City of South Lake Tahoe
City Council
Meeting Agenda
Tuesday, May 19, 2026 at 5:30 pm
City Hall - Council Chambers - 1901 Lisa Maloff Way, South Lake Tahoe

City Council
Cody Bass, Mayor
Keith Roberts, Mayor Pro Tem
Scott Robbins, Councilmember
David Jinkens, Councilmember
Heather Horgan, Councilmember

Mission of the City Council
We provide responsive and effective local government by maintaining a safe, livable, and well-managed city through smart investment, reliable services, and thoughtful planning.

Public Participation
City Council meetings are held in person at the time and location listed on this agenda. A public agenda packet is available for review at City Hall, 1901 Lisa Maloff Way, on the City's Website at www.cityofslt.us, or by contacting the City Clerk's Office, (530) 542-6005 or sblankenship@cityofslt.us

Providing Public Comment:

Remote Public Participation: If you would like to participate remotely, please join the ZOOM meeting by using this link: https://us02web.zoom.us/j/85793142129. If you would like to make a comment, wait for the agenda item to begin, then press the "raise hand" button. Meetings are also live-streamed (for viewing only) on Channel 21, the City website at www.cityofslt.us, and YouTube at https://www.youtube.com/channel/UC3LYne8Ih-kTPLnnuyJW9SQ/live

Note: The Mayor reserves the right to conduct the meeting with in-person public participation only, if there is a technology malfunction that precludes the use of remote public participation.

In Person: Every agenda for regular meetings provides an opportunity for members of the public to directly address the legislative body (City Council), on any item of public interest which is within the jurisdiction of the City Council during Public Communications. For items on the agenda or in connection with any item which the City Council will consider, the public is given the opportunity to comment before or during the City Council's consideration of the item [Government Code Section 54954.3(a)].

In Writing: Written comments received by 3 p.m. the day before the meeting will be distributed to City Council prior to the meeting. Written public comment regarding any item on this agenda may be sent to PublicComment@cityofslt.us. When emailing comments, identify the agenda item number in the subject

line to which your comments relate. Any such comment that is a public record and is emailed to PublicComment@cityofslt.us or otherwise provided to a majority of the City Council before the meeting will be made available for public inspection during normal business hours at the City Clerk's Office located at City Hall, 1901 Lisa Maloff Way, South Lake Tahoe [Government Code Section 54957.5(b)]. Written comments will not be read out loud during the meeting.

The City Council Chambers meeting facility is accessible to people with disabilities. Every reasonable effort will be made to accommodate any person needing special assistance to attend this meeting. Contact the City Clerk at (530) 542-6005 at least 48 hours in advance of the meeting for assistance [28 CFR 35.102.35.104 ADA Title II and Brown Act Government Code Sections 54953.2, 54954.1, 54954.2, and 54957.5].

Spanish Interpretations: The public may access Spanish interpretation using the ZOOM link listed on the front of the Agenda from an internet device (smartphone, laptop, tablet, home computer) with audio capabilities and selecting the Spanish language option. Persons without an internet device may attend the meeting in-person and a device will be provided while supplies last. Requests for interpreter services to offer public comment may be made by contacting the City Clerk.

Land Acknowledgement

Land Acknowledgement - The City of South Lake Tahoe acknowledges the lands we occupy today are the lands and home of the Waśíšiw, the people from here known today as the Washoe Tribe of Nevada and California, a sovereign nation. Since the beginning of time and for thousands of years before the arrival of any other people, the Washoe lived here and cared for this place, with values and intention that we can all learn from. On behalf of the City Council, I would like to acknowledge, thank, and honor the Indigenous Washoe Tribal Communities that are the past, present, and future stewards of the Lake Tahoe Basin.

Call to Order/Pledge of Allegiance

Roll Call

Closed Session Report

Public Communications

This is the public's opportunity to speak on any topic NOT LISTED on this agenda. Comments shall be limited to four (4) minutes. In accordance with the Brown Act, the City Council cannot deliberate or vote on any matter raised under public communications, but may briefly respond to statements made or questions posed. (Government Code Sections 54954.2)

City Commission Reports

Consent Agenda

Public Comment - This is the public's opportunity to speak on any topic listed on the Consent Agenda. Comments shall be limited to three (3) minutes per item and six (6) minutes total per speaker.
The consent agenda consists of items of a repeating or routine nature considered under a single action. Any Councilmember may have an item on the consent agenda removed and considered separately upon request.

Pass a Motion to adopt the Consent Agenda in one motion except as indicated at each item.

1. City Council Meeting Minutes
Requested Action / Suggested Motions: Pass a Motion approving the minutes from the May 6, 2026, City Council meeting.
Item 1- Executive Summary.pdf
05 05 2026 City Council Meeting Minutes.pdf

2. Investment Portfolio Report - March 31, 2026
Requested Action / Suggested Motions: Receive and file.
Responsible Staff Member(s): Olga Tikhomirova, Director of Finance
Item 2- Executive Summary.pdf
01-Staff Report Investment Report as of March 2026 signed.pdf
02-Operations Cash March 2026.pdf
03-Fiscal Agent March 2026.pdf
04-Graph March 2026.pdf
05-Cash March 2026.pdf

3. Fiscal Year 2025-26 Quarterly Financial Status Report - Quarter Ending March 2026
Requested Action / Suggested Motions: Receive and file.
Responsible Staff Member(s): Andrew Black, Financial Services Supervisor
Item 3- Executive Summary.pdf
01-Staff Report - FY 2025-26 Quarterly Budget.docx
02-FY 2025-26 Qtrly Budget Report March 2026.pdf

4. Master Agreement with Environmental Science Associates (ESA) for Airport Environmental Compliance Support Services
Requested Action / Suggested Motions: Pass a Motion authorizing and directing the Mayor to execute a master professional services agreement with ESA for as-needed airport environmental consultant services for a five-year term beginning June 1, 2026.
Responsible Staff Member(s): John Dickinson, Airport Manager
Item 4- Executive Summary.pdf
01-Staff Report-Airport Environmental Services Contract.docx
02-RFQ- Environmental Compliance Support.pdf
03-Contract with Environmental Science Associates
04- Environmental Services RFQ Ranking Sheet.docx

5. Additional Grant Application to the Federal Aviation Administration (FAA) and Caltrans for Lake Tahoe Airport Runway Maintenance
Requested Action / Suggested Motions: Pass a Resolution authorizing the Airport Manager to apply for additional FY 2025 -2026 Federal Aviation Administration Airport Improvement Program (AIP) Grant in the amount of $200,000.00 for the combined amount of $500,000.00 and FY 2025-2026 Caltrans State Matching Grant for Lake Tahoe Airport in the amount of $23,750 or any additional funding the FAA or Caltrans will provide.
CEQA Determination: The project is exempt from review under CEQA Guidelines section 15301(d) (Existing Facilities - restoration or rehabilitation of deteriorated or damaged facilities to meet current standards of public health and safety).
Responsible Staff Member(s): Milan Jevic, Airport Maintenance Supervisor
Item 5- Executive Summary.pdf
01-Staff Report FAA Grant for Runway.docx
02-Resolution Airport Pavement .docx

6. Senate Bill 1 Road Maintenance and Rehabilitation Account Project List for FY26/27
Requested Action / Suggested Motions: Pass a Resolution approving the Senate Bill 1 Road Maintenance and Rehabilitation Account Project List for FY26/27
CEQA Determination: This project is categorically exempt under CEQA Guidelines section 15301(c) (Existing Facilities).
Responsible Staff Member(s): Stephen Anderjack, Project Manager
Item 6- Executive Summary.pdf
01-Staff Report-RMRA Project List 2027.docx
02-Resolution - SB1 Road Maintenance and Rehabilitation 2027.docx
03_RMRA Estimate.pdf

7. Community Corrections Partnership
Requested Action / Suggested Motions: Pass a Resolution: 1) authorizing and directing the Chief of Police to execute the First Amendment to Memorandum of Understanding #7399 for the FY 2025-26 Community Corrections Partnership Budget; 2) authorizing reimbursement up to $20,000.00 from the El Dorado County Probation Department into the Administration - Police Special Services account; and, 3) approving an amendment to the Fiscal Year 2025-2026 budget as follows: 10002110 - 34210.
Responsible Staff Member(s): Lt. Russell Liles
Item 7- Executive Summary.pdf
01-Staff Report - Community Corrections Partnership.docx
02-Resolution - Community Corrections Patrnership.docx
03-2023 MOU between El Dorado Probation and SLTPD
04-Amendment No. I to MOU between El Dorado Probation and the Police Departments - unsigned.pdf

8. Amendment to Ordinance Regulating Shared Mobility Devices (Second Reading)
Requested Action / Suggested Motions: Pass an Ordinance amending Chapter 4.185 of the South Lake Tahoe City Code (Shared Mobility Devices) to increase the City's liability protections from shared mobility device accidents, add safety measures for shared mobility device operations, and revise operator insurance requirements.
Responsible Staff Member(s): Dan Bardzell, Assistant City Attorney; Jeff Roberson, Police Chief
Item 8- Executive Summary.pdf
01 - Staff Report (Second Reading)
02 - SMD Ordinance (Redline)
03 - SMD Ordinance Amendments
04 - Proof of Publication-SMD Ordinance

Regular-New Business

9. Tahoe Bluefins Swim Club City Sponsorship
Requested Action / Suggested Motions: Pass a Resolution authorizing the use of General Fund to sponsor facility rental fees and staff labor for the Tahoe Bluefins Swim Club totaling $8,343 for a six-month agreement.
CEQA Determination: This action is categorically exempt from review under CEQA Guidelines section 15323 (Normal Operations of Facilities for Public Gatherings).
Responsible Staff Member(s): John Stark, Director of Parks & Recreation
Item 9- Executive Summary.pdf
01-Staff Report - Tahoe Bluefins Swim Club City Sponorship.docx
02-Resolution-Tahoe Bluefins Swim Club City Sponsorship.docx

10. Amendment to Parking Agreement with Heavenly Mountain Resort
Requested Action / Suggested Motions: 1) Pass a Motion authorizing and directing the Mayor to execute the Amendment to the Parking Agreement with Heavenly Mountain Resort; and 2) Pass a Resolution amending the seasonal parking restrictions on certain streets in the Heavenly Valley Neighborhood (replaces Resolution 2025-099).
Responsible Staff Member(s): Lt. Doug Sentell
Item 10- Executive Summary.pdf
01-STAFF REPORT-Heavenly Parking Agreement Report
02-Amendment No. 1 to Agreement with Heavenly
03- Exhibit A to Amendment and Resolution.pdf
03-Resolution on Seasonal Parking Agreement
05-C-306-2025 Heavenly Parking Agreement.pdf

11. Long-Term Rental Incentive Program Update and Request for Additional Funding
Requested Action / Suggested Motions:

Pass a Resolution to allocate $80,000 in additional funding for incentive grants and continue operation of the Long-Term Rental Incentive Program.

Responsible Staff Member(s): Lydia Zuniga, Associate Management Analyst
Item 11- Executive Summary.pdf
01-Staff Report - LTRIP.docx
02-Resolution - Rental Incentive Program.docx

Agenda Planning Calendar

12. Agenda Planning Calendar
Requested Action / Suggested Motions: Identify, with consent of at least two Council Members, any desired future agenda items, and/or modify the Agenda Planning Calendar as desired.
Responsible Staff Member(s): Susan Blankenship, City Clerk and Hilary Roverud, Interim City Manager
Item 12- Executive Summary.pdf
APC 05 14 2026.pdf

Updates and Announcements (City Attorney, City Clerk, City Manager)

Councilmember Reports and Comments - Assignments to Boards, Committees, and Commissions

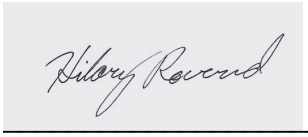
Adjournment
I, Susan Blankenship, City Clerk for the City of South Lake Tahoe, declare that the foregoing agenda for the Tuesday May 19, 2026, City Council meeting was posted and available for review on Thursday, May 14, 2026, at City Hall, 1901 Lisa Maloff Way, South Lake Tahoe, CA 96150. The agenda was also available on the City website at https://www.cityofslt.us.
Signed May 14, 2026

\\sb\\ Susan Blankenship, Elected City Clerk

City of South Lake Tahoe

Agenda Item Executive Summary

Hilary Roverud, Interim City Manager



Meeting Date: May 19, 2026
Agenda Item #:1

Agenda Item: City Council Meeting Minutes

Requested Action / Suggested Motions: Pass a Motion approving the minutes from the May 6, 2026, City Council meeting.

Reviewed and Approved By: Susan Blankenship, City Clerk

Attachments:

05 05 2026 City Council Meeting Minutes.pdf

City of South Lake Tahoe
City Council
Meeting Minutes
Tuesday, May 5, 2026 at 9:00 am
City Hall - Council Chambers - 1901 Lisa Maloff Way, South Lake Tahoe

NOTE: The Meeting Minutes represent actions taken during the meeting of the City Council. Complete Council member discussions on Regular Session meeting items can be viewed in archived video recordings on the City's website at http://www.cityofslt.us Public submittals on items are retained in the administrative record and can be viewed in the City Clerk's repository at http://www.cityofslt.us

Land Acknowledgement
Mayor Bass read the Land Acknowledgement.

Call to Order/Pledge of Allegiance

Mayor Bass called the meeting to order at 9:06 a.m., and then read the pledge of allegiance.

Roll Call
Present were Mayor Bass, Mayor Pro Tem Roberts, and Councilmembers Robbins, Jinkens, and Horgan.

Also present were City Clerk Blankenship, City Attorney Stroud, and Interim City Manager Roverud.

Closed Session Report
None.

Proclamations

1. **Proclamation Recognizing May 2026 as "Mental Health Awareness" Month**
   Action: Issued a Proclamation to Angie Regan with Access Tahoe and Peace Love Tahoe, recognizing May 2026, as "Mental Health Awareness" month.
   The following people addressed the Council:
   1. Angie Reagan, Access Tahoe, Peace Love Tahoe, Petal Kindness, American Foundation for Suicide Prevention, Forever 14
   2. Shelby, Balance Life Tahoe
   3. Cheyenne Lane, Tahoe Youth and Family Services
   4. Kristy Tibbitts, Mountain High Recovery Center
   5. Joannah Lily
   6. Nathan Wheeler, Unity at the Lake
   7. Miss Jodine, Jubilee Preschool, Boys and Girls Club
   8. Peggy Cooly, Unity at the Lake

2. **Proclamation Recognizing May 17-23, 2026, as "National Public Works Week"**
   Action: Issued a Proclamation to Kelli Durocher, Branden Gardella, and John Hoffman in the City Public Works Department recognizing May 17-23, 2026, as "National Public Works Week".

Public Communications

General public comments were heard from the following people:

1. Scott Loberg- Cannabis tax funding for nonprofits.
2. John Messina- Request to rename “56 Acres” after the Dunlap family for a recognition of the community center
3. Angie Reagan- Mental Health Awareness Month Proclamation presentation by Mayor Bass
4. Melissa Soderston- Mental Health Awareness Month Proclamation, roundup use in forests

City Commission Reports

None.

Consent Agenda

Action: Moved/Seconded: Jinkens/Horgan
Yes: Bass, Roberts, Robbins, Jinkens, Horgan
Action: Passed the consent agenda.

3. **City Council Meeting Minutes**
   Action: Passed **Motion 2026-064** approving the minutes from the April 18, 2026 and April 21, 2026, City Council meetings.

4. **Resolution Declaring Intent to Reimburse Fire Station 3 Expenditures**
   Action: Passed **Resolution 2026-040** declaring the City's intent to reimburse certain expenditures related to the Fire Station 3 project from the proceeds of future tax-exempt bond financing.

5. **Journey of Hope Recreation Center Showers Fee Sponsorship**
   Action: Passed **Resolution 2026-041** authorizing the Use of General Fund to cover 40 cyclists from the Journey of Hope to use the showers at the Recreation & Aquatics Center totaling $120.
   Public comment was heard from the following people:
   1. Scott Loberg
   2. John Messina

6. **Quarterly Update on the Affordable Housing**
   Action: Receive and file.

7. **Inclusionary Housing Ordinance In-Lieu Fees Annual Report**
   Action: Receive and file.

8. **Contract with Darren Taylor Construction, Inc. for 2026 Road Rehabilitation Projec**t
   Action: Passed **Motion 2026-065** authorizing and directing the Mayor to execute construction contract with Darren Taylor Construction, Inc. **(C-126-2026)** in the amount of $3,636,859.75, for the 2026 Road Rehabilitation Project.

9. **Ratification of Amendment to Agreement with CDM Smith, Inc. to Extend Contract Term**
   Action: Passed **Motion 2026-066** authorizing and directing the Mayor to execute Ratification of Amendment No. 7 to Agreement with CDM Smith, Inc. **(C-127-2026)** for engineering services for Pioneer Trail Pedestrian Improvement Project Ph II, to extend the term through December 31, 2026.
   Public comment was heard from the following person:
   1. Scott Loberg

10. Acceptance of Lake Tahoe Restoration Act Funds for Construction of Needle Peak Localized Treatment (Part of the Upper Bijou Park Creek Watershed Restoration Project)

Action: 1) Passed **Motion 2026-067** authorizing and directing the Mayor to execute the Memorandum of Understanding with Tahoe Regional Planning Agency **(C-128-2026)** to accept up to $300,000 in Lake Tahoe Restoration Act grant funds for the construction of the Needle Peak Localized Treatment Project; and 2) Passed **Resolution 2026-042** authorizing and directing the Director of Finance to accept and appropriate Lake Tahoe Restoration Act grant funds to the Upper Bijou Park Creek Watershed Restoration Project for the construction of the Needle Peak Localized Treatment Project.

Public comment was heard from the following person:

1. Scott Loberg

11. Sale of Surplus Vehicles and Miscellaneous Small Tools

Action: Passed **Motion 2026-068** designating 9 vehicles and miscellaneous small tools for surplus and subsequent disposal following the City's policy on disposition of surplus property.

Public Hearing

12. 2025-2026 Master Fee Schedule

Action: Moved/Seconded: Horgan/Robbins
Yes: Bass, Roberts, Robbins, Horgan
No: Jinkens

Action: Passed **Resolution 2026-043** adopting the Annual Master Schedule of Fees and Charges for City Services as presented.

Regular-Unfinished Business

13. Amendment to Ordinance Regulating Shared Mobility Devices (First Reading)

Action: Moved/Seconded: Robbins/Roberts
Yes: Bass, Roberts, Robbins, Jinkens, Horgan

Action: Passed **Motion 2026-069** to hold a first reading of an Ordinance amending Chapter 4.185 of the South Lake Tahoe City Code (Shared Mobility Devices) to increase the City's liability protections from shared mobility device accidents, add safety measures for shared mobility device operations, and revise operator insurance requirements.

Public comment was heard from the following people:

1. Scott Loberg
2. Ed Mosur
3. Melissa Soderston
4. Nick Speal
5. Kylee Floodman, Bird Scooters
6. Monica Dilullo, Lime Scooters

14. Grow and Diversify the Economy, Strategic Plan Priority Update #2

Action: Moved/Seconded: Robbins/Jinkens
Yes: Bass, Robbins, Jinkens, Horgan
No: Roberts

Action: Passed **Motion 2026-070** providing direction to the Interim City Manager to establish an Economic Development Ad Hoc Subcommittee consisting of Mayor Bass and Councilmember Robbins.

Action: Moved/Seconded: Horgan/Robbins
Yes: Bass, Roberts, Robbins, Jinkens, Horgan

Action: Passed **Motion 2026-071** to pursue a video & social media campaign with the National League of Cities and CGI.

Public comment was heard from the following people:

1. Scott Loberg
2. Ed Mosur
3. John Messina
4. Melissa Soderston
5. Erick Asbury

15. Resolution Reaffirming the City's Commitment to the Rights, Dignity, and Safety of all Residents

Action: Moved/Seconded: Horgan/Robbins
Yes: Bass, Robbins, Horgan
No: Roberts, Jinkens
Action: Passed **Resolution 2026-044** reaffirming the City's commitment to the rights, dignity, and safety of all residents, regardless of immigration status, and opposing unconstitutional Federal enforcement actions and overreach.

Public comment was heard from the following people:

1. Scott Loberg
2. John Messina
3. Melissa Soderston
4. Erick Asbury
5. Erika Gonzalez

Regular-New Business

16. City Green Card Assistance Program

Action: Moved/Seconded: Jinkens/Robbins
Yes: Bass, Roberts, Robbins, Jinkens, Horgan
Action: Passed **Motion 2026-072** directing staff to bring back program guidelines and potential budget allocation for a city green card assistance program.

Public comment was heard from the following people:

1. Scott Loberg
2. Ed Mosur
3. John Messina
4. Erika Gonzalez
5. Melissa Soderston
6. Kelly O'hare
7. Erick Asbury

17. Housing Terminology, 2025 Housing Element Annual Progress Report and 2027 - 2035 Housing Element Update

Action: Received and filed.

Public comment was heard from the following person:

1. Melissa Soderston

18. Resolution in Support of Measure G to Renew Funding for Recreation Facilities Maintenance

Action: Moved/Seconded: Robbins/Roberts
Yes: Bass, Roberts, Robbins, Jinkens, Horgan
Action: Passed **Resolution 2026-045** in Support of Measure G to Renew Funding for Recreation Facilities Maintenance.

Public comment was heard from the following people:

1. Scott Loberg
2. Melissa Soderston

Written public comment was received from the following person:

1. Cristi Creegan

19. Status of Efforts to Provide Electrical Service for Ski Run Farmer's Market

Action: Moved/Seconded: Robbins/Horgan

Yes: Bass, Roberts, Robbins, Jinkens, Horgan

Action: 1) Passed **Motion 2026-073** directing staff to conduct further investigation into electrification of the Ski Run farmer's market, including investigation of mobile battery storage power solutions that would be suitable for providing electricity to an event of this nature, and which could potentially provide similar power to similar events in other parts of town.

Public comment was heard from the following people:

1. Scott Loberg
2. Melissa Soderston

Public Hearing

20. Levy of Assessment for Ski Run Business Improvement District for Business License Year 2026/2027

Action: Moved/Seconded: Horgan/Jinkens

Yes: Bass, Roberts, Robbins,

Action: Passed **Resolution 2026-046** confirming the Ski Run Business Improvement District annual report and levying the assessment for business license year 2026/2027.

Public comment was heard from the following person:

1. Devin Middlebrook- Friends of Ski Run, Ski Run BID

Agenda Planning Calendar

21. Agenda Planning Calendar

Action: Received and filed.

Updates and Announcements (City Attorney, City Clerk, City Manager)

Interim City Manager Roverud

1. Special Meeting May 26, 2026, for Ethics and Protocols discussion

Councilmember Reports and Comments - Assignments to Boards, Committees, and Commissions

Councilmember Jinkens

1. Request for an update on the response from CPUC regarding Liberty Utilities. Interim City Manager Roverud stated she would send an update to Council.
2. Requested information on renaming the "56 Acres" in recognition of the Dunlap family. Mayor Bass stated the City does not own all the property in the "56 Acres" and the renaming should start with a conversation with El Dorado County.

Councilmember Robbins

1. Request for a condensed Quarterly Housing Report for all housing items to be placed on New Business (Jinkens seconded).
2. Request for an agenda item on electrification of Live at Lakeview and similar events either brought with electrification at Ski Run or after (Bass seconded).

Councilmember Horgan

1. Requested an Urgency Ordinance placing a moratorium on the sale of tobacco near schools and for a review of ongoing enforcement (Robbins seconded).
2. Nurse Week May 6-12

Mayor Pro Tem Roberts

1. Attended Transit JPA

Mayor Bass

1. Missed Transit JPA Meeting
2. Attended LTVA Meeting
3. Upcoming El Dorado County Transit Meeting

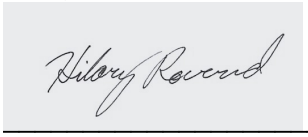
Adjournment

Mayor Bass adjourned the meeting at 4:15 p.m.

City of South Lake Tahoe

Agenda Item Executive Summary

Hilary Roverud, Interim City Manager



Meeting Date: May 19, 2026
Agenda Item #:2

Agenda Item: Investment Portfolio Report - March 31, 2026

Executive Summary: In accordance with the City of South Lake Tahoe Financial Policies and State law, a quarterly investment report is hereby submitted to the members of the City Council. As of March 31, 2026, the City's total cash and investment balances across all funds is $120.3 million.

Requested Action / Suggested Motions: Receive and file.

Responsible Staff Member: Olga Tikhomirova, Director of Finance

Reviewed and Approved By: Susan Blankenship, City Clerk Heather Stroud, City Attorney

Attachments:

01-Staff Report Investment Report as of March 2026 signed.pdf
02-Operations Cash March 2026.pdf
03-Fiscal Agent March 2026.pdf
04-Graph March 2026.pdf
05-Cash March 2026.pdf

City of South Lake Tahoe
Report to **City Council**

Meeting Date: May 19, 2026

Title: Investment Portfolio Report as of March 31, 2026

Location: Citywide

Responsible Staff Member: Olga Tikhomirova, Director of Finance

Background: In accordance with the City of South Lake Tahoe Financial Policies and State law a quarterly investment report shall be submitted to the members of the City Council.

Issue and Discussion: The attached report for the period ending March 31, 2026, describes the type of investments, the issuers, the maturity dates, the par value and the market value. Total cash for operations and cash held by fiscal agents is $120,297,640.

Cash available for operations is $108,030,652. This includes Cash in Bank of $7,908,277 with the remaining amount in various investments diversified in accordance with the City's adopted Investment Policy. The total portfolio yield is 3.66%. Based on this report the City of South Lake Tahoe will be able to meet projected operating expenditures for the next six months.

Cash held by fiscal agents for debt service is $12,266,988. These investments comprise the reserves and other accounts held in trust for debt service, lease financing, and capital projects financed with debt.

Fund Type	Total Cash Balance	Operations Balance	Fiscal Agent Balance
Trust and Agency	$11,272,793	$3,839,160	$7,433,633
Special Revenue	29,479,611	29,479,611	-
General Fund	33,176,341	33,176,341	-
Internal Service	11,867,652	11,867,652	-
Debt Service	6,836,267	2,020,197	4,816,070
Enterprise	4,492,624	4,475,339	17,285
CIP	23,172,352	23,172,352	-
Grand Total	**$120,297,640**	**$108,030,652**	**$12,266,988**

The attached documents include investment terms that are defined below:

- Current yield – The investments annual income (interest or dividends) divided by the current price of the security.
- Weighted par – Weighting the price of each bond by the total price of the entire portfolio.
- Weighted yield – The current yield multiplied by the weighted par, provides the yield of the bonds in the portfolio.

Financial Implications: None.

Environmental Considerations: This is not a "project" subject to review under the California Environmental Quality Act (CEQA) Guidelines section 15378(b)(2) (continuing administrative or maintenance activities, such as purchases for supplies).

Policy Implications: Consistent with City's Financial Policies.

City Treasurer's Review Statement: I, David Olivo, Treasurer of the City of South Lake Tahoe, hereby acknowledge that I have reviewed the Quarterly Investment Report for the period ending March 31, 2026, prepared by the Finance Director. Based on my review, the report accurately reflects the investment activities and holdings of the City in accordance with the City's Investment Policy and applicable laws.

Reviewed and acknowledged on: May 5, 2026

Signature: David OLIVO
David W Olivo (May 5, 2026 18:37:22 PDT)

David Olivo
City Treasurer
(530)307-8972
dolivo@cityofslt.gov

01-Staff Report Investment Report as of March 2026

Final Audit Report 2026-05-06

Created:	2026-05-04
By:	Olga Tikhomirova (otikhomirova@cityofslt.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAAMd8ZVVLuyIWakFFv5qp_ocYHKiQPnIli

"01-Staff Report Investment Report as of March 2026" History

Document created by Olga Tikhomirova (otikhomirova@cityofslt.gov)
2026-05-04 - 10:36:01 PM GMT

Document emailed to dolivo@cityofslt.gov for signature
2026-05-04 - 10:36:18 PM GMT

Email viewed by dolivo@cityofslt.gov
2026-05-06 - 1:35:04 AM GMT

Signer dolivo@cityofslt.gov entered name at signing as David W Olivo
2026-05-06 - 1:37:20 AM GMT

Document e-signed by David W Olivo (dolivo@cityofslt.gov)
Signature Date: 2026-05-06 - 1:37:22 AM GMT - Time Source: server - Signature Appearance Selected: MOBILE_DRAW

Agreement completed.
2026-05-06 - 1:37:22 AM GMT

CITY OF SOUTH LAKE TAHOE
OPERATIONS CASH INVESTMENT PORTFOLIO REPORT
AS OF MARCH 31, 2026

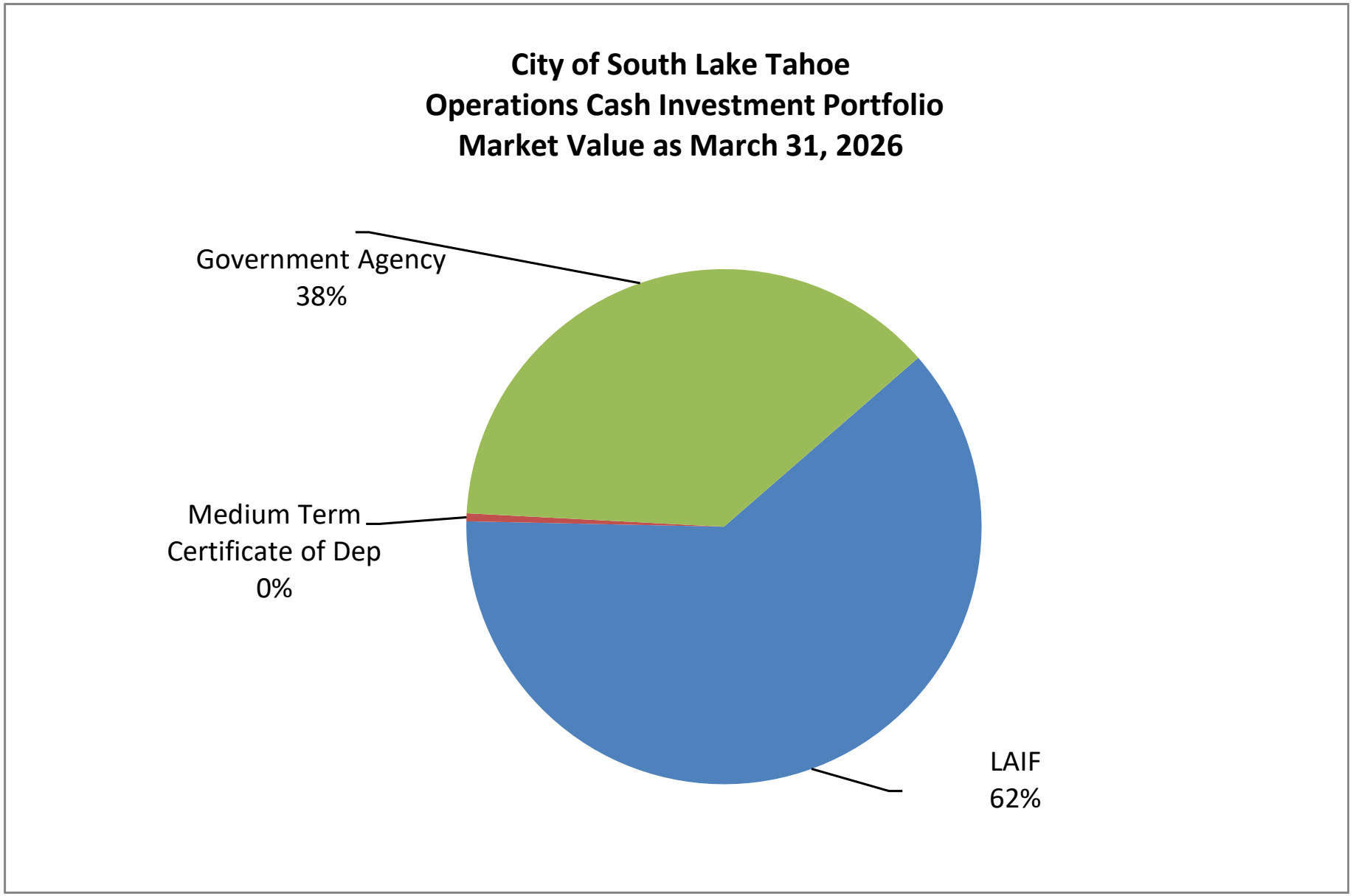
INVESTMENT TYPE	ISSUER	PAR VALUE	MARKET VALUE	CURRENT YIELD	WEIGHTED PAR	WEIGHTED YIELD	MATURITY DATE
Local Agency Investment Fund	State Treasurer	$ 61,616,125	$ 61,614,944	3.826%	57.0%	2.2%	N/A
Federal Farm Credit Banks	US Government Agency	$ 1,000,000	$ 998,503	3.110%	0.9%	0.0%	4/13/2026
Federal Home Loan Bank	US Government Agency	$ 1,000,000	$ 995,497	1.000%	0.9%	0.0%	5/27/2026
Federal Farm Credit Banks	US Government Agency	$ 1,000,000	$ 983,962	1.500%	0.9%	0.0%	12/14/2026
Federal Home Loan Banks	US Government Agency	$ 1,000,000	$ 991,942	3.000%	0.9%	0.0%	3/29/2027
Federal Home Loan Banks	US Government Agency	$ 1,000,000	$ 997,393	4.550%	0.9%	0.0%	2/10/2028
Federal Home Loan Banks	US Government Agency	$ 5,000,000	$ 4,999,880	4.450%	4.6%	0.2%	7/16/2029
Federal Home Loan Banks	US Government Agency	$ 5,000,000	$ 4,967,467	4.500%	4.6%	0.2%	8/14/2030
Federal Home Loan Banks	US Government Agency	$ 3,000,000	$ 2,974,503	4.050%	2.8%	0.1%	9/30/2030
Federal Farm Credit Banks	US Government Agency	$ 2,000,000	$ 1,984,011	4.070%	1.9%	0.1%	9/30/2030
Fed. National Mtg Association	US Government Agency	$ 3,000,000	$ 2,961,924	4.070%	2.8%	0.1%	12/4/2030
Federal Home Loan Banks	US Government Agency	$ 3,000,000	$ 2,968,844	4.050%	2.8%	0.1%	12/4/2030
Fed. National Mtg Association	US Government Agency	$ 2,000,000	$ 1,981,007	4.000%	1.9%	0.1%	12/16/2030
Fed. National Mtg Association	US Government Agency	$ 3,000,000	$ 2,952,912	4.050%	2.8%	0.1%	1/15/2031
Fed. Home Loan Mtg Corp	US Government Agency	$ 4,000,000	$ 3,956,520	4.150%	3.7%	0.2%	1/28/2031
Fed. Home Loan Mtg Corp	US Government Agency	$ 3,000,000	$ 2,996,772	4.550%	2.8%	0.1%	3/28/2031
Certificate of Deposit	Capital One Bank (USA) NA	$ 250,000	$ 249,623	3.150%	0.2%	0.0%	6/2/2026
Certificate of Deposit	State Bank of India	$ 250,000	$ 248,309	3.300%	0.2%	0.0%	6/1/2027
Cash in Bank General & Sweep		$ 7,908,277	$ 7,908,277	0% - 3.54%	7.32%	0.0%	N/A
Petty Cash		$ 6,250		N/A	0.01%	0.0%	N/A
TOTAL		$ 108,030,652	$ 107,732,288			**3.66%**	**(Total Portfolio Yield)**

The Investment porfolio at March 31, 2026 is in compliance with the Investment Policy of the City of South Lake Tahoe. The City of South Lake Tahoe will be able to meet its projected expenditure requirements for the next six months. Valuation is based upon the State Treasurer's Office LAIF quarterly apportionment rates and US Bank Safekeeping.

CITY OF SOUTH LAKE TAHOE INVESTMENT REPORT
CASH AND INVESTMENTS HELD WITH FISCAL AGENTS
AS OF MARCH 31, 2026

BOND ISSUE ACCOUNT	INVESTMENT TYPE	ISSUER	COST VALUE	MARKET VALUE	CURRENT YIELD	MATURITY DATE
So Tahoe JPFA Lease Rev Bonds 2023 A						
Project Fund	Dreyfus Gov Sec CM Inst 227 / U.S. Treasury Bill	Dreyfus	3,128,521	3,128,521	4.89%	N/A
Principal	Dreyfud Gov Sec MC Inst 227	Dreyfus	-	-	0.00%	N/A
Lease Revenue Fund	Dreyfus Gov Sec CM Inst 227	Dreyfus	1,278,926	1,278,926	3.49%	N/A
Interest	Dreyfud Gov Sec MC Inst 227	Dreyfus	-	-	0.00%	N/A
Cost of Issuance Account	Dreyfus Gov Sec CM Inst 227	Dreyfus	31	31	3.49%	N/A
So Tahoe JPFA Ref Lease Rev Bonds 2016 A						
Lease Revenue Fund	Blackrock Treasury Trust	Bank of New York Mellon	4,781	4,781	0.00%	N/A
Interest	Blackrock Treasury Trust	Bank of New York Mellon	-	-	0.00%	N/A
Principal	Blackrock Treasury Trust	Bank of New York Mellon	-	-	0.00%	N/A
Reserve	Assured Guaranty Municipal	Bank of New York Mellon	-	2	0.00%	N/A
So Tahoe JPFA Parking Rev Bonds 2013						
Debt Service Account	Blackrock Treasury Trust	Bank of New York Mellon	17,285	17,285	0.00%	N/A
So Tahoe JPFA Ref Rev Bonds 2014 A, 2015 A, 2017 A						
Revenue Fund	Blackrock Treasury Trust	Bank of New York Mellon	2	3	1.96%	N/A
Interest	Blackrock Treasury Trust	Bank of New York Mellon	976,245	976,245	3.56%	N/A
Principal	Blackrock Treasury Trust	Bank of New York Mellon	7,271	7,271	3.56%	N/A
Surplus	Blackrock Treasury Trust	Bank of New York Mellon	11,328	11,328	3.56%	N/A
So Tahoe JPFA (RPA 1) Reserve	Blackrock Treasury Trust	Bank of New York Mellon	5,732,407	5,732,407	3.56%	N/A
Successor Agency to the So Tahoe RDA, CFD 2001-1, Refdg Series 2015						
Special Tax	Blackrock Treasury Trust	Bank of New York Mellon	51,638	51,638	3.56%	N/A
Interest	Blackrock Treasury Trust	Bank of New York Mellon	14,198	14,198	3.56%	N/A
Principal	Blackrock Treasury Trust	Bank of New York Mellon	918	918	3.56%	N/A
Reserve	Blackrock Treasury Trust	Bank of New York Mellon	637,998	637,998	3.56%	N/A
Surplus	Blackrock Treasury Trust	Bank of New York Mellon	1,626	1,626	3.56%	N/A
City of South Lake Tahoe 2014 Pension Obligation Bonds						
Interest	Blackrock Treasury Trust	Bank of New York Mellon	200	200	3.55%	N/A
Principal	Blackrock Treasury Trust	Bank of New York Mellon	8	8	3.51%	N/A
City of So Lake Tahoe 2012 COPS, Road Improvmt.						
Lease Payment Fund	First American Govt Obligation Fund/Money Mkt	US Bank	16,702	16,702	3.12%	N/A
Reserve Account	First American Govt Obligation Fund/Money Mkt	US Bank	396,899	386,899	3.12%	N/A
	TOTAL		12,276,985	12,266,988		

Valuation is based upon the valuations contained in the monthly statements provided by the trust departments of the fiscal agents.


City of South Lake Tahoe
Operations Cash Investment Portfolio
Market Value as March 31, 2026
Government Agency
38%
Medium Term
Certificate of Dep
0%
LAIF
62%

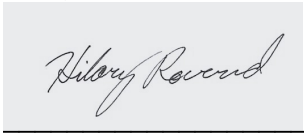
CITY OF SOUTH LAKE TAHOE
CASH REPORT
MARCH 31, 2026

FUND #	FUND NAME	OPERATIONS CASH BALANCE	FISCAL AGENT CASH BALANCE	TOTAL CASH BALANCE	SUBTOTAL BY CATEGORY OPERATIONS	SUBTOTAL BY CATEGORY FISCAL AGENT	TOTAL CASH BALANCE
100	General Fund	31,067,150.56		$31,067,150.56			
102	Measure S - Sales Tax	2,109,190.20		$2,109,190.20	$33,176,341	$0	$33,176,341
201	Gas Tax 2105	1,054,106.21		$1,054,106.21			
207	Snow Removal	1,458,220.47		$1,458,220.47			
208	Snow Removal - Equipment Replac	728,650.02		$728,650.02			
210	Vehicle Replacement	577,310.09		$577,310.09			
211	Police Vehicle Replacement	254,860.87		$254,860.87			
213	Fire Vehicle Replacement	(762,177.41)		($762,177.41)			
215	Disaster Relief/Prep	(243,758.28)		($243,758.28)			
216	Transit Center	47,008.11		$47,008.11			
217	Arts Program	42,659.70		$42,659.70			
218	VHR Program	303,855.93		$303,855.93			
220	Parks and Recreation	10,742,433.79		$10,742,433.79			
221	Ice Arena	18,257.97		$18,257.97			
222	Fire Safety Sales Tax	885,518.37		$885,518.37			
223	Cannabis Program	1,129,162.04		$1,129,162.04			
224	PEG Programming	366,418.08		$366,418.08			
229	DUI/Traffic Safety Grant	(2,643.14)		($2,643.14)			
231	AB3229 COPS	547,138.30		$547,138.30			
232	Safety Sales Tax	185,957.38		$185,957.38			
233	Forfeiture - State Fund	42,643.73		$42,643.73			
235	Forfeiture - Justice Fund	68,228.35		$68,228.35			
236	EMS - JPA	88,521.01		$88,521.01			
237	Boat Patrol - Grant	216,460.50		$216,460.50			
238	Domestic Violence (DVRT) Grant	42,022.53		$42,022.53			
240	Solid Waste AB939	(19,081.19)		($19,081.19)			
241	Clean Community	58,662.71		$58,662.71			
242	Vehicle Abatement	165,123.37		$165,123.37			
243	Nuisance Abatement	231,244.19		$231,244.19			
244	Solid Waste JPA	1,095,177.69		$1,095,177.69			
245	Storm Water Mgmt/Sweeping	262,986.70		$262,986.70			
250	Hsng&ED - Work Force Housing	1,232,741.10		$1,232,741.10			
251	Hsng & Ed - Home	1,568,180.74		$1,568,180.74			
252	Hsng & Ed - CDBG	130,141.12		$130,141.12			
253	Hsng & Ed - Administration	335,959.05		$335,959.05			
255	CDBG Program Income Loans	163,998.45		$163,998.45			
256	CDBG Economic Development	(263,732.87)		($263,732.87)			
258	Calhome Loan Repayments	146,657.39		$146,657.39			
262	RDA Low Income Housing Fund	448,758.42		$448,758.42			
263	TOT Revenue Fund	2,003,993.54		$2,003,993.54			
270	General Plan/Community Plan	538,009.38		$538,009.38			
271	Building Permit Fees	2,065,030.25		$2,065,030.25			
280	Ski Run Business Improvement	910.87		$910.87			
281	Measure S Maintenance Fund	71,261.82		$71,261.82			
284	Measure S City Maintenance	426,259.20		$426,259.20			
285	Tourism Improvement District (TID)	270,930.05		$270,930.05			
290	Settlement Proceeds Sfty Programs	755,544.15		$755,544.15			
291	Fofeitures- Local	0.00		$0.00	$29,479,611	$0	$29,479,611
301	City CIP	21,392,941.58		$21,392,941.58			
303	City CIP - Reg.Surf.Transp.Progr	220,630.03		$220,630.03			
306	Rehab Water Quality Projects	2,836.85		$2,836.85			
310	Long term Capital Replacement	861,960.02		$861,960.02			
311	Campground Capital Outlay	493,253.69		$493,253.69			
320	Housing - CIP Projects	200,729.82		$200,729.82	$23,172,352	$0	$23,172,352
401	City Debt Service	2,020,197.25	4,816,069.95	$6,836,267.20	$2,020,197	$4,816,070	$6,836,267
501	Airport	1,371,008.13		$1,371,008.13			
510	Parking Management Bellamy	397,796.38		$397,796.38			
515	Parking Management Plan	16,711.85		$16,711.85			
520	Parking Garage	2,025,057.47	17,285.32	$2,042,342.79			
550	Transit - Stage	613,014.67		$613,014.67			
560	South Tahoe Transit JPA	51,750.16		$51,750.16	$4,475,339	$17,285	$4,492,624
601	Self Insurance - Health, Vision, Den	578,360.68		$578,360.68			
602	Self Insurance - Workers Comp	9,528,176.27		$9,528,176.27			
604	Payroll	1,726,574.28		$1,726,574.28			
605	Health Insurance Savings	34,540.78		$34,540.78	$11,867,652	$0	$11,867,652
701	Trust	917.00		$917.00			
704	Athletic Facilities - Parks & Rec	0.00		$0.00			
707	Park Avenue CFD Fund	1,112,861.20	706,378.89	$1,819,240.09			
711	Bijou ECP CFD	167,236.95		$167,236.95			
712	Harrison Avenue CFD	288,190.03		$288,190.03			
725	RD Obligation Retirement Fund	2,261,967.02	6,727,253.78	$8,989,220.80			
751	Special Assessment District	4,572.00		$4,572.00			
762	Tahoe Transportation Authority	3,416.00		$3,416.00	$3,839,160	$7,433,633	$11,272,793
	Total Cash and Investments	$108,030,651.62	$12,266,987.94	$120,297,639.56	$108,030,652	$12,266,988	$120,297,640

City of South Lake Tahoe

Agenda Item Executive Summary

Hilary Roverud, Interim City Manager



Meeting Date: May 19, 2026
Agenda Item #:3

Agenda Item: Fiscal Year 2025-26 Quarterly Financial Status Report - Quarter Ending March 2026

Executive Summary: In accordance with the City's Financial Policies, the Finance Department submits reports to City Council on a periodic basis to provide assurance of budget compliance and for informational and comparative purposes. Attachment 2, â€œFY 2025/26 Quarterly Budget and Financial Status Report for Period Ending March 31, 2026â€ summarizes operating revenues and operating expenditures (unaudited figures) for the General Fund and Measure S Sales Tax Fund for the year-to-date providing an analysis of any significant budget variances.

Requested Action / Suggested Motions: Receive and file.

Responsible Staff Member: Andrew Black, Financial Services Supervisor

Reviewed and Approved By: Susan Blankenship, City Clerk Olga Tikhomirova, Director of Finance Heather Stroud, City Attorney

Attachments:

01-Staff Report - FY 2025-26 Quarterly Budget.docx
02-FY 2025-26 Qtrly Budget Report March 2026.pdf

City of South Lake Tahoe
Report to **City Council**

Meeting Date: May 19, 2026

Title: Fiscal Year 2025/26 Quarter End Financial Status Report as of March 2026

Location: Citywide

Responsible Staff Member: Olga Tikhomirova, Director of Finance and Andrew Black, Financial Services Supervisor

Background: The Finance Department submits quarterly reports to City Council to provide assurance of budget compliance and for informational and comparative purposes throughout the year. Attachment 2, "FY *2025/26 Quarterly Budget and Financial Status Report for Period Ending March 31, 2026"* is an unaudited snapshot of year-to-date actual revenues and expenditures for the General Fund for that period.

Issue and Discussion: At the end of March 2026 with 50% of the year complete, primary General Fund revenues were at 37.7% of the amended budget, while expenditures were at 36.2% of appropriations. All departmental expenditures were below the 50.0% threshold allocated to the first two quarters of the fiscal year. Measure S Sales Tax revenue, accounted for in a separate general fund, amounted to approximately 35.9% of the amended budget. See Attachment 2 for further analysis.

Financial Implications: FY 2025/26 General Fund budgeted revenues and expenditures through March 2026, as presented in the attached report, reflect mid-year budget adjustments for supplemental appropriations adopted by City Council on March 24, 2026. As of March 31, 2026, following the first six months of the fiscal year, actual General Fund expenditures exceeded revenues by $804K.

Compared with the same period in the prior fiscal year, overall revenues increased by approximately 10.1%, or $2.4 million, primarily due to strong performance in Property Tax, Recreation revenue, and increased transfers in from other funds. Over the same period, total expenditures increased by 14.0%, or $3.3 million. Of that amount, Miscellaneous General Fund expenditures rose by approximately $2.8 million, largely due to higher transfers out to other funds, while departmental expenditures increased by approximately $512K.

Environmental Considerations: This is not a "project" subject to review under the California Environmental Quality Act (CEQA) Guidelines section 15378(b)(5) (organizational or administrative activities that will not result in direct or indirect physical changes in the environment).

Policy Implications: Consistent with City's Financial Policies.

CITY OF SOUTH LAKE TAHOE
2025-26 QUARTERLY FINANCIAL REPORT
2ND QUARTER ENDING MARCH 31, 2026

This report provides an overview of the City's financial position for the primary General Fund and the Measure S Sales Tax general fund for Fiscal Year 2025-26. It summarizes revenues by type and expenditures by department or program, comparing actual revenues received and expenditures incurred through March 2026 to the total budget.

Primary General Fund Financial Condition

As of March 31st, with 50% of the year complete, General Fund revenues were at 37.7% of projections, and expenditures were at 36.2% of appropriations.

Revenues. The top three revenues, Property Tax, City Transient Occupancy Tax (TOT), and Sales Tax including Measure Q, generated 54.9% of the total $25.9 million General Fund revenues collected through March 31st. Overall revenues, including transfers, were $2.4 million higher than the same period in fiscal year 2024-25.

Revenues by Type	Total Budget as of March 31	Actuals through March 31	As % of Budget
Property Tax	$ 12,680,000	$ 7,136,268	56.3%
Transient Occupancy Tax - City	11,847,563	3,654,023	30.8%
Transient Occupancy Tax - Project Area	8,000,000	3,036,698	38.0%
Sales Tax	7,737,140	2,262,656	29.2%
Measure Q	4,191,000	1,185,812	28.3%
Motor Vehicle License Fees (MVLF)	3,271,000	1,605,820	49.1%
Franchise Fees	2,300,000	337,072	14.7%
Business License Tax	2,278,930	150,899	6.6%
Finance - Other Revenues	3,025,405	1,132,250	37.4%
General Government	281,953	4,221	1.5%
Police	2,913,914	1,055,550	36.2%
Fire	3,434,298	603,405	17.6%
Public Works	720,935	345,966	48.0%
Development Services	2,229,456	1,630,803	73.1%
Parks and Recreation	2,385,417	748,735	31.4%
Transfers In	1,430,085	1,017,141	71.1%
Miscellaneous General Fund	44,820	24,896	55.5%
REVENUES TOTAL	$ 68,771,916	$ 25,932,215	37.7%

Property Tax revenue remained unchanged from the previous quarter. Year-to-date receipts represent 56.3% of the total budget, an increase of 8.6% ($565K) compared to the same period last year. The next semi-annual installment payment, due in May, will be reflected in the next quarterly report.

Transient Occupancy Tax (TOT), including TOT from the Project area, increased by 3.3% ($212K) year over year. Sales Tax and Measure Q revenue combined were substantially flat to the prior year's first two quarters' actuals, increasing by less than one percent.

The largest year-over-year variance occurred in the Transfers In category, which increased by $940K, primarily due to the return of funding previously allocated for the Recreation Center Phase 2 construction. Transfers from other funds included in departmental categories also contributed to favorable revenue variances, including a $380K increase in Fire revenues for the SCBA purchase and a $266K increase in Development Services revenues related to long-term building permits. Parks and Recreation revenues increased by $450K, reflecting higher revenue collection associated with the opening of the new Recreation and Aquatics Center, while interest revenue decreased by approximately $324K.

Increases in revenue were more than offset by expenditure growth, including transfers out, resulting in actual primary General Fund expenditures exceeding revenues by approximately $804K through the end of the first two quarters of the fiscal year.

Expenditures. Total actual expenditures through March 31st were $26.7 million. Of this amount, approximately $17.5 million, or 65.5%, was allocated to personnel expenses, covering 13 payroll periods, which represents 50.0% of the total payroll periods for the year. Of the remaining 34.5%, or approximately $9.2 million, $4.3 million was attributed to transfers-out, $2.1 million to professional, technical, and other contract services, $0.8 million to miscellaneous general expense including taxes and fees, travel and training, communications etc., $0.7 million to purchases of tools,

parts, software, machinery and equipment, and the remaining $1.3 million to utilities, general supplies, and other miscellaneous expense.

Expenditures by Department	Total Budget as of March 31	Actuals through March 31	As % of Budget
General Government	$ 7,373,878	$ 2,051,390	27.8%
Finance	3,844,350	1,860,184	48.4%
Miscellaneous General Fund	17,518,392	5,233,819	29.9%
Police	16,825,025	6,578,892	39.1%
Fire	13,236,560	4,715,920	35.6%
Public Works	6,283,033	2,879,614	45.8%
Development Services	2,100,261	898,008	42.8%
Parks and Recreation	6,756,160	2,518,365	37.3%
EXPENDITURES TOTAL	**$ 73,937,659**	**$ 26,736,192**	**36.2%**

Overall expenditures increased by 14.0%, or $3.3 million, compared to the same period in the prior fiscal year. Of that amount, Transfers Out increased by $2.7 million, primarily due to $760K in additional transfers to the Housing Fund to support the City's housing initiatives, $1.1 million in additional transfers to the Health Insurance Fund to pay for a medical insurance special assessment, $300K for long term capital replacement, and $205K for the Boat Patrol program.

Personnel costs increased by approximately $585K, driven by Cost of Living Adjustments (COLA) and Year 3 equity increases for eligible classifications, as outlined in the Memoranda of Understanding (MOUs) for the City's six bargaining units and the Compensation and Benefits package for unrepresented employees. The remaining increase in expenditures is attributable to higher Parks and Recreation staffing to support expanded programs at the new Recreation Center which opened in April 2026, as well as city-wide increases in technical/professional services, utilities, and software costs.

All departments have maintained expenditures below the 50% threshold allocated to the first two quarters of the fiscal year. As the year progresses, recognition of remaining budgeted expenditures such as additional Transfers-out, insurance premiums, and annual payment of CalPERS Unfunded Accrued Liability will impact the percentage of actual expenditures to the total budget.

Measure S Sales Tax General Fund

Measure S, a 1% city-wide sales and use tax, went into effect on April 1, 2021 and is projected to generate $8.4 million for fiscal year 2025/26.

Measure S Sales Tax	Total Budget as of March 31	Actuals through March 31	As % of Budget
REVENUES			
Measure S Sales Tax	$ 8,382,000	$ 2,364,692	28.2%
Interest/Dividends Revenue	46,000	17,050	37.1%
Transfer in from CIP	1,000,000	1,000,000	100.0%
REVENUES TOTAL	**$ 9,428,000**	**$ 3,381,742**	**35.9%**
EXPENDITURES and FINANCING USES			
Technical Services	10,000	-	0.0%
Transfer out to/for:			
Cape Seal (Road Maintenance)	1,000,000	-	0.0%
Fire Battalion Chief position (50%)	198,500	-	0.0%
Police Lieutenant position	326,050	-	0.0%
Road Reconstruction	2,500,000	-	0.0%
Seven (7) Firefighters	1,315,720	127,720	9.7%
Sidewalk Snow Removal	132,635	132,635	100.0%
Snow Removal Equip - Debt Service	778,934	778,934	100.0%
Snow Removal Operations	700,000	700,000	100.0%
Streets - In house repair	1,023,798	-	0.0%
EXPENDITURES TOTAL	**$ 7,985,637**	**$ 1,739,289**	**21.8%**

Revenues. As of March 31, 2026, the City has received approximately $2.4 million in Measure S sales tax revenue. In addition, $1.0 million in Recreation Center project funds were returned to the Measure S Sales Tax Fund as part of the mid-year budget adjustments.

Expenditures. In the FY 2025-26 budget, City Council allocated $8.0 million in Measure S funds to various projects and programs, including $4.5 million for road rehabilitation, maintenance, and in-house street repair.

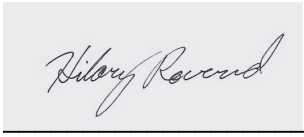
Several Safety positions remain budgeted to be fully or partially funded by Measure S, including seven firefighter positions previously funded by the SAFER grant, one Police Lieutenant position, and 50% of the Fire Battalion Chief position. Other uses include transfers out for debt service on snow removal equipment purchases, sidewalk snow removal, and expanded snow removal operations on public streets.

As of March 31st, a total of $1.7 million has been transferred out to support these Measure S designated projects and programs.

City of South Lake Tahoe

Agenda Item Executive Summary

Hilary Roverud, Interim City Manager



Meeting Date: May 19, 2026
Agenda Item #:4

Agenda Item: Master Agreement with Environmental Science Associates (ESA) for Airport Environmental Compliance Support Services

Executive Summary: The City issued a Request for Qualifications on March 26, 2026, for on-call Airport Environmental Services to support technical environmental planning, permitting, and compliance activities necessary to maintain eligibility for future FAA Airport Improvement Program grants. A three-member Selection Committee reviewed the submitted qualifications and determined that Environmental Science Associates is the most qualified firm. Because the contemplated services include airport planning and environmental services eligible for FAA participation, the City utilized a qualifications-based selection process consistent with 49 U.S.C. Â§ 47107(a)(17), 2 CFR Â§ 200.320, and FAA Advisory Circular 150/5100-14E Change 1. Compensation for individual assignments will be negotiated at the time services are required and on the basis of fair and reasonable fees for the approved scope.

Requested Action / Suggested Motions: Pass a Motion authorizing and directing the Mayor to execute a master professional services agreement with ESA for as-needed airport environmental consultant services for a five-year term beginning June 1, 2026.

Responsible Staff Member: John Dickinson, Airport Manager

Reviewed and Approved By: Susan Blankenship, City Clerk Olga Tikhomirova, Director of Finance Heather Stroud, City Attorney

Attachments:

01-Staff Report-Airport Environmental Services Contract.docx
02-RFQ- Environmental Compliance Support.pdf
03-Contract with Environmental Science Associates
04- Environmental Services RFQ Ranking Sheet.docx

City of South Lake Tahoe
Report to **City Council**

Meeting Date: May 19, 2026

Title: Award 5-Year Master Professional Service Contract for Airport Environmental Compliance Support Services (NEPA, CEQA & TRPA)

Location: 1901 Lisa Maloff Way, Suite 100, South Lake Tahoe, CA 96150

Responsible Staff Member: John Dickinson, Airport Manager

Background: A multi-year contract, commonly known as a Master Professional Services Agreement (PSA) is a contract between an airport sponsor and a consulting firm for specific services referred to by the Federal Aviation Administration (FAA) as "A/E" contracts. Such agreements serve as the 'master contract" for future negotiated project specific services, commonly referred to as "contract amendments." Services and/or projects performed under a contract amendment must be identified in the "Scope of Services" section of the master professional services agreement. Services performed under the agreement may be related to projects that involve federal, state, or local funding sources, or any combination thereof. The Airport Sponsor may have multiple PSAs in place for specific area of expertise or to accommodate project timing needs.

In April 2017, City Council formally adopted the Airport Master Plan Update. The Master Plan Update provides a roadmap for capital improvement projects for a defined 20-year period. The Airport is currently in the process of completing the new Airport Master Plan for 2026-2046 which will go to City Council for adoption.

Federal Requirements

All contracts must be negotiated in accordance with applicable federal law governing qualifications-based selection and negotiation of architectural, engineering, planning, and environmental professional services for airport grant projects.

The guidelines contained in FAA Advisory Circular 150/5100-14E, Architectural, Engineering, and Planning Consultant Services for Airport Grant Projects, are recommended by the FAA to support compliance with applicable federal procurement requirements in 2 CFR Part 200, including 2 CFR §§ 200.317 through 200.326, when selecting consultants for airport projects funded under federal grant programs. The Airport Sponsor shall clearly identify the desired services, projects, and the role of the consultant in both the Request for Qualifications (RFQ) and the Agreement. Each contract amendment for project-specific services should be reviewed by the Sponsor and the FAA, as applicable, to ensure that the project scope and fee are appropriate and that contracting complies with applicable Federal Aviation Administration Advisory Circulars.

City Process
As required by the Federal Aviation Administration (FAA), City staff issued a RFQ on February 9, 2026 to seek the most qualified Airport Environmental Consultant for the period 2026-2031. The RFQ advertisement ended on March 26, 2026. The City received five proposals from the solicitation: Environmental Science Associates (ESA), Avalex, Dudek, Langan, and Soar. The City Selection Committee unanimously selected Environmental Science Associates (ESA) as the most qualified respondent. A ranking summary is provided in Attachment 4 of the Agenda.

Issue and Discussion: A formal bid was issued through PlanetBids.com in conformance with the City's formal procurement process.

The recommendation for possible award was made in conformance with both Federal and State requirements to maintain eligibility for future possible airport grant funding.

The Lake Tahoe Airport sought to streamline City contract procurement and administration through a 5-year Master Professional Services Contract that encompasses airport specific environmental work for multiple projects and operational environmental compliance. This is a departure from the previous practice of procuring environmental and planning services on a project specific basis following City, FAA and Caltrans requirements.

A Master Professional Services contract will cut down City Staff time in soliciting and administering multiple contracts with several consultants at the same time. A review of the bids was performed with the following responses.

Staff recommend the following action(s) for City Council:

1. ***Award a master professional services contract to ESA of Sacramento, California for on-demand airport environmental consultant services for a five-year contract period beginning June 1, 2026 and ending May 31, 2031.***

Financial Implications: There is no financial implication to this 5-Year Master PSA at this time. Specific projects completed under this PSA that exceed $60,000 will be brought before the City Council for consideration per the City's Procurement Policies & Procedure or dictated by any year budgeting policy which result in funding requirements that leave inadequate funding opportunities to carry projects forward.

Contract Amendment fees are established through a negotiation process to determine a fair and reasonable price on a project specific basis following FAA Advisory Circular 150/5100-14E, the airport sponsor is obligated by the Advisory Circular and 2 CFR § 200.323 to prepare an Independent Fee Estimate (IFE) for every contract amendment using Federal funding sources. The FAA also must concur that the scope of work contemplated for each contract amendment is eligible for possible federal funding under the FAA AIP Grant program.

The Airport sponsor must compare the consultant's fee proposal with the Independent Fee Estimate and coordinate with FAA on the results of the process through a Record of Negotiation report. The sponsor is required to either retain staff that are experienced in the preparation of an IFE, engage the services of an independent and objective consultant, or the sponsor may work with Caltrans personnel for the development of the IFE. The sponsor must submit the IFE along with the A/E consultant's cost proposal to the Airports District Office to allow FAA staff to review

the reasonable nature of the fees and issue a determination to ensure against uncompetitive pricing (2 CFR §200.323).

For any contract amendment involving Federal AIP funding, the Airport Sponsor must prepare an Independent Fee Estimate (IFE) and compare the consultant's fee proposal to the IFE as part of the required price analysis and negotiation process. FAA guidance recognizes that a proposal within 10% of the IFE is a common review benchmark; however, the City must ultimately document that the final negotiated fee is fair and reasonable based on the scope of work, level of effort, and applicable federal requirements. The IFE must be prepared by personnel or a third party with professional experience relevant to the project scope to ensure an objective assessment.

Environmental Considerations: Execution of this agreement for on-demand environmental consultant services is not a "project" subject to environmental review under the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines section 15378(b)(2) because it is an administrative activity.

Policy Implications: There are no policy implications associated with this request for City Council direction.

REQUEST FOR QUALIFICATIONS

FIVE YEAR MASTER PROFESSIONAL SERVICES CONTRACT FOR THE LAKE TAHOE AIRPORT (TVL) 2026-2031

AIRPORT ENVIRONMENTAL COMPLIANCE SUPPORT SERVICES (NEPA, CEQA, & TRPA)

Request for Qualifications (RFQ) will be received until the hour of 5:00 P.M. PST

March 26th, 2026 on Planet Bids with tentative award date of May 19th 2026.

SUMMARY

The City of South Lake Tahoe, California (Sponsor), is soliciting Request for Qualifications (RFQ) from airport environmental consulting firms to provide the Lake Tahoe Airport (Airport) with a five-year (5) master professional services contract. The master professional services contract will provide airport environmental compliance support services related to airport operations and airport capital improvement which include but are not limited to the National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA) and Tahoe Regional Planning Agency (TRPA) Code of Ordinances. The Sponsor plans to award a five-year contract, subject to review on an annual basis, for any and all airport capital development subject to federal assistance under the Airport and Airway Improvement Act of 1982, as amended, the California Department of Transportation, California Aid to Airports Program (CAAP), and/or from other sources including local funding.

Proposals are due on or before **03/26/2026 no later than 5:00 P.M.** (Pacific Standard Time). Proposals received after the deadline will not be accepted. Proposals and required copies must be submitted by Planet Bids on-line portal. Fax and Electronic mailed (e-mail) submission will not be accepted.

Read this RFQ document carefully as the award will be given to the most "qualified or best value" Proposer responding to this RFQ. The City of South Lake Tahoe reserves the right to accept or reject any or all proposals or to make no award at all, to extend the period for accepting proposals, to advertise the RFQ at any time and to waive any minor irregularities in any proposals.

In the opinion of the City of South Lake Tahoe, this RFQ is complete and without need of explanation. However, if you have questions, or should you need any clarifying information, please use the Q&A feature that is found within Planet Bids, where the RFQ is posted.

Please note that no information given will be binding upon the City unless such information is issued in writing as an official addendum to this RFQ.

TIMELINE OF CRITICAL DATES

Release of RFQ	**02/12/2026**
Deadline for Question Submittal via Planet Bids	**02/26/2026**
RFQ Submittals DUE	**03/26/2026**
Selection Committee Review Period/Interviews	**04/09/2026**
Award Date	**05/19/2026**

SUBMITTAL PROCEDURES

1. Register with the City

All Proposers **must** register through the Vendor Portal in the PlanetBids Vendor Portal to be entered in the City of South Lake Tahoe Vendor Database, which is **required to submit a proposal**. Proposers will be notified by the City of any addenda that may be issued to this Request for Qualification (RFQ). Proposers must register in the City's Vendor Database to be notified of such addenda.

To register, go to: https://pbsystem.planetbids.com/portal/14997/portal-home and follow the instructions applicable to Proposer. Following submission, Proposer will receive a confirmation message within 24 hours from the City. Proposers are *solely responsible* for maintaining up to date and accurate information in the Vendor Database.

2. Public Record

Proposals must be submitted through the Planetbids portal. Proposals shall not be e-mailed or faxed to the City. **Proposals not received by the date and time specified in this RFQ, will be rejected.** Documents submitted in response to this RFQ will become the property of the City of South Lake Tahoe and will be regarded as public record under California Public Records Act under Government Code 6250 et seq., and subject to review or release to the public, **excluding** financial records marked "confidential" which shall be available for the Proposer to pick up following a review and selection of the firm(s).

3. Format

Font, Type and Style: All proposals shall be single-sided and professionally prepared (no handwritten proposals will be accepted). There are no requirements on font size, type or style requirements.

4. Submittal Deadline

Response to this RFQ is due on or before **03/26/2026 no later than 5:00 P.M.** (Pacific Standard Time) to Planet Bids. Reponses received after the deadline will not be accepted; there are no exceptions. Fax and Electronic mailed (e-mail) submissions will not be accepted.

5. Selection Process

A Selection Committee consisting of City Staff will evaluate the submitted proposals. Proposer(s) will be objectively evaluated based on their responses to the project scope outlined in this RFQ. The written proposal should clearly demonstrate how the Proposer could best satisfy the requirements of the City. The Selection Committee will utilize the Evaluation Method and Criteria described on page 15 of this RFQ to rate and rank each proposal.

If more information is needed following a review of the Proposals, the Selection Committee *may* invite one or more of the Proposers to a Selection Interview. Upon completion of interviews, (if needed) a recommendation by the Selection Committee to the City Manager/City Council will be made at that time and awarded in accordance with the City of South Lake Tahoe Procurement Policies & Procedures.

The City of South Lake Tahoe reserves the right to accept or reject any or all proposals or to make no award at all, to extend the period for accepting proposals, to advertise the RFQ at any time and to waive any minor irregularities in any proposal.

6. Professional Services Agreement

The Professional Services Agreement with the selected Proposer will begin within 30 days of award of contract. The selected Proposer will be required to sign the City's Standard Professional Services Agreement. A sample of this Agreement is attached hereto, and the City reserves the right to amend or edit this Agreement however it sees fit.

7. Reservations

a) The City reserves the right to reject any and all proposals, whether or not minimum qualifications are met, and to modify, postpone, or cancel this Request for Proposal, in whole or in part, or decide to award a contract to perform only some of the services outlined in this Request for Proposals, without liability, obligation, or commitment to any party, firm, or organization.

b) In addition, the City reserves the right to request and obtain additional information from any Proposer and to negotiate the final scope of services with the selected Proposer. The City is not liable for any costs incurred by Proposers prior to issuance of an agreement, contract or purchase order. Costs of developing the proposals, oral presentations or any other such expenses incurred by the Proposer in responding to the RFQ are entirely the responsibility of the Proposer and shall not be reimbursed in any manner by the City of South Lake Tahoe.

c) Only the Mayor or the City Manager, after being duly authorized by the City Council, may execute the Agreement with the successful Proposer. Further, it is understood that respondents must independently evaluate the information in this RFQ and that the City makes no guarantee of data accuracy.

d) The City reserves the right to waive or permit cure of minor informalities and/or insignificant mistakes such as matters of form rather than substance and to conduct discussions and negotiations with any *qualified respondent* in any manner deemed necessary by the City to serve its best interests. The City also reserves the right, based on its sole judgment and discretion, to award a contract based upon the written proposals it receives without conducting discussions, interviews or negotiations.

e) If, in the opinion of the City, a proposal contains false or misleading statements or references, it may be rejected without notice to Proposer.

f) The City reserves the right to obtain written clarification of any point in a Proposer's proposal or to obtain additional information necessary to properly evaluate a particular proposal. Failure of a Proposer to respond to such a request for additional information or clarification may result in rejection of the proposal.

g) The City reserves the right, without qualification, to select a Proposer for further discussions based solely on the content of the RFQ and relevant information obtained from others concerning the respondent's respective records of past performance.

h) Proposer agrees that any response submitted to this RFQ will remain current and valid for a period of not less than 120 calendar days from the proposal due date.

8. <u>Bidder's Security</u> - N/A

INTRODUCTION

Background

The City of South Lake Tahoe, California (Sponsor), is soliciting Request for Qualifications (RFQ) from airport environmental consulting firms to provide the Lake Tahoe Airport (Airport) with a five-year (5) master professional services contract. The master professional services contract will provide airport environmental compliance support services related to airport operations and airport capital improvement which include but are not limited to the National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA) and Tahoe Regional Planning Agency (TRPA) Code of Ordinances.

The Sponsor plans to award a five-year contract, subject to review on an annual basis for any and all airport capital development subject to federal assistance under the Airport and Airway Improvement Act of 1982, as amended, the California Department of Transportation, California Aid to Airports Program (CAAP), and/or from other sources including local funding. **The five-year contract period is anticipated to begin June 1, 2026 ending on May 31, 2031.**

The Lake Tahoe Airport has an overall Disadvantaged Business Enterprise (DBE) goal of 0.00% of total project costs being dedicated towards Race Conscious DBE and is subject to change corresponding with Federal regulations.

Any interested respondent to this RFQ shall convey a good faith effort to solicit DBEs on all funded projects executed by the City as defined in 49 Code of Federal Regulations (CFR) Part 26, to subcontract 0.00% of the dollar of the prime contract to certified DBE sub-consultants.

The Sponsor reserves the right to inquire into the prospective proposal's ability to provide professional services, as defined below, and to amend the Schedule of Projects and contract Scope of Work at the sole discretion of the Sponsor, on behalf of the Lake Tahoe Airport, to include any or all of the below listed services. Environmental consultants employed for work on projects involving airport grants must be responsible and possess the ability to perform successfully under the terms and conditions of the proposed procurement for airport environmental services including compliance with/to NEPA, CEQA and TRPA. Sponsor consideration will be given to such matters as integrity, record of past performance, extent of experience with the type of services required by the Sponsor, technical resources, and accessibility to other resources required to complete the mission of the Airport Sponsor.

Consultants performing Special Services, which include environmental studies, environmental analysis, environmental permit application and environmental compliance reports may be employed directly by the Sponsor to implement one or more phases of a project or may be employed by the principal consultant via a subcontract agreement. Sponsor selection under this RFQ will adhere to the requirements of 49 USC § 47107(a) (17) and 2 CFR §200.320, as amended. **2 CFR § 200.320 establishes that procurement by competitive proposal, where price is not a factor, may only be used for procurement of architectural/engineering/special services.** Title IX of the Federal Property and Administrative Services Act of 1949 requires that qualifications-based selection procedures be used for the selection of firms to perform architectural, engineering and related special services. Qualifications based procedures require that a contract for Special Services be awarded pursuant to a fair and open selection process based on the qualifications of the firms. The fees for such services are established following selection of a firm through a negotiation process to determine a fair and reasonable price on a project-by-project basis when a need is determined by the Sponsor.

Contemplated airport capital development projects under this contract may include, but are not limited to, any of the following projects below over the five-year contract period (not in order of priority). Project work will be based on funding availability (local, state and federal). Respondents are advised that some services may not be required and the Sponsor reserves the right to initiate an additional procurement action for any project service not included in this RFQ during the contracting period, if required by unforeseen conditions/events that may transpire. The negotiation of the fee services, shall occur at the time those services are needed as specified in Federal Aviation Administration Advisory Circular 150/5100-14E Change 1, *Architectural, Engineering, and Planning Consultant Services for Airport Grant Projects*. Examples of fee schedule and scope of work are provided in Appendices C and E of Federal Aviation Administration Advisory Circular 150/5100-14E Change 1. An independent cost analysis shall be performed for each of these negotiations for all projected funded in part by the Federal Aviation Administration Airport Improvement Program. If a price cannot be agreed upon between the owner and the selected firm and negotiations are terminated, negotiations may be initiated with the second top-rated firm, if one exists.

Objective

The objective of this RFQ is to establish a five-year on-call master agreement with qualified environmental consulting firms to provide FAA-compliant environmental planning, documentation, and regulatory coordination services for the Lake Tahoe Airport. The selected consultant(s) will support the Airport in complying with all applicable federal, state, regional, and local environmental requirements, including NEPA, CEQA, applicable FAA Orders, and the Tahoe Regional Planning Agency (TRPA) Code of Ordinances, while minimizing environmental risk, schedule impacts, and potential project delays within the Lake Tahoe Basin.

The master agreement is intended to provide flexible, task-order-based environmental services in support of the Lake Tahoe Airport's 5-Year Capital Improvement Program (CIP) and other airport-related projects. Services may include preparation of Categorical Exclusions, Environmental Assessments, CEQA documentation, joint NEPA/CEQA/TRPA environmental reviews, environmental re-evaluations, technical memoranda, and coordination with the FAA, TRPA, and other responsible and trustee agencies. The consultant(s) shall demonstrate experience integrating federal, state, and TRPA environmental processes, addressing TRPA threshold findings, and applying current FAA and CEQA guidance to produce legally defensible environmental documentation that supports timely project delivery.

In addition to CIP support, the agreement will provide on-call environmental planning, permitting, and advisory services to address as-needed airport projects over the five-year term. The Lake Tahoe Airport seeks consultants who can provide proactive environmental risk management, efficient and right-sized staffing, and responsive project management, while maintaining continuity of knowledge of airport operations, environmental sensitivities, and regulatory requirements unique to the Lake Tahoe Basin. The overall goal is to establish a long-term professional partnership that supports regulatory compliance, cost control, and successful implementation of the Airport's aviation program.

CAPITAL PROJECTS CONTEMPLATED 2026-2031

Please note that City (Airport Sponsor) Fiscal Year (FY) begins on October 1 ending September 30.

1. **FY 2026-2027** After consultant selection, provide airport with rough order of magnitude for anticipated project costs for capital financial planning purposes, a focus will be on non-grant eligible work which includes TRPA, CEQA and other agency environmental review. These are estimates and not final negotiated fee schedule for proposed work and should not be treated as such. Anticipated to start estimation process in October 2026 after a 5-year Master Professional Services Contract is executed with the Sponsor. This process will assist the Sponsor in ensure adequate planning for future funding allocations for 2026-2031 contemplated project implementation. Also contemplated is initial

scoping meeting with FAA Environmental Protection Specialist to qualify level of environmental documentation required to implement 2026 Airport Layout Plan Update with narrative report or a new Airport Master Plan, which should be completed by the end of 2026.

CIP projects anticipated for 2026 - 2027 include:

-Runway 18-36 Crack Seal/Seal Coat/Paint

-Airport Access Road Rehabilitation

2. **FY 2027-2028** AIP funded project rehabilitate Taxiway A design which will include NEPA, CEQA, and TRPA approvals. This project is currently anticipated to be awarded to a qualified engineering firm for design, and work in conjunction with the new environmental consulting firm. This project is anticipated to be performed in two phases, with the first phase beginning fiscal year 2028 and the second phase to be completed in 2030.

3. **FY 2028-2029** TBD

4. **FY 2029-2030** Phase II Taxiway. The objective of the Taxiway Phase II Capital Improvement Project is to deliver a safe, operationally efficient airfield improvement at the Lake Tahoe Airport while ensuring full compliance with applicable environmental regulations, including NEPA, CEQA, and TRPA Code of Ordinances. The project will advance the Airport's Capital Improvement Program by improving taxiway geometry, pavement condition, and operational reliability in a manner that is consistent with FAA design standards and the environmental sensitivities of the Lake Tahoe Basin.

5. **FY 2030-2031** Rehabilitate Runway 18-36 Design. The objective of the FY 2030–2031 Runway 18–36 Rehabilitation Design project is to advance the planning and design of runway pavement rehabilitation at the Lake Tahoe Airport in a manner that enhances safety, maintains operational reliability, and extends the useful life of the primary runway. The project will support the Airport's Capital Improvement Program by developing a constructible, FAA-compliant design that aligns with anticipated funding, phasing, and operational requirements. Environmental objectives for the Runway 18–36 Rehabilitation Design include completing all necessary environmental review and coordination in compliance with NEPA, CEQA, and the Tahoe Regional Planning Agency (TRPA) Code of Ordinances. The selected consultant(s) will support preparation of appropriate environmental documentation, environmental re-evaluations, and agency coordination to ensure that the proposed design is consistent with previously approved environmental clearances or to obtain any additional approvals required. The overall objective is to achieve environmental clearance and regulatory consistency concurrent with design development, enabling timely implementation of runway rehabilitation while minimizing environmental impacts and

regulatory risk within the Lake Tahoe Basin.

6. **Undetermined CIP as needed.** Projects that require CEQA, NEPA, and TRPA will be on an as-need basis.

   All projects are dependent upon federal Airport Improvement Program (AIP) funding, Caltrans funding, and/or Airport funding. All project elements require funding approval from the Sponsor prior to being obligated as an amendment to this 5-year Master Professional Services Agreement. Therefore, it shall be understood that some of the services related to the above listed projects may be deleted or modified. The Sponsor reserves the right to phase the projects contemplated 2026-2031 through the course of multiple grants and/or maybe phased into smaller projects as funding and need dictate. The Sponsor reserves the right to initiate additional services not included in the initial procurement. **Please note that this request is for a Request for Qualification; a detailed cost proposal is not being requested at this time**. Final project costs will be determined through negotiations with the selected firm when the need for such services arise. The negotiation of fees will be specific to each project element and will be included as an amendment to the 5-year Master Professional Services contract. **Applicants are on notice that the City may perform an independent fee analysis on any or all of the projects identified in this solicitation to make a determination of the reasonableness of the fees proposed.**

SCOPE OF SERVICE

Environmental Services and Qualifications

The responding firm shall demonstrate comprehensive experience and technical expertise in providing environmental consulting services for FAA-funded airport projects, particularly within highly regulated environments such as the Lake Tahoe Basin. Environmental services and qualifications shall include, but are not necessarily limited to, the following work elements:

- Investigation, evaluation, rehabilitation, restoration, and long-term management planning for habitats supporting flora, fauna, wetlands, waters of the United States and State, sensitive species, and special-status species, including coordination with federal, state, and local resource agencies.
- Preparation of environmental technical reports and documentation, including environmental assessments, risk assessments, remedial action plans, site investigations, mitigation and monitoring plans, and post-construction compliance reporting in support of airport planning, development, maintenance, and operations.
- Demonstrated experience in compliance with the National Environmental Policy Act (NEPA) for FAA-funded projects, including preparation and support of Categorical Exclusions (CATEX), Environmental Assessments (EA), and Environmental Impact Statements (EIS), as applicable, in coordination with the FAA and other cooperating agencies.
- Preparation of environmental documentation, reports, and studies required to support compliance with the California Environmental Quality Act (CEQA) and the Tahoe Regional Planning Agency (TRPA), including but not limited to Initial Studies, Environmental Checklists, technical studies, findings, mitigation measures, and monitoring and reporting programs.
- Proven knowledge of TRPA regulations, thresholds, ordinances, and environmental review processes, including experience navigating the multi-jurisdictional permitting framework unique to the Lake Tahoe Basin and coordinating with TRPA staff, local jurisdictions, and state and federal agencies.
- Preparation and support of biological assessments, biological evaluations, cultural and natural resource surveys, and permit applications, including coordination with agencies such as the FAA, TRPA, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, Lahontan Regional Water Quality Control Board, and other applicable regulatory bodies.
- Preparation, updating, and amendment of Industrial and Construction Stormwater Pollution Prevention Plans (SWPPP), including development of new SWPPP documents for airport construction projects, implementation support, inspection services, corrective actions, and compliance with state and regional stormwater requirements.
- Spill Prevention, Control, and Countermeasure (SPCC) Plan compliance support services, including preparation and amendment of SPCC plans, regulatory coordination, training support, and technical assistance in response to spill incidents occurring on airport property.

- Technical support for hazardous materials and hazardous waste management programs, including regulatory compliance assistance, inspections, training support, and coordination with applicable oversight agencies.
- Preparation, amendment, and regulatory coordination for El Dorado County Hazardous Materials Business Plans and related documentation applicable to airport facilities and operations.
- Other environmental planning, permitting, compliance, and monitoring services related to airport operations and development, as may be required due to the complex, layered federal, state, regional, and local environmental regulatory structure governing activities within the Lake Tahoe Basin.

The firm shall demonstrate a clear understanding of FAA environmental requirements, TRPA regulatory processes, and the integration of NEPA, CEQA, and TRPA compliance for airport projects, as well as a proven ability to coordinate effectively with multiple agencies and stakeholders to successfully deliver compliant projects.

MEASUREMENT AND PAYMENT

No cost or fee schedules shall be submitted with this RFQ solicitation. FAA AIP grant guidelines require cost and fee information to be presented during contract negotiations after the selection of the most qualified consultant with which to negotiate. Please refer to Federal Aviation Administration Advisory Circular 150/5100-14E, Architectural, Engineering, and Planning Consultant Services for Airport Grant Projects for more information on the selection process being used in this recruitment.

The following details provide additional information relevant to the selection process and the Airport:
Firms submitting Statements may be selected for an interview within thirty (30) days after the deadline. The date, time and location will be coordinated with the firm.
The Sponsor will negotiate a fee and billing schedule and contract with the successful firm.
The Sponsor reserves the right to hold Statements of Qualifications for a minimum of ninety (90) days before action is requested.

STATEMENT OF QUALIFICATION REQUIREMENTS

Submittals shall not exceed 30 one-sided pages. The page limit does not include project team resumes, project schedule, table of contents, or cover page(s). Late submittals will not be accepted. The SOQ shall include the following as a minimum:

Transmittal Letter
Scope of Work and Projects Contemplated Understanding – Provide a detailed discussion of the specified scope of work and duties including a proposed work plan to complete the required services listed within Section III and Capital Projects Contemplated in Section I. Consultants are encouraged to explain, in detail, their understanding of the scope of work to achieve successful environmental compliance in those Capital Projects Contemplated in

Section I. Please feel free to identify any supplemental tasks deemed necessary for successful completion of the project.

Project Team – Include a flow chart of project team including key project personnel and any sub-consultants that will be assigned to the project. Provide a narrative description of the qualifications and experience of each key person along with their proposed project responsibilities. A resume shall be included for each person on the flow chart and identify proposed sub-consultants and their personnel. Sub-consultants shall attend the interview with "short listed" prime consultants. Please note that resumes/CVs do not count towards total page count in submittal and shall be attached at the end by reference or appendix. Respondents must clearly indicate if the firm is sub-contracting portions of the work.

Following the award of a contract with the Sponsor, no additional subcontracting will be permitted without the expressed written consent of the City.

Statement of Qualifications – Include descriptions of example of California projects completed within the past five years that are comparable in scope to the tasks and duties specified within this RFQ.

References – Provide three public agency references including names, addresses and telephone numbers that may be contacted by the City.

Familiarity with FAA NEPA, CEQA and TRPA Procedures and Personnel: Provide an explanation of your experience with NEPA, CEQA and TRPA regulations, policies, procedures and personnel. Any experience or familiarity with the unique environmental review processes required by the Tahoe Regional Planning Agency should be included in this section, if applicable.

PROPOSAL CONTENT REQUIREMENTS

Proposal Requirements - All proposals must include the following information and shall be organized as described below.

A. Cover Letter (0-5 points)

The cover letter shall be addressed to the Airport Manager, and at a minimum, must contain the following:

- Identification of Firm, including name, address and telephone number
- Name, title, address and telephone number of contact person during period of proposal evaluation
- A statement to the effect that the proposal shall remain valid for a period of not less than 120 calendar days from date of submittal
- Signed by person authorized to bind the Firm to the terms of the proposal.

B. Previous Work in California (0-20 points)

The Proposer shall demonstrate substantial experience providing environmental consulting services for projects located within the State of California, with a strong emphasis on compliance with state, regional, and federal environmental regulations. This experience shall reflect a comprehensive understanding of California's regulatory framework and the ability to successfully deliver complex environmental services for public agencies and aviation-related facilities.

C. Company History, Background and Experience (0-20 points)

Describe the Company's history and organizational structure, including the size of the company, location of office(s) and years in business. Provide resumes for project team members. Also include the Firm's background, experience, and capacity to undertake the project/services for the City of South Lake Tahoe in conformity with the requirements of the RFQ.

D. Scope of Work/Qualifications (0-35 points)

Describe the Company's general approach to managing the services provided including an explanation of the methodology to be followed and specific plans to manage, control, and supervise the services in order to insure satisfactory provision of services. In developing the work plan, reference should be made to the specific requirements and specifications noted in the Scope of Services (pages 12 – 14). Provide a delivery schedule designed to meet the requirements of the City. An implementation timeline from the Company is required. Provide description implementation plan considerations, including timeframes and deliverables for various stages of the agreement.

E. Financial Responsibility (0-10 points)

The Proposer shall demonstrate financial responsibility and stability sufficient to successfully perform the required services for the duration of the contract. This includes the ability to manage project resources, personnel, and operational expenses in a timely and reliable manner. The City seeks assurance that the Proposer has the financial capacity to meet contractual obligations without interruption to services.

F. Description of Recent Projects/References (0-10 points)

Provide a description of accounts/ agreements of a similar nature including at least three (3) recent client references with names and telephone numbers, contact persons.

EVALUATION METHOD & CRITERIA

Proposals will first be reviewed for responsiveness to the requirements. If any information is missing from the required content, the proposal may be deemed non-responsive and returned to proposer and any further review is subject to the City's discretion (see Reservations, page 4).

The Selection Committee will make a recommendation based on the criteria in this Proposal to award the contract/agreement to a selected Proposer. The City may conduct interviews as described on page 4 under Selection Process.

Evaluation Criteria

Recommendations for selection will be based on the following weighted criteria of 100 possible points and passing status on all Pass or Fail categories, if any.

Criteria	Points
A. Cover Letter	5
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Attachment 3 – Pavement Maintenance Management Program (PMMP)

Attachment 4 – TVL 2026 CIP Package

ATTACHMENT 1

SAMPLE

PROFESSIONAL SERVICE AGREEMENT

ACITY OF SOUTH LAKE TAHOE

PROFESSIONAL SERVICES AGREEMENT

This Agreement is made and entered into as of the _____day of _____ 202X by and between the **City of South Lake Tahoe**, a municipal corporation ("City") and _____ ("Consultant").

RECITALS

A. Consultant is specially trained, experienced and competent to perform the special services which will be required by this Agreement.

B. Consultant possesses the skill, experience, ability, background, certification and knowledge to provide the services described in this Agreement on the terms and conditions described herein.

C. City desires to retain Consultant to render professional services as set forth in this Agreement.

AGREEMENT

1. Scope of Services. Consultant shall perform the services set forth in this agreement and shall provide said services at the time, place, and in the manner specified in this agreement. Consultant shall have no power or authority by this Agreement to bind City in any respect.

   The Consultant agrees that it has satisfied itself by its own investigation and research regarding the conditions affecting the work to be done and labor and materials needed, and that its decision to execute this Contract is based on such independent investigation and research.

   All services provided by Consultant pursuant to this Agreement will be provided in accordance with the terms set forth in the **Exhibit A, "Scope of Services,"** attached hereto and incorporated herein by reference. **Exhibit B, "Compensation Schedule,"** attached hereto and incorporated herein by reference, outlines the fees and compensation which shall be paid pursuant to this Agreement.

2. Term/Time of Performance. The services by Consultant are to commence upon the execution of the Agreement and continue for _____ years.

3. Compensation. Compensation to be paid to Consultant shall be in accordance with the Schedule set forth in **Exhibit B** which is attached hereto and incorporated herein by reference. In no event shall Consultant's compensation, including travel and out-of-pocket expenses, exceed _____ without additional written authorization from City. Payment by City under this Agreement shall not be deemed a waiver of defects, even if such defects were known to City at the time of payment. Payment is contingent upon compliance with all terms and conditions of this Agreement, as set forth herein. Consultant shall obtain prior written authorization from the City Project Manager for any costs in excess of budgeted amounts for each line item, task, or obligation under the Scope of Services.

4. Method of Payment. Consultant shall submit monthly billings to City describing the work performed during the preceding month. Consultant's bills shall include a brief description of the services performed, the date the services were performed, the number of hours spent and by whom, the applicable hourly rate, and a description of any reimbursable expenditures. City shall pay Consultant no later than 30 days after approval of the monthly invoice by City staff.

5. Extra Work. At any time during the term of this Agreement, City may request that Consultant perform extra work. As used herein, "Extra Work" means any work which is determined by City to be necessary for the proper completion of the Project, but which the parties did not reasonably anticipate would be necessary at the execution of this Agreement. Consultant shall not perform, nor be compensated for, extra work without prior written authorization from City.

6. Termination. This Agreement may be terminated by City or Consultant immediately for cause or without cause upon thirty days (30) days written notice of termination. Upon termination, Consultant shall be entitled to compensation for services performed up to the effective date of termination, and City shall be entitled to all work performed to that date.

   Termination, revocation, or expiration of this Agreement shall not release either party from liability resulting from an event which occurred prior to such termination, revocation or expiration.

7. Ownership of Documents.

All plans, studies, documents and other writings, including working notes and internal documents, prepared by and for Consultant, its officers, employees and agents and subcontractors in the course of implementing this Agreement, shall become the property of City upon payment to Consultant for such work, and City shall have the sole right to use such materials in its discretion without further compensation to Consultant or to any other party. Consultant shall, at Consultant's expense, provide such reports, plans, studies, documents and other writings to City upon written request. All documents prepared by Consultant are confidential and shall be maintained to preserve their confidential nature. Release of any such documents to third parties shall only be made upon written consent of City.

8. Consultant's Books and Records.

a. Consultant shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, and other records or documents evidencing or relating to charges for services, or expenditures and disbursements charged to City for a minimum period of three (3) years, or for any longer period required by law, from the date of final payment to Consultant for services provided pursuant to this Agreement.

b. Consultant shall maintain all documents and records which demonstrate performance under this Agreement for a minimum period of three (3) years, or for any longer period required by law, from records shall be available at Consultant's address indicated for the date of termination or completion of this Agreement.

c. Any records or documents required to be maintained pursuant to this Agreement shall be made available for inspection or audit, at any time during regular business hours, upon written request by the City Manager, City Attorney, City Auditor or a designated representative of these officers. Copies of such documents shall be provided to City for inspection at City offices when it is practical to do so. Otherwise, unless an alternative is mutually agreed upon, the receipt of notices in this Agreement.

d. Where City has reason to believe that such records or documents may be lost or discarded due to dissolution, disbandment or termination of Consultant's business, City may, by written request by any of the above-named officers, require that custody of the records be given to City and that the records and documents be maintained at City offices. Access to such records and documents shall be granted to any party authorized by Consultant, Consultant's representatives, or Consultant's successor-in-interest.

9. Independent Contractor. It is understood that Consultant, in the performance of the work and services agreed to be performed, shall act as and be an independent contractor and shall not act as an agent or employee of City. Consultant shall obtain no rights to retirement benefits or other benefits which accrue to City's employees, and Consultant hereby expressly waives any claim it may have to any such rights. All employees, agents, contractors or subcontractors hired or retained by Consultant are employees, agents, contractors or subcontractors of Consultant and not of the City.

City is not required to make any deductions or withholdings form the compensation payable to Consultant under the provisions of this Contract, and is not required to issue W-2 Forms for income and employment tax purposes for any of Consultant's assigned personnel. Any third party persons employed by Consultant shall be entirely and exclusively under the direction, supervision, and control of Consultant. Consultant hereby indemnifies and holds City harmless from any and all claims that may be made against City based upon any contention by any third party that an employer-employee relationship exists by reason of this Contract.

10. Interest of Consultant. Consultant, (and principals, associates and professional employees of consultant) covenants and represents that it does not now have any investment or interest in real property and shall not acquire any interest, direct or indirect, in the area covered by this Agreement or any other source of income, interest in real property or investment which would be affected in any manner or degree by the performance of Consultant's services hereunder. Consultant further covenants and represents that in the performance of its duties hereunder no person having any such interest shall perform any services under this Agreement.

Consultant is not a designated employee within the meaning of the Political Reform Act because Consultant:

a. Will not serve in a staff capacity and will conduct research and arrive at conclusions with respect to their rendition of information, advice, recommendation or counsel independent of the control and direction of City or of any City official, other than normal agreement monitoring; and,

b. Possesses no authority with respect to any city decision beyond rendition of information, advice, recommendation or counsel. [FPPC Reg. 18700.3(a)].

11. Professional Ability of Consultant. City has relied upon the professional training and ability of Consultant to perform the services hereunder as a material inducement to enter into this Agreement. Consultant shall therefore provide properly skilled professional and technical personnel to perform all services under this Agreement. All work performed by Consultant under this Agreement shall be in accordance with applicable legal requirements and shall meet the standard of quality ordinarily to be expected of competent professionals in Consultant's field of expertise.

12. Compliance with Laws. Consultant shall comply with all applicable federal, state, regional and local laws, codes, ordinances and regulations in carrying out their duties under this Agreement. Consultant shall observe and comply with all applicable laws, ordinances, regulations and codes of federal, state and local governments, and shall commit no trespass on any public or private property in performing any of the work authorized by this Agreement. The City, its officials, officers, elected officials, appointed officials and employees shall not be liable at law or in equity as a result of any failure of Consultant to comply with this section.

In the event it is determined that the Consultant is required to pay prevailing wages for the work performed under this Agreement, the Consultant shall pay all penalties and wages as required by law.

13. Licenses. Consultant represents and warrants to City that it has all licenses, permits, qualifications, insurance and approvals of whatsoever nature which are legally required of Consultant to practice its profession. Consultant

represents and warrants to City that Consultant shall, at its sole cost and expense, keep in effect or obtain at all times during the term of this Agreement, any licenses, permits, insurance and approvals which are legally required of Consultant to practice its profession. If Consultant will be physically present in the City of South Lake Tahoe to perform some or all of the services, Consultant shall maintain a City of South Lake Tahoe business license at all times services are performed under this Agreement. Consultant acknowledges that payments made pursuant to this Agreement may be withheld until this provision has been satisfied.

14. Indemnity. Consultant hereby agrees to and shall indemnify and hold harmless City, its elected and appointed boards, officers, agents, employees and volunteers from and against any liability for any and all claims, demands, actions, losses, damages and injuries, direct or indirect (including any and all costs and expenses in connection therein), arising out of this Agreement or caused in any way by Consultant's negligent performance of this Agreement or its breach of its obligations contained in this Agreement, except for any such claims arising out of the negligence or willful misconduct of the City. Consultant agrees to defend City from and against any and all losses, damages, claims costs and fees arising out Consultant's negligent acts, errors, omissions, regarding this Agreement, the Consultant's work under this Agreement, or the consultant's Scope of Work.

City does not, and shall not, waive any rights against Consultant which it may have by reason of the aforesaid hold harmless agreement, because of the acceptance by City, or the deposit with City by Consultant, of any of the insurance policies hereinafter set forth.

This hold harmless agreement by Consultant shall apply to all damages and claims for damages, or alleged to have been suffered, by reason of any of the aforesaid operation of Consultant or any subcontractor, regardless of whether such insurance policies shall have been determined to be applicable to any of such damages or claims for damages.

Consultant further waives any and all rights to any type of express or implied indemnity or right of contribution from the City for any liability, claims, demands, costs, charges and expenses and causes of action of whatsoever arising out of or in any way connected with this Agreement, and consultant's work under this Agreement.

15. Insurance Requirements.

a. Consultant, at Consultant's own cost and expense, shall procure and maintain, for the duration of the contract, the following insurance policies.

i. Workers' Compensation Coverage. Consultant shall maintain Workers' Compensation Insurance and Employer's Liability Insurance for their employees in accordance with the laws of the State of California. In addition, Consultant shall require each subcontractor to similarly maintain Workers' Compensation Insurance and Employer's Liability Insurance in accordance with the laws of the State of California for all of the subcontractor's employees. Any notice of cancellation of all Workers' Compensation policies must be received by City at least thirty (30) days prior to such change. Consultant shall provide thirty (30) days written notice of nonrenewal of any Workers' Compensation policies. The insurer shall agree to waive all rights of subrogation against City, its officers, agents, employees and volunteers for losses arising from work performed by Consultant for City.

ii. Commercial General Liability Coverage. Consultant shall maintain commercial general liability insurance no less broad than ISO form CG 00 01 in an amount not less than one million dollars ($1,000,000) per occurrence for bodily injury, personal injury and property damage. Coverage must be made on the standard Occurrence form. Claims-Made forms are not acceptable without prior written consent of City. City of South Lake Tahoe must be endorsed as an additional insured for liability arising out of ongoing operation by on behalf of Consultant. If a commercial general liability insurance form or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the work to be performed under this Agreement or the general aggregate limit shall be at least twice the required occurrence limit.

iii. Automobile Liability Coverage. Consultant shall maintain automobile liability insurance covering bodily injury and property damage for all activities of the Consultant arising out of or in connection with the work to be performed under this Agreement, including coverage for owned, hired and non-owned vehicles, in an amount of not less than one million dollars ($1,000,000) combined single limit for each occurrence.

iv. Professional Liability Coverage. Consultant shall maintain professional errors and omissions liability insurance for protection against claims alleging negligent acts, errors or omissions which may arise from Consultant or by its employees, or subcontractors. The amount of this insurance shall not be less than one million dollars ($1,000,000) on a claims-made annual aggregate basis, or a combined single-limit per occurrence basis.

v. Cyber Liability Coverage. Consultant shall maintain cyber liability insurance with limits not less than one million dollars ($1,000,000) per claim, two million dollars ($2,000,000) aggregate. Coverage shall be sufficiently broad to sufficiently broad to respond to the duties and obligations as is undertaken by Vendor in this agreement and shall include, but not limited to, claims involving security breach; system failure; data recovery; business interruption; cyber extortion; social engineering; infringement of intellectual property, including but not limited to infringement of copyright, trademark, trade dress, invasion of privacy violations, information theft, damage to or destruction of electronic information, release of private information, and alteration of electronic information. The policy shall provide coverage for breach response costs as well as regulatory fines and penalties, and credit monitoring expenses with limits sufficient to respond to these obligations. Vendor's policy shall be primary and shall not seek contribution from the City's coverage, shall contain a waiver of subrogation in favor of the City, and shall be endorsed to provide that City and its officers, officials, employees, agents, and volunteers are additional insureds. Any failure to comply with the reporting provisions of

the policy by Vendor shall not affect coverage provided to the City. If Vendor maintains broader coverage and/or higher limits than the minimums listed above, City requires and shall be entitled to the broader coverage and/or higher limits maintained by the Vendor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to City.

b. Endorsements. Each general liability and automobile liability insurance policy shall be with insurers possessing a AM Best's rating of no less than A:VII and shall be endorsed with the following specific language:

i. City, its elected or appointed officers, officials, employees, agents and volunteers are to be covered as additional insured's under Consultant's General Liability and Automobile Liability policies with respect to liability arising out of this Agreement and/or work performed by or on behalf of the Consultant, including materials, parts or equipment furnished in connection with such work or operations.

ii. This policy shall be considered primary insurance as respects City, its elected or appointed officers, officials, employees, agents and volunteers. Any insurance maintained by City, including any self-insured retention City may have, shall be considered excess insurance only and shall not contribute with it.

iii. This insurance shall act for each insured and additional insured as though a separate policy had been written for each, except with respect to the limits of liability of the insuring Consultant.

iv. The insurer waives all rights of subrogation against City except for Consultant's Professional Liability and Employers' Liability policies, its elected or appointed officers, officials, employees or agents.

v. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to City, its elected or appointed officers, officials, employees, agents or volunteers.

vi. No policies of insurance carried by Consultant shall be suspended, voided, canceled, or changed in coverage or in limits except after thirty (30) days written notice to the City Attorney by Certified Mail.

c. Deductibles and Self-Insured Retentions. The Consultant shall be responsible for all deductibles in all of Consultant's insurance policies. The amount of deductibles for insurance coverage required herein shall be reasonable and approved by the City Attorney.

d. Certificates of Insurance. Consultant shall provide certificates of insurance with original endorsements to City as evidence of the insurance coverage required herein. Consultant shall not commence work under this contract until all insurance required under this section has been approved by City as to form, amount and carrier, nor shall Consultant allow any subcontractor to commence work on any subcontract until all similar insurance required and reasonably consistent limits of the subcontractor has been so obtained and approved. Certificates of insurance shall contain no exclusions unless negotiated with the City Attorney and approved, in writing, by the City Attorney.

16. Notices. Any notice required to be given under this Agreement shall be in writing and either served personally or sent prepaid, first class mail. Any such notice shall be addressed to the other party at the address set forth below. Notice shall be deemed communicated within 48 hours from the time of mailing if mailed as provided in this section.

If to City: City of South Lake Tahoe
1901 Lisa Maloff Way
South Lake Tahoe, CA 96150

Provide a copy to: City Attorney's Office
City of South Lake Tahoe
1901 Lisa Maloff Way, Suite 300

South Lake Tahoe, CA 96150

If to Consultant:

Provide a copy to:

17. Assignment and Subcontracting. The parties recognize that a substantial inducement to City for entering into this Agreement is the professional reputation, experience and competence of Consultant. Assignments of any or all rights, duties or obligations of the Consultant under this Agreement will be permitted only with the express consent of City. Consultant shall not subcontract any portion of the work to be performed under this Agreement without the written authorization of City. If City consents to such subcontract, Consultant shall be fully responsible to City for all acts or omissions of the subcontractor. Nothing in the Agreement shall create any contractual relationship between City and subcontractor nor shall it create any obligation on the part of City to pay or to see to the payment of any monies due to any such subcontractor other than as otherwise required by law.

18. Waiver. Waiver of a breach or default under this Agreement shall not constitute a continuing waiver of a subsequent breach of the same or any other provision under this Agreement.

19. Dispute Resolution. Any dispute concerning this Agreement will be first submitted to the City Manager or his designee for resolution. If no resolution is reached, such dispute shall be submitted to the City Council. The decision of the City Council shall be final and shall be appealable only to the El Dorado Superior Court pursuant to California Code of Civil Procedure §1094.5, and as provided by law.

20. Controlling Law Venue. This Agreement and all matters relating to it shall be governed by the laws of the State of California and any action brought relating to this Agreement shall be held exclusively in the Superior Courts in the County of El Dorado, South Lake Tahoe Division.

21. Prohibited Interests. Consultant maintains and warrants that it has not employed nor retained any Consultant or person, other than the independent contractors hired in accordance with Consultant's standard business practice, to solicit or secure this Agreement. Further, Consultant warrants that it has not paid, nor has it agreed to pay any Consultant or person, other than a bona

fide employee working solely for Consultant or an independent contractor hired as discussed above, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, City shall have the right to rescind this Agreement without liability. For the term of this Agreement, no member, officer or employee of City, during the term of his or her service with City, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

22. Equal Opportunity Employment. Consultant represents that it is an equal opportunity employer, and it shall not discriminate against any subcontractor, employee, or applicant for employment because of ancestry, age, color, disability, genetic information, gender expression, gender identity, marital status, medical condition, military or veteran status, national origin, race, religion, reproductive health decision making, sex/gender, or sexual orientation. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff, or termination.

23. Drug-Free Workplace Certification. This certification is only required for Consultants receiving payment from Grant Funding. By signing this Agreement, Consultant hereby certifies under penalty of perjury under the laws of the State of California that the Consultant will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code Section 8355, et seq.) and will provide a drug-free workplace by taking the following actions:

a. Publish a statement notifying employees that unlawful manufacture, distribution dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations, as required by Government Code Section 8355(a).
b. Establish a Drug-Free Awareness Program as required by Government Code Section 8355(a)(2) to inform employees about all of the following:

    i. The dangers of drug abuse in the workplace;
    ii. The person's or organization's policy of maintaining a drug-free workplace;
    iii. Any available counseling, rehabilitation and employee assistance program; and

iv. Penalties that may be imposed upon employees for drug abuse violations.

c. Provide, as required by Government Code Section 8355(a)(3), that every employee who performs grant activities under this Agreement:

i. Will receive a copy of the Consultant's drug-free policy statement; and
ii. Will agree to abide by the terms of the Consultant's statement as a condition of employment on this Agreement.

Failure to comply with these requirements may result in suspension of payments under this Agreement or termination of the Agreement, or both, and Consultant may be ineligible for award of any future City agreements if City determines that any of the following has occurred: the Consultant (1) has made false certification, or (2) violates the certification by failing to carry out the requirements as noted above.

24. Anti-Lobbying Certification. Consultant shall submit to City the Anti-Lobbying Certification contained in **Exhibit C**. Further, Consultant shall require that the language of the certification in **Exhibit C** be included in all contracts or subcontracts entered into in connection with this Agreement and that all Consultants and contractors shall certify and disclose accordingly.

25. Debarment, Suspension, Ineligibility and Voluntary Exclusion. By signing this Agreement, Consultant assures that neither it nor its principals, is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

26. Americans with Disabilities Act. By signing this Agreement, Consultant assures the City that it complies with the American with Disabilities Act (ADA) of 1990, (42 U.S.C. 12101, et. seq.), which prohibits discrimination on the basis of disability, as well as all applicable regulations and guidelines issued pursuant to ADA.

27. Amendments. This Agreement may be modified or amended only by a written document executed by both Consultant and City and approved as to form by the City Attorney.

28. Severability. If any term or portion of this Agreement is held to be invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions of this Agreement shall continue in full force and effect.

29. Entire Agreement. This Agreement constitutes the complete and exclusive statement of Agreement between City and Consultant. All prior written and oral communications, including correspondence, drafts, memoranda, and representations, are superseded in total by this Agreement.

30. Execution. This Agreement may be executed in several counterparts, each of which shall constitute one and the same instrument and shall become binding upon the parties when at least one copy hereof shall have been signed by both parties hereto. In approving this Agreement, it shall not be necessary to produce or account for more than one such counterpart.

31. Time is of the Essence. Time is of the essence for this Agreement.

32. Authority to Enter Agreement. Consultant has all requisite power and authority to conduct its business and to execute, deliver, and perform the Agreement. Each party warrants that the individuals who have signed this Agreement have the legal power, right, and authority to make this Agreement and to bind each respective party.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed on the date first written above.

CITY OF SOUTH LAKE TAHOE:	CONSULTANT:
By_____	By _____
City Manager	Name, Title
Date _____	Date _____
	Business License # _____

APPROVED AS TO FORM:

By_____ Date _____

City Attorney

ATTEST:

By_____ Date _____

City Clerk

Attachments:

Exhibit A – Scope of Services
Exhibit B – Compensation Schedule
Exhibit C - Anti-Lobbying Certification

EXHIBIT A

SCOPE OF SERVICES

EXHIBIT B

SCHEDULE OF CHARGES AND TIMELINE

BUDGET

Estimated fees (not to exceed)	**$_____**
Hourly Rate:	**$_____/hour**
Travel and out-of-pocket expenses	**$_____**
(travel is included in the TOTAL (not to exceed amount)	
TOTAL (not to exceed)	**$_____**

TIMELINE

EXHIBIT C

ANTI-LOBBYING CERTIFICATION

Consultant shall submit to City this certification prior to or at the time of the execution of this Agreement.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U. S. Code. Any person who fails to file the required certification shall be subject to a civil penalty not less than $10,000 and no more than $100,000 for such failure.

The undersigned certifies, to the best of his or her knowledge or belief, that:

1. No federal appropriated funds have been paid or will be paid, by or on behalf of it, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement; and

2. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, cooperative agreement, it will complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instruction.

Consultant:
Name, Title

By:_____

ATTACHMENT 2

DRAFT OF LAKE TAHOE AIRPORT

MASTER PLAN FISMND

LAKE TAHOE AIRPORT MASTER PLAN

Final Initial Study/Mitigated Negative Declaration

Prepared for
City of South Lake Tahoe

December 2025

LAKE TAHOE AIRPORT MASTER PLAN

Final Initial Study/Mitigated Negative Declaration

Prepared for
City of South Lake Tahoe

December 2025

2600 Capitol Avenue
Suite 200
Sacramento, CA 95816
916.564.4500
esassoc.com

ESA

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Palm Beach County	San Diego	Thousand Oaks

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INITIAL STUDY

Lake Tahoe Airport Master Plan
Final Initial Study/Mitigated Negative Declaration

1. Project Title:	Lake Tahoe Airport Master Plan
2. Lead Agency Name and Address:	City of South Lake Tahoe 1052 Tata Lane South Lake Tahoe, CA 96150
3. Contact Person and Phone Number:	John Dickinson Airport Manager, Lake Tahoe Airport 530.542.6182
4. Project Location:	City of South Lake Tahoe/Tahoe Basin portion of El Dorado County
5. Project Sponsor' s Name and Address:	Lake Tahoe Airport 1901 Lisa Maloff Way, Suite 100 South Lake Tahoe, CA 96150
6. General Plan Designation(s):	Special District (SD) Conservation (C)
7. Zoning Designation(s):	Commercial/Public Service

Introduction

This initial study has been prepared pursuant to the California Environmental Quality Act (CEQA) to evaluate the environmental effects of the proposed update to the Lake Tahoe Airport Master Plan. The proposed Airport Master Plan update is a long-range plan for airport development that is intended to meet identified facility requirements and Federal Aviation Administration (FAA) design standards. As the owner and operator of Lake Tahoe Airport, the City of South Lake Tahoe is the lead agency responsible for CEQA compliance.

Background

Lake Tahoe Airport (the Airport or TVL) is a publicly owned, public-use, general aviation airport.[1] The Airport is owned and operated by the City of South Lake Tahoe, a municipality located in El Dorado County, California. TVL provides communities around the southern portion of Lake Tahoe with direct access to aviation facilities designed to accommodate a variety of general aviation services, operations, and aircraft types ranging from small piston-engine aircraft to larger corporate turbine or jet aircraft. As of the publication of this initial study, TVL has no scheduled commercial air service.

The TVL Airport Master Plan was last updated in 2017. Since that time, the Airport and community have experienced changes that necessitate an updated vision to adequately plan for the needs of Airport users.

The principal goal of the proposed update to the Airport Master Plan is to provide a carefully considered, systematic approach to the Airport's overall maintenance, development, and operation over a 20-year planning period.[2] The proposed update to the Airport Master Plan is designed to identify and then plan for current and future Airport facility needs in advance of the actual demand for those facilities. The proposed update to the Airport Master Plan is also designed to review and assess the Airport's current conformance with federal and state airport design and operational standards to help ensure that the Airport continues to operate as safely as possible.

The Airport Master Plan process included an analysis of various development options for meeting facility requirements at the Airport over the next 20 years. The objective of this analysis was to identify a set of feasible development alternatives that enable TVL to meet projected levels of aviation demand as well as enhance the safety and level of service for tenants, customers, employees, and visitors. Each alternative was evaluated to provide recommended improvements that meet demand and provide for future flexibility. These alternatives ranged from a "no project" alternative to alternatives that varied substantially in the number of additions, removals, and/or modifications to existing Airport facilities, including airside, landside, and support facilities. After receiving public input and evaluating each alternative based on economic, operational, environmental, and social benefits and drawbacks, the South Lake Tahoe City Council endorsed a preferred alternative. The preferred alternative, which comprises the "proposed project" evaluated in this initial study, includes a range of improvements described in detail below.

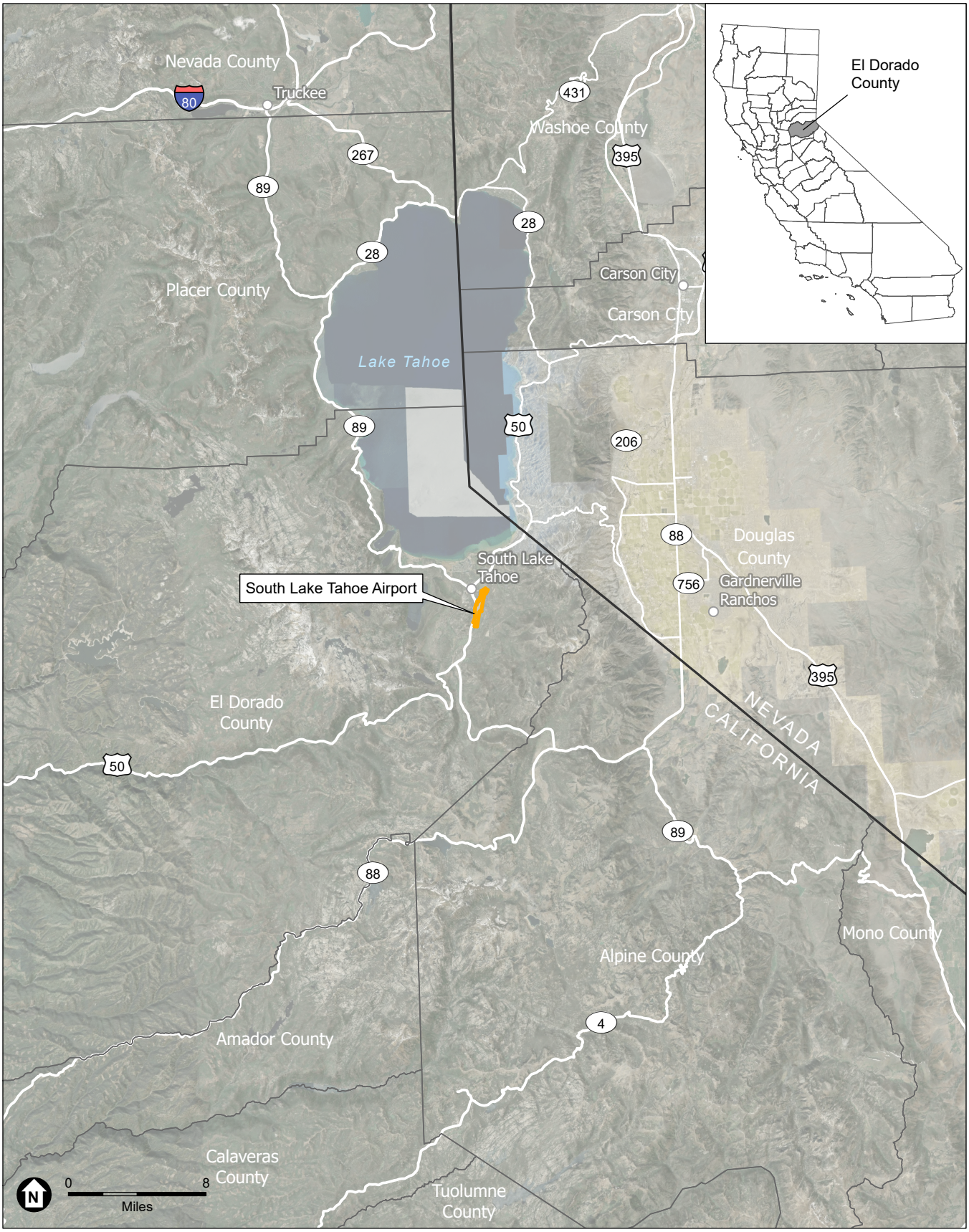
Project Location

The Airport is located in the City of South Lake Tahoe, El Dorado County, approximately 99 miles east of the City of Sacramento and approximately 66 miles south of the City of Reno (see **Figure 1**). Existing land uses surrounding the Airport include open space and forestland to the east, south, west, and north; residential uses to the east and northwest; and commercial uses to the northwest. **Figure 2** provides an aerial image of the Airport and its surrounding environs. **Figure 3** depicts the South Lake Tahoe General Plan land use designations for the Airport and adjacent lands.[3]

[1] General aviation airports are public-use airports that do not have scheduled service or have less than 2,500 annual passenger boardings (Title 49, United States Code [USC], Section 47102(8)).

[2] Woolpert, 2024, *Draft Lake Tahoe Airport Master Plan*, Prepared for the City of South Lake Tahoe.

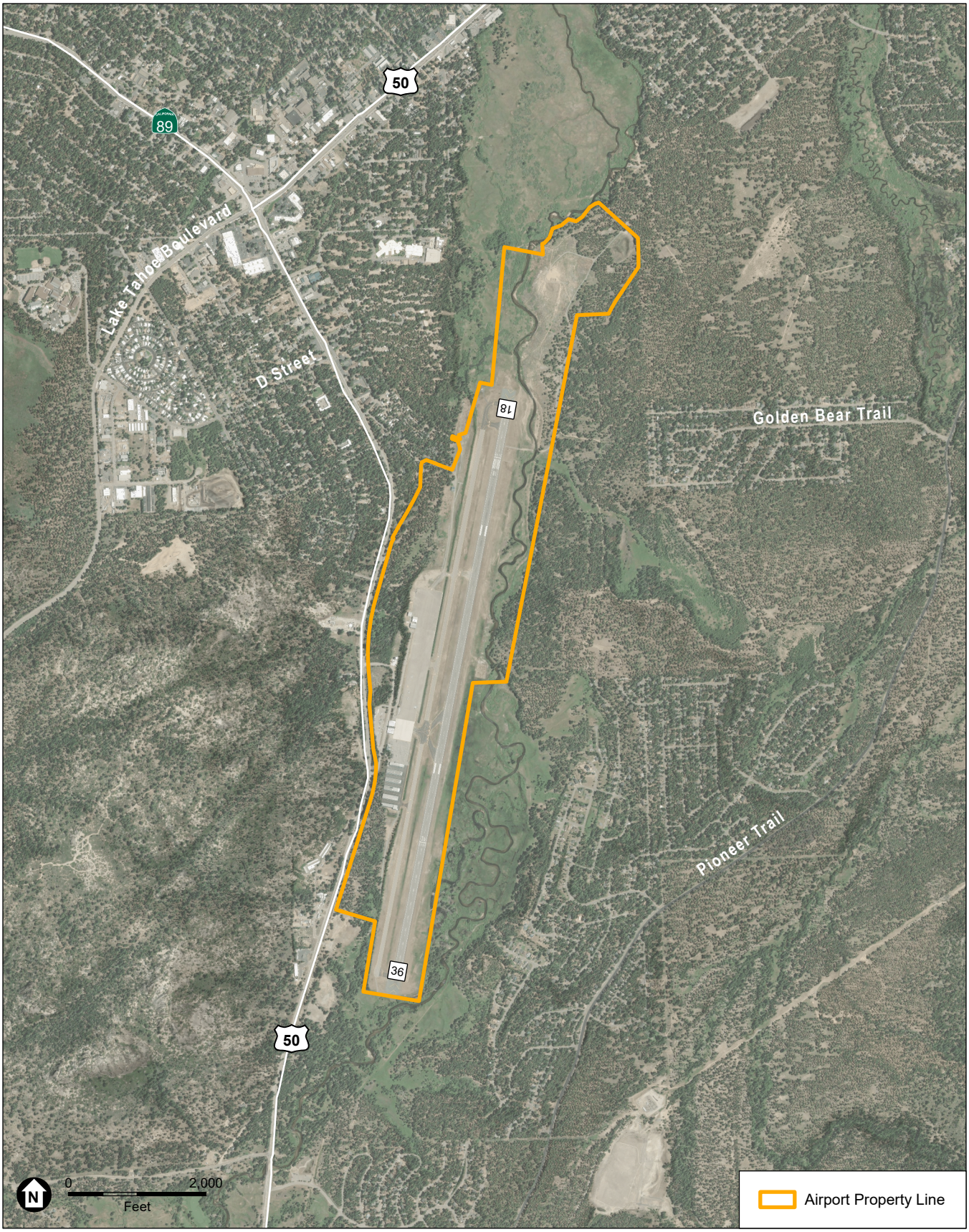
[3] City of South Lake Tahoe, 2011, *South Lake Tahoe General Plan*, adopted May 17, 2011.



SOURCE: Esri, 2025; ESA, 2025

Lake Tahoe Airport Master Plan IS/MND

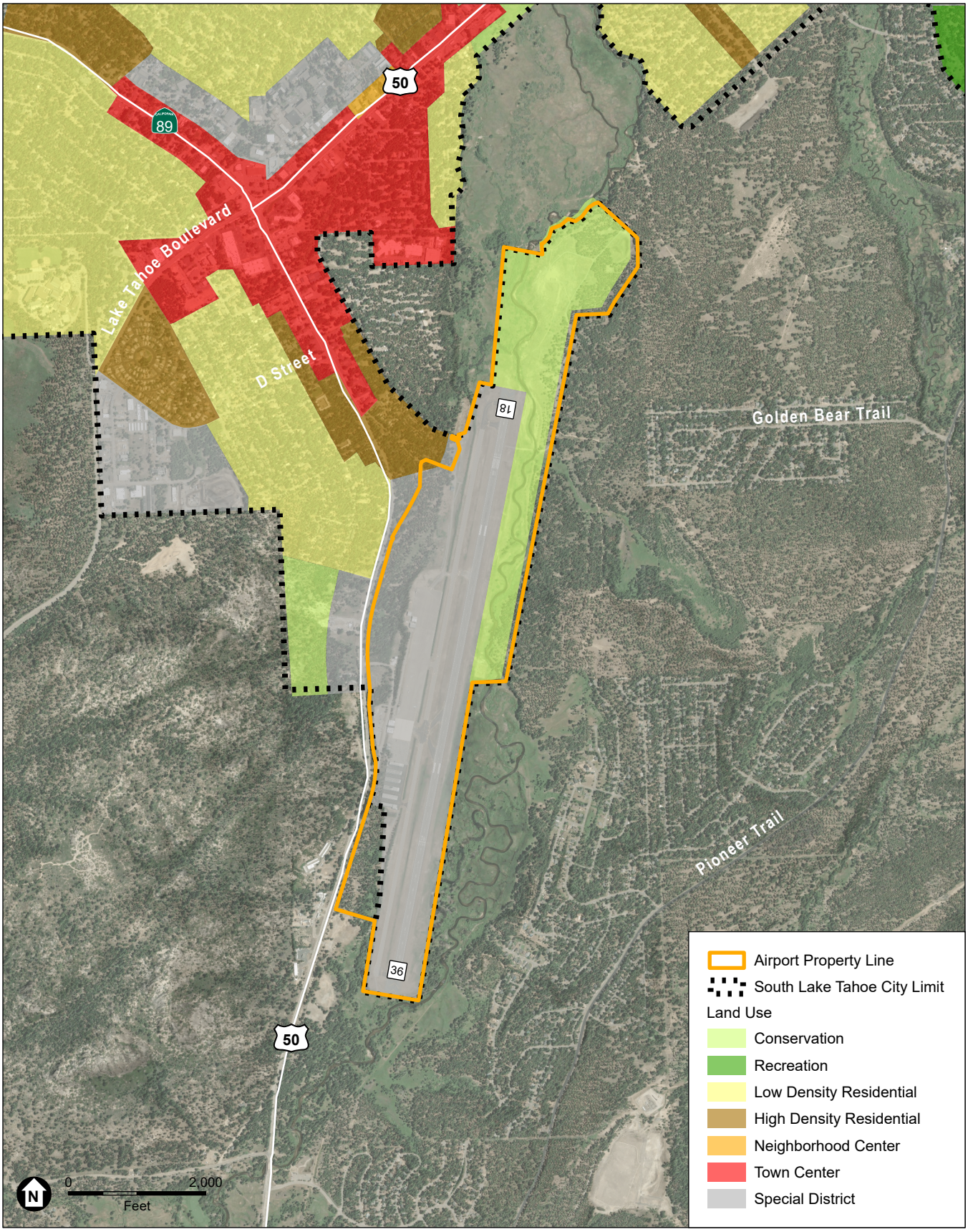
Figure 1
Regional Location



SOURCE: USDA, 2022; Esri, 2025; Woolpert, 2024; ESA, 2025

Lake Tahoe Airport Master Plan IS/MND

Figure 2
Airport Master Plan Study Area



SOURCE: USDA, 2022; Esri, 2025; COSLT, 2011; ESA, 2025

Lake Tahoe Airport Master Plan IS/MND

Figure 3
City of South Lake Tahoe General Plan Land Use Designations

In addition to the City of South Lake Tahoe, the Airport is also located within the planning area for the Tahoe Regional Planning Agency (TRPA). The TRPA has land use and environmental regulatory authority for the long-term preservation of Lake Tahoe and its environs. Jurisdictions within the TRPA's planning area, such as the City of South Lake Tahoe, acknowledge the role of the TRPA to adopt environmental thresholds regulating carrying capacities and a regional plan to achieve the goal of the long-term preservation of Lake Tahoe. As such, land use plans as well as individual development projects must be consistent with the TRPA's regional environmental thresholds. **Figure 4** depicts the TRPA Regional Plan land use designations for the Airport and adjacent lands.[4]

Existing Airport Facilities

Airside Facilities

Airside facilities are the portions of the Airport that accommodate the movement of aircraft and encompass runways, taxiways, airfield lighting, and other facilities necessary to support flight activity. **Figure 5** depicts TVL's existing airside facilities.

Runway

Lake Tahoe Airport is comprised of one runway, Runway 18-36, which is a paved asphalt runway with a northeast/southwest orientation. The Runway is served by two non-precision instrument approach procedures, a full-length parallel taxiway, and other connecting taxiways that provide aircraft access to the various ramp areas and other facilities on the Airport.

Taxiways

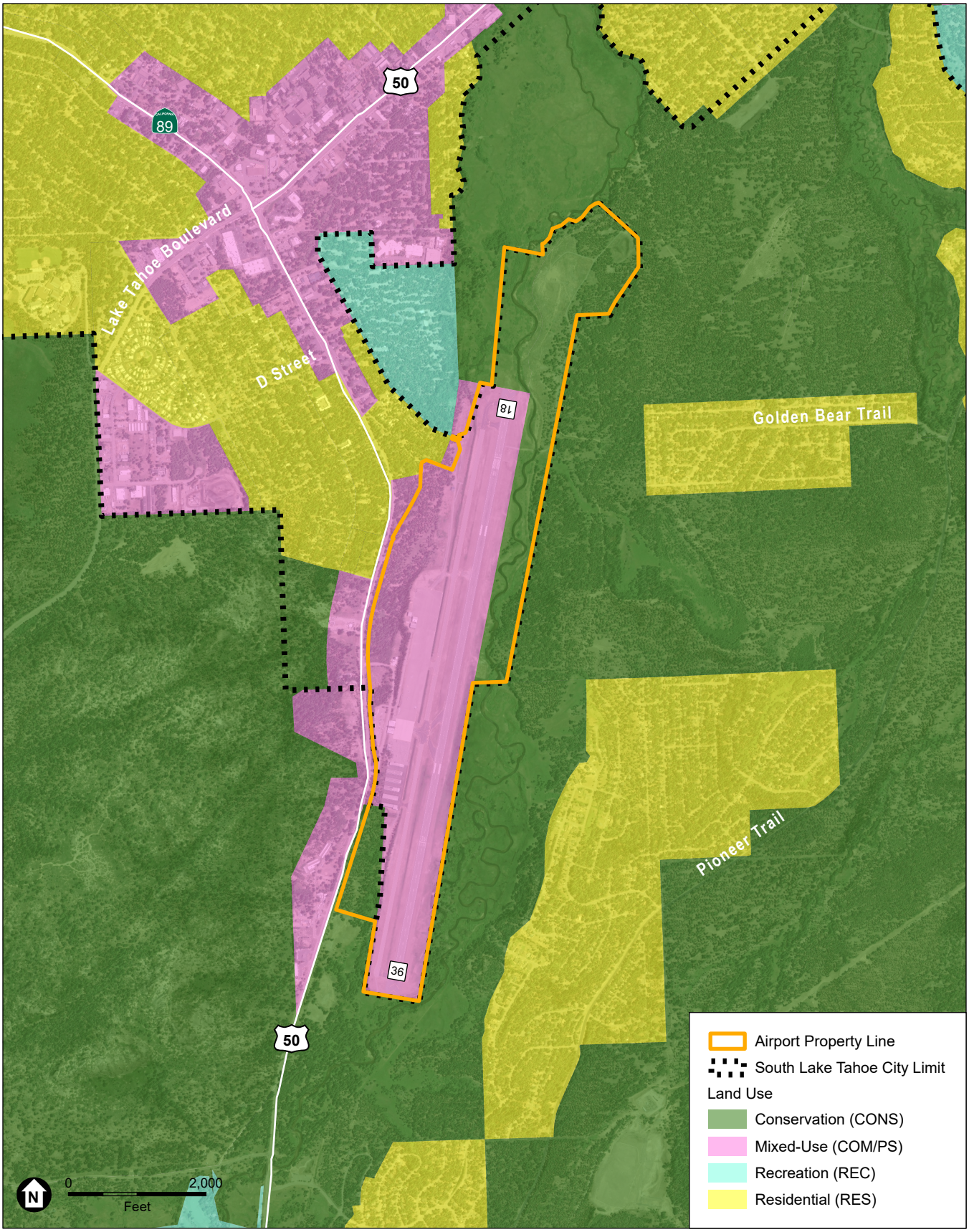
Taxiways are paved areas over which airplanes move from one part of the airfield to another with their primary use being to provide access between the terminal/hangar facilities and the runways. Since TVL has a single runway, the taxiway system is relatively simple and provides access from the runway to the parallel taxiway (Taxiway A), and on to the apron. The Airport has two high-speed exit taxiways intended to allow aircraft to quickly exit the runway following landing. Due to changes in taxiway design standards and anticipated operational demand, these taxiways were identified for removal as part of the 2017 Master Plan. Taxilanes are used to access hangars near the south end of the apron, which vary in condition from newly replaced to poor.

Aprons

An aircraft apron is used for aircraft movement and positioning, aircraft storage and tiedowns, aircraft fueling, and vehicle movement and parking. The complete apron area at TVL consists of over 700,000 square feet of pavement, which is divided into areas for staging based and transient aircraft, and for use by the Airport's Fixed Base Operator (FBO).[5]

[4] Tahoe Regional Planning Agency (TRPA), 1987, *Threshold Standards and Regional Plan*, adopted by the TRPA Governing Board June 25, 1987, Updated December 12, 2012, amended May 22, 2024.

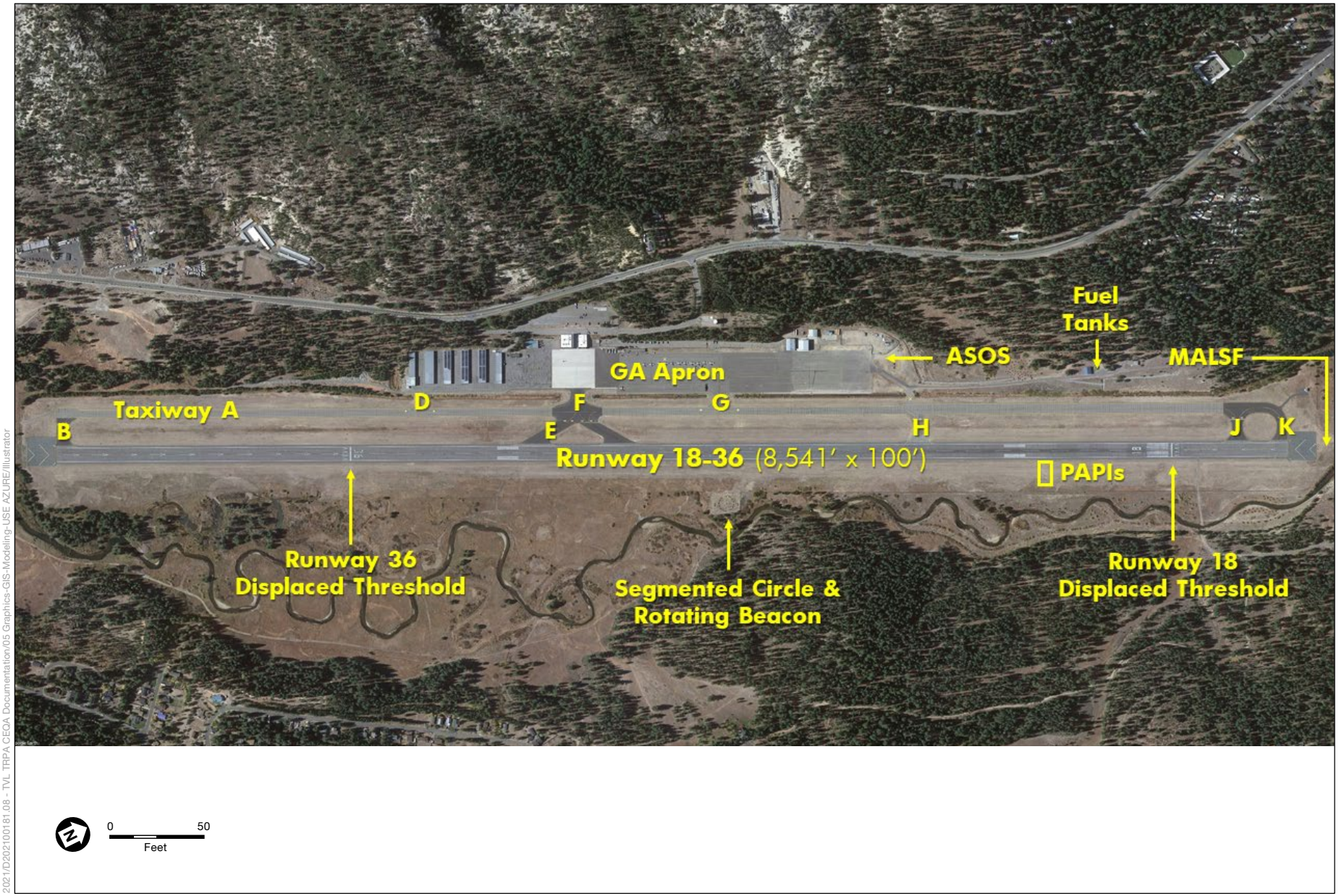
[5] Mountain West Aviation serves as the Airport's FBO and offers full-service fueling; line services; overnight hangar rental; and other aircraft, pilot, and passenger support services. The FBO is also contracted to be a provider of aviation fuel for the U.S. federal government. This arrangement provides military aircraft and other government departments access to specific fuel prices established by the U.S. government. The lease agreement with Mountain West Aviation lasts through 2042.



SOURCE: USDA, 2022; Esri, 2025; TRPA, 2012; ESA, 2025

Lake Tahoe Airport Master Plan IS/MND

Figure 4
TRPA Regional Plan Land Use



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SOURCE: Woolpert, 2024

Lake Tahoe Airport Master Plan IS/MND

Figure 5
Existing TVL Airside Facilities

ESA

Airfield Lighting

A rotating beacon identifies the location of the Airport at night and during periods of poor visibility. For civilian airports like TVL, this beacon projects alternating green and white beams from dusk to dawn. The TVL rotating beacon is located east of the runway near the segmented circle.

Runway lighting aids are necessary to provide pilots with critical takeoff and landing information concerning runway alignment, lateral displacement, rollout operations, and runway distance remaining. Runway edge lights are used to outline the edges of runways during periods of darkness or restricted visibility conditions. Runway 18-36 is outfitted with Medium Intensity Runway Lighting (MIRL).

A Precision Approach Path Indicator (PAPI) is a series of lights that provide visual guidance during a runway approach. A four-light PAPI system is installed on Runway 18. Runway 18 is also equipped with a Medium Intensity Approach Lighting System with Sequenced Flashing Lights (MALSF). Note that approach light systems are designed to provide pilots with the basic means of transitioning from instrument flight to visual flight during landing. Runway End Identifier Lights (REILs) are high-intensity white strobe lights located on each side of the runway threshold to enable rapid identification of the runway threshold, particularly at night and during periods of poor visibility. Runway 36 is equipped with REILs.

Taxiway edge lights aid in providing visual guidance to pilots and ground service/maintenance vehicles accessing the taxiway in low visibility or night conditions. Taxiway lighting at TVL is only available at the apron entrances and high-speed taxiways.

Additional visual aids and instrumentation at TVL assist pilots in arriving or departing. The Airport's segmented circle and lighted wind cone provide pilots with traffic pattern and wind direction/velocity information. This equipment is located east of the runway.

Weather Reporting

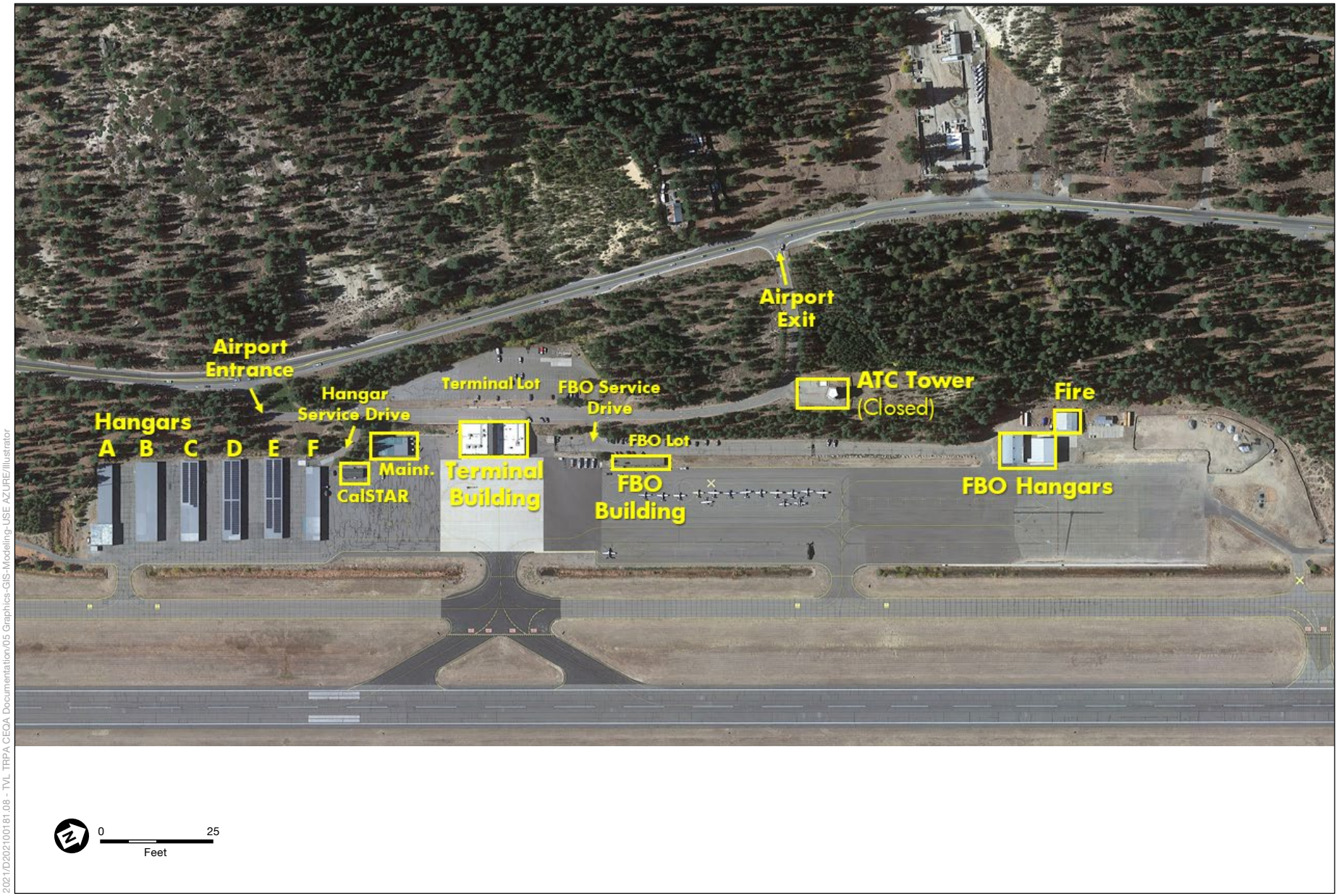
Automated Surface Observing Systems (ASOS) program is a joint effort of the National Weather Service (NWS), the FAA, and the Department of Defense and serves as the nation's primary surface weather observing network. It is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. The TVL ASOS is located west of the runway, near the north end of the general aviation apron. The system provides on-site weather data collection and reporting capabilities. Without on-airport weather reporting, charter/air taxi flights may not be allowed to take off or land in instrument (poor) weather conditions.

Landside Facilities

Landside development at the Airport is west of all airside components. In general, these facilities include a terminal building, FBO structure, aircraft hangars, fuel storage facilities, roadways, and parking lots. **Figure 6** depicts TVL's existing landside facilities.

Terminal Building

The terminal building is a remnant of the Airport's commercial passenger service but serves as a useful asset for current-day operations. The structure contains just over 30,000 square feet of office, restaurant, and administrative space. The City of South Lake Tahoe serves as the terminal building's primary tenant. City Hall, as well as administrative offices, are all located in the Airport terminal building.



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SOURCE: Woolpert, 2024

Lake Tahoe Airport Master Plan IS/MND

Figure 6
Existing TVL Landside Facilities

Airport Buildings and Hangars

Aside from the terminal building and FBO structure, there are other support structures located around the Airport property.

CALSTAR (California Shock and Trauma Air Rescue) occupies a mobile trailer near the hangar service drive. CALSTAR is an affiliate of REACH Air Medical Services, which provides emergency transport services throughout western states. CALSTAR maintains administrative offices in the terminal building and utilizes the mobile trailer for 24-hour on-call services, where staff can remain close to its helicopter for quick response times.

The Airport uses a maintenance shed to store snow removal equipment, mowers, and other materials used in day-to-day operations. The Airport owns and leases general aviation hangars, which are generally located on the south side of the ramp area. All hangars are currently occupied and the Airport maintains a waiting list to address any turnover or vacancy. The FBO leases two stand-alone hangars near the north side of the ramp, which are used for aircraft maintenance and overnight storage.

An Air Traffic Control Tower (ATCT), constructed in the late 1960s, is still standing but has been out of commission for approximately 20 years, as declining operations at the Airport and a change in federal funding led to the eventual closure of the ATCT in 2004.

Airport Support Facilities

Airport Access Roadways

Emerald Bay Road (U.S. Route 50) runs parallel to the west boundary of the Airport and provides access to the City of South Lake Tahoe to the north and the Town of Meyers to the south. Lisa Maloff Way serves as a one-way access point where vehicles enter south of the terminal area, drive north, and exit back on to Emerald Bay Road. This road is currently in poor condition, due to vehicle usage and seasonal weather impacts.

The primary hangar complex is accessed via a service drive located to the immediate right upon entering Lisa Maloff Way. Across from the service drive, users can veer left and enter the Terminal Lot. As vehicles proceed along Lisa Maloff Way, past the terminal building, the FBO building and FBO Lot can be accessed via an additional service drive on the right side. On the left, vehicles can enter the Terminal Lot via an additional entrance; this is also where vehicles exit the Terminal Lot.

Airport Parking

Two parking areas, one west of the terminal building across from Lisa Maloff Way (Terminal Lot) and a second near the FBO building (FBO Lot), serve pilots, tenants, and visitors. The Terminal Lot contains 150 striped parking spaces. Excess spaces in the winter months are used for Recreational Vehicle (RV) and boat parking to generate additional revenues for the Airport. The FBO Lot is partially striped and can support storage of approximately 50 vehicles. Six accessible (ADA) parking spaces are available in front of the main terminal building entrance.

Fencing

The Airport maintains 6-foot fencing around the perimeter of the Airfield Operating Area. This fence follows the property line along the southeast side but otherwise is generally situated to serve as a boundary between environmentally sensitive areas on the east side and as a security measure on the west landside areas.

Project Description

The proposed update to Lake Tahoe Airport Master Plan (proposed project) comprises a long-range plan for Airport development that includes both airside and landside improvements. Airside improvements would take place within aircraft movement areas that include the runway and taxiway system and the FAA-defined protected areas that encompass them. Landside improvements would take place outside of the main aircraft movement area and include facilities that are used for aircraft storage, aircraft parking, terminal facilities, automobile parking, and airport access. The proposed Airport Master Plan projects are depicted on **Figure 7** and are described below.

Landside Improvements

Reconstruct Existing Ground Service Equipment (GSE) Facility

This project comprises reconstruction of the existing Ground Service Equipment (GSE) facility located directly south of the Airport's terminal building. The GSE facility provides storage for the Airport's snow removal, grass cutting, and other ground maintenance vehicles, as well as various other Airport vehicles and equipment. Reconstruction of this facility is intended to ensure that it remains usable for an extended period. The existing facility is approximately 12 feet in height, and the reconstructed facility would be approximately 18 feet in height. Construction of the facility would occur over an estimated duration of eight months and would require excavation of one to two feet in depth.

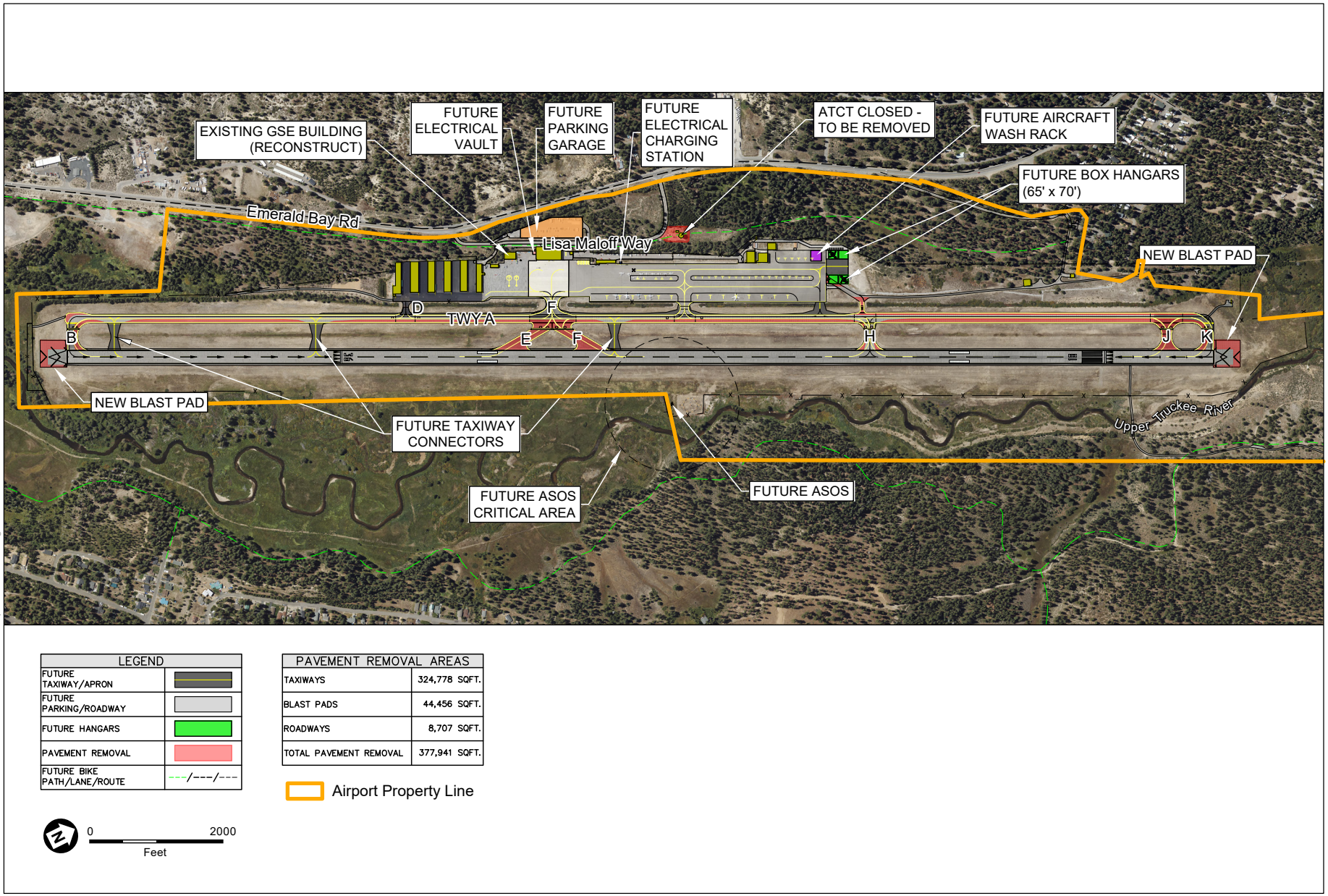
Remediate and Demolish Former Air Traffic Control Tower (ATCT)

The project includes the closure and removal of the Airport's ATCT, located west of the primary apron area. The ATCT at TVL closed more than 20 years ago and has since fallen into disrepair. The project would include demolition and removal of the existing approximately 50-foot-tall structure over an estimated duration of three months.

Incorporate Bike Path onto Airport Property

In 2024, the TRPA adopted the Active Transportation Plan (ATP).[6] This document outlines improvements and recommendations for the overall active transportation infrastructure of the Lake Tahoe region. Active transportation includes any form of walking, bicycling, rolling, or other non-motorized transportation, and the infrastructure required to accommodate these activities. The TRPA 2024 ATP includes the development of a bicycle lane and bicycle path along Emerald Bay Road, which runs along the western side of the Airport. An additional bike path is planned to be constructed in the area near the Upper Truckee River, which runs along the eastern side of the airfield.

[6] Tahoe Regional Planning Agency (TRPA), 2024, *Active Transportation Plan*, adopted by the TRPA Governing Board on April 24, 2024.



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SOURCE: Woolpert, 2025

Figure 7
Proposed Airport Master Plan Elements

The estimated width of the bike path within the Airport property would be 12 feet. Equipment for constructing the bike path would include excavators, trail dozers, and potentially smaller machinery such as mini-excavators or compact tractors with attachments for earthmoving and shaping the trail. Construction of the bike path would occur over an estimated duration of nine months and would occur within the Airport property boundary.

Box Hangar Development and Access Taxilane, and Non-Aeronautical Pavement Removal

This project includes the development of four new aircraft box hangars along the northern side of the existing apron area as well as removal of excess pavement. With the relocation of the ASOS from its existing location (described below under *Airside Improvements*), this area of the Airport would become available for new buildings and development. Currently, TVL has six rows of T-hangars and four box hangars for aircraft storage. The development of these four new box hangars would allow for more covered aircraft storage or aviation-related businesses at the Airport. The hangars would measure 70 feet wide, 65 feet in depth, and approximately 30 feet in height, a size capable of accommodating a wide range of small to medium sized corporate jets. In addition to the construction of these hangars, a small taxi lane would be constructed for aircraft access, and a parking lot and access road would be constructed for automobile access. Construction of the project would occur over an estimated duration of nine months and would require excavation of 2 to 3 feet in depth.

Install Electrical Vault

This project includes the construction of an airport electrical vault. An airfield lighting vault is an above-ground facility that houses regulators, controls, and other equipment necessary to operate the wide range of lights present on an airfield. Currently, the Airport's main electrical control systems are housed within the primary terminal building; however, there are many advantages to housing these systems within a standalone electrical vault. The proposed new electrical vault would provide easy access to all electrical control systems as well as ensuring the continued operations of airfield lights during a power outage through dedicated external backup generators. The proposed new electrical vault would be approximately 8 feet in height and would be located just south of the existing terminal building. Construction of the project would occur over an estimated duration of six months.

Airport Parking Garage

This project includes the construction of a new parking structure across from the terminal building. Currently, this area is occupied by a parking lot that accommodates approximately 100 vehicles. The proposed parking garage would be a three-level, approximately 50,000-square-foot structure with a maximum height of 36 feet. The facility would include 600 to 750 vehicle spaces, 20 to 25 electric vehicle charging stations, and a transit stop. Construction of the facility would occur over an estimated duration of 24 months. Construction is anticipated to require limited excavation for building foundations and could include pile driving depending on the results of the required geotechnical evaluation. The parking structure would occupy the same footprint as the existing parking lot and would not penetrate the Airport's airspace.

Install Electric Aircraft Charging Station

This project includes the addition of an electrical charging station proposed just north of the FBO. Given the advancements in technology for electric aircraft in the past few years, it is reasonable to assume that electric aircraft could operate at TVL within the planning period. As such, this project would accommodate electrical charging for these types of aircraft. The proposed facility may also provide opportunities for vehicle charging. Construction of the project would occur over an estimated duration of less than one month and would require minor excavation to install a surface pad.

Airside Improvements

Remove and Reconstruct Taxiway Connectors

This project includes the removal and addition of several taxiway connectors located across the airfield. The taxiway connectors to be removed include the two high-speed exit taxiways located near the midpoint of the runway, currently designated as Taxiways E and F. Additionally, the bypass taxiway located at the Runway 18 end, designated as Taxiway J, would be removed. In addition to these taxiway removals, a portion of the taxiway pavement located at the Runway 36 end would be removed to conform with FAA requirements.

To account for these taxiway removals, three new taxiway connectors would be constructed along the length of the runway. A new bypass taxiway would be constructed at the Runway 36 end, with another connector being built just before the Runway 36 end threshold. An additional runway connector taxiway would be located just north of the existing high-speed exit taxiways. Finally, a connector taxiway would be constructed to connect the northeastern portion of the existing apron area with Taxiway A.

Relocate Automated Surface Observing System (ASOS)

This project includes the relocation and upgrade of the ASOS, currently located north of the existing apron area. The ASOS would be relocated to the other side of the runway just south of the existing segmented circle. This location would allow for the necessary 500-foot ASOS critical area to be relocated, allowing for future development of the northern apron area.

Adjust Pavement Width of Parallel Taxiway

This project involves the shifting of the Taxiway A centerline to be offset 300 feet from the runway centerline to comply with the FAA separation standards. With the taxiway centerline adjusted, a reduction in taxiway width to 35 feet would be applied to a majority of Taxiway A, with a portion of the taxiway being adjusted to 50 feet in width.

Design and Construct New Blast Pads

Blast pads are surfaces at the end of an airport runway that absorb the force of exhaust during takeoffs and landings. This project includes the removal of currently oversized blast pad pavement on each runway end to meet FAA’s design standards.

Install New Aircraft Wash Rack

This project includes the construction of an aircraft wash rack, to be located on the northern end of the existing apron area. A wash rack is a designated area of an apron used for cleaning aircraft. The wash

rack would be large enough to accommodate most types of aircraft operating at the Airport and allow pilots and ground crew members to manually wash aircraft in need of cleaning. The wash rack would include a water runoff collection filtering system as well as complimentary hoses and water supply to assist with cleaning. Construction of the project would occur over an estimated duration of one month and would not require excavation.

Project Construction

Project construction activities would include demolition and removal of aging or obsolete facilities and construction of new facilities as described under the individual project descriptions above. Project construction would include limited excavation, grading, and disturbance of unpaved ground surface. Anticipated construction equipment required for the proposed improvements would include excavators, graders, front-end loaders, asphalt pavers, rollers, dump trucks, bottom dumps, and street sweepers.

Project Schedule

Implementation of Airport Master Plan improvements is expected to occur over a 20-year period from 2025 through approximately 2045.

Required Approvals

Adoption of the Airport Master Plan would require the following approvals.

- The City of South Lake Tahoe would adopt the Airport Master Plan, the Airport Master Plan Mitigated Negative Declaration (MND), and the Airport Master Plan Mitigation Monitoring and Reporting Program (MMRP).
- The FAA would approve the Airport Layout Plan (ALP) drawing and Aviation Demand Forecast presented in the Airport Master Plan report.

Implementation of projects in the Airport Master Plan may also require approval from:

- Tahoe Regional Planning Agency[7]
- Regional Water Quality Control Board – Lahontan
- California Department of Fish and Wildlife
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- El Dorado County Air Quality Management District

[7] The City of South Lake Tahoe submitted an Initial Environmental Checklist to TRPA, upon review of which TRPA determined the Master Plan "does not require TRPA approval or action at this time." TRPA's determination is documented in correspondence dated September 3, 2025 and included in **Appendix D**.

Public Review

The Draft Initial Study/Mitigated Negative Declaration (Draft IS/MND) was circulated for a 30-day period of public review and comment beginning on Monday, October 6, 2025 and ending on Wednesday, November 5, 2025. The Draft IS/MND directed that written comments should be mailed to:

Robin Blair
Administrative Assistant II
City of South Lake Tahoe
1901 Lisa Maloff Way, Suite 203
South Lake Tahoe, CA 96150

Or submitted via email to rblair@Cityofslt.us.

The City received written comments on the Draft IS/MND from one public agency (the California Department of Transportation), three individuals, and one organization (The League to Save Lake Tahoe). In addition, the City received a DVD from a member of the public that included a collection of technical and scientific studies in PDF format but did not provide any comments on the Draft IS/MND. The receipt of the documents provided on the DVD is acknowledged and no further response is required.

To further ensure that local agencies and the general public had adequate opportunity to provide comments regarding the Draft IS/MND, the City held a public workshop on Monday, October 20, 2025 beginning at 5:00 p.m. at the Lake Tahoe Airport at 1901 Lisa Maloff Way, South Lake Tahoe, CA 96150. No written or oral comments provided during the workshop raised significant environmental issues or pertained to the sufficiency and adequacy of the Draft IS/MND with respect to disclosing the significance of the physical environmental impacts that could result with implementation of the proposed project that were evaluated in the Draft IS/MND.

The comment letters received during the public review period for the Draft IS/MND (from October 6, 2025 to November 5, 2025) and written responses that address each substantive environmental issue that was raised by commenters are provided in **Appendix F** of this Final IS/MND. In accordance with CEQA, the responses to comments focus on addressing physical environmental effects that could result with implementation of the proposed project. None of the comments received provides new information that warrants recirculation of the Draft IS/MND. The comments do not identify new significant impacts or a substantial increase in the severity of previously identified impacts. Finally, the comments do not provide any new information or issues that necessitated corrections or revisions to the text or analysis in the Draft IS/MND.

Final IS/MND

Together, the Draft IS/MND, the comments on the Draft IS/MND and the responses to the comments provided in Appendix F, and the Mitigation Monitoring and Reporting Program (MMRP) included as **Appendix E**, comprise this Final IS/MND.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial study:

☐ 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 revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

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

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact 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. 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, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature _____ Date _____

[City to provide ESA a signed and dated PDF scan of this page once the document is approved and final]

Environmental Checklist

Aesthetics

Issues (and Supporting Information Sources):		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
I.	**AESTHETICS** — Except as provided in Public Resources Code Section 21099, would the project:				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	☐	☐	☒	☐

Impact Analysis

Topic a

Scenic vistas are locations from which the public can experience unique and exemplary views, typically from vantage points that offer panoramic views of great breadth and depth. The Lake Tahoe region affords numerous high-quality views of the lake within a forested mountainous environment.

Emerald Bay Road (U.S. Route 50) runs parallel to the west boundary of the Airport and provides access to the City of South Lake Tahoe to the north and the Town of Meyers to the south. Lisa Maloff Way serves as a one-way access point where vehicles enter south of the terminal area, drive north, and exit back on to Emerald Bay Road. Views experienced from those traveling north and south of the Airport on U.S. Route 50 generally comprise a paved two-lane roadway flanked by large pine trees, intermittent views of open meadows and distant mountains, and varying pockets of mainly commercial development. Publicly accessible views from Lisa Maloff Way and the Airport include flat open views of the runway areas backed by long-range views of large-scale mountains to the east.

The proposed project comprises a long-range plan for Airport development that includes both airside and landside improvements. Airside improvements would take place within aircraft movement areas that include the runway and taxiway system and the FAA-defined protected areas that encompass them. Landside improvements would take place outside of the main aircraft movement area and include facilities that are used for aircraft storage, aircraft parking, terminal facilities, automobile parking, and airport access. The proposed Airport Master Plan projects are depicted on Figure 7 and are described in the Project Description above. The majority of the proposed improvements would be low-rise in nature and would not substantially affect any recognized scenic vistas.

Amid these improvements, the proposed project would include construction of a new parking structure across from the terminal building. Currently, this area is occupied by a parking lot that accommodates approximately 100 vehicles. The proposed parking garage would be a three-level approximately 50,000-square-foot structure with a maximum height of 36 feet. While the Airport is immediately adjacent to U.S. Route 50, views toward the Airport from the roadway are largely obscured by trees that exist on reserved land owned by the Airport. Further, U.S. Route 50 is at a higher elevation than the Airport. Thus, the majority of the proposed improvements would be low-rise in nature and would not substantially affect any recognized scenic vistas. Therefore, the impact would be **less than significant**.

Topic b

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program. The goal of the program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to the highways. U.S. Route 50 from Echo Summit to South Lake Tahoe is an officially designated state scenic highway. As noted above, while the Airport is immediately adjacent to U.S. Route 50, views toward the Airport from the roadway are largely obscured by trees that exist on reserved land owned by the Airport. Furthermore, U.S. Route 50 is at a higher elevation than the Airport. The majority of the proposed project improvements would be low-rise in nature and would not substantially affect any recognized scenic resources within a state scenic highway. Therefore, the impact would be **less than significant**.

Topic c

The proposed project would not introduce any new structures or features not typically found within an airport or that would be visually out of character with the existing visual setting of the Airport property. Consequently, the proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings, and this impact would be **less than significant**.

Topic d

The Airport currently contains several light sources, including apron, building, and runway and taxiway lighting, which are all required to ensure the safe operation of aircraft on the airfield. The Airport contains a variety of visual aids, which assist pilots in locating the Airport at night or during other periods of reduced visibility. The proposed project would add new airfield lighting, as well as relocate some existing airfield light sources. The FAA regulates the location, type, and height of all airfield light sources to ensure that light and glare would not result in safety hazards. Lighting associated with proposed landside improvements would include minimal lighting for the new aircraft box hangars and the proposed Airport parking garage. Lighting associated with these facilities would be consistent with typical landside airport facilities and would not substantially increase the amount of light and glare that currently exists on site. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

Agriculture and Forestry Resources

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY 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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Impact Analysis

Topic a

The Airport primarily consists of largely developed land and is not located within any areas designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the California Department of Conservation Farmland Mapping and Monitoring Program.[8] The proposed project comprises a long-range plan for Airport development that includes both airside and landside improvements within the Airport property. The proposed project would not convert farmland to non-agricultural use, and there would be **no impact** under this significance criterion.

Topic b

The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments

[8] California Department of Conservation, 2022, California Important Farmland Finder, accessed June 11, 2025, https://maps.conservation.ca.gov.

that are much lower than normal because they are based upon farming and open space uses as opposed to full market value.[9]

The Airport property is designated for public transportation (i.e., airport), and conservation uses by the City of South Lake Tahoe and the TRPA. There are no agricultural uses, lands zoned for agricultural protection, or lands under a Williamson Act contract within the Airport property.

Land under Williamson Act contract is located immediately to the north of the Airport. However, none of the components of the proposed project would occur on land containing a Williamson Act contract. The proposed project comprises a long-range plan for Airport development that includes both airside and landside improvements within the Airport property. Implementation of the proposed project would not affect the zoning, contract status, or viability of the land under Williamson Act contract located to the north of the Airport. Therefore, this impact would be **less than significant**.

Topic c

Timber production is largely prohibited in the Lake Tahoe Basin, as TRPA regulations are focused on strengthening the forest resources of the region. No land within the City of South Lake Tahoe (including the Airport) is designated as forestland or timberland. Therefore, the proposed project would not conflict with existing zoning for, or cause rezoning of, forestland or timberland. There would be **no impact** under this significance criterion.

Topics d and e

The proposed project is located within an existing, developed site, the Airport, and the majority of improvements would occur on land that is already developed. There is no land designated as forestland within or adjacent to the project site, and there are no agricultural uses within the project site. As such, no forestlands or agricultural lands would be converted or encumbered as a result of the proposed project, and there would be **no impact** under this significance criterion.

Mitigation Measures

None required.

References

California Department of Conservation. 2022. California Important Farmland Finder. Accessed June 11, 2025. https://maps.conservation.ca.gov.

———. 2025. Williamson Act Program. Accessed June 11, 2025. https://www.conservation.ca.gov/dlrp/wa.

[9] California Department of Conservation, 2025, Williamson Act Program, accessed June 11, 2025, https://www.conservation.ca.gov/dlrp/wa.

Air Quality

Issues (and Supporting Information Sources):	*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 district 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?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Regulatory Framework

Under the federal Clean Air Act (CAA), as amended, the U.S. Environmental Protection Agency (EPA) has developed National Ambient Air Quality Standards (NAAQS) for the following air pollutants, referred to as criteria air pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), lead (Pb), particulate matter up to 10 micrometers in size (PM_{10}), and particulate matter smaller than 2.5 micrometers in size ($PM_{2.5}$). The CAA defines the need to establish two standards—primary standards, which define maximum concentrations of criteria air pollutants to protect public health, and secondary standards, which define maximum concentrations of criteria air pollutants to protect public welfare.

Individual states are required to identify general geographic areas where the NAAQS for these criteria air pollutants are not met. The EPA designates such areas as nonattainment areas and qualifies the nonattainment status by severity of nonattainment ranging from marginal to moderate to serious to extreme nonattainment. Areas that were in nonattainment but have since attained the NAAQS are considered to be an attainment/maintenance area for several years before being designated as being in attainment. A state with a nonattainment or maintenance area must prepare a State Implementation Plan (SIP) that describes the programs and requirements that the state will implement to attain or maintain the NAAQS by the deadlines specified in the CAA, as well as subsequent related documents promulgated by the EPA.

The California Air Resources Board (CARB) monitors air quality conditions throughout the state and enforces state air regulations, issues permits, and formulates and maintains SIPs. Under the California Clean Air Act, patterned after the federal CAA, areas are designated as attainment or nonattainment for California Ambient Air Quality Standards (CAAQS). **Table 1** presents the NAAQS and CAAQS for criteria air pollutants.

TABLE 1
STATE AND FEDERAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	State Standard (CAAQS)[a]	Federal Primary Standard (NAAQS)[b]
Ozone	1-hour	0.09 ppm	NA [c]
	8-hour	0.070 ppm	0.070 ppm [d]
Carbon Monoxide (CO)	1-hour	20 ppm	35 ppm
	8-hour	9 ppm	9 ppm
Nitrogen Dioxide (NO_2)	1-hour	0.18 ppm	0.100 ppm
	Annual	0.030 ppm	0.053 ppm
Sulfur Dioxide (SO_2)	1-hour	0.25 ppm	0.075 ppm
	24-hour	0.04 ppm	0.14 ppm
	Annual	NA	0.030 ppm
Particulate Matter (PM_{10})	24-hour	50 µg/m^3	150 µg/m^3
	Annual [e]	20 µg/m^3	NA
Fine Particulate Matter ($PM_{2.5}$)	24-hour	NA	35 µg/m^3
	Annual	12 µg/m^3	9 µg/m^3
Sulfates	24-hour	25 µg/m^3	NA
Lead	30-day	1.5 µg/m^3	NA
	Cal. Quarter	NA	1.5 µg/m^3
	Rolling 3-month average	NA	0.15
Hydrogen Sulfide	1-hour	0.03 ppm	NA
Visibility-Reducing Particles	8-hour	—[f]	NA

Notes: CAAQS = California ambient air quality standards; Cal = calendar; NA = not applicable; NAAQS = national ambient air quality standards; ppm = parts per million; µg/m^3 = micrograms per cubic meter

a. CAAQS for ozone, CO (except Lake Tahoe), SO_2 (1-hour and 24-hour), NO_2, PM, and visibility-reducing particles are values that are not to be exceeded. All other state standards shown are values not to be equaled or exceeded.
b. NAAQS, other than ozone and particulates, and those based on annual averages or annual arithmetic means, are not to be exceeded more than once a year. The 8-hour ozone standard is attained when the 3-year average of the fourth highest daily concentration is 0.08 ppm or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than the standard. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of the 98th percentile is less than the standard.
c. The U.S. Environmental Protection Agency (EPA) revoked the national 1-hour ozone standard on June 15, 2005.
d. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.
e. State standard = annual geometric mean; national standard = annual arithmetic mean.
f. Statewide visibility reducing particle standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10 mile nominal visual range.

Sources: CARB 2024; EPA 2024.

The proposed project is located in the City of South Lake Tahoe, which is located within the Lake Tahoe Air Basin (LTAB) portion of El Dorado County. Air quality in the project area is regulated by the El Dorado County Air Quality Management District (EDCAQMD) and the TRPA. The EDCAQMD is responsible for ensuring that federal and state air quality standards are met by monitoring ambient air pollutant levels throughout El Dorado County. The EDCAQMD implements strategies to ensure SIP regulations are maintained and issues air quality permits. Construction of the proposed project is subject

to several rules adopted by the EDCAQMD, including Rule 223 regarding fugitive dust and Rule 215 regarding the application of architectural coatings. The TRPA has the authority to adopt air quality and other environmental quality thresholds and to enforce ordinances designed to achieve the thresholds.

Table 2 presents information regarding the air quality attainment status for the LTAB. As shown in Table 2, LTAB is classified as Nonattainment-Transitional for ozone (state standard) and nonattainment for PM_{10} (state standard). Historically, the LTAB was designated nonattainment for carbon monoxide (federal standard) but was reclassified to attainment in 1998.

TABLE 2
LAKE TAHOE AIR BASIN ATTAINMENT STATUS

	Designation/Classification	
Pollutant	**Federal Standards (NAAQS)**	**State Standards (CAAQS)**
Ozone – 1-hour	NA	Nonattainment-Transitional
Ozone – 8-hour	Unclassifiable/Attainment	Nonattainment-Transitional
Carbon Monoxide (CO)	Unclassifiable/Attainment	Attainment
Nitrogen Dioxide (NO_2)	Unclassifiable/Attainment	Attainment
Sulfur Dioxide (SO_2)	Unclassifiable/Attainment	Attainment
Particulate Matter (PM_{10})	Unclassifiable/Attainment	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Unclassifiable/Attainment	Attainment
Sulfates	NA	Attainment
Lead	Unclassifiable/Attainment	Attainment
Hydrogen Sulfide	NA	Unclassified
Visibility Reducing Particles	NA	Unclassified

Note: NA = not applicable
Source: CARB 2023

The EDCAQMD's Guide to Air Quality Assessment provides quantitative significance thresholds for criteria air pollutants during project construction and operation.[10] These significance thresholds are summarized in **Table 3**. As shown in Table 3, for ozone precursor pollutants - reactive organic gases (ROG) and oxides of nitrogen (NOx) - the EDCAQMD has adopted a mass emission threshold of 82 pounds per average day. For the other criteria air pollutants, a project is considered to have a significant impact on air quality if it will cause or contribute significantly to a violation of the applicable national or state ambient air quality standard(s). Guidance provided in Chapters 4-6 of the Guide to Air Quality Assessment can be used to determine whether project-related emissions of these pollutants will cause or contribute to a violation of an applicable ambient air quality standard.

[10] EDCAQMD 2002.

TABLE 3
EDCAQMD SIGNIFICANCE THRESHOLDS

Criteria Pollutants and Precursors	Construction-Related Significance Threshold	Operational Related Significance Threshold
ROG	82 ppd	82 ppd
NOx	82 ppd	82 ppd
Carbon Monoxide (CO)	NAAQS and CAAQS	NAAQS and CAAQS
Nitrogen Dioxide (NO_2)	NAAQS and CAAQS	NAAQS and CAAQS
Sulfur Dioxide (SO_2)	NAAQS and CAAQS	NAAQS and CAAQS
Particulate Matter (PM_{10})	NAAQS and CAAQS	NAAQS and CAAQS
Fine Particulate Matter ($PM_{2.5}$)	NAAQS and CAAQS	NAAQS and CAAQS
Sulfates	CAAQS	CAAQS
Lead	NAAQS and CAAQS	NAAQS and CAAQS
Hydrogen Sulfide	CAAQS	CAAQS

Note: NOx = oxides of nitrogen; ppd = pounds per day; ROG = reactive organic gases
Source: EDCAQMD 2002

As found in Chapter 7 of the Guide to Air Quality Assessment, for health risks, a project is considered to have a significant impact if this probability exceeds one in one million (1×10^{-6}). However, if the project implements Toxics Best Available Control Technology (T-BACT), the threshold for significance is adjusted to ten in one million (1×10^{-5}). For non-carcinogenic effects, the assessment computes a Hazard Index (HI) by comparing estimated exposure levels to reference exposure levels. An HI greater than 1.0 indicates a significant non-cancer health risk. Because implementation of the proposed project would not increase operational emissions, the potential health risks associated with the project are from diesel exhaust emissions that occur during construction.

In EDCAQMD's Guide to Air Quality Assessment, the potential health risk for diesel exhaust particulate matter will not exceed the health risk criteria in Chapter 7 if total diesel fuel use for construction equipment for the duration of the construction phase is less than shown in **Table 4**.

TABLE 4
EDCAQMD FUEL USE SCREENING CRITERIA FOR DIESEL PM HEALTH RISK

PM Control Technology [a]	Maximum Gallons of Diesel Fuel Consumption during Construction Phase
T-BACT applied	37,000 gallons
T-BACT not applied	3,700 gallons

Notes: PM = particulate matter; T-BACT = toxics best available control technology
a. For the purposes of this screening test, T-BACT is defined as the use of 1996 and later model year engines in all Diesel construction equipment.
Source: EDCAQMD 2002

Impact Analysis

Topic a

The LTAB is currently non-attainment for ozone (state ambient standards) and PM_{10} (state ambient standard).

While an air quality plan for the area exists for ozone, currently there is none for particulate matter. The Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan (Plan) was developed for application within the Sacramento region, which includes the LTAB portion of El Dorado County. The Plan outlines how the Sacramento Federal Nonattainment Area (SFNA), including the western portions of El Dorado County, will meet the 2008 ozone NAAQS by July 20, 2027. If a project can demonstrate consistency with the Plan for ROG and NOx emissions, it would be determined that it would not have a significant cumulative impact with respect to ozone.

The EDCAQMD considers projects consistent with the Plan if the project satisfies the following criteria. Compliance of the proposed project with each of these criteria is also discussed below.

1. The project does not require a change in the existing land use designation (i.e., general plan amendment, rezone), and projected emissions of ROG and NOx from the proposed project are equal to or less than the emissions anticipated for the site if developed under the existing land use designation.

   The project would be consistent with the land use designations for the area in the County General Plan and would not require a General Plan Amendment or rezoning. The emissions inventories used to develop a region's air quality attainment plans are based primarily on projected population growth and vehicle miles traveled (VMT) for the region, which are based, in part, on the planned growth identified in regional and community plans. Therefore, projects that would result in increases in population or employment growth beyond that projected in regional or community plans could result in increases in VMT above that planned in the attainment plan. The resulting excess emissions could conflict with a region's air quality planning efforts. Increases in VMT beyond that projected in area plans generally would be considered to have a significant adverse incremental effect on the region's ability to attain or maintain state and federal ambient air quality standards.

   The proposed project would not change existing land use designations as it consists of airport improvements to the existing airport property. Additionally, the proposed project would not generate VMT since there are no operational changes to the existing airport. Therefore, the proposed project is consistent with the general plan.

2. The project does not exceed "project alone" significance criteria in the EDCAQMD CEQA Guide.

   As detailed under Topic b, the proposed project's construction and operational emissions would be less than the project-level significance thresholds identified by the EDCAQMD. Therefore, the proposed project does not exceed the "project alone" significance criteria.

3. The lead agency for the project requires the project to implement any applicable emission reduction measures contained in and/or derived from the Air Quality Attainment Plan (AQAP).

   The Plan contains control measures aimed at reducing air pollution in the Sacramento region. The Plan relies on many existing federal, state, and local control programs to achieve reductions of ozone precursors. Additionally, the CARB, SFNA air districts, and the Sacramento Area Council of

Governments (SACOG) continue to enforce existing strategies and implement traffic control measures (TCMs). These measures include:

- The CARB maintains the most stringent mobile source emissions control program in the nation. The CARB has adopted numerous regulations aimed at reducing exposure to diesel particulate matter (DPM) and oxides of nitrogen (e.g., NO_2). Further, the CARB and the SFNA air district staff work closely on identifying and distributing incentive funds to accelerate cleanup of engines. Key incentive programs include the Carl Moyer Program, the Goods Movement Program, the Lower-Emission School Bus Program, and the Air Quality Improvement Program (AQIP).
- The CARB maintains a long-standing light-duty mobile source program. The CARB estimates that light-duty vehicle NOx emissions will be reduced by about 60 percent in 2024 when compared to 2017. Key light-duty programs include Advanced Clean Cars (ACC); On-Board Diagnostics; Reformulated Gasoline; Incentive Programs; and the Enhanced Smog Check Program.
- The CARB also maintains a long-standing heavy-duty mobile source program. Heavy-duty NOx emissions are expected to be reduced by about 50 percent in 2024 when compared to 2017. Key programs include Heavy- Duty Engine Standards, Clean Diesel Fuel, Truck and Bus Regulation and Incentive Programs.
- The CARB and EPA maintain long-standing programs to reduce emissions from off-road sources. Off-road NOx emissions will be reduced by about 25 percent in 2024 when compared to 2017. Key programs include Off-Road Engine Standards, Locomotive Engine Standards, Clean Greenhouse Gases Diesel Fuel, Cleaner In-Use Off-Road Regulation, and In-Use Large Spark Ignition (LSI) Fleet Regulation.
- SACOG provides transportation planning and funding for the greater Sacramento region and has worked with local governments to develop and implement transportation related policies and measures. For example, one of the TCMs previously developed is the Spare the Air program. The current 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) aims to reduce VMT through transportation policies and implementing actions that foster the next generation of mobility solutions, modernize funding for transportation infrastructure, and build and maintain a safe, reliable, and multimodal transportation.[11]

As these measures are primarily implemented at the state and regional level, the proposed project does not conflict with any of these control measures.

4. The project complies with all applicable district rules and regulations.

   The EDCAQMD maintains a list of current rules and regulations. The proposed project does not include any components that conflict with applicable rules and regulations and will be required to comply with them as permit conditions of approval.

The proposed project is consistent with the EDCAQMD's standards for determination of compliance with the Plan. Thus, the proposed project would be consistent with the air quality plan for the region and would not conflict with or obstruct implementation of the applicable air quality plan. This impact would be **less than significant**.

Topic b

Construction-related emissions arise from a variety of activities, including (1) grading, excavation, road building, and other earth moving activities; (2) travel by construction equipment and employee vehicles,

[11] SACOG 2019.

especially on unpaved surfaces; (3) exhaust from construction equipment; (4) architectural coatings; and (5) asphalt paving.

The proposed project includes a series of improvements to the Airport that would occur over an approximately 20-year period. These improvements are intended to improve the safety of existing Airport operations, meet compliance with current FAA design standards, and accommodate existing and forecasted aviation demands. Implementation of the proposed project would not increase aircraft operations or the number of Airport employees.

Proposed project elements include pavement marking and signage improvements, pavement reconstruction and rehabilitation, taxiway modifications, construction and expansion of new hangars and fixed-base operator facilities, construction of a new parking garage, demolition and removal of an existing air traffic control tower, relocation of a weather observation system, and installation of a new bike path, electric aircraft charging station, and aircraft wash rack.

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. The proposed project construction activities would occur primarily on the paved surface of the Airport property and would include some excavation, grading, and disturbance of unpaved ground surfaces within the Airport property. Although the proposed project elements would not emit large amounts of fugitive dust during their respective construction periods, it is possible for implementation of the proposed project to result in some fugitive dust. However, the City must comply with EDCAQMD Rule 223-1, which requires preparation and implementation of a fugitive dust plan. Compliance with Rule 223-1 would reduce nuisance dust impacts to a level that is less than significant.

Average daily construction emissions of ROG, NOx, CO, SO_2, PM_{10}, and $PM_{2.5}$ were estimated using the current version California Emissions Estimator Model (CalEEMod Version 2022.1). Emissions were calculated using information, such as square footage, for each project element. Off-road equipment, durations of construction phases, and the number of worker trips used to model construction emissions for each project element were based on CalEEMod default values. Haul trips were calculated using information specific to each project element. Because the construction schedule is unknown, emissions were conservatively estimated assuming all project elements occur simultaneously. In reality, average daily emissions would be lower, as construction would be spread over 20 years and equipment would become progressively cleaner over time.

Table 5 compares average daily construction emissions to the EDCAQMD's significance thresholds for each modeled year of construction.

As shown in Table 5, maximum daily construction emissions are estimated at 15.7 pounds per day of ROG and 15.3 pounds per day of NOx, well below the El Dorado County AQMD significance thresholds of 85 pounds per day for both pollutants. PM_{10} and $PM_{2.5}$ emissions would also remain below thresholds with standard dust control measures in place. Construction activities would not cause or contribute to a violation of state or federal ambient air quality standards, nor result in a substantial decline in regional air quality.

TABLE 5
AVERAGE DAILY CONSTRUCTION EMISSIONS (POUNDS PER DAY)

Year [a]	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
2026	1.5	15.3	16.3	< 0.1	0.1	0.5
2027	15.7	1.5	2.2	< 0.1	0.2	0.2
EDCAQMD Significance Threshold	85	85	AAQS	AAQS	AAQS	AAQS
Exceed Threshold (Yes or No)?	No	No	No [b]	No [b]	No [b]	No [b]

Notes: AAQS = ambient air quality standards; CO = Carbon Monoxide; NA = No mass emission threshold for this pollutant; NOX = Oxides of nitrogen; PM10 = particulate matter; $PM_{2.5}$ = fine particulate matter; SO_2 = Oxides of sulfur; ROG = Reactive organic gas

a. "Year" refers to the modeled construction year, assuming a worst-case scenario in which all project elements are built simultaneously.
b. Emissions of these pollutants would be minimal and would not cause or contribute to a violation of the applicable CAAQS or NAAQS.

Construction emissions estimates were developed using CalEEMod version 2022.1. See Appendix A for model outputs and more detailed assumptions.

Source: ESA 2025.

The proposed project would not alter airport operations, including staffing, flights, or customer activity; therefore, operational emissions would remain unchanged and not contribute to regional air quality degradation.

Because construction and operational emissions are below thresholds that EDCAQMD considers cumulatively considerable, the proposed project would not result in a cumulatively significant net increase of any criteria pollutant for which the region is in nonattainment. Impacts would be **less than significant**.

Topic c

Construction activities would generate toxic air contaminants (TACs), primarily diesel particulate matter (DPM), from the operation of off-road diesel-powered equipment. To evaluate potential health risks from construction-related DPM emissions, the EDCAQMD has established a screening threshold of 37,000 gallons of diesel fuel, assuming the use of T-BACT.[12] Projects with diesel fuel usage below this threshold are presumed to result in a less than significant health risk.

The threshold assumes T-BACT is implemented, which EDCAQMD defines as the use of 1996 and later model year engines for all diesel construction equipment. Under federal emissions regulations, 1996 model year nonroad engines rated over 175 kilowatts (kW) were required to meet Tier 1 standards, which included a particulate matter (PM) emission limit of 0.4 grams per brake horsepower-hour (g/bhp-hr).

For this project, PM emissions were estimated based on the fleet-wide mix for calendar years 2026 and 2027. The PM emission rates vary by equipment type and year but range from 0.05 to 0.17 g/bhp-hr, well below the 1996 Tier 1 T-BACT benchmark. Total diesel fuel consumption for the full duration of construction is estimated to be approximately 34,177 gallons, which is below the EDCAQMD screening

[12] El Dorado County Air Quality Management District (EDCAQMD), 2002, *Guide to Air Quality Assessment*, February 2002, https://www.eldoradocounty.ca.gov/files/assets/county/v/1/documents/government/air-quality/guide-to-air-quality-assessment/chapter3_rf6.pdf.

threshold. Therefore, construction of the proposed project would not expose sensitive receptors to substantial pollutant concentrations, and the health risk impact would be **less than significant**.

Since the Airport Master Plan projects would not result in any permanent sources of toxic air emissions, the proposed project would not result in any new long-term sources of TAC in the area. This impact would be **less than significant**.

Topic d

EDCAQMD has identified typical sources of odor in the Guide to Air Quality Assessment,[13] a few examples of which include manufacturing plants, rendering plants, coffee roasters, wastewater treatment plants, sanitary landfills, and solid waste transfer stations. While sources that generate objectionable odors must comply with air quality regulations, the public's sensitivity to locally produced odors often exceed regulatory thresholds. The proposed project would not include uses that have been identified by EDCAQMD as potential sources of objectionable odors; therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

References

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[13] El Dorado County Air Quality Management District (EDCAQMD), 2002, *Guide to Air Quality Assessment*, February 2002, https://www.eldoradocounty.ca.gov/files/assets/county/v/1/documents/government/air-quality/guide-to-air-quality-assessment/chapter3_rf6.pdf.

Biological Resources

Issues (and Supporting Information Sources):		*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?	☐	☒	☐	☐
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 U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
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?	☐	☐	☒	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
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?	☐	☐	☐	☒

Environmental Setting

Data Sources/Methodology

This section identifies the existing biological resources at the Airport property; identifies the federal, state, and local regulations pertaining to biological resources within the region; and describes proposed project impacts on those biological resources as well as mitigation measures to reduce project-related potentially significant impacts. The information and analysis presented in this section is focused on special-status species,[14] wildlife habitats, vegetation communities, and potentially jurisdictional waters of the United States and waters of the state that occur or have the potential to occur on the Airport property. The results of the assessment presented in this section are based upon literature review and queries of the CDFW's Natural Diversity Database (CNDDB), the U.S. Fish and Wildlife Service (USFWS) list of federal endangered and threatened species, and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants, as well as a field survey conducted at the Airport property by a qualified biologist.

[14] Species that are protected pursuant to federal or state endangered species laws or have been designated as Species of Special Concern by CDFW, or species that are not included on any agency listing but meet the definition of rare, endangered or threatened species of the CEQA Guidelines Section 15380(b), are collectively referred to as "special-status species."

The sources of reference data reviewed for this evaluation included the following:

- South Lake Tahoe U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle
- Historic and current aerial imagery[15]
- CDFW CNDDB list of special-status species occurrences within the South Lake Tahoe and surrounding USGS 7.5-minute topographic quadrangles[16]
- The California Native Plant Society online database[17]
- A USFWS Information for Planning and Consultation species list[18]
- USFWS Critical Habitat for Threatened and Endangered Species (online mapping program)[19] (USFWS 2025b)
- USFWS National Wetlands Inventory (NWI) online mapper[20]

On May 19, 2025, ESA biologist Jessica Orsolini conducted a reconnaissance-level survey of the Airport property for biological resources. During the survey, the ESA biologist walked through the Airport property recording existing habitat types, plants, and wildlife species observed. Vegetation communities and wildlife habitats were identified based on the field survey and by using aerial photo interpretation. During the biological survey, habitats were evaluated for their potential to support regionally occurring special-status species and the presence of any other biologically sensitive resources such as wetlands, riparian habitat, or drainages. While a formal aquatic resources delineation was not conducted, potential wetlands and other waters of the United States were noted. No protocol surveys for special-status species were conducted.

Regional Setting

The Airport property is in the City of South Lake Tahoe in El Dorado County, California. Regionally, the proposed project area is in the Sierra Nevada within the northern High Sierra Nevada floristic province of the Sierra Nevada region.[21] The Sierra Nevada of California is a north-northwest aligned mountain range that is substantially steeper on the eastern slope than the western slope. Elevation of the region ranges from 1,000 to 14,495 feet. Regional natural vegetation communities in the vicinity of the Airport property include montane conifer forests, sagebrush scrub, wetlands, and riverine habitat. The climate is typically temperate to cold and dry.

The Airport property area is generally flat where the runway, taxiway, and facility structures are located with gentle slopes in the undeveloped areas along the eastern and western edges of the property. Elevations range from approximately 6,255 to 6,330 feet. The Airport property primarily consists of structures and landscaping with Jeffrey pine forest along the eastern and western edges. The Upper Truckee River crosses from south to north along the eastern property edge and an intermittent drainage runs south to north between the taxiway and Airport structures. Existing land uses surrounding the

[15] Google Earth 2025.
[16] CDFW 2025.
[17] CNPS 2025.
[18] USFWS 2025a.
[19] USFWS 2025b.
[20] USFWS 2025c.
[21] Baldwin et al. 2012.

Airport include open space and forestland to the east, south, west, and north; residential uses to the east and northwest; and commercial uses to the northwest. U.S. Route 50runs parallel to the Airport to the west.

Natural Communities and Other Land Covers

Natural communities are assemblages of plant species that are defined by species composition and relative abundance. Other land covers consist of unvegetated areas or areas significantly disturbed by human activities. The natural communities described herein correlate where applicable with the list of terrestrial biological communities recognized by the CNDDB.[22] Eight habitat types were identified within the proposed project area. They can be divided into two main classifications: uplands (natural and other) and aquatic habitats.

Structures and Landscaping

Structures and urban landscaping comprise the majority of Airport property. Structures and hardscape include the runway, taxiway, aircraft aprons, the terminal and Airport buildings, aviation hangars, the parking lot and Airport access roadways among other Airport infrastructure (Figures 5 and 6). These facilities are described in more detail under *Existing Airport Facilities* in the Introduction. Between and around the runway and taxiway is grassland dominated by bulbous bluegrass (*Poa bulbosa*) that is regularly maintained through mowing.

Jeffrey Pine Forest

Within the proposed project area, Jeffrey pine forest occurs on the slopes at the eastern and western edges of the Airport property, outside the fenced portion of the Airport facilities. This community type is dominated by an overstory of Jeffrey pine (*Pinus jeffreyi*) mixed with lodgepole pine (*Pinus contorta*). The understory is open with scattered shrub and herbaceous species including pinemat (*Ceanothus prostratus*), big sagebrush (*Artemisia tridentata*), bulbous bluegrass, and bottlebrush squirreltail (*Elymus elymoides*). Jeffrey pine forest is not considered a sensitive natural community by CDFW.[23]

Big Sagebrush Scrub

Big sagebrush scrub occurs in the northeastern corner of the Airport property, outside the fenced portion of the Airport facilities. This community primarily occurs east of the Upper Truckee River and west of the edge of the Jeffrey pine forest. This community type is dominated by shrubs and herbaceous species consisting of big sagebrush, greenleaf manzanita (*Arctostaphylos patula*), Woods' rose (*Rosa woodsii*), bitterbrush (*Purshia tridentata*), mule ears (*Wyethia mollis*), butterweed (*Senecio integerrimus*), and bulbous bluegrass. Lemmon's willows (*Salix lemmonii*) are also scattered throughout this community. Big sagebrush scrub is not considered a sensitive natural community by CDFW.[24]

Seasonal Wetlands

A formal aquatic resources delineation was not conducted during the biological reconnaissance survey; however, areas with wetland vegetation or wetland hydrology were noted. Within the Airport property but outside the fenced facilities, the topographically level benches on either side of the Upper Truckee River were vegetated with many hydrophytic species including Lemmon's willow, plantainleaf buttercup (*Ranunculus alismifolius*), slender cinquefoil (*Potentilla gracilis*), bigleaf lupine (*Lupinus polyphyllus*)

[22] CDFW 2023.
[23] CDFW 2023.
[24] CDFW 2023.

and rushes (*Juncus* sp.). The NWI has mapped these areas as a matrix of wetland communities consisting of freshwater forested/shrub wetland (mapped as palustrine, scrub-shrub, broad-leaved deciduous, seasonally flooded, and seasonally saturated; abbreviated PSS1C and PSS1B) and freshwater emergent wetland (mapped as palustrine, emergent, persistent, seasonally flooded; abbreviated PEM1B).[25]

Areas of wetland vegetation, saturated soils, and standing water were also observed on the Airport property in a low swale between the taxiway and runway. Hydrophytic species observed include Nebraska sedge (*Carex nebrascensis*), mountain rush (*Juncus balticus*), willow saplings (*Salix* sp.), alpine timothy (*Phleum alpinum*), polygala knotweed (*Polygonum polygaloides*), and narrowleaf minerslettuce (*Montia linearis*).

Upper Truckee River (Perennial Creek)

The Upper Truckee River is a perennial aquatic feature that flows from south to north through the eastern and northern portions of the Airport property. The river occurs entirely outside the fenced perimeter of the Airport facilities. Flowing water was present in the river during the reconnaissance survey. The Upper Truckee River on the Airport property has flows consisting of a mix of riffles and runs. Scattered Lemmon's willow and wetland vegetation occurs along the banks. The NWI has mapped the portion of the Upper Truckee River that occurs on Airport property as riverine (mapped as riverine, upper perennial, unconsolidated bottom, permanently flooded; abbreviated R3UBH).[26]

Intermittent Drainage

An intermittent excavated drainage runs along the west side of the taxiway and drains into the Upper Truckee River north of the north end of the runway on the Airport property. This drainage contained flowing water during the reconnaissance survey with flows primarily consisting of slow runs. Vegetation along the banks was dominated by Lemmon's willow. Portions of the drainage contained cattails (*Typha* sp.) and field horsetail (*Equisetum arvense*). The NWI has mapped this intermittent drainage as riverine (mapped as riverine, intermittent, streambed, seasonally flooded, excavated; abbreviated R4SBCx).[27] The NWI has also mapped several tributaries to this drainage originating to the west,[28] though besides a small detention basin south of the aircraft hangers (discussed below), these features were not observed during the reconnaissance survey.

Detention Basin

A small detention basin occurs just south of the aircraft hangars. During the survey, this basin contained water but was choked with cattails. Lemmon's willows occur around the edges. This feature likely captures runoff from Airport facilities and the surrounding hillside. A large drain inlet occurs at the east edge of this feature. The NWI has mapped a riverine feature in this area (mapped as riverine, intermittent, streambed, temporarily flooded; abbreviated R4SBA).[29]

Federal and State Protected Wetlands and Waters

The federal government regulates waters of the United States, including many wetlands, under the Clean Water Act (CWA). The federal government defines wetlands in CWA Section 404 as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and

[25] USFWS 2025c.
[26] USFWS 2025c.
[27] USFWS 2025c.
[28] USFWS 2025c.
[29] USFWS 2025c.

that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."[30] Indicators of three wetland parameters (hydric soils, hydrophytic vegetation, and wetlands hydrology), as determined by site investigation, must be present at a site for the U.S. Army Corps of Engineers (USACE) to classify the site as a wetland.[31]

The USACE is the responsible agency for regulating wetlands under CWA Section 404, while the EPA has overall responsibility for the CWA. CDFW does not normally have direct jurisdiction over wetlands unless they are subject to regulation under streambed alteration agreements or they support State-listed species; however, CDFW has trust responsibility for wildlife and habitats pursuant to California law.

"Other waters of the United States" refer to those hydric features that are regulated by the CWA but are not wetlands.[32] To be considered jurisdictional, these features must exhibit an ordinary high-water mark. Examples of other waters of the United States include rivers, creeks, intermittent channels, ponds, and lakes. The definition and regulatory framework of wetlands and jurisdictional waters are further described in the CWA portion of this chapter (see below).

A formal aquatic resources delineation has not been conducted for the proposed project though areas with wetland vegetation or wetland hydrology were noted during the biological reconnaissance survey. A portion of the Upper Truckee River flows through the eastern and northern portions of the Airport property and an intermittent channelized tributary of the Upper Truckee River flows along the west side of the taxiway through the Airport property. Areas of wetland vegetation and wetland hydrology were identified in low areas between the taxiway and runway, and around the Upper Truckee River, and a small detention basin was observed south of the aircraft hangars.

Sensitive Natural Communities

A sensitive natural community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, is structurally complex, or is in other ways of special concern to local, state, or federal agencies. Most sensitive natural communities are given special consideration because they perform important ecological functions, such as maintaining water quality and providing essential habitat for plants and wildlife. Some natural communities support a unique or diverse assemblage of plant species and therefore are considered sensitive from a botanical standpoint. CEQA may identify the elimination of such communities as a significant impact.

Sensitive natural communities include (a) habitats and natural communities that are regulated by federal and state resource agencies, (b) natural communities ranked S1, S2, or S3 by CDFW, and (c) areas protected by county ordinance. The CNDDB generates a list of ecologically sensitive and/or threatened habitat types within the California. There are no sensitive natural communities mapped in the CNDDB on the Airport property. Seasonal wetlands, the detention basin, the intermittent drainage, and the Upper Truckee River located on the Airport property area are sensitive natural communities because they are regulated by federal and state resource agencies.

[30] 33 Code of Federal Regulations (CFR) 328.3(c)(1); 40 CFR 120.2(c)(1).
[31] Environmental Laboratory, *Corps of Engineers Wetlands Delineation Manual*, January 1987.
[32] 33 CFR 328.4.

Wildlife Corridors

Wildlife corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. Fragmentation can also occur when a portion of one or more habitats is converted into another habitat, such as when woodland or scrub habitat is altered or converted into grasslands after a disturbance such as fire, mudslide, or grading activities. Wildlife corridors mitigate the effects of this fragmentation by (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) on population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

The proposed project would make improvements to an existing Airport. Activities and management at the Airport are deterrents to wildlife movement through the area and there are no documented wildlife movement corridors through the Airport property. The Upper Truckee River along the eastern edge of the Airport provides aquatic and riparian habitat suitable for wildlife movement through the area. No Airport improvements are planned near the river outside of existing facility fencing and any wildlife crossing through this area are likely already adapted to the ongoing disturbance from Airport operations. Implementation of the proposed project is not expected to impact wildlife corridors.

Critical Habitat

Critical habitat is defined in Federal Endangered Species Act (FESA) Section 3(5)A as a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. There is no critical habitat designated within or adjacent to the Airport property.

Special-Status Species

Special-status species are regulated pursuant to federal and/or state endangered species laws or have been designated as Species of Special Concern by CDFW. In addition, CEQA Guidelines Section 15380(b) defines rare, endangered, or threatened species that are not included in any listing.[33] Species recognized under these terms are collectively referred to as special-status species. Special-status species or natural communities evaluated in this report are defined as:

1. Species listed or proposed for listing as threatened or endangered under the FESA[34]
2. Species that are candidates for possible future listing as threatened or endangered under FESA[35]
3. Species listed or proposed for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA)[36]

[33] For example, vascular plants listed as rare or endangered or as Rare Plant Rank 1 or 2 by CDFW are considered to meet the requirements of CEQA Guidelines Section 15380(b).

[34] 50 CFR 17.12 (listed plants), 50 CFR 17.11 (listed animals), and various notices in the Federal Register (FR) (proposed species).

[35] 61 FR 40, February 28, 1996.

[36] California Code of Regulations (CCR) Title 14, Section 670.5.

4. Plants listed as rare or endangered under the California Native Plant Protection Act[37]
5. Animal species of special concern to CDFW
6. Animals fully protected under Fish and Game Code[38]
7. Species that meet the definitions of rare and endangered under CEQA; a plant or animal species may be treated as "rare or endangered" even if not on one of the official lists[39]
8. Plants ranked by California Native Plant Society as "rare, threatened, or endangered in California" (California Rare Plant Ranks 1A, 1B, and 2) meet CEQA significance criteria and State Fish and Game Code sections 1901, 2062, and 2067 criteria as rare, threatened, or endangered species
9. Natural communities that are waters, wetlands, riparian communities, or any biological community ranked S1, S2, or S3 by CDFW[40]

A list of special-status plant and terrestrial wildlife species that have the potential to occur in the project area was compiled based on data contained in the CNDDB;[41] and California Native Plant Society's Rare Plant Inventory;[42] a search of the USFWS Information for Planning and Consultation database (**Appendix B**).[43] **Table 6** below provides a list of special-status species, their general habitat requirements, and an assessment of their potential to occur on the Airport property. The analysis also includes consideration of nesting birds regulated by the federal Migratory Bird Treaty Act (MBTA) and/or California Fish and Game Code and species protected under the TRPA.

The "Potential to Occur" categories are defined as follows:

- **None:** A species is determined to have no potential to occur if (1) its specific habitat requirements are not present; **AND/OR** (2) it is outside the range or presumed to be extirpated from the area or region; **AND/OR** (3) a survey has been conducted according to agency protocol and the species was not found.
- **Low:** A species is determined to have a low potential to occur if (1) its known current distribution or range is outside of but near the study area; **AND/OR** (2) only limited or marginally suitable habitat is present.
- **Moderate:** A species is determined to have a moderate potential to occur if (1) habitat is present in the study area or immediately adjacent areas; **AND** (2) the study area is in the known range of the species, even if the species was not observed during general biological surveys.
- **High:** A species is determined to have a high potential to occur or be present if (1) habitat is present in the study area or immediately adjacent areas; **AND** (2) the study area is in the known range of the species; **AND/OR** (3) there are recent and reliable records of the species on or near the site.

Conclusions regarding habitat suitability and species occurrence are based on the analysis of existing literature and databases described previously and known habitats occurring within the project areas and regionally. Only species classified as having a moderate or high potential for occurrence were considered in the impact analysis.

[37] Fish and Game Code Section 1900 et seq.
[38] Fish and Game Code Section 3511 (birds), Section 4700 (mammals), and Section 5050 (reptiles and amphibians).
[39] CEQA Guidelines Section 15380.
[40] CDFW 2023.
[41] CDFW 2025.
[42] CDFW 2025.
[43] USFWS 2025a.

TABLE 6
SPECIAL-STATUS SPECIES POTENTIALLY OCCURRING IN THE AIRPORT PROPERTY

Scientific Name Common Name	Listing Status: Federal/State/ CNPS/Local	General Habitat	Potential to Occur in the Airport Property
Fish			
Catostomus lahontan Lahontan mountain sucker	—/SSC/—	Occur in the Walker, Carson, Truckee, and Susan River drainages of the Lahontan Basin in the Eastern Sierra Nevada, but not in the Eagle Lake Basin. Also found in the North Fork Feather River drainage, mainly in Red Clover Creek. Found in shallow (<6.6 feet), clear, low-gradient streams associated with diverse substrates, from sand to boulders, in areas with dense cover. Have been found in streams up to 9,186 feet at temperatures of 34 to 77 F.	High – This species was found in the Upper Truckee River in the Airport property during surveys in 2005 and 2011.
Oncorhynchus clarkii henshawi Lahontan cutthroat trout	FT/SSC/—	Historically in all accessible cold waters of the Lahontan Basin in a wide variety of water temperatures and conditions. Cannot tolerate presence of other salmonids. Requires gravel riffles in streams for spawning.	Low – Lahontan cutthroat trout occur in the isolated headwaters of the Upper Truckee River and were planted in Lake Tahoe in 2011. These fish planted in Lake Tahoe, which could potentially migrate into the Upper Truckee River in the vicinity of the Airport property, are unlikely to exist now due to predation.
Prosopium williamsoni mountain whitefish	—/SSC/—	Inhabit clear cold streams at rivers at elevations of 4,593 to 7,545 feet. Favorable habitat includes mountain lakes or streams with deep pools (>3.3 feet) where summer temperatures range from 52 to 70 degrees F. Spawning occurs between October and early December when water temperatures are below 52 degrees F.	High – This species was found in the Upper Truckee River in the Airport property during surveys in 2011. This species was also collected from this location in 1949.
Siphateles bicolor pectinifer Lahontan Lake tui chub	—/SSC/—	Inhabits large, deep lakes. Tolerates a wide range of physiochemical water conditions. Spawns in near-shore shallow areas over beds of aquatic vegetation.	None – No suitable habitat on the Airport property.
Reptiles			
Actinemys marmorata northwestern pond turtle	PT/SSC/—	Highly aquatic species found in a broad range of aquatic habitats including rivers and streams, permanent lakes, ponds, reservoirs, settling ponds, marshes, and other inundated wetlands. May use brackish, semi-permanent, or ephemeral features when inundated. Requires basking sites and loose soil in surrounding uplands suitable for nest excavation. Occurs throughout non-desert CA from 0 to 6,700 ft. Isolated populations are known from the Mojave River, Susan River, Truckee River, Carson River, and Klamath Basin.	Low – Airport property is outside the geographic range of this species.

Scientific Name Common Name	Listing Status: Federal/State/ CNPS/Local	General Habitat	Potential to Occur in the Airport Property
Amphibians			
Ambystoma macrodactylum sigillatum southern long-toed salamander	—/SSC/—	Found under wood, logs, rocks, bark and other objects near breeding sites, which can include ponds, lakes, and streams. Outside of breeding season species retreats into burrows or other refugia.	Low – Limited suitable habitat in the Airport property.
Lithobates pipiens Northern leopard frog	—/SSC/—	Highly aquatic species. Shoreline cover, submerged and emergent aquatic vegetation are important habitat characteristics. Native range is east of the Sierra Nevada crest.	None – Limited suitable habitat in the Airport property, not known to occur in the vicinity.
Rana sierrae Sierra Nevada yellow-legged frog	FE/ST/—	Always encountered within a few feet of water. Tadpoles may require 2 to 4 years to complete their aquatic development.	Low – Limited suitable habitat in the Airport property and vicinity; not known to occur within the vicinity.
Birds			
Accipiter artricapillus American goshawk	—/SSC/TRPA	Coniferous forest with high levels of canopy cover. Uses old nests and maintains alternate sites. Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees. Goshawks generally do not nest near areas of human habitation or paved roads	Low – The coniferous forests in the Airport property and vicinity do not provide suitable nesting habitat for this species due to regular human disturbance.
Asio otus Long-eared owl	—/SSC/—	Require a combination of grassland or other open country for foraging, and dense tall shrubs or trees for nesting and roosting.	Low –Suitable foraging habitat is found in the Airport property and vicinity but the presence of the Airport and other development decreases the likelihood of this species occurring.
Aquila chrysaetos Golden eagle	—/—/FP/TRPA	Forages in open terrain such as grasslands, deserts, savannahs, and early successional stages of forest and shrub habitats; nests in canyons and large trees in open habitats. In the Sierra Nevada, golden eagles favor grasslands and areas of shrubs or saplings, and open-canopied woodlands of young blue oaks.	Low –Suitable foraging habitat is found in the meadow communities in the Airport property and vicinity but the presence of the Airport and other development decreases the likelihood of this species occurring in the vicinity.
Cypseloides niger black swift	—/SSC/—	Breeds in the Sierra Nevada Mtns., Cascade Range, and Central Coast Range. Nests in moist crevices or caves on sea cliffs above the surf and on cliffs behind or adjacent to waterfalls in deep canyons. Does not overwinter in California	None – Airport property provides no suitable habitat.
Empidonax traillii willow flycatcher	—/SE/—	Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters. Requires dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches.	Moderate – The montane riparian scrub in the northern part of the Airport property and vicinity provides potential nesting habitat for this species.

Scientific Name Common Name	Listing Status: Federal/State/ CNPS/Local	General Habitat	Potential to Occur in the Airport Property
Falco peregrinus anatum Peregrine falcon	—/—/FP/TRPA	Nests on vertical cliff habitat, with large potholes or ledges, that is inaccessible to land predators. Hunts in a wide variety of habitats including meadows, woodlands, marshes, and mudflats.	None – Airport property provides no suitable nesting habitat.
Haliaeetus leucocephalus bald eagle	FD/SE/FP/TRPA	Nests in large stands with tree heights usually over 100 ft tall. Nests typically within one mile of water.	Low – Limited nesting habitat within the Airport property due to distance to foraging habitat.
Pandion haliaetus osprey	—/—/TRPA	Nests in large nests built in tree-tops within 15 miles of a good fish-producing body of water.	Low – Limited nesting habitat within the Airport property due to distance to foraging habitat.
Riparia riparia Bank swallow	—/ST/—	Colonial nester, primarily in riparian and other lowland habitats. Requires vertical banks/cliffs with fine-textured sandy soils near streams, rivers, lakes to dig nesting hole.	Low – Potential nesting habitat occurs along the Upper Truckee River, but no suitable habitat occurs within the Airport property.
Strix occidentalis occidentalis pop. 2 California spotted owl – Sierra Nevada Distinct Population Segment (DPS)	PT/—/SSC	Occurs in dense, old-growth conifer forests with multiple canopy layers. Roosts are most often in dense canopy on north facing slopes, usually within 1,000 feet of permanent water. Resides mostly in the southern Cascade Range of northern California, along the west slope of the Sierra Nevada, and in the mountains of central and southern California south to the Mexican border.	Low – The coniferous forest in and surrounding the Airport property do not contain the old growth used by this species for nesting and are subject to regular human disturbance.
Waterfowl Species	—/—/TRPA	Open water.	High – The Upper Truckee River in the Airport property and vicinity provides suitable habitat for waterfowl.
Xanthocephalus xanthocephalus yellow-headed blackbird	—/SSC/—	Nests in freshwater emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds. Nests only where large insects are abundant.	Low – Freshwater emergent wetlands within the Airport property provide marginal quality habitat for this species.
Mammals			
Aplodontia rufa californica Sierra Nevada mountain beaver	—/SSC/—	Moist forest habitats with ample vegetative ground cover. Deep, friable soils and a cool, moist microclimate are required for burrowing.	None – Airport property does not provide suitable habitat.
Canis lupus gray wolf	FE/SE/—	Habitat generalist historically occupying diverse habitats including tundra, forests, grasslands, and deserts. Primary habitat requirements are the presence of adequate ungulate prey, water, and low human contact. This native species was likely extirpated from California in the 1920s but have returned to California on their own by dispersal of individuals from source populations in other states.	None – Airport property does not provide suitable habitat. There are no known of occurrences of wolves around South Lake Tahoe.
Gulo gulo luscus North American wolverine	FT/ST/FP	Typically found in very remote areas of the northern North America and high elevation areas of the Sierra Nevada and Rocky Mountains. Uses caves, logs, and burrows for cover and denning. Hunts in more open areas.	None – The presence of an existing developed and populated area in and near the Airport property precludes the use of the area by wolverine.

Scientific Name Common Name	Listing Status: Federal/State/ CNPS/Local	General Habitat	Potential to Occur in the Airport Property
Lepus americanus tahoensis Sierra Nevada snowshoe hare	—/SSC/—	Boreal riparian areas in the Sierra Nevada. Thickets of deciduous trees in riparian areas and thickets of young conifers.	Low – Airport property is outside of the typical high-elevation habitat preferred by this species.
Lepus townsendii townsendii western white-tailed jackrabbit	—/SSC/—	Plains and prairie and in alpine meadows with scattered coniferous trees.	Low – Suitable habitat for this species occurs in the Airport property, however this species is less likely to occur within the developed portions of the Basin.
Odocoileus hemionus Mule deer	—/—/TRPA	Mule deer range and habitat includes coniferous forest, foothill woodland, shrub land, grassland, agricultural fields, and suburban environments.	Low– Suitable habitat for this species occurs in the Airport property; however mule deer are less likely to occur within the developed portions of the Basin.
Pekania pennanti fisher	—/SSC/—	Preferred habitat is characterized by dense, multi-storied coniferous forest that includes a high percentage of snags and downed logs in proximity to riparian corridors.	None – Coniferous forests within the Airport property provide low quality habitat for this species and the species is not known to occur in the vicinity.
Taxidea taxus American badger	—/SSC/—	Found throughout most of California except the northern North Coast. Abundant in drier open stages of many shrub, forest, and herbaceous habitats with friable soils. Friable soils are required to dig burrows for refugia and rearing young	Low – Airport property provides only marginally suitable habitat. No evidence of badger dens were observed during the biological reconnaissance survey.
Vulpes vulpes necator pop. 2 Sierra Nevada red fox – Sierra Nevada DPS	FE/ST/—	Found in the Cascades in Siskiyou County and from Lassen County south to Tulare County. Found in a variety of habitats, including alpine dwarf-shrub, wet meadow, subalpine conifer, lodgepole pine, red fir, aspen, montane chaparral, montane riparian, mixed conifer, and ponderosa pine. Most sightings in the Sierra Nevada are above 7,000 feet. Uses dense vegetation and rocky areas for cover and den sites. Den sites include rock outcrops, hollow logs and stumps, and burrows in deep, loose soil. Prefers forests interspersed with meadows or alpine fell-fields.	None – Airport property provides limited suitable habitat and occurs below the typical elevation range of this species.
Invertebrates			
Bombus occidentalis western bumble bee	—/CE/—	Formerly found in much of California, the western bumble bee is now much reduced in abundance and mostly restricted to high meadows or coastal environments. It currently is observed in high elevation meadows, forests, riparian areas in the Sierra Nevada and Cascades as well as in coastal grasslands in northern California. As generalist foragers, they do not depend on any one flower type. They feed on nectar and pollen from flowers and nest and hibernate in abandoned rodent burrows and bird nests. It requires undisturbed nest sites and overwintering sites.	Low – The Airport property lacks the high elevation meadow habitat typically used by this species.

Scientific Name Common Name	Listing Status: Federal/State/ CNPS/Local	General Habitat	Potential to Occur in the Airport Property
Danaus Plexippus pop. 1 Monarch butterfly – California overwintering population	PT/—/—	During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily *Asclepias* spp.). After larvae emerge, they feed on the milkweed. The larva then pupates into a chrysalis before emerging 6 to 14 days later as an adult butterfly. In temperate climates, such as western North America, monarchs undergo long-distance migration to their overwintering sites. Overwintering monarchs require specific microclimates which are primarily located at sites along the Pacific Coast, roosting in eucalyptus, Monterey pines, and Monterey cypress trees.	None – No milkweed occurs on the Airport property and the project areas occur outside the range of the overwintering population.
Plants and Fungi			
Arabis rigidissima var. *demota* Galena Creek rockcress	—/—/1B.2/TRPA	Well-drained, stony soil underlain by basic volcanic rock in upper montane coniferous forests. Occurs from 7,400 to 8,400 feet elevation. Blooms July through August.	None – Airport property provides no suitable habitat. Airport property outside the known elevational range of the species.
Astragalus austinae Austin's astragalus	—/—/1B.3	Exposed ridges and meadows above timberline. Occurs from 8,005 to 9,745 feet elevation. Blooms July (sometimes May) through September.	None – Airport property provides no suitable habitat. Airport property outside the known elevational range of the species.
Boechera tularensis Tulare rockcress	—/—/1B.3	Rocky slopes in subalpine coniferous forests and upper montane coniferous forests. Occurs from 5,990 to 10,990 feet elevation. Blooms June (sometimes May) through July (sometimes August).	None – Airport property provides no suitable habitat.
Botrychium ascendens upswept moonwort	—/—/2B.2	Moist habitats near springs and streams. Occurs from 3,660 to 9,990 feet elevation. Blooms July (sometimes June) through August.	Moderate – Suitable habitat along banks of the Upper Truckee River and in the in wet meadows and freshwater emergent wetlands in the Airport property.
Botrychium crenulatum scalloped moonwort	— /—/2B.2	Habitats with wet or moist soils such as marshes, meadows, bogs, seeps, and along the edges of lakes and streams. Occurs from 4,160 to 10,760 feet elevation. Blooms June through September.	Moderate – Suitable habitat along banks of the Upper Truckee River and in the in wet meadows and freshwater emergent wetlands in the Airport property.
Brasenia schreberi watershield	—/—/2B.3	Freshwater marshes and swamps. Occurs from 0 to 7,220 feet elevation. Blooms June through September.	Moderate – Suitable habitat occurs in the freshwater emergent wetlands in the Airport property.
Carex daveyi Davy's sedge	—/—/1B.3	Dry, often sparse meadows in subalpine coniferous forest and upper montane coniferous forest. Occurs from 4,920 to 10,500 feet elevation. Blooms May through August.	Moderate – Suitable habitat occurs in the sage scrub community and in the vegetated grassy areas around the runway and taxiway on the Airport property.
Carex hystericina porcupine sedge	—/—/2B.1	Perennial rhizomatous herb found in marshes and swamps and sometimes stream banks. Occurs from 2,000 to 7,875 feet. Blooms May through June.	Moderate – Suitable habitat occurs in the freshwater emergent wetlands in the Airport property.

Scientific Name Common Name	Listing Status: Federal/State/ CNPS/Local	General Habitat	Potential to Occur in the Airport Property
Carex limosa mud sedge	—/—/2B.2	Perennial rhizomatous herb found in sphagnum bogs and fens, soggy meadows, seeps, marshes and swamps, and edges of lakes in upper and lower montane coniferous forest. Occurs from 3,935 to 8,860 feet. Blooms June through August.	Moderate – Suitable habitat occurs in the wet meadows and freshwater emergent wetlands in the Airport property.
Chaenactis douglasii var. *alpina* alpine dusty maidens	—/—/2B.3	Perennial herb found in alpine boulder and rock field. Occurs from 9,400 to 11,155 feet. Blooms July through September.	None – Airport provides no suitable habitat and is outside the known elevational range of the species.
Claytonia megarhiza fell-fields claytonia	—/—/2B.3	Perennial herb found in alpine boulder and rock field in subalpine coniferous forest. Occurs from 8,530 to 11,590 feet. Blooms July through September.	None – Airport provides no suitable habitat and is outside the known elevational range of the species.
Draba asterophora var. *asterophora* Tahoe draba	—/—/1B.2/TRPA	Perennial herb found in alpine talus slopes, rock outcrops and crevices, on decomposed granite in subalpine coniferous forest. Occurs from 8,205 to 11,500 feet. Blooms July through August (sometimes September).	None – Airport property provides no suitable habitat. Airport property outside the known elevational range of the species.
Draba asterophora var. *macrocarpa* Cup Lake draba	—/—/1B.1/TRPA	Perennial herb found in subalpine coniferous forests, in relatively deep soil in the shade of granitic rocks. Occurs from 8,205 to 9,235 feet. Blooms July through August (sometimes September).	None – Airport property provides no suitable habitat. Airport property outside the known elevational range of the species.
Elodium blandowii Blandow's bog moss	—/—/2B.3	Moss found in meadows and seeps in subalpine coniferous forest. Occurs from 6,110 to 8,860 feet.	Moderate – Suitable habitat occurs in the freshwater emergent wetlands in the Airport property.
Epilobium palustre marsh willowherb	—/—/2B.3	Perennial rhizomatous herb found in bogs, fens, mesic meadows, and seeps. Occurs from 4,215 to 7,695 feet. Blooms July through September.	Moderate – Suitable habitat occurs in the freshwater emergent wetlands in the Airport property.
Erigeron miser starved daisy	—/—/1B.3	Perennial herb found in rocky upper montane coniferous forest. Occurs from 6,035 to 8,595 feet. Blooms June through October.	Moderate – Suitable habitat occurs in the Jeffrey pine forest community on the Airport property.
Eriogonum luteolum var. *saltuarium* Jack's wild buckwheat	—/—/1B.2	Annual herb found in granitic, sandy soils of great basin scrub and upper montane coniferous forest. Occurs from 5,580 to 7,875 feet. Blooms July through September.	Moderate – Suitable habitat occurs in the Jeffrey pine forest and sagebrush scrub communities on the Airport property.
Erythranthe carsonensis Carson Valley monkeyflower	—/—/1B.1	Annual herb found in granitic soils in openings of Great Basin scrub. Known from one occurrence in California in the vicinity of Fredricksburg in Alpine County at 4,855 feet. Blooms April through June.	None. Airport property outside the known geographic and elevational range of the species.
Glyceria grandis American managrass	—/—/2B.3	Perennial rhizomatous herb found in found in streams, ditches, ponds, bogs, fens, marshes, swamps, seeps, and wet meadows. Occurs from 50 to 6,495 feet. Booms June through August.	Moderate – Suitable habitat occurs in the Upper Truckee River and in the wet meadows and freshwater emergent wetlands in the Airport property.

Scientific Name Common Name	Listing Status: Federal/State/ CNPS/Local	General Habitat	Potential to Occur in the Airport Property
Lewisia longipetala long-petaled lewisia	—/—/1B.3/TRPA	Perennial herb found in mesic sites, in cracks of granite or gravely volcanic soils in alpine boulder and rock fields and subalpine coniferous forests. Occurs from 8,205 to 9,595 feet. Blooms July through August (sometimes September).	None – Airport property provides no suitable habitat. Airport property outside the known elevational range of the species.
Meesia uliginosa broad-nerved hump moss	—/—/2B.2	Moss growing on damp soil in bogs, fens, wet meadows and seeps in subalpine coniferous forest and upper montane coniferous forest. Occurs from 3,970 to 9,200 feet. Blooms July through October.	Moderate – Suitable habitat occurs in the wet meadows in the Airport property.
Oreocarya crymophila subalpine oreocarya	—/—/1B.3	Perennial herb found in rocky, volcanic soils of subalpine coniferous forest. Occurs from 8,530 to 10,500 feet. Blooms July through August.	None –Airport property outside the known elevational range of the species.
Phacelia stebbinsii Stebbins' phacelia	—/—/1B.2	Annual herb found in cismontane woodland, lower montane coniferous forest, and meadows and seeps. Occurs from 2,000 to 6,595 feet. Blooms May through July.	Moderate – Suitable habitat occurs in the freshwater emergent wetlands and Jeffrey pine forest communities on the Airport property.
Potamogeton robbinsii Robbins' pondweed	—/—2B.3	Aquatic perennial rhizomatous herb found in deep water within marshes and swamps. Occurs from 5,020 to 10,825 feet. Blooms July through August.	Low – there are no deepwater marshes or swamps on the Airport property. The freshwater emergent wetlands only provide marginal habitat due to their shallow depth.
Rorippa subumbellata Tahoe yellowcress	—/SE/1B.1/TRPA	Perennial rhizomatous herb found on sandy beaches in decomposed granitic sand on the shores of Lake Tahoe. Occurs from 6,200 to 6,250 feet. Blooms May through September.	None – Airport property provides no suitable habitat. Airport property is outside the geographic range of this species.
Schoenoplectus subterminalis water bulrush	—/—/2B.3	Aquatic perennial rhizomatous herb found in bogs and fens and along margins of montane marshes and swamps. Occurs from 2,460 to 7,380 feet. Blooms June through August (sometimes September).	Low – There are no bogs, fens, marshes, or swamps on the Airport property.
Scutellaria galericulata marsh skullcap	—/—/2B.2	Perennial rhizomatous herb found in swamps, meadows, stream banks and wet places in coniferous forests. Occurs from 0 to 6,890 feet. Blooms June through September.	Moderate – Suitable habitat occurs along the Upper Truckee River and in the wet meadows and freshwater emergent wetlands in the Airport property.
Stuckenia filiformis ssp. *alpina* northern slender pondweed	—/—/2B.2	Aquatic perennial rhizomatous herb found in shallow, clear water of lakes, drainage channels, marshes and swamps. Occurs from 985 to 7,055 feet. Blooms May through July.	Moderate – Suitable habitat occurs in the Upper Truckee River and in the freshwater emergent wetlands in the Airport property.
Viola purpurea ssp. *aura* golden violet	—/—/2B.2	Perennial herb found in sandy soils of great basin scrub and pinyon juniper woodland. Occurs from 3,280 to 8,205 feet. Blooms April through June.	Low – The Jeffrey pine forest and sagebrush scrub communities on the Airport property are only marginally suitable for this species.

Scientific Name Common Name	Listing Status: Federal/State/ CNPS/Local	General Habitat	Potential to Occur in the Airport Property
Natural Communities			
Fen	—/—/—	A peat-accumulating wetland that receives some drainage from surrounding mineral soil and usually supports marsh-like vegetation. Low growing herbaceous perennials with low to medium shrubs are the dominant vegetation types. Soil is slightly acidic and contains moderate amounts of nutrients. Found widely scattered in the North Coast and Klamath ranges and through the Sierra Nevada from Tulare Co. to OR. Elevations range from 0 to 6,000 feet in the north portion of the range and 5,000 to 9,000 feet in the southern portion of the range.	None. This natural community was not observed on Airport property during the biological reconnaissance survey.
Sphagnum bog	—/—/—	Bog with *Sphagnum* sp. moss and low-growing herbaceous perennials and low shrubs. Occurs in cold, highly acidic, permanently waterlogged soils that are low in available nutrients. Incomplete decomposition of peat is common.	None. This natural community was not observed on Airport property during the biological reconnaissance survey.

Key:
Federal: (USFWS)
FE = Listed as Endangered by the Federal Government
FT = Listed as Threatened by the Federal Government
FC = Candidate for listing by the Federal Government
PT/PE = Proposed for listing by the Federal Government
State: (CDFW)
SE = Listed as Endangered by the State of California
ST = Listed as Threatened by the State of California
SR = Listed as Rare by the State of California (plants only)
SSC = California Species of Concern
FP = Fully Protected

CNPS: (California Native Plant Society)
Rank 1A = Plants presumed extirpated in California and either rare or extinct elsewhere
Rank 1B = Plants rare, threatened, or endangered in California and elsewhere
Rank 2A = Plants presumed extirpated in California, but more common elsewhere
Rank 2B = Plants rare, threatened, or endangered in California but more common elsewhere
0.1 = Seriously endangered in California
0.2 = Fairly endangered in California
0.3 = Not very endangered in California
– = No Listing
Local: TRPA = TRPA Special Interest Species.

Source: USFWS 2025a; CDFW 2025; CNPS 2025.

Regulatory Framework

Federal

Federal Endangered Species Act

FESA[44] prohibits unauthorized take of fish, wildlife, and plants that are listed as threatened or endangered and their designated critical habitat. *Candidate species* are those for which there is sufficient information on their biological status and threats to propose listing, but for which the development of a proposed listing regulation is precluded by other higher priority listing activities. Candidate species are usually evaluated as special-status species during the environmental review process. FESA specifies procedures for addressing effects or consequences of proposed actions on federally listed species.

Procedures for addressing impacts to federally listed species follow two principal pathways. The first pathway is a Section 10(a) incidental take permit, which applies to situations where a non-federal government entity must resolve potential adverse impacts to species protected under the FESA. The

[44] 16 USC 1531–1544.

second pathway involves Section 7 consultation, which applies to projects directly undertaken by a federal agency or private projects requiring a federal permit or approval such as a Section 404 permit under the CWA or receiving federal funding.

Clean Water Act

The federal CWA was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the United States. The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands.

Section 401 – Under CWA Section 401, applicants for a federal license or permit to conduct activities which may result in the discharge of a pollutant into waters of the United States must obtain certification from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect state water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401.

Section 402 – Under the CWA Section 402, the State Water Resources Control Board (SWRCB) has adopted a *General Construction Activity Stormwater Permit* (General Permit) for storm water discharges associated with any construction activity including clearing, grading, excavation reconstruction, and dredge and fill activities that results in the disturbance of at least one acre of total land area. The general permit requires the site owner to notify the state, to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP), and to monitor the effectiveness of the plan.

De minimis discharge activities that are regulated by an individual or general National Pollutant Discharge Elimination Permit (NPDES) permit, such as discharges resulting in construction dewatering, also require the General Order for Dewatering and Other Low Threat Discharge to Surface Waters Permit (Section 402). Project applicants/proponents should apply for this permit concurrently with the NPDES permit application.

Section 404 – CWA Section 404 regulates the discharge of dredged and fill materials into waters of the United States. Waters of the United States refers to oceans, bays, rivers, streams, lakes, ponds, and wetlands. Applicants must obtain a permit from the USACE for all discharges of dredged or fill material into waters of the United States, including wetlands, before proceeding with a proposed activity. Waters of the United States are under the jurisdiction of the USACE and the EPA.

Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations. The USACE cannot issue an individual permit or verify the use of a general nationwide permit until the requirements of NEPA, FESA, and the National Historic Preservation Act (NHPA) have been met. In addition, USACE cannot issue or verify any permit until a water quality certification or a waiver of certification has been issued pursuant to CWA Section 401.

Migratory Bird Act

The MBTA[45] enacts the provisions of treaties between the U.S., Great Britain, Mexico, Japan, and the former Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. Unless and except as permitted by regulations, the MBTA states that without a permit issued by the U.S. Department of the Interior, it is unlawful to pursue, hunt, take, capture, or kill any migratory bird. The law also applies to the intentional disturbance and removal of nests occupied by migratory birds or their eggs during the breeding season. USFWS is responsible for overseeing compliance with the MBTA.

Bald Eagle Protection Act

The Bald Eagle Protection Act[46] prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald and golden eagles, including their parts, nests, or eggs. The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death, or nest abandonment.

State

Regional Water Quality Control Board

The SWRCB and the Regional Water Quality Control Boards (RWQCBs) (together "Boards") are the principal state agencies with primary responsibility for the coordination and control of water quality. In the Porter-Cologne Water Quality Control Act (Porter-Cologne), the Legislature declared that the "state must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation …"[47] Porter-Cologne grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface waters of the state. Waters of the state determined to be jurisdictional would require, if impacted, waste discharge permitting and/or a Clean Water Act Section 401 certification (in the case of the required USACE permit). The enforcement of the state's water quality requirements is not solely the purview of the Boards and their staff. Other agencies (e.g., CDFW) have the ability to enforce certain water quality provisions in state law.

California Endangered Species Act

The CESA was enacted in 1984. Under CESA, the California Fish and Game Commission has the responsibility for maintaining a list of threatened species and endangered species. Pursuant to the requirements of the CESA, an agency reviewing a project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project site and determine whether the project would have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any project which may impact a candidate species. The CESA prohibits the take of California listed animals and plants in most cases, but CDFW may issue incidental take permits under special conditions.

[45] 16 USC 703–712.
[46] 16 U.S.C. 668–668c.
[47] California Water Code section 13000.

Pursuant to the requirements of the CESA, an agency reviewing a project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project study area and determine whether the project would have a potentially significant impact on such species. Project-related impacts to species on the CESA endangered or threatened list would be considered significant. "Take" of protected species incidental to otherwise lawful management activities may be authorized under Fish and Game Code Section 206.591. Authorization from CDFW would be in the form of an incidental take permit under Section 2801.

California Fish and Game Code

The California Fish and Game Code protects a variety of species from take. Certain species are considered *fully protected*, meaning that the code explicitly prohibits all take of individuals of these species except for take permitted for scientific research. It is also possible for a species to be protected under the California Fish and Game Code, but not fully protected.

Fully Protected Species – Certain species are considered *fully protected*, meaning that the code explicitly prohibits all take of individuals of these species except for take permitted for scientific research. Section 5050 lists fully protected amphibians and reptiles, Section 5515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals. Except as provided in Sections 2081.7 or 2835, fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the species for the protection of livestock.

Nesting Birds and Birds-of-Prey (CA Fish and Game Code Section 3503, 3503.5, 3800, 3505) – Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 of the code prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Migratory non-game birds are protected under Section 3800, while other specified birds are protected under Section 3505.

Take Prohibition (CA Fish and Game Code Section 86, 2080) – Fish and Game Code Section 86 defines 'take' and Section 2080 prohibits 'taking' of a species listed as threatened or endangered under CESA[48] or otherwise fully protected, as defined in CA Fish and Game Code Section 3511, 4700, and 5050.

Lake and Streambed Alteration Agreement (CA Fish and Game Code Section 1602) – CDFW has jurisdictional authority over streams and lakes and the wetland resources associated with these aquatic systems under California Fish and Game Code Sections 1600 et seq. through administration of lake or streambed alteration agreements. Such agreements are not a permit, but rather a mutual accord between CDFW and the project proponent. California Fish and Game Code Section 1600 et seq. was repealed and replaced in October of 2003 with the new Section 1600–1616 that took effect on January 1, 2004 (Senate Bill No. 418 Sher). Under the new code, CDFW has the authority to regulate work that will "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river lake or stream." CDFW enters into a streambed alteration agreement with the project proponent and can impose conditions in the

[48] California Fish and Game Code Section 2080.

agreement to minimize and mitigate impacts to fish and wildlife resources. Because CDFW includes under its jurisdiction streamside habitats that may not qualify as wetlands under the federal CWA definition, CDFW jurisdiction may be broader than the USACE jurisdiction.

A project proponent must submit a notification of streambed alteration to CDFW before construction. The notification requires an application fee for streambed alteration agreements, with a specific fee schedule to be determined by CDFW. CDFW can enter into programmatic agreements that cover recurring operation and maintenance activities and regional plans. These agreements are sometimes referred to as Master Streambed Alteration Agreements (MSAAs).

Under Fish and Game Code Section 1602 (Streambed Alteration Agreements), the CDFW takes jurisdiction over the stream zone which is defined top of bank or outside extent of riparian vegetation, whichever is the greatest. Within the stream zone, waters of the state are typically delineated to include the streambed to the top of the bank and adjacent areas that would meet any one of the three wetland parameters in the USACE definition (vegetation, hydrology, and/or soils). Whereas federal jurisdiction requires meeting all three parameters, in practice meeting one parameter, or even the presence (rather than dominance) of wetland plants in an area associated with a jurisdictional streambed would qualify an area as waters of the state. CDFW jurisdiction is not limited to navigable waters or tributaries to navigable waters; however, isolated wetlands and wetlands not associated with a streambed are not subject to CDFW jurisdiction.

Native Plant Protection Act (CA Fish and Game Code Section 1900-1913)

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA), which directed the CDFW to carry out the legislature's intent to "preserve, protect, and enhance endangered plants in this state." The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. CESA expanded on the original NPPA and enhanced legal protection for plants. CESA established threatened and endangered species categories and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, three listing categories for plants are employed in California: rare, threatened, and endangered.

CEQA Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specific criteria.

CEQA also specifies the protection of other locally or regionally significant resources, including natural communities or habitats. Although natural communities do not presently have legal protection, CEQA requires an assessment of such communities and potential project impacts. Natural communities that are identified as sensitive in the CNDDB are considered by the CDFW to be significant resources and fall under the CEQA Guidelines for addressing impacts.

Local

Tahoe Regional Planning Agency Environmental Thresholds

TRPA has established environmental thresholds for vegetation, wildlife, and fisheries. These environmental thresholds are used to establish the significance of an environmental effect to biological resources in the Lake Tahoe Basin. TRPA environmental thresholds for biological resources are defined below.

Vegetation Thresholds

Common Vegetation

Management Standard: Increase plant and structural diversity of forest communities through appropriate management practices as measured by diversity indices of species richness, relative abundance, and pattern.

Richness – Maintain the existing species richness of the Basin by providing for the perpetuation of the following plant associations:

Yellow Pine Forest: Jeffrey pine, white fir, incense cedar, sugar pine.

Red Fir Forest: red fir, Jeffrey pine, lodgepole pine, western white pine, mountain hemlock, western juniper.

Subalpine Forest: whitebark pine, mountain hemlock, mountain mahogany.

Shrub Associations: greenleaf and pinemat manzanita, tobacco brush, Sierra chinquapin, huckleberry oak, mountain whitethorn.

Sagebrush Scrub Vegetation: basin sagebrush, bitterbrush, Douglas chaenactis.

Deciduous Riparian: quaking aspen, mountain alder, black cottonwood, willow.

Meadow Association (wet and dry meadow): mountain squirrel tail, alpine gentian, whorled penstemon, asters, fescues, mountain brome, corn lilies, mountain bentgrass, hairgrass, marsh marigold, elephant heads, tinker's penney, mountain Timothy, sedges, rushes, buttercups.

Wetland Associations (marsh vegetation): pond lilies, buckbean, mare’s tail, pondweed, common bladderwort, bottle sedge, common spikerush.

Cushion Plant Association (alpine scrub): alpine phlox, dwarf ragwort, draba.

Relative Abundance – Of the total amount of undisturbed vegetation in the Lake Tahoe Basin:

- Maintain at least 4 percent meadow and wetland vegetation.
- Maintain at least 4 percent deciduous riparian vegetation.
- Maintain no more than 25 percent dominant shrub association vegetation.
- Maintain 15–25 percent of the Yellow Pine Forest in seral stages other than mature.
- Maintain 15–25 percent of the Red Fir Forest in seral stages other than mature.

Pattern – Provide for the proper juxtaposition of vegetation communities and age classes by:

- Limiting acreage size of new forest openings to no more than eight acres.
- Adjacent openings shall not be of the same relative age class or successional stage to avoid uniformity in stand composition and age.

A non-degradation standard to preserve plant communities shall apply to native deciduous trees, wetlands, and meadows while providing for opportunities to increase the acreage of such riparian associations to be consistent with the stream environment zone[49] (SEZ) threshold.

Native vegetation shall be maintained at a maximum level to be consistent with the limits defined in the *Land Capability Classification of the Lake Tahoe Basin, California-Nevada, A Guide for Planning, Bailey, 1974*, for allowable impervious cover and permanent site disturbance.

Late Seral and Old Growth Forest Ecosystems

Numerical Standard: Attain and maintain a minimum of 55 percent by area of forested lands within the Tahoe Basin in a late seral or old growth condition, and distributed across elevation zones. To achieve the 55 percent, the elevation zones shall contribute as follows:

- The Subalpine zone (greater than 8,500 feet elevation) will contribute 5 percent (7,600 acres) of the forested land;
- The Upper Montane zone (between 7,000 and 8,500 feet elevation) will contribute 30 percent (45,900 acres) of forested land;
- The Montane zone (lower than 7,000 feet elevation) will contribute 20 percent (30,600 acres) of forested land.

Forested lands within TRPA-designated urban areas are excluded in the calculation for threshold attainment. Areas of the montane zone within 1,250 feet or urban areas may be included in the calculation for threshold attainment if the area is actively being managed for late seral and old growth conditions and has been mapped by TRPA. A maximum value of 40 percent of the lands within 1,250 feet of urban areas may be included in the calculation.

Because of these restrictions the following percentage of each elevation zone must be attained to achieve this threshold:

- 61 percent of the Subalpine zone must be in late seral or old growth condition;
- 60 percent of the Upper Montane zone must be in late seral or old growth condition;
- 48 percent of the Montane Zone must be in late seral or old growth condition.

Uncommon Plant Communities

Numerical Standard: Provide for the non-degradation of the natural qualities of any plant community that is uncommon to the Tahoe Basin or of exceptional scientific, ecological, or scenic value. This threshold shall apply but not be limited to:

1. The deepwater plants of Lake Tahoe
2. Grass Lake (sphagnum bog)

[49] A stream environment zone is an area that owes its biological and physical characteristics to the presence of surface or ground water. The precise definition is an area determined to be an SEZ by application of the criteria set forth in the TRPA's *Water Quality Management Plan for the Lake Tahoe Region*, Volume III, SEZ Protection and Restoration Program, dated November 1988.

3. Osgood swamp
4. The Freel Peak Cushion Plant community
5. Taylor Creek Marsh
6. Pope Marsh
7. Upper Truckee Marsh
8. Hell Hole

Sensitive Plants

Numerical Standard: Maintain a minimum number of population sites in the Tahoe Basin for each of the five sensitive plant species identified in **Table 7**.

TABLE 7
TRPA SENSITIVE PLANTS

Species	Minimum Number of Population Sites
Arabis rigidissima var. *demota*	7
Draba asterophora var. *asterophora*	5
Draba asterophora var. *macrocarpa*	2
Lewisia longipetala	2
Rorippa subumbellata	26

Source: TRPA

Wildlife Thresholds

Special Interest Species

Numerical Standard: Provide a minimum number of population sites and disturbance zones in the Tahoe Basin for the species identified in **Table 8**.

TABLE 8
TRPA SPECIAL INTEREST WILDLIFE SPECIES

Species of Interest	Minimum Number of Population Sites	Disturbance Zone (mi.)	Influence Zone (mi.)
Goshawk	12	Most suitable 500 acres surrounding a nest site including a 0.25-mile buffer centered on nest sites.	3.50
Osprey	4	0.25	0.60
Bald eagle (wintering)	2	Mapped areas	Mapped areas
Bald eagle (nesting)	1	0.50	Variable
Golden eagle	4	0.25	9.0
Peregrine falcon	2	0.25	7.6
Waterfowl	18	Mapped areas	Mapped areas
Deer	—	Mapped areas	Meadows

Source: TRPA

Habitats of Special Significance

Management Standard: A non-degradation standard shall apply to significant wildlife habitat consisting of deciduous trees, wetlands, and meadows while providing for opportunities to increase the acreage of such riparian associations.

Fisheries Thresholds

Stream Habitat

Numerical Standard: Maintain the 75 miles of excellent, 105 miles of good, and 38 miles of marginal stream habitat as indicated by the Stream Habitat Quality Overlay map, amended May 1997, based upon the re-rated stream scores set for in Appendix C-1 of the 1996 Evaluation Report.

Instream Flows

Management Standard: Until instream flow standards are established in the Regional Plan to protect fishery values, a non-degradation standard shall apply to instream flows.

Policy Statement: It shall be a policy of the TRPA Governing Board to seek transfers of existing points of water diversion from streams to Lake Tahoe.

Lahontan Cutthroat Trout

Policy Statement: It shall be the policy of the TRPA Governing Board to support, in response to justifiable evidence, state and federal efforts to reintroduce Lahontan cutthroat trout.

Lake Habitat

Management Standard: A non-degradation standard shall apply to fish habitat in Lake Tahoe. Achieve the equivalent of 5,948 total acres of excellent habitat as indicated by the Prime Fish Habitat Overlay Map as may be amended based on best available science.

TRPA Code of Ordinances

The TRPA Code of Ordinances compiles all the laws and ordinances needed to implement the TRPA's Regional Plan. The following chapters are relevant to biological resources: Chapter 61, *Vegetation and Forest Health*; Chapter 62, *Wildlife Resources*; and Chapter 63, *Fish Resources*.

Impact Analysis

Topic a

The following analysis considers the potential for the proposed project to have a substantial adverse effect, either directly or through habitat modifications, on special-status species that are known or have potential to occur on or near the project site.

Database searches of the CNDDB,[50] the CNPS's Inventory of Rare and Endangered Plants,[51] and USFWS's Resource List[52] were conducted within the Airport property and vicinity to identify previously reported occurrences of special-status species. A reconnaissance-level field survey to characterize existing conditions and determine the potential for the occurrence of special-status species was conducted on

[50] CDFW 2025.
[51] CNPS 2025.
[52] USFWS 2025.

May 19, 2025. Table 6 above summarizes the potential for special-status species to occur on the Airport property. No special-status species were observed during the field visits. Detailed below is a summary of those findings and proposed mitigation measures to reduce any potential significant impacts to less than significant levels.

Special-Status Wildlife Species

Database queries returned thirty-one special-status wildlife species that could occur or that have been documented in the vicinity of the Airport property. Only four of these species: Lahontan mountain sucker, mountain whitefish, willow flycatcher and waterfowl, have a moderate or high potential to occur within the Airport property due to the habitat conditions present, distance to known occurrences of the species, or both. Fish and Game Code Sections 3503 and 3503.5 and the Migratory Bird Treaty Act protect raptors and passerines and their eggs and nests from incidental "take." These protections apply to both special-status birds identified in Table 6 and other birds that may occur in the project area. The implementation of **Mitigation Measures BIO-1** and **BIO-3** would ensure that potential impacts to these special-status species and nesting birds would be **less than significant with mitigation incorporated**.

Nesting Birds

Construction activities performed during the bird nesting season (March 1 to August 31), especially those that involve the use of mechanized equipment (e.g., grading and excavation), or vegetation removal could affect nesting bird species within 0.25-mile of the project sites. The loss or failure of any active nest by direct (i.e., removing vegetation containing a nest) or indirect (nest abandonment caused by construction disturbance), must be avoided under federal and California law described previously. If construction activities and the removal and trimming of vegetation are scheduled during the bird nesting season, the implementation of **Mitigation Measure BIO-1** would ensure that potential impacts to nesting birds would be **less than significant with mitigation incorporated**.

Potential Bird Collision

In addition to disturbance impacts on nesting birds there is potential for direct bird mortality to occur through collisions of birds and aircraft. Implementation of the proposed project would not result in an increase in aircraft operations, and thus the proposed project would not increase the potential or number of bird-related mortalities due to collisions with aircraft compared with the baseline condition. The impact would be **less than significant**.

Special-Status Fish Species

Lahontan mountain sucker and mountain whitefish have potential to occur within the Upper Truckee River where it crosses through the Airport property. No work is proposed in or immediately adjacent to the Upper Truckee River. Work to remove the blast pads and construct the new ASOS will occur within 150 feet of the river. Impacts to special-status fish could occur if excess sediment or hazardous materials enter the river while they are present. This would be a potentially significant impact. Implementation of **Mitigation Measure BIO-2** would protect the water quality in the Upper Truckee River and would ensure that potential impacts to special-status fish would be **less than significant with mitigation incorporated**.

Special-Status Plant Species

Database queries returned twenty-nine special-status plant species that could occur or that have been documented in the vicinity of the Airport property. Of these, fifteen have a moderate potential to occur

within or in the vicinity of the Airport property. The reconnaissance-level survey conducted for this project did not record presence of any special-status plant species; however, this survey does not constitute a full botanical inventory of the site and does not meet the requirements outlined in the *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities*.[53] The majority of these species are associated with the Upper Truckee River, freshwater emergent wetlands, and the Jeffrey pine forest communities that are outside of the developed footprint of the Airport property and would not be impacted by the proposed project. However, the potential for impacting special-status plant species exists in undeveloped locations within the Airport. If construction activities and the removal and trimming of vegetation are located in undeveloped areas that have the potential to support special-status plant species, implementation of **Mitigation Measure BIO-3** would ensure that potential project impacts to special-status plant species would be **less than significant with mitigation incorporated**.

Topic b

A formal wetland delineation has not yet been conducted within the Airport property. A portion of the Upper Truckee River flows through the eastern side of the Airport property and an intermittent channelized tributary of the Upper Truckee River flows along the west side of the taxiway through the Airport property. Areas of wetland vegetation and wetland hydrology were identified in low areas between the taxiway and runway, and around the Upper Truckee River. A small detention basin was observed just south of the aircraft hangars. Implementation of **Mitigation Measure BIO-4** would ensure that the proposed project would be designed to avoid, restore, or compensate for direct and indirect effects to any potentially jurisdictional features and that the project would not impact riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the TRPA, CDFW or USFWS. The impact would be **less than significant with mitigation incorporated**.

Topic c

As described above, any projects implemented under the Airport Master Plan would be required to comply with existing TRPA, federal, and state regulations; permitting requirements; and environmental review procedures that protect SEZs, wetlands, and other sensitive habitats. Implementation of **Mitigation Measures BIO-2** and **BIO-4** would protect the water quality in the Upper Truckee River and would ensure that any potential temporary or permanent impacts to riparian habitats and waters of the United States or state would be **less than significant with mitigation incorporated**.

Topic d

The project would not create barriers or temporarily disturb any high-quality wildlife movement corridors such as streams or riparian corridors. The Airport property is small in relation to surrounding habitats with higher quality wildlife habitat. The proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife corridors or impede the use of native wildlife nursery sites. The impact would be **less than significant**.

Topic e

TRPA has established environmental thresholds for vegetation, wildlife, and fisheries. As described above, **Mitigation Measures BIO-1**, **BIO-2**, and **BIO-3** would ensure that the proposed project would

[53] CDFW 2018.

not result in significant impacts to special-status wildlife, plants, or their habitats. **Mitigation Measure BIO-4** would ensure that any potential temporary or permanent impacts to wetlands or waters of the United States or state would be fully mitigated consistent with TRPA ordinances. Implementation of these mitigation measures would ensure that potential project impacts would be **less than significant with mitigation incorporated**.

Topic f

There are no adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan that apply to the Airport property. Therefore, **no impact** would occur.

Mitigation Measures

BIO-1: Conduct nesting bird surveys. For construction activities that occur between March 1 and August 31, preconstruction nesting bird surveys shall be conducted by a qualified biologist familiar with bird behavior and knowledge of nest types prior to and within 14 days of any initial ground-disturbance activities. Surveys shall be conducted on foot within all suitable nesting habitat within 250 feet for passerines and 500 feet for raptors, to the extent feasible. If active nests are identified at the time of the survey, a minimum 50-foot radius exclusion zone for passerines shall be established and flagged. Active raptor or special-status species nests shall be protected by a buffer with a minimum radius of 250 feet. These distances may be adjusted depending on the level of surrounding ambient activity (i.e., if the project site is adjacent to a road or community development) and if an obstruction is within line-of-sight between the nest and construction. For bird species that are federally and/or State-listed special-status species (i.e., fully protected, endangered, threatened, species of special concern), the City of South Lake Tahoe shall consult with the USFWS and/or CDFW regarding modifying nest buffers, prohibiting construction within the buffer, modifying construction, and removing or relocating active nests that are found on the site. Each exclusion zone will remain in place until the nest has successfully fledged or is otherwise inactive as determined by a qualified biologist. The following are conditions of this measure:

- Survey results are valid for 14 days from the survey date. Should ground disturbance commence later than 14 days from the survey date, surveys will be repeated. If no nesting birds are encountered, then work may proceed as planned.
- After commencement of work if there is a period of no work activity of 14 days or longer during the bird breeding season (March 1 to August 31), surveys will be repeated to ensure birds have not established nests during inactivity. If new nests are encountered buffers shall be established.
- Any birds that begin nesting within the project site and survey buffers amid construction activities shall be assumed to be habituated to construction-related or similar noise and disturbance levels and minimum work exclusion zones of 25 feet shall be established around active nests in these cases.

BIO-2: Protect Water Quality of Upper Truckee River. The following BMPs will be implemented to protect water quality and special-status fish species in the Upper Truckee River.

- No construction equipment will be allowed to enter or drive through the creek, except where the existing in-water road crossing occurs in the northeastern portion of the Airport property.

- All equipment and tools will be inspected for the presence of undesirable species and cleaned prior to entering the work area at each location to reduce the risk of introducing nonnative plant or animal species.
- Staging and storage areas for equipment, materials, fuels, lubricants, and solvents will not be located within 150 feet of the stream. Stationary equipment such as cranes, motors, pumps, generators, compressors, and welders will be positioned over drip-pans. Non-stationary vehicles and equipment will be moved at least 150 feet from the stream prior to refueling and lubrication.
- Raw cement, concrete, or washings thereof, asphalt, equipment fluids or lubricants, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to fish or wildlife resulting from or disturbed by project-related activities, will be prevented from contaminating the soil and/or entering waterways.
- All personnel involved in the use of hazardous materials should be trained in emergency response and spill control.
- No litter or debris will be allowed to enter any waterway or placed in a location where it could be washed into a waterway. All such debris will be picked up daily and properly disposed of at an offsite location.

BIO-3: Perform preconstruction surveys for special-status plant species. For construction activities outside of currently developed hardscape areas and that would include ground disturbance or vegetation removal, a qualified botanist shall conduct a preconstruction survey for all special-status species, including all CNPS-listed species with the potential to occur within the area of disturbance. The survey shall be floristic in nature and shall follow the procedures outlined in CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*. If special-status plant species are found, the City of South Lake Tahoe shall consult with CDFW to provide further measures to avoid/minimize impacts to identified special-status plants.

BIO-4: Avoid impacts to waters of the United States and state, either through avoidance, restoration, or compensation. Prior to construction activities outside of currently developed hardscape areas that would include ground disturbance or vegetation removal, a wetland delineation shall be conducted by a qualified biologist to determine if there are any wetland or waters subject to federal or state jurisdiction or subject to any permits or approvals by federal, state or local resource agencies. The wetland delineation shall be submitted to the USACE for verification. The City of South Lake Tahoe shall use the results of the wetland delineation to refine site plans in order avoid impacts to any jurisdictional features to the extent possible. If total avoidance is not possible, the City of South Lake Tahoe shall obtain the required permits prior to the implementation of construction activities. The anticipated required permits include a Clean Water Act Section 404 Nationwide Permit from the USACE; a Clean Water Act Section 401 Water Quality Certification from the Regional Water Quality Control Board; and a Streambed Alteration Agreement (SAA) from the CDFW. All permit requirements such as restoration for temporary impacts or compensation for permanent impacts shall be implemented to mitigate for loss of waters of the United States or state and reduce impacts to water quality during construction. In addition to federal or state requirements, setbacks and or mitigation as required by TRPA Section 61.1 (Tree Removal) of the TRPA Code of Ordinances, Section 33.6, *Vegetation Protection During Construction* and Chapter 61, *Vegetation and Forest Health* shall be integrated into project design plans.

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Cultural Resources

Issues (and Supporting Information Sources):	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 pursuant to §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Regulatory Framework

Federal

Although the proposed project is not anticipated to require compliance with section 106 of the National Historic Preservation Act, the federal guidelines for the treatment of cultural resources are relevant for determining whether cultural resources, as defined under CEQA, are present, and for guiding the treatment of such resources. The following sections summarize the relevant federal regulations and guidelines.

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1966 was enacted primarily to acknowledge the importance of protecting the heritage of the United States from federal development. The following describes the NHPA's responsibilities:

- Set the federal policy for preserving our nation's heritage.
- Establish a federal-state and federal-tribal partnership.
- Establish the National Register of Historic Places (National Register) and National Historic Landmarks Programs.
- Mandate the selection of qualified state historic preservation officers (SHPOs).
- Establish the Advisory Council on Historic Preservation.
- Charge federal agencies with responsible stewardship.
- Establish the role of certified local governments within the states.

The regulations supporting the federal policy for historic preservation set by the NHPA can be found in Code of Federal Regulations (CFR) title 36, part 800 (36 CFR 800), "Protection of Historic Properties." This provides guidelines on how to follow the policy set forth in the NHPA.

National Register of Historic Places

The National Register is the nation's master inventory of cultural resources worthy of preservation. It is administered by the National Park Service, which is represented at the state level by the SHPO. The National Register includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archeological, or cultural significance at the federal, state, or local level. Resources that are listed in or have been found by the SHPO to be eligible for listing in the National Register are called *historic properties*.

Under the NHPA, a property is considered significant if it meets the NHPA listing criteria in 36 CFR 60.4, which read as follows:

> The quality of significance in American history, architecture, archeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and
>
> a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b) that are associated with the lives of persons significant in our past; or
>
> c) that embody the characteristics of a type, period, or method of construction, or that represent works of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d) that have yielded, or may be likely to yield, information important in prehistory or history.
>
> Although there are exceptions, certain kinds of resources are not usually considered for listing in the National Register: religious properties, moved properties, birthplaces and graves, cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.
>
> In addition to meeting at least one of the four criteria, a property or district must retain *integrity*, meaning that it must have the ability to convey its significance through the retention of seven aspects, or qualities, that in various combinations define integrity:
>
> – *Location:* The place where the historic property was constructed.
>
> – *Design:* The combination of elements that create the form, plans, space, structure, and style of the property.
>
> – *Setting:* The physical environment of the historic property, inclusive of the landscape and spatial relationships of the buildings.
>
> – *Materials:* The physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form the historic property.
>
> – *Workmanship:* Physical evidence of the crafts of a particular culture or people during any given period in history.
>
> – *Feeling:* The property's expression of the aesthetic or historic sense of a particular period of time.
>
> – *Association:* Direct link between an important historic event or person and a historic property.

Properties that are listed in the National Register, as well as properties that are formally determined to be eligible for listing in the National Register, are automatically listed in the California Register and therefore are considered historical resources under CEQA.[54]

The Secretary of the Interior's Standards for the Treatment of Historic Properties

The *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (Secretary's Standards)

[54] *California Code of Regulations* Title 14, section 4851, Historical Resources Eligible for Listing in the California Register of Historical Resources, accessed January 27, 2025, https://govt.westlaw.com/calregs/Document/I67F9B4365B4D11EC976B000D3A7C4BC3?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)&bhcp=1.

were published and codified as 36 CFR 68 in 1995 and updated in 2017.[55] The Secretary's Standards for rehabilitation have been adopted by local government bodies across the country for reviewing proposed work on historic properties under local preservation ordinances. The Secretary's Standards provide a useful analytical tool for understanding and describing the potential impacts of changes to historic resources and are used to inform CEQA review. Developed by the National Park Service for reviewing certified rehabilitation tax credit projects, the rehabilitation standards provide guidance for reviewing work on historic properties.

Conformance with all rehabilitation standards does not determine whether a project would cause a substantial adverse change in the significance of a historical resource under CEQA. Rather, projects that comply with the standards benefit from a regulatory presumption that they would have a less-than-significant adverse impact on a historic resource. Projects that do not comply with the rehabilitation standards may or may not cause a substantial adverse change in the significance of a historic resource and would require further analysis to determine whether the historic resource would be "materially impaired" by the project under CEQA Guidelines Section 15064.5(b).

State

California implements the NHPA through its statewide comprehensive cultural resource preservation programs. The California Office of Historic Preservation, an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The California Office of Historic Preservation also maintains the California Historical Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the state's jurisdiction.

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects in California. To be considered a historical resource, a property must generally be at least 50 years old; often a threshold of 45 years is used to account for project buildout. A *historical resource* is defined in CEQA Guidelines section 15064.5 as a cultural resource (i.e., a built-environment resource, archaeological resource, or human remains) that meets at least one of the following criteria:

1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register.
2) A resource included in a local register of historical resources, as defined in Public Resources Code section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of Public Resources Code section 5024.1(g), shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial

[55] U.S. Department of the Interior, National Park Service (Kay D. Weeks and Anne E. Grimmer), *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstruction Historic Buildings*, revised 2017, accessed January 27, 2025, https://www.nps.gov/orgs/1739/secretary-standards-treatment-historic-properties.htm.

evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register.

4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register, not included in a local register of historical resources (pursuant to of the Public Resources Code section 5020.1(k)), or identified in a historical resources survey (meeting the criteria in Public Resources Code section 5024.1(g)) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code section 5020.1(j) or 5024.1.

Therefore, under the CEQA Guidelines, even if a resource is not included in any federal, state, or local register or identified in a qualifying historical resources survey, a lead agency may still determine that any resource is a historical resource for the purposes of CEQA if there is substantial evidence supporting such a determination. A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the California Register.

CEQA requires a lead agency to determine whether a proposed project would have a significant effect on important historical resources or unique archaeological resources. If a resource is neither a unique archaeological resource nor a historical resource, the CEQA Guidelines note that the effects of the project on that resource shall not be considered a significant effect on the environment (CEQA Guidelines Section 15064.5(c)(4)). As noted above, projects that comply with the Secretary's Standards benefit from a regulatory presumption under CEQA that they would have a less-than-significant impact on a historical resource. Projects that do not comply with the Secretary's Standards may or may not cause a substantial adverse change in the significance of a historical resource and must be subject to further analysis to assess whether they would result in material impairment of a historic resource's significance.

California Register of Historical Resources

The California Register, administered by the California Office of Historic Preservation, is the authoritative guide to historical and archeological resources that are significant within the context of California's history. The eligibility criteria for inclusion in the California Register are based on and correspond to the National Register criteria. Under CEQA, certain resources are determined to be automatically included in the California Register, including California properties that are formally eligible for or listed in the National Register. These resources are considered historical resources by the San Francisco Planning Department for the purposes of CEQA. The criteria used for determining eligibility for listing in the California Register closely parallel those developed by the National Park Service for the National Register but also include relevance to California history. To be eligible for listing in the California Register as a historical resource, a resource must meet at least one of the following criteria (Public Resources Code section 5024.1(c)):

- **Criterion 1 (Event):** Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California.
- **Criterion 2 (Person):** Resources that are associated with the lives of persons important to history.
- **Criterion 3 (Design/Construction):** Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values.
- **Criterion 4 (Information Potential):** Resources or sites that have yielded or have the potential to yield information important in prehistory or history.

In addition, to be considered eligible for listing in the California Register, a historical resource must possess integrity. Consideration of integrity for evaluation of California Register eligibility closely follows the seven aspects of integrity that apply to the National Register (listed above).

Local

South Lake Tahoe General Plan

The Natural and Cultural Resources Element of the South Lake Tahoe General Plan includes the following goals and policies to protect archaeological, historic, and cultural resources.

> **Goal NCR-4:** To preserve and maintain sites and structures that serve as significant, visible connections to South Lake Tahoe's social, cultural, and architectural history.
>
> ***Policy NCR-4.1: Significant Site Preservation.*** The City shall preserve sites of historical, cultural and architectural significance within the city, consistent with the Secretary of the Interior Standards for Treatment of Historic Properties.
>
> ***Policy NCR-4.2: Historic Landmark Designation.*** The City shall designate structures or sites having special character or special historic, architectural, or aesthetic interest or value as local historic landmarks. The City shall protect local historic landmarks from demolition and inappropriate alterations, and develop criteria for evaluating the appropriateness for sites or structures to be designated as local historic landmarks, and provide incentives for preservation of local historic landmarks.
>
> ***Policy NCR-4.3: Archeological Investigations.*** The City shall require archeological investigations for all applicable discretionary projects, in accordance with CEQA regulations, for areas not previously surveyed and/or that are determined sensitive for cultural resources (e.g., undeveloped parcels near water features). The City shall require the preservation of discovered archeologically significant resources (as determined based on TRPA, state, and federal standards by a qualified professional) in place if feasible, or provide mitigation (avoidance, excavation, documentation, curation, data recovery, or other appropriate measures) prior to further disturbance.
>
> ***Policy NCR-4.5: Human Remain Discovery.*** The City shall require/condition projects and other ground disturbance activities to notify the City if human remains are discovered and halt work. The County Coroner will be notified according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.

Tahoe Regional Planning Authority Code of Ordinances

South Lake Tahoe does not have its own set of local designation criteria. Rather, Municipal Code section 6.10.120 (Building Design) refers to the TRPA Code of Ordinances Chapter 29 for the process of review related to historic resources. Chapter 29 has been superseded by Chapter 67: Historic Resource Protection.

The TRPA has adopted criteria similar to those including in the National and California registers related to association with events, people, and design. Specifically, Chapter 67.6 of the TRPA Code of Ordinances states:

> *Sites, objects, structures, districts or other resources, eligible for designation as resources of historical, cultural, archeological, paleontological, or architectural significance locally, regionally, state-wide or nationally, shall meet at least one of the criteria provided below.*
>
> 1. *Resources Associated with Historically Significant Events and Sites*
>
>   *Resources shall exemplify the broad cultural, political, economic, social, civic, or military history of the region, the states, or the nation, or be associated with events that have made a significant contribution to the broad patterns of history, including regional history. Such resources shall meet one or more of the following criteria:*
>
>   A. *Association with an important community function in the past;*
>
>   B. *Association with a memorable happening in the past; or*
>
>   C. *Contain outstanding qualities reminiscent of an early stage of development in the region.*
>
> 2. *Resources Associated with Significant Persons*
>
>   *Resources that are associated with the lives of persons significant in history, including regional history, such as:*
>
>   A. *Buildings or structures associated with a locally, regionally, or nationally known person;*
>
>   B. *Notable examples, or best surviving works, of a pioneer architect, designer, or master builder; or*
>
>   C. *Structures associated with the life or work of significant persons.*
>
> 3. *Resources Embodying Distinctive Characteristics*
>
>   *Resources that embody the distinctive characteristics of a type, period, or method of construction that possess high artistic values or that represent a significant and distinguishable entity but whose components may lack individual distinction. Works of a master builder, designer, or architect also are eligible. Resources may be classified as significant if they are a prototype of, or a representative example of, a period style, architectural movement, or method of construction unique in the region, the states, or the nation.*
>
> 4. *State and Federal Guidelines*
>
>   *Archeological or paleontological resources protected or eligible for protection under state or federal guidelines.*
>
> 5. *Prehistoric Sites*
>
>   *Sites where prehistoric archaeological or paleontological resources that may contribute to the basic understanding of early cultural or biological development in the region.*

Cultural Context

Pre-contact Setting

The project site is located in the vicinity of two archaeological complexes: the Martis Complex (4,000 to 1,500 years before present [B.P.]) and the Kings Beach Complex (1,500 to 150 B.P.). Initial characterizations of the Martis Complex highlighted a preference for basalt in the production of bifaces and large, roughly chipped, heavy projectile points that are variable in form; basalt drills; the rare use of chert and obsidian for tool production; the use of the mano and metate; and an economy that appeared to emphasize hunting of large game. The Martis Complex may be connected to cultures in Central California and the Great Basin, but may represent a widespread cultural pattern along the western slopes of the Sierra Nevada. Initial characterizations of the Kings Beach Complex highlighted a preference for obsidian in the production of small projectile points; the rare use of basalt; an absence of drills; the use of bedrock mortars; and an economic emphasis on seed processing and fishing. At about 1,500 B.P. (before present), changes in technology and subsistence and settlement strategies indicate the decline of the Martis Complex and the emergence of the Kings Beach Complex. Early King Beach (1,300–700 B.P.) is thought to represent the initial phase of the Washoe ethnographic pattern.

Ethnographic Setting – Washoe

The project site is located on the ancestral lands of the washoan-speaking, a branch of the Hokan language, Washoe (or Washo) people, near areas ethnographically associated with the *Wel mel it*.[56] Their territory from time immemorial is bordered by the steep Sierra Nevada Mountains to the west, Honey Lake to the north, the Pine Nut Mountains and Virginia Mountain range to the east, the Sonora Pass to the south, and at the heart is Lake Tahoe.[57] Lake Tahoe or *Da ow a ga* is considered by the Washoe to be the center of their world, for it "breaths life" in the surrounding ecosystems and people.[58] Numerous tributaries flow throughout their territory; in particular, the Upper Truckee River flows through the Plan Area. The Washoe, a Great Basin people, are categorized into subgroups or bands that are characterized by slight differences in language, customs, and geography. These subgroups include the northern *Wel mel ti*, the eastern *Pau wa lu*, and the southern *Hung a lel ti*.[59,60] Although their habitation settlements were historically concentrated within their 4,000 square mile territory, the Washoe transversed an estimated 10,000 to 13,000 square miles during seasonal explorations west into the California Central Valley, south to Mono Lake, and east along several rivers in Nevada to Pyramid Lake and Walker Lake.[61,62,63] The Washoe population estimates of the mid-19th and mid-20th centuries ranged from approximately 500 to 1,500.[64] Traditionally, the Washoe lived in small autonomous egalitarian local communities that were led at times by an informal or elected male or female *detumu* ("the one in front"), who, during instances of violence, co-led with a war leader.[65] Regional communities, which were comprised of multiple local communities existed throughout the territory. The local communities were comprised of family units that established permanent winter settlements and

[56] Washoe Tribe of Nevada and California 2009.
[57] Washoe Tribe of Nevada and California 2009.
[58] Washoe Tribe of Nevada and California 2009.
[59] D'Azevedo 1986.
[60] Washoe Tribe of Nevada and California 2009.
[61] D'Azevedo 1986.
[62] Davenport 2019.
[63] USFS, n.d.
[64] D'Azevedo 1986.
[65] D'Azevedo 1986.

temporary seasonal mobile camps in the valleys and mountains.[66] Shared areas and corridors existed for not only the Washoe, but also neighboring tribes such as the Paiute and Maidu.[67,68]

Economically, the Washoe engage in hunting, fishing, and gathering. Their territory encompassed open valley meadows and marshland, foothills, and mountain environments that contained a wide variety of resources. Of these resources, the pronghorn antelope, mule deer, mountain sheep, white-tailed jackrabbit, cottontail, snowshoe hare, other small mammals, trout, Tahoe suckers, Lahontan tui chub, mountain whitefish, various non-predatory or scavenging bird species, insects, honey, the piñon nut, acorn, and a variety of berries, mushrooms, bulbs, roots, grasses, leafy plants, and seeds were utilized for consumption, medicinal, and utilitarian purposes.[69,70] Hunting strategies and weaponry included the use of blinds and deer disguises and the bow and arrow with basalt, chert, flint, and obsidian projectile points.[71] The Truckee River and Lake Tahoe were major year-round fisheries with desirable locations for villages and camps. Long nets, snares, traps, or the bow and arrow were used to collect small mammals and birds. Spears, bone fishhooks, harpoons, nets and basketry, dams, weirs, and fish traps were used for fishing. The art of twining and coiled basketry was highly important as their products were used in ceremonial practices, food preparation, water and food storage, cradle construction, and other activities. Traditionally, willow rods, willow sewing and twinning elements, fern, bracken root, and redbud bard were used.[72,73] Traditional multigeneration and unique marker designs were used. The production of baskets, especially by the southern Washoe, intensified as the demand by settlers increased during the late 19th and 20th centuries.

Washoe lifeways were not directly affected by the earliest historic-period activities in California and Nevada. However, By the 1850s and 1860s, thousands of outsiders, including fur trappers, explorers, and those migrating west, had moved through their territory to reach California.[74] At the same time, Central Pacific Railroad laborers, ranchers, miners, and other settlers within the territory restricted Washoe peoples' use of traditional lands and resources. These newcomers brought diseases and violence that impacted some communities. Although their settlement, subsistence, cultural, and religious practices were profoundly disrupted by the loss of lands and extreme pressures to assimilate, many traditional customs persist among the Washoe people today. They are strongly represented by a variety of organizations, such as the federally recognized Washoe Tribe of Nevada and California (Carson Colony, Dresslerville Colony, Woodfords Community, Stewart Community, & Washoe Ranches).[75] Under the Indian Reorganization Act of 1934, the Washoe began to form a tribal government and called themselves the Washoe Tribe of Nevada and California. In 1937, the tribe adopted a constitution and laws and was recognized as a formally organized tribe. They are committed to the preservation of their culture and language, the protection of sites and objects, and stewardship of over 10,000 square miles of ancestral territory in California and Nevada, including nine counties, six national forests, and four Bureau of Land Management districts.

[66] Washoe Tribe of Nevada and California 2020.
[67] D'Azevedo 1986.
[68] Davenport 2019).
[69] Barrett 1917.
[70] D'Azevedo 1986.
[71] Henton and Markley 1985.
[72] Barrett 1917.
[73] Washoe Tribe of Nevada and California 2009.
[74] Davenport 2019.
[75] USBIA 2022.

Historic Era Context

Exploration and Access

The following general historical summary of the area is excerpted from the South Lake Tahoe General Plan:[76]

> *Euroamerican contact with Native American groups living in coastal areas and the Central Valley of California began during the last half of the 18th century. The Spanish period in California lasted from about 1769 to 1821. This was a time when the Spanish missions dominated lives of both the Spanish and the Native Americans in those areas in California. However, the effect of the Spanish on the Washoe has not been documented. The Mexican Period (ca. 1821–1848) in California is an outgrowth of the Mexican Revolution, and its accompanying social and political views affected the mission system. Spanish exploration of the Central Valley did not begin until the late 1700s, and the eastern edges of the Central Valley and the Sierra Nevada were not explored until the early 1800s. In 1808 Gabriel Moraga explored the Mokelumne, Cosumnes, and American rivers, passing near modern-day Folsom. Subsequent exploration of the general area is credited to mountain men such as Jedediah Smith, who crossed the Sierra Nevada into California in 1826. Smith traveled along the American, Sacramento, and Cosumnes rivers and also probably passed through current Pleasant Valley. Other explorers such as Ewing Young, Joseph Walker, John Fremont, and Christopher "Kit" Carson soon followed Smith. In 1844, Fremont crossed the Sierra Nevada near Lake Tahoe and descended the west slope in proximity to the American River, which he eventually followed to Sutter's Fort. Many of the trails used by these early explorers and subsequent immigrants were not newly discovered routes, but rather Native American trails that were already in use.*
>
> *Early explorations of the Sierra Nevada and its flanks were soon followed by groups of immigrants moving west. The first of these immigrant groups was the Bartleson-Bidwell party that crossed the Sierra Nevada in 1841 and followed the Stanislaus River into the Central Valley. The Joseph Chiles and Joseph Walker parties followed the crossing of the Sierra Nevada by the Bartleson-Bidwell party in 1843. Chiles crossed the Sierra Nevada following the Malheur and Pit rivers into the Central Valley and then traveled south along the Sacramento River. Walker, however, traveled south along the eastern front of the Sierra Nevada to Walker Lake where he crossed into Owens Valley and eventually the Central Valley using what is now known as Walker's Pass. Subsequently, in 1844 the Stevens-Murphy party crossed the Sierra Nevada and probably is the first immigrant group to enter California via the Truckee and Bear rivers. Subsequently, the Gold Rush in 1849 dramatically increased the numbers of immigrants passing through the Lake Tahoe Basin to reach the gold fields in California.*
>
> *At the end of the 19th century and beginning of the 20th century, there was a growing demand for roads that linked local communities and also California and Nevada. Initial road construction generally followed immigrant trails and other routes used by overland stage traffic and the Pony Express. One such road connecting Placerville and Nevada was constructed near the location of South Lake Tahoe. This road eventually became Placerville Road. The passage of the State Highways Act in 1909 authorized the creation of a highway network within states and linking adjoining states. The Placerville Road*

[76] City of South Lake Tahoe, *General Plan Update, Draft Environmental Impact Report,* prepared by PMC, September 2010 (SCH: 2009092049), 4.10-6 – 4.10-7, https://cityofslt.us/DocumentCenter/View/15125/General-Plan-Draft-Environmental-Impact-Report?bidId=.

was incorporated into the developing highway system. Subsequently in 1913, the Placerville Road was incorporated into the intercontinental Lincoln Highway system. The Federal Aid Highway Act of 1925 created our current system of numbered interstate highways and the Lincoln Highway became US Highway 50. The City of South Lake Tahoe was incorporated in 1965 by combining the previously unincorporated communities of Al Tahoe, Bijou, Bijou Park, Stateline, Tahoe Valley, and Tallac Village.

Early Recreation

The majority of land within the Lake Tahoe Basin (upwards of 70 percent) is owned or managed by federal or state governments.[77] These lands are part of the U.S. Forest Service (Forest Service) or are units of the California or Nevada State Parks systems. This large proportion of public land ownership is the result of more than a century of active land acquisition and conservation efforts that began at the close of the 19th century as a response to clear-cutting and other destructive logging practices.[78] The Forest Service established its first ranger station in the Lake Tahoe basin in 1911. The first state park (no longer extant) in the area was opened in 1927 near Tahoe City, followed the next year by D. L Bliss State Park further south.[79]

At the same time, winter recreation areas began to open near Lake Tahoe. In 1910 a wooden ski jump, presumably the first in the United States, and toboggan lift was installed near Truckee. It was called "Winter Sports Hill" and eventually "Hilltop."[80] The winter carnival and sports exhibitions near Truckee drew people from all over the California and Nevada areas through the 1920s. A second ski jump was built near Tahoe City in 1928. It was called "Tahoe Tavern." Soon thereafter, enthusiasts constructed an "Olympic-caliber hill" just a mile away from the Tahoe Tavern. This new ski hill hosted the 1932 Winter Olympic tryouts.[81] By the 1930s, rope tows made accessing the tops of ski slopes much easier.[82] The first in the basin were installed at what is now the Sugar Bowl Resort when it opened in 1939.[83]

Immediately after the war, a series of ski resorts opened all along the basin's western half: Sierra-at-Tahoe (1946), Palisades Tahoe (formerly Squaw Valley, 1949), Heavenly (1955), plus many smaller resorts. When Palisades Tahoe won the bid to host the 1960s winter Olympics Games, the Lake Tahoe Basin's reputation as a world-class recreation center was solidified.

1960 Winter Olympic Games

When Palisades Tahoe was chosen as the site for the 1960 winter Olympics, the area lacked major infrastructure to support such a large event. While the original ski resort opened in 1949, it did not yet have sufficient facilities to host an Olympic Games.[84] To prepare, the Squaw Valley Development Corporation had to construct roads, bridges, administrative buildings, hotels, restaurants, not to mention

[77] Tahoe Fund, "Tahoe's Environmental History," accessed May 20, 2025.
[78] Tahoe Fund, "Tahoe's Environmental History."
[79] Tahoe Fund, "Tahoe's Environmental History."
[80] Judy DePuy, "History: Truckee's Hilltop and Its Future," *Sierra Sun,* January 23, 2023, https://www.sierrasun.com/news/history-truckees-hilltop-and-its-future/.
[81] "Sierra Heritage: History of California Skiing," Tahoetopia.com, accessed May 20, 2025, https://tahoetopia.com/news/sierra-heritage-history-california-skiing.
[82] Dino Vournas, "A Look at Lake Tahoe's Ski History, as Sugar Bowl Turns 80," *San Jose Mercury News,* November 7, 2019. https://www.mercurynews.com/2019/11/06/a-look-back-at-lake-tahoes-sugar-bowl-as-it-turns-80/.
[83] Sugarbowl, "Skiing Happy Since 1939," accessed May 20, 2025, https://www.sugarbowl.com/history.
[84] Palisades Tahoe, "History Runs Deep," accessed May 20, 2025, https://www.palisadestahoe.com/explore/our-history.

lifts, ski runs, and facilities needed to actually host the events.[85] This preparation involved numerous agencies and private entities and included completion of Highway 80, which was still under construction when the successful bid was announced.

> *These Olympic Games were the first to be televised and the first to use instant replay. They also introduced the world to Lake Tahoe, the Sierra Nevada mountains, and the history of the area. Following the games, the region experienced a 30-year period of sustained growth and development, primarily as a recreational and tourist destination.[86] More importantly, it transformed the area from a summer designation to a year-round destination. Construction boomed for decades but often with little oversite.*
>
> *Placer County, however, was unprepared to deal with the period of rapid growth that followed the 1960 Olympics. Large projects like high-rise casinos and the Tahoe Keys, which was built on the biggest filtration meadow in the basin, went in without any environmental analysis. In the 45 years since the Winter Games, the number of homes in the basin has increased five-fold, from around 7,000 in 1960 to 35,500 in 2000, according to Antonucci and the Tahoe Regional Planning Agency. The lakewide population has had even a bigger jump, growing from around 3,000 to 63,000 during the same period of time.[87]*

One of the answers was creation of the TRPA, a bi-state agency authorized by Congress to manage growth and development in the watershed.[88]

Lake Tahoe Airport Development

El Dorado County purchased the first tracts of land for the Airport in 1957 from the Kyburz family who used the land for cattle and sheep ranching.[89] The early surveys were conducted in 1957 and identified a floodplain around the Upper Truckee River located just two miles from the south shore of Lake Tahoe. Planning efforts were catalyzed after the area was awarded the 1960 Winter Olympic games. This included selection of Charles Luckman Associates to prepare a Master Plan to guide airport development.[90] However, runway construction began concurrently with planning efforts. When the Tahoe Valley Airport opened on August 1, 1959,[91] it opened with no master plan document. Reports from the September 1959 dedication note that "Luckman had been operating under quite a handicap in trying to plan an airport which was already under construction.[92] That construction was facilitated with assistance from the Federal Aid to Airports Program and resulted in a 5,900-foot-long, 100-foot wide runway.[93] In spite of the airport having no night lighting, no air traffic control tower, and no hangars, the plan was for

[85] Jenny Goldsmith, "2020 Hindsight: Looking Back on 100 Years of Historical Events at Lake Tahoe," *Tahoe Daily Tribune,* February 27, 2020.

[86] "45 Years Later – Lake Tahoe Feels Ripples of 1960 Games," *The Union,* March 3, 2005, accessed May 20, 2025, https://www.theunion.com/news/local-news/45-years-later-lake-tahoe-feels-ripples-of-1960-games/article_7747cd38-34aa-5673-8d1d-03f99da21355.html.

[87] "45 Years Later – Lake Tahoe Feels Ripples of 1960 Games," *The Union,* March 3, 2005.

[88] Miranda Jacobson, "Taking Lake Tahoe to New Heights: Development History in the Basin," *Sierra Sun,* December 27, 2022, accessed May 20, 2025, https://www.sierrasun.com/news/taking-lake-tahoe-to-new-heights-development-history-in-the-basin/.

[89] Lake Tahoe Airport, "History of Lake Tahoe's Airports," October 18, 2018, 2, https://cityofslt.us/DocumentCenter/View/12754/10182018_AIRPORT-HISTORY.

[90] "History and Reason for Lake Tahoe Airport Master Plan Listed," *Tahoe Sierra Tribune,* October 22, 1959, 4.

[91] "History of Lake Tahoe's Airports," 2.

[92] "Airport Manager Operator Term Master Plan as Not Realistic," *Tahoe Daily Tribune*, September 3, 1959.

[93] Promotional brochure, August 1963.

it to sustain 24-hour operations in time for the Olympics in February 1960.[94] Indeed, the airport recorded 1,170 flights in November 1959, justifying the need for an airfield to serve the area.[95]

From the beginning, El Dorado County, who operated the Airport, sought support from local businesses (casinos) and the federal government to expand Airport facilities.[96] The process was often slow and piecemeal, proceeding through perpetual master planning efforts. Throughout the 1960s local newspapers discussed the need for an updated master plan, for creation of a new master plan, contracts for master plans, and overall construction of permanent facilities.[97] Still, the early years were primarily guided by the Luckman master plan, which included recommendations for development of permanent commercial and terminal facilities on the east side of the runway.[98] This was never realized and through 2025, no construction beyond necessary security fencing and navigation aids have been placed east of the runway.

By 1960, the Airport was serviced by a temporary terminal (at the site of the present terminal) and a permanent, rectangular hangar at the north end of the runway, near the present-day north hangars.[99] The temporary terminal was long and narrow, measuring 120-feet by 20-feet and consisted of prefabricated structures moved to the site.[100,101] In 1962, the runway was extended to 8,540 feet and a fire and rescue building was constructed at the end of the runway.[102] Shortly thereafter, a larger hangar was added to the north end of the runway (extant).[103,104] With a longer runway, the Airport could handle more and larger planes. This brought new urgency to the need for a permanent air traffic control tower. In 1964, the Airport recorded more than the minimum 24,000 flights per year required to qualify for FAA air traffic control.[105] By the fall, the Airport was awarded funding from the FAA to both construct and staff a control tower, located on the west side of the runway.[106,107] With a proper tower and a longer runway in place, calls for construction of a proper, permanent terminal were renewed. By January 1965, designs for a terminal building were being presented to the public but no further action was taken.[108] The delay in approval of a terminal seems to stem from issues around financing construction.[109,110]

[94] "Airport Work Reprogramming Approved; Lights, Beacons scheduled for November 15," *Tahoe Mountain Tribune*, August 27, 1959.

[95] "1170 Operations Reported for Moth at Tahoe Airport," *Tahoe Mountain Tribune*, December 1, 1959.

[96] "History and Reason," October 22, 1959.

[97] The Lake Tahoe Airport has two scrapbooks of newspaper clippings that informed this statement. While most clippings are dated, many lack references to a specific publication. It is assumed that most are attributed to the *Tahoe Sierra Tribune* or the *Tahoe Daily Tribune*.

[98] "History and Reason," October 22, 1959.

[99] "The Lake Tahoe Airport," *Tahoe Realty News*, May 1, 1960.

[100] "The Lake Tahoe Airport," *Tahoe Realty News*, May 1, 1960.

[101] "County Seeks Lease-Back Offers for Tahoe Airport Terminal," Placerville *Mountain Democrat*, April 4, 1968, A3.

[102] "FAAP's at Tahoe, Too," promotional brochure, August 1963.

[103] The dating of this hangar is based on comparisons of a 1962 aerial photograph where no such hangar is shown and a 1964 newspaper photo depicting the hangar in operations prior to construction of the control tower.

[104] In June 1963, Bridgeford Flying Services was under a lease agreement to construct a hangar at the airport. An article from that time noted that it had yet to comply. Based on the dimensions and construction described, this hangar may be Hangar 1. "Airport Terminal Proposal Rejected by Supervisors," *Tahoe Daily Tribune*, June 11, 1963, 1.

[105] "FAA Tower at Tahoe Easily Justifies its Construction, "*Tahoe Daily Tribune*, November 4, 1965, 12.

[106] "FAA Tower," *Tahoe Daily Tribune*, November 4, 1965.

[107] "Nearing Completion," *Tahoe Daily Tribune*, October 5, 1964.

[108] "Proposed Terminal," *Tahoe Daily Tribune*, January 26, 1965.

[109] "Airport Terminal Proposal Rejected," *Tahoe Daily Tribune*, June 11, 1963, 1.

[110] "Supervisors See Big Future for Airport," *Tahoe Daily Tribune*, July 1, 1965.

From the beginning, development and construction of the Airport was undertaken through grants or money generated by the Airport. El Dorado County did not dedicate substantial tax dollars toward its operation or development. When the City of South Lake Tahoe incorporated in 1965, the County immediately began discussions with the City to take over the Airport.[111] Discussions over ownership and operation of the Airport included conversations regarding the updates already needed to the six-year old facility: a permanent terminal and widening of the runway.[112]

In 1967, the Airport master plan was revised to include updated facility requirements for a new terminal as well as recommendations to expand the runways to handle 727 jets.[113] This master plan was prepared by engineer Reinhard Brandley of Sacramento.[114] Meanwhile, talks between the County and the City continued and the County secured $1.1 million to fund these needed improvements through assistance by the State of California as well as with donations from local casinos.[115] With a plan for funding for a runway expansion, the terminal project became the prime focus.

The County decided to finance the terminal through a lease-back program whereby a developer would pay for the construction and the Couty would lease the terminal over a set period of time. It was presumed that rental income from commercial spaces in the terminal would cover the lease payments, thus negating the requirement for tax-payer funding. Various bids for the terminal were submitted. In 1968, 19 proposals were submitted with International Aviation Facilities, Inc. (IAF) providing the preferred proposal.[116] Shortly after, a rendering of an A-frame design was proposed.[117]

The runway expansion was dedicated in October 1968, but only a few months after announcing the winning proposal from IAF, progress on the terminal design was stymied. At the time, the issue was reported to be "trouble coming up with an architectural design acceptable to local agencies who want it to be compatible with the Tahoe Area."[118] At the same time, other reports noted that the County wanted to formalize a handoff to the City prior to undertaking the terminal project.[119] This second justification for delay seems to be the more accurate, as shortly thereafter in June 1969,[120] plans were drawn up for the current terminal showing a design that was remarkably similar to the rendering published in August 1968.[121]

Construction on the terminal began in early 1970 after removal of the temporary terminal building. It was constructed by Gil Construction of Pacheco[122] at a cost of approximately $800,000, with structural engineering design by AV Colosi and Associates of Oakland.[123] After years of waiting for a permanent terminal, the final completion and dedication of the building was further delayed as disputes over the

[111] "City Asked to Take Over Tahoe Airport Operation," *Tahoe Daily Tribune*, December 2, 1965.
[112] "Should City Take Over Lake Tahoe's Airport," *Tahoe Daily Tribune*, January 6, 1966.
[113] "County Orders Updated Master Plan for Tahoe Airport," *Placerville Mountain Democrat*, October 12, 1967, 1.
[114] "County Orders," *Placerville Mountain Democrat*, October 12, 1967.
[115] "County Receives Money for Tahoe Airport Runway Project," *Placerville Mountain Democrat*, July 20, 1968, 1.
[116] "County Considering Lease-Back for New Tahoe Airport Terminal," *Placerville Mountain Democrat*, August 1, 1968, 1 & 3.
[117] "A-Frame Plus," *Placerville Mountain Democrat*, August 8, 1968, 41.
[118] Ceremonies Friday Will Re-Open Tahoe Airport," *Placerville Mountain Democrat*, October 24, 1968, 12.
[119] "A-Frame Plus," *Placerville Mountain Democrat*, August 8, 1968, 41.
[120] "Architect for Tahoe Air Terminal," *Placerville Mountain Democrat*, February 13, 1969, 3.
[121] "Structural Plan," prepared by *AV Colosi and Associates*, dated June 16, 1969, on file with the Lake Tahoe Airport.
[122] "Contract Let for Tahoe Airport Terminal Building," *Placerville Mountain Democrat*, August 7, 1969, 27.
[123] "Architect for Tahoe," *Placerville Mountain Democrat*, February 13, 1969.

funding and financing model for terminal construction festered between county supervisors.[124] Regardless, the terminal finally opened to the public in July 1970.[125]

When the terminal opened in 1970, the Airport facilities consisted of the terminal building at the half-way point of the runway, a grouping of three hangars at the north end of the runway (a roughly square hangar, a short and wide rectangular hangar, and a long, narrow rectangular hangar), and an air traffic control tower located between the terminal and the hangars.[126] By 1973, there was also a small maintenance facility just south of the terminal (part of the current maintenance building) as well as the Fixed-Base Operator building north of the terminal and another square-plan hangar at the north end of the runway.

Then, in 1982, the City assumed control of the Airport and further expansion took place. By 1987, the parking lot was graded and paved and the maintenance building was expanded slightly to the west. After that the most substantial additions to the Airport were construction of the south hangars in 1994.[127,128] Other smaller modifications include installation of the helicopter operator's building (between 1998 and 2004), removal of several hangars at the north end of the runway (between 2004 and 2007) and construction of a new hangar at the north end of the runway (between 2007 and 2012.)

Methodology

Records Search

ESA received the results of a records search from the North Central Information Center (NCIC) of the California Historical Resources Information System (CHRIS) on December 18, 2024 (File No. ELD-24-122). The review included the proposed project site and a 0.5-mile radius. Previous surveys, studies, and site records were accessed. Records were also reviewed in the Built Environment Resources Directory and Archaeological Resources Directory for El Dorado County, which contain information on places of recognized historical significance, including those evaluated for listing in the *National Register of Historic Places*, the *California Register of Historical Resources*, the *California Inventory of Historical Resources*, *California Historical Landmarks*, and *California Points of Historical Interest*. The purpose of the records search was to (1) determine whether known cultural resources have been recorded within the proposed project vicinity, (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby sites, and (3) develop a context for the identification and preliminary evaluation of cultural resources.

The NCIC records search indicated that 33 previously recorded archaeological resources are mapped within or within 0.5-mile of the project site. Among these resources, eight are mapped within the project site and three are mapped within 100 feet. The resources recorded within the project site consist of one multi-component site with both pre-contact and historic-era components (P-09-0005817), two historic-era road alignments (P-09-004529; P-09-004537), two historic-era refuse scatters (P-09-004332; P-09-004535), a historic-era campsite (P-09-005814), and a historic-era fence (P-09-005816).

[124] "No Water – But Tahoe Airport Terminal Opening on Weekend," *Placerville Mountain Democrat*, May 21, 1970, 10.
[125] "Old and New," *Placerville Mountain Democrat*, July 16, 1970, 36.
[126] All these buildings, minus the terminal, are shown on a 1969 aerial as viewed in Google Earth.
[127] "Pilots Now Have Place to Store Planes," *Tahoe Daily Tribune*, date unknown.
[128] Architectural Plans, September 1993. On file with the Lake Tahoe Airport.

Architectural Resources

Architectural Resources Survey

ESA conducted an intensive site survey of the entire Airport property on March 20, 2025. At that time, all buildings and built features on the Airport property were photographed and recorded. Original documents and photographs maintained on the Airport property were reviewed and photographed. Additional research was conducted at local archives and through online databases. As a result of the survey and preliminary research, ESA identified two potential historic architectural resources for further evaluation and recordation: the Lake Tahoe Airport and the Lake Tahoe Airport Terminal. No other individual buildings or features of the Lake Tahoe Airport appeared to warrant individual recordation and evaluation after completing the initial round of archival research.

Historic Architectural Resources Analysis

ESA evaluated both the Lake Tahoe Airport and the Lake Tahoe Airport Terminal for eligibility for listing in the California Register and as a local historic resource as defined by the TRPA. The results of that analysis are found in **Appendix C**. The following summarizes those findings.

As a complex, the Lake Tahoe Airport is recommended ineligible for listing on the California Register or as a local historic resource as defined by the TRPA. The complex was developed over an approximately 60 year period and does not reflect a single unified architectural plan, nor does it reflect a cohesive master plan. It does not appear to have had a historically significant role in regional development, nor does it have an association with important historical events. No historically significant individuals are associated with the Airport. Also, it does not appear to provide potential for informing the greater understanding of Airport construction.

The Lake Tahoe Terminal Building (Terminal) is recommended individually eligible for listing on the California Register under Criterion 3 for its application of the regionally significant A-frame design to a commercial building. While the building has been modified, including interior reconfiguration and alterations to the fenestration pattern on the primary (west) façade, it retains sufficient integrity for listing in the California Register. As such, it is also recommended eligible for local listing under Criterion 3.

The character-defining features of the Lake Tahoe Airport Terminal are those features that exemplify its A-frame architecture:

- A-shaped roof/wall truss system;
- Deep, overhanding eaves on the central A-frame mass and faux-mansard parapet on the wings;
- Symmetrical wings that vary in height according to the terrain of the site;
- Large glazing configurations extending across entire façades (east and west);
- Expansive decks on east walls;
- Siting parallel to both the east mountains and runway;
- Modest gabled dormer windows on the north and south roof planes;
- Concrete knee walls no more than two-thirds the height of the first story; and

- Open framing of the A-frame peak, visible from the interior; and\
- Views through the building to the mountain and wooded setting to the east.

The Lake Tahoe Airport Terminal qualifies as a historical resource for the purposes of CEQA.

Archaeological Resources

Cultural Resources Survey

An ESA archaeologist completed a pedestrian surface survey of the Airport property on May 19, 2025. The archaeological survey included all accessible and unpaved areas within the fenced runway and Airport area, and targeted survey of the locations of known cultural resources outside of the fence that are within the Airport's property boundary.

During the pedestrian survey the previously recorded resources were revisited and documented. No new archaeological resources were identified during the survey.

ESA evaluated the California Register eligibility and historic resource designation under TPRA's ordinances of these resources as documented in the Archaeological Resources Inventory Report prepared for this analysis.[129] As a result of these evaluations, all historic-era archaeological resources, including two roads/trails (P-09-004529, P-09-004537), four refuse scatters (P-09-004332, P-09-004535, P-09-005815, and the historic-era component of P-09-005817), the remains of a summer camp (P-09-005814), a fence segment (P-09-005816) were recommended as not eligible for the California Register and not eligible as a historic resource under TPRA's ordinances.

The pre-contact component of P-09-005817 consists of two bedrock milling features, each with one mortar cup. This resource is recommended to be treated as eligible for the California Register and as a historic resource under TRPA's ordinances for this project. Therefore, P-09-005817 is considered a historical resource under CEQA.

Archaeological Sensitivity Assessment

The underlying geology at the area consists of Holocene-age flood plain deposits in the area where the runway and terminal are located and Pleistocene-age glacial tell and lacustrine terrace deposits on the upland areas on the western and eastern edges of the Airport property.[130] Because the Airport runway was constructed on a floodplain and the alignment of the Upper Truckee River was diverted east, soils within the fenced portion of the Airport's property that includes the runway, hangars, and terminal are located on artificial fill and soils brought deposited to elevate the Airport. The alignment of the Upper Truckee Creek to the east of the runway is entirely artificial. Prior to construction of the Airport, this area was a braided channel that meandered throughout the entire riparian corridor. Soils along the eastern edges of the Airport boundary appear to not have been significantly disturbed by construction of the Airport. Soils in this area consist of Gefo gravelly loamy coarse sand and Ubaj and Jabu series sandy loams.[131]

[129] Sims, Ashleigh, *Tahoe Airport Master Plan*, Archaeological Resources Inventory Report. Confidential report on file at City of South Lake Tahoe, June 2025.
[130] Saucedo 2005.
[131] USDA 2025.

Due to the significant level of disturbance and the placement of artificial fill, the fenced portion of the Airport property and the area between the Airport fence and the eastern bank of the Upper Truckee River, has a very low sensitivity for buried pre-contact archaeological resources. The very eastern and northeastern edge of the Airport property has some potential for buried archaeological resources. This area also appears to have not been impacted by construction of the Airport. Therefore, undisturbed portions of the eastern and northeastern edge of the Airport property have a moderate potential for pre-contact archaeological resources. The proposed project does not include ground disturbing components in these areas.

Impact Analysis

Topic a

Within the project site there is one historical resource, the Lake Tahoe Airport Terminal. This building is located between the parking lot along Lisa Maloff Way and the apron on a site that sloped such that the main entrance is at the second floor, while apron access is at the first floor. The project proposes several actions that are located in the vicinity of the Terminal. This includes replacement/reconstruction of the existing GSE facility located south of the Terminal and construction of a new multi-story parking structure in the location of the current parking lot. The project also includes one action that occurs within the Terminal: relocation of the Airport's main electrical control system from inside the Terminal to a separate electrical vault located just south of the Terminal. All other proposed actions are located at the north or south ends of the runway or otherwise are not in the immediate vicinity of the Terminal.

The Terminal is recommended eligible for the California Register under Criterion 3 for its architectural design. Construction of a new parking multi-story parking garage would alter the setting in which the Terminal currently exists by introducing a new building that would limit views of the forest and mountains to the west. However, this alteration of the setting would not remove any character-defining features of the Terminal as noted above. Similarly, replacement of the GSE building with a new building would not remove or otherwise modify any character-defining features of the architectural design.

Relocation of the electrical control system from the Terminal interior to a new, separate, exterior electrical vault would require internal modifications to the Terminal. However, the interior of the building has been modified extensively since it was constructed in 1970. Those remaining interior character-defining features associated with public spaces include open peak framing and views to the east. Neither of these features are associated with the electrical operation of the building or the Airport and neither would be altered by moving the electrical controls outside the building.

Therefore, implementation of the proposed project would not alter character-defining features of the Terminal to a degree that the building would lose its ability to adequate convey its historical significance. All work associated with the proposed project is either not associated with the Terminal or does not alter features of the Terminal that are part of its significance for architectural design. Therefore, the impact would be **less than significant**.

Topic b

This section discusses archaeological resources, both as historical resources according to CEQA Guidelines Section 15064.5, as well as unique archaeological resources, as defined in California Public Resources (PRC) (CEQA) Section 21083.2(g). A significant impact would occur if the project would

cause a substantial adverse change to an archaeological resource through physical demolition, destruction, relocation, or alteration of the resource.

Based on the results of the records search, background research, pedestrian survey, resource evaluation, and archaeological sensitivity assessment, one archaeological historical resource was identified on the Airport property. The pre-contact component of P-09-005817 consists of two bedrock milling features, each with one mortar cup. This resource is more than 800 feet away from any components of the proposed project, including the landside and airside improvements. Therefore, this resource would not be impacted by the proposed project.

The archaeological sensitivity analysis found that the project area, consisting of the proposed areas where the landside and airside improvements are proposed, has a low potential for encountering archaeological resources. While unlikely, there is the potential for the discovery of buried archaeological resources during ground-disturbing activities. Accordingly, the proposed project shall implement **Mitigation Measure CUL-1, Cultural Resources Awareness Training**, and **Mitigation Measure CUL-2: Inadvertent Discovery of Cultural Resources**, to determine, mitigate, and reduce any potential significant impacts. If any previously unrecorded archaeological resources are identified during proposed project ground-disturbing activities and were found to qualify as a historical resource per CEQA Guidelines Section 15064.5 or a unique archaeological resource, as defined in PRC (CEQA) Section 21083.2(g), any impacts to the resource resulting from the proposed project could be potentially significant. Any such potential significant impacts would be reduced to a less-than-significant level with implementation of **Mitigation Measure CUL-1** and **Mitigation Measure CUL-2**. Therefore, the potential impacts to the significance of archaeological resources would be **less than significant with mitigation incorporated**.

Topic c

Based on the records search and survey results, no human remains are known to exist within the project site. It is possible that human remains would be encountered during construction of the proposed project. Therefore, the possibility of inadvertent discovery cannot be entirely discounted. In the event of the discovery of human remains during project construction activities, implementation of **Mitigation Measure CUL-3, Inadvertent Discovery of Human Remains**, would reduce potential impacts to human remains. Therefore, the potential impacts associated with disturbance of human remains would be **less than significant with mitigation incorporated**.

Mitigation Measures

CUL-1: Cultural Resources Awareness Training. Before any ground-disturbing and/or construction activities, an archaeologist meeting or under the supervision of an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards (SOI PQS) for Archeology shall conduct a training program for all construction and field personnel involved in project-related ground disturbance prior to such personnel conducting any on-site activities. If a Native American tribe has expressed interest in the project via AB 52 or Section 106-related tribal consultation, they shall be invited to participate in the training program. The training shall outline the general archaeological sensitivity of the area and the procedures to follow if an archaeological resource and/or human remains are inadvertently discovered during project-related activities.

CUL-2: Inadvertent Discovery of Cultural Resources. If pre-contact or historic-era archaeological resources are encountered during project implementation, all construction activities within 100 feet shall halt, and a qualified archaeologist, defined as an archaeologist meeting Secretary of the Interior's Professional Qualifications Standards (SOI PQS) for Archeology, shall inspect the find within 24 hours of discovery and notify the City of Lake Tahoe of their initial assessment. Pre-contact archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (midden) containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools (e.g., hammerstones, pitted stones). Historic-era materials might include building or structure footings and walls, and deposits of metal, glass, and/or ceramic refuse.

If the City of Lake Tahoe determines, based on recommendations from the archaeologist and, if the resource is indigenous and a Native American tribe has expressed interest, a Native American tribe, that the resource may qualify as a historical resource or unique archaeological resource (as defined in CEQA Guidelines Section 15064.5) or a tribal cultural resource (as defined in PRC Section 21080.3) the resource shall be avoided, if feasible. Consistent with Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement.

If avoidance is not feasible, the City of Lake Tahoe shall consult with appropriate Native American tribes (if the resource is pre-contact), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2, and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3).

CUL-3: Inadvertent Discovery of Human Remains. In the event of discovery or recognition of any human remains during construction activities, all such activities within 100 feet of the find shall cease until the El Dorado County Coroner has been contacted to determine that no investigation of the cause of death is required. The Native American Heritage Commission (NAHC) shall be contacted within 24 hours if the Coroner determines that the remains are Native American. The NAHC shall then identify the person or persons it believes to be the most likely descendant from the deceased Native American, who in turn would make recommendations to USACE for the appropriate means of treating the human remains and any grave goods.

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Energy

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. ENERGY — Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Regulatory Framework

State

State of California Energy Action Plan

The California Energy Committee (CEC) and the California Public Utilities Commission (CPUC) approved the first State of California Energy Action Plan in 2003. The plan established shared goals and specific actions to ensure that adequate, reliable, and reasonably priced electrical power and natural gas supplies are provided. It also identified policies, strategies, and actions that are cost-effective and environmentally sound for California's consumers and taxpayers.

In 2005, the CEC and CPUC adopted a second Energy Action Plan to reflect various policy changes and actions from the prior two years. At the beginning of 2008, the agencies determined that it would not be necessary or productive to prepare a new energy action plan. This determination was based in part on a finding that the state's energy policies have been significantly influenced by the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (discussed below). Rather than produce a new energy action plan, the CEC and CPUC prepared an update that examines the state's ongoing actions in the context of global climate change.

California Global Warming Solutions Act of 2006

In 2006, Governor Arnold Schwarzenegger signed AB 32, the California Global Warming Solutions Act of 2006,[132] which focused on reducing greenhouse gas (GHG) emissions in California to 1990 levels by 2020. Under Health and Safety Code Division 25.5, the California Air Resources Board (CARB) has the primary responsibility for reducing GHG emissions in California; however, AB 32 also tasked the CEC and CPUC with providing information, analysis, and recommendations to CARB regarding strategies to reduce GHG emissions in the energy sector.

In 2016, Governor Edmund G. Brown Jr. signed Senate Bill (SB) 32 and its companion bill, AB 197. SB 32 and AB 197 amended Health and Safety Code Division 25.5 and established a new climate pollution reduction target of 40 percent below 1990 levels by 2030, with provisions to ensure that the benefits of state climate policies reach disadvantaged communities.

[132] California Health and Safety Code, Division 25.5.

Assembly Bill 1279 (California Climate Crisis Act)

Signed into law in September 2022, AB 1279 requires the State of California to achieve two objectives by 2045 or sooner: (1) net zero GHG emissions; and (2) a reduction in statewide anthropogenic GHG emissions of 85 percent below 1990 levels. AB 1279 requires CARB to identify and recommend measures to achieve carbon neutrality, and to identify and implement policies and strategies for GHG removal and carbon capture, utilization, and storage technologies. It is anticipated that the energy sector will have a large role in achieving the AB 1279 emissions reduction goals.

California Integrated Energy Policy

In 2002, the Legislature enacted SB 1389, which required the CEC to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs.

The CEC has adopted the 2022 Integrated Energy Policy Report Update, which assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety. The 2022 Integrated Energy Policy Report covers a broad range of topics, including energy reliability, demand planning, fossil fuel transition, and embedding equity and environmental justice at the CEC, among other issues.[133]

Local

Adopted El Dorado County General Plan

The adopted General Plan provides for long-range direction and policy for the use of land within the county. It provides a mechanism through which the County can focus on the issues of greatest local concern and a basis for decision-making regarding long-term physical development. The following General Plan goals, objectives, and policies related to energy resources are applicable to the proposed project:

Objective 5.6.2: Encourage Energy-Efficient Development

> ***Policy 5.6.2.1.*** Require energy conserving landscaping plans for all projects requiring design review or other discretionary approval.

Impact Analysis

Topic a

Development of the proposed project at the Airport would result in energy use primarily during construction, including fuel consumption by off-road equipment and construction-related vehicle trips. Operational energy use would be minimal and limited to electricity demand from new features such as lighting in the parking structure and electric vehicle (EV) charging stations.

[133] CEC 2023.

The proposed project does not include any elements that would result in an unusually high use of transportation fuel as compared to other or similar developments. The volume of diesel and gasoline fuels that would be consumed during construction were calculated based on the estimated greenhouse gas emissions for the project and the gasoline and diesel CO_2 emission factors from The Climate Registry.[134]

Based on the proposed project's estimated equipment use and construction duration, it is estimated to result in the consumption of a total of approximately 89,710 gallons of diesel fuel and a total of approximately 2,994 gallons of gasoline during the construction period. Fuel use during construction would represent 0.13 percent of diesel and less than 0.1 percent of gasoline sold in El Dorado County in 2023. Therefore, fuel use during construction would be minimal in comparison to the overall usage within El Dorado County.

Operation of the proposed project would comply with CALGreen Title 24 energy efficiency requirements, which would ensure that electricity use associated with the operation of the project would not be wasteful or inefficient. The proposed project would not alter Airport operations, including staffing, flights, or customer activity; therefore, operational emissions would remain unchanged and there would be no change in fuel consumption from vehicles.

For the above reasons, the proposed project would not result in any significant adverse impacts related to project energy requirements, energy use inefficiencies, and/or the energy intensiveness of materials by amount and fuel type for construction and operation of the project. The proposed project would comply with all existing energy standards, including those established by the County, and would not result in significant adverse impacts on energy resources. For these reasons, the proposed project would be expected to result in a **less-than-significant** impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

Topic b

The proposed project would be in compliance with all applicable federal, state, and local regulations regulating energy usage. In addition, energy providers are actively implementing measures to reduce reliance on fossil fuels and to improve energy efficiency. The primary energy provider in the project area is Algonquin Power and Utilities, who generate more than 70 percent of their power from a diverse portfolio of renewable sources.[135] Algonquin Power would be subject to SB 100 and the California's Renewable Portfolio Standard Program. Signed into law by Governor Jerry Brown, SB 100 increased California's Renewable Portfolio Standard target to 60 percent of total electric retail sales by 2030 and requires 100 percent of electric retail sales to come from eligible renewable or carbon-free resources by 2045. Algonquin, as the utility provider, is subject to these requirements. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g., the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

Therefore, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and the impact would be **less than significant**.

[134] TCR 2024.
[135] Algonquin Power 2024.

Mitigation Measures

None required.

References

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Geology and Soils

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
VII. GEOLOGY AND SOILS — Would the project:				
a) Directly or indirectly cause 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.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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 off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Regulatory Framework

Federal

Earthquake Hazards Reduction Act

The Earthquake Hazards Reductions Act (EHRA) (42 U.S. Code Section 7701 et seq.) passed in 1977 and is designed to minimize the risks to lives and properties from future earthquakes and seismic activity on a nationwide scale by installing a hazards reduction program that effectively addresses earthquakes. In this process, the federal government implemented the National Earthquake Hazards Reduction Program (NEHRP). Congress adopted the National Earthquake Hazards Reduction Program Act (NEHRPA) to amend the NEHRP in November 1990 to refine the description of agency responsibilities, program goals, and objectives, and reauthorized the act in 2004.

The mission of the NEHRP is to provide improved understanding, characterization, and prediction of hazards vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; increased mitigation capacity; and accelerated application of research findings. The NEHRPA gives the Federal Emergency Management Agency (FEMA) lead agency status for this program, which

allows FEMA to assign numerous planning, coordinating, and reporting responsibilities. Other agencies affiliated with the NEHRPA include the National Institute of Standards and Technology (NIST), the National Science Foundation (NSF), and the United States Geological Survey (USGS).

National Pollutant Discharge Elimination Permit

The NPDES system was established within the CWA to regulate municipal and industrial point discharges to surface waters of the United States. In California, the State Water Resources Control Board (SWRCB) administers the CWA (33 U.S. Code Section 1301 et seq.) and its associated regulations promulgated by the USEPA (40 Code of Federal Regulations [CFR] Section 122 et seq.) requiring the permitting of stormwater-generated pollution under the NPDES. The SWRCB's jurisdiction is administered through nine regional water quality control boards. Under the federal CWA and the Porter-Cologne Act, an operator must obtain coverage under the General Construction Permit for any construction or demolition activity (i.e., clearing, grading, and excavation) that results in a land disturbance of one acre or more. The General Permit requires the implementation of best management practices (BMPs) to reduce sedimentation into surface waters and to control erosion.

The CWA was amended in 1987 to require NPDES permits for non-point source (i.e., stormwater) pollutants in discharges. Stormwater sources are diffuse and originate over a wide area rather than from a definable point. The goal of NPDES stormwater regulations is to improve the quality of stormwater discharged to receiving waters to the "maximum extent practicable" through the use of structural and non-structural BMPs. BMPs can include the development and implementation of various practices including educational measures (workshops informing public of what impacts results when household chemicals are dumped into storm drains), regulatory measures (local authority of drainage facility design), public policy measures, and structural measures (filter strips, grass swales, and detention ponds). One element involving compliance with the NPDES permit is preparation of a SWPPP that addresses the control of water pollution, including sediment, in runoff during construction (see the Hydrology and Water Quality section for more information about the NPDES and SWPPPs).

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act, Public Resources Code (PRC) Sections 2621–2630) is intended to mitigate the effects of surface faulting on structures designed for human occupancy. This law primarily serves to act as a preventive measure for the construction of buildings for human occupancy directly on the surface trace of active faults, but addresses no seismic hazards apart from the hazard of surface fault rapture. In accordance with this Act, the State Geologist is required to establish regulatory zones, known as Earthquake Fault Zones, around the surface traces of active faults and map the designated regions accordingly for all affected cities, counties, and California agencies. If a development is within a designated Alquist-Priolo Earthquake Fault Zone, the affected jurisdiction must require a geologic investigation to prove that the proposed structures would not be constructed across active faults prior to approving any development.

The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in California. The State of California provides minimum standards for building design through the 2022 California Building Code (CBC) (CCR Title 24). Where no other building codes apply, CBC Chapter 18 regulates excavation, foundations, and retaining walls.

California Surface Mining and Reclamation Act

The California Surface Mining and Reclamation Act (SMARA) (California PRC Section 2710 et seq.) was enacted by the California Legislature in 1975 to regulate activities related to mineral resource extraction. The act requires the prevention of adverse environmental effects caused by mining, the reclamation of mined lands for alternative land uses, and the elimination of hazards to public health and safety from the effects of mining activities. At the same time, SMARA encourages both the conservation and the production of extractive mineral resources, requiring the State Geologist to identify and attach levels of significance to the state's varied extractive resource deposits. Under SMARA, the mining industry in California must plan adequately for the reclamation of mined sites for beneficial uses and provide financial assurances to guarantee that the approved reclamation will actually be implemented. The requirements of SMARA must be implemented by the local lead agency with permitting responsibility for the proposed mining project.

Local

Tahoe Regional Planning Agency Regional Plan

In 1969, Nevada and California established the TRPA with the consent of Congress through a bi-state compact. TRPA is the nation's first environmental organization with land use authority crossing state lines and continues to be unique in the United States. The bi-state compact charges TRPA with establishing a regional plan for the Lake Tahoe Basin with the mandate to achieve environmental standards, called thresholds. Environmental threshold standards set long-term environmental goals for the region. The TRPA Regional Plan outlines actions to attain these thresholds that restore Lake Tahoe while balancing economic and community vitality. The compact gives TRPA authority to enforce the TRPA Code of Ordinances (described below). Goal S-1 of the TRPA Regional Plan seeks to minimize soil erosion and the loss of soil productivity, and features policies that are focused on generally limiting new impervious land coverage and, in particular, prohibiting new impervious land coverage in designated land capability districts, with some limited exceptions. Policy S-1.2 establishes a requirement to prohibit new impervious land coverage in Land Capability Districts 1-3, and a large portion of the Airport is designated as 1B. Policy S-1.2 (C) allows public service facilities within Land Capability Districts 1-3, such as the Airport and the improvements envisioned in the proposed project, pending the following requirements are met:

i. The project is necessary for public health, safety, or environmental protection;

ii. There is no reasonable alternative, which avoids or reduces the extent of encroachment in land capability districts 1-3;

iii. The impacts are fully mitigated;

iv. Land capability districts 1-3 lands are restored in the amount of 1.5 times the area of land capability districts 1-3 which is disturbed or developed beyond that permitted by the Bailey co-efficients; and

v. Alternatively, because of their public and environmental benefits, special provisions for non-motorized public trails may be allowed and defined by ordinances.[136]

Tahoe Regional Planning Agency Code of Ordinances

Chapter 33 of the TRPA Code of Ordinances, Grading and Construction, is intended to apply to grading, excavation, filling, clearing of vegetation, or disturbance of the soil, and protection of vegetation during

[136] Tahoe Regional Planning Agency (TRPA), 1987, *Threshold Standards and Regional Plan*, adopted by the TRPA Governing Board June 25, 1987, updated December 12, 2012, amended May 22, 2024.

construction. Section 33.3 provides grading standards as they relate to seasonal weather conditions, discharge requirements, dust control, material disposal, cutting and filling practices, standards for excavation, and standards for the discovery of historic resources. Per section 33.5, the Code of Ordinances also provides additional scheduling requirements for projects presenting special problems with regard to project completion, site development, or water quality management, such as crossings of stream environment zones, major earthworks, or major clearing projects. In this scenario, TRPA may require, as a condition of approval, submittal, and approval of project schedules prior to site disturbance. Changes to the schedules shall be provided to TRPA prior to commencing the activity on the schedule. Lastly, Chapter 60 provides water discharge standards coming from properties in the Lake Tahoe Basin in addition to regulations for domestic, municipal, and industrial wastewater discharge. The Code of Ordinances provides standards for both surface runoff and discharge affecting groundwater.[137]

South Lake Tahoe General Plan

In the City of South Lake Tahoe General Plan, which was adopted on May 17, 2011, the Health and Safety Element provides policy context for the City of South Lake Tahoe to achieve its vision for future health and safety, and includes standards for emergency response and disaster preparedness; fire hazards; seismic and geologic hazards; flooding hazards; avalanche hazards; hazardous materials; airport hazards; and noise. In particular, Policy HS-3.2 calls on the City to promote the upgrade, retrofitting, and/or relocation of all existing critical facilities and other public facilities that do not currently meet building standards and are within areas susceptible to seismic or geologic hazards.[138]

South Lake Tahoe City Code

In the City of South Lake Tahoe City Code, Chapter 7.20 (Grading, Erosion, and Sediment Control) is designed to provide the following regulatory mechanisms:

1. Regulating grading on both public and private property within the city of South Lake Tahoe to safeguard life, limb, health, property, and public welfare;
2. To avoid pollution of watercourses with hazardous materials, nutrients, sediments, or other earthen materials generated on or caused by surface runoff or by aerial deposition of pollutants generated from the permit area on or across the permit area; and
3. To ensure that the intended use of a graded site is consistent with the city of South Lake Tahoe general plan, any specific plans adopted thereto and applicable city of South Lake Tahoe ordinances including the zoning ordinance, flood damage prevention ordinance, environmental review ordinance and applicable chapters of the California Building Code. In the event of conflict between this chapter and state or federal law, this chapter shall prevail unless preempted by the state or federal law. In the event of conflict between this chapter and other chapters of the South Lake Tahoe City Code, this chapter shall prevail.[139]

[137] Tahoe Regional Planning Agency (TRPA), 2012, *TRPA Code of Ordinances*, adopted December 12, 2012, Effective February 9, 2013, amended June 26, 2024.

[138] City of South Lake Tahoe, 2011, South Lake Tahoe General Plan, adopted May 17, 2011.

[139] City of South Lake Tahoe, 2024, *South Lake Tahoe City Code*, Chapter 7.20, Grading, Erosion, and Sediment Control. Current through Ordinance 1192, passed December 10, 2024.

Impact Analysis

Topic a.i

The proposed project comprises a long-range plan for Airport development that includes both airside and landside improvements that would occur over approximately a 20-year period. Airside improvements would take place within aircraft movement areas that include the runway and taxiway system and the FAA-defined protected areas that encompass them. Landside improvements would take place outside of the main aircraft movement area and include facilities that are used for aircraft storage, aircraft parking, terminal facilities, automobile parking, and airport access. The proposed Airport Master Plan projects are depicted on Figure 7 and are described in the Project Description. Construction activities pertaining to the proposed project would occur primarily on the paved surface of the Airport property and would include limited excavation, grading, and disturbance of unpaved ground surface within the Airport property. The proposed project is intended to improve the safety of existing Airport operations, meet compliance with current FAA design standards, and accommodate existing and forecasted aviation demands. Implementation of the proposed project would not result in an increase in aircraft operations or an increase in the number of Airport employees.

There are two inactive faults located in the Lake Tahoe Basin. The West Tahoe Fault is located to the west of Lake Tahoe, and the other is unnamed. The Airport is not located in any seismic hazard zones regulated under the Alquist-Priolo Earthquake Fault Zoning Act, nor is it located within any special study zones. Thus, this impact would be **less than significant**.

Topic a.ii

As specified in the CBC, the Lake Tahoe Basin is located in Seismic Zone D, which is prone to high seismicity and has the potential to produce intense ground shaking from earthquakes. As a result, buildings constructed in the region are required to build to a standard capable of withstanding Seismic Zone D hazards. Compliance with these regulations helps prevent significant damage and public safety risks during an earthquake.

The City of South Lake Tahoe has adopted the California Building Standards Code, which thereby requires all new buildings, including those included in the proposed project, to withstand the potential seismic hazards within the Lake Tahoe Basin. Accordingly, new buildings constructed under the Airport Master Plan would be built to accommodate the risks of fault rupture and ground shaking. Therefore, this impact is **less than significant**.

Topic a.iii

The Lake Tahoe Basin is located in a mountainous region, with elevations ranging from approximately 6,200 to 11,000 feet. While the region is home to two inactive faults, none of the City of South Lake Tahoe, including the Airport, is located within a Seismic Hazard Zone, as regulated by the California Geological Survey. Therefore, the region surrounding the Airport features a minimal risk of liquefaction or lateral spreading, an additional geological hazard typically associated with areas capable of liquefaction. In addition, the project site is on largely graded and developed land, and the majority of the proposed project components would occur on land that has already been developed. Therefore, this impact is **less than significant**.

Topic a.iv

The Lake Tahoe Basin contains a variety of mountains ranging between 6,200 and 11,000 feet in elevation, and features many areas that are susceptible to landslides. However, the project site is on largely graded and developed land, and the majority of the proposed project components would occur on land that has already been developed. Thus, the potential for landslides to occur within the project site as a result of the proposed project is minimal, and the impact would be **less than significant**.

Topics b through d

The proposed project would involve a series of improvements within the Airport, largely focused on improving and replacing existing facilities, along with some completely new structures. Some of these components (such as the proposed parking garage) would include excavation and land disturbance. However, federal, state, and local standards have been established that would require the project to adhere to several permitting and regulatory conditions. Construction activities disturbing equal to or greater than one acre would be required to apply for an NPDES SWPPP permit, which is regulated by the RWQCB and, as such, necessitates erosion prevention measures for the construction and operation phases of the proposed project. Furthermore, the proposed project would be required to meet the standards provided in Chapter 7.20 of the City of South Lake Tahoe City Code, Grading, Erosion, and Sediment Control. As a result of these actions, this impact would be **less than significant**.

Topic e

The Airport features no septic tanks and the proposed project would not involve the creation of any septic systems or alternative wastewater systems. Therefore, there would be **no impact**.

Topic f

No unique paleontological resources or geologic features are known to occur on the Airport property. Project construction activities would occur primarily on the paved surface of the Airport property and would include limited excavation, grading, and disturbance of unpaved ground surface. While highly unlikely, it is possible that ground-disturbing activities off the paved Airport surface could inadvertently encounter and damage previously unknown subsurface paleontological resources. Implementation of **Mitigation Measure GEO-1** would ensure that impacts to paleontological resources would be **less than significant**.

Mitigation Measures

> **GEO-1: Unanticipated discovery protocol for paleontological resources.** If suspected paleontological resources, such as fossil materials, bones, teeth, shells, plant impressions, are discovered during ground-disturbing activities, all activity in the vicinity of the discovery shall cease until the discovery is evaluated by a qualified paleontologist. If the paleontologist determines that the resources may be significant, no further work in the vicinity of the resources shall take place until appropriate treatment is determined and implemented.

References

City of South Lake Tahoe. 2011. *South Lake Tahoe General Plan*. Adopted May 17, 2011.

———. 2024. *South Lake Tahoe City Code*. Chapter 7.20, Grading, Erosion, and Sediment Control. Current through Ordinance 1192, passed December 10, 2024.

Tahoe Regional Planning Agency (TRPA). 1987. *Threshold Standards and Regional Plan*. Adopted by the TRPA Governing Board June 25, 1987. Updated December 12, 2012. Amended May 22, 2024.

———. 2012. *TRPA Code of Ordinances*. Adopted December 12, 2012. Effective February 9, 2013. Amended June 26, 2024.

Greenhouse Gas Emissions

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

Regulatory Framework

State

A variety of statewide rules and regulations mandate the quantification and, if emissions exceed established thresholds, the reduction of GHGs. CEQA requires lead agencies to evaluate project-related GHG emissions and the potential for projects to contribute to climate change and to provide appropriate mitigation in cases where the lead agency determines that a project would result in a significant addition of GHGs to the atmosphere. Below is a discussion of other state programs, regulations, plans, and goals designed to reduce GHG emissions.

Executive Order S-3-05

In June 2006, Governor Arnold Schwarzenegger signed Executive Order S-3-05, which established the following statewide emission-reduction targets through the year 2050:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

This executive order does not contain any requirements that directly pertain to the proposed project; however, future actions taken by the State of California and the EDCAQMD to implement these goals may affect the proposed project, depending on the specific measures that are developed and their timeline of implementation

Executive Order B-55-18

In September 2018, Governor Brown signed Executive Order B-55-18, committing California to total, economy-wide carbon neutrality by 2045. Executive Order B-55-18 directs CARB to work with relevant state agencies to develop a framework to implement accounting to track progress toward this goal. The goal will be incorporated into future Scoping Plans, as policies and actions which affect major sectors of California's economy, including transportation, agriculture, development, industrial, and others. This executive order does not contain any requirements that would need to be implemented at the project level. The carbon neutrality requirements would be implemented on a regional and local level through regional electricity providers and vehicle and equipment standards.

Climate Change Scoping Plan (AB 32 Scoping Plan)

In December 2008, CARB approved the AB 32 Scoping Plan, outlining the State of California's strategy to achieve the 2020 GHG emissions limit. The Scoping Plan estimates a reduction of 174 million metric tons of carbon dioxide equivalent (MT CO_2e) (about 191 million tons) from the transportation, energy, agriculture, forestry, and high-climate-change-potential sectors, and proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California's energy sources, save energy, create new jobs, and enhance public health. The Scoping Plan must be updated every 5 years to evaluate the mix of AB 32 policies to ensure that California is on track to achieve the 2020 GHG reduction goal. Appendices C and E of the adopted 2008 AB 32 Scoping Plan include a list of 39 recommended action measures to reduce GHG emissions.[140] CARB released its first Scoping Plan Update in May 2014[141] and subsequent updates in 2017 and 2022, as described below.

Executive Order B-30-15 and SB 32

In April 2015, Governor Brown issued an Executive Order B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. Reaching this emission reduction target will facilitate California in reaching its ultimate goal of reducing emissions 80 percent under 1990 levels by 2050, as identified in Executive Order S-3-05.

Subsequently, Senate Bill 32 (SB 32), which codifies the Executive Order's 2030 emissions reduction target, was approved by the Governor on September 8, 2016. SB 32 requires CARB to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions to ensure that statewide GHG emissions are reduced to at least 40 percent below the 1990 statewide GHG emissions limit no later than December 31, 2030.

Assembly Bill 1279 (California Climate Crisis Act)

Signed into law in September of 2022, AB 1279 requires the state to achieve two things by 2045 or sooner: (1) net zero GHG emissions and (2) a reduction in statewide anthropogenic GHG emissions of 85 percent below 1990 levels. AB 1279 requires CARB to ensure that the 2022 Scoping Plan, described further below, identifies and recommends measures to achieve carbon neutrality, and to identify and implement policies and strategies for CO_2 removal and carbon capture, utilization, and storage technologies.

2022 Scoping Plan for Achieving Carbon Neutrality

The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan), adopted by CARB in December 2022, expands on prior Scoping Plans and responds to AB 1279 by outlining a technologically feasible, cost-effective, and equity-focused path to achieve the state's climate target of reducing anthropogenic emissions to 85 percent below 1990 levels and achieving carbon neutrality by 2045 or earlier.[142] The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

[140] CARB 2008.
[141] CARB 2014.
[142] CARB 2022.

The 2022 Scoping Plan also discusses the role of local governments in meeting the State's GHG emissions reduction goals because local governments have jurisdiction and land use authority related to community-scale planning and permitting processes, local codes and actions, outreach and education programs, and municipal operations. The efforts of local governments to reduce GHG emissions within their jurisdictions are critical to achieving the state's long-term climate goals. Furthermore, local governments make critical decisions on how and when to deploy transportation infrastructure and can choose to support transit, walking, bicycling, and neighborhoods that allow people to transition away from cars; they can adopt building ordinances that exceed statewide building code requirements; and they play a critical role in facilitating the rollout of zero-emission vehicle infrastructure.[143]

The 2022 Scoping Plan identifies a construction equipment sector action for the Scoping Plan Scenario that commits to 25 percent of energy demand to be electrified by 2030 and 75 percent electrified by 2045.[144] Since construction of the proposed project would be completed prior to 2030, this construction equipment sector action is not directly applicable to the proposed project.

Regional

South Lake Tahoe Climate Action Plan

The City developed its first Climate Action Plan (CAP), which was adopted in October 2020. The CAP provides actions to reduce GHG emissions from the construction sector, including:

> **Action ZNE-1: Adopt green building standard.** Develop the code to require or incentivize the following measures in new construction (new buildings, additions, major alterations, and repairs to existing buildings):
>
> - All electric appliances;
> - Energy efficiency and renewable energy requirements beyond Title 24 standards;
> - Efficient indoor and outdoor lighting standards;
> - Installation of 240-volt outlets in garages for EV charging; and
> - Installation of Energy Star appliances wherever appliances are furnished as a standard part of the construction.

Impact Analysis

Topic a, b

Neither EDCAQMD nor TRPA have adopted a numerical threshold of significance for GHG emissions. As previously discussed, in the Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming (CBD vs. CDFW) case the Court provided some guidance to evaluate the cumulative significance of a project's GHG emissions, which include relying on existing numerical thresholds of significance established by another air district. The Sacramento Metropolitan Air Quality Management District (SMAQMD) has developed significance thresholds for GHG emissions, which include 1,100 MT CO_2e per year during construction. For operations, thresholds include a 10,000 MT CO_2e per year for stationary sources and for land use emissions, SMAQMD has tier based thresholds. Projects must implement Tier 1 best management practices (no natural gas infrastructure and CALGreen

[143] CARB 2022.
[144] CARB 2022.

Tier 2 compliance with EV-ready spaces), and if emissions still exceed 1,100 metric tons of CO_2e per year, Tier 2 measures are required to reduce vehicle miles traveled by 15 percent for residential and office uses or achieve no net increase for retail uses.[145] Although the SMAQMD GHG thresholds are not strictly applicable to the EDCAQMD, the SMAQMD GHG thresholds are currently being used by other air districts in the region such as the Bay Area Air District and Placer County Air Pollution Control District in evaluating GHG impacts and is the best available standard for evaluation.

During construction, the proposed project would generate emissions of GHG from operation of heavy-duty construction equipment, operation of worker vehicles and haul trucks, excavation of materials, paving activities, and application of architectural coatings. Construction GHG emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2022.1. Specific information on building acreages and paving surfaces for the proposed project was used to generate CalEEMod defaults for construction phases, equipment, vehicle trips, and truck haul trips. Because the construction schedule is unknown, emissions were conservatively estimated assuming all project elements occur simultaneously. In reality, annual GHG emissions would be lower, as construction would be spread over 20 years.

Detailed modeling assumptions are included in **Appendix A** in this document.

Table 9 indicates proposed project construction would generate a total of approximately 608 $MTCO_2e$ over an estimated 20-year buildout period.

TABLE 9
GHG EMISSIONS FROM PROJECT CONSTRUCTION

Year [a]	Annual GHG Emissions ($MTCO_2e$ per year)
2026	563
2027	45
GHG Significance Threshold [b]	1,100
Exceed Threshold (Yes or No)?	No

Notes: $MTCO_2e$ = metric tons of carbon dioxide equivalent

a. "Year" refers to the modeled construction year, assuming a worst-case scenario in which all project elements are built simultaneously.
b. Since the neither EDCAQMD nor TRPA have adopted a numerical threshold of significance for GHG emissions, the SMAQMD bright-light threshold of 1,100 MT CO2e per year is used.

Source: ESA, 2025.

El Dorado County does not have a quantitative GHG emissions threshold for construction projects; therefore, this analysis uses SMAQMD's GHG emission threshold of 10,000 MT CO_2e to assess the potential impacts. The proposed project's GHG emissions are well below this threshold and the impact would be **less than significant**.

The proposed project includes a series of improvements to the Airport that would occur over approximately a 20-year period. These improvements are intended to improve the safety of existing

[145] SMAQMD 2020.

Airport operations, meet compliance with current FAA design standards, and accommodate existing and forecasted aviation demand. The number of aircraft operations (i.e., aircraft arrivals and departures) at the Airport is expected to increase in the future; however, the number of future aircraft operations would be the same with or without the proposed project because the project does not include any components that would induce aircraft operations. That is, the growth in future aircraft operations would occur with or without the proposed project. Similarly, future-year operations by ground support equipment and other vehicles at the Airport are expected to be the same regardless of implementation of the proposed project.

Operation of the proposed project would not introduce new sources of GHG emissions at the Airport and the proposed improvements would not, by themselves, lead to increases in GHG emissions in the future. GHG emissions from aircraft and ground-support equipment would increase in the future from projected increases in aircraft activity levels, which would occur with or without the proposed project.

The proposed project would not result in any new permanent sources of GHG emissions exceeding the bright-line threshold of 1,100 MT of CO_2e/year established by the SMAQMD (see Table 9). Since the SMAQMD threshold was designed to meet the AB32 goal of reducing GHG emissions to 1990 levels by 2020, the proposed project would not result in an increase in GHG emissions that would impair the state's ability to implement AB 32. This impact would be **less than significant**.

Mitigation Measures

None required.

References

California Air Resources Board (CARB). 2008. *Climate Change Scoping Plan: A Framework for Change*. December 2008. https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/adopted_scoping_plan.pdf.

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———. 2022. *2022 Scoping Plan for Achieving Carbon Neutrality*. December 2022. https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf.

Sacramento Metropolitan Air Quality Management District (SMAQMD). 2020. *CH2 Thresholds Table 4 – Greenhouse Gas Emissions (GHG) Thresholds and Best Management Practices*. April 23, 2020. https://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable4-2020.pdf.

Hazards and Hazardous Materials

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
IX. 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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 or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

Regulatory Framework

Federal

Hazardous Materials Management

The primary federal agencies with responsibility for hazardous materials management include the USEPA, U.S. Department of Labor Occupational Safety and Health Administration (OSHA), and the U.S. Department of Transportation (USDOT). With respect to hazardous materials, state and local agencies often have either parallel or more stringent regulations than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the state or local agency section.

Resource Conservation and Recovery Act

Under the Resource Conservation and Recovery Act of 1976 (RCRA), individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as federal RCRA requirements and is approved by the USEPA. The USEPA approved California's RCRA program, referred to as the Hazardous Waste Control Law, in 1992. In addition, RCRA regulates USTs

under Code of Federal Regulations (CFR) Title 40, Part 2801, as expanded by the Hazardous and Solid Waste Amendments of 1984.

Toxic Substance Control Act

The Toxic Substances Control Act of 1976 was enacted by Congress to give the USEPA the ability to track the 75,000 industrial chemicals currently produced or imported into the United States. The USEPA repeatedly screens these chemicals and can require reporting or testing of those that may pose an environmental or human-health hazard. The USEPA can ban the manufacture and import of those chemicals that pose an unreasonable risk.

Hazardous Materials Transportation

The USDOT regulates hazardous materials transportation on all interstate roads. Within California, the state agencies with primary responsibility for enforcing federal and state regulations and for responding to transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications. Although special requirements apply to transporting hazardous materials, requirements for transporting hazardous waste are more stringent, and hazardous waste haulers must be licensed to transport hazardous waste on public roads.

Occupational Safety

OSHA is the agency responsible for assuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in CFR Title 29, as authorized in the Occupational Safety and Health Act of 1970. They provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling. At sites known or suspected to have soil or groundwater contamination, construction workers must receive training in hazardous materials operations and a site health and safety plan must be prepared. The health and safety plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

Oil Pollution Prevention

Part 112 of Subchapter D of Chapter I of Title 40 of the CFR (40 CFR 112) establishes procedures, methods, equipment, and other requirements to prevent discharges from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States. These regulations require facilities with a single tank or cumulative aboveground storage capacities of 1,320 gallons or greater of petroleum to prepare and implement a Spill Prevention, Control, and Countermeasure (SPCC) plan (40 CFR 112.1). The purpose of an SPCC plan is to form a comprehensive federal/state spill prevention program that minimizes the potential for discharges. The SPCC plan must address all relevant spill prevention, control, and countermeasures necessary at the specific facility for which the SPCC plan is written.

State

California Code of Regulations

The California Code of Regulations (CCR) Title 22, Sections 66261.20 through 66261.24, contains technical descriptions of characteristics that would classify wasted material, including soil, as hazardous

waste. When excavated, soils with concentrations of contaminants higher than certain acceptable levels must be handled and disposed as a hazardous waste.

California Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) is responsible for regulating the use, storage, transport, and disposal of hazardous substances in the state. DTSC maintains a Hazardous Waste and Substances Site List for site cleanup. This list is commonly referred to as the Cortese List. Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to update the Cortese List at least annually. DTSC is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information for the Cortese List.

Universal Waste Rule

Universal waste comes primarily from consumer products containing mercury, lead, cadmium, and other substances that are hazardous to human health and the environment. These items cannot be discarded in household trash or disposed of in landfills. Examples of universal waste are batteries, fluorescent tubes, and many electronic devices.

California's Universal Waste Rule allows individuals and businesses to transport, handle, and recycle certain common hazardous wastes, termed universal wastes, in a manner that differs from the requirements for most hazardous wastes. The more relaxed requirements for managing universal waste were adopted to ensure that they are managed safely and are not disposed of in the trash.

Surface Water Quality

The SWRCB and RWQCB are delegated authority from the USEPA to implement portions of the CWA and the state's water quality law, the Porter-Cologne Act. These agencies have established water quality standards that are required by section 303 of the CWA and the Porter-Cologne Act. The Porter-Cologne Act states that basin plans will consist of beneficial uses, water quality objectives, and a program of implementation for achieving water quality objectives. Water quality objectives for the Upper Truckee River are specified in the Water Quality Control Plan for the Lahontan Region (Lahontan Basin Plan) prepared by the Lahontan Regional Water Quality Board in compliance with the federal CWA and the California Water Code (Section 13240). The Lahontan Basin Plan establishes water quality objectives and implementation programs to meet stated objectives and to protect the beneficial uses of water in the Lahontan Region that are applicable to surface and groundwater discharges from the proposed project site. To minimize the potential effects of construction runoff on receiving water quality, the NPDES regulations require the municipal authority to evaluate the quality of its storm water discharge and receiving waters, identify areas of pollutant loading, and implement a program of BMPs to control pollutant discharges. In accordance with NPDES regulations, the state requires that any construction activity within the Tahoe Basin affecting one acre or more must obtain coverage under the Construction Storm Water NPDES Permit for the Tahoe Basin, NPDES No. CAG616001 Order No. R6T-2016-0010 (Tahoe General Construction Permit) to minimize the potential effects of construction runoff on receiving water quality. Future development and operations at the Airport would be required to adhere to the BMPs identified in the Airport's current SWPPP and any updated SWPPP. These BMPs include, but are not limited to non-structural (e.g., preventative maintenance, spill prevention and response, and stormwater

management) and structural (e.g., overhead coverage of fuel farm, control devices in vegetation lined drainage, and de-icing containment) BMPs.

Stormwater Management

Discharges from municipal separate storm sewer systems ("MS4s") are regulated because of concern over the high concentration of pollutants found in those discharges. The MS4 permits require the discharger to develop and implement a Storm Water Management Plan/Program (SWMP) with the goal of reducing the discharge of pollutants. The City of South Lake Tahoe, El Dorado, and Placer counties are co-permittees of a Phase I joint NPDES Permit/Waste Discharge Requirement for storm water/urban runoff (NPDES No. CAG616001, Order No. R6T-2022-0046). According to the permit, the primary pollutants of concern for storm water treatment in the Lake Tahoe Hydrologic Unit (LTHU) are fine sediment particles, total nitrogen, and total phosphorus. As a provision of the NPDES permit under which the City is a co-permittee, along with Placer County and El Dorado County, the City and Counties have prepared a SWMP for the Lake Tahoe Basin as part of each jurisdiction's integrated strategy for stormwater management. The SWMP outlines a comprehensive set of priorities and activities that constitute the components required in the NPDES permit.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

In January 1996, CalEPA adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The program has six elements: hazardous waste generators and hazardous waste on-site treatment; underground storage tanks; aboveground storage tanks; hazardous materials release response plans and inventories; risk management and prevention programs; and Unified Fire Code hazardous materials management plans and inventories. The plan is implemented at the local level. The Certified Unified Program Agency (CUPA) is the local agency that is responsible for the implementation of the Unified Program. The El Dorado County Department of Environmental Management, Hazardous Waste Division is the local CUPA.

Hazardous Materials Release Response Plans and Inventory Law

The California Hazardous Materials Release Response Plan and Inventory Law of 1985 (Business Plan Act) requires businesses that store hazardous materials on-site to prepare a hazardous materials business plan and submit it to local health and fire departments. The business plan must include details of the facility and business conducted at the site, an inventory of hazardous materials that are handled and stored on-site, an emergency response plan, and a safety and emergency response training program for new employees with an annual refresher course.

Hazardous Waste Handling

The DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or to mitigate injury to health or the environment. Laws and regulations require hazardous materials users to store these materials appropriately and to trin employees to manage them safely.

Under the federal RCRA, individual states may implement their own hazardous waste programs in lieu of RCRA, as long as the state program is at least as stringent as federal RCRA requirements. In California, the DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste.

The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; prescribe management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous waste that cannot be disposed of in landfills.

Aboveground Storage Of Petroleum Products

The Aboveground Petroleum Storage Act of 1990 requires owners or operators of facilities that store petroleum products with a capacity of 1,320 gallons or more to file a storage statement with the SWRCB and prepare a SPCC plan. The plan must identify appropriate spill containment or equipment for diverting spills from sensitive areas, as well as discuss facility-specific requirements for the storage system, inspections, recordkeeping, security, and personnel training.

Underground Storage Tanks

State laws governing USTs specify requirements for permitting, monitoring, closure, and cleanup associated with these facilities. Regulations set forth construction and monitoring standards for existing tanks, release reporting requirements, and closure requirements. SCEMD has regulatory authority for permitting, inspection, and removal of USTs. Any entity proposing to remove a UST must submit a closure plan to the regulating agency prior to tank removal. Upon approval of the UST closure plan, the regulating agency would issue a permit, oversee removal of the UST, require additional subsurface sampling if necessary, and issue a site closure letter when the appropriate removal and/or remediation has been completed.

Hazardous Materials Transportation

The State of California has adopted USDOT regulations for the intrastate movement of hazardous materials; state regulations are contained in 26 CCR. In addition, the State of California regulates the transportation of hazardous waste originating in the state and passing through the state (26 CCR). Both regulatory programs apply in California.

The two state agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the CHP and Caltrans. The CHP enforces hazardous materials and hazardous waste labeling and packing regulations to prevent leakage and spills of material in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are the responsibility of the CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identification teams at as many as 72 locations throughout the state that can respond quickly in the event of a spill.

Common carriers are licensed by the CHP, pursuant to California Vehicle Code section 32000. This section requires the licensing of every motor (common) carrier who transports, for a fee, in excess of 500 pounds of hazardous materials at one time, and every carrier, if not for hire, who carries more than 1,000 pounds of hazardous material of the type requiring placards.

Every hazardous waste package type used by a hazardous materials shipper must undergo tests that imitate some of the possible rigors of travel. Every package is not put through every test. However, most packages must be able to be kept under running water for a time without leaking, dropped fully loaded

onto a concrete floor, compressed from both sides for a period of time, subjected to low and high pressure, and frozen and heated alternately.

Occupational Safety

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the CFR.

Cal/OSHA regulations concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances, and communicating hazard information relating to hazardous substances and their handling. The hazard communication program also requires that Material Safety Data Sheets (MSDSs) be available to employees, and that employee information and training programs be documented. These regulations also require preparation of emergency action plans (escape and evacuation procedures, rescue and medical duties, alarm systems, and training in emergency evacuation).

Emergency Response

Pursuant to the Emergency Services Act, California has developed an Emergency Plan to coordinate emergency services provided by federal, state, and local governmental agencies and private persons. Response to hazardous materials incidents is one part of this plan. The plan is administered by the State Office of Emergency Services, which coordinates the responses of other agencies, including the USEPA, CHP, CDFW, the Regional Water Quality Control Boards (in this case, the Lahontan RWQCB), the local air districts (in this case, EDCAQMD) and local agencies. The State Emergency Plan defines the "policies, concepts, and general protocols" for the proper implementation of the California Standardized Emergency Management System (SEMS). The SEMS is an emergency management protocol that agencies within the State of California must follow during multi-agency response efforts whenever state agencies are involved.

California Fire Code

The California Fire Code is contained within Title 24, Chapter 9 of the CCR. Based on the International Fire Code, the California Fire Code is created by the California Buildings Standards Commission and regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. Similar to the International Fire Code, the California Fire Code and the California Building Code use a hazards classification system to determine the appropriate measures to incorporate to protect life and property.

The California Public Resources Code includes fire safety regulations that apply to state responsibility areas during the time of year designated as having hazardous fire conditions. During the fire hazard season, these regulations restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire-suppression equipment that must be provided on-site for various types of work in fire-prone areas. Additional codes require that any person who owns, controls, operates, or maintains any electrical transmission or distribution line must maintain a

firebreak clearing around and adjacent to any pole, tower, and conductors that carry electric current as specified in Sections 4292 and 4293. The state's Fire Prevention Standards for Electric Utilities (14 CCR Sections 1250-1258) provides specific exemptions from electric pole and tower firebreak and electric conductor clearance standards and specifies when and where standards apply.

California Public Resources Code

California Public Resources Code Sections 4201 through 4204 require the California Department of Forestry and Fire Protection (CAL FIRE) to prepare fire hazard severity zone (FHSZ) maps for all lands within State Responsibility Areas (SRAs)[146] and to make recommendations for such zones in Local Responsibility Areas (LRAs).[147] Each zone is to embrace relatively homogeneous lands and is to be based on fuel loading, slope, fire weather, and other relevant factors present, including areas where winds have been identified as a major cause of wildfire spread.

California Building Code

In January of 2008, California officially switched from the Uniform Building Code to the International Building Code (IBC). The IBC specifies construction standards to be used in urban interface and wildland areas where there is an elevated threat of fire.

Local

Tahoe Regional Planning Agency

The following policies relative to hazards and hazardous materials set forth under the TRPA Regional Plan would be applicable to the proposed project.

Water Quality

Goal WQ-2. Reduce or eliminate point sources of pollutants which affect, or potentially affect, water quality in the Tahoe region.

Policy WQ-2.1. Discharge of municipal or industrial wastewater to Lake Tahoe, its tributaries, or the groundwaters of the Tahoe region is prohibited, except for existing development operating under approved alternative plans for wastewater disposal, and for fire suppression efforts in accordance with applicable state laws.

Policy WQ-2.2. Discharges of sewage to Lake Tahoe, its tributaries, or the groundwaters of the Lake Tahoe region are prohibited. Sewage collection, conveyance and treatment districts shall have approved spill contingency, prevention, and detection plans.

Goal WQ-3. Reduce or eliminate non-point sources of pollutants which affect, or potentially affect, water quality in the Tahoe region in a manner consistent with the Lake Tahoe TMDL, where applicable.

Policy WQ-3.1. Reduce loads of sediment, nitrogen, and phosphorus to Lake Tahoe; and meet water quality thresholds for tributary streams, surface runoff, and groundwater.

[146] State Responsibility Areas (SRAs) are designated geographic areas in California where the State of California, specifically CAL FIRE, is financially responsible for preventing and suppressing wildfires.

[147] In Local Responsibility Areas (LRAs), fire protection is primarily the responsibility of local government agencies, such as city or county fire departments. CAL FIRE does not directly provide fire protection services in LRAs, though they may offer support or guidance.

Policy WQ-12. Projects shall be required to meet TRPA BMP requirements as a condition of approval for all projects. All projects shall be required, as a condition of approval, to apply Best Management Practices to the project parcel during construction and as follows upon completion of construction:

A. New projects on undeveloped parcels shall require application and maintenance of temporary and permanent BMPs as a condition of project approval.

B. Projects which expand structures or land coverage shall require application and maintenance of temporary and permanent BMPs to the project area.

C. Rehabilitation projects, other than minor utility projects, shall require the preparation of a plan and schedule for application and maintenance of temporary and permanent BMPs to the entire parcel. The amount of work required pursuant to the project approval shall consider the cost and nature of the project.

D. Where area-wide treatments are approved, projects shall install improvements in accordance with the approved area-wide BMP plan.[148]

Lake Tahoe Basin Community Wildfire Protection Plan

The Lake Tahoe Basin Community Wildfire Protection Plan (CWPP) was completed in February 2025.[149] The updated plan addresses the region's evolving wildfire risks, focusing on fuels reduction, preparedness, structural ignitability, and wildfire response. The CWPP is a community-driven plan that prioritizes wildfire risk reduction, using local input and data to guide fuel reduction, improve preparedness, and address structural ignitability. The CWPP is not an evacuation plan. The CWPP identifies areas needing fuel reduction treatments, supports funding requirements for project implementation, and offers educational opportunities to help the public understand wildfire prevention. It also outlines actions homeowners and communities can take to reduce wildfire risk.

Lake Tahoe Regional Evacuation Plan

The Lake Tahoe Regional Evacuation Plan describes the strategies for managing evacuations which exceed the day-to-day capabilities of the various public safety agencies in the Lake Tahoe Basin. The Sheriff's Office or law enforcement agency with jurisdiction is charged with the responsibility of evacuation in response to a major event threatening the life safety of residents and visitors. With a special emphasis placed on the wildland fire threat, the strategies outlined in the Regional Evacuation Plan are designed using an all-hazards approach to preparing for and managing evacuations. The Regional Evacuation Plan is designed to be applied in any event regardless of the threat or hazard that precipitates the need to evacuate an area. The Regional Evacuation Plan was developed by the cooperative efforts of the Lake Tahoe Fire Chiefs and Lake Tahoe Law Enforcement agencies and is intended to provide the public with critical information related to evacuations and is considered a living document that will be updated from time to time.[150]

[148] Tahoe Regional Planning Agency (TRPA), 1987, *Threshold Standards and Regional Plan*, adopted by the TRPA Governing Board June 25, 1987, updated December 12, 2012, amended May 22, 2024.
[149] Tahoe Resource Conservation District, 2025, *Lake Tahoe Basin Community Wildfire Protection Plan*.
[150] Lake Tahoe Fire Chiefs Association, 2024, *Lake Tahoe Regional Evacuation Plan*, September 10, 2024.

Impact Analysis

Topic a

Construction activities are required to comply with numerous hazardous materials and stormwater regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials to affect stormwater and downstream receiving water bodies. Contractors working on the proposed project would be required to prepare and implement a hazardous materials business plan that would require that hazardous materials used for construction are stored in appropriate containers with secondary containment to contain a potential release. For construction activities disturbing equal to or greater than one acre, the state Construction General Permit would require the preparation and implementation of a SWPPP that would require the use of BMPs to prevent the release of pollutants leaving the construction site through runoff. Cal/OSHA regulations provide for the proper labeling, storage, and handling of hazardous materials to reduce the potential harmful health effects that could result from worker exposure to hazardous materials. Through compliance with applicable hazardous materials storage, disposal, and stormwater permitting regulations, hazardous materials impacts associated with potential releases from the routine transport, use, or disposal of hazardous materials during construction would be reduced to a **less-than-significant** level.

Operational activities are also required to comply with numerous hazardous materials and stormwater regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of fuels or other hazardous materials to affect stormwater and downstream receiving water bodies. The California Fire Code would require measures for the safe storage and handling of hazardous materials. Through compliance with applicable hazardous materials storage, disposal, and hazardous materials impacts associated with the routine transport, use, or disposal of hazardous materials during the routine operations of the Airport would be reduced to a **less-than-significant** level.

Topic b

The required compliance with the numerous laws and regulations discussed above that govern the transportation, use, handling, and disposal of hazardous materials would limit the potential for creation of hazardous conditions due to the use or accidental release of hazardous materials, and would render this impact **less than significant**.

Topic c

There are no schools within one-quarter mile of the Airport; therefore, there would be **no impact** relative to schools.

Topic d

The SWRCB GeoTracker website includes two listings for the Airport. However, the two listings are for two leaking underground fuel tank sites that were remediated to the satisfaction of the regulatory

agencies, and the cases were closed in 2004[151] and 2010.[152] Therefore, there would be **no impact** relative to hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Topic e

The proposed project is located at the Airport and would be located within its airport land use plan. However, the purpose of the proposed project is to improve Airport operations, including safety. Therefore, implementation of the proposed project would reduce the potential impact relative to being located within two miles of, or in this case, on, an airport to a **less-than-significant** level.

Topic f

All of the construction activities would occur on the Airport property and not on public roads. The construction activities would involve a number of vehicles using local roads and has the potential to interfere with emergency evacuation routes. However, the construction activities would not require a large number of vehicles and no roads would be closed or restricted. Therefore, the potential impacts would be **less than significant** relative to affecting designated emergency routes.

Topic g

The Airport is located in an area designated by CAL FIRE as a Very High Fire Hazard Severity Zone (FHSZ) under local responsibility (South Lake Tahoe Fire Rescue) as recommended by the State Fire Marshal on February 10, 2025.[153] The Airport is required to comply with numerous regulations designed to reduce fire danger, including the California Fire Code. Through compliance with the applicable regulations, impacts associated with wildfires would be reduced to a **less-than-significant** level.

Mitigation Measures

None required.

References

California Department of Forestry and Fire Protection (CAL FIRE). 2025. Fire Hazard Severity Zones.

California State Water Resources Control Board. 2025a. GeoTracker. Oasis Aviation (T0601700115).

———. 2025b. GeoTracker. South Lake Tahoe Airport (T10000001522).

Lake Tahoe Fire Chiefs Association. 2024. *Lake Tahoe Regional Evacuation Plan*. September 10, 2024.

Tahoe Regional Planning Agency (TRPA). 1987. *Threshold Standards and Regional Plan*. Adopted by the TRPA Governing Board June 25, 1987. Updated December 12, 2012. Amended May 22, 2024.

Tahoe Resource Conservation District. 2025. *Lake Tahoe Basin Community Wildfire Protection Plan*.

[151] California State Water Resources Control Board, 2025a, GeoTracker, Oasis Aviation (T0601700115).
[152] California State Water Resources Control Board, 2025b, GeoTracker, South Lake Tahoe Airport (T10000001522).
[153] California Department of Forestry and Fire Protection (CAL FIRE), 2025, Fire Hazard Severity Zones.

Hydrology and Water Quality

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
X. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii) 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; or	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Regulatory Framework

Federal

Surface Water Quality

Water quality objectives for all waters of the United States are established under applicable provisions of the federal CWA. The CWA prohibits the discharge of pollutants to navigable waters from a point source unless authorized by a NPDES permit. Implementation of these regulations has been delegated to the state.

National Pollutant Discharge Elimination System Permits

The NPDES permit system was established in the CWA to regulate municipal and industrial point discharges to surface waters of the United States. Each NPDES permit for point discharges contains limits on allowable concentrations of pollutants contained in discharges. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the USEPA must consider in setting effluent limits for priority pollutants.

The CWA was amended in 1987 to require NPDES permits for non-point source (i.e., stormwater) pollutants in discharges. Stormwater sources are diffuse and originate over a wide area rather than from a

definable point. The goal of NPDES stormwater regulations is to improve the quality of stormwater discharged to receiving waters to the "maximum extent practicable" through the use of structural and non-structural BMPs. BMPs can include the development and implementation of various practices including educational measures (workshops informing public of what impacts results when household chemicals are dumped into storm drains), regulatory measures (local authority of drainage facility design), public policy measures, and structural measures (filter strips, grass swales, and detention ponds).

Floodplain Regulations

Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations (CFR). The FEMA imposes building regulations on development within flood hazard zones depending upon the potential for flooding within each area. Building regulations are incorporated into the municipal code of jurisdictions participating in the National Flood Insurance Program (NFIP). The City of South Lake Tahoe Floodplain Management Ordinance provides direction for new and existing developments located within special flood hazard zones. The primary goal of this ordinance is to reduce future flood damage through the implementation of building techniques that minimize the potential loss of life and property due to development in floodplains. The regulations are outlined in South Lake Tahoe City Code Chapter 6.65, Floodplain Management.

State

Surface Water Quality

The SWRCB and RWQCB are delegated authority from the USEPA to implement portions of the CWA and the state's water quality law, the Porter-Cologne Act. These agencies have established water quality standards that are required by section 303 of the CWA and the Porter-Cologne Act. The Porter-Cologne Act states that basin plans will consist of beneficial uses, water quality objectives, and a program of implementation for achieving water quality objectives. Water quality objectives for the Upper Truckee River are specified in the Water Quality Control Plan for the Lahontan Region (Lahontan Basin Plan) prepared by the Lahontan Regional Water Quality Control Board in compliance with the federal CWA and the California Water Code (Section 13240). The Lahontan Basin Plan establishes water quality objectives and implementation programs to meet stated objectives and to protect the beneficial uses of water in the Lahontan Region that are applicable to surface and groundwater discharges from the proposed project site. To minimize the potential effects of construction runoff on receiving water quality, the NPDES regulations require the municipal authority to evaluate the quality of its storm water discharge and receiving waters, identify areas of pollutant loading, and implement a program of BMPs to control pollutant discharges. In accordance with NPDES regulations, the state requires that any construction activity within the Tahoe Basin affecting one acre or more must obtain coverage under the Construction Storm Water NPDES Permit for the Tahoe Basin, NPDES No. CAG616001 Order No. R6T-2016-0010 (Tahoe General Construction Permit) to minimize the potential effects of construction runoff on receiving water quality. Future development and operations at the Airport would be required to adhere to the BMPs identified in the Airport's current SWPPP and any updated SWPPP. These BMPs include, but are not limited to non-structural (e.g., preventative maintenance, spill prevention and response, and stormwater management) and structural (e.g., overhead coverage of fuel farm, control devices in vegetation lined drainage, and de-icing containment) BMPs.

Stormwater Management

Discharges from municipal separate storm sewer systems ("MS4s") are regulated because of concern over the high concentration of pollutants found in those discharges. The MS4 permits require the discharger to develop and implement a Storm Water Management Plan/Program (SWMP) with the goal of reducing the discharge of pollutants. The City of South Lake Tahoe, El Dorado, and Placer counties are co-permittees of a Phase I joint NPDES Permit/Waste Discharge Requirement for storm water/urban runoff (NPDES No. CAG616001, Order No. R6T-2022-0046). According to the permit, the primary pollutants of concern for storm water treatment in the Lake Tahoe Hydrologic Unit (LTHU) are fine sediment particles, total nitrogen, and total phosphorus. As a provision of the NPDES permit under which the City is a co-permittee, along with Placer County and El Dorado County, the City and Counties have prepared a SWMP for the Lake Tahoe Basin as part of each jurisdiction's integrated strategy for stormwater management. The SWMP outlines a comprehensive set of priorities and activities that constitute the components required in the NPDES permit.

Lake Tahoe Total Maximum Daily Load

Section 303(d) of the CWA requires states to compile a list of impaired water bodies that do not meet water quality standards and to develop a total maximum daily load (TMDL) for impaired water bodies to determine the key pollutants and contributing sources to the impairment. California's Lake Tahoe TMDL (dated November 2010 and approved by the USEPA in 2011) requires attainment of the California transparency objective for Lake Tahoe over a 65 year implementation period. Based on California law, the Lahontan Regional Board has the obligation to implement and enforce the Lake Tahoe TMDL through NPDES permits (over which USEPA has jurisdiction) issued to California local government entities. In November 2010, Lahontan Regional Board modified their Basin Plan to establish a TMDL for Sediment and Nutrients (Tahoe TMDL). The Tahoe TMDL identified a long-term goal to restore deep water transparency to 1967-1971 levels (97.4 feet from current 68 feet) within 65 years.[154]

Local

Tahoe Regional Planning Agency

The following policies relative to hydrology and water quality set forth under the TRPA Regional Plan are applicable to the proposed project.

Water Quality

Goal WQ-2. Reduce or eliminate point sources of pollutants which affect, or potentially affect, water quality in the Tahoe region.

Policy WQ-2.1. Discharge of municipal or industrial wastewater to Lake Tahoe, its tributaries, or the groundwaters of the Tahoe region is prohibited, except for existing development operating under approved alternative plans for wastewater disposal, and for fire suppression efforts in accordance with applicable state laws.

Policy WQ-2.2. Discharges of sewage to Lake Tahoe, its tributaries, or the groundwaters of the Lake Tahoe region are prohibited. Sewage collection, conveyance and treatment districts shall have approved spill contingency, prevention, and detection plans.

[154] California Regional Water Quality Control Board (CRWQCB) and Nevada Division of Environmental Protection (NDEP), 2010, *Final Lake Tahoe Total Maximum Daily Load Report*.

Goal WQ-3. Reduce or eliminate non-point sources of pollutants which affect, or potentially affect, water quality in the Tahoe region in a manner consistent with the Lake Tahoe TMDL, where applicable.

Policy: WQ-3.1. Reduce loads of sediment, nitrogen, and phosphorus to Lake Tahoe; and meet water quality thresholds for tributary streams, surface runoff, and groundwater.

Policy WQ-12. Projects shall be required to meet TRPA BMP requirements as a condition of approval for all projects. All projects shall be required, as a condition of approval, to apply Best Management Practices to the project parcel during construction and as follows upon completion of construction:

A. New projects on undeveloped parcels shall require application and maintenance of temporary and permanent BMPs as a condition of project approval.

B. Projects which expand structures or land coverage shall require application and maintenance of temporary and permanent BMPs to the project area.

C. Rehabilitation projects, other than minor utility projects, shall require the preparation of a plan and schedule for application and maintenance of temporary and permanent BMPs to the entire parcel. The amount of work required pursuant to the project approval shall consider the cost and nature of the project.

D. Where area-wide treatments are approved, projects shall install improvements in accordance with the approved area-wide BMP plan.

TRPA also regulates water quality and development in Stream Environment Zones (SEZs). Section 60.4 of the TRPA Code of Ordinances sets forth requirements for installation of BMPs for the protection or restoration of water quality and attainment of minimum discharge standards. TRPA mandates that all municipal, public, and private land uses institute BMPs. TRPA's BMP Retrofit Program is part of the Lake Tahoe Environmental Improvement Program (EIP) and requires all property owners to implement BMPs, whether they own residential, multifamily, commercial, or industrial properties. The primary goal of the BMP Retrofit Program is to reduce the amount of runoff generated by the developed impervious surfaces located on private properties before it discharges to public rights-of-way. It is also a goal to stabilize unstable slopes, thereby reducing the potential for sediment inputs into storm water.

In addition to these requirements, future development at the Airport would also be required to comply with water quality standards set forth in Chapter 60, Water Quality, of the TRPA Code of Ordinances. TRPA Code Chapter 60 establishes standards for water discharge from properties in the Basin as well as regulations for discharge of domestic, municipal, and industrial wastewaters. Standards are established for both surface runoff and discharge to groundwater.[155]

City of South Lake Tahoe General Plan

The Natural and Cultural Resources Element of the City of South Lake Tahoe General Plan includes Goal NCR-2 to protect and enhance the clarity of Lake Tahoe and water quality in the area's rivers, creeks, and groundwater. This goal includes policies aimed at protecting South Lake Tahoe's hydrological resources through stormwater quality management and retention and containment of hazardous materials.[156]

[155] Tahoe Regional Planning Agency (TRPA), 2012, TRPA *Code of Ordinances*, adopted December 12, 2012, Effective February 9, 2013, amended June 26, 2024.

[156] City of South Lake Tahoe, 2011, *South Lake Tahoe General Plan*, adopted May 17, 2011.

South Lake Tahoe City Code

In the City of South Lake Tahoe City Code, Chapter 7.20 (Grading, Erosion, and Sediment Control) is designed to provide the following regulatory mechanisms:

1. Regulating grading on both public and private property within the city of South Lake Tahoe to safeguard life, limb, health, property, and public welfare;
2. To avoid pollution of watercourses with hazardous materials, nutrients, sediments, or other earthen materials generated on or caused by surface runoff or by aerial deposition of pollutants generated from the permit area on or across the permit area; and
3. To ensure that the intended use of a graded site is consistent with the city of South Lake Tahoe general plan, any specific plans adopted thereto and applicable city of South Lake Tahoe ordinances including the zoning ordinance, flood damage prevention ordinance, environmental review ordinance and applicable chapters of the California Building Code. In the event of conflict between this chapter and state or federal law, this chapter shall prevail unless preempted by the state or federal law. In the event of conflict between this chapter and other chapters of the South Lake Tahoe City Code, this chapter shall prevail.[157]

Groundwater Quality

The South Tahoe Public Utility District prepared a groundwater management plan for the Tahoe Valley South Subbasin. The plan was developed to regulate, manage, conserve, and protect the groundwater resources available to the District so that the groundwater will remain a viable potable water resource and be available to be put to the most efficient and beneficial use by the District and its customers.[158]

Impact Analysis

Topic a

Water from the airfield is collected in a drainage ditch located along the west side of Taxiway A. Water in the drainage ditch flows north by gravity eventually discharging into the Upper Truckee River. The Upper Truckee River lies immediately to the east of the Airport and continues north before discharging into Lake Tahoe. The Upper Truckee River and the tributaries, which make up the Upper Truckee River Watershed comprise the largest contribution to the waters of Lake Tahoe.

Project construction activities would occur primarily on the paved surface of the Airport property and would include limited excavation, grading, and disturbance of unpaved ground surface within the Airport property. Construction activities could generate loose, erodible soils that, if not properly managed, could cause sedimentation and result in an adverse water quality impact. Additionally, accidental discharges of fuels, oils, hydraulic fluid, grease, and other hazardous substances used during construction activities could contaminate stormwater flows in the drainage ditch, and potentially degrade receiving water quality. The proposed project would be required to adhere to the BMPs identified in the Airport's current SWPPP and any updated SWPPP. Additionally, the proposed project would be required to obtain and act in compliance with an NPDES operating permit. Adherence to the SWPPP and NPDES operating permit

[157] City of South Lake Tahoe, 2024, *South Lake Tahoe City Code*, Chapter 7.20, Grading, Erosion, and Sediment Control. Current through Ordinance 1192, passed December 10, 2024.

[158] South Tahoe Public Utility District (STPUD), 2022, *Alternative Plan for Tahoe Valley South Subbasin (6-005.01), First Five-Year Update*, April 22, 2022.

would ensure that BMPs are employed at the Airport to reduce potential impacts to water quality. Therefore, this impact would be **less than significant**.

Topic b

The proposed project lies within the Tahoe South Subbasin of the Tahoe Valley Groundwater Basin. The Tahoe Valley Groundwater Basin is within the larger structural feature commonly referred to as the Lake Tahoe Basin. The principal source of groundwater in the Tahoe Valley South subbasin is from Tertiary and Quaternary age glacial, fluvial, and lacustrine sediments, collectively referred to as basin-fill deposits. These deposits typically have moderate permeability.

Conversion of pervious surfaces to impervious surfaces can result in a decrease in the amount of infiltration of surface water to the groundwater that can, in some cases, cause a reduction in groundwater recharge. The proposed project would include taxiway removal and other pavement improvements that would collectively result in an approximately 251,810 square-foot net decrease in impervious surface on the Airport property.[159] Consequently, implementation of the proposed project would not interfere with groundwater recharge resulting from conversion of pervious surfaces to impervious surfaces.

While the proposed project would include development of new facilities, implementation of the proposed project would not result in an increase in aircraft operations or an increase in the number of Airport employees. The proposed improvements are intended to improve existing Airport operations and would neither individually nor collectively result in increases in water demand that would substantially decrease groundwater supplies. As a result, impacts to related to groundwater supplies or groundwater recharge would be **less than significant**.

Topic c

Water from the airfield is collected in a drainage ditch located along the west side of Taxiway A. Water in the drainage ditch flows north by gravity eventually discharging into the Upper Truckee River. The Upper Truckee River lies immediately to the east of the Airport and continues north before discharging into Lake Tahoe. As discussed above, the proposed project would involve a net decrease in impervious surfaces and would therefore result in a reduced rate and amount of stormwater runoff compared to existing conditions. The installation of the majority of the structures would occur on areas that are already paved. Therefore, the proposed project would not substantially increase the amount or rate of runoff or result in flooding on-or off-site. Furthermore, all properties in the Tahoe Basin are required to include stormwater BMPs designed to infiltrate the runoff from a 20-year 1-hour storm. BMPs include installing erosion control and stormwater infiltration measures. Finally, the proposed project would be required to implement BMPs as discussed under topic a. Therefore, impacts associated with increases in surface runoff on drainage capacity and flooding would be **less than significant**.

Topic d

The proposed project would involve the construction of new structures located in a 100-year flood hazard zone. The design and construction of these facilities would be subject to compliance with FEMA, County, and City floodplain management regulations, which require the review of a development permit to ensure the facility includes flood proofing to minimize damage due to flooding and is designed to prevent a

[159] Woolpert, 2024, *Draft Lake Tahoe Airport Master Plan*, prepared for the City of South Lake Tahoe, page 5-21.

change in flood or drainage patterns. In addition, the proposed project would be subject to the SWPPP and NPDES operating permit which include infiltration BMPs to reduce the potential to release sediment and other pollutants. Therefore, this impact would be **less than significant**.

Topic e

The proposed project would be required to adhere to the BMPs identified in the Airport's current SWPPP and any updated SWPPP. Additionally, the proposed project would be required to obtain and act in compliance with an NPDES operating permit. Adherence to the SWPPP and NPDES operating permit would ensure that the proposed project would not conflict with or obstruct implementation of a water quality control plan or groundwater management plan. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

References

California Regional Water Quality Control Board (CRWQCB) and Nevada Division of Environmental Protection (NDEP). 2010. *Final Lake Tahoe Total Maximum Daily Load Report*.

City of South Lake Tahoe. 2011. *South Lake Tahoe General Plan*. Adopted May 17, 2011.

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Woolpert. 2024. *Draft Lake Tahoe Airport Master Plan*. Prepared for the City of South Lake Tahoe.

Land Use and Planning

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. LAND USE AND PLANNING — Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Regulatory Framework

Local

City of South Lake Tahoe General Plan

The City of South Lake Tahoe General Plan sets out a long-term vision for the city's development, redevelopment, and environmental protection through the year 2030.[160] The Land Use and Community Design Element of the General Plan provides the policy context for the City of South Lake Tahoe to achieve its vision for future land use and community design. This element includes goals, policies, and standards for future land use, development, redevelopment, community design, sustainability, and change in South Lake Tahoe. This element also includes a description of the Land Use Diagram and the related land use classification system and standards. The General Plan land use designations for the Airport are Special District and Conservation, which are described below:

- **Special District (SD):** This designation provides for unique land uses that require flexibility or special considerations. This includes public facilities, industrial uses, and transportation uses (i.e., airport).
- **Conservation (C):** This designation provides for the permanent preservation of natural resources, habitat protection, watershed management, public and quasi-public uses, areas that contain public health and safety hazards such as floodways, and areas containing environmentally sensitive features.

Tahoe Regional Planning Agency Regional Plan

In 1969, Nevada and California established the TRPA with the consent of Congress through a bi-state compact. TRPA is the nation's first environmental organization with land use authority crossing state lines and continues to be unique in the United States. The bi-state compact charges TRPA with establishing a regional plan for the Lake Tahoe Basin with the mandate to achieve environmental standards, called thresholds. Environmental threshold standards set long-term environmental goals for the region. The TRPA Regional Plan outlines actions to attain these thresholds that restore Lake Tahoe while balancing economic and community vitality. The compact gives TRPA authority to enforce the TRPA Code of Ordinances (described below). The TRPA Regional Plan land use designations for the Airport are Mixed-Use and Conservation, which are described below:

- **Mixed-Use:** Urban areas that have been designated to provide a mix of commercial, public services, light industrial, office, and residential uses to the region or have the potential to provide future commercial, public service, light industrial, office, and residential uses. The purpose of this

[160] City of South Lake Tahoe, 2011, *South Lake Tahoe General Plan*, adopted May 17, 2011.

classification is to concentrate higher intensity land uses for public convenience, and enhanced sustainability.

- **Conservation:** Non-urban areas with value as primitive or natural areas, with strong environmental limitations on use, and with a potential for dispersed recreation or low intensity resource management. Conservation areas include (1) public lands already set aside for this purpose; (2) high-hazard lands, stream environment zones, and other fragile areas, without substantial existing improvements; (3) isolated areas which do not contain the necessary infrastructure for development; (4) areas capable of sustaining only passive recreation or non-intensive agriculture; and (5) areas suitable for low-to-moderate resource management.

Tahoe Regional Planning Agency Code of Ordinances

The TRPA Code of Ordinances provides a codified implementation of the TRPA Regional Plan. The Code is designed, among other things, to implement the goals and policies of the TRPA Regional Plan in a manner attaining and maintaining the environmental thresholds. The Code compiles all the ordinances of TRPA into one document except for certain procedural ordinances such as the ordinances adopting plan amendments. The Code addresses many subjects, including but not limited to required permits for development, findings required for approval of projects, environmental impact statements, plan area statements, land use, density and coverage, development standards, allocations of development, grading and construction practices, resource management, water quality, air quality, and transportation.

Impact Analysis

Topic a

Typically, the physical division of an established community refers to the construction of a physical feature that would impair the mobility within an existing community or between a community and outlying areas. Examples of physically dividing a community could be the establishment of a roadway or a set of railroad tracks through a community, or removal of a means of access such as a local road or bridge. The proposed project comprises improvements within the existing Airport property. The proposed project would not result in the construction of any physical barriers that would divide any community. There would be **no impact** under this criterion.

Topic b

The proposed project comprises a long-range plan for Airport development that includes both airside and landside improvements that would be consistent with existing land use designations and development standards set forth by the City of South Lake Tahoe and the TRPA. CEQA does not consider inconsistency with land use plans and policies to be a physical effect on the environment unless the plan or policy was adopted for the purpose of avoiding or mitigating a significant environmental effect. Adverse physical effects on the environment that could result from construction and operation of the proposed project are evaluated and disclosed in the appropriate topical sections of this document. As discussed in the analyses, the proposed project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. This impact would be **less than significant**.

Mitigation Measures

None required.

References

City of South Lake Tahoe. 2011. *South Lake Tahoe General Plan*. Adopted May 17, 2011.

Tahoe Regional Planning Agency (TRPA). 1987. *Threshold Standards and Regional Plan*. Adopted by the TRPA Governing Board June 25, 1987. Updated December 12, 2012. Amended May 22, 2024.

———. 2012. *TRPA Code of Ordinances*. Adopted December 12, 2012. Effective February 9, 2013. Amended June 26, 2024.

Mineral Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XII. 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Impact Analysis

Topics a and b

Currently, the California Department of Conservation identifies the land within the Airport as MRZ-4, or areas of unknown mineral resource significance. The South Lake Tahoe General Plan does not identify any known mineral resources that would be of value to the region or the state within or near the project site. Project construction activities would occur primarily on the paved surface of the Airport property and would include limited excavation, grading, and disturbance of unpaved ground surface within the Airport property. Construction and operation of the project would not conflict with or limit access to mineral resources. Therefore, impacts related to mineral resources would be **less than significant**.

Noise

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIII. NOISE — Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or 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 expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Environmental Setting

General Characteristics of Noise

Sound is characterized by parameters that describe the rate of *oscillation* (frequency) of sound waves, the distance between successive troughs or crests in waves, the speed that they travel, and the pressure level or energy content of a given sound. The sound pressure level has become the most common descriptor used to characterize how loud a sound is, and the decibel (dB) scale is used to quantify sound intensity. Because the human ear is not equally sensitive to all sound frequencies, human response is factored into sound descriptions in a process called *A-weighting*, expressed as *dBA*. The dBA, or A-weighted decibel, refers to a scale of noise measurement that reflects the different frequencies that humans can hear. On this scale, the normal range of human hearing extends from about 0 dBA to about 140 dBA. Except in carefully controlled laboratory experiments, a change of only 1 dBA in sound level cannot be perceived. Outside of the laboratory, a 3 dBA change is considered a perceptible difference while a 5 dBA change is considered readily noticeable. A 10 dBA increase in the level of a continuous noise represents a perceived doubling of loudness.[161] **Table 10** presents representative noise sources and their corresponding noise levels in dBA at varying distances from the noise sources.

Noise Descriptors

Noise is generally defined as sound that is loud, disagreeable, unexpected, or unwanted. Variations in noise exposure over time are typically expressed in terms of a steady-state energy level (called L_{eq}) that represents the acoustical energy of a given measurement, or alternatively as a statistical description of what sound level is exceeded over some fraction (10, 50, or 90 percent) of a given observation period (e.g., L_{10}, L_{50}, L_{90}). L_{max} is the maximum instantaneous noise level registered during a measurement period.

Noise metrics assess community response to noise by including the loudness of the noise, total number of noise events, duration, and time of day that the noise events occur in one single number rating scale. Day-Night Average Sound Level (DNL), also referred to as L_{dn}, is expressed in dBA and represents the noise level over a 24-hour period. DNL is a 24-hour average of hourly L_{eq} noise levels, but with penalties to

[161] Caltrans 2013.

account for the increase in sensitivity to noise events that occur during more sensitive nighttime periods. Specifically, DNL adds a penalty of 10 dB to the measured noise levels during the nighttime period (10 p.m. to 7 a.m.).

TABLE 10
REPRESENTATIVE ENVIRONMENTAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock band
Jet fly-over at 100 feet		
	100	
Gas lawn mower at 3 feet		
	90	
Diesel truck going 50 miles per hour at 50 feet		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area during daytime		
Gas lawn mower at 100 feet	70	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60	
		Large business office
Quiet urban area during daytime	50	Dishwasher in next room
Quiet urban area during nighttime	40	Theater, large conference room (background)
Quiet suburban area during nighttime		
	30	Library
Quiet rural area during nighttime		Bedroom at night, concert hall (background)
	20	
		Broadcast/recording studio
	10	
	0	

Source: Caltrans, 2013

Community Noise Equivalent Level (CNEL) is expressed in dBA and is used in California to represent cumulative noise exposure. Similar to DNL, CNEL is a 24-hour average of hourly L_{eq} noise levels. Unlike DNL, CNEL includes penalties applied to noise events occurring in the evening, which is defined as after 7 p.m. and before 10 p.m., when noise is considered more intrusive. Both metrics contain nighttime (10 p.m. to 7 a.m.) penalties. When a noise event occurs in the evening, a penalty of 4.77 dBA is added to the measured sound level. A 10 dBA penalty is added to nighttime noise events. The evening weighting is the only difference between CNEL and DNL. For purposes of aircraft noise analysis in California, the FAA recognizes the use of CNEL.

Vibration and Groundborne Noise

Groundborne noise typically refers to noise generated by vibrations from outside a structure but experienced inside the structure. Groundborne noise can be a problem in situations where the primary airborne noise path is blocked, such as in the case of a subway tunnel passing near homes or other sensitive structures. Vibration is an oscillatory motion through a solid medium. Typically, groundborne vibrations generated by man-made activities attenuate rapidly with the distance from the source of the vibration. The effects of vibration on structures are typically measured by peak particle velocity (PPV) in inches per second (in/sec). Vibration decibels (VdB) are the units used to assess the effects of vibrations on people. VdB is used to distinguish vibration decibels from sound decibels (dB).

With the exception of long-term occupational exposure, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that can affect concentration or disturb sleep. Vibration that results in sleep disturbance may result in health effects related to that sleep disturbance.

People may tolerate infrequent, short-duration vibration levels, but human annoyance to vibration becomes more pronounced if the vibration is continuous or occurs frequently. High levels of vibration can damage fragile buildings or interfere with sensitive equipment. Depending on the age of the structure and type of vibration (transient, continuous, or frequent intermittent sources), vibration levels as low as 0.5 to 2.0 in/sec PPV can damage a structure.[162]

Typical sources of groundborne vibration in urban areas are large-scale construction projects that involve pile driving, vibratory construction equipment, or underground tunneling. Vibration is also caused by transit rail vehicles. In general, such vibration is only an issue when there are sensitive receptors located nearby. Because rubber tires and suspension systems mitigate vibrations, rubber tire vehicles such as buses, trucks, and automobiles rarely create substantial vibration absent discontinuities in the road surface.[163]

Sensitive Receptors

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication; physiological and psychological stress; and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Consistent with the Governor's Office of Planning and Research's General Plan Guidelines 2017, residences, schools, libraries, churches, hospitals, nursing homes, auditoriums, parks and other outdoor recreation areas, and sensitive wildlife habitat generally are more sensitive to noise.

Existing land uses surrounding the Airport include open space and forestland to the east, south, west, and north; residential uses to the east (in unincorporated El Dorado County); and residential and commercial uses to the northwest within the City of South Lake Tahoe. While some residential communities do exist in the vicinity of the Airport, none of the proposed projects would be located on or near existing, developed residential properties.

[162] Caltrans 2020.
[163] FTA 2018.

Regulatory Framework

Federal

Federal standards for aircraft noise evaluation are formalized in Title 14 Code of Federal Regulations Part 150 (14 CFR Part 150), FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*.[164] For aviation noise analyses, the FAA has determined that the 24-hour cumulative exposure of individuals to noise resulting from aviation activities must be established in terms of DNL. However, the FAA recognizes CNEL as an alternative metric for assessing aircraft noise exposure in California.

The Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual* identifies general assessment construction noise criteria.[165] For residential uses, it identifies a 1-hour L_{eq} of 90 dBA during daytime and 80 dBA during nighttime. For commercial and industrial uses, the criterion is a 1-hour L_{eq} of 100 dBA for both daytime and nighttime.

Federal regulations also establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 CFR part 205, subpart B. The federal truck pass-by noise standard is 80 dB at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

Ground-borne vibration levels resulting from construction activities at a project site are typically estimated using data published by the FTA in its *Transit Noise and Vibration Impact Assessment Manual*.[166] The FTA has adopted vibration standards that are used to evaluate potential building damage impacts related to construction activities, which are shown in **Table 11**.

TABLE 11
FTA CONSTRUCTION VIBRATION DAMAGE CRITERIA

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

Notes: PPV = Peak particle velocity; in/sec = inches per second
Source: FTA 2018.

In addition, the FTA has also adopted standards associated with human annoyance for ground-borne vibration impacts for the following three land-use categories: Vibration Category 1 – High Sensitivity, Vibration Category 2 – Residential, and Vibration Category 3 – Institutional. The FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron

[164] FAA 2006.
[165] FTA 2018.
[166] FTA 2018.

microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment but still have the potential for activity interference. The vibration thresholds associated with human annoyance for these three land-use categories are shown in **Table 12**.

TABLE 12
FTA GENERAL ASSESSMENT CRITERIA FOR GROUNDBORNE VIBRATION

	Impact levels (VdB, micro-inch per second)		
Land Use Category	**Frequent Events [a]**	**Occasional Events [b]**	**Infrequent Events [c]**
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB [d]	65 VdB [d]	65 VdB [d]
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

Notes:

VdB is vibration velocity level in decibels.

a. "Frequent Events" is defined as more than 70 vibration events of the same source per day.
b. "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.
c. "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day.
d. This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes.

Source: FTA 2018.

State

California Code of Regulations

California Code of Regulations Title 21, subchapter 6 (California Airport Noise Standard), defines incompatible noise levels as exposure of nearby communities to aircraft noise levels of 65 CNEL or greater. Land use incompatibility is most likely to occur for most types of noise-sensitive uses when they are within the 65 CNEL contour. One of the suggested measures for controlling and reducing noise problems within Title 21 is to develop compatible land uses within the 65 CNEL contour. If residences are sound insulated or refuse sound insulation as part of a residential sound insulation program, they are considered a compatible land use under Title 21.

California Code of Regulations has guidelines for evaluating the compatibility of various land uses as a function of community noise exposure, as shown in **Table 13**.

The State of California also establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dB. The state pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dB at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanction of vehicle operators by state and local law enforcement officials.

TABLE 13
LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS (DNL OR CNEL)

Land Use	Normally Acceptable[a]	Conditionally Acceptable[b]	Normally Unacceptable[c]	Clearly Unacceptable[d]
Single-Family Homes, Duplexes, Mobile Homes	50–60	55–70	70–75	above 75
Multifamily Homes	50–65	60–70	70–75	above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	above 80
Transient Lodging—Motels, Hotels	50–65	60–70	70–80	above 75
Auditoriums, Concert Halls, Amphitheaters	—	50–70	—	above 70
Sports Arenas, Outdoor Spectator Sports	—	50–75	—	above 75
Playgrounds, Neighborhood Parks	50–70	—	67–75	above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	—	70–80	above 80
Office Buildings, Business and Professional, Commercial	50–70	67–77	above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	above 75	—

Notes: CNEL = community noise equivalent level; DNL = day-night average noise level

a. **Normally Acceptable:** Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
b. **Conditionally Acceptable:** New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
c. **Normally Unacceptable:** New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
d. **Clearly Unacceptable:** New construction or development should generally not be undertaken.

Source: Governor's Office of Planning and Research, *State of California General Plan Guidelines*, Appendix D, 2017.

The state has also established noise insulation standards for new multifamily residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (Title 24, California Code of Regulations). The noise insulation standards set forth an interior standard of 45 dB DNL in any habitable room. They require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than DNL 60 dB. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

There are no state regulations related to construction-induced vibration. However, the Caltrans consolidated vibration criteria from various sources for assessing the potential damage to structures from ground vibration induced by construction equipment, and these criteria are included in their *Transportation and Construction Vibration Guidance Manual*[167] and summarized in **Table 14**. As shown in this table, the building damage criteria for continuous vibration sources is about half of the criteria for transient sources.

[167] Caltrans 2013.

TABLE 14
CALTRANS VIBRATION GUIDELINES FOR POTENTIAL DAMAGE TO STRUCTURES

Structure Type and Condition	Maximum PPV (in/sec)	
	Transient Sources [a]	Continuous/Frequent Intermittent Sources [b]
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Notes: PPV = Peak particle velocity; in/sec = inches per second

a. Transient sources create a single, isolated vibration event, such as blasting or drop balls.
b. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans 2020.

Groundborne vibration and noise can also disturb people, who are generally more sensitive to vibration during the nighttime hours when sleeping than during daytime waking hours. Numerous studies have been conducted to characterize the human response to vibration. **Table 15** provides Caltrans' guidelines regarding vibration annoyance potential (expressed here as PPV).

TABLE 15
CALTRANS GUIDELINES FOR VIBRATION ANNOYANCE POTENTIAL

Human Response	Maximum PPV (in/sec)	
	Transient Sources [a]	Continuous/Frequent Intermittent Sources [b]
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.1
Severe	2.0	0.4

Notes: PPV = Peak particle velocity; in/sec = inches per second

a. Transient sources create a single, isolated vibration event, such as blasting or drop balls.
b. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans 2020.

Local

Lake Tahoe Airport is located within the City of South Lake Tahoe within El Dorado County. There are noise-sensitive receivers, such as single-family and multifamily residences and Tahoe Valley RV Resort & Campground in close proximity to the Airport. The single- and multifamily residences are located

within the City of South Lake Tahoe and the campground is located in an unincorporated area of El Dorado County.

El Dorado County

Code of Ordinances

The El Dorado County Code of Ordinances, Section 130.37.020 exempts noise sources of traffic on public roadways, railroad line operations, aircraft in flight, and any other activity where regulation thereof has been preempted by state or federal law. Construction (e.g., construction, alteration, or repair activities) during daytime hours is allowed as long as all construction equipment is equipped with manufacturer-installed muffling devices and maintained in good working order.[168]

General Plan

The Public Health, Safety, and Noise Element of the El Dorado County General Plan provides standards for noise sensitive land uses affected by both transportation and non-transportation sources. For the purposes of the Noise Element, transportation noise sources are defined as traffic on public roadways, railroad line operations and aircraft in flight. As described previously, control of noise from aircraft in flight is preempted by federal laws and regulations.

The Noise Element provides daytime, evening, and nighttime standards for non-transportation sources as shown in **Table 16**. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, schools, hospitals, commercial land uses, other outdoor land uses, etc.

TABLE 16
NOISE LEVEL PERFORMANCE PROTECTION STANDARDS FOR NOISE SENSITIVE LAND USES AFFECTED BY NON-TRANSPORTATION SOURCES

	Daytime (7 a.m. to 7 p.m.)		Evening (7 p.m. to 10 p.m.)		Nighttime (10 p.m. to 7 a.m.)	
Noise Level Descriptor	**Community**	**Rural**	**Community**	**Rural**	**Community**	**Rural**
Hourly L_{eq}, dB	55	50	50	45	45	40
Maximum Level, dB	70	60	60	55	55	50

Notes:

Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

The County can impose noise level standards which are up to 5 dB less than those specified above based upon determination of existing low ambient noise levels in the vicinity of the project site.

In Community areas the exterior noise level standard shall be applied to the property line of the receiving property. In Rural Areas, the exterior noise level standard shall be applied at a point 100' away from the residence. The above standards shall be measured only on property containing a noise sensitive land use as defined in Objective 6.5.1. This measurement standard may be amended to provide for measurement at the boundary of a recorded noise easement between all effected property owners and approved by the County

Source: El Dorado County, 2019

Policy 6.5.1.11 states that the noise standards outlined in Table 6-2 of the General Plan shall not apply to those activities associated with actual construction of a project as long as such construction occurs

[168] El Dorado County 2025.

between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends, and on federally recognized holidays.[169]

City of South Lake Tahoe

City Code

Section 6.15.100 requires that when construction activities that include impact equipment and activities such as pile driving, soil compaction, or vibratory hammers that could potentially affect nearby structures occur within 200 feet of existing structures, an analysis shall be conducted of potential vibration levels based on the criteria contained in the City General Plan Update EIR (September 2010). Construction activities shall be designed to avoid or mitigate vibrations above 0.02 in/sec. There is no discussion of construction or operational noise standards in the City code.

Section 6.55.200 of the South Lake Tahoe City Code discusses the airport land use compatibility plan, which contains policies that are intended to prevent the development of new noise sensitive land uses in the vicinity of the Airport (City of South Lake Tahoe, 2025). The proposed project does not involve the development of noise sensitive land uses; therefore, this section of the municipal code is not applicable to the project.

General Plan

Policy HS-6.3 in the City's General Plan Health and Safety Element states that all construction activities that include impact equipment and activities such as pile driving, soil compaction, or vibratory hammers could potentially affect nearby structures.[170] Where these activities occur within 200 feet of existing structures, the City shall require an analysis of vibration impacts. In accordance with the policy, construction operations must be designed to avoid or mitigate for vibrations above 0.02 in/sec.

According to Policy HS-8.1, the City shall require all new non-transportation noise sources to not exceed the exterior noise level standards shown in **Table 17**. These standards shall be measured immediately within the property line of parcels designated as noise-sensitive uses. In instances where a noise-sensitive use is adversely affected by non-transportation noise levels in excess of standards shown in Table 17, per Policy HS-8.2, the City shall require appropriate mitigation to be incorporated into the project's design in order to achieve the standards shown in Table 17, as measured immediately within the property line or within a designated outdoor activity area of the project (at the discretion of the Community Development Director). Policy HS-8.3 states that the City shall not allow any project to increase the overall background noise levels at receiving land uses by three or more decibels (dB) in instances when measured ambient noise levels exceed the hourly equivalent sound level (L_{eq}) standards contained within Table 17.

Tahoe Regional Planning Agency

Chapter 68.3 of the TRPA's Code of Ordinances describes single-event noise level limits for aircraft, watercraft, motor vehicles, motorcycles, off-road vehicles, and over-snow vehicles.[171] As the control of noise from aircraft in flight is preempted by federal laws and regulations, the single event noise criteria contained within Chapter 68.3 are not considered applicable to the proposed project.

[169] El Dorado County 2019.
[170] City of South Lake Tahoe 2022.
[171] TRPA 2023.

TABLE 17
EXTERIOR NOISE LEVEL PERFORMANCE STANDARDS FOR NEW PROJECTS AFFECTED BY OR INCLUDING NON-TRANSPORTATION NOISE SOURCES

Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq}, dB	55	45

Notes:

1. Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises (e.g., humming sounds, outdoor speaker systems). These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

   The City can impose noise level standards that are more restrictive than those specified above based on determination of existing low ambient noise levels.

   Fixed noise sources which are typically of concern include but are not limited to the following:

HVAC Systems	Cooling Towers/Evaporative Condensers
Pump Stations	Lift Stations
Emergency Generators	Boilers
Steam Valves	Steam Turbines
Generators	Fans
Air Compressors	Heavy Equipment
Conveyor Systems	Transformers
Pile Drivers	Grinders
Drill Rigs	Gas or Diesel Motors
Welders	Cutting Equipment
Outdoor Speakers	Outdoor Speakers Blowers

   The types of uses which may typically produce the noise sources described above include but are not limited to: industrial facilities including pump stations, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch plants, bottling and canning plants, recycling centers, electric generating stations, race tracks, landfills, sand and gravel operations, and athletic fields.

2. For the purposes of this General Plan, transportation noise sources are defined as traffic on public roadways, railroad line operations, and aircraft in flight. Control of noise from these sources is preempted by Federal and State regulations. Nontransportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, loading docks, etc.

Source: City of South Lake Tahoe 2022.

Thresholds of Significance

Construction Noise

For noise sensitive receptors within the El Dorado County, construction noise is exempted as long as such construction occurs between the hours of 7 a.m. and 7 p.m. Monday through Friday, and between the hours of 8 a.m. and 5 p.m. on weekends and federally recognized holidays.

For noise-sensitive receivers within the City of South Lake Tahoe, a significant impact would result if construction noise exceeds 55 dB hourly L_{eq} at noise sensitive receivers between 7 a.m. and 10 p.m.

Vibration Structural Damage

The City of South Lake Tahoe has defined a vibration impact standard. A vibration impact would occur if the construction activities occur within 200 feet of existing structures and the PPV level exceeds 0.02 in/sec. This threshold is more stringent than the FTA and Caltrans thresholds for both historic structures and buildings of standard construction.

El Dorado County does not have vibration impact standards. Therefore, the standards established by the City of South Lake Tahoe are used for this analysis.

Vibration Human Annoyance

Neither the City of South Lake Tahoe nor El Dorado County have established human annoyance impact standards due to construction vibration. Therefore, the FTA's impact threshold are used for this analysis. For residential and other land uses where people are likely to sleep, the human annoyance impact threshold used is 80 VdB.

Impact Analysis

Topic a

The proposed project includes a series of improvements to the Airport that would occur over approximately a 20-year period. The actual construction duration of the various project components would vary from less than 1 month to 24 months. Proposed project elements include pavement marking and signage improvements, pavement reconstruction and rehabilitation, taxiway modifications, construction and expansion of new hangars and fixed-base operator facilities, construction of a new parking garage, demolition and removal of an existing air traffic control tower, relocation of a weather observation system, installation of a new bike path, electric aircraft charging station, and aircraft wash rack.

Construction activities would include the use of heavy equipment, such as excavators, graders, front-end loaders, asphalt pavers, rollers, dump trucks, bottom dumps, and street sweepers along with the use of smaller power tools, generators, and other sources of noise. Pile driving may be required for the construction of the future parking garage depending on soil conditions. Typical construction phases would include clearing and demolition, excavation and grading, foundation installation, building construction, paving, and finishing. During each construction phase there would be a different mix of equipment operating and noise levels would vary based on the amount of equipment in operation and the location of each activity. As such, construction activity noise levels at the project site would fluctuate depending on the particular type, number, location, and duration of use of the various pieces of construction equipment. Details related to the mix of construction equipment and usage times are not available, as the various elements of the project are still being designed. **Table 18** presents noise levels associated with typical construction equipment that are likely to be used for the proposed project.

Consistent with the general assessment methodology provided by the FTA, this analysis assumes the simultaneous operation of the two noisiest pieces of construction equipment to calculate construction noise levels for comparison with the threshold. For pile driving activities, the simultaneous operation of a pile driver and crane is assumed, which would result in exterior noise levels exceeding the 55 dBA threshold as far as 4,600 feet from pile driving activities. To estimate noise levels from standard construction equipment (other than pile driving), the simultaneous operation of a concrete saw and jackhammer is assumed. This would result in exterior noise levels exceeding the 55 dBA L_{eq} threshold at receptors within 1,630 feet of construction activities. Receptors are located within these distances from proposed project sites and would be exposed to noise levels in excess of the City's impact threshold of 55 dB hourly L_{eq} resulting in a significant impact. **Mitigation Measure NOI-1** is identified to reduce this impact to less than significant. Implementation of Mitigation Measure NOI-1 would be required for pile driving activities occurring within 4,600 feet of noise sensitive receivers and standard construction activities occurring within 1,630 feet of noise sensitive receptors within the City of South Lake Tahoe to ensure construction noise levels of 55 dB hourly L_{eq} or less at the receptors. Implementation of Mitigation Measure NOI-1 would reduce this impact to South Lake Tahoe receptors to less than significant.

TABLE 18
MAXIMUM NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

Construction Equipment	Noise Level at 50 Feet (dBA, L_{max})
Air Compressor	78
Backhoe	78
Bore/Drill Rig	84
Chain Saw	84
Compactor	83
Concrete Batch Plant	83
Concrete Mixer Truck	79
Concrete Pump Truck	81
Concrete Saw	90
Crane	81
Dozer	82
Excavator	81
Front End Loader	79
Generator Set	81
Grader	85
Haul Truck	77
Impact and Vibratory Pile Driver	101
Jackhammer	89
Paver	77
Pump	81
Roller	80
Rough Terrain Forklift	83
Scraper	84
Sweeper/Scrubber	82
Tractor	84

Sources: FHWA 2006; FTA 2018.

Construction noise impacts to receptors within El Dorado County would be less than significant as long as construction activities associated with the proposed project take place between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends, and on federally recognized holidays. It is assumed that the proposed project's construction activities would be limited to these hours, and therefore the impact would be less than significant.

Overall, construction noise impacts of the proposed project would be **less than significant with mitigation incorporated**.

Topic b

Construction equipment associated with the proposed project would generate groundborne vibration. **Table 19** shows the vibration levels associated with the highest vibration generating construction equipment. Vibration levels are provided as PPV expressed in in/sec and root mean square (RMS) velocity expressed as VdB. Based on the information presented in Table 19, impact pile drivers produce maximum vibration at 0.644 in/sec at 25 feet. Pile driving, if found to be necessary, would be used only for construction activities associated with the proposed parking garage. For standard construction equipment anticipated to be used for the proposed project, maximum vibration levels generated would be 0.210 PPV at 25 feet from the use of a vibratory roller. This corresponds to an RMS velocity level of 94 VdB at 25 feet from the source activity.

TABLE 19
VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Approximate PPV (in/sec) at 25 feet	Approximate RMS (VdB) at 25 feet
Pile Driver (impact)	0.644	104
Vibratory Roller	0.210	94
Large Bulldozer, Caisson Drill	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: FTA 2018.

Structure Damage

Vibration from construction activities would have the potential to impact nearby structures and cause structural or cosmetic building damage. As discussed earlier, the City of South Lake Tahoe General Plan identifies a vibration threshold for structural damage at 0.02 in/sec when construction activities occur within 200 feet of structures. **Table 20** presents the distances within which each equipment type would generate vibration levels in excess of 0.02 in/sec.

TABLE 20
DISTANCES EXCEEDING 0.02 IN/SEC THRESHOLD

Equipment	Distance (feet)
Pile Driver (impact)	255
Vibratory Roller	120
Large Bulldozer	70
Loaded Trucks	65
Jackhammer	40
Small Bulldozer	10

Source: Table compiled by ESA in 2025.

If the distances separating construction equipment from nearby structures are less than the distances presented in Table 20, the City's building damage vibration threshold would be exceeded resulting in potential structural damage. There are no offsite structures within 255 feet of the proposed parking garage where pile driving is likely to occur or within 120 feet of project construction areas where non-pile driving equipment would be used. However, there are structures on Airport property that could be affected. The Airport Terminal building, which is eligible for listing on the California Register as a historic building, is located approximately 60 feet from the location of the proposed parking structure where pile driving activities could occur. At this distance, pile driving would result in a vibration level of 0.17 in/sec, which would exceed the City of South Lake Tahoe vibration impact threshold of 0.02 in/sec and result in a potentially significant impact.

Mitigation Measure NOI-2 is identified to reduce vibration impact from pile driving activities at the proposed parking structure to nearby structures, primarily the Airport Terminal. Therefore, the vibration impact from construction would be **less than significant with mitigation incorporated**.

Human Annoyance

Construction vibration could annoy people within a building primarily through sleep disturbance at night. Therefore, receptors for human annoyance include residences, hotels, motels, and other land uses where people sleep. The FTA vibration impact threshold for human annoyance at Category 2 land uses including residences and buildings where people sleep is 80 VdB for infrequent events such as construction activities. The RMS value of a vibratory roller at 25 feet would be 94 VdB. In order to be greater than 80 VdB, a vibratory roller needs to be within 80 feet of a receptor. There are no residences or other Category 2 land uses within 80 feet of the project construction areas. Besides, construction activities would be limited to daytime hours consistent with El Dorado County noise ordinance restrictions. Therefore, the human annoyance impact from construction vibration would be **less than significant**.

Topic c

Airport land use compatibility plans (ALUCPs) are adopted by airport land use commissions (ALUCs) and ensure compatibility of airport operations with land use planning in the surrounding communities affected by airport noise and safety concerns. The objectives of compatible land use planning are to encourage land uses that are generally considered to be incompatible with airports (such as residential, schools, and churches) to be located away from airports and to encourage land uses that are more compatible (such as industrial and commercial uses) to be located in the vicinity of airports. The City of South Lake Tahoe Planning Commission, acting in its capacity as the South Lake Tahoe ALUC, adopted an updated ALUCP on September 12, 2019, for the environs of South Lake Tahoe Airport, which identifies the Airport influence area with land uses exposed to aircraft noise above CNEL 65 dB and noise compatibility policies.[172]

Compatible land use planning is an important consideration during the master planning process that involves changes to aircraft operations thereby resulting in a change in the extent of surrounding land uses affected within the 65 CNEL contour. However, implementation of the proposed project would not result in any changes to aircraft operations, runway use, or the types or number of aircraft operating at the Airport. Therefore, there would be no change to the extent of incompatible land uses within the CNEL

[172] South Lake Tahoe ALUC 2019.

65 dB contour in the Airport vicinity covered under the airport land use plan with implementation of the proposed project, and implementation of the proposed project would not result in additional people residing or working in the airport land use plan area who would be exposed to excessive aircraft noise levels.

All proposed project components would be located on Airport property and would not introduce any new residents to the project area. In summary, implementation of the proposed project would not expose people residing or working in an airport land use plan area to excessive noise levels and this impact would be **less than significant**.

Mitigation Measures

NOI-1: Implement Construction Noise Mitigation Plan. Construction contractors shall be required to implement a Construction Noise Mitigation Plan to ensure that noise levels at sensitive receptors within the City of South Lake Tahoe will not experience noise levels more than 55 dBA L_{eq} during project construction to comply with the established City of South Lake Tahoe General Plan requirements. Noise reduction measures implemented may include but not be limited to the following measures.

- Ensure that all heavy construction equipment include manufacturer approved/supplied mufflers and other standard noise-reducing engine devices.
- Use "quiet" pile driving methods such as hydraulic pressing, vibratory hammers, or pre-augering to reduce noise.
- Use acoustic barriers and noise curtains around high noise generating stationary equipment.
- Minimize heavy equipment engine idling whenever possible.
- Stage all heavy construction as far away as possible from noise sensitive uses.
- Limit construction operations to between the hours of 7 a.m. and 7 p.m., Monday through Friday, between the hours of 8 a.m. and 5 p.m. on weekends, and on federally recognized holidays.
- Erect temporary noise barriers to block a line-of-sight between construction equipment and noise sensitive receivers when it is feasible and practical.

NOI-2: Construction Vibration Minimization Plan. Before the issuance of any demolition, grading, or building permit (whichever comes first) for work within 200 feet of an existing structure, the project sponsor shall submit a Construction Vibration Minimization Plan prepared by an acoustical and/or structural engineer or other appropriate qualified professional to the City for review and approval.

The Construction Vibration Minimization Plan shall establish pre-construction baseline conditions and threshold levels of vibration that could damage structures located within 200 feet of construction. The plan shall also include measures to limit vibration from construction equipment when operating within 200 feet of structures to achieve a performance standard of 0.02 in/sec as required by the City of South Lake Tahoe General Plan Policy HS-6.3. Measures may include but not be limited to:

- Prohibit impact, sonic, or vibratory pile driving methods where feasible. Drilled piles cause lower vibration levels where geological conditions permit their use.

- Limit other vibration-inducing equipment to the extent feasible.
- Submit a list of all heavy construction equipment to be used for this project known to produce high vibration levels (e.g., tracked vehicles, vibratory compaction, jackhammers, hoe rams) to the City. This list shall be used to identify equipment and activities that would potentially generate substantial vibration and to define the level of effort required for continuous vibration monitoring.
- Where vibration-inducing equipment is deemed necessary for construction work within 200 feet of a structure, include details outlining implementation of continued vibration monitoring.

All construction contracts and approved plans shall include notes with reviewer-identified limitations and diagrams to avoid impacts on historic resources.

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Population and Housing

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIV. POPULATION AND HOUSING — Would the project:				
a) Induce substantial unplanned 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)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

Impact Analysis

Topics a and b

The proposed project comprises a long-range plan for Airport development that includes both airside and landside improvements that would occur over approximately a 20-year period. The proposed project is intended to improve the safety of existing Airport operations, meet compliance with current FAA design standards, and accommodate existing and forecasted aviation demands. Implementation of the proposed project would not result in the construction of new residences; as such, it would not induce residential growth. While a limited number of new buildings and facilities would be constructed with implementation of the proposed project, the project is not anticipated to result in an increase in Airport employees. The proposed project would not result in the displacement of any housing or necessitate the construction of replacement housing. Therefore, impacts related to population and housing would be **less than significant**.

Mitigation Measures

None required.

Public Services

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XV. PUBLIC SERVICES —				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the 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 following public services:				
i) Fire protection?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Impact Analysis

Topic a.i

The proposed project comprises a long-range plan for Airport development that includes both airside and landside improvements that would occur over approximately a 20-year period. Airside improvements would take place within aircraft movement areas that include the runway and taxiway system and the FAA-defined protected areas that encompass them. Landside improvements would take place outside of the main aircraft movement area and include facilities that are used for aircraft storage, aircraft parking, terminal facilities, automobile parking, and airport access. The proposed project is intended to improve the safety of existing Airport operations, meet compliance with current FAA design standards, and accommodate existing and forecasted aviation demands. Implementation of the proposed project would not result in an increase in aircraft operations or an increase in the number of Airport employees.

The proposed project would not result in a substantial need for fire protection facilities or new or physically altered government facilities. The proposed project would not increase the level of aircraft operations or the number of employees; therefore, existing fire protection facilities and services would be minimally affected. For fire protection services, the Airport is served by South Lake Tahoe Fire Rescue. The nearest fire station is South Lake Tahoe Fire Rescue Station Three, which serves as the administration headquarters and is located at 2101 Lake Tahoe Boulevard in South Lake Tahoe, approximately 1.6 miles to the north of the Airport. The buildings envisioned in the proposed project would be required to meet the fire flow and fire safety requirements per the FAA and the City of South Lake Tahoe and would be designed to meet access requirements for fire and emergency vehicles and personnel. Therefore, this impact would be **less than significant**.

Topic a.ii

It is not anticipated that the proposed project would result in any additional security needs. For police services, the Airport is served by the South Lake Tahoe Police Department, and their headquarters is located at 1352 Johnson Boulevard in South Lake Tahoe, approximately 3.7 miles to the northeast of the

Airport. The proposed project would not result in the construction of residential units or result in an increase in Airport employees. Therefore, the proposed project would not induce a need to alter any existing police facility or a need to construct a new police facility. This impact would be **less than significant**.

Topic a.iii

The proposed project would not result in the construction of residential units nor generate any residential population and would therefore not induce a need to alter any school facilities or construct any school facilities. There would be **no impact**.

Topic a.iv

The proposed project would not result in the construction of residential units nor generate any residential population. The proposed project does not include any parks and would not generate the need for new or altered park or recreation facilities. There would be **no impact**.

Topic a.v

The proposed project would involve a series of improvements within the Airport largely focused on improving and replacing existing facilities. The proposed project would not result in the construction of residential units nor generate any residential population and would therefore not induce a need to alter any additional government facilities. There would be **no impact**.

Mitigation Measures

None required.

Recreation

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVI. 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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Impact Analysis

Topics a and b

The proposed project would involve a series of improvements within the Airport property largely focused on improving and replacing existing facilities. The proposed project would not result in the construction of residential units nor generate any residential population that would increase the use of existing neighborhood and regional parks or other recreational facilities. As discussed in the Project Description, the proposed project includes construction of segments of a future bicycle path that would occur within the Airport property boundary. The physical environmental effects of the construction of the bicycle path segments are addressed in the applicable topical sections of this initial study. Impacts related to recreation would be **less than significant**.

Mitigation Measures

None required.

Transportation

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVII. TRANSPORTATION — Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☒	☐

Regulatory Framework

Local

Tahoe Regional Planning Agency Regional Plan Transportation Element

The bi-state compact and TRPA Regional Plan calls for the development of an integrated transportation plan addressing all modes of travel to reduce dependency on the automobile, reduce air pollution that is caused by motor vehicles, and provide public transportation and public programs and projects related to transportation. The TRPA Regional Plan Transportation Element includes transportation goals, policies, and implementation measures that address multiple aspects of transportation planning and interact to create a successful multi-modal transportation system.

The TRPA is designated as the Tahoe Metropolitan Planning Organization (TMPO) for state and federal transportation planning. In addition to fulfilling the bi-state compact's directives, as the TMPO, TRPA is required to develop a long-range Regional Transportation Plan (RTP) consistent with federal transportation laws. The RTP must also meet statutory requirements in California through the adoption of a Sustainable Communities Strategy (SCS). The SCS lays out a plan for reducing passenger vehicle related greenhouse gas (GHG) emissions in California. The goals and policies of the RTP are identical to those in the Regional Plan Transportation Element. In addition to goals and policies, the RTP also includes a detailed transportation improvement strategy, predicated on received or forecasted funding.

Impact Analysis

Topic a

The proposed project comprises a long-range plan for Airport development that includes both airside and landside improvements that would occur over approximately a 20-year period. Airside improvements would take place within aircraft movement areas that include the runway and taxiway system and the FAA-defined protected areas that encompass them. Landside improvements would take place outside of the main aircraft movement area and include facilities that are used for aircraft storage, aircraft parking, terminal facilities, automobile parking, and airport access. The proposed project is intended to improve the safety of existing Airport operations, meet compliance with current FAA design standards, and accommodate existing and forecasted aviation demands. Implementation of the proposed project would not result in an increase in aircraft operations or an increase in the number of Airport employees. The

proposed project would not conflict with the goals, policies, and implementation measures of the TRPA Regional Plan Transportation Element or the RTP. This impact would be **less than significant**.

Topic b

CEQA Guidelines Section 15064.3, Determining the Significance of Transportation Impacts, describes specific considerations for evaluating a project's transportation impacts and states that, generally, vehicle miles traveled (VMT), which refers to the amount and distance of automobile travel attributable to a project, is the most appropriate measure of transportation impacts. Section 15064.3, subdivision (b) states that transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. As discussed above, implementation of the proposed project would not result in an increase in aircraft operations or an increase in the number of Airport employees. Consequently, the proposed project would not result in an increase in VMT. The proposed project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b). This impact would be **less than significant**.

Topic c

The proposed project would only result in operational changes and would not alter any existing facilities or infrastructure in a manner that would increase hazards. There would be **no impact** related to this significance criterion.

Topic d

The proposed project would not alter existing roadways or require roadway lane closures. Implementation of the proposed project would not create obstacles within the Airport property that would hinder response to emergencies within the Airport. This impact would be **less than significant**.

Mitigation Measures

None required.

References

Tahoe Regional Planning Agency (TRPA). 1987. *Threshold Standards and Regional Plan*. Adopted by the TRPA Governing Board June 25, 1987. Updated December 12, 2012. Amended May 22, 2024.

Tribal Cultural Resources

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XVIII. TRIBAL CULTURAL RESOURCES —				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, 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:				
i) 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	☐	☒	☐	☐
ii) 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.	☐	☒	☐	☐

Regulatory Framework

California Register of Historical Resources

Created in 1992 and implemented in 1998, the California Register is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change." A resource, either an individual property or a contributor to a historic district, may be listed in the California Register if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on National Register criteria, and retains sufficient integrity to reflect its historical significance:

- It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- It is associated with the lives of persons important in our past.
- It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
- It has yielded, or may be likely to yield, information important in history or prehistory.

Typically, an archaeological site in California is recommended eligible for listing in the California Register based on its potential to yield information important in prehistory or history (Criterion 4). Important information includes chronological markers such as projectile point styles or obsidian artifacts that can be subjected to dating methods or undisturbed deposits that retain their stratigraphic integrity. However, archaeological sites may also be recommended eligible under California Register Criteria 1, 2, and/or 3.

As with traditional cultural properties in the National Register, identification of tribal cultural resources for the California Register emphasizes a place or a feature's value and significance to living communities. Assembly Bill (AB) 52, summarized below, further clarified this designation process.

Public Resources Code

AB 52, enacted in September 2014, amended CEQA to explicitly recognize that California Native American tribes have expertise with regard to their tribal history and practices. AB 52 has been codified as Public Resources Code sections 21080.3.1, 21074 and 21084.2, and established a new category of cultural resources known as tribal cultural resources in order for state and local agencies to consider tribal cultural values when determining impacts on cultural resources. Public Resources Code section 21074(a) defines a *tribal cultural resource* as any of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
  - Included or determined to be eligible for inclusion in the California Register; or
  - Included in a *local register of historical resources*, as defined in Public Resources Code section 5020.1(k).[173]
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code section 5024.1(c).[174] In applying these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.
- A cultural landscape that meets the criteria of CEQA section 21074(a)[175] also is a tribal cultural resource if the landscape is geographically defined in terms of the size and scope.
- An historical resource as described in CEQA section 21084.1,[176] a unique archaeological resource as defined in CEQA section 21083.2,[177] or a non-unique archaeological resource as defined in CEQA section 21083.2[178] may also be a tribal cultural resource if it meets the criteria of CEQA section 21074(a).

[173] Public Resources Code section 5020.1(k) defines "local register of historical resources" as "a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution."

[174] The criteria set forth in Public Resources Code section 5024.1(c) include whether a resource: "(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage. (2) Is associated with the lives of persons important in our past. (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values. (4) Has yielded, or may be likely to yield, information important in prehistory or history."

[175] A cultural landscape meets the criteria of Public Resources Code section 21074(a) if it either is "included or determined to be eligible for inclusion in the California Register of Historical Resources" or is "included in a local register of historical resources" pursuant to section 5020.1(k).

[176] Public Resources Code section 21084.1 defines an *historical resource* as "a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources."

[177] Public Resources Code section 21083.2(g) defines *unique archaeological resource* as "an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type; (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person."

[178] Public Resources Code section 21083.2(h) defines *nonunique archaeological resource* as "an archaeological artifact, object, or site which does not meet the criteria in subdivision (g)."

AB 52 requires lead agencies to analyze project impacts on "tribal cultural resources" separately from archaeological resources,[179] in recognition that archaeological resources have cultural values beyond their ability to yield data important to prehistory or history. AB 52 also defines *tribal cultural resources* in Public Resources Code section 21074 (see above), and requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes.[180]

Native American Heritage Commission

The NAHC identifies and manages a catalog of places of special religious or social significance to Native Americans. This database, known as the Sacred Lands File, is a compilation of information on known graves and cemeteries of Native Americans on private lands and other places of cultural or religious significance to the Native American community. The NAHC also performs other duties regarding the preservation and accessibility of sacred sites and burials and the disposition of Native American human remains and burial items.

Public Resources Code sections 5097.9 through 5097.991 describe the duties and role of the NAHC and requires the cooperation of State and local agencies in carrying out their duties with respect to Native American resources.

Health and Safety Code, Sections 7052 and 7050.5

Section 7052 of the Health and Safety Code states that the disturbance of Native American cemeteries is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the NAHC.

Other Relevant State Regulations

Sections of the Public Records Act (Government Code sections 6254(r), 6254.10), as well as Health and Safety Code section 7050.5, Penal Code section 622.5, and Public Resources Code section 622.5 provide guidance for protection of archaeological resources and human remains. These codes provide protection from unauthorized excavation, looting, or vandalism; guidance following discovery of human remains; penalty for injuring or destroying objects of historic or archaeological interest; and penalty for unauthorized disturbance or removal of archaeological or historical features.

Impact Analysis

Topic a.i, ii

ESA contacted the California State NAHC on December 17, 2024, to request a search of the NAHC's Sacred Lands File and a list of Native American representatives who may have knowledge of tribal cultural resources in the project site, or interest in the project. The NAHC replied to ESA by email on December 26, 2025, with the statement that the result of any Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was positive. The NAHC response included a list of eight Native American representatives from five tribes who may have knowledge of tribal cultural resources in the project site, or be interested in the project.

[179] PRC Sections 21074 and 21083.09.
[180] PRC Sections 21080.3.1, 21080.3.2, and 21082.3.

As per Public Resources Code sections 21080.3.1, the City has received requests from the Colfax-Todds Valley Consolidated Tribe, Susanville Rancheria, and Washoe Tribe of Nevada and California to be consulted with on the City's projects. The City sent letters via certified mail to representatives of these three tribes on January 25, 2025 inviting them to consult with the City regarding the Master Plan.

As of the publication of this document, the City has not received a response to the request for consultation.

See the *Cultural Resources* section above for a summary of ESA's NCIC records search, background research, pedestrian survey, and archaeological sensitivity analysis.

Based on the results of the NAHC SLF search, tribal outreach, CHRIS records search, and pedestrian survey of the project area, no known tribal cultural resources listed or determined eligible for listing in the California Register, or included in a local register of historical resources as defined in PRC Section 5020.1(k), pursuant to PRC Section 21074(a)(1), would be affected by the proposed project.

However, if any previously unrecorded archaeological resource were identified during ground-disturbing construction activities and were found to qualify as a tribal cultural resource pursuant to PRC Section 21074(a)(1) (determined to be eligible for listing in the California Register or in a local register of historical resources), any impacts of the proposed project on the resource could be potentially significant. Any such potentially significant impacts would be reduced to a less-than-significant level by implementing **Mitigation Measure CUL-1**, **Mitigation Measure CUL-2**, and **Mitigation Measure CUL-3**. Thus, any potential impacts to tribal cultural resources associated with the proposed project would be **less than significant with mitigation incorporated**.

Mitigation Measures

See *Cultural Resources* section for mitigation measures.

References

North Central Information Center. Records Search File No. ELD-24-122. On file, ESA, December 18, ESA.

Utilities and Service Systems

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XIX. UTILITIES AND SERVICE SYSTEMS — Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐
c) 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?	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Impact Analysis

Topics a through c

The proposed project comprises a long-range plan for Airport development that includes both airside and landside improvements that would occur over approximately a 20-year period. While the proposed project would include development of new facilities, implementation of the proposed project would not result in an increase in aircraft operations or an increase in the number of Airport employees. The proposed improvements are intended to improve existing Airport operations and would neither individually nor collectively result in increases in wastewater generation or water demand that would require or result in the construction of new water or wastewater treatment facilities, expansion of existing facilities, or exceed wastewater treatment requirements. This impact would be **less than significant**.

Topics d and e

Implementation of the proposed project would not result in an increase in aircraft operations or an increase in the number of Airport employees. Construction of individual project elements over a 20-year period would generate construction waste, but the volume of waste produced would not be anticipated to exceed the capacity of landfills that serve Airport. All solid waste generated by the proposed project would be required to meet federal, state, and local regulations regarding solid waste. This impact would be **less than significant**.

Mitigation Measures

None required.

Wildfire

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. WILDFIRE — If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Regulatory Framework

Federal

National Fire Protection Association

The National Fire Protection Association (NFPA) is a non-profit organization with a mission to eliminate death, economic loss, and property damage from fire, electrical and associated hazards. The NFPA design, building and installation criteria includes 300 codes and standards which aim to minimize the risk of fire incidents.

NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, establishes a recommended response time for dispatched incidents. The NFPA recommends that fire departments respond to emergency calls within six minutes of receiving the call, 90 percent of the time.

State

California Health and Safety Code

Section 13000 of the California Health and Safety Code outlines state fire regulations such as building standards, fire notification systems, fire protection devices (extinguishers and smoke alarms), high-rise building standards, and childcare facilities standards. The State Fire Marshall is responsible for enforcing the regulations and standards outlined in Section 13000 of the California Health and Safety Code.

Emergency Response

Pursuant to the Emergency Services Act, California has developed an Emergency Plan to coordinate emergency services provided by federal, state, and local governmental agencies and private persons. Response to hazardous materials incidents is one part of this plan. The plan is administered by the State Office of Emergency Services, which coordinates the responses of other agencies, including the USEPA,

the CHP, CDFW, the RWQCB (in this case, the Lahontan RWQCB), the local air districts (in this case, EDCAQMD) and local agencies. The State Emergency Plan defines the "policies, concepts, and general protocols" for the proper implementation of the California Standardized Emergency Management System (SEMS). The SEMS is an emergency management protocol that agencies within the State of California must follow during multi-agency response efforts whenever state agencies are involved.

California Public Resources Code

California Public Resources Code Sections 4201 through 4204 require (CAL FIRE to prepare fire hazard severity zone (FHSZ) maps for all lands within State Responsibility Areas (SRAs)[181] and to make recommendations for such zones in Local Responsibility Areas (LRAs).[182] Each zone is to embrace relatively homogeneous lands and is to be based on fuel loading, slope, fire weather, and other relevant factors present, including areas where winds have been identified as a major cause of wildfire spread.

California Building Code

In January of 2008, California officially switched from the Uniform Building Code to the International Building Code (IBC). The IBC specifies construction standards to be used in urban interface and wildland areas where there is an elevated threat of fire.

Local

Lake Tahoe Basin Community Wildfire Protection Plan

The Lake Tahoe Basin Community Wildfire Protection Plan (CWPP) was completed in February 2025.[183] The updated plan addresses the region's evolving wildfire risks, focusing on fuels reduction, preparedness, structural ignitability, and wildfire response. The CWPP is a community-driven plan that prioritizes wildfire risk reduction, using local input and data to guide fuel reduction, improve preparedness, and address structural ignitability. The CWPP is not an evacuation plan. The CWPP identifies areas needing fuel reduction treatments, supports funding requirements for project implementation, and offers educational opportunities to help the public understand wildfire prevention. It also outlines actions homeowners and communities can take to reduce wildfire risk.

Lake Tahoe Regional Evacuation Plan

The Lake Tahoe Regional Evacuation Plan describes the strategies for managing evacuations that exceed the day-to-day capabilities of the various public safety agencies in the Lake Tahoe Basin. The Sheriff's Office or law enforcement agency with jurisdiction is charged with the responsibility of evacuation in response to a major event threatening the life safety of residents and visitors. With a special emphasis placed on the wildland fire threat, the strategies outlined in the Regional Evacuation Plan are designed using an all-hazards approach to preparing for and managing evacuations. The Regional Evacuation Plan is designed to be applied in any event regardless of the threat or hazard that precipitates the need to evacuate an area. The Regional Evacuation Plan was developed by the cooperative efforts of the Lake Tahoe Fire Chiefs and Lake Tahoe Law Enforcement agencies and is intended to provide the public with

[181] State Responsibility Areas are designated geographic areas in California where the State of California, specifically CAL FIRE, is financially responsible for preventing and suppressing wildfires.

[182] In Local Responsibility Areas, fire protection is primarily the responsibility of local government agencies, such as city or county fire departments. CAL FIRE does not directly provide fire protection services in LRAs, though they may offer support or guidance.

[183] Tahoe Resource Conservation District, 2025, *Lake Tahoe Basin Community Wildfire Protection Plan*.

critical information related to evacuations and is considered a living document that will be updated from time to time.[184]

Impact Analysis

Topic a

The Airport is located in an area designated by CAL FIRE as a Very High Fire Hazard Severity Zone (FHSZ) under local responsibility (South Lake Tahoe Fire Rescue) as recommended by the State Fire Marshal on February 10, 2025.[185]

The proposed project comprises a long-range plan for Airport development that includes both airside and landside improvements that would occur over approximately a 20-year period. Airside improvements would take place within aircraft movement areas that include the runway and taxiway system and the FAA-defined protected areas that encompass them. Landside improvements would take place outside of the main aircraft movement area and include facilities that are used for aircraft storage, aircraft parking, terminal facilities, automobile parking, and airport access. The proposed project is intended to improve the safety of existing Airport operations, meet compliance with current FAA design standards, and accommodate existing and forecasted aviation demands. Implementation of the proposed project would not result in an increase in aircraft operations or an increase in the number of Airport employees.

All project construction activities would occur on the Airport property and not on public roads. Construction activities would not require a large number of vehicles and no roads would be closed or restricted. The Airport is required to comply with numerous state and local regulations as described in the Regulatory Framework above that are designed to reduce fire danger and ensure adequate emergency accesses and response. Neither construction nor operation of the proposed project would impair an adopted emergency response plan or emergency evacuation plan. The impact would be **less than significant**.

Topic b

The proposed project comprises a long-range plan for Airport development that includes both airside and landside improvements within the existing developed Airport property. The Airport is required to comply with numerous state and local regulations as described in the Regulatory Framework above that are designed to reduce fire danger. Neither construction nor operation of the proposed project would exacerbate wildfire risks. The impact would be **less than significant**.

Topic c

The proposed project would not require the installation or maintenance of associated infrastructure that would exacerbate fire risk or result in temporary or ongoing impacts to the environment. The impact would be **less than significant**.

Topic d

The proposed project comprises a long-range plan for Airport development that includes both airside and landside improvements within the existing developed Airport property. The Airport is required to comply

[184] Lake Tahoe Fire Chiefs Association, 2024, *Lake Tahoe Regional Evacuation Plan*, September 10, 2024.
[185] California Department of Forestry and Fire Protection (CAL FIRE), 2025, Fire Hazard Severity Zones.

with numerous state and local regulations as described in the Regulatory Framework above that are designed to reduce fire danger. Neither construction nor operation of the proposed project would expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The impact would be **less than significant**.

Mitigation Measures

None required.

References

California Department of Forestry and Fire Protection (CAL FIRE). 2025. *Fire Hazard Severity Zones*.

Lake Tahoe Fire Chiefs Association. 2024. *Lake Tahoe Regional Evacuation Plan*. September 10, 2024.

Tahoe Resource Conservation District. 2025. *Lake Tahoe Basin Community Wildfire Protection Plan*.

Mandatory Findings of Significance

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
XXI. MANDATORY FINDINGS OF SIGNIFICANCE —				
a) Does the project have the potential to substantially 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, substantially 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?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable 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?	☐	☒	☐	☐

Impact Analysis

Topics a and c

With the incorporation of mitigation measures, the proposed project would not 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, or threaten to eliminate a plant or animal community. The proposed project would not impact rare or endangered wildlife species, or eliminate important examples of the major periods of California history or prehistory. With implementation of the mitigation measures described in this document, the project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly, and the impact would be **less than significant with mitigation incorporated**.

Topic b

The impacts of the proposed project are mitigated to a less-than-significant level, limited to the construction phase of the proposed project, and generally site specific. No other projects are proposed that would overlap or interact with the proposed project. The cumulative impact of the proposed project is **less than significant with mitigation incorporated**.

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Appendix A
Air Quality Technical Work

Appendix A
Air Quality Technical Work

A-1 CalEEMod Output

TVL TRPA CEQA Documentation Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	TVL TRPA CEQA Documentation
Construction Start Date	1/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	44.8
Location	38.89416147771169, -119.9963541030523
County	El Dorado-Lake Tahoe
City	South Lake Tahoe
Air District	El Dorado County AQMD
Air Basin	Lake Tahoe
TAZ	417
EDFZ	0-A
Electric Utility	Liberty Utilities
Gas Utility	Southwest Gas Corp.
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Light Industry	4.50	1000sqft	0.10	4,500	0.00	—	—	Ground Service Equipment (GSE) Facility

Parking Lot	38.0	1000sqft	0.87	0.00	0.00	—	—	Bike Path
General Light Industry	18.2	1000sqft	0.42	18,200	0.00	—	—	Box Hanger
General Light Industry	0.63	1000sqft	0.01	625	0.00	—	—	Elecetrical Vault
Enclosed Parking with Elevator	61.7	1000sqft	1.42	61,685	0.00	—	—	Airport Parking Garage
Parking Lot	1.93	1000sqft	0.04	0.00	0.00	—	—	Surface Pad for EV Charger
General Light Industry	1.60	1000sqft	0.04	1,600	0.00	—	—	Aircraft Wash Rack
Parking Lot	106	1000sqft	2.42	0.00	0.00	—	—	Taxiway and Pavement Removal and Reconstruction
General Light Industry	0.50	1000sqft	0.01	500	0.00	—	—	ASOS

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-B	Water Active Demolition Sites

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.49	1.26	10.6	14.6	0.03	0.38	17.5	17.9	0.35	1.78	2.14	—	2,891	2,891	0.11	0.07	1.63	2,916
Mit.	1.49	1.26	10.6	14.6	0.03	0.38	17.5	17.9	0.35	1.78	2.14	—	2,891	2,891	0.11	0.07	1.63	2,916

% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	34.3	34.3	47.5	29.6	0.13	1.24	213	214	1.14	22.9	24.0	—	18,590	18,590	0.22	2.39	0.57	19,306
Mit.	34.3	34.3	47.5	29.6	0.13	1.24	206	207	1.14	21.9	23.0	—	18,590	18,590	0.22	2.39	0.57	19,306
% Reduced	—	—	—	—	—	—	3%	3%	—	4%	4%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.05	2.03	10.9	11.6	0.03	0.36	24.3	24.7	0.33	2.93	3.26	—	3,330	3,330	0.09	0.23	1.15	3,401
Mit.	2.05	2.03	10.9	11.6	0.03	0.36	23.9	24.3	0.33	2.87	3.20	—	3,330	3,330	0.09	0.23	1.15	3,401
% Reduced	—	—	—	—	—	—	2%	2%	—	2%	2%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.37	0.37	1.98	2.12	< 0.005	0.07	4.44	4.50	0.06	0.53	0.59	—	551	551	0.01	0.04	0.19	563
Mit.	0.37	0.37	1.98	2.12	< 0.005	0.07	4.37	4.43	0.06	0.52	0.58	—	551	551	0.01	0.04	0.19	563
% Reduced	—	—	—	—	—	—	2%	2%	—	2%	2%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.49	1.26	10.6	14.6	0.03	0.38	17.5	17.9	0.35	1.78	2.14	—	2,891	2,891	0.11	0.07	1.63	2,916
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	3.84	3.23	47.5	29.6	0.13	1.24	213	214	1.14	22.9	24.0	—	18,590	18,590	0.22	2.39	0.57	19,306
2027	34.3	34.3	10.1	14.7	0.03	0.34	17.5	17.8	0.31	1.78	2.10	—	2,882	2,882	0.11	0.07	0.04	2,905
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.26	1.06	10.9	11.6	0.03	0.36	24.3	24.7	0.33	2.93	3.26	—	3,330	3,330	0.09	0.23	1.15	3,401
2027	2.05	2.03	1.04	1.55	< 0.005	0.04	1.34	1.37	0.04	0.14	0.17	—	272	272	0.01	0.01	0.05	274
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.23	0.19	1.98	2.12	< 0.005	0.07	4.44	4.50	0.06	0.53	0.59	—	551	551	0.01	0.04	0.19	563
2027	0.37	0.37	0.19	0.28	< 0.005	0.01	0.24	0.25	0.01	0.02	0.03	—	45.0	45.0	< 0.005	< 0.005	0.01	45.3

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.49	1.26	10.6	14.6	0.03	0.38	17.5	17.9	0.35	1.78	2.14	—	2,891	2,891	0.11	0.07	1.63	2,916
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.84	3.23	47.5	29.6	0.13	1.24	206	207	1.14	21.9	23.0	—	18,590	18,590	0.22	2.39	0.57	19,306
2027	34.3	34.3	10.1	14.7	0.03	0.34	17.5	17.8	0.31	1.78	2.10	—	2,882	2,882	0.11	0.07	0.04	2,905
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.26	1.06	10.9	11.6	0.03	0.36	23.9	24.3	0.33	2.87	3.20	—	3,330	3,330	0.09	0.23	1.15	3,401
2027	2.05	2.03	1.04	1.55	< 0.005	0.04	1.34	1.37	0.04	0.14	0.17	—	272	272	0.01	0.01	0.05	274
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.23	0.19	1.98	2.12	< 0.005	0.07	4.37	4.43	0.06	0.52	0.58	—	551	551	0.01	0.04	0.19	563
2027	0.37	0.37	0.19	0.28	< 0.005	0.01	0.24	0.25	0.01	0.02	0.03	—	45.0	45.0	< 0.005	< 0.005	0.01	45.3

3. Construction Emissions Details

3.1. Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	18.8	18.8	—	2.85	2.85	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.13	1.04	< 0.005	0.05	—	0.05	0.04	—	0.04	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	1.03	1.03	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.02	0.21	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.19	0.19	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.71	0.00	0.00	5.66	5.66	0.00	0.58	0.58	—	88.4	88.4	0.01	< 0.005	0.01	90.0
Vendor	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	0.00
Hauling	0.48	0.36	26.8	3.40	0.10	0.29	189	189	0.29	19.5	19.8	—	15,075	15,075	0.01	2.36	0.56	15,778
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.27	0.27	0.00	0.03	0.03	—	4.85	4.85	< 0.005	< 0.005	0.01	4.94
Vendor	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	0.00
Hauling	0.03	0.02	1.45	0.18	0.01	0.02	9.09	9.10	0.02	0.94	0.96	—	826	826	< 0.005	0.13	0.51	865
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	0.80	0.80	< 0.005	< 0.005	< 0.005	0.82
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.27	0.03	< 0.005	< 0.005	1.66	1.66	< 0.005	0.17	0.18	—	137	137	< 0.005	0.02	0.08	143

3.2. Demolition (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.72	2.29	20.7	19.0	0.03	0.84	—	0.84	0.78	—	0.78	—	3,427	3,427	0.14	0.03	—	3,438
Demolition	—	—	—	—	—	—	12.0	12.0	—	1.82	1.82	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.13	1.04	< 0.005	0.05	—	0.05	0.04	—	0.04	—	188	188	0.01	< 0.005	—	188
Demolition	—	—	—	—	—	—	0.66	0.66	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.21	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.1	31.1	< 0.005	< 0.005	—	31.2
Demolition	—	—	—	—	—	—	0.12	0.12	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.71	0.00	0.00	5.66	5.66	0.00	0.58	0.58	—	88.4	88.4	0.01	< 0.005	0.01	90.0
Vendor	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	0.00
Hauling	0.48	0.36	26.8	3.40	0.10	0.29	189	189	0.29	19.5	19.8	—	15,075	15,075	0.01	2.36	0.56	15,778
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.27	0.27	0.00	0.03	0.03	—	4.85	4.85	< 0.005	< 0.005	0.01	4.94
Vendor	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	0.00
Hauling	0.03	0.02	1.45	0.18	0.01	0.02	9.09	9.10	0.02	0.94	0.96	—	826	826	< 0.005	0.13	0.51	865
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	0.80	0.80	< 0.005	< 0.005	< 0.005	0.82
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.27	0.03	< 0.005	< 0.005	1.66	1.66	< 0.005	0.17	0.18	—	137	137	< 0.005	0.02	0.08	143

3.3. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.74	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	—	5,316

Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.80	0.79	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.54	0.54	—	0.28	0.28	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.07	0.83	0.00	0.00	6.60	6.60	0.00	0.67	0.67	—	103	103	0.01	0.01	0.01	105

Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.16	0.16	0.00	0.02	0.02	—	2.83	2.83	< 0.005	< 0.005	0.01	2.88
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.03	0.03	0.00	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.48
Vendor	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	0.00
Hauling	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	0.00

3.4. Site Preparation (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.74	3.14	29.2	28.8	0.05	1.24	—	1.24	1.14	—	1.14	—	5,298	5,298	0.21	0.04	—	5,316
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	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	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.80	0.79	< 0.005	0.03	—	0.03	0.03	—	0.03	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.54	0.54	—	0.28	0.28	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.14	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	0.07	0.83	0.00	0.00	6.60	6.60	0.00	0.67	0.67	—	103	103	0.01	0.01	0.01	105
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.16	0.16	0.00	0.02	0.02	—	2.83	2.83	< 0.005	< 0.005	0.01	2.88

Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.03	0.03	0.00	< 0.005	< 0.005	—	0.47	0.47	< 0.005	< 0.005	< 0.005	0.48
Vendor	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	0.00
Hauling	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	0.00

3.5. Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.96	1.65	15.0	17.4	0.03	0.65	—	0.65	0.59	—	0.59	—	2,960	2,960	0.12	0.02	—	2,970
Dust From Material Movement	—	—	—	—	—	—	7.12	7.12	—	3.43	3.43	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.82	0.96	< 0.005	0.04	—	0.04	0.03	—	0.03	—	162	162	0.01	< 0.005	—	163

Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.71	0.00	0.00	5.66	5.66	0.00	0.58	0.58	—	88.4	88.4	0.01	< 0.005	0.01	90.0
Vendor	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	0.00
Hauling	0.20	0.15	11.2	1.41	0.04	0.12	78.5	78.7	0.12	8.12	8.24	—	6,280	6,280	< 0.005	0.98	0.23	6,572
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.27	0.27	0.00	0.03	0.03	—	4.85	4.85	< 0.005	< 0.005	0.01	4.94
Vendor	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	0.00
Hauling	0.01	0.01	0.61	0.08	< 0.005	0.01	3.78	3.79	0.01	0.39	0.40	—	344	344	< 0.005	0.05	0.21	360
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	0.80	0.80	< 0.005	< 0.005	< 0.005	0.82

Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.11	0.01	< 0.005	< 0.005	0.69	0.69	< 0.005	0.07	0.07	—	57.0	57.0	< 0.005	0.01	0.04	59.7

3.6. Grading (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.96	1.65	15.0	17.4	0.03	0.65	—	0.65	0.59	—	0.59	—	2,960	2,960	0.12	0.02	—	2,970
Dust From Material Movement	—	—	—	—	—	—	7.12	7.12	—	3.43	3.43	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.82	0.96	< 0.005	0.04	—	0.04	0.03	—	0.03	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement	—	—	—	—	—	—	0.39	0.39	—	0.19	0.19	—	—	—	—	—	—	—
Onsite truck	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.71	0.00	0.00	5.66	5.66	0.00	0.58	0.58	—	88.4	88.4	0.01	< 0.005	0.01	90.0
Vendor	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	0.00
Hauling	0.20	0.15	11.2	1.41	0.04	0.12	78.5	78.7	0.12	8.12	8.24	—	6,280	6,280	< 0.005	0.98	0.23	6,572
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.27	0.27	0.00	0.03	0.03	—	4.85	4.85	< 0.005	< 0.005	0.01	4.94
Vendor	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	0.00
Hauling	0.01	0.01	0.61	0.08	< 0.005	0.01	3.78	3.79	0.01	0.39	0.40	—	344	344	< 0.005	0.05	0.21	360
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	0.80	0.80	< 0.005	< 0.005	< 0.005	0.82
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.11	0.01	< 0.005	< 0.005	0.69	0.69	< 0.005	0.07	0.07	—	57.0	57.0	< 0.005	0.01	0.04	59.7

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.73	0.61	5.63	7.41	0.01	0.22	—	0.22	0.20	—	0.20	—	1,370	1,370	0.06	0.01	—	1,375
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.03	1.35	< 0.005	0.04	—	0.04	0.04	—	0.04	—	227	227	0.01	< 0.005	—	228
Onsite truck	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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.12	1.46	0.00	0.00	13.8	13.8	0.00	1.41	1.41	—	215	215	0.02	0.01	1.00	220
Vendor	0.02	0.02	0.59	0.19	< 0.005	< 0.005	3.66	3.67	< 0.005	0.38	0.38	—	278	278	< 0.005	0.04	0.63	291
Hauling	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.15	1.73	0.00	0.00	13.8	13.8	0.00	1.41	1.41	—	216	216	0.02	0.01	0.03	219
Vendor	0.02	0.02	0.61	0.20	< 0.005	< 0.005	3.66	3.67	< 0.005	0.38	0.38	—	278	278	< 0.005	0.04	0.02	290
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	0.93	0.00	0.00	6.93	6.93	0.00	0.71	0.71	—	123	123	0.01	0.01	0.25	126
Vendor	0.01	0.01	0.34	0.11	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	—	159	159	< 0.005	0.02	0.15	166
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.17	0.00	0.00	1.27	1.27	0.00	0.13	0.13	—	20.4	20.4	< 0.005	< 0.005	0.04	20.8
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.34	0.34	< 0.005	0.03	0.04	—	26.3	26.3	< 0.005	< 0.005	0.03	27.5
Hauling	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	0.00

3.8. Building Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.73	0.61	5.63	7.41	0.01	0.22	—	0.22	0.20	—	0.20	—	1,370	1,370	0.06	0.01	—	1,375
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.03	1.35	< 0.005	0.04	—	0.04	0.04	—	0.04	—	227	227	0.01	< 0.005	—	228
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.12	1.46	0.00	0.00	13.8	13.8	0.00	1.41	1.41	—	215	215	0.02	0.01	1.00	220
Vendor	0.02	0.02	0.59	0.19	< 0.005	< 0.005	3.66	3.67	< 0.005	0.38	0.38	—	278	278	< 0.005	0.04	0.63	291
Hauling	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	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.15	1.73	0.00	0.00	13.8	13.8	0.00	1.41	1.41	—	216	216	0.02	0.01	0.03	219
Vendor	0.02	0.02	0.61	0.20	< 0.005	< 0.005	3.66	3.67	< 0.005	0.38	0.38	—	278	278	< 0.005	0.04	0.02	290
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.08	0.93	0.00	0.00	6.93	6.93	0.00	0.71	0.71	—	123	123	0.01	0.01	0.25	126
Vendor	0.01	0.01	0.34	0.11	< 0.005	< 0.005	1.84	1.84	< 0.005	0.19	0.19	—	159	159	< 0.005	0.02	0.15	166
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.17	0.00	0.00	1.27	1.27	0.00	0.13	0.13	—	20.4	20.4	< 0.005	< 0.005	0.04	20.8
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.34	0.34	< 0.005	0.03	0.04	—	26.3	26.3	< 0.005	< 0.005	0.03	27.5
Hauling	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	0.00

3.9. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.57	0.78	< 0.005	0.02	—	0.02	0.02	—	0.02	—	145	145	0.01	< 0.005	—	146
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.1	24.1	< 0.005	< 0.005	—	24.2
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.14	1.61	0.00	0.00	13.8	13.8	0.00	1.41	1.41	—	212	212	0.01	0.01	0.02	216
Vendor	0.02	0.02	0.57	0.19	< 0.005	< 0.005	3.66	3.67	< 0.005	0.38	0.38	—	272	272	< 0.005	0.04	0.01	284
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.74	0.74	0.00	0.08	0.08	—	12.9	12.9	< 0.005	< 0.005	0.02	13.1
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	—	16.5	16.5	< 0.005	< 0.005	0.01	17.2
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.13	0.13	0.00	0.01	0.01	—	2.13	2.13	< 0.005	< 0.005	< 0.005	2.17
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	2.74	2.74	< 0.005	< 0.005	< 0.005	2.85
Hauling	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	0.0

3.10. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.23	1.03	9.39	12.9	0.02	0.34	—	0.34	0.31	—	0.31	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.57	0.78	< 0.005	0.02	—	0.02	0.02	—	0.02	—	145	145	0.01	< 0.005	—	146
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	24.1	24.1	< 0.005	< 0.005	—	24.2
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.14	1.61	0.00	0.00	13.8	13.8	0.00	1.41	1.41	—	212	212	0.01	0.01	0.02	216
Vendor	0.02	0.02	0.57	0.19	< 0.005	< 0.005	3.66	3.67	< 0.005	0.38	0.38	—	272	272	< 0.005	0.04	0.01	284
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.74	0.74	0.00	0.08	0.08	—	12.9	12.9	< 0.005	< 0.005	0.02	13.1
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.20	0.20	< 0.005	0.02	0.02	—	16.5	16.5	< 0.005	< 0.005	0.01	17.2
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.13	0.13	0.00	0.01	0.01	—	2.13	2.13	< 0.005	< 0.005	< 0.005	2.17
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	2.74	2.74	< 0.005	< 0.005	< 0.005	2.85
Hauling	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	0.00

3.11. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.62	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.66	0.00	0.00	5.66	5.66	0.00	0.58	0.58	—	87.0	87.0	0.01	< 0.005	0.01	88.5
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.27	0.27	0.00	0.03	0.03	—	4.77	4.77	< 0.005	< 0.005	0.01	4.85
Vendor	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	0.00
Hauling	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	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.80
Vendor	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	0.00
Hauling	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	0.00

3.12. Paving (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.88	0.74	6.94	9.95	0.01	0.30	—	0.30	0.27	—	0.27	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.62	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.66	0.00	0.00	5.66	5.66	0.00	0.58	0.58	—	87.0	87.0	0.01	< 0.005	0.01	88.5
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.27	0.27	0.00	0.03	0.03	—	4.77	4.77	< 0.005	< 0.005	0.01	4.85
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.80
Vendor	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	0.00
Hauling	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	0.00

3.13. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	34.1	34.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	1.87	1.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	0.34	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.32	0.00	0.00	2.76	2.76	0.00	0.28	0.28	—	42.4	42.4	< 0.005	< 0.005	< 0.005	43.2
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.13	0.13	0.00	0.01	0.01	—	2.33	2.33	< 0.005	< 0.005	< 0.005	2.37
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	0.39	0.39	< 0.005	< 0.005	< 0.005	0.39
Vendor	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	0.00
Hauling	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	0.00

3.14. Architectural Coating (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	34.1	34.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.32	7.32	< 0.005	< 0.005	—	7.34
Architectural Coatings	1.87	1.87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.22
Architectural Coatings	0.34	0.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.32	0.00	0.00	2.76	2.76	0.00	0.28	0.28	—	42.4	42.4	< 0.005	< 0.005	< 0.005	43.2
Vendor	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	0.00
Hauling	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.13	0.13	0.00	0.01	0.01	—	2.33	2.33	< 0.005	< 0.005	< 0.005	2.37
Vendor	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	0.00
Hauling	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	0.39	0.39	< 0.005	< 0.005	< 0.005	0.39
Vendor	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	0.00
Hauling	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	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2026	1/29/2026	5.00	20.0	—
Site Preparation	Site Preparation	1/30/2026	2/13/2026	5.00	10.0	—
Grading	Grading	2/14/2026	3/14/2026	5.00	20.0	—
Building Construction	Building Construction	3/15/2026	1/31/2027	5.00	230	—
Paving	Paving	2/1/2027	3/1/2027	5.00	20.0	—
Architectural Coating	Architectural Coating	3/2/2027	3/30/2027	5.00	20.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20

Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42

Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	8.70	LDA,LDT1,LDT2
Demolition	Vendor	—	5.90	HHDT,MHDT
Demolition	Hauling	216	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	8.70	LDA,LDT1,LDT2
Site Preparation	Vendor	—	5.90	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	8.70	LDA,LDT1,LDT2
Grading	Vendor	—	5.90	HHDT,MHDT
Grading	Hauling	90.1	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	36.6	8.70	LDA,LDT1,LDT2
Building Construction	Vendor	14.3	5.90	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT

Paving	—	—	—	—
Paving	Worker	15.0	8.70	LDA,LDT1,LDT2
Paving	Vendor	—	5.90	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	7.32	8.70	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	5.90	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	8.70	LDA,LDT1,LDT2
Demolition	Vendor	—	5.90	HHDT,MHDT
Demolition	Hauling	216	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	8.70	LDA,LDT1,LDT2
Site Preparation	Vendor	—	5.90	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	8.70	LDA,LDT1,LDT2
Grading	Vendor	—	5.90	HHDT,MHDT
Grading	Hauling	90.1	20.0	HHDT
Grading	Onsite truck	—	—	HHDT

Building Construction	—	—	—	—
Building Construction	Worker	36.6	8.70	LDA,LDT1,LDT2
Building Construction	Vendor	14.3	5.90	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	8.70	LDA,LDT1,LDT2
Paving	Vendor	—	5.90	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	7.32	8.70	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	5.90	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	40,913	13,021	12,430

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	376,089	—
Site Preparation	—	—	15.0	0.00	—
Grading	—	14,409	20.0	0.00	—
Paving	0.00	0.00	0.00	0.00	4.76

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Light Industry	0.00	0%
Parking Lot	0.87	100%
General Light Industry	0.00	0%
General Light Industry	0.00	0%
Enclosed Parking with Elevator	1.42	100%
Parking Lot	0.04	100%
General Light Industry	0.00	0%
Parking Lot	2.42	100%
General Light Industry	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	453	0.03	< 0.005
2027	0.00	453	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	31.1	annual days of extreme heat
Extreme Precipitation	9.05	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	6.63	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	0	0	0	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	1	1	3
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	1	1	1	2
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	62.5

AQ-PM	0.58
AQ-DPM	31.5
Drinking Water	18.0
Lead Risk Housing	60.3
Pesticides	0.00
Toxic Releases	7.04
Traffic	33.1
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	87.6
Haz Waste Facilities/Generators	78.8
Impaired Water Bodies	66.7
Solid Waste	75.7
Sensitive Population	—
Asthma	30.2
Cardio-vascular	3.25
Low Birth Weights	97.1
Socioeconomic Factor Indicators	—
Education	45.2
Housing	60.9
Linguistic	22.2
Poverty	64.4
Unemployment	82.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—

Above Poverty	38.5730784
Employed	15.56525087
Median HI	16.04003593
Education	—
Bachelor's or higher	39.1505197
High school enrollment	100
Preschool enrollment	60.90080842
Transportation	—
Auto Access	17.1435904
Active commuting	53.94584884
Social	—
2-parent households	19.88964455
Voting	37.53368408
Neighborhood	—
Alcohol availability	58.15475427
Park access	48.76170923
Retail density	35.51905556
Supermarket access	60.19504684
Tree canopy	96.80482484
Housing	—
Homeownership	42.92313615
Housing habitability	44.47581163
Low-inc homeowner severe housing cost burden	17.57987938
Low-inc renter severe housing cost burden	29.94995509
Uncrowded housing	74.48992686
Health Outcomes	—
Insured adults	27.75567817
Arthritis	0.0

Asthma ER Admissions	92.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	5.5
Cognitively Disabled	8.5
Physically Disabled	5.0
Heart Attack ER Admissions	93.6
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	59.8
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	96.3
SLR Inundation Area	0.0
Children	75.0
Elderly	26.8
English Speaking	82.5
Foreign-born	14.3

Outdoor Workers	51.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	85.0
Traffic Density	32.4
Traffic Access	0.0
Other Indices	—
Hardship	56.4
Other Decision Support	—
2016 Voting	47.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	47.0
Healthy Places Index Score for Project Location (b)	34.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Dust From Material Movement	—

A-2 Energy Calculations

County fuel sales source: https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.energy.ca.gov%2Fsites%2Fdefault%2Ffiles%2F2024-10%2F2010-2023_CEC-A15_Results_and_Analysis_ADA.xlsx&wdOrigin=BROWSELINK

Project Construction Fuel Use

Diesel Emissions				
Off-road Equipment	349	MT CO2T	2023 Diesel Sold in CA	
Vendor	15	MT CO2T	3,006,777,156	gallons
Hauling	203	MT CO2T		
Total Disel Emissions	567	MT CO2T		
	1000	kg/MT		
Total CO2 Emissions	566990.5533	kg		
			2023 Diesel Sold in El Dorado County	
Diesel Fuel Combustion Rate	10.21	kg/gallon	67,000,000	gallons
Total Diesel Fuel Consumption	**55,533**	gallons		
Project Percentage Usage County	0.08%			
Average per Year	27,766	gallons		

Gasoline Emissions				
			2023 Gasoline Sold in CA	
Worker	26	MT CO2T	13,584,697,639	gallons
	1000	kg/MT		
Total CO2 Emisions	26291.07932	kg/MT		
Gasoline Combustion Rate	8.78	kg/gallon	2023 Diesel Sold in El Dorado County	
Gasoline Consumption	**2,994**	gallons	11,000,000	gallons
Project Percentage Usage County	0.027%			
Average per Year	1,497.21	gallons		

HRA Screening - On-site Project Construction Fuel Use

Diesel Emissions Off-road		
Off-road Equipment	348.9497	MT CO2T
Total Disel Emissions	348.9497	MT CO2T
	1000	kg/MT
Total CO2 Emissions	348949.7	kg
Diesel Fuel Combustion Rate	10.21	kg/gallon
Total Diesel Fuel Consumption	**34,177**	gallons
HRA Threshold	37,000	gallons

Note: (The Climate Registry, 2022) Combustion rates taken from The Climate Registry 2022 default emission factors (Table 2.1)

From CalEEMod Output - CO2e Construction Emissions

	3.1 CO_2e (MT/year)
Annual	0
Off-Road Equipment	31.19224933
Demolition	
Onsite truck	0
Offsite	0
Annual	0
Worker	0.81822111
Vendor	0
Hauling	143.2078295
	3.3

Annual		0
Off-Road Equipment		24.11354895
Dust From Material Movement		
Onsite truck		0
Offsite		0
Annual		0
Worker		0.477295647
Vendor		0
Hauling		0
	3.5	
Annual		0
Off-Road Equipment		26.94154961
Dust From Material Movement		
Onsite truck		0
Offsite		0
Annual		0
Worker		0.81822111
Vendor		0
Hauling		59.65337698
	3.7	
Annual		0
Off-Road Equipment		227.5728604
Onsite truck		0
Offsite		0
Annual		0
Worker		20.81237034
Vendor		27.50497957
Hauling		0
	3.9	
Annual		0
Off-Road Equipment		24.15849485
Onsite truck		0
Offsite		0
Annual		0
Worker		2.169606331
Vendor		2.854398689
Hauling		0
	3.11	21.11
Annual		0
Off-Road Equipment		13.75558933
Paving		
Onsite truck		0
Offsite		0
Hauling		0

Annual		0
Worker		0.803435897
Vendor		0
Hauling		0
	3.13	
Annual		0
Off-Road Equipment		1.215365156
Architectural Coatings		
Onsite truck		0
Offsite		0
Annual		0
Worker		0.391928886
Vendor		0
Hauling		0

Appendix B
Biological Resources Technical References

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Meeks Bay (3912011) OR Emerald Bay (3812081) OR Echo Lake (3812071) OR South Lake Tahoe (3811988) OR Freel Peak (3811978) OR Minden (3811987) OR Woodfords (3811977))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter atricapillus American goshawk	ABNKC12061	None	None	G5	S3	SSC
Accipiter striatus sharp-shinned hawk	ABNKC12020	None	None	G5	S4	WL
Ambystoma macrodactylum sigillatum southern long-toed salamander	AAAAA01085	None	None	G5T4	S2	SSC
Aplodontia rufa californica Sierra Nevada mountain beaver	AMAFA01013	None	None	G5T3T4	S2S3	SSC
Arabis rigidissima var. demota Galena Creek rockcress	PDBRA061R1	None	None	G3T3Q	S1	1B.2
Asio otus long-eared owl	ABNSB13010	None	None	G5	S3?	SSC
Astragalus austiniae Austin's astragalus	PDFAB0F120	None	None	G2G3	S2S3	1B.3
Boechera tularensis Tulare rockcress	PDBRA40130	None	None	G3	S3	1B.3
Bombus morrisoni Morrison bumble bee	IIHYM24460	None	None	G3	S1S2	
Bombus occidentalis western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
Bombus pensylvanicus American bumble bee	IIHYM24260	None	None	G3G4	S2	
Botrychium ascendens upswept moonwort	PPOPH010S0	None	None	G4	S3	2B.2
Botrychium crenulatum scalloped moonwort	PPOPH010L0	None	None	G4	S3	2B.2
Botrychium minganense Mingan moonwort	PPOPH010R0	None	None	G5	S4	4.2
Brasenia schreberi watershield	PDCAB01010	None	None	G5	S3	2B.3
Bruchia bolanderi Bolander's bruchia	NBMUS13010	None	None	G3	S3	4.2
Capnia lacustra Lake Tahoe benthic stonefly	IIPLE03200	None	None	G1	S1	
Carex davyi Davy's sedge	PMCYP033H0	None	None	G3	S3	1B.3
Carex hystericina porcupine sedge	PMCYP036D0	None	None	G5	S2	2B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Carex limosa mud sedge	PMCYP037K0	None	None	G5	S3	2B.2
Catostomus lahontan Lahontan mountain sucker	AFCJC02330	None	None	GNR	S2	SSC
Chaenactis douglasii var. alpina alpine dusty maidens	PDAST20065	None	None	G5T5	S2	2B.3
Claytonia megarhiza fell-fields claytonia	PDPOR030A0	None	None	G5	S2	2B.3
Cypseloides niger black swift	ABNUA01010	None	None	G4	S3	SSC
Desmona bethula amphibious caddisfly	IITRI77010	None	None	G2G3	S2S3	
Draba asterophora var. asterophora Tahoe draba	PDBRA110D1	None	None	G2T2?	S2?	1B.2
Draba asterophora var. macrocarpa Cup Lake draba	PDBRA110D2	None	None	G2T1	S1	1B.1
Elodium blandowii Blandow's bog moss	NBMUS3C011	None	None	G4	S2	2B.3
Empidonax traillii willow flycatcher	ABPAE33040	None	Endangered	G5	S3	
Epilobium howellii subalpine fireweed	PDONA06180	None	None	G4	S4	4.3
Epilobium palustre marsh willowherb	PDONA060R0	None	None	G5	S2	2B.3
Erethizon dorsatum North American porcupine	AMAFJ01010	None	None	G5	S3	
Erigeron miser starved daisy	PDAST3M2K0	None	None	G3?	S3?	1B.3
Eriogonum luteolum var. saltuarium Jack's wild buckwheat	PDPGN083S4	None	None	G5T1	S1	1B.2
Erythranthe carsonensis Carson Valley monkeyflower	PDPHR01020	None	None	G2	S1	1B.1
Fen Fen	CTT51200CA	None	None	G2	S1.2	
Glyceria grandis American manna grass	PMPOA2Y080	None	None	G5	S3	2B.3
Gulo gulo wolverine	AMAJF03010	Threatened	Threatened	G4	S1	FP
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Helisoma newberryi Great Basin rams-horn	IMGASM6020	None	None	G1	S1S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lepus americanus tahoensis Sierra Nevada snowshoe hare	AMAEB03012	None	None	G5T3T4Q	S2	SSC
Lepus townsendii townsendii western white-tailed jackrabbit	AMAEB03041	None	None	G5T5	S3?	SSC
Lewisia longipetala long-petaled lewisia	PDPOR040K0	None	None	G2	S2	1B.3
Lithobates pipiens northern leopard frog	AAABH01170	None	None	G5	S2	SSC
Martes caurina sierrae Sierra marten	AMAJF01014	None	None	G4G5T3	S3	
Meesia triquetra three-ranked hump moss	NBMUS4L020	None	None	G5	S4	4.2
Meesia uliginosa broad-nerved hump moss	NBMUS4L030	None	None	G5	S3	2B.2
Myotis thysanodes fringed myotis	AMACC01090	None	None	G4	S3	
Myotis volans long-legged myotis	AMACC01110	None	None	G4G5	S3	
Ochotona princeps schisticeps gray-headed pika	AMAEA0102L	None	None	G5T4	S2S4	
Oncorhynchus clarkii henshawi Lahontan cutthroat trout	AFCHA02081	Threatened	None	G5T3	S2	SSC
Oreocarya crymophila subalpine oreocarya	PDBOR0A0R0	None	None	G3	S3	1B.3
Pandion haliaetus osprey	ABNKC01010	None	None	G5	S4	WL
Pekania pennanti Fisher	AMAJF01020	None	None	G5	S2S3	SSC
Peltigera gowardii western waterfan lichen	NLVER00460	None	None	G3G4	S3	4.2
Phacelia stebbinsii Stebbins' phacelia	PDHYD0C4D0	None	None	G3	S3	1B.2
Picoides arcticus black-backed woodpecker	ABNYF07090	None	None	G5	S2	
Potamogeton robbinsii Robbins' pondweed	PMPOT030Z0	None	None	G5	S3	2B.3
Prosopium williamsoni mountain whitefish	AFCHA03060	None	None	G5	S3	SSC
Rana sierrae Sierra Nevada yellow-legged frog	AAABH01340	Endangered	Threatened	G2	S2	WL
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S3	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Rorippa subumbellata Tahoe yellow cress	PDBRA270M0	None	Endangered	G1	S1	1B.1
Schoenoplectus subterminalis water bulrush	PMCYP0Q1G0	None	None	G5	S3	2B.3
Scutellaria galericulata marsh skullcap	PDLAM1U0J0	None	None	G5	S2	2B.2
Siphateles bicolor pectinifer Lahontan Lake tui chub	AFCJB1303P	None	None	G4T3	S1S2	SSC
Speyeria nokomis carsonensis Carson Valley silverspot	IILEPJ6056	None	None	G3T1T2	S1	
Sphagnum Bog Sphagnum Bog	CTT51110CA	None	None	G3	S1.2	
Stuckenia filiformis ssp. alpina northern slender pondweed	PMPOT03091	None	None	G5T5	S2S3	2B.2
Stygobromus lacicolus Lake Tahoe amphipod	ICMAL05970	None	None	G1	S1	
Stygobromus tahoensis Lake Tahoe stygobromid	ICMAL05A70	None	None	G1	S1	
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Viola purpurea ssp. aurea golden violet	PDVIO04420	None	None	G5T2	S2S3	2B.2
Xanthocephalus xanthocephalus yellow-headed blackbird	ABPBXB3010	None	None	G5	S3	SSC

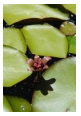
Record Count: 73

Search Results

29 matches found. Click on scientific name for details

Search Criteria: , CRPR is one of [1A:1B:2A:2B] , Quad is one of [3912011:3812081:3812071:3811988:3811978:3811987:3811977]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	CA RARE PLANT RANK	GENERAL HABITATS	MICROHABITATS	LOWEST ELEVATION (FT)	HIGHEST ELEVATION (FT)	PHOTO
Arabis rigidissima var. *demota*	Galena Creek rockcress	Brassicaceae	perennial herb	Jul-Aug	None	None	1B.2	Broadleafed upland forest, Upper montane coniferous forest	Rocky	7400	8400	No Photo Available
Astragalus austiniae	Austin's astragalus	Fabaceae	perennial herb	(May)Jul-Sep	None	None	1B.3	Alpine boulder and rock field, Subalpine coniferous forest	Rocky	8005	9745	No Photo Available
Boechera tularensis	Tulare rockcress	Brassicaceae	perennial herb	(May)Jun-Jul(Aug)	None	None	1B.3	Subalpine coniferous forest, Upper montane coniferous forest	Roadsides (sometimes), Rocky, Slopes	5990	10990	No Photo Available
Botrychium ascendens	upswept moonwort	Ophioglossaceae	perennial rhizomatous herb	(Jun)Jul-Aug	None	None	2B.2	Lower montane coniferous forest, Meadows and seeps	Mesic	3660	9990	 © 2005 Steve Matson
Botrychium crenulatum	scalloped moonwort	Ophioglossaceae	perennial rhizomatous herb	Jun-Sep	None	None	2B.2	Bogs and fens, Lower montane coniferous forest, Marshes and swamps (freshwater), Meadows and seeps, Upper montane coniferous forest		4160	10760	 © 2016 Steve Matson

Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	None	None	2B.3	Marshes and swamps (freshwater)	0	7220	 ©2014 Kirsten Bovee
Carex davyi	Davy's sedge	Cyperaceae	perennial herb	May-Aug	None	None	1B.3	Subalpine coniferous forest, Upper montane coniferous forest	4920	10500	No Photo Available
Carex hystericina	porcupine sedge	Cyperaceae	perennial rhizomatous herb	May-Jun	None	None	2B.1	Marshes and swamps (streambanks)	2000	7875	 ©2014 Robert E. Preston, Ph.D.
Carex limosa	mud sedge	Cyperaceae	perennial rhizomatous herb	Jun-Aug	None	None	2B.2	Bogs and fens, Lower montane coniferous forest, Marshes and swamps, Meadows and seeps, Upper montane coniferous forest	3935	8860	 Steve Matson 2009
Chaenactis douglasii var. *alpina*	alpine dusty maidens	Asteraceae	perennial herb	Jul-Sep	None	None	2B.3	Alpine boulder and rock field (granitic)	9400	11155	 © 2008 Steve Matson
Claytonia megarhiza	fell-fields claytonia	Montiaceae	perennial herb	Jul-Sep	None	None	2B.3	Alpine boulder and rock field, Subalpine coniferous forest (gravelly, rocky)	8530	11590	No Photo Available
Draba asterophora var. *asterophora*	Tahoe draba	Brassicaceae	perennial herb	Jul-Aug(Sep)	None	None	1B.2	Alpine boulder and rock field, Subalpine coniferous forest	8205	11500	No Photo Available

Draba asterophora var. *macrocarpa*	Cup Lake draba	Brassicaceae	perennial herb	Jul-Aug(Sep)	None	None	1B.1	Subalpine coniferous forest (rocky)		8205	9235	No Photo Available
Elodium blandowii	Blandow's bog moss	Helodiaceae	moss		None	None	2B.2	Meadows and seeps, Subalpine coniferous forest		6110	8860	 © 2013 Scot Loring
Epilobium palustre	marsh willowherb	Onagraceae	perennial rhizomatous herb	Jul-Sep	None	None	2B.3	Bogs and fens, Meadows and seeps (mesic)		4215	7695	No Photo Available
Erigeron miser	starved daisy	Asteraceae	perennial herb	Jun-Oct	None	None	1B.3	Upper montane coniferous forest (rocky)		6035	8595	No Photo Available
Eriogonum luteolum var. *saltuarium*	Jack's wild buckwheat	Polygonaceae	annual herb	Jul-Sep	None	None	1B.2	Great Basin scrub, Upper montane coniferous forest	Granitic, Sandy	5580	7875	No Photo Available
Erythranthe carsonensis	Carson Valley monkeyflower	Phrymaceae	annual herb	Apr-Jun	None	None	1B.1	Great Basin scrub (openings)	Granitic	4855	4855	 Steve Matson, 2013
Glyceria grandis	American manna grass	Poaceae	perennial rhizomatous herb	Jun-Aug	None	None	2B.3	Bogs and fens, Marshes and swamps (lake margins, streambanks), Meadows and seeps		50	6495	 ©2004 Dean Wm. Taylor
Lewisia longipetala	long-petaled lewisia	Montiaceae	perennial herb	Jul-Aug(Sep)	None	None	1B.3	Alpine boulder and rock field, Subalpine coniferous forest (mesic, rocky)	Granitic	8205	9595	 © 2009 Gary A. Monroe
Meesia uliginosa	broad-nerved hump moss	Meesiaceae	moss	Jul-Oct	None	None	2B.2	Bogs and fens, Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest		3970	9200	 ©2013 Scot Loring

Oreocarya crymophila	subalpine oreocarya	Boraginaceae	perennial herb	Jul-Aug	None	None	1B.3	Subalpine coniferous forest (rocky, volcanic)		8530	10500	No Photo Available
Phacelia stebbinsii	Stebbins' phacelia	Hydrophyllaceae	annual herb	May-Jul	None	None	1B.2	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps		2000	6595	No Photo Available
Potamogeton robbinsii	Robbins' pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	Jul-Aug	None	None	2B.3	Marshes and swamps (lakes, deep water)		5020	10825	 ©2014 Dana York
Rorippa subumbellata	Tahoe yellow cress	Brassicaceae	perennial rhizomatous herb	May-Sep	None	CE	1B.1	Lower montane coniferous forest, Meadows and seeps	Decomposed granitic	6200	6250	No Photo Available
Schoenoplectus subterminalis	water bulrush	Cyperaceae	perennial rhizomatous herb (aquatic)	Jun-Aug(Sep)	None	None	2B.3	Bogs and fens, Marshes and swamps (montane lake margins)		2460	7380	 Dean Wm. Taylor (1996)
Scutellaria galericulata	marsh skullcap	Lamiaceae	perennial rhizomatous herb	Jun-Sep	None	None	2B.2	Lower montane coniferous forest, Marshes and swamps, Meadows and seeps (mesic)		0	6890	 © 2021 Scot Loring
Stuckenia filiformis ssp. *alpina*	northern slender pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	May-Jul	None	None	2B.2	Marshes and swamps (shallow freshwater)		985	7055	 Dana York (2016)
Viola purpurea ssp. *aurea*	golden violet	Violaceae	perennial herb	Apr-Jun	None	None	2B.2	Great Basin scrub, Pinyon and juniper woodland	Sandy	3280	8205	No Photo Available

Showing 1 to 29 of 29 entries

Go to top

Suggested Citation:
California Native Plant Society, Rare Plant Program. 2025. Rare Plant Inventory (online edition, v9.5.1). Website https://www.rareplants.cnps.org [accessed 2 June 2025].
}

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301

In Reply Refer To: 06/02/2025 23:07:40 UTC
Project Code: 2025-0104447
Project Name: Lake Tahoe Airport Master Plan

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service (fws.gov).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

PROJECT SUMMARY

Project Code: 2025-0104447
Project Name: Lake Tahoe Airport Master Plan
Project Type: Airport - Maintenance/Modification
Project Description: The proposed Airport Master Plan update is a long-range plan for airport development that is intended to meet identified facility requirements and Federal Aviation Administration (FAA) design standards. As the owner and operator of Lake Tahoe Airport, the City of South Lake Tahoe is the lead agency responsible for CEQA compliance. The proposed update to Lake Tahoe Airport Master Plan (proposed project) comprises a long-range plan for Airport development that includes both airside and landside improvements. Airside improvements would take place within aircraft movement areas that include the runway and taxiway system and the FAA-defined protected areas that encompass them. Landside improvements would take place outside of the main aircraft movement area and include facilities that are used for aircraft storage, aircraft parking, terminal facilities, automobile parking, and airport access.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.89843115,-119.99521634312376,14z



Counties: El Dorado County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Gray Wolf *Canis lupus* Population: U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, ND, NE, NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, and WV; and portions of AZ, NM, OR, UT, and WA. Mexico. There is **final** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/4488	Endangered
North American Wolverine *Gulo gulo luscus* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Species may be present based on transient occurrence as it moves through or too suitable habitat. Effects should be considered to species and projects should consult with the Service, however, depending on the project, consultation may not be necessary. Species profile: https://ecos.fws.gov/ecp/species/5123	Threatened
Sierra Nevada Red Fox *Vulpes vulpes necator* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4252	Endangered

BIRDS

NAME	STATUS
California Spotted Owl *Strix occidentalis occidentalis* Population: Sierra Nevada No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7266	Proposed Threatened

REPTILES

NAME	STATUS
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

AMPHIBIANS

NAME	STATUS
Sierra Nevada Yellow-legged Frog *Rana sierrae* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9529	Endangered

FISHES

NAME	STATUS
Lahontan Cutthroat Trout *Oncorhynchus clarkii henshawi*	Threatened

NAME	STATUS
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964	

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

BALD & GOLDEN EAGLES INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

MIGRATORY BIRD INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1C
- PEM1B

RIVERINE

- R3UBF
- R3UBH
- R4SBA
- R4SBC
- R4SBCx

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1C
- PSS1B

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Jessica Orsolini
Address: 2600 Capitol Avenue
Address Line 2: Suite 200
City: Sacramento
State: CA
Zip: 95816
Email horseyjess@gmail.com
Phone: 9167705035

LEAD AGENCY CONTACT INFORMATION

Lead Agency: South Lake Tahoe city

Appendix C
California Department of Parks and Recreation Forms

nState of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 of 17 ***Resource Name or #:** Lake Tahoe Airport
P1. Other Identifier: South Lake Tahoe City Hall
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County** El Dorado
***b. USGS 7.5' Quad** South Lake Tahoe **Date** 2021 **T** 12N ; **R** 18E ; ¼ **of** ¼ **of Sec** 9 and 16 ; **B.M.** MDM
c. Address 1901 Lisa Maloff Way City South Lake Tahoe Zip 96150
d. UTM: Zone 11S , 239932.99 mE/ 4309128.89 mN; NAD 83
e. Other Locational Data: APNs 032-090-006, 032-100-004, 033-050-006, -011 and -020.

***P3a. Description:** The Lake Tahoe Airport (airport) is a small publicly owned, general aviation airport catering to privately-owned aircraft in South Lake Tahoe. It is located at an elevation of 6,260 feet and sits on approximately 350 acres immediately adjacent to the Upper Truckee River, approximately 3 miles south of Lake Tahoe. The airport is comprised of a single runway and taxiway; a large apron with plane tiedowns; three small, rectangular-plan, metal-frame aircraft maintenance hangars at the north end of the apron; a currently inoperative air traffic control tower; six rectangular-plan aircraft storage hangars at the south end of the apron, a rectangular plan maintenance building, a rectangular-plan, pre-fabricated building that serves as the helicopter tour office, a rectangular plan fixed-base operator (FBO) building, a central A-frame former terminal building, and a parking lot.

***P3b. Resource Attributes:** HP6 (1-3 story commercial building)
***P4. Resources Present:** ☒ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)



P5b. Description of Photo:
East façade of the former terminal building, facing west (ESA, 2025)

***P6. Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric
☐ Both
Various:
1959 – Airfield, 1963 – Hangar 1, 1964 – Air Traffic Control Tower, 1970 – terminal building, 1994 – south hangars

***P7. Owner and Address:**
City of South Lake Tahoe
1052 Tata Lane
South Lake Tahoe, CA 96150

P8. Recorded by: Becky Urbano, ESA
180 Grand Avenue, Suite 1050
Oakland, CA 94610

***P9. Date Recorded:** March 20, 2025

***P10. Survey Type:** Intensive

***P11. Report Citation**: n/a

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** Lake Tahoe Airport ***NRHP Status Code** 6Z

B1. Historic Name: Lake Tahoe Airport
B2. Common Name: Lake Tahoe Airport and South Lake Tahoe City Hall
B3. Original Use: Aviation B4. Present Use: Aviation and Local Government
***B5. Architectural Style:** Various – A-Frame (terminal), general utility – hangars and support buildings
***B6. Construction History:** (Construction date, alterations, and date of alterations)
See **Table 1** for a development history of the airport

***B7. Moved?** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:** Lake Tahoe Airport Terminal Building (documented separately)

B9a. Architect: unknown b. Builder: various
***B10. Significance: Theme** Transportation - Aviation **Area** Lake Tahoe Region
Period of Significance n/a **Property Type** Airport **Applicable Criteria** n/a
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

As a complex, the Lake Tahoe Airport is recommended ineligible for listing on the National Register of Historic Places (National Register), the California Register of Historical Resources (California Register), or as a local historic resource as defined by the Tahoe Regional Planning Agency (TRPA local register). However, the Lake Tahoe Terminal Building (documented separately) is recommended eligible for listing on the California Register under Criterion 3 for its application of the regionally significant A-frame design to a commercial building. See the DPR 523 form set for the Lake Tahoe Terminal Building for more information.

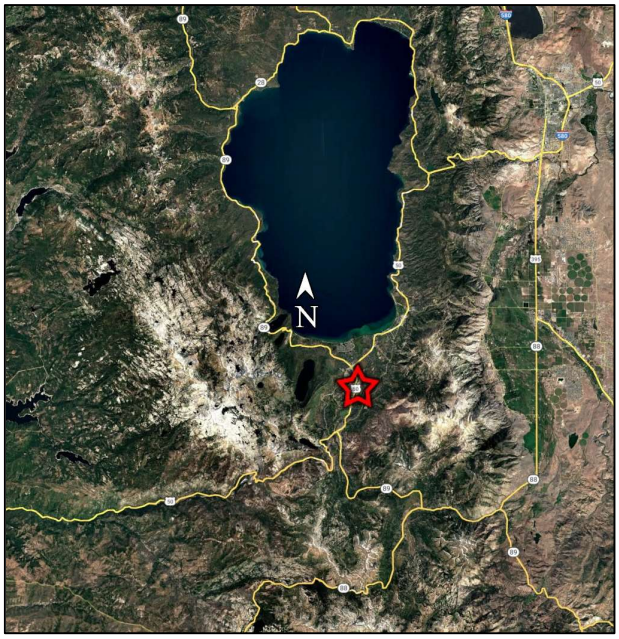
Continued on page 3.

B11. Additional Resource Attributes: (List attributes and codes) HP4 (ancillary building); HP14 (government building); HP39 (other-airport)

***B12. References:**
See page 15

B13. Remarks:

***B14. Evaluator:** Becky Urbano, ESA
***Date of Evaluation:** May 2025



***Recorded by:** Becky Urbano, ESA ***Date:** May 2025 ☒ Continuation ☐ Update

***P3a. Description:** (Continued from page 1)

Runway

Runway 18-36 is 8,541 feet long and 100 feet wide. It is a paved asphalt runway with a northeast/southwest orientation. The Runway is served by two non-precision instrument approach procedures, a full-length parallel taxiway, and other connecting taxiways that provide aircraft access to the various ramp areas and other facilities on the airport.

Taxiways

Taxiways are paved areas over which airplanes move from one part of the airfield to another with their primary use being providing access between the terminal/hangar facilities and the runways. Since the airport has a single runway, the taxiway system is relatively simple and provides access from the runway to the parallel taxiway (Taxiway A), and on to the apron. The airport has two high-speed exit taxiways at each end of the runway that are intended to allow aircraft to quickly exit the runway following landing. A connector taxiway is located at the mid-point of the runway to connect Taxiway A to the apron near the former terminal building. A taxilane is also used to access hangars near the south end of the apron.

Aprons

An aircraft apron is used for aircraft movement and positioning, aircraft storage and tiedowns, aircraft fueling, and vehicle movement and parking. The complete apron area at the airport consists of over 700,000 square feet of pavement, which is divided into areas for staging transient aircraft and for use by the airport's FBO.[1] The apron is located between the runway/taxiway, the terminal, and north and south hangars.

Terminal Building

The 1970 terminal building is a rectangular plan, two-and three-story A-frame style, wood framed commercial building located at the western edge of the airport apron (**Figure 1**). It contains nearly 30,000 square feet of office, restaurant, and administrative space. The building is clad in stucco with wood trim. The building is divided into three sections: a steeply pitched central triangular mass and two flanking rectangular masses. The building wings are covered with a flat roof that is hidden by shingle-covered, faux-mansard parapets that make the wings appear particularly heavy and short. Additionally, the building is sited at the edge of a graded slope with the first floor at the same level as the runway while the main entry is on the second floor, at grade with the access road.

The primary (west) façade has a central two-story triangular mass that was originally glazed but the windows have been filled in. Plate glass storefront windows line the north and south wing façades. Some of the former windows have been replaced with stucco panels. The secondary (east) façade fronts the runway. This side of the building sits on a lower grade than the front and has the central triangular mass flanked by two-story wings. Nearly all the glazing remains on this façade, giving the building an open and expansive view of the runway and surrounding mountains. The north and south facades are two stories tall with multiple groupings of an aluminum frame sliding window over a solid inset panel and under a fixed glazed transom. The City of South Lake Tahoe serves as the terminal building's primary tenant. City Hall, as well as administrative offices, are all located in the Airport terminal building.

FBO Building

The ca 1973 FBO building is a one-story, wood frame, rectangular plan building located north of the terminal building on the west side of the apron (**Figure 2**). It is approximately 3,200 square feet in size, is clad in a mix of pressed brick veneer and stucco, and is capped by a shingle-covered, faux mansard parapet masking a flat roof. The primary (east) façade fronts the apron. There are two double-leaf, glazed pedestrian doors on the south end of the building. Fenestration includes tripartite sliding and fixed aluminum frame windows and two-lite sliding aluminum frame windows. A chimney is visible at the south end of the building. The northern end of the building is clad in stucco and features two roll-up vehicular doors and a single two-light sliding window. A wood sign board capped by a gable roof and featuring a "Mountain West" banner is located between the two pedestrian entrances at the south end of the building. The south façade is devoid of fenestration but has a central brick-veneer clad chimney and water table with horizontal wood lap siding.

Air Traffic Control Tower (ATCT)

The air traffic control tower (ATCT) was constructed in 1964. It is an irregular plan, steel-frame tower composed of a tall base topped by a glazed, upside down pyramidal shaped observation room (**Figure 3**). The whole structure is set on a concrete pad foundation. The base of the tower structure is clad in corrugated metal siding and is devoid of fenestration. The base is caped by a roughly pentagonal platform surrounded by a metal railing. In the center of this platform is the observational suite. This square-shaped mass has battered glazed walls that cantilever outward and are topped with a flat roof deck from which multiple antennae project upward. This roof deck is also surrounded by a metal railing.

Adjacent to the 1964 tower is a one-story, rectangular plan building with a flat roof. This building houses electrical equipment.

Also adjacent to the ACTC is a second, taller, open metal frame tower. The top of this tower holds newer radar and communications antennae. The metal tower is fully surrounded by chain-link security fencing.

North Hangars

There are three hangars at the north end of the apron that vary in age but are roughly similar in construction (**Figure 4**). All three are rectangular plan, steel frame buildings with front-facing gable roofs that are set on concrete pad foundations. Hangar 1 is southernmost and oldest, constructed ca.1963. It is clad in corrugated metal siding and features two sets of telescoping doors that enclose the east façade. Hangar 2 is the central and newest hangar of the group, constructed sometime between 2007 and 2012. It is also the largest. This hangar is also clad in metal siding, has a shallow pitch front gable roof, and features a single telescoping door to enclose the east façade. Hangar 3 is the northernmost and smallest of the three hangars. It was constructed ca.1973. It is clad in both vertical and horizontal corrugated metal siding and appears to have a rollup door enclosing its east façade. Hangar 3 is also marked as “South Lake Tahoe Fire Station No. 4.”

South Hangars

The south hangars were constructed in 1993. This grouping of six, rectangular plan, steel-frame, shed roof buildings are nearly identical (**Figure 5**). Four of the six measure approximately 230 x 55 feet, have low-slope shed roofs and are clad in standing-seam metal siding. Each of the end buildings is slightly narrower, measuring approximately 230 x 43 feet. The southernmost building has one bay that is square in plan, creating an irregular floorplan. While all the hangars are devoid of fenestration, each building has six pedestrian doors on their south or north facades. Each door provides access to one of the six interior hangar spaces. The south façade is composed entirely of bi-fold garage doors that operate with a central, horizontal pivot, essentially folding the wall outward then upward to allow planes to enter and exit the space.

Maintenance Building

The ca 1973 maintenance building is a one-story, rectangular plan, steel-frame building clad in metal siding (**Figure 6**). It is capped by a shed roof with deep eaves and a faux-mansard frieze on the primary (east) façade. The primary façade features five bays, each with a glazed roll-up vehicular door. The rear (west) façade is clad in stone veneer that also wraps partially around to the north and south facades.

Helicopter Operator

The helicopter operator, Calstar, occupies a rectangular plan, side gable roofed modular building located south of the maintenance building. The primary (east) façade has a slightly off-set pedestrian entrance set beneath a diminutive gable roof feature (**Figure 7**). To the south of the entrance are three sets of two-lite, vinyl frame sliding windows. A fourth, two-lite vinyl frame sliding window is located north of the entrance. These same windows are found on all three other facades of the building

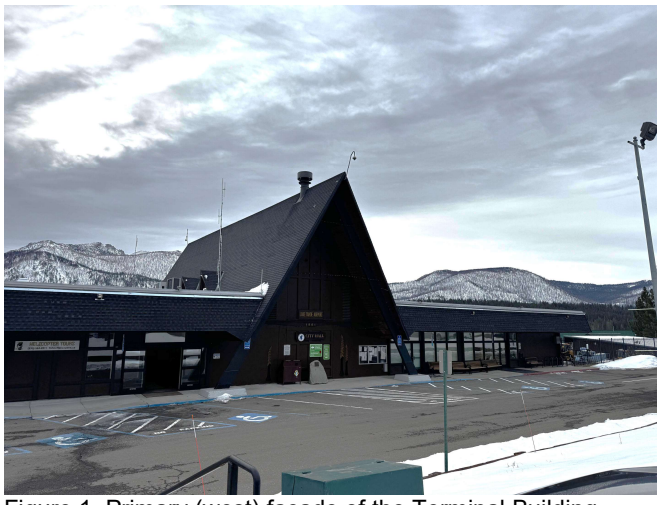


Figure 1. Primary (west) façade of the Terminal Building. (ESA, 2025)



Figure 2. FBO Building. (ESA, 2025)



Figure 3. ATCT and adjacent buildings. (ESA, 2025)



Figure 4. North Hangars. Hangar 1 is to the far left, Hangar 2 is at center, and Hangar 3 is at the far right. (ESA, 2025)



Figure 5. South Hangars. (ESA, 2025)



Figure 6. Maintenance Building. (ESA, 2025)



Figure 7. Helicopter prefabricated building. (ESA, 2025)

***B10. Significance:** (Continued from page 2)

The Lake Tahoe Airport is located in the City of South Lake Tahoe. The earliest portions of the airport were constructed in 1959, partially in preparation for the 1960 Winter Olympic Games. The following presents a brief historical context regarding development of the region and the airport as well as sub-themes related to design and engineering to support the evaluation of significance.

Regional Development

Exploration and Access

The following general historical summary of the area is excerpted from the South Lake Tahoe General Plan:[2]

> *Euroamerican contact with Native American groups living in coastal areas and the Central Valley of California began during the last half of the 18th century. The Spanish period in California lasted from about 1769 to 1821. This was a time when the Spanish missions dominated lives of both the Spanish and the Native Americans in those areas in California. However, the effect of the Spanish on the Washoe has not been documented. The Mexican Period (ca. 1821–1848) in California is an outgrowth of the Mexican Revolution, and its accompanying social and political views affected the mission system. Spanish exploration of the Central Valley did not begin until the late 1700s, and the eastern edges of the Central Valley and the Sierra Nevada were not explored until the early 1800s. In 1808 Gabriel Moraga explored the Mokelumne, Cosumnes, and American rivers, passing near modern-day Folsom. Subsequent exploration of the general area is credited to mountain men such as Jedediah Smith, who crossed the Sierra Nevada into California in 1826. Smith traveled along the American, Sacramento, and Cosumnes rivers and also probably passed through current Pleasant Valley. Other explorers such as Ewing Young, Joseph Walker, John Fremont, and Christopher "Kit" Carson soon followed Smith. In 1844, Fremont crossed the Sierra Nevada near Lake Tahoe and descended the west slope in proximity to the American River, which he eventually followed to Sutter's Fort. Many of the trails used by these early explorers and subsequent immigrants were not newly discovered routes, but rather Native American trails that were already in use.*
>
> *Early explorations of the Sierra Nevada and its flanks were soon followed by groups of immigrants moving west. The first of these immigrant groups was the Bartleson-Bidwell party that crossed the Sierra Nevada in 1841 and followed the Stanislaus River into the Central Valley. The Joseph Chiles and Joseph Walker parties followed the crossing of the Sierra Nevada by the Bartleson-Bidwell party in 1843. Chiles crossed the Sierra Nevada following the Malheur and Pit rivers into the Central Valley and then traveled south along the Sacramento River. Walker, however, traveled south along the eastern front of the Sierra Nevada to Walker Lake where he crossed into Owens Valley and eventually the Central Valley using what is now known as Walker's Pass. Subsequently, in 1844 the Stevens-Murphy party crossed the Sierra Nevada and probably is the first immigrant group to enter California via the Truckee and Bear rivers. Subsequently, the Gold Rush in*

1849 dramatically increased the numbers of immigrants passing through the Lake Tahoe Basin to reach the gold fields in California.

At the end of the 19th century and beginning of the 20th century, there was a growing demand for roads that linked local communities and also California and Nevada. Initial road construction generally followed immigrant trails and other routes used by overland stage traffic and the Pony Express. One such road connecting Placerville and Nevada was constructed near the location of South Lake Tahoe. This road eventually became Placerville Road. The passage of the State Highways Act in 1909 authorized the creation of a highway network within states and linking adjoining states. The Placerville Road was incorporated into the developing highway system. Subsequently in 1913, the Placerville Road was incorporated into the intercontinental Lincoln Highway system. The Federal Aid Highway Act of 1925 created our current system of numbered interstate highways and the Lincoln Highway became US Highway 50. The City of South Lake Tahoe was incorporated in 1965 by combining the previously unincorporated communities of Al Tahoe, Bijou, Bijou Park, Stateline, Tahoe Valley, and Tallac Village.

Early Recreation

The majority of land within the Lake Tahoe Basin (upwards of 70%) is owned or managed by federal or state governments.[3] These lands are part of the U.S. Forest Service (Forest Service) or are units of the California or Nevada State Parks systems. This large proportion of public land ownership is the result of more than a century of active land acquisition and conservation efforts that began at the close of the 19th century as a response to clear-cutting and other destructive logging practices of the times.[4] The Forest Service established its first ranger station in the Lake Tahoe basin in 1911. The first state park (no longer extant) in the area was opened in 1927 near Tahoe City, followed the next year by D. L Bliss State Park further south.[5]

At the same time, winter recreation areas began to open near Lake Tahoe. In 1910 a wooden ski jump, presumably the first in the United States, and toboggan lift was installed near Truckee. It was called "Winter Sports Hill" and eventually "Hilltop."[6] The winter carnival and sports exhibitions near Truckee drew people from all over the California and Nevada areas through the 1920s. A second ski jump was built near Tahoe City in 1928. It was called "Tahoe Tavern." Soon thereafter, enthusiasts constructed an "Olympic-caliber hill" just a mile away from the Tahoe Tavern. This new ski hill hosted the 1932 Winter Olympic tryouts.[7] By the 1930s, rope tows made accessing the tops of ski slopes much easier.[8] The first in the basin were installed at what is now the Sugar Bowl Resort when it opened in 1939.[9]

Immediately after the war, a series of ski resorts opened all along the basin's western half: Sierra-at-Tahoe (1946), Palisades Tahoe (formerly Squaw Valley, 1949), Heavenly (1955), plus many smaller resorts. When Palisades Tahoe won the bid to host the 1960s winter Olympics Games, the Lake Tahoe Basin's reputation as a world-class recreation center was solidified.

1960 Winter Olympic Games

When Palisades Tahoe was chosen as the site for the 1960 winter Olympics, the area lacked major infrastructure to support such a large event. While the original ski resort opened in 1949, it did not yet have sufficient facilities to host an Olympic Games.[10] To prepare, the Squaw Valley Development Corporation had to construct roads, bridges, administrative buildings, hotels, restaurants, not to mention lifts, ski runs, and facilities needed to actually host the events.[11] This preparation involved numerous agencies and private entities and included completion of Highway 80 which was still under construction when the successful bid was announced.

These Olympic Games were the first to be televised and the first to use instant replay. They also introduced the world to Lake Tahoe, the Sierra Nevada mountains, and the history of the area. Following the games, the region experienced a 30-year period of sustained growth and development, primarily as a recreational and tourist destination.[12] More importantly, it transformed the area from a summer designation to a year-round destination. Construction boomed for decades but often with little oversite.

"*Placer County, however, was unprepared to deal with the period of rapid growth that followed the 1960 Olympics. Large projects like high-rise casinos and the Tahoe Keys, which was built on the biggest filtration meadow in the basin, went in without any environmental analysis. In the 45 years since the Winter Games, the number of homes in the basin has increased five-fold, from around 7,000 in 1960 to 35,500 in 2000, according to Antonucci and the Tahoe Regional Planning Agency. The lakewide population has had even a bigger jump, growing from around 3,000 to 63,000 during the same period of time.*"[13]

One of the answers was creation of the Tahoe Regional Planning Agency (TRPA), a bi-state agency authorized by Congress to manage growth and development in the watershed.[14]

Lake Tahoe Airport Development

El Dorado County purchased the first tracts of land for the airport in 1957 from the Kyburz family who used the land for cattle and sheep ranching.[15] The early surveys were conducted in 1957 and identified a floodplain around the Upper Truckee River located just two miles from the south shore of Lake Tahoe. Planning efforts were catalyzed after the area was awarded the 1960 Winter Olympic games. This included selection of Charles Luckman Associates to prepare a Master Plan to guide airport development.[16] However, runway construction began concurrently with planning efforts. When the Tahoe Valley Airport opened on August 1, 1959,[17] it opened with no master plan document. Indeed, reports from the September 1959 dedication note that "Luckman had been operating under quite a handicap in trying to plan an airport which was already under construction.[18] That construction was facilitated with assistance from the Federal Aid to Airports Program and resulted in a 5,900-foot-long, 100-foot wide runway.[19] In spite of the airport having no night lighting, no air traffic control tower, and no hangars, the plan was for it to sustain 24-hour operation in time for the Olympics in February 1960.[20] Indeed, the airport recorded 1,170 flights in November 1959, justifying the need for an airfield to serve the area.[21]

From the beginning, El Dorado County, who operated the airport, sought support from local businesses (casinos) and the federal government to expand airport facilities.[22] The process was often slow and piecemeal, proceeding through perpetual master planning efforts. Throughout the 1960s local newspapers discussed the need for an updated master plan, for creation of a new master plan, contracts for master plans, and overall construction of permanent facilities.[23] Still, the early years were primarily guided by the Luckman master plan which included recommendations for development of permanent commercial and terminal facilities on the east side of the runway.[24] This was never realized and through 2025, no construction beyond necessary security fencing and navigation aids have been placed east of the runway.

By 1960, the airport was serviced by a temporary terminal (at the site of the present terminal) and a permanent, rectangular hangar at the north end of the runway, near the present-day north hangars.[25] The temporary terminal was long, and narrow, measuring 120-feet by 20-feet and consisted of prefabricated structures moved to the site (**Figure 8**).[26,27] In 1962, the runway was extended to 8,540 feet and a fire and rescue building was constructed at the end of the runway.[28] Shortly thereafter, a larger hangar was added to the north end of the runway (extant).[29,30] With a longer runway, the airport could handle more and larger planes. This brought new urgency to the need for a permanent air traffic control tower. In 1964, the airport recorded more than the minimum 24,000 flights per year required to qualify for Federal Aviation Administration-supported (FAA) air traffic control.[31] By the fall, the airport was awarded funding from the FAA to both construct and staff a control tower, located on the west side of the runway.[32,33] With a proper tower and a longer runway in place, calls for construction of a proper, permanent terminal were renewed. By January 1965, designs for a terminal building were being presented to the public but no further action was taken.[34] The delay in approval of a terminal seems to stem from issues around financing construction.[35,36]

From the beginning, development and construction of the airport was undertaken through grants or money generated by the airport. El Dorado County did not dedicate substantial tax dollars toward its operation or development. When the City of South Lake Tahoe incorporated in 1965, the County immediately began discussions with the City to take over the airport.[37] Discussions over ownership and operation of the airport included conversations regarding the updates already needed to the six-year old facility: a permanent terminal and widening of the runway.[38]

In 1967, the airport master plan was revised to include updated facility requirements for a new terminal as well as recommendations to expand the runways to handle 727 jets.[39] This master plan was prepared by engineer Reinhard Brandley of Sacramento.[40] Meanwhile, talks between the County and the City continued and the County secured $1.1 million to fund these needed improvements through assistance by the State of California as well as with donations from local casinos.[41] With a plan for funding for a runway expansion, the terminal project became the prime focus.

The County decided to finance the terminal through a lease-back program whereby a developer would pay for the construction and the Couty would lease the terminal over a set period of time. It was presumed that rental income from commercial spaces in the terminal would cover the lease payments, thus negating the requirement for tax-payer funding. Various bids for the terminal were submitted. In 1968, 19 proposals were submitted with International Aviation Facilities, Inc. (IAF) provided the preferred proposal.[42] Shortly after, a rendering of an A-frame design was proposed.[43]

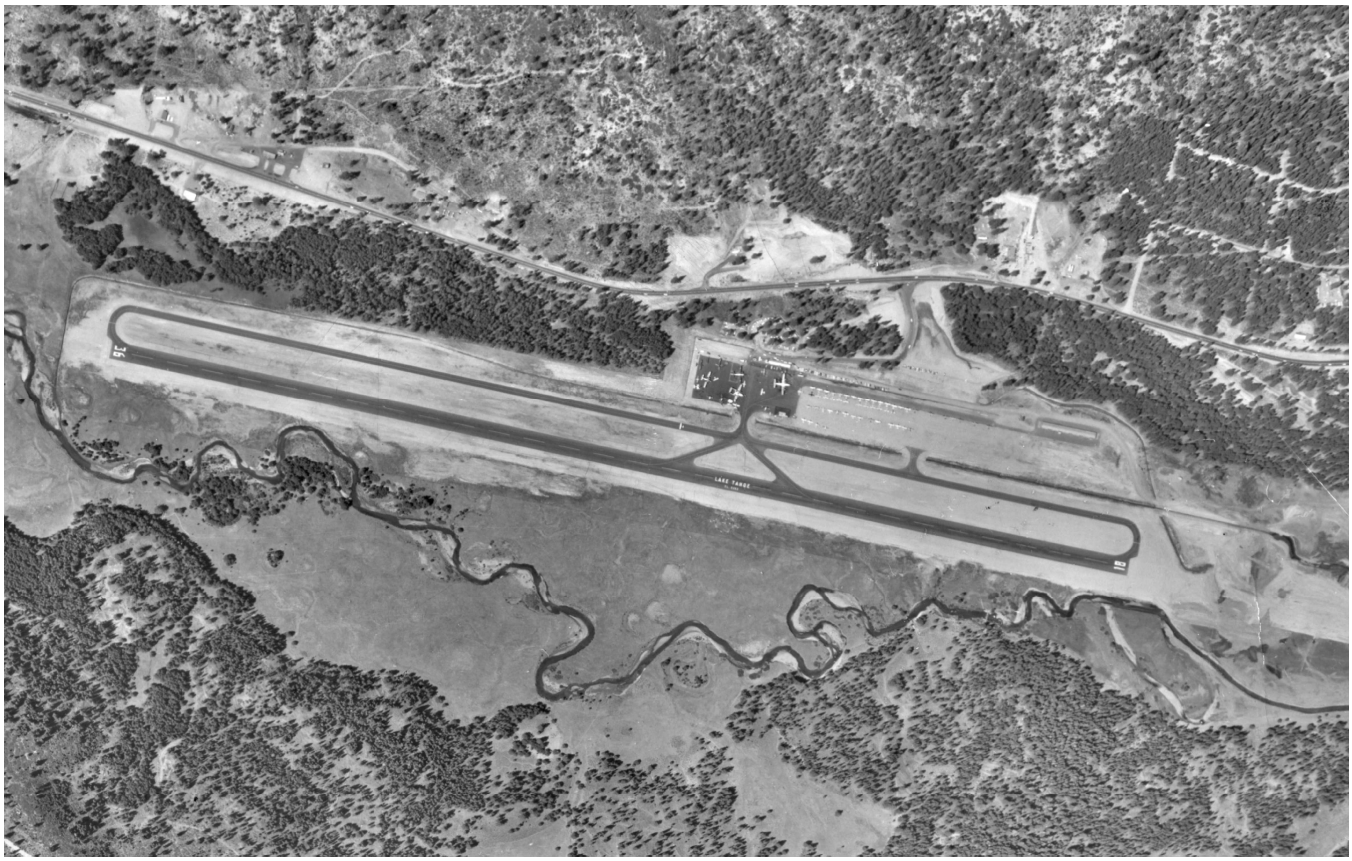


Figure 8. Aerial view of the airport in 1962, only 3 years after it opened. North is to the right. (UC Santa Barbara Aerial Archive, 1962)

The runway expansion was dedicated in October 1968, but only a few months after announcing the winning proposal from IAF, progress on the terminal design was stymied. At the time, the issue was reported to be "trouble coming up with an architectural design acceptable to local agencies who want it to be compatible with the Tahoe Area."[44] At the same time, other reports noted that the County wanted to formalize a handoff to the City prior to undertaking the terminal project.[45] This second justification for delay seems to be the more accurate, as shortly thereafter in June 1969,[46] plans were drawn up for the current terminal showing a design that was remarkably similar to the rendering published in August 1968.[47]

Construction on the terminal began in early 1970 after removal of the temporary terminal building. It was constructed by Gil Construction of Pacheco[48] at a cost of approximately $800,000, with structural engineering design by AV Colosi and Associates of Oakland.[49] After years of waiting for a permanent terminal, the final completion and dedication of the building was further delayed as disputes over the funding and financing model for terminal construction festered between county supervisors.[50] Regardless, the terminal finally opened to the public in July 1970.[51]

When the terminal opened in 1970, the airport facilities consisted of the terminal building at the half-way point of the runway, a grouping of three hangars at the north end of the runway (a roughly square hangar, a short and wide rectangular hangar, and a long, narrow rectangular hangar), and an air traffic control tower located between the terminal and the hangars.[52] By 1973, there was also a small maintenance facility just south of the terminal (part of the current maintenance building) as well as the Fixed Base Operator building north of the terminal and another square-plan hangar at the north end of the runway (**Figure 9**).



Figure 9. Aerial view of the airport in 1973. The terminal building is visible and notable by the shadow cast by the steeply pitched A-frame center section. Hangars 1 and 3 are part of the grouping to the top-right. The FBO building is between the hangars and the terminal. The maintenance building is south of the terminal. North is to the right. (UC Santa Barbara Aerial Archive, 1973)

Then, in 1982, the City assumed control of the airport and further expansion took place. By 1987, the parking lot was graded and paved and the maintenance building was expanded slightly to the west. After that the most substantial additions to the airport were construction of the south hangars in 1994.[53,54] Other smaller modifications include installation of the helicopter operator's building (between 1998 and 2004), removal of several hangars at the north end of the runway (between 2004 and 2007) and construction of a new hangar at the north end of the runway (between 2007 and 2012.) A timeline of airport development is presented in **Table 1.**

Table 1: Lake Tahoe Airport Construction History

Date	Alteration / Change	Source
1957	Airfield is surveyed	July 1957 Survey Drawings, on file with Lake Tahoe Airprot
1959	5,900-foot runway is constructed, airfield opens	Lake Tahoe Airport Archive, promotional brochure, August 1963
1960	Low, rectangular hangars are constructed at the north end of the runway, original temporary terminal building is constructed of prefabricated buildings at the west side of the runway	"The Lake Tahoe Airport," *Tahoe Realty News,* May 1, 1960.

Date	Alteration / Change	Source
1962	Runway is expanded to 8,540 feet long and 100-feet wide	"FAAP's at Tahoe, Too," promotional brochure, August 1963.
1963	Hangar 1 constructed (assumed)	"Airport Terminal Proposal Rejected by Supervisors," *Tahoe Daily Tribune,* June 11, 1963, 1.
1964	Air Traffic Control Tower is constructed by FAA	"Nearing Completion," *Tahoe Daily Tribune,* October 5, 1964.
1969	An additional hangar is added to the north runway at this time, plans are drawn up by AV Colosi for the terminal building, the runway is further expanded and updated to accommodate 727 jets	"County Receives Money for Tahoe Airport Runway Project," *Placerville Mountain Democrat,* July 20, 1968, 1.
1970	Terminal building opens	"Old and New," *Placerville Mountain Democrat,* July 16, 1970, 36.
1973	By this time the original portion of the maintenance building is in place, as is the Fixed Base Operator building, the parking lot, and Hangar 3	UCSB Framefinder, "CAS-3596, frame 134," July 25, 1973
1994	South hangars are installed	Architectural Plan on file with the Lake Tahoe Airport
2004	Air traffic control tower is shuttered on October 1. By this time, the helicopter operator's building has been constructed	"Tour," *Placerville Mountain Democrat,* August 12, 2005, 21. Google Earth Aerial Images (June 2004)
2007	Between 2004 and 2007, the original long, rectangular hangars at the north end of the runway have been demolished	Google Earth Aerial Images (June 2007)
2012	North Hangar 2 is constructed between 2007 and 2012	Google Earth Aerial Images (July 2012)

Associated Design Professionals

Charles Luckman (1909-1999) and Charles Luckman Associates[55]

Charles Luckman Associates is credited with the first airport Master Plan in the early 1960s.

Charles Luckman was born in 1909 in Kansas City, Missouri. His early professional career began in Chicago when he accepted a job as a draftsman in an architect's office. This inspired him to enroll in the architecture program at the University of Illinois in 1927. While there, he met his future business partner William Pereira.

Graduating from school in the early years of the Great Depression, Luckman put architecture aside in 1931 for a ready job at Colgate-Palmolive-Peet as a draftsman in their advertising department. He soon moved to sales, an area in which he excelled. Propelled by strong results in soap sales at Colgate, he was hired by Pepsodent in 1935 where he made further professional gains settling a labor dispute with the National Association of Retail Druggists over pricing of Pepsodent toothpaste. By 1936, he was vice-president in charge of sales followed in 1941 with a promotion to executive vice-president. In 1943, at the age of 34, he was named president of the company.

When Lever Brothers acquired Pepsodent in 1944, Luckman became a vice-president at his new company. In 1946, he was named president of Lever Brothers' (now Unilever) United States division. The next few years were a bit tumultuous as Unilever lost market dominance in key product areas to its rival Proctor and Gamble. By 1949 the company was losing money and in 1950, Luckman resigned.

It was then, at the age of 41, that Luckman returned to his first career in architecture. His first venture was joining former classmate William Pereira at his firm in Los Angeles. The Pereira & Luckman partnership was quite successful and resulted in a number of notable buildings including the Theme Building at Los Angeles International Airport. The partnership dissolved in 1958 and Luckman formed his own firm, Charles Luckman Associates (CLA). Within 10 years, CLA was one of the country's five largest architecture firms. Their credits include Madison Square Gardens (New York City), the Prudential Center (Boston), NASA's manned flight center (Houston), and the Forum (Los Angeles), among many others.

James Luckman, Charles' second son, became president of CLA in 1968. That same year the firm merged with Ogden Corporation. It was a short-lived merger which was dissolved in 1973. When Charles Luckman retired in 1977, the firm was reorganized as the Luckman Partnership. This firm was led by James until his retirement in 1991.

Charles Luckman received many accolades throughout his professional architectural career, both for his designs and for his leadership within the field. He retired from CLA in 1977. Charles Luckman died in Los Angeles in 1999 at the age of 89. Charles Luckman and CLA are considered masters of architectural design.

Reinhard W. Brandley (1923-2022), Engineer[56]

The 1967 airport master plan update is credited to engineer Reinhard W. Brandley.

Reinhard Brandley was born in Stirling, Alberta, Canada in 1923. In this small frontier town that was established by his grandfather in 1898, he grew up farming with his family. He left Stirling in 1941 to study Civil Engineering at the University of Alberta. After earning a Master's degree he accepted a teaching fellowship at Harvard University. During his four years at Harvard, he earned a PhD in Civil Engineering, with a thesis focused on airfield pavement design and evaluation. It was during this course of study that he developed the Brandley Fatigue Analysis methodology for the evaluation and design of airfield pavements.

After Harvard, Brandley returned to Canada, assuming an Assistant Professorship at the University of Saskatchewan. This was a short-lived professional stint as he soon moved to Sacramento, California to join the O.J. Porter Company as Chief Engineer in charge of Geotechnical Engineering Design. He also ran their materials testing laboratory. In 1953, Brandley founded his own firm, Brandley Engineering.

Brandley's professional career focused on airport design. His projects included many California, as well as in Illinois, Kentucky, Tennessee, Utah, Florida, Hawaii, and even Iran. Many of the designs and specifications that he developed were adopted by the FAA as design standards. His work in the region includes as a consulting engineer for the City of Sacramento,[57] Bryant Field in Bridgeport[58], Mammoth-Yosemite Airport,[59] and Truckee Tahoe Airport.[60]

Reinhard Brandley died in Loomis, California in 2022. Reinhard Brandley is considered a master of engineering design.

Regulatory Framework

National Register of Historic Places

A property is eligible for listing in the National Register of Historic Places (National Register) if it meets the National Register listing criteria at 36 CFR 60.4, as stated below:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and that:

A) Are associated with events that have made a significant contribution to the broad patterns of our history, or
B) Are associated with the lives of persons significant in our past, or
C) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
D) Have yielded, or may be likely to yield, information important in prehistory or history

In addition to qualifying for listing under at least one of the National Register criteria, a property must be shown to have sufficient historic integrity. The concept of integrity is essential to identifying the important physical characteristics of historic resources and in evaluating adverse changes to them. Integrity is defined as "the authenticity of an historic resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance." The same seven variables or aspects that define integrity—location, design, setting, materials, workmanship, feeling and association—are used to evaluate a resource's eligibility for listing in the National Register.

California Register of Historical Resources

To be eligible for the California Register of Historical Resources (California Register) a historical resource must be significant under one or more of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important to prehistory or history.

Local Designation - TRPA

South Lake Tahoe does not have its own set of local designation criteria. Rather, the municipal code refers to the Tahoe Regional Planning Authority (TRPA) Code of Ordinances.

The TRPA has adopted criteria similar to those including in the National and California registers related to association with events, people, and design. Specifically, Chapter 67.6 of the TRPA Code of Ordinances states:

> "Sites, objects, structures, districts or other resources, eligible for designation as resources of historical, cultural, archeological, paleontological, or architectural significance locally, regionally, state-wide or nationally, shall meet at least one of the criteria provided below."

1. Resources Associated with Historically Significant Events and Sites
   Resources shall exemplify the broad cultural, political, economic, social, civic, or military history of the region, the states, or the nation, or be associated with events that have made a significant contribution to the broad patterns of history, including regional history. Such resources shall meet one or more of the following criteria:
   A. Association with an important community function in the past;
   B. Association with a memorable happening in the past; or
   C. Contain outstanding qualities reminiscent of an early stage of development in the region.

2. Resources Associated with Significant Persons
   Resources that are associated with the lives of persons significant in history, including regional history, such as:
   A. Buildings or structures associated with a locally, regionally, or nationally known person;
   B. Notable examples, or best surviving works, of a pioneer architect, designer, or master builder; or
   C. Structures associated with the life or work of significant persons.

3. Resources Embodying Distinctive Characteristics
   Resources that embody the distinctive characteristics of a type, period, or method of construction that possess high artistic values or that represent a significant and distinguishable entity but whose components may lack individual distinction. Works of a master builder, designer, or architect also are eligible. Resources may be classified as significant if they are a prototype of, or a representative example of, a period style, architectural movement, or method of construction unique in the region, the states, or the nation.

4. State and Federal Guidelines
   Archeological or paleontological resources protected or eligible for protection under state or federal guidelines.

5. Prehistoric Sites
   Sites where prehistoric archaeological or paleontological resources that may contribute to the basic understanding of early cultural or biological development in the region.

Significance Evaluation

The Lake Tahoe Airport is evaluated below for potential historical significance according to National Register Criteria A through D, California Register Criteria 1 through 4 and TRPA criteria 1-3 and 5.

Criteria A/1/1 – Events

The Lake Tahoe Airport was constructed only five months before the 1960 Winter Olympic Games. While not built to exclusively serve the games, the airport was an immediate success and remained open during the games to provide transportation. After the games it remained popular with small commercial and private aircraft, providing close access to the casinos just across the state line as well as the recreational venues in the southern Lake Tahoe basin. As a regional transportation hub, it serves a relatively small market of private and commuter planes, most of which use the airport between June and August each year. The airport provides convenience but does not appear to have influenced development of the South Lake Tahoe area or of the region more broadly, which has been more profoundly influenced by the growth in tourism than any other factor. Aside from the association of its initial construction with the 1960 Olympic Games, there do not appear to be any other notable or lasting associations between the airport and events important in local or regional history. As such, the Lake Tahoe Airport is recommended ineligible as a historic resource at any level for associations with important events or trends.

Criteria B/2/2 – People

Research did not uncover any particular persons who have made a notable contribution to local, regional, or national history. There have been a number of airport managers, under both El Dorado County and then City of South Lake Tahoe operation, however none appear to have made significant contributions to history or to aviation in the area. For these reasons, the Lake Tahoe Airport is recommended ineligible as a historic resource at any level for associations with the productive life of historically important individuals.

Criteria C/3/3 – Design

The Lake Tahoe Airport does have associations with two notable design professionals. The original master plan for the airport is attributed to Charles Luckman Associates, a master architecture and design firm. This firm is mentioned in several newspaper accounts of the day as having been hired for the job and as making recommendations for airport development. However, this first master planning effort was happening contemporaneously with the airport's opening and initial period of operation. Therefore, the plan was not reflected when the runways were laid out in 1959, nor was it reflected during the 1960 Winter Olympic Games, two important milestones in the airport's early existence. Indeed, no images or direct references to any specific buildings or implemented recommendations were noted in any of these newspaper accounts. No copy of the final master plan was on file at the airport. It is unclear what, if any, of Luckman's master plan was ever implemented nor if any portions of that plan remain today.

In 1967, less than a decade after the airport opened, the master plan was updated to address needed improvements to accommodate new 727 jets. The master plan update also reinforced the need for a proper terminal to replace the prefabricated buildings that had been relocated to the site in the early 1960s to serve as terminal facilities. The Airport hired Reinhard Brandley, who had contributed to airport planning for many regional airports throughout the state. Little is known about this master plan effort or what Brandley produced under his contract. Because he was known for his innovative runway engineering solutions[61] it is assumed that his major contributions to the airport's development are associated with the runway specifically as opposed to any overarching, cohesive master plan. Indeed, since 1967, there have been several buildings constructed, including a terminal building, but none are attributed to Brandley and none share any design characteristics that would unite them as part of a specific vision or development plan.

As it appears today, the airport represents a series of buildings and structures that were built or assembled over the span of the last 60+ years. None share a particular architectural design language, nor do they appear to have any relation other than they all support various components of airport operation. Each is reflective of its period of construction or its function. In terms of a master plan, there does not appear to be a comprehensive design that has guided development of the airport. The involvement of several notable design professionals – Charles Luckman Associates and Reinhard Brandley – is interesting but the airport does not appear to reflect any lasting contribution of these professionals in its current appearance. The layout of the airport is logical, common, and reflective of the particular needs of the site and the facility. For these reasons, the Lake Tahoe Airport is recommended ineligible as a historic resource at any level for its design or for its association with master design professionals.

Criteria D/4/5 – Information Potential

While most often applied to archaeological districts and sites, Criterion D/4/5 can also apply to buildings, structures, and objects that contain important information. For these types of properties to be eligible, they themselves must be, or must have been, the principal source of the important information, and the information must be considered important.

The Lake Tahoe Airport does not appear to have the potential to yield significant information that would expand our current knowledge or theories of design, methods of construction, operation, or other information that is not already known about the period in which the complex was constructed, particular method of construction, or design. The property reflects common building practices and uses typical materials that would be expected for a mid-20th century airport. These methods and

materials follow convention and are well documented. Therefore, the Lake Tahoe Airport does not appear to possess individual significance under Criterion D/4/5.

Integrity

In addition to being eligible for listing under at least one of the National, California, or TRPA register criteria, a property must also retain sufficient integrity to convey its historical significance. There are seven aspects to consider when evaluating the integrity of a property: location, design, setting, materials, workmanship, feeling, and association. As discussed above, the Lake Tahoe Airport does not appear to possess significance under any criteria. Therefore, no assessment of integrity is required.

Summary

As a complex, the Lake Tahoe Airport is recommended ineligible for listing on the National Register, California Register, or as a local historic resource as defined by the TRPA local register. It does not qualify as a historical resource for the purposes of CEQA review.

***B12. References:** (Continued from page 2)

[1] Mountain West Aviation serves as the Airport's FBO and offers full-service fueling; line services; overnight hangar rental; and other aircraft, pilot, and passenger support services. The FBO is also contracted to be a provider of aviation fuel for the U.S. federal government. This arrangement provides military aircraft and other government departments access to specific fuel prices established by the U.S. government. The lease agreement with Mountain West Aviation lasts through 2042.

[2] City of South Lake Tahoe, *General Plan Update, Draft Environmental Impact Report,* prepared by PMC, September 2010 (SCH: 2009092049), 4.10-6 – 4.10-7. https://cityofslt.us/DocumentCenter/View/15125/General-Plan-Draft-Environmental-Impact-Report?bidId=.

[3] Tahoe Fund, "Tahoe's Environmental History," accessed May 20, 2025.

[4] "Tahoe's Environmental History."

[5] "Tahoe's Environmental History."

[6] Judy DePuy, "History: Truckee's Hilltop and Its Future," *Sierra Sun,* January 23, 2023. https://www.sierrasun.com/news/history-truckees-hilltop-and-its-future/

[7] "Sierra Heritage: History of California Skiing," Tahoetopia.com, accessed May 20, 2025. https://tahoetopia.com/news/sierra-heritage-history-california-skiing.

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[9] Sugarbowl, "Skiing Happy Since 1939," accessed May 20, 2025. https://www.sugarbowl.com/history

[10] Palisades Tahoe, "History Runs Deep," accessed May 20, 2025. https://www.palisadestahoe.com/explore/our-history

[11] Jenny Goldsmith, "2020 Hindsight: Looking Back on 100 Years of Historical Events at Lake Tahoe," *Tahoe Daily Tribune,* February 27, 2020.

[12] "45 Years Later – Lake Tahoe Feels Ripples of 1960 Games," *The Union,* March 3, 2005. Accessed May 20, 2025. https://www.theunion.com/news/local-news/45-years-later-lake-tahoe-feels-ripples-of-1960-games/article_7747cd38-34aa-5673-8d1d-03f99da21355.html.

[13] "45 Years Later."

[14] Miranda Jacobson, "Taking Lake Tahoe to New Heights: Development History in the Basin," *Sierra Sun,* December 27, 2022, accessed May 20, 2025. https://www.sierrasun.com/news/taking-lake-tahoe-to-new-heights-development-history-in-the-basin/.

[15] Lake Tahoe Airport, "History of Lake Tahoe's Airports," October 18, 2018, 2. https://cityofslt.us/DocumentCenter/View/12754/10182018_AIRPORT-HISTORY.

[16] "History and Reason for Lake Tahoe Airport Master Plan Listed," *Tahoe Sierra Tribune,* October 22, 1959, 4.

[17] "History of Lake Tahoe's Airports," 2.

[18] "Airport Manager Operator Term Master Plan as Not Realistic," *Tahoe Daily Tribune,* September 3, 1959.

[19] Promotional brochure, August 1963.

[20] "Airport Work Reprogramming Approved; Lights, Beacons scheduled for November 15," *Tahoe Mountain Tribune,* August 27, 1959.

[21] "1170 Operations Reported for Moth at Tahoe Airport," *Tahoe Mountain Tribune,* December 1, 1959.

[22] "History and Reason," October 22, 1959.

[23] The Lake Tahoe Airport has two scrapbooks of newspaper clippings that informed this statement. While most clippings are dated, many lack references to a specific publication. It is assumed that most are attributed to the *Tahoe Sierra Tribune* or the *Tahoe Daily Tribune*.

[24] "History and Reason," October 22, 1959.

[25] "The Lake Tahoe Airport," *Tahoe Realty News,* May 1, 1960.

[26] "The Lake Tahoe Airport," May 1, 1960.

[27] "County Seeks Lease-Back Offers for Tahoe Airport Terminal," Placerville *Mountain Democrat,* April 4, 1968, A3.

[28] "FAAP's at Tahoe, Too," promotional brochure, August 1963.

[29] The dating of this hangar is based on comparisons of a 1962 aerial photograph where no such hangar is shown and a 1964 newspaper photo depicting the hangar in operations prior to construction of the control tower.

[30] In June 1963, Bridgeford Flying Services was under a lease agreement to construct a hangar at the airport. An article from that time noted that it had yet to comply. Based on the dimensions and construction described, this hangar may be Hangar 1. "Airport Terminal Proposal Rejected by Supervisors," *Tahoe Daily Tribune,* June 11, 1963, 1.

[31] "FAA Tower at Tahoe Easily Justifies its Construction, "*Tahoe Daily Tribune,* November 4, 1965, 12.

[32] "FAA Tower," *Tahoe Daily Tribune,* November 4, 1965.

[33] "Nearing Completion," *Tahoe Daily Tribune,* October 5, 1964.

[34] "Proposed Terminal," *Tahoe Daily Tribune,* January 26, 1965.

[35] "Airport Terminal Proposal Rejected," *Tahoe Daily Tribune,* June 11, 1963, 1.

[36] "Supervisors See Big Future for Airport," *Tahoe Daily Tribune,* July 1, 1965.

[37] "City Asked to Take Over Tahoe Airport Operation," *Tahoe Daily Tribune,* December 2, 1965.

[38] "Should City Take Over Lake Tahoe's Airport," *Tahoe Daily Tribune,* January 6, 1966.

[39] "County Orders Updated Master Plan for Tahoe Airport," *Placerville Mountain Democrat,* October 12, 1967, 1.

[40] "County Orders," *Placerville Mountain Democrat,* October 12, 1967.

[41] "County Receives Money for Tahoe Airport Runway Project," *Placerville Mountain Democrat,* July 20, 1968, 1.

[42] "County Considering Lease-Back for New Tahoe Airport Terminal," *Placerville Mountain Democrat,* August 1, 1968, 1 & 3.

[43] "A-Frame Plus," *Placerville Mountain Democrat,* August 8, 1968, 41.

[44] Ceremonies Friday Will Re-Open Tahoe Airport," *Placerville Mountain Democrat,* October 24, 1968, 12.

[45] "A-Frame Plus," *Placerville Mountain Democrat,* August 8, 1968, 41.

[46] "Architect for Tahoe Air Terminal," *Placerville Mountain Democrat,* February 13, 1969, 3.

[47] "Structural Plan," prepared by *AV Colosi and Associates*, dated June 16, 1969, on file with the Lake Tahoe Airport.

[48] "Contract Let for Tahoe Airport Terminal Building," *Placerville Mountain Democrat,* August 7, 1969, 27.

[49] "Architect for Tahoe," *Placerville Mountain Democrat,* February 13, 1969.

[50] "No Water – But Tahoe Airport Terminal Opening on Weekend," *Placerville Mountain Democrat,* May 21, 1970, 10.

[51] "Old and New," *Placerville Mountain Democrat,* July 16, 1970, 36.

[52] All these buildings, minus the terminal, are shown on a 1969 aerial as viewed in Google Earth.

[53] "Pilots Now Have Place to Store Planes," *Tahoe Daily Tribune,* date unknown.

[54] Architectural Plans, September 1993. On file with the Lake Tahoe Airport.

[55] Unless otherwise note, this material is summarized from the biographical information about Charles Luckman that precedes the *Charles Luckman Papers, 1908-2000* archive, as presented by the Online Archive of California. Accessed April 17, 2025. https://oac.cdlib.org/findaid/ark:/13030/c8057gjv/.

[56] Unless otherwise noted, the biography for Reinard W. Brandley is summarized from the obituary provided by Heritage Oaks Memorial Chapel in Loomis, California. Accessed April 17, 2025. https://obits.heritageoaksmemorialchapel.com/reinard-brandley.

[57] Arthur S. Schai, Jaquith Industries, Inc., "The Design, Installation and Maintenance of In-Pavement Airport Lighting," 1986, 13.

[58] Lara Kirkner, "Big Bucks for Bryant," *The Sheet,* March 16, 2012. https://thesheetnews.com/2012/03/16/big-bucks-for-bryant/.

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[60] Truckee Tahoe Airport District, Board of Directors, "Agenda Item Summary," May 2014. https://truckeetahoeairport.com/board_meetings/14/view_file?file=tab+09+-+engineering+activities+staff+report+07.18.14.pdf.

[61] Arthur S. Schai, "The Design, Installation and Maintenance of In-Pavement Airport Lighting," (Jaquith Industries, Inc., 1986), 13. https://www.faa.gov/sites/faa.gov/files/airports/engineering/airport_lighting/schai-airport-lighting.pdf.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code Reviewer Date

Page 1 of 18 ***Resource Name or #:** Lake Tahoe Airport Terminal Building
P1. Other Identifier: South Lake Tahoe City Hall
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County** El Dorado
***b. USGS 7.5' Quad** South Lake Tahoe **Date** 2021 **T** 12N ; **R** 18E ; ¼ **of** ¼ **of Sec** 9 and 16 ; **B.M.** MDM
c. Address 1901 Lisa Maloff Way City South Lake Tahoe Zip 96150
d. UTM: Zone 11S , 239932.99 mE/ 4309128.89 mN; NAD 83
e. Other Locational Data: APNs 032-090-006, 032-100-004, 033-050-006, -011 and -020.

***P3a. Description:** The Lake Tahoe Airport (airport) is a small publicly owned, general aviation airport catering to privately-owned aircraft in South Lake Tahoe. It is located at an elevation of 6,260 feet and sits on approximately 350 acres immediately adjacent to the Upper Truckee River, approximately 3 miles south of Lake Tahoe. The terminal building is a rectangular plan, two-and three-story A-frame style, wood framed commercial building located at the western edge of the airport apron (**Figure 1**). It contains nearly 30,000 square feet of office, restaurant, and administrative space. The building is clad in stucco with wood trim. The building is divided into three sections: a steeply pitched central triangular mass and two flanking rectangular masses. The building wings are covered with a flat roof that is hidden by shingle-covered, faux-mansard parapets that make the wings appear particularly heavy and short. Additionally, the building is sited at the edge of a graded slope with the first floor at the same level as the runway while the main entry is on the second floor, at grade with the access road.

***P3b. Resource Attributes:** HP6 (1-3 story commercial building)
***P4. Resources Present:** ☒ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)



P5b. Description of Photo:
East façade of the former terminal building, facing west (ESA, 2025)

***P6. Date Constructed/Age and Source:**
☒ Historic ☐ Prehistoric
☐ Both
Various:
1970 – terminal building

***P7. Owner and Address:**
City of South Lake Tahoe
1052 Tata Lane
South Lake Tahoe, CA 96150

P8. Recorded by: Becky Urbano, ESA
180 Grand Avenue, Suite 1050
Oakland, CA 94610

***P9. Date Recorded:** March 20, 2025

***P10. Survey Type:** Intensive

***P11. Report Citation**: n/a

***Attachments:** ☐ NONE ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record
☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record
☐ Artifact Record ☐ Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** Lake Tahoe Airport Terminal Building ***NRHP Status Code** 3CS
Page 2 of 18
B1. Historic Name: Lake Tahoe Airport Terminal Building
B2. Common Name: South Lake Tahoe City Hall
B3. Original Use: Aviation B4. Present Use: Aviation and Local Government
***B5. Architectural Style:** A-Frame
***B6. Construction History:** (Construction date, alterations, and date of alterations)
The building was constructed and opened to the public in 1970. See **Table 1** for a development history of the building.

***B7. Moved?** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** **Original Location:**
***B8. Related Features:** Lake Tahoe Airport (documented separately)

B9a. Architect: A.V. Colosi and Associates (structural engineer) b. Builder: Gil Construction
***B10. Significance: Theme** Architecture – Commercial Design **Area** Lake Tahoe Region
Period of Significance 1970 **Property Type** Building **Applicable Criteria** 3
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Lake Tahoe Terminal Building is recommended individually eligible for listing on the California Register of Historical Resources (California Register) under Criterion 3 for its application of the regionally significant A-frame design to a commercial building. While the building has been modified, including interior reconfiguration and alterations to the fenestration pattern on the primary (west) façade, it retains sufficient integrity for listing in the California Register.

The building is not recommended eligible for the National Register of Historic Places (National Register) as the building has been modified from its original form through interior changes and alterations to window openings and fenestration patterns. As such it does not retain sufficient integrity for National Register listing.

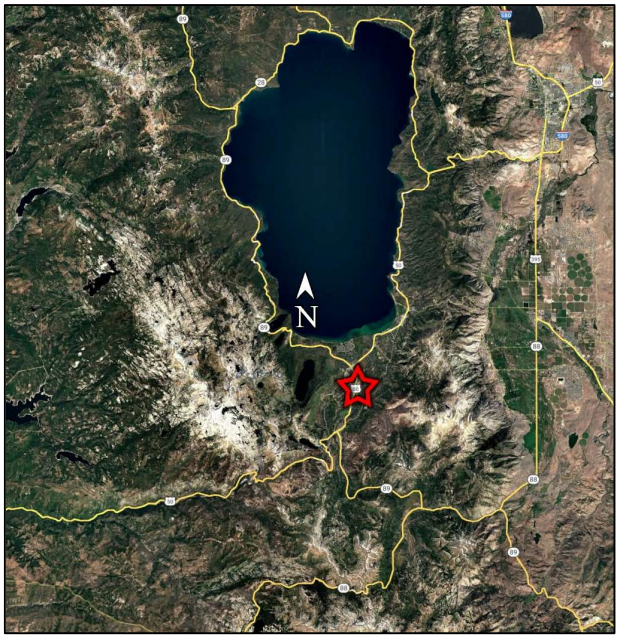
Continued on page 3.

B11. Additional Resource Attributes: (List attributes and codes) HP4 (ancillary building); HP14 (government building); HP39 (other-airport)

***B12. References:**
See page 16

B13. Remarks:

***B14. Evaluator:** Becky Urbano, ESA
***Date of Evaluation:** May 2025



***Recorded by:** Becky Urbano, ESA ***Date:** May 2025 ☒ Continuation ☐ Update

***P3a. Description:** (Continued from page 1)

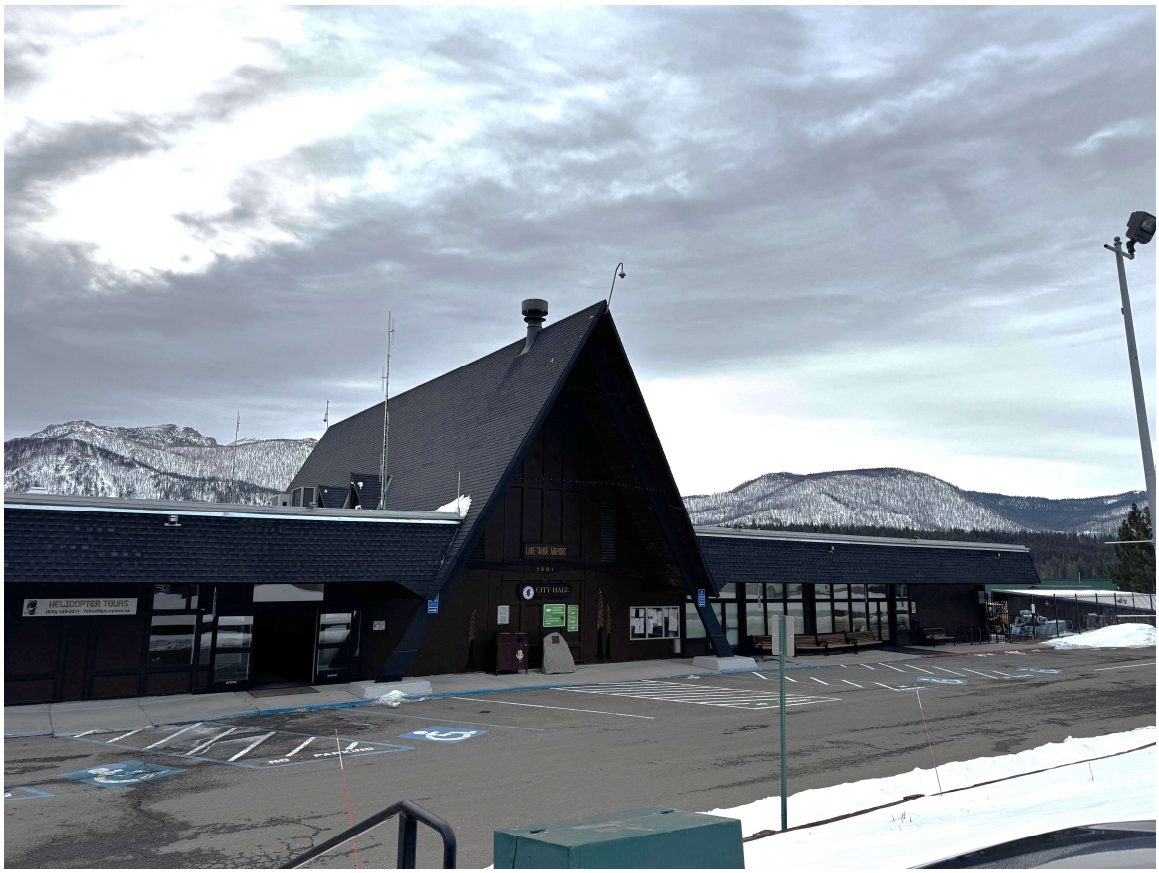


Figure 1. Primary (west) façade of the Terminal Building. (ESA, 2025)

The primary (west) façade has a central two-story triangular mass that was originally glazed but the windows have been filled in (**Figure 2**). Plate glass storefront windows line west facades of the one-story north and south wings. Some of the former windows have been replaced with stucco panels. The secondary (east) façade fronts the runway (**Figure 3**). This side of the building sites on a lower grade than the front and has the central triangular mass flanked by two-story wings. This façade is composed primarily of glazed openings, including fixed windows and numerous glazed pedestrian doors to access the full-width balcony at the second floor. As such, the east façade provides open and expansive views of the runway and surrounding mountains. The north and south facades are two-stories tall with multiple groupings of an aluminum frame sliding window over a solid inset panel and under a fixed glazed transom. The City of South Lake Tahoe serves as the terminal building's primary tenant. City Hall, as well as administrative offices, are all located in the Airport terminal building.



Figure 2. Terminal Building. (ESA, 2025)



Figure 3. Secondary (east) façade of the Terminal Building. Note the at-grade pedestrian entrance. (ESA, 2025)

***Recorded by:** Becky Urbano, ESA ***Date:** May 2025 ☒ Continuation ☐ Update

The interior of the building has been modified several times to convert it from an airport terminal, with ticket desks, airline offices, concessions, and a waiting room, to its current use as airport offices and South Lake Tahoe City Hall. Overall, the interior is arranged with City Hall in the southern wing of the building on both floors, concessions such as flight tours and a restaurant (currently closed) on the second floor of the north wing, and airport offices on the first floor of the north wing. The central, A-frame mass serves as a circulation corridor and connector (**Figure 4**). As one moves from the main entrance toward the rear (east) of the building, the central volume opens up to provide expansive views of the runway and mountains (**Figures 5 and 6**). Remaining original features include exposed beams, glazed peak, and exposed wood paneling on the ceiling (**Figure 7**).

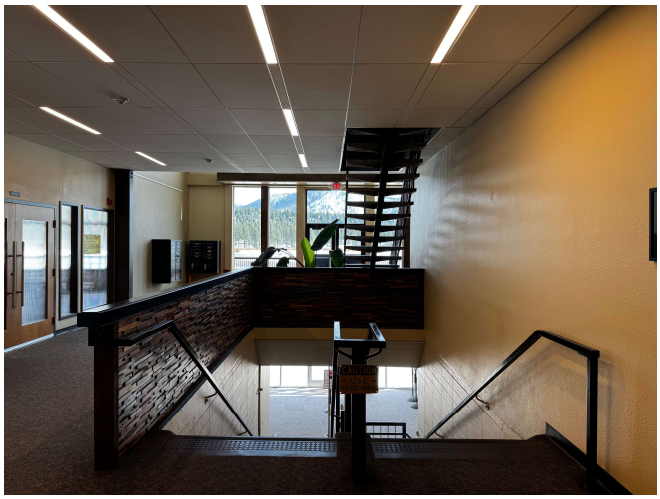


Figure 4. Central circulation corridor. (ESA, 2025)



Figure 5. At-grade pedestrian entrance. (ESA, 2025)

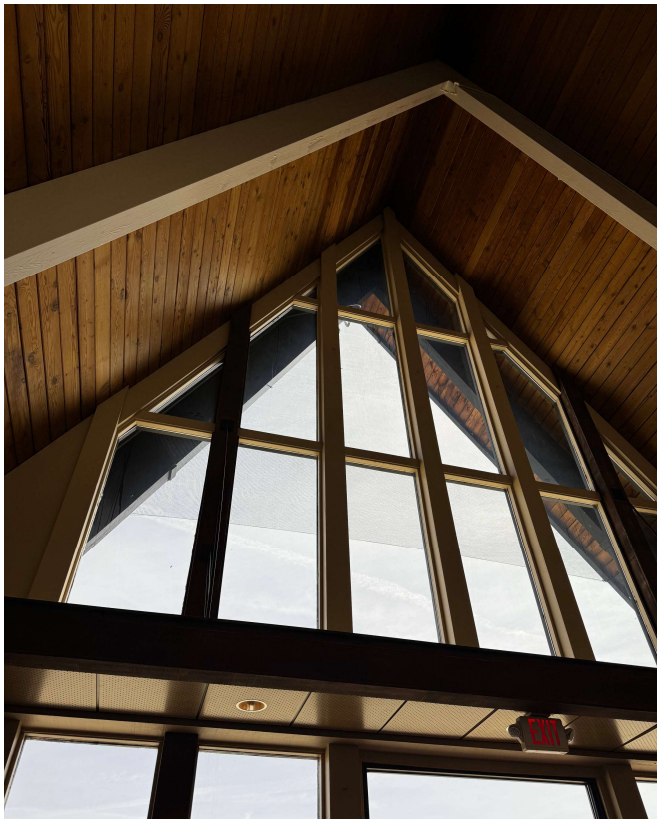


Figure 6. The east gable retains its glazing for expansive views of the runway and mountains. (ESA, 2025)

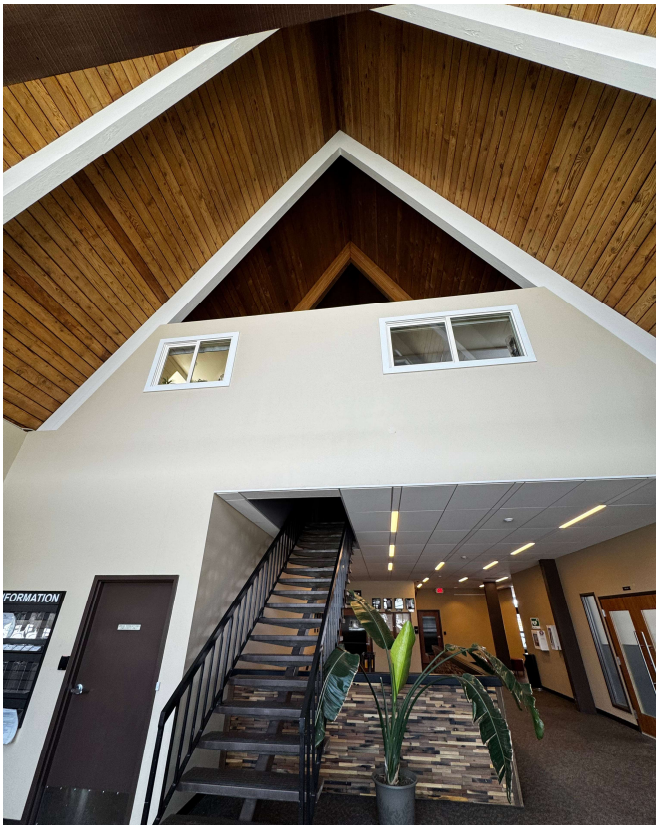


Figure 7. Exposed beams and wood paneling remain. (ESA, 2025)

The passenger waiting area was originally located on the first floor. There was direct access to the apron for loading and unloading. Today, the airport retains at-grade pedestrian access.

***B10. Significance:** (Continued from page 2)

The Lake Tahoe Airport is located in the City of South Lake Tahoe. The earliest portions of the airport were constructed in 1959, partially in preparation for the 1960 Winter Olympic Games. The terminal was constructed in 1970, in the aftermath of the Olympics and during a period of tremendous growth for the region. The following presents a brief historical context regarding development of the region and the airport as well as sub-themes related to design and engineering to support the evaluation of significance.

Regional Development

Exploration and Access

The following general historical summary of the area is excerpted from the South Lake Tahoe General Plan:[1]

> *Euroamerican contact with Native American groups living in coastal areas and the Central Valley of California began during the last half of the 18th century. The Spanish period in California lasted from about 1769 to 1821. This was a time when the Spanish missions dominated lives of both the Spanish and the Native Americans in those areas in California. However, the effect of the Spanish on the Washoe has not been documented. The Mexican Period (ca. 1821–1848) in California is an outgrowth of the Mexican Revolution, and its accompanying social and political views affected the mission system. Spanish exploration of the Central Valley did not begin until the late 1700s, and the eastern edges of the Central Valley and the Sierra Nevada were not explored until the early 1800s. In 1808 Gabriel Moraga explored the Mokelumne, Cosumnes, and American rivers, passing near modern-day Folsom. Subsequent exploration of the general area is credited to mountain men such as Jedediah Smith, who crossed the Sierra Nevada into California in 1826. Smith traveled along the American, Sacramento, and Cosumnes rivers and also probably passed through current Pleasant Valley. Other explorers such as Ewing Young, Joseph Walker, John Fremont, and Christopher "Kit" Carson soon followed Smith. In 1844, Fremont crossed the Sierra Nevada near Lake Tahoe and descended the west slope in proximity to the American River, which he eventually followed to Sutter's Fort. Many of the trails used by these early explorers and subsequent immigrants were not newly discovered routes, but rather Native American trails that were already in use.*
>
> *Early explorations of the Sierra Nevada and its flanks were soon followed by groups of immigrants moving west. The first of these immigrant groups was the Bartleson-Bidwell party that crossed the Sierra Nevada in 1841 and followed the Stanislaus River into the Central Valley. The Joseph Chiles and Joseph Walker parties followed the crossing of the Sierra Nevada by the Bartleson-Bidwell party in 1843. Chiles crossed the Sierra Nevada following the Malheur and Pit rivers into the Central Valley and then traveled south along the Sacramento River. Walker, however, traveled south along the eastern front of the Sierra Nevada to Walker Lake where he crossed into Owens Valley and eventually the Central Valley using what is now known as Walker's Pass. Subsequently, in 1844 the Stevens-Murphy party crossed the Sierra Nevada and probably is the first immigrant group to enter California via the Truckee and Bear rivers. Subsequently, the Gold Rush in 1849 dramatically increased the numbers of immigrants passing through the Lake Tahoe Basin to reach the gold fields in California.*
>
> *At the end of the 19th century and beginning of the 20th century, there was a growing demand for roads that linked local communities and also California and Nevada. Initial road construction generally followed immigrant trails and other routes used by overland stage traffic and the Pony Express. One such road connecting Placerville and Nevada was constructed near the location of South Lake Tahoe. This road eventually became Placerville Road. The passage of the State Highways Act in 1909 authorized the creation of a highway network within states and linking adjoining states. The Placerville Road was incorporated into the developing highway system. Subsequently in 1913, the Placerville Road was incorporated into the intercontinental Lincoln Highway system. The Federal Aid Highway Act of 1925 created our current system of numbered interstate highways and the Lincoln Highway became US Highway 50. The City of South Lake Tahoe was incorporated in 1965 by combining the previously unincorporated communities of Al Tahoe, Bijou, Bijou Park, Stateline, Tahoe Valley, and Tallac Village.*

Early Recreation

The majority of land within the Lake Tahoe Basin (upwards of 70%) is owned or managed by federal or state governments.[2] These lands are part of the U.S. Forest Service (Forest Service) or are units of the California or Nevada State Parks systems. This large proportion of public land ownership is the result of more than a century of active land acquisition and conservation efforts that began at the close of the 19th century as a response to clear-cutting and other destructive logging practices of the times.[3] The Forest Service established its first ranger station in the Lake Tahoe basin in 1911. The first state park (no longer extant) in the area was opened in 1927 near Tahoe City, followed the next year by D. L Bliss State Park further south.[4]

At the same time, winter recreation areas began to open near Lake Tahoe. In 1910 a wooden ski jump, presumably the first in the United States, and toboggan lift was installed near Truckee. It was called "Winter Sports Hill" and eventually "Hilltop."[5] The winter carnival and sports exhibitions near Truckee drew people from all over the California and Nevada areas through the 1920s. A second ski jump was built near Tahoe City in 1928. It was called "Tahoe Tavern." Soon thereafter, enthusiasts constructed an "Olympic-caliber hill" just a mile away from the Tahoe Tavern. This new ski hill hosted the 1932 Winter Olympic tryouts.[6] By the 1930s, rope tows made accessing the tops of ski slopes much easier.[7] The first in the basin were installed at what is now the Sugar Bowl Resort when it opened in 1939.[8]

Immediately after the war, a series of ski resorts opened all along the basin's western half: Sierra-at-Tahoe (1946), Palisades Tahoe (formerly Squaw Valley, 1949), Heavenly (1955), plus many smaller resorts. When Palisades Tahoe won the bid to host the 1960s winter Olympics Games, the Lake Tahoe Basin's reputation as a world-class recreation center was solidified.

1960 Winter Olympic Games

When Palisades Tahoe was chosen as the site for the 1960 winter Olympics, the area lacked major infrastructure to support such a large event. While the original ski resort opened in 1949, it did not yet have sufficient facilities to host an Olympic Games.[9] To prepare, the Squaw Valley Development Corporation had to construct roads, bridges, administrative buildings, hotels, restaurants, not to mention lifts, ski runs, and facilities needed to actually host the events.[10] This preparation involved numerous agencies and private entities and included completion of Highway 80 which was still under construction when the successful bid was announced.

These Olympic Games were the first to be televised and the first to use instant replay. They also introduced the world to Lake Tahoe, the Sierra Nevada mountains, and the history of the area. Following the games, the region experienced a 30-year period of sustained growth and development, primarily as a recreational and tourist destination.[11] More importantly, it transformed the area from a summer designation to a year-round destination. Construction boomed for decades but often with little oversite.

> "*Placer County, however, was unprepared to deal with the period of rapid growth that followed the 1960 Olympics. Large projects like high-rise casinos and the Tahoe Keys, which was built on the biggest filtration meadow in the basin, went in without any environmental analysis. In the 45 years since the Winter Games, the number of homes in the basin has increased five-fold, from around 7,000 in 1960 to 35,500 in 2000, according to Antonucci and the Tahoe Regional Planning Agency. The lakewide population has had even a bigger jump, growing from around 3,000 to 63,000 during the same period of time.*"[12]

One of the answers was creation of the Tahoe Regional Planning Agency (TRPA), a bi-state agency authorized by Congress to manage growth and development in the watershed.[13]

Lake Tahoe Airport Development

El Dorado County purchased the first tracts of land for the airport in 1957 from the Kyburz family who used the land for cattle and sheep ranching.[14] The early surveys were conducted in 1957 and identified a floodplain around the Upper Truckee River located just two miles from the south shore of Lake Tahoe. Planning efforts were catalyzed after the area was awarded the 1960 Winter Olympic games. This included selection of Charles Luckman Associates to prepare a Master Plan to guide airport development.[15] However, runway construction began concurrently with planning efforts. When the Tahoe Valley Airport opened on August 1, 1959,[16] it opened with no master plan document. Indeed, reports from the September 1959 dedication note that "Luckman had been operating under quite a handicap in trying to plan an airport which was already under construction.[17] That construction was facilitated with assistance from the Federal Aid to Airports Program and resulted in a 5,900-foot-long, 100-foot wide runway.[18] In spite of the airport having no night lighting, no air traffic control tower, and no hangars, the plan was for it to sustain 24-hour operation in time for the Olympics in February 1960.[19] Indeed, the airport recorded 1,170 flights in November 1959, justifying the need for an airfield to serve the area.[20]

From the beginning, El Dorado County, who operated the airport, sought support from local businesses (casinos) and the

federal government to expand airport facilities.[21] The process was often slow and piecemeal, proceeding through perpetual master planning efforts. Throughout the 1960s local newspapers discussed the need for an updated master plan, for creation of a new master plan, contracts for master plans, and overall construction of permanent facilities.[22] Still, the early years were primarily guided by the Luckman master plan which included recommendations for development of permanent commercial and terminal facilities on the east side of the runway.[23] This was never realized and through 2025, no construction beyond necessary security fencing and navigation aids have been placed east of the runway.

By 1960, the airport was serviced by a temporary terminal (at the site of the present terminal) and a permanent, rectangular hangar at the north end of the runway, near the present-day north hangars.[24] The temporary terminal was long, and narrow, measuring 120-feet by 20-feet and consisted of prefabricated structures moved to the site (**Figure 8**).[25,26] In 1962, the runway was extended to 8,540 feet and a fire and rescue building was constructed at the end of the runway.[27] Shortly thereafter, a larger hangar was added to the north end of the runway (extant).[28,29] With a longer runway, the airport could handle more and larger planes. This brought new urgency to the need for a permanent air traffic control tower. In 1964, the airport recorded more than the minimum 24,000 flights per year required to qualify for Federal Aviation Administration-supported (FAA) air traffic control.[30] By the fall, the airport was awarded funding from the FAA to both construct and staff a control tower, located on the west side of the runway.[31,32] With a proper tower and a longer runway in place, calls for construction of a proper, permanent terminal were renewed. By January 1965, designs for a terminal building were being presented to the public but no further action was taken.[33] The delay in approval of a terminal seems to stem from issues around financing construction.[34,35]

From the beginning, development and construction of the airport was undertaken through grants or money generated by the airport. El Dorado County did not dedicate substantial tax dollars toward its operation or development. When the City of South Lake Tahoe incorporated in 1965, the County immediately began discussions with the City to take over the airport.[36] Discussions over ownership and operation of the airport included conversations regarding the updates already needed to the six-year old facility: a permanent terminal and widening of the runway.[37]



Figure 8. Aerial view of the airport in 1962, only 3 years after it opened. North is to the right. (UC Santa Barbara Aerial Archive, 1962)

In 1967, the airport master plan was revised to include updated facility requirements for a new terminal as well as recommendations to expand the runways to handle 727 jets.[38] This master plan was prepared by engineer Reinhard Brandley of Sacramento.[39] Meanwhile, talks between the County and the City continued and the County secured $1.1 million to fund these needed improvements through assistance by the State of California as well as with donations from local casinos.[40] With a plan for funding for a runway expansion, the terminal project became the prime focus.

The County decided to finance the terminal through a lease-back program whereby a developer would pay for the construction and the Couty would lease the terminal over a set period of time. It was presumed that rental income from commercial spaces in the terminal would cover the lease payments, thus negating the requirement for tax-payer funding. Various bids for the

terminal were submitted. In 1968, 19 proposals were submitted with International Aviation Facilities, Inc. (IAF) provided the preferred proposal.[41] Shortly after, a rendering of an A-frame design was proposed.[42]

The runway expansion was dedicated in October 1968, but only a few months after announcing the winning proposal from IAF, progress on the terminal design was stymied. At the time, the issue was reported to be "trouble coming up with an architectural design acceptable to local agencies who want it to be compatible with the Tahoe Area."[43] At the same time, other reports noted that the County wanted to formalize a handoff to the City prior to undertaking the terminal project.[44] This second justification for delay seems to be the more accurate, as shortly thereafter in June 1969,[45] plans were drawn up for the current terminal showing a design that was remarkably similar to the rendering published in August 1968.[46]

Construction on the terminal began in early 1970 after removal of the temporary terminal building. It was constructed by Gil Construction of Pacheco[47] at a cost of approximately $800,000, with structural engineering design by AV Colosi and Associates of Oakland.[48] After years of waiting for a permanent terminal, the final completion and dedication of the building was further delayed as disputes over the funding and financing model for terminal construction festered between county supervisors.[49] Regardless, the terminal finally opened to the public in July 1970.[50]

When the terminal opened in 1970, the airport facilities consisted of the terminal building at the half-way point of the runway, a grouping of three hangars at the north end of the runway (a roughly square hangar, a short and wide rectangular hangar, and a long, narrow rectangular hangar), and an air traffic control tower located between the terminal and the hangars.[51] By 1973, there was also a small maintenance facility just south of the terminal (part of the current maintenance building) as well as the Fixed Base Operator building north of the terminal and another square-plan hangar at the north end of the runway (**Figure 9**).



Figure 10. Aerial view of the airport in 1973. The terminal building is visible and notable by the shadow cast by the steeply pitched A-frame center section. Hangars 1 and 3 are part of the grouping to the top-right. The FBO building is between the hangars and the terminal. The maintenance building is south of the terminal. North is to the right. (UC Santa Barbara Aerial Archive, 1973)

Then, in 1982, the City assumed control of the airport and further expansion took place. By 1987, the parking lot was graded and paved and the maintenance building was expanded slightly to the west. After that the most substantial additions to the airport were construction of the south hangars in 1994.[52,53] Other smaller modifications include installation of the helicopter operator's building (between 1998 and 2004), removal of several hangars at the north end of the runway (between 2004 and

2007) and construction of a new hangar at the north end of the runway (between 2007 and 2012.)

Lake Tahoe Airport Terminal

Construction History

The Lake Tahoe Airport terminal was designed conceptually in 1968 with drawings created in 1969. While no original architectural designs are directly attributable to IAF, Inc., a rendering of the company's 1968 design was published with the announcement of an award to the firm for the terminal (**Figure 10**).[54] Structural designs were completed by A.V. Colosi and Associates of Oakland, California in 1969.[55] Minimal alterations to the exterior of the building have occurred (**Table 1**). Windows on the west façade have been filled in (date unknown). The interior retains its lofted central volume with exposed beams and ceiling. However, the interior layout was modified in 2006 when most of the building was remodeled to accommodate its current use as the South Lake Tahoe City Hall and Lake Tahoe Airport offices.

Table 1: Lake Tahoe Airport Terminal Construction History

Date	Alteration / Change	Source
1968	IAF, Inc. is awarded the contract for terminal design.	Tahoe 'Port Expands," *Valley Times (North Hollywood),* August 1968, 9.
1969	Plans drawn for terminal building by AV Colosi and Associates	Structural Plans on file with the Lake Tahoe Airport
1970	Airport terminal dedicated	"Old and New," *Placerville Mountain Democrat,* July 16, 1970, 36.
1988	As-Built drawings are drafted by Robert Mason, Architect. The reason for work is not specified. As-builts show airline offices, concessions, and passenger services	Architectural Plans on file with the Lake Tahoe Airport
2005	Airport interior remodeled for use as South Lake Tahoe City Hall	Architectural Plan on file with the Lake Tahoe Airport
ca. 2006	South Lake Tahoe City Hall reopens in former terminal building	Lake Tahoe Airport, "History of Lake Tahoe's Airports," October 18, 2018, 8.

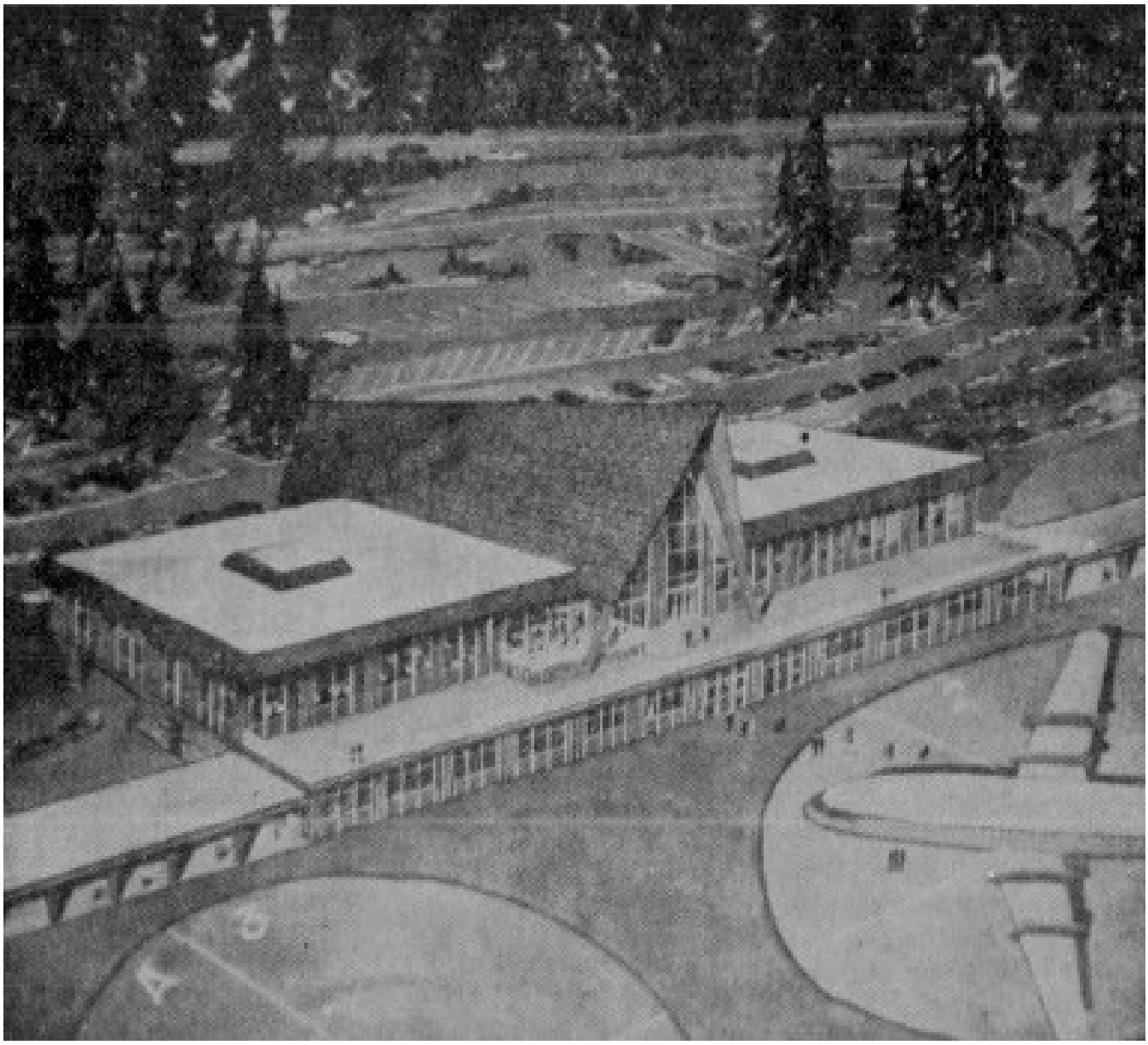


Figure 9. 1968 rendering of the proposed terminal design proposed by IAF, Inc. ("Tahoe 'Port Expands," *Valley Times,* August 7, 1968.)

A-Frame Architecture

A-frame buildings are easily identified by their steeply sloping roofs and prominent triangular form. It is a building type that developed in the early 1950s as an economical design for the rapidly expanding vacation home market.[56] Triangular roof forms have been found in traditional buildings throughout the world from Japan to Africa to the South Pacific islands and beyond. It is a strong, practical shape for simple construction that is adaptable to a wide set of geographic conditions. However, it is generally argued that the modern A-frame does not trace its roots to these designs but rather follows naturally from the idea of a simple, cost-effective type of building that can be adapted for a range of uses and conditions.[57]

In the United States, the modern A-frame can be traced to Rudolph Schindler's 1934 design for a triangular cabin for Gisela Bennati at Lake Arrowhead, California.[58] The style gained popular appeal after World War II when *Interiors* magazine selected an A-frame style design by John Campbell (Campbell and Wong) as part of its 1951 "Interiors to Come" collection.[59] Campbell called his design the "Leisure House" and it immediately spawned other articles in popular publications celebrating its ease of construction and suitability for do-it-yourself assembly.[60] The design was so popular that Campbell soon began offering a pre-

packaged kit that was offered through the 1970s.[61]

Other architect-designed examples proliferated popular design magazines in the 1950s, establishing the A-frame as a respectable design choice for vacation homes across the country. This corresponded to a period when the rapidly growing, post-World War II middle-class had both money and time to devote to recreational activities. At the same time, there were greatly expanded areas for recreation being developed on state and federal lands throughout the country along with new highways to get you there quickly and easily.[62]

The "A" shaped roof makes the design inherently strong and suitable to mountainous conditions where structural loads from heavy snowfall are a concern.[63] In the Lake Tahoe basin as in other mountain regions across the country, the design became ubiquitous, being used for houses, churches, commercial buildings, and even the 1960 Winter Olympics itself.[64] It came to symbolize the mountain recreation home of the 1960s. References to A-frames were employed in advertisements as a short-hand reference to demonstrate the modern-nature of the product being advertised or to indicate its ease of use. "No other vacation home design was so instantly recognizable and unambiguous in its connection to the leisure lifestyle."[65]

The variations of the A-frame have been classified into eight sub-types (**Figure 10**). The Lake Tahoe Airport terminal is the "A-frame with wings," subtype.

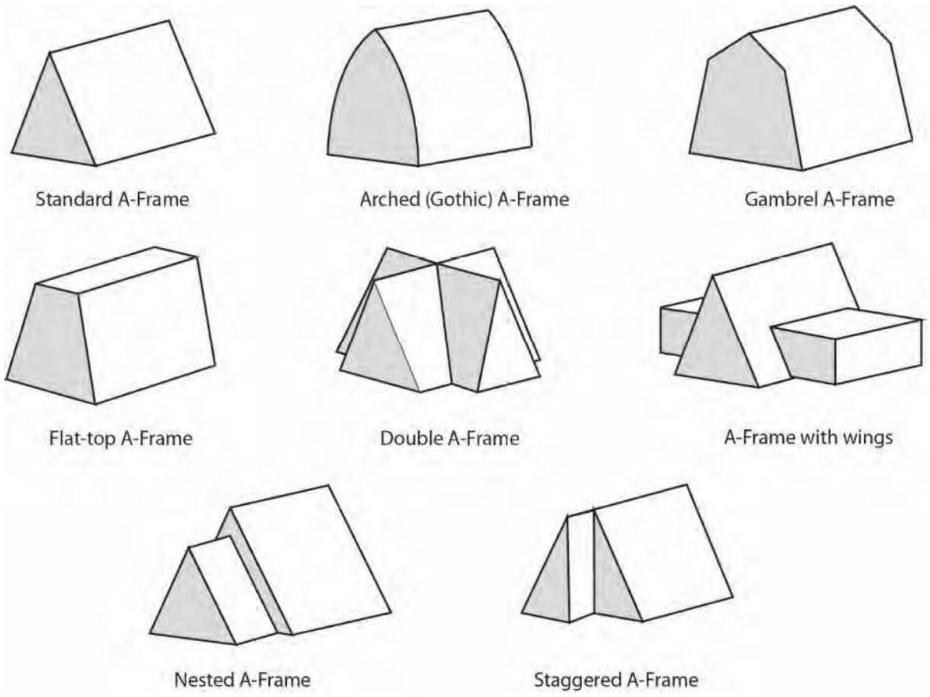


Figure 10. There are eight sub-types of A-frames. The Lake Tahoe Airport Terminal is the "A-frame with wings," subtype. (Mead and Hunt, *Historic Context of A-frame Architecture in Boulder County,* 106.)

Character-defining features of A-frame architecture include:[66]

- A-shaped roof/wall truss system;
- Deep, overhanding eaves/gable ends;
- Large glazing configurations extending across entire façade of one or more walls;
- Expansive porches/decks on front and rear walls;
- Skylights and modest dormer windows on side walls to add interior light;
- Foundations of stone, concrete, or presence of wooden or concrete piers;
- Concrete knee walls no more than two-thirds the height of the first story; and
- Rustic elements such as stone chimneys and rough-hewn elements including porches and decks

Associated Design Professionals

A.V. Colosi and Associates

A.V. Colosi and Associates is credited as the structural engineer for the construction of the Lake Tahoe Airport Terminal building.

A.V. Colosi and Associates was an engineering firm located in the San Francisco Bay Area in California.[67] Little is known about the firm. They are recredited with a number of apartment complexes in the Adams Point neighborhood of Oakland in the 1960s and early 1970s. A review of local newspapers directly attributes the following apartment complexes to the firm: 250 Montecito Avenue (1962), 695 Mariposa Avenue (1963), 499 Chetwood Street (1964), 22 Moss Avenue (1964), 240 Athol Avenue (1964), 420 Burk Street (1965), 320 Park View Terrace (1970), and a 264-unit development in Santa Clara (1970). For some projects they are credited with design and engineering, while for others the credit is for engineering only.[68] The firm is named for Albert Vincent Colosi. Archival research did not uncover any further information about the professional career of Colosi or the firm.

International Aviation Facilities, Inc.

International Aviation Facilities, Inc. was a Los Angeles-based transportation corporation "formed and owned by a number of major corporations including Goodyear Tire and Rubber, Co., Lockheed Aircraft International Inc., Glore Forgan, William R. Staats Inc., Bunke-Ramo Corp., Rucker Co., Haas and Haynie Corp., Arrowsmith Tool and Manufacturing Corp., EG and G Inc., Reynolds Electric Co., Farr Co., Brooks, Harvey and Co., Edwin W. Pauley Associates, Johnson and Turner Co., Acme Delivery Service Inc., Asbury Systems, Barton Truck Lines, Bonanza Trucking Co., Robert S. Carter Associates, and Hill-Elliott Inc."[69] Limited information on the firm could be located.

Regulatory Framework

National Register of Historic Places

A property is eligible for listing in the National Register of Historic Places (National Register) if it meets the National Register listing criteria at 36 CFR 60.4, as stated below:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and that:

A) Are associated with events that have made a significant contribution to the broad patterns of our history, or
B) Are associated with the lives of persons significant in our past, or
C) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
D) Have yielded, or may be likely to yield, information important in prehistory or history

In addition to qualifying for listing under at least one of the National Register criteria, a property must be shown to have sufficient historic integrity. The concept of integrity is essential to identifying the important physical characteristics of historic resources and in evaluating adverse changes to them. Integrity is defined as "the authenticity of an historic resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance." The same seven variables or aspects that define integrity—location, design, setting, materials, workmanship, feeling and association—are used to evaluate a resource's eligibility for listing in the National Register.

California Register of Historical Resources

To be eligible for the California Register of Historical Resources (California Register) a historical resource must be significant under one or more of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important to prehistory or history.

Local Designation - TRPA

South Lake Tahoe does not have its own set of local designation criteria. Rather, the municipal code refers to the Tahoe Regional Planning Authority (TRPA) Code of Ordinances.

The TRPA has adopted criteria similar to those including in the National and California registers related to association with events, people, and design. Specifically, Chapter 67.6 of the TRPA Code of Ordinances states:

> "Sites, objects, structures, districts or other resources, eligible for designation as resources of historical, cultural, archeological, paleontological, or architectural significance locally, regionally, state-wide or nationally, shall meet at least one of the criteria provided below."

1. Resources Associated with Historically Significant Events and Sites
   Resources shall exemplify the broad cultural, political, economic, social, civic, or military history of the region, the states, or the nation, or be associated with events that have made a significant contribution to the broad patterns of history, including regional history. Such resources shall meet one or more of the following criteria:
   A. Association with an important community function in the past;
   B. Association with a memorable happening in the past; or
   C. Contain outstanding qualities reminiscent of an early stage of development in the region.

2. Resources Associated with Significant Persons
   Resources that are associated with the lives of persons significant in history, including regional history, such as:
   A. Buildings or structures associated with a locally, regionally, or nationally known person;
   B. Notable examples, or best surviving works, of a pioneer architect, designer, or master builder; or
   C. Structures associated with the life or work of significant persons.

3. Resources Embodying Distinctive Characteristics
   Resources that embody the distinctive characteristics of a type, period, or method of construction that possess high artistic values or that represent a significant and distinguishable entity but whose components may lack individual distinction. Works of a master builder, designer, or architect also are eligible. Resources may be classified as significant if they are a prototype of, or a representative example of, a period style, architectural movement, or method of construction unique in the region, the states, or the nation.

4. State and Federal Guidelines
   Archeological or paleontological resources protected or eligible for protection under state or federal guidelines.

5. Prehistoric Sites
   Sites where prehistoric archaeological or paleontological resources that may contribute to the basic understanding of early cultural or biological development in the region.

Significance Evaluation

The Lake Tahoe Airport Terminal is evaluated below for potential historic significance according to National Register Criteria A through D, California Register Criteria 1 through 4 and TRPA criteria 1-3 and 5.

Criteria A/1/1 – Events

The Lake Tahoe Airport Terminal was constructed in 1970, 11 years after the airport first opened. It is not associated with the initial phase of development at the airport, its support of the 1960 Winter Olympic games, or with first decade of growth that followed the development of the Lake Tahoe basin as a recreation destination following the games. It shares no historically significant associations with development of the region in the early 1970s nor is the terminal associated with any period of significant expansion at the airport after its construction. Because the terminal lacks associations with these regional themes, it is recommended ineligible as a historic resource at any level for associations with important events or trends.

Criteria B/2/2 – People

Construction of a permanent terminal at the Lake Tahoe Airport was a constant thread of discussion in newspaper accounts for the first decade the airport operated. Numerous individuals championed the cause in public media but none are directly accredited with the actual construction of the terminal. Research did not uncover any historically significant people whose

productive life is best represented by the terminal building. Because there is a lack of association between the productive lives of historically significant individuals and the Lake Tahoe Airport Terminal, the building is recommended ineligible as a historic resource at any level.

Criteria C/3/3 – Design

Attribution of the architectural design of the Lake Tahoe Airport Terminal to IAF, Inc. is assumed but could not be confirmed. The structural drawings are associated with A.V. Colosi and Associates, a structural engineering firm based in Oakland. Based on comparisons between promotional renderings released prior to Colosi's involvement with the project, the design is not attributable to that firm and no other information about designers employed by IAF, Inc. could be located. Therefore, the building does not appear attributable to a master architect, engineer, or designer.

However, as a representative of A-frame architecture, the building is unique. There are other examples of commercial applications of the form both in South Lake Tahoe and in the broader mountain west, but ESA could find no other instance where it was used for an airport terminal. The choice is unusual but also highly specific to the Lake Tahoe region where the A-frame has come to symbolize recreation and leisure. Like many commercial applications, the A-frame served as both a short-hand for fun and vacation time as well as a recognizable differentiator from the standard roadside architecture.[70] Use of the A-frame form as an airport terminal serves as a form of advertising to signal to passengers that they had arrived at a recreation destination. It provided a first impression of being in a place of fun and leisure by adapting the language of mountain vacation homes in the area to serve the affluent visitors who could afford to arrive via commercial airline. On top of that, the expanses of glass that characterize the east façade allow for those visitors to enjoy expansive mountain views while they waited for their flights. The A-frame form, as adapted for the airport terminal celebrated the region's ethos and its natural beauty.

As a unique adaptation of the regional design language of A-frame architecture to an aviation terminal, the Lake Tahoe Airport Terminal is recommended eligible for listing in the National Register under Criterion C, in the California Register under Criterion 3, and the TRPA register under Criterion 3 for its design. The period of significance is 1970, corresponding to the completion of construction.

The character-defining features of the Lake Tahoe Airport Terminal as those features that exemplify its A-frame architecture:

- A-shaped roof/wall truss system;
- Deep, overhanding eaves on the central A-frame mass and faux-mansard parapet on the wings;
- Symmetrical wings that vary in height according to the terrain of the site;
- Large glazing configurations extending across entire façades (east and west);
- Expansive decks on east walls;
- Siting parallel to both the east mountains and runway;
- Modest gabled dormer windows on the north and south roof planes;
- Concrete knee walls no more than two-thirds the height of the first story;
- Open framing of the A-frame peak, visible from the interior; and
- Views through the building to the mountain and wooded setting to the east.

An assessment of integrity is presented below.

Criteria D/4/5 – Information Potential

While most often applied to archaeological districts and sites, Criterion D/4/5 can also apply to buildings, structures, and objects that contain important information. For these types of properties to be eligible, they themselves must be, or must have been, the principal source of the important information, and the information must be considered important.

The Lake Tahoe Airport Terminal does not appear to have the potential to yield significant information that would expand our current knowledge or theories of design, methods of construction, operation, or other information that is not already known about the period in which the building was constructed, particular method of construction, or design. The building reflects common building practices and uses typical materials that would be expected for its late-20th century construction date. These methods and materials follow convention and are well documented. Therefore, the Lake Tahoe Airport Terminal does not appear to possess individual significance under Criterion D/4/5.

***Recorded by:** Becky Urbano, ESA ***Date:** May 2025 ☒ Continuation ☐ Update

Integrity

In addition to being eligible for listing under at least one of the National, California, or TRPA *r*egister criteria, a property must also retain sufficient integrity to convey its historical significance. There are seven aspects to consider when evaluating the integrity of a property: location, design, setting, materials, workmanship, feeling, and association.

The Lake Tahoe Airport Terminal has not been relocated, nor has its setting within a wooded space, at the edge of a clearing for the runway and facing the surrounding mountains been altered since the period of significance in 1970. It retains a sense of being in the woods, surrounded by mature trees with views of open space and nature. Therefore, it retains integrity of location, setting, feeling, and also association with the Lake Tahoe Airport.

The building has been altered through infill of many windows on the west façade. This has reduced the original openness of the central A-frame. Infill of windows on portions of the west facades of the north and south wings has also reduced the original transparency of the design. These windows, and the expansive views they afford, are still present on the east façade. As a result, the building does have reduced integrity of design, materials, and workmanship.

Overall, the building retains the majority of its character-defining features and it is clearly a representation of A-frame architecture. The building retains sufficient integrity for eligibility for listing in the California and local registers. However, it does not retain sufficient integrity for listing in the National Register.

Summary

The Lake Tahoe Terminal Building is recommended individually eligible for listing on the California Register under Criterion 3 for its application of the regionally significant A-frame design to a commercial building. While the building has been modified, including interior reconfiguration and alterations to the fenestration pattern on the primary (west) façade, it retains sufficient integrity for listing in the California Register. As such, it is also recommended eligible for local listing under Criterion 3.

The building is not recommended eligible for the National Register as the building has been modified from its original form through interior changes and alterations to window openings and fenestration patterns. As such it does not retain sufficient integrity for National Register listing.

The Lake Tahoe Airport Terminal qualifies as a historical resource for the purposes of CEQA. It would not qualify as a historic property for the purposes of Section 106 should such compliance be required in the future.

***B12. References:** (Continued from page 2)

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[62] Mead & Hunt, *Historic Context of A-frame Architecture in Boulder County,* prepared for Boulder County Land Use Department, April 2018, 20.

[63] DAHP, "A-Frame: 1950-1990."

[64] Randl, *A-Frame,* 115. The visitor center for the 1960 Winter Olympic games was designed as a double A-frame subtype. The building currently serves as the Members Locker Room at Palisades Tahoe.

[65] Randl, *A-Frame,* 154.

[66] Mead & Hunt, 97. While Mead and Hunt focused primarily on residential representations of A-frame architecture, the list of character-defining features presented here is universal to all adaptations of the style.

[67] In 1967, the firm is listed under both structural and civil engineering with an address of 3261 Grand Avenue in Oakland. *Polk's Oakland City Directory,* 1967, 190-191.

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Appendix D
Tahoe Regional Planning Agency Determination

TAHOE REGIONAL PLANNING AGENCY

Mail
PO Box 5310
Stateline, NV 89449-5310

Location
128 Market Street
Stateline, NV 89449

Contact
Phone: 775-588-4547
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September 3, 2025

Milan Jevic, C. M.
Interim Airport Manager
City of South Lake Tahoe, CA
mjevic@cityofslt.us

Re: 2025 Lake Tahoe Airport Master Plan Draft Environmental Analysis

Mr. Jevic:

Thank you for the opportunity to review and comment on the Draft Lake Tahoe Airport Master Plan and environmental analysis. The Tahoe Regional Planning Agency (TRPA) appreciates the ongoing coordination with the City and other stakeholders throughout this planning process.

According to the Draft Initial Study/Mitigated Negative Declaration prepared under the California Environmental Quality Act (CEQA), the proposed plan is an update to the "long-range plan for airport development that is intended to meet identified facility requirements and Federal Aviation Administration (FAA) design standards." In short, we understand that the 20-year Master Plan was prompted by FAA funding requirements, and the scope was developed to ensure the existing airport's operational infrastructure (e.g. taxiways) meet FAA guidelines. This is an update to the 2017 Airport Master Plan, with the City of South Lake Tahoe serving as the CEQA lead agency.

To summarize, the proposed improvements within the draft Airport Master Plan include the following:

- Reconstruction of an existing ground service equipment maintenance facility;
- Demolition of an existing air traffic control tower;
- Incorporation of proposed bike paths consistent with the regional Active Transportation Plan (ATP);
- Removal of four aircraft tie-downs and construction of four new aircraft box hangars;
- Installation of electrical vault and electric aircraft charging stations;
- Removal and relocation of coverage associated with taxiways and runway;
- Relocation of mechanical equipment and other improvements; and,
- Construction of a parking garage structure.

Through our participation in the planning process, TRPA understands the proposed parking garage is contemplated in other planning documents as a potential mobility hub with shuttle service to Emerald Bay and surrounding locations. Importantly, the garage is not intended to increase airport operational capacity, nor would it be funded in whole or in part with FAA resources. Its inclusion in the Master Plan is for the limited purpose of analyzing potential airspace impacts.

TRPA APPROVAL PROCESS FOR REDEVELOPMENT OF THE LAKE TAHOE AIRPORT

Under TRPA Code of Ordinances section 14.2.2.A and Chapter 13, a TRPA-approved Master Plan or Area Plan is required for projects that expand airport facilities or commercial passenger air service. Expansion is defined as any project that increases development rights (e.g., commercial floor area, tourist accommodation units, residential units), land coverage, vehicle trips for airport operations, or airport operational capacity.[1]

Projects that do not increase development rights, land coverage, vehicle trips for airport operations, or airport operational capacity do not trigger the requirement for a TRPA-approved Master Plan. Such projects may, however, still require project-level TRPA review and approval. For example, the proposed removal or relocation of land coverage associated with the runways, taxiways, or the parking garage would require project-specific TRPA review and approval consistent with the Code of Ordinances.

Additionally, prior to or concurrent with future development, the City should reconcile land capability and coverage information to determine specific coverages and development potential, as well as existing easements, for each parcel. The Lake Tahoe Airport property consists of 17 parcels. The existing land capability and coverage verifications (TRPA File #s LCAP2010-0100 and VBOC2010-0326) summarize this information for the Lake Tahoe Airport property as a whole and do not differentiate what land capability or coverage amounts are associated with each parcel.

TRPA REVIEW OF DRAFT MASTER PLAN

Based on our review of the draft Master Plan, and coordination with the City's consulting team and Airport Manager at the time of the planning process (John Dickinson), TRPA understands that the proposed improvements outlined within the draft plan are narrowly focused on compliance with FAA standards. The plan does not appear to propose any increase in operational capacity (i.e.it proposes to continue operations as-is, no expansion), development rights, land coverage, or airport-related vehicle trips. The existing airport does not have any commercial passenger air service, nor is any proposed as part of this master plan.

Therefore, TRPA has determined that the Draft Master Plan does not require TRPA approval or action at this time. No further applications or documentation, including an IEC, are required. Please contact TRPA staff with any questions regarding project-level review and approval as individual projects move forward.

Kind regards,



Wendy Jepson,
Permitting & Compliance Department Manager
Tahoe Regional Planning Agency

[1] The attached letter dated June 10, 2020 from TRPA staff to former Airport Manager Mark Gibbs summarizes historical background on the airport master plan and TRPA approvals.

Cc:
Julie Regan, Executive Director, TRPA
Graham St.Michel, General Counsel, TRPA
Michelle Glickert, Transportation Planning Program Manager, TRPA
Jennifer Self, Principal Planner, TRPA
John Dickinson, Acting Public Works Director, City of South lake Tahoe
Patrick Hickman, Managing Planner, Environmental Science Associates

Attachment:
Email to former Airport Manager, Mark Gibbs, from TRPA staff, June 10, 2020.

Jennifer Self

From: Jennifer Self
Sent: Wednesday, June 10, 2020 11:52 AM
To: mgibbs@cityofslt.us
Cc: kfabino@cityofslt.us; Mark Johnson; John Hester; John Marshall; Wendy Jepson
Subject: FW: South Lake Tahoe Airport Development

Hi Mark,
I received an email from Mark Johnson on May 20 regarding a future redevelopment proposal at the airport. Mark forwarded your email that outlines considerations and the approval process as it pertains to the FAA, CalTrans, and the City. He asked that I speak to the TRPA approval process.

Given that the City is exploring alternatives for the property, we wanted to make sure that there was clear direction on our end to avoid any surprises down the road. I have worked with our staff and legal counsel to outline what the TRPA process entails.

There are ample studies, analyses, and reports completed in the last few years that outline the environmental and financial considerations, so I will not go into those aspects. Again, this is intended to speak directly to the TRPA approval process.

The information and process steps you outlined for Mark are incredibly helpful. Please see the information below to supplement that.

Please feel free to reach out if you have any questions regarding this email.

Best,
Jennifer

TRPA APPROVAL PROCESS FOR REDEVELOPMENT OF THE LAKE TAHOE AIRPORT
A TRPA adopted master plan or area plan (in accordance to Chapters 13 and 14 of the TRPA Code) is required *prior* to any future project that would increase development rights (i.e. commercial floor area, tourist accommodation units, residential units), land coverage, or vehicle trips for the airport property. For more information on these, see below.

Projects that do not increase development rights, land coverage, or vehicle trips (e.g. coverage restoration or relocation, reconfiguration of existing facilities with similar use, etc.) would not be required to complete a master plan or area plan.

Any development project that does not fall under the MOU between the City and TRPA, would need to come to TRPA for review and approval prior to review by the City's Development Services Division. Any project exceeding the size limitations in Policy LU-4.12 of the Regional Plan must be reviewed by TRPA.

Additionally, prior to future development or concurrent with a project, the City would also need to reconcile the land capability and coverage information to determine specific coverages and development potential, as well as existing easements, for each parcel. There are 17 parcels that comprise the Lake Tahoe Airport property. The existing land capability and coverage verifications (TRPA File #s LCAP2010-0100 and VBOC2010-0326) summarize this information for the Lake Tahoe Airport property as a whole and do not differentiate what land capability or coverage amounts are associated with each parcel.

Background on Airport Master Plan

As part of the 1992 settlement agreement between the City, TRPA, the League to Save Lake Tahoe, and the California Attorney General; the City prepared the Lake Tahoe Airport Master Plan and environmental analysis. TRPA adopted the Plan and certified the final EIR/EIS, per the agreement. Pursuant to TRPA's Rules of Procedure, the Governing Board was charged with reviewing the final EIS and making a determination (or certification) on its compliance, substantively and procedurally, with Article VII of the Compact, Chapter 3 of the TRPA Code of Ordinances, and Article VI of the Rules of Procedure.

The settlement agreement and subsequent plan put into place the single event noise environmental threshold standards for aircraft arrivals and departures as well as a maximum community noise equivalent level for the Lake Tahoe Airport Corridor. The settlement agreement also upheld TRPA's authority to implement and enforce noise thresholds and flight limits without challenge by the City or FAA. The intent behind the standards was to limit commercial flights and control noise within the Region.

The City initiated the Airport Master Plan Update in 2013, with funding from the FAA, in order to determine the current and future potential of the airport. The plan was primarily focused on maintaining general aviation versus allowing for commercial service.

During the Master Plan update, the City consulted with TRPA staff. Per direction from TRPA's legal counsel, as long as airport projects do not increase development rights (CFA, TAUs, residential units, PAOTs, land coverage) or vehicle trips, TRPA adoption of the updated Master Plan was not required. (TRPA Code 14.2.2.A) According to the City staff, the thinking at the time was that the City would be able to implement airfield Alternative 2 and landside Alternative C that were recommended in the Phase 2 report within these parameters and thus did not seek adoption and certification from TRPA. If there is a desire to increase development rights, then adoption of an updated master plan or an area plan is required.

Master plans and area plans adopted by TRPA and in compliance with the Regional Plan provide detailed planning goals, policies, and standards for a specified area. These refine and supersede land use strategies and environmental protection mechanisms called for in the plan area statements. (The airport property is located within four plan area statements - Airport, Country Club, Trout/Cold Creek, and Truckee Marsh PASs.)
The alternative to a master plan is an area plan, or to expand the Tahoe Valley Area Plan and possibly the town center boundaries. A citywide area plan was being considered by Frank Rush and Hilary Roverud as recently as last year. The area plan serves a similar purpose to a master plan – localized planning strategies for a given area. A few advantages of an area plan over a master plan are the ability to develop an alternative coverage management system and alternative transfer ratios for development rights for the area. If the town center boundary is expanded, this affords a wide range of incentives from increased density allowances, transfer bonuses, etc. To determine if this is a viable option, we need to look into specific findings to see if these can be met for the property.

Both the master plan or an area plan would be initiated by the City and is required to be developed in compliance with the Regional Plan, including threshold standards. An area plan would be adopted by TRPA Governing Board and the City.

As always, TRPA staff are available to discuss these options or the TRPA approval process further.

Jennifer Self
Acting Principal Planner
& Long Range Planning Program Manager
775.589.5261

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From: Mark Johnson <markjgsp@gmail.com>
Sent: Tuesday, May 26, 2020 2:43 PM
To: Jennifer Self <jself@trpa.org>
Subject: Re: South Lake Tahoe Airport Development

Thanks....your awesome for doing that! I have had some good meetings and learning alot over the last couple weeks.

Mark

On Tue, May 26, 2020 at 4:38 PM Jennifer Self <jself@trpa.org> wrote:

> Hi Mark,
>
> I reached out to a few other staff members who were more familiar with the airport site than I am. We are working on gathering some information and will send it over as soon as it is ready.
>
> Best,
>
> Jennifer
>
> **Jennifer Self**
>
> Acting Principal Planner
>
> & Long Range Planning Program Manager
>
> 775.589.5261

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From: Mark Johnson <markjgsp@gmail.com>
Sent: Wednesday, May 20, 2020 6:48 AM
To: Jennifer Self <jself@trpa.org>
Subject: Fwd: South Lake Tahoe Airport Development

Good morning. I received this email from Mark Gibbs yesterday. It was loaded with awesome information. Would you mind addressing paragraph 3 & 4 for me please?

I will be in town next Wed and Thurs. If further discussions are needed while Im there please let me know.

I will be using the City to facilitate the ARP review and make sure TRPA is involved.

Have a great day!

Mark Johnsonn

530-417-5811

---------- Forwarded message ---------
From: **Mark Gibbs** <mgibbs@cityofslt.us>
Date: Tue, May 19, 2020 at 4:51 PM
Subject: RE: South Lake Tahoe Airport Development
To: Mark Johnson <markjgsp@gmail.com>
Cc: Joseph Irvin <jirvin@cityofslt.us>, Ray Jarvis <rjarvis@cityofslt.us>, Kevin Fabino <kfabino@cityofslt.us>, Kyle Jenkins <kjenkins@cityofslt.us>

Mark:

Thank you for reaching out to me last week. Sorry for the delay getting back to you. This email broadly establishes the planning framework required to undertake a major airport development project. These are things to think about when exploring a possible development of a hotel/conference/retail complex at this Airport. Just as any development in Lake Tahoe, environmental review and compliance are significant areas of redress and drivers of the planning process (and ultimately what is achievable in development).

I have attached a few documents that can aid you understand the airport's current financial picture in addition to many development concepts that were vetted with the express purpose of meeting a City Council priority that the airport seek all means to realize financial self-sufficiency from the City's General Fund. The airport concluded that based on the current financial arrangement and strict limits on land coverage that the highest and best use was a public boat/rv storage facility at the basin and additional aircraft hangars to meet demand. City Council at the time did not wish to take on the capital risk and finance the project. Hence, the airport is open to discussions on these development proposals in addition to yours if there is interest. Many of the proposals show the same sort of development conditions present for a hotel/retail/conference center. A hotel is consistent with City Plan Area Statement 116-Airport which allows for this as a permitted use under "tourist accommodation" under the currently approved plan. Furthermore, the FAA and Caltrans typically finds hotel development a compatible land use if such proposed development does not adversely impact existing aeronautical uses.

As initially discussed over the telephone what you are envisioning requires changes to the Airport Master Plan Update that was last approved by City Council in 2017. Unfortunately, the 2017 Airport Master Plan Update, we both inherited, did not envision hotel/retail/conference center proposed by you. Also important, the 2017 Airport Master Plan Update was never approved by the TRPA so any individual project proposal would need to be vetted by the TRPA on a project specific basis. Any major update to the development of the airport as proposed would require an Airport Layout Plan Update with Narrative Report which is a "mini" airport master plan specific to a major development change at an obligated airport that was not addressed through the last airport master plan update. Any Airport Layout Plan Update would need approval by the Federal Aviation Administration to ensure any development does not adversely effect the safety, efficiency or operation of the airport. Caltrans Division of Aeronautics will also review and approve the Airport Layout Plan Update Narrative Report to ensure compatible development within the airport's safety

zones. Safety Zones are a component of the Lake Tahoe Airport Land Use Compatibility Plan. Finally our City Development Services Division must review and approve any new development through a major design review process to meet City land use compatibility and development impacts to the community as a whole.

Since the City never received TPRA approval of the Airport Master Plan; the airport is trying to seek approvals for development on an individual project basis with limited success under my term. The TRPA is unwilling at this time to approve a comprehensive plan for development at the airport. In 2020, TRPA asked for the airport to submit a new Land Capability Map for verification prior to reviewing any development proposals. The 2010 Land Capability Map was apparently approved by the TRPA with omissions. TRPA input is very important as there are planning costs associated with making any changes to proposed development at the airport. What the City does not want is to get three approvals but the TRPA finds a fatal flaw in a development site or concept. I would recommend TRPA involvement at the very earliest opportunity based on past history.

Overall the airport planning process involves tackling these major elements. I tried to distill hundreds of pages of regulatory guidance into major elements of large scale airport development projects.

- Establishing an Airport Master Plan, Airport Layout Plan Update Narrative Report or other visioning tool;
- Aligning airport and community goals; community consideration/consultation;
- Setting a leasing policy;
- Ensure contracting mechanisms comply with Federal Aviation Administration Airport Sponsor Grant Assurances (#5,6,7,8,20,21,,24,29,31)
- Providing flexibility throughout the development process;
- Coordinating with local, state, and federal agencies, when appropriate.

Airport Manager's Recommended Steps to Develop Airport Property for New Development Not Previously Approved in 2017 Airport Master Plan Update.

Please note that depending on the nature of environmental review it may take 3 years to obtain all approvals.

1. Contract document to establish P3 relationship in Airport Planning Process (resource allocation, who pays for what, etc.)
2. Provide for initial environmental scoping meeting with FAA San Francisco Airport District Office of Environmental Compliance for project proposal. This is a MUST DO per FAA Order 5050.4B, *Airport Environmental Compliance Handbook*. Tiering of environmental review is encouraged and airport sector environmental review is very complex. Hence, the need for early involvement of FAA in outlining the environmental review process for a development project. FAA also will determine schedule for NEPA compliance (timeline).

501. PROJECT PLANNING AND NEPA. To achieve NEPA's intent, 4
states:

> "Agencies shall integrate the NEPA process with other planning at the earliest poss
> insure that planning and decisions reflect environmental values, to avoid delays lat
> process, and to head-off potential conflicts."

504. KEY MASTER PLAN STEPS THAT AID THE NEPA PROCE
sponsor developing a master plan that accurately reflects needed airport imp
focus on the following steps.

a. Meet with ARP regional or district office personnel. Early in
phase, the airport sponsor and its planners should meet with the appropriate
district office's planners and environmental specialists. As noted in paragra
coordination allows ARP staff to view the initial, conceptual plan and highl
environmental issues airport planners need to consider. Information exchan
sponsor, planning consultants, and environmental specialists fosters effectiv
planning. It also promotes completing the subsequent NEPA process in a ti
manner.

---

[4] Noise exposure maps and noise compatibility plans prepared under 14 CFR Part 150 pro
about an airport's present and future noise levels and land uses exposed to those levels in t

3. Consult with TRPA on how to handle airport development as the TRPA is not using TRPA Code of Ordinances 14.2.2A *Airports* approval process and has not provided City on their "preferred" approval process so new development remains a grey area that needs early coordination. Any proposed changes to land coverage should be voiced early on in the process.
4. Establish FMV on non-aeronautical use of property (appraisal) required for FAA formal Land Release (see step 5).

5. Obtain Land Release (Federal Action) to convert portions designated aeronautical/terminal to non-aeronautical (NEPA Environmental Review Triggered FAA Order 5050.4B Section 207.) Maybe an Categorical Exclusion or EA/EIS based on use or extraordinary circumstances of the released land (future use) that are probable due to location of airport in Lake Tahoe.
6. Airport Layout Plan Update Narrative Report . ALP approval by FAA is either Mixed, Unconditional or Conditional Approval See Environmental Appendix B.Page B-1

    a. City Council formally adopts new Airport Layout Plan Update
    b. Airport Layout Plan Update also must be provided to Caltrans Division of Aeronautics.
    c. FAA must approve ALP with proposed development depicted. If it is not on the approved ALP the development cannot proceed until it is shown on the approved ALP.

7. Project Specific Environmental Review on Proposed Development ***Tiering encouraged from Neg mitigated declaration 2017 Airport Master Plan Update*** (Adopting ALP triggers CEQA and NEPA review). Costs for preparation of environmental review at project proponent expense §21089. Costs for preparing an ALP Update for airport development is at the cost of the project proponent and is not eligible for Federal funding. ALP Update approval is considered a "Federal Action" triggering environmental review under NEPA. Cost for NEPA compliance with ALP Approval is at the expense of the project proponent (City or Developer; TBD)

    a. Project Specific TRPA / CEQA Initial Study PRC§21083.5 which may likely result in a Negative Declaration, Mitigated Negative Declaration or EIR. May also require CEQA scoping meetings depending on nature of environmental impact level
    b. NEPA EA or EIS completed either during ALP approval process "Mixed ALP Approval" or "Unconditionally ALP Approval" or at time project is "ripe" for environmental review as a "Conditionally Approved ALP" which only requires a Categorical Exclusion but does require future environmental review under NEPA as designated by FAA official.
    c. Robust coordination with local tribal agencies as well as federal, state and local resource agencies.

8. City of South Lake Tahoe General Development Application for the proposed development project required
9. Development Agreement and Airport Land Lease Agreement(s) once planning approvals obtained.

Great source for reference is Guidebook for Developing & Leasing Airport Property, published by the Airport Cooperative Research Board, an arm of the National Academies of Sciences, Medicine and Engineering.

Supporting documents for other airport development plans, airport land capability map, and current approved Airport Layout Plan are available here as resources https://cityofsouthlaketahoe-my.sharepoint.com/:f:/g/personal/mgibbs_cityofslt_us/Ei3pmI3RX9pFqfa85e5qTpoBrnNlIeQReBNjQRMQTYRlLQ?e=aGiR3Z

Mark, I am sorry to provide you with so much but you did ask me a lot of very good questions. I believe this email actually provides you with 80% of the information you desired. The other 20% left my mind during our telephone conversation so I apologize. You really did have some thoughtful questions/comments; so thank you for those. I believe I will be meeting you in person next Thursday at the Joe Irvin's Office. I look forward to seeing you in person.

Sincerely,

Mark Gibbs, A.A.E.

Airport Manager

Lake Tahoe Airport (TVL)

1901 Lisa Maloff Way, Suite 100

South Lake Tahoe, CA 96150

Tel: (530) 542-6182

Cell: (530) 208-8074

Fax: (530) 544-6366

Email: mgibbs@cityofslt.us





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From: Mark Johnson <markjgsp@gmail.com>
Sent: Wednesday, May 6, 2020 11:35 AM
To: Mark Gibbs <mgibbs@cityofslt.us>
Subject: Airport

Great talk today. This is my email.

Mark Johnson

530-417-5811

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Appendix E
Mitigation Monitoring and Reporting Program

APPENDIX E
Mitigation Monitoring and Reporting Program

Introduction

The purpose of this Mitigation Monitoring and Reporting Program (MMRP) is to describe the roles and responsibilities in the mitigation monitoring process for the proposed project, pursuant to CEQA Guidelines Section 15097. A reporting and monitoring program ensures that measures adopted to mitigate or avoid significant environmental impacts are implemented. It is a working guide to facilitate not only the implementation of mitigation measures, but also the monitoring, compliance, and reporting activities.

The measures identified in this MMRP were developed as part of the IS/MND prepared for the proposed project and is defined by CEQA as a measure which minimizes impacts by limiting the degree or magnitude of the action and its implementation.

Monitoring and documenting the implementation of mitigation measures will be coordinated by the City (CEQA Lead Agency). **Table E-1** identifies the mitigation measure, the monitoring action for the mitigation measure, the responsible party for the monitoring action, and timing of the monitoring action. The City will monitor and report on all mitigation activities. As such, the responsibilities for implementation shall be assigned to the City of South Lake Tahoe.

TABLE E-1
MITIGATION MONITORING AND REPORTING PROGRAM

Impact Topic	Mitigation Measure	Implementation Responsibility	Monitoring/Reporting Responsibility	Timing
Biological Resources	**BIO-1: Conduct Nesting Bird Surveys.** For construction activities that occur between March 1 and August 31, preconstruction nesting bird surveys shall be conducted by a qualified biologist familiar with bird behavior and knowledge of nest types prior to and within 14 days of any initial ground-disturbance activities. Surveys shall be conducted on foot within all suitable nesting habitat within 250 feet for passerines and 500 feet for raptors, to the extent feasible. If active nests are identified at the time of the survey, a minimum 50-foot radius exclusion zone for passerines shall be established and flagged. Active raptor or special-status species nests shall be protected by a buffer with a minimum radius of 250 feet. These distances may be adjusted depending on the level of surrounding ambient activity (i.e., if the project site is adjacent to a road or community development) and if an obstruction is within line-of-sight between the nest and construction. For bird species that are federally and/or State-listed special-status species (i.e., fully protected, endangered, threatened, species of special concern), the City of South Lake Tahoe shall consult with the USFWS and/or CDFW regarding modifying nest buffers, prohibiting construction within the buffer, modifying construction, and removing or relocating active nests that are found on the site. Each exclusion zone will remain in place until the nest has successfully fledged or is otherwise inactive as determined by a qualified biologist. The following are conditions of this measure: • Survey results are valid for 14 days from the survey date. Should ground disturbance commence later than 14 days from the survey date, surveys will be repeated. If no nesting birds are encountered, then work may proceed as planned. • After commencement of work if there is a period of no work activity of 14 days or longer during the bird breeding season (March 1 to August 31), surveys will be repeated to ensure birds have not established nests during inactivity. If new nests are encountered buffers shall be established. • Any birds that begin nesting within the project site and survey buffers amid construction activities shall be assumed to be habituated to construction-related or similar noise and disturbance levels and minimum work exclusion zones of 25 feet shall be established around active nests in these cases.	City of South Lake Tahoe Department of Public Works	City of South Lake Tahoe Director of Public Works or the Director's designee	Prior to ground or vegetation disturbing activities
Biological Resources	**BIO-2: Protect Water Quality of Upper Truckee River.** The following BMPs will be implemented to protect water quality and special-status fish species in the Upper Truckee River. • No construction equipment will be allowed to enter or drive through the creek, except where the existing in-water road crossing occurs in the northeastern portion of the Airport property. • All equipment and tools will be inspected for the presence of undesirable species and cleaned prior to entering the work area at each location to reduce the risk of introducing nonnative plant or animal species.	City of South Lake Tahoe Department of Public Works	City of South Lake Tahoe Director of Public Works or the Director's designee	Prior to ground or vegetation disturbing activities

Impact Topic	Mitigation Measure	Implementation Responsibility	Monitoring/Reporting Responsibility	Timing
	• Staging and storage areas for equipment, materials, fuels, lubricants, and solvents will not be located within 150 feet of the stream. Stationary equipment such as cranes, motors, pumps, generators, compressors, and welders will be positioned over drip-pans. Non-stationary vehicles and equipment will be moved at least 150 feet from the stream prior to refueling and lubrication. • Raw cement, concrete, or washings thereof, asphalt, equipment fluids or lubricants, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to fish or wildlife resulting from or disturbed by project-related activities, will be prevented from contaminating the soil and/or entering waterways. • All personnel involved in the use of hazardous materials should be trained in emergency response and spill control. • No litter or debris will be allowed to enter any waterway or placed in a location where it could be washed into a waterway. All such debris will be picked up daily and properly disposed of at an offsite location.			
Biological Resources	**BIO-3: Perform Preconstruction Surveys for Special-Status Plant Species.** For construction activities outside of currently developed hardscape areas and that would include ground disturbance or vegetation removal, a qualified botanist shall conduct a preconstruction survey for all special-status species, including all CNPS-listed species with the potential to occur within the area of disturbance. The survey shall be floristic in nature and shall follow the procedures outlined in CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*. If special-status plant species are found, the City of South Lake Tahoe shall consult with CDFW to provide further measures to avoid/minimize impacts to identified special-status plants.	City of South Lake Tahoe Department of Public Works	City of South Lake Tahoe Director of Public Works or the Director's designee	Prior to ground or vegetation disturbing activities
Biological Resources	**BIO-4: Avoid Impacts to Waters of the United States and State, either through Avoidance, Restoration, or Compensation.** Prior to construction activities outside of currently developed hardscape areas that would include ground disturbance or vegetation removal, a wetland delineation shall be conducted by a qualified biologist to determine if there are any wetland or waters subject to federal or state jurisdiction or subject to any permits or approvals by federal, state or local resource agencies. The wetland delineation shall be submitted to the USACE for verification. The City of South Lake Tahoe shall use the results of the wetland delineation to refine site plans in order avoid impacts to any jurisdictional features to the extent possible. If total avoidance is not possible, the City of South Lake Tahoe shall obtain the required permits prior to the implementation of construction activities. The anticipated required permits include a Clean Water Act Section 404 Nationwide Permit from the USACE; a Clean Water Act Section 401 Water Quality Certification from the Regional Water Quality Control Board; and a Streambed Alteration Agreement (SAA) from the CDFW. All permit requirements such as restoration for temporary impacts or compensation for permanent impacts shall be implemented to mitigate for loss of waters of the United States or state and reduce impacts to water quality during construction. In addition to federal or state requirements, setbacks and or mitigation as required by TRPA Section 61.1 (Tree Removal) of the TRPA Code of	City of South Lake Tahoe Department of Public Works	City of South Lake Tahoe Director of Public Works or the Director's designee	Prior to ground or vegetation disturbing activities

Impact Topic	Mitigation Measure	Implementation Responsibility	Monitoring/Reporting Responsibility	Timing
	Ordinances, Section 33.6, Vegetation Protection During Construction and Chapter 61, Vegetation and Forest Health shall be integrated into project design plans.			
Cultural Resources	**CUL-1: Cultural Resources Awareness Training.** Before any ground-disturbing and/or construction activities, an archaeologist meeting or under the supervision of an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards (SOI PQS) for Archeology shall conduct a training program for all construction and field personnel involved in project-related ground disturbance prior to such personnel conducting any on-site activities. If a Native American tribe has expressed interest in the project via AB 52 or Section 106-related tribal consultation, they shall be invited to participate in the training program. The training shall outline the general archaeological sensitivity of the area and the procedures to follow if an archaeological resource and/or human remains are inadvertently discovered during project-related activities.	City of South Lake Tahoe Department of Public Works	City of South Lake Tahoe Director of Public Works or the Director's designee	Prior to ground or vegetation disturbing activities
Cultural Resources	**CUL-2: Inadvertent Discovery of Cultural Resources.** If pre-contact or historic-era archaeological resources are encountered during project implementation, all construction activities within 100 feet shall halt, and a qualified archaeologist, defined as an archaeologist meeting Secretary of the Interior's Professional Qualifications Standards (SOI PQS) for Archeology, shall inspect the find within 24 hours of discovery and notify the City of Lake Tahoe of their initial assessment. Pre-contact archaeological materials might include: obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (midden) containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools (e.g., hammerstones, pitted stones). Historic-era materials might include building or structure footings and walls, and deposits of metal, glass, and/or ceramic refuse. If the City of Lake Tahoe determines, based on recommendations from the archaeologist and, if the resource is indigenous and a Native American tribe has expressed interest, a Native American tribe, that the resource may qualify as a historical resource or unique archaeological resource (as defined in CEQA Guidelines Section 15064.5) or a tribal cultural resource (as defined in PRC Section 21080.3) the resource shall be avoided, if feasible. Consistent with Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If avoidance is not feasible, the City of Lake Tahoe shall consult with appropriate Native American tribes (if the resource is pre-contact), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2, and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3).	City of South Lake Tahoe Department of Public Works	Construction Inspector/ Archaeologist	During project construction

Impact Topic	Mitigation Measure	Implementation Responsibility	Monitoring/Reporting Responsibility	Timing
Cultural Resources	**CUL-3: Inadvertent Discovery of Human Remains.** In the event of discovery or recognition of any human remains during construction activities, all such activities within 100 feet of the find shall cease until the El Dorado County Coroner has been contacted to determine that no investigation of the cause of death is required. The Native American Heritage Commission (NAHC) shall be contacted within 24 hours if the Coroner determines that the remains are Native American. The NAHC shall then identify the person or persons it believes to be the most likely descendant from the deceased Native American, who in turn would make recommendations to USACE for the appropriate means of treating the human remains and any grave goods.	City of South Lake Tahoe Department of Public Works	Construction Inspector/ Archaeologist	During project construction
Geology and Soils	**GEO-1: Unanticipated Discovery Protocol for Paleontological Resources.** If suspected paleontological resources, such as fossil materials, bones, teeth, shells, plant impressions, are discovered during ground-disturbing activities, all activity in the vicinity of the discovery shall cease until the discovery is evaluated by a qualified paleontologist. If the paleontologist determines that the resources may be significant, no further work in the vicinity of the resources shall take place until appropriate treatment is determined and implemented.	City of South Lake Tahoe Department of Public Works	Construction Inspector/ Paleontologist	During project construction
Noise	**NOI-1: Implement Construction Noise Mitigation Plan.** Construction contractors shall be required to implement a Construction Noise Mitigation Plan to ensure that noise levels at sensitive receptors within the City of South Lake Tahoe will not experience noise levels more than 55 dBA L_{eq} during project construction to comply with the established City of South Lake Tahoe General Plan requirements. Noise reduction measures implemented may include but not be limited to the following measures.	Designated Construction Contractor	Construction Inspector	During project construction
Noise	**NOI-2: Construction Vibration Minimization Plan.** Before the issuance of any demolition, grading, or building permit (whichever comes first) for work within 200 feet of an existing structure, the project sponsor shall submit a Construction Vibration Minimization Plan prepared by an acoustical and/or structural engineer or other appropriate qualified professional to the City for review and approval. • The Construction Vibration Minimization Plan shall establish pre-construction baseline conditions and threshold levels of vibration that could damage structures located within 200 feet of construction. The plan shall also include measures to limit vibration from construction equipment when operating within 200 feet of structures to achieve a performance standard of 0.02 in/sec as required by the City of South Lake Tahoe General Plan Policy HS-6.3. Measures may include but not be limited to: • Prohibit impact, sonic, or vibratory pile driving methods where feasible. Drilled piles cause lower vibration levels where geological conditions permit their use. • Limit other vibration-inducing equipment to the extent feasible. • Submit a list of all heavy construction equipment to be used for this project known to produce high vibration levels (e.g., tracked vehicles, vibratory compaction, jackhammers, hoe rams) to the City. This list shall be used to identify equipment and activities that would potentially generate substantial vibration and to define the level of effort required for continuous vibration monitoring.	City of South Lake Tahoe Department of Public Works	Construction Inspector	During project construction

Impact Topic	Mitigation Measure	Implementation Responsibility	Monitoring/Reporting Responsibility	Timing
	• Where vibration-inducing equipment is deemed necessary for construction work within 200 feet of a structure, include details outlining implementation of continued vibration monitoring. All construction contracts and approved plans shall include notes with reviewer-identified limitations and diagrams to avoid impacts on historic resources.			

Appendix F
Comments and Responses

APPENDIX F
Comments and Responses

This appendix includes comment letters received during the public review period for the Draft IS/MND (from October 6, 2025 to November 5, 2025) and written responses that address each substantive environmental issue that was raised by commenters. In accordance with CEQA, the responses to comments focus on addressing physical environmental effects that could result with implementation of the proposed project. None of the comments provide substantial new information or issues that necessitated corrections or revisions to the analysis or conclusions presented in the Draft IS/MND. Summaries of the comment letters received are provided in **Table F-1**. The comment letters and the City of South Lake Tahoe's responses are provided on subsequent pages.

TABLE F-1
DRAFT IS/MND COMMENTS

Letter	Commenter/ Agency	Dated	Received by City of South Lake Tahoe	Comment Summary
1	Nick Speal	October 8, 2025	October 8, 2025	Comments and suggestions regarding transportation infrastructure that serves the Lake Tahoe Airport.
2	Nick Speal	October 8, 2025	October 8, 2025	Comments assert that the Draft IS/MND did not address environmental effects related to increased aircraft operations the commenter asserts would be facilitated by the Airport Master Plan.
3	Mark Johnson	October 16, 2025	October 16, 2025	Comments state that the Airport Master Plan and related environmental documents should consider and study removal of the Airport and restoration of the Airport property.
4	Kristin Gunn	October 22, 2025	October 22, 2025	Comments express support for incorporation of a proposed bike path onto Airport property and concerns regarding aircraft noise and close proximity of aircraft overflights to the commenter's residence.
5	California Department of Transportation (Caltrans)	October 27, 2025	October 27, 2025	Comments state that a transportation impact study should be conducted to analyze potential intersection safety impacts related to the Airport parking garage proposed under the Airport Master Plan. The comments also state that any project or work that takes place along or within the State's right of way (ROW) requires an encroachment permit issued by Caltrans.
6	The League to Save Lake Tahoe	November 3, 2025	November 3, 2025	Comments and suggestions regarding several topics, including greenhouse gas emissions, water quality, transportation and circulation, biological resources, noise, air quality, and alternatives.

Outlook

Airport Master Plan Ground Transportation Comments

From Nick Speal <nick@speal.ca>
Date Wed 10/8/2025 10:45 AM
To Robin Blair <rblair@cityofslt.gov>
Cc Scott Robbins <srobbins@cityofslt.us>

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

To the Airport Master Plan team,

Thank you for including ground transportation improvements in the Airport Master Plan, connecting the facility to the broader community. I appreciate the inclusion of a bike path, electric vehicle charging, and a transit mobility hub in the plan.

I have a few small suggestions for additions to make to these elements, to make them a little more practical to implement.

For bike access, I understand that the proposed bike path is planned to connect to the airport exit at the north end of Lisa Maloff Way and Emerald Bay Rd. Before and after it is constructed, cyclists access the terminal from this intersection, traveling against traffic. Please study whether the vehicular traffic needs of the airport still warrant a two lane exit road, and if not, please close one of these lanes to vehicular traffic, instead reserving it for bi-directional bike traffic. This would be a cost-efficient way to provide cyclists with safe access to the terminal building.

For transit access, I understand that staff at the Tahoe Transportation District have expressed concerns about the difficulty of turning a slow-accelerating bus into and out of the airport from Emerald Bay Rd, especially considering the short sight distances and high speeds on Emerald Bay Rd. Please include intersection improvements at the entrance and exit to facilitate large vehicle access.

1A

Thank you,

Nick Speal

Letter 1 Nick Speal

Response 1A

The commenter expresses appreciation for the inclusion of a bicycle path, electric vehicle charging, and a transit mobility hub in the Airport Master Plan and provides suggested additions and actions related to these elements. With regard to bicycle access, the commenter suggests studying whether the vehicular traffic needs of the Airport still warrant a two lane exit road, and if not, the commenter suggests closure of one of these lanes to vehicular traffic and dedication of the lane for bi-directional bicycle traffic to improve safety. With regard to transit access related to the Airport parking garage with transit stop proposed under the Airport Master Plan, the commenter suggests the inclusion of intersection improvements at the Airport entrance and exit on Emerald Bay Road (U.S. Route 50) to facilitate large vehicle (e.g., bus) access and related operational safety. The comments are noted and will be provided to decision makers for consideration in their deliberations on approval of the proposed project. The comments do not pertain to the adequacy, accuracy, or completeness of the Draft IS/MND's analysis of the physical environmental impacts of the proposed project and thus do not require further response. See Response 5A for further discussion regarding comments related to Airport access in connection with the proposed project.

Outlook

Airport Master Plan Energy/GHG Comments

From Nick Speal <nick@speal.ca>
Date Wed 10/8/2025 11:39 AM
To Robin Blair <rblair@cityofslt.gov>
Cc Scott Robbins <srobbins@cityofslt.us>

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

To the Airport Master Plan team,

In summary, the Airport Master Plan's Initial Study / Mitigated Negative Declaration is flawed because it explicitly dismisses the environmental impacts of expanded aircraft operations. The document simultaneously claims that the project is intended to accommodate a forecasted 133% increase in based aircraft and 16% growth in annual operations, and that these increases "would occur with or without the proposed project.".

If a project is planned to accommodate such growth in greenhouse gas emissions, in conflict with local and regional adopted policies to reduce greenhouse gas emissions, these impacts should be mitigated and offset by environmental investments studied and reported on in an updated IS/MND. Alternatively, the project should be modified to reduce the capacity of the airport to gradually phase out unnecessarily impactful aircraft operations.

A more detailed analysis with quotations follows:

The Environmental Checklist within the Airport Master Plan IS/MND claims that the project would have "less than significant impact" to "wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation" (pg 79). The impact analysis justifies this claim based on the assumption that, "The proposed project would not alter Airport operations, including staffing, flights, or customer activity; therefore, operational emissions would remain unchanged and there would be no change in fuel consumption from vehicles." (pg 81). 2A

Similarly the document claims "less than significant impact" to Greenhouse Gas Emissions (Pg 90) based on the following justification. "The number of aircraft operations (i.e., aircraft arrivals and departures) at the Airport is expected to increase in the future; however, the number of future aircraft operations would be the same with or without the proposed project because the project does not include any components that would induce aircraft operations. That is, the growth in future aircraft operations would occur with or without the proposed project." ... "GHG emissions from aircraft and ground-support equipment would increase in the future from projected increases in aircraft activity levels, which would occur with or without the proposed project." (pg 94)

This analysis is inconsistent with the Project Description (pg 12), which includes elements specifically designed to prolong and expand aircraft operations at the facility. The following excerpts from the

Project Description explicitly state how this project is designed to prolong and expand airport capacity:

Reconstruct Existing Ground Service Equipment (GSE) Facility
"Reconstruction of this facility is intended to ensure that it remains usable for an extended period." (pg 12)

Box Hangar Development and Access Taxilane
"This project includes the development of four new aircraft box hangars"... "The development of these four new box hangars would allow for more covered aircraft storage or aviation-related businesses at the Airport." (pg 14)

The project website discusses how this plan is specifically intended to adapt the facility to accommodate growth in airplane traffic volume:

"Forecasting must be conducted as part of the master plan to help ensure that Lake Tahoe is developed and designed to meet the needs of today and tomorrow. Results of the 20-year forecast will have a direct bearing on if new airport facilities need to be developed, what facilities may be needed, and when they should be built."

"The activity forecasts for TVL are featured in the following images, with based aircraft anticipated to grow from 12 to 28 and an increase in annual operations from 26,204 to 30,481 over the 20-year planning period."

The IS/ND repeatedly states "The proposed project is intended to [...] accommodate existing and forecasted aviation demands." (pgs 2, 28, 87, 94, 133, 134, 137, 146)

2A

Finally, Environmental Checklist item Mandatory Findings of Significance claims cumulative impacts are "less than significant with mitigation incorporated":

"Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?" ... "The impacts of the proposed project are mitigated to a less-than-significant level, limited to the construction phase of the proposed project, and generally site specific. No other projects are proposed that would overlap or interact with the proposed project. The cumulative impact of the proposed project is less than significant with mitigation incorporated." (pg 148)

This analysis fails to consider the cumulative impacts of constructing an airport on sensitive lands, and then modifying that airport to accommodate growing flight volume. The report acknowledges a forecast of growing GHG emissions (pg 94), meanwhile a scientific consensus around the significant impact of GHG emissions on environmental health that has emerged since the initial construction of the airport in 1959. The cumulative impact of this facility should be addressed and mitigated.

2B

Thank you,

Nick

Letter 2 Nick Speal

Response 2A

The comment asserts that the Draft IS/MND is flawed because it explicitly dismisses the environmental impacts of expanded aircraft operations, including impacts related to greenhouse gas (GHG) emissions, that the commenter asserts would result with implementation of the proposed project. The comment includes several excerpts from the project description and environmental impact analyses in the Draft IS/MND that the commenter asserts are demonstrative of the Draft IS/MND's purported dismissal of the aforementioned environmental impacts.

In response to the comment, the commenter inaccurately conflates accommodation of existing and forecasted aviation demand with facilitation or inducement of expanded aircraft operations. As discussed on pages 93 through 94 of the Draft IS/MND, and as referenced in the comment, the proposed project includes a series of improvements to the Airport that would occur over approximately a 20-year period. These improvements are intended to improve the safety of existing Airport operations, meet compliance with current Federal Aviation Administration (FAA) design standards, and accommodate existing and forecasted aviation demand. The number of aircraft operations (i.e., aircraft arrivals and departures) at the Airport is expected to increase in the future; however, the number of future aircraft operations would be the same with or without the proposed project because the project does not include any components that would induce aircraft operations. That is, the forecast growth in future aircraft operations would be anticipated to occur with or without the proposed project. Similarly, future-year operations by ground support equipment and other vehicles at the Airport are expected to be the same regardless of implementation of the proposed project. Operation of the proposed project would not introduce new sources of GHG emissions at the Airport and the proposed improvements would not, by themselves, lead to increases in GHG emissions in the future. GHG emissions from aircraft and ground-support equipment would increase in the future from projected increases in aircraft activity levels, which would occur with or without the proposed project.

The environmental impacts of the proposed project are identified and comprehensively evaluated in the Draft IS/MND in accordance with CEQA requirements. The comment does not provide evidence to support claims that the Draft IS/MND does not adequately address the environmental impacts of the proposed project, and no further response is required.

Response 2B

The comment asserts that the Draft IS/MND failed to consider cumulative impacts, including cumulative impacts related to GHG emissions associated with construction of the Airport and subsequent modifications to the Airport to accommodate growing flight volume.

In response to this comment, CEQA requires an evaluation of a project's potential contributions to cumulative impacts, in addition to proposed project-specific impacts. Cumulative impacts, as defined in CEQA Guidelines Section 15355, refer to two or more individual effects that, when taken together, are "considerable" or that compound or increase other environmental impacts. A cumulative impact from several projects is the change in the environment that would result from the incremental impact of the project when added to the impact of other closely related past, present, or reasonably foreseeable future

projects. As discussed on page 148 of the Draft/IS/MND, and as referenced in the comment, the impacts of the proposed project are mitigated to a less-than-significant level, limited to the construction phase of the proposed project, and generally site specific. Any ongoing impacts of the Airport that could combine with the impacts of the proposed project are reflected in the resource-specific descriptions of the environmental setting. No other projects are proposed that would cause impacts that could combine with those of the proposed project to cause or contribute to a significant cumulative impact. The environmental impacts of the proposed project are identified and comprehensively evaluated in the Draft IS/MND in accordance with CEQA requirements. The comment does not provide evidence to support claims that the Draft IS/MND does not adequately address cumulative impacts related to implementation of the proposed project, and no further response is required.

Outlook

SLT Airport Master Plan Comment

From Mark Johnson <mhjgsp@gmail.com>
Date Thu 10/16/2025 12:58 PM
To Robin Blair <rblair@cityofslt.gov>

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Why does the draft master plan and environmental documents consider restoration/complete removal of the airport. Removal of the airport could constitute the largest environmental restoration project in history along the most sensitive and largest tributary to Lake Tahoe - the Upper Truckee River. Maintaining a highly subsidized and limited value airport in this environmentally sensitive location is unacceptable and will be a missed opportunity for a meaningful environmental restoration project that could benefit the lake, fish and wildlife, and residents and visitors who live or visit this community for its unique natural assets. 3A

This should be considered along with a study of which emergency agencies are utilizing this airport for mission essential services that could not be redirected to the Minden Airport or other surrounding airports.

Mark Johnson
530-417-5811

Letter 3 Mark Johnson

Response 3A

The comment states that the draft Airport Master Plan and related environmental documents should consider and study removal of the Airport and restoration of the Airport property. The comment asserts that maintaining a highly subsidized and limited value airport in an environmentally sensitive location is unacceptable, and removal of the Airport and restoration of the Airport property could benefit the Upper Truckee River, Lake Tahoe, fish and wildlife, and residents and visitors who live in or visit the community for its unique natural assets.

The comment is noted and will be provided to decision makers for consideration in their deliberations on approval of the proposed project. There is no requirement under planning law or CEQA to consider or analyze removal of the Airport and restoration of the Airport property. The comment does not pertain to the adequacy, accuracy, or completeness of the Draft IS/MND's analysis of the physical environmental impacts of the proposed project and thus does not require further response.

Patrick Hickman

From: Fletcher, Hilary <Hilary.Fletcher@woolpert.com>
Sent: Thursday, October 23, 2025 6:44 AM
To: Davis, Tony; John Dickinson
Subject: FW: Your form "Lake Tahoe Airport (TVL) - StoryMap" got a response

Tony & John,

FYI - let me know if you want me to respond with something specific...

Thanks,
Hilary

-----Original Message-----
From: Response Report <report@formassembly.com>
Sent: Wednesday, October 22, 2025 1:14 PM
To: Sanders, Greg <Greg.Sanders@woolpert.com>; Fletcher, Hilary <Hilary.Fletcher@woolpert.com>
Subject: Your form "Lake Tahoe Airport (TVL) - StoryMap" got a response

CAUTION: EXTERNAL EMAIL - If suspicious, verify with Phish Alert button.

Your form "Lake Tahoe Airport (TVL) - StoryMap" has received the following response:

Submitted on: 10/22/2025 01:13:31 PM
Completion time: 2 min. 18 sec.

Q. Name
R. Kristin Gunn

Q. Affiliation
R. Full-Time Unincorporated El Dorado County Resident

Q. Email
R. kgunn79@gmail.com

Q. Phone Number
R. 916-850-5227

Q. Gender:
R.

Q. Which race or ethnicity do you most identify with?
R.

Q. Age Range:
R.

Q. Annual Household Income Range:
R.

Q. Leave us a comment!
R. regarding airport improvements, hurray for the proposed bike paths! Also, we are never informed when very loud & fast aircraft fly close to our home, it is nerve-wracking! We live on Skyline Drive above the airport and have had several "flyovers" that seemed dangerously close.

4A

Letter 4 Kristin Gunn

Response 4A

The comment expresses support for proposed future bicycle paths and expresses concerns regarding a purported absence of notifications to the commenter regarding aircraft operations, which the commenter asserts can produce noise and safety concerns due to the close proximity of aircraft overflights to the commenter's residence.

The proposed project includes a series of improvements to the Airport that are intended to improve the safety of existing Airport operations, meet compliance with current FAA design standards, and accommodate existing and forecasted aviation demand. The number of aircraft operations (i.e., aircraft arrivals and departures) at the Airport is expected to increase in the future; however, the number of future aircraft operations would be the same with or without the proposed project because the project does not include any components that would induce aircraft operations. Notifications related to aircraft operations are not a component of the proposed project and are not within the scope of the Draft IS/MND's analysis of the physical environmental impacts of the proposed project. However, the comment is noted and will be provided to decision makers for consideration in their deliberations on approval of the proposed project. The comment does not pertain to the adequacy, accuracy, or completeness of the Draft IS/MND's analysis of the physical environmental impacts of the proposed project and thus does not require further response.

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

703 B STREET | MARYSVILLE, CA 95901-5556
(530) 821-8401
www.dot.ca.gov

October 27, 2025

GTS # 03-ED-2017-00452
SCH# 2025100157

Mr. John Hitchcock, Planning Manage
City of South Lake Tahoe
1052 Tata Lane
South Lake Tahoe, CA 96150

Lake Tahoe Airport Master Plan (MND)

Dear Mr. Hitchcock,

Thank you for including the California Department of Transportation (Caltrans) in the review process for the project referenced above. We reviewed this local development for impacts to the State Highway System (SHS) in keeping with our mission, vision, and goals, some of which includes addressing equity, climate change, and safety, as outlined in our statewide plans such as the California Transportation Plan, Caltrans Strategic Plan, and Climate Action Plan for Transportation Infrastructure.

The Lake Tahoe Airport, located in the City of South Lake Tahoe in El Dorado County, is adjacent to Emerald Bay Road (U.S. Route 50), which runs parallel to the Airport's western boundary. In 2023, the City of South Lake Tahoe initiated an update to the Airport Master Plan, with funding support from the Federal Aviation Administration, to assess the current conditions and future potential of the Lake Tahoe Airport. The updated Airport Master Plan outlines a series of airside and landside improvements to be implemented over approximately 20 years. The proposed project includes reconstruction of the ground service equipment facility; remediation and demolition of the former air traffic control tower; incorporation of a proposed bike path onto airport property, development of four additional box hangars with new taxi lane and automobile access, installation of an airport electrical vault, construction of an airport parking garage, installation of an electric aircraft charging station, removal and reconstruction of taxiway connectors, relocation of the automated surface observing system, adjustment of parallel taxiway pavement width, removal of excess pavement and construction of new blast pads, and installation of a new aircraft wash rack. Based on the Draft Initial Study/Mitigated Negative Declaration (MND) provided, Caltrans provide the following comments:

Highway Operations

The transit component of the MND proposes constructing a large parking garage with over 600 spaces, presumably as a park-and-ride facility for visitors to South Lake Tahoe. A transportation impact study should be conducted to analyze the impacts from the project to the two Airport Road intersections on the US 50. Currently, these intersections are uncontrolled. If the study determines that improvements are needed to maintain intersection safety due to increased conflicting traffic volumes, an Intersection and Signal Operations Analysis (ISOAP) study will need to be completed to identify the appropriate improvements to be constructed at each location. 5A

Encroachment Permit

Any project or work, including access modification and drainage work, that takes place along or within the State's right of way (ROW) requires an encroachment permit issued by Caltrans. To apply, a completed encroachment permit application, environmental documentation, and five sets of plans clearly indicating State ROW must be submitted to Encroachment Permits Offices as indicated below: 5B

California Department of Transportation
District 3, Office of Permits
703 B Street
Marysville, CA 95901
D3encpermit@dot.ca.gov

Please provide our office with copies of any further actions regarding this proposal. We would appreciate the opportunity to review and comment on any changes related to this development.

If you have any questions regarding these comments or require additional information, please contact Satwinder Dhatt, Local Development Review Coordinator, by phone (530) 821-8261 or via email at satwinder.dhatt@dot.ca.gov.

Sincerely,

Alexander Fong (Oct 27, 2025 11:06:10 PDT)

ALEXANDER FONG, Acting Branch Chief
Local Development Review and Complete Streets
Division of Planning, Local Assistance, and Sustainability
California Department of Transportation, District 3

Caltrans Comments Letter -Lake Tahoe Airport Master Plan

Final Audit Report 2025-10-27

Created:	2025-10-27
By:	Satwinder Dhatt (s134519@dot.ca.gov)
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Letter 5 California Department of Transportation

Response 5A

The comment states that a transportation impact study should be conducted to analyze potential intersection safety impacts at the two uncontrolled Airport road intersections on Emerald Bay Road (U.S. Route 50). The comment asserts that the potential intersection safety impacts could result from operation of the Airport parking garage proposed under the Airport Master Plan. The comment states that if the study determines that improvements are needed to maintain intersection safety due to increased conflicting traffic volumes, an Intersection and Signal Operations Analysis (ISOAP) study will need to be completed to identify the appropriate improvements to be constructed at each location. The comment does not question the adequacy, accuracy, or completeness of the Draft IS/MND's analysis of the physical environmental impacts of the proposed project; nonetheless, the City has considered whether an ISOAP study would improve the informational value of the analysis and has concluded that, at this time, it would not.

The transportation analysis in the Draft IS/MND (pages 137 through 138) considered potential intersection safety impacts in the context of topic c), concluding that the proposed project would cause no impact as a result of causing or contributing to a substantial increase in transportation hazards due to a geometric design feature (such as dangerous intersections) relative to the baseline condition because the proposed project would not alter any existing facilities or infrastructure. The comment correctly observes that the Airport Master Plan anticipates future development of a parking garage. However, as stated in Table 7-2, *TVL Combined Capital Improvement Plan*, on page 7-9 of the Draft Airport Master Plan,[1] the design and construction of the proposed Airport parking garage is not proposed for development until the Phase III (Long Term, 2034-2043) planning period.

Caltrans conducts Intersection and Signal Operations Analysis (ISOAP) studies to inform evaluations of intersection alternatives to identify the most effective and safe solution, considering such factors as traffic operations, safety, and all users, including motorists, pedestrians, cyclists, and transit.[2] Page 4 of the guide explains that "ISOAP applies to new intersections or the major modification of existing intersections and local street interchanges…on the State Highway System." The guide provides four examples of conditions under which ISOAP applies:

- Connecting a new public road, private road, or high-volume (average daily traffic volumes of 1,000 or greater) driveway to a state highway or a new interchange to a freeway.
- Changing the type of traffic control, such as from stop-control to signal-control or from a two-way stop to all-way stop.
- Installing a pedestrian hybrid beacon at an intersection.
- Making major physical changes to intersection approaches, including at ramp terminals, such as adding a leg to an intersection or widening to provide an additional through or turn lane.

[1] Woolpert, 2024, *Draft Lake Tahoe Airport Master Plan*, Prepared for the City of South Lake Tahoe. Available at http://tvlmasterplan.com/.

[2] Caltrans, 2024. *Intersection Safety and Operational Assessment Guide*. September 2024. Available at https://dot.ca.gov/-/media/dot-media/programs/traffic-operations/documents/isoap/20240910-isoap-process-info-guide--a11y.pdf.

Because the proposed project includes none of these conditions, the ISOAP process does not apply to the project. Further, page 1 of the guide explains that the ISOAP "presents a data-driven, performance-based framework." Specific details about what development of a parking garage could entail a decade or more into the future are not precisely clear at this time and determining how its construction and operation might affect roadway conditions on U.S. Route 50 could more effectively be assessed during project design and implementation. It would be entirely speculative to guess what traffic operations, safety, and user needs should be factored into a study now for it to reasonably inform decision-makers or members of the public about the potential environmental consequences of the proposed parking garage between 2034 and 2043. CEQA Guidelines Section 15145 is clear: "If, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact." When responding to comments, a lead agency is not required to conduct every test or perform all studies that may be sought by commenters (Public Resources Code Section 21091[d][2][B]; 14 California Code of Regulations Section 15204[a]). Accordingly, the City declines to prepare the requested ISOAP study now because the analysis as a whole better reflects a reasonable good faith effort at full disclosure without the speculation that completing a study would require.

Response 5B

The comment states that any project or work, including access modification and drainage work, that takes place along or within the State's right of way (ROW) requires an encroachment permit issued by Caltrans. The City acknowledges this information and is committed to complying with all relevant legal requirements related to work within Caltrans' ROW.

KEEP TAHOE BLUE
League to Save Lake Tahoe

LETTER 6

advocate | engage | create

November 3, 2025

John Dickinson, Airport Manager
City of South Lake Tahoe
1901 Lisa Maloff Way, Suite 100
South Lake Tahoe, CA 96150
Submitted via email to jdickinson@cityofslt.us

Re: Comments on Draft Lake Tahoe Airport Master Plan Update (2025–2045)

Dear Mr. Dickinson,

Thank you for the opportunity to comment on the proposed update to the Lake Tahoe Airport Master Plan. The League to Save Lake Tahoe ("League"), also known as Keep Tahoe Blue, is Tahoe's oldest and largest nonprofit environmental advocacy organization. Our mission is to protect and restore the environmental health, sustainability, and scenic beauty of Lake Tahoe through advocacy, education, and collaboration.

We appreciate the City's commitment to environmental stewardship and the preparation of a CEQA Initial Study/Mitigated Negative Declaration (IS/MND) for the proposed Master Plan. Below are our comments and recommendations based on review of the IS/MND and comparison to prior planning concepts.

Areas of Concern

Climate & Greenhouse Gas Emissions

While we commend inclusion of electric aircraft charging infrastructure and EV stations, we remain concerned about the cumulative climate implications of additional hangars and expanded landside facilities. Even without scheduled commercial service, increased hangar capacity could incentivize more private jet activity—the most emissions-intensive mode of travel. This conflicts with the City's Strategic Priority for carbon neutrality and TRPA's transportation policies. We urge the City to:

- Condition any new hangar development on demonstrated demand that does not increase annual operations beyond the current level.
- Require adoption of Sustainable Aviation Fuel (SAF) and electrification strategies as prerequisites for expansion.

6A

Water Quality & SEZ Protection

The Airport remains a major impediment to full restoration of the Upper Truckee River and associated SEZs. While the proposed plan avoids direct river work, any expansion must not compromise ongoing and future restoration projects. We request:

- Coordination with Tahoe Resource Conservation District and TRPA to ensure compatibility with Johnson Meadow restoration and the planned multi-use path.
- Full wetland delineation and avoidance of SEZ disturbance beyond existing paved areas.

6B

Transportation and Circulation
The inclusion of a multi-use path is a long overdue and much-needed aspect of the project and we fully support this regardless of the outcome of the larger Master Plan update. We understand that the proposed parking garage is being considered as a potential mobility hub with associated transit service. We request:

- Making the IS/MND clear that the parking garage is only for non-airport related uses.
- If a parking garage is separately proposed for development, a decrease in vehicle miles traveled (VMT) must be demonstrated.

6C

Wildlife & Habitat
We support mitigation measures BIO-1 through BIO-4 but emphasize the need for rigorous implementation and monitoring. Sensitive habitats and special-status species occur on-site; any failure in BMPs could result in irreversible impacts.

6D

Noise & Community Impacts
The IS/MND concludes noise impacts are less than significant; however, community concerns about helicopter tours and event-related surges persist. We recommend:

- A comprehensive noise monitoring and reporting program tied to Master Plan implementation.
- Evaluation of cumulative noise impacts if hangar development leads to increased operations.

6E

Further Recommendations

- Analyze a true “No Action” alternative at the same level of detail as other alternatives.
- Include enforceable conditions for GHG reduction (SAF, electrification) in all development phases.
- Require TRPA consultation prior to approval of any alternative that increases land coverage or vehicle trips.
- Establish a transparent public reporting system for noise, air quality, and water quality monitoring.

6F

Thank you for considering these comments. The League looks forward to continued engagement to ensure that the Airport Master Plan aligns with the community’s environmental priorities and the long-term protection of Lake Tahoe.

Sincerely,

Gavin Feiger
Policy Director

Letter 6 The League to Save Lake Tahoe

Response 6A

The comment expresses concerns regarding potential cumulative climate effects related to hangars and landside facilities proposed under the Airport Master Plan. The comment asserts that increased hangar capacity could incentivize more private jet activity, which the commenter states in the most emissions-intensive mode of travel. The comment asserts that this purported increase in private jet activity and related GHG effects conflicts with the City's Strategic Priority for carbon neutrality and TRPA's transportation policies. The comment requests the City to condition any new hangar development on demonstrated demand that does not increase annual operations beyond the current level and require adoption of Sustainable Aviation Fuel (SAF) and electrification strategies as prerequisites for expansion.

In response to this comment, as discussed on pages 92 through 94 of the Draft IS/MND, the proposed project includes a series of improvements to the Airport that are intended to improve the safety of existing Airport operations, meet compliance with current FAA design standards, and accommodate existing and forecasted aviation demand. The number of aircraft operations (i.e., aircraft arrivals and departures) at the Airport is expected to increase in the future; however, the number of future aircraft operations would be the same with or without the proposed project because the project does not include any components that would induce aircraft operations. The comment does not provide factual evidence to support the claim that additional hangars or landside facilities proposed under the Airport Master Plan could incentivize increased private jet activity and result in increased GHG emissions. The environmental impacts of the proposed project, including impacts related to GHG emissions, are identified and comprehensively evaluated in the Draft IS/MND in accordance with CEQA requirements and in accordance with applicable City and TRPA policies. No further response is required.

Response 6B

The comment states that the Airport remains a major impediment to full restoration of the Upper Truckee River and associated stream environment zones (SEZs). The comment states that, while the proposed project avoids direct river work, any expansion must not compromise ongoing and future restoration projects. The commenter requests coordination with Tahoe Resource Conservation District and TRPA to ensure compatibility with Johnson Meadow restoration and the planned multi-use path and completion of a full wetland delineation and avoidance of SEZ disturbance beyond existing paved areas.

In response to this comment, as discussed on page 56 of the Draft IS/MND, any projects implemented under the Airport Master Plan would be required to comply with existing TRPA, federal, and state regulations; permitting requirements; and environmental review procedures that protect SEZs, wetlands, and other sensitive habitats. Implementation of Mitigation Measures BIO-2 and BIO-4, described on pages 57 through 58 of the Draft IS/MND would protect the water quality in the Upper Truckee River and would ensure that any potential temporary or permanent impacts to riparian habitats and waters of the United States or state would be less than significant with mitigation incorporated. The environmental impacts of the proposed project, including impacts related to aquatic and/or biological resources, are identified and comprehensively evaluated in the Draft IS/MND in accordance with CEQA requirements, and no further response is required.

Response 6C

The comment requests that the IS/MND clearly state that the proposed Airport parking garage is only for non-airport related uses, and if a parking garage is separately proposed for development, a decrease in vehicle miles traveled (VMT) must be demonstrated.

The proposed Airport parking garage and inclusive transit stop is included as an element of the Airport Master Plan and is anticipated to serve airport users and non-airport users. Thus, it would not be accurate to state that the parking garage would be exclusively operated for non-Airport use. With regard to VMT, as discussed on page 138 of the Draft IS/MND, CEQA Guidelines Section 15064.3(b) states that transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. Implementation of the proposed project would not result in an increase in aircraft operations or an increase in the number of Airport employees. Consequently, the proposed project would not result in an increase in VMT, and the impact would be less than significant. The environmental impacts of the proposed project, including impacts related to VMT, are identified and comprehensively evaluated in the Draft IS/MND in accordance with CEQA requirements, and no further response is required.

Response 6D

The comment expresses support for mitigation measures BIO-1 through BIO-4 included in the Draft IS/MND (pages 56 through 58) and emphasizes the need for rigorous implementation and monitoring of the measures. The comment is noted.

Response 6E

The comment states that there are ongoing community concerns about helicopter tours and event-related surges -- presumably related to the Airport. The comment requests establishment of a comprehensive noise monitoring and reporting program tied to Airport Master Plan implementation and evaluation of cumulative noise impacts if hangar development leads to increased operations.

In response to this comment, as discussed in Response 6A above, the proposed project does not include any components that would induce aircraft operations. No helicopter tours or events are proposed by the project. Consequently, a noise monitoring and reporting program tied to Airport Master Plan implementation is neither necessary nor required. The comment does not pertain to the adequacy, accuracy, or completeness of the Draft IS/MND's analysis of the physical environmental impacts of the proposed project and thus does not require further response.

Response 6F

The comment includes additional recommendations, including evaluation of a "No Action" alternative; inclusion of enforceable conditions for GHG reduction in all development phases; required TRPA consultation prior to approval of any alternative that increases land coverage or vehicle trips; and establishment of a public reporting system for noise, air quality, and water quality monitoring.

With regard to the recommended evaluation of a "No Action" alternative, as discussed on page 2 of the Draft IS/MND, the Airport Master Plan process included consideration of various development options for meeting facility requirements at the Airport over the next 20 years. The objective of this analysis was

to identify a set of feasible development alternatives that enable the Airport to meet projected levels of aviation demand as well as enhance the safety and level of service for tenants, customers, employees, and visitors. Each alternative was evaluated to provide recommended improvements that meet demand and provide for future flexibility. These alternatives ranged from a "no project" alternative to alternatives that varied substantially in the number of additions, removals, and/or modifications to existing Airport facilities, including airside, landside, and support facilities. After receiving public input and evaluating each alternative based on economic, operational, environmental, and social benefits and drawbacks, the South Lake Tahoe City Council endorsed a preferred alternative. The preferred alternative, which comprises the "proposed project" was evaluated in the Draft IS/MND. Thus, a no project alternative was appropriately considered in the planning process for the Airport Master Plan.

With regard to environmental review of alternatives, CEQA requires that when a preliminary analysis of a proposed project (e.g., an initial study) determines the proposed project could result in significant environmental effects that will be analyzed in an EIR, the EIR shall include identification and evaluation of a range of alternatives to the project that would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, as well as a no project alternative to allow decision-makers to compare the environmental effects of approving the project with the effects of not approving the project (CEQA Guidelines Section 15126.6). With regard to the lead agency's decision on whether to prepare an EIR or a mitigated negative declaration, CEQA provides that when the initial study has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment, a mitigated negative declaration may be prepared (CEQA Guidelines Section 15126.6). As documented in the Draft IS/MND prepared for the proposed project, the potential significant impacts of the proposed project would be reduced to a less-than-significant level with implementation of the mitigation measures identified in the Draft IS/MND and required as a condition of project approval. Consequently, the proposed project does not require preparation of an EIR and the EIR-specific requirement to identify and evaluate alternatives to the project, including evaluation of a no project alternative.

With regard to the recommended inclusion of enforceable conditions for GHG reduction in all development phases (presumably in reference to implementation of the Airport Master Plan), as discussed in Section VIII, *Greenhouse Gas Emissions*, of the Draft IS/MND (pages 90 through 94), neither construction nor operation of the proposed project would generate GHG emissions in exceedance of applicable thresholds, and impacts related to GHG emissions would be less than significant with no mitigation required. Moreover, implementation of the proposed project would be conducted in adherence with all applicable regulations and policies related to reduction of GHG emissions. Consequently, additional conditions for GHG reduction are neither warranted nor required.

With regard to the recommendation to require TRPA consultation prior to approval of any alternative that increases land coverage or vehicle trips, no such alternative is proposed. TRPA has reviewed the Draft

Airport Master Plan and related environmental documents prepared for the proposed project[3] and would be consulted for any future Airport plans or projects within the purview of TRPA's land use and environmental regulatory authority.

Finally, with regard to the recommended establishment of a public reporting system for noise, air quality, and water quality monitoring, the comment provides no basis for the establishment and implementation of this system. The Airport operates in accordance with all applicable laws and regulations related to noise, air quality, and water quality. Establishment and implementation of the suggested reporting system is therefore neither warranted nor required. The comment does not pertain to the adequacy, accuracy, or completeness of the Draft IS/MND's analysis of the physical environmental impacts of the proposed project and thus does not require further response.

[3] The City of South Lake Tahoe submitted an Initial Environmental Checklist to TRPA, upon review of which TRPA determined the Master Plan "does not require TRPA approval or action at this time." TRPA's determination is documented in correspondence dated September 3, 2025 and included in Appendix D of this Final IS/MND.

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ATTACHMENT 3

PAVEMENT MAINTENANCE MANAGEMENT PROGRAM

PAVEMENT MAINTENANCE - MANAGEMENT PROGRAM

FAA AIP Project No. 3-06-0249-047-2022

LAKE TAHOE airport

Lake Tahoe Airport

South Lake Tahoe, California

Sponsored By:

City of South Lake Tahoe, California

Federal Aviation Administration

California Department of Transportation Aviation Division

Issued for Review
October 31, 2024

WOOLPERT

1300 Eastman Ave, Suite 214, Ventura, CA 93003

Woolpert.com

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EXECUTIVE SUMMARY

This Pavement Management Program (PMP) was completed by Woolpert Inc. (Woolpert) for the Lake Tahoe Airport (TVL or the Airport) to update the "Pavement Evaluation Study Pavement Maintenance/Management Plan" prepared August 2017 by Renard W. Brandley.

This pavement condition report presents the findings of a comprehensive inspection conducted at TVL in South Lake Tahoe, California for the purpose of assessing the condition of its runway, taxiways, and aprons and is funded under Airport Improvement Program (AIP) Grant No. 3-06-0249-047-2022 with a city match. The inspection utilized American Society for Testing and Materials (ASTM) D5340 *Standard Test Method for Airport Pavement Condition Index Surveys* guidelines to assign Pavement Condition Index (PCI) ratings based on observed distresses. The PMP provides recommendations on maintenance needs for each airport pavement surface over a ten-year planning period.

The elements scoped for this PMP include:

- PCI reporting
- Aircraft Classification Rating - Pavement Classification Rating (ACR-PCR) to assess the load bearing capacity (pavement strength) of the airfield pavements
- Maintenance and rehabilitation plan scheduling

This report is intended to be used to make informed decisions about maintenance and rehabilitation needs at TVL.

Pavement Condition Index

A visual pavement inspection was completed September 2023 by Woolpert and followed ASTM D5340 guidelines. This standard provides guidelines for conducting PCI surveys, including procedures for performing a detailed visual survey of the pavement to identify various types of surface distresses.

The types, severities, and extents of the identified distresses were then recorded using standardized forms and software designed and approved by the Federal Aviation Administration (FAA) for pavement management systems. The recorded data was used to calculate a PCI value of each pavement section. Each type of distress has a different impact on the overall pavement condition, and the PCI was computed using a standardized formula that accounts for these factors.

The results of the PCI inspection in this survey provide a comprehensive overview of the pavement's condition. The PCI values are then put into a range of condition levels to categorize the condition of the pavements and to guide maintenance and rehabilitation decisions.

Maintenance responses to different levels of pavement deterioration defined by a PCI value vary based on the specific distress types and extent of damage observed. Below are recommended maintenance responses based on PCI ranges in accordance with the guidelines in FAA Advisory Circular 150/5380-7B *Airport Pavement Management Program (PMP)*

- PCI 75-100 (Very Good): Routine maintenance: Crack sealing, joint resealing, and minor patching to preserve the pavement and prevent water infiltration.
- PCI 65-74 (Good): Preventive maintenance: Surface treatments (e.g., fog seal and slurry seal, to extend pavement life and improve surface condition).
- PCI 55-64 (Fair): Selective rehabilitation: Patching, localized repairs, and thin overlays to address surface distresses and maintain ride quality.
- PCI 45-54 (Poor): Rehabilitation: Consider more extensive rehabilitation, such as mill and overlay or partial depth repairs, to restore pavement structural capacity.
- PCI Below 45 (Very Poor): Reconstruction: Full-depth reconstruction or major rehabilitation to address severe distresses and safety concerns.

Maintenance and Repair (M&R) Planning

M&R planning is a very important part of maintaining airport pavements, as airport pavements require ongoing maintenance and upgrades to ensure they remain safe and operational. A well-planned M&R plan helps identify and prioritize these needs and it allows time to allocate specific funds for M&R projects.

The PCI data collected for TVL indicate taxiway conditions require more immediate attention than other airport pavements (except for Taxiway D which was recently rehabilitated). Runway 18/36 is in better condition than most of the taxiways but needs future attention to extend its life. Aprons overall are in good to very good condition. The area South of the terminal ramp is the exception and is in poor condition.

A 2024 crack seal, seal coat, and remarking of Taxiways A, E, F, and G will address some immediate M&R needs. Additionally, a major runway rehabilitation is planned for in 2028 followed by the rehabilitation of Taxiway A and associated connectors in 2030. These projects are contained in the Airport's Capital Improvement Plan (CIP) in Appendix F.

This M&R plan will help manage airport assets effectively within available budget. The PMP will facilitate prioritization of funds based on the condition and lifespan of existing infrastructure, ensuring that resources are used efficiently. It contains the recommendations for improvements each year spanning from 2024 to 2033 for TVL pavements.

Pavement Classification Rating

The evaluation of the existing pavement sections throughout the airport were based on previous construction drawings, reconstruction and maintenance drawings, evaluation study reports, and FAA files that were collected. Subsurface exploration, laboratory testing, nondestructive testing, and geotechnical engineering analyses were completed in August 2017 by Renard W. Brandley as well as for the apron and hangar taxilane reconstruction projects in 2017 and 2021 respectively. This information was utilized in conjunction with the existing fleet mix to determine the strength of each of the pavement sections at TVL and their ability to support the existing fleet mix. This analysis is completed through the ACR-PCR determination utilizing the FAA Rigid and Flexible Iterative Elastic Layered Design (FAARFIELD) 2.1.1 (build 12/21/2023) computer program based on analysis of traffic data. The existing pavement sections and characteristics of the subgrade soils were inserted into the program to determine the design aircraft that can be safely permitted on the existing pavements at TVL. The PCR value for Runway 18/36 was calculated to be 330/F/C/X/T and is further described in later sections.

INTRODUCTION

The purpose of this study and report is to update a PMP produced for TVL located in the City of South Lake Tahoe, California by Reinard W. Brandley in August 2017. Public Law 103-305 requires airports included in the National Plan of Integrated Airport Systems (NPIAS) have a PMP to qualify for federal grant funding. Airports receiving federal funds for pavement projects are required to implement a Pavement Maintenance-Management Program (PMMP) designed to preserve the pavement's structural integrity and prolong its useful life, minimizing the need for extensive repairs or reconstruction.

Performing a pavement condition assessment and analysis coupled with the development of a Capital Investment Plan (CIP) provide major elements needed to meet the requisites to participate in the Federal Aviation Administration (FAA) AIP. This report includes an inventory of pavement assets including the runway, taxiways, aprons, roads, and parking lots. Woolpert Inc. followed the recommendations of FAA Advisory Circular (AC) 150/5380-7B, *Airport Pavement Management Program*, to produce this report.

Woolpert Inc. performed an evaluation of the condition of pavement assets through a visual inspection to identify distresses and their severity. This collected data was entered into a database created by Woolpert Inc. using FAA PAVEAIR software. This software uses pavement performance models to determine the PCI and the Structural Condition Index (SCI) for each pavement section.

As a result of the record review, pavement inspection, and asset analysis, recommended maintenance and rehabilitation treatments were developed for the CIP, including timing and cost estimates. The CIP outlines the schedule and sequence for implementing the recommended treatments based on priority rankings, funding availability, and operational constraints.

The FAA has detailed specifications for pavement management in the following documents:

- AC 150/5380-7B, *Airport Pavement Management Program*
- AC 150/5380-6C, *Guidelines and Procedures for Maintenance of Airports Pavements*
- AC 150/5335-5D, *Standardized Method of Reporting Airport Pavement Strength (PCR)*

According to FAA AC 150-5380-7B, an airport PMP has several benefits, including:

- Increased pavement useful life.
- An objective and consistent evaluation of the condition of a network of pavements.
- A systematic and documentable engineering bases for determining pavement M&R needs including consideration of future operational needs and/or planned airport expansion projects.
- Identification of budget requirements necessary to maintain pavement functionality.
- Documentation on the present and future condition of the pavements.
- A life cycle cost analysis for various pavement M&R alternatives.
- Identification of the impact on the pavement if no major repairs are conducted.

An effective PMP calculates when pavements will likely reach response triggering conditions. Furthermore, the PMP will help identify the most appropriate approach—between rehabilitation or reconstruction—by assessing available resources and funds. The PMP utilizes data from a pavement condition rating system (PCI and ACR-PCR) that helps predict future conditions and indicate whether the distress is load or environmentally related. This PMMP will help avoid unnecessary or ineffective maintenance applications and promote the best use of available funds.

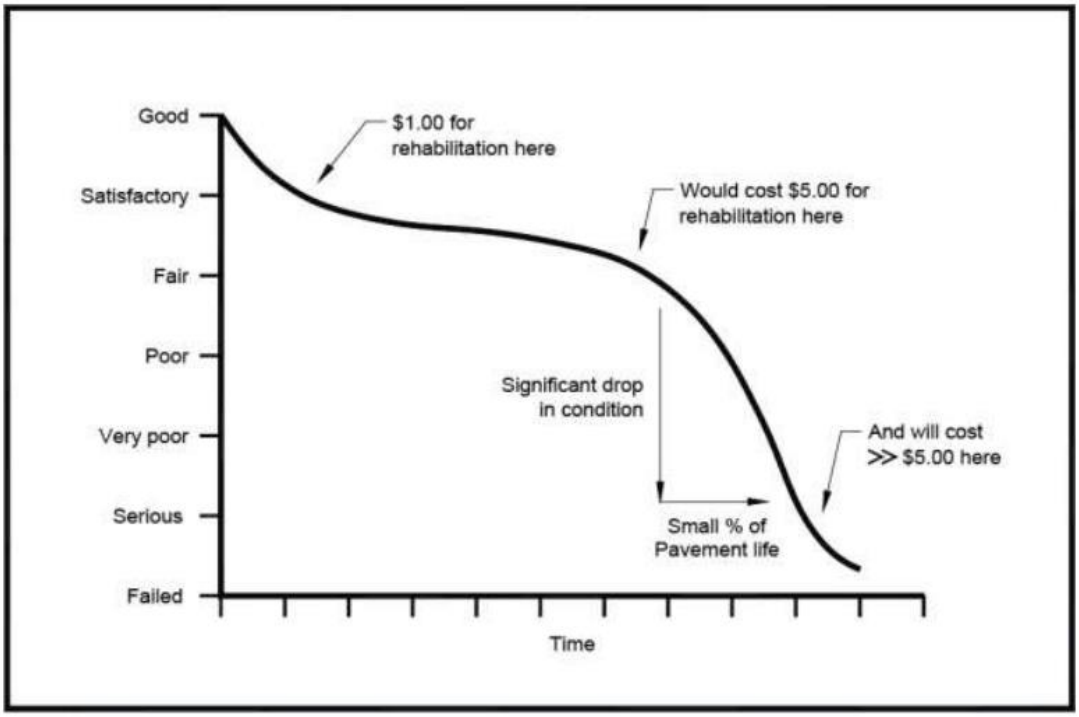
General Information

By systematically evaluating the condition of pavements and scheduling M&R based on need rather than a reactive approach, PMPs can help reduce long-term costs. These plans can also help prioritize projects, based on available funding. PMPs help airport operators manage their pavement assets more effectively by tracking pavement conditions, maintenance history, and performance over time. This information can inform decisions about rehabilitation, reconstruction, or other improvements. PMPs are critical to an airport's compliance with regulatory requirements and industry standards. By

maintaining pavement conditions, airports can ensure smoother operations, reduce aircraft wear and tear, and enhance the overall user experience. Properly implemented PMPs extend the lifespan of pavements, reducing the frequency of major repairs or replacements. Overall, a well-developed PMP help airports manage their pavements effectively, leading to improved safety, reduced costs, and better overall performance.

As demonstrated in **Figure 1** investing in preventative pavement maintenance results in significant cost savings over the long term. It helps to preserve the pavement in good condition and avoid more costly repairs or replacements. While preventative maintenance requires regular investments, these costs are typically lower than the costs associated with reactive repairs, which involve more extensive work and higher material and labor expenses. Furthermore, preventative maintenance projects can be planned and scheduled during off-peak times, minimizing disruption to airport operations and reducing the impact to airport users. This proactive approach drives cost savings by avoiding the need for emergency repairs that may require closures or restrictions.

FIGURE 1: TYPICAL PAVEMENT CONDITION LIFE CYCLE



Source: FAA AC 150/5380-7B

Figure 2 illustrates the concept of active pavement preservation—a proactive approach to maintaining airport pavement infrastructure. The concept focuses on applying the right treatment to the right pavement at the right time to extend pavement life, enhance performance, and save money over the long term. Pavement preservation conserves a surface's performance and serviceability rather than simply extending its life. Preservation involves monitoring the pavement's condition and performance over time to determine the most appropriate maintenance strategies.

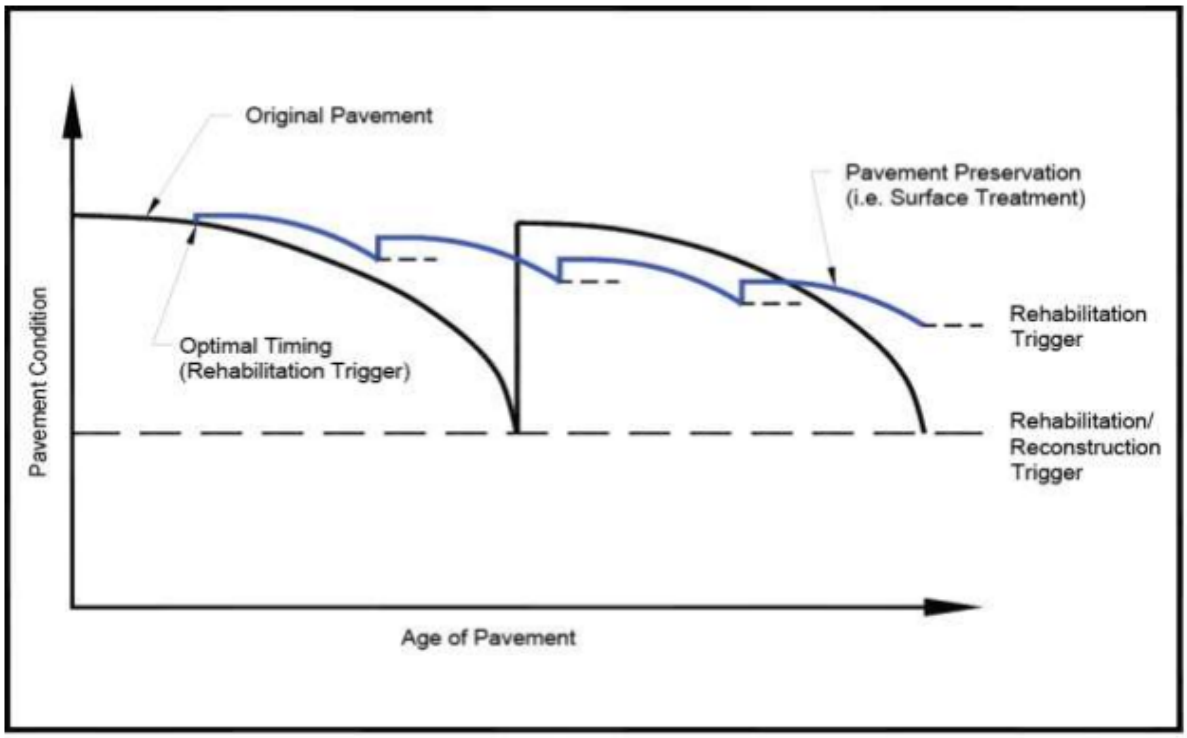


FIGURE 2: PAVEMENT PRESERVATION CONCEPT
Source: FAA AC 150/5380-7B

Pavement History

The historical pavement data discussed below refers to previous projects constructed at TVL. The data was compiled from past construction documents, record drawings, and any other airport records made obtainable by airport staff. TVL was constructed in 1958 by El Dorado County, California in preparation for the 1960 Winter Olympics; this event spurred sudden and widespread commercial and residential development throughout the county. TVL started operating in the summer of 1959 with a 5,900-foot runway which was extended to 8,541 feet in 1962. In 1983, TVL was sold to the City of South Lake Tahoe by El Dorado County. Summers at TVL are warm with maximum temperatures reaching from 62°F to 80°F; the winters are long, cold, and snowy with maximum temperatures from 43°F to 53°F and minimum temperatures averaging 22°F between December and February. The airport averages 50 days per year below freezing.

The existing airport pavements include Runway 18/36, parallel Taxiway A, adjoining taxiway connectors, and general aviation aprons. Each of these airfield pavements were initially constructed in the 1950s. Runway 18/36 was last reconstructed in 2008. The parallel Taxiway A was constructed in 1958 and last rehabilitated (via overlay) in 1990. The taxiway connectors were initially constructed in 1958 through 1963 and connectors B, E, H, J, and K were last reconstructed and overlayed from 1968 through 1990. Taxiway F was last reconstructed in 1970, and Taxiway G was last reconstructed in 2016. Taxiway D, Taxilane D, and South Hangar Taxilanes were initially constructed in 1994 and were last rehabilitated in 2022 through 2023. The general aviation aprons were initially constructed in 1950 through 1974 and were reconstructed by phases in 2009 through 2020. Previous maintenance records for each of the airfield pavements are not available. See Appendix C for the summary of pavement sections and pavement history.

PAVEMENT INVENTORY

The Airport's pavements are divided into sections with common properties according to function (runway, taxiway, aprons, and taxilanes) and pavement construction material (asphalt and concrete).

Runway 18/36

As listed in **Table 1,** Runway 18/36 has a length of 8,541 feet, a width of 100 feet, and a north-south orientation. Both ends of the runway have displaced thresholds; Runway 18 is displaced 800 feet, while Runway 36 is displaced 2,033 feet. The asphalt surface on the runway is grooved to increase friction in adverse weather.

TABLE 1: RUNWAY CHARACTERISTICS

Characteristics	**Runway 18/36**
Use	Primary
Length (feet)	8,541'
Runway 18 – Displaced Threshold	800'
Runway 36 – Displaced Threshold	2,033'
Width (feet)	100' (12.5' shoulders, each side)
Composition	Asphalt/Grooved
Gradient	2% Maximum
Markings	Non-precision/Visual

*Source: FAA Airport Master Record Form 5010 (April 3, 2024)

Taxiways

The TVL taxiway system, detailed in **Table 2**, consists of a full-length parallel taxiway, Taxiway A, and eight connecting taxiway segments, two of which are high speed exits.

TABLE 2: TAXIWAY CHARACTERISTICS

Taxiway	**Dimensions Length x Width (Feet)**	**Description**
Taxiway A	8400 x 60-75	Full parallel taxiway
Taxiway B	192.5 x 75	Taxiway connector to Runway 18/36
Taxiway D	102 x 40	Taxiway from hangars to Taxiway A
Taxiway E	362.5 x 75	High speed taxiway exit
Taxiway F West	135 x 90	Taxiway from Terminal Apron to Taxiway A
Taxiway F East	372.5 x 75	High speed taxiway exit
Taxiway G	95 x 52	Taxiway from tie-down area to Taxiway A
Taxiway H	192.5 x 75	Taxiway connector to Runway 18/36
Taxiway J	192.5 x 75.5	Taxiway connector to Runway 18/36
Taxiway K	192.5 x 75.5	Taxiway connector to Runway 18/36

*Source Caltrans Airport Pavement Management System, 2011

Aprons

TVL has approximately 80,790 square yards of apron space that is divided by use. The southern portion of the apron area is approximately 11,770 square yards and has an asphalt concrete surface course. This area is adjacent to the Aircraft Rescue and Fire Fighting (ARFF) and California Shock Trauma Air Rescue (CalSTAR) facilities. Although there are no aircraft tie-downs located in this area, it is available for temporary aircraft storage and provides terminal apron access for aircraft in the T-hangars.

The center portion of the apron (or terminal apron) is positioned directly in front of the terminal building and is approximately 9,130 square yards. This area is constructed of Portland Cement Concrete (PCC) and is used primarily for temporary aircraft storage by transient (visiting) pilots.

The northern apron is the largest apron area and is approximately 59,890 square yards, constructed of asphalt concrete. This area is adjacent to the Fixed Based Operator (FBO) and used primarily for its services (aircraft storage, fueling, maintenance, etc.). There are currently 127 aircraft tie-down anchors located on this apron.

Hangar Taxilanes and Taxilane D

TVL has five hangar taxilanes that provide access to the six hangar structures south of the main terminal. These taxilanes tie into a perpendicular taxilane that provides access to the parallel taxiway via Taxiway D.

Each of the hangar taxilanes has approximately 1,800 square yards of asphalt concrete and Taxilane D has approximately 4,700 square yards of asphalt concrete.

PAVEMENT CONDITION INDEX

PCI is the most common method used to visually, consistently, and repeatably assess the current pavement surface condition of different airfield pavements. PCI is a rating of the existing surface condition of a pavement section and determines current pavement capacity and condition. Periodic PCI determinations on the same pavement will exhibit the change in surface condition and distress severity over time. Frequent data collection and recording helps determine the current condition of the pavement; these data inform the planning and selection of the most appropriate pavement M&R response with the given resources. A pavement that has a high PCI rating is an indicator the pavement is in good condition and a pavement with low PCI rating is an indicator the pavement is in poor condition.

Methodology

PCI surveys were performed September 2023 for all TVL pavement sections. The surveys were performed using the PCI methodology developed by the U.S. Army Corps of Engineers (USACE) and outlined in the current edition of ASTM D5340, *Standard Test Method for Airport Condition Index Surveys*. This document defines distress types, severity levels, and methods for measuring and recording distresses.

The Airport's pavements were separated into sections based on the type of pavement (asphalt, concrete) and function (runway, taxiway, apron, and so forth). They were further divided by construction date and maintenance history. Woolpert segmented pavement areas based on how an individual pavement section will be managed. For example, if an apron was constructed in two different years, but both portions are characterized by similar distress types, quantities, and resulting comparable PCI values, the sections were combined into one.

Sections are then further divided into sample units which are more manageable for the inspection procedure. To achieve a statistically reliable PCI value, it is not required to inspect 100 percent of the sample units in a section. A set number of randomly chosen sample units are selected based on established criteria outlined in ASTM D5340. The sampling rates used during this study are shown in Table 3**.**

TABLE 3: NUMBER OF SAMPLE UNITS TO INSPECT PER SECTION

Flexible Pavement		Rigid Pavement	
N	n	N	n
1	1	1	1
2-3	2	2	2
4-6	3	3 - 4	3
7-13	4	5 - 6	4
14-38	5	7 - 8	5
39+	10%	9 - 11	6
		12 - 14	7
		15 - 19	8
		20 - 27	9
		28 - 38	10
		39 - 58	11
		59 - 104	12
		105 - 313	13
		314 +	14

Where: N = Total number of sample units in a pavement section

n = Number of sample units to be surveyed

*Source: ASTM D5340.

Table 4 lists the distress types recognized in ASTM D5340. The list separates asphalt and concrete pavement distresses and identifies the related cause (load, climate/durability, other) as designated by the software. Load-related distresses are caused by over-stressed traffic loads applied to the surface. Climate/durability-related distresses are a result of exposure to the environment. Other related distresses are caused by actions not related to load or climate such damage from oil and fuel spills or material related distress such as alkali–silica and alkali–carbonate reactivity.

TABLE 4: PAVEMENT CONDITION INDEX DISTRESS TYPES AND RELATED CAUSES

Asphalt Concrete		Portland Cement Concrete	
Pavement Distress	**Related Cause**	**Pavement Distress**	**Related Cause**
Alligator Cracking	Load	Blow-Up	Climate/Durability
Bleeding	Other	Corner Break	Load
Block Cracking	Climate/Durability	Cracks: Longitudinal, Transverse, and Diagonal	Load
Corrugation	Other	Durability ("D") Crack	Climate/Durability
Depression	Other	Joint Seal Damage	Climate/Durability
Jet Blast Erosion	Other	Patching, Small	Other
Joint Reflection Cracking	Climate/Durability	Patching, Large and Utility Cuts	Other
Longitudinal and Transverse Cracking	Climate/Durability	Popouts	Other
Oil Spillage	Other	Pumping	Other
Patching and Utility Cut Patching	Climate/Durability	Scaling, Map Cracking, Crazing	Other
Polished Aggregate	Other	Settlement or Faulting	Other
Raveling	Climate/Durability	Shattered Slab / Intersecting Cracks	Load
Rutting	Load	Shrinkage Cracks	Other
Shoving	Other	Spalling (Longitudinal and Transverse Joint)	Other
Slippage Cracking	Other	Spalling (Corner)	Other
Swell	Other	Alkali Silica Reaction (ASR)	Other
Weathering	Climate/Durability		

*Source: ASTMD 5340.

The industry-established PCI method was used to rate the existing surface condition of the pavement sections indicating their functional performance. Based on these conventional PCI values, ranges that relate to appropriate maintenance responses are recommended to allow time to plan project development and funding. This information will enable TVL management to take a proactive approach to pavement management, ultimately enhancing the overall performance and sustainability of the airport infrastructure. **Figure 3** below shows the recommended PCI rating scale and the maintenance response threshold by PCI value.

PCI Range	Rating	Maintenance Response
75-100	Very Good	Routine maintenance: Crack sealing, joint resealing, and minor patching to preserve the pavement and prevent water infiltration.
65-74	Good	Preventative maintenance: Surface treatments (e.g., fog seal and slurry seal, to extend pavement life and improve surface condition.
55-64	Fair	Selective rehabilitation: Patching, localized repairs, and thin overlays to address surface distress and maintain ride quality.
45-54	Poor	Rehabilitation: Consider more extensive rehabilitation, such as mill and overlay or partial depth repairs, to restore pavement structural capacity.
Below 45	Very Poor	Reconstruction: Full-depth reconstruction or major rehabilitation to address distress and safety concerns.

FIGURE 3: PCI RATING SCALE FOR AIRFIELD PAVEMENTS

Source: Woolpert, Inc.

Figure 4 on page 13 displays an airport map that depicts the location of the different pavement sections.

PCI Section Map

Appendix E contains a color-coded maps of the PCI results that correspond to the rating scale shown in **Figure 3.** There is a map of the current PCI values and maps that depict 5 years and 10 years without maintenance being performed on the pavements.

PCI Inspection

The PCI data were collected and uploaded in the FAA's PAVEAIR website for TVL. See Appendix D for the exhibit titled "Pavement Maintenance Management Plan Project Section Map," showing the precise sample units surveyed to conduct the PCI inspection at TVL.

Table 5 shows the summary of PCI for each pavement section at TVL.

Over the last few decades, the FAA, USACE, and the U.S. Air Force have cooperated to define the distresses common in pavements that can be classified and quantified to determine the condition of pavements that has comparative value on a national basis.

During a PCI survey, the inspectors identify the distresses and determine the severity and volume. These data are entered into a program that establishes a deduct value. Historical pavement section data helps compute a more accurate deterioration rate. Keeping a comprehensive history of pavement sections over many years improves PMP calculations. PCI values are important in prioritizing, funding, and executing maintenance and rehabilitation on a pavement section. A summary of pavement history at TVL can be found in Appendix C.

TABLE 5: SUMMARY OF PCI AND SCI

Pavement Code	Pavement Section	PCI (2017)	PCI (2023)	SCI	Total Inspected Samples	Total Area (SF)
R18TV-01	Runway 18/36	81	72	100	14	854,007
TATV-01	Taxiway A	55	54	96	11	447,458
TBTV-01	Taxiway B	55	55	100	3	13,500
TDTV-01	Taxiway D	23	100	100	1	5,610
TETV-01	Taxiway E	68	48	92	4	27,000
TF2TV-01	Taxiway F (East)	55	49	69	4	27,000
TF1TV-01	Taxiway F (West)	73	46	100	3	11,305
TGTV-01	Taxiway G	35	85	100	2	6,975
THTV-01	Taxiway H	50	29	73	3	13,860
TJTV-01	Taxiway J	47	44	72	3	13,500
TKTV-01	Taxiway K	55	58	80	4	22,050
A01TV-01	Apron 1 (Taxilane D and Hangar Taxilanes)	23	100	100	7	111,000
A02TV-01	Apron 2	52-63	54	100	7	90,480
A03TV-01	Apron 3	100	100	100	7	81,000
A04TV-01	Apron 4	45	85	100	6	41,600
A05TV-01	Apron 5	10-90	67	100	8	198,801
A06TV-01	Apron 6	25-20	76	100	7	125,281
A07TV-01	Apron 7	20-25	100	100	6	52,640
A08TV-01	Apron 8	14	100	100	8	144,376
AR01TV-01	Airport Road 1	45	80	94	6	69,196
AR01TV02	Airport Road 2	-	78	87	1	5,751
AR01TV-03	Airport Road 3	-	74	100	1	5,350
AR01TV-04	Airport Road 4	-	47	54	5	47,075
TP01TV-01	Terminal Parking 1	25-70	61	97	6	71,175

SCI is a measure of the damage to a pavement caused by traffic and loading. Similar to PCI, it is a numerical index between 0 and 100, where 100 is the best possible condition. It is calculated using the PCI procedures defined in ASTM D5340 using a subset of the PCI distresses:

ASPHALT CONCRETE:

- Alligator Cracking
- Rutting
- Corner Break
- Linear Cracking

PORTLAND CEMENT CONCRETE:

- Shattered Slab
- Shrinkage Cracking
- Joint Spalling
- Corner Spalling

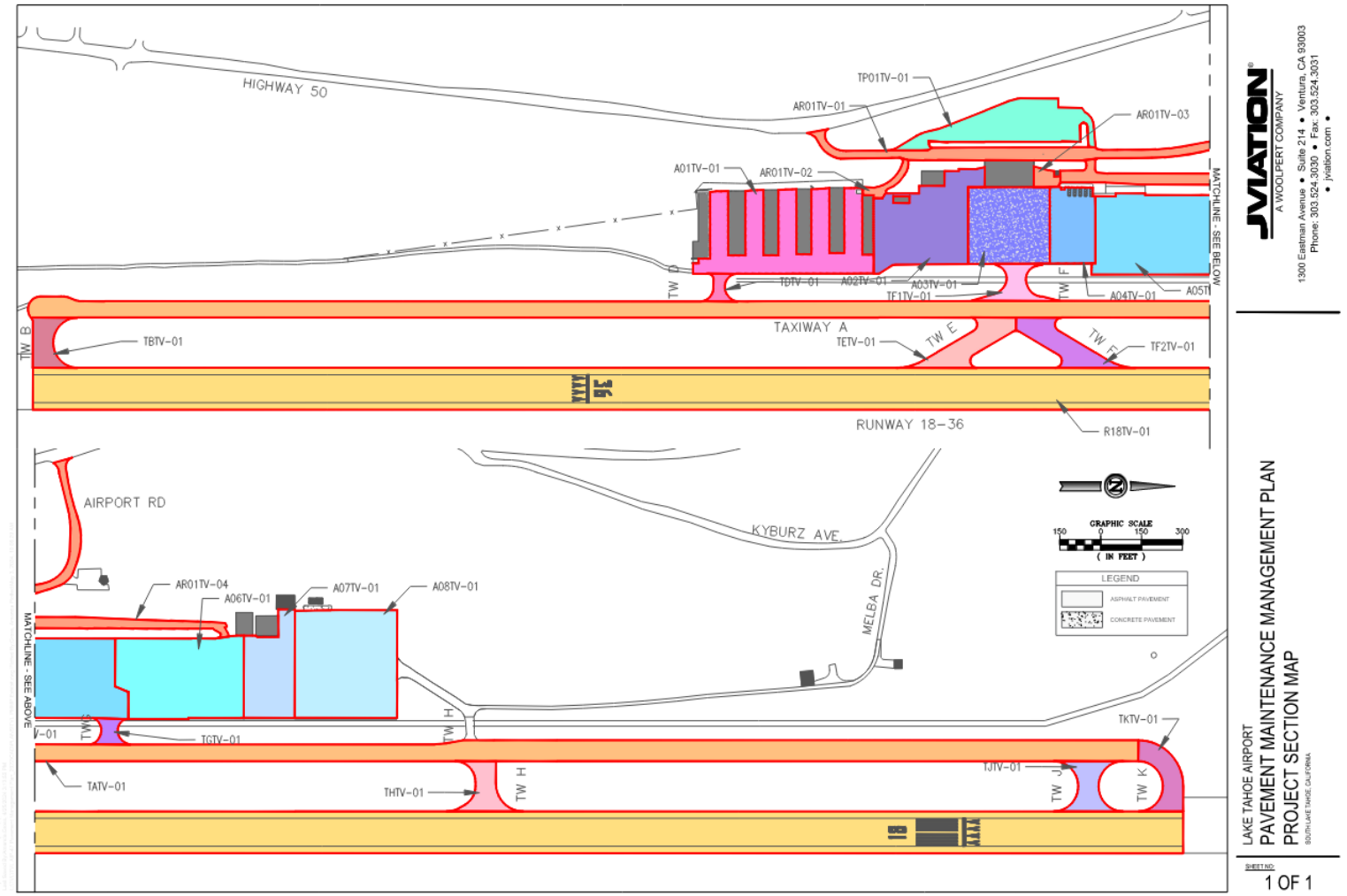


FIGURE 4: PCI SECTION MAP

PAVEMENT CLASSIFICATION RATING (PCR)

The FAA has developed AC 150/5335-5D to determine the PCR on airport pavements. With this method of evaluation, the airfield pavements are assigned a PCR, which is dependent on the pavement section and soil strength and represents the strength and bearing capacity of the pavement section. PCR is a number that expresses the load-carrying capacity of a pavement for a specified aircraft operation. ACR has been developed by aircraft manufacturers to represent the relative effect of an aircraft at a given configuration on a pavement structure. The ACR-PCR system ensures both aircraft and pavement will be able to utilize their maximum extent without detrimental effect to the airfield pavements. Aircraft with ACR less than or equal to the PCR will be able to operate without any weight restrictions See Appendix B for the ACR-PCR values for the different pavement sections at TVL.

Aircraft Fleet Mix and Traffic

Forecasts of annual departures by airplane type are needed for design and evaluation of airfield pavements. The Airport fleet mix presented in **Table 6** contains annual departures and growth rates that are based on projections included in the FAA Terminal Area Forecasts (TAF). The TAF is the official forecast of aviation activity at all airports in the NPIAS. The aircraft fleet mix was determined using data provided by the FAA Traffic Flow Management System Counts (TFMSC) database, records from Virtower, and the fleet mix developed for the apron reconstruction project completed in AIP Grant No. 3-08-0249-041-2018. Data was collected from 2017 to 2023 and an average annual operation was determined for each aircraft type. Aircraft of similar maximum takeoff weight and gear configuration were grouped together into representative aircraft groups, and all aircraft greater than 47,000 pounds were grouped together to reach the annual departures needed to be considered as regular use. Only regular use aircraft, defined as having annual operations greater than or equal to 500, were included in the fleet mix, except for the CRJ 100/200 aircraft since the growth rate for aircraft over 47,000 pounds is projected to exceed 250 annual departures within the next five years. Aircraft growth rates, based on the values provided in TVL's Airport Pavement Evaluation Study PMMP (dated August 2017 by Reinard W. Brandley) and the TFMSC database, were applied to the aircraft fleet mix. Based on this historical information, a 2% annual growth rate was utilized for aircraft weighing less than 25,000 pounds, and a 3% annual growth rate was used for aircraft weighing more than 25,000 pounds but less than 50,000 pounds.

TABLE 6: AIRPORT FLEET MIX INFORMATION

Aircraft Name	Gross Wt. (lbs.)	Annual Departures	% Annual Growth
CRJ100/200	47,700	400	3
Cessna Citation X	36,000	1,000	3
Hawker 800	28,000	330	3
Beechcraft King Air 350	15,100	1,500	2
Cessna Citation II/Bravo C550/551	15,000	2,500	2
PA-31-325 Navajo C/R	6,500	600	2
Cessna 206 Stationair	3,600	3,500	2

PCR Calculations and Inspection

In accordance with FAA AC 150/5320-6G *Airport Pavement Design and Evaluation*, all existing pavements were assessed using industry-standard methods for evaluating pavement strength. The FAARFIELD software, version 2.1.1, was employed for this analysis to inspect pavement conditions and calculate the Pavement Condition Rating (PCR). This technical approach provided a thorough evaluation of pavement strength, considering factors such as pavement layer thickness, material quality, and subgrade strength.

PCR values were computed for each pavement section using FAARFIELD, with a design life of 20 years. The primary goals were to identify which aircraft types impose significant stress on the airfield pavements and to determine the

maximum allowable aircraft load for each section. The analysis was based on subgrade California Bearing Ratio (CBR), pavement Elastic Modulus (E), and the underlying layers, as reported in the August 2017 geotechnical investigation and supplemented by historical reports from apron reconstruction projects conducted over the past decade. Pavement thicknesses were also derived from the 2017 geotechnical data and historical as-built records. For pavement layers with elastic moduli or thicknesses below FAARFIELD's programmed values, user-defined layers were incorporated to accurately model the conditions. Pavement section thicknesses were capped at 20 inches, as historical data for TVL indicate pavement sections thicker than 20 inches serve frost protection purposes rather than structural strength.

A pass-to-traffic-cycle ratio of 1.00 was used, reflecting the assumption that one coverage is achieved for each aircraft pass, consistent with the standard gear configurations of the aircraft in the fleet mix.

Table 8 presents the PCR values for each pavement section at TVL, with supporting documentation provided in Appendix B.
It is noted that all pavement sections have experienced some degree of wear and deterioration since the 2017 investigation. A re-evaluation of the ACR-PCR for each section is recommended following a new geotechnical investigation. A summary of the existing pavement conditions at TVL is provided in Appendix C, and the PCR reporting codes are listed in **Table 7**.

TABLE 7: PCR CODES

Pavement Type	
Pavement Type	**Code**
Flexible	F
Rigid	R

Standard Subgrade Conditions for ACR Calculation			
Subgrade Strength Category	**Subgrade Support E (Elastic Modulus) psi**	**Represents E (Elastic Modulus) psi**	**Code**
High	29008	E≥21,756	A
Medium	17405	E≥14,504<21,756	B
Low	11603	E≥8,702<14,504	C
Ultra Low	7252	E<8,702	D

Tire Pressure		
Category	**Tire Pressure Range**	**Code**
Unlimited	No pressure limit	W
High	Pressure limited to 254 psi	X
Medium	Pressure limited to 181 psi	Y
Low	Pressure limited to 73 psi	Z

Method of Analysis	
Method	**Code**
Technical	T
Using Aircraft	U

Source: FAA AC 150/5335-5D

TABLE 8: PCR RESULTS

Pavement Section	Total Thickness (in.)	PCR
Runway 18/36	20	330/F/C/X/T
Taxiway B, A, F, & E	20	250/F/D/X/T
Taxiway K, H, & J	20	120/F/D/X/T
Taxiway D and South Hangars	18	150/F/C/X/T
GA Apron 2	15	110/F/C/X/T
GA Apron 3	20	560/R/B/W/T
GA Apron 4	18	250/F/C/X/T
Taxiway G & GA Apron 5	11	100/F/B/X/T
GA Apron 6	18	240/F/B/X/T
GA Apron 7	18	350/F/B/X/T
GA Apron 8	18	390/F/B/X/T

The PCR for Runway 18/36 was determined based on the latest PCR calculation methodology, considering pavement type, subgrade strength category, and allowable tire pressure. The resulting PCR for Runway 18/36 is **290/F/C/X/T**. The ACR of the fleet mix was found to be lower than the PCR for each pavement section, confirming all aircraft in the current fleet can be accommodated by the existing pavements at TVL. Runway 18/36 pavement gross weight limits for single-, double-, and dual-double-gear aircraft are provided in **Table 9**.

TABLE 9: RUNWAY 18/36 AIRCRAFT WEIGHT LIMITS

Gear Type	Gross Weight (lb.)
S	82,000
D	120,000
2D	189,000

MAINTENANCE AND REHABILITATION (M&R) PLANS AND BUDGET REQUIREMENTS

M&R is a subset of CIP planning and should be reviewed and adjusted each year. PCI is the result of an airfield pavement surface evaluation and is required to be updated every three years. M&R and CIP planning is a dynamic process that requires periodic fine-tuning.

Table 10 shows the projected PCI value for each section of pavement if no M&R is completed. The PCI values are color coded to correspond to the rating scale in **Figure 3.**

TABLE 10: TEN YEAR PROJECTED DETERIORATION WITHOUT MAINTENANCE

Projected Deterioration by Section If No Maintenance Done												
Pavement Code	Section	PCI 2023	PCI 2024	PCI 2025	PCI 2026	PCI 2027	PCI 2028	PCI 2029	PCI 2030	PCI 2031	PCI 2032	PCI 2033
R18TV-01	Runway 18/36	72	71	69	67	64	62	61	59	56	53	50
TATV-01	Taxiway A	54	53	51	50	48	47	45	44	42	41	39
TBTV-01	Taxiway B	55	51	49	47	45	43	41	39	37	35	33
TDTV-01	Taxiway D	100	96	93	90	87	86	83	81	78	76	74
TETV-01	Taxiway E	48	46	44	42	40	37	35	33	31	29	26
TF2TV-01	Taxiway F (East)	49	47	45	43	41	39	37	35	33	31	29
TF1TV-01	Taxiway F (West)	46	45	43	41	39	37	35	33	31	29	27
TGTV-01	Taxiway G	85	82	80	78	76	73	71	69	66	64	61
THTV-01	Taxiway H	29	27	24	22	19	16	13	11	9	7	5
TJTV-01	Taxiway J	44	42	39	36	32	28	24	20	16	11	7
TKTV-01	Taxiway K	58	56	54	52	50	48	46	44	42	40	38
A01TV-01	Apron 1	100	98	95	93	90	88	86	83	81	78	76
A02TV-01	Apron 2	54	52	49	47	45	43	40	37	33	32	29
A03TV-01	Apron 3	100	98	97	94	92	89	87	85	83	81	78
A04TV-01	Apron 4	85	83	81	79	76	74	72	70	68	65	63
A05TV-01	Apron 5	67	65	64	63	60	57	55	52	51	49	47
A06TV-01	Apron 6	76	74	72	71	70	68	67	65	64	62	60
A07TV-01	Apron 7	100	98	95	92	90	87	85	82	80	77	74
A08TV-01	Apron 8	100	97	95	92	89	87	84	82	79	76	73
AR01TV-01	Airport Road 1	80	79	77	76	74	72	68	67	65	63	61
AR01TV02	Airport Road 2	78	77	76	74	73	72	70	68	66	64	62
AR01TV-03	Airport Road 3	74	72	69	67	66	63	61	59	57	55	53
AR01TV-04	Airport Road 4	47	47	43	41	39	37	35	33	31	29	27
TP01TV-01	Terminal Parking 1	61	59	57	55	52	49	46	43	40	37	35

Source: Woolpert Inc.

An updated CIP was prepared for TVL that includes the scheduled pavement M&R for 2024 to 2033 and submitted to the FAA in February 2024 and was approved. See Appendix F for the current CIP.

Maintenance and Rehabilitation Options

The ideal M&R approach maintains pavements by identifying and rectifying defects early in the cycle of deterioration. This is the most efficient way to extend the life of pavement with the least required funding. Consequently, maintenance responses to different levels of pavement deterioration defined by PCI value vary based on the specific distress types and extent of damage observed. Maintenance required to restore pavement to good condition and extend the life costs less at higher PCI values than the cost at lower PCI values.

Routine maintenance, such as crack sealing, joint resealing, and minor patching to preserve the pavement and prevent water infiltration of the subsurface, should be accomplished earlier in pavement life cycles to lower overall cost of maintaining the life of the pavement.

If pavement has deteriorated to a level beyond routine maintenance but is still in good condition, it will require more extensive maintenance. This consists of maintenance applications such as surface treatments (e.g., fog seal and slurry seal) to extend pavement life and improve surface condition.

When pavements deteriorate beyond the level where routine maintenance is the correct response, selective rehabilitation will be required. This involves rehabilitation of specific areas of distress in a section, including patching, localized repairs, and thin overlays to address surface distresses and maintain pavement useability and safety. Maintenance response for pavement conditions worse than what can be restored by selective rehabilitation is more extensive, requiring a maintenance application to the entire section. This consists of projects such as mill and overlay or partial depth repairs to restore pavement structural capacity. Eventually, all pavements will reach a level of decline that will require full-depth reconstruction or major rehabilitation to address severe distresses and safety concerns.

The timing for each of these treatments will be based on cost-benefit analysis, safety, rideability, and aesthetic conditions. The rehabilitation type and schedule to correct problems caused by surface distress is determined by engineering judgment, taking into consideration the cost-benefit, operational problems, and visual perception. For the current CIP scheduled for TVL's different pavements to maintain the Airport's full operation, see Appendix E.

Required Inspections and Record Keeping

The airport must record and retain complete information about all detailed inspections and maintenance performed until the pavement system is replaced. The types of distress, their locations, and remedial action, scheduled or performed, must be documented. The minimum information recorded includes:

- Inspection date
- Location
- Distress types
- Maintenance scheduled or performed

Other duties required to keep this report current include:

- Continue to update inspection dates with routine inspections.
- Update inventory with any changes in the inventory.
- Conduct detailed review of construction history and provide updates.
- Document any work performed on the airport since recent inspection.
- Provide a method of tracking all maintenance activities that occur as a result of inspections.
- Formulate a periodic crack and joint sealing program to extend the life of the pavement system by keeping water and debris from entering the cracks, which can lead to further damage and deterioration of the pavement.

The pavements at TVL have been maintained at a level ensuring them to be safe and functional for serving the flying public. Overall, the apron areas have a higher PCI rating than the runway and taxiways. The CIP reflects the needs and priority of the airport pavements and places the priority of the runway and taxiways higher than aprons.

When TVL pavements were constructed, particularly the parallel taxiway, the design engineer included saw cutting joints into the newly constructed pavement with the theory it would control cracking. However, saw cut joints introduced cracks into new pavement, lowering the overall PCI value of the pavement. Ultimately, this design choice has triggered the need for the airport to regularly apply crack fill earlier in the pavement life cycle. The CIP includes maintenance of Taxiway A including crack fill and a seal coat in 2024 followed by a major rehabilitation in 2030.

Although most of the aprons are in excellent condition, they are showing signs of oxidation. The loss of volatile compounds in the asphalt mixture will make the asphalt more brittle. New asphalt is flexible and withstands the stresses of traffic and temperature changes, while brittle asphalt is prone to cracking under the stresses of traffic and temperature changes. These differences result in cracks that allow water to penetrate and further damage the pavement. Apron deterioration can be mitigated with proper surface treatments including periodic crack filling and seal coats.

The FAA requires NPIAS airports to conduct PCI inspections every three years; it is recommended TVL's PCI be updated in 2026. As the 2017 PMP was not entered into a standard pavement management database, this report cannot be compared to a previous study. The data collected in this study was entered into FAA's PAVEAIR; similarly, the next update should follow FAA requirements (as outlined in AC 150/5380-7B) and be entered into TVL's PAVEAIR's database to improve future standard deterioration rate determinations.

Table 11 recommends specific maintenance projects by year and pavement section.

TABLE 11: RECOMMENDED PAVEMENT MAINTENANCE SCHEDULE AND ESTIMATED COST

Recommended Maintenance - Year - Estimated Cost				
Year	Section	Recommended Maintenance	Sq Ft	Estimated Construction Cost
2024	Taxiway A	Crack Seal, Seal Coat/Paint	447458	$402,712.20
2024	Taxiway B	Crack Seal, Seal Coat/Paint	13500	$12,150.00
2024	Taxiway F East	Crack Seal, Seal Coat/Paint	27000	$24,300.00
2024	Taxiway F West	Crack Seal, Seal Coat/Paint	11305	$10,174.50
2024	Taxiway E	Crack Seal, Seal Coat/Paint	27000	$24,300.00
2024	Taxiway H	Crack Seal, Seal Coat/Paint	13890	$12,501.00
2024	Taxiway J	Crack Seal, Seal Coat/Paint	13500	$12,150.00
2024	Taxiway K	Crack Seal, Seal Coat/Paint	22050	$19,845.00
2024	Apron 2	Crack Seal, Seal Coat/Paint	90480	$81,432.00
2024	Apron 4	Crack Seal, Seal Coat/Paint	41600	$37,440.00
2024	Apron 5	Crack Seal, Seal Coat/Paint	198801	$178,920.90
2024	Apron 6	Crack Seal, Seal Coat/Paint	125281	$112,752.90
2024 Total Cost				$928,678.50
2025	Runway 18/36	Crack Seal, Seal Coat/Paint	854007	$394,737.00
2025	Airport Road 1	Rhabillitation (Mill/Fill)	7820	$450,000.00
2025 Total Cost				$844,737.00
2026	Taxiway G	Crack Seal, Seal Coat/Paint	6975	$6,277.50
2026	Termial Parking Lot	Crack Seal, Seal Coat/Paint	71175	$64,057.50
2026	Airport Road 2	Crack Seal, Seal Coat/Paint	5751	$5,175.90
2026	Airport Road 3	Crack Seal, Seal Coat/Paint	5350	$4,815.00
2026	Airport Road 4	Local Patching, Crack Seal, Seal Coat	47075	$56,490.00
2026 Total Cost				$136,815.90
2028	Taxiway A	Rehabilitate	447458	$10,200,000.00
2028	Taxiway B	Reconstruct	12150	$80,000.00
2028	Taxiway H	Reconstruct	13890	$92,000.00
2028	Taxiway J	Reconstruct	12150	$80,000.00
2028	Taxiway K	Reconstruct	22050	$148,000.00
2028 Total Cost				$10,600,000.00
2030	Runway 18/36	Rehabilitate	854007	$14,800,000.00
2030 Total Cost				$14,800,000.00
2033	Taxiway G	Crack Seal, Seal Coat	6975	$6,975.00
2033	Apron 7	Crack Seal, Seal Coat	52640	$50,534.40
2033	Apron 8	Crack Seal, Seal Coat	144376	$138,600.96
2033 Total Cost				$196,110.36

*The unit cost is based on recently bid projects and include mobility costs.

In conclusion, the comprehensive assessment of the airport pavement has identified key areas where maintenance and rehabilitation are essential to preserving the structural integrity and safety of the airfield. By implementing the recommended maintenance strategies and prioritizing the necessary repairs, the airport will be able to extend the life of its pavement assets, reduce long-term costs, and ensure a safe operating environment for all users. Continuous monitoring and timely maintenance will be critical in sustaining optimal pavement conditions and supporting future growth and operational demands of the airport.

APPENDIX A: PAVEMENT EVALUATION STUDY PAVEMENT MAINTENANCE/MANAGEMENT PLAN

(Prepared by Reinard W. Brandley, August 2017)

LAKE TAHOE AIRPORT
Pavement Evaluation Study
Pavement Maintenance/Management Plan

PREPARED FOR
CITY OF SOUTH LAKE TAHOE



PREPARED BY
REINARD W. BRANDLEY
CONSULTING AIRPORT ENGINEER

AUGUST 2017

LAKE TAHOE AIRPORT
PAVEMENT EVALUATION STUDY
PAVEMENT MAINTENANCE / MANAGEMENT PLAN

Prepared for
City of South Lake Tahoe, California

Prepared by:
Reinard W. Brandley
Consulting Airport Engineer

August 2017

LAKE TAHOE AIRPORT
PAVEMENT EVALUATION STUDY AND
PAVEMENT MAINTENANCE/MANAGEMENT PLAN

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CHAPTER 1. INTRODUCTION

1-1 History

Construction of the Lake Tahoe airport began in 1958 by the County of El Dorado, CA as part of the larger development of the community in preparation for the 1960 Winter Olympics. A building boom preceding the Olympics resulted in a flurry of commercial and residential development. El Dorado County began operation of the Airport in the summer of 1959. Originally, the runway was only 5,900 feet long, but was extended to 8,541 feet in length in 1962. In 1983, the City of South Lake Tahoe purchased the airport from El Dorado County.

The airport maintained commercial airline service operations until they were discontinued in 2001. Commercial airline operations peaked in 1978 with nearly 300,000 annual passenger enplanements. However, with airline deregulation later in that same year (1978) and restrictions adopted on the use of jet aircraft at the Airport, these operations began to decrease. In 1992, the Airport's Master Plan Settlement Agreement (MPSA) was adopted and outlined additional limitations on aircraft noise, operations, and development on the airport property. The MPSA expired in October 2012, but certain provisions that addressed aircraft noise still apply to current operations.

1-2 Airport Layout

Lake Tahoe Airport consists of one runway and a parallel taxiway with several cross taxiways. Runway 18-36 is 100 feet wide by 8,541 feet long. The thresholds on both Runways 18 and 36 have been displaced due to obstructions in the northern and southern approach to the airport and keeping the Upper Truckee River out of the extended runway safety area on the north end of the airport, decreasing the effective length of each runway. Taxiways have been constructed to serve the runway and aprons. A large aircraft parking apron is in existence on the west side of the runway. The terminal apron and southern portion of the general aviation apron serves the larger business jets, and the northern portion of the general aviation apron serves the smaller general aviation aircraft. Tee hangars are located at the south end of the apron area. Access roads are available to serve the terminal building, tee hangar buildings, and the fixed base operator at the airport. Automobile parking lots have been developed on the west side of the airport. Portions of the airline terminal building have been converted to City offices.

1-3 Role of the Airport

Lake Tahoe Airport serves the general aviation and corporate aviation needs of the area. Noise requirements limit the type of turbojet aircraft that can use the airport to those which operate with the quieter engines. There is no commercial airline service into Lake Tahoe Airport at this time.

Emergency service flights are also based out of the Lake Tahoe Airport, providing helicopter EMS services for the surrounding community. The airport also serves

as a temporary staging area for firefighting helicopters during the summer months.

1-4 Pavement Composition

Runway 18-36, the associated taxiways serving the runway, and portions of the aircraft parking apron were constructed by El Dorado County in the late 1950's.

Most of the pavements on the airport are flexible pavement consisting of asphaltic concrete pavement surfacing. Portland cement concrete pavement was used on the apron located directly in front of the terminal building. These Portland cement concrete pavements are 14 inches thick. The existing pavement sections are included in Chapter 2, Section 2-2.

1-5 Need for Study and Purpose of Test Program

Normally a pavement at an airport does not suddenly collapse and allow an aircraft to sink into the pavement unless the pavement is grossly underdesigned or some major defect occurs in the pavement section. The normal type of failure is a progressive failure which takes place over a period of time and gradually causes the pavement to deteriorate to a point where normal maintenance is no longer feasible. When a pavement reaches this condition of deterioration or failure it is normally strengthened or reconstructed in order that its life can be extended.

If the deterioration of a pavement section is allowed to progress to a point where actual failure of the subgrade or base materials occurs, then a strengthening overlay is not feasible until the failed areas are removed and reconstructed.

If rehabilitation of a pavement section is undertaken before subsection failures occur, then a strengthening overlay can be used effectively to extend the life of the pavement section.

It is almost always cost effective to anticipate pavement failures and overlay the sections or add to the existing pavement section before the failure actually occurs.

There are two major distress or failure types that occur on a pavement. One is surface distress and the other deep-seated distress. With asphalt pavements, surface distress displays itself as cracking, shoving, raveling, and rutting. With rigid pavements surface distress displays itself as spalling, corner cracking, and map cracking. When surface distress reaches a certain point, it is not feasible to overlay the pavement structure with new asphalt or new Portland cement concrete since the cracks and other defects will tend to reflect through the new overlay. It is necessary to repair the distressed sections and/or remove or replace the distressed sections prior to placing the overlay or new development. With flexible pavement sections a mill and fill operation produces a good underlying surface by removing the damaged flexible pavement and replacing it with new sections. With rigid pavements spall repairs, corner crack repairs, and reestablishment of load transfer at the joints is often necessary to provide an adequate foundation for an

overlay or new section.

Deep-seated failure results in failure under load of the subgrade soils, subsoils, and/or aggregate base course materials resulting from repeated aircraft operations. When a deep-seated failure occurs in a pavement section, it is necessary to reconstruct the total section. Fatigue Analysis methodologies have been developed where the timing of deep-seated failure of a pavement system under specified traffic conditions can be determined. Strengthening or rehabilitation of the pavement section should be undertaken 2 to 5 years prior to the forecast time of failure.

Fatigue analysis methodologies have been developed that can be used to predict remaining pavement life of a given pavement section under specified traffic. Fatigue analysis is also used to develop pavement section requirements to support specified traffic for a specified life. Required input data for the fatigue analysis program are:

- Thickness and type of each layer of the pavement section, including subgrade and subsoils
- Existing and Forecast Traffic - type and operations
- Modulus of Elasticity and Poisson's Ratio of each layer of pavement section and underlying subsoils and of potential materials to be considered for overlay or for reconstructed pavement sections.
- Accurate pavement failure criteria

This type analysis can also forecast extended pavement life of a section with the placement of various types and thicknesses of overlay and/or various reconstructed sections.

In order to maintain efficient operation of this airport, it is necessary that all pavements being used by aircraft - runways, taxiways, and aprons - be maintained in good condition. In order to establish maintenance, strengthening, and/or rehabilitation programs for the airport and to allow for the orderly budgeting of maintenance and redevelopment funds, it is necessary that the Airport Owner be able to anticipate the remaining life of existing and new pavements under given operational conditions and to know when it will be necessary to apply strengthening overlays to or reconstruct existing pavements.

In order to provide this information on expected pavement life of existing pavements and the extended life for different overlay or reconstruction conditions, a detailed pavement evaluation study has been conducted. This study includes a study and evaluation of surface and deep-seated distresses. This report presents the results of this study.

CHAPTER 2. DATA COLLECTION

Significant data were collected for the development of this Pavement Maintenance Management Plan (PMMP). All previous pavement management study reports were reviewed and data that were applicable to this study were abstracted from these reports and used in this program. All previous test information, including geotechnical data, were gathered and reviewed. A testing and inspection program was developed and new data from the new test program were accumulated. A summarization of the data collected is provided in this chapter. A detailed reporting of the test program and data collected are included in Appendices A, B, C, and D.

2-1 Geotechnical Studies

Detailed geotechnical studies are required before an airport or a portion thereof is designed. These studies are necessary to determine the type of soil on which the pavement sections are to be constructed, including the character and strength of these soils. Uniformity of stratification and location and fluctuation of groundwater table are also important information required to provide guidance during design. With the current operation of business jet aircraft at the Lake Tahoe Airport, the collection of detailed soil test data is necessary to a depth of 10 to 15 feet. Soils data developed include uniformity of the stratification, soil classification, soil density, soil moisture content, soil strength, consolidation characteristics, and the location of groundwater table.

Test borings have been drilled at various times from the late 1950s to the present time to provide necessary geotechnical data to be used in the design of the various features at the airport. These test boring data have been gathered and are included in Appendix A to this report in the form of soil profiles.

The airport is located in the valley that is occupied by the Upper Truckee River. Historically, this river has wandered somewhat through the valley carrying water from the mountains into Lake Tahoe. When the airport was originally designed in the late 1950s, a portion of the river was relocated to the east to provide a straight section on which to construct the runway and taxiway for the airport.

Geological studies indicate that the soils deposited under and around the Upper Truckee River are alluvial deposits consisting of decomposed granite, which classifies as fine to medium and fine to coarse sands with some gravel and cobbles embedded. The low mountainous ground to the immediate west of the airport eroded and caused the deposition of various layers of sand, silt, and clay on the western section of the airport.

Soil studies and observations show that the soils under the runway and taxiway at the airport generally consist of the fine to medium sands and the fine to coarse sands of decomposed granite, which were in a very loose, saturated condition. In some areas, particularly north of Taxiway G, some of the silt soils from the west extended into the sand soils of the runway and taxiway. The aprons and tee

hangar development exist on the west side of the airport and the soils in this area consist of various layers of sands, silts, and silty clays.

The groundwater table in the area of the airport varies significantly with the season and with the climatic conditions, including drought and high levels of precipitation. In the drought years, the groundwater table in the apron area was located at a depth of 8 to 10 feet; whereas, in 2017 after record rainfall and snow accumulations, the groundwater table was at or near ground surface in these apron areas.

At the time the airport was originally constructed in the late 1950s, the runway construction contractor found that the sand soils in the runway and taxiway sections were so loose and saturated they became “quick” under the vibration caused by a heavy-track vehicle clearing the area. Construction was stopped to determine method of correcting and stabilizing these soils. At that time, under the direction of Reinard W. Brandley, Consulting Airport Engineer, these sands were compacted and stabilized in all paved areas of the runway and taxiway by alternate vibrating of the soils with construction equipment, which liquefied the mass. There was then a waiting period until the excess pore pressure in the voids created by the vibration had been dissipated and then the process was repeated until a stable mass had been obtained. Within two weeks the entire section of runway and taxiway had been stabilized. The same technique was attempted in the apron area, but the sandy silt and clay layers were so fine that it required unreasonably long periods of time to dissipate the excess pore pressure. In these areas, the soft soils were removed to a reasonable depth and replaced with sand soils compacted as necessary.

Extensive soil borings have been conducted at this airport under the direction of our office for previous pavement evaluation studies and for soil studies leading to the design of specific construction projects. The logs of these tests holes are included in previous reports filed with the Airport and are included in this report as Appendix A.

Detailed laboratory testing has been conducted on soil samples obtained from the various test programs. These tests indicate that the surface soils are generally loose and soft. They show that these materials generally have a California Bearing Ratio (CBR) in place of 4 for the silty clays and 8 for the sands and decomposed granites. When compacted, sand soil CBR increases to 12 to 15.

2-2 Existing Pavement Sections

The existing pavement sections throughout the airport were evaluated based on the study of original construction drawings, reconstruction and maintenance drawings, test pits excavated, previous reports, and F.A.A. files.

In general, all existing flexible pavements are F.A.A. standard Marshall mix design materials. A portion of the terminal apron pavement is composed of 14” Portland

cement concrete. Many of the pavements are a good quality product but some show signs of distress and failure. The existing aggregate base course consists mainly of a well-graded crushed aggregate base course with a maximum size of ¾ inch to 1½ inch depending on location.

Existing pavement sections at the location of each test hole included in Appendix A are the sections that existed at the time the test holes were drilled and do not necessarily represent existing conditions. Existing pavement sections shown in this section of the report represent current condition.

The current thickness of each layer of Portland cement concrete, asphalt pavement, aggregate base, cement treated base, aggregate subbase, pit run or select sand material, is shown, wherever it is known, in Appendix C, Tables C1 through C36. In general, the existing pavement sections are as shown in the table below:

Lake Tahoe Airport - Existing Pavement Sections

Item	Section Thickness - inches				
	PCC*	AC*	AB* OR CTB**	ASB*	Total*
Runway 18-36	-	3	7	20	30
Taxiways A, B, E, F, H, J, K	-	4-8.5	8	0-24	15-39
Aprons A1, A2, & A4	-	3-4	6	6-13	18-27
Aprons A3	14	2	6	0	22
Apron A5	-	2-5	5-14	0-18	12-29
Apron A6	-	2-5	5-6	4-9	8-18
Apron Taxiway H	-	2	5	4	11
Taxiway D and South Hangars	-	3	6	9	18
Terminal Access Road	-	2	3	5	10
Parking Lots	-	2-3	4-5	0-22	7-29

* See Table 5-3 for Section Thickness of Individual Segments of Each Pavement Item
** CTB = Cement Treated Base

2-3 Falling Weight Deflectometer (FWD) Tests

The heavy-duty falling weight deflectometer (FWD) as manufactured by Dynatest Corporation is capable of applying dynamic loads to the pavement of up to 50,000 pounds on a 12 or 18-inch diameter plate. This FWD measures the deflections of the surface of the pavement not only under the center of the plate, but at various locations out to 7 feet from the center of the plate. The shape and magnitude of the deflection bowl caused at the surface of the pavement under the applied loads can thus be determined. These FWD tests can be conducted fairly quickly, generally 20 to 30 tests per hour. Therefore, enough tests can be conducted to determine the uniformity of the load-carrying characteristics of the pavement in each element of the airport, together with the size and shape of the deflection bowl at the surface of the pavement under load.

At the Lake Tahoe Airport, FWD tests were conducted using an 18-inch diameter plate, on each side of the runway centerline in the wheel path at a spacing of 200 feet. The locations of the tests were staggered so that test results are available at 100-foot intervals. One row of tests at 200-foot spacing was conducted on all taxiways, approximately 10 feet off centerline. On all aprons tests were conducted on a grid of approximately 100-foot by 100-foot. On all other areas such as hangar areas, FWD tests were conducted in the wheel path of the taxilane at a spacing of approximately 100 feet.

The FWD tests not only measure the deflection obtained under each test, but also measure the load that was applied to the pavement. Even though the height of fall of the weights remains the same for each test, the actual load applied to the pavement varies somewhat depending on the resistance to load. In order to compare the test results, all deflections obtained were normalized to the deflections under loads of 12, 20, 25, and/or 45 kips (1 kip = 1,000 lbs). The results of the falling weight deflectometer tests showing center plate deflections and joint efficiency tests are included in Appendix B, Plates B1 through B3. The center deflections for each element of the airport were also plotted as profiles and these data are included in Appendix B, Plates B4 through B24.

The measured surface deflections under the FWD tests varied somewhat from one location to another on the airport. These test results indicate that the pavement section materials, subgrade and subsoils have variable strengths throughout the airport.

The basic soil parameters that are utilized in the Fatigue Analysis to determine pavement life are Modulus of Elasticity, Poisson's Ratio, and element thickness. The magnitude of deflection and shape of the deflection bowl on the surface of the pavement under load can be used with the computer program for calculations of stresses, strains, and deflections on multi-layer systems to back calculate the soil parameter of Modulus of Elasticity. The data developed from all of the falling weight deflectometer tests were utilized to back calculate Modulus of Elasticity of each layer of the pavement section, and the subsoils located below the pavement section. The results of these back calculated values of Modulus of Elasticity of each layer analyzed are included in Appendix C, Tables C1 through C36.

2-4 Pavement Condition Survey

Pavement condition surveys were conducted on all pavements at Lake Tahoe Airport to determine the type of distress and degree of distress that has occurred on each pavement element and the general character of the pavement.

A standard test method for pavement condition surveys is included in ASTM D 5340-11, *Standard Test Method for Airport Pavement Condition Index Surveys*. In the pavement condition survey, a detailed assessment of the pavement is conducted, which evaluates the following surface distresses:

Distresses in Asphalt Pavement	Distresses in Jointed Concrete Pavements
Alligator Cracking	Blowup
Bleeding	Corner Break
Block Cracking	Cracks (Longitudinal, Transverse, Diagonal)
Corrugation	Durability Cracking
Depression	Joint Seal Damage
Jet Blast Erosion	Patching, small
Joint Reflection Cracking (from PCC)	Patching, Large & Utility Cuts
Longitudinal and Transverse Cracking	Popouts
Oil Spillage	Pumping
Patching and Utility Cut Patching	Scaling, Map Cracking, Crazing
Polished Aggregate	Settlement or Faulting
Raveling and Weathering	Shattered Slab / Intersecting Cracks
Rutting	Shrinkage Cracks
Shoving	Spalling (Longitudinal and Transverse)
Slippage Cracking	Spalling (Corner)
Swell	

The standard ASTM evaluation procedure is to divide the test element into sample units. The sample units generally represent approximately 10 percent of the total pavement section. The type and severity of each airport pavement distress is assessed by visual inspection of the pavement sample units. The quantity of distress is measured and the distress data are used to calculate the Pavement Condition Index (PCI) of each sample unit. The process involves detailed inspection of sample units throughout the section, which covers approximately 10 percent of the total area of the pavement.

The office of Reinard W. Brandley deviates from this process in that 100 percent of the pavement surface is surveyed to determine the severity and magnitude of distress for each type of distress that is occurring on that section of pavement. During these detailed surveys all the distress modes are observed and recorded so that all distresses can be evaluated. By this procedure the coverage of the survey is increased from the 10 percent included in the standard ASTM method to 100 percent. It is considered important to expand the survey in this manner so as to identify the worst-case conditions as well as the average and best case conditions. Any unusual distress types are also recorded for the total unit.

The Pavement Condition Index (PCI) and pavement condition description were determined for each section of pavement. This information is included in Appendix C of this report. The data for each segment are included in Tables C1 through C36. Additional information is also included on these tables. Pavement condition determinations are based on visual observations and can vary significantly based on the experience and judgment of the Engineer.

The ASTM Standard provides a relationship between Pavement Condition Index

(PCI) and pavement rating. On Plate No. 2-1 the rating system is indicated as a color legend and the rating of each segment of pavement is indicated by color. The PCI of each segment is also indicated adjacent to each segment of the pavement. It will be noted that most pavements show a "fair" to "very good" condition, yet some only show "very poor" to "poor" conditions. These "poor" pavements are showing considerable distresses on the surface including weathering and block cracking. As a result of the surface conditions on some of the pavements, some rehabilitation is recommended earlier than the forecast remaining life of the pavement. The Pavement Condition Index is based solely on the surface condition and surface distresses and does not necessarily reflect the condition or life of the pavement from a deep-seated failure basis.

2-5 Forecast Traffic

Traffic forecasts for the airport were obtained from the 2016 Lake Tahoe Airport Master Plan Report and used to evaluate the pavements at this airport. The Master Plan only included data on total operations forecast at the airport. It did not include any data on the fleet mix of aircraft that were anticipated to utilize the airport. The consultant that prepared the Master Plan Report provided typical fleet mix data that was utilized for the noise contour analysis in the Master Plan. This typical fleet mix data along with the forecast operations data from the Master Plan was used to generate the forecast traffic utilized in this pavement evaluation study to determine the remaining pavement life of each section of pavement. This data included the typical type of aircraft currently operating at the airport, along with the annual number of operations of each aircraft type. The data furnished did not include the forecast growth rates of these aircraft, so a reasonable growth rate of 2% for aircraft weighing less than 25,000 lbs. was used in this analysis. Typically, a growth rate of 3% could be expected for aircraft weighing more than 25,000 lbs., Table No. 2-1 provides the traffic data utilized for the runway and taxiway complex as well as other hangar and apron areas.

Table No. 2-1 lists the 2016 annual operations for aircraft utilizing the airport and includes their maximum takeoff weight and gear configuration. These aircraft have been grouped into 8 aircraft groups and 2 groups of automobiles and delivery trucks for the access roads and parking lots. Each group represents the average aircraft characteristics of maximum takeoff weight and gear type for the different classifications of aircraft that utilize the airport pavements.

In evaluating airfield pavements for deep-seated distress, it is the number of coverages of each wheel on each aircraft over a given point of pavement that contributes to the deep-seated distress on or near that section of pavement. The distribution of aircraft traffic on the airport is a function of:

- Wind direction, which dictates which runway is used
- Landing length requirement of each aircraft and takeoff length requirement of each aircraft
- Destination on the airport of each aircraft type.
- Distribution of traffic on a given pavement section.

For this evaluation, data was estimated showing how many operations utilized each of the 2 runway ends at the airport. The runway utilized by each aircraft is a function of the size and weight of using aircraft, wind direction, destination of the aircraft on the airfield, and pilot in command preference.

When an aircraft lands on a runway, only the heavier aircraft generally use the full length of runway. Intermediate and smaller size aircraft exit the runway at the appropriate cross taxiway. The taxiways that are used by aircraft are dependent upon the location at which the aircraft take off and land as well as the destination of the arriving aircraft on the airport.

Based on the aircraft characteristics, the runway use dictated by wind direction, and the destination of aircraft on the airport, the current annual operations of each aircraft have been evaluated to best represent the actual traffic that occurs on each segment of pavement. The traffic forecast to occur on each segment is defined as "Traffic Index." A total of 14 traffic indexes were evaluated and used for this study. On several pavement sections, such as the cross taxiways, hangar areas and aprons, the entire amount of traffic from a pavement complex was initially utilized even though the actual traffic experienced on these pavements will likely be much lower. This higher level of traffic was not further reduced in some areas since the pavement life on these pavements exceeded 20 years even with the higher than expected traffic levels. Pavements that showed less than 20 years of remaining life were further analyzed with the traffic index that represented their actual forecast traffic. The number of annual operations and estimated average annual growth rates for each aircraft group and each traffic index are indicated in Table No. 2-1. These traffic indexes were utilized in the evaluation of all pavements for deep-seated distress.

Using the traffic index and the total annual operations, the number of operations on a given segment of the airport can be estimated. Each operation does not travel over the same spot on a pavement and, therefore, the number of coverages on the pavement section will be less than the total operations for each traffic index. The distribution of traffic on each section is a function of the aircraft type, the gear type, the wind conditions, and the skill of the pilot. There is generally a fairly wide distribution of traffic on a runway; whereas, on a taxiway the traffic is more concentrated. On the aprons the traffic generally follows specified taxilane markings, but only a fraction of the total aircraft operate on each section of apron. Different factors are applied to the operations estimated for a given section of the airport to convert operations to coverages. Coverages are used in the Fatigue Analysis for remaining pavement life calculations.

The traffic index used for various segments of each pavement is indicated on Plate No. 2-2.

2-6 Frost Action

The natural soils at the Lake Tahoe Airport are highly susceptible to frost action because of the gradation of these materials and the access to ground moisture. When soils freeze, if the level of frost penetration remains stable for a significant period of time, water is drawn to the freezing layer and this water accumulates and freezes in the form of ice lenses, which cause the soils above that level to heave. When the frost penetrates deeper, the process is repeated and additional ice lenses are formed. In a frost-susceptible soil with deep penetration of frost, numerous ice lenses will form and significant heave will occur.

At the Lake Tahoe Airport (approximately 30 years ago) the depth of frost penetration under a 10-foot wide solid white reflective painted surface extended to 49 inches. Exploration at Lake Tahoe Airport showed that the frost had penetrated to a depth of 49 inches under the white painted stripe and only 14 inches under the adjacent dark pavement. As an experiment a series of 6-inch wide black stripes were painted on this pavement to form a “zebra” pattern of 6-inch white and 6-inch black. Even in the middle of the winter the painting of these black stripes caused the frozen soil to melt and the surface of the runway, which had heaved 12 inches, to settle back to original grade. This research led to F.A.A. adoption of “zebra” striping as a standard for cold climate areas.

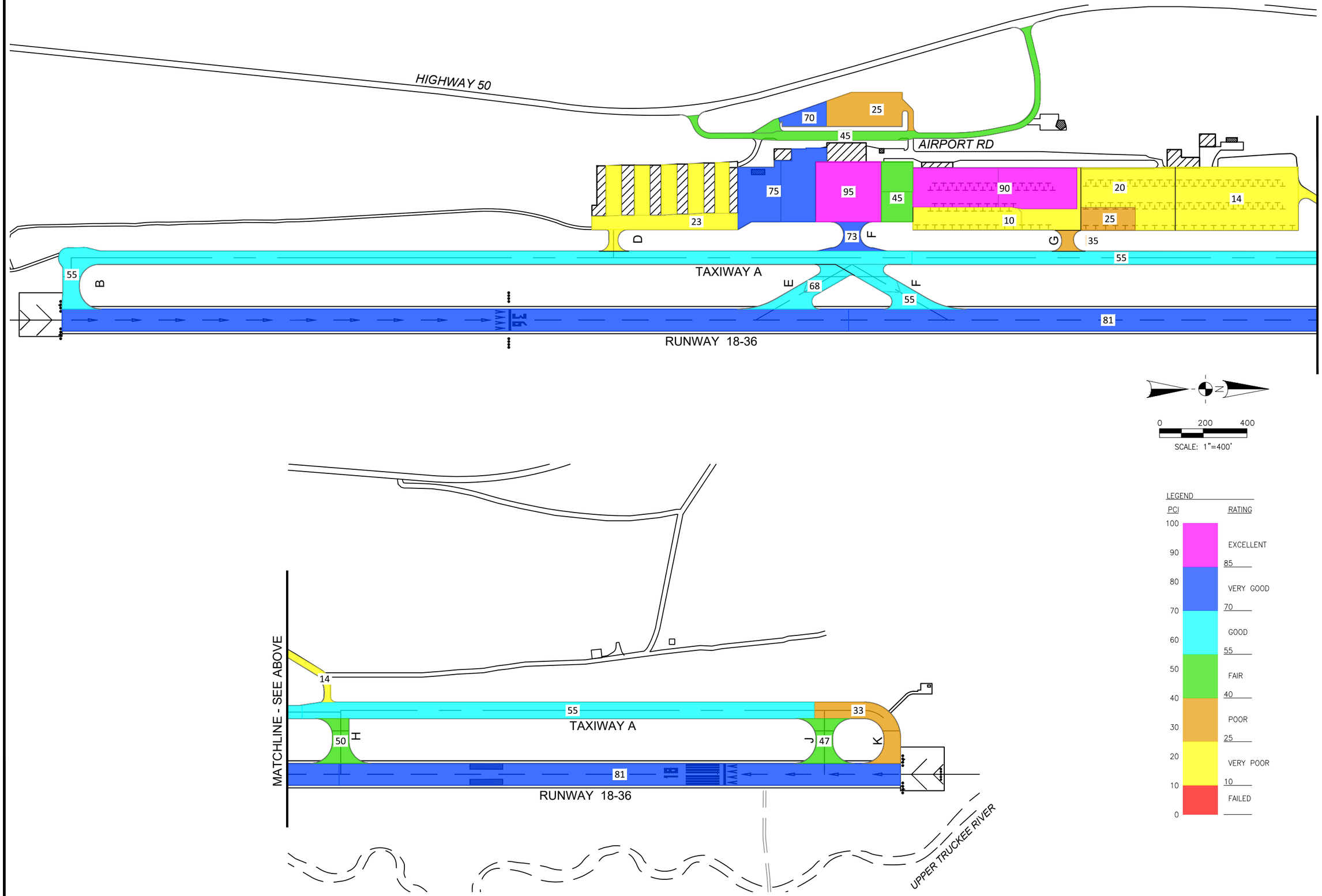
When these soils thaw in the spring, they thaw from the top and from the bottom. Generally, about two-thirds of the thawing occurs from the surface and one-third from the bottom. Until the total section thaws, that portion above the remaining frozen layer is super-saturated because of the melting of the ice lenses. The remaining frozen soil creates an impervious layer so the excess pore water cannot dissipate. This produces a much weaker pavement section during this period. It is important to determine the depth of frost penetration at the Lake Tahoe Airport and to develop methods to accommodate the decreased strength of subsoils during spring thaw if necessary.

Experience at other airports in the Sierra Nevada Mountains indicates that frost penetration under a dark colored pavement is significantly less than that indicated by the freezing index; whereas, the frost penetration under a white reflective painted surface can be greater than that indicated by the freezing index.

Observations and thermocouple data at the Lake Tahoe Airport indicates that the depth of frost penetration under wide white painted pavement can be as much as 60 inches, whereas the depth of frost penetration under black pavement surfaces ranges from 12 to 16 inches. It is recommended at the Lake Tahoe Airport that all pavement markings be “zebra” striping using 6” maximum width painted sections and 6” minimum black unpainted sections. Frost free materials should be used for all pavement sections to a depth of 20 inches.

TABLE No. 2-1 - Traffic Index Summary - Lake Tahoe Airport

				Traffic Index (Forecast Aircraft Operations in 2016)														
Aircraft Group	Typical Aircraft Type	Aircraft MTOW (lbs)	Gear Configuration	2016 Annual Operations	Annual Growth Rate	T1 (Runway)	T2 (Taxiways)	T3 (Taxiways)	T4 (Taxiways)	T5 (Aprons)	T6 (Aprons)	T7 (Aprons)	T8 (Aprons)	T9 (Aprons)	T10 (Aprons)	T11 (Hangars)	T12 (Hangars)	T13 (Roads)	T14 (Roads)
1	Cessna 172 / Cirrus SR-22	5,000	Single	9,700	2%	9,700	4,850	4,850	4,850	970	3,880	5,820	5,820	2,910	1,940	2,910	970	-	-
2	Piper PA-31T Cheyenne	9,000	Single	1,600	2%	1,600	800	800	800	160	640	960	960	480	320	480	160	-	-
3	Beech Super King Air	16,000	Dual	8,100	2%	8,100	4,050	4,050	3,240	810	5,670	8,100	2,430	1,620	405	2,430	-	-	-
4	BAe-125 Hawker	28,000	Dual	900	3%	900	810	225	90	630	720	900	180	270	-	-	-	-	-
5	Cessna Citation X	36,000	Dual	2,650	3%	2,650	2,385	663	265	1,855	2,120	2,650	530	795	-	-	-	-	-
6	Dassault Falcon 2000	41,000	Dual	2,900	3%	2,900	2,610	725	290	2,030	2,320	2,900	580	870	-	-	-	-	-
7	Gulfstream IV	74,000	Dual	900	3%	900	855	180	45	630	810	900	90	90	-	-	-	-	-
8	Gulfstream V	90,000	Dual	650	3%	650	618	130	33	455	585	650	65	65	-	-	-	-	-
9	Automobile	4,000	Single	75,000	1%	-	-	-	-	-	-	-	-	-	-	-	-	75,000	65,000
10	H20 Truck	20,000	Truck	1,500	1%	-	-	-	-	-	700	700	-	350	1,000	-	-	1,500	200



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DATE
REVISIONS
No.

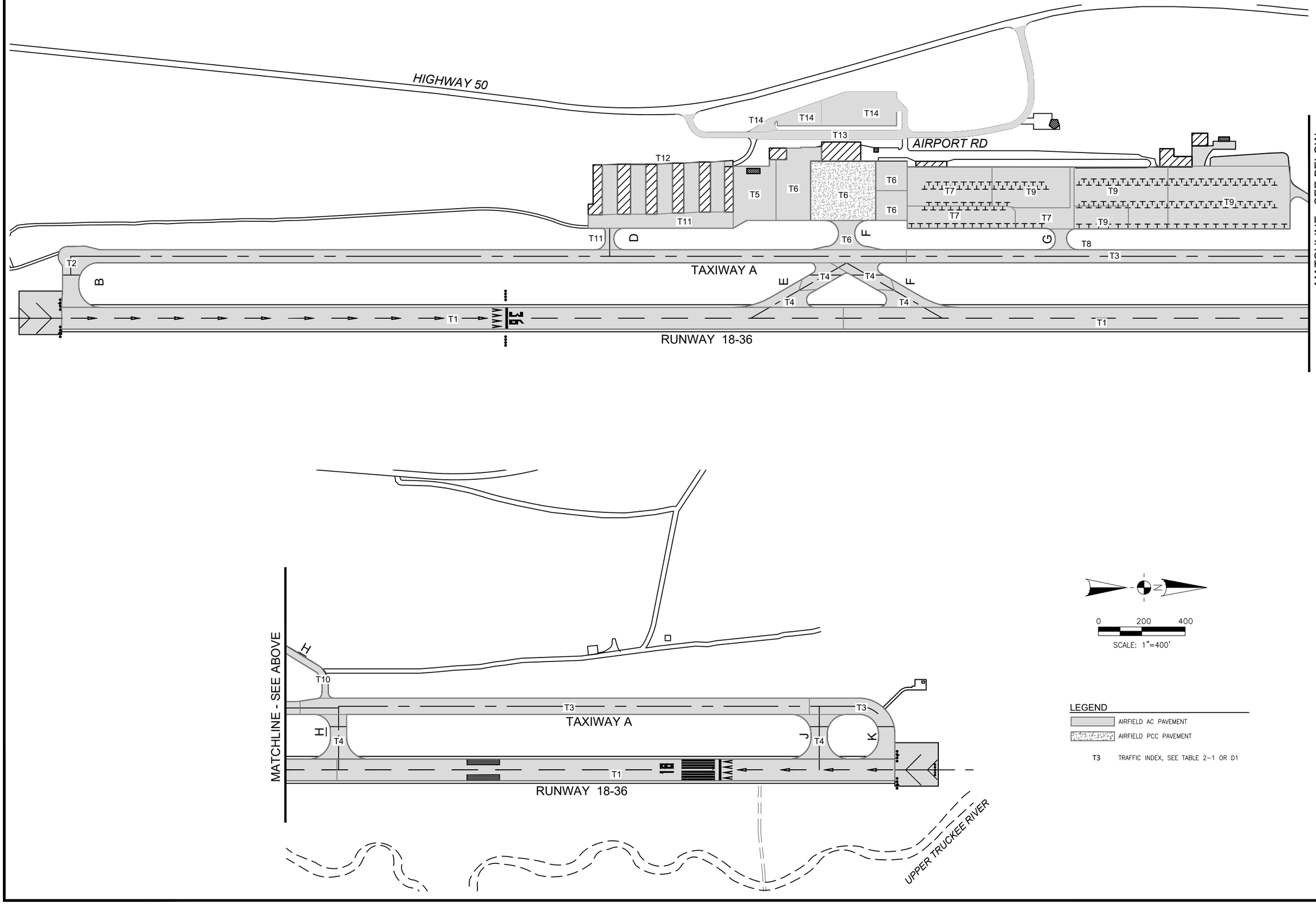
LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

PAVEMENT EVALUATION

SURFACE DISTRESS - PAVEMENT CONDITION INDEX (PCI) - 2016

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
FILE	TVL2-1.PCI
SCALE	1"=400'

PLATE No.
2-1



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No.	REVISIONS	DATE

SOUTH LAKE TAHOE CALIFORNIA

LAKE TAHOE AIRPORT

PAVEMENT EVALUATION

TRAFFIC DISTRIBUTION - TRAFFIC INDEX

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
FILE	TVL.2-2.Traffic
SCALE	1"=400'

PLATE No.
2-2

CHAPTER 3. PAVEMENT CONDITION NUMBER (PCN)

3-1 Method of Calculating PCN

More than 50 years ago the European Airport Systems, particularly the United Kingdom, developed a standard method known as Aircraft Classification Number/Pavement Classification Number (ACN/PCN) method of pavement strength rating information. FAA has long resisted using this standard, but has now adopted it as an international standard to facilitate the exchange of pavement strength rating information.

With this method of evaluation, the airfield pavements are assigned a Pavement Classification Number (PCN), which is dependent on the pavement section and soil strength and represents the strength and bearing capacity of the pavement section. PCN is a number that expresses the load-carrying capacity of a pavement for specified operations. The aircraft manufacturers have developed an Aircraft Classification Number (ACN), which represents the relative effect of an aircraft at a given configuration on a pavement structure. This system has been developed such that aircraft with a given ACN value can safely operate on pavements that have PCN values equal to or greater than the ACN value of the aircraft. It has, therefore, become necessary to develop and report PCN values for all pavements, particularly on commercial airports.

The Federal Aviation Administration has developed Advisory Circular (AC) 150/5335-5C, *Standardized Method of Reporting Airport Pavement Strength - PCN.* In AC 150/5335-5C FAA sets forth various methods for determining PCN on airport pavements. This Advisory Circular has been used to develop PCN values for the various pavement sections at Lake Tahoe Airport.

There are several methods for determining PCN Values for a pavement section that are suggested, including the following:

1. COMFAA Computer Program

2. Use the ACN of the most critical aircraft that is successfully using the airport and assume the PCN is the same as that critical ACN value.

3. Knowing the existing pavement sections and characteristics of the subgrade soils and each pavement section layer, determine the design aircraft weight allowed on the pavement section with each landing gear configuration. The bearing capacity of the pavement sections with flexible pavements is determined by the California Bearing Ratio Method and for pavement sections with rigid pavements the Westergaard Design Method is used. Once the load bearing capacity of the section is determined, FAA has developed a series of tables that are included in AC 150/5335-5C, Appendix F as Tables F-1, F-2, F-3, and F-4, which provide the relationship

between PCN and aircraft gross weight. A different set of tables is used for flexible pavement sections and for rigid pavement sections. Once the maximum allowable aircraft gross weight for each gear type is determined, then the representative PCN can be taken from these tables.

At the Lake Tahoe Airport the COMFAA program was tested. It was found that the results obtained were very erratic and did not represent the aircraft load carrying capacity of the pavements and no further effort was made to utilize the computer program.

The use of the ACN value of the critical aircraft successfully using the airport as the PCN value of the pavement is somewhat arbitrary and is not considered to accurately depict the strength of the pavement sections. This method was not utilized in this study.

The technical method for determining the PCN determines the strength of the pavement sections based on thickness and quality of the various pavement layers used and the subgrade strength. For flexible pavements the California Bearing Ratio (CBR) of subgrade method was utilized and for rigid pavements the Modulus of Subgrade Reaction (K) was utilized. The K factor utilized was the K factor at the top of the base course, which is larger than the K factor of the subgrade materials. With this method of design and evaluation the maximum aircraft load that can be utilized on each pavement section can be calculated for single gear aircraft, dual gear aircraft, dual tandem gear aircraft, and double dual tandem gear aircraft. Dual tandem gear and double dual tandem gear aircraft were not evaluated for this study as they do not operate at the Lake Tahoe Airport.

3-2 Evaluation

The PCN values are determined separately for each pavement section on the airport and indicated in the report based on pavement type, subgrade strength category, allowable tire pressure, and method used for determining the PCN. The pavement codes for reporting the PCN are as follows:

Pavement Type	
Pavement Type	Code
Flexible	F
Rigid	R

Subgrade Strength (Flexible Pavement)	
Subgrade CBR	Code
$\geq$ 13	A
8 to 13	B
4 to 8	C
$\leq$ 4	D

Rigid Pavements - K	
K	Code
≥ 442	A
221 to 442	B
92 to 221	C
≤ 92	D

Tire Pressure	
Psi	Code
≥ 254 (No Limit)	W
181 to 254	X
73 to 180	Y
≤ 73	Z

Method of Analysis	
Method	Code
Technical	T
Using Aircraft	U

A typical listing of a PCN value will, therefore, be PCN = 28/F/C/Y/T, where

F = Flexible Pavement
C = Subgrade CBR 4 to 8
Y = Tire pressure 73 to 180 psi
T = Technical method of calculation.

3-3 Calculated PCN Values

There are numerous pavement sections at the Lake Tahoe Airport - some rigid pavements and some flexible pavements. Some are original design and others are reconstructed or overlaid sections. A detailed study has been conducted to determine the pavement sections existing at this time at Lake Tahoe Airport. These data are summarized in Table No. 3-1 for all pavements at the airport. Using these pavement sections and either the CBR or Westergaard method of design, the airplane gross weight allowed on these pavements for single gear aircraft and dual gear aircraft has been determined and is included on Table No. 3-1 for each of the pavement sections.

An Airport Diagram showing the major features and PCN values of the airfield pavements is shown on Plate No. 3-1.

Utilizing these data the PCN for each pavement section, both flexible and rigid, has been determined using Tables F-1 through F-4 of AC 150/5335-5C, Appendix F.

Summary of PCN Values

Section	PCN
Runway 18-36 & Associated Taxiways	15 F/C/Y/T
Terminal Apron (PCC)	40 R/B/Y/T
Terminal Area Aprons and Taxiways (Flexible)	22 F/C/Y/T
General Aviation Taxiways and Aprons	7 F/D/Y/T
General Aviation Hangar Areas	7 F/D/Y/T

The PCN for Runway 18-36 is 28 F/C/Y/T, but the lower PCN Values for the supporting Taxiways A, B, E, F, H, J, & K control the PCN value listed for the runway and taxiway complex.

Several pavement sections are designed to only support light aircraft. These sections are not supported by the calculation of a PCN value and should be restricted to light aircraft only. A light aircraft weighs less than 12,000 lbs.

Apron A6 and Hangar Areas should be restricted to light aircraft only. See Plate 5-1 for locations of these Apron and Hangar areas.

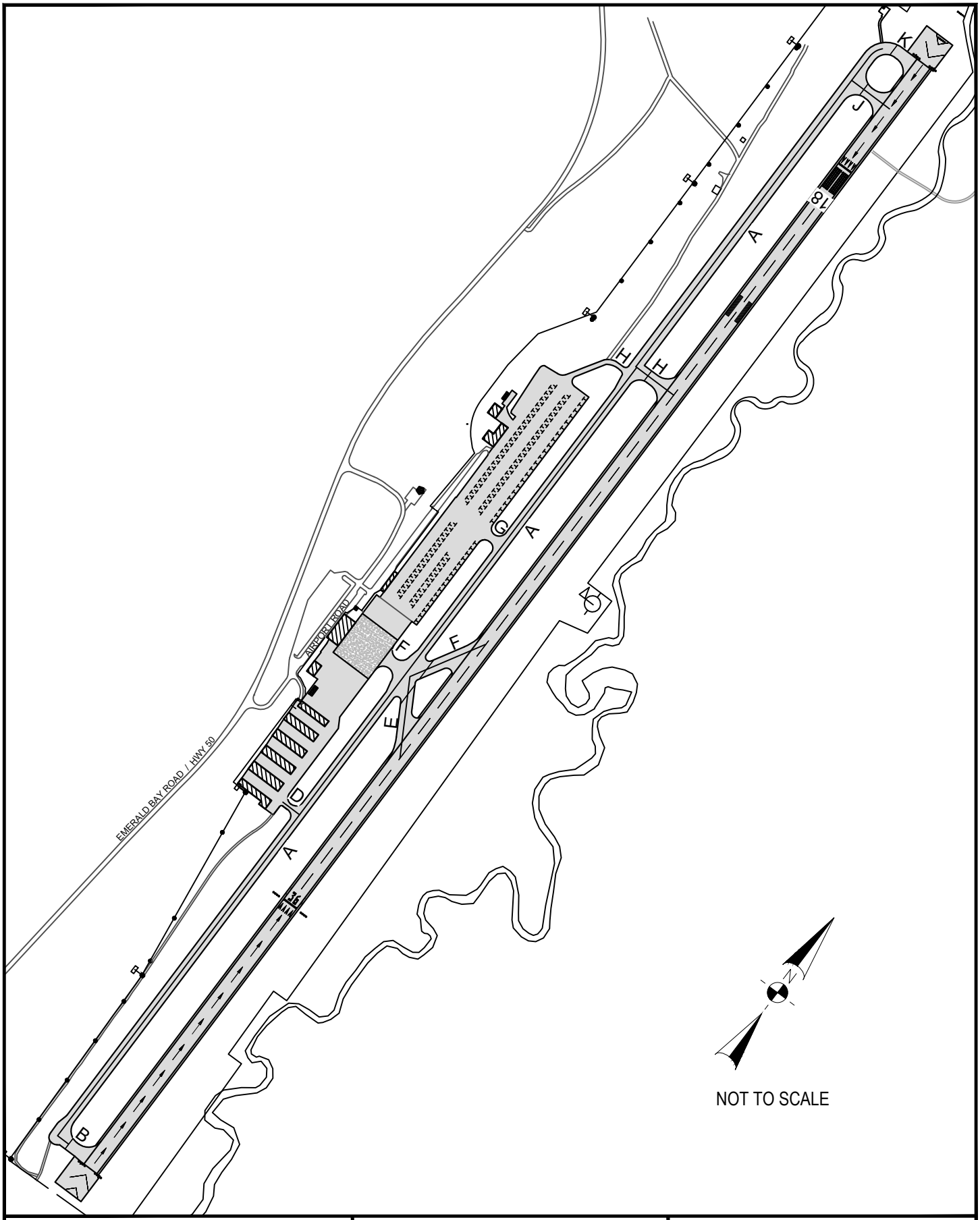
This PCN information should be added to the Airport Master Record, FAA Form 5100, for the Lake Tahoe Airport.

Table 3-1
Pavement Sections and Pavement Condition Number (PCN)
Lake Tahoe Airport

Pavement Segment ID (See Plate 5-1)	Element	Station (See Plate 5-2)	Existing Pavement Section - inches								Subgrade Strength		Bearing Capacity - Kips (1 Kip = 1,000 lbs.)		PCN - Flexible or Rigid Section - (F or R) / _ / Y / T			Pavement Condition Number PCN	Element
			PCC	AC	AB	CTB	ASB	Pit Run	Select Sand	Total	Estimated CBR	Subgrade Category	SW	DW	SW	DW	Use		
C1	Runway 18-36	0+00 - 36+00	-	3.0	7	-	20	-	-	30	8	C	75+	175	30	28	28	28 F/C/Y/T	Runway 18-36
C2	Runway 18-36	36+00 - 59+75	-	3.0	7	-	20	-	-	30	8	C	75+	175	30	28	28	28 F/C/Y/T	Runway 18-36
C3	Runway 18-36	59+75 - 85+40	-	3.0	7	-	20	-	-	30	8	C	75+	175	30	28	28	28 F/C/Y/T	Runway 18-36
C4	Taxiways B, A, & K	0+00 - 40+60	-	8.5	8	-	8	-	-	25	5	C	55	75	22	22	22	22 F/C/Y/T	Taxiways B, A, & K
C5	Taxiways B, A, & K	40+60 - 59+15	-	4.0	8	-	8	-	-	20	5	C	35	60	13	15	15	15 F/C/Y/T	Taxiways B, A, & K
C6	Taxiways B, A, & K	59+15 - 82+60	-	7.5	8	-	24	-	-	39	5	C	75+	200	30	33	30	30 F/C/Y/T	Taxiways B, A, & K
C7	Taxiways B, A, & K	82+60 - 88+00	-	7.5	8	-	24	-	-	39	3	D	75+	110	30	35	30	30 F/D/Y/T	Taxiways B, A, & K
C8	Taxiway E	0+00 - 1+75	-	7	8	-	-	-	-	15	5	C	20	35	8	9	8	8 F/C/Y/T	Taxiway E
C9	Taxiway E	1+75 - 3+60	-	9	8	-	8	-	-	25	5	C	55	75	22	22	22	22 F/C/Y/T	Taxiway E
C10	Taxiway F	0-00 - 1+75	-	7	8	-	-	-	-	15	5	C	20	35	8	9	8	8 F/C/Y/T	Taxiway F
C11	Taxiway F	1+75 - 3+50	-	9	8	-	8	-	-	25	5	C	55	75	22	22	22	22 F/C/Y/T	Taxiway F
C12	Taxiway F	3+50 - 5+60	-	9	8	-	8	-	-	25	5	C	55	75	22	22	22	22 F/C/Y/T	Taxiway F
C13	Taxiway H	0+00 - 1+80	-	8	8	-	24	-	-	39	3	D	75+	125	30	40	30	30 F/D/Y/T	Taxiway H
C14	Taxiway J	0+00 - 1+80	-	8	8	-	24	-	-	39	3	D	75+	125	30	40	30	30 F/D/Y/T	Taxiway J
C15	Taxiway G	0+00 - 1+00	-	6	8	-	8	-	-	22	4	D	30	50	12	15	15	15 F/D/Y/T	Taxiway G
C16	Apron A1	See Plates 5-1 & 5-2	-	3	6	-	6	-	12	27	8	C	75+	160	30	46	30	30 F/C/Y/T	Apron A1
C17	Apron A2	See Plates 5-1 & 5-2	-	4	6	-	13	-	-	23	8	C	75	110	30	33	30	30 F/C/Y/T	Apron A2
C18	Apron A3	See Plates 5-1 & 5-2	14	2	-	-	6	-	-	22	10	B	75+	175	40	49	40	40 R/B/Y/T	Apron A3
C19	Apron A4a	See Plates 5-1 & 5-2	-	4	6	-	8	-	-	18	8	C	50	75	19	22	22	22 F/C/Y/T	Apron A4a
C20	Apron A4b	See Plates 5-1 & 5-2	-	4	6	-	8	-	-	18	8	C	50	75	19	22	22	22 F/C/Y/T	Apron A4b
C21	Apron A5a	See Plates 5-1 & 5-2	-	3	6	-	20	18	-	29	13	B	75+	200+	30	48	30	30 F/B/Y/T	Apron A5a
C22	Apron A5b	See Plates 5-1 & 5-2	-	3	14	-	-	-	-	17	4	D	20	25	8	8	8	8 F/D/Y/T	Apron A5b
C23	Apron A5c	See Plates 5-1 & 5-2	-	2	5	-	5	-	-	12	3	D	5	N/A	N/A	N/A	N/A	N/A	Apron A5c
C24	Apron A5d	See Plates 5-1 & 5-2	-	5	-	5	4	-	-	14	5	C	21	25	7	7	7	7 F/C/Y/T	Apron A5d

Table 3-1 (continued)
Pavement Sections and Pavement Condition Number (PCN)
Lake Tahoe Airport

C25	Apron A6a	See Plates 5-1 & 5-2	-	3	6	-	9	-	-	18	4	D	20	25	7	7	7	7 F/D/Y/T	Apron A6a
C26	Apron A6b	See Plates 5-1 & 5-2	-	5	-	5	4	-	-	14	5	C	21	25	7	7	7	7 F/C/Y/T	Apron A6b
C27	Apron A6c	See Plates 5-1 & 5-2	-	2	6	-	-	5	-	8	3	D	5	N/A	N/A	N/A	N/A	N/A	Apron A6c
C28	Apron T/W H	See Plates 5-1 & 5-2	-	2	5	-	4	-	-	11	3	D	5	N/A	N/A	N/A	N/A	N/A	Apron T/W H
C29	Taxiway D	0+00 - 1+00	-	3	6	-	9	-	-	18	7	C	45	60	17	15	15	15 F/C/Y/T	Taxiway D
C30	Tee Hangar Taxiway (H6)	0+00 - 6+70	-	3	6	-	9	-	-	18	7	C	45	60	17	15	15	15 F/C/Y/T	Tee Hangar Taxiway (H6)
C31	Tee Hangar Taxilanes (H1-H5)	See Plates 5-1 & 5-2	-	3	6	-	9	-	-	18	3	D	20	25	7	7	7	7 F/D/Y/T	Tee Hangar Taxilanes (H1-H5)
C32	Terminal Access Road	0+00 - 20+00	-	2	3	-	5	-	-	10	5	C	N/A	N/A	N/A	N/A	N/A	N/A	Terminal Access Road
C33	Parking Lot Entrance	See Plates 5-1 & 5-2	-	2	3	-	5	-	-	10	8	C	N/A	N/A	N/A	N/A	N/A	N/A	Parking Lot Entrance
C34	Parking Lot A - W/ Over Ex	See Plates 5-1 & 5-2	-	3	4	-	22	-	-	29	5	C	N/A	N/A	N/A	N/A	N/A	N/A	Parking Lot A - W/ Over Ex
C35	Parking Lot A - W/O Over Ex	See Plates 5-1 & 5-2	-	3	4	-	4	-	-	11	5	C	N/A	N/A	N/A	N/A	N/A	N/A	Parking Lot A - W/O Over Ex
C36	Parking Lot B	See Plates 5-1 & 5-2	-	2	5	-	-	-	-	7	3	D	N/A	N/A	N/A	N/A	N/A	N/A	Parking Lot B



LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE, CALIFORNIA

PAVEMENT EVALUATION

AIRPORT DIAGRAM

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PLATE No. **438**

CHAPTER 4. ANALYSIS AND EVALUATION

4-1 Distress Mode

There are two major distress types that lead to failure and/or deterioration of an airfield pavement. These are deep-seated distress and surface distress.

Deep-seated distress is distress in the lower sections of the pavement section and the subgrade and subsoil beneath the pavement section and is caused by repeated stresses induced by aircraft movement on the surface of the pavement. Deep-seated distress can lead to complete failure of the pavement section, foundation soils, or both.

Surface distress is caused by traffic, age, and environmental factors including temperature, temperature changes, and moisture. Surface distress causes deterioration of the surface pavement layer including cracking, spalling, raveling, bleeding, and shoving. These distresses can be caused by deep-seated distress or surface distress caused by load, environmental factors, and quality of pavement, or both.

4-2 Deep-Seated Distress

A pavement does not suddenly fail under load unless it is grossly overloaded. Load limits for infrequent use need to be applied to the pavements to avoid collapse of the aircraft through the pavement section. The failures that generally occur are fatigue-type failures where distresses develop to a point that rutting and accompanying failure of the pavement section occurs. It is important in developing a Pavement Maintenance/Management Plan (PMMP) to determine the time at which failure of the section caused by deep-seated distress will begin to occur under forecast loadings. Several methods have been developed over the past 70 years for utilizing a Fatigue Analysis methodology to forecast remaining life of pavements under forecast loads. The degree of success has been varied depending on the method used. The BRANDLEY Fatigue Analysis methodology has a successful 60-year performance record, showing a 90 to 95 percent accuracy in predicting remaining pavement life. FAA's FAARFIELD methodology, as detailed in this chapter, has not proven to provide accurate forecasts of remaining pavement section life. The BRANDLEY Fatigue Analysis methodology is utilized in this study.

4-2.1 Back Calculated Modulus of Elasticity

Prior to the development of the computer, it was not possible to calculate stresses, strains, and deflections under loaded pavement sections at various depths in a section using a multi-layered system. As a result, the early methods of fatigue analysis utilized deflections of pavement surface, subgrade surface, or other locations measured under full-scale load tests

as the failure criteria. With the development of the computer, it was possible to calculate stresses, strains and deflections at the surface and all depths below in a multi-layer system. The basic soils and pavement parameters that were necessary for this computation are Modulus of Elasticity, Poisson's Ratio, and thickness of each layer in the system.

With the development of the heavy-duty falling weight deflectometer equipment and the heavy-duty vibratory load test equipment, it became possible to measure deflections of the pavement surface and to establish the size and shape of the deflection bowl caused by the applied loads. Using the deflection bowl data and the computer program for multi-layer systems, it is possible to back calculate values of Modulus of Elasticity for each layer of the system. Poisson's Ratio is not a critical parameter and values of Poisson's Ratio can be adequately estimated for each type material in each layer. As a result of this development, full-scale load tests are no longer required and the basic soil parameters can be developed from the results of heavy-duty falling weight deflectometer tests or vibratory load tests.

Modulus of Elasticity and Poisson's Ratio of each layer and the thickness of each layer of the pavement section, the subgrade materials, and various layers of subsoil were obtained in this study and utilized with the Fatigue Analysis.

4-2.2 Forecast Traffic

Forecast traffic, including type aircraft, type gear, operating load, annual operations, and distribution on the pavement, is a parameter that must be utilized in any fatigue analysis. This data must be converted to coverages, which is the number of wheels per year crossing a given point on the pavement. The forecast traffic at Lake Tahoe Airport for each pavement section is included as the Traffic Index in Table No. 2-1. These traffic indexes represent the total operations of each category of aircraft on each section of pavement. For input into the Fatigue Analysis methodology, these operations are converted to coverages to represent the distribution of aircraft tires on the pavement section in each segment.

4-2.3 Existing Pavement Sections

Thickness and type of material of each pavement section and each layer of subgrade and subsoil under the pavement section are important factors to input into any fatigue analysis. The pavement section data for each pavement section are included in Appendix C.

4-2.4 Considered Rehabilitation Sections

Fatigue Analysis methodology not only provides a forecast remaining pavement life under forecast traffic for a given pavement section, but can also forecast extended pavement life after different rehabilitation or reconstruction processes have taken place. It is, therefore, important to not only evaluate the existing pavement sections for forecast remaining life, but to apply feasible rehabilitation methods to the existing pavement sections and calculate forecast extended life due to the rehabilitation process. It is important to prepare this evaluation for different rehabilitation processes that would be feasible at this airport in order to prepare a cost-benefit analysis to evaluate the most acceptable rehabilitation program for the pavement section. A series of rehabilitation processes that are considered feasible for this airport have been prepared and are included in Table No. 4-1. Where applicable, each of these rehabilitation procedures was evaluated using the Fatigue Analysis Methodology.

4-2.5 Fatigue Analysis – Deep-Seated Distress

4-2.5.1 BRANDLEY Fatigue Analysis – Remaining Life Analysis

In 1948, as research for a doctoral thesis at Harvard University Graduate School of Engineering, Reinard W. Brandley developed the BRANDLEY Fatigue Analysis method of evaluating airfield pavements. This Fatigue Analysis was developed using full-scale load tests conducted by the Corps of Engineers near the end of World War II on various airports for the purpose of developing design criteria for pavements to serve the larger military aircraft that were being developed. The failure criterion that was used in this analysis was limiting subgrade deflection under design traffic. Measured deflections were used at that time since the computer had not been developed and the stresses, strains, and deflections in multi-layered systems could not be calculated. This Fatigue Analysis methodology and failure criteria has been utilized on many airports. However, the method of determining deflections of the surface of the subgrade has changed from direct measurement to calculating these deflections using layer thicknesses and the Modulus of Elasticity and Poisson's Ratio of each layer, which have been back calculated from the data obtained from the falling weight deflectometer tests. From the Fatigue Analysis, forecasts of remaining pavement life, so far as deep-seated distress is concerned, were calculated for each pavement section.

Since the original research was conducted on flexible pavements, it was anticipated that a separate failure criteria would be required for rigid pavement sections. Experience and comparison with

actual performance show that the failure criteria used for flexible pavements is the same for rigid pavements and there was no change required in the failure criteria.

A comparison of forecast pavement life and time for failure under the forecast traffic over the past 60 years has shown excellent correlation between forecast life and actual time to failure. The forecast life has always been within 90 to 110 percent of the actual life of the section when actual traffic on the section was the same as that used in the analysis.

Plate 4-1 shows the remaining life of the pavements expected to fail under deep-seated distress in the subgrade layer using the forecast traffic. The remaining life analysis for the subgrade layer is the critical item for the areas of pavement that have less than 20 years of remaining life.

The remaining life data shown is for forecast traffic on the section. If traffic varies from forecast, then remaining life of the section subjected to the new traffic can be re-calculated using existing data obtained in this study for Modulus of Elasticity and thickness of each layer of the pavement section.

Any analysis that showed a remaining pavement life of a section of more than 20 years has been indicated as 20+ years. Other factors such as weathering, maintenance, etc., over a 20-year period can have a significant influence on the performance of a pavement. It is recommended that a complete reevaluation of pavement performance, including falling weight deflectometer testing and Fatigue Analysis, be conducted every 10 years to evaluate unforeseen changes and to update the recommended maintenance and rehabilitation schedules.

4-2.5.2 FAARFIELD Airport Pavement Design – Remaining Life Analysis

The FAA has recently developed a program called “FAARFIELD” to design and evaluate airfield pavements, including a remaining life analysis. A comparative study of the BRANDLEY Fatigue Analysis and the FAARFIELD systems was made on some airport pavements that have actually failed after they had been tested. In this analysis the same traffic, pavement section, Modulus of Elasticity values, and Poisson’s Ratio values for each layer were used in both the BRANDLEY Fatigue Analysis and the FAARFIELD analysis. At each location Air Traffic Control Tower records indicated that the forecast traffic for aircraft type and operation

matched the actual traffic experienced. The results of this study are tabulated below:

Airport	Facility	Forecast Remaining Life (Years) (Deep-Seated Distress Only)		Actual Life*
		BRANDLEY	FAARFIELD	
Sacramento International Airport	Runway 16L-34R	5	0.25	5.1
Stockton Metropolitan Airport	Runway 11-29	6 to 8	22	7
Nashville International Airport	Existing Apron Taxiway	3	0.1	3
Truckee-Tahoe Airport	Runway 11-29	16	1	10+**

*Number of years to actual failure.
**This section of the runway performed under forecast loading for 8 to 10 years with no sign of deep-seated distress. There was surface cracking of the asphalt pavement due to thermal stresses, which was the reason for reconstruction in 2012, not deep-seated distresses. According to FAARFIELD it should have had structural failure 7 to 9 years earlier.

A few select areas of pavement at Lake Tahoe Airport were selected and analyzed with both the BRANDLEY Fatigue Analysis and with FAARFIELD for this study. The summary of the results are tabulated below for comparison purposes:

Pavement Element	Station	Forecast Remaining Life (Years) (Deep-Seated Distress Only)	
		BRANDLEY	FAARFIELD
		Subgrade	Subgrade
Runway 18-36	0+00 to 36+00	50+	4,500
Taxiway A	40+60 to 59+15	25	2
Taxiway F	3+50 to 5+60	11	42
Apron A4b	See Plate 5-1 & 5-2	15	1
Apron A6c	See Plate 5-1 & 5-2	2	0
Tee Hangars	See Plate 5-1 & 5-2	50+	43,000
Terminal Access Road	See Plate 5-1 & 5-2	8	11

Due to the long, accurate performance record of the BRANDLEY Fatigue Analysis methodology and the large discrepancies with the FAARFIELD method and short performance record of FAARFIELD, all maintenance and rehabilitation recommendations in this report are based on data obtained from the BRANDLEY analysis.

A detailed fatigue analysis was conducted using each type of rehabilitation and overlay considered appropriate and the extended pavement life was calculated. Taking this extended life for each section into account, the recommended pavement maintenance program was prepared. The recommended pavement rehabilitation method used was based on a cost-benefit analysis, construction timing and difficulties, and availability of funding.

Several recommended rehabilitation procedures for deep-seated distress with estimated unit costs for each procedure are presented in Table 4-1. The rehabilitation plan for the next 20-year period to protect against deep-seated distress only is included in Table No. 4-2.

4-3 Surface Distress

4-3.1 Pavement Condition Index (PCI)

Surface distress in the pavements is not necessarily caused by deep-seated distress, nor does it forecast when the pavement section will fail. Surface distress generally is caused by inadequate quality of the pavement materials, traffic, and/or environmental factors such as temperature, moisture, and temperature changes between day and night and summer and winter. These defects show up as cracking, patching, raveling, weathering, swelling, rutting, and PCC slab shattering. Rutting can be caused by deep-seated distress and failure of the section or associated with flushing or shoving of an asphalt mix.

The pavement condition is determined by visual inspection of the surface of the pavement as described previously. A Pavement Condition Index (PCI) can be determined for each segment to indicate the degree of distress. A typical plot of PCI vs. Time is included as Plate No. 4-2. On this plate a typical pavement index plot for asphalt concrete pavement and for Portland cement concrete pavement is shown. In both diagrams the PCI gradually decreases with time and when it reaches a certain point, it decreases at a much faster rate. The gradual decreasing portion of the curve indicates surface distress only. The sharp break off is generally caused by deep-seated distress. There is no way to predict when the deep-seated distress or failure of the section is going to occur using only the PCI and, therefore, it is not possible to predict with only the PCI when major rehabilitation or reconstruction will be required. If one waits until the PCI vs. Time curve shows deep-seated distress by the sharp break off, then failure has already occurred and it is not possible to extend the life of the section by overlays or adding to the surface of the existing pavement section. As a result, the Pavement Condition Index (PCI) cannot be successfully used to predict deep-seated distresses and failures but is effective in determining when

surface rehabilitation and repairs are necessary.

Surface distress results in deterioration of the surface course. This distress shows up as cracks in the pavement, including transverse cracking, longitudinal cracking, block cracking, map cracking, secondary cracking, raveling, weathering, patching, or damage to the surface caused by jet blast or oil and chemical spillage. Each of these deficiencies can be treated so as to provide safe operation of the airport, but with time it will become more cost effective to completely rehabilitate or reconstruct the section. The timing of repair of cracks or other defects will be a function of cost benefit and availability of funds.

The typical rehabilitation procedures for surface distress for Lake Tahoe Airport are shown in Table No. 4-3.

4-3.2 Thermal Stresses

Surface cracking can be caused by thermal stresses in the pavement. These stresses are created by large changes in temperature of the pavement from day to night and summer to winter. Over time these temperature variations combined with the oil in the asphalt becoming old and brittle can cause cracking of an asphalt pavement.

With airports in the higher altitudes of the Sierra Nevada Mountain Range, large temperature changes occur between night and day and summer and winter. These large temperature changes cause thermal stresses to build up in the asphalt pavement section, which generally results in cracking of the pavements, both longitudinal and transverse. Early cracking will be transverse cracks at 500 to 800 foot centers. Additional cracks will then form in between and ultimately it will end up with a block cracking at 15 to 20 foot centers. If not sealed, these cracks will become wider each year and, in some instances, have been observed to be 3 to 5 inches wide.

Recently a polymer-modified asphalt has been developed that provides an asphalt pavement that will withstand or delay thermal cracking. Experience has been limited and has shown no thermal cracking in the pavement after 10 to 12 years from the time that it was placed. All new flexible pavements at Lake Tahoe Airport should be constructed using the polymer-modified asphalt.

In the 1980s the office of Reinard W. Brandley developed a method of sawing and sealing a joint pattern on airfield pavements in the Sierra Nevada Mountain regions to control the cracking caused by thermal stresses. This joint pattern started out at 25-foot centers, but intermediate cracks developed so the spacing was decreased to 12 to 15-foot centers depending on the location. This has proven to be successful. The main

problem with the sawing and sealing of the joint pattern has been that it requires maintenance in the form of resealing the joints every 4 to 6 years. All joints need to be formed with a depth-to-width ratio of 0.5 to 1.0 for the joint sealant and have a “band-aid” section on top of the pavement extending 1 inch each side of the joint in order to avoid bond failure of the joint seal.

Many of the pavements at Lake Tahoe Airport have a joint pattern installed on a 15’ grid.

When new pavements are placed at the airport, polymer-modified asphalt should be used in the mix. Based on experience, this should at least delay the start of any cracking due to thermal stresses, and may eliminate it. Installation of a jointing system is not recommended until cracking of the pavement begins. Careful inspection should be made of the new pavements each year and when transverse cracks form at regular intervals of 500 feet or less, a 15 x 15 foot joint pattern should be installed using the existing transverse crack as one of the joints. This will eliminate or delay further cracking due to thermal stresses.

Performance of new pavements using polymer-modified asphalt has been limited to 12 to 14 years. It is not known whether or not thermal cracking will occur in these pavements after that time, so in the PMMP an item to install a joint system after 11 to 13 years has been included but will only be used if needed.

In some areas, particularly in the apron tie down area, the surface of the pavement has weathered, some raveling has occurred, and there is extensive fine cracking. In these areas surface rehabilitation should consist of milling at least 2 inches, but no less than 75 percent of the thickness of the existing pavement, and replacing it with new polymer-modified asphalt.

A sealant on the surface of the asphalt pavement should be considered when the weathering and development of fine cracks has developed to a point that it has a detrimental effect on the life of the pavement and the surface condition. This sealant can consist of Reclamite, slurry seal, an SS1h fog seal or other suitable materials.

Sealing of the cracks in flexible pavement sections is an important maintenance procedure since it resists spalling or raveling of the pavement immediately adjacent to the cracks and inhibits the entry of storm water into the underlying aggregate base course. It is recommended that all cracks to be sealed be prepared for sealing by routing a section to provide a depth to width ratio of the sealant of no more than 1 to 1. This will also require the installation of a backer rod or tape below the sealant to keep the sealant from filling the bottom section of the crack. The sealant should include a

"Band Aid" on the top of the pavement over the seal extending 1-inch minimum beyond the edge of the prepared repair on each side of the crack. The thickness of the "Band Aid" should be 1/8". A typical section of a crack seal repair is shown on Plate 4-3.

4-4 Frost Action

If the frost line penetrates and remains for a significant period of time in a frost-susceptible soil, frostheave will occur, which is caused by the formation of ice lenses at the bottom edge of the frozen layer. This heave can have a serious effect on rideability of the pavement until it melts and the surface returns to approximately the same elevation as before the frost. During the spring thaw the frozen soil and ice lenses will thaw and the soil above the remaining frozen layer will become super-saturated, which will decrease the strength of this material.

Based on past experience it is expected that frost may penetrate up to depths of 15 to 20 inches provided zebra striping is used for all marking. With a 15-inch depth of frost penetration there would be little effect on the strength of the pavement section during the spring thaw. However, if frost penetrates deeper, there would be a weakened condition during the spring thaw. If that weakened condition occurs due to depth of frost penetration, then the effect can be mitigated during the spring thaw period by:

- Placing a thicker pavement section, which will support the heavier aircraft, or
- Restricting the size aircraft that can use the airport to those having a maximum gross weight less than 40,000 pounds on dual gear.

The spring thaw would normally be a fairly short period of time.

It may be advantageous to install a series of thermocouple gauges in the existing pavement sections and monitor the depth of frost penetration and rate of thawing in the spring, if thicker pavement sections are not constructed, so the timing of limiting operations of the heavier aircraft can be accurately established.

If the depth of frost penetration never exceeds 16", then no load restrictions would be required on the pavements at any time. If the depth of frost penetration extends below 16", load restrictions should be applied whenever the depth of thawing as measured from the surface of the pavement exceeds 12" and should remain in place until seven days after the proposed thermocouples indicate that all of the frozen sections of pavement and subsoil have completely thawed.

TABLE NO. 4-1

LAKE TAHOE AIRPORT

PAVEMENT REHABILITATION PROCEDURES
DEEP-SEATED DISTRESS

Code	Rehabilitation Method	
A1	Rehabilitate and Strengthen Section	
	Grind and Remove 6" Existing AC	
	Pulverize and Recompact 10" Existing AC & AB as ASB	
	New Section - Existing AB, ASB	18"
	AB - Crushed Aggregate Base (8" New)	8"
	AC - Asphalt Pavement (New)	3"
	Total Thickness	29"
	Cost per square foot	$8.00
A2	Reconstruct and Strengthen Section	
	Pulverize and Remove 15" Existing AC & AB, Excavate 14" to Subgrade	
	Scarify and Recompact Subgrade, Place 14" Pulverized AC & AB as ASB	
	New Section - 14" Pulverized ASB	14"
	AB - Crushed Aggregate Base (12" New)	12"
	AC - Asphalt Pavement (New)	3"
	Total Thickness	29"
	Cost per square foot	$12.00
B	Remove 8" of Existing AC & AB, Rehabilitate and Strengthen Section	
	Pulverize and Remove 8" Existing AC & AB	
	Recompact AB, Add 5" New Porous Concrete, Add 3" New AC	
	New Section - Existing AB, ASB, Select Fill	6"-10"
	Porous Concrete Base Course (5" New)	5"
	AC - Asphalt Pavement (3" New)	3"
	Total Thickness	14"-18"
	Cost per square foot	$15.50

Notes: 1. Costs indicated are based on 2017 prices and do not include any costs other than the pavement section itself.

TABLE NO. 4-1 (continued)

LAKE TAHOE AIRPORT

PAVEMENT REHABILITATION PROCEDURES
DEEP-SEATED DISTRESS

Code	Rehabilitation Method	
C	Remove 13" of Existing AC & AB, Rehabilitate and Strengthen Section	
	Pulverize and Remove 13" Existing AC & AB	
	Recompact Subgrade, Add 13" New Porous Concrete, Add 3" New AC	
	New Section - Existing AB, ASB	0"-2"
	Porous Concrete Base Course (13" New)	13"
	AC - Asphalt Pavement (3" New)	3"
	Total Thickness	16"-18"
	Cost per square foot	$17.00
D	Remove and Reconstruct Existing Section	
	Pulverize, remove, stockpile AC & AB - 10"	
	Excavate to new Subgrade level - 9"	
	Scarify and Recompact Subgrade	
	New Section - ASB - Pulverized Existing AC & AB	10"
	AB - Crushed Aggregate Base (New)	6"
	AC - Asphalt Pavement (New)	3"
	Total Thickness	19"
	Cost per square foot	$6.50
E	Remove and Reconstruct Existing Section	
	Pulverize, remove, stockpile AC & AB - 7"-10"	
	Excavate to new Subgrade level - 5"-8"	
	Scarify and Recompact Subgrade	
	New Section - ASB - Pulverized Existing AC & AB	6"
	AB - Crushed Aggregate Base (New)	6"
	AC - Asphalt Pavement (New)	3"
	Total Thickness	15"
	Cost per square foot	$8.00

Notes: 1. Costs indicated are based on 2017 prices and do not include any costs other than the pavement section itself.

TABLE NO. 4-2

LAKE TAHOE AIRPORT

REHABILITATION PLAN - DEEP-SEATED DISTRESS

Estimated Date of Rehabilitation	Element	Station	2016 Remaining Life (Years)	Estimated Year of Failure	Recommended Rehabilitation	
			Subgrade	Subgrade	Code*	Description
2022	Taxiway F	3+50 - 5+60	11	2037	A1	Rehabilitate and Strengthen Section
2030	Aprons A4a & A4b	See Plates 5-1 & 5-2	15-19	2031-35	B	Rehabilitate and Strengthen Section
2032	Apron A5b	See Plates 5-1 & 5-2	17	2033	B	Rehabilitate and Strengthen Section
2016**	Aprons A5c & A5d**	See Plates 5-1 & 5-2	1-5	2017-2021	-	Reconstruction Completed** (See Report Section 5-2.4)
2018***	Apron A6a***	See Plates 5-1 & 5-2	19	2035	B	Rehabilitate and Strengthen Section***
2018	Apron A6c	See Plates 5-1 & 5-2	2	2018	C	Rehabilitate and Strengthen Section
2018	Apron Taxiway H****	See Plates 5-1 & 5-2	6	2022	C	Rehabilitate and Strengthen Section or Abandon****
2023	Terminal Access Road	See Plates 5-1 & 5-2	8	2024	D	Remove and Reconstruct Section
2018	Parking Lot B	See Plates 5-1 & 5-2	2	2018	E	Remove and Reconstruct Section

* - See Table 4-1 or 4-3 for Rehabilitation Code.

** - This section of apron was reconstructed after data was collected for this report. See report Section 5-2.4.

*** - Apron reconstruction is funded through an AIP grant and will occur in the spring of 2018. Surface Distress dictates early reconstruction.

**** - Taxiway H connection from the GA Apron to Taxiway A is shown to be removed and replaced with a new connector to Taxiway A. It should be reconstructed if the new connector is not constructed otherwise it should be reconstructed.

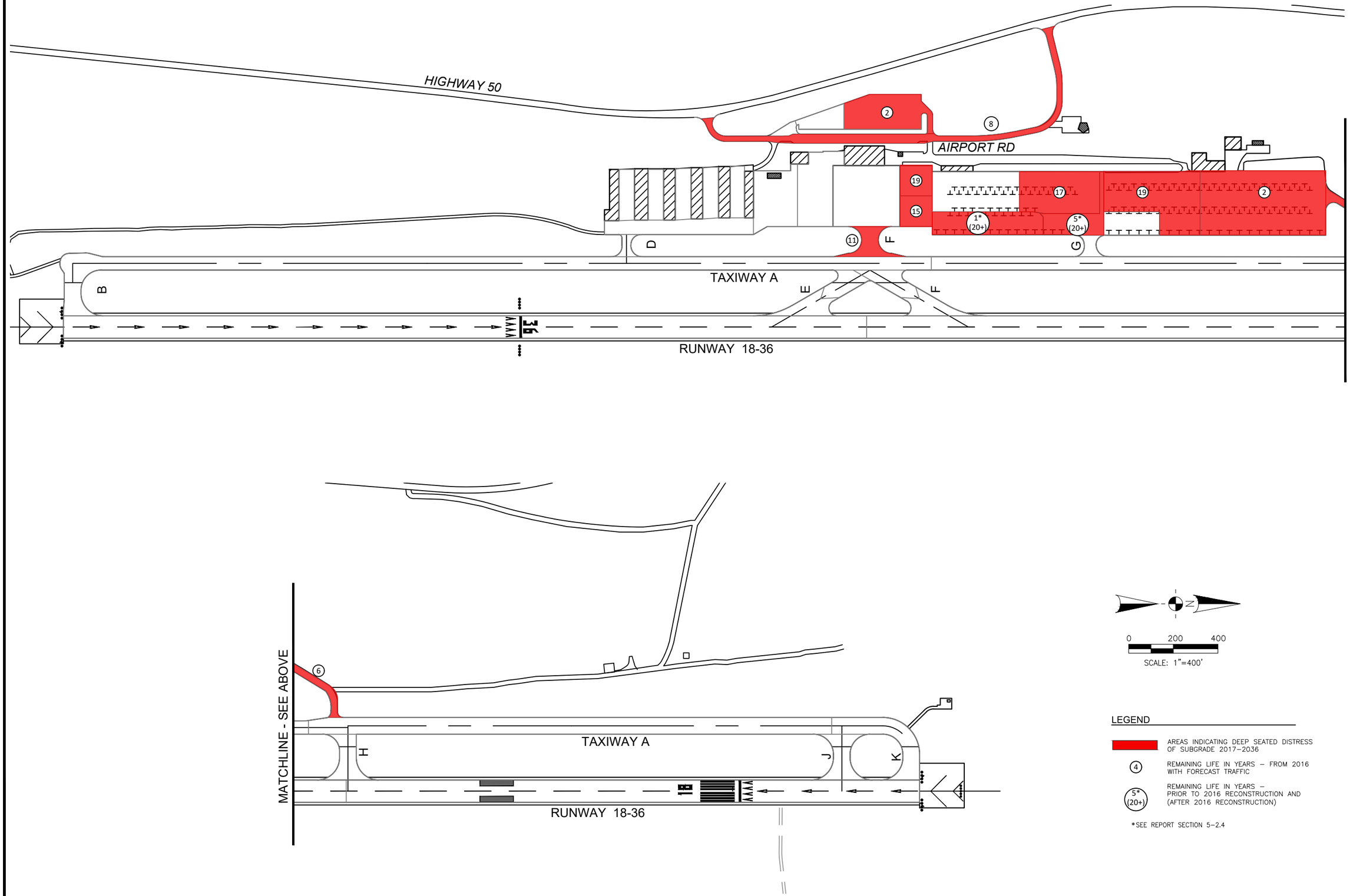
NOTE: Rehabilitation of pavement sections should be scheduled 2 to 3 years before estimated date of failure.

TABLE NO. 4-3

LAKE TAHOE AIRPORT

PAVEMENT REHABILITATION PROCEDURES
SURFACE DISTRESS

Code	Rehabilitation Method	Estimated Unit Costs
F2	Mill and Fill (2" AC) - Remove and Replace AC Surface	$2.50/sq. ft.
F3	Mill and Fill (3" AC) - Remove and Replace AC Surface	$3.75/sq. ft.
F2/3	Mill (2” AC) and Fill (3" AC) - Remove and Replace AC Surface	$3.25/sq. ft.
G3	Remove and Replace 3” Existing AC and Recompact Existing AB	$4.50/sq. ft.
H	Crack Repair, Seal Existing Cracks and Joints	$2.50/ln. ft.
J	New Seal Coat – Slurry Seal, Reclamite, Fog Seal, etc.	$1.25/sq. yd.
K	Rehabilitate PCC Joints (Joint Seal and Spall Repair)	$5.00/ln. ft. Joint Seal $10/ln. ft. Spall Repair
L	Remark Pavements	$1.50/sq. ft.



LEGEND

- AREAS INDICATING DEEP SEATED DISTRESS OF SUBGRADE 2017–2036
- (4) REMAINING LIFE IN YEARS – FROM 2016 WITH FORECAST TRAFFIC
- (5* / (20+)) REMAINING LIFE IN YEARS – PRIOR TO 2016 RECONSTRUCTION AND (AFTER 2016 RECONSTRUCTION)

*SEE REPORT SECTION 5–2.4

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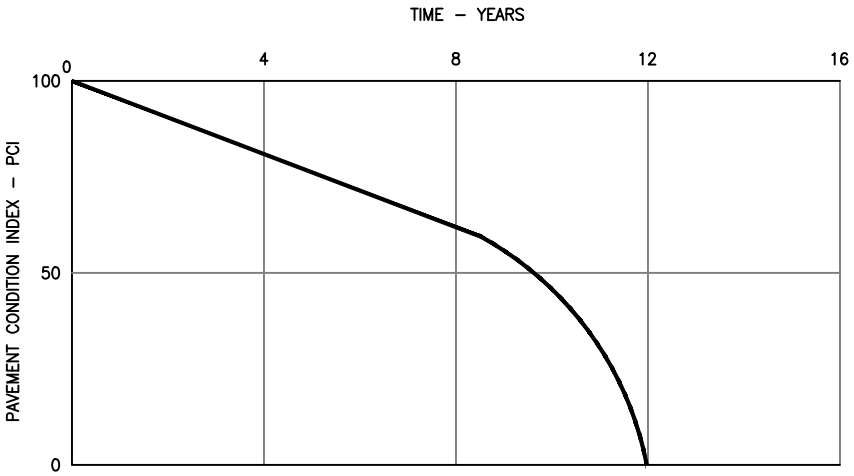
No.	REVISIONS	DATE

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

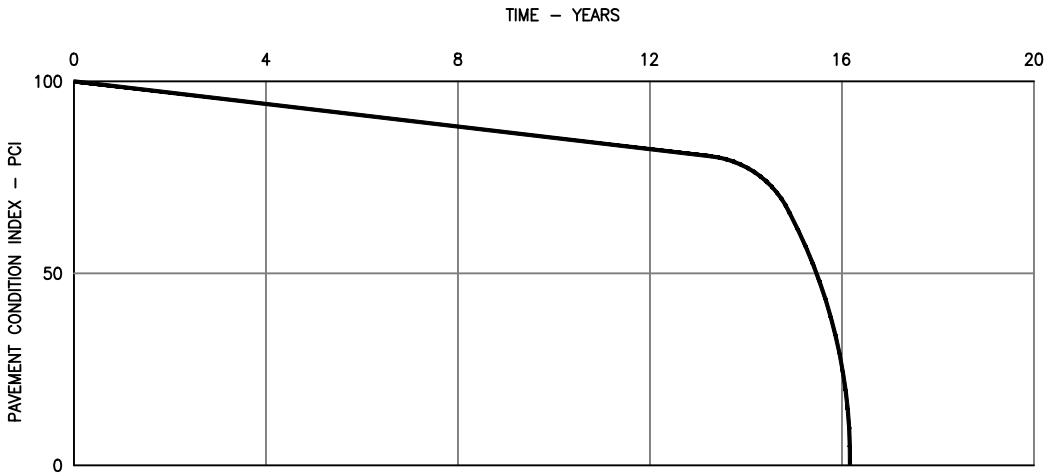
PAVEMENT EVALUATION

DEEP-SEATED DISTRESS - BRANDLEY FATIGUE ANALYSIS

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
FILE	TVL.4-1.Deep
SCALE	1"=400'
PLATE No.	4-1



ASPHALT CONCRETE PAVEMENT SECTION
PCI VS. TIME - RELATIONSHIP



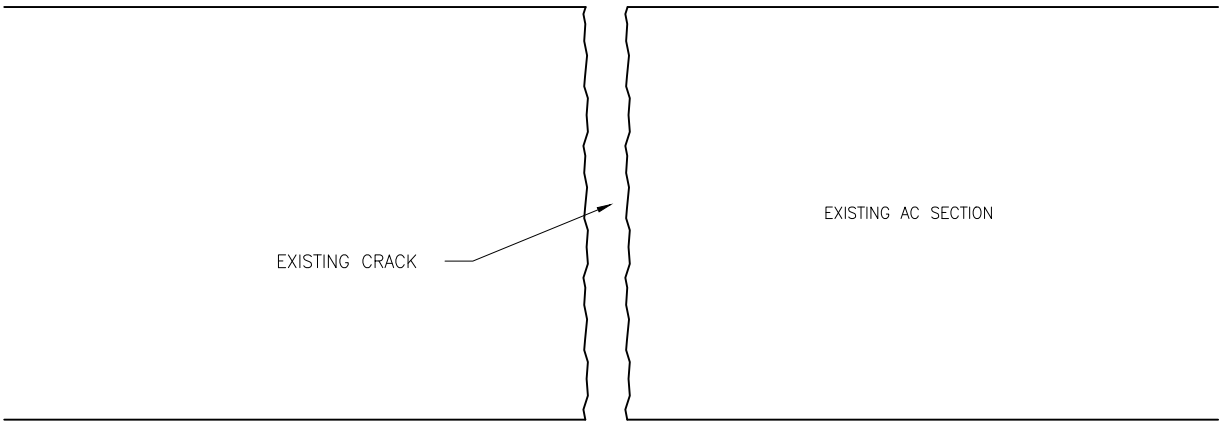
PORTLAND CEMENT CONCRETE PAVEMENT SECTION
PCI VS. TIME - RELATIONSHIP

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE, CALIFORNIA

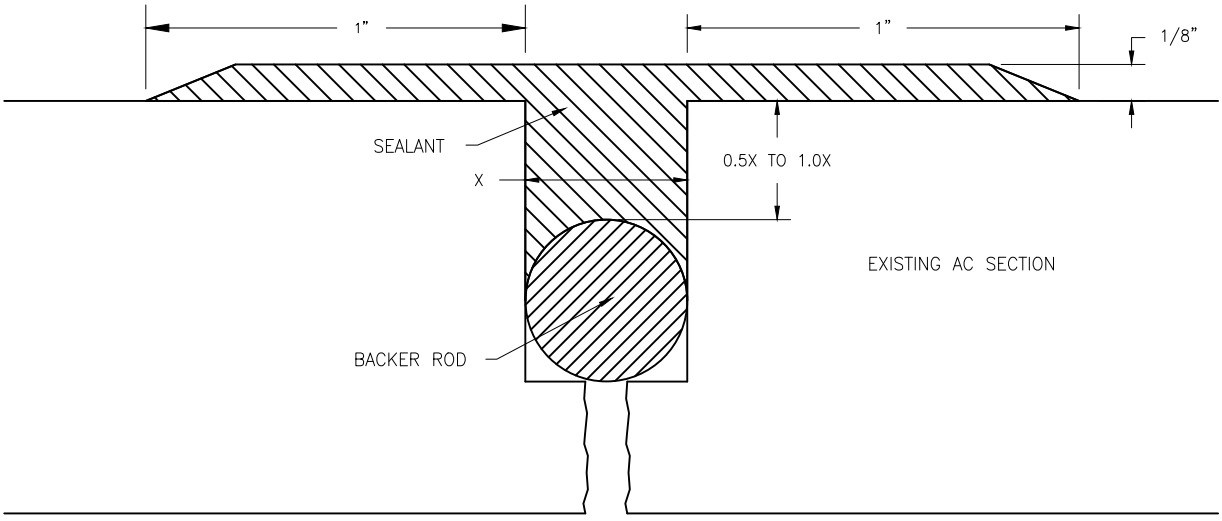
PAVEMENT EVALUATION

PCI vs TIME

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EXISTING CRACK IN PAVEMENT



TYPICAL SEALED CRACK

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE, CALIFORNIA

PAVEMENT EVALUATION

TYPICAL CRACK SEAL REHABILITATION

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CHAPTER 5. CONCLUSIONS AND REHABILITATION PLAN & SCHEDULE

5-1 General

Even with the success of the BRANDLEY Fatigue Analysis methodology in predicting remaining pavement life, pavement performance beyond 20 years cannot be accurately forecast due to unknown factors including weather, traffic, maintenance, and surface defects. Even beyond 10 years the forecast performance is somewhat questionable due to the same variables. It is, therefore, recommended that the rehabilitation plan be developed for a 20-year period but it should be updated periodically based on ongoing surveys and analyses. It is recommended that pavement condition surveys, which visually identify surface defects, be conducted annually by a general visual observation of all pavements and every 5 years using a detailed survey and determination of Pavement Condition Index (PCI). It is also recommended that detailed falling weight deflectometer testing and new fatigue analyses be conducted on a 10-year interval and the remaining life of the pavement based on deep-seated distress be evaluated and the rehabilitation program adjusted as necessary.

Rehabilitation of pavements to correct deep-seated distress problems should be performed 2 to 3 years before the forecast failure of the pavement has occurred. If one waits until the pavement section has failed due to deep-seated distress, then the strength of the subgrade and subsoils and the strength and quality of the existing base and pavement materials will have decreased. It will not be feasible to strengthen the section and extend the life of the section by the placement of reasonable overlays or additional thicknesses of the pavement section. Once a deep-seated failure has occurred, it will be necessary to reconstruct the entire section.

The modulus of elasticity of the existing aggregate base course materials in some pavement sections is lower than would normally be anticipated. This is likely an indicator that the quality of these materials has deteriorated somewhat over time. They have likely become saturated and loose from traffic, water infiltration, and/or frost action in the pavement sections. These aggregate base course materials will need to be scarified and recompacted during any rehabilitation work in the future once the surface course has been removed, which is why a remove and replace AC surface is proposed for some projects instead of a mil and fill of the existing AC surface.

If the surface distress becomes severe, before the forecast remaining life due to deep-seated distress occurs, in many cases it will be more feasible from a cost-benefit, performance, and aesthetic standpoint to rehabilitate or reconstruct the section earlier than forecast due to deep-seated distresses.

Rehabilitation of the pavement section to correct surface distress problems can consist of patching, sealing of the cracks, application of a seal coat, or milling and replacing the asphalt surface. The timing for each of these treatments will be based on cost-benefit analysis, safety, rideability, and aesthetic conditions. The rehabilitation type and schedule to correct problems caused by surface distress is determined by engineering judgment, taking into consideration the cost-benefit, operational problems, and visual perception. The schedule for rehabilitation to correct surface distress issues is flexible, but timing of rehabilitation to correct deep-seated distress must be scheduled to occur no later than 2 to 3 years before the forecast time of failure.

If a pavement section is grossly overloaded, there is a risk that the pavement will be overstressed to a point that the landing gear will punch through the pavement. To protect against this happening, a load limit should be established, even for infrequent use. A different load limit is required for single wheel and dual wheel geared aircraft. The PCN values presented in Chapter 3 of this report represent adequate load limit values for each gear type.

5-2 Special Rehabilitation Recommendations

As a result of this PMMP, there are several special design recommendations that have been suggested and it is highly recommended that they be adopted for new pavements and rehabilitated pavements at Lake Tahoe Airport. These design recommendations, together with background information, are presented herewith.

5-2.1 Flexible Pavements (Bituminous Surface Course)

In recent years, research conducted by the Highway Research Board produced a SuperPave mix design methodology. With this methodology they established that a 0.45 power curve on grading analysis plots would be a satisfactory curve to use to establish idealized gradation for aggregates used in the asphalt mix design. The 0.45 power curve represents the gradation that will produce the highest density finished product possible with the aggregate being used, but the air voids are near zero and the mix is subject to flushing if the gradation of the aggregate lies on the 0.45 power curve. The further the combined gradation of the mix deviates from the 0.45 power curve, either on the fine side or the coarse side, the higher the air voids become. Research has shown that if the combined gradation of the aggregate is on the fine side of the 0.45 power curve, Marshall stabilities will generally range from 2,000 to 2,400 pounds, which still meet the F.A.A. Marshall mix design requirements. However, if the combined gradation is held on the coarse side of the 0.45 power curve, the Marshall stability rises to 3,000 to 5,000 pounds and the mix is much more stable.

The coarser mix has enough fines in it that the air voids meet specification requirements and the surface is smooth and filled with fines, but after rolling the surface a few of the upper portions of the stones in the aggregate are

visible at the surface. The coarser mix is also sufficiently stable that breakdown rolling can be started right behind the paving machine without allowing the mix to cool, which makes it easier and less expensive to obtain specified compaction. Both gradations on the coarse side and the fine side of the 0.45 power curve fall within the FAA limits for Marshall mix design.

With the coarser mix the asphalt content is decreased by approximately 0.5 percent and the required compaction effort is decreased significantly. As a result, the unit cost of both the coarse and fine mixes is approximately the same and a far superior product is obtained by using the coarse mix. The surface is smooth and filled with fines and grooving is easier and more permanent because of the higher stability of the mix. This coarse mix will deter the shoving of the asphalt materials and subsequent decrease in Modulus of Elasticity of the asphalt and underlying materials and will minimize the risk of rutting. It is highly recommended that the SuperPave mix design procedures be used and that the gradation be on the coarse side of the 0.45 power curve on all flexible pavements placed on this airport.

5-2.2 Porous Concrete

It is proposed to utilize a porous concrete as the base course and drainage layer for the reconstruction of the General Aviation Apron Phase 5. The water table has been found to be high in this area (within 0 to 6 inches of the surface at times) and the test holes have shown that the subgrade is potentially soft and yielding.

A porous concrete base should be used and will perform better than the standard cement treated base course (CTB). Experience has shown that the cost is less for the porous concrete than for the CTB. The porous concrete will have a minimum compressive strength of 1,500 psi and will have a minimum coefficient of permeability of 5 feet per minute. This will allow early drainage of storm water that penetrates the surfacing, thus protecting the underlying subbase courses. A perforated pipe subdrain should be installed at the edges of the porous concrete in order to take the water out of the pavement section and put it into the drainage system. In addition, the porous concrete does not crack during curing.

The pavement section recommended will include a 5 to 10-inch stabilized base course constructed of porous concrete immediately below the 3-inch asphalt surfacing. This upper section of porous concrete will pick up any water that penetrates through the pavement section and carry it to the West Drainage Ditch and will bridge any weak areas. The timing required for removal of any water that penetrates is fairly short since the coefficient of permeability of the porous concrete is specified to be no less than 5 feet per minute.

The porous concrete should have a coefficient of permeability greater than five feet (5') per minute, a compressive strength in excess of 1,500 psi, and a Modulus of Elasticity of 1,200,00 psi. Experience has shown that this product is very effective in bridging any soft soils and that it provides 100 percent subdrainage under any pavement section. The porous concrete will be placed on a sloping surface (1% minimum) the slope of which is parallel to the finished grade of the pavement, and a perforated pipe will be installed in the lower portion of the porous concrete along all low areas which will drain into the existing drainage facilities. The porous concrete will provide good subdrainage, will bridge any soft soils, and will provide the rigid support necessary to decrease the risk of differential support throughout the site.

A filter fabric will be placed immediately under and around the sides of the porous concrete section to protect the porous concrete from infiltration of fines from the subgrade.

The porous concrete materials proposed will meet or exceed the recommendation of FAA as set forth in Advisory Circular 150/5380-6C, Section 2.3b, "Subsurface Drainage," and Advisory Circular 150/5320-5D, Appendix G, "Design of Subsurface Pavement Drainage Systems." Experience on other projects showed the following properties for the porous concrete were easily obtainable:

Coefficient of Permeability	5 ft./minute
28 Day Compressive Strength	1,500 psi
Modulus of Elasticity "E"	1,200,000 psi

It is, therefore, proposed and recommended in any new or reconstructed pavement sections in areas with a high water table and soft unstable subgrades at Lake Tahoe Airport that porous concrete be used as the stabilized base course and sub-drainage layer under either flexible or rigid pavement surfaces.

In normal or dry conditions, the groundwater table in the area of the aircraft parking apron has been found to be located at depths ranging from 8 to 10 feet below pavement surface. In 2017 there were heavy rains and heavy deposits of snow in the Sierra. The groundwater table in the apron area raised to a point where it was generally 1 to 2 feet below the pavement surface and, in some cases at particularly wet periods, the groundwater emerged to the surface through cracks in the pavement. This high groundwater has stayed in place throughout most of the summer due to high snow melts. There are also some springs that feed into the groundwater in certain areas on the west side of the airport.

It will be necessary to depress the groundwater table in the apron area to

be constructed in 2017-18 to improve the stability of the underlying soils to support construction equipment and maintain the integrity of the pavement section. In order to provide this lowering of the water table, it is proposed to construct an interceptor drain along the west side of the apron and to carry the water from this drain into a main cross drainage pipe and deposit it in the West Drainage Ditch. This drain will be a minimum of 4 feet deep and will consist of a perforated pipe located in the bottom of an excavated trench, which will be backfilled with porous concrete. The outside of the porous concrete will be wrapped with a filter fabric to keep fines from penetrating the porous concrete. In addition, a 5-inch layer of porous concrete will be placed as stabilized aggregate base course and drainage layer immediately below the new pavement section. After the interceptor trench is installed, flow-net studies indicate that the groundwater table in the apron area will decrease to a point at least 2 to 3 feet below finished pavement section.

It will be necessary to install the interceptor drain this fall and then wait a minimum of a month to allow the drain to effectively lower the water table. This will require that the main reconstruction of Apron 6a be postponed to the spring of 2018.

5-2.3 AC Surface Rehabilitation vs. AC Mill & Fill

Typically, a surface rehabilitation will consist of only a mill and fill of the existing asphalt surface, but with underlying aggregate base courses that have lower than anticipated modulus of elasticities, a different type of surface rehabilitation has been recommended for many of these pavements. It is recommended that when these pavements are rehabilitated for surface distress that a surface reconstruction be completed, consisting of breaking up and removing the existing AC surface course, scarifying and recompacting the underlying aggregate base course to 100% relative compaction, and then placing 3 inches of a new bituminous surface course.

This type of pavement rehabilitation is recommended in areas where existing finished grades must be maintained as they currently exist. In rehabilitation areas where finished grades can be raised, then the AC and upper 3 inches of AB can be pulverized and recompacted in place to a relative compaction of 100% and the new aggregate base and bituminous surface course placed as needed.

An alternate rehabilitation would consist of a 2 to 3-inch asphalt mill and fill which could be an alternative to the full surface reconstruction. This type of rehabilitation would consist of milling off the top 2 to 3-inches of the existing asphalt section and placing 2 to 3-inches of new bituminous surface course. This type of rehabilitation is not the preferred rehabilitation for pavements

with weaker base course layer for several reasons. The underlying base course materials would not be recompacted in this type of rehabilitation, which would still lead to future deterioration of the asphalt surface course. The up-front cost is slightly less than the recommended surface reconstruction but the life-cycle cost of this will be significantly higher, since this type of rehabilitation is likely to only provide 5 to 10 years of additional pavement life at which time a surface reconstruction would still need to occur. For these reasons, all surface rehabilitation recommendations for pavements with weak existing aggregate base courses are to perform the surface reconstruction at the appropriate times and the recommended maintenance projects shown are based on the surface reconstruction being completed. If the airport chooses to perform the AC mill and fill alternative rehabilitation on these pavements, the estimated maintenance schedule after that project will need to be modified significantly from what is shown in this report.

On pavement sections where the underlying pavement section is still strong and has adequate remaining life, the mill and fill rehabilitation option is an appropriate rehabilitation to be performed.

If traffic forecast to use a given pavement section changes from that estimated in this study, then the pavement sections affected by the change should be reevaluated using existing data and the recommended pavement maintenance program for the pavement sections modified to meet the new requirements. Existing data obtained from this PMMP study can be used for the revised pavement use analysis.

5-2.4 Apron A5c and A5d - 2016 Reconstruction

The portion of the general aviation apron that is denoted as Apron A5c and A5d on Plates 5-1 and 5-2 was reconstructed during the summer of 2016. The data collection and testing for this pavement maintenance management program was collected during the spring of 2016 prior to the reconstruction of this portion of the apron. Thus, the existing pavement section, modulus of elasticity values, pavement condition index, pavement condition number, remaining pavement life, and other associated values are shown in the tables and calculations of report in the condition that they were in during the spring of 2016 before the reconstruction.

This portion of the apron was reconstructed with a new pavement section of 3” of Bituminous Surface Course, 8” of Aggregate Base Course, and 12” of Aggregate Subbase Course. Significant areas of the project had a soft, unstable subgrade which required overexcavation of the subgrade by 2 to 3 feet and placing an imported pit run material beneath the pavement section.

It is expected that the pavement section on Aprons 5c and 5d will have the following characteristics following the reconstruction:

Aprons 5c & 5d Pavement Data Before and After 2016 Reconstruction

	Pre-Reconstruction (Data Included in Report)		Post-Reconstruction (Estimated Properties)	
Pavement Layer	Section Thickness (inches)	Modulus of Elasticity E (ksi)	Section Thickness (inches)	Modulus of Elasticity (estimated) E (ksi)
Bituminous Surface Course (AC)	2-5	85-150	3	350
Aggregate Base Course (AB)	5	15	8	75
Aggregate Subbase Course (ASB)	4-5	10	12	40
Pit Run	n/a	n/a	0-36	10
Subgrade	Semi-Infinite	5-7	Semi-Infinite	5-7
Pavement Section Properties				
Pavement Condition Index (PCI)	10		95-100	
Pavement Condition Number (PCN)	7 F/C/Y/T		22 F/C/Y/T	
Remaining Pavement Life (years)	1-5		20+	

5-2.5 Apron Taxiway H Connector - 2018 Reconstruction

The portion of Taxiway H that connects the northern portion of the general aviation apron to Taxiway A is shown to be removed in the future on the Airport Layout Plan and will be replaced with a new connector taxiway from the apron to Taxiway A. The new Taxiway H should be constructed with Apron.

5-3 Recommended Rehabilitation Schedule

The BRANDLEY Fatigue Analysis was used to determine the remaining life of the existing pavements and the recommended maintenance and rehabilitation schedules based on the forecast aircraft operations at the airport.

Taking into consideration the timing required for rehabilitation of sections that have a forecast remaining life less than 20 years and requirements to correct surface defects caused by surface distress, a rehabilitation schedule has been prepared for each pavement item. The timing of complete rehabilitation of the section on those areas that are not forecast to fail within the 20-year period due to deep-seated distress was based on engineering judgment. Consideration was given to the requirements to maintain a good operational surface, to be cost effective, and to spread out the work in such a manner as to maintain a reasonably uniform annual cost of rehabilitation. The anticipation of receiving Federal grant funding to do major projects was also taken into consideration.

Based on this method of timing of rehabilitation or repair, the recommended rehabilitation schedule has been included in detail in Appendix C, Tables C1 through C36 and has been summarized in Table No. 5-1. Using this information, a maintenance and rehabilitation schedule has been prepared showing the recommended projects for each year that maintenance or rehabilitation work is scheduled within the next 20 years and is summarized in Table No. 5-2. These maintenance schedules have also been shown on the Rehabilitation Schedule maps, Plates No. 5-3 through 5-7. With each of these schedules, assumptions have been made as to when Federal funding would be available, and the maintenance schedule has been adjusted to include these major projects during those periods provided any delayed maintenance or reconstruction would not have a significant effect on the remaining life and performance of the pavement section.

The maintenance work recommended to correct surface distress is based on engineering judgment. The timing should be adjusted each year based on availability of funds and the results of the annual surface inspection. The schedule for rehabilitation and reconstruction required to correct deep-seated distresses must be adhered to since the timing established is 2 to 3 years before failure of the section is anticipated. Rehabilitation at earlier dates is acceptable.

The majority of the pavement sections show a pavement life, based on deep-seated distress, in excess of 20 years with forecast traffic. While most of these pavements show a long life, the life of the pavement surface is likely significantly lower. Many of the pavements are old, brittle, and weathered from environmental and other surface distresses. In order to maintain a good surface and protect the underlying portion of the pavement section from damage, a surface rehabilitation should be considered for each of the pavements that do not require a full structural rehabilitation. As a result, the majority of the airfield pavements have a recommendation for surface rehabilitation in the future. The timing of this rehabilitation can vary based on the operations, needs, and budget.

Several of the existing asphaltic concrete pavements at this airport are old and the surface is weathered. In areas that are not specified to be reconstructed good maintenance practice consists of providing a seal coat to the surface of the pavement every five to ten years. The oil seal recommended is Reclamite, SS1h, or a Type I Slurry Seal, or approved equal. With the old pavements the Reclamite would be more effective since it tends to restore the plastic characteristics of the asphalt better than the other seals. A representative for a Reclamite or rejuvinating seal should be consulted for determining the proper type of application to be used prior to designing a project that uses this material. This type of rehabilitation is not an option for pavements that are already heavily cracked and deteriorating.

Rehabilitation schedules based on deep-seated distress could change in the future if the traffic experienced at the airport is significantly different than the forecast traffic utilized in this report. If the actual traffic varies, particularly with the heavier jet aircraft, the same FWD data and pavement section characteristics can be

utilized with the actual traffic realized at the airport. An updated remaining life can be recalculated based on actual traffic realized at a future date if necessary.

All costs shown in this analysis are construction costs only and are based on 2017 prices. These costs are for construction only and do not include engineering design, quality assurance testing, resident engineering, or administrative costs. Engineering and administrative costs ranging from 20% to 30% of construction costs need to be added and adjustments made for inflation for each year.

As an aid in preparing this report, Table No. 5-3 entitled, “Summary of Existing Conditions and Rehabilitation Requirements” was prepared. This table should be useful to Operations and Maintenance staff as it summarizes all of the information that was compiled, analyzed, and/or recommended in this report for each pavement section on the airfield.

Disclaimer

The recommendations presented in this report are based on the results of tests conducted. Soil borings were spaced to represent typical subsurface conditions and falling weight deflectometer (FWD) tests were spaced at approximately 200 feet. While it is unlikely, it is possible that significantly different conditions exist between the location of the test holes and FWD test locations that could lead to pavement distress occurring later or earlier than forecast.

Delays in maintenance, changes in traffic, and changes in environmental conditions from those assumed in this study can also have a significant effect on the recommended schedule for maintenance and rehabilitation. It is recommended that visual inspections be conducted annually, detailed pavement condition surveys be conducted every five years, and FWD tests and Fatigue Analysis studies be conducted every 10 years. As a result of these inspections, tests and evaluations, the maintenance and rehabilitation schedule should be adjusted as necessary.





Reinard W. Brandley, P.E.



R. Damon Brandley, P.E.

TABLE NO. 5-1 (page 1 of 6)

LAKE TAHOE AIRPORT

REHABILITATION PLAN (2017-2036) - (BASED ON INDIVIDUAL PAVEMENT ITEM SCHEDULE)

Individual Element Rehabilitation Schedules

Required for Deep Seated Distress

Estimated - Surface Distress

Year	Element (Segment ID)	Station	2016 PCI	Recommended Rehabilitation Code	Recommended Rehabilitation Description	Code	Estimated Construction Cost	Code	Estimated Construction Cost
RUNWAY 18-36 COMPLEX									
2023	Runway 18-36 (C1-C3)	0+00 to 85+40	81	H	Crack Repair, Seal Cracks	H	$ 188,000		
2027		0+00 to 85+40	81	F2/3	Mill (2" AC) and Fill (3" AC)	F2/3	$ 2,777,000		
2022	Taxiways B, A, & K (C4-C7)	0+00 to 88+00	33-55	A1	Rehabilitate and Reconstruct Section	A1	$ 4,713,000		
2030		0+00 to 88+00	33-55	H	Crack Repair, Seal Cracks	H	$ 118,000		
2035		0+00 to 88+00	33-55	H	Crack Repair, Seal Cracks	H	$ 129,000		
2022	Taxiway E (C8)	0+00 to 1+75	68	A2	Reconstruct and Strengthen Section	A2	$ 210,000		
2030		0+00 to 1+75	68	H	Crack Repair, Seal Cracks	H	$ 3,000		
2035		0+00 to 1+75	68	H	Crack Repair, Seal Cracks	H	$ 4,000		
2022	Taxiway E (C9)	1+75 to 3+60	68	A1	Rehabilitate and Reconstruct Section	A1	$ 122,000		
2030		1+75 to 3+60	68	H	Crack Repair, Seal Cracks	H	$ 3,000		
2035		1+75 to 3+60	68	H	Crack Repair, Seal Cracks	H	$ 3,000		
2022	Taxiway F (C10)	0+00 to 1+75	55	A2	Reconstruct and Strengthen Section	A2	$ 210,000		
2030		0+00 to 1+75	55	H	Crack Repair, Seal Cracks	H	$ 3,000		
2035		0+00 to 1+75	55	H	Crack Repair, Seal Cracks	H	$ 4,000		

Notes:
1. For Rehabilitation Code See Tables 4-1 and 4-3
2. See Plates 5-1 and 5-2 for Stationing Controls and Pavement Segment Identification
3. See Plates 5-3 through 5-7 for Rehabilitation Schedule Maps
4. All crack repair and joint seal projects include re-marking of all pavements in the project.

TABLE NO. 5-1 (continued) (page 2 of 6)

LAKE TAHOE AIRPORT

REHABILITATION PLAN (2017-2036) - (BASED ON INDIVIDUAL PAVEMENT ITEM SCHEDULE)

Individual Element Rehabilitation Schedules

Required for Deep Seated Distress

Estimated - Surface Distress

Year	Element (Segment ID)	Station	2016 PCI	Recommended Rehabilitation Code	Recommended Rehabilitation Description	Code	Estimated Construction Cost	Code	Estimated Construction Cost
RUNWAY 18-36 COMPLEX (continued)									
2022	Taxiway F (C11)	1+75 to 3+50	55	A1	Rehabilitate and Reconstruct Section	A1	$ 148,000		
2030		1+75 to 3+50	55	H	Crack Repair, Seal Cracks	H	$ 4,000		
2035		1+75 to 3+50	55	H	Crack Repair, Seal Cracks	H	$ 4,000		
2022	Taxiway F (C12)	3+50 to 5+60	73	A1	Rehabilitate and Reconstruct Section	A1	$ 128,000		
2030		3+50 to 5+60	73	H	Crack Repair, Seal Cracks	H	$ 3,000		
2035		3+50 to 5+60	73	H	Crack Repair, Seal Cracks	H	$ 4,000		
2022	Taxiway H (C13)	0+00 to 1+80	50	A1	Rehabilitate and Reconstruct Section	A1	$ 167,000		
2030		0+00 to 1+80	50	H	Crack Repair, Seal Cracks	H	$ 4,000		
2035		0+00 to 1+80	50	H	Crack Repair, Seal Cracks	H	$ 5,000		
2022	Taxiway J (C14)	0+00 to 1+80	47	A1	Rehabilitate and Reconstruct Section	A1	$ 185,000		
2030		0+00 to 1+80	47	H	Crack Repair, Seal Cracks	H	$ 5,000		
2035		0+00 to 1+80	47	H	Crack Repair, Seal Cracks	H	$ 5,000		
2024	Taxiway G (C15)	0+00 to 1+00	35	H	Crack Repair, Seal Cracks	H	$ 1,000		
2029		0+00 to 1+00	35	H	Crack Repair, Seal Cracks	H	$ 2,000		
2034		0+00 to 1+00	35	H, J	Slurry Seal and Crack Repair	H, J	$ 2,000		

Notes:
1. For Rehabilitation Code See Tables 4-1 and 4-3
2. See Plates 5-1 and 5-2 for Stationing Controls and Pavement Segment Identification
3. See Plates 5-3 through 5-7 for Rehabilitation Schedule Maps
4. All crack repair and joint seal projects include re-marking of all pavements in the project.

TABLE NO. 5-1 (continued) (page 3 of 6)

LAKE TAHOE AIRPORT

REHABILITATION PLAN (2017-2036) - (BASED ON INDIVIDUAL PAVEMENT ITEM SCHEDULE)

Individual Element Rehabilitation Schedules

Required for Deep Seated Distress

Estimated - Surface Distress

Year	Element (Segment ID)	Station	2016 PCI	Recommended Rehabilitation Code	Recommended Rehabilitation Description	Code	Estimated Construction Cost	Code	Estimated Construction Cost
				Aprons					
2018	Apron A1 (C16)	See Plates 5-1 & 5-2	75	H, J	Slurry Seal and Crack Repair	H, J	$ 17,000		
2022		See Plates 5-1 & 5-2	75	H	Crack Repair, Seal Cracks	H	$ 12,000		
2027		See Plates 5-1 & 5-2	75	F2	2" AC Mill & Fill	F2	$ 129,000		
2035		See Plates 5-1 & 5-2	75	H	Crack Repair, Seal Cracks	H	$ 10,000		
2018	Apron A2 (C17)	See Plates 5-1 & 5-2	75	H, J	Slurry Seal and Crack Repair	H, J	$ 18,000		
2022		See Plates 5-1 & 5-2	75	H	Crack Repair, Seal Cracks	H	$ 13,000		
2027		See Plates 5-1 & 5-2	75	F3	3" AC Mill & Fill	F3	$ 202,000		
2035		See Plates 5-1 & 5-2	75	H	Crack Repair, Seal Cracks	H	$ 11,000		
2024	Apron A3 (C18)	See Plates 5-1 & 5-2	95	K	Rehabilitate PCC Joints	K	$ 74,000		
2034		See Plates 5-1 & 5-2	95	K	Rehabilitate PCC Joints	K	$ 74,000		
2018	Apron A4a (C19)	See Plates 5-1 & 5-2	45	F2	2" AC Mill & Fill	F2	$ 50,000		
2024		See Plates 5-1 & 5-2	45	H	Crack Repair, Seal Cracks	H	$ 4,000		
2030		See Plates 5-1 & 5-2	45	B	Rehabilitate and Strengthen Section	B	$ 309,000		
2018	Apron A4b (C20)	See Plates 5-1 & 5-2	45	F2	2" AC Mill & Fill	F2	$ 50,000		
2024		See Plates 5-1 & 5-2	45	H	Crack Repair, Seal Cracks	H	$ 4,000		
2030		See Plates 5-1 & 5-2	45	B	Rehabilitate and Strengthen Section	B	$ 309,000		

Notes: 1. For Rehabilitation Code See Tables 4-1 and 4-3
2. See Plates 5-1 and 5-2 for Stationing Controls and Pavement Segment Identification
3. See Plates 5-3 through 5-7 for Rehabilitation Schedule Maps
4. All crack repair and joint seal projects include re-marking of all pavements in the project.

TABLE NO. 5-1 (continued) (page 4 of 6)

LAKE TAHOE AIRPORT

REHABILITATION PLAN (2017-2036) - (BASED ON INDIVIDUAL PAVEMENT ITEM SCHEDULE)

Individual Element Rehabilitation Schedules

Required for Deep Seated Distress

Estimated - Surface Distress

Year	Element (Segment ID)	Station	2016 PCI	Recommended Rehabilitation Code	Recommended Rehabilitation Description	Code	Estimated Construction Cost	Code	Estimated Construction Cost
Aprons (continued)									
2022	Apron A5a (C21)	See Plates 5-1 & 5-2	90	H	Crack Repair, Seal Cracks	H	$ 14,000		
2027		See Plates 5-1 & 5-2	90	H, J	Slurry Seal and Crack Repair	H, J	$ 24,000		
2032		See Plates 5-1 & 5-2	90	H	Crack Repair, Seal Cracks	H	$ 17,000		
2022	Apron A5b (C22)	See Plates 5-1 & 5-2	90	H	Crack Repair, Seal Cracks	H	$ 13,000		
2027		See Plates 5-1 & 5-2	90	H, J	Slurry Seal and Crack Repair	H, J	$ 23,000		
2032		See Plates 5-1 & 5-2	90	B	Rehabilitate and Strengthen Section	B	$ 1,039,000		
2024	Apron A5c (C23)	See Plates 5-1 & 5-2	10	H	Crack Repair, Seal Cracks	H	$ 10,000		
2029		See Plates 5-1 & 5-2	10	H	Crack Repair, Seal Cracks	H	$ 11,000		
2034		See Plates 5-1 & 5-2	10	H, J	Slurry Seal and Crack Repair	H, J	$ 17,000		
2024	Apron A5d (C24)	See Plates 5-1 & 5-2	10	H	Crack Repair, Seal Cracks	H	$ 6,000		
2029		See Plates 5-1 & 5-2	10	H	Crack Repair, Seal Cracks	H	$ 7,000		
2034		See Plates 5-1 & 5-2	10	H, J	Slurry Seal and Crack Repair	H, J	$ 10,000		

Notes:
1. For Rehabilitation Code See Tables 4-1 and 4-3
2. See Plates 5-1 and 5-2 for Stationing Controls and Pavement Segment Identification
3. See Plates 5-3 through 5-7 for Rehabilitation Schedule Maps
4. All crack repair and joint seal projects include re-marking of all pavements in the project.

TABLE NO. 5-1 (continued) (page 5 of 6)

LAKE TAHOE AIRPORT

REHABILITATION PLAN (2017-2036) - (BASED ON INDIVIDUAL PAVEMENT ITEM SCHEDULE)

Individual Element Rehabilitation Schedules

Required for Deep Seated Distress

Estimated - Surface Distress

Year	Element (Segment ID)	Station	2016 PCI	Recommended Rehabilitation Code	Recommended Rehabilitation Description	Code	Estimated Construction Cost	Code	Estimated Construction Cost
Aprons (continued)									
2018	Apron A6a (C25)	See Plates 5-1 & 5-2	20	B	Rehabilitate and Strengthen Section	B	$ 1,453,000		
2026		See Plates 5-1 & 5-2	20	H	Crack Repair, Seal Cracks	H	$ 19,000		
2031		See Plates 5-1 & 5-2	20	H	Crack Repair, Seal Cracks	H	$ 21,000		
2036		See Plates 5-1 & 5-2	20	H, J	Slurry Seal and Crack Repair	H, J	$ 33,000		
2018	Apron A6b (C26)	See Plates 5-1 & 5-2	25	B	Rehabilitate and Strengthen Section	B	$ 409,000		
2026		See Plates 5-1 & 5-2	25	H	Crack Repair, Seal Cracks	H	$ 5,000		
2031		See Plates 5-1 & 5-2	25	H	Crack Repair, Seal Cracks	H	$ 6,000		
2036		See Plates 5-1 & 5-2	25	H, J	Slurry Seal and Crack Repair	H, J	$ 9,000		
2018	Apron A6c (C27)	See Plates 5-1 & 5-2	14	C	Rehabilitate and Strengthen Section	C	$ 2,766,000		
2026		See Plates 5-1 & 5-2	14	H	Crack Repair, Seal Cracks	H	$ 33,000		
2031		See Plates 5-1 & 5-2	14	H	Crack Repair, Seal Cracks	H	$ 36,000		
2036		See Plates 5-1 & 5-2	14	H, J	Slurry Seal and Crack Repair	H, J	$ 55,000		
2018	Apron Taxiway H (C28)	See Plates 5-1 & 5-2	14	C	Rehabilitate and Strengthen or Abandon	C	$ 236,000	or	Abandon
2026		See Plates 5-1 & 5-2	14	H	Crack Repair or Abandon	H	$ 3,000	or	Abandon
2031		See Plates 5-1 & 5-2	14	H	Crack Repair or Abandon	H	$ 3,000	or	Abandon
2036		See Plates 5-1 & 5-2	14	H, J	Slurry Seal and Crack Repair or Abandon	H, J	$ 5,000	or	Abandon

Notes: 1. For Rehabilitation Code See Tables 4-1 and 4-3

2. See Plates 5-1 and 5-2 for Stationing Controls and Pavement Segment Identification

3. See Plates 5-3 through 5-7 for Rehabilitation Schedule Maps

4. All crack repair and joint seal projects include re-marking of all pavements in the project.

TABLE NO. 5-1 (continued) (page 6 of 6)

LAKE TAHOE AIRPORT

REHABILITATION PLAN (2017-2036) - (BASED ON INDIVIDUAL PAVEMENT ITEM SCHEDULE)

Individual Element Rehabilitation Schedules

Required for Deep Seated Distress

Estimated - Surface Distress

Year	Element (Segment ID)	Station	2016 PCI	Recommended Rehabilitation Code	Recommended Rehabilitation Description	Code	Estimated Construction Cost	Code	Estimated Construction Cost
South Hangar Area									
2019	Taxiway D and South Hangars (C29-C31)	See Plates 5-1 & 5-2	23	G3	Remove/Replace 3" AC, Recompact AB	G3	$ 302,000		
2027		See Plates 5-1 & 5-2	23	H	Crack Repair, Seal Cracks	H	$ 13,000		
2032		See Plates 5-1 & 5-2	23	H	Crack Repair, Seal Cracks	H	$ 15,000		
Terminal Access Road and Parking Lots									
2018	Terminal Access Road (C32)	0+00 to 20+00	45	H	Crack Repair, Seal Cracks	H	$ 13,000		
2023		0+00 to 20+00	45	D	Remove and Reconstruct Section	D	$ 409,000		
2031		0+00 to 20+00	45	H	Crack Repair, Seal Cracks	H	$ 13,000		
2036		0+00 to 20+00	45	H	Crack Repair, Seal Cracks	H	$ 14,000		
2018	Parking Lot A (C33-C35)	See Plates 5-1 & 5-2	70	H	Crack Repair, Seal Cracks	H	$ 4,000		
2023		See Plates 5-1 & 5-2	70	H, J	Slurry Seal and Crack Repair	H, J	$ 8,000		
2029		See Plates 5-1 & 5-2	70	H	Crack Repair, Seal Cracks	H	$ 5,000		
2033		See Plates 5-1 & 5-2	70	E	Remove and Reconstruct Section	E	$ 168,000		
2018	Parking Lot B (C36)	See Plates 5-1 & 5-2	25	E	Remove and Reconstruct Section	E	$ 444,000		
2026		See Plates 5-1 & 5-2	25	H	Crack Repair, Seal Cracks	H	$ 11,000		
2031		See Plates 5-1 & 5-2	25	H	Crack Repair, Seal Cracks	H	$ 12,000		
2036		See Plates 5-1 & 5-2	25	H	Crack Repair, Seal Cracks	H	$ 13,000		

Notes:
1. For Rehabilitation Code See Tables 4-1 and 4-3
2. See Plates 5-1 and 5-2 for Stationing Controls and Pavement Segment Identification
3. See Plates 5-3 through 5-7 for Rehabilitation Schedule Maps
4. All crack repair and joint seal projects include re-marking of all pavements in the project.

TABLE NO. 5-2 (page 1 of 3)

LAKE TAHOE AIRPORT

MAINTENANCE AND REHABILITATION SCHEDULE (2017-2036)

(BASED ON ANNUAL TOTAL PROJECT SCHEDULES)

Annual Rehabilitation Schedule

Required for Deep Seated Distress

Estimated - Surface Distress

Year	Element	Station	2016 PCI	Recommended Rehabilitation Code	Recommended Rehabilitation Description	Code	Estimated Construction Cost	Code	Estimated Construction Cost
2017	No Scheduled Projects						$ -		
					2017 Total Cost		**$ -**		
2018	Apron A1	Entire Apron	75	H, J	Slurry Seal and Crack Repair	H, J	$ 17,000		
	Apron A2	Entire Apron	75	H, J	Slurry Seal and Crack Repair	H, J	$ 18,000		
	Apron A4a & A4b	Entire Apron	45	F2	2" AC Mill & Fill	F2	$ 100,000		
	Apron A6a & A6b	Entire Apron	20-25	B	Rehabilitate and Strengthen Section	B	$ 1,862,000		
	Apron A6c	Entire Apron	14	C	Rehabilitate and Strengthen Section	C	$ 2,766,000		
	Apron Taxiway H	Entire Taxiway	14	C	Rehabilitate and Strengthen or Abandon	C	$ 236,000	or	Abandon
	Terminal Acess Road	0+00 to 20+00	45	H	Crack Repair, Seal Cracks	H	$ 13,000		
	Parking Lot A	Entire Parking Lot	70	H	Crack Repair, Seal Cracks	H	$ 4,000		
	Parking Lot B	Entire Parking Lot	25	E	Remove and Reconstruct Section	E	$ 444,000		
					2018 Total Cost		**$ 5,460,000**		
2019	Taxiway D and South Tee Hangars	All Taxilanes	23	G3	Remove/Replace 3" AC, Recompact AB	G3	$ 302,000		
					2019 Total Cost		**$ 302,000**		
2020	No Scheduled Projects								
					2020 Total Cost		**$ -**		
2021	No Scheduled Projects								
					2021 Total Cost		**$ -**		
2022	Taxiways B, A, & K	0+00 to 88+00	33-55	A1	Rehabilitate and Reconstruct Section	A1	$ 4,713,000		
	Taxiway E	0+00 to 1+75	68	A2	Reconstruct and Strengthen Section	A2	$ 210,000		
	Taxiway E	1+75 to 3+60	68	A1	Rehabilitate and Reconstruct Section	A1	$ 122,000		
	Taxiway F	0+00 to 1+75	55	A2	Reconstruct and Strengthen Section	A2	$ 210,000		
	Taxiway F	1+75 to 3+50	55	A1	Rehabilitate and Reconstruct Section	A1	$ 148,000		
	Taxiway F	3+50 to 5+60	73	A1	Rehabilitate and Reconstruct Section	A1	$ 128,000		
	Taxiway H	0+00 to 1+80	50	A1	Rehabilitate and Reconstruct Section	A1	$ 167,000		
	Taxiway J	0+00 to 1+80	47	A1	Rehabilitate and Reconstruct Section	A1	$ 185,000		
	Apron A1	Entire Apron	75	H	Crack Repair, Seal Cracks	H	$ 12,000		
	Apron A2	Entire Apron	75	H	Crack Repair, Seal Cracks	H	$ 13,000		
	Apron A5a & A5b	Entire Apron	90	H	Crack Repair, Seal Cracks	H	$ 27,000		
					2022 Total Cost		**$ 5,935,000**		

Notes: 1. See Plates 5-1 and 5-2 for Stationing Controls and Pavement Segment Identification
2. See Plates 5-3 through 5-7 for Rehabilitation Schedule Maps
3. All crack repair and joint seal projects include re-marking of all pavements included in the project.

TABLE NO. 5-2 (continued) (page 2 of 3)

LAKE TAHOE AIRPORT

MAINTENANCE AND REHABILITATION SCHEDULE (2017-2036)

(BASED ON ANNUAL TOTAL PROJECT SCHEDULES)

Annual Rehabilitation Schedule

Required for Deep Seated Distress

Estimated - Surface Distress

Year	Element	Station	2016 PCI	Recommended Rehabilitation Code	Recommended Rehabilitation Description	Code	Estimated Construction Cost	Code	Estimated Construction Cost
2023	Runway 18-36	0+00 to 85+40	81	H	Crack Repair, Seal Cracks	H	$ 188,000		
	Terminal Acess Road	0+00 to 20+00	45	D	Remove and Reconstruct Section	D	$ 409,000		
	Parking Lot A	Entire Parking Lot	70	H, J	Slurry Seal and Crack Repair	H, J	$ 8,000		
					2023 Total Cost		**$ 605,000**		
2024	Taxiway G	0+00 to 1+00	35	H	Crack Repair, Seal Cracks	H	$ 1,000		
	Apron A3	Entire Apron	95	K	Rehabilitate PCC Joints	K	$ 74,000		
	Apron A4a & A4b	Entire Apron	45	H	Crack Repair, Seal Cracks	H	$ 8,000		
	Apron A5c & A5d	Entire Apron	10	H	Crack Repair, Seal Cracks	H	$ 16,000		
					2024 Total Cost		**$ 99,000**		
2025	No Scheduled Projects								
					2025 Total Cost		**$ -**		
2026	Apron A6a, A6b, & A6c	Entire Apron	14-25	H	Crack Repair, Seal Cracks	H	$ 57,000		
	Apron Taxiway H	Entire Taxiway	14	H	Crack Repair or Abandon	H	$ 3,000	or	Abandon
	Parking Lot B	Entire Parking Lot	25	H	Crack Repair, Seal Cracks	H	$ 11,000		
					2026 Total Cost		**$ 71,000**		
2027	Runway 18-36	0+00 to 85+40	81	F2/3	Mill (2" AC) and Fill (3" AC)	F2/3	$ 2,777,000		
	Apron A1	Entire Apron	75	F2	2" AC Mill & Fill	F2	$ 129,000		
	Apron A2	Entire Apron	75	F3	3" AC Mill & Fill	F3	$ 202,000		
	Apron A5a & A5b	Entire Apron	90	H, J	Slurry Seal and Crack Repair	H, J	$ 47,000		
	Taxiway D and South Tee Hangars	All Taxilanes	23	H	Crack Repair, Seal Cracks	H	$ 13,000		
					2027 Total Cost		**$ 3,168,000**		
2028	No Scheduled Projects								
					2028 Total Cost		**$ -**		
2029	Taxiway G	0+00 to 1+00	35	H	Crack Repair, Seal Cracks	H	$ 2,000		
	Apron A5c & A5d	Entire Apron	10	H	Crack Repair, Seal Cracks	H	$ 18,000		
	Parking Lot A	Entire Parking Lot	70	H	Crack Repair, Seal Cracks	H	$ 5,000		
					2029 Total Cost		**$ 25,000**		

Notes: 1. See Plates 5-1 and 5-2 for Stationing Controls and Pavement Segment Identification

2. See Plates 5-3 through 5-7 for Rehabilitation Schedule Maps

3. All crack repair and joint seal projects include re-marking of all pavements included in the project.

Annual Rehabilitation Schedule

TABLE NO. 5-2 (continued) (page 3 of 3)

LAKE TAHOE AIRPORT

MAINTENANCE AND REHABILITATION SCHEDULE (2017-2036)

(BASED ON ANNUAL TOTAL PROJECT SCHEDULES)

Required for Deep Seated Distress

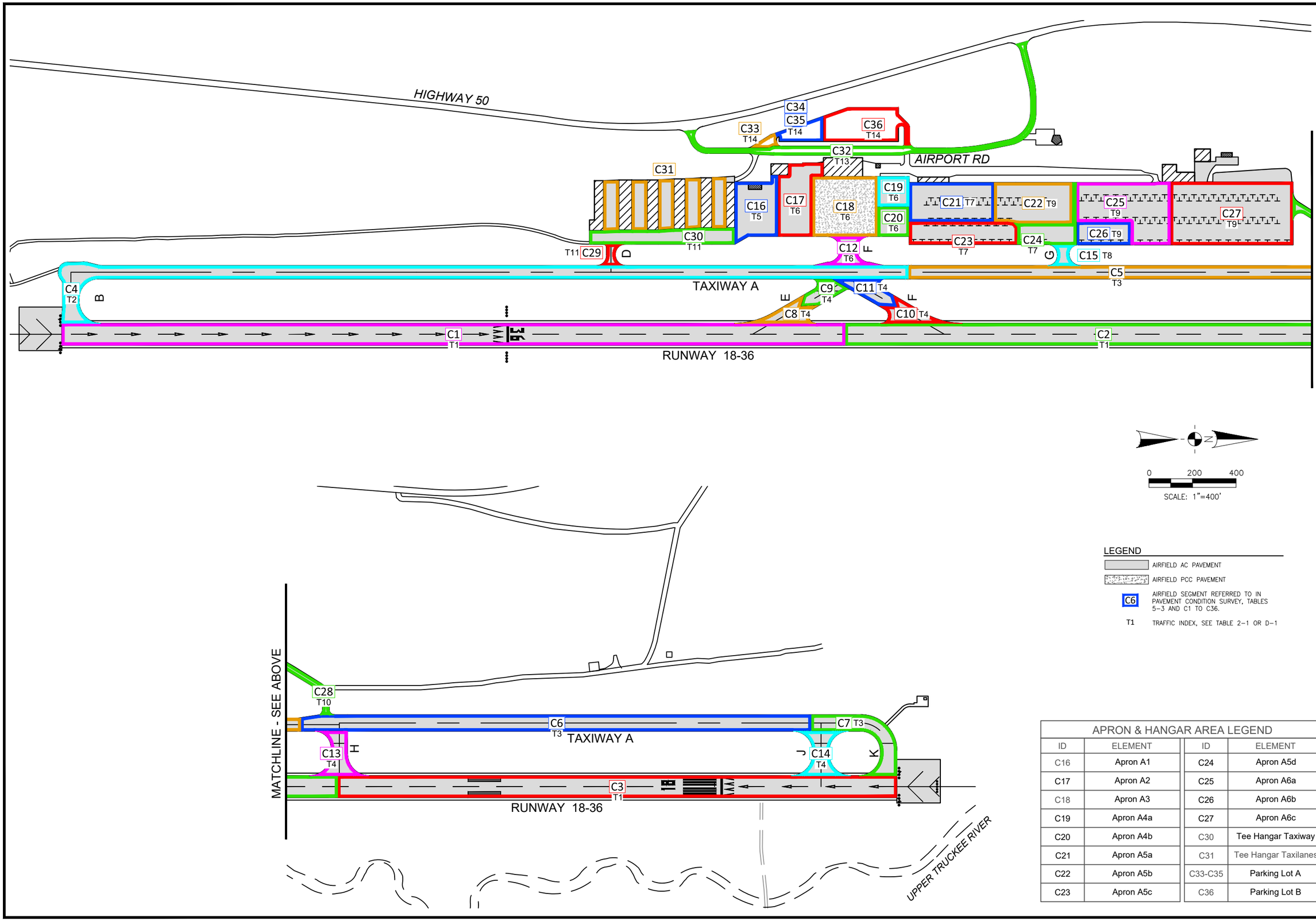
Estimated - Surface Distress

Year	Element	Station	2016 PCI	Recommended Rehabilitation Code	Recommended Rehabilitation Description	Code	Estimated Construction Cost	Code	Estimated Construction Cost
2030	Taxiways B, A, & K	0+00 to 88+00	33-55	H	Crack Repair, Seal Cracks	H	$ 118,000		
	Taxiway E	0+00 to 3+60	68	H	Crack Repair, Seal Cracks	H	$ 6,000		
	Taxiway F	0+00 to 5+60	55-73	H	Crack Repair, Seal Cracks	H	$ 10,000		
	Taxiway H	0+00 to 1+80	50	H	Crack Repair, Seal Cracks	H	$ 4,000		
	Taxiway J	0+00 to 1+80	47	H	Crack Repair, Seal Cracks	H	$ 5,000		
	Apron A4a & A4b	Entire Apron	45	B	Rehabilitate and Strengthen Section	B	$ 618,000		
					2030 Total Cost		**$ 761,000**		
2031	Apron A6a, A6b, & A6c	Entire Apron	14-25	H	Crack Repair, Seal Cracks	H	$ 63,000		
	Apron Taxiway H	Entire Taxiway	14	H	Crack Repair or Abandon	H	$ 3,000	or	Abandon
	Terminal Acess Road	0+00 to 20+00	45	H	Crack Repair, Seal Cracks	H	$ 13,000		
	Parking Lot B	Entire Parking Lot	25	H	Crack Repair, Seal Cracks	H	$ 12,000		
					2031 Total Cost		**$ 91,000**		
2032	Apron A5a	Entire Apron	90	H	Crack Repair, Seal Cracks	H	$ 17,000		
	Apron A5b	Entire Apron	90	B	Rehabilitate and Strengthen Section	B	$ 1,039,000		
	Taxiway D and South Tee Hangars	All Taxilanes	23	H	Crack Repair, Seal Cracks	H	$ 15,000		
					2032 Total Cost		**$ 1,071,000**		
2033	Parking Lot A	Entire Parking Lot	70	E	Remove and Reconstruct Section	E	$ 168,000		
					2033 Total Cost		**$ 168,000**		
2034	Taxiway G	0+00 to 1+00	35	H, J	Slurry Seal and Crack Repair	H, J	$ 2,000		
	Apron A3	Entire Apron	95	K	Rehabilitate PCC Joints	K	$ 74,000		
	Apron A5c & A5d	Entire Apron	10	H, J	Slurry Seal and Crack Repair	H, J	$ 27,000		
					2034 Total Cost		**$ 103,000**		
2035	Taxiways B, A, & K	0+00 to 88+00	33-55	H	Crack Repair, Seal Cracks	H	$ 129,000		
	Taxiway E	0+00 to 3+60	68	H	Crack Repair, Seal Cracks	H	$ 7,000		
	Taxiway F	0+00 to 5+60	55-73	H	Crack Repair, Seal Cracks	H	$ 12,000		
	Taxiway H	0+00 to 1+80	50	H	Crack Repair, Seal Cracks	H	$ 5,000		
	Taxiway J	0+00 to 1+80	47	H	Crack Repair, Seal Cracks	H	$ 5,000		
	Apron A1	Entire Apron	75	H	Crack Repair, Seal Cracks	H	$ 10,000		
	Apron A2	Entire Apron	75	H	Crack Repair, Seal Cracks	H	$ 11,000		
					2035 Total Cost		**$ 179,000**		
2036	Apron A6a, A6b, & A6c	Entire Apron	14-25	H, J	Slurry Seal and Crack Repair	H, J	$ 97,000		
	Apron Taxiway H	Entire Taxiway	14	H, J	Slurry Seal and Crack Repair or Abandon	H, J	$ 5,000	or	Abandon
	Terminal Acess Road	0+00 to 20+00	45	H	Crack Repair, Seal Cracks	H	$ 14,000		
	Parking Lot B	Entire Parking Lot	25	H	Crack Repair, Seal Cracks	H	$ 13,000		
					2036 Total Cost		**$ 129,000**		

Notes:
1. See Plates 5-1 and 5-2 for Stationing Controls and Pavement Segment Identification
2. See Plates 5-3 through 5-7 for Rehabilitation Schedule Maps
3. All crack repair and joint seal projects include re-marking of all pavements included in the project.

Table 5-3
Summary of Existing Conditions and Rehabilitation Requirements
Lake Tahoe Airport

Pavement Segment ID (See Plate 5-1)	Element	Station (See Plate 5-2)	Construction Dates			FWD Data			Surface Data		Pavement Condition Number PCN	Existing Pavement Section - inches									Existing Modulus of Elasticity (E) - ksi									Traffic Index	Remaining Pavement Life - Years from 2016 Fatigue Analysis (Brandley)	Recommended Rehabilitation and Maintenance				Element
			Original	Reconstruct	Latest Overlay	Load (kips)	Deflection Range (mils)	Deflection Used (mils)	Pavement Rating	2016 PCI		PCC	AC	AB	CTB	ASB	Pit Run	Select Sand	Subgrade	Subsoil	PCC	AC	AB	CTB	ASB	Pit Run	Select Sand	Subgrade	Subsoil		Remaining Life - Pavement Subgrade	2017-2021	2022-2026	2027-2031	2032-2036	
C1	Runway 18-36	0+00 - 36+00	1958	1968, 2008		25	39-57	57	Very Good	81	28 F/C/Y/T	-	3.0	7	-	20	-		24	S.I.	-	200	40		20	-	-	12	20	T1	20+		2023 - Crack Repair	2027 - Mill 2" AC, Fill 3" AC		Runway 18-36
C2	Runway 18-36	36+00 - 59+75	1958	1968, 2008		25	42-57	57	Very Good	81	28 F/C/Y/T	-	3.0	7	-	20	-		24	S.I.	-	200	40		20	-	-	12	20	T1	20+		2023 - Crack Repair	2027 - Mill 2" AC, Fill 3" AC		Runway 18-36
C3	Runway 18-36	59+75 - 85+40	1962	1968, 2008		25	33-54	54	Very Good	81	28 F/C/Y/T	-	3.0	7	-	20	-		24	S.I.	-	200	40		20	-	-	12	20	T1	20+		2023 - Crack Repair	2027 - Mill 2" AC, Fill 3" AC		Runway 18-36
C4	Taxiways B, A, & K	0+00 - 40+60	1958	1968, 1970	1990	25	28-53	42	Good	55	22 F/C/Y/T	-	8.5	8	-	8	-	-	24	S.I.	-	250	30	-	20	-	-	8	20	T2	20+		2022 - Reconstruction	2030 - Crack Repair	2035 - Crack Repair	Taxiways B, A, & K
C5	Taxiways B, A, & K	40+60 - 59+15	1958	1975		25	48-68	68	Good	55	15 F/C/Y/T	-	4.0	8	-	8	-	-	24	S.I.	-	150	30	-	20	-	-	8	20	T3	20+		2022 - Reconstruction	2030 - Crack Repair	2035 - Crack Repair	Taxiways B, A, & K
C6	Taxiways B, A, & K	59+15 - 82+60	1963		1990	25	35-56	47	Good	55	30 F/C/Y/T	-	7.5	7.5	-	24	-	-	24	S.I.	-	200	20	-	15	-	-	8	20	T3	20+		2022 - Reconstruction	2030 - Crack Repair	2035 - Crack Repair	Taxiways B, A, & K
C7	Taxiways B, A, & K	82+60 - 88+00	1962		1990	25	48-75	75	Poor	33	30 F/D/Y/T	-	7.5	7.5	-	24	-	-	24	S.I.	-	150	20	-	15	-	-	5	20	T3	20+		2022 - Reconstruction	2030 - Crack Repair	2035 - Crack Repair	Taxiways B, A, & K
C8	Taxiway E	0+00 - 1+75	1958		1968	25	49-54	54	Good	68	8 F/C/Y/T	-	7	8	-	-	-	-	24	S.I.	-	200	30	-	-	-	-	8	20	T4	20+		2022 - Reconstruction	2030 - Crack Repair	2035 - Crack Repair	Taxiway E
C9	Taxiway E	1+75 - 3+60	1958	1968, 1970	1990	25	27-32	32	Good	68	22 F/C/Y/T	-	8.5	8	-	8	-	-	24	S.I.	-	250	30	-	20	-	-	8	20	T4	20+		2022 - Reconstruction	2030 - Crack Repair	2035 - Crack Repair	Taxiway E
C10	Taxiway F	0-00 - 1+75	1958		1968	25	45-68	68	Good	55	8 F/C/Y/T	-	7	8	-	-	-	-	24	S.I.	-	200	30	-	-	-	-	8	20	T4	20+		2022 - Reconstruction	2030 - Crack Repair	2035 - Crack Repair	Taxiway F
C11	Taxiway F	1+75 - 3+50	1958	1968, 1970	1990	25	30	30	Good	55	22 F/C/Y/T	-	8.5	8	-	8	-	-	24	S.I.	-	250	30	-	20	-	-	8	20	T4	20+		2022 - Reconstruction	2030 - Crack Repair	2035 - Crack Repair	Taxiway F
C12	Taxiway F	3+50 - 5+60	1958	1968, 1970	2009	25	30-39	39	Very Good	73	22 F/C/Y/T	-	8.5	8	-	8	-	-	24	S.I.	-	250	30	-	20	-	-	8	20	T6	11		2022 - Reconstruction	2030 - Crack Repair	2035 - Crack Repair	Taxiway F
C13	Taxiway H	0+00 - 1+80	1963		1990	25	49-62	62	Fair	50	30 F/D/Y/T	-	7.5	7.5	-	24	-	-	24	S.I.	-	150	20	-	15	-	-	5	20	T4	20+		2022 - Reconstruction	2030 - Crack Repair	2035 - Crack Repair	Taxiway H
C14	Taxiway J	0+00 - 1+80	1962		1990	25	43-70	70	Fair	47	30 F/D/Y/T	-	7.5	7.5	-	24	-	-	24	S.I.	-	150	20	-	15	-	-	5	20	T4	20+		2022 - Reconstruction	2030 - Crack Repair	2035 - Crack Repair	Taxiway J
C15	Taxiway G	0+00 - 1+00	1958	1975, 2016	1989	12	43	43	Poor	35	15 F/D/Y/T	-	6	8	-	8	-	-	24	S.I.	-	85	20	-	15	-	-	6	17	T8	20+	2016 - Reconstruction (Completed) (See Section 5-2.4)	2024 - Crack Repair	2029 - Crack Repair	2034 - Crack Repair / Slurry Seal	Taxiway G
C16	Apron A1	See Plates 5-1 & 5-2	1969	2010		12	43-52	52	Very Good	75	30 F/C/Y/T	-	3	6	-	6	-	12	24	S.I.	-	150	20	-	15	-	10	12	20	T5	20+	2018 - Crack Repair / Slurry Seal	2022 - Crack Repair	2027 - 2" AC Mill & Fill	2035 - Crack Repair	Apron A1
C17	Apron A2	See Plates 5-1 & 5-2	1950	2010	1970	25	48-63	63	Very Good	75	30 F/C/Y/T	-	4	6	-	13	-	-	24	S.I.	-	200	60	-	20	-	-	12	20	T6	20+	2018 - Crack Repair / Slurry Seal	2022 - Crack Repair	2027 - 3" AC Mill & Fill	2035 - Crack Repair	Apron A2
C18	Apron A3	See Plates 5-1 & 5-2	Pre 1963	2009	1970	25	4-7	7	Excellent	95	40 R/B/Y/T	14	2	-	-	6	-	-	24	S.I.	5,000	300	-	-	40	-	-	15	30	T6	20+		2024 - PCC Repair		2034 - PCC Repair	Apron A3
C19	Apron A4a	See Plates 5-1 & 5-2	Pre 1963	2009	1970	25	37-60	60	Fair	45	22 F/C/Y/T	-	4	6	-	8	-	-	24	S.I.	-	200	50	-	20	-	-	12	20	T6	19	2018 - 2" AC Mill & Fill	2024 - Crack Repair	2030 - Reconstruction		Apron A4a
C20	Apron A4b	See Plates 5-1 & 5-2	Pre 1963	2009	1970	25	79-99	99	Fair	45	22 F/C/Y/T	-	4	6	-	8	-	-	24	S.I.	-	150	25	-	15	-	-	12	20	T6	15	2018 - 2" AC Mill & Fill	2024 - Crack Repair	2030 - Reconstruction		Apron A4b
C21	Apron A5a	See Plates 5-1 & 5-2	Pre 1963	1974, 2014		25	48-60	60	Excellent	90	30 F/B/Y/T	-	3	6	-	20	18	-	-	S.I.	-	200	40	-	30	25	-	-	20	T7	20+		2022 - Crack Repair	2027 - Crack Repair / Slurry Seal	2032 - Crack Repair	Apron A5a
C22	Apron A5b	See Plates 5-1 & 5-2	Pre 1963	1974, 2014		12	38-70	49	Excellent	90	8 F/D/Y/T	-	3	14	-	-	-	-	24	S.I.	-	150	30	-	-	-	-	6	12	T9	17		2022 - Crack Repair	2027 - Crack Repair / Slurry Seal	2032 - Reconstruction	Apron A5b
C23	Apron A5c	See Plates 5-1 & 5-2	1968	1987, 2016		12	67-88	88	Very Poor	10	N/A	-	2	5	-	5	-	-	24	S.I.	-	85	15	-	10	-	-	5	7	T7	1	2016 - Reconstruction (Completed) (See Section 5-2.4)	2024 - Crack Repair	2029 - Crack Repair	2034 - Crack Repair / Slurry Seal	Apron A5c
C24	Apron A5d	See Plates 5-1 & 5-2	Pre 1969	2016	1989	12	18-22	22	Very Poor	10	7 F/C/Y/T	-	5	-	5	4	-	-	24	S.I.	-	150	-	800	20	-	-	7	15	T7	5	2016 - Reconstruction (Completed) (See Section 5-2.4)	2024 - Crack Repair	2029 - Crack Repair	2034 - Crack Repair / Slurry Seal	Apron A5d
C25	Apron A6a	See Plates 5-1 & 5-2	1974	1989		12	32-54	54	Very Poor	20	7 F/D/Y/T	-	3	6	-	9	-	-	24	S.I.	-	85	20	-	15	-	-	6	17	T9	19	2018 - Reconstruction	2026 - Crack Repair	2031 - Crack Repair	2036 - Crack Repair / Slurry Seal	Apron A6a
C26	Apron A6b	See Plates 5-1 & 5-2	1974		1989	12	17	17	Poor	25	7 F/C/Y/T	-	5	-	5	4	-	-	24	S.I.	-	150	-	800	20	-	-	7	15	T9	20+	2018 - Reconstruction	2026 - Crack Repair	2031 - Crack Repair	2036 - Crack Repair / Slurry Seal	Apron A6b
C27	Apron A6c	See Plates 5-1 & 5-2	1974	1989		12	54-104	104	Very Poor	14	N/A	-	2	6	-	-	5	-	24	S.I.	-	70	15	-	10	-	-	5	8	T9	2	2018 - Reconstruction	2026 - Crack Repair	2031 - Crack Repair	2036 - Crack Repair / Slurry Seal	Apron A6c
C28	Apron T/W H	See Plates 5-1 & 5-2	Pre 1969			12	64-110	110	Very Poor	14	N/A	-	2	5	-	4	-	-	24	S.I.	-	70	15	-	10	-	-	5	10	T10	6	2018 - Reconstruction or Abandon (See Section 5-2.5)	2026 - Crack Repair or Abandon (See Section 5-2.5)	2031 - Crack Repair or Abandon (See Section 5-2.5)	2036 - Crack Repair / Slurry Seal or Abandon (See Section 5-2.5)	Apron T/W H
C29	Taxiway D	0+00 - 1+00	1994			12	40-43	43	Very Poor	23	15 F/C/Y/T	-	3	6	-	9	-	-	24	S.I.	-	150	20	-	15	-	-	10	20	T11	20+	2019 - Replace AC / Recompact AB		2027 - Crack Repair	2032 - Crack Repair	Taxiway D
C30	Tee Hangar Taxiway (H6)	0+00 - 6+70	1994			12	32-43	43	Very Poor	23	15 F/C/Y/T	-	3	6	-	9	-	-	24	S.I.	-	150	20	-	15	-	-	10	20	T11	20+	2019 - Replace AC / Recompact AB		2027 - Crack Repair	2032 - Crack Repair	Tee Hangar Taxiway (H6)
C31	Tee Hangar Taxilanes (H1-H5)	See Plates 5-1 & 5-2	1994			12	48-85	85	Very Poor	23	7 F/D/Y/T	-	3	6	-	9	-	-	24	-	-	70	15		10	-	-	5	15	T12	20+	2019 - Replace AC / Recompact AB		2027 - Crack Repair	2032 - Crack Repair	Tee Hangar Taxilanes (H1-H5)
C32	Terminal Access Road	0+00 - 20+00	1969	2009		12	42-65	65	Fair	45	N/A	-	2	3	-	5	-	-	24	S.I.	-	200	20	-	15	-	-	8	15	T13	8	2018 - Crack Repair	2023 - Reconstruction	2031 - Crack Repair	2036 - Crack Repair	Terminal Access Road
C33	Parking Lot Entrance	See Plates 5-1 & 5-2	1969	2009		12	42-44	44	Fair	45	N/A	-	2	3	-	5	-	-	24	S.I.	-	200	40	-	30	-	-	12	15	T14	20+	2018 - Crack Repair	2023 - Crack Repair / Slurry Seal	2029 - Crack Repair	2033 - Reconstruction	Parking Lot Entrance
C34	Parking Lot A - W/ Over Ex	See Plates 5-1 & 5-2	1969	2010		12	37-54	54	Very Good	70	N/A	-	3	4	-	22	-	-	24	S.I.	-	150	30	-	20	-	-	7	15	T14	20+	2018 - Crack Repair	2023 - Crack Repair / Slurry Seal	2029 - Crack Repair	2033 - Reconstruction	Parking Lot A - W/ Over Ex
C35	Parking Lot A - W/O Over Ex	See Plates 5-1 & 5-2	1969	2010		12	37-54	54	Very Good	70	N/A	-	3	4	-	4	-	-	24	S.I.	-	150	30	-	20	-	-	7	15	T14	20+	2018 - Crack Repair	2023 - Crack Repair / Slurry Seal	2029 - Crack Repair	2033 - Reconstruction	Parking Lot A - W/O Over Ex
C36	Parking Lot B	See Plates 5-1 & 5-2	1998			12	35-104	104	Poor	25	N/A	-	2	5	-	-	-	-	24	S.I.	-	85	20	-	-	-	-	5	15	T14	2	2018 - Reconstruction	2026 - Crack Repair	2031 - Crack Repair	2036 - Crack Repair	Parking Lot B



LEGEND

- AIRFIELD AC PAVEMENT
- AIRFIELD PCC PAVEMENT
- C6 — AIRFIELD SEGMENT REFERRED TO IN PAVEMENT CONDITION SURVEY, TABLES 5-3 AND C1 TO C36.
- T1 — TRAFFIC INDEX, SEE TABLE 2-1 OR D-1

APRON & HANGAR AREA LEGEND			
ID	ELEMENT	ID	ELEMENT
C16	Apron A1	C24	Apron A5d
C17	Apron A2	C25	Apron A6a
C18	Apron A3	C26	Apron A6b
C19	Apron A4a	C27	Apron A6c
C20	Apron A4b	C30	Tee Hangar Taxiway
C21	Apron A5a	C31	Tee Hangar Taxilanes
C22	Apron A5b	C33-C35	Parking Lot A
C23	Apron A5c	C36	Parking Lot B

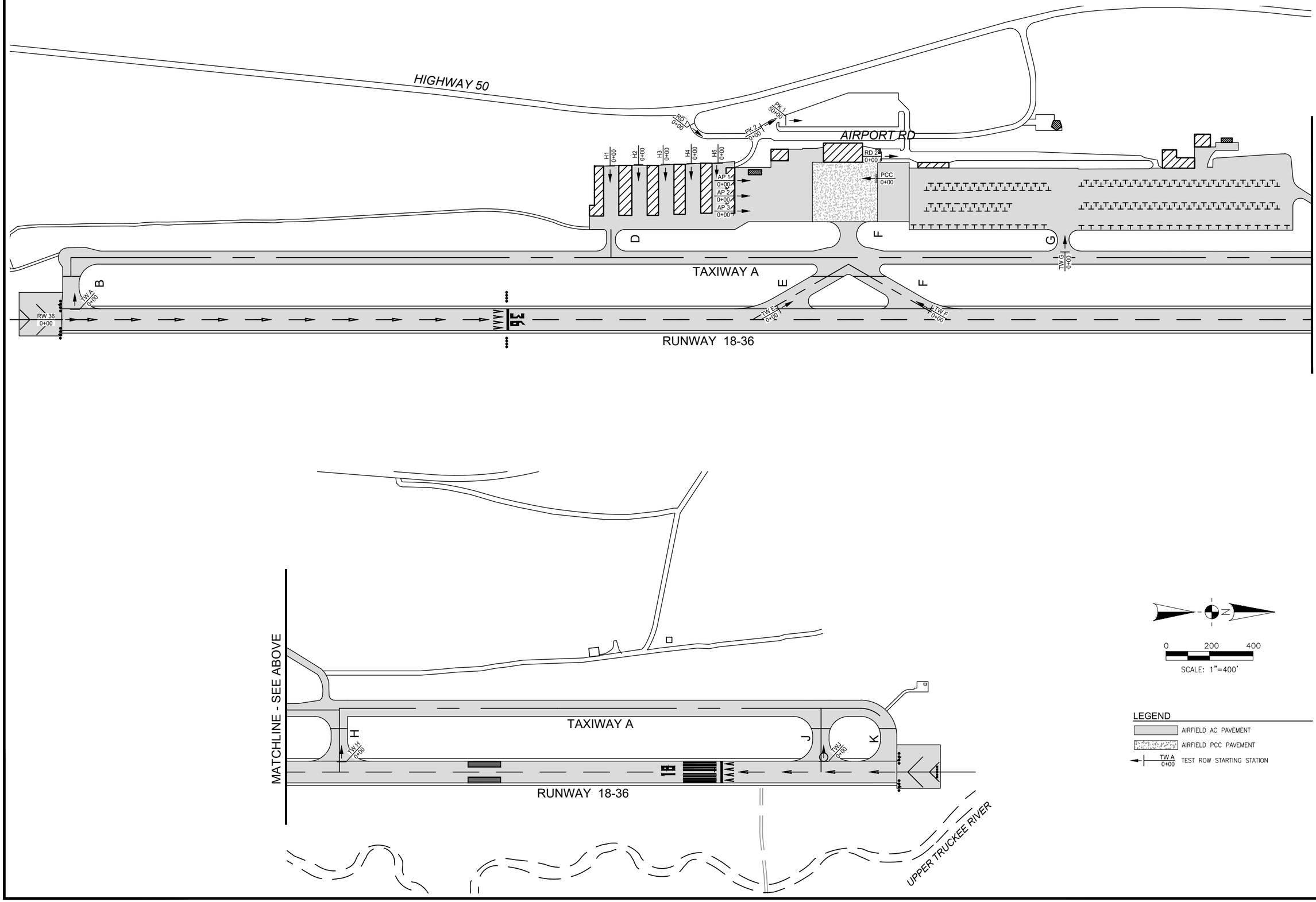
Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 · Loomis, California 95650 (916) 652-4475

No.	REVISIONS	DATE

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

PAVEMENT EVALUATION
PAVEMENT SEGMENT IDENTIFICATION

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
FILE	TVL5-1 ArealDs
SCALE	1"=400'
PLATE No.	5-1



Reinard W. Brandley
CONSULTING AIRPORT ENGINEER 476
6125 King Road, Suite 201 · Loomis, California 95650 (916) 652-4

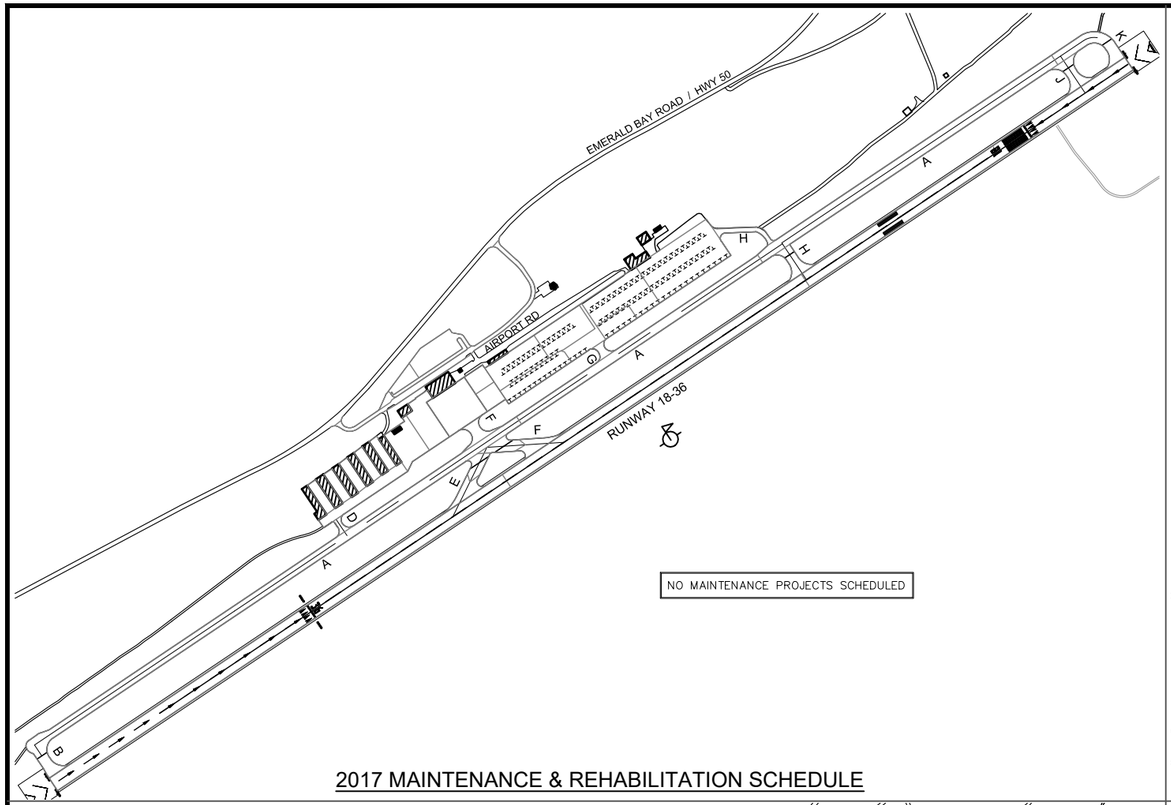
No.	REVISIONS	DATE

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

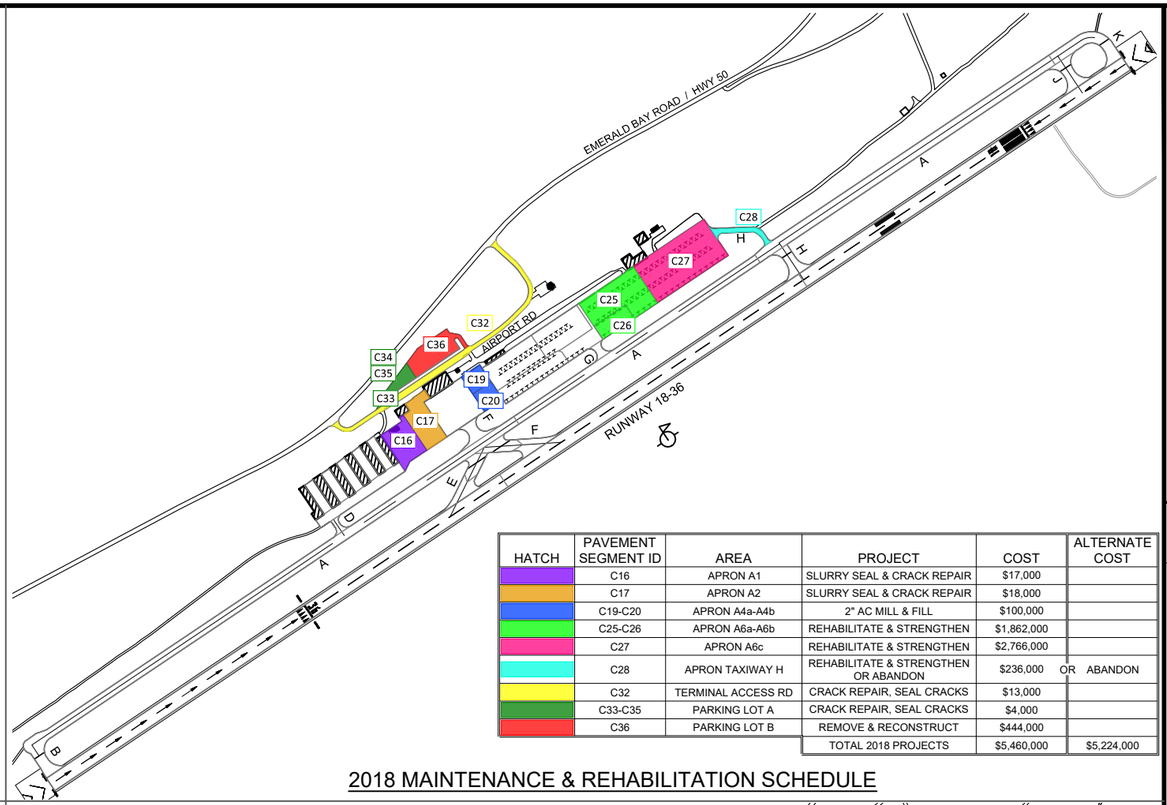
PAVEMENT EVALUATION

STATIONING CONTROL PLAN

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
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SCALE	1"=400'
PLATE No.	5-2

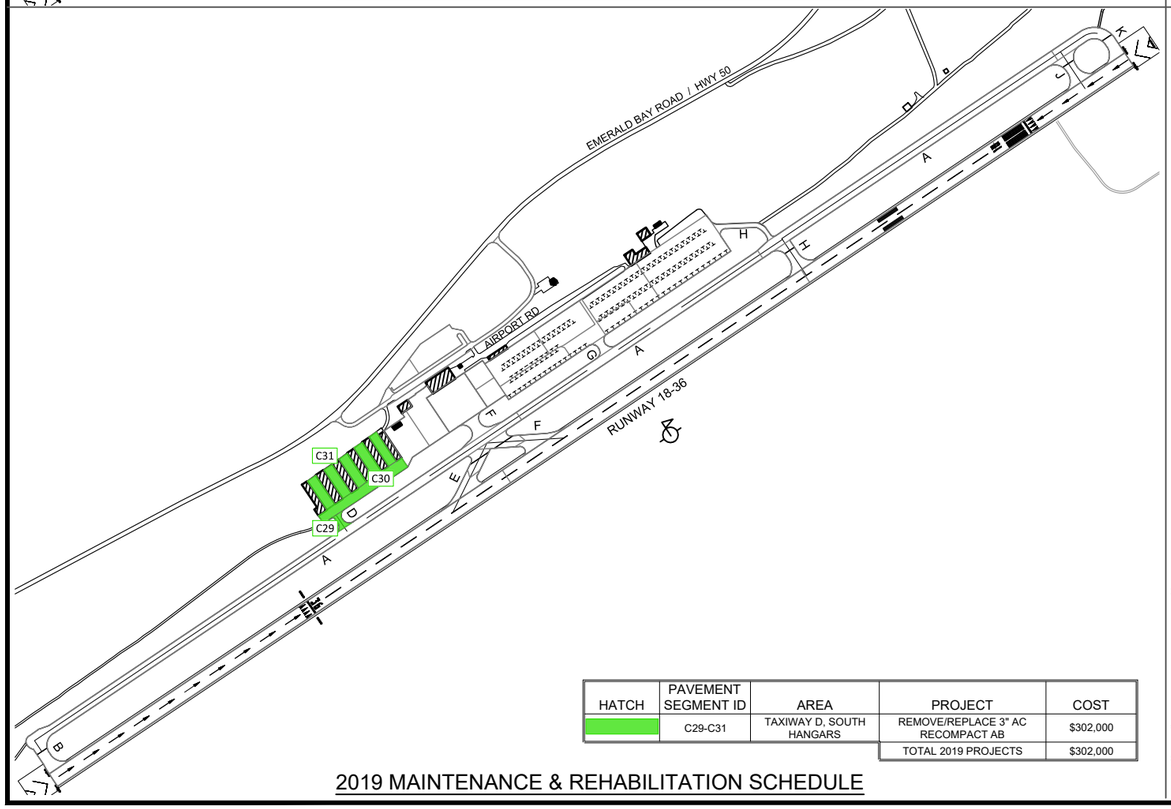


2017 MAINTENANCE & REHABILITATION SCHEDULE



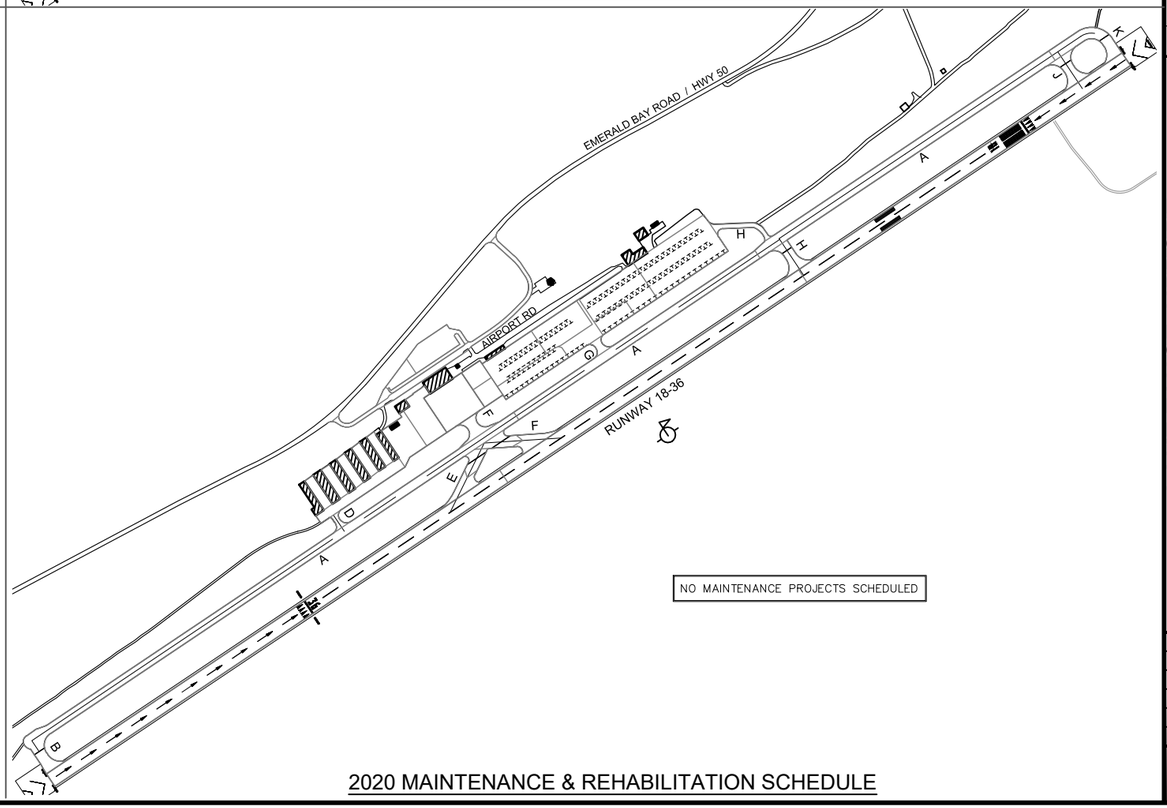
HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST	ALTERNATE COST
	C16	APRON A1	SLURRY SEAL & CRACK REPAIR	$17,000	
	C17	APRON A2	SLURRY SEAL & CRACK REPAIR	$18,000	
	C19-C20	APRON A4a-A4b	2" AC MILL & FILL	$100,000	
	C25-C26	APRON A6a-A6b	REHABILITATE & STRENGTHEN	$1,862,000	
	C27	APRON A6c	REHABILITATE & STRENGTHEN	$2,766,000	
	C28	APRON TAXIWAY H	REHABILITATE & STRENGTHEN OR ABANDON	$236,000 OR ABANDON	
	C32	TERMINAL ACCESS RD	CRACK REPAIR, SEAL CRACKS	$13,000	
	C33-C35	PARKING LOT A	CRACK REPAIR, SEAL CRACKS	$4,000	
	C36	PARKING LOT B	REMOVE & RECONSTRUCT	$444,000	
			TOTAL 2018 PROJECTS	$5,460,000	$5,224,000

2018 MAINTENANCE & REHABILITATION SCHEDULE



HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST
	C29-C31	TAXIWAY D, SOUTH HANGARS	REMOVE/REPLACE 3" AC RECOMPACT AB	$302,000
			TOTAL 2019 PROJECTS	$302,000

2019 MAINTENANCE & REHABILITATION SCHEDULE



2020 MAINTENANCE & REHABILITATION SCHEDULE

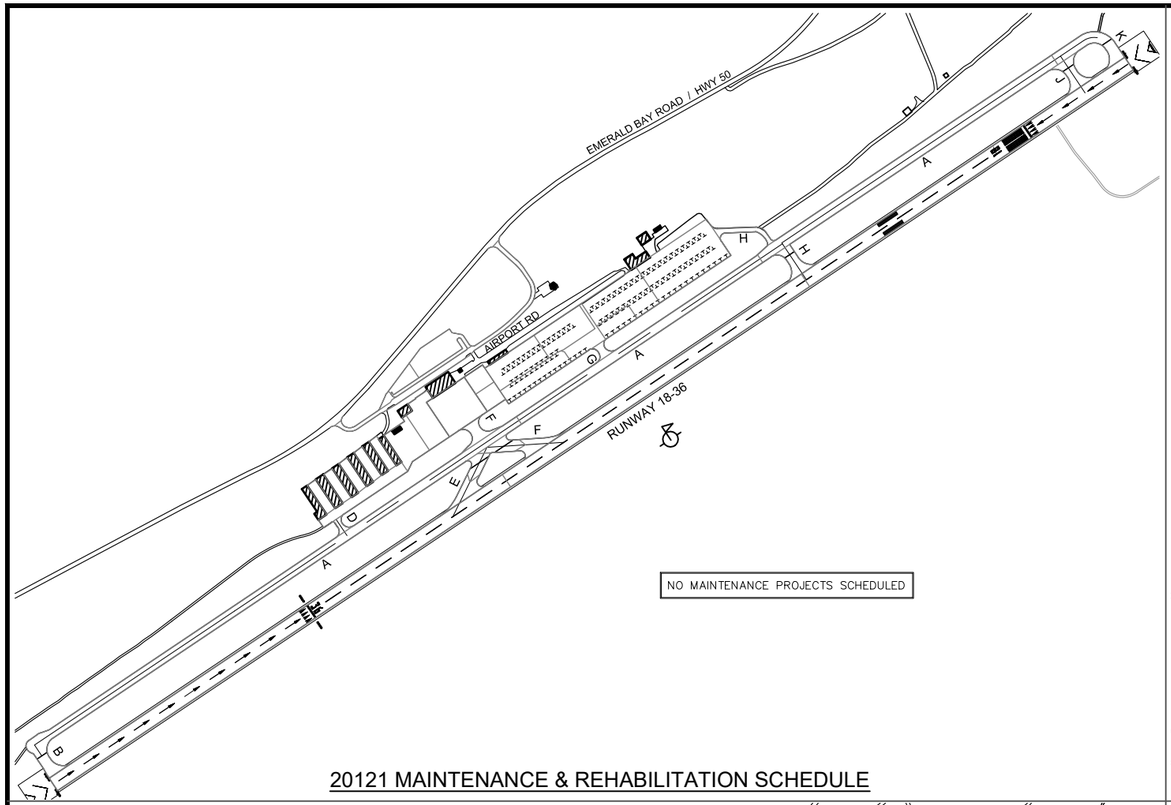
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No.	REVISIONS	DATE

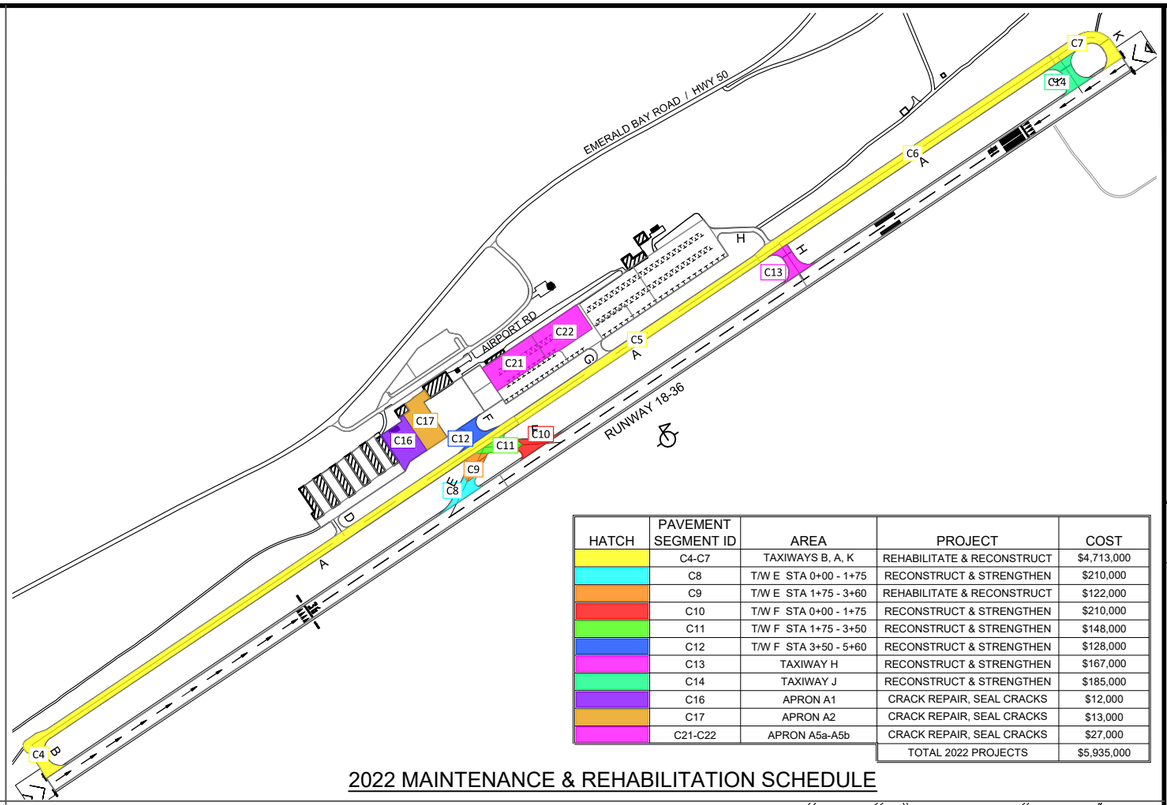
LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

PAVEMENT EVALUATION
REHABILITATION SCHEDULE 2017-2020

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
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SCALE	1"=1000'
PLATE No.	5-3

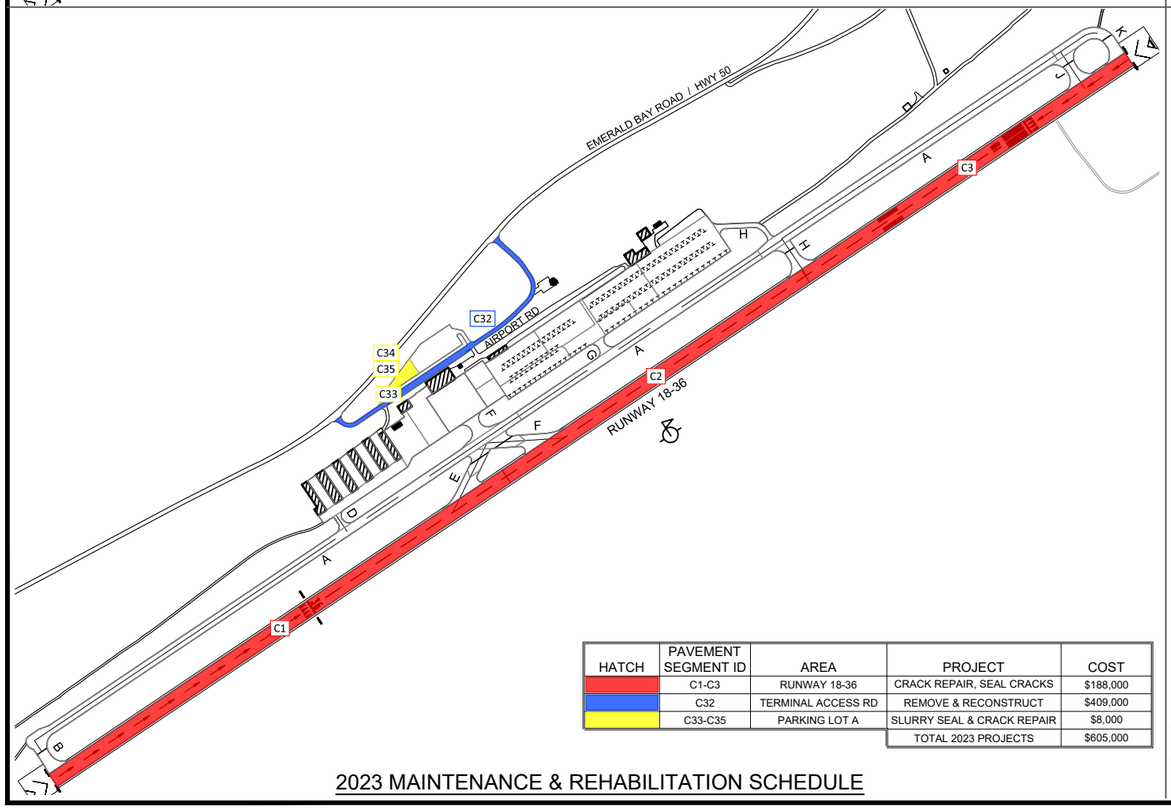


20121 MAINTENANCE & REHABILITATION SCHEDULE



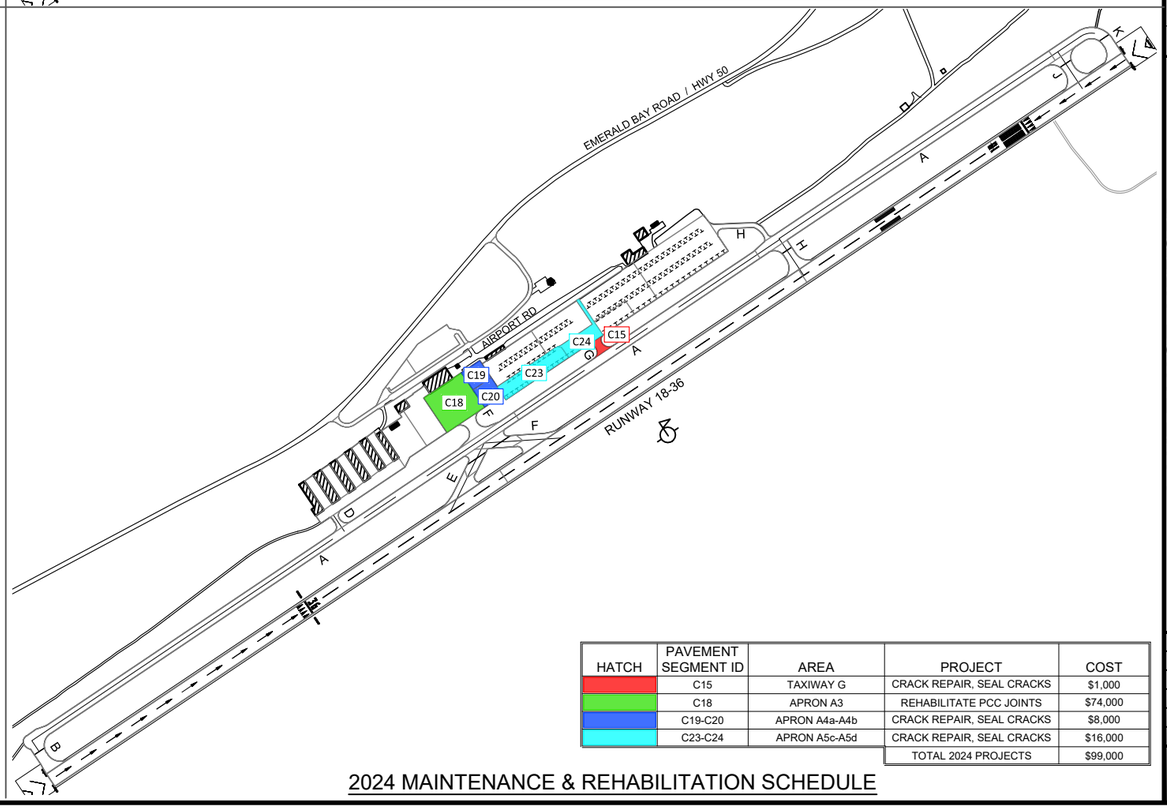
HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST
	C4-C7	TAXIWAYS B, A, K	REHABILITATE & RECONSTRUCT	$4,713,000
	C8	T/W E STA 0+00 - 1+75	RECONSTRUCT & STRENGTHEN	$210,000
	C9	T/W E STA 1+75 - 3+60	REHABILITATE & RECONSTRUCT	$122,000
	C10	T/W F STA 0+00 - 1+75	RECONSTRUCT & STRENGTHEN	$210,000
	C11	T/W F STA 1+75 - 3+50	RECONSTRUCT & STRENGTHEN	$148,000
	C12	T/W F STA 3+50 - 5+60	RECONSTRUCT & STRENGTHEN	$128,000
	C13	TAXIWAY H	RECONSTRUCT & STRENGTHEN	$167,000
	C14	TAXIWAY J	RECONSTRUCT & STRENGTHEN	$185,000
	C16	APRON A1	CRACK REPAIR, SEAL CRACKS	$12,000
	C17	APRON A2	CRACK REPAIR, SEAL CRACKS	$13,000
	C21-C22	APRON A5a-A5b	CRACK REPAIR, SEAL CRACKS	$27,000
			TOTAL 2022 PROJECTS	$5,935,000

2022 MAINTENANCE & REHABILITATION SCHEDULE



HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST
	C1-C3	RUNWAY 18-36	CRACK REPAIR, SEAL CRACKS	$188,000
	C32	TERMINAL ACCESS RD	REMOVE & RECONSTRUCT	$409,000
	C33-C35	PARKING LOT A	SLURRY SEAL & CRACK REPAIR	$8,000
			TOTAL 2023 PROJECTS	$605,000

2023 MAINTENANCE & REHABILITATION SCHEDULE



HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST
	C15	TAXIWAY G	CRACK REPAIR, SEAL CRACKS	$1,000
	C18	APRON A3	REHABILITATE PCC JOINTS	$74,000
	C19-C20	APRON A4a-A4b	CRACK REPAIR, SEAL CRACKS	$8,000
	C23-C24	APRON A5c-A5d	CRACK REPAIR, SEAL CRACKS	$16,000
			TOTAL 2024 PROJECTS	$99,000

2024 MAINTENANCE & REHABILITATION SCHEDULE

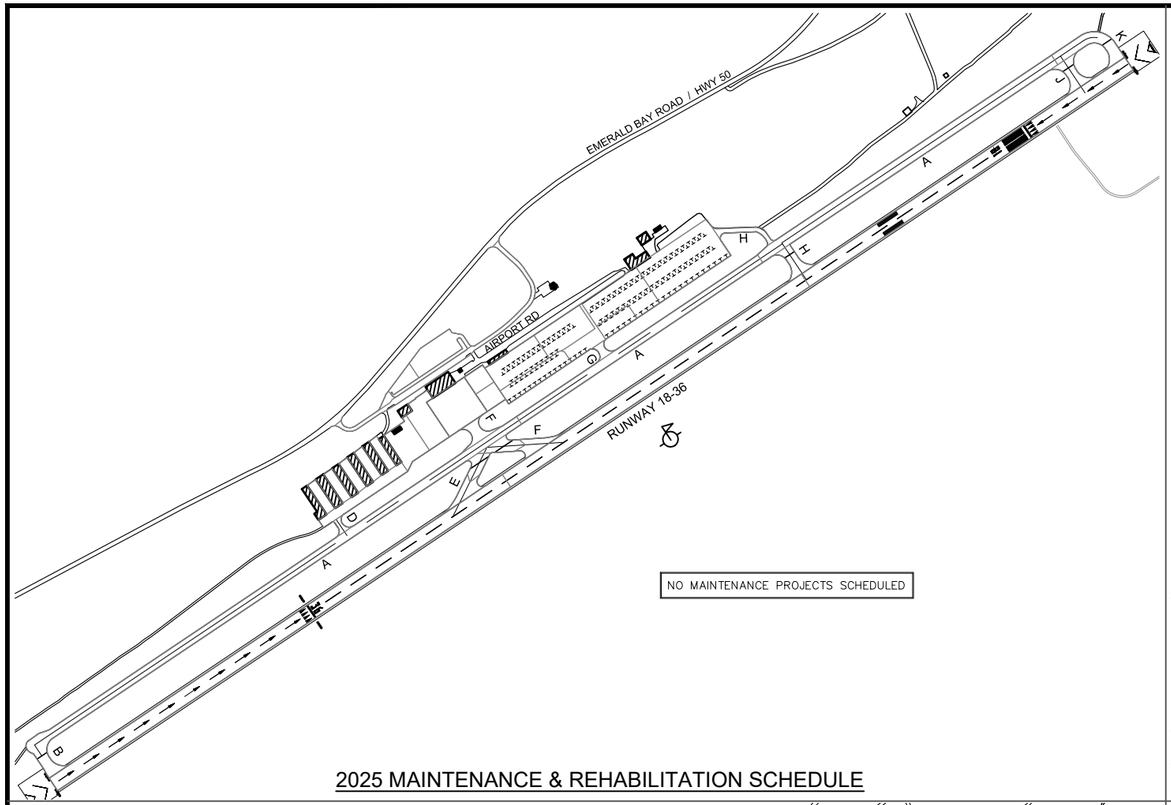
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6125 King Road, Suite 201 - Loomis, California 95650 (916) 652-4478

No.	REVISIONS	DATE

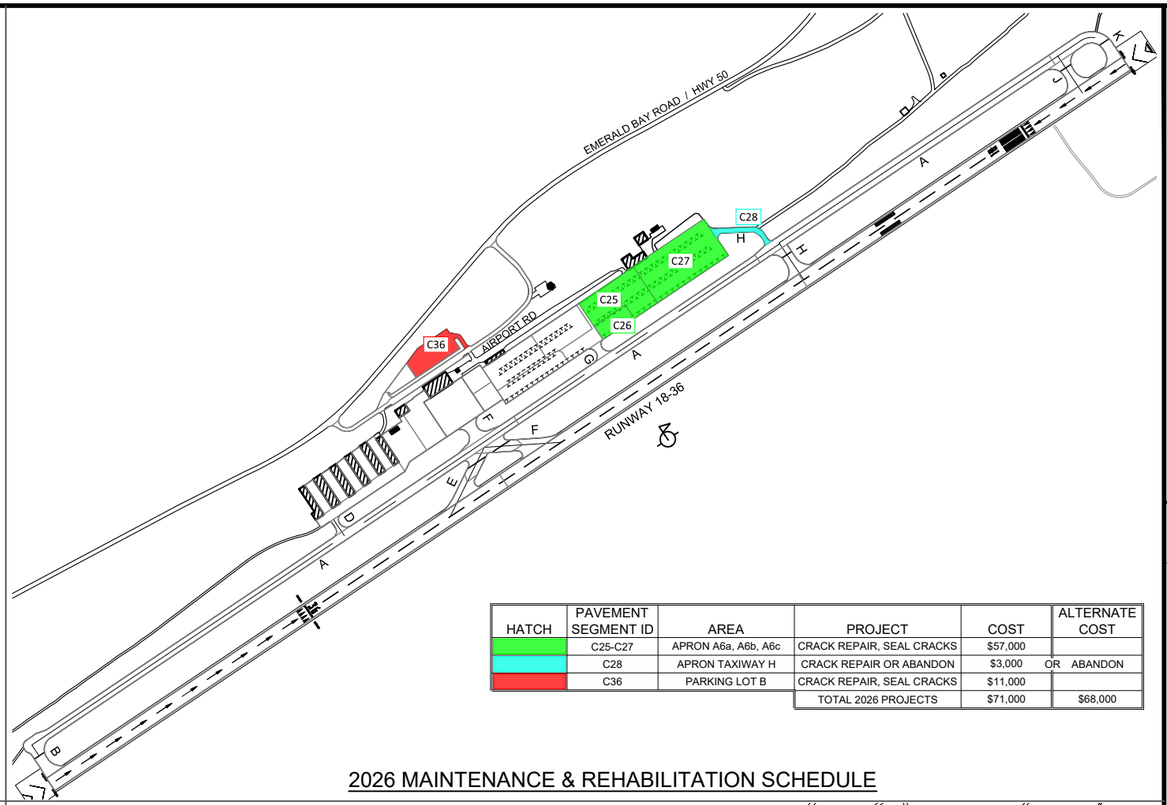
LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

PAVEMENT EVALUATION
REHABILITATION SCHEDULE 2021-2024

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
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SCALE	1"=1000'
PLATE No.	5-4

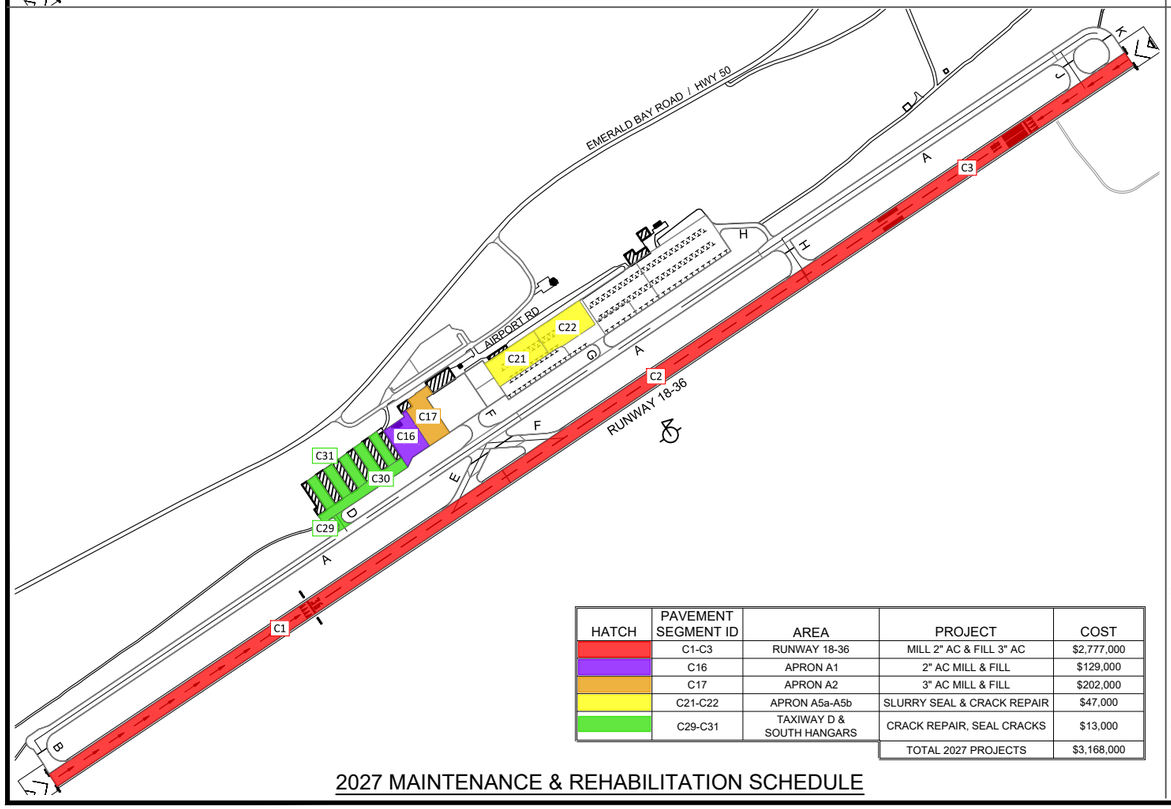


2025 MAINTENANCE & REHABILITATION SCHEDULE



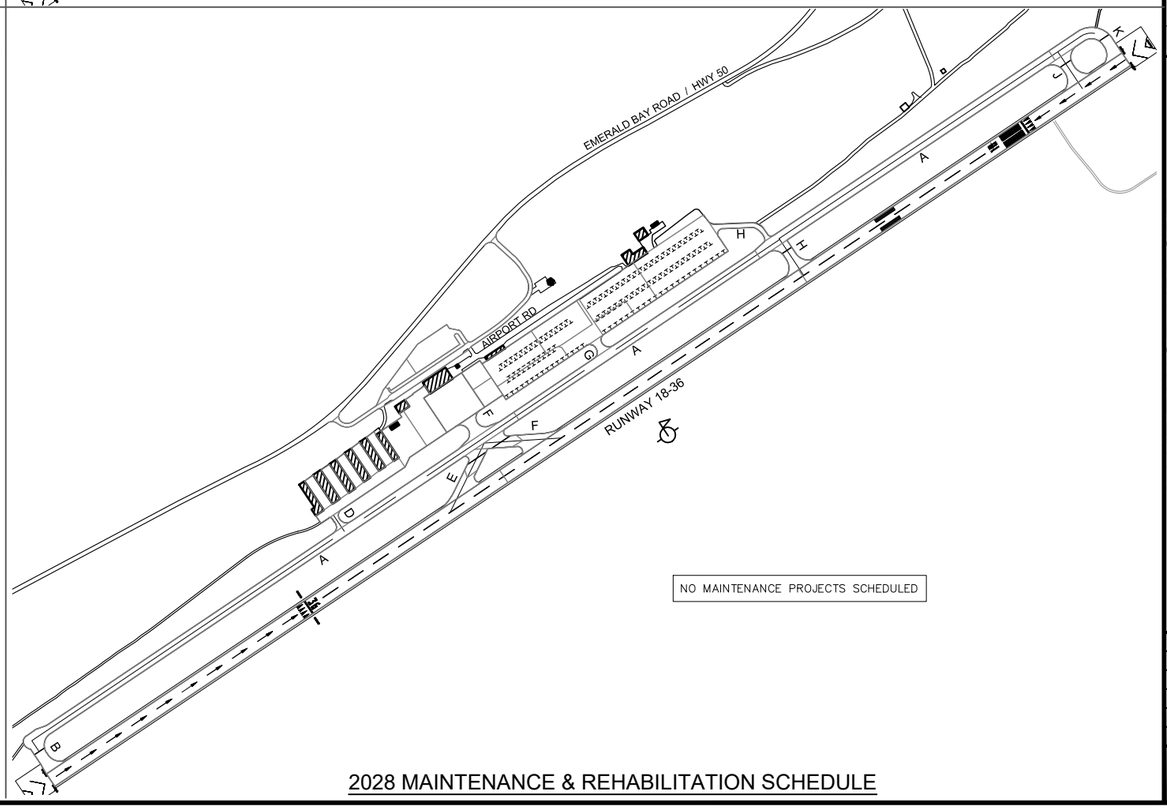
HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST	ALTERNATE COST
	C25-C27	APRON A6a, A6b, A6c	CRACK REPAIR, SEAL CRACKS	$57,000	
	C28	APRON TAXIWAY H	CRACK REPAIR OR ABANDON	$3,000	OR ABANDON
	C36	PARKING LOT B	CRACK REPAIR, SEAL CRACKS	$11,000	
			TOTAL 2026 PROJECTS	$71,000	$68,000

2026 MAINTENANCE & REHABILITATION SCHEDULE



HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST
	C1-C3	RUNWAY 18-36	MILL 2" AC & FILL 3" AC	$2,777,000
	C16	APRON A1	2" AC MILL & FILL	$129,000
	C17	APRON A2	3" AC MILL & FILL	$202,000
	C21-C22	APRON A5a-A5b	SLURRY SEAL & CRACK REPAIR	$47,000
	C29-C31	TAXIWAY D & SOUTH HANGARS	CRACK REPAIR, SEAL CRACKS	$13,000
			TOTAL 2027 PROJECTS	$3,168,000

2027 MAINTENANCE & REHABILITATION SCHEDULE



2028 MAINTENANCE & REHABILITATION SCHEDULE

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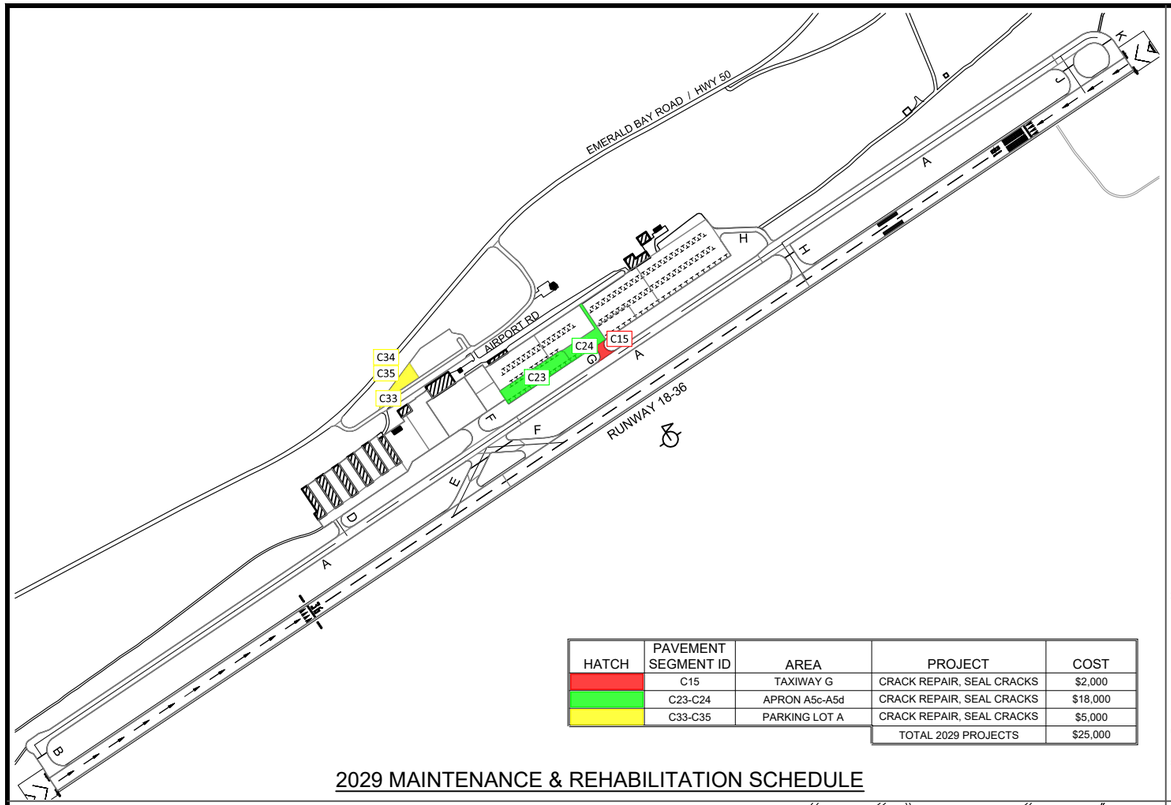
No.	DATE

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LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

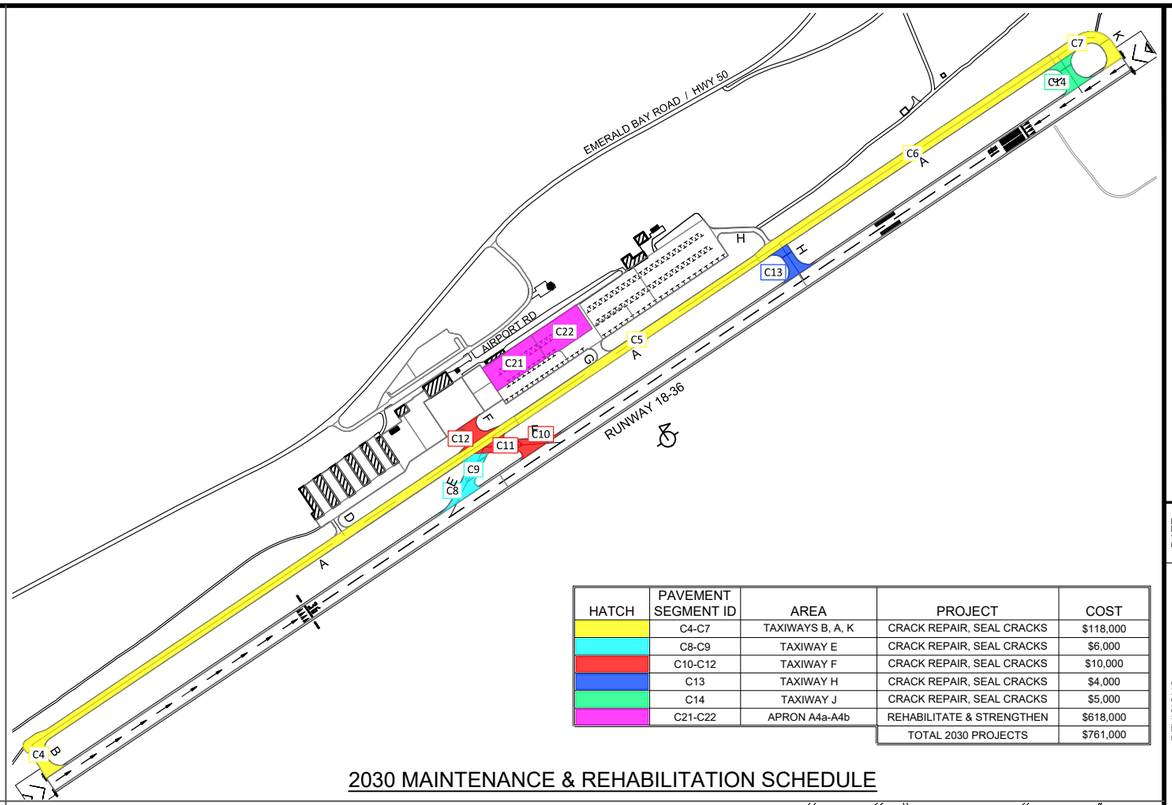
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CHECKED	RWB
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SCALE	1"=1000'
PLATE No.	5-5



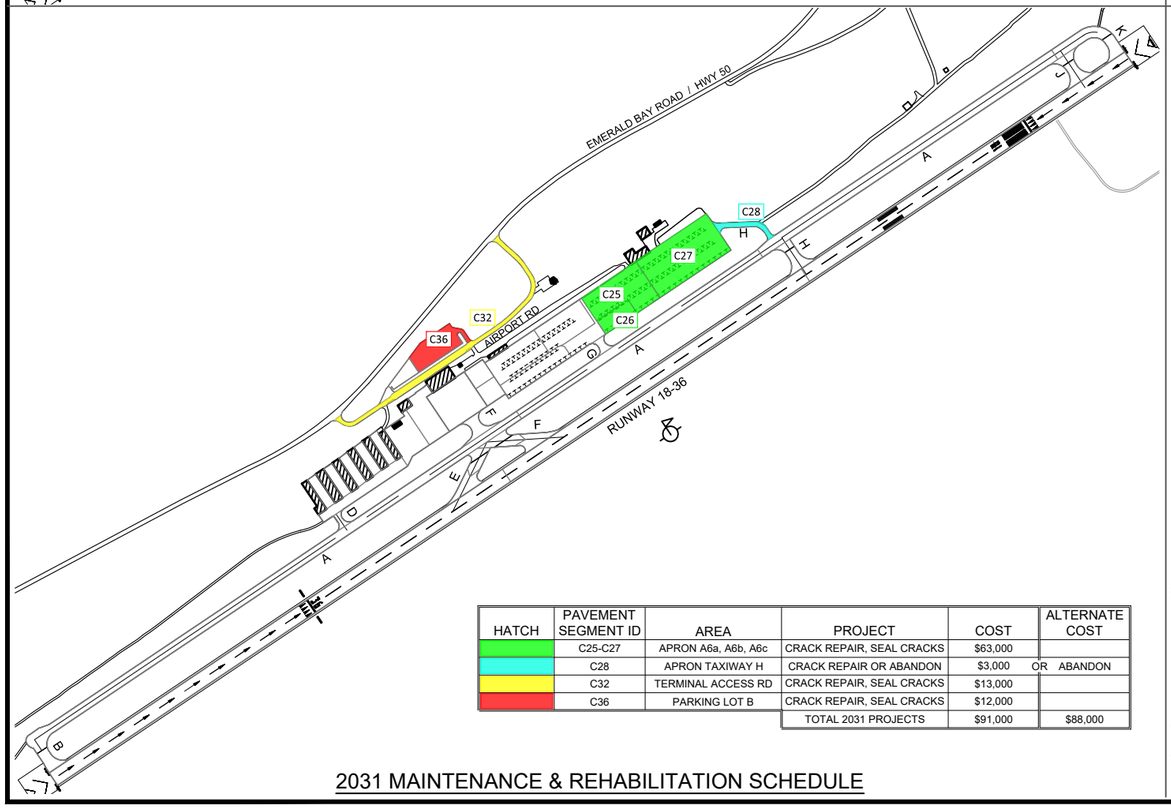
HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST
	C15	TAXIWAY G	CRACK REPAIR, SEAL CRACKS	$2,000
	C23-C24	APRON A5c-A5d	CRACK REPAIR, SEAL CRACKS	$18,000
	C33-C35	PARKING LOT A	CRACK REPAIR, SEAL CRACKS	$5,000
			TOTAL 2029 PROJECTS	$25,000

2029 MAINTENANCE & REHABILITATION SCHEDULE



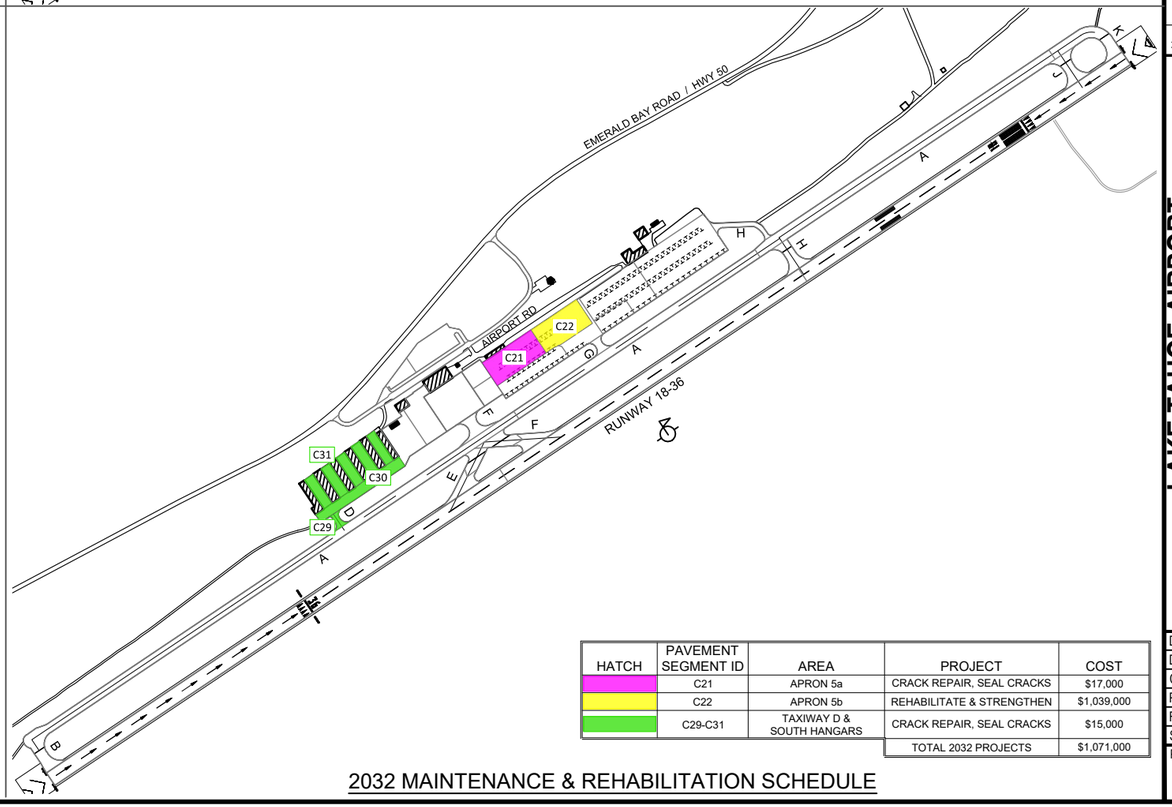
HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST
	C4-C7	TAXIWAYS B, A, K	CRACK REPAIR, SEAL CRACKS	$118,000
	C8-C9	TAXIWAY E	CRACK REPAIR, SEAL CRACKS	$6,000
	C10-C12	TAXIWAY F	CRACK REPAIR, SEAL CRACKS	$10,000
	C13	TAXIWAY H	CRACK REPAIR, SEAL CRACKS	$4,000
	C14	TAXIWAY J	CRACK REPAIR, SEAL CRACKS	$5,000
	C21-C22	APRON A4a-A4b	REHABILITATE & STRENGTHEN	$618,000
			TOTAL 2030 PROJECTS	$761,000

2030 MAINTENANCE & REHABILITATION SCHEDULE



HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST	ALTERNATE COST
	C25-C27	APRON A6a, A6b, A6c	CRACK REPAIR, SEAL CRACKS	$63,000	
	C28	APRON TAXIWAY H	CRACK REPAIR OR ABANDON	$3,000	OR ABANDON
	C32	TERMINAL ACCESS RD	CRACK REPAIR, SEAL CRACKS	$13,000	
	C36	PARKING LOT B	CRACK REPAIR, SEAL CRACKS	$12,000	
			TOTAL 2031 PROJECTS	$91,000	$88,000

2031 MAINTENANCE & REHABILITATION SCHEDULE



HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST
	C21	APRON 5a	CRACK REPAIR, SEAL CRACKS	$17,000
	C22	APRON 5b	REHABILITATE & STRENGTHEN	$1,039,000
	C29-C31	TAXIWAY D & SOUTH HANGARS	CRACK REPAIR, SEAL CRACKS	$15,000
			TOTAL 2032 PROJECTS	$1,071,000

2032 MAINTENANCE & REHABILITATION SCHEDULE

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DATE

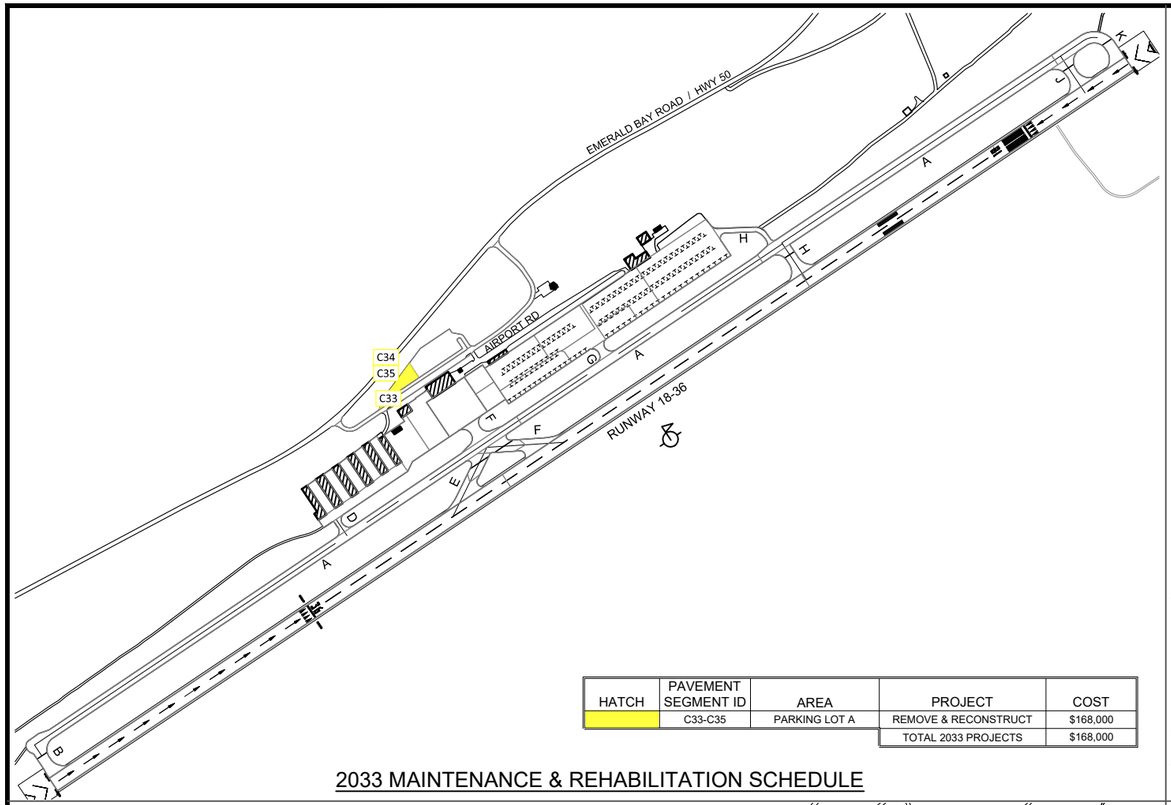
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LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

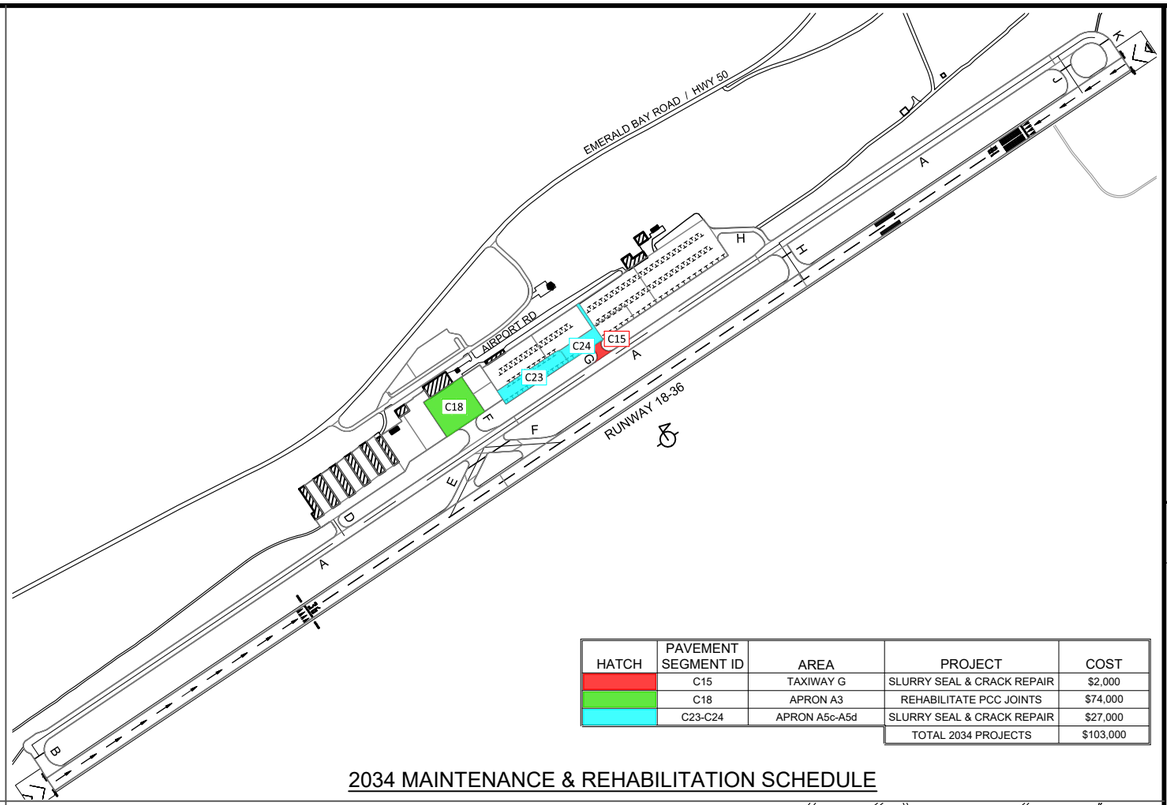
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REHABILITATION SCHEDULE 2029-2032

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CHECKED	RWB
PROJECT No.	04
FILE	TVL.5-3.REHAB
SCALE	1"=1000'
PLATE No.	5-6



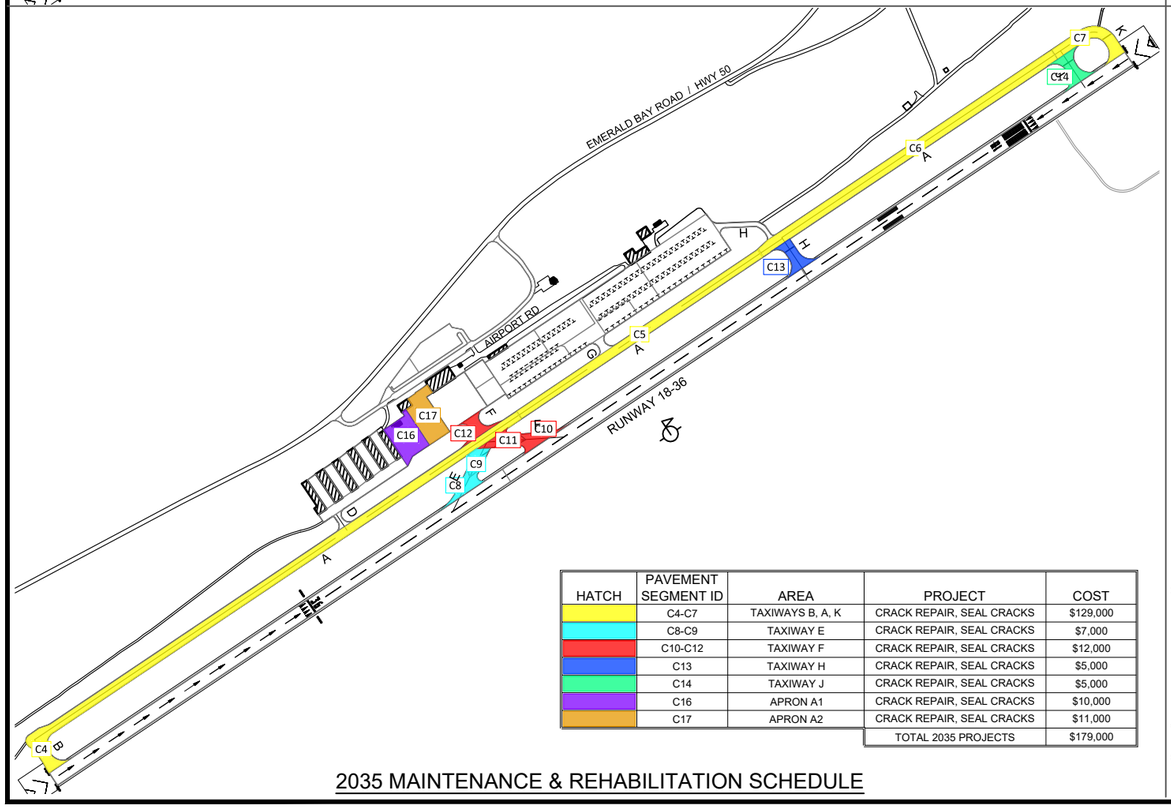
HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST
	C33-C35	PARKING LOT A	REMOVE & RECONSTRUCT	$168,000
			TOTAL 2033 PROJECTS	$168,000

2033 MAINTENANCE & REHABILITATION SCHEDULE



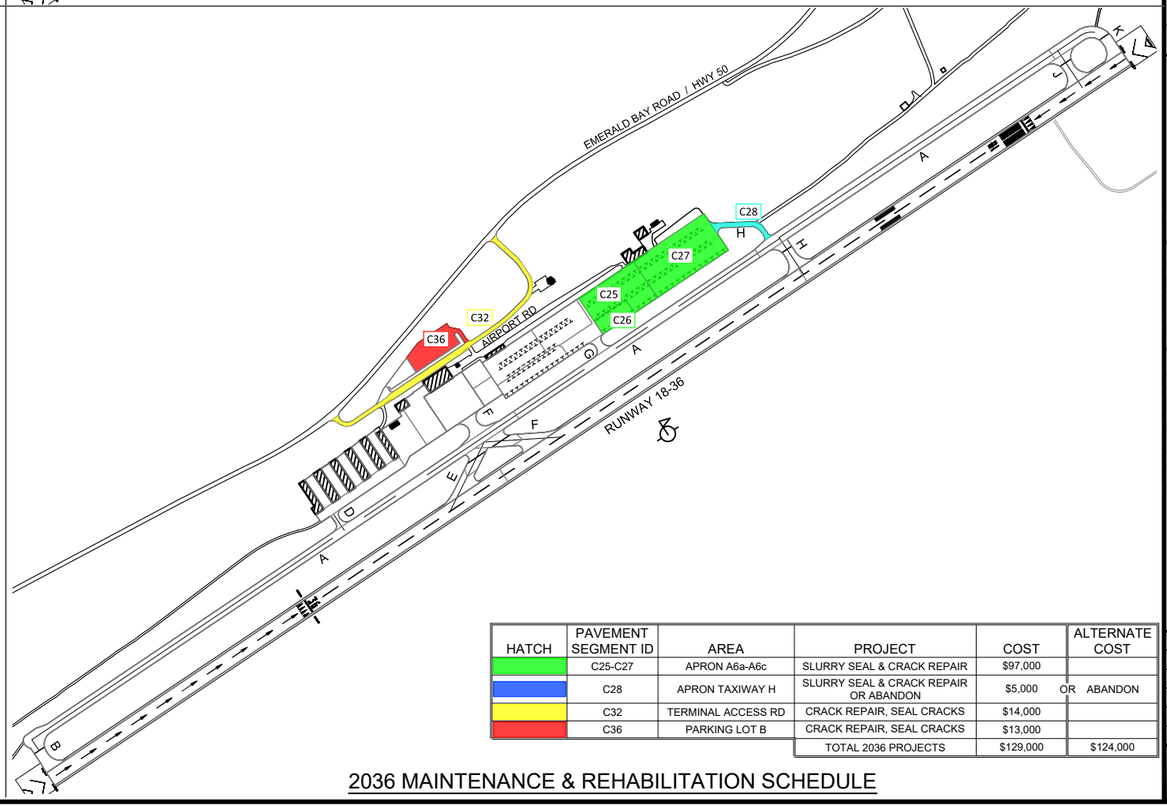
HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST
	C15	TAXIWAY G	SLURRY SEAL & CRACK REPAIR	$2,000
	C18	APRON A3	REHABILITATE PCC JOINTS	$74,000
	C23-C24	APRON A5c-A5d	SLURRY SEAL & CRACK REPAIR	$27,000
			TOTAL 2034 PROJECTS	$103,000

2034 MAINTENANCE & REHABILITATION SCHEDULE



HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST
	C4-C7	TAXIWAYS B, A, K	CRACK REPAIR, SEAL CRACKS	$129,000
	C8-C9	TAXIWAY E	CRACK REPAIR, SEAL CRACKS	$7,000
	C10-C12	TAXIWAY F	CRACK REPAIR, SEAL CRACKS	$12,000
	C13	TAXIWAY H	CRACK REPAIR, SEAL CRACKS	$5,000
	C14	TAXIWAY J	CRACK REPAIR, SEAL CRACKS	$5,000
	C16	APRON A1	CRACK REPAIR, SEAL CRACKS	$10,000
	C17	APRON A2	CRACK REPAIR, SEAL CRACKS	$11,000
			TOTAL 2035 PROJECTS	$179,000

2035 MAINTENANCE & REHABILITATION SCHEDULE



HATCH	PAVEMENT SEGMENT ID	AREA	PROJECT	COST	ALTERNATE COST
	C25-C27	APRON A6a-A6c	SLURRY SEAL & CRACK REPAIR	$97,000	
	C28	APRON TAXIWAY H	SLURRY SEAL & CRACK REPAIR OR ABANDON	$5,000 OR	ABANDON
	C32	TERMINAL ACCESS RD	CRACK REPAIR, SEAL CRACKS	$14,000	
	C36	PARKING LOT B	CRACK REPAIR, SEAL CRACKS	$13,000	
			TOTAL 2036 PROJECTS	$129,000	$124,000

2036 MAINTENANCE & REHABILITATION SCHEDULE

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LAKE TAHOE AIRPORT
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PAVEMENT EVALUATION
REHABILITATION SCHEDULE 2033-2036

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
FILE	TVL.5-3.REHAB
SCALE	1"=1000'
PLATE No.	5-7

Appendix A
Geotechnical Data

A series of soil (geotechnical) studies have been conducted by the office of Reinard W. Brandley, Consulting Airport Engineer (RWB), for pavement evaluation studies at Lake Tahoe Airport. The results of these studies have been collected and included in Appendix A to this report.

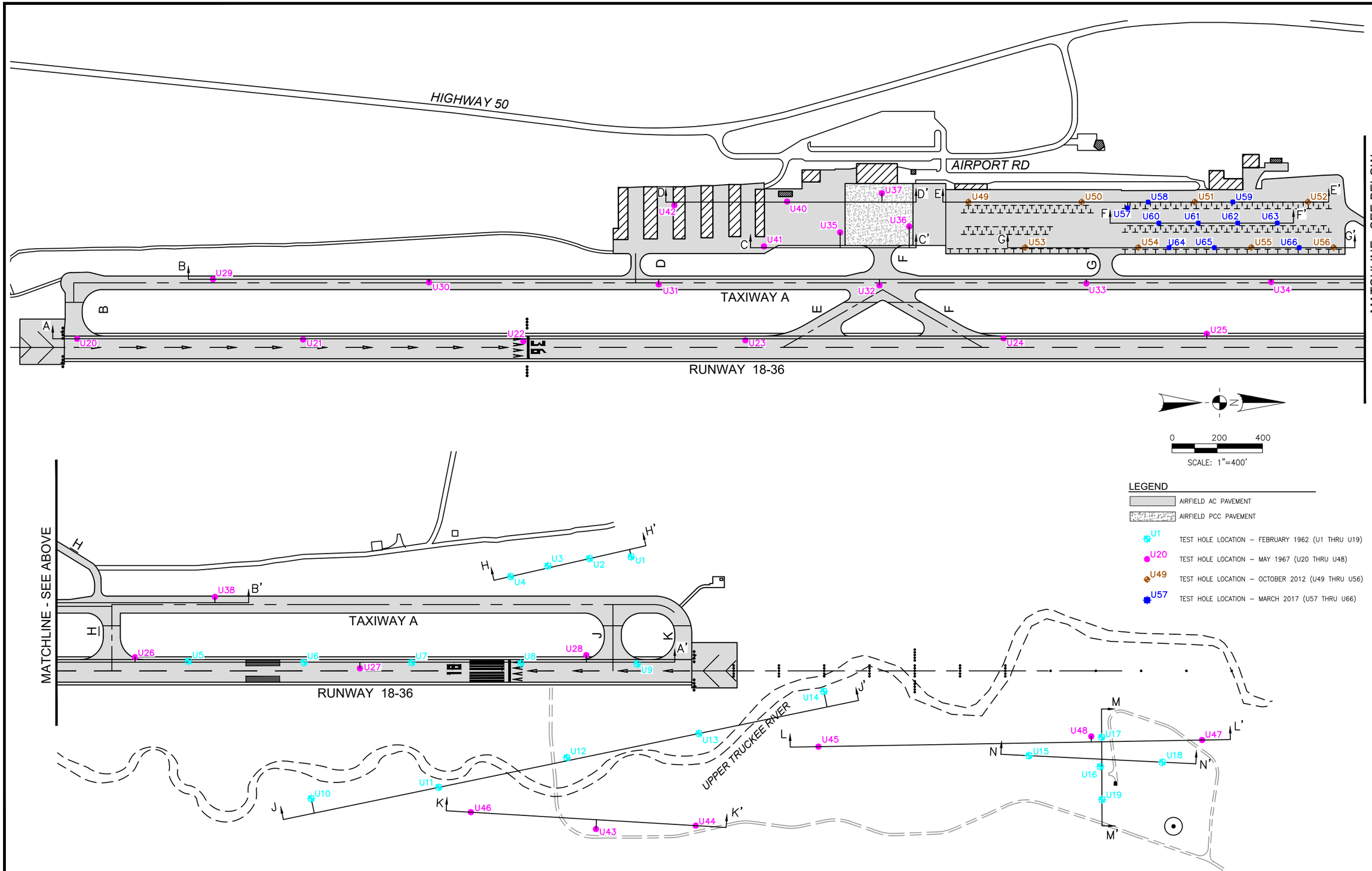
Our office conducted test borings at this airport in 1962, 1968, 2012, and 2017. The location map included as Plate A1 identifies the location of each of the test holes drilled at this site. The logs of the borings for each of these test holes are shown on Plates A2 through A7. On these logs, the stratification of the soil is shown under the existing surface as it existed at the time the test hole was drilled, whether the surface was soil or pavement. Where pavement existed, the logs showed the thickness of each layer of the pavement section and the soils below the pavement to depths of 5 to 15 feet.

The soil stratification obtained from these borings was basically as expected based on geological studies. The soils under the runway and parallel taxiway generally consisted of fine to medium or fine to coarse loose sands. Some of the sands were somewhat silty in the area immediately north of Taxiway G. In the apron area the soils consisted of varying layers of sands, sandy clays, and sandy silts. The silty clays and clayey silt layers were generally fairly soft.

The elevation of the groundwater table was measured in each test hole at the time it was drilled and the location and date at which the measurement was made are shown on most of the test boring logs. It will be noted that the groundwater table in the dry years was 8 to 10 feet below surface in the apron area. During the wet year of 2016/17 the groundwater table in the same areas was located within 1 foot of the surface and in some areas was at ground surface.

The location and log of the test holes drilled in the various geotechnical studies on the airport have been assembled and included in this Appendix as:

Plate No. A1	Test Hole Location Map
Plate No. A2	Soil Profile A-A’
Plate No. A3	Soil Profiles B-B’ thru C-C’
Plate No. A4	Soil Profiles D-D’ thru G-G’
Plate No. A5	Soil Profiles H-H’ thru K-K’
Plate No. A6	Soil Profiles L-L’ thru N-N’



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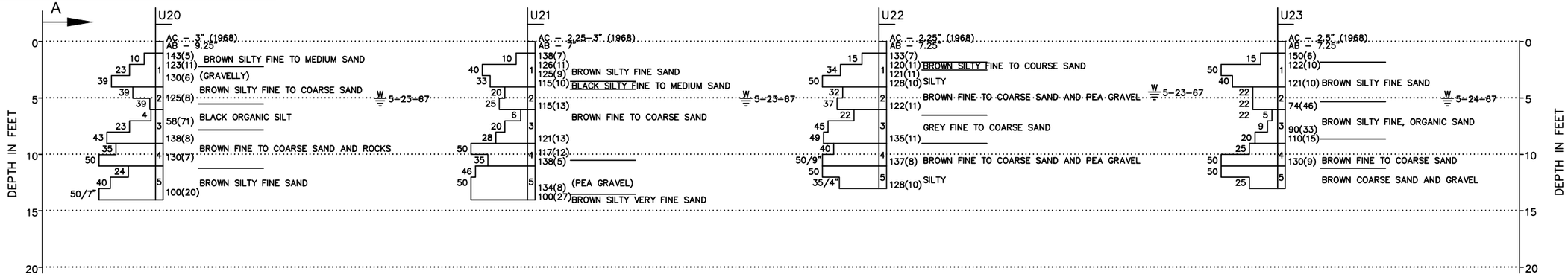
No.

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

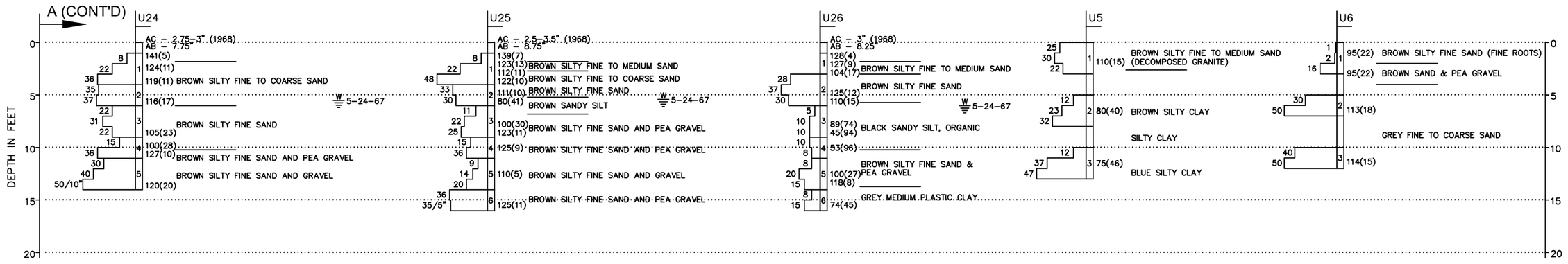
PAVEMENT EVALUATION

TEST HOLE LOCATION MAP

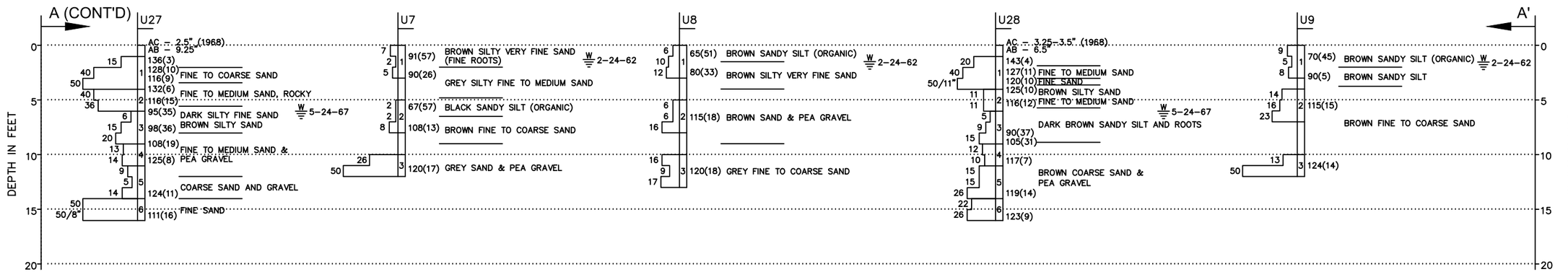
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CHECKED	RWB
PROJECT No.	04
FILE	TVL Plate A1
SCALE	1"=400'
PLATE No.	A1



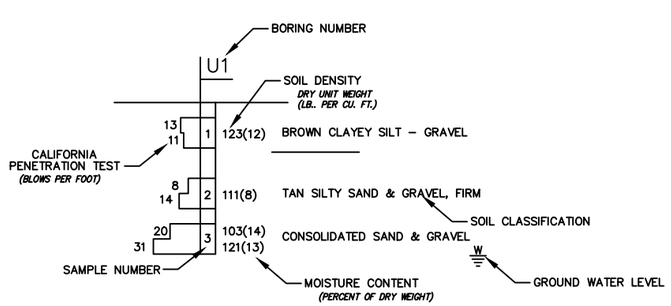
PROFILE A-A'



PROFILE A-A'



PROFILE A-A'



SOIL PROFILE LEGEND

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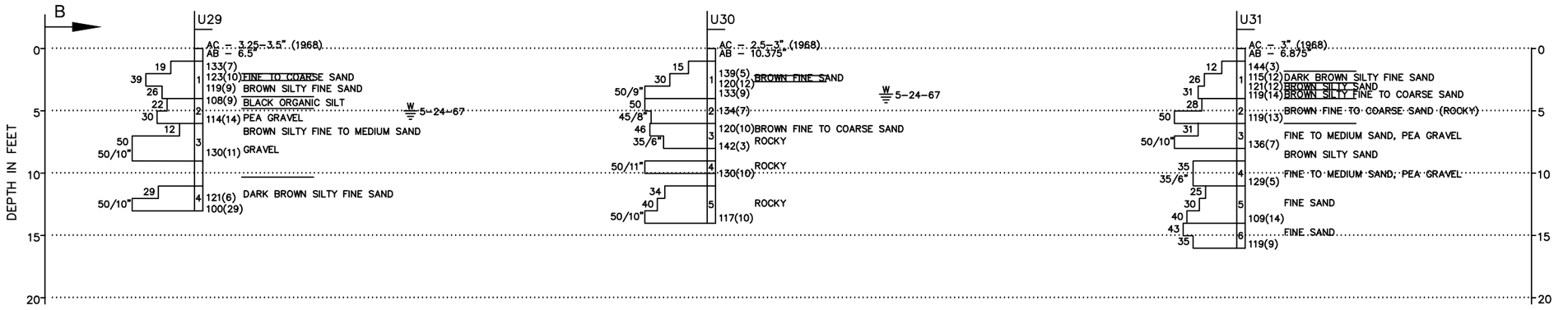
No.	REVISIONS	DATE

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

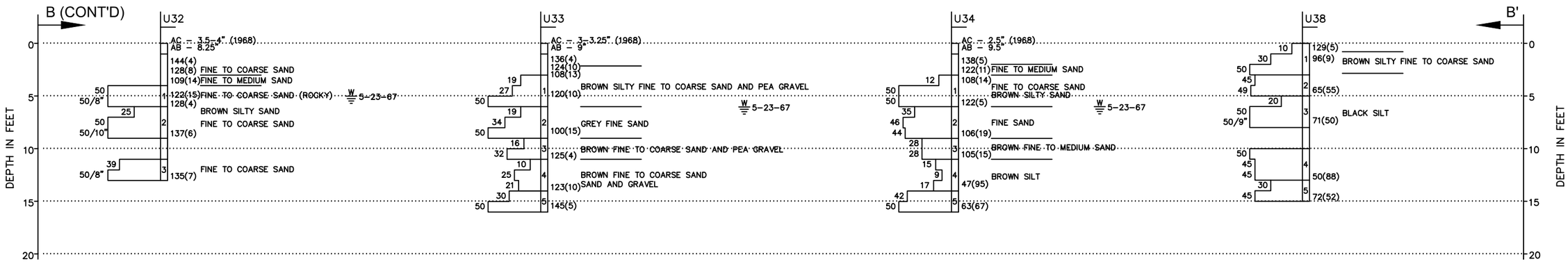
PAVEMENT EVALUATION

SOIL PROFILE A-A'

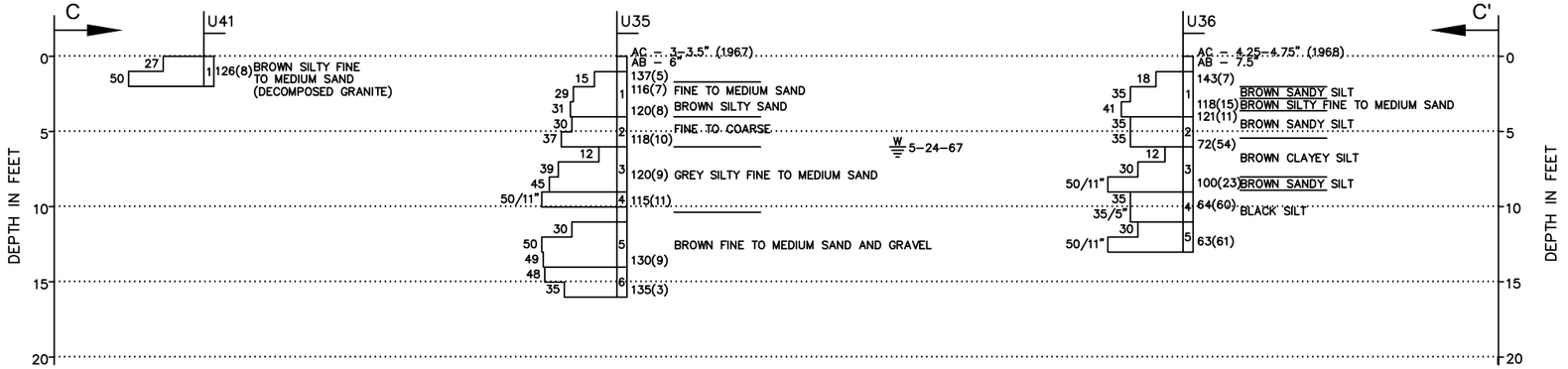
DATE	7/21/17
DRAWN	DMB
CHECKED	RWB
PROJECT No.	04
FILE	TVL Plate A1
SCALE	1"=20'
PLATE No.	A2



PROFILE B-B'



PROFILE B-B'



PROFILE C-C'

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485

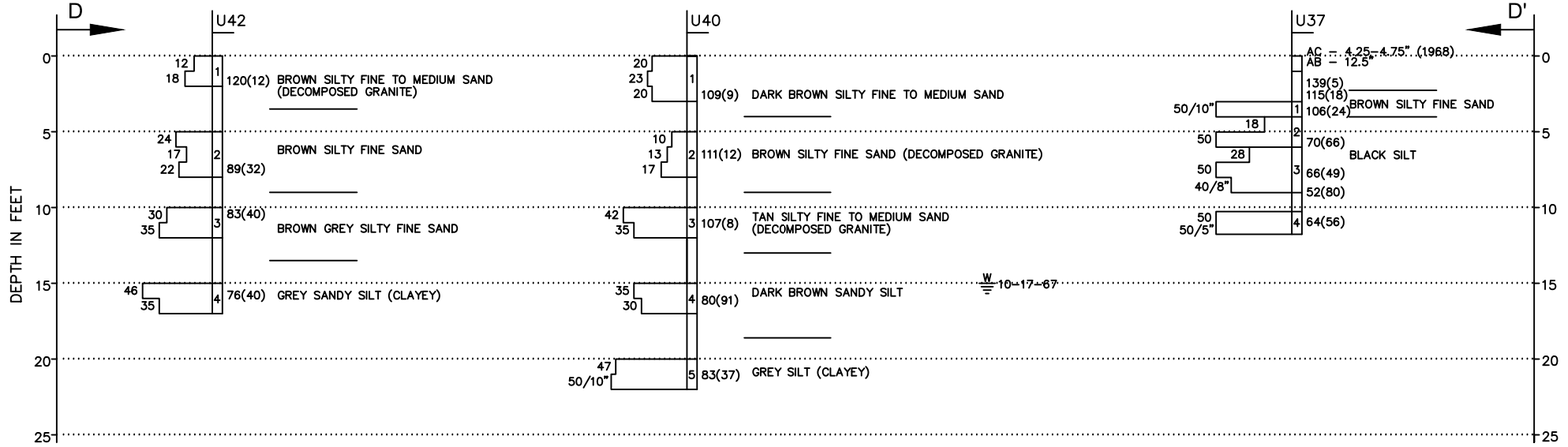
No.	REVISIONS	DATE

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

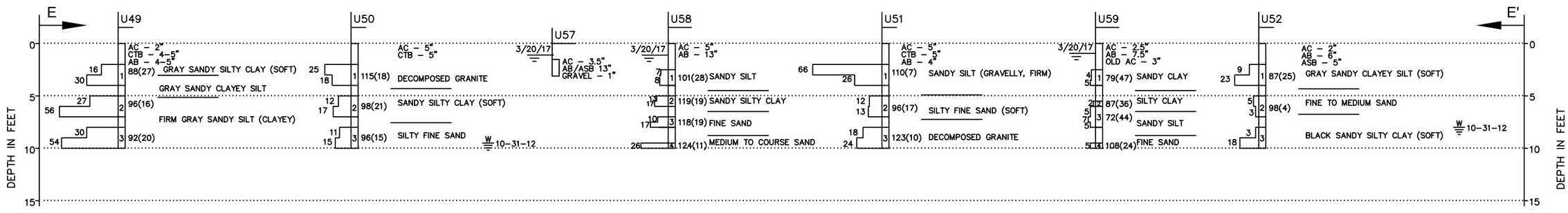
PAVEMENT EVALUATION

SOIL PROFILES B-B' THRU C-C'

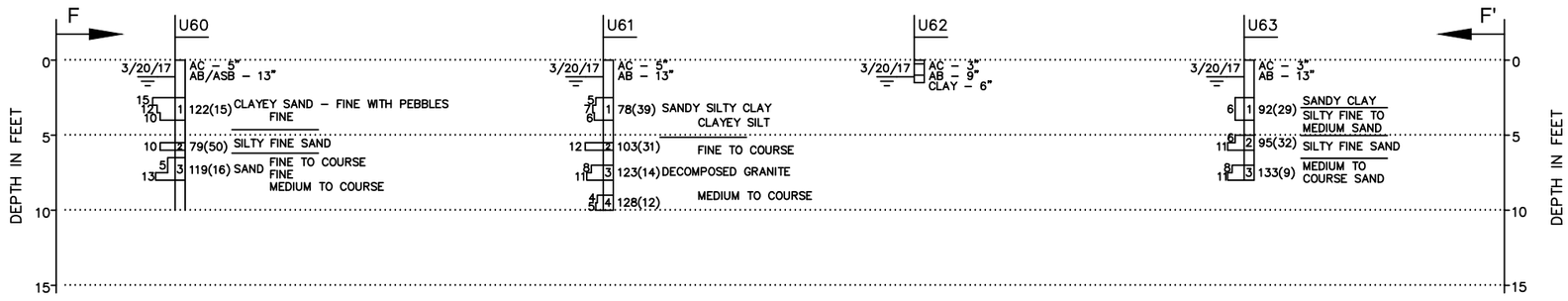
DATE	7/21/17
DRAWN	DMB
CHECKED	RWB
PROJECT No.	04
FILE	TVL Plate A1
SCALE	1"=20'
PLATE No.	A3



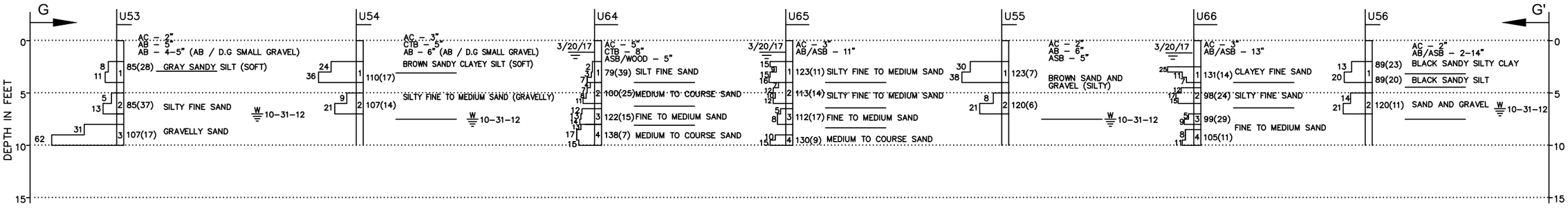
PROFILE D-D'



PROFILE E-E'



PROFILE F-F'



PROFILE G-G'

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DATE
REVISIONS
No.

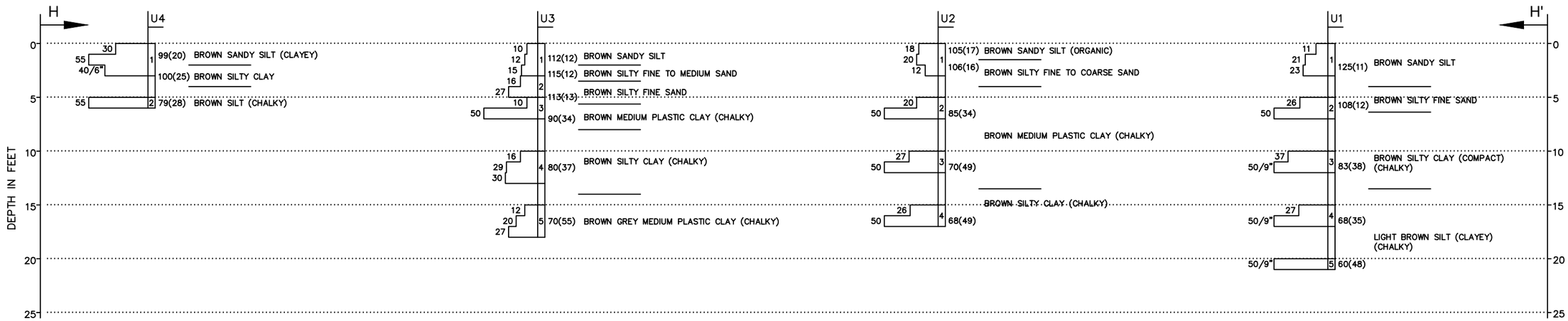
LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

PAVEMENT EVALUATION

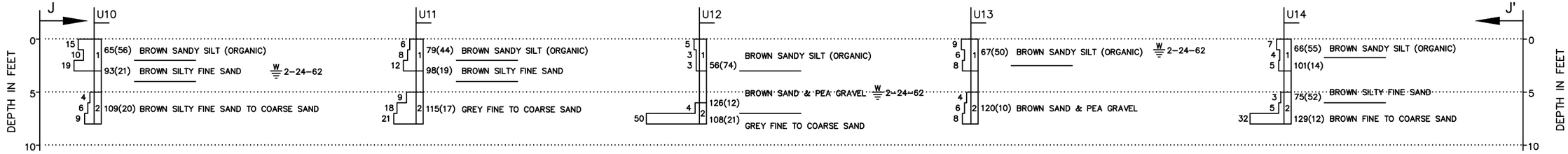
SOIL PROFILES D-D' THRU G-G'

DATE	7/21/17
DRAWN	DMB
CHECKED	RWB
PROJECT No.	04
FILE	TVL Plate A1
SCALE	1"=20'

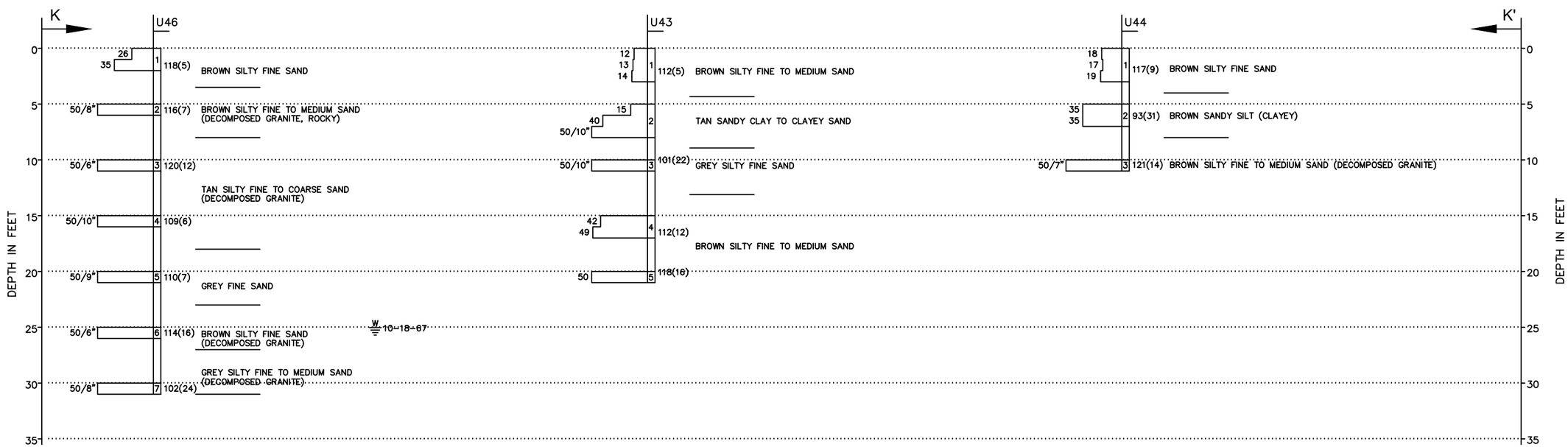
PLATE No.
A4



PROFILE H-H'



PROFILE J-J'



PROFILE K-K'

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DATE
REVISIONS
No.

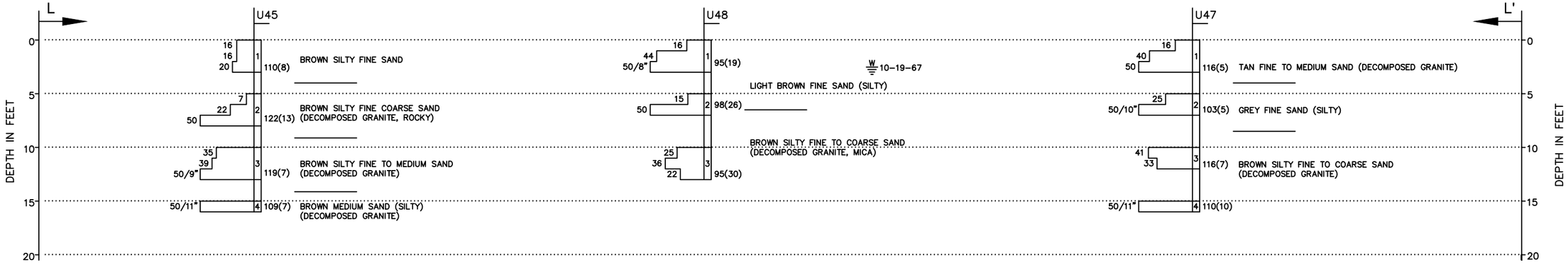
LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

PAVEMENT EVALUATION

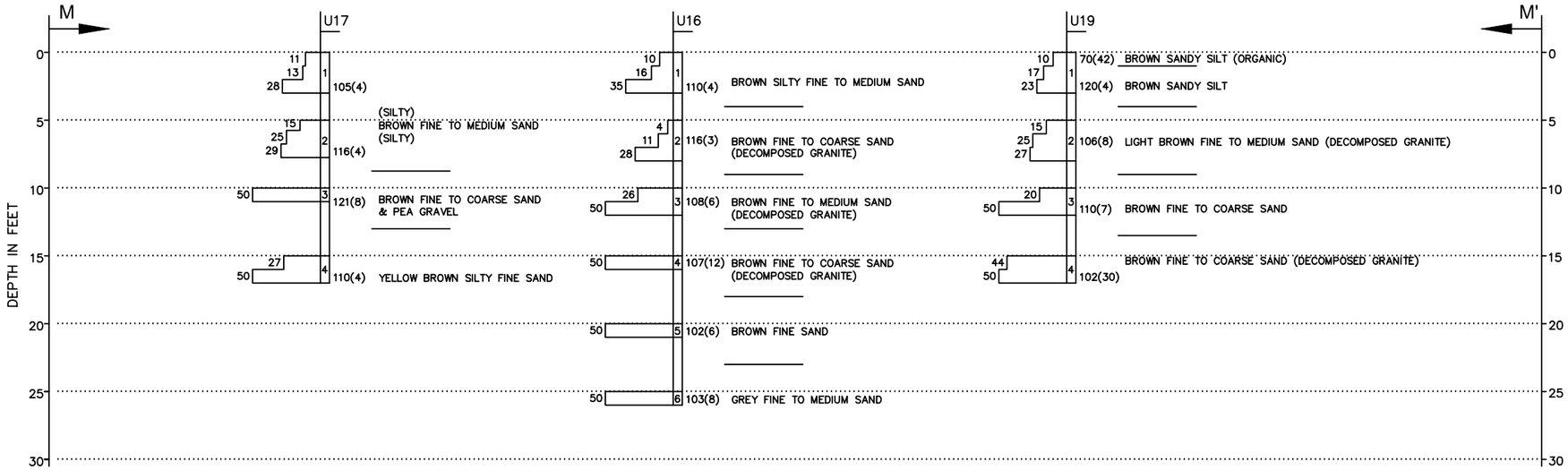
SOIL PROFILES H-H' THRU K-K'

DATE	7/21/17
DRAWN	DMB
CHECKED	RWB
PROJECT No.	04
FILE	TVL Plate A1
SCALE	1"=20'

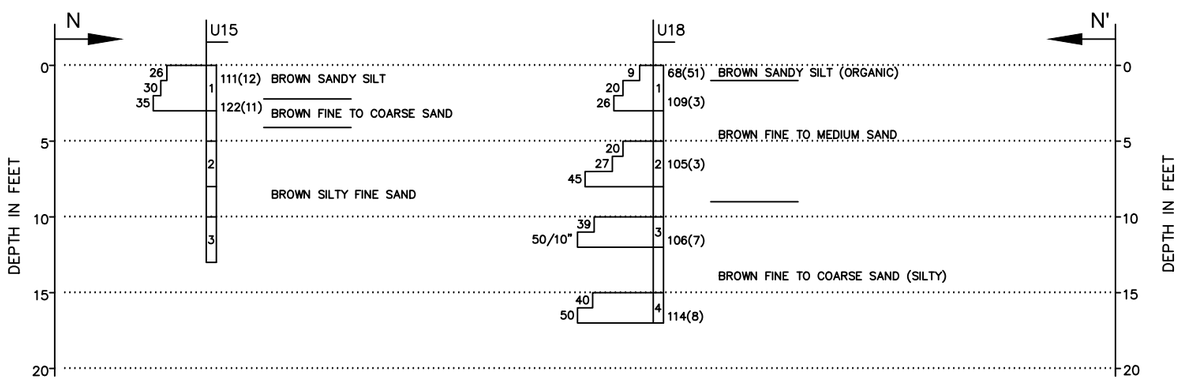
PLATE No.
A5



PROFILE L-L'



PROFILE M-M'



PROFILE N-N'

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DATE | REVISIONS | No.

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

PAVEMENT EVALUATION

SOIL PROFILES L-L' THRU N-N'

DATE	7/21/17
DRAWN	DMB
CHECKED	RWB
PROJECT No.	04
FILE	TVL Plate A1
SCALE	1"=20'

PLATE No.
A6

Appendix B
Falling Weight Deflectometer Test Data

Falling Weight Deflectometer (FWD) tests were conducted on all pavements on the airport. On the runway two rows of FWD tests were conducted, one on each side of the runway centerline, at a distance of approximately 10 feet from the centerline. These tests were located at a spacing of approximately 200 feet staggered on each side of centerline, which provided general longitudinal spacing of 100 feet between tests. FWD tests were also conducted on all taxiways and taxilanes at a distance of 10 feet from centerline and at longitudinal spacing of approximately 200 feet. On all aprons FWD tests were conducted on an approximate 100 by 100 foot grid. On all hangar taxilanes FWD tests were conducted in the wheel path of the taxilane at a spacing of approximately 100 feet.

The Falling Weight Deflectometer tests are generally conducted at three different loadings and the applied load is measured by load cells. As a result of variations in resistance, the applied load varies somewhat from the anticipated load. In order to provide comparable test results, all data were normalized to standard loads of 12, 20, 25, and/or 45 kips (1 kip = 1,000 lbs).

The location of the test, starting point of the row of tests, and location of Station 0+00 for each row of tests are shown on Plates B1 through B3. The FWD data for the center deflections under applied load are indicated on these drawings for each test location. The location of Station 0+00 at the start of each row of tests and the direction of test are reflected in the plots as Station 0+00 in Plates No. B4 through B24.

For each row of FWD tests on each segment of pavement a graph showing the center plate deflection at each test location has been prepared and is shown on Plates B4 through B24. These data show the uniformity of strength as reflected by deflection of the pavement sections and identify the hard spots and the soft spots. For calculation purposes in order to back calculate Modulus of Elasticity, critical values of deflection for each fairly uniform section has been indicated by horizontal lines.

A camera was mounted on the FWD equipment and a photograph of the surface of the pavement was taken at the location of each FWD test. These photographs are useful historical documents since they show the condition of the existing pavement at the time and location of each FWD test. An electronic copy of these photographs are enclosed with this report.

The results of these studies have been included in this Appendix, as follows:

Appendix B
Falling Weight Deflectometer Test Data

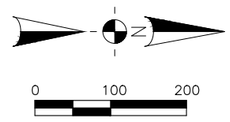
Plates

Plates No. B1-B3 Falling Weight Deflectometer Test Data Summary

Plate B1 – FWD Test Data Summary No. 1
Plate B2 – FWD Test Data Summary No. 2
Plate B3 – FWD Test Data Summary No. 3

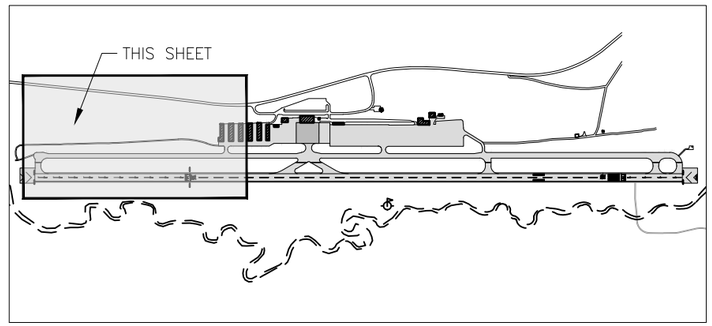
Plates B4 through B24 – FWD Deflection Data Profiles

Plate No. B4	Runway 18-36
Plates No. B5 through B10	Taxiways A, B, E, F, G, H, J, and K
Plates No. B11 through B14	Terminal Apron and General Aviation Apron
Plates No. B15 through B20	Tee Hangar Taxilanes
Plate No. B21	Terminal Access Road
Plate No. B22	North Apron Access Road
Plates No. B23 through B24	Terminal Parking Lot



LEGEND

- AIRFIELD AC PAVEMENT
- TW A 0+00 — TEST ROW STARTING STATION
- ×–25<40>(50) — CENTER OF PLATE DEFLECTION (0.001 INCH)
  - @ 50K LOAD
  - @ 40K LOAD
  - @ 25K LOAD
  - TEST LOCATION



HIGHWAY 50

H1 0+00
H2 0+00
H3 0+00
54*94*<116>
82*125*
78*125*
44*79*<100>
58*98*
53*88*<110>
62*105*
53*86*<104>
52*87*<105>
46*78*<96>
48*79*<98>
86
75*119*
40*69*<86>
43*74*<96>
31*59*<73>
35*55*<68>
39*62*<78>

TAXIWAY A

23<42>(67)
29<53>(84)
19<39>(70)
TW A 0+00
RW 36 0+00
22<40>(62)
17<33>(53)
14<29>(50)
18<35>(56)
22<42>(68)
19<36>(57)
17<34>(56)
14<28>(48)
17<32>(51)
16<31>(52)
17<33>(57)
22<40>(65)
17<32>(62)
16<31>(51)
16<32>(65)

RUNWAY 18-36

18
36

20<42>(74)
20<41>(62)
21<40>(64)
25<44>(67)
26<48>(74)
25<47>(72)
24<45>(74)
24<46>(68)
24<46>(75)
21<41>(70)
25<52>(88)
24<45>(73)
24<49>(87)
25<47>(77)
23<44>(79)
30<56>(92)
23<45>(72)
23<43>(67)
21<43>(73)
23<44>(71)
23<46>(75)
22<42>(68)
21<42>(71)
27<48>(76)
21<40>(66)
26<47>(76)
27<55>(91)
25<48>(80)
27<52>(89)
24<46>(75)

MATCHLINE - SEE SHEET B2

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No.	REVISIONS	DATE

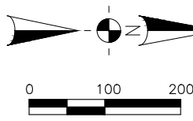
SOUTH LAKE TAHOE CALIFORNIA

LAKE TAHOE AIRPORT

PAVEMENT EVALUATION

FWD TEST DATA SUMMARY No. 1

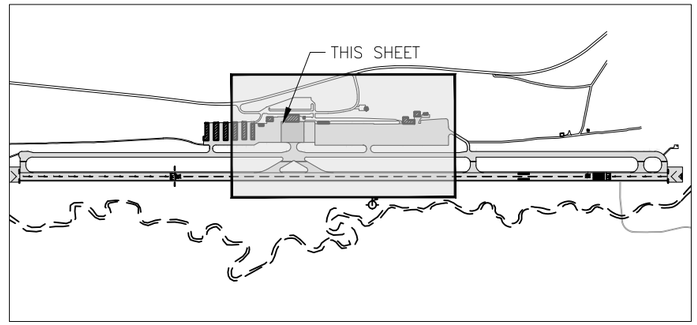
DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
FILE	TVL.B1.FWD
SCALE	1"=200'
PLATE No.	B1



LEGEND

- AIRFIELD AC PAVEMENT
- AIRFIELD PCC PAVEMENT
- TW A 0+00 — TEST ROW STARTING STATION
- ×–25<40>(50) — CENTER OF PLATE DEFLECTION (0.001 INCH)
  - @ 50K LOAD
  - @ 40K LOAD
  - @ 25K LOAD
  - TEST LOCATION

[100%] JOINT LOAD TRANSFER EFFICIENCY
LOCATION ON SLAB
C CENTER OF SLAB
T TRANSVERSE JOINT
L1 LONGITUDINAL JOINT LEFT OF CENTERLINE



HIGHWAY 50

AIRPORT RD

APRON

TAXIWAY A

RUNWAY 18-36

T/W E

T/W F

T/W G

T/W H

MATCHLINE - SEE SHEET B2

MATCHLINE - SEE SHEET B3

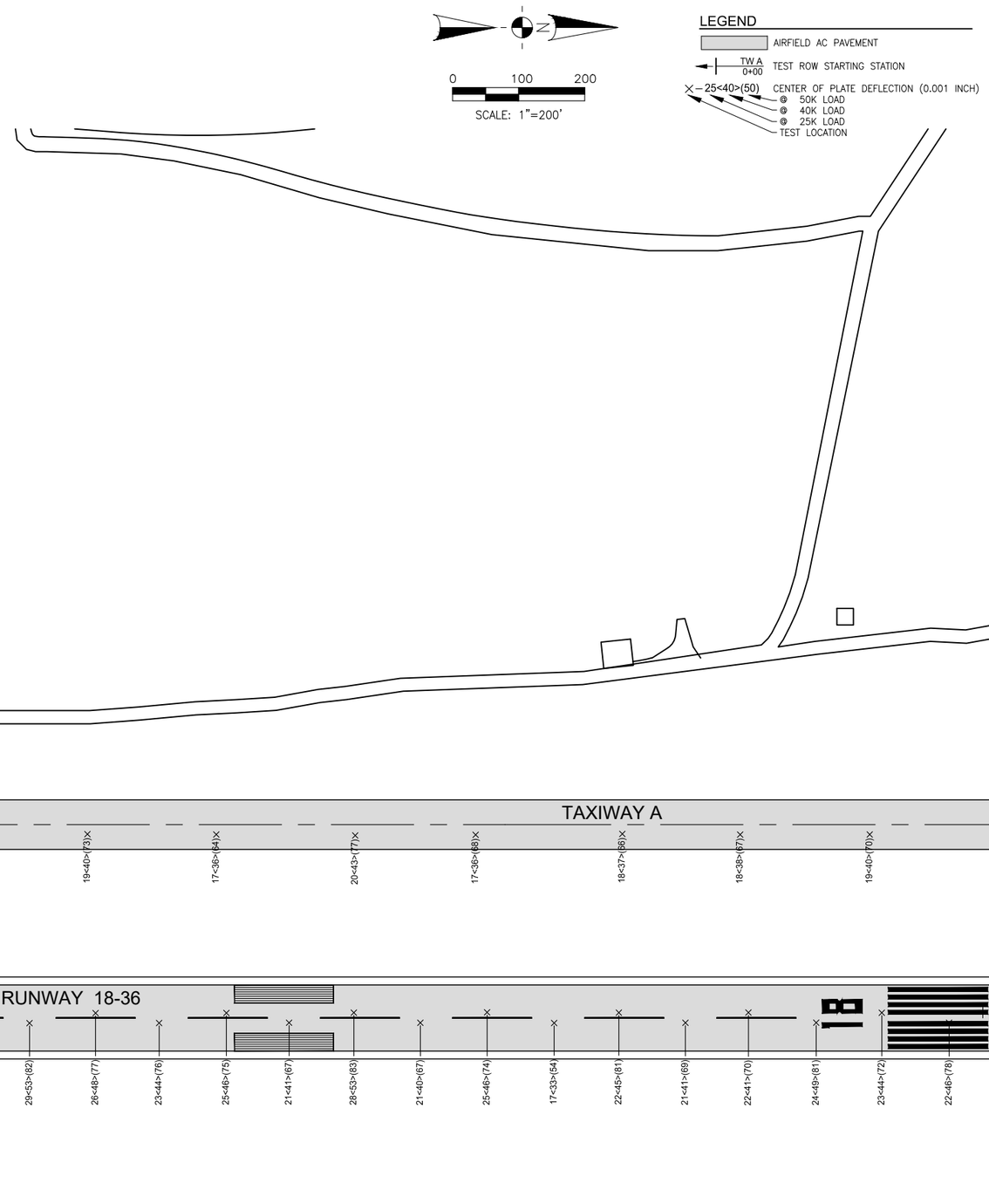
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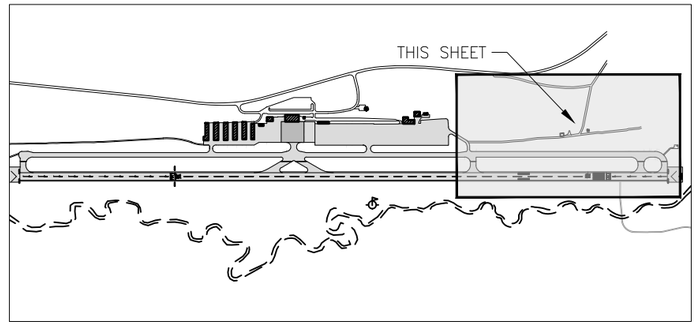
No.	REVISIONS	DATE

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

PAVEMENT EVALUATION
FWD TEST DATA SUMMARY No. 2

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
FILE	TVL.B1.FWD
SCALE	1"=200'
PLATE No.	B2





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REVISIONS	No.	DATE

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

PAVEMENT EVALUATION
FWD TEST DATA SUMMARY No. 3

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
FILE	TVL.B1.FWD
SCALE	1"=200'
PLATE No.	B3

Lake Tahoe Airport - 2016 FWD Deflection Data
Runway 18-36
(Station 0+00 at R/W 36 End)

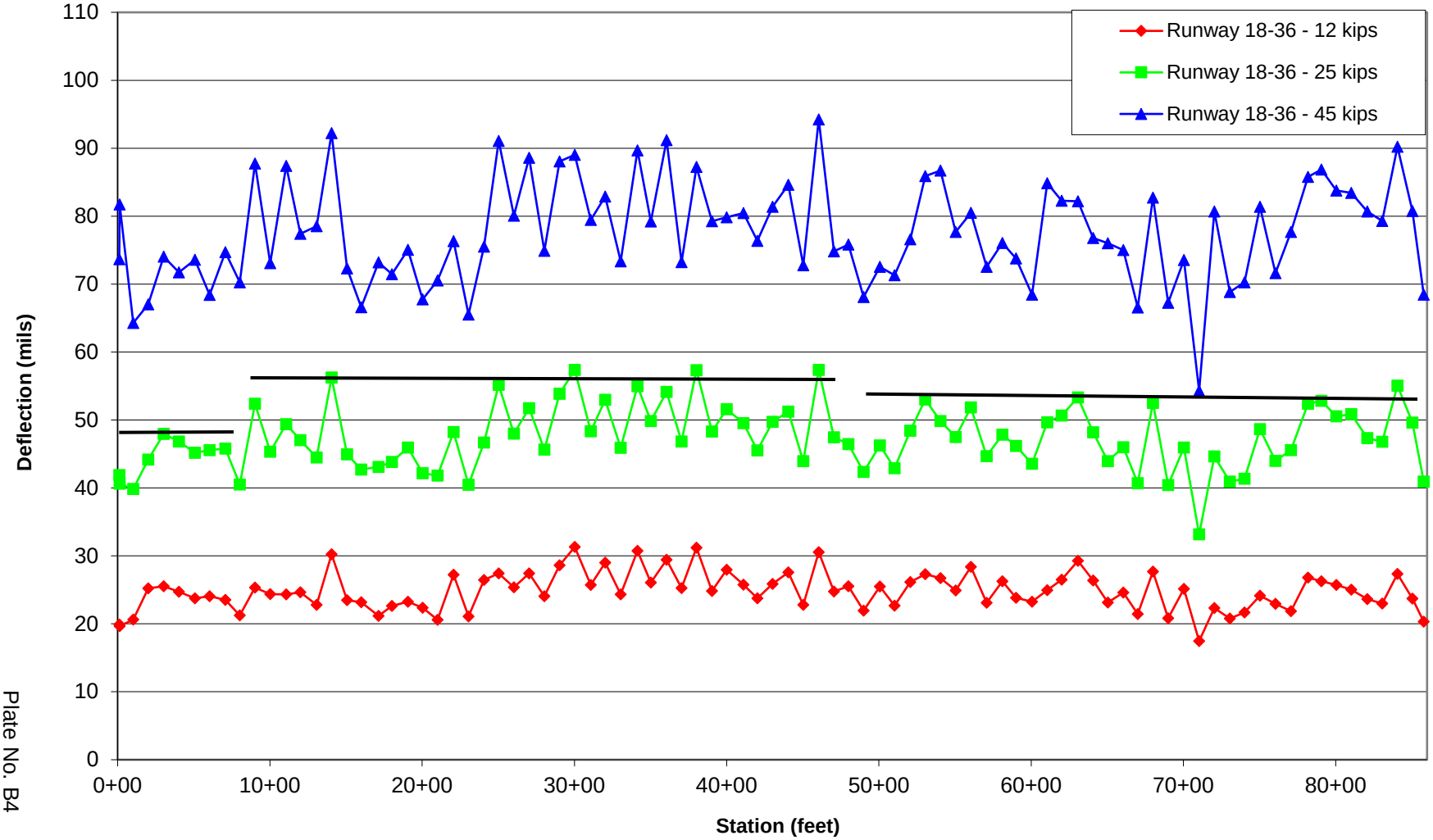


Plate No. B4

Lake Tahoe Airport - 2016 FWD Deflection Data
Taxiways B, A, & K
(Station 0+00 at R/W 36 End)

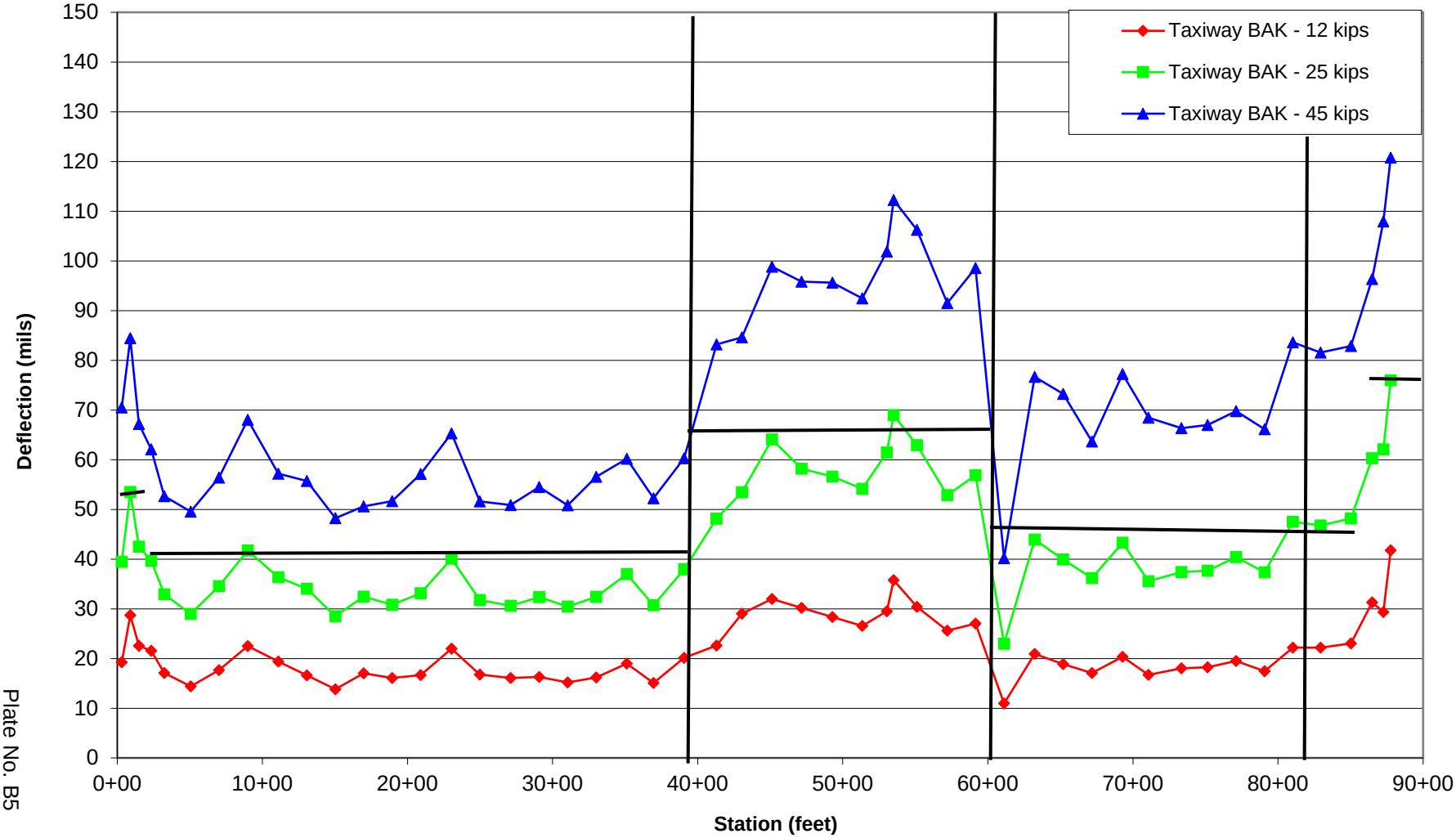


Plate No. B5

Lake Tahoe Airport - 2016 FWD Deflection Data
Taxiway E
(Station 0+00 at R/W)

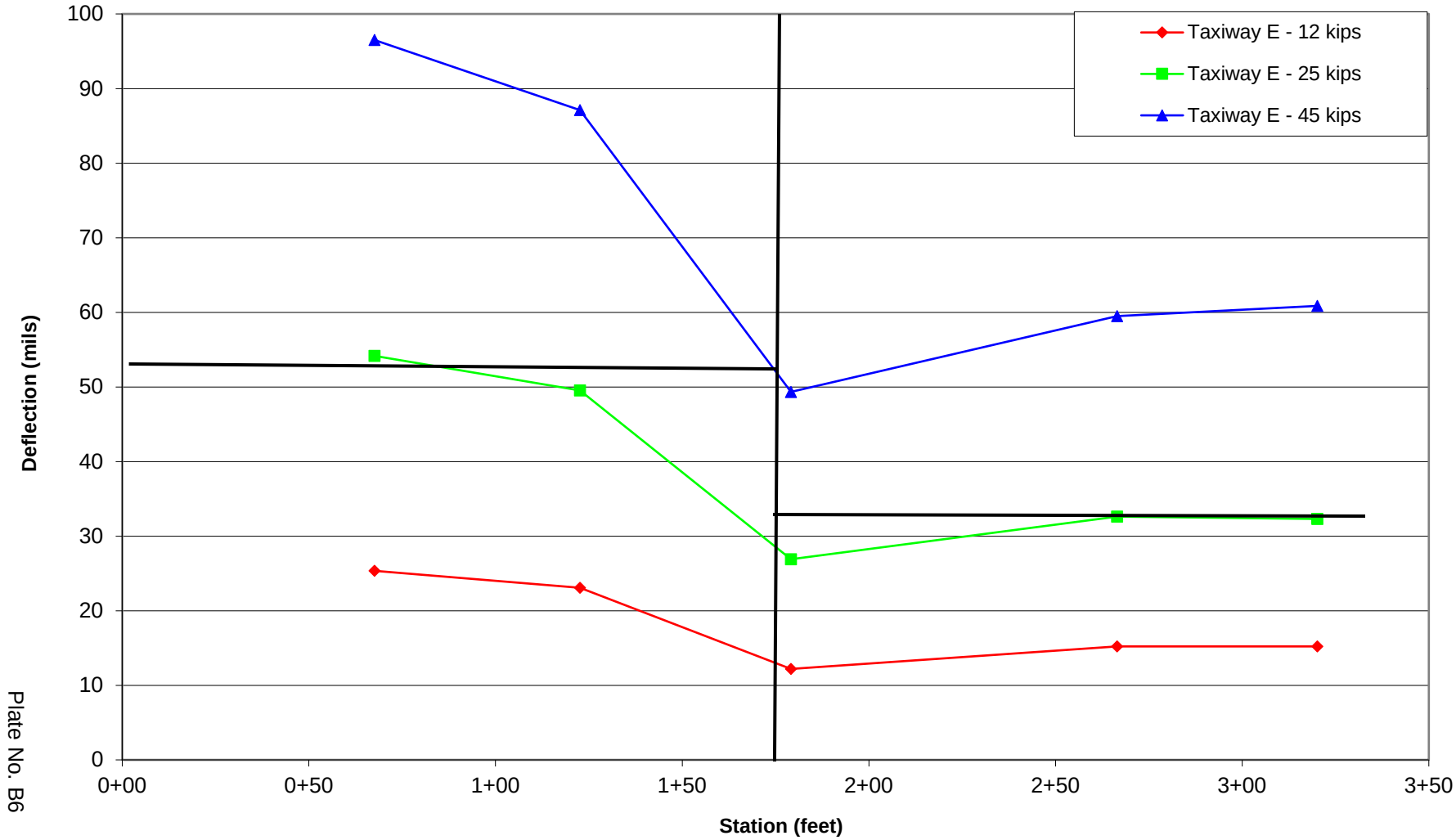


Plate No. B6

Lake Tahoe Airport - 2016 FWD Deflection Data
Taxiway F
(Station 0+00 at R/W)

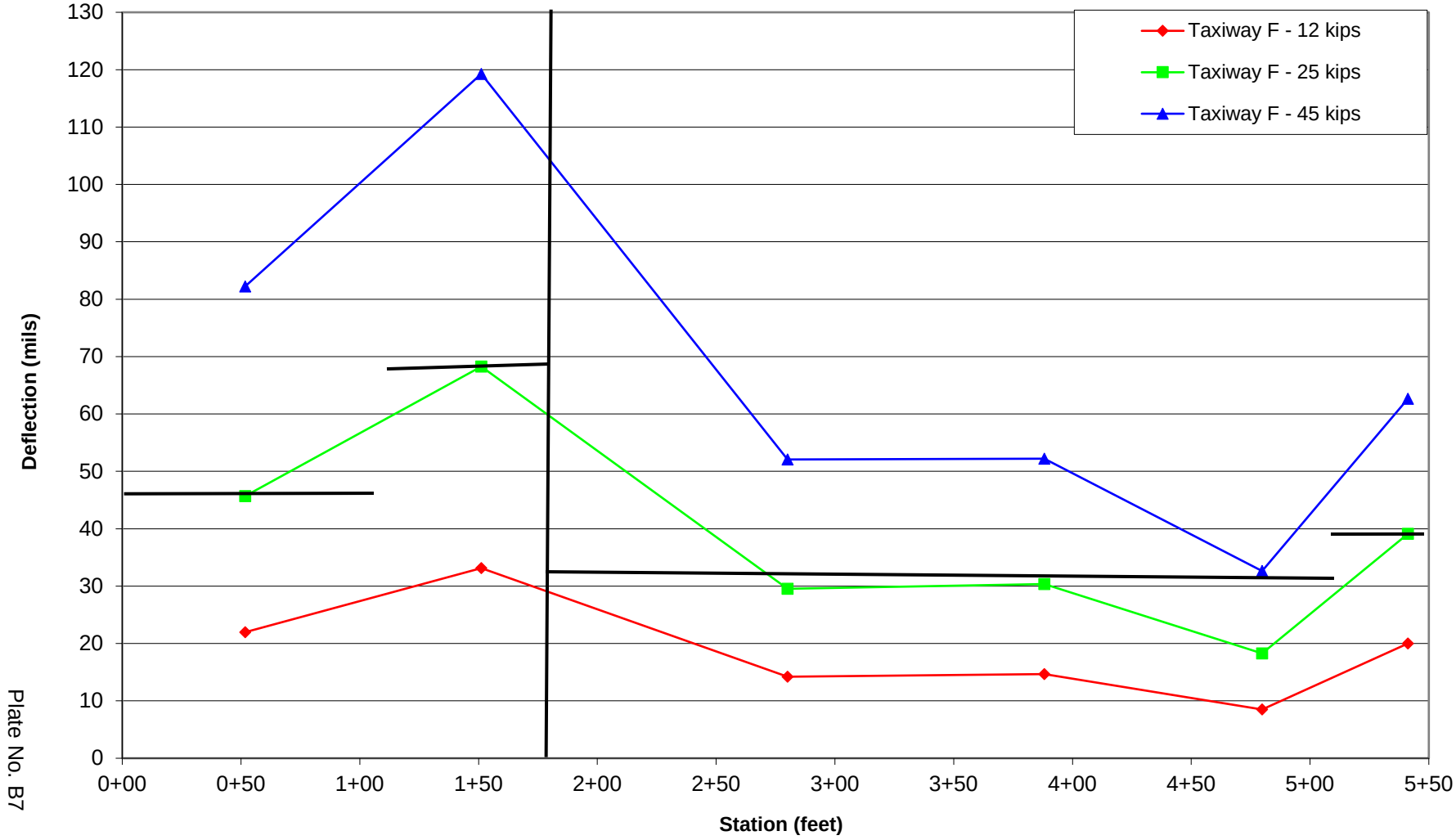


Plate No. B7

Lake Tahoe Airport - 2016 FWD Deflection Data
Taxiway H
(Station 0+00 at R/W)

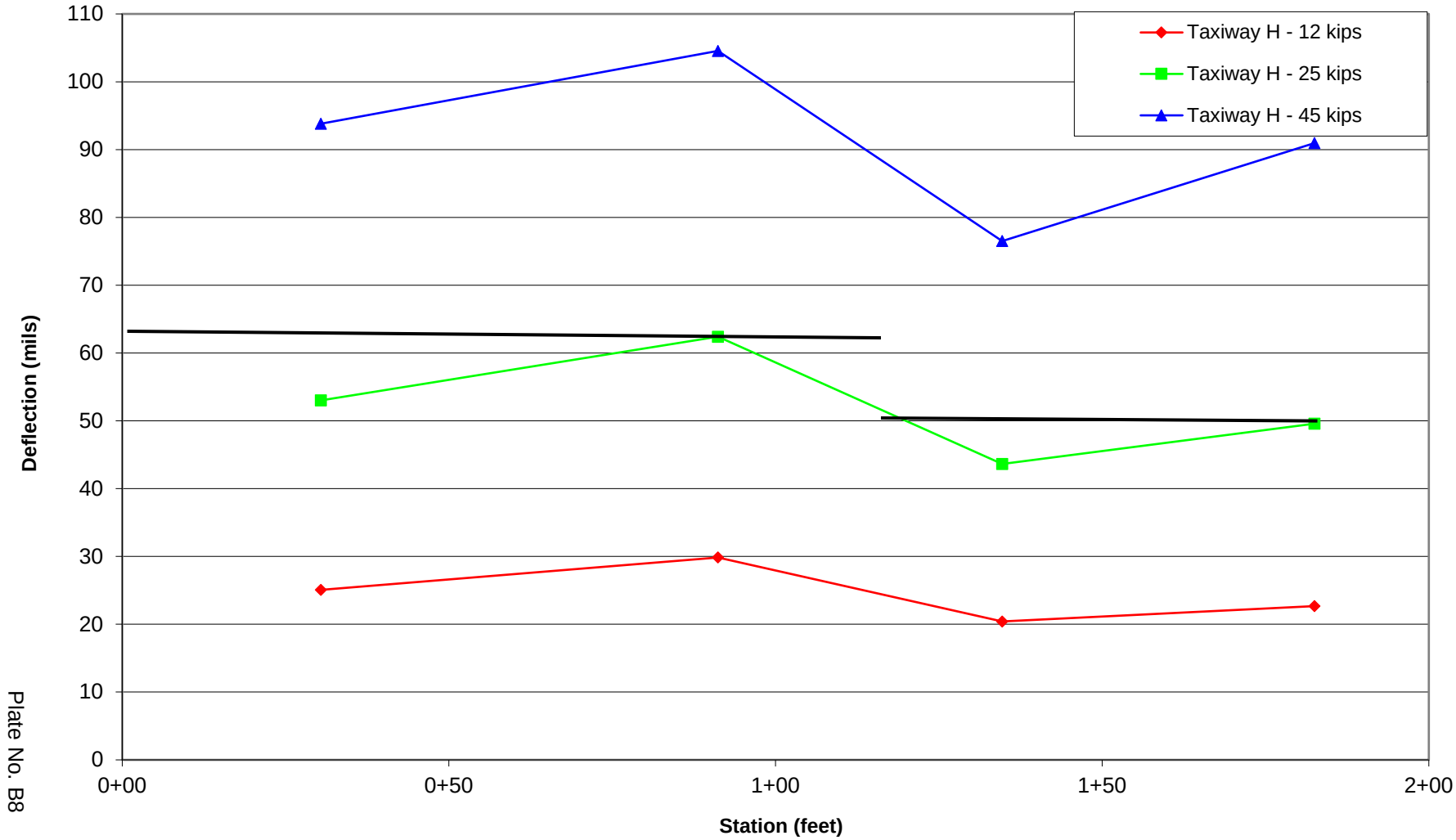


Plate No. B8

Lake Tahoe Airport - 2016 FWD Deflection Data
Taxiway J
(Station 0+00 at R/W)

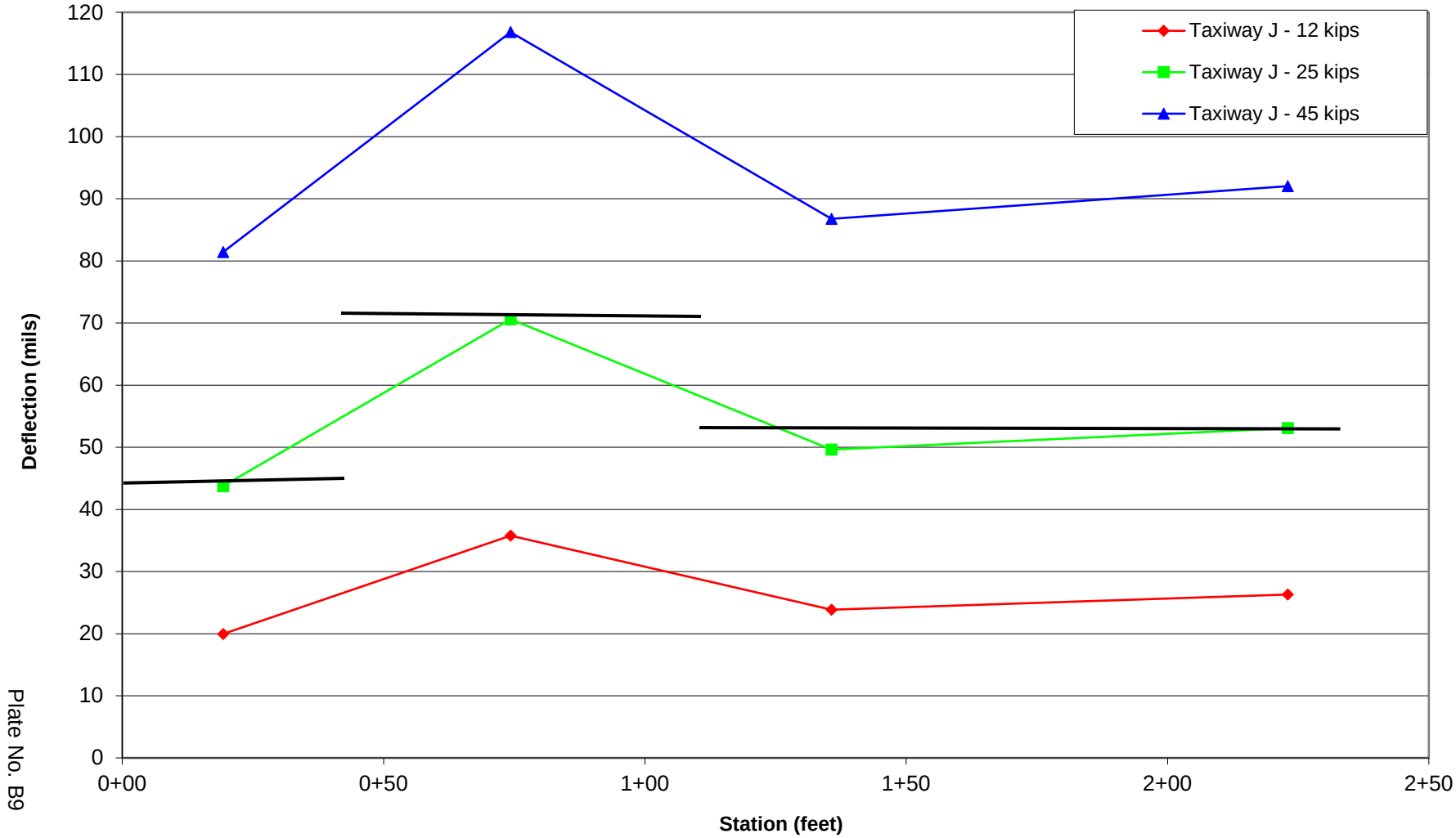


Plate No. B9

Lake Tahoe Airport - 2016 FWD Deflection Data
Taxiway G
(Station 0+00 at T/W A)

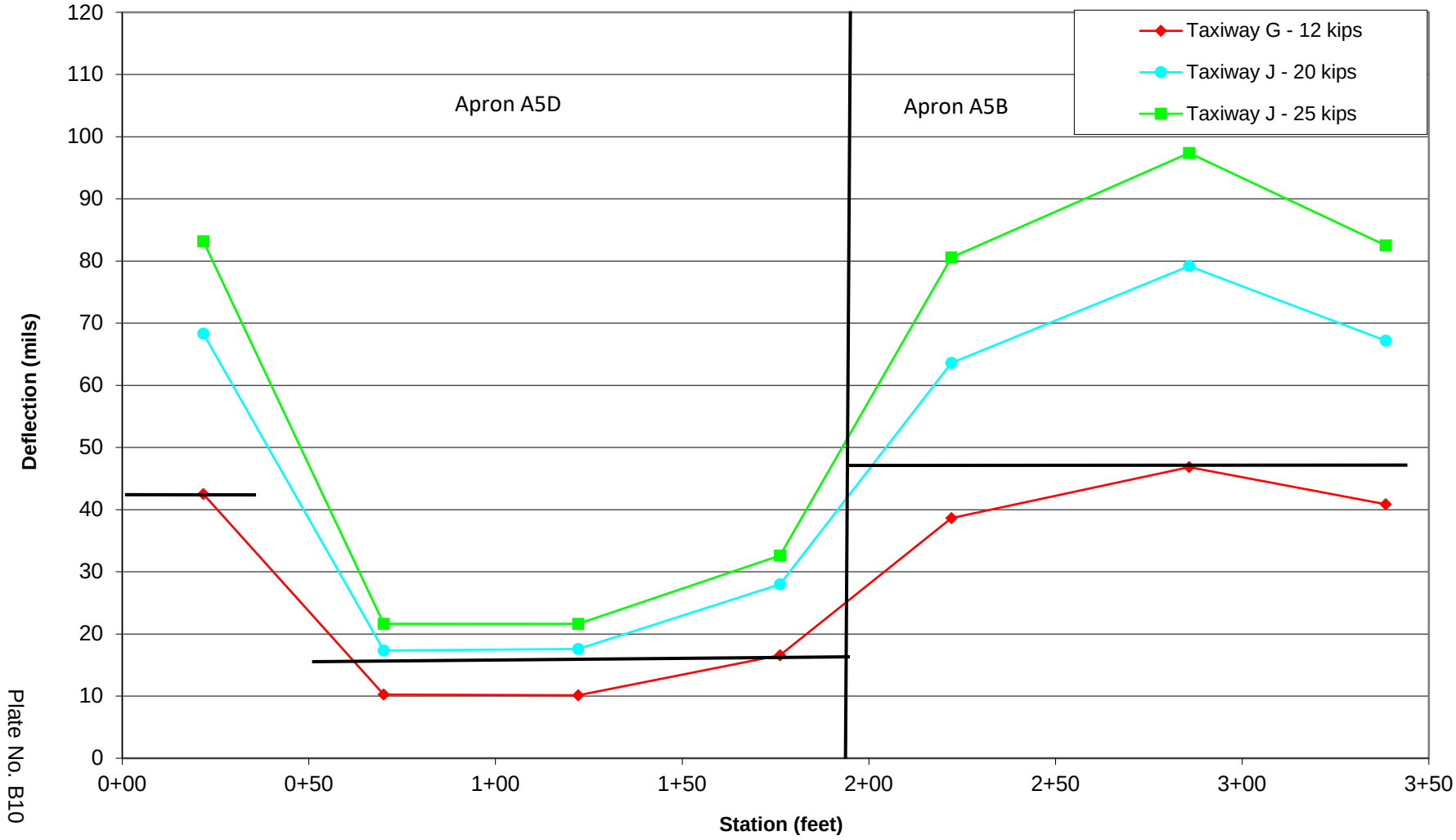


Plate No. B10

Lake Tahoe Airport - 2016 FWD Deflection Data
Apron 1
(Station 0+00 at South End)

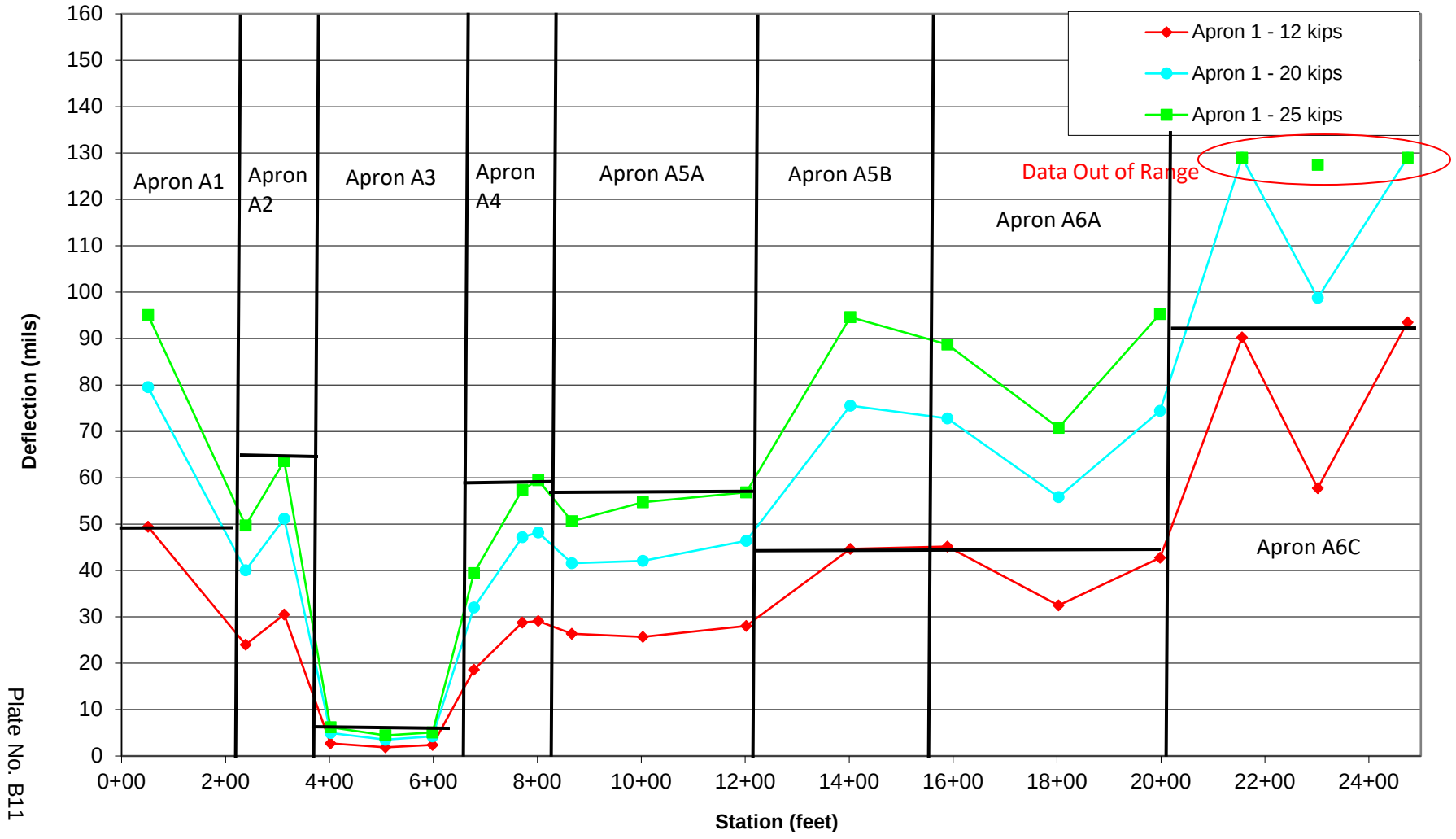


Plate No. B11

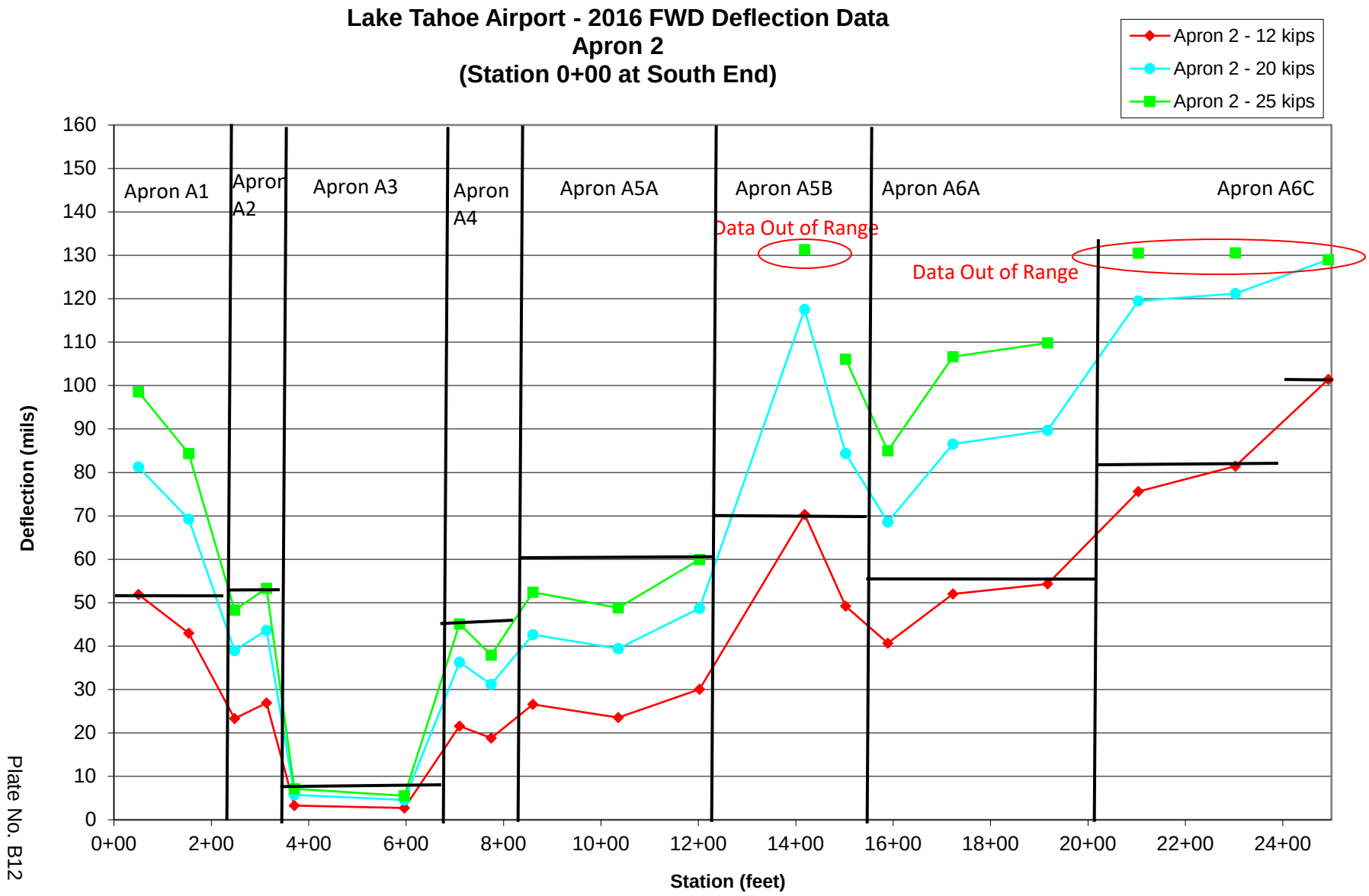

Lake Tahoe Airport - 2016 FWD Deflection Data
Apron 2
(Station 0+00 at South End)
Apron 2 - 12 kips
Apron 2 - 20 kips
Apron 2 - 25 kips
Deflection (mils)
Station (feet)
Apron A1
Apron A2
Apron A3
Apron A4
Apron A5A
Apron A5B
Apron A6A
Apron A6C
Data Out of Range
Data Out of Range
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
0+00
2+00
4+00
6+00
8+00
10+00
12+00
14+00
16+00
18+00
20+00
22+00
24+00

Plate No. B12

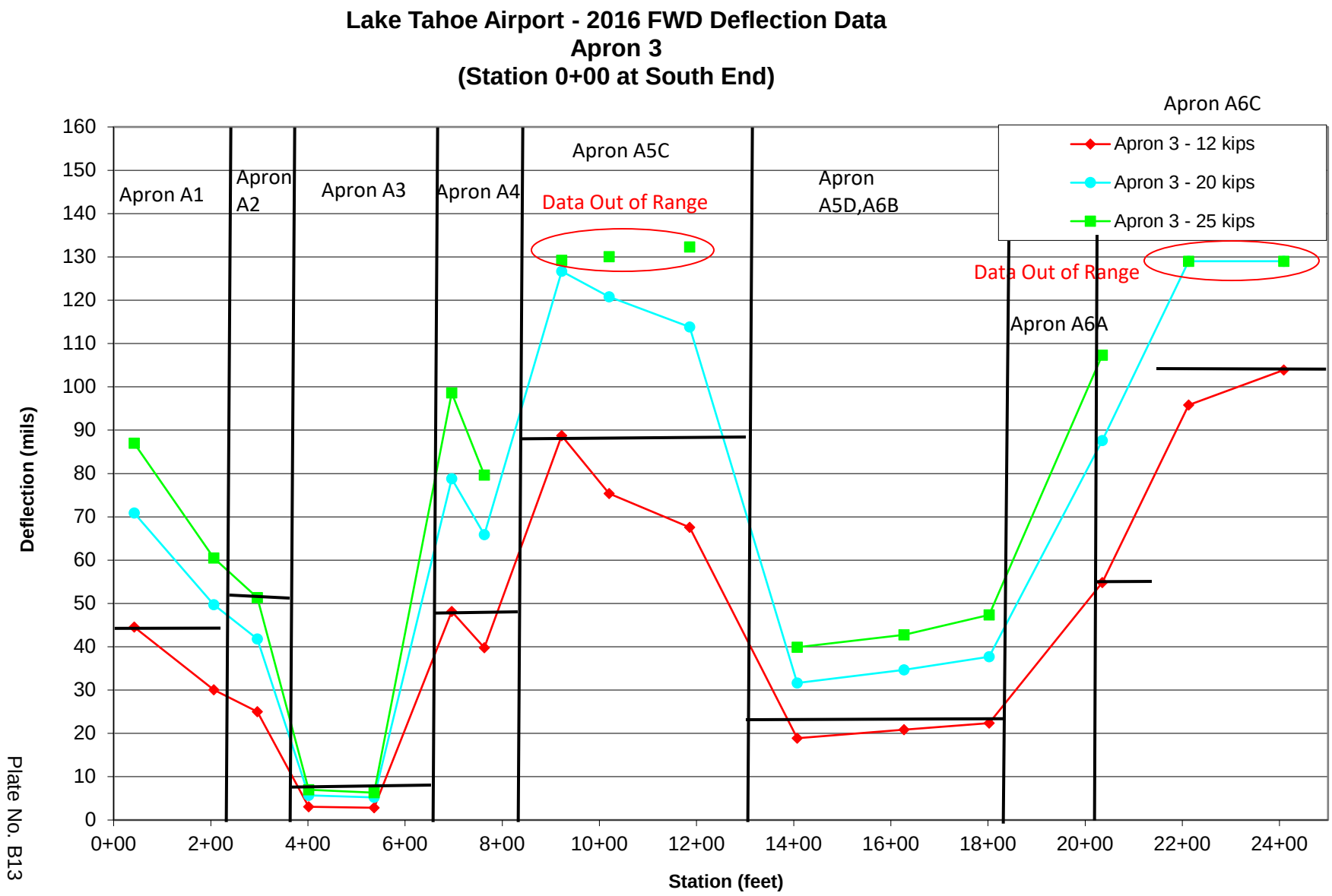

Lake Tahoe Airport - 2016 FWD Deflection Data
Apron 3
(Station 0+00 at South End)
Deflection (mils)
Station (feet)
Apron A1
Apron A2
Apron A3
Apron A4
Apron A5C
Apron A5D,A6B
Apron A6A
Apron A6C
Data Out of Range
Data Out of Range
Apron 3 - 12 kips
Apron 3 - 20 kips
Apron 3 - 25 kips
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
0+00
2+00
4+00
6+00
8+00
10+00
12+00
14+00
16+00
18+00
20+00
22+00
24+00

Plate No. B13

Lake Tahoe Airport - 2016 FWD Deflection Data
Apron T/W H
(Station 0+00 at Apron)

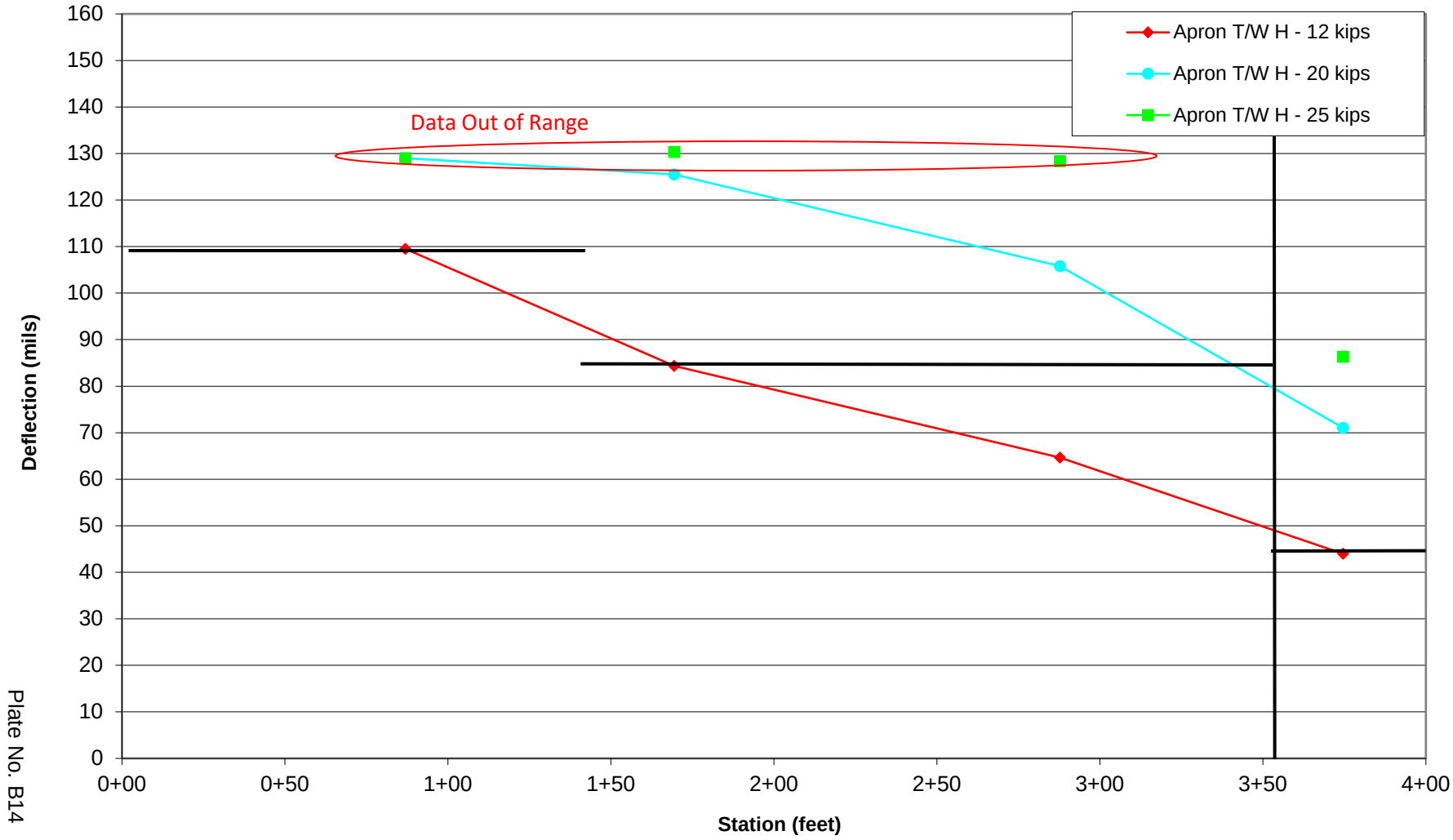


Plate No. B14

Lake Tahoe Airport - 2016 FWD Deflection Data
H1 - Tee Hangar Taxilanes
(Station 0+00 at West End)

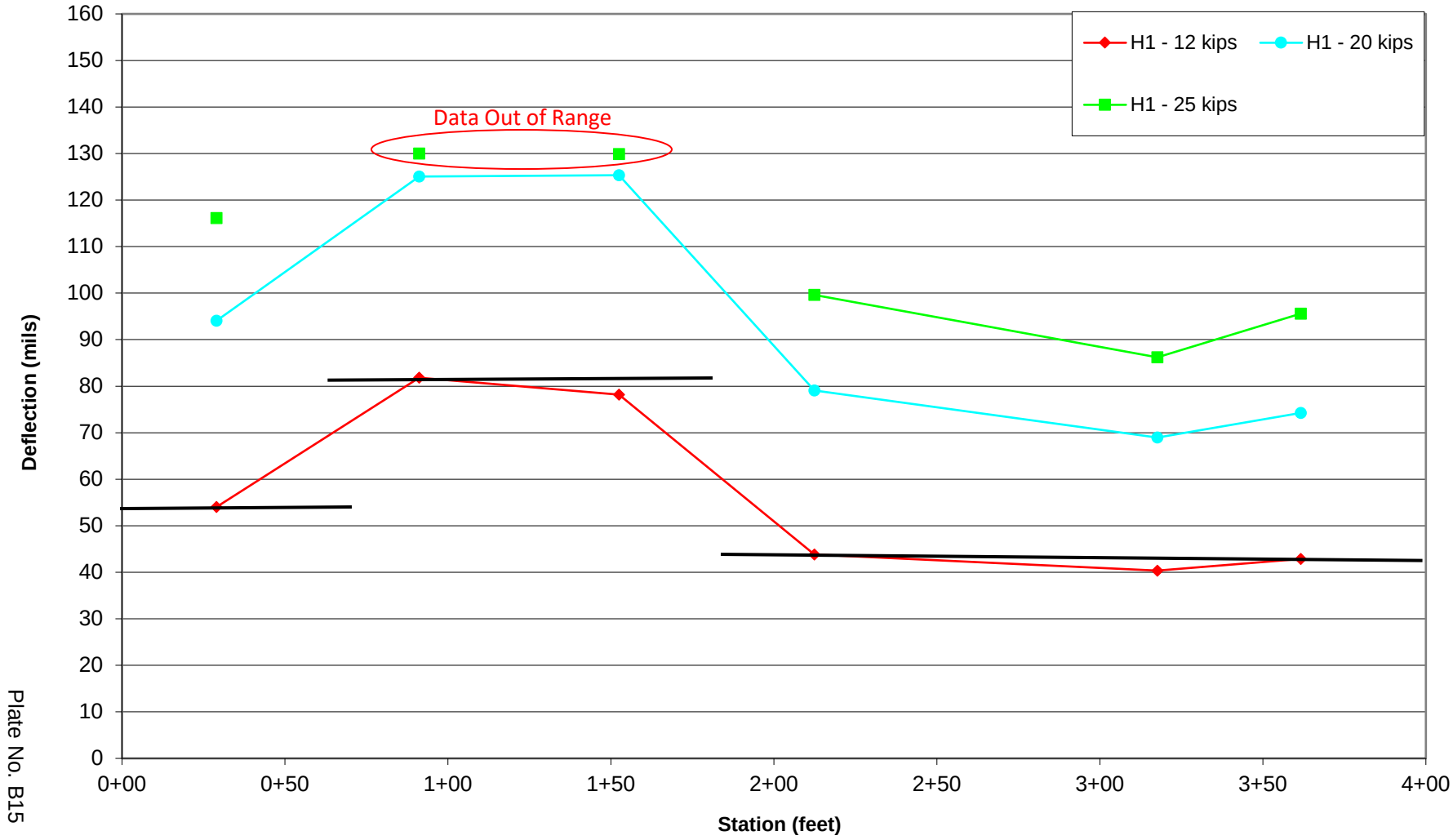


Plate No. B15

Lake Tahoe Airport - 2016 FWD Deflection Data
H2 - Tee Hangar Taxilanes
(Station 0+00 at West End)

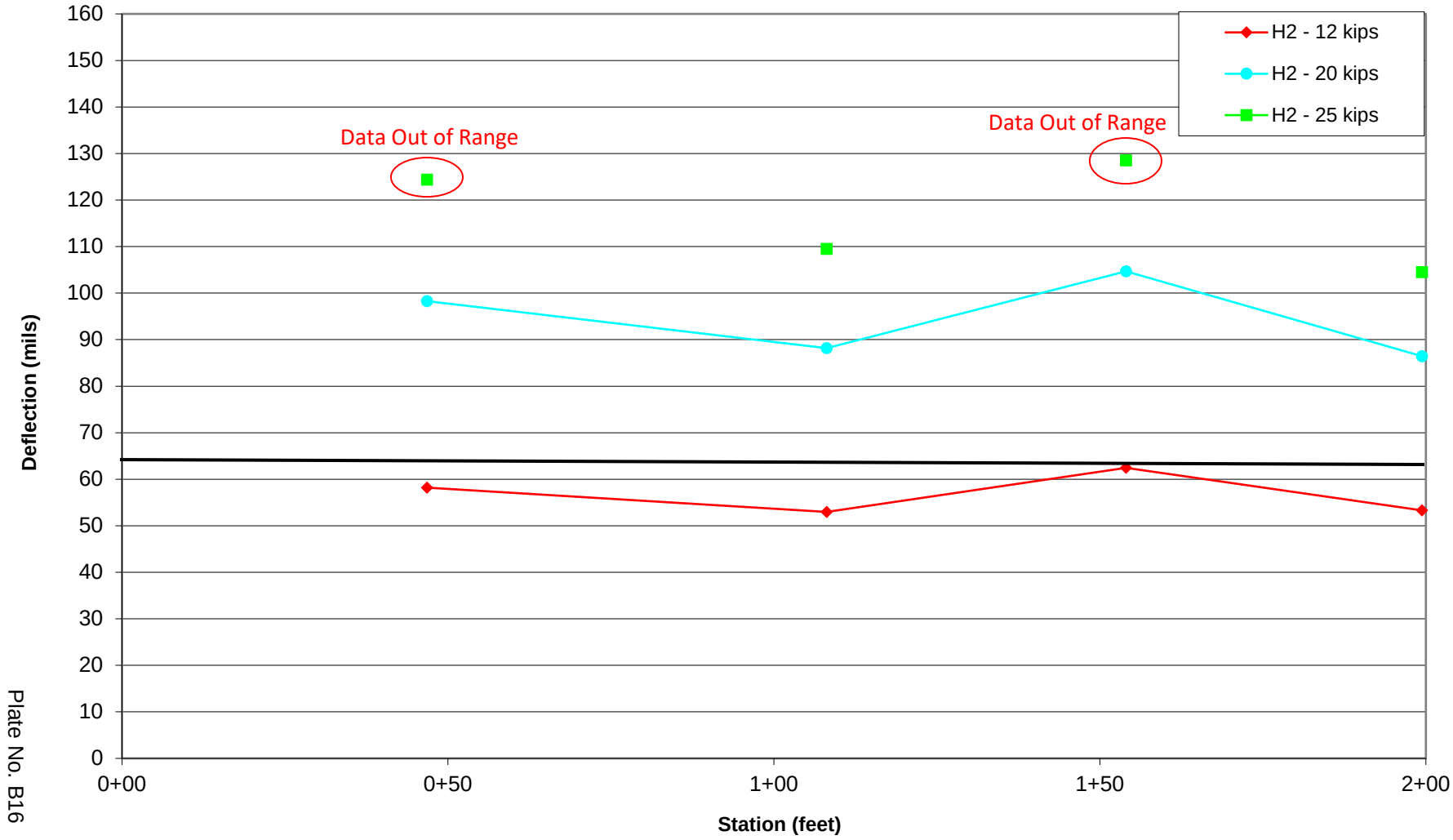


Plate No. B16

Lake Tahoe Airport - 2016 FWD Deflection Data
H3 - Tee Hangar Taxilanes
(Station 0+00 at West End)

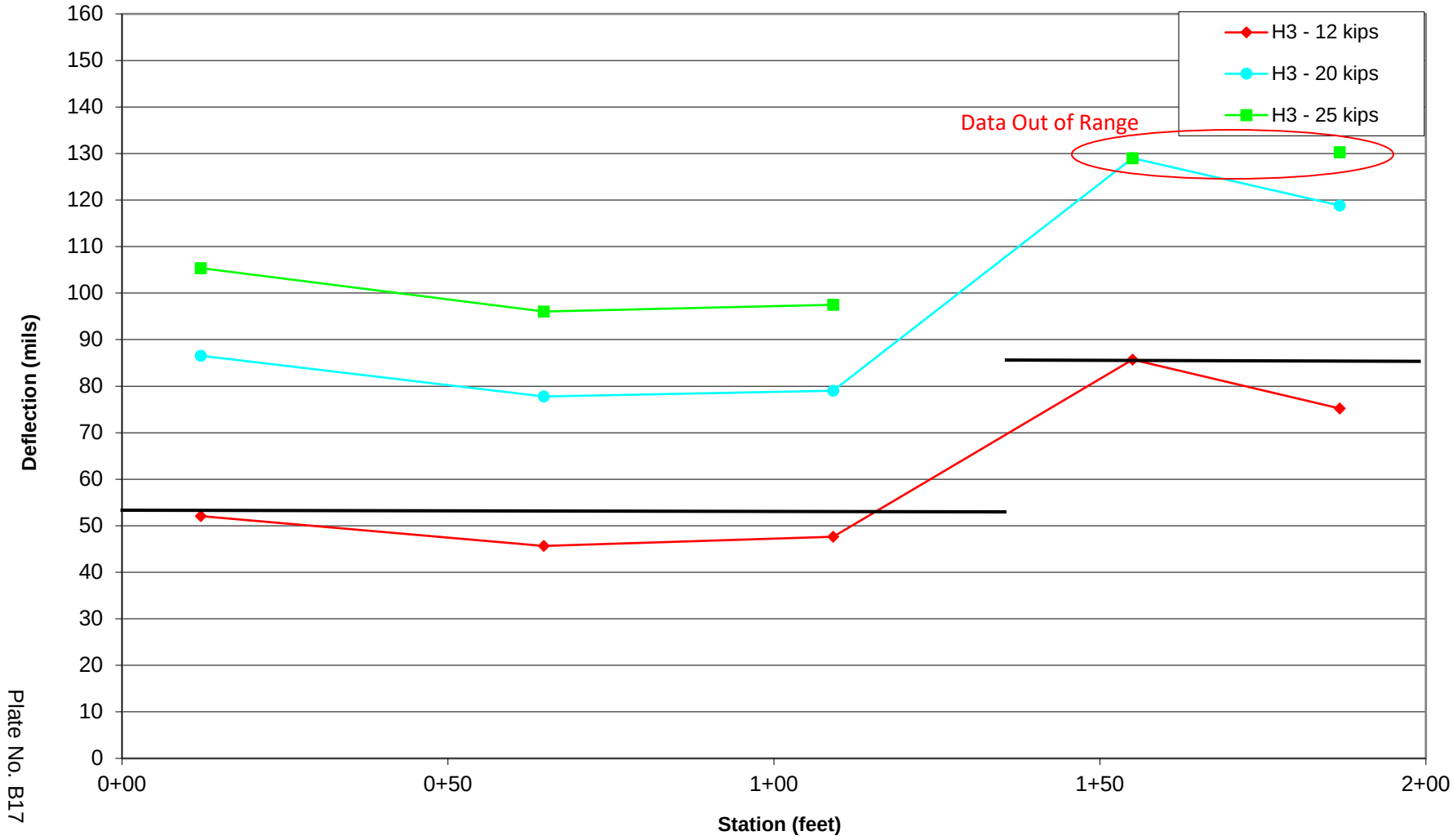


Plate No. B17

Lake Tahoe Airport - 2016 FWD Deflection Data
H4 - Tee Hangar Taxilanes
(Station 0+00 at West End)

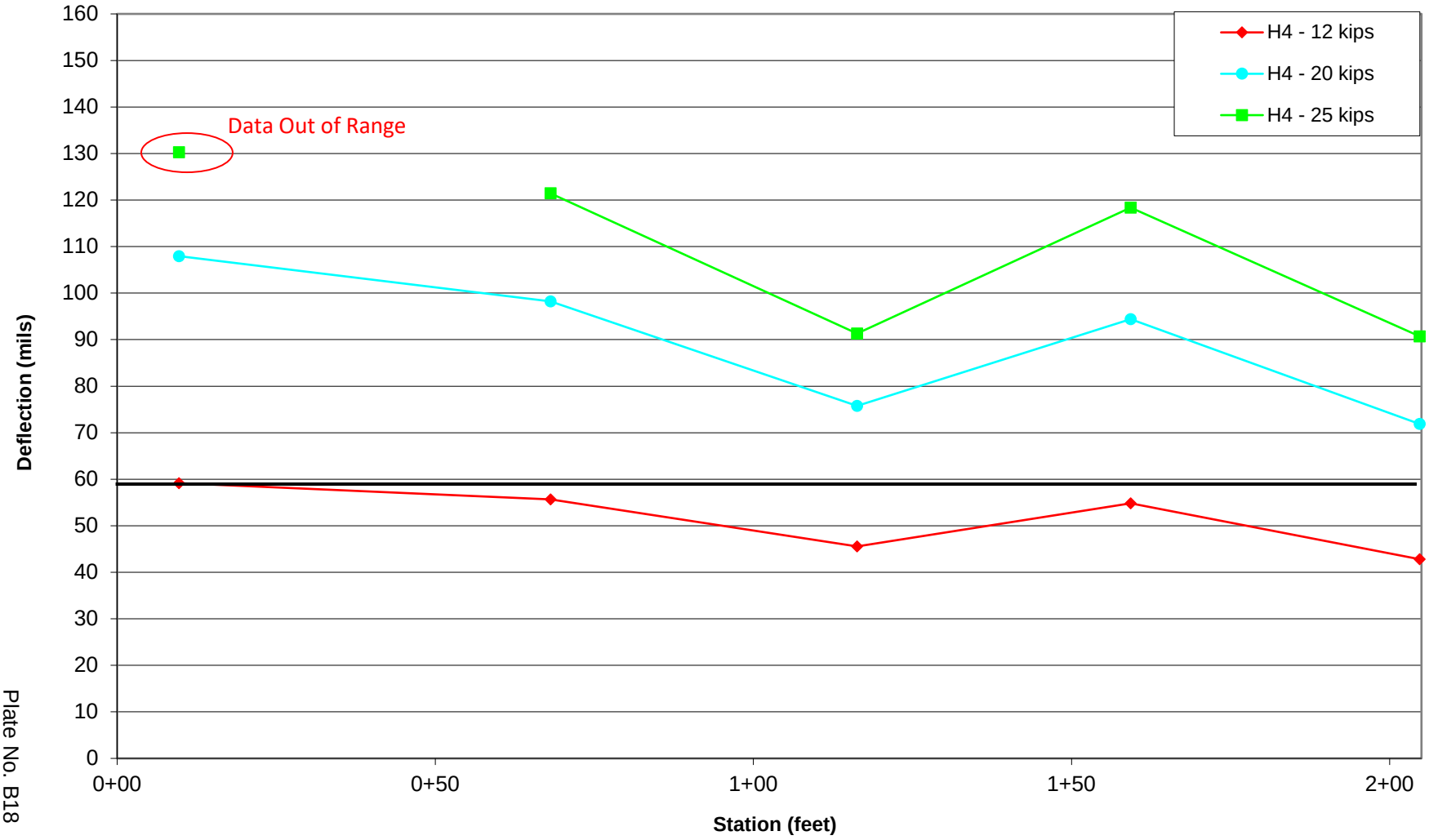


Plate No. B18

Lake Tahoe Airport - 2016 FWD Deflection Data
H5 - Tee Hangar Taxilanes
(Station 0+00 at West End)

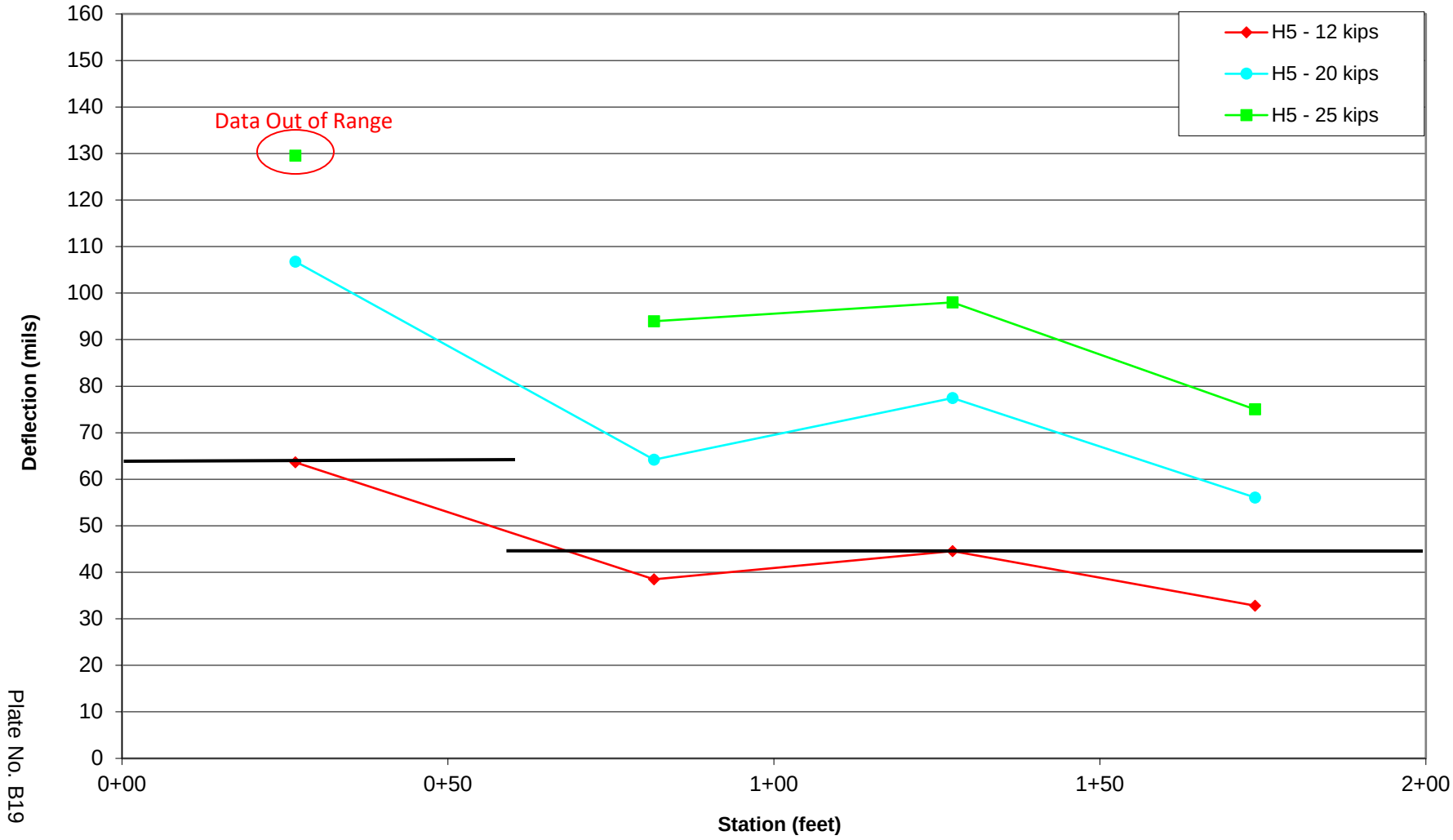


Plate No. B19

Lake Tahoe Airport - 2016 FWD Deflection Data
H6 - Tee Hangar Taxilanes
(Station 0+00 at Apron)

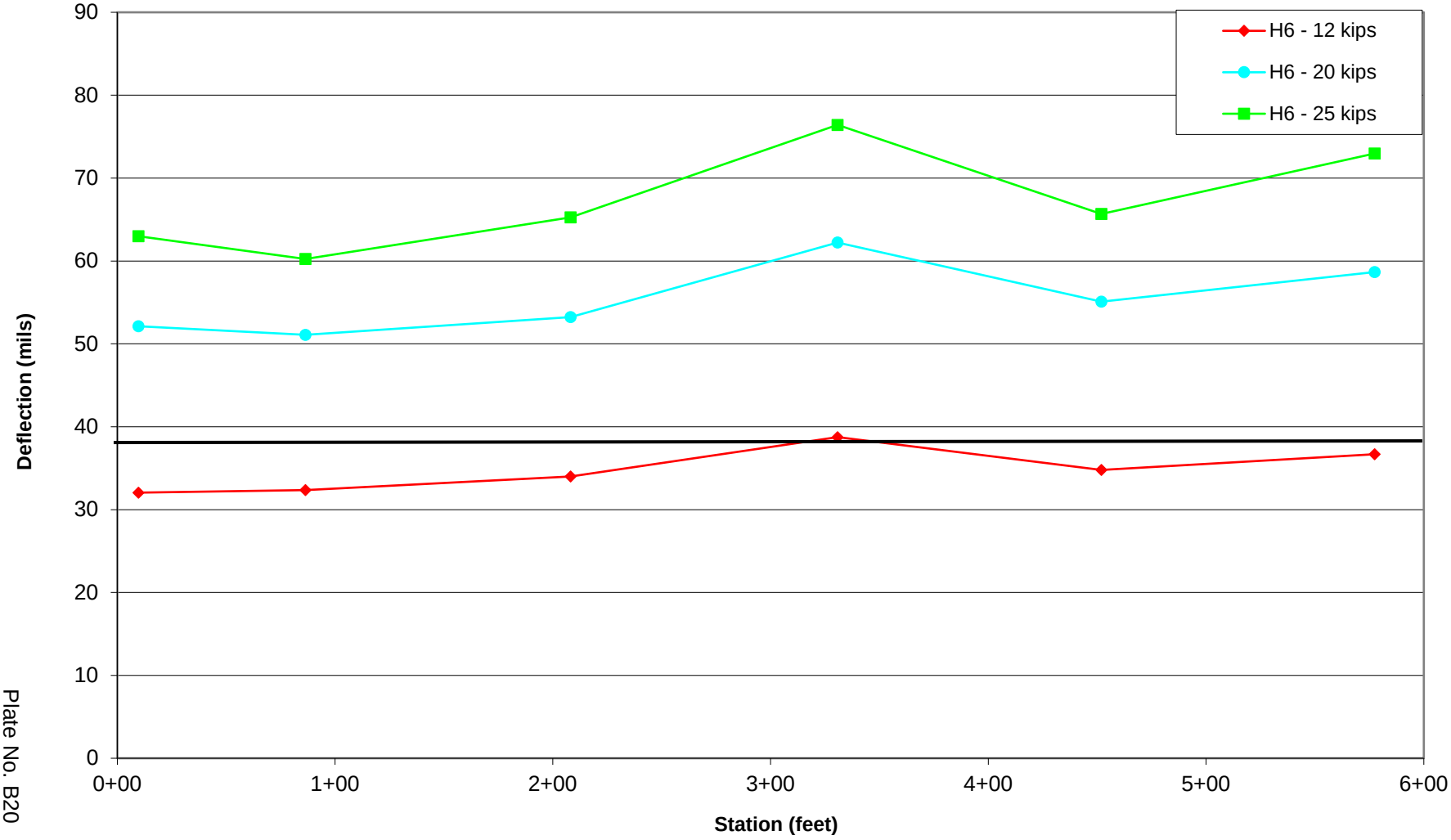


Plate No. B20

Lake Tahoe Airport - 2016 FWD Deflection Data
Road 1 - Terminal Access Road
(Station 0+00 at South End)

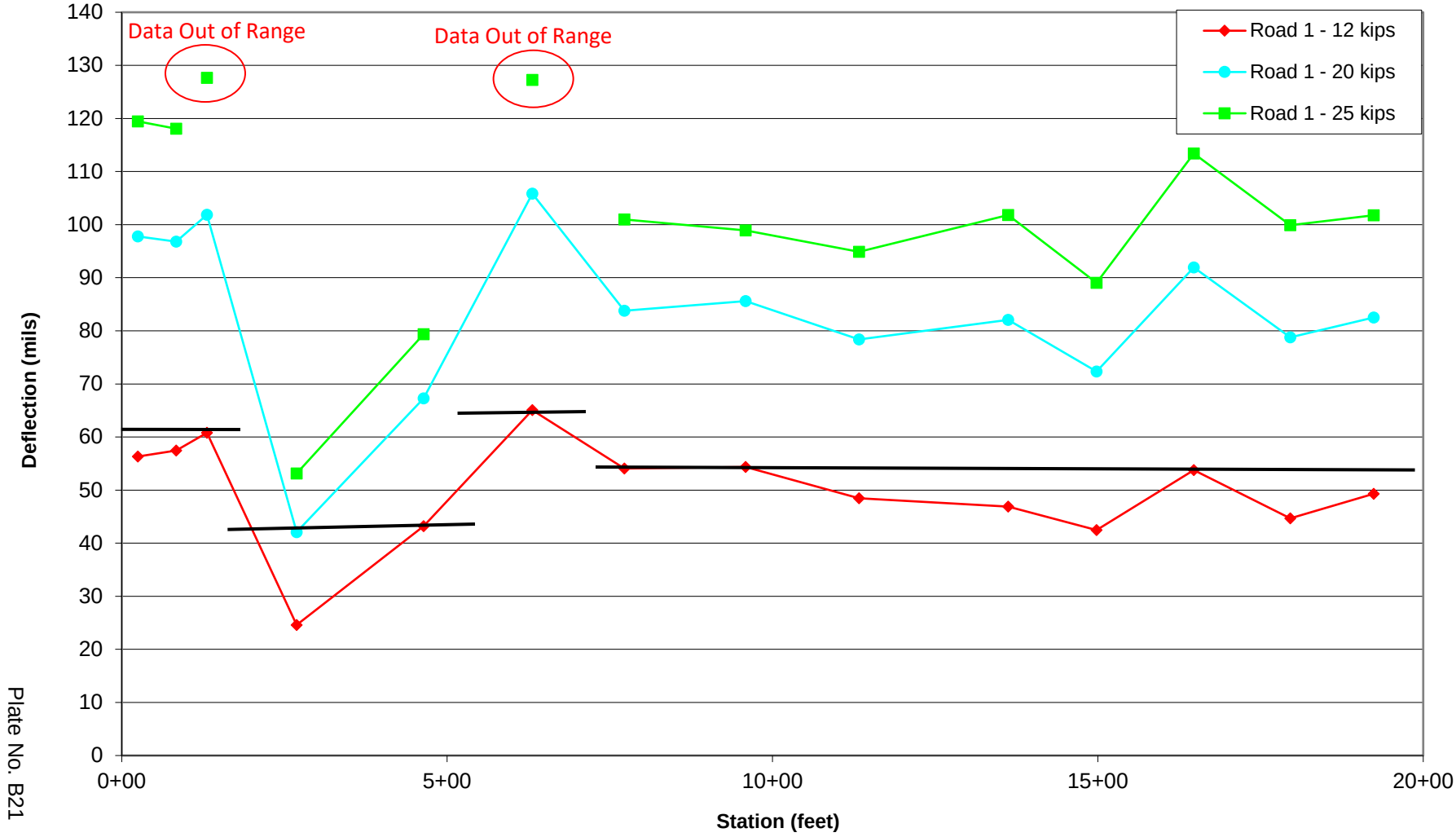


Plate No. B21

Lake Tahoe Airport - 2016 FWD Deflection Data
Road 2 - FBO Office to North Gate V2
(Station 0+00 at Gate V1)

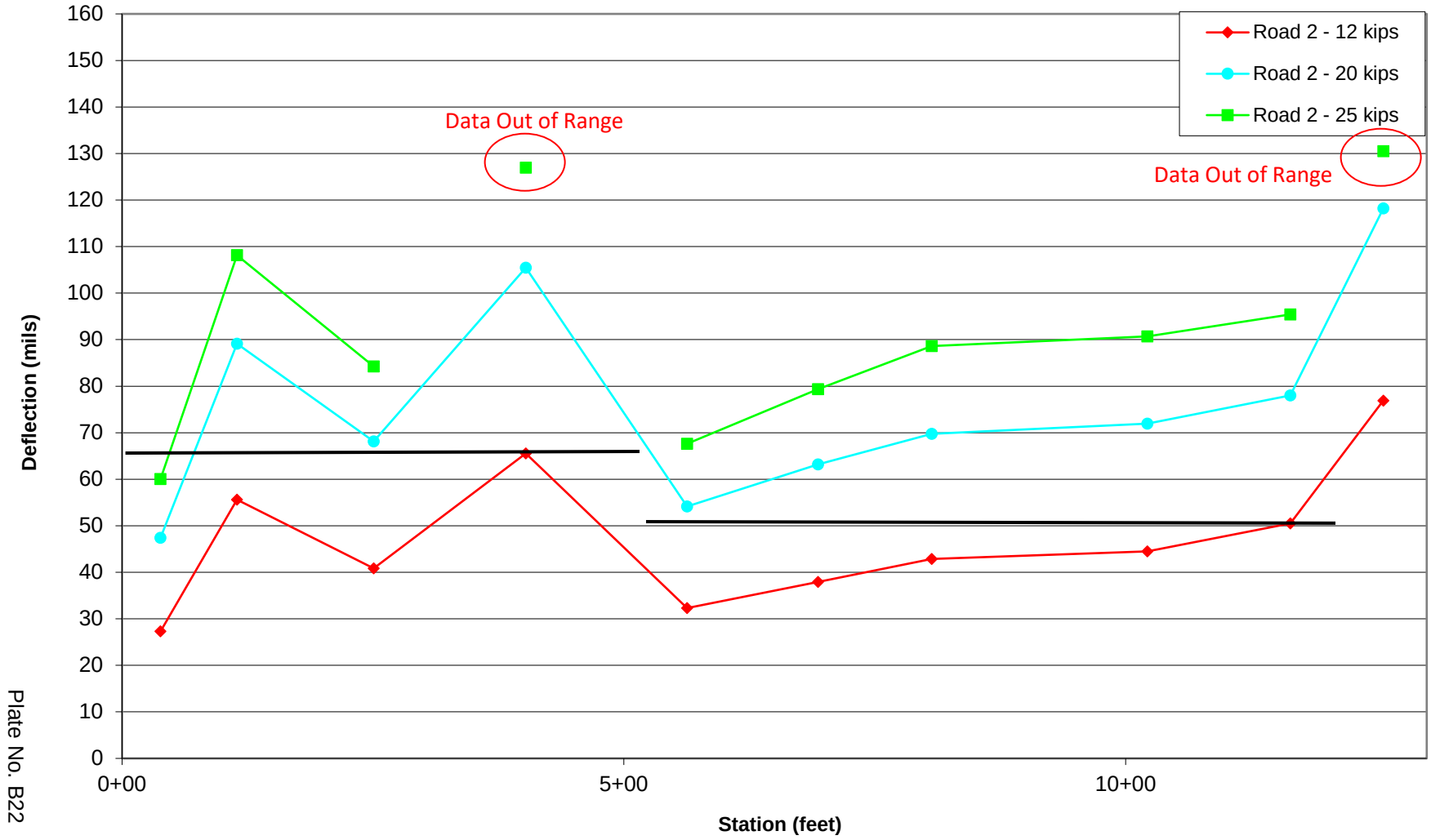


Plate No. B22

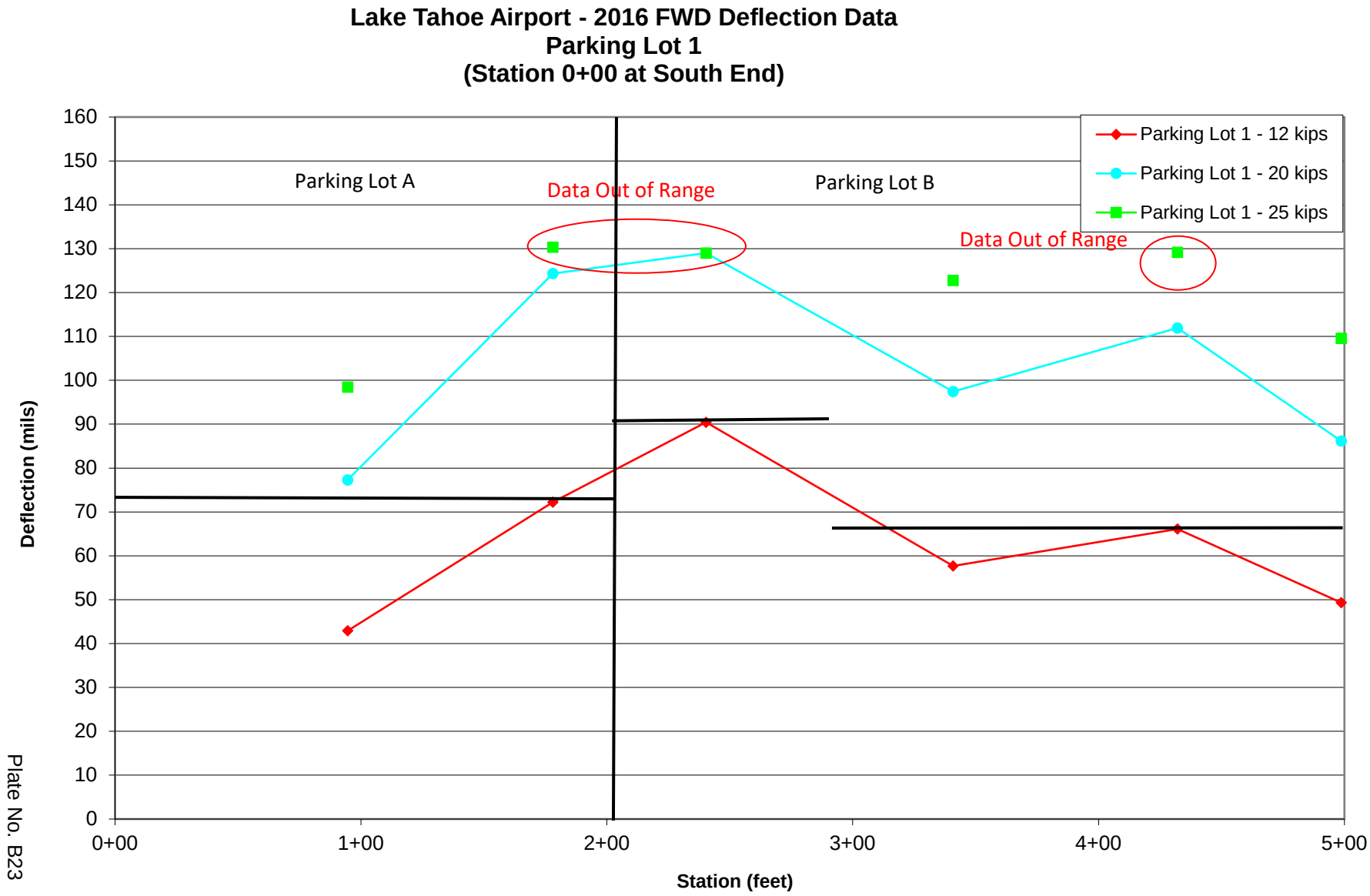

Lake Tahoe Airport - 2016 FWD Deflection Data
Parking Lot 1
(Station 0+00 at South End)
Parking Lot 1 - 12 kips
Parking Lot 1 - 20 kips
Parking Lot 1 - 25 kips
Parking Lot A
Parking Lot B
Data Out of Range
Data Out of Range
Deflection (mils)
Station (feet)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
0+00
1+00
2+00
3+00
4+00
5+00

Plate No. B23

Lake Tahoe Airport - 2016 FWD Deflection Data
Parking Lot 2
(Station 0+00 at South End)

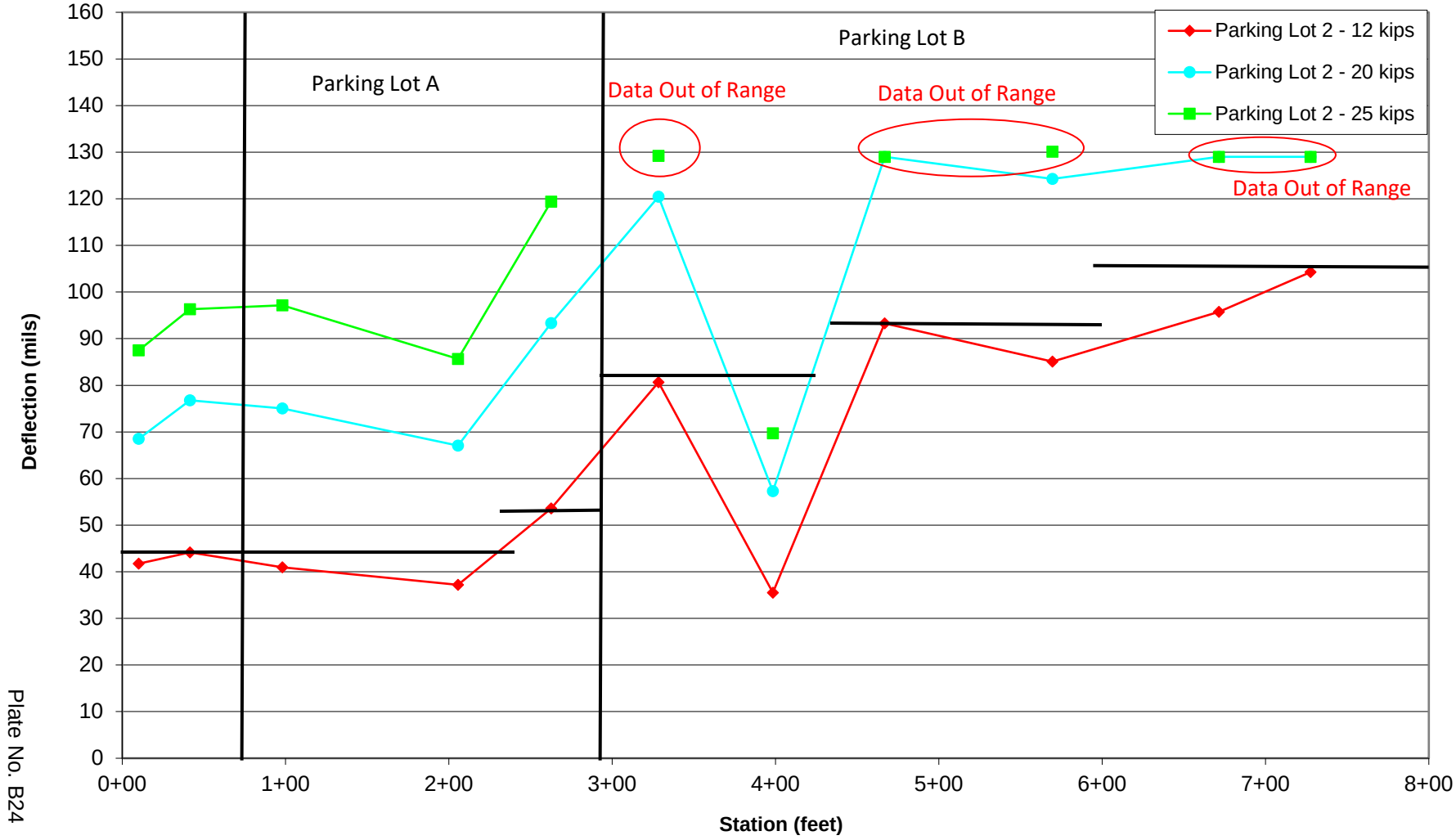


Plate No. B24

Appendix C
Pavement Condition Survey
Pavement Maintenance Management Plan

As an aid in determining the performance to date of the existing pavements and to provide a guide for the test program conducted in this study a detailed condition survey of all existing pavements was made. This survey consisted of visually observing all pavements and noting deficiencies in areas of distress. A drawing identifying the pavements surveyed is included in this appendix as Plate No. C1. Plate No. C2 gives the stationing control for all segments of pavement included in this report. A drawing indicating the PCI (Pavement Condition Index) rating of each segment of pavement in 2016 by color is included as Plate No. C3.

The Pavement Condition Survey and Rehabilitation Schedules shown in Tables C1 through C36 include the following information for each pavement segment evaluated:

- F.A.A. Pavement Strength Survey
- F.A.A. Existing Pavement Section, FAA Form 5335
- Date constructed
- Rehabilitation record
- Pavement condition including Pavement Condition Index (PCI)
- Pavement Condition Number (PCN)
- Pavement evaluation
- Traffic Index
- Pavement remaining life analysis
- Recommended rehabilitation.

Routine remarking of the pavements is necessary every 8 to 10 years. The scheduled remarking is not shown in Appendix C or Table 5-3, but it is included in each of the rehabilitation and maintenance project cost estimates.

The table of contents of this appendix is shown below:

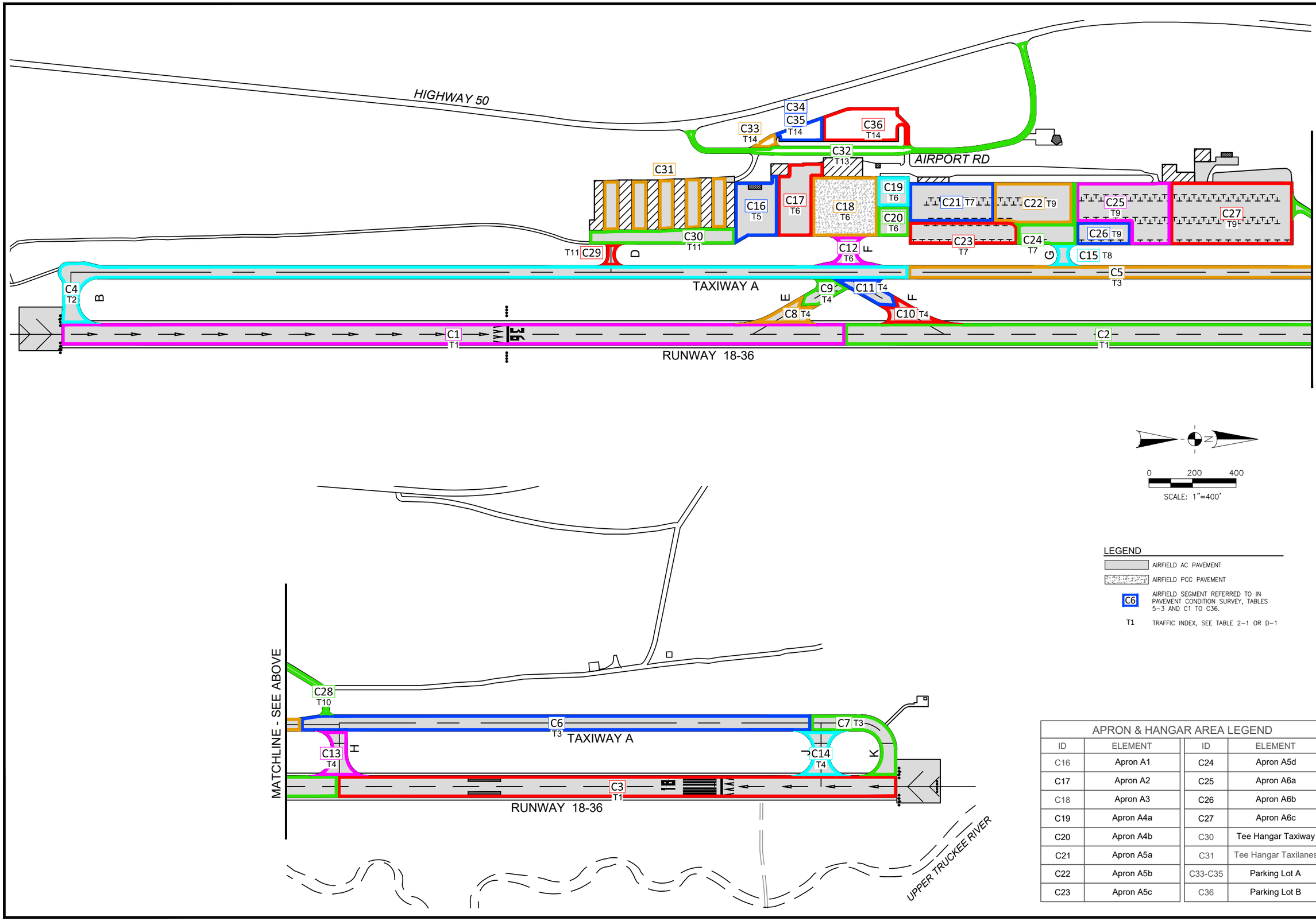
Plates

Plate No. C1	Pavement Segment Identification
Plate No. C2	Stationing Control Plan
Plate No. C3	Surface Distress – Pavement Condition Index (PCI) - 2016

Appendix C
Pavement Condition Survey
Pavement Maintenance Management Plan

Tables C1 through C36 – Pavement Condition Survey and Rehabilitation Schedule

Tables No. C1 through C3	Runway 18-36
Tables No. C4 through C7	Taxiways B, A, and K
Tables No. C8 through C9	Taxiway E
Tables No. C10 through C12	Taxiway F
Table No. C13	Taxiway H
Table No. C14	Taxiway J
Table No. C15	Taxiway G
Table No. C16	Apron A1 (South of Terminal Apron)
Table No. C17	Apron A2 (South of Terminal Apron)
Table No. C18	Apron A3 (Terminal Apron)
Tables No. C19 through C20	Apron A4 (General Aviation Apron)
Tables No. C21 through C24	Apron A5 (General Aviation Apron)
Tables No. C25 through C27	Apron A6 (General Aviation Apron)
Table No. C28	Apron Taxiway H
Table No. C29	Taxiway D
Tables No. C30 through C31	Tee Hangar Taxilanes
Table No. C32	Terminal Access Road
Tables No. C33 through C36	Terminal Parking Lot



LEGEND

- AIRFIELD AC PAVEMENT
- AIRFIELD PCC PAVEMENT
- C6 — AIRFIELD SEGMENT REFERRED TO IN PAVEMENT CONDITION SURVEY, TABLES 5-3 AND C1 TO C36.
- T1 — TRAFFIC INDEX, SEE TABLE 2-1 OR D-1

APRON & HANGAR AREA LEGEND

ID	ELEMENT	ID	ELEMENT
C16	Apron A1	C24	Apron A5d
C17	Apron A2	C25	Apron A6a
C18	Apron A3	C26	Apron A6b
C19	Apron A4a	C27	Apron A6c
C20	Apron A4b	C30	Tee Hangar Taxiway
C21	Apron A5a	C31	Tee Hangar Taxilanes
C22	Apron A5b	C33-C35	Parking Lot A
C23	Apron A5c	C36	Parking Lot B

Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
6125 King Road, Suite 201 · Loomis, California 95650 (916) 652-4517

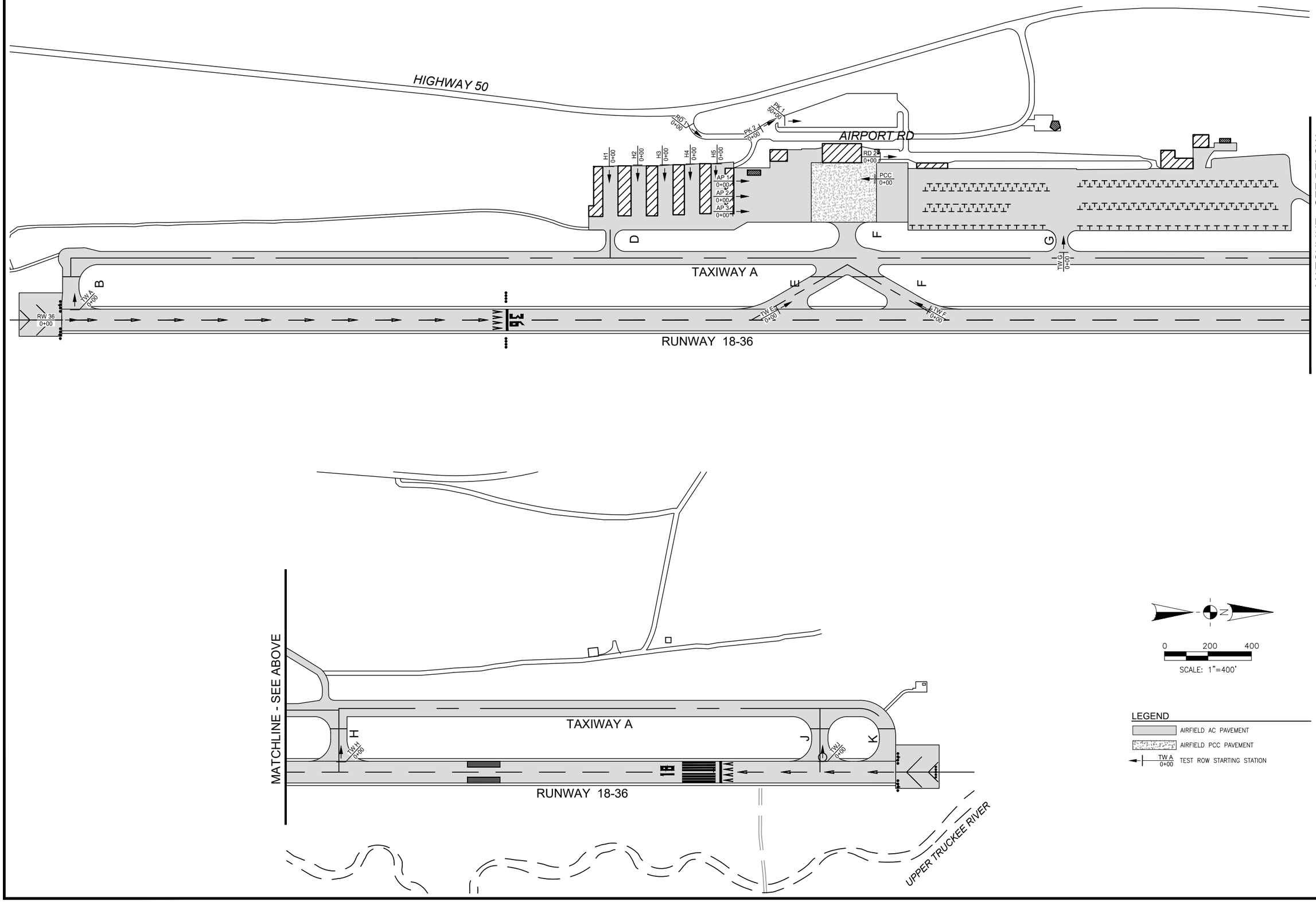
No.	REVISIONS	DATE

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

PAVEMENT EVALUATION

PAVEMENT SEGMENT IDENTIFICATION

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
FILE	TVL5-1.ArealDs
SCALE	1"=400'
PLATE No.	C1



Reinard W. Brandley
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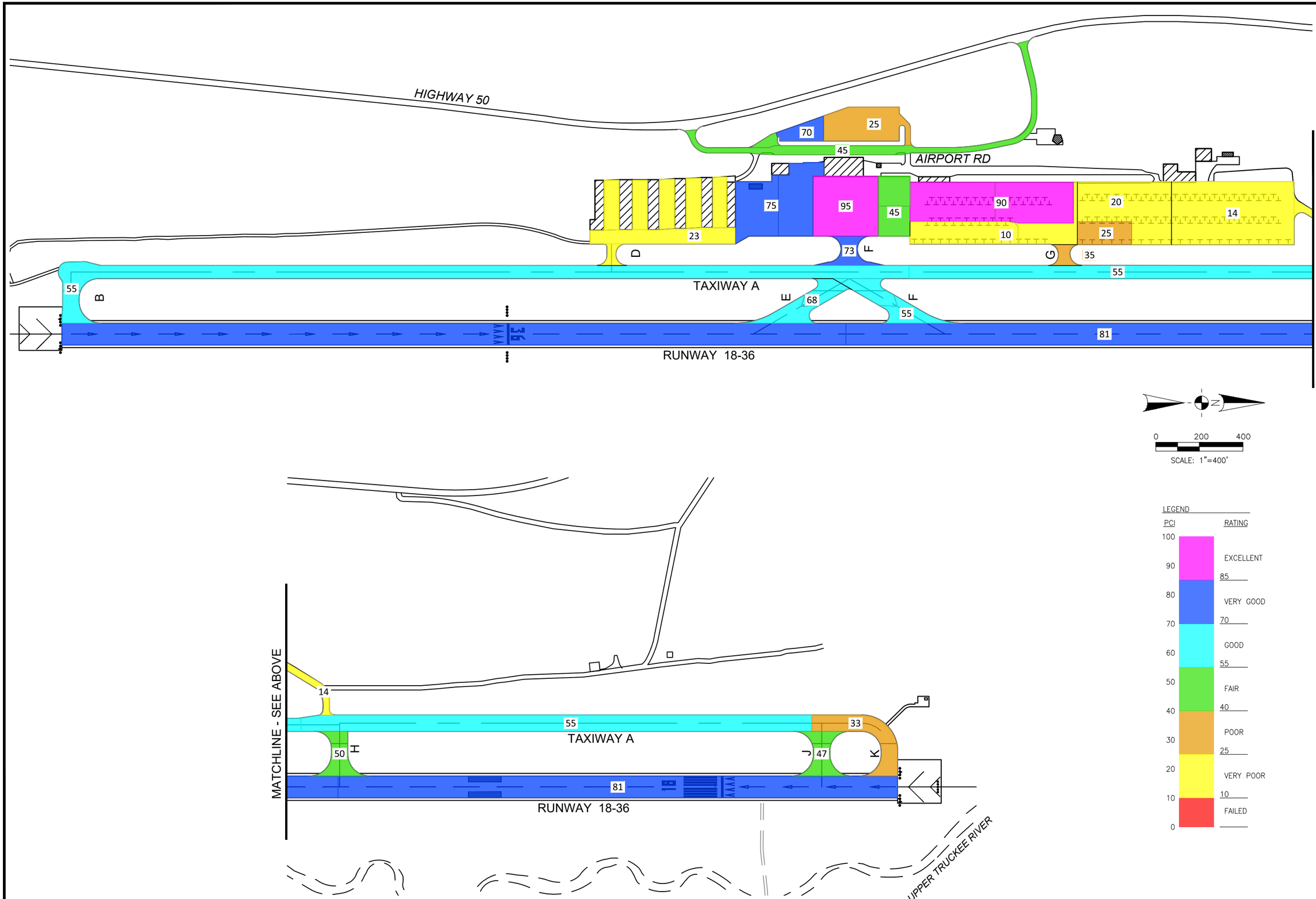
No.	REVISIONS	DATE

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

PAVEMENT EVALUATION

STATIONING CONTROL PLAN

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
FILE	TVL.5-2.FWD
SCALE	1"=400'
PLATE No.	C2



LEGEND

PCI	RATING
100	
90	EXCELLENT
85	
80	VERY GOOD
70	
60	GOOD
55	
50	FAIR
40	
30	POOR
25	
20	VERY POOR
10	
0	FAILED

Reinard W. Brandley
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DATE
REVISIONS
No.

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

PAVEMENT EVALUATION
SURFACE DISTRESS - PAVEMENT CONDITION INDEX (PCI) - 2016

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
FILE	TVL2-1.PCI
SCALE	1"=400'
PLATE No.	C3

TABLE No. C1 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Runway 18-36		
Station:	0+00 - 36+00		
Dimensions:	3,600' X 100'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	3	200	0.35		
	Aggregate Base	7	40	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	20	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	12	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1958

Rehabilitation Record:	**Date**	**Type**
	1968, 2008	Reconstruction

Pavement Condition:

Grooved Pavement, Longitudinal Paving Joints Cracked and Sealed, Few Transverse Cracks
Several Profile Grinds on Surface.

Weathering - Light Raveling - None Rutting - None

Pavement Rating = Very Good	PCI = 81	PCN = 28 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T1
FWD Center Plate Deflection - 25 K Load	57 (39-57)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021		None Scheduled
2022-2026	H	2023 - Crack Repair
2027-2031	F2/3	2027 - Mill 2" AC, Fill 3" AC
2032-2036		None Scheduled

Remarks: Station 0+00 located at south end of Runway 18-36 proceeding north.
FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24
For Traffic Index see Table D1.

TABLE No. C2 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Runway 18-36		
Station:	36+00 - 59+75		
Dimensions:	2,375' X 100'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	3	200	0.35		
	Aggregate Base	7	40	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	20	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	12	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1958

Rehabilitation Record:	**Date**	**Type**
	1968, 2008	Reconstruction

Pavement Condition:

Grooved Pavement, Longitudinal Paving Joints Cracked and Sealed, Few Transverse Cracks
Several Profile Grinds on Surface.

Weathering - Light Raveling - None Rutting - None

Pavement Rating = Very Good	PCI = 81	PCN = 28 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T1
FWD Center Plate Deflection - 25 K Load	57 (42-57)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021		None Scheduled
2022-2026	H	2023 - Crack Repair
2027-2031	F2/3	2027 - Mill 2" AC, Fill 3" AC
2032-2036		None Scheduled

Remarks: Station 0+00 located at south end of Runway 18-36 proceeding north.
FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24
For Traffic Index see Table D1.

TABLE No. C3 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Runway 18-36		
Station:	59+75 - 85+40		
Dimensions:	2,565' X 100'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	3	200	0.35		
	Aggregate Base	7	40	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	20	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	12	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1962

Rehabilitation Record:	**Date**	**Type**
	1968, 2008	Reconstruction

Pavement Condition:

Grooved Pavement, Longitudinal Paving Joints Cracked and Sealed, Few Transverse Cracks
Several Profile Grinds on Surface.

Weathering - Light Raveling - None Rutting - None

Pavement Rating = Very Good	PCI = 81	PCN = 28 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T1
FWD Center Plate Deflection - 25 K Load	54 (33-54)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021		None Scheduled
2022-2026	H	2023 - Crack Repair
2027-2031	F2/3	2027 - Mill 2" AC, Fill 3" AC
2032-2036		None Scheduled

Remarks: Station 0+00 located at south end of Runway 18-36 proceeding north.
FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24
For Traffic Index see Table D1.

TABLE No. C4 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Taxiways B, A, & K		
Station:	0+00 - 40+60		
Dimensions:	4,060' X 60'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	8.5	250	0.35		
	Aggregate Base	8	30	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	8	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	8	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1958

Rehabilitation Record:	**Date**	**Type**
	1968, 1970	Reconstruction
	1990	AC Overlay

Pavement Condition:

Taxiway B is slurry sealed, rest of this portion of Taxiway A is not slurry Sealed

Sawed and Sealed joints - good condition. Several other cracks developint along joints and between joints

Some corner cracks, few areas of alligator cracking developing (isolated small areas)

Weathering - Moderate Raveling - None Rutting - None

Pavement Rating = Good | PCI = 55 | PCN = 22 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T2
FWD Center Plate Deflection - 25 K Load	42 (28-53)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	**Rehab. Code**	**Date and Description**
2017-2021		None Scheduled
2022-2026	A1	2022 - Reconstruction
2027-2031	H	2030 - Crack Repair
2032-2036	H	2035 - Crack Repair

Remarks: Station 0+00 located at south edge of Runway 36 proceeding north.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C5 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Taxiways B, A, & K		
Station:	40+60 - 59+15		
Dimensions:	1,855' X 60'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	4	150	0.35		
	Aggregate Base	8	30	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	8	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	8	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1958

Rehabilitation Record:	**Date**	**Type**
	1975	Reconstruction

Pavement Condition:

Taxiway A is slurry sealed at Taxiway F, the rest of this portion of Taxiway A is not slurry Sealed

Sawed and Sealed joints - good condition. Several other cracks developint along joints and between joints

Some corner cracks, few areas of alligator cracking developing (isolated small areas)

Weathering - Moderate Raveling - None Rutting - None

Pavement Rating = Good	PCI = 55	PCN = 15 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T3
FWD Center Plate Deflection - 25 K Load	68 (48-68)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	**Rehab. Code**	**Date and Description**
2017-2021		None Scheduled
2022-2026	A1	2022 - Reconstruction
2027-2031	H	2030 - Crack Repair
2032-2036	H	2035 - Crack Repair

Remarks: Station 0+00 located at south edge of Runway 36 proceeding north.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C6 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Taxiways B, A, & K		
Station:	59+15 - 82+60		
Dimensions:	2,345' X 75'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	7.5	200	0.35		
	Aggregate Base	7.5	20	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	24	15	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	8	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1963

Rehabilitation Record:	**Date**	**Type**
	1990	AC Overlay

Pavement Condition:

Taxiway A is slurry sealed at Taxiway J, the rest of this portion of Taxiway A is not slurry Sealed

Sawed and Sealed joints - good condition. Several other cracks developint along joints and between joints

Some corner cracks, few areas of alligator cracking developing (isolated small areas)

Weathering - Moderate Raveling - None Rutting - None

Pavement Rating = Good | PCI = 55 | PCN = 30 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T3
FWD Center Plate Deflection - 25 K Load	47 (35-56)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021		None Scheduled
2022-2026	A1	2022 - Reconstruction
2027-2031	H	2030 - Crack Repair
2032-2036	H	2035 - Crack Repair

Remarks: Station 0+00 located at south edge of Runway 36 proceeding north.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C7 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Taxiways B, A, & K		
Station:	82+60 - 88+00		
Dimensions:	540' X 75'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	7.5	150	0.35		
	Aggregate Base	7.5	20	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	24	15	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	5	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1962

Rehabilitation Record:	**Date**	**Type**
	1990	AC Overlay

Pavement Condition:

Taxiways A and K in this segment are both slurry sealed, with some slurry worn by the snowplows.
Sawed and Sealed joints - good condition. Several other cracks developint along joints and between joints
Some corner cracks, significant portion of Taxiway K has low severity alligator cracking.

Weathering - Moderate Raveling - None Rutting - None		
Pavement Rating = Poor	PCI = 33	PCN = 30 F/D/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T3
FWD Center Plate Deflection - 25 K Load	75 (48-75)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	**Rehab. Code**	**Date and Description**
2017-2021		None Scheduled
2022-2026	A1	2022 - Reconstruction
2027-2031	H	2030 - Crack Repair
2032-2036	H	2035 - Crack Repair

Remarks: Station 0+00 located at south edge of Runway 36 proceeding north.
FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24
For Traffic Index see Table D1.

TABLE No. C8 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Taxiway E		
Station:	0+00 - 1+75		
Dimensions:	175' X 75'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	6.5	200	0.35		
	Aggregate Base	8	30	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	-	-	-		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	8	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1958

Rehabilitation Record:	**Date**	**Type**
	1968	AC Overlay

Pavement Condition:

Pavement is slurry sealed. Moderate cracking at the edges of the joints.

1 small area of alligator cracking.

Sawed and Sealed joints - good condition. Some other cracks developint along joints and between joints

Weathering - Light-Moderate Raveling - None Rutting - None

Pavement Rating = Good PCI = 68 PCN = 8 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T4
FWD Center Plate Deflection - 25 K Load	54 (49-54)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021		None Scheduled
2022-2026	A2	2022 - Reconstruction
2027-2031	H	2030 - Crack Repair
2032-2036	H	2035 - Crack Repair

Remarks: Station 0+00 located at edge of Runwy 18-36 proceeding west.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C9 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Taxiway E		
Station:	1+75 - 3+60		
Dimensions:	185' X 75'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	8.5	250	0.35		
	Aggregate Base	8	30	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	8	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	8	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1958

Rehabilitation Record:	**Date**	**Type**
	1968, 1970	Reconstruction
	1990	AC Overlay

Pavement Condition:

Pavement is slurry sealed. Moderate cracking at the edges of the joints.

1 small area of alligator cracking.

Sawed and Sealed joints - good condition. Some other cracks developint along joints and between joints

Weathering - Light-Moderate Raveling - None Rutting - None

Pavement Rating = Good | PCI = 68 | PCN = 22 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T4
FWD Center Plate Deflection - 25 K Load	32 (27-32)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021		None Scheduled
2022-2026	A1	2022 - Reconstruction
2027-2031	H	2030 - Crack Repair
2032-2036	H	2035 - Crack Repair

Remarks: Station 0+00 located at edge of Runwy 18-36 proceeding west.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C10 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Taxiway F		
Station:	0-00 - 1+75		
Dimensions:	175' X 75'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	6.5	200	0.35		
	Aggregate Base	8	30	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	-	-	-		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	8	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1958

Rehabilitation Record:	**Date**	**Type**
	1968	AC Overlay

Pavement Condition:

Pavement is slurry sealed. Moderate cracking at the edges of the joints.

Some moderate alligator cracking.

Sawed and Sealed joints - good condition. Some other cracks developint along joints and between joints

Weathering - Light-Moderate Raveling - None Rutting - None

Pavement Rating = Good PCI = 55 PCN = 8 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T4
FWD Center Plate Deflection - 25 K Load	68 (45-68)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021		None Scheduled
2022-2026	A2	2022 - Reconstruction
2027-2031	H	2030 - Crack Repair
2032-2036	H	2035 - Crack Repair

Remarks: Station 0+00 located at edge of Runwy 18-36 proceeding west.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C11 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Taxiway F		
Station:	1+75 - 3+50		
Dimensions:	175' X 75'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	8.5	250	0.35		
	Aggregate Base	8	30	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	8	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	8	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1958

Rehabilitation Record:	**Date**	**Type**
	1968, 1970	Reconstruction
	1990	AC Overlay

Pavement Condition:

Pavement is slurry sealed. Moderate cracking at the edges of the joints.

Some moderate alligator cracking.

Sawed and Sealed joints - good condition. Some other cracks developint along joints and between joints

Weathering - Light-Moderate Raveling - None Rutting - None

Pavement Rating = Good | PCI = 55 | PCN = 22 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T4
FWD Center Plate Deflection - 25 K Load	30 (30)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021		None Scheduled
2022-2026	A1	2022 - Reconstruction
2027-2031	H	2030 - Crack Repair
2032-2036	H	2035 - Crack Repair

Remarks: Station 0+00 located at edge of Runwy 18-36 proceeding west.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C12 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Taxiway F		
Station:	3+50 - 5+60		
Dimensions:	210' X 75'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	8.5	250	0.35		
	Aggregate Base	8	30	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	8	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	8	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1958

Rehabilitation Record:	**Date**	**Type**
	1968, 1970	Reconstruction
	2009	AC Overlay

Pavement Condition:

Pavement is slurry sealed. Moderate cracking at the edges of the joints.

Sawed and Sealed joints - good condition. Some other cracks developint along joints and between joints

Weathering - Light-Moderate Raveling - None Rutting - None

Pavement Rating = Very Good PCI = 73 PCN = 22 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T6
FWD Center Plate Deflection - 25 K Load	39 (30-39)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	11

Recommended Rehabilitation:

Time Period	**Rehab. Code**	**Date and Description**
2017-2021		None Scheduled
2022-2026	A1	2022 - Reconstruction
2027-2031	H	2030 - Crack Repair
2032-2036	H	2035 - Crack Repair

Remarks: Station 0+00 located at edge of Runwy 18-36 proceeding west.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C13 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Taxiway H		
Station:	0+00 - 1+80		
Dimensions:	180' X 75'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	7.5	150	0.35		
	Aggregate Base	7.5	20	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	24	15	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	5	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1963

Rehabilitation Record:	**Date**	**Type**
	1990	AC Overlay

Pavement Condition:

No Slurry Seal

Sawed and Sealed joints - good condition. Several other cracks developint along joints and between joints

Some corner cracks

Weathering - Moderate Raveling - None Rutting - None

Pavement Rating = Fair PCI = 50 PCN = 30 F/D/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T4
FWD Center Plate Deflection - 25 K Load	62 (49-62)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021		None Scheduled
2022-2026	A1	2022 - Reconstruction
2027-2031	H	2030 - Crack Repair
2032-2036	H	2035 - Crack Repair

Remarks: Station 0+00 located at edge of Runwy 18-36 proceeding west.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C14 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Taxiway J		
Station:	0+00 - 1+80		
Dimensions:	180' X 75'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	7.5	150	0.35		
	Aggregate Base	7.5	20	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	24	15	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	5	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1962

Rehabilitation Record:	**Date**	**Type**
	1990	AC Overlay

Pavement Condition:

Slurry Sealed, some slurry worn by the snowplows.

Sawed and Sealed joints - good condition. Several other cracks developint along joints and between joints

Some corner cracks, significant portion of Taxiway J has low severity alligator cracking.

Weathering - Low-Moderate Raveling - None Rutting - None

Pavement Rating = Fair | PCI = 47 | PCN = 30 F/D/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T4
FWD Center Plate Deflection - 25 K Load	70 (43-70)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	**Rehab. Code**	**Date and Description**
2017-2021		None Scheduled
2022-2026	A1	2022 - Reconstruction
2027-2031	H	2030 - Crack Repair
2032-2036	H	2035 - Crack Repair

Remarks: Station 0+00 located at edge of Runwy 18-36 proceeding west.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C15 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Taxiway G		
Station:	0+00 - 1+00		
Dimensions:	100' X 55'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		Data was collected prior to 2016 rehabilitation. See section 5-2.4 in the report.
	Asphalt (Surface)	6	85	0.35		
	Aggregate Base	8	20	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	8	15	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	6	0.35		
	Sub-soil	Semi-Infinite	17	0.35		

Date Constructed: 1958

Rehabilitation Record:	**Date**	**Type**
	1975, 2016	Reconstruction
	1989	AC Overlay

Pavement Condition:

Sawed and Sealed joints - fair condition. Several other cracks developint along joints and between joints
Areas of alligator cracking, some ravelling of surface.
Reconstructed in 2016, PCI is approximately 95-100 after reconstruction
Weathering - Moderate Raveling - Some Rutting - None

Pavement Rating = Poor	PCI = 35	PCN = 15 F/D/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T8
FWD Center Plate Deflection - 12 K Load	43 (43)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	**Rehab. Code**	**Date and Description**
2017-2021		2016 - Reconstruction (Completed) (See Section 5-2.4)
2022-2026	H	2024 - Crack Repair
2027-2031	H	2029 - Crack Repair
2032-2036	H, J	2034 - Crack Repair / Slurry Seal

Remarks: Station 0+00 located at edge of Taxiway A proceeding west.
FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24
For Traffic Index see Table D1.

TABLE No. C16 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Apron A1		
Station:	See Plates 5-1 & 5-2		
Dimensions:	200' X 250'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	3	150	0.35		
	Aggregate Base	6	20	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	6	15	0.35		
	Pit-Run	-	-	-		
	Select Sand	12	10	0.35		
	Subgrade	24	12	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1969

Rehabilitation Record:	**Date**	**Type**
	2010	Reconstruction

Pavement Condition:

No Joints, Polymer Modified Asphalt. Several cracks mid paving lane, longitudinal, low severity, sealed.

Weathering - Light-Moderate Raveling - None Rutting - None

Pavement Rating = Very Good PCI = 75 PCN = 30 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T5
FWD Center Plate Deflection - 12 K Load	52 (43-52)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	**Rehab. Code**	**Date and Description**
2017-2021	H, J	2018 - Crack Repair / Slurry Seal
2022-2026	H	2022 - Crack Repair
2027-2031	F2	2027 - 2" AC Mill & Fill
2032-2036	H	2035 - Crack Repair

Remarks: See Plates B1 thru B3 for test locations.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C17 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Apron A2		
Station:	See Plates 5-1 & 5-2		
Dimensions:	160' X 280'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	4	200	0.35		
	Aggregate Base	6	60	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	13	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	12	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1950

Rehabilitation Record:	**Date**	**Type**
	2010	Reconstruction
	1970	AC Overlay

Pavement Condition:

No Joints, Polymer Modified Asphalt. Some cracks, longitudinal, low severity, sealed.

Few cracks adjacent to PCC pavement, these are reflective cracks from buried concrete slab.

Weathering - Light-Moderate	Raveling - None	Rutting - None
Pavement Rating = Very Good	PCI = 75	PCN = 30 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T6
FWD Center Plate Deflection - 25 K Load	63 (48-63)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021	H, J	2018 - Crack Repair / Slurry Seal
2022-2026	H	2022 - Crack Repair
2027-2031	F3	2027 - 3" AC Mill & Fill
2032-2036	H	2035 - Crack Repair

Remarks: See Plates B1 thru B3 for test locations.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C18 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Apron A3		
Station:	See Plates 5-1 & 5-2		
Dimensions:	300' X 275'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	14	5000	0.35		
	Asphalt (Surface)	1.5	300	0.35		
	Aggregate Base	-	-	-		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	6	40	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	15	0.35		
	Sub-soil	Semi-Infinite	30	0.35		

Date Constructed: Pre 1963

Rehabilitation Record:	**Date**	**Type**
	2009	Reconstruction
	1970	AC Overlay

Pavement Condition:

PCC Sealant is in good condition. Surface has very few defects.
Few patches due to joint spalling during construction. Excellent Condition.
Scrapes from snow plows, but no significant damage.
Weathering - Light Spalling - None Joint Seal - Good
Pavement Rating = Excellent PCI = 95 PCN = 40 R/B/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T6
FWD Center Plate Deflection - 25 K Load	7 (4-7)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	**Rehab. Code**	**Date and Description**
2017-2021		None Scheduled
2022-2026	K	2024 - PCC Repair
2027-2031		None Scheduled
2032-2036	K	2034 - PCC Repair

Remarks: See Plates B1 thru B3 for test locations.
FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24
For Traffic Index see Table D1.

TABLE No. C19 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Apron A4a		
Station:	See Plates 5-1 & 5-2		
Dimensions:	150' X 135'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	4	200	0.35		
	Aggregate Base	6	50	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	8	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	12	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: Pre 1963

Rehabilitation Record:	**Date**	**Type**
	2009	Reconstruction
	1970	AC Overlay

Pavement Condition:

No Joints, Polymer Modified Asphalt. Some Cracks on paving joints.

Significant surface raveling and aggregates popping out. Raveling worse due to snow plows.

Surface is wearing off.

Weathering - Moderate Raveling - Light - Moderate Rutting - None

Pavement Rating = Fair PCI = 45 PCN = 22 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T6
FWD Center Plate Deflection - 25 K Load	60 (37-60)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	19

Recommended Rehabilitation:

Time Period	**Rehab. Code**	**Date and Description**
2017-2021	F2	2018 - 2" AC Mill & Fill
2022-2026	H	2024 - Crack Repair
2027-2031	B	2030 - Reconstruction
2032-2036		None Scheduled

Remarks: See Plates B1 thru B3 for test locations.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C20 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Apron A4b		
Station:	See Plates 5-1 & 5-2		
Dimensions:	150' X 135'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	4	150	0.35		
	Aggregate Base	6	25	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	8	15	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	12	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: Pre 1963

Rehabilitation Record:	**Date**	**Type**
	2009	Reconstruction
	1970	AC Overlay

Pavement Condition:

No Joints, Polymer Modified Asphalt. Some Cracks on paving joints.

Significant surface raveling and aggregates popping out. Raveling worse due to snow plows.

Surface is wearing off.

Weathering - Moderate Raveling - Light - Moderate Rutting - None

Pavement Rating = Fair PCI = 45 PCN = 22 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T6
FWD Center Plate Deflection - 25 K Load	99 (79-99)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	15

Recommended Rehabilitation:

Time Period	**Rehab. Code**	**Date and Description**
2017-2021	F2	2018 - 2" AC Mill & Fill
2022-2026	H	2024 - Crack Repair
2027-2031	B	2030 - Reconstruction
2032-2036		None Scheduled

Remarks: See Plates B1 thru B3 for test locations.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C21 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Apron A5a		
Station:	See Plates 5-1 & 5-2		
Dimensions:	390' X 180'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	3	200	0.35		
	Aggregate Base	6	40	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	20	30	0.35		
	Pit-Run	18	25	0.35		
	Select Sand	-	-	-		
	Subgrade	-	-	-		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: Pre 1963

Rehabilitation Record:	**Date**	**Type**
	1974, 2014	Reconstruction

Pavement Condition:

No Joints, Polymer Modified Asphalt. No cracking

Light surface wear from snow removal

Weathering - Light Raveling - None Rutting - None

Pavement Rating = Excellent	PCI = 90	PCN = 30 F/B/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T7
FWD Center Plate Deflection - 25 K Load	60 (48-60)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	**Rehab. Code**	**Date and Description**
2017-2021		None Scheduled
2022-2026	H	2022 - Crack Repair
2027-2031	H, J	2027 - Crack Repair / Slurry Seal
2032-2036	H	2032 - Crack Repair

Remarks: See Plates B1 thru B3 for test locations.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C22 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Apron A5b		
Station:	See Plates 5-1 & 5-2		
Dimensions:	360' X 180'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	3	150	0.35		
	Aggregate Base	14	30	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	-	-	-		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	6	0.35		
	Sub-soil	Semi-Infinite	12	0.35		

Date Constructed: Pre 1963

Rehabilitation Record:	**Date**	**Type**
	1974, 2014	Reconstruction

Pavement Condition:

No Joints, Polymer Modified Asphalt. No cracking

Light surface wear from snow removal

Weathering - Light Raveling - None Rutting - None

Pavement Rating = Excellent	PCI = 90	PCN = 8 F/D/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T9
FWD Center Plate Deflection - 12 K Load	49 (38-70)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	17

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021		None Scheduled
2022-2026	H	2022 - Crack Repair
2027-2031	H, J	2027 - Crack Repair / Slurry Seal
2032-2036	B	2032 - Reconstruction

Remarks: See Plates B1 thru B3 for test locations.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C23 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Apron A5c		
Station:	See Plates 5-1 & 5-2		
Dimensions:	500' X 100'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		Data was collected prior to 2016 rehabilitation. See section 5-2.4 in the report.
	Asphalt (Surface)	2	85	0.35		
	Aggregate Base	5	15	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	5	10	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	5	0.35		
	Sub-soil	Semi-Infinite	7	0.35		

Date Constructed: 1968

Rehabilitation Record:	**Date**	**Type**
	1987, 2016	Reconstruction

Pavement Condition:

Sawed and Sealed joints - poor condition. Several Moderate Cracks
Severely Aligator cracked, failed.
Reconstructed in 2016, PCI is approximately 95-100 after reconstruction

Weathering - Moderate-Severe	Raveling - Some	Rutting - None	
Pavement Rating = Very Poor		PCI = 10	PCN = N/A

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T7
FWD Center Plate Deflection - 12 K Load	88 (67-88)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	1

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021		2016 - Reconstruction (Completed) (See Section 5-2.4)
2022-2026	H	2024 - Crack Repair
2027-2031	H	2029 - Crack Repair
2032-2036	H, J	2034 - Crack Repair / Slurry Seal

Remarks: See Plates B1 thru B3 for test locations.
FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24
For Traffic Index see Table D1.

TABLE No. C24 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Apron A5d		
Station:	See Plates 5-1 & 5-2		
Dimensions:	270' X 100'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		Data was collected prior to 2016 rehabilitation. See section 5-2.4 in the report.
	Asphalt (Surface)	5	150	0.35		
	Aggregate Base	-	-	-		
	Cement Treated Base	5	800	0.35		
	Aggregate Subbase	4	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	7	0.35		
	Sub-soil	Semi-Infinite	15	0.35		

Date Constructed: Pre 1969

Rehabilitation Record:	**Date**	**Type**
	2016	Reconstruction
	1989	AC Overlay

Pavement Condition:

Sawed and Sealed joints - poor condition. Several Moderate Cracks
Severely Aligator cracked, failed.
Reconstructed in 2016, PCI is approximately 95-100 after reconstruction

Weathering - Moderate-Severe	Raveling - Some	Rutting - None	
Pavement Rating = Very Poor		PCI = 10	PCN = 7 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T7
FWD Center Plate Deflection - 12 K Load	22 (18-22)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	5

Recommended Rehabilitation:

Time Period	**Rehab. Code**	**Date and Description**
2017-2021		2016 - Reconstruction (Completed) (See Section 5-2.4)
2022-2026	H	2024 - Crack Repair
2027-2031	H	2029 - Crack Repair
2032-2036	H, J	2034 - Crack Repair / Slurry Seal

Remarks: See Plates B1 thru B3 for test locations.
FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24
For Traffic Index see Table D1.

TABLE No. C25 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Apron A6a		
Station:	See Plates 5-1 & 5-2		
Dimensions:	430' X 280'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	3	85	0.35		
	Aggregate Base	6	20	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	9	15	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	6	0.35		
	Sub-soil	Semi-Infinite	17	0.35		

Date Constructed: 1974

Rehabilitation Record:	**Date**	**Type**
	1989	Reconstruction

Pavement Condition:

Sawed and Sealed joints - poor condition. Several Moderate Cracks
Severely Aligator cracked, failed.

Weathering - Moderate-Severe Raveling - Some Rutting - None

Pavement Rating = Very Poor PCI = 20 PCN = 7 F/D/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T9
FWD Center Plate Deflection - 12 K Load	54 (32-54)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	19

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021	B	2018 - Reconstruction
2022-2026	H	2026 - Crack Repair
2027-2031	H	2031 - Crack Repair
2032-2036	H, J	2036 - Crack Repair / Slurry Seal

Remarks: See Plates B1 thru B3 for test locations.
FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24
For Traffic Index see Table D1.

TABLE No. C26 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Apron A6b		
Station:	See Plates 5-1 & 5-2		
Dimensions:	240' X 100'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	5	150	0.35		
	Aggregate Base	-	-	-		
	Cement Treated Base	5	800	0.35		
	Aggregate Subbase	4	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	7	0.35		
	Sub-soil	Semi-Infinite	15	0.35		

Date Constructed: 1974

Rehabilitation Record:	**Date**	**Type**
	1989	AC Overlay

Pavement Condition:

Sawed and Sealed joints - poor condition. Several Moderate Cracks
Severely Aligator cracked, failed.

Weathering - Moderate-Severe Raveling - Some Rutting - None

Pavement Rating = Poor	PCI = 25	PCN = 7 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T9
FWD Center Plate Deflection - 12 K Load	17 (17)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021	B	2018 - Reconstruction
2022-2026	H	2026 - Crack Repair
2027-2031	H	2031 - Crack Repair
2032-2036	H, J	2036 - Crack Repair / Slurry Seal

Remarks: See Plates B1 thru B3 for test locations.
FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24
For Traffic Index see Table D1.

TABLE No. C27 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Apron A6c		
Station:	See Plates 5-1 & 5-2		
Dimensions:	560' X 290'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	2	70	0.35		
	Aggregate Base	6	15	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	-	10	0.35		
	Pit-Run	5	-	-		
	Select Sand	-	-	-		
	Subgrade	24	5	0.35		
	Sub-soil	Semi-Infinite	8	0.35		

Date Constructed: 1974

Rehabilitation Record:	**Date**	**Type**
	1989	Reconstruction

Pavement Condition:

Sawed and Sealed joints - poor condition. Several Moderate Cracks
Severely Aligator cracked, failed.

Weathering - Moderate-Severe Raveling - Some Rutting - None

Pavement Rating = Very Poor | PCI = 14 | PCN = N/A

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T9
FWD Center Plate Deflection - 12 K Load	104 (54-104)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	2

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021	C	2018 - Reconstruction
2022-2026	H	2026 - Crack Repair
2027-2031	H	2031 - Crack Repair
2032-2036	H, J	2036 - Crack Repair / Slurry Seal

Remarks: See Plates B1 thru B3 for test locations.
FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24
For Traffic Index see Table D1.

TABLE No. C28 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Apron T/W H		
Station:	See Plates 5-1 & 5-2		
Dimensions:	500' X 30'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	2	70	0.35		
	Aggregate Base	5	15	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	4	10	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	5	0.35		
	Sub-soil	Semi-Infinite	10	0.35		

Date Constructed: Pre 1969

Rehabilitation Record:	**Date**	**Type**

Pavement Condition:

Sawed and Sealed joints - poor condition. Several Moderate Cracks
Severely Aligator cracked, failed.

Weathering - Moderate-Severe Raveling - Some Rutting - None

Pavement Rating = Very Poor	PCI = 14	PCN = N/A

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T10
FWD Center Plate Deflection - 12 K Load	110 (64-110)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	6

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021	C or None	2018 - Reconstruction or Abandon (See Section 5-2.5)
2022-2026	H or None	2026 - Crack Repair or Abandon (See Section 5-2.5)
2027-2031	H or None	2031 - Crack Repair or Abandon (See Section 5-2.5)
2032-2036	H, J or None	2036 - Crack Repair / Slurry Seal or Abandon (See Section 5-2.5)

Remarks: See Plates B1 thru B3 for test locations.
FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24
For Traffic Index see Table D1.

TABLE No. C29 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Taxiway D		
Station:	0+00 - 1+00		
Dimensions:	100' X 40'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	3	150	0.35		
	Aggregate Base	6	20	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	9	15	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	10	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1994

Rehabilitation Record:	**Date**	**Type**

Pavement Condition:

Sawed and Sealed joints - fair condition. Several Moderate Cracks

Several areas of aligator cracking, surface is failing

Weathering - Moderate	Raveling - Some	Rutting - None
Pavement Rating = Very Poor	PCI = 23	PCN = 15 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T11
FWD Center Plate Deflection - 12 K Load	43 (40-43)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021	G3	2019 - Replace AC / Recompact AB
2022-2026		None Scheduled
2027-2031	H	2027 - Crack Repair
2032-2036	H	2032 - Crack Repair

Remarks: See Plates B1 thru B3 for test locations.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C30 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Tee Hangar Taxiway (H6)		
Station:	0+00 - 6+70		
Dimensions:	670' X 65'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	3	150	0.35		
	Aggregate Base	6	20	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	9	15	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	10	0.35		
	Sub-soil	Semi-Infinite	20	0.35		

Date Constructed: 1994

Rehabilitation Record:	**Date**	**Type**

Pavement Condition:

Sawed and Sealed joints - fair condition. Several Moderate Cracks

Several areas of aligator cracking, surface is failing

Weathering - Moderate	Raveling - Some	Rutting - None
Pavement Rating = Very Poor	PCI = 23	PCN = 15 F/C/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T11
FWD Center Plate Deflection - 12 K Load	43 (32-43)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021	G3	2019 - Replace AC / Recompact AB
2022-2026		None Scheduled
2027-2031	H	2027 - Crack Repair
2032-2036	H	2032 - Crack Repair

Remarks: See Plates B1 thru B3 for test locations.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C31 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Tee Hangar Taxilanes (H1-H5)		
Station:	See Plates 5-1 & 5-2		
Dimensions:	Varies		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	3	70	0.35		
	Aggregate Base	6	15	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	9	10	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	5	0.35		
	Sub-soil	-	15	0.35		

Date Constructed: 1994

Rehabilitation Record:	**Date**	**Type**

Pavement Condition:

Sawed and Sealed joints - fair condition. Several Moderate Cracks

Several areas of aligator cracking, surface is failing

Weathering - Moderate Raveling - Some Rutting - None

Pavement Rating = Very Poor PCI = 23 PCN = 7 F/D/Y/T

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T12
FWD Center Plate Deflection - 12 K Load	85 (48-85)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021	G3	2019 - Replace AC / Recompact AB
2022-2026		None Scheduled
2027-2031	H	2027 - Crack Repair
2032-2036	H	2032 - Crack Repair

Remarks: See Plates B1 thru B3 for test locations.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C32 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Terminal Access Road		
Station:	0+00 - 20+00		
Dimensions:	2,000' X 30' to 50' wide		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	2	200	0.35		
	Aggregate Base	3	20	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	5	15	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	8	0.35		
	Sub-soil	Semi-Infinite	15	0.35		

Date Constructed: 1969

Rehabilitation Record:	**Date**	**Type**
	2009	Reconstruction

Pavement Condition:

No Joints, Polymer Modified Asphalt. Few Cracks on paving joints.

Surface raveling and aggregates popping out. Raveling worse due to snow plows.

Surface is wearing off.

Weathering - Moderate Raveling - Light - Moderate Rutting - None

Pavement Rating = Fair PCI = 45 PCN = N/A

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T13
FWD Center Plate Deflection - 12 K Load	65 (42-65)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	8

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021	H	2018 - Crack Repair
2022-2026	D	2023 - Reconstruction
2027-2031	H	2031 - Crack Repair
2032-2036	H	2036 - Crack Repair

Remarks: See Plates B1 thru B3 for test locations.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C33 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Parking Lot Entrance		
Station:	See Plates 5-1 & 5-2		
Dimensions:	100' X 30'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	2	200	0.35		
	Aggregate Base	3	40	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	5	30	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	12	0.35		
	Sub-soil	Semi-Infinite	15	0.35		

Date Constructed: 1969

Rehabilitation Record:	**Date**	**Type**
	2009	Reconstruction

Pavement Condition:

No Joints, Polymer Modified Asphalt. Few Cracks on paving joints.

Surface raveling and aggregates popping out. Raveling worse due to snow plows.

Weathering - Moderate	Raveling - Light - Moderate	Rutting - None
Pavement Rating = Fair	PCI = 45	PCN = N/A

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T14
FWD Center Plate Deflection - 12 K Load	44 (42-44)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021	H	2018 - Crack Repair
2022-2026	H, J	2023 - Crack Repair / Slurry Seal
2027-2031	H	2029 - Crack Repair
2032-2036	E	2033 - Reconstruction

Remarks: See Plates B1 thru B3 for test locations.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C34 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Parking Lot A - W/ Over Ex		
Station:	See Plates 5-1 & 5-2		
Dimensions:	200' X 100'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	3	150	0.35		
	Aggregate Base	4	30	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	22	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	7	0.35		
	Sub-soil	Semi-Infinite	15	0.35		

Date Constructed: 1969

Rehabilitation Record:	**Date**	**Type**
	2010	Reconstruction

Pavement Condition:

No Joints, Polymer Modified Asphalt. Some block cracking, mostly just random cracks

Weathering - Light Raveling - None Rutting - None

Pavement Rating = Very Good	PCI = 70	PCN = N/A

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T14
FWD Center Plate Deflection - 12 K Load	54 (37-54)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021	H	2018 - Crack Repair
2022-2026	H, J	2023 - Crack Repair / Slurry Seal
2027-2031	H	2029 - Crack Repair
2032-2036	E	2033 - Reconstruction

Remarks: See Plates B1 thru B3 for test locations.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C35 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Parking Lot A - W/O Over Ex		
Station:	See Plates 5-1 & 5-2		
Dimensions:	200' X 100'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	3	150	0.35		
	Aggregate Base	4	30	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	4	20	0.35		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	7	0.35		
	Sub-soil	Semi-Infinite	15	0.35		

Date Constructed: 1969

Rehabilitation Record:	**Date**	**Type**
	2010	Reconstruction

Pavement Condition:

No Joints, Polymer Modified Asphalt. Some block cracking, mostly just random cracks

Weathering - Light Raveling - None Rutting - None

Pavement Rating = Very Good | PCI = 70 | PCN = N/A

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T14
FWD Center Plate Deflection - 12 K Load	54 (37-54)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	20+

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021	H	2018 - Crack Repair
2022-2026	H, J	2023 - Crack Repair / Slurry Seal
2027-2031	H	2029 - Crack Repair
2032-2036	E	2033 - Reconstruction

Remarks: See Plates B1 thru B3 for test locations.

FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24

For Traffic Index see Table D1.

TABLE No. C36 - PAVEMENT CONDITION SURVEY AND REHABILITATION SCHEDULE

Airport:	Lake Tahoe Airport	**Date of Survey:**	May 27, 2016
Element:	Parking Lot B		
Station:	See Plates 5-1 & 5-2		
Dimensions:	350' X 150'		
FAA Pavement Strength Survey - Element Identification (Form 5335-1):		Not Available	

		Thickness (inches)	E (ksi)	μ	K (pci)	Remarks
Existing Pavement Section:	**PCC (surface)**	-	-	-		
	Asphalt (Surface)	2	85	0.35		
	Aggregate Base	5	20	0.35		
	Cement Treated Base	-	-	-		
	Aggregate Subbase	-	-	-		
	Pit-Run	-	-	-		
	Select Sand	-	-	-		
	Subgrade	24	5	0.35		
	Sub-soil	Semi-Infinite	15	0.35		

Date Constructed: 1998

Rehabilitation Record:	**Date**	**Type**

Pavement Condition:

Sawed and Sealed joints - poor condition. Several Moderate Cracks
Severely Aligator cracked, failed.

Weathering - Moderate-Severe Raveling - Some Rutting - None

Pavement Rating = Poor | PCI = 25 | PCN = N/A

Pavement Remaining Life Analysis	Brandley - Fatigue Analysis
Traffic Index Used -	T14
FWD Center Plate Deflection - 12 K Load	104 (35-104)
Pavement Layer Analyzed	Subgrade
Pavement Structure Layer Remaining Life - Years	2

Recommended Rehabilitation:

Time Period	Rehab. Code	Date and Description
2017-2021	E	2018 - Reconstruction
2022-2026	H	2026 - Crack Repair
2027-2031	H	2031 - Crack Repair
2032-2036	H	2036 - Crack Repair

Remarks: See Plates B1 thru B3 for test locations.
FWD used was mean value for section - See FWD Graphs, Plates B4 thru B24
For Traffic Index see Table D1.

Appendix D
Traffic Summary

This Appendix summarizes the design characteristics of all the aircraft that are currently utilizing the airport. It also provides existing aircraft operations by type, as well as the number of annual operations currently operating at the airport.

The total annual operations of each aircraft group for each area have been calculated as "Traffic Indexes" and are included in Table No. D1. The traffic for each Traffic Index is the traffic that was used to calculate deep-seated distresses in the pavement sections and to calculate the predicted remaining life of each pavement section.

Traffic forecasts for the airport were obtained from the 2016 Lake Tahoe Airport Master Plan Report and used to evaluate the pavements at this airport. The Master Plan only included data on total operations forecast at the airport. It did not include any data on the fleet mix of aircraft that were anticipated to utilize the airport. The consultant that prepared the Master Plan Report provided typical fleet mix data that was utilized for the noise contour analysis in the Master Plan. This typical fleet mix data along with the forecast operations data from the Master Plan was used to generate the forecast traffic utilized in this pavement evaluation study to determine the remaining pavement life of each section of pavement. This data included the typical type of aircraft currently operating at the airport, along with the annual number of operations of each aircraft type. The data furnished did not include the forecast growth rates of these aircraft, so a reasonable growth rate of 2% for aircraft weighing less than 25,000 lbs. was used in this analysis. Typically, a growth rate of 3% could be expected for aircraft weighing more than 25,000 lbs., Table No. D1 provides the traffic data utilized for the runway and taxiway complex as well as other hangar and apron areas.

Table No. D1 lists the 2016 annual operations for aircraft utilizing the airport and includes their maximum takeoff weight and gear configuration. These aircraft have been grouped into 8 aircraft groups and 2 groups of automobiles and delivery trucks for the access roads and parking lots. Each group represents the average aircraft characteristics of maximum takeoff weight and gear type for the different classifications of aircraft that utilize the airport pavements.

In evaluating airfield pavements for deep-seated distress, it is the number of coverages of each wheel on each aircraft over a given point of pavement that contributes to the deep-seated distress on or near that section of pavement. The distribution of aircraft traffic on the airport is a function of:

- Wind direction, which dictates which runway is used
- Landing length requirement of each aircraft and takeoff length requirement of each aircraft
- Destination on the airport of each aircraft type.
- Distribution of traffic on a given pavement section.

Appendix D
Traffic Summary

For this evaluation, data was estimated showing how many operations utilized each of the 2 runway ends at the airport. The runway utilized by each aircraft is a function of the size and weight of using aircraft, wind direction, destination of the aircraft on the airfield, and pilot in command preference.

When an aircraft lands on a runway, only the heavier aircraft generally use the full length of runway. Intermediate and smaller size aircraft exit the runway at the appropriate cross taxiway. The taxiways that are used by aircraft are dependent upon the location at which the aircraft take off and land as well as the destination of the arriving aircraft on the airport.

Based on the aircraft characteristics, the runway use dictated by wind direction, and the destination of aircraft on the airport, the current annual operations of each aircraft have been evaluated to best represent the actual traffic that occurs on each segment of pavement. The traffic forecast to occur on each segment is defined as "Traffic Index." A total of 14 traffic indexes were evaluated and used for this study. On several pavement sections, such as the cross taxiways, hangar areas and aprons, the entire amount of traffic from a pavement complex was initially utilized even though the actual traffic experienced on these pavements will likely be much lower. This higher level of traffic was not further reduced in some areas since the pavement life on these pavements exceeded 20 years even with the higher than expected traffic levels. Pavements that showed less than 20 years of remaining life were further analyzed with the traffic index that represented their actual forecast traffic. The number of annual operations and estimated average annual growth rates for each aircraft group and each traffic index are indicated in Table No. D1. These traffic indexes were utilized in the evaluation of all pavements for deep-seated distress.

Using the traffic index and the total annual operations, the number of operations on a given segment of the airport can be estimated. Each operation does not travel over the same spot on a pavement and, therefore, the number of coverages on the pavement section will be less than the total operations for each traffic index. The distribution of traffic on each section is a function of the aircraft type, the gear type, the wind conditions, and the skill of the pilot. There is generally a fairly wide distribution of traffic on a runway; whereas, on a taxiway the traffic is more concentrated. On the aprons the traffic generally follows specified taxilane markings, but only a fraction of the total aircraft operate on each section of apron. Different factors are applied to the operations estimated for a given section of the airport to convert operations to coverages. Coverages are used in the Fatigue Analysis for remaining pavement life calculations.

Appendix D
Traffic Summary

The traffic index used for various segments of each pavement is indicated on Plate No. D1.

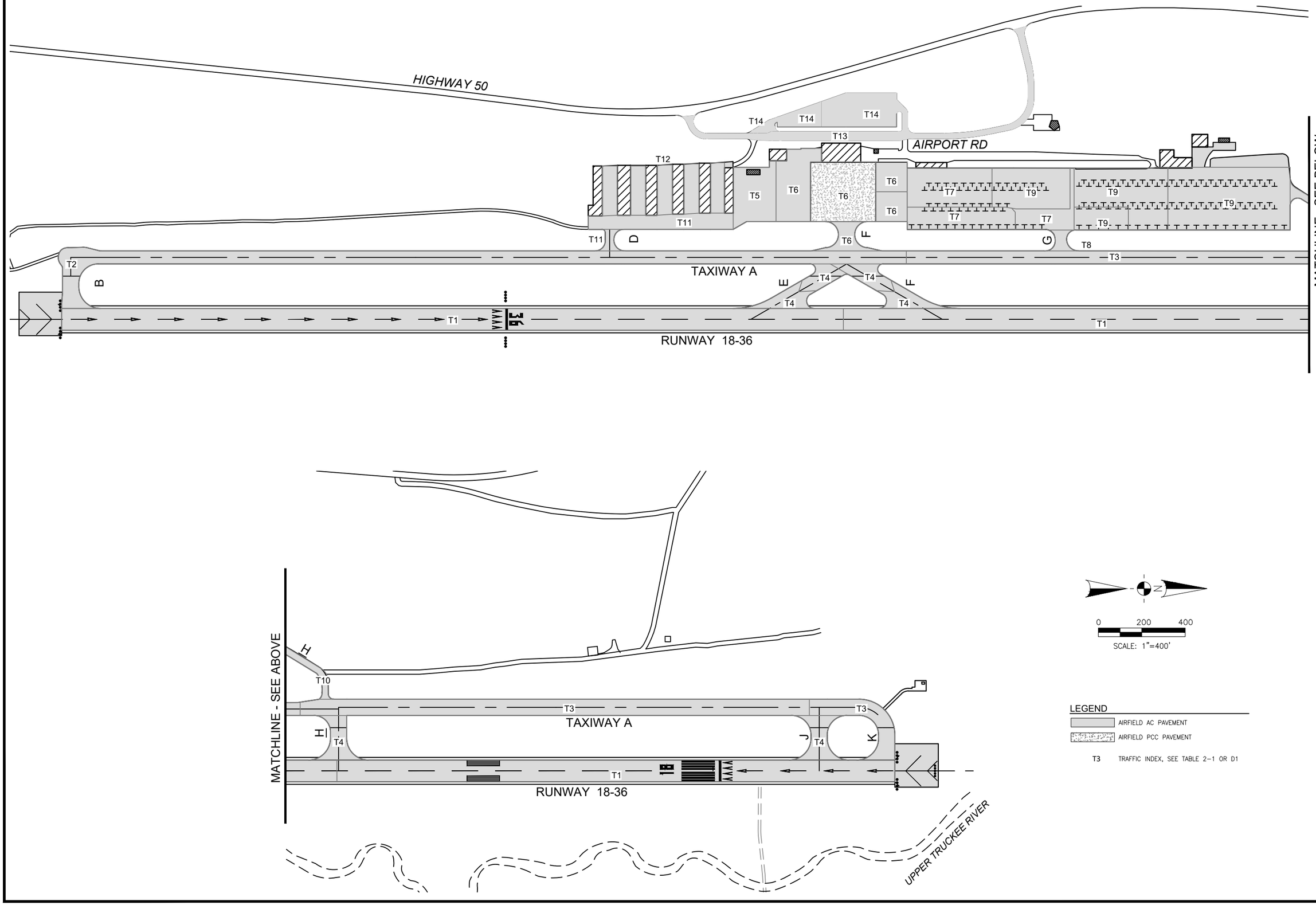
A table of contents of this appendix is shown below:

Plates:

Plate No. D1 Traffic Distribution – Traffic Index

Tables

Table No. D1 Traffic Index Summary



Reinard W. Brandley
CONSULTING AIRPORT ENGINEER
559
6125 King Road, Suite 201 · Loomis, California 95650 (916) 652-4

No.	REVISIONS	DATE

LAKE TAHOE AIRPORT
SOUTH LAKE TAHOE CALIFORNIA

PAVEMENT EVALUATION

TRAFFIC DISTRIBUTION - TRAFFIC INDEX

DATE	7/21/17
DRAWN	KDC
CHECKED	RWB
PROJECT No.	04
FILE	TVL.2-2.Traffic
SCALE	1"=400'
PLATE No.	D1

Table No. D1 - Traffic Index Summary - Lake Tahoe Airport

				Traffic Index (Forecast Aircraft Operations in 2016)															
Aircraft Group	Typical Aircraft Type	Aircraft MTOW (lbs)	Gear Configuration	2016 Annual Operations	Annual Growth Rate	T1 (Runway)	T2 (Taxiways)	T3 (Taxiways)	T4 (Taxiways)	T5 (Aprons)	T6 (Aprons)	T7 (Aprons)	T8 (Aprons)	T9 (Aprons)	T10 (Aprons)	T11 (Hangars)	T12 (Hangars)	T13 (Roads)	T14 (Roads)
1	Cessna 172 / Cirrus SR-22	5,000	Single	9,700	2%	9,700	4,850	4,850	4,850	970	3,880	5,820	5,820	2,910	1,940	2,910	970	-	-
2	Piper PA-31T Cheyenne	9,000	Single	1,600	2%	1,600	800	800	800	160	640	960	960	480	320	480	160	-	-
3	Beech Super King Air	16,000	Dual	8,100	2%	8,100	4,050	4,050	3,240	810	5,670	8,100	2,430	1,620	405	2,430	-	-	-
4	BAe-125 Hawker	28,000	Dual	900	3%	900	810	225	90	630	720	900	180	270	-	-	-	-	-
5	Cessna Citation X	36,000	Dual	2,650	3%	2,650	2,385	663	265	1,855	2,120	2,650	530	795	-	-	-	-	-
6	Dassault Falcon 2000	41,000	Dual	2,900	3%	2,900	2,610	725	290	2,030	2,320	2,900	580	870	-	-	-	-	-
7	Gulfstream IV	74,000	Dual	900	3%	900	855	180	45	630	810	900	90	90	-	-	-	-	-
8	Gulfstream V	90,000	Dual	650	3%	650	618	130	33	455	585	650	65	65	-	-	-	-	-
9	Automobile	4,000	Single	75,000	1%	-	-	-	-	-	-	-	-	-	-	-	-	75,000	65,000
10	H20 Truck	20,000	Truck	1,500	1%	-	-	-	-	-	700	700	-	350	1,000	-	-	1,500	200

APPENDIX B: AIRCRAFT CLASSIFICATION RATING / PAVEMENT CLASSIFICATION RATING

(ACR-PCR)

Federal Aviation Administration FAARFIELD 2.1 Airport Master Record

FAARFIELD 2.1.1 (Build 12/21/2023)

RUNWAY DATA

Job Name: TVL-047

Structure: Runway 18-36

Gross Weight (In THSDS)

35 S	82
36 D	120
37 2D	189
38 2D/2D2	0

39 PCR	330/F/C/X/T

Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Runway 18-36

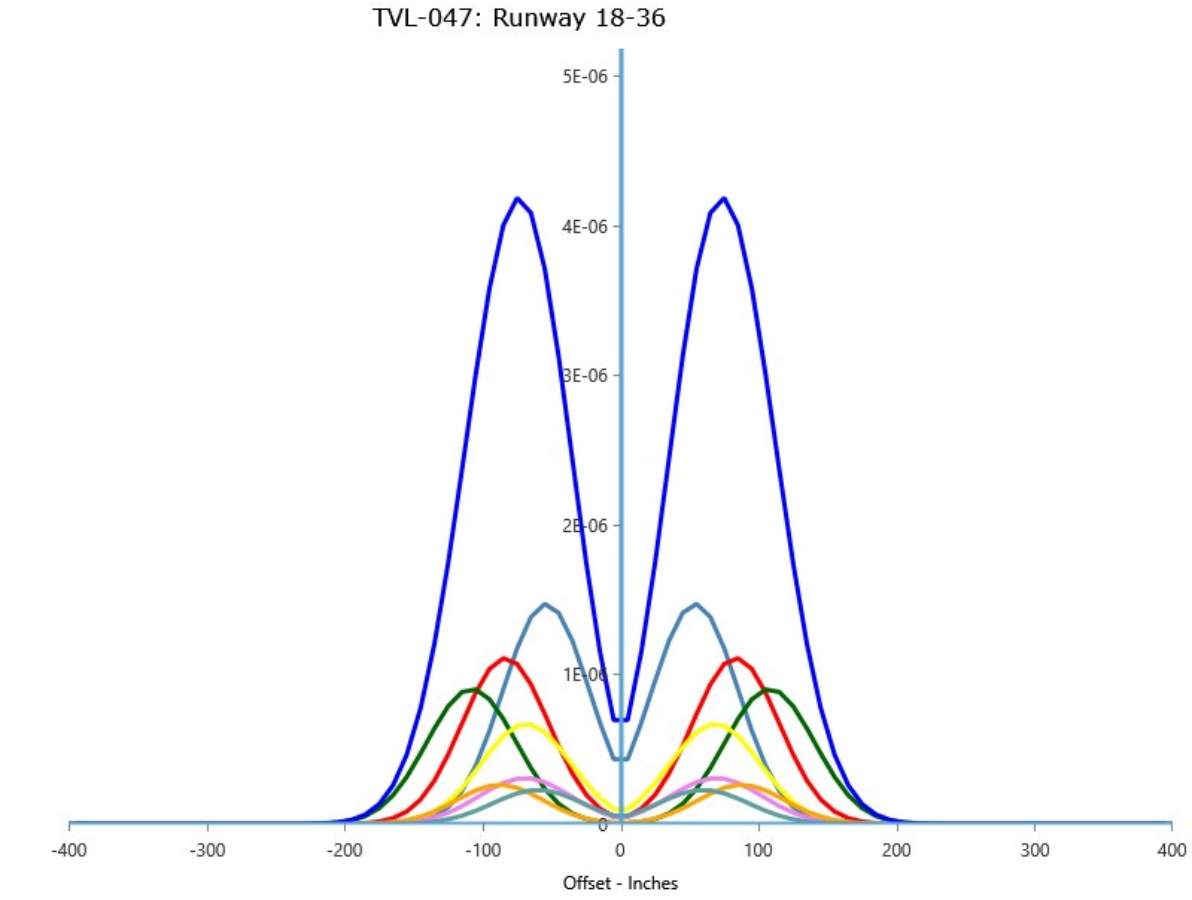
Analysis Type: New Flexible

Analysis Run Time: 2024-06-25 10:33:29

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 20.0in.


TVL-047: Runway 18-36
5E-06
4E-06
3E-06
2E-06
1E-06
0
-400
-300
-200
-100
0
100
200
300
400
Offset - Inches
Cumulative CDF
Cessna 206 Stationair
Cessna Citation II/Bravo C550/551
Beechcraft King Air 350
Cessna Citation X
CRJ100/200
PA-31-325 Navajo C/R
Hawker-800/800XP

Federal Aviation Administration FAARFIELD 2.1 PCR Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Runway 18-36

This file name = PCR Results for New Flexible 2024-06-25 10:33:29

Evaluation pavement type is flexible and design program is FAARFIELD.

Structure name: Runway 18-36 in job file: TVL-047.JOB.xml

Units = US Customary

Analysis Type: New Flexible

Subgrade Modulus =12,000psi (Subgrade Category is C)

Evaluation Pavement Thickness = 20.0 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 0.000

No aircraft have 4 or more wheels per gear.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	Cessna 206 Stationair	3,600	47.50	52	3,500	26,886
2	PA-31-325 Navajo C/R	6,500	47.50	66	600	4,768
3	Cessna Citation II/Bravo C550/551	15,000	47.50	130	2,500	20,255
4	Beechcraft King Air 350	15,100	47.50	92	1,500	16,431
5	Hawker-800/800XP	28,000	47.50	134	330	4,108
6	Cessna Citation X	36,000	47.50	189	1,000	12,156
7	CRJ100/200	47,700	46.50	160	400	5,555

Results Table 2. PCR Value

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/C
1	CRJ100/200	400	84,120	20.4	267.9

Results Table 3. New Flexible ACR at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)	ACR Thick (in.) (C)	ACR/F/C
1	Cessna 206 Stationair	3,600	47.5	52	4.6	12.3
2	PA-31-325 Navajo C/R	6,500	47.5	66	5.0	21.7
3	Cessna Citation II/Bravo C550/551	15,000	47.5	130	9.8	60.7
4	Beechcraft King Air 350	15,100	47.5	92	6.8	33.1
5	Hawker-800/800XP	28,000	47.5	134	10.8	72.8
6	Cessna Citation X	36,000	47.5	189	13.8	115.6
7	CRJ100/200	47,700	46.5	160	14.0	118.9

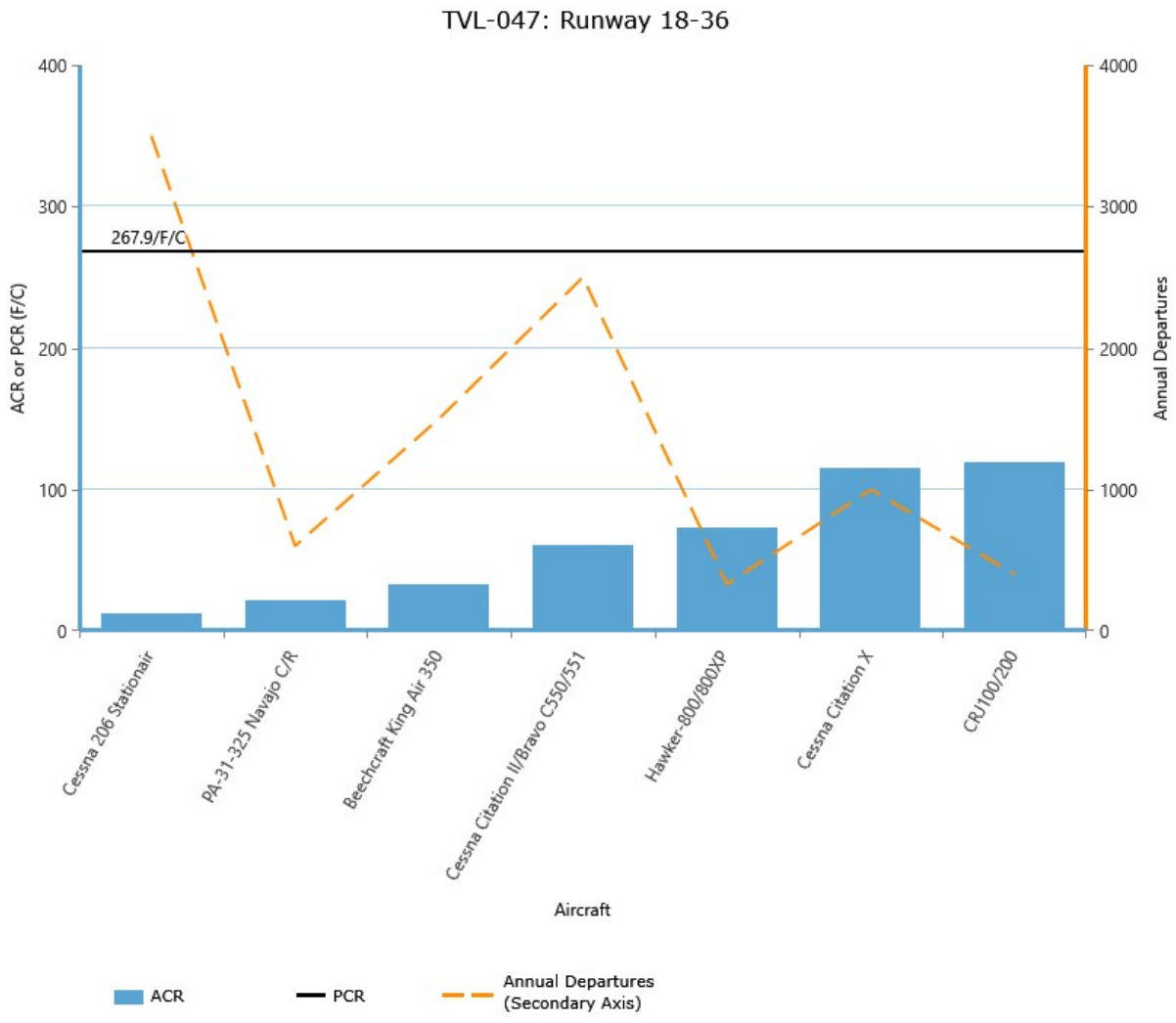
Federal Aviation Administration FAARFIELD 2.1 PCR Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Runway 18-36

Analysis Type: New Flexible



No.	Aircraft Name	Aircraft ACR	Calculated PCR	Annual Departure
1	CRJ100/200	118.9	267.9	400
2	Cessna Citation X	115.6	-	1,000
3	Hawker-800/800XP	72.8	-	330
4	Cessna Citation II/Bravo C550/551	60.7	-	2,500
5	Beechcraft King Air 350	33.1	-	1,500
6	PA-31-325 Navajo C/R	21.7	-	600
7	Cessna 206 Stationair	12.3	-	3,500

Federal Aviation Administration FAARFIELD 2.1 Structure Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Runway 18-36

Analysis Type: New Flexible

No run has been done on this structure.

Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	CBR	Poisson's Ratio	Strength R (psi)
1	P-401/P-403 HMA Surface	3.0	200,000	0	0.35	0
2	User Defined	7.0	40,000	0	0.35	0
3	User Defined	10.0	20,000	0	0.35	0
4	Subgrade	0	12,000	8	0.35	0

Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	Cessna 206 Stationair	3,600	3,500	2
2	PA-31-325 Navajo C/R	6,500	600	2
3	Cessna Citation II/Bravo C550/551	15,000	2,500	2
4	Beechcraft King Air 350	15,100	1,500	2
5	Hawker-800/800XP	28,000	330	3
6	Cessna Citation X	36,000	1,000	3
7	CRJ100/200	47,700	400	3

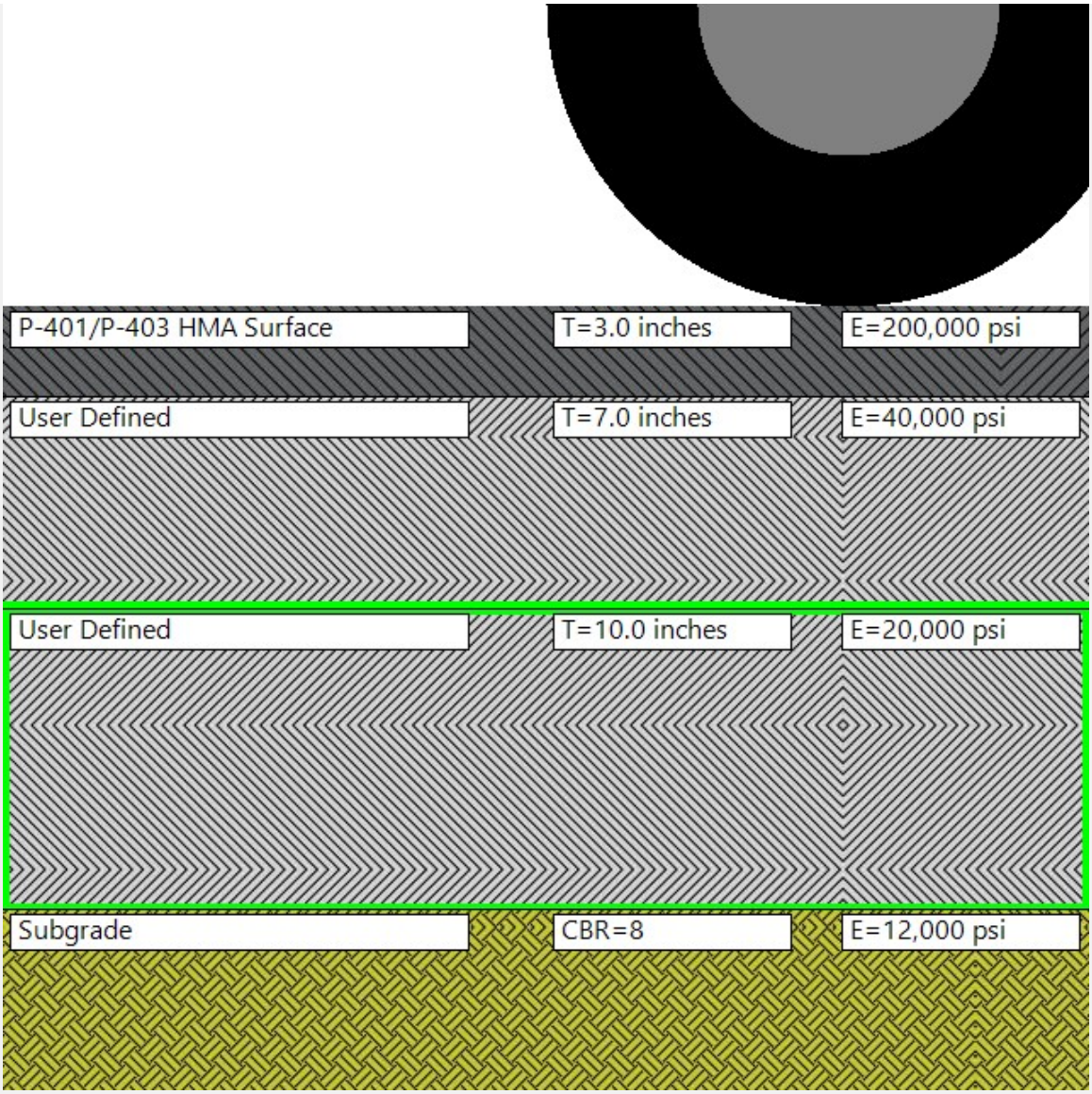
Additional Airplane Information

Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	Cessna 206 Stationair	0.00	0.00	3.12
2	PA-31-325 Navajo C/R	0.00	0.00	3.02
3	Cessna Citation II/Bravo C550/551	0.00	0.00	2.96
4	Beechcraft King Air 350	0.00	0.00	2.19
5	Hawker-800/800XP	0.00	0.00	2.09
6	Cessna Citation X	0.00	0.00	2.14
7	CRJ100/200	0.00	0.00	1.87

NOTE:

User is responsible for checking frost protection requirements.


P-401/P-403 HMA Surface
T=3.0 inches
E=200,000 psi
User Defined
T=7.0 inches
E=40,000 psi
User Defined
T=10.0 inches
E=20,000 psi
Subgrade
CBR=8
E=12,000 psi

Federal Aviation Administration FAARFIELD 2.1 Airport Master Record

FAARFIELD 2.1.1 (Build 12/21/2023)

RUNWAY DATA

Job Name: TVL-047

Structure: Taxiway B, A, F, & E

Gross Weight (In THSDS)

35 S	62
36 D	80
37 2D	131
38 2D/2D2	0

39 PCR	250/F/D/X/T

Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway B, A, F, & E

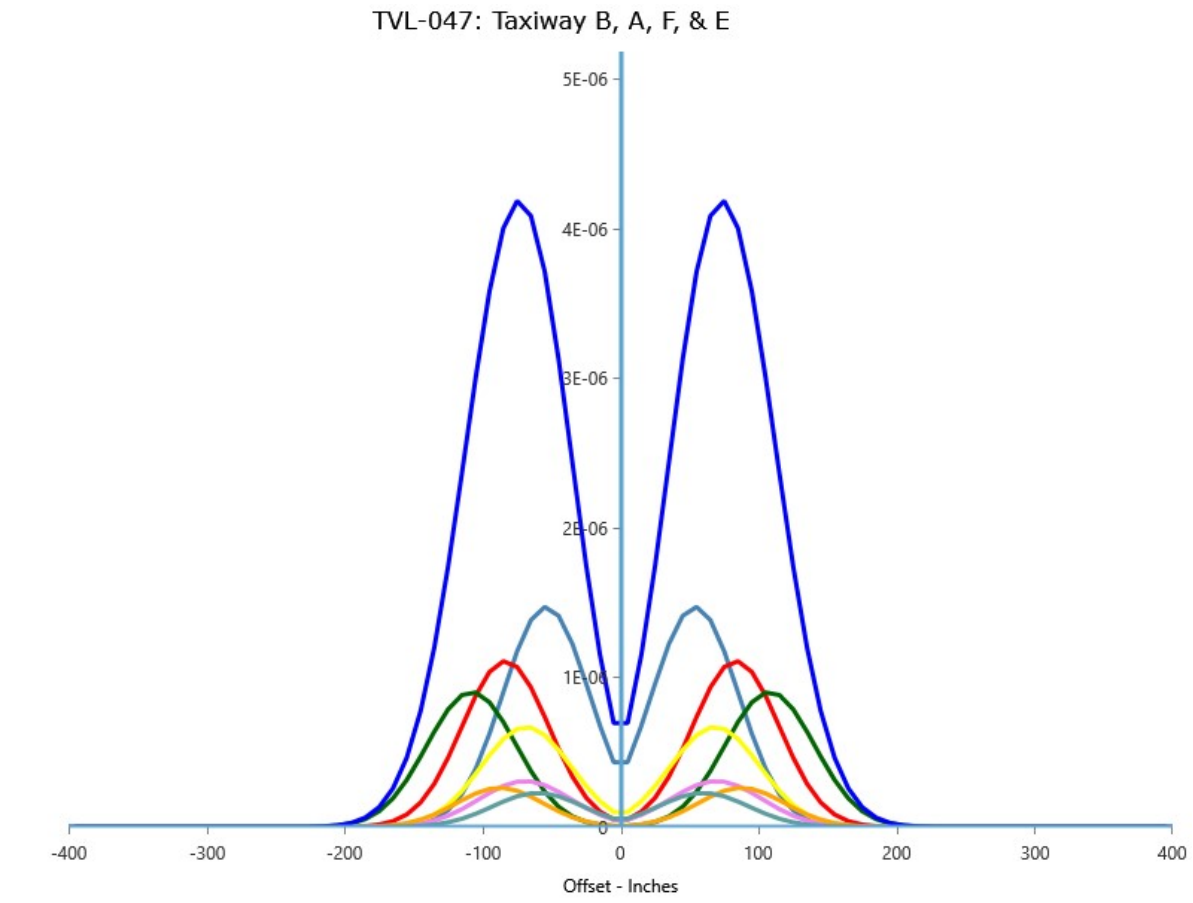
Analysis Type: New Flexible

Analysis Run Time: 2024-06-25 10:40:48

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 20.0in.


TVL-047: Taxiway B, A, F, & E
5E-06
4E-06
3E-06
2E-06
1E-06
0
-400
-300
-200
-100
0
100
200
300
400
Offset - Inches
Cumulative CDF
Cessna 206 Stationair
Cessna Citation II/Bravo C550/551
Beechcraft King Air 350
Cessna Citation X
CRJ100/200
PA-31-325 Navajo C/R
Hawker-800/800XP

Federal Aviation Administration FAARFIELD 2.1 PCR Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway B, A, F, & E

This file name = PCR Results for New Flexible 2024-04-25 19:22:37

Evaluation pavement type is flexible and design program is FAARFIELD.

Structure name: Taxiway B, A, F, & E in job file: TVL-047.JOB.xml

Units = US Customary

Analysis Type: New Flexible

Subgrade Modulus =7,500psi (Subgrade Category is D)

Evaluation Pavement Thickness = 20.0 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 2.560

No aircraft have 4 or more wheels per gear.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	Cessna 172 Skyhawk	2,558	95.00	50	28	112
2	Cessna 182 Skylane	3,110	95.00	50	14	58
3	Cessna 206 Stationair	3,612	95.00	52	36	153
4	Beechcraft Baron 55	5,424	95.00	56	32	145
5	PA-31-325 Navajo C/R	6,536	95.00	66	42	191
6	Beechcraft King Air C90	9,710	95.00	58	56	286
7	Cessna Citation II/Bravo C550/551	15,000	95.00	130	196	921
8	Beechcraft King Air B100	11,500	95.00	52	4	32
9	Beechcraft King Air B200	12,590	95.00	98	66	503
10	Beechcraft King Air 300	14,100	95.00	92	6	46
11	Beechcraft King Air 350	15,100	95.00	92	52	406
12	BeechJet-400/400A	16,300	95.00	90	14	72
13	Learjet 45/55B	21,500	95.00	201	44	336
14	Cessna Citation VI/VII	23,200	95.00	168	116	827
15	S-30	30,000	95.00	75	108	741
16	Cessna Citation X	36,000	95.00	189	70	614
17	Dassault Falcon 2000	35,000	95.00	197	86	797
18	Dassault Falcon 900B/C	45,500	95.00	145	34	335
19	CRJ100/200	47,700	93.00	160	98	1,002
20	DHC-7	43,799	93.60	228	2	19
21	ERJ-140	46,738	95.00	153	10	104
22	C-123	60,000	95.00	100	34	263
23	F-15C	68,000	95.00	340	2	11
24	Gulfstream-G-III	70,200	95.00	175	24	256
25	Gulfstream-G-IV	75,000	95.00	185	62	663
26	Gulfstream G-V/G500/G550	90,900	95.00	188	54	622
27	D-100	100,000	95.00	140	60	752
28	Cessna Citation V	16,500	95.00	130	44	209

Results Table 2. PCR Value

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/D
1	Gulfstream G-V/G500/G550	120	81,340	24.2	284.6

Results Table 3. New Flexible ACR at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)	ACR Thick (in.) (D)	ACR/F/D
1	Cessna 172 Skyhawk	2,558	95	50	4.6	9.4
2	Cessna 182 Skylane	3,110	95	50	4.6	11.1
3	Cessna 206 Stationair	3,612	95	52	4.6	12.7
4	Beechcraft Baron 55	5,424	95	56	5.7	19.3
5	PA-31-325 Navajo C/R	6,536	95	66	6.8	24.5
6	Beechcraft King Air C90	9,710	95	58	8.7	35.4
7	Cessna Citation II/Bravo C550/551	15,000	95	130	12.1	62.1
8	Beechcraft King Air B100	11,500	95	52	7.1	26.1
9	Beechcraft King Air B200	12,590	95	98	8.2	32
10	Beechcraft King Air 300	14,100	95	92	9.0	37.1
11	Beechcraft King Air 350	15,100	95	92	9.5	40.6
12	BeechJet-400/400A	16,300	95	90	12.4	64.4
13	Learjet 45/55B	21,500	95	201	12.7	67.5
14	Cessna Citation VI/VII	23,200	95	168	14.3	84.1
15	S-30	30,000	95	75	16.8	113.9
16	Cessna Citation X	36,000	95	189	17.9	129.1
17	Dassault Falcon 2000	35,000	95	197	16.9	115.7
18	Dassault Falcon 900B/C	45,500	95	145	19.4	159.2
19	CRJ100/200	47,700	93	160	18.6	142
20	DHC-7	43,799	93.6	228	18.2	135.2
21	ERJ-140	46,738	95	153	18.3	136.8
22	C-123	60,000	95	100	22.5	236.7
23	F-15C	68,000	95	340	24.7	299.5
24	Gulfstream-G-III	70,200	95	175	23.1	256.2
25	Gulfstream-G-IV	75,000	95	185	23.9	277.6
26	Gulfstream G-V/G500/G550	90,900	95	188	25.7	326
27	D-100	100,000	95	140	25.5	320.9
28	Cessna Citation V	16,500	95	130	12.8	68.3

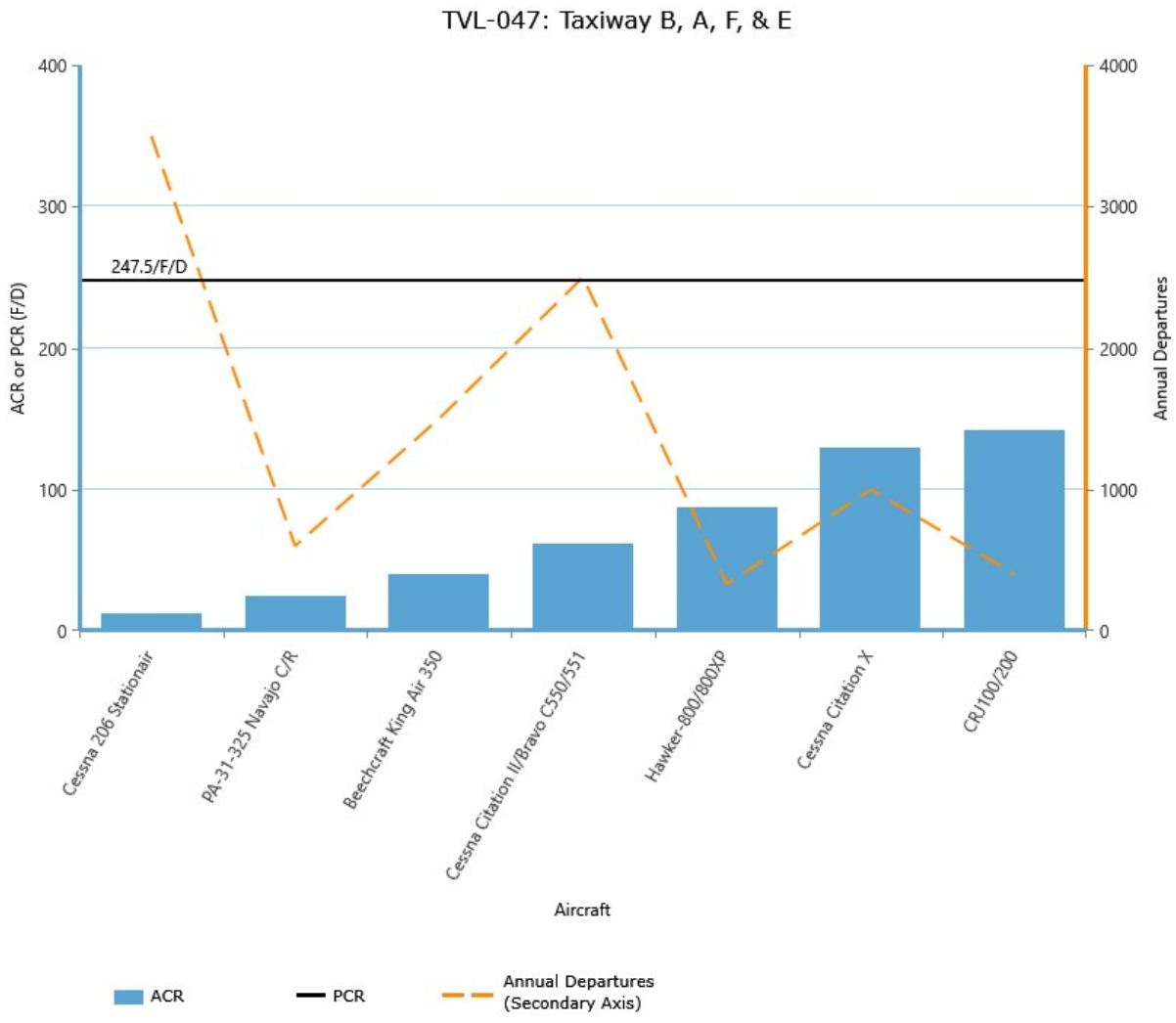
Federal Aviation Administration FAARFIELD 2.1 PCR Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway B, A, F, & E

Analysis Type: New Flexible



No.	Aircraft Name	Aircraft ACR	Calculated PCR	Annual Departure
1	CRJ100/200	142	247.5	400
2	Cessna Citation X	129.1	-	1,000
3	Hawker-800/800XP	87.8	-	330
4	Cessna Citation II/Bravo C550/551	62.1	-	2,500
5	Beechcraft King Air 350	40.6	-	1,500
6	PA-31-325 Navajo C/R	24.3	-	600
7	Cessna 206 Stationair	12.6	-	3,500

Federal Aviation Administration FAARFIELD 2.1 Structure Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway B, A, F, & E

Analysis Type: New Flexible

No run has been done on this structure.

Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	CBR	Poisson's Ratio	Strength R (psi)
1	P-401/P-403 HMA Surface	8.5	200,000	0	0.35	0
2	User Defined	8.0	30,000	0	0.35	0
3	User Defined	3.5	20,000	0	0.35	0
4	Subgrade	0	7,500	5	0.35	0

Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	Cessna 172 Skyhawk	2,558	28	2
2	Cessna 182 Skylane	3,110	14	2
3	Cessna 206 Stationair	3,612	36	2
4	Beechcraft Baron 55	5,424	32	2
5	PA-31-325 Navajo C/R	6,536	42	2
6	Beechcraft King Air C90	9,710	56	2
7	Cessna Citation II/Bravo C550/551	15,000	196	2
8	Beechcraft King Air B100	11,500	4	2
9	Beechcraft King Air B200	12,590	66	2
10	Beechcraft King Air 300	14,100	6	2
11	Beechcraft King Air 350	15,100	52	2
12	BeechJet-400/400A	16,300	14	2
13	Learjet 45/55B	21,500	44	2
14	Cessna Citation VI/VII	23,200	116	2
15	S-30	30,000	108	3
16	Cessna Citation X	36,000	70	3
17	Dassault Falcon 2000	35,000	86	3
18	Dassault Falcon 900B/C	45,500	34	3
19	CRJ100/200	47,700	98	3
20	DHC-7	43,799	2	3
21	ERJ-140	46,738	10	3
22	C-123	60,000	34	3
23	F-15C	68,000	2	3
24	Gulfstream-G-III	70,200	24	3
25	Gulfstream-G-IV	75,000	62	3
26	Gulfstream G-V/G500/G550	90,900	54	3
27	D-100	100,000	60	3
28	Cessna Citation V	16,500	44	2

Additional Airplane Information

Subgrade CDF

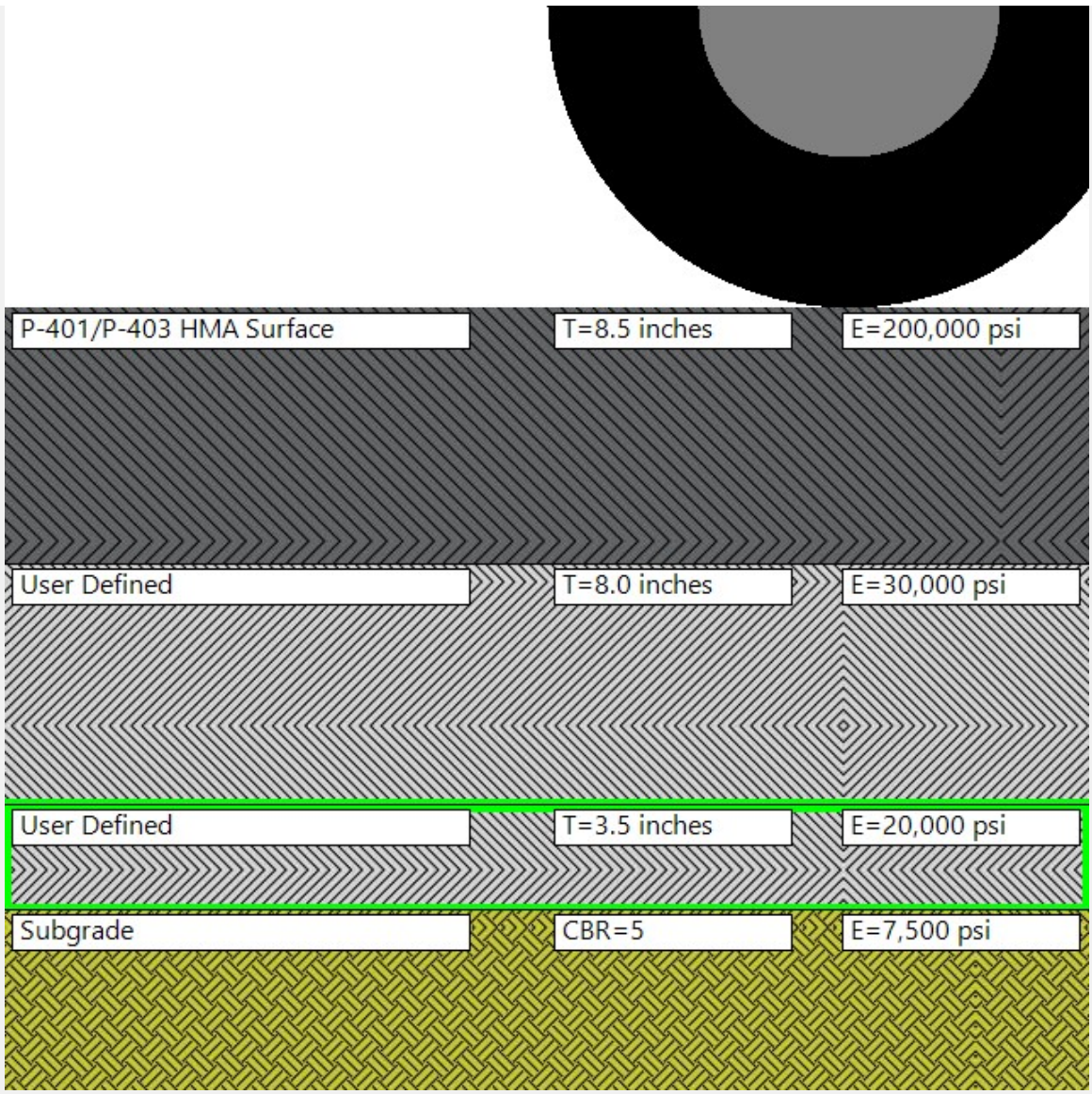
No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	Cessna 172 Skyhawk	0.00	0.00	5.99
2	Cessna 182 Skylane	0.00	0.00	5.77
3	Cessna 206 Stationair	0.00	0.00	5.65
4	Beechcraft Baron 55	0.00	0.00	5.3
5	PA-31-325 Navajo C/R	0.00	0.00	5.29
6	Beechcraft King Air C90	0.00	0.00	4.69
7	Cessna Citation II/Bravo C550/551	0.00	0.00	5.11
8	Beechcraft King Air B100	0.00	0.00	2.99
9	Beechcraft King Air B200	0.00	0.00	3.15
10	Beechcraft King Air 300	0.00	0.00	3.1
11	Beechcraft King Air 350	0.00	0.00	3.08
12	BeechJet-400/400A	0.00	0.00	4.64
13	Learjet 45/55B	0.00	0.00	3.14
14	Cessna Citation VI/VII	0.00	0.00	3.37
15	S-30	0.00	0.00	3.79
16	Cessna Citation X	0.00	0.00	2.96
17	Dassault Falcon 2000	0.00	0.00	2.81
18	Dassault Falcon 900B/C	0.00	0.00	2.64
19	CRJ100/200	0.00	0.00	2.54
20	DHC-7	0.00	0.00	2.76
21	ERJ-140	0.00	0.00	2.5
22	C-123	0.04	0.04	3.36
23	F-15C	0.01	0.02	4.54
24	Gulfstream-G-III	0.08	0.08	2.43
25	Gulfstream-G-IV	0.42	0.43	2.43
26	Gulfstream G-V/G500/G550	1.15	1.15	2.26
27	D-100	0.86	1.06	2.07
28	Cessna Citation V	0.00	0.00	5.05

HMA CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	Cessna 172 Skyhawk	0.03	0.03	2.32
2	Cessna 182 Skylane	0.00	0.00	3.16
3	Cessna 206 Stationair	0.00	0.00	3.12
4	Beechcraft Baron 55	0.00	0.00	3.02
5	PA-31-325 Navajo C/R	0.00	0.00	3.02
6	Beechcraft King Air C90	0.00	0.00	2.83
7	Cessna Citation II/Bravo C550/551	0.00	0.00	2.96
8	Beechcraft King Air B100	0.00	0.00	2.15
9	Beechcraft King Air B200	0.00	0.00	2.23
10	Beechcraft King Air 300	0.00	0.00	2.20
11	Beechcraft King Air 350	0.00	0.00	2.19
12	BeechJet-400/400A	0.00	0.00	2.82
13	Learjet 45/55B	0.00	0.00	2.22
14	Cessna Citation VI/VII	0.00	0.00	2.32
15	S-30	0.00	0.00	2.50
16	Cessna Citation X	0.00	0.00	2.14
17	Dassault Falcon 2000	0.00	0.00	2.06
18	Dassault Falcon 900B/C	0.00	0.00	1.98
19	CRJ100/200	0.00	0.00	1.87
20	DHC-7	0.00	0.00	1.94
21	ERJ-140	0.00	0.00	1.83
22	C-123	0.04	0.04	2.32
23	F-15C	0.01	0.02	2.78
24	Gulfstream-G-III	0.08	0.08	1.87
25	Gulfstream-G-IV	0.42	0.43	1.87
26	Gulfstream G-V/G500/G550	1.15	1.15	1.77
27	D-100	0.86	1.06	1.59
28	Cessna Citation V	0.00	0.00	2.96

NOTE:

User is responsible for checking frost protection requirements.


P-401/P-403 HMA Surface
T=8.5 inches
E=200,000 psi
User Defined
T=8.0 inches
E=30,000 psi
User Defined
T=3.5 inches
E=20,000 psi
Subgrade
CBR=5
E=7,500 psi

Federal Aviation Administration FAARFIELD 2.1 Airport Master Record

FAARFIELD 2.1.1 (Build 12/21/2023)

RUNWAY DATA

Job Name: TVL-047

Structure: Taxiway K, H, & J

Gross Weight (In THSDS)

35 S	32
36 D	48
37 2D	0
38 2D/2D2	0

39 PCR	120/F/D/X/T

Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway K, H, & J

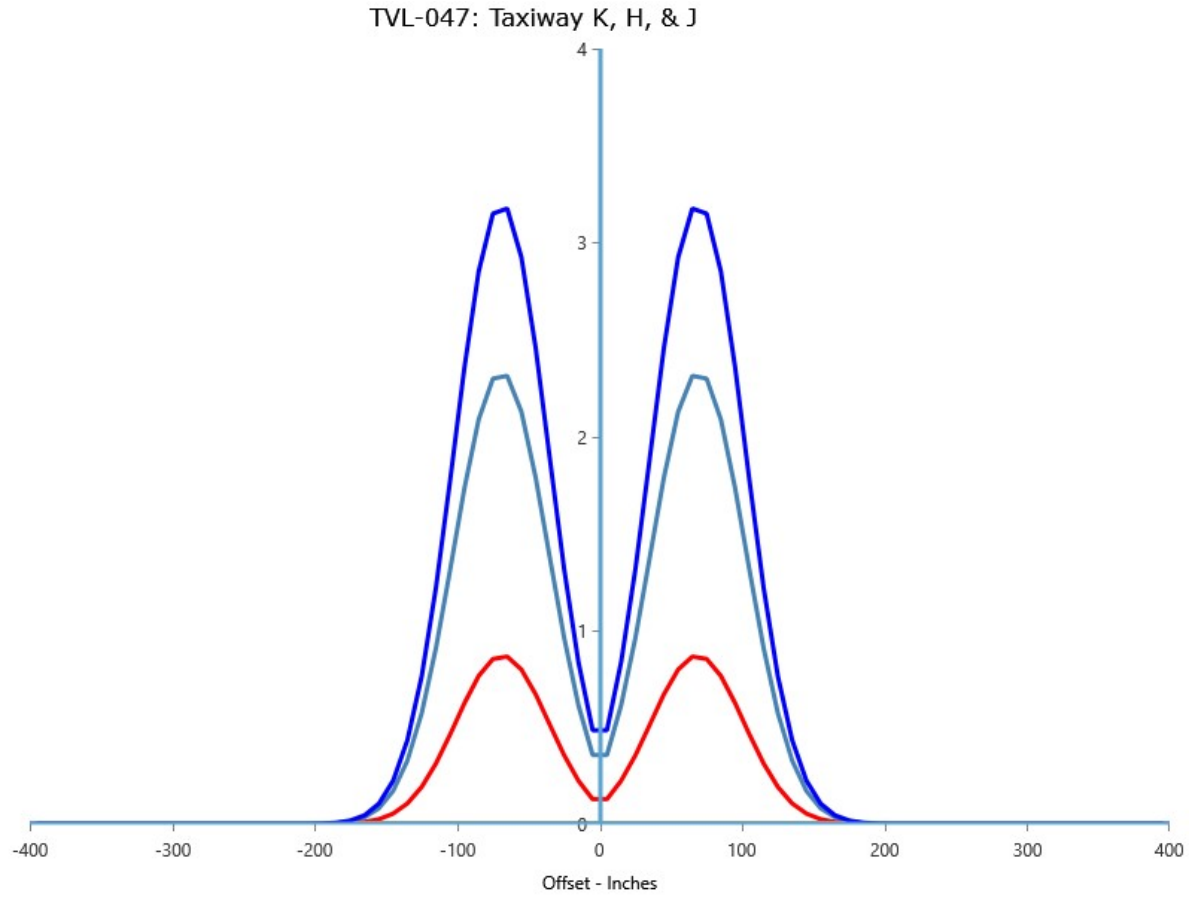
Analysis Type: New Flexible

Analysis Run Time: 2024-06-25 10:59:22

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 20.0in.


TVL-047: Taxiway K, H, & J
4
3
2
1
0
-400
-300
-200
-100
0
100
200
300
400
Offset - Inches
Cumulative CDF
CRJ100/200
Cessna Citation X
Hawker-800/800XP
Cessna 206 Stationair
Cessna Citation II/Bravo C550/551
Beechcraft King Air 350
PA-31-325 Navajo C/R

Federal Aviation Administration FAARFIELD 2.1 PCR Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway K, H, & J

This file name = PCR Results for New Flexible 2024-06-25 10:59:22

Evaluation pavement type is flexible and design program is FAARFIELD.

Structure name: Taxiway K, H, & J in job file: TVL-047.JOB.xml

Units = US Customary

Analysis Type: New Flexible

Subgrade Modulus =4,500psi (Subgrade Category is D)

Evaluation Pavement Thickness = 20.0 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 3.170

No aircraft have 4 or more wheels per gear.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	Cessna 206 Stationair	3,600	95.00	52	3,500	26,886
2	PA-31-325 Navajo C/R	6,500	95.00	66	600	4,768
3	Cessna Citation II/Bravo C550/551	15,000	95.00	130	2,500	20,255
4	Beechcraft King Air 350	15,100	95.00	92	1,500	16,431
5	Hawker-800/800XP	28,000	95.00	134	330	4,108
6	Cessna Citation X	36,000	95.00	189	1,000	12,156
7	CRJ100/200	47,700	93.00	160	400	5,555

Results Table 2. PCR Value

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/D
1	CRJ100/200	549	43,255	17.5	123.4

Results Table 3. New Flexible ACR at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)	ACR Thick (in.) (D)	ACR/F/D
1	Cessna 206 Stationair	3,600	95	52	4.6	12.6
2	PA-31-325 Navajo C/R	6,500	95	66	6.8	24.3
3	Cessna Citation II/Bravo C550/551	15,000	95	130	12.1	62.1
4	Beechcraft King Air 350	15,100	95	92	9.5	40.6
5	Hawker-800/800XP	28,000	95	134	14.6	87.8
6	Cessna Citation X	36,000	95	189	17.9	129.1
7	CRJ100/200	47,700	93	160	18.6	142

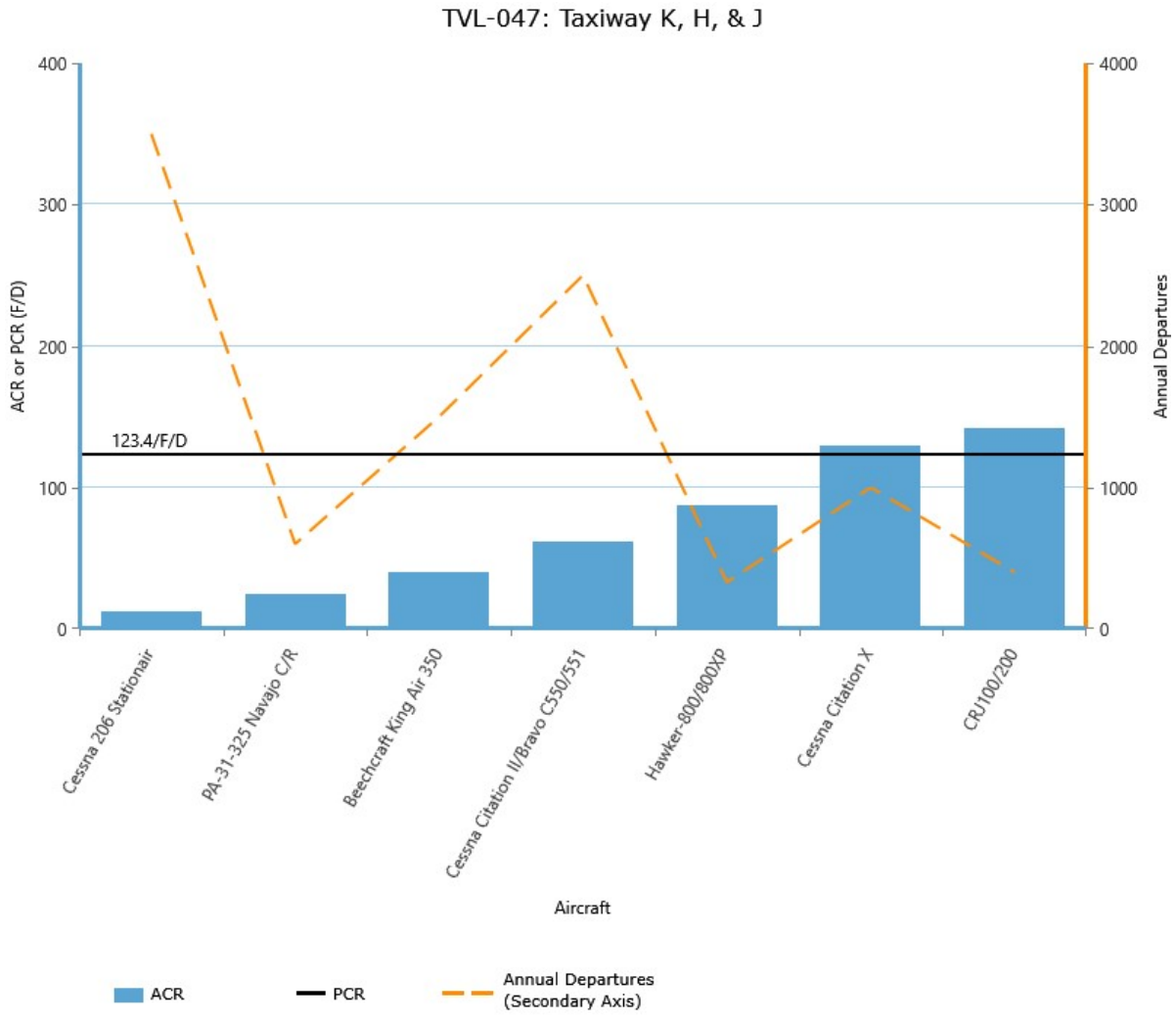
Federal Aviation Administration FAARFIELD 2.1 PCR Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway K, H, & J

Analysis Type: New Flexible



No.	Aircraft Name	Aircraft ACR	Calculated PCR	Annual Departure
1	CRJ100/200	142	123.4	400
2	Cessna Citation X	129.1	-	1,000
3	Hawker-800/800XP	87.8	-	330
4	Cessna Citation II/Bravo C550/551	62.1	-	2,500
5	Beechcraft King Air 350	40.6	-	1,500
6	PA-31-325 Navajo C/R	24.3	-	600
7	Cessna 206 Stationair	12.6	-	3,500

Federal Aviation Administration FAARFIELD 2.1 Structure Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway K, H, & J

Analysis Type: New Flexible

No run has been done on this structure.

Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	CBR	Poisson's Ratio	Strength R (psi)
1	User Defined	7.5	150,000	0	0.35	0
2	User Defined	7.5	20,000	0	0.35	0
3	User Defined	5.0	15,000	0	0.35	0
4	Subgrade	0	4,500	3	0.35	0

Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	Cessna 206 Stationair	3,600	3,500	2
2	PA-31-325 Navajo C/R	6,500	600	2
3	Cessna Citation II/Bravo C550/551	15,000	2,500	2
4	Beechcraft King Air 350	15,100	1,500	2
5	Hawker-800/800XP	28,000	330	3
6	Cessna Citation X	36,000	1,000	3
7	CRJ100/200	47,700	400	3

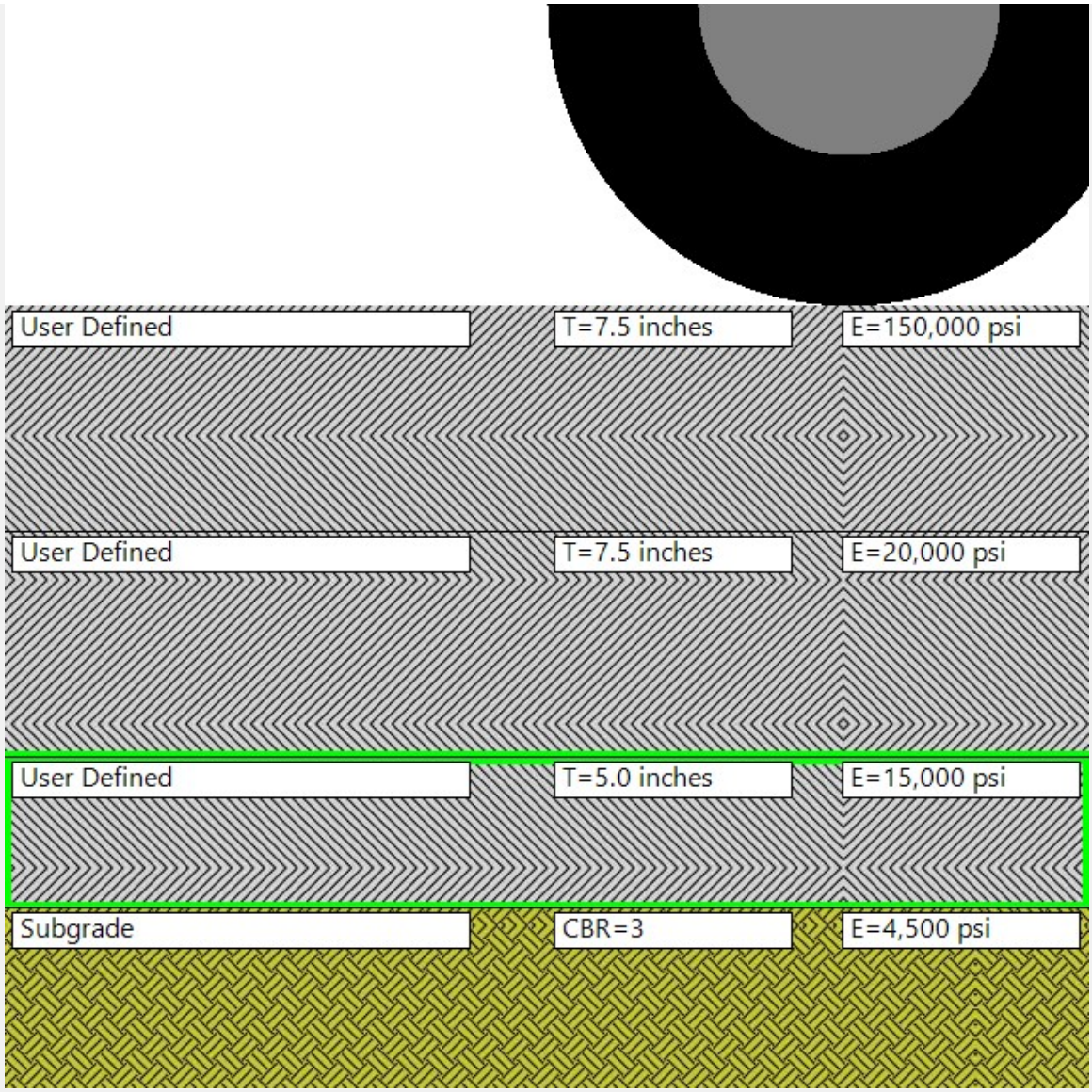
Additional Airplane Information

Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	Cessna 206 Stationair	0.00	0.00	3.12
2	PA-31-325 Navajo C/R	0.00	0.00	3.02
3	Cessna Citation II/Bravo C550/551	0.00	0.00	2.96
4	Beechcraft King Air 350	0.00	0.00	2.19
5	Hawker-800/800XP	0.00	0.00	2.09
6	Cessna Citation X	0.86	0.86	2.14
7	CRJ100/200	2.31	2.31	1.87

NOTE:

User is responsible for checking frost protection requirements.


User Defined
T=7.5 inches
E=150,000 psi
User Defined
T=7.5 inches
E=20,000 psi
User Defined
T=5.0 inches
E=15,000 psi
Subgrade
CBR=3
E=4,500 psi

Federal Aviation Administration FAARFIELD 2.1 Airport Master Record

FAARFIELD 2.1.1 (Build 12/21/2023)

RUNWAY DATA

Job Name: TVL-047

Structure: Taxiway D and South Hangars

Gross Weight (In THSDS)

35 S	40
36 D	61
37 2D	110
38 2D/2D2	0

39 PCR	150/F/C/X/T

Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway D and South Hangars

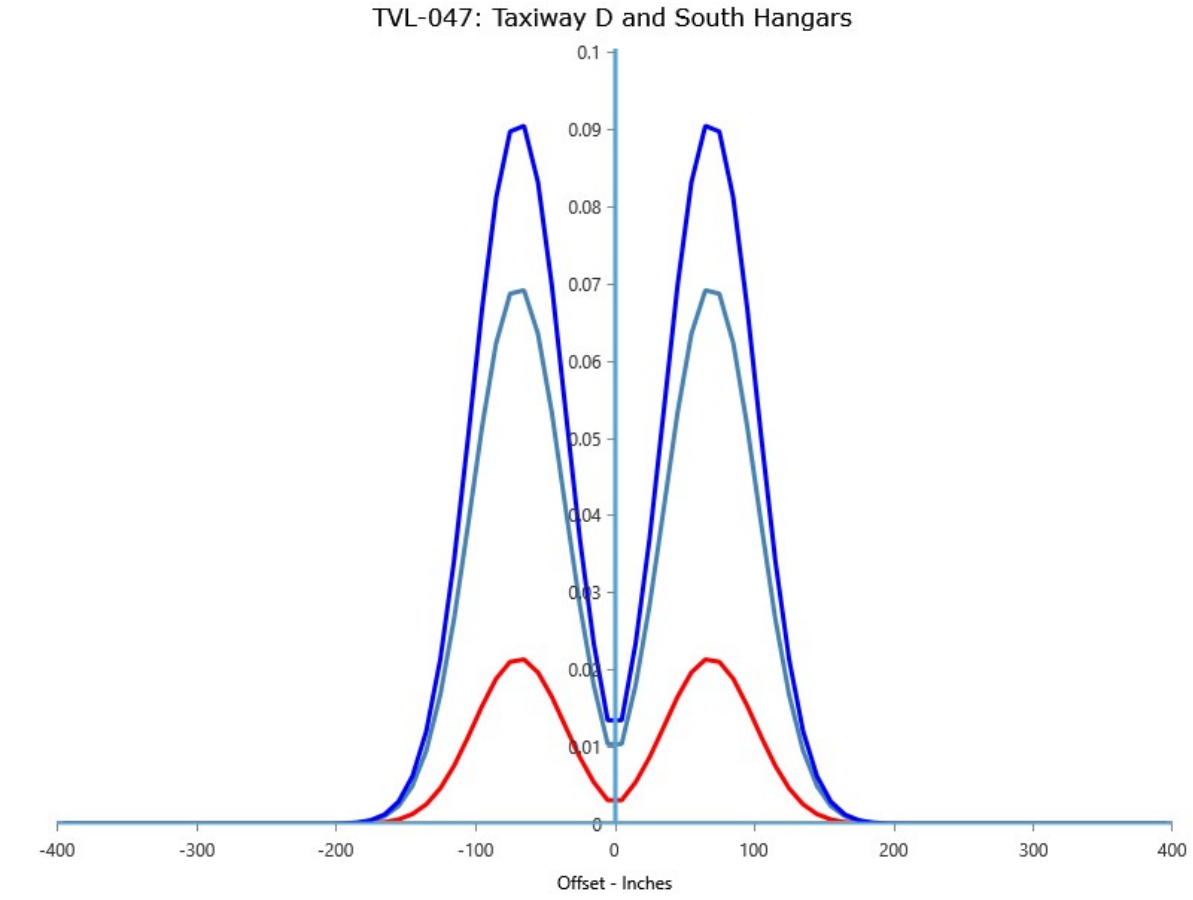
Analysis Type: New Flexible

Analysis Run Time: 2024-06-25 11:35:30

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 18.0in.


TVL-047: Taxiway D and South Hangars
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
-400
-300
-200
-100
0
100
200
300
400
Offset - Inches
Cumulative CDF
CRJ100/200
Cessna Citation X
Cessna 206 Stationair
Cessna Citation II/Bravo C550/551
Beechcraft King Air 350
PA-31-325 Navajo C/R
Hawker-800/800XP

Federal Aviation Administration FAARFIELD 2.1 PCR Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway D and South Hangars

This file name = PCR Results for New Flexible 2024-06-25 11:35:30

Evaluation pavement type is flexible and design program is FAARFIELD.

Structure name: Taxiway D and South Hangars in job file: TVL-047.JOB.xml

Units = US Customary

Analysis Type: New Flexible

Subgrade Modulus =10,500psi (Subgrade Category is C)

Evaluation Pavement Thickness = 18.0 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 0.090

No aircraft have 4 or more wheels per gear.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	Cessna 206 Stationair	3,600	95.00	52	3,500	24,851
2	PA-31-325 Navajo C/R	6,500	95.00	66	600	4,422
3	Cessna Citation II/Bravo C550/551	15,000	95.00	130	2,500	18,816
4	Beechcraft King Air 350	15,100	95.00	92	1,500	15,642
5	Hawker-800/800XP	28,000	95.00	134	330	3,925
6	Cessna Citation X	36,000	95.00	189	1,000	11,593
7	CRJ100/200	47,700	93.00	160	400	5,345

Results Table 2. PCR Value

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/C
1	CRJ100/200	523	55,027	15.5	145.1

Results Table 3. New Flexible ACR at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)	ACR Thick (in.) (C)	ACR/F/C
1	Cessna 206 Stationair	3,600	95	52	4.6	12.3
2	PA-31-325 Navajo C/R	6,500	95	66	5.0	21.7
3	Cessna Citation II/Bravo C550/551	15,000	95	130	9.8	60.7
4	Beechcraft King Air 350	15,100	95	92	6.8	33.1
5	Hawker-800/800XP	28,000	95	134	10.8	72.8
6	Cessna Citation X	36,000	95	189	13.8	115.6
7	CRJ100/200	47,700	93	160	14.0	118.9

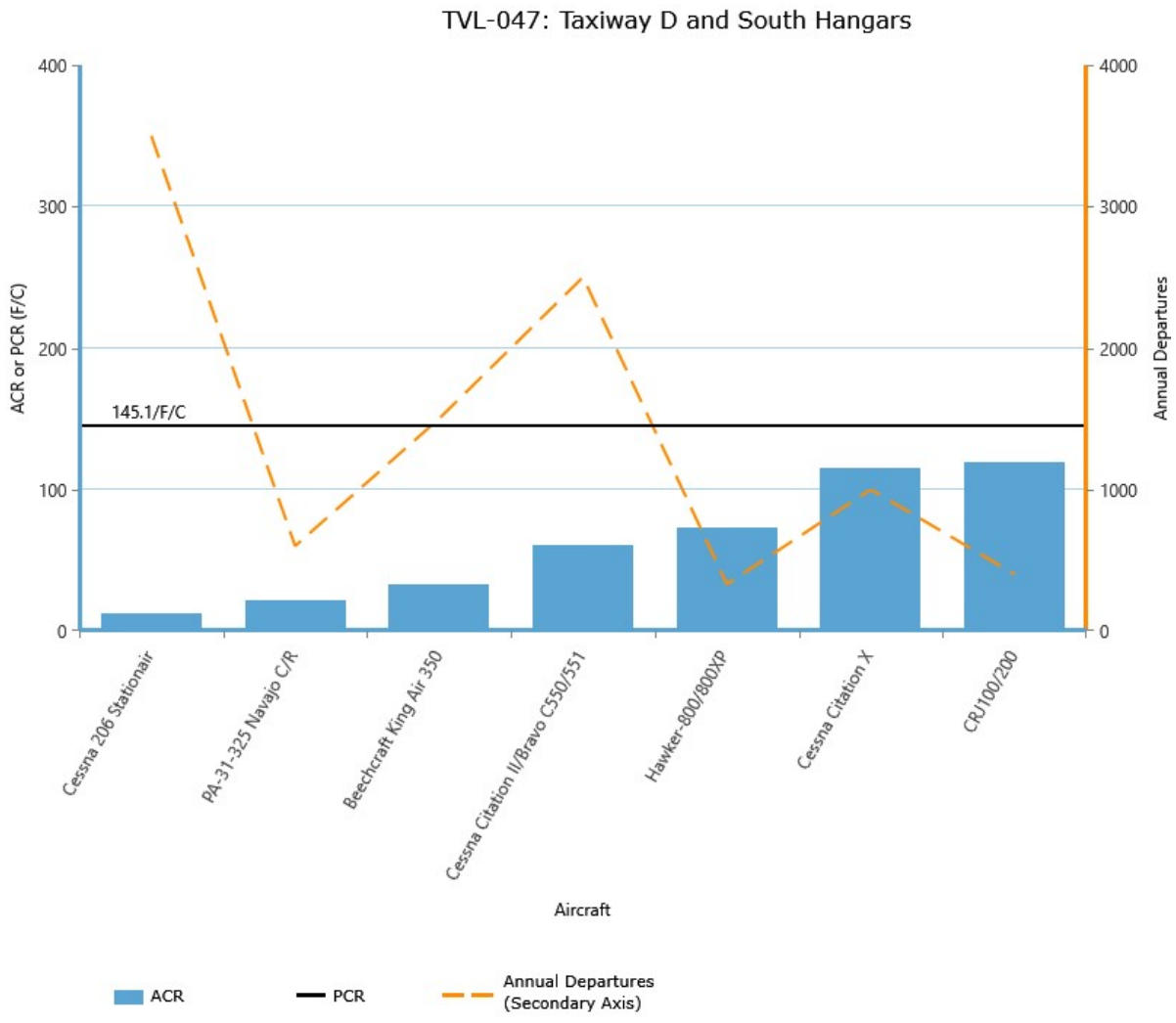
Federal Aviation Administration FAARFIELD 2.1 PCR Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway D and South Hangars

Analysis Type: New Flexible



No.	Aircraft Name	Aircraft ACR	Calculated PCR	Annual Departure
1	CRJ100/200	118.9	145.1	400
2	Cessna Citation X	115.6	-	1,000
3	Hawker-800/800XP	72.8	-	330
4	Cessna Citation II/Bravo C550/551	60.7	-	2,500
5	Beechcraft King Air 350	33.1	-	1,500
6	PA-31-325 Navajo C/R	21.7	-	600
7	Cessna 206 Stationair	12.3	-	3,500

Federal Aviation Administration FAARFIELD 2.1 Structure Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway D and South Hangars

Analysis Type: New Flexible

No run has been done on this structure.

Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	CBR	Poisson's Ratio	Strength R (psi)
1	P-401/P-403 HMA Surface	4.0	200,000	0	0.35	0
2	User Defined	5.0	20,000	0	0.35	0
3	User Defined	9.0	15,000	0	0.35	0
4	Subgrade	0	10,500	7	0.35	0

Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	Cessna 206 Stationair	3,600	3,500	2
2	PA-31-325 Navajo C/R	6,500	600	2
3	Cessna Citation II/Bravo C550/551	15,000	2,500	2
4	Beechcraft King Air 350	15,100	1,500	2
5	Hawker-800/800XP	28,000	330	3
6	Cessna Citation X	36,000	1,000	3
7	CRJ100/200	47,700	400	3

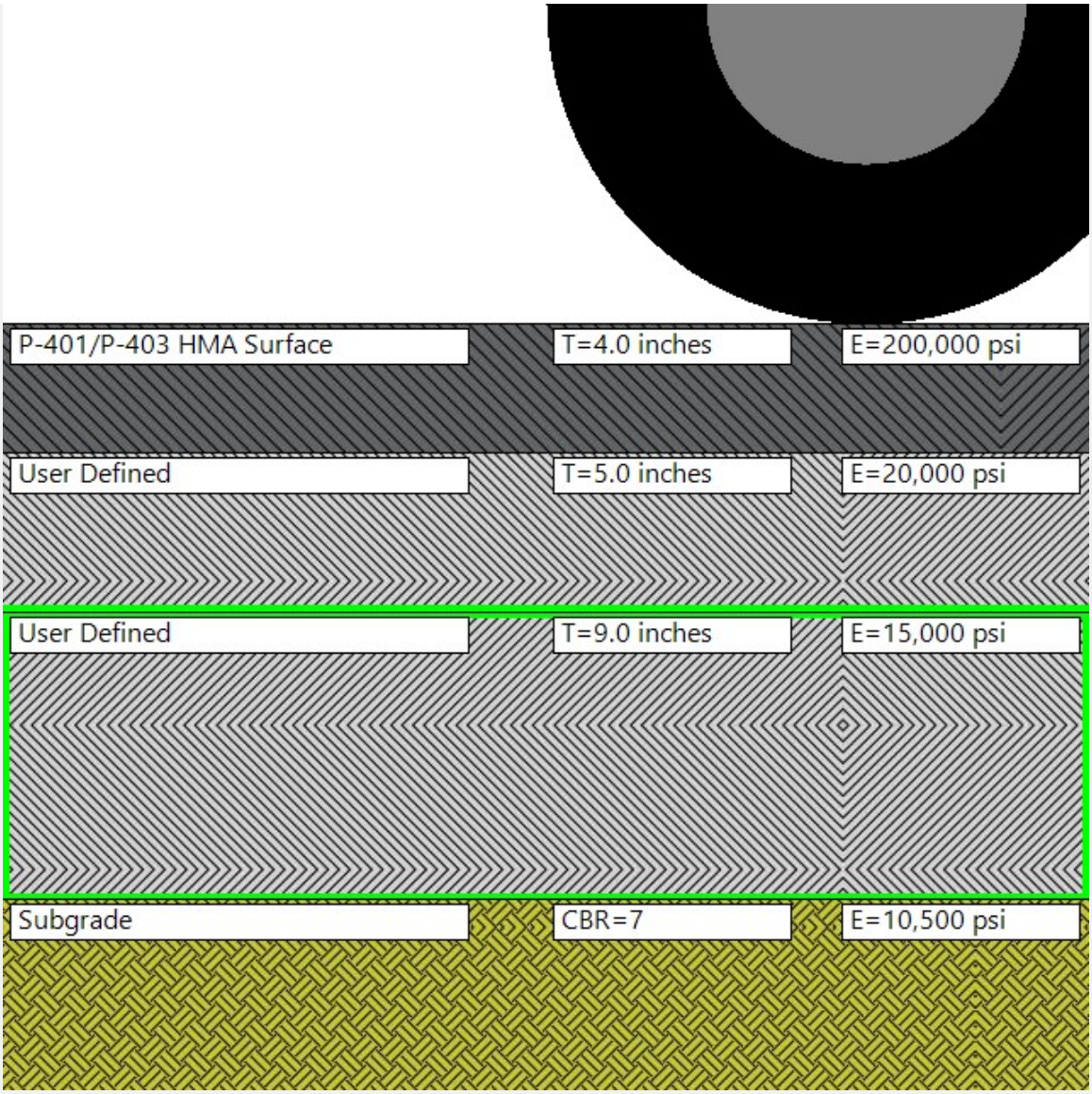
Additional Airplane Information

Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	Cessna 206 Stationair	0.00	0.00	3.38
2	PA-31-325 Navajo C/R	0.00	0.00	3.26
3	Cessna Citation II/Bravo C550/551	0.00	0.00	3.19
4	Beechcraft King Air 350	0.00	0.00	2.3
5	Hawker-800/800XP	0.00	0.00	2.19
6	Cessna Citation X	0.02	0.02	2.24
7	CRJ100/200	0.07	0.07	1.95

NOTE:

User is responsible for checking frost protection requirements.


P-401/P-403 HMA Surface
T=4.0 inches
E=200,000 psi
User Defined
T=5.0 inches
E=20,000 psi
User Defined
T=9.0 inches
E=15,000 psi
Subgrade
CBR=7
E=10,500 psi

Federal Aviation Administration FAARFIELD 2.1 Airport Master Record

FAARFIELD 2.1.1 (Build 12/21/2023)

RUNWAY DATA

Job Name: TVL-047

Structure: GA Apron 2

Gross Weight (In THSDS)

35 S	30
36 D	50
37 2D	0
38 2D/2D2	0

39 PCR	110/F/C/X/T

Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 2

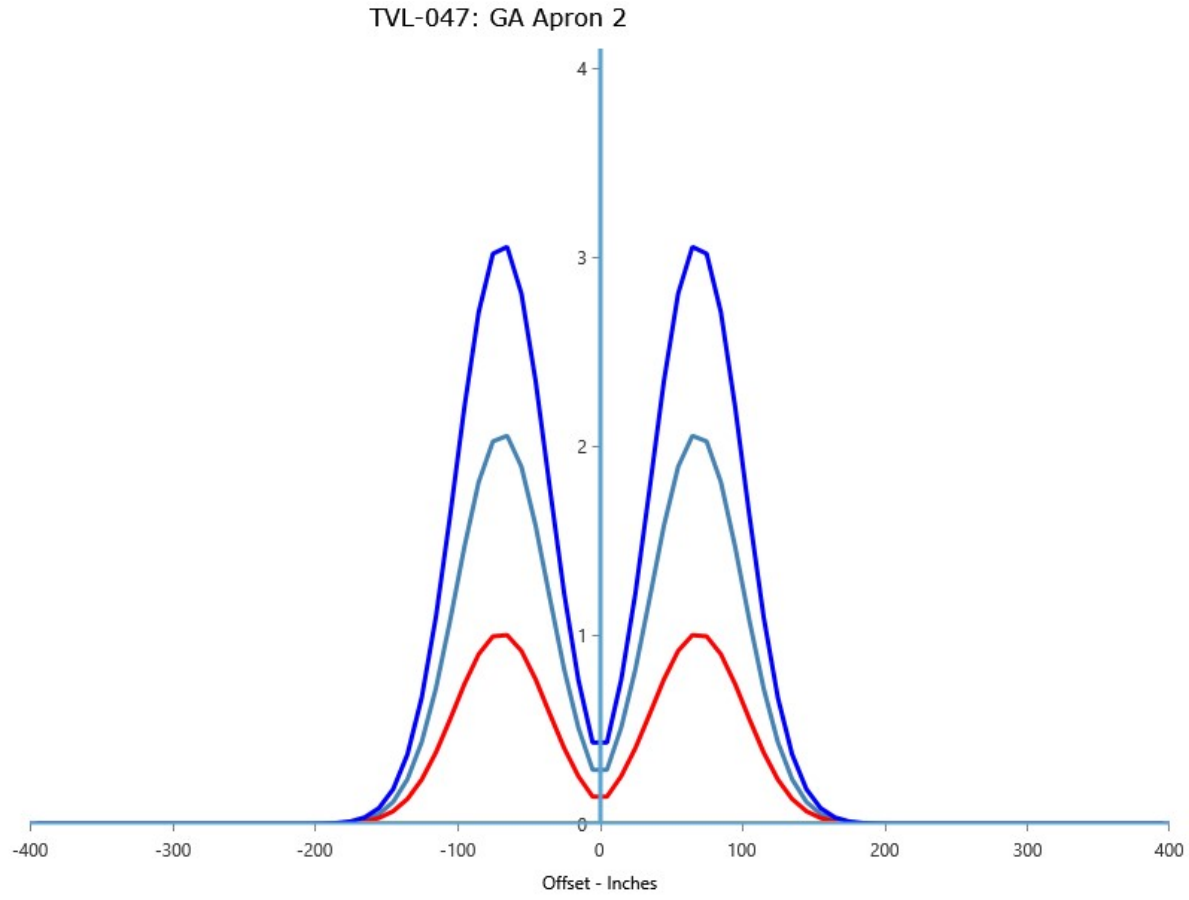
Analysis Type: New Flexible

Analysis Run Time: 2024-06-25 11:37:47

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 15.0in.



- Cumulative CDF
- Cessna Citation X
- CRJ100/200
- Hawker-800/800XP
- Cessna 206 Stationair
- Cessna Citation II/Bravo C550/551
- Beechcraft King Air 350
- PA-31-325 Navajo C/R

Federal Aviation Administration FAARFIELD 2.1 PCR Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 2

This file name = PCR Results for New Flexible 2024-06-25 11:37:47

Evaluation pavement type is flexible and design program is FAARFIELD.

Structure name: GA Apron 2 in job file: TVL-047.JOB.xml

Units = US Customary

Analysis Type: New Flexible

Subgrade Modulus =12,000psi (Subgrade Category is C)

Evaluation Pavement Thickness = 15.0 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 3.050

No aircraft have 4 or more wheels per gear.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	Cessna 206 Stationair	3,600	95.00	52	3,500	21,751
2	PA-31-325 Navajo C/R	6,500	95.00	66	600	3,895
3	Cessna Citation II/Bravo C550/551	15,000	95.00	130	2,500	16,623
4	Beechcraft King Air 350	15,100	95.00	92	1,500	14,431
5	Hawker-800/800XP	28,000	95.00	134	330	3,645
6	Cessna Citation X	36,000	95.00	189	1,000	10,729
7	CRJ100/200	47,700	93.00	160	400	5,022

Results Table 2. PCR Value

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/C
1	CRJ100/200	1,223	43,934	13.3	107.4

Results Table 3. New Flexible ACR at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)	ACR Thick (in.) (C)	ACR/F/C
1	Cessna 206 Stationair	3,600	95	52	4.6	12.3
2	PA-31-325 Navajo C/R	6,500	95	66	5.0	21.7
3	Cessna Citation II/Bravo C550/551	15,000	95	130	9.8	60.7
4	Beechcraft King Air 350	15,100	95	92	6.8	33.1
5	Hawker-800/800XP	28,000	95	134	10.8	72.8
6	Cessna Citation X	36,000	95	189	13.8	115.6
7	CRJ100/200	47,700	93	160	14.0	118.9

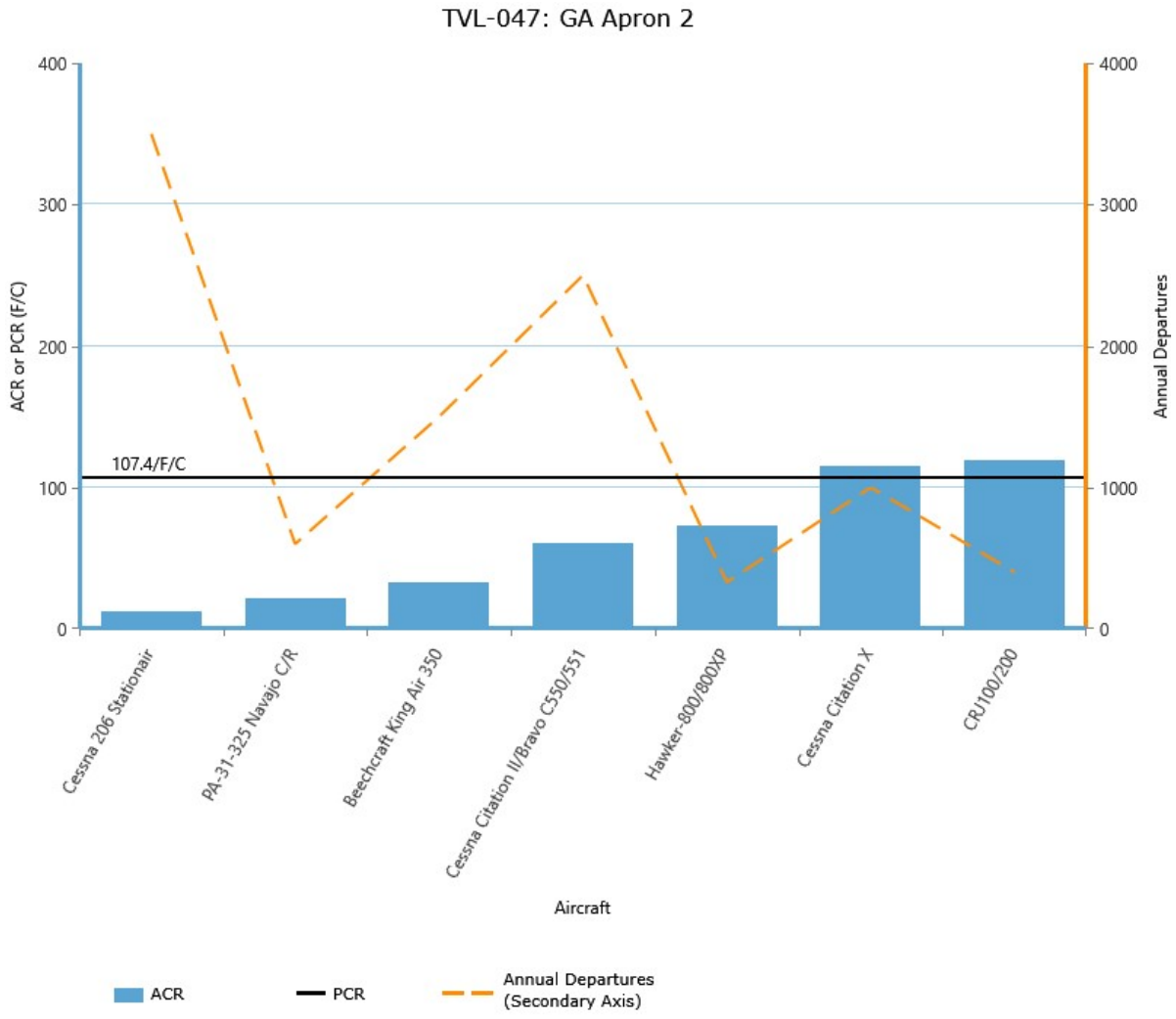
Federal Aviation Administration FAARFIELD 2.1 PCR Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 2

Analysis Type: New Flexible



No.	Aircraft Name	Aircraft ACR	Calculated PCR	Annual Departure
1	CRJ100/200	118.9	107.4	400
2	Cessna Citation X	115.6	-	1,000
3	Hawker-800/800XP	72.8	-	330
4	Cessna Citation II/Bravo C550/551	60.7	-	2,500
5	Beechcraft King Air 350	33.1	-	1,500
6	PA-31-325 Navajo C/R	21.7	-	600
7	Cessna 206 Stationair	12.3	-	3,500

Federal Aviation Administration FAARFIELD 2.1 Structure Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 2

Analysis Type: New Flexible

No run has been done on this structure.

Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	CBR	Poisson's Ratio	Strength R (psi)
1	User Defined	3.0	150,000	0	0.35	0
2	User Defined	6.0	20,000	0	0.35	0
3	User Defined	6.0	15,000	0	0.35	0
4	Subgrade	0	12,000	8	0.35	0

Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	Cessna 206 Stationair	3,600	3,500	2
2	PA-31-325 Navajo C/R	6,500	600	2
3	Cessna Citation II/Bravo C550/551	15,000	2,500	2
4	Beechcraft King Air 350	15,100	1,500	2
5	Hawker-800/800XP	28,000	330	3
6	Cessna Citation X	36,000	1,000	3
7	CRJ100/200	47,700	400	3

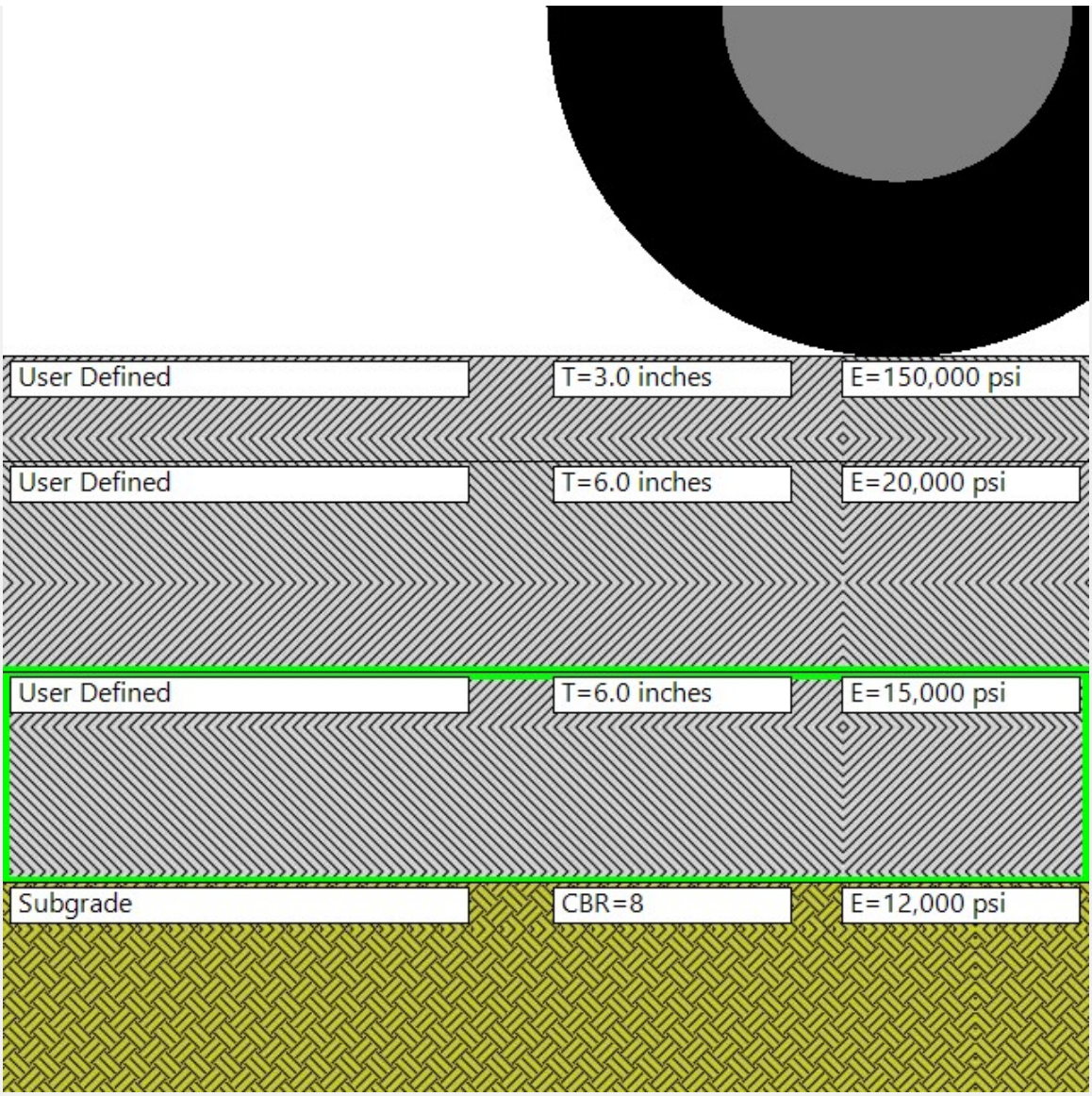
Additional Airplane Information

Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	Cessna 206 Stationair	0.00	0.00	3.86
2	PA-31-325 Navajo C/R	0.00	0.00	3.7
3	Cessna Citation II/Bravo C550/551	0.00	0.00	3.61
4	Beechcraft King Air 350	0.00	0.00	2.49
5	Hawker-800/800XP	0.00	0.00	2.35
6	Cessna Citation X	2.05	2.05	2.42
7	CRJ100/200	1.00	1.00	2.07

NOTE:

User is responsible for checking frost protection requirements.


User Defined
T=3.0 inches
E=150,000 psi
User Defined
T=6.0 inches
E=20,000 psi
User Defined
T=6.0 inches
E=15,000 psi
Subgrade
CBR=8
E=12,000 psi

Federal Aviation Administration FAARFIELD 2.1 Airport Master Record

FAARFIELD 2.1.1 (Build 12/21/2023)

RUNWAY DATA

Job Name: TVL-047

Structure: GA Apron 3

Gross Weight (In THSDS)

35 S	120
36 D	183
37 2D	316
38 2D/2D2	756

39 PCR	560/R/B/W/T

Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 3

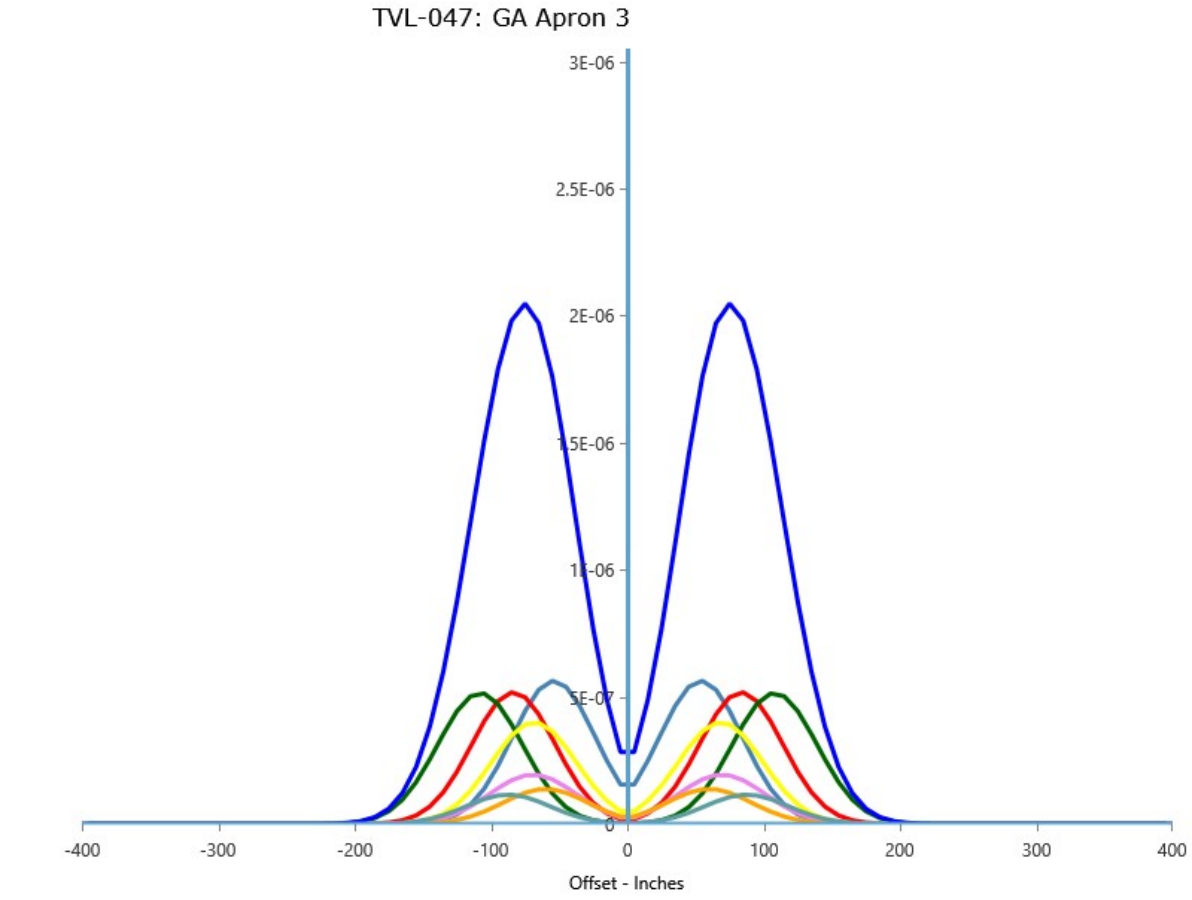
Analysis Type: PCC Overlay on Flexible

Analysis Run Time: 2024-06-25 11:16:50

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 20.0in.


TVL-047: GA Apron 3
3E-06
2.5E-06
2E-06
1.5E-06
1E-06
5E-07
0
-400
-300
-200
-100
0
100
200
300
400
Offset - Inches
Cumulative CDF
Cessna 206 Stationair
Cessna Citation II/Bravo C550/551
Beechcraft King Air 350
Cessna Citation X
CRJ100/200
Hawker-800/800XP
PA-31-325 Navajo C/R

Federal Aviation Administration FAARFIELD 2.1 PCR Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 3

This file name = PCR Results for PCC Overlay on Flexible 2024-06-25 11:16:50

Structure name: GA Apron 3 in job file: TVL-047.JOB.xml

Units = US Customary

Analysis Type: PCC Overlay on Flexible

Subgrade Modulus =15,000psi (Subgrade Category is B)

Evaluation Pavement Thickness = 20.0 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 0.000

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	Cessna 206 Stationair	3,600	95.00	52	3,500	5,632
2	PA-31-325 Navajo C/R	6,500	95.00	66	600	1,149
3	Cessna Citation II/Bravo C550/551	15,000	95.00	130	2,500	5,178
4	Beechcraft King Air 350	15,100	95.00	92	1,500	5,131
5	Hawker-800/800XP	28,000	95.00	134	330	1,358
6	Cessna Citation X	36,000	95.00	189	1,000	3,976
7	CRJ100/200	47,700	93.00	160	400	1,922

Results Table 2. PCR Value

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/R/B
1	CRJ100/200	400	158,232	13.6	562.8

Results Table 3. PCC Overlay on Flexible ACR at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)	ACR Thick (in.) (B)	ACR/R/B
1	Cessna 206 Stationair	3,600	95	52	2.0	8.2
2	PA-31-325 Navajo C/R	6,500	95	66	2.0	14.2
3	Cessna Citation II/Bravo C550/551	15,000	95	130	4.0	53.7
4	Beechcraft King Air 350	15,100	95	92	3.1	32.4
5	Hawker-800/800XP	28,000	95	134	4.9	77.4
6	Cessna Citation X	36,000	95	189	6.1	117.3
7	CRJ100/200	47,700	93	160	6.6	135.3

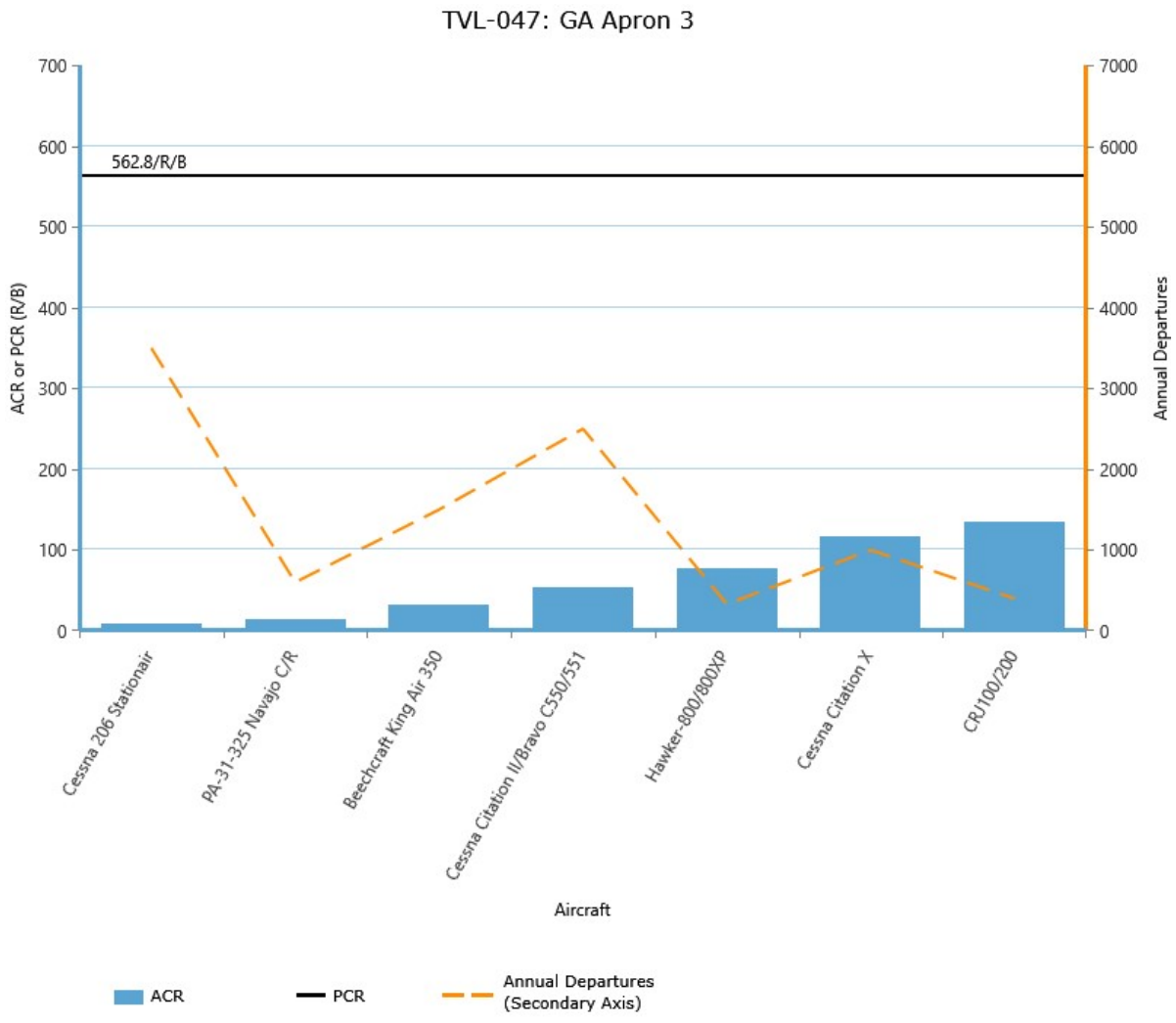
Federal Aviation Administration FAARFIELD 2.1 PCR Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 3

Analysis Type: PCC Overlay on Flexible



No.	Aircraft Name	Aircraft ACR	Calculated PCR	Annual Departure
1	CRJ100/200	135.3	562.8	400
2	Cessna Citation X	117.3	-	1,000
3	Hawker-800/800XP	77.4	-	330
4	Cessna Citation II/Bravo C550/551	53.7	-	2,500
5	Beechcraft King Air 350	32.4	-	1,500
6	PA-31-325 Navajo C/R	14.2	-	600
7	Cessna 206 Stationair	8.2	-	3,500

Federal Aviation Administration FAARFIELD 2.1 Structure Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 3

Analysis Type: PCC Overlay on Flexible

No run has been done on this structure.

Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	k (pci)	Poisson's Ratio	Strength R (psi)
1	P-501 PCC Overlay on Flexible	14.0	4,000,000	0	0.15	650
2	User Defined	2.0	200,000	0	0.35	0
3	User Defined	4.0	40,000	0	0.35	0
4	Subgrade	0	15,000	172.4	0.4	0

Airplane Information

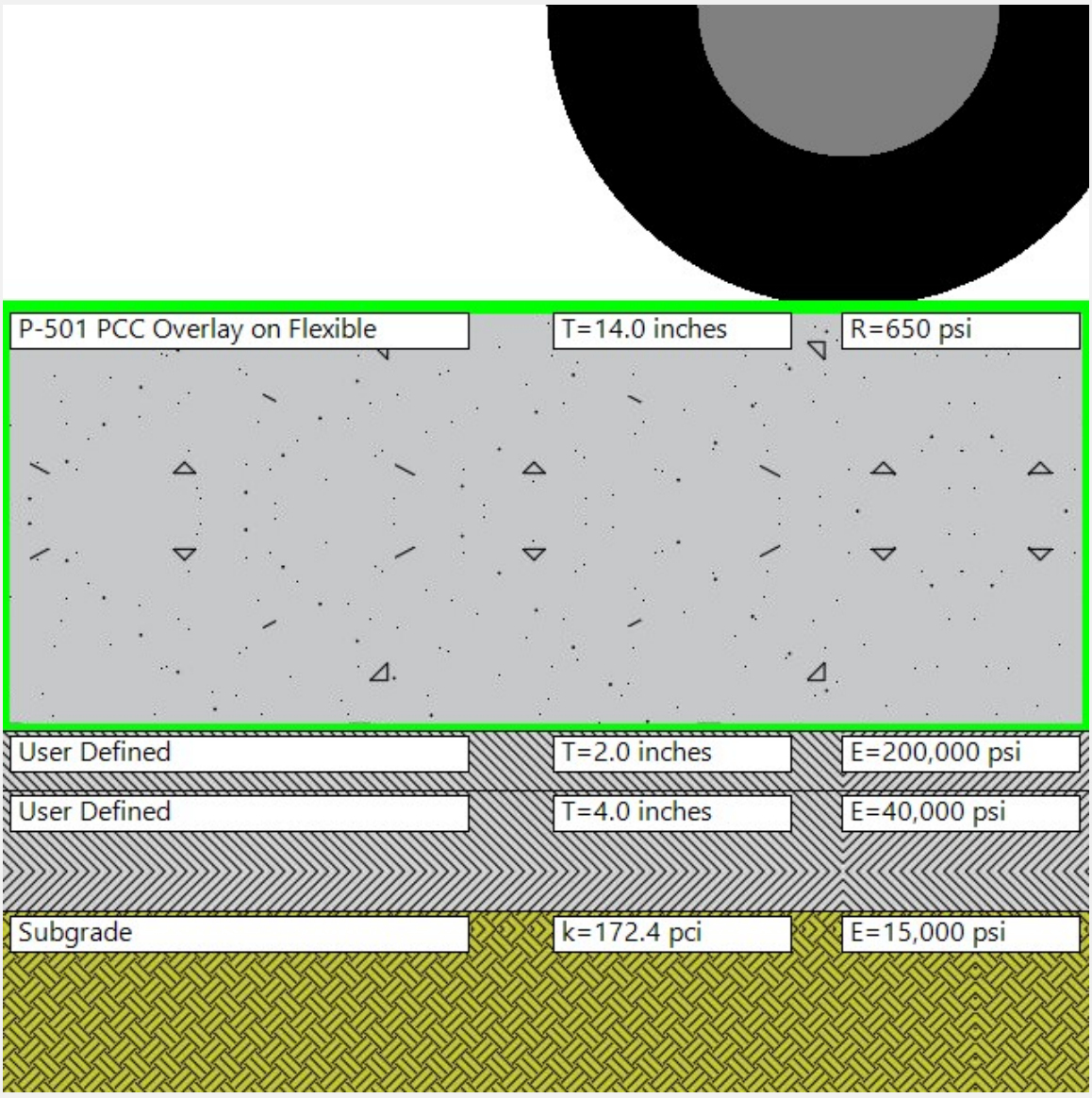
No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	Cessna 206 Stationair	3,600	3,500	2
2	PA-31-325 Navajo C/R	6,500	600	2
3	Cessna Citation II/Bravo C550/551	15,000	2,500	2
4	Beechcraft King Air 350	15,100	1,500	2
5	Hawker-800/800XP	28,000	330	3
6	Cessna Citation X	36,000	1,000	3
7	CRJ100/200	47,700	400	3

Additional Airplane Information

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	Cessna 206 Stationair	0.00	0.00	14.91
2	PA-31-325 Navajo C/R	0.00	0.00	12.53
3	Cessna Citation II/Bravo C550/551	0.00	0.00	11.59
4	Beechcraft King Air 350	0.00	0.00	7.02
5	Hawker-800/800XP	0.00	0.00	6.32
6	Cessna Citation X	0.00	0.00	6.54
7	CRJ100/200	0.00	0.00	5.41

NOTE:

User is responsible for checking frost protection requirements.



Federal Aviation Administration FAARFIELD 2.1 Airport Master Record

FAARFIELD 2.1.1 (Build 12/21/2023)

RUNWAY DATA

Job Name: TVL-047

Structure: GA Apron 4

Gross Weight (In THSDS)

35 S	65
36 D	93
37 2D	157
38 2D/2D2	0

39 PCR	250/F/C/X/T

Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 4

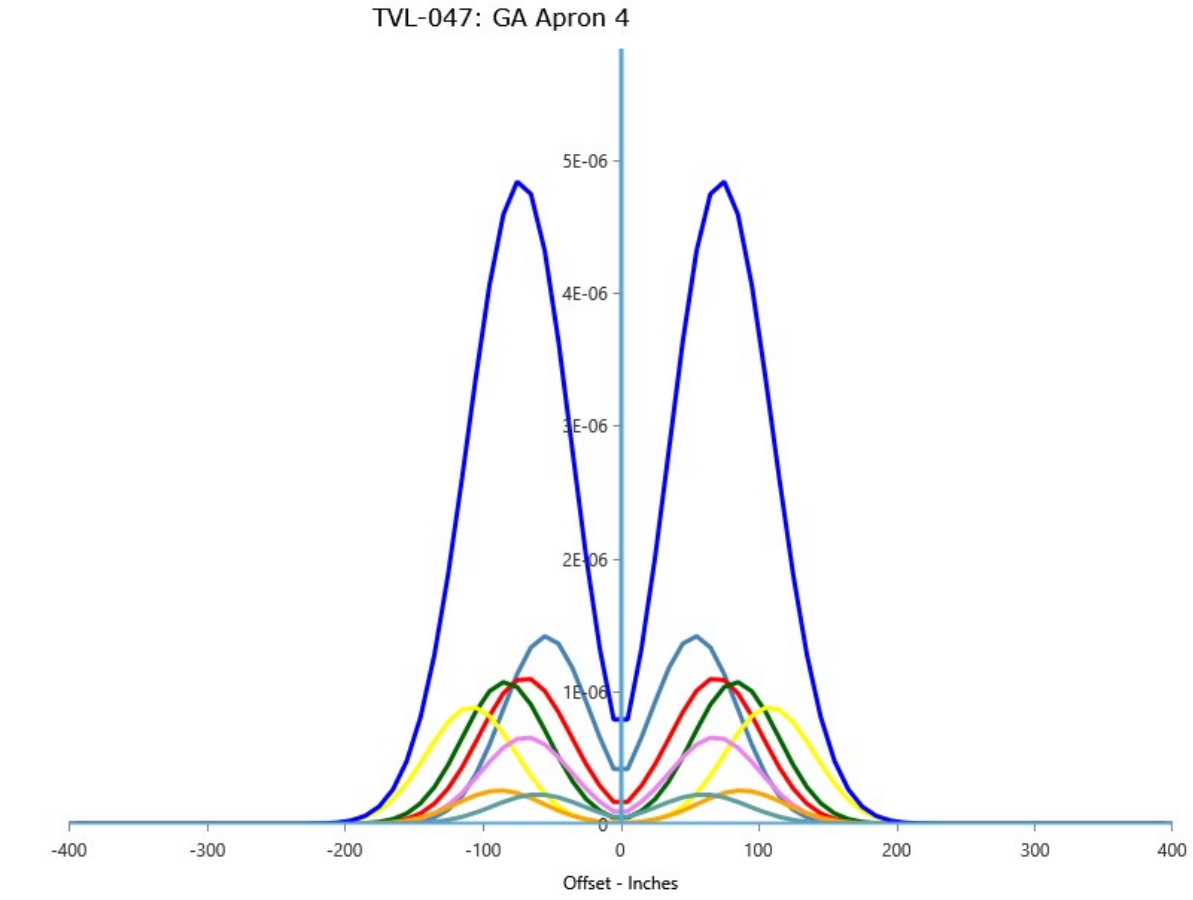
Analysis Type: New Flexible

Analysis Run Time: 2024-06-25 11:32:11

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 18.0in.


TVL-047: GA Apron 4
5E-06
4E-06
3E-06
2E-06
1E-06
0
-400
-300
-200
-100
0
100
200
300
400
Offset - Inches
Cumulative CDF
Cessna 206 Stationair
CRJ100/200
Cessna Citation II/Bravo C550/551
Beechcraft King Air 350
Cessna Citation X
PA-31-325 Navajo C/R
Hawker-800/800XP

Federal Aviation Administration FAARFIELD 2.1 PCR Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 4

This file name = PCR Results for New Flexible 2024-06-25 11:32:11

Evaluation pavement type is flexible and design program is FAARFIELD.

Structure name: GA Apron 4 in job file: TVL-047.JOB.xml

Units = US Customary

Analysis Type: New Flexible

Subgrade Modulus =12,000psi (Subgrade Category is C)

Evaluation Pavement Thickness = 18.0 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 0.000

No aircraft have 4 or more wheels per gear.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	Cessna 206 Stationair	3,600	95.00	52	3,500	25,872
2	PA-31-325 Navajo C/R	6,500	95.00	66	600	4,596
3	Cessna Citation II/Bravo C550/551	15,000	95.00	130	2,500	19,538
4	Beechcraft King Air 350	15,100	95.00	92	1,500	16,038
5	Hawker-800/800XP	28,000	95.00	134	330	4,017
6	Cessna Citation X	36,000	95.00	189	1,000	11,876
7	CRJ100/200	47,700	93.00	160	400	5,451

Results Table 2. PCR Value

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/C
1	CRJ100/200	400	80,079	19.9	250.4

Results Table 3. New Flexible ACR at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)	ACR Thick (in.) (C)	ACR/F/C
1	Cessna 206 Stationair	3,600	95	52	4.6	12.3
2	PA-31-325 Navajo C/R	6,500	95	66	5.0	21.7
3	Cessna Citation II/Bravo C550/551	15,000	95	130	9.8	60.7
4	Beechcraft King Air 350	15,100	95	92	6.8	33.1
5	Hawker-800/800XP	28,000	95	134	10.8	72.8
6	Cessna Citation X	36,000	95	189	13.8	115.6
7	CRJ100/200	47,700	93	160	14.0	118.9

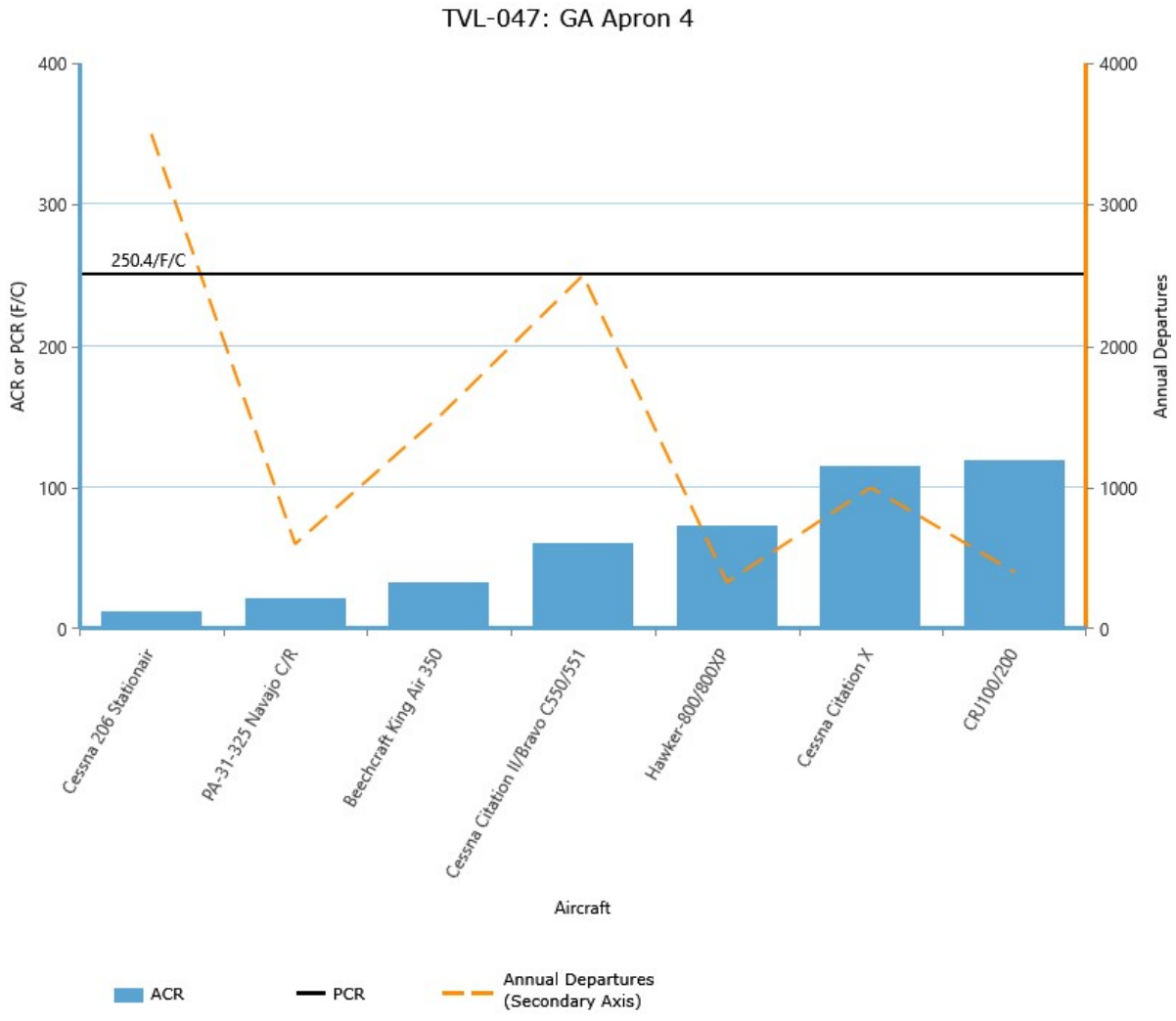
Federal Aviation Administration FAARFIELD 2.1 PCR Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 4

Analysis Type: New Flexible



No.	Aircraft Name	Aircraft ACR	Calculated PCR	Annual Departure
1	CRJ100/200	118.9	250.4	400
2	Cessna Citation X	115.6	-	1,000
3	Hawker-800/800XP	72.8	-	330
4	Cessna Citation II/Bravo C550/551	60.7	-	2,500
5	Beechcraft King Air 350	33.1	-	1,500
6	PA-31-325 Navajo C/R	21.7	-	600
7	Cessna 206 Stationair	12.3	-	3,500

Federal Aviation Administration FAARFIELD 2.1 Structure Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 4

Analysis Type: New Flexible

No run has been done on this structure.

Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	CBR	Poisson's Ratio	Strength R (psi)
1	P-401/P-403 HMA Surface	2.0	200,000	0	0.35	0
2	User Defined	2.0	150,000	0	0.35	0
3	User Defined	6.0	25,000	0	0.35	0
4	User Defined	8.0	15,000	0	0.35	0
5	Subgrade	0	12,000	8	0.35	0

Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	Cessna 206 Stationair	3,600	3,500	2
2	PA-31-325 Navajo C/R	6,500	600	2
3	Cessna Citation II/Bravo C550/551	15,000	2,500	2
4	Beechcraft King Air 350	15,100	1,500	2
5	Hawker-800/800XP	28,000	330	3
6	Cessna Citation X	36,000	1,000	3
7	CRJ100/200	47,700	400	3

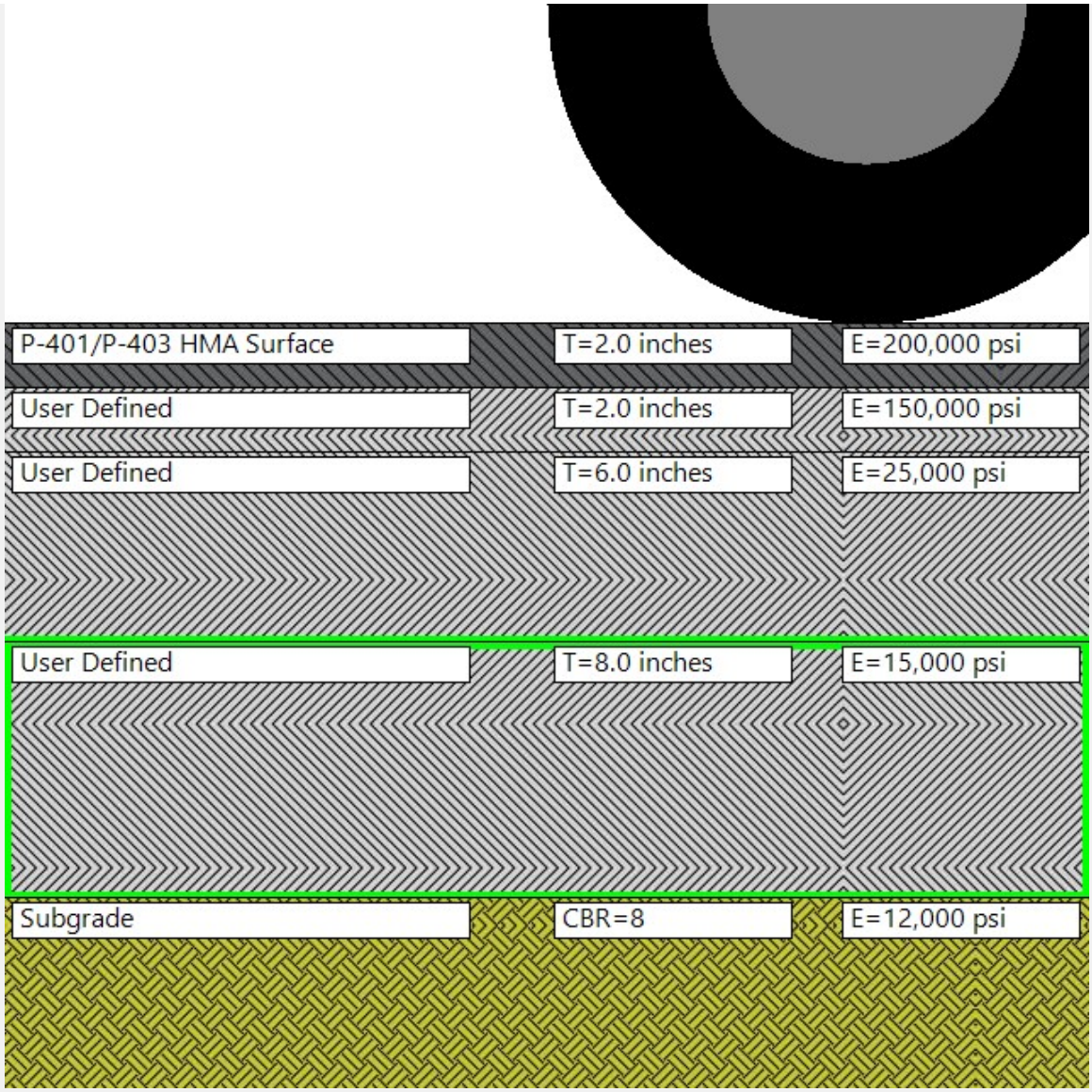
Additional Airplane Information

Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	Cessna 206 Stationair	0.00	0.00	3.25
2	PA-31-325 Navajo C/R	0.00	0.00	3.13
3	Cessna Citation II/Bravo C550/551	0.00	0.00	3.07
4	Beechcraft King Air 350	0.00	0.00	2.24
5	Hawker-800/800XP	0.00	0.00	2.14
6	Cessna Citation X	0.00	0.00	2.19
7	CRJ100/200	0.00	0.00	1.91

NOTE:

User is responsible for checking frost protection requirements.


P-401/P-403 HMA Surface
T=2.0 inches
E=200,000 psi
User Defined
T=2.0 inches
E=150,000 psi
User Defined
T=6.0 inches
E=25,000 psi
User Defined
T=8.0 inches
E=15,000 psi
Subgrade
CBR=8
E=12,000 psi

Federal Aviation Administration FAARFIELD 2.1 Airport Master Record

FAARFIELD 2.1.1 (Build 12/21/2023)

RUNWAY DATA

Job Name: TVL-047

Structure: Taxiway G & GA Apron 5

Gross Weight (In THSDS)

35 S	32
36 D	54
37 2D	0
38 2D/2D2	0

39 PCR	100/F/B/X/T

Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway G & GA Apron 5

Analysis Type: HMA on Aggregate

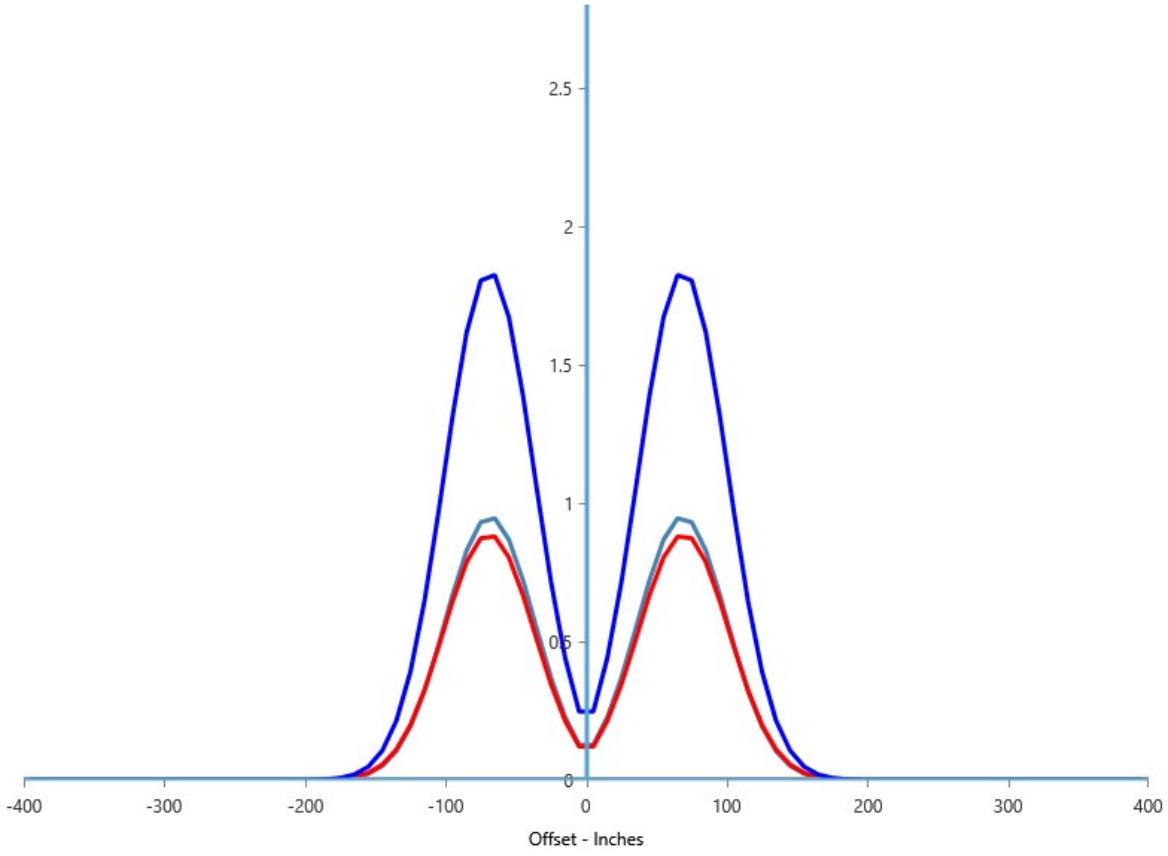
Analysis Run Time: 2024-06-25 11:59:39

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 11.0in.

TVL-047: Taxiway G & GA Apron 5



- Cumulative CDF
- Cessna Citation X
- CRJ100/200
- Hawker-800/800XP
- Cessna 206 Stationair
- Cessna Citation II/Bravo C550/551
- Beechcraft King Air 350
- PA-31-325 Navajo C/R

Federal Aviation Administration FAARFIELD 2.1 PCR Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway G & GA Apron 5

This file name = PCR Results for HMA on Aggregate 2024-06-25 11:59:39

Evaluation pavement type is flexible and design program is FAARFIELD.

Structure name: Taxiway G & GA Apron 5 in job file: TVL-047.JOB.xml

Units = US Customary

Analysis Type: HMA on Aggregate

Subgrade Modulus =15,000psi (Subgrade Category is B)

Evaluation Pavement Thickness = 11.0 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 1.820

No aircraft have 4 or more wheels per gear.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	Cessna 206 Stationair	3,600	95.00	52	3,500	17,540
2	PA-31-325 Navajo C/R	6,500	95.00	66	600	3,179
3	Cessna Citation II/Bravo C550/551	15,000	95.00	130	2,500	13,639
4	Beechcraft King Air 350	15,100	95.00	92	1,500	12,767
5	Hawker-800/800XP	28,000	95.00	134	330	3,259
6	Cessna Citation X	36,000	95.00	189	1,000	9,540
7	CRJ100/200	47,700	93.00	160	400	4,575

Results Table 2. PCR Value

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/B
1	CRJ100/200	830	45,342	10.8	101.1

Results Table 3. HMA on Aggregate ACR at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)	ACR Thick (in.) (B)	ACR/F/B
1	Cessna 206 Stationair	3,600	95	52	4.6	11.9
2	PA-31-325 Navajo C/R	6,500	95	66	4.6	20.3
3	Cessna Citation II/Bravo C550/551	15,000	95	130	8.0	58.7
4	Beechcraft King Air 350	15,100	95	92	4.9	27.8
5	Hawker-800/800XP	28,000	95	134	8.3	62.4
6	Cessna Citation X	36,000	95	189	10.6	98.5
7	CRJ100/200	47,700	93	160	11.1	107.5

Federal Aviation Administration FAARFIELD 2.1 Structure Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: Taxiway G & GA Apron 5

Analysis Type: HMA on Aggregate

No run has been done on this structure.

Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	CBR	Poisson's Ratio	Strength R (psi)
1	P-401/P-403 HMA Surface	3.0	200,000	0	0.35	0
2	P-209 Crushed Aggregate	8.0	44,366	0	0.35	0
3	Subgrade	0	15,000	10	0.35	0

Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	Cessna 206 Stationair	3,600	3,500	2
2	PA-31-325 Navajo C/R	6,500	600	2
3	Cessna Citation II/Bravo C550/551	15,000	2,500	2
4	Beechcraft King Air 350	15,100	1,500	2
5	Hawker-800/800XP	28,000	330	3
6	Cessna Citation X	36,000	1,000	3
7	CRJ100/200	47,700	400	3

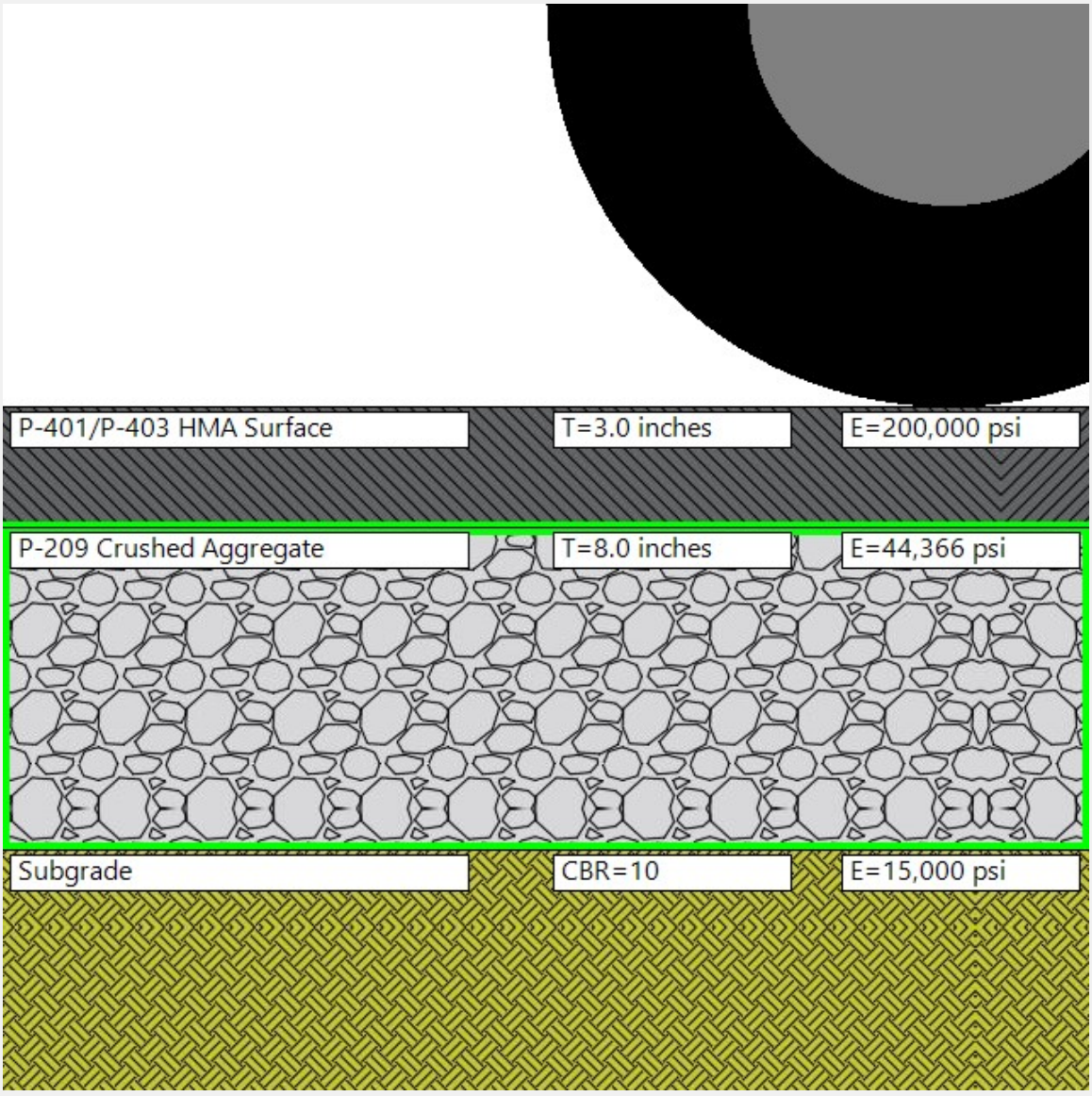
Additional Airplane Information

Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	Cessna 206 Stationair	0.00	0.00	4.79
2	PA-31-325 Navajo C/R	0.00	0.00	4.53
3	Cessna Citation II/Bravo C550/551	0.00	0.00	4.4
4	Beechcraft King Air 350	0.00	0.00	2.82
5	Hawker-800/800XP	0.00	0.00	2.63
6	Cessna Citation X	0.94	0.94	2.73
7	CRJ100/200	0.88	0.88	2.27

NOTE:

User is responsible for checking frost protection requirements.



Federal Aviation Administration FAARFIELD 2.1 Airport Master Record

FAARFIELD 2.1.1 (Build 12/21/2023)

RUNWAY DATA

Job Name: TVL-047

Structure: GA Apron 6

Gross Weight (In THSDS)

35 S	65
36 D	103
37 2D	178
38 2D/2D2	0

39 PCR	240/F/B/X/T

Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 6

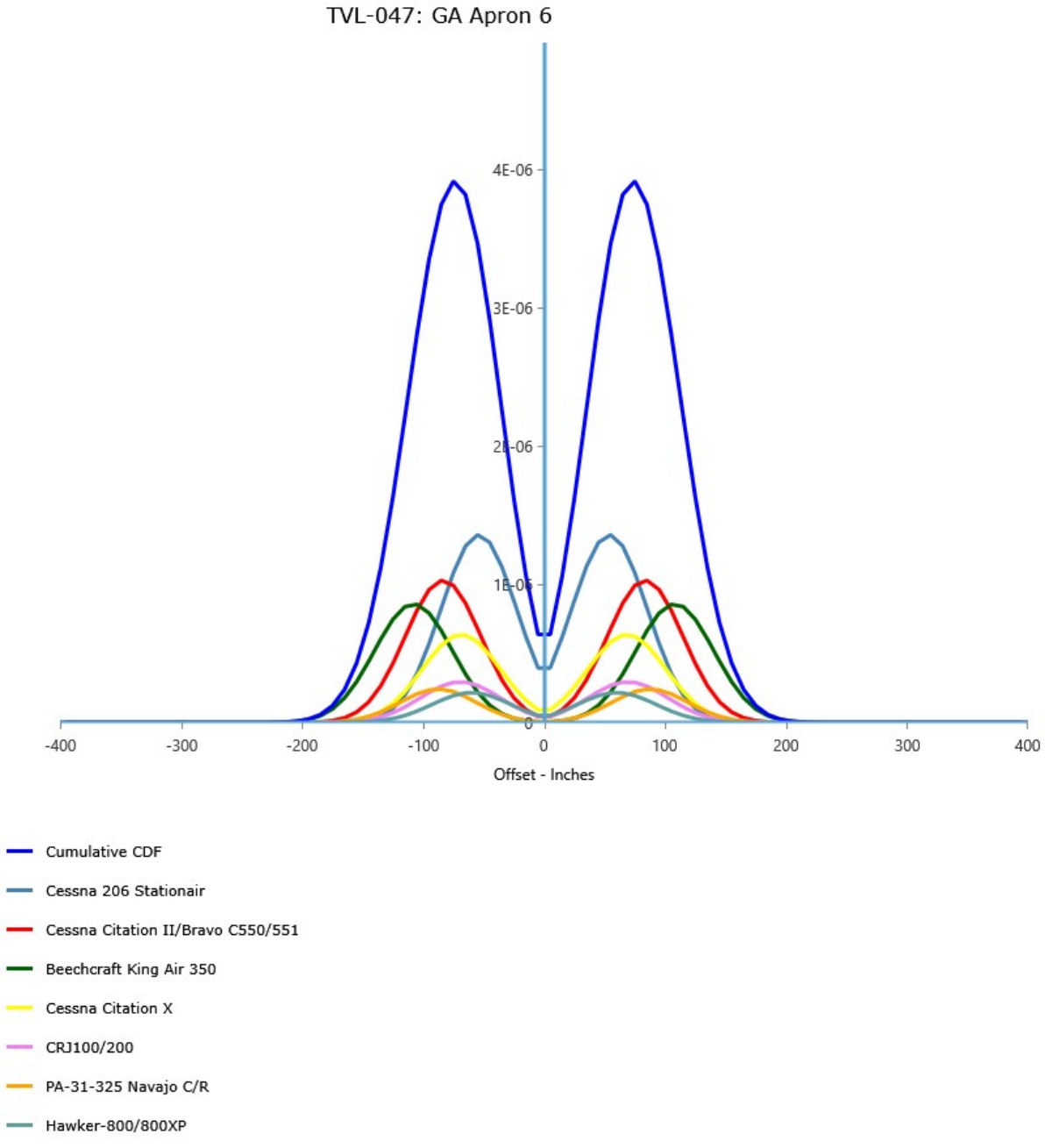
Analysis Type: New Flexible

Analysis Run Time: 2024-06-25 12:14:38

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 18.0in.


TVL-047: GA Apron 6
4E-06
3E-06
0
-400
-300
-200
-100
0
100
200
300
400
Offset - Inches
Cumulative CDF
Cessna 206 Stationair
Cessna Citation II/Bravo C550/551
Beechcraft King Air 350
Cessna Citation X
CRJ100/200
PA-31-325 Navajo C/R
Hawker-800/800XP

Federal Aviation Administration FAARFIELD 2.1 PCR Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 6

This file name = PCR Results for New Flexible 2024-06-25 12:14:38

Evaluation pavement type is flexible and design program is FAARFIELD.

Structure name: GA Apron 6 in job file: TVL-047.JOB.xml

Units = US Customary

Analysis Type: New Flexible

Subgrade Modulus =15,000psi (Subgrade Category is B)

Evaluation Pavement Thickness = 18.0 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 0.000

No aircraft have 4 or more wheels per gear.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	Cessna 206 Stationair	3,600	95.00	52	3,500	24,851
2	PA-31-325 Navajo C/R	6,500	95.00	66	600	4,422
3	Cessna Citation II/Bravo C550/551	15,000	95.00	130	2,500	18,816
4	Beechcraft King Air 350	15,100	95.00	92	1,500	15,642
5	Hawker-800/800XP	28,000	95.00	134	330	3,925
6	Cessna Citation X	36,000	95.00	189	1,000	11,593
7	CRJ100/200	47,700	93.00	160	400	5,345

Results Table 2. PCR Value

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/B
1	CRJ100/200	400	86,240	16.6	238.0

Results Table 3. New Flexible ACR at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)	ACR Thick (in.) (B)	ACR/F/B
1	Cessna 206 Stationair	3,600	95	52	4.6	11.9
2	PA-31-325 Navajo C/R	6,500	95	66	4.6	20.3
3	Cessna Citation II/Bravo C550/551	15,000	95	130	8.0	58.7
4	Beechcraft King Air 350	15,100	95	92	4.9	27.8
5	Hawker-800/800XP	28,000	95	134	8.3	62.4
6	Cessna Citation X	36,000	95	189	10.6	98.5
7	CRJ100/200	47,700	93	160	11.1	107.5

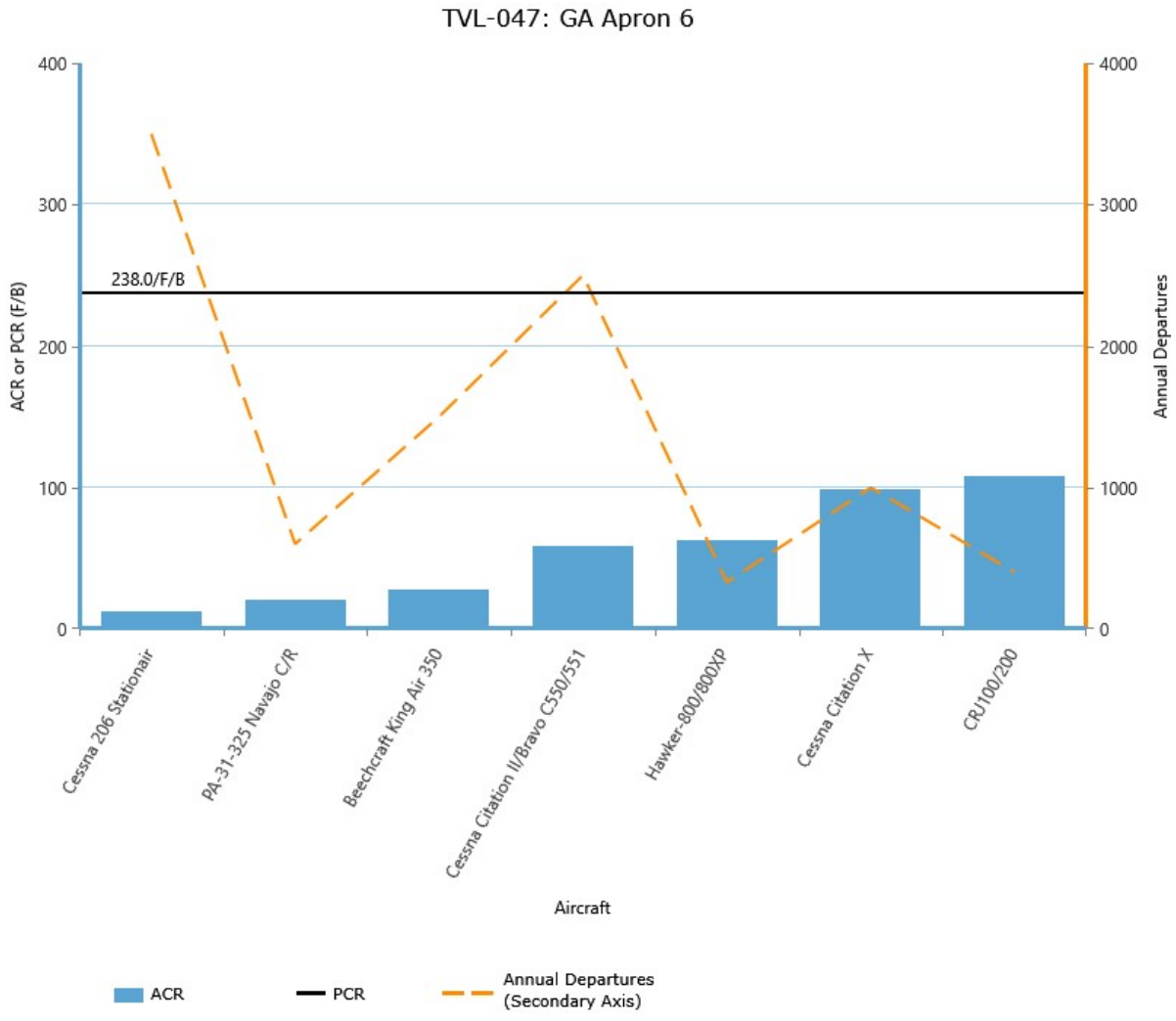
Federal Aviation Administration FAARFIELD 2.1 PCR Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 6

Analysis Type: New Flexible



No.	Aircraft Name	Aircraft ACR	Calculated PCR	Annual Departure
1	CRJ100/200	107.5	238.0	400
2	Cessna Citation X	98.5	-	1,000
3	Hawker-800/800XP	62.4	-	330
4	Cessna Citation II/Bravo C550/551	58.7	-	2,500
5	Beechcraft King Air 350	27.8	-	1,500
6	PA-31-325 Navajo C/R	20.3	-	600
7	Cessna 206 Stationair	11.9	-	3,500

Federal Aviation Administration FAARFIELD 2.1 Structure Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 6

Analysis Type: New Flexible

No run has been done on this structure.

Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	CBR	Poisson's Ratio	Strength R (psi)
1	P-401/P-403 HMA Surface	3.0	200,000	0	0.35	0
2	User Defined	5.0	44,366	0	0.35	0
3	User Defined	10.0	15,000	0	0.35	0
4	Subgrade	0	15,000	10	0.35	0

Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	Cessna 206 Stationair	3,600	3,500	2
2	PA-31-325 Navajo C/R	6,500	600	2
3	Cessna Citation II/Bravo C550/551	15,000	2,500	2
4	Beechcraft King Air 350	15,100	1,500	2
5	Hawker-800/800XP	28,000	330	3
6	Cessna Citation X	36,000	1,000	3
7	CRJ100/200	47,700	400	3

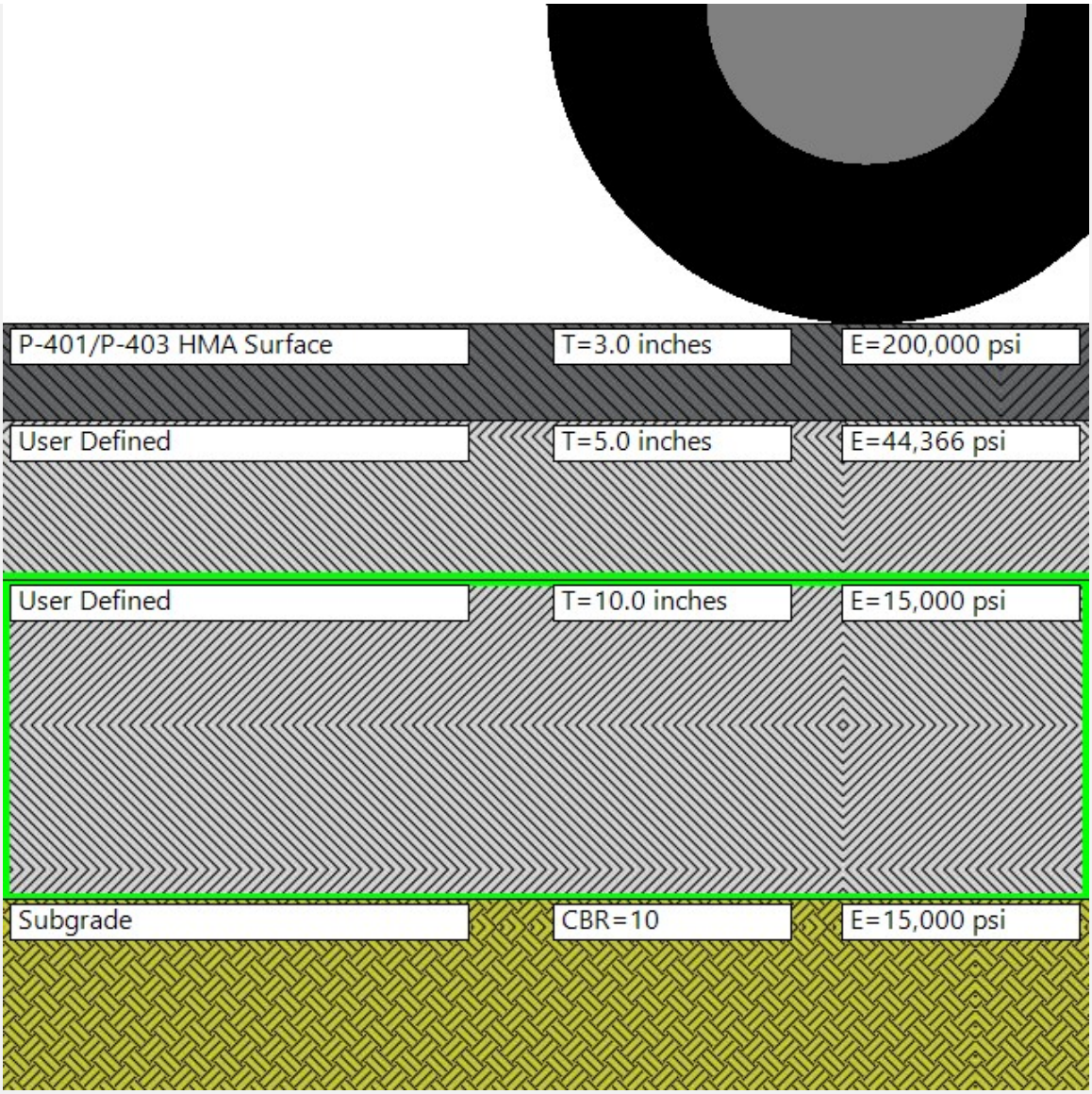
Additional Airplane Information

Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	Cessna 206 Stationair	0.00	0.00	3.38
2	PA-31-325 Navajo C/R	0.00	0.00	3.26
3	Cessna Citation II/Bravo C550/551	0.00	0.00	3.19
4	Beechcraft King Air 350	0.00	0.00	2.3
5	Hawker-800/800XP	0.00	0.00	2.19
6	Cessna Citation X	0.00	0.00	2.24
7	CRJ100/200	0.00	0.00	1.95

NOTE:

User is responsible for checking frost protection requirements.


P-401/P-403 HMA Surface
T=3.0 inches
E=200,000 psi
User Defined
T=5.0 inches
E=44,366 psi
User Defined
T=10.0 inches
E=15,000 psi
Subgrade
CBR=10
E=15,000 psi

Federal Aviation Administration FAARFIELD 2.1 Airport Master Record

FAARFIELD 2.1.1 (Build 12/21/2023)

RUNWAY DATA

Job Name: TVL-047

Structure: GA Apron 7

Gross Weight (In THSDS)

35 S	89
36 D	150
37 2D	245
38 2D/2D2	0

39 PCR	350/F/B/X/T

Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 7

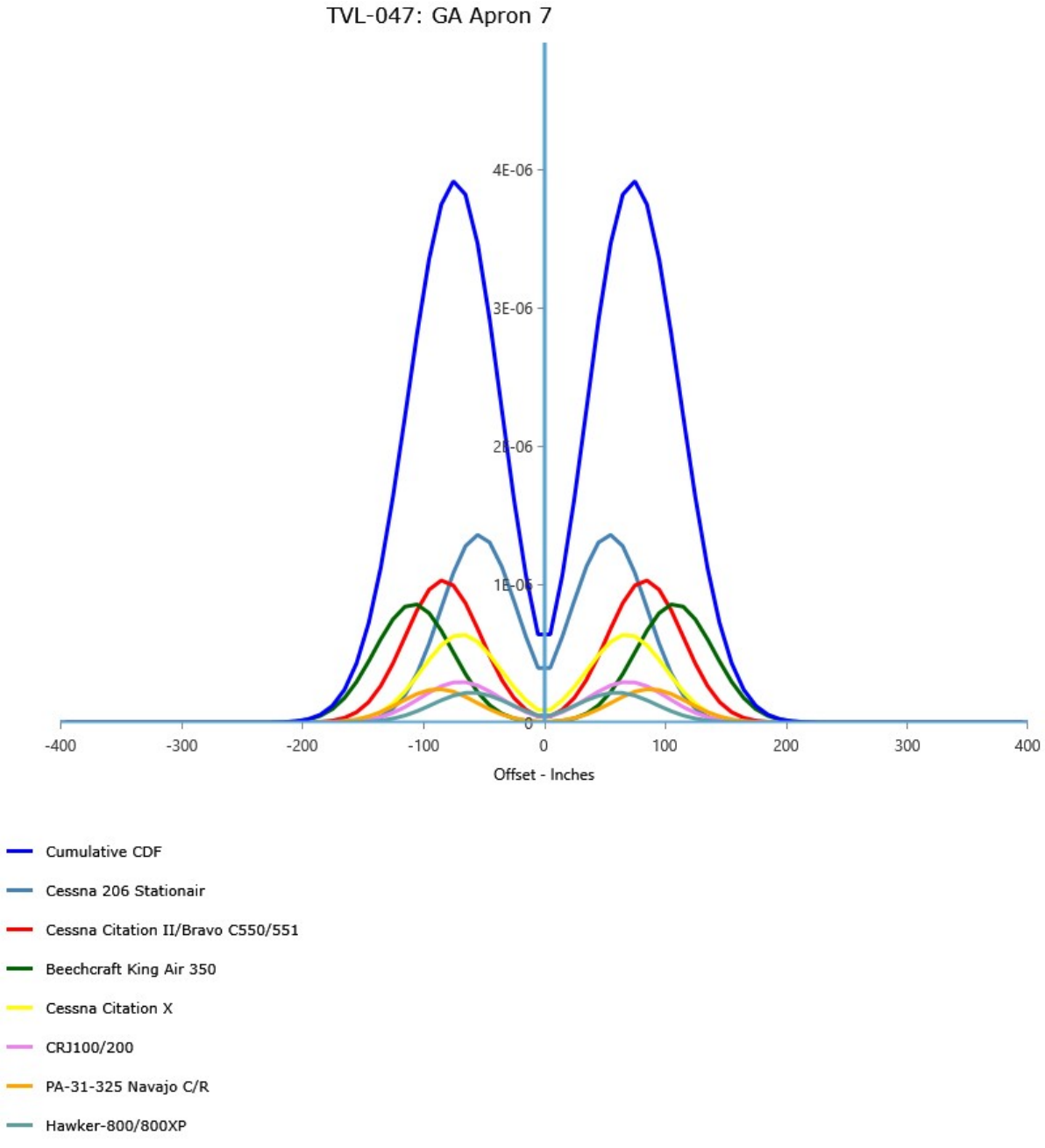
Analysis Type: HMA on Aggregate

Analysis Run Time: 2024-06-25 12:21:14

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 18.0in.


TVL-047: GA Apron 7
4E-06
3E-06
0
-400
-300
-200
-100
0
100
200
300
400
Offset - Inches
Cumulative CDF
Cessna 206 Stationair
Cessna Citation II/Bravo C550/551
Beechcraft King Air 350
Cessna Citation X
CRJ100/200
PA-31-325 Navajo C/R
Hawker-800/800XP

Federal Aviation Administration FAARFIELD 2.1 PCR Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 7

This file name = PCR Results for HMA on Aggregate 2024-06-25 12:21:14

Evaluation pavement type is flexible and design program is FAARFIELD.

Structure name: GA Apron 7 in job file: TVL-047.JOB.xml

Units = US Customary

Analysis Type: HMA on Aggregate

Subgrade Modulus =19,500psi (Subgrade Category is B)

Evaluation Pavement Thickness = 18.0 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 0.000

No aircraft have 4 or more wheels per gear.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	Cessna 206 Stationair	3,600	95.00	52	3,500	24,851
2	PA-31-325 Navajo C/R	6,500	95.00	66	600	4,422
3	Cessna Citation II/Bravo C550/551	15,000	95.00	130	2,500	18,816
4	Beechcraft King Air 350	15,100	95.00	92	1,500	15,642
5	Hawker-800/800XP	28,000	95.00	134	330	3,925
6	Cessna Citation X	36,000	95.00	189	1,000	11,593
7	CRJ100/200	47,700	93.00	160	400	5,345

Results Table 2. PCR Value

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/B
1	CRJ100/200	400	110,556	19.7	346.5

Results Table 3. HMA on Aggregate ACR at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)	ACR Thick (in.) (B)	ACR/F/B
1	Cessna 206 Stationair	3,600	95	52	4.6	11.9
2	PA-31-325 Navajo C/R	6,500	95	66	4.6	20.3
3	Cessna Citation II/Bravo C550/551	15,000	95	130	8.0	58.7
4	Beechcraft King Air 350	15,100	95	92	4.9	27.8
5	Hawker-800/800XP	28,000	95	134	8.3	62.4
6	Cessna Citation X	36,000	95	189	10.6	98.5
7	CRJ100/200	47,700	93	160	11.1	107.5

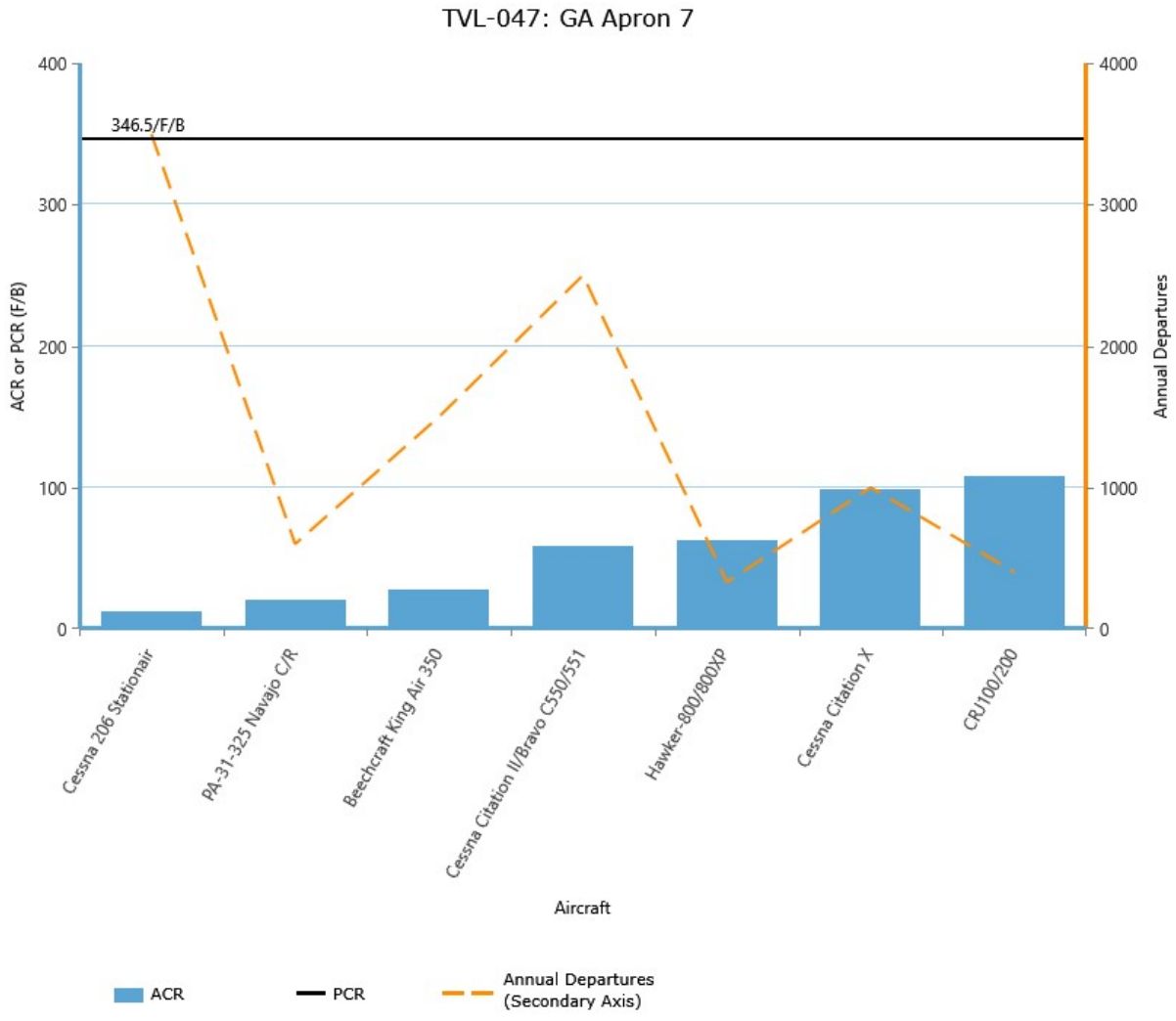
Federal Aviation Administration FAARFIELD 2.1 PCR Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 7

Analysis Type: HMA on Aggregate



No.	Aircraft Name	Aircraft ACR	Calculated PCR	Annual Departure
1	CRJ100/200	107.5	346.5	400
2	Cessna Citation X	98.5	-	1,000
3	Hawker-800/800XP	62.4	-	330
4	Cessna Citation II/Bravo C550/551	58.7	-	2,500
5	Beechcraft King Air 350	27.8	-	1,500
6	PA-31-325 Navajo C/R	20.3	-	600
7	Cessna 206 Stationair	11.9	-	3,500

Federal Aviation Administration FAARFIELD 2.1 Structure Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 7

Analysis Type: HMA on Aggregate

No run has been done on this structure.

Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	CBR	Poisson's Ratio	Strength R (psi)
1	P-401/P-403 HMA Surface	4.0	200,000	0	0.35	0
2	P-209 Crushed Aggregate	8.0	59,106	0	0.35	0
3	P-154 Uncrushed Aggregate	6.0	22,346	0	0.35	0
4	Subgrade	0	19,500	13	0.35	0

Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	Cessna 206 Stationair	3,600	3,500	2
2	PA-31-325 Navajo C/R	6,500	600	2
3	Cessna Citation II/Bravo C550/551	15,000	2,500	2
4	Beechcraft King Air 350	15,100	1,500	2
5	Hawker-800/800XP	28,000	330	3
6	Cessna Citation X	36,000	1,000	3
7	CRJ100/200	47,700	400	3

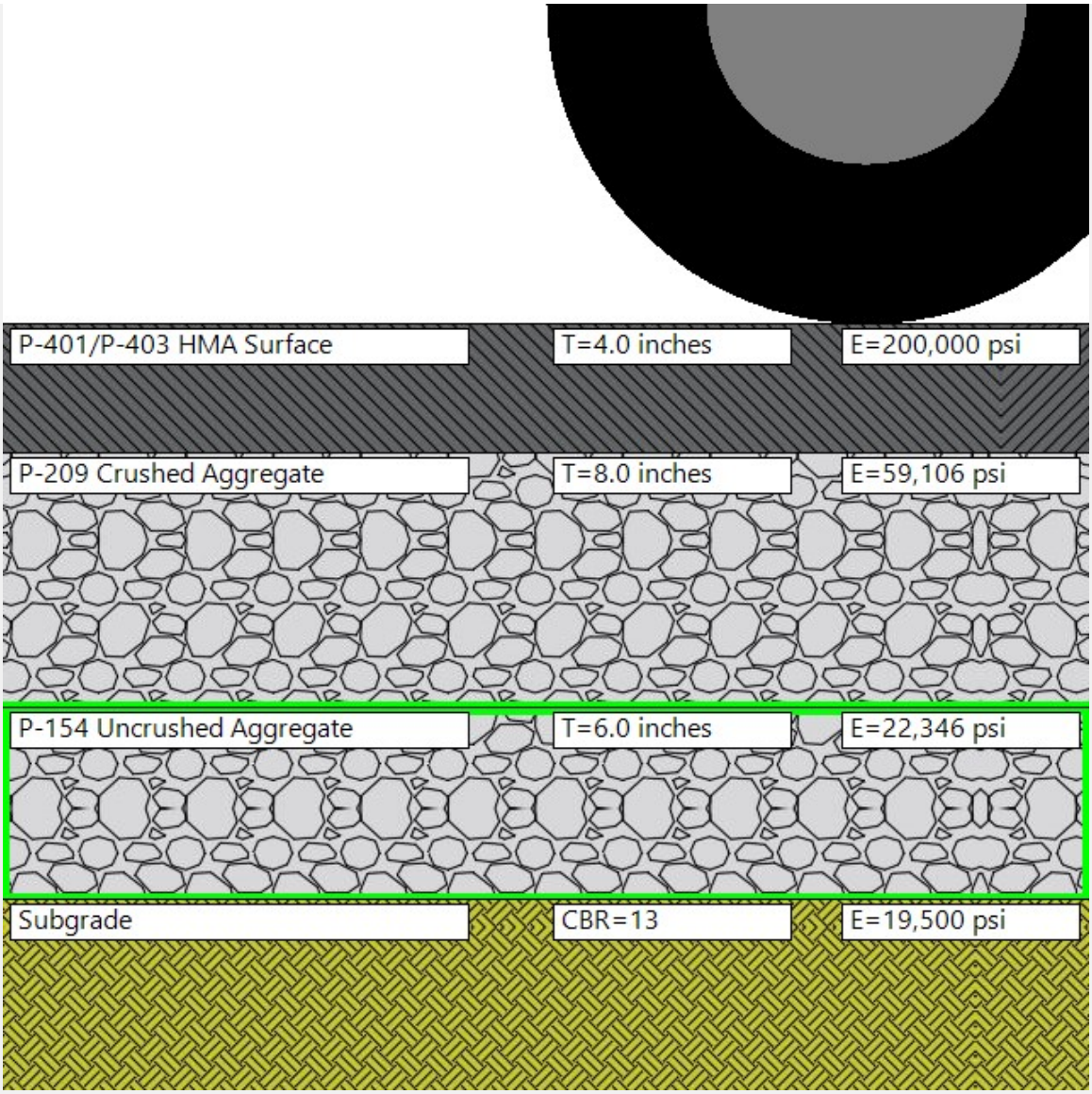
Additional Airplane Information

Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	Cessna 206 Stationair	0.00	0.00	3.38
2	PA-31-325 Navajo C/R	0.00	0.00	3.26
3	Cessna Citation II/Bravo C550/551	0.00	0.00	3.19
4	Beechcraft King Air 350	0.00	0.00	2.3
5	Hawker-800/800XP	0.00	0.00	2.19
6	Cessna Citation X	0.00	0.00	2.24
7	CRJ100/200	0.00	0.00	1.95

NOTE:

User is responsible for checking frost protection requirements.


P-401/P-403 HMA Surface
T=4.0 inches
E=200,000 psi
P-209 Crushed Aggregate
T=8.0 inches
E=59,106 psi
P-154 Uncrushed Aggregate
T=6.0 inches
E=22,346 psi
Subgrade
CBR=13
E=19,500 psi

Federal Aviation Administration FAARFIELD 2.1 Airport Master Record

FAARFIELD 2.1.1 (Build 12/21/2023)

RUNWAY DATA

Job Name: TVL-047

Structure: GA Apron 8

Gross Weight (In THSDS)

35 S	99
36 D	166
37 2D	276
38 2D/2D2	0

39 PCR	390/F/B/X/T

Federal Aviation Administration FAARFIELD CDF Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 8

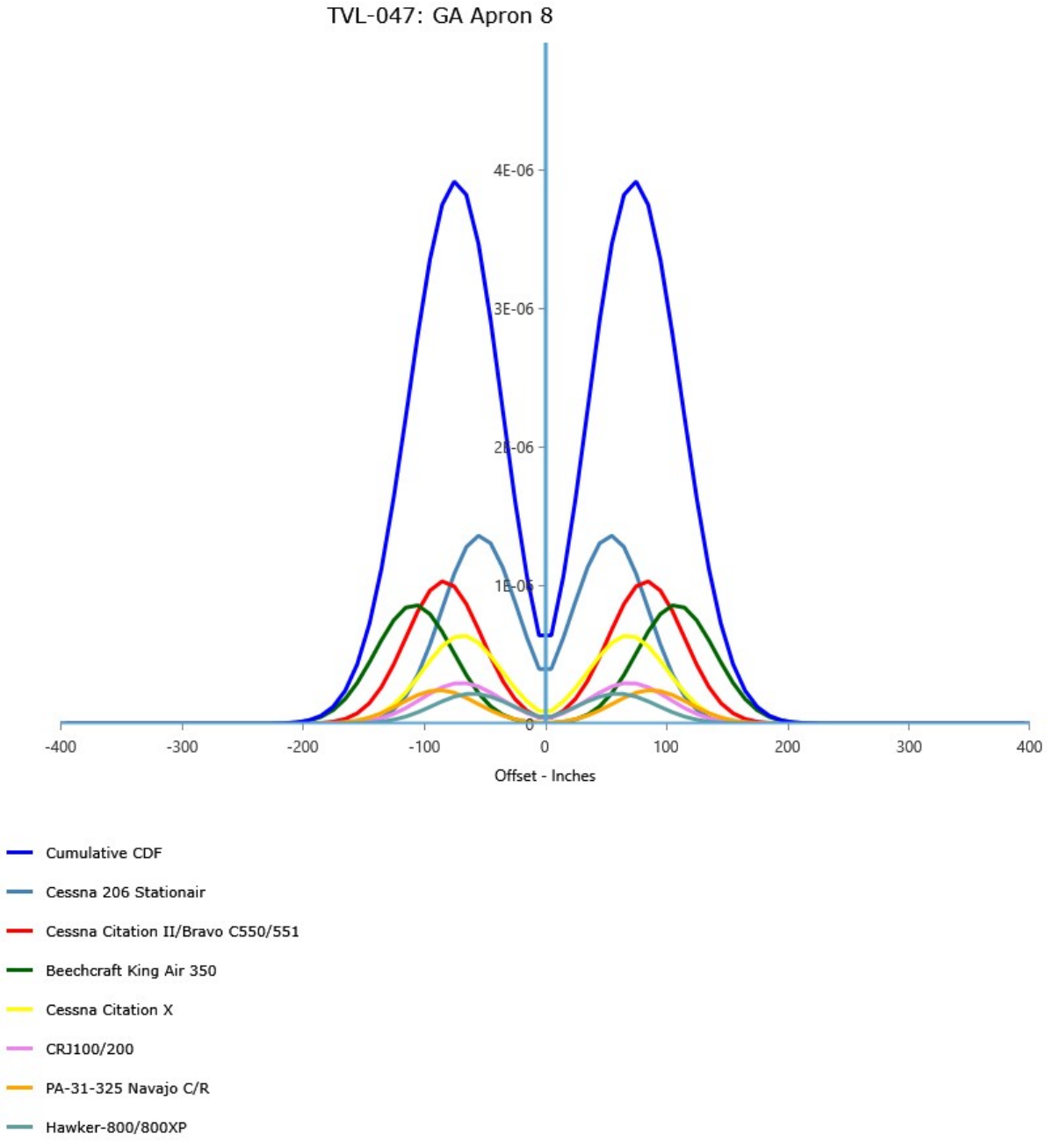
Analysis Type: HMA on Aggregate

Analysis Run Time: 2024-06-25 12:23:24

Last Run: PCR

Design Life = 20.0 Years

Total thickness to the top of the subgrade = 18.0in.


TVL-047: GA Apron 8
4E-06
3E-06
0
-400
-300
-200
-100
0
100
200
300
400
Offset - Inches
Cumulative CDF
Cessna 206 Stationair
Cessna Citation II/Bravo C550/551
Beechcraft King Air 350
Cessna Citation X
CRJ100/200
PA-31-325 Navajo C/R
Hawker-800/800XP

Federal Aviation Administration FAARFIELD 2.1 PCR Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 8

This file name = PCR Results for HMA on Aggregate 2024-06-25 12:23:24

Evaluation pavement type is flexible and design program is FAARFIELD.

Structure name: GA Apron 8 in job file: TVL-047.JOB.xml

Units = US Customary

Analysis Type: HMA on Aggregate

Subgrade Modulus =19,500psi (Subgrade Category is B)

Evaluation Pavement Thickness = 18.0 in.

Pass to Traffic Cycle (PtoTC) Ratio = 1.00

Maximum number of wheels per gear = 2

CDF = 0.000

No aircraft have 4 or more wheels per gear.

Results Table 1. Input Traffic Data

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight	Tire Pressure (psi)	Annual Departure	20 Years Coverage
1	Cessna 206 Stationair	3,600	95.00	52	3,500	24,851
2	PA-31-325 Navajo C/R	6,500	95.00	66	600	4,422
3	Cessna Citation II/Bravo C550/551	15,000	95.00	130	2,500	18,816
4	Beechcraft King Air 350	15,100	95.00	92	1,500	15,642
5	Hawker-800/800XP	28,000	95.00	134	330	3,925
6	Cessna Citation X	36,000	95.00	189	1,000	11,593
7	CRJ100/200	47,700	93.00	160	400	5,345

Results Table 2. PCR Value

No.	Aircraft Name	Critical aircraft Total equiv. departures	Max allowable Gross Weight of critical aircraft (lbs)	ACR Thick at max. MGW (in.)	PCR/F/B
1	CRJ100/200	400	120,708	20.7	391.7

Results Table 3. HMA on Aggregate ACR at Indicated Gross Weight and Strength

No.	Aircraft Name	Gross Weight (lbs)	Percent Gross Weight on Main Gear	Tire Pressure (psi)	ACR Thick (in.) (B)	ACR/F/B
1	Cessna 206 Stationair	3,600	95	52	4.6	11.9
2	PA-31-325 Navajo C/R	6,500	95	66	4.6	20.3
3	Cessna Citation II/Bravo C550/551	15,000	95	130	8.0	58.7
4	Beechcraft King Air 350	15,100	95	92	4.9	27.8
5	Hawker-800/800XP	28,000	95	134	8.3	62.4
6	Cessna Citation X	36,000	95	189	10.6	98.5
7	CRJ100/200	47,700	93	160	11.1	107.5

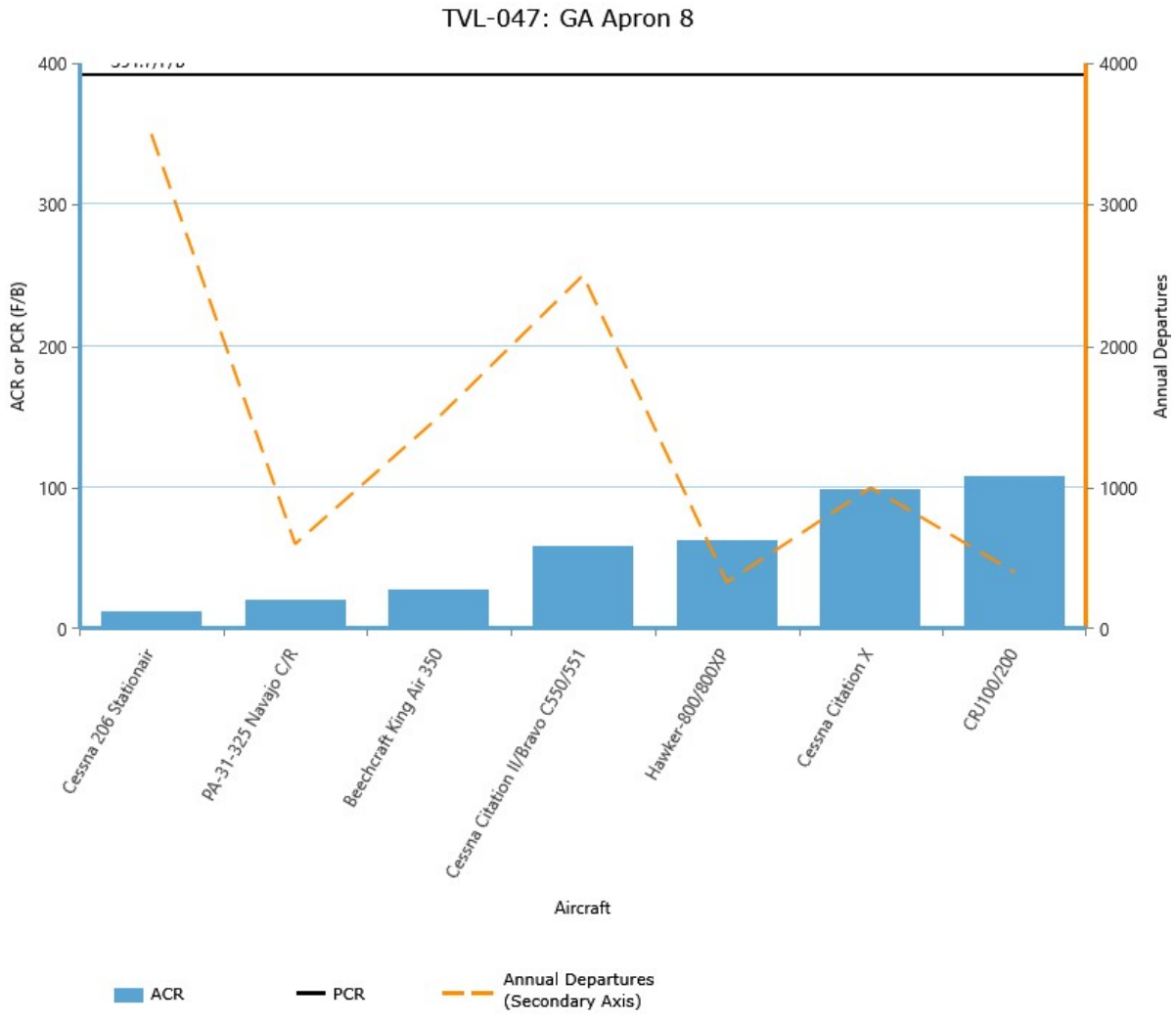
Federal Aviation Administration FAARFIELD 2.1 PCR Graph

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 8

Analysis Type: HMA on Aggregate



No.	Aircraft Name	Aircraft ACR	Calculated PCR	Annual Departure
1	CRJ100/200	107.5	391.7	400
2	Cessna Citation X	98.5	-	1,000
3	Hawker-800/800XP	62.4	-	330
4	Cessna Citation II/Bravo C550/551	58.7	-	2,500
5	Beechcraft King Air 350	27.8	-	1,500
6	PA-31-325 Navajo C/R	20.3	-	600
7	Cessna 206 Stationair	11.9	-	3,500

Federal Aviation Administration FAARFIELD 2.1 Structure Report

FAARFIELD 2.1.1 (Build 12/21/2023)

Job Name: TVL-047

Structure: GA Apron 8

Analysis Type: HMA on Aggregate

No run has been done on this structure.

Pavement Structure Information by Layer

No.	Type	Thickness (in.)	Modulus (psi)	CBR	Poisson's Ratio	Strength R (psi)
1	P-401/P-403 HMA Surface	4.0	200,000	0	0.35	0
2	P-209 Crushed Aggregate	14.0	62,856	0	0.35	0
3	Subgrade	0	19,500	13	0.35	0

Airplane Information

No.	Name	Gross Wt. (lbs)	Annual Departures	% Annual Growth
1	Cessna 206 Stationair	3,600	3,500	2
2	PA-31-325 Navajo C/R	6,500	600	2
3	Cessna Citation II/Bravo C550/551	15,000	2,500	2
4	Beechcraft King Air 350	15,100	1,500	2
5	Hawker-800/800XP	28,000	330	3
6	Cessna Citation X	36,000	1,000	3
7	CRJ100/200	47,700	400	3

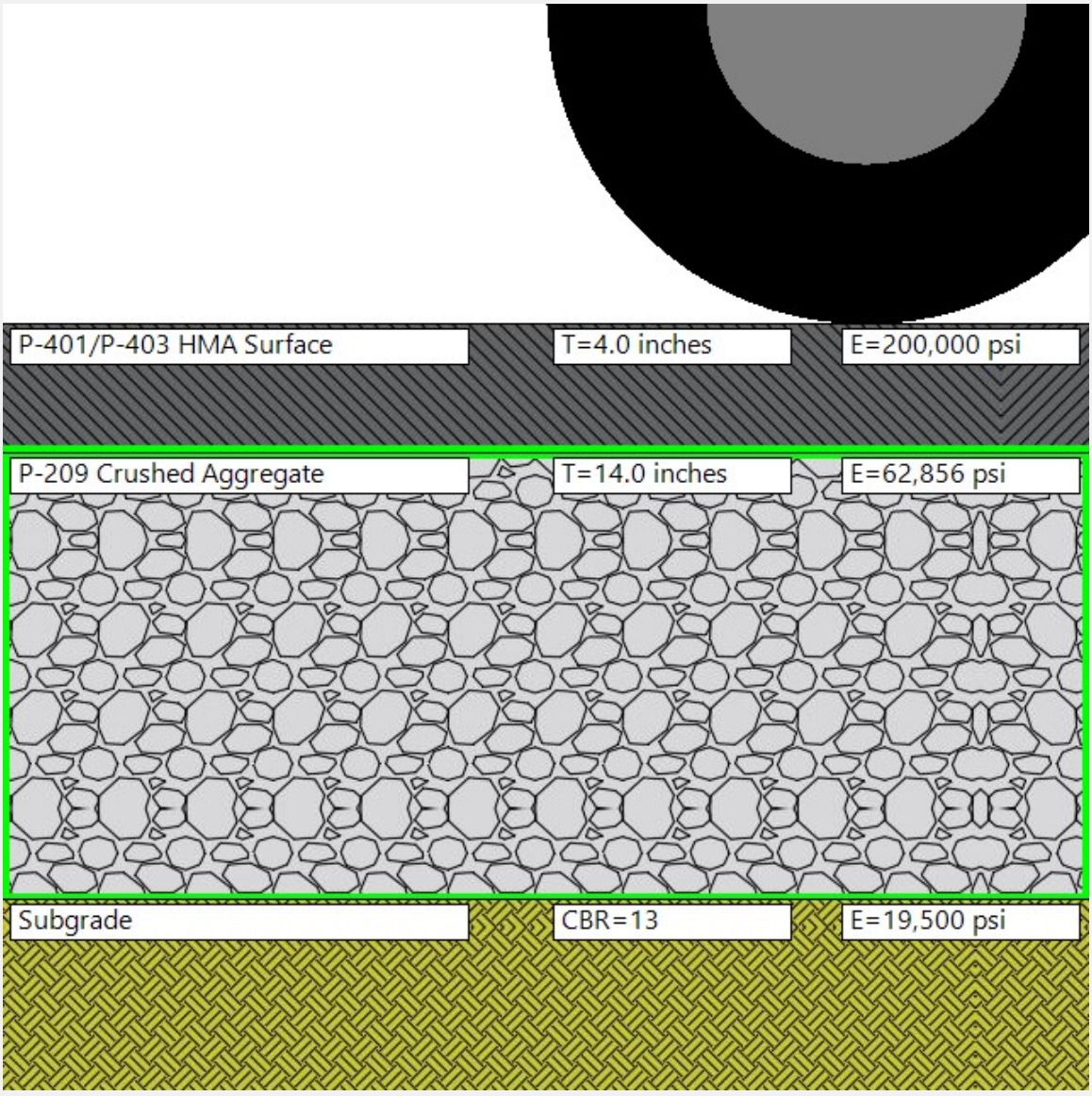
Additional Airplane Information

Subgrade CDF

No.	Name	CDF Contribution	CDF Max for Airplane	P/C Ratio
1	Cessna 206 Stationair	0.00	0.00	3.38
2	PA-31-325 Navajo C/R	0.00	0.00	3.26
3	Cessna Citation II/Bravo C550/551	0.00	0.00	3.19
4	Beechcraft King Air 350	0.00	0.00	2.3
5	Hawker-800/800XP	0.00	0.00	2.19
6	Cessna Citation X	0.00	0.00	2.24
7	CRJ100/200	0.00	0.00	1.95

NOTE:

User is responsible for checking frost protection requirements.



APPENDIX C: SUMMARY OF PAVEMENT HISTORY AND PAVEMENT SECTIONS

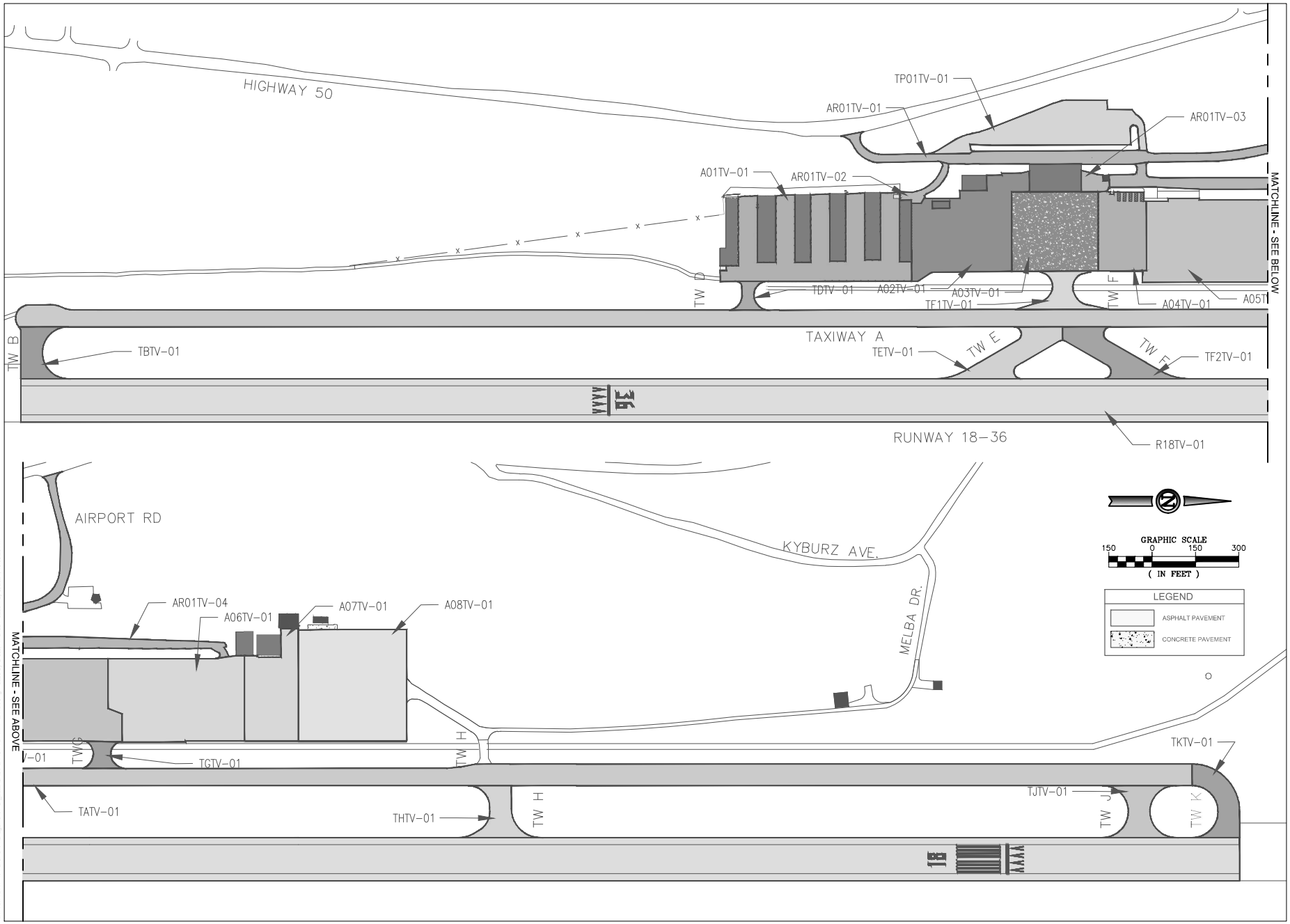
Summary of Pavement Sections and History.

Pavement ID	Pavement Designation	Pavement Section (Inches)				Pavement History			
		PCC	AC	AB or CTB*	ASB	Original	Reconstruct	Rehabilitation	Latest Overlay
C1-C3	Runway 18/36	-	3	7	20	1958	1968, 2008	-	-
C4	Taxiway B	-	8.5	8	8	1958	1968, 1970	-	1990
C4	Taxiways A South	-	8.5	8	8	1958	1968, 1970	-	1990
C6	Taxiway A North	-	7.5	7.5	24	1963	-	-	1990
C5	Taxiway A Mid	-	4	8	8	1958	1975	-	-
C7	Taxiway K	-	7.5	7.5	24	1962	-	-	1990
C8	Taxiway E East	-	6.5	8	-	1958	-	-	1968
C9	Taxiway E West	-	8.5	8	8	1958	1968, 1970	-	1990
C12	Taxiway F1	-	8.5	8	8	1958	1968, 1970	-	2009
C10	Taxiway F2 East	-	7	8		1958	-	-	1990
C11	Taxiway F2 West	-	8.5	8	8	1958	1968, 1970	-	1968
C13	Taxiway H East	-	7.5	7.5	24	1963	-	-	1990
C14	Taxiway J	-	7.5	7.5	24	1962	-	-	1990
C15	Taxiway G	-	3	8	8	1958	1975, 2016	-	1989
C16	Apron 2 South	-	3	6	6	1969	2010	-	-
C17	Apron 2 North	-	4	6	13	1950	2010	-	1970
C18	Apron 3	14	2	-	6	Pre (1963)	2009	-	1970
C20	Apron 4 East	-	6.25-7	6	8	Pre (1963)	2009, 2019	-	1970
C19	Apron 4 West	-	6.25-7	6	8	Pre (1963)	2009, 2019	-	1970
C21	Apron 5a	-	3	14	-	Pre (1963)	1974, 2014	-	-
C22	Apron 5b	-	3	14	-	Pre (1963)	1974, 2014	-	-

Pavement ID	Pavement Designation	Pavement Section (Inches)				Pavement History			
		PCC	AC	AB or CTB*	ASB	Original	Reconstruct	Rehabilitation	Latest Overlay
C23	Apron 5c	-	3	8	-	1968	1987, 2016	-	-
C24	Apron 5d	-	3	8	-	Pre (1969)	2016	-	1989
C25	Apron 6a	-	3	8		1974	1989, 2017	-	-
C26	Apron 6b	-	3	8		1974	2017	-	1989
C27	Apron 7 & 8	-	4	14	-	1974	1989, 2019,2020	-	-
C28	Taxiway H West	-	2	5	4	Pre (1969)	-	-	-
C29	Taxiway D	-	4	6	9	1994	2023	-	-
C30-C31	Hangar Taxilanes and Taxilane D	-	4	5	9	1994	2022, 2023	-	-
C32	Terminal Access Road	-	2	3	5	1969	2009	-	-
C33	Terminal Parking 1	-	2	3	5	1969	2009	-	-
C34	Terminal Parking 2	-	3	4	22	1969	2010	-	-
C35	Terminal Parking 3	-	3	4	4	1969	2010	-	-
C36	Terminal Parking 4	-	2	5	-	1998	-	-	-

*Source: Pavement Maintenance/Management Plan (August 2017) and Historical As-Built Plan Sets

- PCC - Portland Cement Concrete
- AC - Asphalt Pavement
- AB – Aggregate Base
- CTB – Cement Treated Base
- ASB – Aggregate Subbase

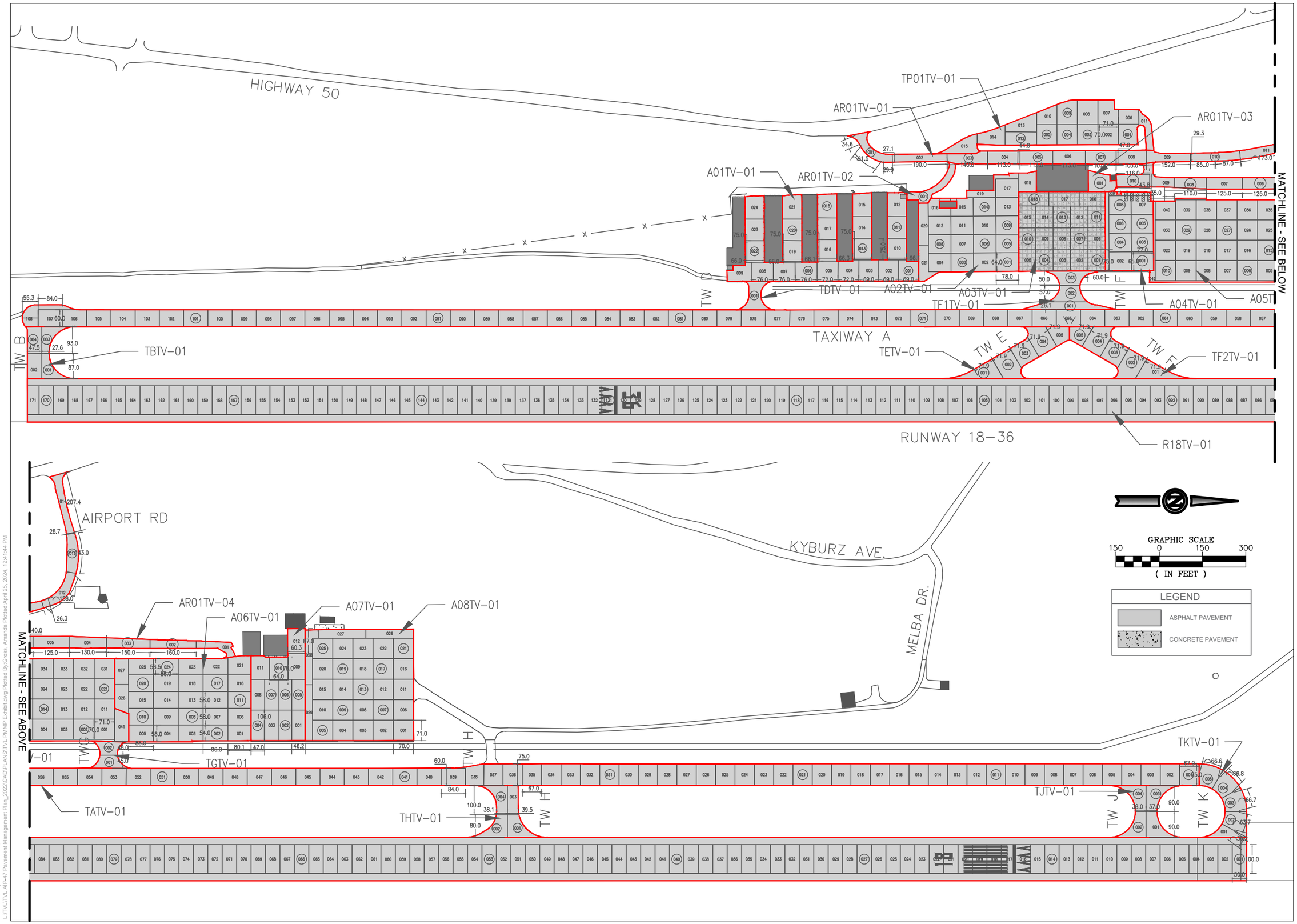


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LAKE TAHOE AIRPORT
PAVEMENT MAINTENANCE MANAGEMENT PLAN
PROJECT SECTION MAP
SOUTH LAKE TAHOE, CALIFORNIA

SHEET NO:
1 OF 1

APPENDIX D: PAVEMENT CONDITION INDEX (PCI) SAMPLE LOCATION EXHIBIT



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LAKE TAHOE AIRPORT
PAVEMENT MAINTENANCE MANAGEMENT PLAN
PROJECT SECTION MAP
SOUTH LAKE TAHOE, CALIFORNIA

SHEET NO:
1 OF 1

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HIGHWAY 50

TP01TV-01

AR01TV-01

AR01TV-03

A01TV-01

AR01TV-02

MATCHLINE - SEE BELOW

TDTV-01

A02TV-01

A03TV-01

TF1TV-01

A04TV-01

A05TV-01

TAXIWAY A

TBTV-01

TETV-01

TW E

TW F

TF2TV-01

36

RUNWAY 18-36

R18TV-01

AIRPORT RD

KYBURZ AVE.

MELBA DR.

AR01TV-04

A06TV-01

A07TV-01

A08TV-01

MATCHLINE - SEE ABOVE

TGTV-01

TATV-01

THTV-01

TKTV-01

TJTV-01

18

GRAPHIC SCALE
150 0 150 300
(IN FEET)

LEGEND
ASPHALT PAVEMENT
CONCRETE PAVEMENT

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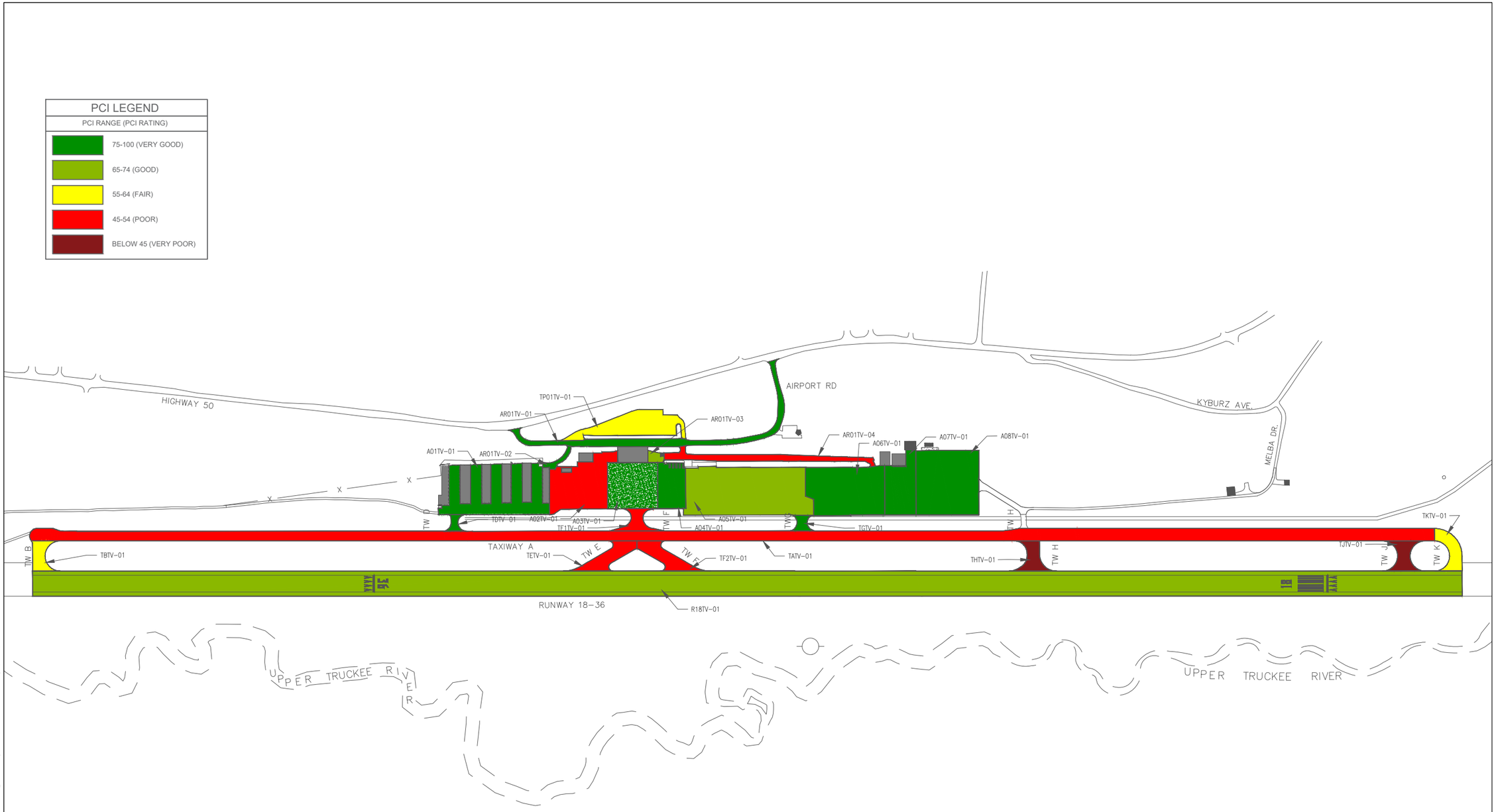
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LAKE TAHOE AIRPORT
PAVEMENT MAINTENANCE MANAGEMENT PLAN
PROJECT SECTION MAP
SOUTH LAKE TAHOE, CALIFORNIA

SHEET NO:
1 OF 1

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APPENDIX E: PCI RATINGS MAPS 2023-2033



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LAKE TAHOE AIRPORT
PAVEMENT MAINTENANCE MANAGEMENT PLAN
PCI RATINGS (2023)
SOUTH LAKE TAHOE, CALIFORNIA

SHEET NO:
1 OF 1

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PCI LEGEND
PCI RANGE (PCI RATING)
75-100 (VERY GOOD)
65-74 (GOOD)
55-64 (FAIR)
45-54 (POOR)
BELOW 45 (VERY POOR)

HIGHWAY 50

AIRPORT RD

KYBURZ AVE.

MELBA DR.

TP01TV–01

AR01TV–01

AR01TV–03

AR01TV–04

A01TV–01

AR01TV–02

A06TV–01

A07TV–01

A08TV–01

TDTV–01

A02TV–01

A03TV–01

TF1TV–01

A05TV–01

A04TV–01

TGTV–01

TKTV–01

TBTV–01

TETV–01

TF2TV–01

TATV–01

THTV–01

TJTV–01

TAXIWAY A

TW B

TW D

TW E

TW F

TW H

TW J

TW K

RUNWAY 18–36

R18TV–01

UPPER TRUCKEE RIVER

UPPER TRUCKEE RIVER

GRAPHIC SCALE

300 0 300 600

(IN FEET)

PAVEMENT LEGEND
ASPHALT PAVEMENT
CONCRETE PAVEMENT

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LAKE TAHOE AIRPORT

PAVEMENT MAINTENANCE MANAGEMENT PLAN

PCI RATINGS (2028)

SOUTH LAKE TAHOE, CALIFORNIA

SHEET NO.

1 OF 1

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LAKE TAHOE AIRPORT

PAVEMENT MAINTENANCE MANAGEMENT PLAN

PCI RATINGS (2033)

SOUTH LAKE TAHOE, CALIFORNIA

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1 OF 1

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APPENDIX F: CIP (WITH BIL PROJECTS)

JVIATION®

LAKE TAHOE AIRPORT (TVL)
CAPITAL IMPROVEMENT PLAN
SOUTH LAKE TAHOE, CA - February 2024

DESCRIPTION	FUNDING SOURCES					TOTAL ESTIMATED PROJECT COST 2024 DOLLARS	ENVIRONMENTAL DOCUMENT			Start Date	End Date
	FEDERAL (90.0%)				LOCAL (10.0%)		NEPA	CEQA	TRPA		
	AIP	State Apportionment/ DI	BIL Allocated	BIL (ATP)							
2024											
Rehabilitate Taxiway A (60' x 8,541' (56,400 SY))(Crack Seal/Seal Coat/Paint)			$ 506,435	$ -	$ 56,271	$ 562,706	CATEX	IS/ADDENDUM	IEC/MFONSE	10/1/2023	12/31/2024
Rehabilitate General Aviation Apron & TWY E, F & G	$ 421,813				$ 46,868	$ 468,681	CATEX	IS/MND	IEC/MFONSE	10/1/2023	12/31/2024
2025											
Acquire SRE (Truck with Plow)	$ 150,000	$ 150,000			$ 33,333	$ 333,333	CATEX	N/A	N/A	1/1/2025	5/30/2026
Replace Terminal Building Public Area Rooftop HVAC Units, Replace Single Pane Windows in terminal building, Replace failing Mansard Roof Shingles on terminal building				$ 159,000	$ 17,667	$ 176,667	CATEX	CATEX	NONE	11/1/2024	5/31/2025
2026											
Airport Terminal Access Road Rehabilitation and Guard Rail Replacement (7,820 SY) (mill/fill)	$ 150,000			$ 50,000	$ 22,222	$ 222,222	NONE	CATEX	NONE	11/25/2025	10/15/2026
2027											
Rehabilitate Runway 18/36 (100' x 8,451' (94,900 SY)) and Electrical Infrastructure (Design & Engineering)	$ 150,000	$ 615,000			$ 85,000	$ 850,000	CATEX	IS/ADDENDUM	IEC/MFONSE	5/1/2027	12/31/2029
2028											
Rehabilitate Runway 18/36 (100' x 8,541' (94,900 SY)) and Electrical Infrastructure (Construction)	$ 150,000	$ 13,170,000		$ -	$ 1,480,000	$ 14,800,000	CATEX	IS/ADDENDUM	IEC/MFONSE	5/1/2028	12/31/2029
2029											
Rehabilitate Parallel Taxiway A (50' x 8,541') and Associated Connector Taxiways A-1 and A-4 – A-6 (50' x 165') and Electrical Infrastructure (Design & Engineering) (2016 PCI=55)	$ 150,000	$ 390,000			$ 60,000	$ 600,000	CATEX	CATEX	IEC/MFONSE		
Construct New Connector Taxiways A-2 and A-3 (50' x 165') (Including RIM Correction) and Electrical Infrastructure (Design & Engineering)		$ 225,000			$ 25,000	$ 250,000	CATEX	CATEX	IEC/MFONSE		
2030											
Rehabilitate Parallel Taxiway A (50' x 8,541') and Associated Connector Taxiways A-1 and A-4 – A-6 (50' x 165') and Electrical Infrastructure (Construction) (2016 PCI=55)	$ 150,000	$ 10,470,000			$ 1,180,000	$ 11,800,000	CATEX	CATEX	IEC/MFONSE		
Construct New Connector Taxiways A-2 and A-3 (50' x 165') (Including RIM Correction) and Electrical Infrastructure (Construction)		$ 2,700,000			$ 300,000	$ 3,000,000	CATEX	CATEX	IEC/MFONSE		
2031											
CEQA Conduct Environmental Study Improve Airport Drainage – (Apron-Edge (5,700 LF) & Associated Outfalls)	$ -				$ 550,000	$ 550,000	N/A	IS/MND	IEC/MFONSE		
NEPA Conduct Environmental Study Improve Airport Drainage – (Apron-Edge (5,700 LF) & Associated Outfalls)	$ 225,000				$ 25,000	$ 250,000	EA	N/A	N/A		
2032											
Improve Airport Drainage – (Apron-Edge (5,700 LF) & Associated Outfalls) (Design, Engineering, and Construction)	$ 150,000	$ 1,000,000			$ 127,778	$ 1,277,778	EA	IS/MND	IEC/MFONSE		
2033											
Install Weather Reporting Equipment (AWOS III) (Design, Engineering, and Construction)	$ 150,000	$ 200,000			$ 38,889	$ 388,889	CATEX	CATEX	NONE		
SUBTOTAL 2022 - 2033 (12 -Years)	**$ 1,846,813**	**$ 28,920,000**	**$ 506,435**	**$ 209,000**	**$ 4,048,028**	**$ 35,530,276**					

APPENDIX G: FAA PAVEAIR RESULTS

LAKE TAHOE airport

Network	Branch	Section	Surface	Branch Use	PCI	FOD	SCI	Construction Date	Inspection Date	Age at Inspection	Age at Time of Report	State	Climate Zone	Area	Area Unit
South Lake Tahoe	Rwy 18	Rwy 18	AAC	RUNWAY	72	28	100	07/01/2008	09/18/2023	15	16	CALIFORNIA	WF	854007	sf
South Lake Tahoe	Taxiway A	Taxiway A	AAC	TAXIWAY	54	45	96	07/01/1990	09/18/2023	33	34	CALIFORNIA	WF	447458	sf
South Lake Tahoe	Taxiway B	Taxiway B	AAC	TAXIWAY	55	45	100	07/01/1990	09/18/2023	33	34	CALIFORNIA	WF	13500	sf
South Lake Tahoe	Taxiway D	Taxiway D	AAC	TAXIWAY	100	100	100	08/14/2023	08/14/2023	0	1	CALIFORNIA	WF	5610	sf
South Lake Tahoe	Taxiway E	Taxiway E	AAC	TAXIWAY	48	50	92	07/01/1990	09/18/2023	33	34	CALIFORNIA	WF	27000	sf
South Lake Tahoe	Taxiway F East	Taxiway F East	AAC	TAXIWAY	49	42	69	07/01/1990	09/18/2023	33	34	CALIFORNIA	WF	27000	sf
South Lake Tahoe	Taxiway F West	Taxiway F West	AAC	TAXIWAY	46	54	100	07/01/1970	09/18/2023	53	54	CALIFORNIA	WF	11305	sf
South Lake Tahoe	Taxiway G	Taxiway G	AAC	TAXIWAY	85	15	100	07/01/2016	09/18/2023	7	8	CALIFORNIA	WF	6975	sf
South Lake Tahoe	Taxiway H	Taxiway H	AAC	TAXIWAY	29	58	73	07/01/1990	09/18/2023	33	34	CALIFORNIA	WF	13860	sf
South Lake Tahoe	Taxiway J	Taxiway J	AAC	TAXIWAY	44	45	72	07/01/1990	09/18/2023	33	34	CALIFORNIA	WF	13500	sf
South Lake Tahoe	Taxiway K	Taxiway K	AAC	TAXIWAY	58	36	80	07/01/1990	09/18/2023	33	34	CALIFORNIA	WF	22050	sf
South Lake Tahoe	Apron 1	Apron 1	AAC	APRON	100	0	100	08/14/2023	09/18/2023	0	1	CALIFORNIA	WF	111000	sf
South Lake Tahoe	Apron 2	Apron 2	AAC	APRON	54	46	100	07/01/2010	09/18/2023	13	14	CALIFORNIA	WF	90480	sf
South Lake Tahoe	Apron 3	Apron 3	PCC	APRON	100	6	100	07/01/2009	09/18/2023	14	15	CALIFORNIA	WF	81000	sf
South Lake Tahoe	Apron 4	Apron 4	AAC	APRON	85	15	100	07/01/2019	09/18/2023	4	5	CALIFORNIA	WF	41600	sf
South Lake Tahoe	Apron 5	Apron 5	AAC	APRON	67	33	100	07/01/2016	09/18/2023	7	8	CALIFORNIA	WF	198801	sf
South Lake Tahoe	Apron 6	Apron 6	AAC	APRON	76	24	100	07/01/2017	09/19/2023	6	7	CALIFORNIA	WF	125281	sf
South Lake Tahoe	Apron 7	Apron 7	AAC	APRON	100	1	100	09/18/2019	09/19/2023	4	5	CALIFORNIA	WF	52640	sf
South Lake Tahoe	Apron 8	Apron 8	AAC	APRON	100	0	100	09/08/2020	09/19/2023	3	4	CALIFORNIA	WF	144376	sf
South Lake Tahoe	AR01TV	Airport Rd 1	AC	ROADWAY	80	0	94	07/01/2009	09/20/2023	14	15	CALIFORNIA	WF	69196	sf
South Lake Tahoe	ARTV02	Airport Rd 2	AC	ROADWAY	78	0	87	07/01/2009	09/20/2023	14	15	CALIFORNIA	WF	5751	sf
South Lake Tahoe	ARTV03	Airport Rd 3	AC	ROADWAY	74	0	100	07/01/2009	09/20/2023	14	15	CALIFORNIA	WF	5350	sf
South Lake Tahoe	ARTV04	Airport Rd 4	AC	ROADWAY	47	0	54	07/01/2009	09/20/2023	14	15	CALIFORNIA	WF	47075	sf
South Lake Tahoe	TP01TV	Parking 1	AC	PARKING	61	0	97	07/01/2010	09/18/2023	13	14	CALIFORNIA	WF	71175	sf

LAKE TAHOE AIPORT

BRANCH CONDITION SUMMARY REPORT

Use Category	Number of Sections	Total Area(ft²)	Arithmetic Average PCI	Standard Deviation PCI	Weighted Average PCI
APRON	8	845,175.00	85.25	16.88	85.25
PARKING	1	71,175.00	60.79	0.00	60.79
ROADWAY	4	127,371.60	69.81	13.63	69.81
RUNWAY	1	854,000.00	72.28	0.00	72.28
TAXIWAY	10	588,255.00	56.92	19.68	56.92
All	24	2,485,976.60	69.31	20.96	69.31

LAKE TAHOE AIPORT

SECTION CONDITION SUMMARY REPORT

Age Category	Average Age at Inspection	Total Area(ft²)	Number of Sections	Arithmetic Average PCI	Standard Deviation PCI	Weighted Average PCI
[0-2]	0	116,610.00	2	100.00	0.00	100.00
[03-5]	3	238,615.00	3	95.05	7.00	97.41
[06-10]	6	331,055.00	3	76.23	7.42	70.94
[11-15]	13	1,224,026.60	8	70.74	15.80	71.56
[31-35]	33	564,365.00	7	48.19	8.93	53.03
Age >=50	53	11,305.00	1	46.44	0.00	46.44
All	17	2,485,976.60	24	69.31	20.96	70.97

APPENDIX H: PAVEMENT INSPECTION PHOTOS

Runway 18/36 is a grooved asphalt surface. The 2023 PCI is 72. The largest cracks have formed longitudinally along the paving joints with transverse cracks having formed fairly evenly full length. Weathering on the runway is 100 percent. Although the runway is in good condition major rehabilitation is recommended in the CIP.



FIGURE 1. RUNWAY 18/36

Taxiway A is in fair condition. The overview shows the sawed joints from construction. These are regarded as longitudinal and transverse cracking. There is regular secondary cracking outside the sawed joints. Weathering is 100 percent. The condition is fair and needs a surface treatment followed by rehabilitation in the near future.



FIGURE 2. TAXIWAY A

Taxiway B has a significant amount of longitudinal and transverse cracks. The PCI is currently 55 and is in fair condition. There is considerable secondary cracking that has areas that constitute block cracking. Although Taxiway B has had a seal coat installed sometime in the past it shows areas of weathering. A surface treatment followed by rehabilitation is in the CIP.



FIGURE 3. TAXIWAY B

Taxiway D pavement surface shows minor marks from snow removal equipment. It also shows no significant distress on the pavement surface and is in excellent condition. The PCI rating is currently at 100 as it has recently been resurfaced.



FIGURE 4. TAXIWAY D

Taxiway E is in fair condition with a PCI of 48. The overview shows the sawed joints from construction. These are regarded as longitudinal and transverse cracking. There is secondary cracking in some areas forming block cracking. There are areas of weathering along the center line.



FIGURE 5. TAXIWAY E

Taxiway F East has longitudinal and transverse cracking with areas of weathering. The taxiway is in fair condition with a PCI of 49. This pavement has had a slurry seal in the past which is delaminating. A surface treatment is recommenced.



FIGURE 6. TAXIWAY F EAST

Taxiway F West is in fair condition with a PCI of 46. It has longitudinal and transverse cracking with areas of significant weathering. Many of the cracks have secondary cracks forming block cracking and alligator cracking. A surface treatment is recommended.



FIGURE 7. TAXIWAY F WEST

Taxiway G is in excellent condition with only a couple of small cracks along paving joints. The PCI is 85.



FIGURE 8. TAXIWAY G

Taxiway H is in poor condition with a PCI of 29. The overview shows the sawed joints from construction. These are regarded as longitudinal and transverse cracking. There is significant secondary cracking in some areas forming block cracking. Weathering is 100%. Taxiway H is recommended for a surface treatment and rehabilitation later.



FIGURE 9. TAXIWAY H

Taxiway J is in poor condition with a PCI of 44. The overview shows the sawed joints from construction. These are regarded as longitudinal and transverse cracking. There is secondary cracking forming large areas of block cracking. Taxiway J is recommended for a surface treatment and rehabilitation later.



FIGURE 10. TAXIWAY J

Taxiway K is in to fair to poor condition with a PCI of 58. The overview shows the sawed joints from construction. These are regarded as longitudinal and transverse cracking. In one area there is secondary cracking forming large areas of block cracking. The slurry seal is delaminating and revealing weathering.



FIGURE 11. TAXIWAY K

Apron 1 (Taxilane D and Hangar Taxilanes) is new pavement and in excellent condition with no distress. The PCI is 100.



FIGURE 12. HANGAR TAXILANES AND TAXILANE D

Apron 2 is in fair condition with a PCI of 54. The apron has longitudinal cracks primarily stemming from paving joint shrinkage with some secondary and transverse cracks. Weathering is considerable.



FIGURE 13. APRON 2

Apron 3 has a PCI of 100 and has only minor distresses such as shrinkage cracks, small patches, etc. This ramp is in excellent condition.



FIGURE 14. APRON 3

Apron 4 has a PCI of 85 and in very good condition. It has some longitudinal cracks along some of the paving joints. Weathering is low severity but covers 100 percent. The surface is recommended for a surface treatment.



FIGURE 15. APRON 4

Apron 5 has a PCI of 67 and is in good condition. The apron has longitudinal cracks primarily along paving joints. There are some secondary and transverse cracks that have progressed to form small areas of block cracking. Weathering is 100 percent. A surface treatment is recommended.



FIGURE 16. APRON 5

Apron 6 is in very good condition with a PCI of 76. There are longitudinal cracks primarily stemming from paving joints with some transverse cracks. Weathering is low severity but covers 100 percent.



FIGURE 17. APRON 6

Apron 7 is in excellent condition with a PCI of 100. There are a small number of cracks, and the main distress is oil spills. A surface treatment in the future is recommended.



FIGURE 18. APRON 7

Apron 8 has a PCI of 100 and is in excellent condition. The apron is nearly distress free. A surface treatment is recommended in the future.

.



FIGURE 19. APRON 8

The Airport Entrance Road is in good condition. The road was divided into four sections for inspection and the PCI ranges between 47 and 80. The average PCI for the entrance road is 70. There are some areas of cracking that are beginning to develop into alligator cracking. Weathering is 100 percent with a few areas of raveling.



FIGURE 20. AIRPORT ENTRANCE ROAD

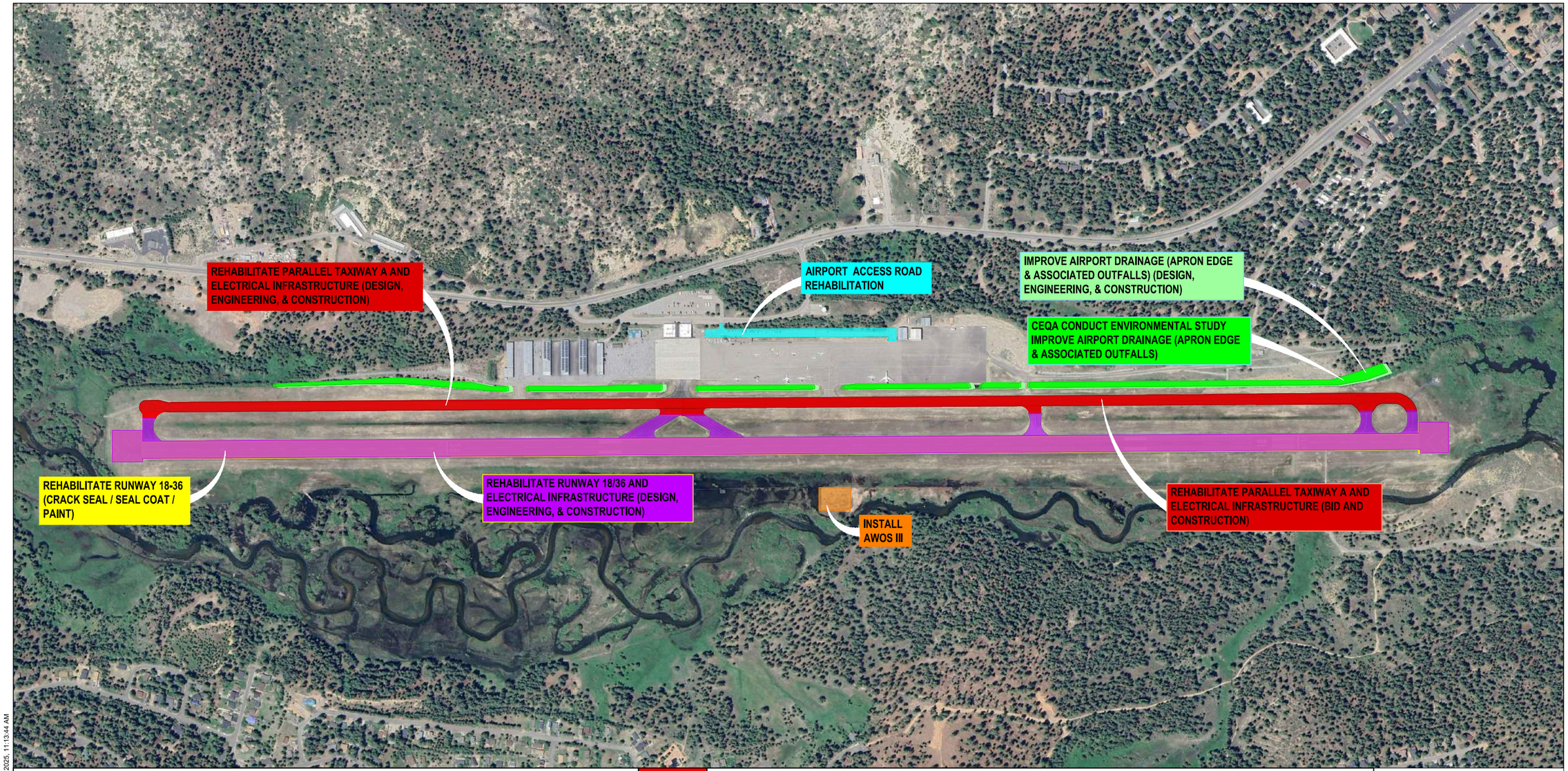
ATTACHMENT 4

TVL 2026 CIP PACKAGE

WOOLPERT

LAKE TAHOE AIRPORT (TVL)
CAPITAL IMPROVEMENT PLAN
SOUTH LAKE TAHOE, CA - October 2025

DESCRIPTION	FUNDING SOURCES					TOTAL ESTIMATED PROJECT COST 2026 DOLLARS	ENVIRONMENTAL DOCUMENT			Start Date	End Date
	FEDERAL (90.0% - 95.0%)				LOCAL (5.0% - 10.0%)		NEPA	CEQA	TRPA		
	AIP	State Apportionment/ DI	BIL Allocated	BIL (ATP)							
2026											
Rehabilitate Runway 18/36 (Crack Seal/Seal Coat/Paint)	$ 150,000	$ 100,000			$ 138,158	$ 388,158	CATEX	IS/ADDENDUM	IEC/MFONSE	10/1/2023	12/31/2025
Reimbursement for Pavement Maintenance (Taxiway)			$ 108,000		$ 49,796	$ 157,796	CATEX	IS/ADDENDUM	IEC/MFONSE	10/1/2023	12/31/2026
Airport Access Road Rehabilitation (7,820 SY) (mill/fill)					$ 450,000	$ 450,000	NONE	CATEX	NONE	11/25/2024	10/15/2025
2027											
Rehabilitate Parallel Taxiway A (8,541') and Electrical Infrastructure (Design & Engineering) (2023 PCI=54)	$ 150,000	$ 795,000			$ 105,000	$ 1,050,000	CATEX	CATEX	IEC/MFONSE	5/1/2026	12/31/2027
2028											
Rehabilitate Parallel Taxiway A (50' x 3,635') and Electrical Infrastructure (Construction) (2023 PCI=54)	$ 150,000	$ 3,630,000			$ 420,000	$ 4,200,000	CATEX	CATEX	IEC/MFONSE	5/1/2027	12/31/2028
2029											
Bank Entitlement Funds											
2030											
Rehabilitate Parallel Taxiway A (50' x 4,906') and Electrical Infrastructure (Bid and Construction) (2023 PCI=54)	$ 300,000	$ 5,280,000			$ 620,000	$ 6,200,000	CATEX	CATEX	IEC/MFONSE	5/1/2027	12/31/2028
2031											
Rehabilitate Runway 18/36 (100' x 8,451' (94,900 SY)) and Electrical Infrastructure (Design & Engineering)	$ 150,000	$ 615,000			$ 85,000	$ 850,000	CATEX	IS/ADDENDUM	IEC/MFONSE	5/1/2027	12/31/2029
2032											
Rehabilitate Runway 18/36 (100' x 8,541' (94,900 SY)) and Electrical Infrastructure (Construction)	$ 150,000	$ 14,700,000			$ 1,650,000	$ 16,500,000	CATEX	IS/ADDENDUM	IEC/MFONSE	5/1/2028	12/31/2029
2033											
Install Weather Reporting Equipment (AWOS III) (Design, Engineering, and Construction)	$ 150,000	$ 200,000			$ 38,889	$ 388,889	CATEX	CATEX	NONE		
2034											
CEQA Conduct Environmental Study Improve Airport Drainage – (Apron-Edge (5,700 LF) & Associated Outfalls)	$ -				$ 550,000	$ 550,000	N/A	IS/MND	IEC/MFONSE		
NEPA Conduct Environmental Study Improve Airport Drainage – (Apron-Edge (5,700 LF) & Associated Outfalls)	$ 225,000				$ 25,000	$ 250,000	EA	N/A	N/A		
2035											
Improve Airport Drainage – (Apron-Edge (5,700 LF) & Associated Outfalls) (Design, Engineering, and Construction)	$ 150,000	$ 1,000,000			$ 127,778	$ 1,277,778	EA	IS/MND	IEC/MFONSE		
SUBTOTAL 2026 - 2033 (8 -Years)	**$ 1,575,000**	**$ 26,320,000**	**$ 108,000**	**$ -**	**$ 4,259,621**	**$ 32,262,621**					



CAPITAL IMPROVEMENT PLAN

YEAR	PROJECT DESCRIPTION
2026	REHABILITATE RUNWAY 18-36 (CRACK SEAL/SEAL COAT/PAINT)
2026	AIRPORT ACCESS ROAD REHABILITATION (MILL/FILL)
2026	REIMBURSEMENT FOR PAVEMENT MAINTENANCE (TAXIWAY) (NOT DEPICTED)
2027	REHABILITATE PARALLEL TAXIWAY A AND ELECTRICAL INFRASTRUCTURE (DESIGN & ENGINEERING)
2028	REHABILITATE PARALLEL TAXIWAY A AND ELECTRICAL INFRASTRUCTURE (CONSTRUCTION) (TWY F TO TWY B)
2029	BANK ENTITLEMENT FUNDS
2030	REHABILITATE PARALLEL TAXIWAY A AND ELECTRICAL INFRASTRUCTURE (BID & CONSTRUCTION) (TWY F TO TWY K)
2031	REHABILITATE RUNWAY 18/36 AND ELECTRICAL INFRASTRUCTURE (DESIGN & ENGINEEERING)
2032	REHABILITATE RUNWAY 18/36 AND ELECTRICAL INFRASTRUCTURE (CONSTRUCTION)
2033	INSTALL WEATHER REPORTING EQUIPMENT (AWOS III) (DESIGN, ENGINEERING, & CONSTRUCTION)
2034	CEQA CONDUCT ENVIRONMENTAL STUDY IMPROVE AIRPORT DRAINAGE (APRON EDGE & ASSOCIATED OUTFALLS)
2034	NEPA CONDUCT ENVIRONMENTAL STUDY IMPROVE AIRPORT DRAINAGE (APRON EDGE & ASSOCIATED OUTFALLS)
2035	IMPROVE AIRPORT DRAINAGE (APRON EDGE & ASSOCIATED OUTFALLS) (DESIGN, ENGINEERING, & CONSTRUCTION)

GRAPHIC SCALE
350 0 350 700
(IN FEET)

WOOLPERT

LAKE TAHOE AIRPORT
2026 - 2033 CAPITAL IMPROVEMENT PLAN
2026-2033 OVERALL PLAN
DATE: OCTOBER 2025

LAKE TAHOE airport
SOUTH LAKE TAHOE, CALIFORNIA

CITY OF SOUTH LAKE TAHOE

SHEET NO:
1 OF 690

Layout Tab Name: OVERALL PLAN
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CAPITAL IMPROVEMENT PLAN

YEAR	PROJECT DESCRIPTION
2026	REIMBURSEMENT FOR PAVEMENT MAINTENANCE (NOT DEPICTED)
2026	REHABILITATE RUNWAY 18-36 (CRACK SEAL/SEAL COAT/PAINT)
2026	AIRPORT ACCESS ROAD REHABILITATION (MILL/FILL)

GRAPHIC SCALE
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(IN FEET)

WOOLPERT

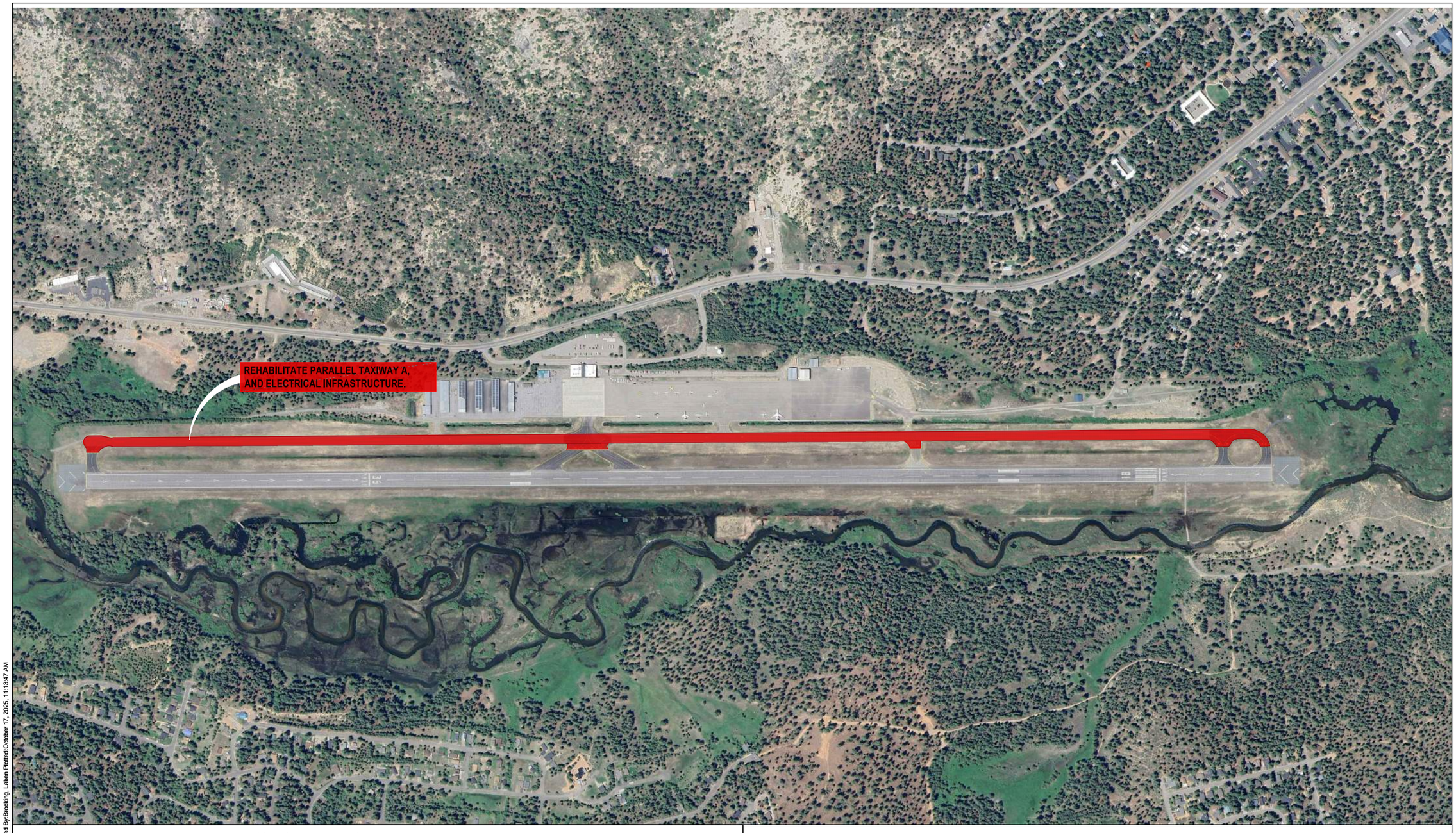
LAKE TAHOE AIRPORT
2026 - 2033 CAPITAL IMPROVEMENT PLAN
2026
DATE: OCTOBER 2025

LAKE TAHOE airport
SOUTH LAKE TAHOE, CALIFORNIA

CITY OF SOUTH LAKE TAHOE

SHEET NO:
3 OF 691

Layout Tab Name: 2026
Last Saved By:LBrooking, 10/17/2025 11:12:52 AM
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CAPITAL IMPROVEMENT PLAN

YEAR	PROJECT DESCRIPTION
2027	REHABILITATE PARALLEL TAXIWAY A AND ELECTRICAL INFRASTRUCTURE (DESIGN & ENGINEERING)

GRAPHIC SCALE
350 0 350 700
(IN FEET)

WOOLPERT

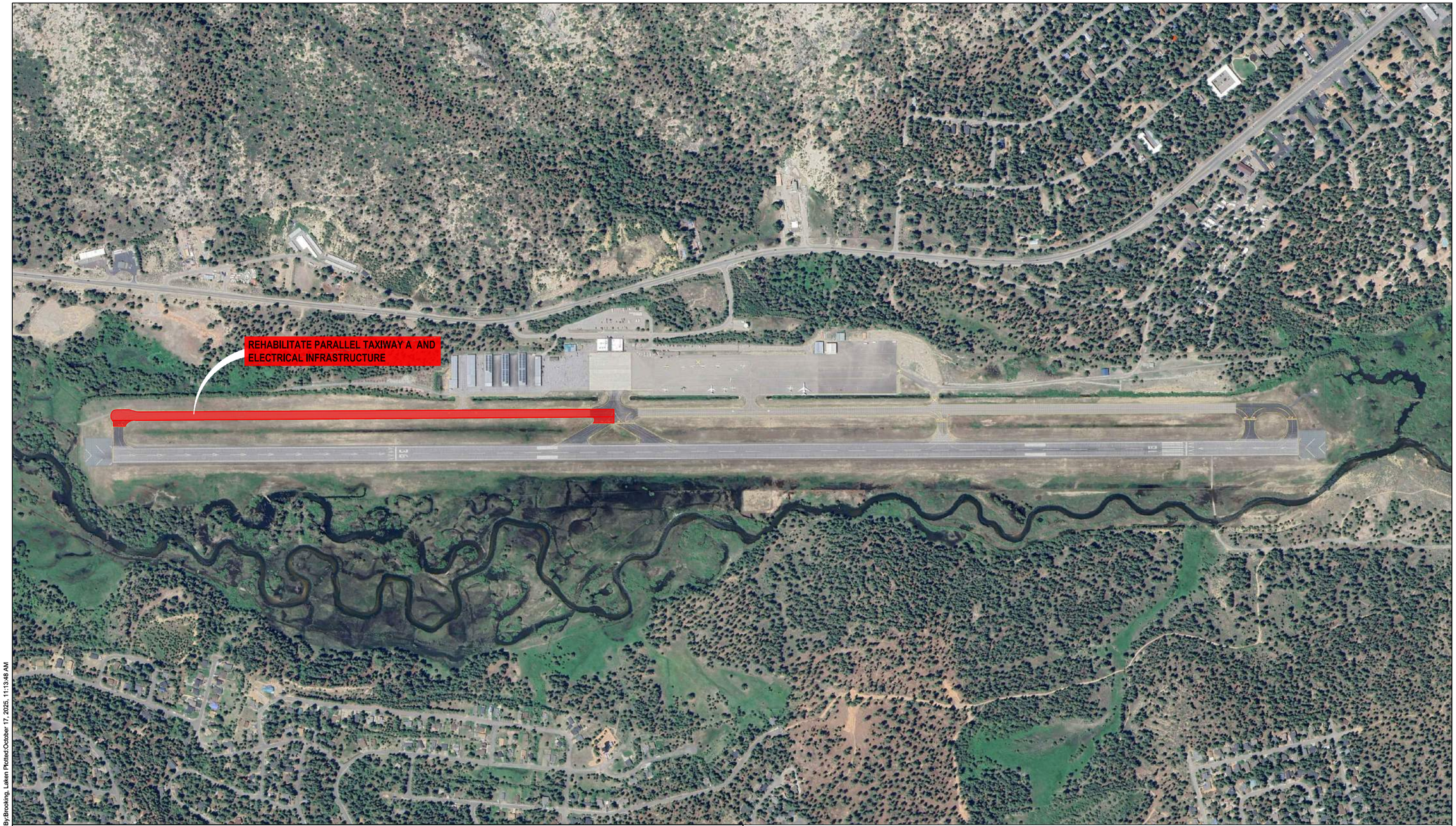
LAKE TAHOE AIRPORT
2026 - 2033 CAPITAL IMPROVEMENT PLAN
2027-2028
DATE: OCTOBER 2025

LAKE TAHOE airport
SOUTH LAKE TAHOE, CALIFORNIA

CITY OF SOUTH LAKE TAHOE

SHEET NO:
4 OF 692

Layout Tab Name: 2027
Last Saved By:L.Brooking, 10/17/2025 11:12:52 AM
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CAPITAL IMPROVEMENT PLAN

YEAR	PROJECT DESCRIPTION
2028	REHABILITATE PARALLEL TAXIWAY A AND ELECTRICAL INFRASTRUCTURE (CONSTRUCTION) (TWY F TO TWY B)

GRAPHIC SCALE
350 0 350 700
(IN FEET)

WOOLPERT

LAKE TAHOE AIRPORT
2026 - 2033 CAPITAL IMPROVEMENT PLAN
2027-2028
DATE: OCTOBER 2025

LAKE TAHOE airport
SOUTH LAKE TAHOE, CALIFORNIA

CITY OF SOUTH LAKE TAHOE

SHEET NO:
4 OF 693

Layout Tab Name: 2028
Last Saved By:L.Brooking, 10/17/2025 11:12:52 AM
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CAPITAL IMPROVEMENT PLAN	
YEAR	PROJECT DESCRIPTION
2029	BANK ENTITLEMENT FUNDS
2030	REHABILITATE PARALLEL TAXIWAY A AND ELECTRICAL INFRASTRUCTURE (BID & CONSTRUCTION) (TWY F TO TWY K)

GRAPHIC SCALE
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(IN FEET)

WOOLPERT

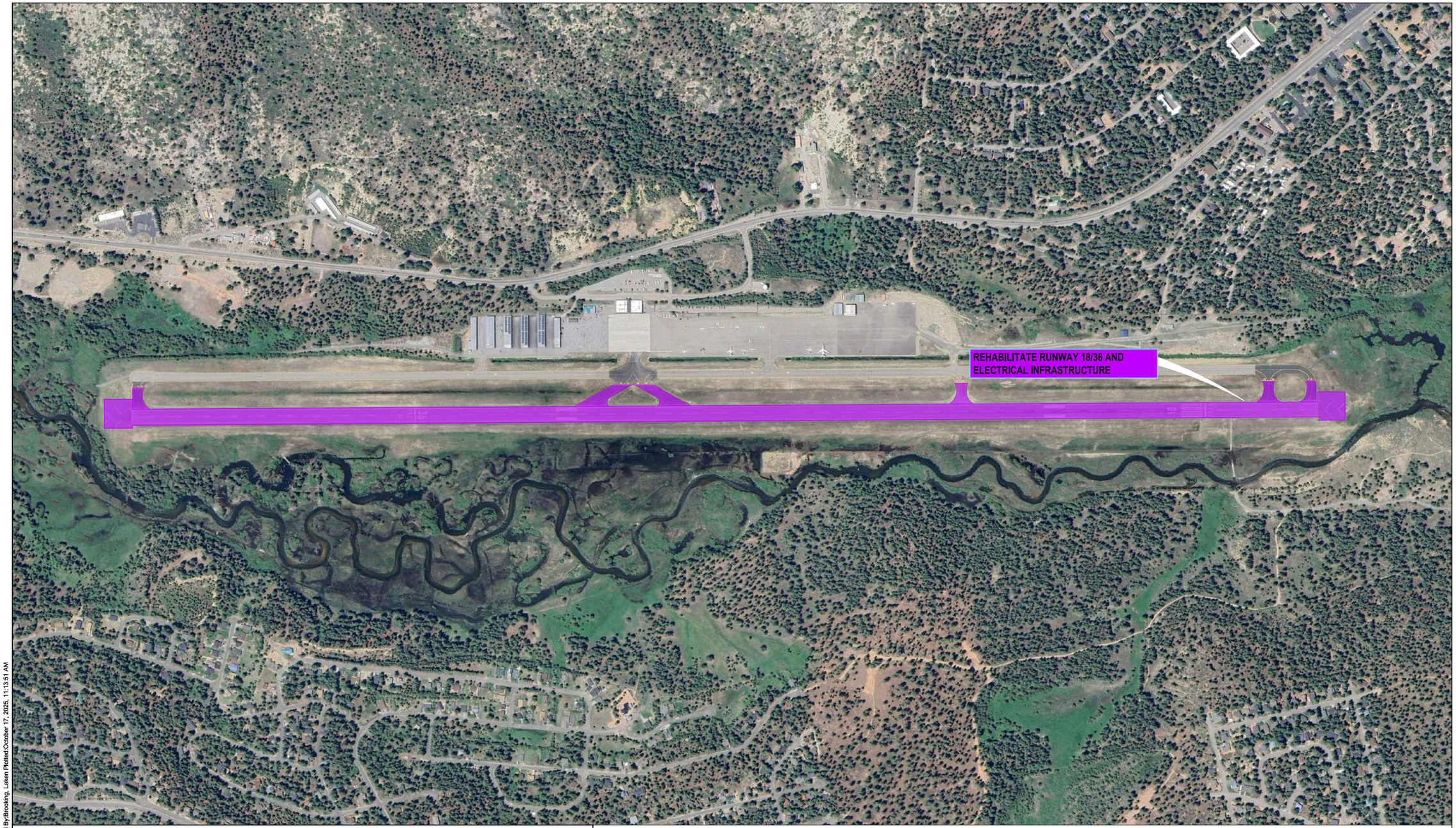
LAKE TAHOE AIRPORT
2026 - 2033 CAPITAL IMPROVEMENT PLAN
2029-2030
DATE: OCTOBER 2025

LAKE TAHOE airport
SOUTH LAKE TAHOE, CALIFORNIA

CITY OF SOUTH LAKE TAHOE

SHEET NO:
5 OF 694

Layout Tab Name: 2029-2030
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CAPITAL IMPROVEMENT PLAN

YEAR	PROJECT DESCRIPTION
2031	REHABILITATE RUNWAY 18/36 AND ELECTRICAL INFRASTRUCTURE (DESIGN & ENGINEERING)
2032	REHABILITATE RUNWAY 18/36 AND ELECTRICAL INFRASTRUCTURE (CONSTRUCTION)

GRAPHIC SCALE
350 0 350 700
(IN FEET)

WOOLPERT

LAKE TAHOE AIRPORT
2026 - 2033 CAPITAL IMPROVEMENT PLAN
2031-2032
DATE: OCTOBER 2025

LAKE TAHOE airport
SOUTH LAKE TAHOE, CALIFORNIA

CITY OF SOUTH LAKE TAHOE

SHEET NO:
6 OF 695

Layout Tab Name: 2031-2032
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CAPITAL IMPROVEMENT PLAN

YEAR	PROJECT DESCRIPTION
2033	INSTALL WEATHER REPORTING EQUIPMENT (AWOS III) (DESIGN, ENGINEERING, AND CONSTRUTION

GRAPHIC SCALE
350 0 350 700
(IN FEET)

WOOLPERT

LAKE TAHOE AIRPORT
2026 - 2033 CAPITAL IMPROVEMENT PLAN
2033
DATE: OCTOBER 2025

LAKE TAHOE airport
SOUTH LAKE TAHOE, CALIFORNIA

CITY OF SOUTH LAKE TAHOE

SHEET NO:
7 OF 696

Layout Tab Name: 2033
Last Saved By:LBrooking, 10/17/2025 11:12:52 AM
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CAPITAL IMPROVEMENT PLAN

YEAR	PROJECT DESCRIPTION
2034	CEQA CONDUCT ENVIRONMENTAL STUDY IMPROVE AIRPORT DRAINAGE - (APRON EDGE & ASSOCIATED OUTFALLS)
2034	NEPA CONDUCT ENVIRONMENTAL STUDY IMPROVE AIRPORT DRAINAGE - (APRON EDGE & ASSOCIATED OUTFALLS)

GRAPHIC SCALE
350 0 350 700
(IN FEET)

WOOLPERT

LAKE TAHOE AIRPORT
2026 - 2033 CAPITAL IMPROVEMENT PLAN
2031-2032
DATE: OCTOBER 2025

LAKE TAHOE airport
SOUTH LAKE TAHOE, CALIFORNIA

CITY OF SOUTH LAKE TAHOE

SHEET NO:
6 OF 697

Layout Tab Name: 2034
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CAPITAL IMPROVEMENT PLAN	
YEAR	PROJECT DESCRIPTION
2035	IMPROVE AIRPORT DRAINAGE (DESIGN, ENGINEERING, AND CONSTRUCTION)

GRAPHIC SCALE
350 0 350 700
(IN FEET)

WOOLPERT

LAKE TAHOE AIRPORT
2026 - 2033 CAPITAL IMPROVEMENT PLAN
2031-2032
DATE: OCTOBER 2025

LAKE TAHOE airport
SOUTH LAKE TAHOE, CALIFORNIA

CITY OF SOUTH LAKE TAHOE

SHEET NO:
6 OF 698

Layout Tab Name: 2035
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CITY OF SOUTH LAKE TAHOE

AIRPORT MASTER PROFESSIONAL SERVICES AGREEMENT

This Agreement is made and entered into as of the **1ST** day of **June 2026** by and between the **City of South Lake Tahoe**, a municipal corporation ("City") and **Environmental Science Associates (ESA)** ("Consultant").

RECITALS

A. Consultant is specially trained, experienced and competent to perform the special services which will be required by this Agreement.

B. Consultant possesses the skill, experience, ability, background, certification and knowledge to provide the services described in this Agreement on the terms and conditions described herein.

C. City desires to retain Consultant to render professional services as set forth in this Agreement.

AGREEMENT

1. Scope of Services. Consultant shall perform the services set forth in this agreement and shall provide said services at the time, place, and in the manner specified in this agreement. Consultant shall have no power or authority by this Agreement to bind City in any respect.

   The Consultant agrees that it has satisfied itself by its own investigation and research regarding the conditions affecting the work to be done and labor and materials needed, and that its decision to execute this Contract is based on such independent investigation and research.

   All services provided by Consultant pursuant to this Agreement will be provided in accordance with the terms set forth in the **Exhibit A, "Scope of Services,"** attached hereto and incorporated herein by reference. **Exhibit B, "Compensation Schedule,"** attached hereto and incorporated herein by reference, outlines the fees and compensation which shall be paid pursuant to this Agreement.

2. Term/Time of Performance. The services by Consultant are to commence upon the execution of the Agreement and continue for **5 years** ending May 31, 2031.

3. Compensation. Compensation to be paid to Consultant shall be in accordance with the Schedule set forth in **Exhibit B** which is attached hereto and incorporated herein by reference. Payment by City under this Agreement shall not be deemed a waiver of defects, even if such defects were known to City at the time of payment. Payment is contingent upon compliance with all terms and conditions of this Agreement, as set forth herein. Consultant shall obtain prior written authorization from the City Project Manager for any costs in excess of budgeted amounts for each line item, task, or obligation under the Scope of Services.

4. Method of Payment. Consultant shall submit monthly billings to City describing the work performed during the preceding month. Consultant's bills shall include a brief description of the services performed, the date the services were performed, the number of hours spent and by whom, the applicable hourly rate, and a description of any reimbursable expenditures. City shall pay Consultant no later than 30 days after approval of the monthly invoice by City staff.

5. Extra Work. At any time during the term of this Agreement, City may request that Consultant perform extra work. As used herein, "Extra Work" means any work which is determined by City to be necessary for the proper completion of the Project, but which the parties did not reasonably anticipate would be necessary at the execution of this Agreement. Consultant shall not perform, nor be compensated for, extra work without prior written authorization from City.

6. Termination. This Agreement may be terminated by City or Consultant immediately for cause or without cause upon thirty days (30) days written notice of termination. Upon termination, Consultant shall be entitled to compensation for services performed up to the effective date of termination, and City shall be entitled to all work performed to that date.

Termination, revocation, or expiration of this Agreement shall not release either party from liability resulting from an event which occurred prior to such termination, revocation or expiration.

7. Ownership of Documents.

All plans, studies, documents and other writings, including working notes and internal documents, prepared by and for Consultant, its officers, employees and agents and subcontractors in the course of implementing this Agreement, shall become the property of City upon payment to Consultant for such work, and City shall have the sole right to use such materials in its discretion without further compensation to Consultant or to any other party. Consultant shall, at Consultant's expense, provide such reports, plans, studies, documents and other writings to City upon written request. All documents prepared by Consultant are confidential and shall be maintained to preserve their confidential nature. Release of any such documents to third parties shall only be made upon written consent of City.

8. Consultant's Books and Records.

a. Consultant shall maintain any and all ledgers, books of account, invoices, vouchers, canceled checks, and other records or documents evidencing or relating to charges for services, or expenditures and disbursements charged to City for a minimum period of three (3) years, or for any longer period required by law, from the date of final payment to Consultant for services provided pursuant to this Agreement.

b. Consultant shall maintain all documents and records which demonstrate performance under this Agreement for a minimum period of three (3) years, or for any longer period required by law, from records shall be available at Consultant's address indicated for the date of termination or completion of this Agreement.

c. Any records or documents required to be maintained pursuant to this Agreement shall be made available for inspection or audit, at any time during regular business hours, upon written request by the City Manager, City Attorney, City Auditor or a designated representative of these officers. Copies of such documents shall be provided to City for inspection at City offices when it is practical to do so. Otherwise,

unless an alternative is mutually agreed upon, the receipt of notices in this Agreement.

d. Where City has reason to believe that such records or documents may be lost or discarded due to dissolution, disbandment or termination of Consultant's business, City may, by written request by any of the above-named officers, require that custody of the records be given to City and that the records and documents be maintained at City offices. Access to such records and documents shall be granted to any party authorized by Consultant, Consultant's representatives, or Consultant's successor-in-interest.

9. Independent Contractor. It is understood that Consultant, in the performance of the work and services agreed to be performed, shall act as and be an independent contractor and shall not act as an agent or employee of City. Consultant shall obtain no rights to retirement benefits or other benefits which accrue to City's employees, and Consultant hereby expressly waives any claim it may have to any such rights. All employees, agents, contractors or subcontractors hired or retained by Consultant are employees, agents, contractors or subcontractors of Consultant and not of the City.

City is not required to make any deductions or withholdings form the compensation payable to Consultant under the provisions of this Contract, and is not required to issue W-2 Forms for income and employment tax purposes for any of Consultant's assigned personnel. Any third party persons employed by Consultant shall be entirely and exclusively under the direction, supervision, and control of Consultant. Consultant hereby indemnifies and holds City harmless from any and all claims that may be made against City based upon any contention by any third party that an employer-employee relationship exists by reason of this Contract.

10. Interest of Consultant. Consultant, (and principals, associates and professional employees of consultant) covenants and represents that it does not now have any investment or interest in real property and shall not acquire any interest, direct or indirect, in the area covered by this Agreement or any other source of income, interest in real property or investment which would be affected in any manner or degree by the performance of Consultant's services hereunder. Consultant further covenants and represents that in the

performance of its duties hereunder no person having any such interest shall perform any services under this Agreement.

Consultant is not a designated employee within the meaning of the Political Reform Act because Consultant:

a. Will not serve in a staff capacity and will conduct research and arrive at conclusions with respect to their rendition of information, advice, recommendation or counsel independent of the control and direction of City or of any City official, other than normal agreement monitoring; and,

b. Possesses no authority with respect to any city decision beyond rendition of information, advice, recommendation or counsel. [FPPC Reg. 18700.3(a)].

11. Professional Ability of Consultant. City has relied upon the professional training and ability of Consultant to perform the services hereunder as a material inducement to enter into this Agreement. Consultant shall therefore provide properly skilled professional and technical personnel to perform all services under this Agreement. All work performed by Consultant under this Agreement shall be in accordance with applicable legal requirements and shall meet the standard of quality ordinarily to be expected of competent professionals in Consultant's field of expertise.

12. Compliance with Laws. Consultant shall comply with all applicable federal, state, regional and local laws, codes, ordinances and regulations in carrying out their duties under this Agreement. Consultant shall observe and comply with all applicable laws, ordinances, regulations and codes of federal, state and local governments, and shall commit no trespass on any public or private property in performing any of the work authorized by this Agreement. The City, its officials, officers, elected officials, appointed officials and employees shall not be liable at law or in equity as a result of any failure of Consultant to comply with this section.

In the event it is determined that the Consultant is required to pay prevailing wages for the work performed under this Agreement, the Consultant shall pay all penalties and wages as required by law.

13. Licenses. Consultant represents and warrants to City that it has all licenses, permits, qualifications, insurance and approvals of whatsoever nature which are legally required of Consultant to practice its profession. Consultant represents and warrants to City that Consultant shall, at its sole cost and expense, keep in effect or obtain at all times during the term of this Agreement, any licenses, permits, insurance and approvals which are legally required of Consultant to practice its profession. If Consultant will be physically present in the City of South Lake Tahoe to perform some or all of the services, Consultant shall maintain a City of South Lake Tahoe business license at all times services are performed under this Agreement. Consultant acknowledges that payments made pursuant to this Agreement may be withheld until this provision has been satisfied.

14. Indemnity. Consultant hereby agrees to and shall indemnify and hold harmless City, its elected and appointed boards, officers, agents, employees and volunteers from and against any liability for any and all claims, demands, actions, losses, damages and injuries, direct or indirect (including any and all costs and expenses in connection therein), arising out of this Agreement or caused in any way by Consultant's negligent performance of this Agreement or its breach of its obligations contained in this Agreement, except for any such claims arising out of the negligence or willful misconduct of the City. Consultant agrees to defend City from and against any and all losses, damages, claims costs and fees arising out Consultant's negligent acts, errors, omissions, regarding this Agreement, the Consultant's work under this Agreement, or the consultant's Scope of Work.

City does not, and shall not, waive any rights against Consultant which it may have by reason of the aforesaid hold harmless agreement, because of the acceptance by City, or the deposit with City by Consultant, of any of the insurance policies hereinafter set forth.

This hold harmless agreement by Consultant shall apply to all damages and claims for damages, or alleged to have been suffered, by reason of any of the aforesaid operation of Consultant or any subcontractor, regardless of whether such insurance policies shall have been determined to be applicable to any of such damages or claims for damages.

Consultant further waives any and all rights to any type of express or implied indemnity or right of contribution from the City for any liability, claims,

demands, costs, charges and expenses and causes of action of whatsoever arising out of or in any way connected with this Agreement, and consultant's work under this Agreement.

15. Insurance Requirements.

a. Consultant, at Consultant's own cost and expense, shall procure and maintain, for the duration of the contract, the following insurance policies.

i. Workers' Compensation Coverage. Consultant shall maintain Workers' Compensation Insurance and Employer's Liability Insurance for their employees in accordance with the laws of the State of California. In addition, Consultant shall require each subcontractor to similarly maintain Workers' Compensation Insurance and Employer's Liability Insurance in accordance with the laws of the State of California for all of the subcontractor's employees. Any notice of cancellation of all Workers' Compensation policies must be received by City at least thirty (30) days prior to such change. Consultant shall provide thirty (30) days written notice of nonrenewal of any Workers' Compensation policies. The insurer shall agree to waive all rights of subrogation against City, its officers, agents, employees and volunteers for losses arising from work performed by Consultant for City.

ii. Commercial General Liability Coverage. Consultant shall maintain commercial general liability insurance no less broad than ISO form CG 00 01 in an amount not less than one million dollars ($1,000,000) per occurrence for bodily injury, personal injury and property damage. Coverage must be made on the standard Occurrence form. Claims-Made forms are not acceptable without prior written consent of City. City of South Lake Tahoe must be endorsed as an additional insured for liability arising out of ongoing operation by on behalf of Consultant. If a commercial general liability insurance form or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the work to be performed under this Agreement or the general

aggregate limit shall be at least twice the required occurrence limit.

iii. Automobile Liability Coverage. Consultant shall maintain automobile liability insurance covering bodily injury and property damage for all activities of the Consultant arising out of or in connection with the work to be performed under this Agreement, including coverage for owned, hired and non-owned vehicles, in an amount of not less than one million dollars ($1,000,000) combined single limit for each occurrence.

iv. Professional Liability Coverage. Consultant shall maintain professional errors and omissions liability insurance for protection against claims alleging negligent acts, errors or omissions which may arise from Consultant or by its employees, or subcontractors. The amount of this insurance shall not be less than one million dollars ($1,000,000) on a claims-made annual aggregate basis, or a combined single-limit per occurrence basis.

v. Cyber Liability Coverage. Consultant shall maintain cyber liability insurance with limits not less than one million dollars ($1,000,000) per claim, two million dollars ($2,000,000) aggregate. Coverage shall be sufficiently broad to sufficiently broad to respond to the duties and obligations as is undertaken by Vendor in this agreement and shall include, but not limited to, claims involving security breach; system failure; data recovery; business interruption; cyber extortion; social engineering; infringement of intellectual property, including but not limited to infringement of copyright, trademark, trade dress, invasion of privacy violations, information theft, damage to or destruction of electronic information, release of private information, and alteration of electronic information. The policy shall provide coverage for breach response costs as well as regulatory fines and penalties, and credit monitoring expenses with limits sufficient to respond to these obligations. Vendor's policy shall be primary and shall not seek contribution from the City's coverage, shall contain a waiver of subrogation in favor of the City, and shall be

endorsed to provide that City and its officers, officials, employees, agents, and volunteers are additional insureds. Any failure to comply with the reporting provisions of the policy by Vendor shall not affect coverage provided to the City. If Vendor maintains broader coverage and/or higher limits than the minimums listed above, City requires and shall be entitled to the broader coverage and/or higher limits maintained by the Vendor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to City.

b. Endorsements. Each general liability and automobile liability insurance policy shall be with insurers possessing a AM Best's rating of no less than A:VII and shall be endorsed with the following specific language:

i. City, its elected or appointed officers, officials, employees, agents and volunteers are to be covered as additional insured's under Consultant's General Liability and Automobile Liability policies with respect to liability arising out of this Agreement and/or work performed by or on behalf of the Consultant, including materials, parts or equipment furnished in connection with such work or operations.

ii. This policy shall be considered primary insurance as respects City, its elected or appointed officers, officials, employees, agents and volunteers. Any insurance maintained by City, including any self-insured retention City may have, shall be considered excess insurance only and shall not contribute with it.

iii. This insurance shall act for each insured and additional insured as though a separate policy had been written for each, except with respect to the limits of liability of the insuring Consultant.

iv. The insurer waives all rights of subrogation against City except for Consultant's Professional Liability and Employers' Liability policies, its elected or appointed officers, officials, employees or agents.

v. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to City, its elected or appointed officers, officials, employees, agents or volunteers.

vi. No policies of insurance carried by Consultant shall be suspended, voided, canceled, or changed in coverage or in limits except after thirty (30) days written notice to the City Attorney by Certified Mail.

c. Deductibles and Self-Insured Retentions. The Consultant shall be responsible for all deductibles in all of Consultant's insurance policies. The amount of deductibles for insurance coverage required herein shall be reasonable and approved by the City Attorney.

d. Certificates of Insurance. Consultant shall provide certificates of insurance with original endorsements to City as evidence of the insurance coverage required herein. Consultant shall not commence work under this contract until all insurance required under this section has been approved by City as to form, amount and carrier, nor shall Consultant allow any subcontractor to commence work on any subcontract until all similar insurance required and reasonably consistent limits of the subcontractor has been so obtained and approved. Certificates of insurance shall contain no exclusions unless negotiated with the City Attorney and approved, in writing, by the City Attorney.

16. Notices. Any notice required to be given under this Agreement shall be in writing and either served personally or sent prepaid, first class mail. Any such notice shall be addressed to the other party at the address set forth below. Notice shall be deemed communicated within 48 hours from the time of mailing if mailed as provided in this section.

If to City: City of South Lake Tahoe
1901 Lisa Maloff Way
South Lake Tahoe, CA 96150

Provide a copy to: City Attorney's Office
City of South Lake Tahoe
1901 Lisa Maloff Way, Suite 300

South Lake Tahoe, CA 96150

If to Consultant: Patrick Hickman, AICP, PLA
Project Manager
Environmental Science Associates
2600 Capitol Avenue Suite 200
Sacramento, CA 95816
(619)719-4224
PHickman@esassoc.com

17. Assignment and Subcontracting. The parties recognize that a substantial inducement to City for entering into this Agreement is the professional reputation, experience and competence of Consultant. Assignments of any or all rights, duties or obligations of the Consultant under this Agreement will be permitted only with the express consent of City. Consultant shall not subcontract any portion of the work to be performed under this Agreement without the written authorization of City. If City consents to such subcontract, Consultant shall be fully responsible to City for all acts or omissions of the subcontractor. Nothing in the Agreement shall create any contractual relationship between City and subcontractor nor shall it create any obligation on the part of City to pay or to see to the payment of any monies due to any such subcontractor other than as otherwise required by law.

18. Waiver. Waiver of a breach or default under this Agreement shall not constitute a continuing waiver of a subsequent breach of the same or any other provision under this Agreement.

19. Dispute Resolution. Any dispute concerning this Agreement will be first submitted to the City Manager or his designee for resolution. If no resolution is reached, such dispute shall be submitted to the City Council. The decision of the City Council shall be final and shall be appealable only to the El Dorado Superior Court pursuant to California Code of Civil Procedure §1094.5, and as provided by law.

20. Controlling Law Venue. This Agreement and all matters relating to it shall be governed by the laws of the State of California and any action brought relating to this Agreement shall be held exclusively in the Superior Courts in the County of El Dorado, South Lake Tahoe Division.

21. Prohibited Interests. Consultant maintains and warrants that it has not employed nor retained any Consultant or person, other than the independent contractors hired in accordance with Consultant's standard business practice, to solicit or secure this Agreement. Further, Consultant warrants that it has not paid, nor has it agreed to pay any Consultant or person, other than a bona fide employee working solely for Consultant or an independent contractor hired as discussed above, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, City shall have the right to rescind this Agreement without liability. For the term of this Agreement, no member, officer or employee of City, during the term of his or her service with City, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

22. Equal Opportunity Employment. Consultant represents that it is an equal opportunity employer, and it shall not discriminate against any subcontractor, employee, or applicant for employment because of ancestry, age, color, disability, genetic information, gender expression, gender identity, marital status, medical condition, military or veteran status, national origin, race, religion, reproductive health decision making, sex/gender, or sexual orientation. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff, or termination.

23. Drug-Free Workplace Certification. By signing this Agreement, Consultant hereby certifies under penalty of perjury under the laws of the State of California that the Consultant will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code Section 8355, et seq.) and will provide a drug-free workplace by taking the following actions:

a. Publish a statement notifying employees that unlawful manufacture, distribution dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations, as required by Government Code Section 8355(a).
b. Establish a Drug-Free Awareness Program as required by Government Code Section 8355(a)(2) to inform employees about all of the following:

    i. The dangers of drug abuse in the workplace;

ii. The person's or organization's policy of maintaining a drug-free workplace;
iii. Any available counseling, rehabilitation and employee assistance program; and
iv. Penalties that may be imposed upon employees for drug abuse violations.

c. Provide, as required by Government Code Section 8355(a)(3), that every employee who performs grant activities under this Agreement:

i. Will receive a copy of the Consultant's drug-free policy statement; and
ii. Will agree to abide by the terms of the Consultant's statement as a condition of employment on this Agreement.

Failure to comply with these requirements may result in suspension of payments under this Agreement or termination of the Agreement, or both, and Consultant may be ineligible for award of any future City agreements if City determines that any of the following has occurred: the Consultant (1) has made false certification, or (2) violates the certification by failing to carry out the requirements as noted above.

24. Anti-Lobbying Certification. Consultant shall submit to City the Anti-Lobbying Certification contained in **Exhibit C**. Further, Consultant shall require that the language of the certification in **Exhibit C** be included in all contracts or subcontracts entered into in connection with this Agreement and that all Consultants and contractors shall certify and disclose accordingly.

25. Debarment, Suspension, Ineligibility and Voluntary Exclusion. By signing this Agreement, Consultant assures that neither it nor its principals, is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

26. Americans with Disabilities Act. By signing this Agreement, Consultant assures the City that it complies with the American with Disabilities Act (ADA) of 1990, (42 U.S.C. 12101, et. seq.), which prohibits discrimination on the basis of disability, as well as all applicable regulations and guidelines issued pursuant to ADA.

27. Amendments. This Agreement may be modified or amended only by a written document executed by both Consultant and City and approved as to form by the City Attorney.

28. Severability. If any term or portion of this Agreement is held to be invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions of this Agreement shall continue in full force and effect.

29. Entire Agreement. This Agreement constitutes the complete and exclusive statement of Agreement between City and Consultant. All prior written and oral communications, including correspondence, drafts, memoranda, and representations, are superseded in total by this Agreement.

30. Execution. This Agreement may be executed in several counterparts, each of which shall constitute one and the same instrument and shall become binding upon the parties when at least one copy hereof shall have been signed by both parties hereto. In approving this Agreement, it shall not be necessary to produce or account for more than one such counterpart.

31. Time is of the Essence. Time is of the essence for this Agreement.

32. Authority to Enter Agreement. Consultant has all requisite power and authority to conduct its business and to execute, deliver, and perform the Agreement. Each party warrants that the individuals who have signed this Agreement have the legal power, right, and authority to make this Agreement and to bind each respective party.

33. Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity.

a. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

b. The goals and timetables for minority and female participation, expressed in percentage terms for the Consultant's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables

Goals for minority participation for each trade: 0.0% Race Conscious

Goals for female participation in each trade: 0.0%

These goals are applicable to all of the Consultant's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Consultant performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Consultant also is subject to the goals for both its federally involved and non-federally involved construction. The Consultant's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a) and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Consultant shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Consultant to Consultant or from project to project for the sole purpose of meeting the Consultant's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

a. The Consultant shall provide written notification to the Director of the Office of Federal Contract Compliance Programs (OFCCP)within 10 working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the Sub-Consultant; employer identification number of the Sub-Consultant; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

b. As used in this notice and in the contract resulting from this solicitation, the "covered area" is the City of South Lake Tahoe, El Dorado County, California.

34. Breach of Contract Terms. Any violation or breach of terms of this contract on the part of the Consultant or its Sub-Consultant may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement. Owner will provide Consultant written notice that describes the nature of the breach and corrective actions the Consultant must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Consultant until such time the Consultant corrects the breach or the Owner elects to terminate the contract. The Owner's notice will identify a specific date by which the Consultant must correct the breach. Owner may proceed with termination of the contract if the Consultant fails to correct the breach by the deadline indicated in the Owner's notice. The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

35. General Civil Rights Provisions. The Consultant agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance. This provision binds the Consultant and Sub-Consultant from the bid solicitation period through the completion of the contract. This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

36. Title VI Solicitation Notice. The City of South Lake Tahoe, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC §§2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that any contract entered into pursuant to this advertisement, [select disadvantaged business enterprises or airport concession disadvantaged business enterprises] will be afforded full and fair opportunity to submit bids in response to this invitation and will

not be discriminated against on the grounds of race, color, or national origin inconsideration for an award.

37. Compliance with Nondiscrimination Requirements. During the performance of this contract, the Consultant, for itself, its assignees, and successors in interest (hereinafter referred to as the "Consultant"), agrees as follows:

    a. Compliance with Regulations: The Consultant (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract
    b. Nondiscrimination: The Consultant, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of Sub-Consultant, including procurements of materials and leases of equipment. The Consultant will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
    c. Solicitations for Subcontracts, including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding or negotiation made by the Consultant for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential Sub-Consultant or supplier will be notified by the Consultant of the Consultant's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.
    d. Information and Reports: The Consultant will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a Consultant is in the exclusive possession of another who fails or

refuses to furnish the information, the Consultant will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

e. Sanctions for Noncompliance: In the event of a Consultant's noncompliance with the non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
    i. Withholding payments to the Consultant under the contract until the Consultant complies; and/or
    ii. Cancelling, terminating, or suspending a contract, in whole or in part.

f. Incorporation of Provisions: The Consultant will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Consultant will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Consultant becomes involved in, or is threatened with litigation by a Sub-Consultant, or supplier because of such direction, the Consultant may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the Consultant may request the United States to enter into the litigation to protect the interests of the United States.

38. Clean Air and Water Pollution Control. Consultant agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 USC § 740-7671q) and the Federal Water Pollution Control Act as amended (33 USC § 1251-1387). The Consultant agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration. Consultant must include this requirement in all subcontracts that exceeds $150,000.

39. Contract Workhours and Safety Standards Act Requirements.

a. Overtime Requirements. No Consultant or Sub-Consultant contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such

laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

b. Violation; Liability for Unpaid Wages; Liquidated Damages. In the event of any violation of the clause set forth in paragraph (1) of this clause, the Consultant and any Sub-Consultant responsible therefore shall be liable for the unpaid wages. In addition, such Consultant and Sub-Consultant shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

c. Withholding for Unpaid Wages and Liquidated Damages. The Federal Aviation Administration (FAA) or the Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Consultant or Sub-Consultant under any such contract or any other Federal contract with the same prime Consultant, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Consultant, such sums as may be determined to be necessary to satisfy any liabilities of such Consultant or Sub-Consultant for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this clause.

d. Sub-Consultant. The Consultant or Sub-Consultant shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the Sub-Consultant to include these clauses in any lower tier subcontracts. The prime Consultant shall be responsible for compliance by any Sub-Consultant or lower tier Sub-Consultant with the clauses set forth in paragraphs (1) through (4) of this clause.

40. Copeland "Anti-Kickback" Act. Consultant must comply with the requirements of the Copeland "Anti-Kickback" Act (18 USC 874 and 40

USC3145), as supplemented by Department of Labor regulation 29 CFR part 3. Consultant and Sub-Consultant are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Consultant and each Sub-Consultant must submit to the Owner, a weekly statement on the wages paid to each employee performing on covered work during the prior week. Owner must report any violations of the Act to the Federal Aviation Administration.

41. Davis-Bacon Act.

a. Minimum wages.

i. All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fid fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Consultant and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (42)(d) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the

time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (42)(b) of this section) and the Davis-Bacon poster (WH- 1321) shall be posted at all times by the Consultant and its Sub-Consultant at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

ii. The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

1. The work to be performed by the classification requested is not performed by a classification in the wage determination;

2. The classification is utilized in the area by the construction industry; and

3. The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

iii. If the Consultant and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

iv. In the event the Consultant, the laborers, or mechanics to be employed in the classification, or their representatives, and the

contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

v. The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (42)(ii) (1) or (2) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

vi. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Consultant shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

vii. If the Consultant does not make payments to a trustee or other third person, the Consultant may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program: Provided that the Secretary of Labor has found, upon the written request of the Consultant, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Consultant to set aside in a separate account assets for the meeting of obligations under the plan or program.

b. Withholding. The Federal Aviation Administration or the sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Consultant under this contract or any other Federal contract with the same prime Consultant, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Consultant, so much

of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Consultant or any Sub-Consultant the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the Consultant, Sponsor, Applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

c. Payrolls and Basic Records.

   i. Payrolls and basic records relating thereto shall be maintained by the Consultant during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Consultant shall maintain records that show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and that show the costs anticipated or the actual costs incurred in providing such benefits. Consultants employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and

trainees, and the ratios and wage rates prescribed in the applicable programs.

ii. A. The Consultant shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Consultant will submit the payrolls to the applicant, Sponsor, or Owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at www.dol.gov/whd/forms/wh347instr.htm or its successor site. The prime Consultant is responsible for the submission of copies of payrolls by all Sub-Consultant. Consultants and Sub-Consultant shall maintain the full social security number and current address of each covered worker and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Consultant will submit them to the applicant, sponsor, or Owner, as the case may be, for transmission to the Federal Aviation Administration, the Consultant, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime Consultant to require a Sub-Consultant to provide addresses and social security numbers to the prime Consultant for its own records, without weekly submission to the sponsoring government agency (or the applicant, Sponsor, or Owner).

B. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Consultant or Sub-

Consultant or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

1. The payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i), and that such information is correct and complete;

2. Each laborer and mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations 29 CFR Part 3; 3.Each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

iii. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

iv. The falsification of any of the above certifications may subject the Consultant or Sub-Consultant to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

v. The Consultant or Sub-Consultant shall make the records required under paragraph (3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the sponsor, the Federal Aviation Administration, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Consultant or Sub-Consultant fails to submit the required records or to make them available, the Federal agency may, after written notice to the Consultant, Sponsor, applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment,

advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

d. Apprentices and Trainees.

i. Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Consultant as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Consultant is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Consultant's or Sub-Consultant's registered program shall be observed. Every apprentice must be paid at not less than the rate

specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Consultant will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

ii. Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator

of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination that provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Consultant will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

e. Equal Employment Opportunity. The utilization of apprentices, trainees, and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

f. Compliance with Copeland Act Requirements. The Consultant shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

g. Subcontracts. The Consultant or Sub-Consultant shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the Sub-Consultant to include these clauses in any lower tier subcontracts. The prime Consultant shall be responsible for the compliance by any Sub-Consultant or lower tier Sub-Consultant with all the contract clauses in 29 CFR Part 5.5.

h. Contract Termination: Debarment. A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a Consultant and a Sub-Consultant as provided in 29 CFR 5.12.

i. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

j. Disputes Concerning Labor Standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Consultant (or any of its Sub-Consultant) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

k. Certification of Eligibility.

   i. By entering into this contract, the Consultant certifies that neither it (nor he or she) nor any person or firm who has an interest in the Consultant's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

   ii. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

   iii. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 USC 1001.

42. Disadvantaged Business Enterprises. The Consultant or Sub-Consultant shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Consultant shall carry out applicable requirements of 49 CFR part 26 in the award and administration of Department of Transportation-assisted contracts. Failure by the Consultant to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Owner deems appropriate, which may include, but is not limited to:

    a. Withholding monthly progress payments;
    b. Assessing sanctions;
    c. Liquidated damages; and/or
    d. Disqualifying the Consultant from future bidding as non-responsible.

The Prime Consultant agrees to pay each Sub-Consultant under this prime contract for satisfactory performance of its contract no later than sixty (60) days from the receipt of each payment the prime Consultant receives from the City of South Lake Tahoe. The prime Consultant agrees further to return retainage payments to each Sub-Consultant within sixty (60) days after the Sub-Consultant's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the City of South Lake Tahoe. This clause applies to both DBE and non-DBE Sub-Consultant.

43. Texting When Driving. In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving", (10/1/2009) and DOT Order 3902.10, "Text Messaging While Driving", (12/30/2009), the Federal Aviation Administration encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant. In support of this initiative, the Owner encourages the Consultant to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Consultant must include the substance of this clause in all sub-tier contracts exceeding $3,500 that involve driving a motor vehicle in performance of work activities associated with the project.
44. Energy Conservation Requirements. Consultant and Sub-Consultant agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 USC 6201et seq).
45. Equal Opportunity Clause. During the performance of this contract, the Consultant agrees as follows:

    a. The Consultant will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Consultant will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identify, or national origin. Such action

shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff, or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

b. The Consultant will, in all solicitations or advertisements for employees placed by or on behalf of the Consultant, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

c. The Consultant will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Consultant's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

d. The Consultant will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

e. The Consultant will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

f. In the event of the Consultant's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Consultant may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other

sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

g. The Consultant will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each Sub-Consultant or vendor. The Consultant will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a Consultant becomes involved in, or is threatened with, litigation with a Sub-Consultant or vendor as a result of such direction by the administering agency the Consultant may request the United States to enter into such litigation to protect the interests of the United States.

46. Fair Labor Standards Act. All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part-time workers. The Consultant has full responsibility to monitor compliance to the referenced statute or regulation. The Consultant must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

47. Occupational Safety and Health Act of 1970. All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. The employer must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The employer retains full responsibility to monitor its compliance and their Sub-Consultant's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). The employer must address any claims or disputes that pertain to a referenced

requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

48. Prohibition of Segregated Facilities.
    a. The Consultant agrees that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Consultant agrees that a breach of this clause is a violation of the Equal Employment Opportunity clause in this contract.
    b. "Segregated facilities," as used in this clause, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, sex, or national origin because of written or oral policies or employee custom. The term does not include separate or single-user rest rooms or necessary dressing or sleeping areas provided to assure privacy between the sexes.
    c. The Consultant shall include this clause in every subcontract and purchase order that is subject to the Equal Employment Opportunity clause of this contract.

49. Procurement of Recovered Materials. Consultant and Sub-Consultant agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Consultant and Sub-Consultants are to use products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:
    a. The contract requires procurement of $10,000 or more of a designated item during the fiscal year; or
    b. The Consultant has procured $10,000 or more of a designated item using Federal funding during the previous fiscal year.

    The list of EPA-designated items is available at: www.epa.gov/smm/comprehensive-procurement-guidelines-construction-products.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the Consultant can demonstrate the item is:

a. Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
b. Fails to meet reasonable contract performance requirements;
c. Is only available at an unreasonable price.

50. Rights to Inventions. Contracts or agreements that include the performance of experimental, developmental, or research work must provide for the rights of the Federal Government and the Owner in any resulting invention as established by 37 CFR part 401, Rights to Inventions Made by Non-profit Organizations and Small Business Firms under Government Grants, Contracts, and Cooperative Agreements. This contract incorporates by reference the patent and inventions rights as specified within 37 CFR §401.14. Consultant must include this requirement in all sub-tier contracts involving experimental, developmental, or research work.
51. Seismic Safety. In the performance of design services, the Consultant agrees to furnish a building design and associated construction specification that conform to a building code standard that provides a level of seismic safety substantially equivalent to standards as established by the National Earthquake Hazards Reduction Program (NEHRP). Local building codes that model their building code after the current version of the International Building Code (IBC) meet the NEHRP equivalency level for seismic safety. At the conclusion of the design services, the Consultant agrees to furnish the Owner a "certification of compliance" that attests conformance of the building design and the construction specifications with the seismic standards of NEHRP or an equivalent building code.
52. Termination for Convenience. The Owner may, by written notice to the Consultant, terminate this Agreement for its convenience and without cause or default on the part of Consultant. Upon receipt of the notice of termination, except as explicitly directed by the Owner, the Contractor must immediately discontinue all services affected. Upon termination of the Agreement, the Consultant must deliver to the Owner all data, surveys, models, drawings, specifications, reports, maps, photographs, estimates, summaries, and other documents and materials prepared by the Engineer under this contract, whether complete or partially complete. Owner agrees to make just and equitable compensation to the Consultant for satisfactory

work completed up through the date the Consultant receives the termination notice. Compensation will not include anticipated profit on non-performed services. Owner further agrees to hold Consultant harmless for errors or omissions in documents that are incomplete as a result of the termination action under this clause.

53. Termination for Cause. Either party may terminate this Agreement for cause if the other party fails to fulfill its obligations that are essential to the completion of the work per the terms and conditions of the Agreement. The party initiating the termination action must allow the breaching party an opportunity to dispute or cure the breach. The terminating party must provide the breaching party seven (7) days advance written notice of its intent to terminate the Agreement. The notice must specify the nature and extent of the breach, the conditions necessary to cure the breach, and the effective date of the termination action. The rights and remedies in this clause are in addition to any other rights and remedies provided by law or under this agreement.
    a. Termination by Owner: The Owner may terminate this Agreement in whole or in part, for the failure of the Consultant to:
        i. Perform the services within the time specified in this contract or by Owner approved extension;
        ii. Make adequate progress so as to endanger satisfactory performance of the Project; or
        iii. Fulfill the obligations of the Agreement that are essential to the completion of the Project.

    Upon receipt of the notice of termination, the Consultant must immediately discontinue all services affected unless the notice directs otherwise. Upon termination of the Agreement, the Consultant must deliver to the Owner all data, surveys, models, drawings, specifications, reports, maps, photographs, estimates, summaries, and other documents and materials prepared by the Engineer under this contract, whether complete or partially complete. Owner agrees to make just and equitable compensation to the Consultant for satisfactory work completed up through the date the Consultant receives the termination notice. Compensation will not include anticipated profit on non-performed services. Owner further agrees to hold Consultant harmless for errors or omissions in documents that are incomplete as a result of the termination action under this clause. If, after finalization of the termination action, the Owner determines the Consultant was not in default of the

Agreement, the rights and obligations of the parties shall be the same as if the Owner issued the termination for the convenience of the Owner.

b. Termination by Consultant. The Consultant may terminate this Agreement in whole or in part, if the Owner:

i. Defaults on its obligations under this Agreement;

ii. Fails to make payment to the Consultant in accordance with the terms of this Agreement;

iii. Suspends the Project for more than one hundred and eighty (180) days due to reasons beyond the control of the Consultant.

Upon receipt of a notice of termination from the Consultant, Owner agrees to cooperate with Consultant for the purpose of terminating the agreement or portion thereof, by mutual consent. If Owner and Consultant cannot reach mutual agreement on the termination settlement, the Consultant may, without prejudice to any rights and remedies it may have, proceed with terminating all or parts of this Agreement based upon the Owner's breach of the contract. In the event of termination due to Owner breach, the Engineer is entitled to invoice Owner and to receive full payment for all services performed or furnished in accordance with this Agreement and all justified reimbursable expenses incurred by the Consultant through the effective date of termination action. Owner agrees to hold Consultant harmless for errors or omissions in documents that are incomplete as a result of the termination action under this clause.

54. Veterans Preference. In the employment of labor (excluding executive, administrative, and supervisory positions), the Contractor and all sub-tier contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 USC 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

55. Time Overruns Beyond Control of Consultant. On airport architectural/engineering construction contract amendments to the Master Professional Services Agreement, the Consultant must provide the City with amendment language that states the period of time as specified by the number of contract days for which the compensation applies. The consultant must be reimbursed for services in excess of the specified

period of time at a mutually acceptable fee negotiated at the time all the pertinent circumstances are known. The cost of additional consultant technical inspection services that would result from Construction Contractor or City caused construction delays should be included in the liquidated damages established for Airport Improvement Program (AIP) construction contracts.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed on the date first written above.

CITY OF SOUTH LAKE TAHOE:

By_____

Cody Bass, Mayor

Date _____

CONSULTANT:

By _____

Patrick Hickman, Project Manager

Date _____

Business License # 008716

APPROVED AS TO FORM:

By_____

Heather Stroud, City Attorney

Date _____

ATTEST:

By_____

Susan Blankenship, City Clerk

Date _____

Attachments:

Exhibit A – Scope of Services
Exhibit B – Compensation Schedule
Exhibit C – Anti-Lobbying Certification
Exhibit D – Trade Restriction Certification
Exhibit E – Tax Delinquency and Felony Conviction Certification
Exhibit F – Certification of Offerer/Bidder Regarding Debarment
Exhibit G – W9
Exhibit H – COI

EXHIBIT A

SCOPE OF SERVICES

City of South Lake Tahoe

5-Year Master Professional Services Contract for Lake Tahoe Airport (TVL) 2026-2031

Airport Environmental Compliance Support Services (NEPA, CEQA, & TRPA)



March 26, 2026

Environmental Science Associates
esassoc.com

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APPENDIX A

Resumes

SECTION A

Cover Letter

2600 Capitol Avenue
Suite 200
Sacramento, CA 95816
415.896.5900 phone
415.896.0332 fax
esassoc.com

March 26, 2026

Attn: John Dickinson, C.M.
Airport Manager
Lake Tahoe Airport
1901 Lisa Maloff Way, Suite 100
South Lake Tahoe, CA 96150

Subject: 5-Year Master Professional Services Contract for Lake Tahoe Airport (TVL) 2026-2031 Airport Environmental Compliance Support Services (NEPA, CEQA, & TRPA)

Dear Mr. Dickinson:

The City of South Lake Tahoe seeks support services for environmental compliance related to airport operations and capital improvement projects at Lake Tahoe Airport (Airport). This includes preparation of National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and Tahoe Regional Planning Agency (TRPA) environmental documentation, as well as coordination with local and regional stakeholders. Environmental Science Associates (ESA) has experience at more than 250 airports nationally, including 50 in California, and we are currently providing similar on-call services for more than 80 airports throughout the United States. We are the premier environmental based aviation consultancy with a dedicated team of airport specialists providing air quality, noise studies, NEPA/CEQA/State Environmental Policy Act, natural resources permitting and mitigation, wildlife hazards, sustainability and resilience, and community engagement among other services. ESA has assembled a comprehensive team of experienced, highly skilled professionals with the expertise necessary to meet all of the Airport's needs under this contract. The ESA Team can provide Lake Tahoe Airport with Industry-leading environmental expertise, local experience and presence, and a solid understanding of the Airport and surrounding area.

Environmental Expertise: As a firm, ESA has more than 50 years of experience conducting CEQA and NEPA compliance and managing and preparing documentation for a wide range of projects throughout California. ESA also has extensive experience managing and preparing environmental documents for TRPA compliance, in accordance with the TRPA Code of Ordinances. Our extensive experience includes successfully preparing environmental documentation for airport and airport-related projects throughout the United States. In California, ESA recently completed work with the Federal Aviation Administration (FAA) on preparation of the NEPA/CEQA documentation for the Runway Safety Area Improvements Project at Bishop Airport in Inyo County, and we also recently completed the NEPA Environmental Assessment (EA) for the WattEV electric vehicle charging facility on land owned by Sacramento International Airport. We are also managing CEQA documentation for several projects at San Francisco International Airport. ESA's work was featured at the FAA's 2024 Western Pacific Airports Conference, where FAA regional and legal staff presented ESA's EA for a new Cargo Logistics Center at San Bernardino International as a "best practice" example for completing NEPA on airport projects. These represent just a few examples of our recent work in California on airport and airport-related projects.

Local Experience & Presence: The ESA Team has managed or collaborated on numerous projects at Lake Tahoe Airport and in the Lake Tahoe region. ESA, Woolpert, and Wildscape Engineering teamed on the last 5-Year Master Professional Services contract for the Airport. ESA also completed the Airport Land Use Compatibility Plan (ALUCP) for Lake Tahoe Airport and the associated CEQA documentation. This required an understanding of the land use regulatory environment in the Lake Tahoe region. The ESA Team also has extensive experience in coordinating with TRPA as well as other interested parties in the region, such as the California Tahoe Conservancy. Some of the projects

our team members have worked on with TRPA include the *Tahoe Keys Lagoon EIR/EIS, Upper Truckee River and Marsh and Lower West Side Wetland Restoration Project; the Sierra District, Upper Truckee River Restoration and Golf Course Relocation Project Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) and the Revegetation Design for South Lake Tahoe Public Utilities District Comprehensive Facility-Wide Erosion Control Project.* The ESA Team also has an enduring local presence, with several of our team members living in the Lake Tahoe area.

Location Understanding & Relationships: Through our many years of working on airport and airspace projects, ESA has developed a highly productive working relationship with the FAA. We have worked collaboratively with environmental protection specialists (EPSs) in both the Airports and Air Traffic Organizations and have good working relationships with EPSs in both the San Francisco and Los Angeles Airports' district offices. Our staff include multiple former FAA EPSs as well as headquarters staff from the FAA's Office of Environment. This provides us with unique insight into the agency's expectations and results in thorough NEPA documentation that is so critical to ensuring that approvals are secured in a timely manner. We have also successfully navigated numerous projects through environmental review process with the TRPA and understand that close collaboration and communication with this regional agency is absolutely key to the successful implementation of projects in the Lake Tahoe Basin.

Our Project Team will be led by Patrick Hickman, supported by Project Director Eryn Brennan and Deputy Project Manager Steve Smith. Combined, they bring more than 60 years of experience in CEQA/NEPA environmental documentation, as well as experience with aviation and aviation-related projects. Our team's history with the Lake Tahoe Airport and familiarity with the unique regulatory environment in the Lake Tahoe region, as well as our decades of environmental documentation experience, will enable us to quickly and efficiently mobilize to provide you with immediate support.

The information provided in this statement of qualifications will illustrate how the ESA Team would excel in providing you with unparalleled environmental compliance support services. The enclosed proposal will remain valid for a period of no less than 120 days from the date of submittal. We very much look forward to the opportunity to continue working with you. Please feel free to contact Patrick with any questions at phickman@esassoc.com or at (619) 719-4224.

Sincerely,

Michael Arnold
Market Leader

Eryn Brennan
Project Director

Patrick Hickman
Project Manager

SECTION B

Previous California Work

Introduction

This section describes Environmental Science Associates' (ESA's) experience providing environmental consulting services for projects located within California. The projects listed below demonstrate ESA's ability to navigate projects through complex environmental review processes with agencies like the Federal Aviation Administration (FAA) and Tahoe Regional Planning Agency (TRPA).

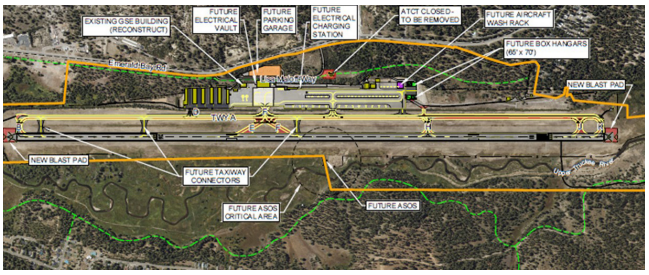
On-Call Experience

ESA has experience at more than 250 airports nationally, including 50 in California, and we are currently providing similar on-call services for more than 80 airports throughout California and the United States. Our team brings an interdisciplinary approach to resolving environmental issues specific to airport projects and devising practical solutions for projects ranging from small and straightforward to large and complex. Our deep bench of knowledgeable professionals allows our project managers to address urgent client questions and unexpected issues reliably and effectively. Our expertise, professionalism, and responsiveness with on-call contracts is reflected by the fact that more than 85 percent of our airport business comes from existing and prior clients.

Local and Regional Experience

With more than 500 environmental professionals located in California, we are experts in navigating California's complex state, regional, and local regulatory environment. We have excellent working relationships with agencies at all levels and with Native American tribes, which allows us to effectively guide our clients' project implementation strategy. The ESA Team has managed or collaborated on numerous projects at Lake Tahoe Airport (Airport) and in the Lake Tahoe region. ESA's recent work at Lake Tahoe Airport extends back to 2016 and includes environmental review for Airport Master Plan updates, an airport land use compatibility plan update, and land use advisory services. All this work has contributed to ESA's familiarity with the Airport and the particular regulatory framework in which it operates. Within the greater Lake Tahoe region, ESA has extensive experience in coordinating with TRPA as well as other regional interests, such as the California Tahoe Conservancy. Projects ESA has contributed to in the region include **Upper Truckee River and Marsh and Lower West Side Wetland Restoration Project; the Sierra District, Upper Truckee River Restoration and Golf Course Relocation Project Environmental Impact Report (EIR)/Environmental Impact Statement (EIS); Cultivating Community, Conserving the Basin: Tahoe Living Housing Policy Amendments** and the **Revegetation Design for South Lake Tahoe Public Utilities District Comprehensive Facility-Wide Erosion Control Project.** ESA's knowledge of the region's planning environment, coupled with our experience providing on-call services at airports throughout the state, gives us unparalleled expertise essential to the successful delivery of high-quality, technically accurate environmental services.

Relevant Projects



Lake Tahoe Airport Master Plan CEQA/TRPA Documentation

Client: City of South Lake Tahoe
Location: South Lake Tahoe, CA
Duration: 2025–2026

Scope/Role: ESA has provided on-call environmental compliance and related technical environmental services for Lake Tahoe Airport, supporting both ongoing airport

operations and airport capital improvement activities in a complex, multi-layered regulatory setting within the Lake Tahoe Basin. ESA is currently assisting the City of South Lake Tahoe (City) in the environmental review for the Draft Lake Tahoe Airport Master Plan. Lake Tahoe Airport has developed an Airport Master Plan addressing anticipated long-term facility and infrastructure needs. The Airport Master Plan will guide development at the Airport for the foreseeable future and allow for appropriate accommodation of aircraft and associated activities. ESA is preparing an Initial Study and Mitigated Negative Declaration (IS/MND) in compliance with the California Environmental Quality Act (CEQA) and an Initial Environmental Checklist per the TRPA Code of Ordinances. ESA's team performed on-site surveys of biological and cultural resources, coordinated with relevant agencies, developed thorough and comprehensible summations of potential environmental impacts and mitigation measures, and assisted with public outreach.

ESA coordinated with the City, the master planning team, and TRPA planners to prepare the CEQA documentation, and a Draft IS/MND was published in October 2025. On October 20, ESA assisted in holding a public workshop to provide information on the environmental review and answer questions from interested parties. A Final IS/MND is anticipated to be adopted in 2026.



Bishop Airport, Runway Safety Area Improvements NEPA & CEQA Documentation

Client: Inyo County Department of Public Works
Location: Bishop, CA
Duration: 2022–2024

Scope/Role: ESA assisted the Inyo County Department of Public Works in preparation of National Environmental Policy Act (NEPA) and CEQA documentation in support of runway safety area (RSA) improvements for Runway 12/30 at Bishop Airport in Bishop, California. Inyo County identified a need for improvements to achieve a standard RSA at Runway 12/30, the runway accommodating recently introduced commercial passenger operations at Bishop Airport. As the project involved federal action as well as discretionary approval by Inyo County, it is subject to both NEPA and CEQA. A draft environmental assessment (EA) and IS/MND were prepared for the project. Key environmental issues analyzed in the environmental documents prepared for this project include aircraft-generated noise, air emissions, and biological resources.

ESA worked closely with both Inyo County and the FAA on this project, coordinating both NEPA and CEQA documentation. In addition, ESA provided support for a public workshop conducted in May 2024. The project was completed in 2024.



Bob Hope Airport, Replacement Terminal Project EIS

Client: Burbank-Glendale-Pasadena Airport Authority
Location: Burbank, CA
Duration: 2018–2021

Scope/Role: As a part of a larger project team, ESA helped prepare key sections of the Burbank Bob Hope Airport Replacement Terminal EIS. The terminal replacement project proposed the replacement of the existing 14-gate, 232,000-square-foot passenger terminal at the Hollywood Burbank Airport to meet current California seismic design and FAA airport design standards. ESA began its work on the EIS after certification of the EIR—which ESA also supported. ESA prepared the Air Quality Protocol for review and concurrence by regulatory agencies, including the U.S. Environmental Protection Agency (EPA), California Air Resources Control Board (CARB), South Coast Air Quality Management District (SCAQMD), and the Southern California Association of Governments (SCAG), which

ultimately led to final approval of methods, models, and data sources by the FAA. ESA authored the Air Quality and Climate (greenhouse gas emissions) sections analyzing construction and terminal operations along with landside transportation. ESA also prepared the Historic Resources Assessment for the EIS, as well as several sections of the Affected Environment and Environmental Consequences chapters of the EIS sections, including analyses of impacts associated with biology, hazards and hazardous materials, historic resources, water resources, and biology. ESA team members also assisted the FAA by answering questions live during the virtual public meetings and preparing numerous responses to comments received during the public review period. The FAA released a Final EIS and Record of Decision in May 2021.



San Francisco International Airport, Recommended Airport Development Plan EIR

Client: San Francisco International Airport (SFO)
Location: San Francisco, CA
Duration: 2019–2026

Scope/Role: ESA managed a complex EIR for SFO's next long-term master plan—the Recommended Airport Development Plan—that will support the strategic development of the airport over the next two decades. ESA managed the EIR for SFO's previous 1989 masterplan (EIR certified in 1992), which served the continuous growth of the airport over the last 25 years. The current master plan outlines critical strategies to improve the passenger experience, accommodate an estimated increase of 20 million air passengers, and plan for more sustainable and efficient ways to meet the state's environmental goals. The Final EIR was certified in February 2026.



Sacramento County WattEV Commercial Charging Center

Client: Sacramento County Department of Airports and WattEV
Location: Sacramento, CA
Duration: 2019–2025

Scope/Role: ESA led a team to prepare an EA for a publicly accessible electric vehicle (EV) charging facility to be built on a 110+-acre parcel of land owned by the Sacramento International Airport (SMF). The facility would include EV charging stations powered by a new solar array and would serve shippers and transporters as well as public transportation and passenger vehicles. The charging stations, along with three accessory structures, would provide services to the traveling public (e.g., convenience store, resting lounge, restrooms) and would be located on the northern portion of the proposed project site, while the solar array would be located on the approximately 100 acres in the southern portion of the site. Agency coordination on the EA includes Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) related to the giant garter snake; Section 106 consultation with the California State Historic Preservation Office for historic resources; consultation with the Federal Emergency Management Agency for floodplains; and consultation with the EPA, CARB, and the Sacramento Metropolitan Air Quality Management District for air quality.



Tahoe Keys Lagoon EIR/EIS

Client: Tahoe Regional Planning Agency and Lahontan Regional Water Quality Control Board
Location: South Lake Tahoe, CA
Duration: 2019–2022

Scope/Role: Invasive aquatic weeds are a growing problem for Lake Tahoe, one of two Outstanding National Resource Waters (ONRW) in California, and the scientific community is searching for solutions to control and prevent them at their primary source. The spread of aquatic weeds is an immediate threat to Lake Tahoe and solutions need to be effective, minimize environmental impacts, comply with regulatory standards, and be technologically and economically feasible. By testing methods for controlling aquatic weeds in designated test areas of the Tahoe Keys lagoons, the most effective methods to reduce the spread of these weeds to other parts of Lake Tahoe will be evaluated. Primary methods under evaluation include aquatic herbicides and two new technologies for aquatic weed control: ultraviolet (UV) light and laminar flow aeration. Part of a larger team, ESA is the technical lead responsible for collecting and analyzing data to understand and evaluate the impacts of the proposed test methods and alternative management options on the aquatic environment using expertise in aquatic plant management, limnology, hydrology, fisheries, aquatic ecology, aquatic toxicology, and risk assessment.

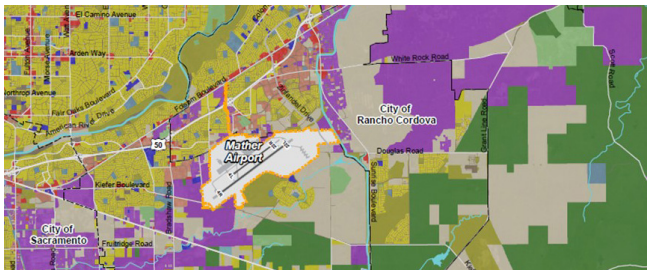
The project team conducted the environmental analyses in support of a combined EIR/EIS to meet CEQA and TRPA requirements. To support the analyses, we conducted extensive baseline water and sediment sampling, fish surveys, and benthic macroinvertebrate surveys throughout the lagoons. ESA has developed a nutrient cycling model to understand how project actions could affect harmful algal blooms. Because of Lake Tahoe's status as an ONRW, ESA also prepared an anti-degradation analysis to evaluate whether the project can meet the highest standards for protection of water quality and beneficial uses.



On-Call Natural Resources Advisory Services

Client: Sacramento County Department of Airports
Location: Sacramento County, CA
Duration: 2019–Ongoing

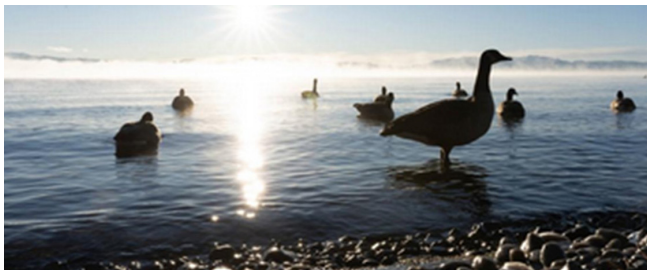
Scope/Role: ESA provided natural resources support and consulting services for the Sacramento County Airport System (SCAS). This on-call contract covers a wide variety of natural resources tasks at all of the airports that make up the SCAS. Specific tasks included assisting in CEQA/NEPA compliance; coordinating mitigation and permitting conditions on a very rapid schedule with several regulatory agencies (including the Sacramento County Planning Commission, the Sacramento County Department of Environmental Review and Assessment, the Sacramento Metropolitan Air Quality Management District, the Central Valley Regional Water Quality Control Board, California Department of Fish and Wildlife [CDFW], USFWS, U.S. Army Corps of Engineers [USACE], and FAA); addressing issues related to the Natomas Basin Habitat Conservation Plan; assisting in land use planning in regard to wildlife hazard attractants; and assisting SCAS in evaluating a proposal to work cooperatively with the Sacramento Area Flood Control District to increase flood control protection in the Natomas Basin.



Mather Airport On-Call Airport Land Use Commission Advisory Services

Client: Sacramento Area Council of Governments
Location: Sacramento County, CA
Duration: 2021–Ongoing

Scope/Role: ESA has provided on-call advisory services to the Sacramento Area Council of Governments (SACOG) as it performs the responsibilities of the role of Airport Land Use Commission for Sacramento County. Mather Airport is situated in central Sacramento County in an area experiencing heavy development pressure. Since assisting SACOG staff with preparation of the Mather Airport Land Use Compatibility Plan (ALUCP), ESA has provided advisory services in interpreting the ALUCP and reviewing development proposals for consistency with ALUCP policies and criteria. In this capacity, ESA has coordinated with multiple agencies, including the California Department of Transportation (Caltrans), the County of Sacramento, and the City of Rancho Cordova to determine the appropriateness for development proposals in the environs of Mather Airport and to advise jurisdictions on the potential ramifications of local planning decisions. ESA continues to review development proposals in the Mather Airport environs on an on-call basis and to advise SACOG staff in an accurate and timely manner.



On-Call CEQA and Biological Services

Client: Zone 7 Water Agency
Location: Alameda County, CA
Duration: 2001-Ongoing

Scope/Role: Since 2001, ESA has provided technical biological resources expertise for continuing capital improvement and maintenance work in the Tri-Valley's urban streams and flood control channels, and technical support services to identify and protect sensitive species.

ESA has provided a broadly based range of support services to Zone 7 over the years, including federal habitat assessment evaluations and protocol-level surveys for California red-legged frog, biological constraints and opportunities analyses for in-stream enhancement activities, siting of sediment detention basins and emergency channel repairs, evaluations of salmonid movement barriers, and detailed evaluations of riparian habitat.

In support of this on-call contract, ESA has conducted federal protocol-level surveys for the California red-legged frog at more than 100 sites; designed natural stream channels to withstand episodic storm events; consulted with and acquired permits and authorizations from the USACE, USFWS, and CDFW; and provided restoration assistance and construction oversight in streams and flood control channels throughout Zone 7's service area. In areas where rare species are present, ESA provides construction support in the form of worker training, preconstruction surveys, compliance monitoring, and postconstruction reporting.

SECTION C

Company History, Background and Experience

Firm Background and Experience

1969 FOUNDED | 100% EMPLOYEE-OWNED | 700+ STAFF

Founded in 1969, ESA is a 100 percent employee-owned full-service, multidisciplinary environmental consulting and planning firm, headquartered in San Francisco, with a current staff of more than 700 professionals, including over 450 in the Bay Area alone. With multiple offices nationwide and five offices in Northern California (Sacramento, San Francisco, Petaluma, Oakland, and San Jose), ESA has an array of technical specialties and is large enough to offer a full range of services but small enough to provide the kind of personal service and attention that clients expect. After 57 years in business, clients look to ESA as a single source for well-reasoned, timely, and effective solutions for their project and planning needs. With a heavy focus on aviation, we have established ourselves as the nation's premier environmental planning consultancy. ESA has provided airport noise and environmental planning services, as well as public engagement and facilitation support, for more than 250 airports throughout the United States (**see Figure 1**), including 50 in California, and we currently hold active on-call contracts with more than 80 airports.

Our experience spans virtually every type of project at every type of airport ranging from small general aviation airports to some of the most complex commercial passenger airports in the country. Projects include new runways and runway extensions, taxiway and apron improvement, T- and box hangars, fueling facilities, general aviation and commercial terminals, maintenance repair and overhaul facilities, cargo facilities, landside development programs, access roadways, obstruction removal, aeronautical and nonaeronautical revenue enhancement projects, new airport feasibility studies, and complete airfield reconfiguration projects, among others.

ESA's services encompass preparation of ALUCPs; CEQA and NEPA documentation; and a variety of technical studies and analyses, including noise and air quality analyses, cultural resource evaluations, biological resource evaluations, safety and airspace planning studies, airport master plans, and wildlife hazard assessments and management plans. Our staff members also possess expertise in permitting, environmental and construction monitoring, restoration, and public involvement.

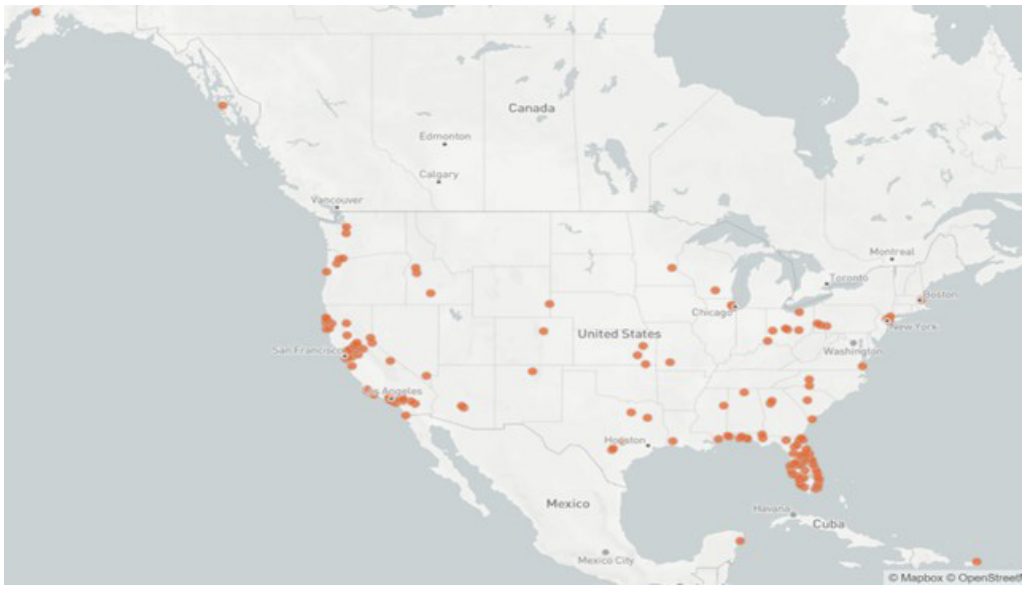
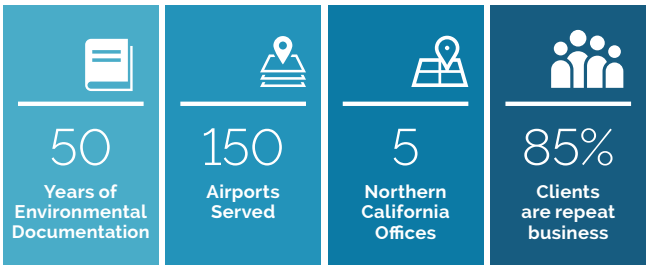


Figure 1: ESA's Firmwide Airport Project Locations

Familiarity with FAA NEPA, CEQA, and TRPA Procedures and Personnel



ESA has provided a wide range of environmental services: environmental planning and permitting, noise analysis, habitat assessments, surveys and monitoring for federally listed plants and wildlife, mitigation planning and electronic tracking, and biological permit compliance. A sampling of recent airport projects in California includes preparation of CEQA documentation and all associated technical studies for SFO's Shoreline Protection Program EIR and Recommended Airport Development Plan (RADP) EIR, NEPA/CEQA analysis for the high-profile WattEV project at Sacramento International Airport, NEPA support for John Wayne Airport, NEPA/CEQA studies for new airline service and safety area improvements at Bishop Airport, historic resources evaluations for San Diego International Airport, and mitigation planning for Gnoss Field Airport. ESA has also worked on dozens of NEPA projects throughout the nation at airports such as Aspen/Pitkin County Airport, where we are providing NEPA support related to the relocation of the airport's only runway, development of a new passenger terminal, landside access improvements, taxiway modifications, apron expansions, and modification and expansion of the fixed base operator.

ESA's custom-developed Mitigation Monitoring and Reporting Program for Los Angeles International Airport tracks more than 600 NEPA/CEQA and permitting mitigation commitments and won the 2022 ACI Environmental Management Award. ESA's San Bernardino Air Cargo Logistics EA was featured in the 2024 FAA Western Pacific Conference in Torrance, California, as a best practice case study in how to prepare a legally defensible NEPA document. The case study was presented by David Kessler, FAA Regional Environmental Protection Specialist, and Joseph Manalili, FAA Senior Attorney, Office of the Chief Counsel.

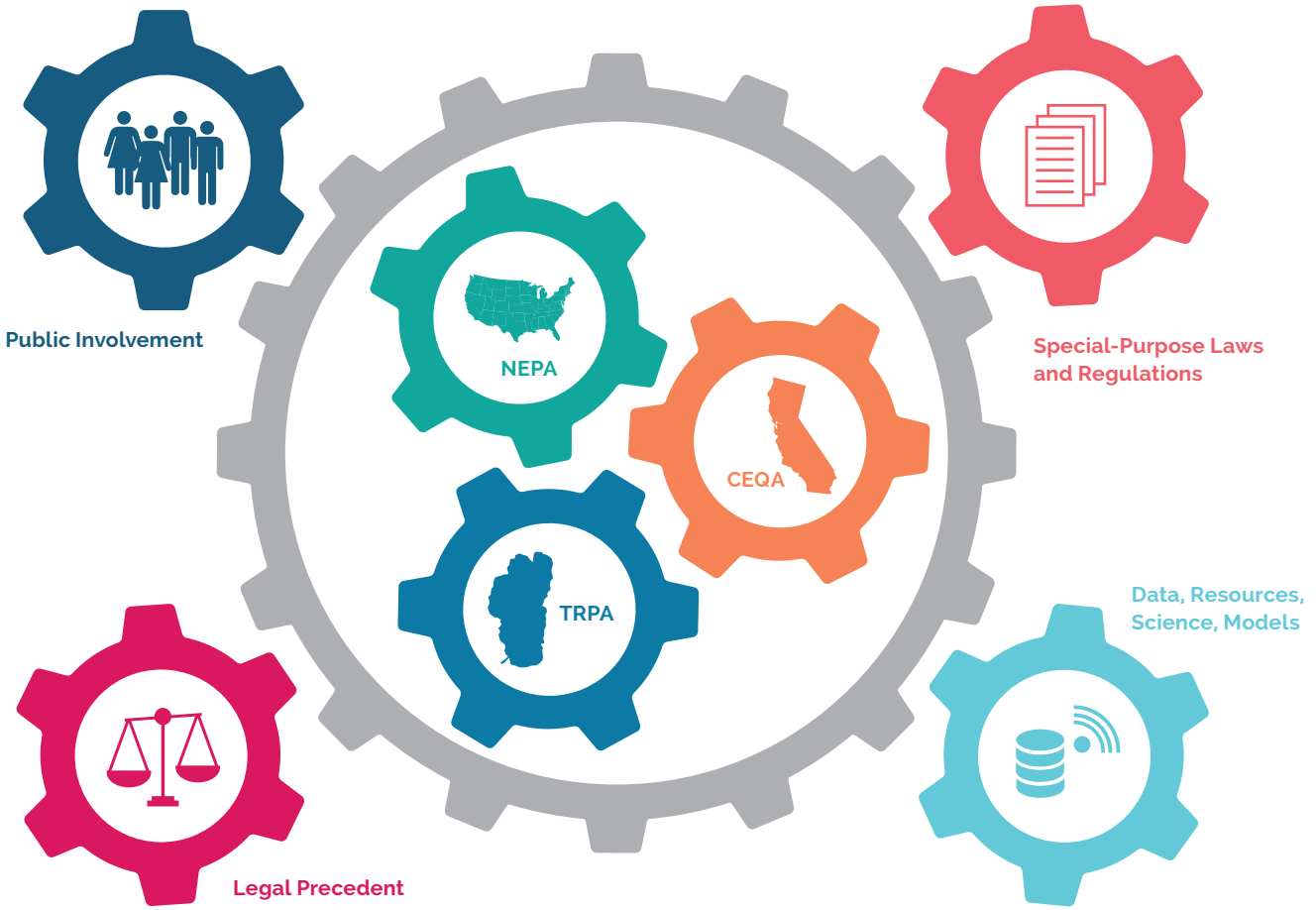
Our staff members are at the forefront of tracking the evolution of national regulations as they apply to NEPA and environmental planning generally. Our federal regulatory team includes Eric Beightel, the former Director of the Federal Permitting Improvement Steering Council, who provides unique insights into the current regulatory evolution and helps our clients better understand what to expect moving forward. ESA's federal permitting dashboard provides free industry access to every federal action by the current administration related to federal environmental policy. Our work with the FAA through the Policy, Engineering, Analysis, and Research Support (PEARS II) contract allows us unique insight into the evolution of FAA's environmental policies. With our extensive national experience, strong technical expertise, and deep local understanding, the ESA Team is uniquely positioned to meet the requirements of the scope of services in the RFQ and exceed the City's expectations.

ESA is also uniquely positioned to provide support with the various regulatory agencies involved in the approval process of projects in the City of South Lake Tahoe. ESA has extensive experience working with CDFW, USACE, and the National Marine Fisheries Service. ESA has recently supported SFO in securing permits from these and other agencies for the Shoreline Protection Program and regularly supports SFO in coordinating with CDFW regarding the West of Bayshore property.

The ESA Team has successfully delivered a wide range of services in the Tahoe Basin, having worked in the region since the 1970s. ESA has been working with TRPA for more than 20 years on technology services, including an on-call for development of **Lake Tahoe Info** and a **TRPA Parcel Tracker** for use in conducting species and plant surveys and control/monitoring and restoration projects such as the **Aquatic Invasive Species Lakewide Monitoring** and **Taylor and Tallac Creek Watershed Assessment and Restoration Plan** projects. ESA recently worked with TRPA to prepare the **Tahoe Keys Lagoon EIR/EIS**. Aside from our work with TRPA, ESA was also the lead in fish and aquatic resources for the **Meeks Bay Restoration Project**.

Additionally, our team has developed an efficient and effective working relationship with Lake Tahoe Airport staff over the course of multiple 5-year environmental on-call contracts with Lake Tahoe Airport for airport and environmental planning services. This working relationship has allowed ESA to gain firsthand understanding of the issues the Airport faces and the preferred processes for addressing those issues.

At ESA, our goal is to effectively guide airports and other stakeholders through the process of satisfying environmental regulatory requirements associated with the ongoing demand for improved facilities and need to adapt to the ever- changing demands of the aviation market. We provide an interdisciplinary approach to addressing and resolving environmental issues, as well as devising effective and practical solutions to issues that may arise from projects ranging from small and simple to large and complex. Our team of highly skilled professionals has a proven track record of successfully collaborating with engineers, contractors, stakeholders, and decision-makers to fully assess potential environmental impacts at all stages of a project. We effectively navigate the environmental process for all kinds of projects, from planning through design and construction to postconstruction compliance. We know how airports operate and how they function as part of their local and regional communities. This is particularly true for Lake Tahoe Airport, which is situated within a unique and fairly complex regulatory environment. Our team's experience with the environmental issues and agencies prevalent in the Lake Tahoe region and the region's unique regulatory framework makes us particularly qualified for this contract. We can provide you with a fine balance of aviation knowledge, technical expertise, coordination skills, and dynamic, creative thinking to guide your Airport's future development through the environmental process efficiently and effectively.



Environmental Planning and Regulatory Compliance Services

Documentation and Coordination under the National Environmental Policy Act

ESA is unique as a firm in that we have been working with NEPA since it was signed into law in 1970. For more than 50 years, ESA has provided environmental planning support under NEPA and the special-purpose laws and regulations that fall under its statutory umbrella. Our aviation consultants are fully supported by specialists in every resource category identified in FAA Order 1050.1G and the 1050.1 Desk Reference. Over the last several decades, ESA has prepared thousands of NEPA environmental documents, including some of the most complex airport NEPA documents developed in decades. The ESA Team also features several members with recent experience in federal agencies and whose knowledge of historic and current practices in federal agency reviews gives us unparalleled expertise in interpreting and adapting to a rapidly changing policy landscape. Our experience in preparing FAA-compliant environmental documentation and our deep connections with FAA staff allow us to bring an unrivaled depth of knowledge to Lake Tahoe Airport under this contract.

NEPA compliance is mandated for every airport project that requires a federal action (e.g., Airport Layout Plan [ALP] approval, grant funding). This requirement can vary significantly based on the type of project and its anticipated level of impact to the environment. Recent changes to FAA policy with the implementation of Section 743 can reduce the scope of FAA oversight if it meets certain requirements, thereby reducing project complexity and cost. Like all regulatory processes, the NEPA process is laid out to follow a predictable course of action. However, each project is different and can involve unique demands under NEPA or the various special purpose laws and regulations that fall under its purview. ESA's breadth of experience preparing NEPA documents allows our team to take a proactive approach to quickly identify potential project-specific issues and risks related to the environmental planning process and to address them in a quick and efficient manner. By evaluating potential issues early in the process, we are able to avoid and minimize impacts, thoroughly document those efforts, and develop creative and cost-effective mitigation strategies if necessary. We are experts in successfully navigating the NEPA process.

Having successfully prepared numerous airport-related NEPA documents in close coordination with the FAA, ESA has excellent working relationships with FAA's Environmental Protection Specialists throughout California. We are familiar with the FAA's expectations when it comes to preparing NEPA documents for aviation related projects.

Coordination and Documentation under the California Environmental Quality Act

ESA is equally adept at executing CEQA for projects. Since CEQA was signed into law in 1970, our firm has an established 50+-year legacy of successful CEQA compliance. Our legacy includes approval and implementation of tens of thousands of projects throughout California's metropolitan and rural areas. We combine our firm's technical depth in natural resources science and environmental planning with unparalleled knowledge of CEQA practice and procedure, including the most current legislation and case law, to create value-added, cost-effective, and legally defensible solutions for our clients.

ESA has successfully managed CEQA documentation for some of the most complex and high-profile projects in California. Our approach is to use all of the tools available under CEQA, including the most current streamlining methods, to save time and money while minimizing litigation risk. When ESA prepares a full EIR, our focus is on comprehensiveness and clarity, and the result is that our EIRs are frequently recognized by professional organizations with awards for creative approach and quality.

In preparing CEQA documents, our aviation consultants are fully supported by specialists on biological resources and wetlands permitting, cultural resources and Assembly Bill (AB) 52 consultation, climate action and adaptation planning and design, acoustics and vibration, aesthetics and visual resources analyses, and other such technical disciplines. The result is that ESA offers a cohesive team to solve any CEQA challenge, delivering solutions and facilitating successful projects and plans.

Coordination and Documentation with the Tahoe Regional Planning Agency

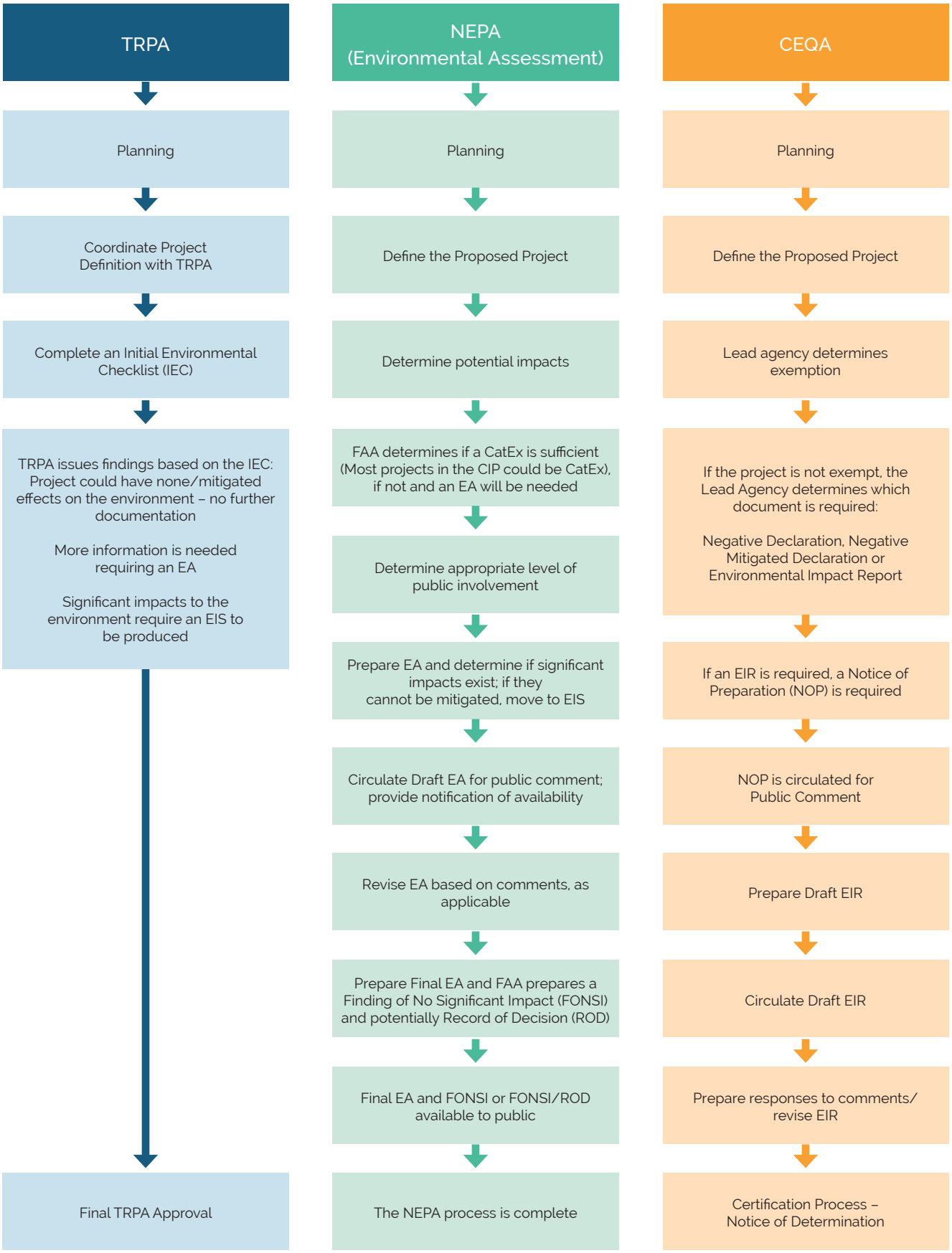
Lake Tahoe Airport is unique in that it is located within the jurisdiction of the TRPA and is therefore required to comply with the environmental compliance guidelines of the agency. The TRPA has specific regulations for development activities occurring within the Lake Tahoe region. ESA has coordinated past efforts with the TRPA for various projects around Lake Tahoe. Integrating TRPA into the planning process from the beginning is essential to ensure that a project in the Lake Tahoe region gains the necessary TRPA buy-in and approvals. Typically, the NEPA process for an airport project would require working with the FAA to determine whether an EA or an EIS is required. However, in the Lake Tahoe region, the TRPA also has that authority based on regionally defined environmental thresholds, goals, and objectives that can differ from those defined by the FAA. Completed in parallel with any NEPA or CEQA documentation and in full coordination with the TRPA, an Initial Environmental Checklist is used to determine whether a project is exempt from further TRPA requirements. Based on TRPA findings, the project could require additional environmental documentation in the form of an EA or an EIS, even if during their parallel process the FAA determines it is not necessary. Regardless of the outcome of a TRPA determination, it is essential to coordinate with TRPA staff throughout the environmental process to ensure a smooth path to final TRPA project approval.

TRPA coordination will be overseen by Patrick Hickman (ESA), Carol Beahan (Wildscape Engineering), and Chris Fitzer (ESA) . Patrick has recently coordinated with TRPA on the environmental review for the ongoing Airport Master Plan Update, and ESA Team member Wildscape Engineering has managed permitting with the TRPA for numerous projects. Wildscape Engineering is located on-Airport, and Carol lives in the Lake Tahoe area; therefore, our team can provide immediate local response to any issue that might arise. In addition, the ESA Team has staff in our Sacramento and Bay Area offices with extensive TRPA experience who are ready to participate when required. Below is a listing of some of the projects ESA has worked on in the Lake Tahoe region in close collaboration with the TRPA in recent years:

- Tahoe Regional Planning Agency and Lahontan Regional Water Quality Control Board, Tahoe Keys Lagoons Aquatic Weed Control Methods Test EIR/EIS, City of South Lake Tahoe, CA
- California Tahoe Conservancy, Upper Truckee River and Marsh and Lower West Side Wetland Restoration Project, City of South Lake Tahoe, CA
- California Department of Parks and Recreation, Sierra District, Upper Truckee River Restoration and Golf Course Relocation Project EIR/EIS, El Dorado County, CA
- Tahoe Regional Planning Agency, Lake Tahoe Shorezone Ordinance Amendments Final EIS and Response to Comments, Tahoe Basin, California and Nevada
- U.S. Forest Service Lake Tahoe Basin Management Unit North Shore Access and Travel Management Plan EA and Biological Evaluation/Biological Assessment (BE/BA), Lake Tahoe, CA
- South Lake Tahoe Public Utilities District, Revegetation Design for South Lake Tahoe Public Utilities District Comprehensive Facility-Wide Erosion Control Project, City of South Lake Tahoe and El Dorado County, CA

The review processes associated with each of the above agencies are illustrated in **Figure 2**.

Figure 2: Agency Environmental Review Process Flows



Project Team

ESA has assembled a team of firms with the skillsets and experience to assist Lake Tahoe Airport with airport environmental documentation requirements, as well as the planning, engineering, permitting, and coordination with agencies and stakeholders. This combination of firms and skillsets will ensure proactive, seamless, cost-effective, and timely implementation of projects. **Woolpert** is a longtime ESA collaborator with whom we partnered on the previous South Lake Tahoe Airport on-call contract. Woolpert brings complimentary airport planning experience in airports in California, specifically as a partner with ESA at Lake Tahoe Airport on the previous on-call contract. **Wildscape Engineering** is a local Disadvantaged Business Enterprise (DBE) firm with strong local experience in the Lake Tahoe region as well as hyper local knowledge of the airport. Wildscape Engineering has familiarity with the TRPA permitting process and offers a local, hands-on approach.

Woolpert

Services Woolpert will provide

- Master Planning
- Airfield/Landside Design
- Facilities Planning

Woolpert delivers comprehensive, in-house aviation services tailored to the unique needs of our aviation clients. They support projects for public and private airports, airport tenants, the FAA, military installations, state aviation departments, airlines, and private developers, often simultaneously at the same airport. Their team brings deep expertise in both airside and landside development, creating safe, efficient, cost-effective, and secure facilities that support long-term growth.

With decades of experience planning and executing complex airport projects in all 50 states, Woolpert understands how to balance the needs of multiple stakeholders. Focusing on airport development, industry regulations, and emerging aviation trends, they help clients meet today's operational demands without compromising future objectives. Their complete lifecycle services enable clients to successfully navigate an evolving regulatory and environmental landscape.

Woolpert's planners, engineers, architects, and construction professionals have a thorough understanding of the airport operating environment. This expertise allows them to deliver practical, compliant solutions that minimize disruption to daily operations while meeting all applicable design standards and regulatory requirements.

Wildscape Engineering

Services Wildscape Engineering will provide:

- TRPA Coordination
- Permitting
- SWPPP & SWCC
- Hyper Local Presence
- DBE

Wildscape Engineering is a full-service ecological engineering and restoration firm based at the Lake Tahoe Airport. They are a woman-owned, certified Small Business Enterprise (Certification #2023565) in the State of California, established in 2008. The company operates as an S corporation under Federal Tax ID #47-4046279 and has a City of South Lake Tahoe Business License #006076.

Wildscape Engineering's president, Carol Beahan, PE, QSD, has been effectively planning, designing, permitting, implementing, and monitoring public and private projects in the highly regulated Tahoe Basin for over 20 years. Their staff have the technical expertise in all aspects of Stormwater Pollution Prevention Plan (SWPPP) and County fuel storage compliance (i.e., California Environmental Reporting System [CERS]) to properly develop and implement SWPPPs and spill prevention, control, and countermeasures (SPCCs) and to proficiently monitor and train other staff to comply with all SWPPP requirements under the Lake Tahoe Basin Construction Stormwater General Permit (Lake Tahoe Basin Order RT6-2016-0010) and the California Industrial General Permit (Order 2014-0057-DWQ). Wildscape Engineering also provides the full suite of engineering, hydrology, ecological restoration, geographic information system (GIS) and CAD drafting, planning, and permitting services that may be useful in supporting SWPPP and related planning and permitting efforts.

Wildscape Engineering has successfully provided SWPPP services in the Lake Tahoe Basin and throughout Northern California and Nevada since 2009, and they are excited by the opportunity to provide their expertise and SWPPP services in support of the Lake Tahoe Airport.

Wildscape Engineering has two Qualified SWPPP Developers (QSDs) and four Qualified SWPPP Practitioners (QSPs) on staff, all based out of the local Tahoe office to readily serve the Tahoe Airport and respond rapidly to summer thunderstorm events that form quickly and show up in localized areas. The QSD and QSP stay up to date on SWPPP training, cost-effective and Lahontan-acceptable best management practice (BMP) products and procedures, and proper storm sampling protocol, and they coordinate with Western Environmental Testing (Wetlab) in Sparks, Nevada, on a regular basis to ensure samples are collected and analyzed within the required time frames. The QSD/P staff are also well practiced in providing SWPPP weekly trainings to contractor crews and staff and they have several specific BMP training material handouts already developed that provide an easy and informative 15- to 20-minute on-site training that meets the Tahoe construction permit requirements.

Wildscape Engineering has developed and implemented SWPPPs for public agencies and municipalities over the past decade in and around Tahoe including the City of South Lake Tahoe, Caltrans, South Tahoe Public Utility District, California Tahoe Conservancy, and the U.S. Department of Agriculture (USDA) Forest Service Lake Tahoe Basin Management Unit. Wildscape Engineering has also applied for and acquired resource agency permits for residential and commercial development and marina dredging projects in the Tahoe Basin, including the State Water Resource Control Board 401 Water Quality Certificate, USACE 404 permit, CDFW Streambed Alteration Agreement, TRPA Environmental Improvement Program (EIP) and commercial construction permits, and TRPA BMP Certificates. The staff possess in-depth knowledge of the California Construction General Permit, the California Industrial General Permit, the Clean Water Act Section 402, and the National Pollutant Discharge Elimination System requirements. Wildscape Engineering is currently providing Qualified Industrial Practitioner SWPPP services under the California Industrial General Permit for South Tahoe Refuse, Sierra Tahoe Ready Mix, and other clients in the San Francisco Bay Area. Their staff has also been providing and continue to provide monthly inspection, stormwater monitoring, and water quality and sampling analysis services for several Tahoe marinas as required under the Tahoe Marina General Permit.

Additionally, ESA enjoys positive working relationships with allied firms across a variety of specializations. This allows us to easily identify and contract with subconsultants on an as-needed basis to attend to any specific effort that may require distinctive knowledge outside the ESA Team's core specialties.

Organizational Chart

Figure 3: Organizational Chart outlines the structure of our proposed team. Our proposed team includes staff with specific and proven leadership and expertise in key areas necessary for this contract. The ESA Team will be led by **Patrick Hickman**, as the day-to-day project manager. Patrick will be the primary point of contact for the Airport, and he will be responsible for overseeing and delivering the scope, schedule, budget, and quality performance of our work. Patrick will be supported by **Eryn Brennan**, who will manage the internal project coordination as project director, leveraging Patrick's time to focus on the technical issues and coordination with the Airport. **Steve Smith**, from ESA, will assist Patrick in preparing and reviewing the CEQA documentation for projects under the contract. Together, the Project Management Team will oversee the preparation of all required environmental documentation and coordination for the Airport's projects. Individual tasks will be handled by task leads depending on whether the project is primarily focused on environmental documentation, planning, permitting, or, if needed, engineering/ architecture. Although environmental documentation is a field of specialty in its own right, all tasks will be completed with an integrated environmental documentation and coordination approach to accelerate NEPA, CEQA, and TRPA approvals when the task and project matures to the environmental documentation and coordination stage.

Figure 3: Organizational Chart

LAKE TAHOE airport

PROJECT MANAGEMENT



PROJECT DIRECTOR
Eryn Brennen



PROJECT MANAGER
Patrick Hickman, AICP, PLA



DEPUTY PROJECT MANAGER
Steve Smith



STRATEGIC ADVISOR
Michael Arnold

TECHNICAL TEAM

AIR QUALITY
Chris Dugan
Dominic Scarano
Aviation

ARCHAEO/CULTURAL
Matt Russell, PhD, RPA
Heidi Koenig, RPA

BIOLOGICAL RESOURCES
Mandi McElroy
Brian Pittman, CWB
Chris Fitzer

COMMUNITY ENGAGEMENT
Autumn Ward

GHG
Brian Schuster

HISTORIC ARCHITECTURAL RESOURCES
Becky Urbano

HYDROLOGY, WETLANDS & WATER QUALITY
Carol Beahan[1]
Matt Brennan

LAND USE & PLANNING
Patrick Hickman, AICP, PLA

VISUAL/AESTHETICS
Steve Smith

NOISE & VIBRATION LEAD
Chris Dugan
Chris Nottoli
Aviation

PUBLIC SERVICES & RECREATION
Steve Smith

SOCIOECONOMICS & ENVIRONMENTAL JUSTICE
Luke Evans

UTILITIES & SERVICE SYSTEMS
Michael Burns, CHG, CEG, PG, QSD

PERMITTING
Permitting/Compliance
Priya Finnemore
Carol Beahan[1]

SWPPP/SWCC
Carol Beahan[1]

Hazards & Hazardous Materials
Michael Burns, CHG, CEG, PG, QSD

ENGINEERING/ ARCHITECTURE
Airfield Engineering/ Facilities Planning
Kirk Nielsen, PE

PLANNING
Master Planning
Tony Davis[2]
Morgan Einspahr[2]

Sustainability
Neal Wolfe

Airspace
Patrick Hickman, AICP, PLA

GIS
Patrick Hickman, AICP, PLA
Eryn Pimentel

Subconsultants: 1 Wildscape Engineering 2 Woolpert

Project Team Experience

Below are qualification summaries for our project management team. In addition, our team includes several technical specialists with expertise in the areas identified in the County's Request for Qualifications.

More detailed information about project experience for those individuals is contained in our full team resumes provided in **Appendix A**.

Eryn Brennan | Project Director



Eryn has 18 years of experience preparing and developing NEPA and CEQA documentation for a range of mid- to large-scale development projects and master plans. As project director, Eryn will ensure this contract has all necessary staff in place and resources are assigned promptly. Her extensive project management experience, combined with her technical expertise, allows for seamless project facilitation through the environmental review process. Eryn has successfully managed dozens of projects through the environmental review process, and specializes in managing large, complex EIRs with extensive technical teams. Recent project work includes San Francisco International Airport's **Recommended Airport Development Plan EIR** as well as their **Shoreline Protection Program Project EIR**.

Eryn's Responsibilities

- Project Oversight
- Quality Control /Assurance

Patrick Hickman, PLA, AICP | Project Manager, Planning Lead



Patrick is a land use planner and landscape architect with expertise in airport land use compatibility planning, environmental analysis, GIS analysis and mapping, and site planning and design. Patrick has worked on a variety of projects throughout the United States, including airport master plans, airport land use compatibility plans, CEQA/NEPA environmental studies, and other planning efforts. Relevant project experience for Patrick includes the **Lake Tahoe Airport Master Plan Update IS/MND, Bishop Airport Runway Safety Area Improvements NEPA/CEQA, Crystal River Airport Runway Extension EA; Seattle-Tacoma International Airport Part 150 Noise Exposure Mapping**, and many others.

Patrick's Responsibilities

- Project Management
- Planning Lead
- Land Use Planning

Steve Smith | Deputy Project Manager



Steve has more than 20 years of experience leading the preparation of environmental, technical, and regulatory compliance documentation for a broad range of public and private projects. Steve manages and contributes to initial studies, EIRs, EAs, EISs, and regulatory permit applications. Steve has extensive experience managing the environmental compliance process and provides responsive and technically excellent service to his clients. His relevant project experience includes being a technical analyst and deputy project manager for the **Lake Tahoe Airport, San Bernardino International Airport, Jacqueline Cochran Regional Airport**, and **Westover Field Airport**, among others.

Steve's Responsibilities

- Deputy Project Manager
- Technical Author
- Environmental Analyst

Michael Arnold | Strategic Advisor



Mike has more than 35 years of planning, environmental, and noise experience at more than 130 domestic and international airports. His expertise includes airport planning, strategic planning, noise, airspace, land use compatibility, forecasting, and integration of planning and environmental processes. Mike has served in a leadership role on more than 25 airport master plans and has managed and supported more than 50 NEPA projects and 50 airport noise and land use compatibility studies. His NEPA experience includes environmental studies for a wide range of projects, including new runways and major airfield reconfigurations; new terminal configurations; landside improvements; air cargo and maintenance, repair, and overhaul facilities; fixed base operator facilities; and a wide range of non-aeronautical projects. His extensive noise experience involves virtually every possible type of noise and operational issue at many of the busiest and most complex general aviation and commercial passenger airports in the world. Mike's NEPA experience includes projects at airports such as **Sacramento International Airport**, **Miami International Airport,** and **Orlando International Airport**. Additionally, he recently oversaw noise studies for **Fort Lauderdale International Airport, John F. Kennedy International Airport, LaGuardia Airport, and Tampa International Airport.**

Mike is an active leader in the aviation industry and regularly speaks and facilitates discussions on a wide variety of industry issues, including NEPA, aircraft noise, advanced air mobility, sustainability/resilience, land use compatibility, forecasting, integration of planning and environmental processes, and the changing needs of airport planning.

Mike's Responsibilities

- Strategic Planning
- Quality Control /Assurance

Carol Beahan, PE, QSD/P | Permitting Lead



Carol has 20 plus years of experience managing similar planning, design, and implementation efforts. She has managed watershed and feasibility assessments, alternatives analyses, design development, construction documents and oversight, community and stakeholder coordination, hydrologic and water quality assessments, permit acquisition, and construction monitoring. Her experience running a successful company over many years and managing collaborative high-profile projects combined with her strong desire to see communities benefit alongside nature will be key in supporting the Airport in achieving their facility improvements.

Prior to becoming an engineer, Carol was the wildlife education director at Sulphur Creek Nature Park in Hayward, California, where her duties included leading educational tours, presenting at schools and assemblies, teaching creek classes, writing press releases and monthly newsletters, and developing education materials. She carried these writing and oral communication skills forward into her engineering career in various forms, including well-received CEQA/NEPA water quality and hydrology sections, design guidance reports, wetland management plans, and presentations to various governing boards and community and public planning meetings and conferences.

Ms. Beahan has wide-ranging experience in Northern California and the Sierras from watershed conceptual planning to construction implementation within sensitive and challenging environments. She has managed multidisciplinary teams to assess and design water quality, fish passage, wildlife habitat, and recreation improvements. Ms. Beahan has developed and implemented design plans, specifications, cost estimates, bid packages, and preconstruction and postconstruction and mitigation monitoring plans and has provided impacts analyses for various environmental documents and acquired numerous construction permits. She has provided construction oversight on several impactful meadow, river, and wetland restoration projects and has coordinated and led public and stakeholder meetings and community workshops.

Carol's Responsibilities

- Permitting
- SWPPP
- SWCC
- TRPA Coordination

Kirk Nielsen, PE | Engineering / Facilities Lead



Kirk has managed complex airport projects and programs since 1996 and was recently appointed to the State of Utah's Aviation Advisory Board, providing valuable insight into UDOT and FAA processes and procedures. Prior to joining Woolpert, he served in multiple roles at UDOT, including program manager, aeronautical planner, and project manager for the state system plan, and contributed to the Sensitive Species Habitat Management Plan and development of annual Capital Improvement Programs (CIPs). Over the past nine years, Kirk has served as both client liaison and project manager for many of TVL's projects, building strong working relationships with staff and developing a thorough understanding of the airport and its operational and programmatic complexities. At Woolpert, he coordinates CIPs in Utah, California, Texas, and Nevada, working closely with state DOTs and the FAA on behalf of clients.

Kirk's Responsibilities

- Engineering / Design
- Airport Facilities Planning
- Utilities

SECTION D

Scope of Work - Qualifications

Introduction

ESA understands that Lake Tahoe Airport is seeking a team of environmental consultants who can reliably operate under dynamic and sometimes sudden circumstances. Our team is composed of skilled problem solvers with access to industry-leading expertise that can be leveraged to address a variety of environmental concerns that may be encountered over the course of the 5-year term. This section describes how the ESA Team will not only provide any environmental services associated with the established Capital Improvement Program, but will also stand ready to assist Airport staff in confronting the challenging environmental and regulatory issues that may emerge independently.

Environmental Planning and Regulatory Compliance Services

Lake Tahoe Airport has a need for extended environmental planning support. At ESA, our goal is to assist airports in successfully navigating the rigors of environmental regulatory compliance, including meeting new and emerging demands at the local, state, and federal levels. CEQA and NEPA documentation carry their own intricacies when it comes to meeting lead agency requirements and obligations to engage in consultation with outside parties under the various laws and regulations that fall under these "umbrella statutes." However, projects in the Lake Tahoe region carry their own unique range of challenges due to the role of TRPA and various local stakeholders in the environmental planning process. Maintaining complex project schedules while ensuring proper and timely coordination between this range of stakeholders is key to the successful completion of any project in the Lake Tahoe region.

The ESA Team brings an interdisciplinary approach to resolving environmental issues and devising practical solutions for the full range of airport projects, from the smallest to the largest and most complex. Our professionals effectively collaborate with engineers, contractors, stakeholders, and decision-makers to fully assess potential environmental impacts at all stages of a project, from planning through design and construction to postconstruction compliance. Our approach begins with our understanding of not only how airports operate on a daily basis, but also how they interrelate with their local and regional communities. Our experience with the environmental issues and the legal framework influencing airport development makes us uniquely qualified for this type of contract. We balance aviation knowledge, technical expertise, coordination skills, insight, and creativity to allow for maximum flexibility in airport development with minimum cost and impacts to the environment. We also take pride in helping improve stakeholder relations and communication as part of the coordination/consultation process.

We have extensive experience in successfully completing the various tasks the airport has identified. In addition to ESA, the Project Team includes engineers proficient in the full design cycle of a project, whether the project is focused on the airfield, airport facilities, airspace/navigational aids, or landside. Whatever the level needed by the Airport, be it project environmental definition, preliminary 25% design, or full 100% design, it can be met by our team. We work with our subconsultants to implement regular internal project briefings and reviews. ESA also implements a rigorous Quality Assurance/Quality Control Program through which all deliverables are processed before delivery to our clients. This includes review by publication specialists and technical editors to ensure intelligible, technically sound documentation that are easily accessible to the interested public.

Contemplated Scope of Work

The following provides a detailed discussion of the scope of work contemplated under this Request for Qualifications and ESA's understanding of what efforts will be necessary to successfully complete these tasks. Key to successful completion of these projects is the need to secure timely environmental approvals for these over the 5-year term of this contract.

Fiscal Year 2026–2027

The contract is anticipated to begin at the end of fiscal year 2025–2026. Tasks identified for completion at the end of fiscal year 2026–2027 include preparation of rough order of magnitude cost estimates with particular attention to services not funded by grants. An initial scoping discussion with the FAA may be required to identify the appropriate level of environmental documentation necessary to clear the elements of the Airport Layout Plan Update and Airport Master Plan anticipated to be completed in 2026. Each of these tasks is further discussed below.

Rough Order of Magnitude Cost Estimates

ESA will work with the Airport to prepare rough order of cost estimates for upcoming anticipated projects with a focus on non-grant eligible capital projects subject to environmental review. It is understood that these cost estimates are for financial planning purposes only. ESA will leverage expertise acquired through decades of experience to provide the most accurate cost estimates possible.

Initial Scoping

The Airport also contemplates meeting with the FAA to discuss what level of environmental documentation will be necessary for an Airport Layout Plan with Narrative Report or a Master Plan Update. ESA will help facilitate this call on behalf of the Airport. Projects anticipated to begin in fiscal year 2026–2027 include Runway 18/36 surface treatments and painting, and rehabilitation of Lisa Maloff Way.

Fiscal Year 2027–2028



Tasks identified for completion during fiscal year 2027–2028 include initiation of Phase I of the Taxiway Improvements project to include rehabilitation of Taxiway A and associated NEPA, CEQA, and TRPA approvals. The ESA Team will work in coordination with the Airport's selected engineering firm .

Phase I Taxiway Improvements

The Airport anticipates awarding a qualified design and engineering firm to begin design work for Phase I of the Taxiway A rehabilitation. During this phase, ESA will coordinate with the Airport and the selected engineering firm to provide any preliminary evaluation of potential environmental considerations.

NEPA Documentation – Taxiway A Rehabilitation

ESA will coordinate with the Airport and the FAA environmental protection specialist to identify the appropriate NEPA documentation for approval of the Taxiway A Rehabilitation. Once determined, ESA will ensure that any documents are fully completed in compliance with current regulations and FAA Orders.

CEQA Documentation – Taxiway A Rehabilitation

ESA will coordinate with the Airport to determine the level of CEQA documentation necessary for environmental clearance for the Taxiway A Rehabilitation and will prepare the relevant documents in accordance with the CEQA statutes.

TRPA Environmental Documentation – Taxiway A Rehabilitation

ESA will work with the Airport and TRPA to ensure that the appropriate TRPA environmental documentation is completed for the planned taxiway rehabilitation. If needed, an Initial Environmental Checklist will be completed for the TRPA in compliance with the TRPA Code of Ordinances.

Fiscal Year 2028–2029



Tasks to be completed during fiscal year 2028–2029 are yet to be determined. ESA will coordinate with the Airport as necessary during this time to provide any requested support to management and staff.

Fiscal Year 2029–2030



Phase II of the Taxiway Rehabilitation will commence in fiscal year 2029–2030, to include compliance with relevant NEPA, CEQA, and TRPA environmental regulations.

NEPA Documentation – Phase II Taxiway Improvements

Continuing with the coordination undertaken during the previous fiscal years, ESA will work with the Airport and the FAA's environmental protection specialist to identify and complete the appropriate level of NEPA documentation for the Phase II Taxiway Improvements project. Depending on the extent of the alterations to the taxiway geometry, ESA anticipates either a Categorical Exclusion (CatEx) or, potentially, an EA will be needed for full compliance. ESA will ensure that either document is fully completed in compliance with current regulations and FAA Orders. Anticipated environmental analyses include, but are not limited to, a noise study, air quality/greenhouse gas analyses, biological resources analysis, wetlands analysis, hazardous materials assessment, and analysis of impacts to water resources. Preparation of an EA would require a robust public involvement program to ensure that residents of the surrounding communities are engaged in the NEPA process.

CEQA Documentation – Phase II Taxiway Improvements

ESA also understands that the Taxiway Improvements project is a discretionary action, subject to approval by the South Lake Tahoe City Council, and thus subject to CEQA. The ESA Team will prepare an initial study and all associated technical analyses and documentation in support of the initial study. Similar to the effort anticipated for the NEPA documentation, anticipated environmental analyses will include but not be limited to a noise study, air quality/greenhouse gas analyses, biological resources analysis, wetlands analysis, hazardous materials assessment, and analyses of impacts to water resources. A common mistake made by consultants in the preparation of CEQA documents is the assumption that environmental analyses prepared for NEPA documents can be used for preparing CEQA documentation (and vice versa), which is not necessarily the case. ESA will ensure that all environmental analyses prepared for the CEQA document will be consistent with CEQA requirements.

TRPA Environmental Documentation – Phase II Taxiway Improvements

ESA will work with the Airport and TRPA to ensure that the appropriate TRPA environmental documentation is completed for the planned taxiway improvement. If needed, an Initial Environmental Checklist will be completed for the TRPA in compliance with the TRPA Code of Ordinances.

Fiscal Year 2030–2031



The Airport has identified rehabilitation and design of the Runway 18/36 pavement as the priority project for fiscal year 2030–2031. The project will enhance the safety and integrity of the runway while implementing an FAA-compliant design. To advance the runway pavement rehabilitation design, ESA will perform all necessary coordination and review for compliance with NEPA, CEQA, and the TRPA Code of Ordinances in concurrence with project design development.

NEPA Environmental Documentation – Runway 18/36 Rehabilitation Design

ESA will work with the Airport and the FAA to identify the appropriate level of NEPA environmental documentation necessary for the planned pavement rehabilitation design.

The ESA Team will review engineering designs and coordinate with the Airport and the FAA. It is understood that based on further coordination with the FAA, a CatEx (likely a documented CatEx) or EA will be the required environmental documentation. ESA will ensure that either document is fully completed in compliance with FAA Orders and the required environmental analyses are completed to our exacting technical requirements.

CEQA Environmental Documentation – Runway 18/36 Rehabilitation Design

ESA will work with the Airport to ensure that the appropriate CEQA environmental documentation is completed. The ESA Team anticipates a CEQA CatEx will be the appropriate environmental review documentation for the Runway 18/36 rehabilitation design.

TRPA Environmental Documentation – Runway 18/36 Rehabilitation Design

ESA will work with the Airport and the TRPA to ensure that the appropriate environmental documentation is completed in compliance with the TRPA Code of Ordinances.

As-Needed Capital Improvements 2026–2031



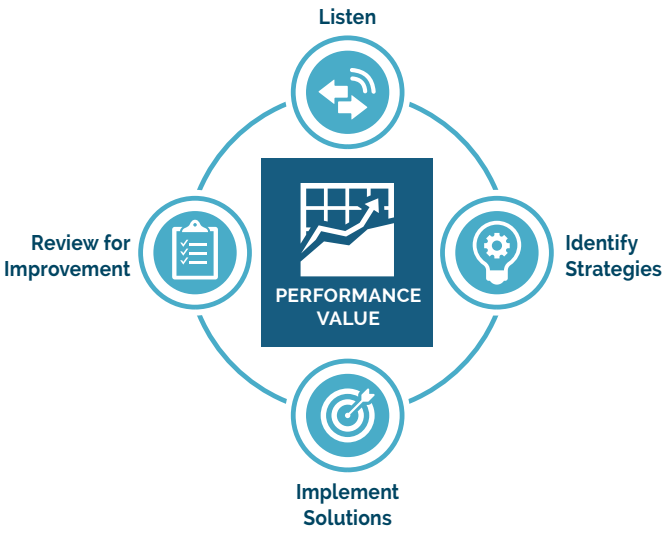
ESA understands all proposed projects are dependent upon funding derived from the federal Airport Improvement Program (AIP) and Caltrans, as well as Airport funding. As the various project elements will require sponsor approval prior to being obligated, ESA understands that some of the associated services enumerated in the Request for Qualifications may be cancelled or revised. Furthermore, ESA understands additional services not initially included in the Request for Qualifications may be initiated, and the ESA team will coordinate with the Airport to perform any required tasks as needs emerge and information becomes available.

SECTION E

Financial Responsibility

Approach to Execution and Management of Services

ESA's approach to the execution and management of services includes developing well-thought-out scopes, budgets, and schedules; tracking progress; and communicating that progress to our clients frequently so that they are informed. Lake Tahoe Airport will benefit from our overall approach to providing the highest quality management services. In choosing ESA, you will have a consultant on your team that will:



Listen—We listen and ask questions so that we understand your goals and desired outcomes for the project and the potential challenges you face.

Identify Strategies—Based on our shared understanding, we collaborate with you to explore successful strategies and provide you the information you need to make an informed decision on how to best achieve project goals. We will be there with you, thinking through and planning potential outcomes to identify workable strategies.

Implement Solutions—ESA is solution-oriented. Once solutions have been identified and agreed upon, we implement those solutions efficiently and effectively to meet the identified needs.

Review for Improvement—Part of implementing solutions is constantly reviewing our work, thereby driving our team toward high performance and continuous improvement.

In addition, ESA will approach execution and management services by providing Lake Tahoe Airport with the following:

Responsive Project Management. Communication is key to effective project management. ESA will collaborate with the Airport to provide perspective, bring key issues or questions to your attention, and inform the development of solutions. Patrick Hickman, with support from Eryn Brennan as the Project Director, will communicate clearly and often with Airport staff to ensure that we understand expectations and goals for tasks and deliverables and administrative needs for progress reports, invoicing, and contract management requirements. Through regular check-in calls and written communication, Patrick will coordinate the status of tasks, invoicing, overall contract budget status, and any issues that may arise so we can strategically address them before they unintentionally affect budget or schedule. Patrick has a track record of being accessible not only during standard work hours, but also at night and on weekends when needed. Regardless of the time of day, certain situations have sometimes involved deployment of technical staff to respond to pressing situations. ESA is accustomed to, and thrives in, situations where multiple, concurrent tasks are being executed.

Cost and Schedule Management. ESA project managers prioritize timely, cost-effective delivery of quality products and services as key to a successful project. Patrick will use ESA's project management tools

to monitor, manage, and report project performance. ESA uses Deltek Vantagepoint to carefully monitor project budgets. The Deltek system allows us to track expenditures by each staff member in real time, so everyone can manage their time relative to the requirements of individual task assignments. This system also allows staff members to annotate timesheet entries, which Patrick will use when preparing the monthly progress report or responding to questions from the Airport about work progress.

QA/QC Focus

- Technical Adequacy
- Policy Consistency
- Study Protocol Compliance
- Document Consistency
- Cost and Schedule Control and Tracking

ESA uses a web-based project management dashboard that shows the key financial metrics for each project at the task level: contract amount, spent-to-date, remaining budget, and "burn rate." Since the initial implementation of this system in 2020, our project managers have reported greater success in dealing with potential budget issues and greater ability to share budget information with clients.

For schedule management, we typically use Microsoft Project or Excel spreadsheets with tasks and timelines. ESA will identify interdependencies and forecasting durations associated with critical-path activities. Schedules will be updated regularly to reflect project progress.

Efficient Contract Administration and Accounting. ESA's approach to efficient contract administration starts with assigning a project accountant who is well versed in Lake Tahoe Airport's project accounting and specific invoicing requirements. Our accounting team shares a client service perspective that involves recognizing the unique qualities of contract and client needs. Accountants often coordinate between internal project managers and client representatives to gain an understanding of project reporting needs before setting up the job in the accounting system. Our Deltek Vantagepoint system allows for a high degree of flexibility, which we use to maximum capacity to customize for both internal project management needs and ideally configured client invoice deliverables. Complete project manager portfolios are often assigned to a single project accountant, which facilitates long-term cooperative relationships whose partners are well equipped to swiftly adapt to changing needs as projects progress.

In partnership with Patrick Hickman, the project accountant will remain flexible, listening closely, making changes, and adapting to meet Lake Tahoe Airport's needs. The project accountant will provide progress reporting and task order and invoice management. Our aim is to provide scalable resources to respond to both predictable and unpredictable service requests under this contract.

Quality Deliverables. As part of our technical services, ESA maintains strict adherence to a quality assurance/quality control (QA/QC) program. Key elements of ESA's standard project QA/QC program include (1) early guidance from team management to technical staff on standards for content and format; (2) first-draft product review by key specific senior technical staff members within each technical discipline; (3) second review of the analysis and technical writing by the project manager; (4) third review for readability by the technical editor; and (5) final review by the project manager before delivery to the Airport. This approach provides for the preparation of documents that are defensible, technically accurate, and tailored to meet client needs.

With this structure, ESA provides Lake Tahoe Airport with the best combination of project management, contract administration, and technical resources to meet the needs of this contract. Our structure reflects our commitment to continuous improvement in providing the Airport with the most cost-effective, organized, and high-quality services.

SECTION F

Description of Recent Projects/ References

As evidenced by our previous California work (detailed in Section B) and supported by our client references, ESA consistently produces the highest quality deliverables on time and on budget. Our relationships with the FAA and regulatory agencies combined with our staff's unmatched experience and knowledge allows us to deliver quality and results on even the most aggressive schedules. The following client references have been offered as those with direct knowledge of the ESA Team's capability to conduct NEPA and CEQA environmental documentation.

Project	Reference	Project Description
Several SFO Projects	Audrey Park, Environmental Affairs Manager **SAN FRANCISCO INTERNATIONAL AIRPORT** **Phone:** (415) 821-7844 **Email:** audrey.park@flysfo.com	Ongoing on-call contract for which ESA is preparing a variety of CEQA/NEPA technical reports and documents. Efforts to date have included biological monitoring and assisting with natural resources planning and permitting for multiple projects. In addition, ESA responded to talk orders to prepare multiple CEQA addenda, IS/MNDs, and EIRs. ESA technical staff have prepared a variety of studies and reports, including but not limited to: ➔ Air quality modeling ➔ Geoarchaeological coring ➔ Hazardous materials reports (Phase I Environmental Site Assessments [ESA]) ➔ Historic resource and archeological reports ➔ Hydrological modeling ➔ Noise analyses ➔ CEQA/NEPA documentation for Caltrans Permitting support
Bishop Airport Part 139 Certification NEPA/ CEQA; Bishop Airport RSA Improvements NEPA/CEQA	Ashley Helms, Deputy Director – Airports **COUNTY OF INYO, PUBLIC WORKS** **Phone:** (760) 878-0263 **Email:** ahelms@inyocounty.us	ESA assisted the Inyo County Department of Public Works in preparation of NEPA and CEQA documentation in support of RSA improvements for Runway 12/30 at Bishop Airport in Bishop, California. Inyo County identified a need for improvements to achieve a standard RSA at Runway 12/30, the runway accommodating recently introduced commercial passenger operations at Bishop Airport.
Sacramento County WattEV Commercial Charging Center	Zach Frese **COUNTY OF SACRAMENTO – DEPARTMENT OF AIRPORTS** **Phone:** (916) 806-5444 **Email:** FreseZ@saccounty.gov	ESA led a team to prepare an EA for a publicly accessible EV charging facility to be built on a 110+-acre parcel of land owned by the Sacramento International Airport (SMF). The facility would include EV charging stations powered by a new solar array and would serve shippers and transporters as well as public transportation and passenger vehicles.



A

Resumes

ESA

Eryn Brennan

Project Director



EDUCATION

Master, Urban and Environmental Planning, University of Virginia

Master, Architectural History and Certificate in Historic Preservation, University of Virginia

B.A., History, University of California, Santa Cruz

18 YEARS' EXPERIENCE

PROFESSIONAL AFFILIATIONS

American Planning Association

Association of Environmental Professionals

Eryn is an urban planner and architectural historian with 15 years of experience preparing and developing environmental assessments for a range of mid- to large-scale development projects and masterplans, as well as assessing cultural resources. Her extensive project management experience, combined with her technical expertise in surveying and evaluating cultural resources, allows for seamless project facilitation through the environmental review process. Eryn has successfully managed dozens of projects through the environmental review process, and specializes in managing large, complex EIRs and CPEs with extensive technical teams in San Francisco and the Bay Area. Eryn also has an in-depth knowledge and understanding of an array of cultural resources work, including field surveys, Historic American Building Survey (HABS) reports, and conducting Section 106 reviews to identify, assess, and mitigate potential impacts to historic resources. Eryn is a published author, former adjunct faculty member at the University of Virginia, and lecturer in the Stanford School of Continuing Studies.

Relevant Experience

Lake Tahoe Airport, Environmental Professional Services On-Call, City of South Lake Tahoe, CA. *Project Director.* Eryn is the Project Director for the Lake Tahoe Airport environmental professional services on-call. As project direct, Eryn supports the project manager in identifying the appropriate staff to assist with a variety of projects related to environmental planning for both CEQA and NEPA.

San Francisco International Airport, Planning and Environmental Services On-Call, San Francisco, CA. *Project Director*. Eryn is the client service manager for the SFO planning and environmental on-call and regularly coordinates a staff of approximately 140 people (including subconsultants) to develop and deliver myriad CEQA addenda, technical reports, permitting documents, and other services for SFO. As client service manager, Eryn immediately responds to requests regarding various ongoing and planned projects at the Airport and identifies the appropriate technical lead to support the effort.

SFO NEPA As-Needed Services Contract, San Francisco, CA. *Project Manager*. Eryn managed the NEPA as-needed contract as a subconsultant to Ricondo. Various tasks conducted under this contract included preparation of a Section 106 report and biological resources support for the Boarding Area H EA and preparation of Section 106 reports for various projects and the Noise Insulation Program.

San Francisco International Airport, Natural Resources Management On-Call, San Francisco County, CA. *Project Director*. Eryn is the Project Director for the Natural Resources Management On-Call for SFO. In this role, she supports three project managers that lead ESA's teams providing services related to biological monitoring, regulatory permitting related to protection of the California red-legged frog and San Francisco garter snake, implementation of their wildlife hazards management program, and compensatory mitigation support.

Eryn Brennan (Continued)

Project Director

San Francisco International Airport, Shoreline Protection Program Project EIR, San Francisco, CA. *Project Manager*. Eryn managed a complex EIR for SFO's Shoreline Protection Program, which looks to armor the approximately 8-mile coastline around SFO in order to accommodate sea-level rise through end of century. As an architectural historian, Eryn is also leading the cultural resources team that will conduct the Section 106 work to support the NEPA document that will be prepared for the project. Eryn managed a team of more than 65 technical staff (including subconsultants) to develop complex technical analyses related to cultural resources, noise, air quality, biological resources, hydrology and water quality, and transportation.

San Francisco International Airport, Recommended Airport Development Plan EIR, San Francisco, CA. *Project Manager*. Eryn managed a complex EIR for SFO's next long term masterplan—the Recommended Airport Development Plan—that will support the strategic development of the Airport over the next two decades. ESA managed the EIR for SFO's previous 1989 masterplan (EIR certified in 1992), which served the continuous growth of the airport over the last 25 years. The current masterplan outlines critical strategies to improve the passenger experience, accommodate an estimated increase of 20 million air passengers, and plan for more sustainable and efficient ways to meet the state's environmental goals. Eryn is overseeing the work of a large team of subcontractors, along with ESA's in-house technical team.

Port of San Francisco, Waterfront Plan EIR, San Francisco, CA. *Project Manager*. Eryn managed the Port of San Francisco's Waterfront Plan EIR, a programmatic EIR that analyzed policy amendments and updates to the Waterfront Land Use Plan—the governing policy document for the Port's approximately 7.5-mile waterfront property. The updated Waterfront Plan focuses on advancing new goals and policies in the areas of waterfront resilience, environmental sustainability, financial strength, and continued public engagement.

Stonestown Development Project, San Francisco, CA. *Project Director*. The project would include up to approximately 2,930 residential units; up to 160,000 square feet of new retail; up to 200,000 square feet of office; up to approximately 100,000 square feet of hotel; approximately 53,000 square feet of cultural, institutional, and educational uses; approximately 4,000 parking spaces; 6 acres of open space; and infrastructure improvements. The EIR will analyze one variant to the project, which would include the development of the Authentic Church parcel. Under the Authentic Church Variant, the redevelopment of the 27 acres surrounding the Stonestown Galleria would be the same as the project; however, the Authentic Church parcel would be developed with an additional 150 residential units; 10,000 square feet of cultural, institutional, and educational uses; and 200 parking spaces.

San Francisco Recreation and Parks Department, Portsmouth Square Improvement Project, San Francisco, CA. *Project Director*. Eryn served as the Project Director for Portsmouth Square Improvement Project EIR and subsequent mitigation monitoring and compliance work. The San Francisco Recreation and Parks Department will replace the existing park features with a redesigned public park that will include new playgrounds, exercise equipment, shade structures, wayfinding, signage, sidewalks, planters, terraces, ramps, and a 7,500 square foot new community clubhouse facility. The project will also waterproof the roof of the parking garage located underneath the park and remove the pedestrian bridge spanning Kearny Street that connects a 27-story hotel building with Portsmouth Square.

Patrick Hickman, PLA, AICP, LEED AP

Project Manager, Land Use & Planning, Airspace and GIS, Land Use & Planning, Airspace and GIS



EDUCATION

Bachelor of Landscape Architecture (BLA), Mississippi State University

Master of Urban and Regional Planning (MURP) — Cal Poly Pomona

17 YEARS OF EXPERIENCE

CERTIFICATIONS/ REGISTRATION

Professional Landscape Architect (PLA), CA, No. 5676

American Institute of Certified Planners (AICP), No. 025518

LEED Accredited Professional (LEED AP), US Green Building Council

Patrick Hickman is a land use planner and landscape architect with ESA, providing expertise in airport land use compatibility planning, environmental analysis, GIS analysis and mapping, and site planning and design. His skills have been utilized throughout the United States and abroad on a variety of projects including airport land use compatibility plans, CEQA/NEPA environmental studies, airport master plans, and other planning efforts.

Relevant Experience

Lake Tahoe Airport, TVL TRPA/CEQA Documentation, South Lake Tahoe, CA. *Project Manager.* Patrick is currently managing preparation of the environmental documentation for the Lake Tahoe Airport Master Plan Update. Required environmental clearance documents include a CEQA Initial Study and Mitigated Negative Declaration as well as an Initial Environmental Checklist in compliance with the Tahoe Regional Planning Agency (TRPA) Code of Ordinances.

City of South Lake Tahoe, Airport Land Use Capability Plan, South Lake Tahoe, CA. *Land Use Planner*. Patrick is assisting the Lake Tahoe Airport Land Use Commission with the update to the Lake Tahoe ALUCP. The ALUCP addresses compatible land use for areas around Lake Tahoe Airport. Patrick assisted in the production of compatibility factor maps delineating the geographic extent of the ALUCP policies.

Mather Airport Land Use Compatibility Plan, Sacramento, CA. *Land Use Planner*. Patrick assisted with compatibility factor boundary delineation, including safety zones and the overflight notification area. He also assisted in the development of compatibility policy and criteria, including compatibility matrices drafted to correspond to the uses reflected in the plans and ordinances of local jurisdictions.

Bishop Airport Environmental Review Services, NEPA and CEQA Support, Bishop, CA. *Airport Planner*. Patrick has served in multiple capacities supporting Inyo County Public Works for two separate environmental reviews for both NEPA and CEQA. Patrick served in a technical role in the preparation of an environmental assessment and an initial study evaluating environmental impacts related to the introduction of commercial service under 14 CFR Part 139, and he served as project manager while supporting preparation of an environmental assessment and initial study evaluating environmental impacts associated with runway safety area improvements.

Initial Study and Development Displacement Analysis for the Mather Airport Land Use Compatibility Plan, Sacramento, CA. *Task Leader*. Patrick prepared a development displacement analysis and Initial Study to fulfill CEQA requirements for the Mather Airport Land Use Compatibility Plan. The development displacement analysis measured the potential dwelling unit yield impacted for housing opportunity sites in the airport influence area. The analysis also entailed determining the amount of land area which

would become unavailable to various non-residential land uses upon implementation of the ALUCP.

Humboldt County Airport Land Use Compatibility Plan, Humboldt County, CA. *Land Use Planner.* Patrick assisted the Humboldt County Airport Land Use Commission with an update to the Humboldt County ALUCP. The ALUCP addresses compatible land use for areas around eight airports, including California-Redwood Coast-Humboldt Airport, Murray Field, Samoa Field Airport, Kneeland Airport, Rohnerville Airport, Dinsmore Airport, Garberville Airport, and Shelter Cove Airport. Patrick assisted with the development of the noise and safety compatibility factor policies and standards of the ALUCP.

San Carlos Airport, On-Call Airport Land Use Compatibility Planning Support, San Carlos, CA. *Land Use Planner*. Patrick has assisted the San Mateo City/County Association of Governments in reviewing proposed development in the San Carlos Airport environs. He reviewed individual project proposals for consistency with existing ALUCP policies and criteria.

Amazon Prime Air, Environmental Assessments (EAs) for Commercial Drone Delivery, Various Locations. *Airport Planner.* ESA is currently assisting Amazon Prime Air to prepare EAs, in accordance with the National Environmental Policy Act, so that they can secure Part 135 Operations Specification approval to conduct commercial drone delivery services. The scope of environmental analyses includes detailed assessments of potential impacts to biological resources, historic resources, noise and land use, Section 4(f) properties, and environmental justice communities. Agency consultation efforts include a wide variety of state and federal regulatory agencies, including state and tribal historic preservation offices, FWS, and state coastal zone management agencies. Patrick developed initial methodologies for inventorying public lands per the Department of Transportation Act of 1966, Section 4(f); historic resources; communities with environmental justice concerns; and other existing environmental conditions.

San Diego International Airport, Land Use Compatibility Plan, Environmental Impact Report, San Diego, CA. *Task Leader.* Patrick served in a lead technical role in conducting a development displacement analysis to determine potential land use and population and housing impacts in a densely urban environment resulting from implementation of the San Diego International Airport Land Use Compatibility Plan published in 2014. He authored documentation detailing potential impacts to housing and population, public services, and local planning objectives.

San Diego International, Airport Land Use Compatibility Plan, San Diego, CA. *Airport Planner.* Patrick conducted research and analysis of local general plan policies and development regulations for the Airport Land Use Compatibility Plan (ALUCP). He developed methodology and utilized GIS and MS Excel software to perform analysis of existing land use density and intensity. Patrick participated in public workshops, steering committee meetings and local agency coordination meetings and provided on-call consistency review services for proposed projects with potential to conflict with ALUCP policies.

Pittsburgh International Airport Master Plan Update, Pittsburgh, PA. *Airport Planner*. In 2016, Patrick assisted with an update to the PIT Master Plan. Patrick developed a detailed database of existing land uses in the PIT environs and prepared noise exposure maps depicting baseline and future noise contours based on the master plan activity forecast.

Naval Air Station North Island, Airport Land Use Compatibility Planning, Coronado, CA. *Land Use Planner.* Patrick developed maps and prepared technical appendices supporting proposed land use policies and compatibility criteria for the environs of Naval Air Station North Island. He also prepared a work plan and conducted preliminary environmental analyses for the Draft ALUCP.

Steve Smith

Deputy Project Manager



EDUCATION

M.A., History, California State University, Sacramento

B.A., History, Humboldt State University

25 YEARS' EXPERIENCE

PROFESSIONAL AFFILIATIONS

Association of Environmental Professionals

Steve is a seasoned and technically diverse environmental professional. Over his 20 years in the profession, Steve has managed and provided technical support for a multitude of CEQA and NEPA compliance documents, including initial studies, environmental impact reports, environmental assessments, and environmental impact statements. Steve has extensive experience leading and supporting the environmental compliance process for residential, commercial, mixed-use, infill, and infrastructure projects, including surface transportation, electrical, gas, and aviation projects. Steve also has extensive regulatory permitting experience, including preparation of permit applications for submittal to the United States Army Corps of Engineers (USACE) for compliance with Clean Water Act Section 404, Regional Water Quality Control Boards (RWQCBs) for compliance with Clean Water Act Section 401, and the California Department of Fish and Wildlife (CDFW) for compliance with Fish and Game Code Sections 1602 and Section 2081. Steve is also a highly experienced cultural resources specialist. He conducts historical research and writing, historic built-environment surveys, archaeological field support, and preparation of cultural resources documentation for CEQA, NEPA, and Section 106 compliance.

Relevant Experience

City of South Lake Tahoe and Lake Tahoe Airport, TVL IS/MND, City of South Lake Tahoe, CA. *CEQA Project Manager.* The Lake Tahoe Airport Master Plan identifies a series of improvements to the Lake Tahoe Airport that would occur over approximately a 20-year period to meet compliance with current FAA design standards, and accommodate existing and forecasted aviation demands. Implementation of the Airport Master Plan includes pavement marking and signage improvements, pavement reconstruction and rehabilitation, taxiway modifications, delineation of helicopter parking, removal of vegetation and other airspace obstructions, improvements to a drainage ditch, construction and/or expansion of new hangar and fixed-base operator facilities, demolition and removal of an existing air traffic control tower, installation of improved navigational instruments, and installation of a self-serve fueling station, aircraft wash rack, and electric vehicle charging stations. ESA assisted the City of South Lake Tahoe with preparation of an Initial Study to evaluate the potential environmental effects of the proposed project in compliance with CEQA. Based upon the findings contained in the Initial Study, it was determined that the project would not have a significant effect on the environment, based on mitigation measures that would be attached to the project as conditions of approval. The City adopted a Mitigated Negative Declaration for the project.

Rio Vista Airport Land Use Compatibility Plan CEQA Categorical Exemption Technical Memo, Rio Vista, CA. *Technical Analyst*. The Rio Vista Airport Land Use Compatibility Plan is intended to promote compatibility between the functions and operations of the Rio Vista Airport and the land uses surrounding the Airport. The Rio Vista Airport ALUCP included proposed land use policies and criteria for implementation by local agencies and did not propose or entail any new development, construction, or changes to existing land

uses or the environment. No physical construction would result from the adoption of the proposed ALUCP or from subsequent implementation of the ALUCP by local agencies. Similarly, no change in airport facilities or aircraft or airport operations would result with implementation of the ALUCP. Accordingly, Steve prepared a technical memorandum that supported the proposed ALUCP's exemption from the provisions of CEQA.

Westover Field Airport Land Use Compatibility Plan CEQA Categorical Exemption Technical Memo, Amador County, CA. *Technical Analyst*. The proposed Westover Field Airport Land Use Compatibility Plan is intended to promote compatibility between the functions and operations of Amador County Airport (i.e., Westover Field) and the land uses surrounding the Airport. The draft ALUCP included proposed land use policies and criteria for implementation by local agencies and did not propose or entail any new development, construction, or changes to existing land uses or the environment. No physical construction would result from the adoption of the proposed ALUCP or from subsequent implementation of the ALUCP by local agencies. Similarly, no change in airport facilities or aircraft or airport operations would result with implementation of the ALUCP. Accordingly, Steve prepared a technical memorandum that supported the proposed ALUCP's exemption from the provisions of CEQA.

County of Marin, Donahue Highlands Master Plan, Marin County, CA. *Technical Analyst*. The applicant proposes to construct 18 residences on a ridgeline overlooking the City of Sausalito. The site lies adjacent to the Golden Gate National Recreation Area. ESA's scope has also included preparation of a comprehensive constraints analysis prior to initiation of the EIR, covering topics such as aesthetics, biological and cultural resources, geology and soils (landslides), hydrology, and traffic. The project is uniquely controversial, as it would develop one of the last remaining ridgelines in southern Marin County. Steve assisted in the preparation of the environmental constrains analysis for the project and is the lead author for the land use and aesthetics section of the EIR.

San Bernardino International Airport, Eastgate Air Cargo Facility, San Bernardino County, CA. *Deputy Project Manager.* The San Bernardino International Airport Authority (SBIAA) is proposing to develop the Eastgate Air Cargo Facility, a package sorting and distribution center with an air cargo hub that would satisfy an unmet need for large-scale air cargo facilities at the airport. Approval and implementation of the proposed project requires one or more actions by the Federal Aviation Administration (FAA), requiring environmental analysis, coordination, and documentation conforming to the provisions of NEPA and the federal Clean Air Act. ESA is assisting the SBIAA and the FAA with preparation of an EA for the project's NEPA compliance, as well as an air quality analysis to support a finding that the proposed project conforms to the air quality management plan established in the state implementation plan.

Air Cargo Facility at March Inland Port, Riverside County, CA. *Technical Analyst*. The March Joint Powers Authority was the CEQA lead agency for the proposed reuse of a former DHL air cargo facility at March Inland Port for resumed operations under a new operator. ESA prepared an initial study to evaluate the environmental effects of the proposed project in support of an addendum to the previously adopted mitigated negative declaration prepared for the DHL facility. Key environmental issues included aircraft-generated noise and air emissions and truck traffic. Steve was a key technical analyst for preparation of the addendum.

Michael Arnold, LEED AP

Strategic Advisor



EDUCATION

BS, Civil Engineering, Michigan State University

35 YEARS OF EXPERIENCE

CERTIFICATIONS/ REGISTRATIONS

Leadership in Energy and Environmental Design Accredited Professional, U.S. Green Building Council, #10256411, 2011

PROFESSIONAL AFFILIATIONS

Airport Consultants Council

Airport Consultants Council Board of Directors (2008–2012)

Airports Council International – North America

Airports Council International – North America Operations and Technical Affairs Committee Steering Group (2007–2009)

American Association of Airport Executives

American Society of Civil Engineers

Broward College Aviation Institute Advisory Committee

Florida Airports Council

Mike has more than 35 years of aviation planning, noise, and environmental project experience at more than 130 domestic and international airports. He has prepared long-term master development programs for more than 25 airports and has assisted private operators develop capital programs and revenue enhancement strategies for airport privatization pursuits on four continents. Mike has prepared numerous forecasts, facility requirements and alternatives analyses, project definition/justification studies, and has participated in airport/aircraft compatibility analyses for more than 60 airports. He has managed and participated in several complex environmental studies for a wide range of projects including new runways, new terminal configurations, and major airfield reconfigurations. Mike is an active leader in the aviation industry and regularly speaks and facilitates discussions on a wide variety of industry issues including sustainability/"green airports," land use compatibility, forecasting, integration of planning and environmental processes, and the changing needs of airport planning.

Relevant Experience

Miami International Airport NEPA and Noise Support, Miami, FL. *Technical Analyst.* Led various technical analyses related to changes in arrival and departure procedures including changes in flight tracks, changes in direction of flow, and the use of runway displacements. Also evaluated flight procedure changes associated with the Central South Florida Metroplex procedures. Conducted numerous airspace, noise studies and NEPA analyses for MIA, OPF and TMB.

San Bernardino International Airport Environmental Assessment, Eastgate Air Cargo Facility, San Bernardino County, CA. *Project Director.* The San Bernardino International Airport Authority proposed developing the Eastgate Air Cargo Facility, a package sorting and distribution center with an air cargo hub that will satisfy an unmet need for large-scale air cargo facilities at the airport. ESA prepared an environmental assessment and air quality analysis to support a finding that the proposed project conforms to the air quality management plan established in the state implementation plan.

Santa Maria Public Airport Master Plan Update NEPA/CEQA Documentation, Santa Maria, CA. *Role.* ESA prepared NEPA/CEQA documentation in support of the Santa Maria Public Airport Master Plan Update and provided supplemental airport planning services to refine the recommended development plan. These services included providing the justification for various project components and identifying alternatives for meeting the purpose and need of the proposed action. The primary components of the Master Plan Update included the extension of the main air carrier runway, various taxiway improvements, and the development of hangars and general aviation facilities on the south side of the airport. Key environmental issues analyzed included natural resources, noise, air quality, land use compatibility, and surface transportation/traffic. The EA received a Findings of No Significant Impact from the FAA in June 2010. The EIR was

certified by the Airport Board in September 2010. The runway and taxiway extension opened for use in May 2012. (Coordination with USFWS, USACE, FAA, CDFG, SHPO, and Caltrans.)

St. Petersburg-Clearwater International Airport Master Plan EA, Pinellas County, FL. *Technical Analyst.* Led all planning analyses in conjunction with the preparation of NEPA documentation for the Airport Master Plan for Pinellas County, Florida. Airside projects include the extension of a runway, development of a new runway, and development of new taxiways. Landside projects include improvements to the existing terminal building, development of new air cargo facilities, and development of additional general aviation facilities. Planning efforts include a new runway siting study, update of activity forecasts and a benefit/cost assessment for the new parallel runway.

St. Petersburg-Clearwater International Airport New Parallel Runway Environmental Assessment, Clearwater, FL. *Project Manager.* Mike led several planning analyses in conjunction with the preparation of NEPA documentation for the airport master plan for Pinellas County, FL. Airside projects included the extension of a runway, development of a new runway, and development of new taxiways. Landside projects included improvements to the existing terminal building, development of new air cargo facilities, and development of additional general aviation facilities. Planning efforts included a new runway siting study, update of activity forecasts, and a benefit/cost assessment for the new parallel runway.

Southwest Florida International Airport Master Plan Update and NEPA Re-evaluation, Ft. Myers, FL. *Project Director.* Mike led all aspects of the master plan update for Southwest Florida International Airport in Ft. Myers, FL. The plan incorporated the proposed midfield terminal complex, a second parallel air carrier runway, and all support facilities (new airport traffic control tower, aircraft rescue and firefighting, cargo) through the 20-year development period. A primary consideration of the Master Plan Update was maximizing airport revenues through both aviation-related and non-aviation commercial development. Mike also led the NEPA process to re-evaluate the prior EA completed for the terminal to ensure FAA's findings and determination remained accurate.

Lakeland Linder Regional Airport, Various Projects, Lakeland, FL. *Project Director.* Mike has overseen and supported a series of projects at Lakeland Linder Regional Airport (LAL) including NEPA documentation for an Instrument Landing System relocation, a new ATCT EA and a new MRO/Cargo facility, among others. Non NEPA projects include a Wildlife Hazard Assessment and Management Plan and the environmental elements of the ongoing master plan update.

Fort Lauderdale-Hollywood International Airport Part 150 Study Update, Fort Lauderdale, FL. *Project Manager.* Mike is overseeing all aspects of the Title 14 Code of Federal Regulations Part 150 noise and land use compatibility study for Fort Lauderdale-Hollywood International Airport. The study evaluates the new operational conditions at the airport stemming from reconstruction and expansion of the south parallel runway. This controversial project resulted in operational changes that affect not only the communities near the ends of the new runway but also those near the existing runway. Measures include noise abatement strategies, a new sound insulation program, and numerous programmatic measures The project is one of the largest noise studies ever undertaken in the southeast U.S. SF330: w/Firm; $2.5M; 7/2016–12/2022_N/A

Chris Dugan

Air Quality and Noise



EDUCATION

BS, Natural Resource Management, cum Laude, Rutgers University

20 YEARS' EXPERIENCE

Chris Dugan has more than 20 years' experience resolving environmental noise and air quality challenges for public and private clients. Chris plans and manages technical data collection efforts, evaluates changing ambient noise and vibration and air quality conditions, and works with designers, developers, municipal staff, and community members to attain clean air standards and create local noise environments that meet general plan guidelines, zoning standards, and quality of life expectations.

Relevant Experience

Goodman North America, Commerce Center Master Plan Building 1 Project Construction Noise Monitoring, Long Beach, CA. *Lead Noise Analyst.* Chris prepared the construction noise management plan, led construction noise monitoring activities at noise-sensitive land uses, including nighttime noise monitoring, and conducted plan review services for compliance with condition use permit requirements. The CNMP and noise monitoring needed to address cumulative noise levels from construction and Long Beach Airport operations, with monitoring required to distinguish construction activity noise levels from airport-related noise levels.

San Mateo County, Government Center Campus Development Project EIR, Construction Noise Barrier Recommendation, and Construction Noise Monitoring, Redwood City, CA. *Lead Noise Analyst*. Chris oversaw preparation of CEQA noise and vibration analyses for the new County Government Center Building. Chris developed construction noise barrier design recommendations to reduce construction noise levels at adjacent residential and school receptor locations and developed, implemented, and managed a construction noise monitoring program to verify effectiveness of barrier design and CEQA mitigation.

WSP/Caltrain, San Mateo Setout Track Noise and Vibration Monitoring, San Mateo, CA. *Project Manager/Lead Noise Analyst.* In 2024, the Peninsula Corridor Joint Powers Board (PCJPB) and Caltrain completed the installation of new gravel access road, setout track, and screening wall in San Mateo. The installation of the setout track required new track infrastructure to enable rail vehicles to move from the main track to the setout track, which resulted in a change to the existing noise and vibration environment in the vicinity of the track. Chris developed and managed a noise and vibration monitoring plan designed to measure noise and vibration levels associated with train travel over the new track infrastructure.

WSP/Caltrain, Guadalupe Bridge Replacement Project, San Jose, CA. *Lead Noise Analyst.* In 2023, the PCJPB and Caltrain began replacing an existing railroad bridge over Guadalupe Creek to address seismic deficiencies. Chris developed and managed the preparation of a construction noise management plan in accordance with Mitigation Monitoring and Reporting Program requirements, collecting daytime and nighttime noise

levels from grading, pile driving, and other construction activities to confirm compliance with construction noise performance standards and wildlife agency requirements for special-status species protections.

Hillside Church, New Gathering Plaza and Playground Project, San Jose, CA. *Lead Noise Analyst.* Hillside Church proposed the expansion of existing gathering and playground areas near residential receptors. Chris managed the preparation of a Noise Impact Report that evaluated the noise impacts at residential receptors in accordance with City requirements. Chris successfully demonstrated that existing noise levels exceeded the City standards and demonstrated the project would not result in a substantial change in ambient noise levels at sensitive receptor locations, supporting project approval.

Mount Shasta City-wide Noise Study, Noise Element Update, and Noise Ordinance Update, Mount Shasta, CA. *Lead Noise Analyst.* Chris provided technical noise consulting services to the City of Mount Shasta in support of a General Plan Noise Element update and new Noise Ordinance. Chris designed and led community noise surveys, coordinated with City staff and traffic subconsultants on traffic noise data collection, managed traffic noise modeling for the General Plan update, and prepared a report on City-wide noise conditions that supported an updated General Plan Noise Element and a new City Noise Ordinance.

City of Santa Clara, Patrick Henry Drive Specific Plan EIR, Santa Clara, CA. *Lead Noise Analyst*. Chris oversaw the preparation of CEQA noise and vibration analyses for this 74-acre specific plan that proposed up to 12,000 new residential units and 785,000 square feet of office space near existing residential and educational land uses. Chris identified program-level mitigation to reduce construction noise levels from specific plan development. The EIR analysis included traffic noise modeling for more than 150 road segments.

City of Palo Alto, Palo Alto Public Safety Building EIR, Palo Alto, CA. *Lead Noise Analyst.* Chris developed, implemented, and managed noise monitoring and impact analysis methodology for a public safety facility (i.e., police and emergency services headquarters) and parking garage involving vehicle activity sirens, and a large back-up generator.

California State Parks, Off-Highway Motor Vehicle Recreation Division, Oceano Dunes SVRA Pismocean Music Festival IS/MND and Special Event Monitoring, San Luis Obispo County, CA. *Project Manager/Lead Noise Analyst.* Chris prepared the CEQA IS/MND analysis of potential noise impacts from special event activities, and subsequently developed the noise monitoring program to measure special event sound levels at SVRA boundary and sensitive receptor locations. The monitoring program also evaluated ambient OHV noise levels and meteorological and tidal influences on measured sound levels. The results of the monitoring were used to prepare a set of recommendations for limiting special event noise levels at Oceano Dunes SVRA.

Dominic Scarano

Air Quality and Noise (Aviation)



EDUCATION

BS, Environmental Science, Concentration in Atmospheric Science, University of Massachusetts, Lowell,

9 YEARS OF EXPERIENCE

Dominic has more than 9 years of experience in modeling aviation noise and air quality. Dominic has worked on over 30 domestic and international airports supporting the needs of the client and community. He has advanced knowledge of aviation practices and environmental concepts of aircraft noise and air quality modeling. Dominic has served as technical lead, project manager, quality control manager, noise, and air quality modeler on a variety of projects. He has experience with many types of projects, including Environmental Impact Statements (EISs), Environmental Assessments (EAs), Noise Exposure Maps (NEMs), Noise Compatibility Programs (NCPs), Voluntary Airport Low Emissions (VALE) Programs, and various special studies in aviation, air quality, and residential sound insulation projects. He is an expert user of regulatory software and industry standard programs including the Aviation Environmental Design Tool (AEDT), Microsoft SQL, and ESRI ArcGIS.

Relevant Experience

Sacramento County – Department of Community Development, Planning, and Environmental Review, Sacramento County/Sacramento International Airport (SMF) WattEV Commercial Charging Center, Sacramento, CA. *National Environmental Policy Act (NEPA) Documentation/Project* and *Technical Support Specialist* responsible for assisting with preparation of NEPA documentation as well as air quality technical support.

Napa County, 2025 Baseline Data Report, Napa County, CA. *Noise Modeler.* The Baseline Data Report (BDR) intends to catalog and assess baseline environmental conditions throughout Napa County on various resource topics. ESA is providing full planning and implementation support for this project, from data-gathering to report and application development for public viewing. This includes preparing administrative draft Baseline Data Report (BDR) chapters designed to support the County's General Plan Update and associated EIR. Dominic is providing airport noise services for this project.

City and County of San Francisco, San Francisco International Airport (SFO), SFO As-Needed California Environmental Quality Act Services, San Francisco, CA. *Project Support Specialist* responsible for overall project support and data analysis.

City of Los Angeles – Airports, Los Angeles International Airport (LAX) Preferential Runway Policy Report Update, Los Angeles, CA. *Deputy Project Manager.* ESA developed an update to the LAX Preferential Runway Policy Report, which details the LAX Preferential Runway Use Policy and provides an analysis of operator's compliance with the Policy. Dominic led the collection of flight track data and completed the data analysis effort required for the updated report.

Naples Airport Authority, Naples Municipal Airport (APF) Code of Federal Regulations (CFR) Part 150 Study, Naples, FL. *Noise Modeler.* ESA is preparing a CFR Part 150 study to address noise concerns in the vicinity of the airport. This study includes an extensive noise modeling effort, including supplemental metrics and tasks outside of the CFR Part 150

requirements. Dominic has assisted with various technical analyses and the development of the Naples Airport Noise Compatibility Program document and supporting public outreach materials.

- **APF Task 26 -CY2022 Noise Stage Update, Naples, FL.** *Technical Lead* responsible for *leading technical analysis*.
- **APF Task 29 - APF FSFQ Program Update, Naples, FL.** *Project* and *Technical Support Specialist* responsible for *project and technical support; assisting with preparation of documentation*.
- **APF Task 32 - Additional Noise Support, Naples, FL.** *Project* and *Technical Support Specialist* responsible for general project and technical support.
- **APF Task 34 - Additional Noise Support, Naples, FL.** *Project* and *Technical Support Specialist* responsible for general project and technical support.

Port of Oakland, Terminal Development Project for Oakland International Airport (OAK), Oakland, CA. *Noise Modeling, Data Processing, Technical Analysis Specialist.*

City of San Jose, San Jose Mineta International Airport (SJC) Voluntary Airport Low Emissions (VALE) Program Emissions Modeling, San Jose, CA. *Project Manager.*

Inyo County, Eastern Sierra Regional Airport (BIH) Runway Safety Area Environmental Assessment (EA), Bishop, CA. *Air Quality Modeling Lead.* ESA is assisting the County of Inyo with the preparation of an EA for the construction of a new Runway Safety Area at BIH. Dominic led the development and modeling of an operational emissions and greenhouse gas inventories for the EA.

Broward County – Aviation Department, WA ESA-05 Fort Lauderdale-Hollywood International Airport (FLL) Landside Projects Environmental Assessment, Fort Lauderdale, FL. *Project Support Specialist* responsible for assisting with preparation of NEPA documentation.

City of Chicago, Chicago O'Hare International Airport (ORD) Environmental Impact Statement (EIS) Reevaluation, Chicago, IL. *Noise Modeling, Data Processing, Technical Analysis Specialist.*

Broward County – Aviation Department, WA ESA-05 Fort Lauderdale-Hollywood International Airport (FLL) Landside Projects Environmental Assessment, Fort Lauderdale, FL. *Project Support Specialist* responsible for assisting with preparation of NEPA documentation.

City of Austin, Austin-Bergstrom International Airport (AUS) Environmental Assessment, Austin, TX. *Noise and Air Quality Modeling Lead.* Dominic led noise and air quality modeling efforts for an Environmental Assessment at AUS in support of airfield improvements. Dominic prepared noise contours and operational emissions inventories for each scenario of the Environmental Assessment and assisted with the preparation of technical documentation.

Roanoke Regional Airport Commission, Airport Master Plan Update Noise Analysis at Roanoke-Blacksburg Regional Airport (ROA), Roanoke, VA. *Assistant Project Manager/Noise Modeling Lead.* Dominic served as the noise modeling lead and assistant project manager for this project. Dominic oversaw the noise modeling effort for the ROA master plan and prepared noise exposure contours for each forecast scenario of the master plan. Dominic also assisted with the preparation of master plan technical noise documentation.

Matthew Russell, PhD, RPA

Cultural Resources – Archaeology



EDUCATION

PhD, Anthropology (Archaeology Program), University of California, Berkeley

MA, Anthropology (Archaeology Program), University of California, Berkeley

MA, Nautical Archaeology and Maritime History, East Carolina University

BA, Anthropology (Archaeology Emphasis), University of California, Santa Barbara

30 YEARS' EXPERIENCE

CERTIFICATIONS/ REGISTRATION

Register of Professional Archaeologists

24-Hour Hazardous Waste Operations and Emergency Response, 2012

PROFESSIONAL AFFILIATIONS

Society for Historical Archaeology (Board of Directors, 2008-2010)

Advisory Council on Underwater Archaeology (2002-2010; Chair, 2008-2010)

Society for California Archaeology

Matt Russell has more than 31 years of experience in archaeology and has a wide range of experience in pre-contact and historical archaeology in the United States and abroad, with more than 25 years managing large and complex projects in both the private and public sectors. Matt is a specialist in maritime archaeology, and has participated in or directed more than 50 archaeology projects for state, federal and international agencies both on land and underwater since 1993. He has written numerous articles, book chapters, and monographs, and has edited several books. Matt has been a member of the Register of Professional Archaeologists since 2005. At ESA since 2014, Matt currently serves as Regional Business Group Director, managing a team of archaeologists and architectural historians that conduct pre-contact, historical, and maritime archaeological technical studies. Matt has conducted and/or managed more than 90 technical studies and impact assessments for compliance with federal and state laws including NHPA Section 106 and CEQA while at ESA.

ESA Experience

San Francisco International Airport (SFO), Taxiway Improvements Project, San Francisco, CA. *Senior Archaeologist, ESA*. ESA prepared an Archaeological Survey Report to support Section 106 compliance. Matt was responsible for overseeing preparation of the report and overall Section 106 management.

San Francisco International Airport (SFO), Shoreline Protection Program, San Francisco, CA. *Senior Archaeologist, ESA*. ESA is coordinating Section 106 compliance for the Program. Matt was responsible for overseeing preparation of technical reports and overall Section 106 management.

Pioneer Law Group, LLP, Sacramento Entertainment and Sports Center & Related Development, Sacramento, CA. *Senior Archaeologist.* Matt helped produce an archaeological sensitivity training video for construction workers participating in construction the new Sacramento Kings arena in downtown Sacramento, California.

SFPUC Sunol Wilderness/EBRPD Project, Sunol, CA. *Project Manager/Senior Archaeologist.* ESA prepared an archaeological testing program for the SFPUC Sunol Wilderness/EBRPD Project in Sunol, California. Matt was responsible for preparing the ATP and for implementing archaeological testing on the project site.

Associate Capital, Potrero Power Station Mixed-Use Development Project EIR and Archeological Testing, San Francisco, CA. *Senior Archaeologist.* ESA prepared an Archaeological Sensitivity Assessment to support the Project EIR, as well as the cultural EIR section Matt was responsible for preparing the Archaeological Sensitivity Assessment and supervising preparation of the EIR section. In addition, ESA prepared and implemented an ATP for the project's mitigation phase.

Kilroy Realty, Flower Mart Development Project, San Francisco, CA. *Senior Archaeologist.* ESA prepared an ARDTP for the Flower Mart Development Project in San Francisco, California. Matt was responsible for preparing the ARDTP for the San Francisco Planning Department.

SFPUC, Southeast Plant Biodigester Facilities Project EIR, San Francisco, CA. *Senior Archaeologist.* Matt provided archaeological analysis for the San Francisco Southeast Plant Biodigester Facilities Project. ESA teamed with Far Western Anthropological Group, Inc. to prepare an ARDTP for the project, in support of CEQA/NEPA review. ESA also provided pre-construction and construction-related archaeological testing and monitoring at the project site.

SFPUC, Westside Recycled Water Project EIR, San Francisco, CA. *Senior Archaeologist.* Matt provided archaeological analysis for the San Francisco Westside Recycled Water Project, which includes recycled water treatment, storage, and distribution facilities for users located on the west side of San Francisco. The project included Section 106 consultation and preparing an Archaeological Resources Management Plan to satisfy SHPO requirements. ESA also provided archaeological testing for project components within the former San Francisco City Cemetery.

SFPUC Fort Mason Geoarchaeological Testing Project, San Francisco, CA. *Project Manager/Senior Archaeologist.* ESA prepared an archaeological testing program for the SFPUC Fort Mason Project in San Francisco, California. Matt was responsible for preparing the ATP and for implementing archaeological testing on the project site.

Port of San Francisco, Mission Bay Ferry Landing and Water Taxi Landing Project, San Francisco, CA. *Senior Archaeologist*. ESA prepared an Extended (Subsurface) Archaeological Survey Plan, conducted subsurface testing, and final reporting for the Mission Bay Ferry Landing and Water Taxi Landing Project to support CEQA and Section 106 compliance. Matt was responsible for overseeing preparation of the reports and overall Section 106 management.

Golden State Warriors Arena, LLC, Event Center & Mixed-Use Development at Mission Bay Blocks 29-32 SEIR (Golden State Warriors Arena), San Francisco, CA. *Senior Archaeologist*. ESA prepared an archaeological testing program for the Golden State Warriors Event Center at Mission Bay Blocks 29-32 in San Francisco's Mission Bay waterfront. Matt was responsible for preparing the ATP and managing and coordinating the implementation of the testing program. In addition, as the result of an unanticipated discovery, ESA prepared an Archaeological Monitoring Plan and conducted archaeological monitoring during construction and prepared a Final Archaeological Resources Report and Archaeological Interpretation Plan for the discovered resource, a historic rail car.

California High Speed Rail Authority, California High Speed Rail Merced to Fresno Construction Package 1, Central Valley, CA. *Senior Archaeologist.* As a subconsultant to the Tutor Perini Zachary Parsons (TPZP) Joint Venture, ESA is providing environmental compliance support services for the Merced to Fresno Construction Package 1 (CP1) segment of the California High Speed Rail project. Tasks included conducting pre-construction surveys for cultural resources, compliance monitoring during construction, and compliance tracking and reporting. Approximately 29 miles in length, CP1 includes cultural resources such as the historic Chinatown in downtown Fresno. Matt is managing ESA's overall cultural resources role in the project, including coordinating and managing Section 106 compliance, archaeological surveys and monitoring of various preconstruction activities between Madera and Fresno.

Heidi Koenig

Cultural Resources - Archaeology



PHONE: 415.896.5900

EDUCATION

M.A., Cultural Resources Management, Sonoma State University

B.A., Anthropology, San Francisco State University

20 YEARS' EXPERIENCE

CERTIFICATIONS/ REGISTRATION

Register of Professional Archaeologists (RPA), 15140

Hazardous Waste Operations and Emergency Response

40 hour course completion and active renewal

PROFESSIONAL AFFILIATIONS

Society for California Archaeology

Society for Historical Archaeology

Heidi Koenig is a Registered Professional Archaeologist specializing in California archaeology and compliance with the National Environmental Policy Act, the California Environmental Quality Act, and Section 106 of the National Historic Preservation Act. Her experience includes over 20 years of conducting cultural resources identification efforts, significance evaluations, development of environmental documentation, implementation programs, and consultation support with the State Historic Preservation Officer. Heidi has developed Geographic Information System databases to assist regulatory agencies with cultural resources management and preservation decisions. Heidi has a proficient understanding of the regulatory framework guiding cultural resources management and has extensive experience in conducting environmental work for all types of infrastructure projects, including development, transportation, water, and energy projects. Her experience includes working with many federal, State, and local agencies, as well as numerous Native American tribes and Tribal Historic Preservation Officers

Relevant Experience

WattEV Innovative Freight Terminal (SWIFT) Project EIR. *Cultural Resources Analyst.* Serving as Cultural Resources Analyst, Heidi and ESA prepared an EIR that evaluated the environmental effects of a publicly accessible Electric Vehicle (EV) charging facility to be bult on a 110-acre parcel of land south of the Sacramento International Airport (SMF). The facility would include Direct Current Fast Chargers and Megawatt Chargers powered by a new solar array and would serve shippers and transporters as well as public transportation and passenger vehicles. The charging stations along with three accessory structures providing services to the traveling public (i.e., convenience store, resting lounge, restrooms, etc.) would be located on the northern 13.5 acres of the project site while the solar array would be located on the remaining 96.5 acres of the site to the south. As the project site is located on land controlled by SMF, the analysis in the EIR tiered from the analysis found in the Supplemental EIR for 2022 Airport Master Plan Update. Principal issues addressed in the EIR include potential impacts to agricultural resources (loss of important farmland) and biological resources (harm to special-status species [i.e., Swainson's Hawk and Giant Garter Snake] and conflicts with the Natomas Basin Habitat Conservation Plan). The EIR was certified in May 2024 on an expedited schedule.

San Francisco International Airport (SFO), Shoreline Protection Program, San Francisco, CA. *Senior Archaeologist, ESA.* ESA is coordinating Section 106 compliance for the Program. Heidi is responsible for overseeing preparation of technical reports and overall Section 106 management.

Port of San Francisco, Mission Bay Ferry Landing and Water Taxi Landing, San Francisco, CA. *Senior Archaeologist*. Heidi directed the cultural resources analysis for a ferry landing and water taxi landing construction project in the Mission Bay neighborhood

of San Francisco. Work was conducted in support of permitting and CEQA compliance, with the City and County of San Francisco Planning Department as the lead reviewing agency.

Linda Creek Sewer Crossing Rehab Project, Roseville, Placer County, CA. *Archaeologist.* Heidi prepared the cultural resources section for the Section 404 permit application from the Army Corps of Engineers. The Linda Creek Sewer Crossing is located in Roseville, Placer County and consists of the construction of four new sewer crossings on Dry and Linda Creeks. Heidi conducted a records search, consulted with interested Native American organizations and tribes, performed an intensive field survey, updated the location map of a 1860s railroad grade, and evaluated the grade as not eligible for listing in the National Register of Historic Places.

Town of Truckee, Church Street Extension Truckee Railyard, Nevada County, CA. *Archaeologist*. Heidi completed the cultural resources study for the development of a 34-acre parcel adjacent to the Union Pacific Railroad east of downtown Truckee. The study included background research at the North Central Information Center and development of a memorandum for consultation with the State Historic Preservation Officer. The finding for the project was No Historic Properties Affected.

Napa River Rutherford Reach, Napa County, CA. *Archaeologist.* Heidi prepared the archaeological study for this river restoration project. The analysis included a records search at the Northwest Information Center and a surface survey. Background research indicated a large prehistoric site was within the proposed work area. In consultation with the project proponent and engineers, Heidi worked to reduce impacts to this significant site by redesigning the project. Heidi also completed a subsurface investigation to confirm that site components were not in other proposed work areas. Archaeological monitoring was completed during project construction to further identify and protect cultural resources. The project was completed in coordination with the U.S. Army Corps of Engineers for National Historic Preservation Act compliance.

Watson Ranch Specific Plan, City of American Canyon, Napa County, CA. *Archaeologist.* Heidi completed an archaeological resources study for this 300-acre development project, including a records search at the Northwest Information Center and a pedestrian survey of the project area. Given the environmental setting, the relative distance of most of the Plan area from the nearest perennial water source (a small tributary to American Canyon Creek), and the paucity of any nearby **prehistoric** archaeological sites in a similar setting, Heidi recommended that a low archaeological sensitivity of the Plan area.

Inn at the Abbey EIR, Napa, CA. *Archaeologist.* Heidi is serving as archaeologist on an ESA team preparing an EIR for development of a 79-room hotel in multiple buildings on a 15-acre site owned by Jackson Family Vineyards north of St. Helena in unincorporated Napa County. The project would preserve an existing stone building (currently a winery/restaurant) and demolish other structures on the site with the exception of six residential dwelling units, which would be used for employee housing.

Mandi McElroy

FAA-Qualified Airport Wildlife Biologist



EDUCATION

M.S., Wildlife Ecology and Management, University of Georgia

B.S., Wildlife Biology, University of Georgia

20 YEARS' EXPERIENCE

CERTIFICATIONS

FAA-Qualified Airport Wildlife Biologist

First Aid/CPR

ATV Safety

TRAININGS

Advanced FAA Wildlife Hazard Assessment (2011)

FAA Wildlife Hazard Assessment (2010)

Bat Ecology and Field Techniques (2017)

San Joaquin Kit Fox Workshop (2013)

Remote Camera Trapping Workshop (2013)

Rare Pond Species Survey Techniques (2011)

PROFESSIONAL AFFILIATIONS

Bird Strike Committee USA

The Wildlife Society (President of SF Bay Area Chapter 2014-2015; Executive Board Member of Western Section 2013-2016)

Mandi is a senior wildlife biologist and project manager at ESA with 20 years of experience in wildlife surveys and monitoring. She has worked as an environmental consultant in California since 2009 and became a FAA-Qualified Airport Wildlife Biologist in 2016 after conducting wildlife hazard assessments and authoring FAA-approved wildlife hazard management plans for two airports. She specializes in the identification and life history of birds, bats, and small mammals of California. As a project manager and technical lead on multiple biological compliance projects, Mandi's skills include conducting habitat assessments and protocol-level surveys, advising clients on management strategies for nesting birds and other wildlife, and analyzing impacts to wildlife for NEPA and CEQA compliance.

San Francisco International Airport (SFO) Wildlife Hazard Management Support. *Airport Wildlife Biologist*. Mandi is supporting SFO's wildlife hazard management program by conducting ongoing bi-monthly wildlife monitoring surveys and advising on nesting bird and special-status species management, habitat modification, hazing and deterrents. She assesses triggering strikes and drafts the reports to FAA, leads the annual Operations personnel training, leads the monthly wildlife hazard committee meeting, and conducts the annual review of the Wildlife Hazard Management Plan.

Port of Oakland, Oakland International Airport (OAK) Environmental On-Call Services. *Lead Biologist*. Mandi is leading a team of biologists conducting compliance monitoring on the OAK airfield, which includes protocol-level surveys for western burrowing owl and routine nesting bird surveys. She coordinates with OAK's in-house USDA-APHIS biologists on wildlife issues to ensure continued compliance with project biological avoidance and mitigation measures.

Westervelt Ecological Services, Wildlife Hazard Analysis, Solano County, CA. *Airport Wildlife Biologist*. Mandi conducted a wildlife hazard analysis for the development of Cache Slough Mitigation Bank, in accordance with airport land use compatibility plans for Travis Air Force Base and Rio Vista Municipal Airport. She reviewed and analyzed wildlife survey data and met with airport staff and land use commission members. Mandi authored a report summarizing survey findings, analyzed potential wildlife hazards associated with the proposed land use change, and recommended measures to minimize potential hazards.

American Samoa Department of Port Administration, Wildlife Hazard Assessments and Wildlife Hazard Management Plans, Fitiuta and Ofu, American Samoa. *Airport Wildlife Biologist*. Conducted 12-month wildlife hazard assessments at two airports in remote location, overseen and reviewed by a senior FAA-Qualified biologist. Trained airport staff to conduct surveys, identify potential hazards and wildlife attractants, and implement deterrents. Authored FAA-approved wildlife hazard management plans for both airports.

Buzz Oates Construction, Wildlife Hazard Assessments for Multiple Development Projects and Mitigation Sites, various locations, CA. *Project Manager and Lead Biologist.*

Mandi McElroy (Continued)

FAA-Qualified Airport Wildlife Biologist

Advising client on potential wildlife strike hazards resulting from multiple development projects and associated wetland mitigation plans in the vicinity of Travis Air Force Base and Napa County Airport. Assigning qualified biologists to conduct reconnaissance-level surveys and habitat assessments of project sites. Reviewing survey data and assessing whether project activities will potentially increase presence of birds and other wildlife within flight paths.

East Bay Regional Park District, Biological Compliance for Fuels Management Program, various East Bay parks, CA. *Project Manager and Lead Biologist.* Provided pre- and post-treatment assessments and biological monitoring for activities conducted under the Park District's Wildfire Hazard Reduction and Resource Management Plan, encompassing fourteen East Bay hills and shoreline parks from Point Pinole Regional Shoreline to Anthony Chabot Regional Park. Led a team of biologists and subcontractors to provide project oversight to protect biological resources, conduct environmental assessments and surveys pre- and post- work, provide and coordinate agency approvals of Designated Biologists, coordinate projects with Park District fuel program representatives, and provide assessments, reports, and work updates in a timely manner. Assisted with staffing and providing technical expertise on restoration projects, routine maintenance work and other projects needing regulatory permits, on an intermittent/emergency basis.

Chevron Richmond Refinery, Osprey Nest Management, Richmond, CA. *Wildlife Biologist.* Conducted surveys and monitoring on oil and gas refinery sites to assess existing level of osprey activity, manage active nests, and provide recommendations for nest deterrents and artificial nest platforms. Met regularly with client, legal team, and CDFW to develop long-term management strategies.

Pacific Gas and Electric Company, Wildfire Risk Mitigation Programs - Environmental Support, Mt. Diablo State Park, CA and other locations. *Project Manager/Wildlife Biologist.* Worked closely with client and large team of field biologists to support PG&E's Wildfire System Hardening Program. Staffed biological monitors, wetland scientists, and botanists to conduct surveys and monitoring. Species of concern included rare plants, reptiles and amphibians, and nesting birds including bald and golden eagles. Advised on avoidance buffers and other measures. Reviewed biological constraints reports for projects throughout California.

California American Water, Monterey Peninsula Water Supply Project, Monterey, CA. *Wildlife Biologist.* Conducted field surveys and habitat mapping for species including bats, western burrowing owl, California tiger salamander, and California red-legged frog. Authored wildlife sections of the technical report.

Save Mount Diablo, Morgan Fire Research Project, Mount Diablo State Park, CA. *Wildlife Biologist.* Conducted habitat assessments, small mammal trapping, spotlight surveys, and remote camera trapping within four different habitat types (burned and control sites) to assess wildlife response to post-fire conditions. Received competitive grant from Save Mount Diablo to expand and continue remote camera and small mammal trapping.

Brian Pittman, CWB

Biological Resources



EDUCATION

M.S., Environmental Studies, San Jose State University

B.A., Biology, University of California, Santa Cruz

26 YEARS' EXPERIENCE

CERTIFICATIONS/ REGISTRATION

Certified Wildlife Biologist - The Wildlife Society, 2004

California Scientific Collecting Permit ID# 003068

Federal Recovery Permit #TE-027422-6 (fairy shrimp, California tiger salamander, and California red-legged frog)

FAA-certified Unmanned Aircraft System (UAS) pilot

TRAINING

2017 Salt Marsh Harvest Mouse Workshop (2-day with field I.D. & handling)

CDFW California Aquatic Bioassessment Workshop

Wetland Delineation Training Course, U.S. Army Corps of Engineers

Desert Tortoise Survey Techniques Workshop, Desert Tortoise Council

Brian is a *Certified Wildlife Biologist* with 26 years of practice leading projects with complex regulatory, mitigation, and construction/environmental compliance backgrounds. He is fluent with biological resources characterization and management throughout California and routinely coordinates with scientists, planners, and resource agency staff to identify and resolve issues affecting sensitive or regulated resources. Brian is trained in the permitting procedures and requirements under CEQA, NEPA, the federal and California Endangered Species Act(s), California Fish & Game Code, and federal and California Clean Water Acts. He holds a 10(a) federal Recovery Permit for vernal pool branchiopods, California red-legged frog, San Francisco garter snake, and California tiger salamander; and he performs a wide range of focused biological surveys throughout the State.

Relevant Experience

Napa County, 2025 Baseline Data Report, Napa County, CA. *Technical Lead and Lead Biologist.* The Baseline Data Report (BDR) intends to catalog and assess baseline environmental conditions throughout Napa County on various resource topics. ESA is providing full planning and implementation support for this project, from data-gathering to report and application development for public viewing. This includes preparing administrative draft Baseline Data Report (BDR) chapters designed to support the County's General Plan Update and associated EIR. Brian is leading a team that provides biological resources and connectivity mapping.

SFO, West-of-Bayshore Enhancement Program, San Francisco, CA. Senior Biologist. As an agency-approved biologist, Brian was the field lead for SFO's West-of-Bayshore canal enhancement project. In 2022, SFO completed specific vegetation and sediment removal activities to improve habitat conditions for two federally listed species—the endangered San Francisco garter snake (SFGS) and the threatened California red-legged frog (CRLF)—by removing vegetation and sediment from portions of South Lomita and San Felipe canals. During the two-month canal enhancement effort, Brian led a team of 8 to 10 on-site biologists who worked closely with the SFO contractor to monitor the removal of excavated materials and ensure protection of target wildlife species. Biologists performed preconstruction surveys for SFGS and CRLF, hand-sorted excavated materials to locate animals, relocated CRLF and SFGS when identified in the work area, and escorted work vehicles through the work site. Work was completed in October 2022.

SFO, Master Plan NEPA documentation. *Senior Biologist.* Brian prepared portions of the biological resources and hydrology analyses in support of the new International Terminal, boarding areas and aircraft gates, parking garage, ground transportation center and automated people mover, roadway and circulation system improvements, ALP approval, potential application for PFC funding, and other airport and commercial improvements.

Port of San Francisco (for Weiss Associates), As-Needed Environmental and Related Professional Services, City and County of San Francisco, CA. *Sr. Wildlife Biologist.* Brian was the lead biologist under the Port's as-needed services contract with Weiss Associates. In this capacity, he performed a detailed biological review that supported the CEQA analysis for the Crane Cove Park Project (within the Pier 70 Master Plan area). This project required permit from the USACE, the RWQCB, and San Francisco BCDC; consultations with the USFWS and NMFS; and coordination under Section 106 of the NHPA. Brian collaborated closely with Port staff to prepare and submit permit applications to the resource agencies.

Hollister Airport Biological Services, Hollister, CA. *Technical Specialist and Lead Biologist.* In support of the Hollister Airport runway widening and safety project, Brian assisted the City in developing a strategy to identify and protect California tiger salamanders and burrowing owls on the airport during construction. Over the course of a week, he led a team of wildlife biologists that cleared approximately 90 acres airport lands prior to the runway expansion project.

S.F. Public Utilities Commission, Alameda Creek Recapture Project, Alameda Creek, CA. *Senior Biologist*. As part of the ESA/Orion team, Brian supported the CEQA analysis and performed focused habitat reviews for sensitive wildlife in Alameda Creek, including the foothill yellow-legged frog and California red-legged frog to better represent the impact of the proposed effects of water recapture on the wildlife resources within Alameda Creek.

Marin Municipal Water District. California Red-legged Frog Surveys. *Project Manager and Lead Biologist.* Brian coordinated with fisheries biologists at MMWD to assess their maintenance projects in the Lagunitas Creek Watershed and performed a U.S. Fish and Wildlife Service protocol-level survey to ascertain the presence and distribution of California red-legged frogs in the local project vicinity. The survey results informed which areas needed coordination with resource agencies to address potential impacts to red-legged frogs.

California High Speed Rail Project, Environmental Compliance for Merced to Fresno Construction Package 1 (CP1), Merced to Fresno, CA. *Senior Biologist.* As a subconsultant to the Tutor Perini Zachary Parsons (TPZP) Joint Venture, ESA is providing environmental compliance support services for the Merced to Fresno Construction Package 1 (CP1), the 29-mile first segment of the California High Speed Rail design/build project. ESA is supporting TPZP and the Authority by providing both biological and cultural resources technical studies, including conducting historical and archaeological surveys, evaluations, and implementation of mitigation measures, in support of the design and construction of the project. Further, ESA is leading pre-construction surveys for targeted species (i.e., California tiger salamander, San Joaquin kit fox, Swainson's hawk, burrowing owl, and rare plants) and providing all biological monitoring during construction. Lastly, ESA is providing GIS support throughout construction to document habitat disturbances in real time and demonstrate compliance with numerous environmental compliance commitments. As a senior project biologist since 2013, Brian has conducted pre-construction surveys, biological surveys (general and focused), and provided QA/QC oversight to maintain project compliance with MMRP requirements and project environmental permits.

Mai/Chardonnay Resort EIR, Suisun City, CA. *Lead Biologist.* Brian prepared the focused biological constraints analysis in support of the biological analysis for the proposed development of a 46-acre resort hotel and vineyards in Napa County. He was the technical lead for the wetland delineation, and prepared the biological resources section of the EIR which analyzed potential environmental effects related to compatibility with the Airport Industrial Area Specific Plan.

Chris Fitzer

Biological Resources (Fisheries)



EDUCATION

Masters in Environmental Planning (Watershed/Water Resource Concentration), University of Colorado

B.A., Geography (Biogeography Concentration), Texas Tech University

27 YEARS' EXPERIENCE

TRAINING

Resource Management and Sustainable Development (Field Course), Institute for Central American Development Studies, San Jose, Costa Rica, 1994

Fluvial Geomorphology: Principles and Applications to River Restoration. University of California White Mountain Research Station, Bishop, CA. 2004

Aquatic Ecological Bioassessment Workshop. University of California, Davis, CA. 2005

PROFESSIONAL AFFILIATIONS

American Fisheries Society

Chris Fitzer has more than 27 years of experience in working on a diverse range of projects involving fisheries and aquatic ecology, water supply, watershed assessment and management, aquatic ecosystem restoration and enhancement, comprehensive water resource planning and management for local, state, and federal agencies; and water rights applications and other regulatory/permit proceedings. He possesses effective problem-solving abilities, excellent writing skills, and the ability to work with diverse, multi-disciplinary teams. He has expertise in managing fisheries and aquatic science staff, large-scale and complex projects, client and stakeholder interactions, and excellent technical capabilities. Chris has developed approaches to fish sampling programs and surveys, habitat evaluation and restoration, limiting factors analyses, habitat-flow relationship analyses, computational hydrologic and water quality model interpretation, and a working knowledge of California water rights issues. Over the years he has developed trusted, working relationships with resource and regulatory agency personnel and has a strong understanding of diverse and complex regulatory and stakeholder environments for projects located in coastal, Sierra Nevada, Central Valley, Delta, and Bay regions. He is proficient in document preparation and permitting for projects requiring CEQA, NEPA, ESA Section 7 compliance, and California ESA Section 2081 compliance. Chris has also led or assisted in the development of several land/resource management plans.

Relevant Experience

Tahoe Regional Planning Agency, Meeks Bay Restoration Project, Lake Tahoe, CA. *Aquatic Ecologist/Fish Technical Lead.* ESA served as fish and aquatic resources technical lead for the Meeks Bay Restoration Project, which is being developed to restore the Meeks Creek stream channel and wetland/lagoon below the State Route (SR) 89 to a more natural condition where geomorphic and hydrologic processes support a functioning ecosystem while continuing to support sustainable recreation opportunities. Other key project objectives include improving/managing fish passage and flood flow conveyance through the SR 89 stream crossing, and control or eradication of current populations of terrestrial and aquatic invasive plant and animal species.

Tahoe Regional Planning Agency, Tahoe City Marina EIR/EIS, Placer County, CA. *Fisheries Biologist/Water Quality Specialist.* Mr Fitzer, working with an interdisciplinary team, prepared an EIR/EIS for the Tahoe City Marina Expansion Master Plan. The expansion was planned through the Tahoe Regional Planning Agency (TRPA) master plan steering committee process, and the EIR/ Environmental Impact Statement (EIS) was prepared with continued steering committee consultation. The marina expansion involved an additional 144 boat slips built in two phases. Key project issues include water quality, attainment of TRPA thresholds, compliance with the Basin 208 Plan and water quality regulations, scenic effects, traffic and parking, site coverage, and pedestrian/bicycle circulation. Mr. Fitzer provided analysis support related to fisheries and water quality issues addressed in the EIR/EIS.

Tahoe Regional Planning Agency, Lake Tahoe Shorezone Ordinance Amendments Final Environmental Impact Statement and Response to Comments, Tahoe Basin, CA and NV. *Aquatic Ecologist*. Working with an interdisciplinary team, Chris assisted TRPA in preparing a Supplemental Draft Environmental Impact Statement (DEIS) and Final EIS which evaluated five alternatives for amendments to the Shorezone Ordinance relating to shorezone development/ facilities (piers, buoys, floating docks, slips), scenic resources, water quality, fish habitat, recreation, and other issue areas. Chris also assisted TRPA in preparing a Supplemental DEIS to present a sixth alternative, which was crafted based on public and agency comments from the five previous alternatives. Mr. Fitzer provided the assessment of the Shorezone Ordinance effects on fisheries resources, water quality, and hydrology.

Meeks Creek Fish Management Structure Design and Feasibility Project, Lake Tahoe, CA. Clients: U.S. Forest Service Lake Tahoe Basin Management Unit (LTBMU), Tahoe Regional Planning Agency. *Aquatic Ecologist/Fish Technical Lead.* ESA is serving as fish and aquatic resources technical lead for the Meeks Creek Fish Management Structure Design and Feasibility Project, which is being developed to manage native and nonnative fish species in the Meeks Creek Watershed with a focus on Lahontan cutthroat trout recovery. The project is a component of the Meeks Bay Restoration Project, which Chris provided fish technical assessment services. Technical services by ESA include identifying species of management interest, developing life history and life stage habitat suitability requirements, developing swim performance information for target species and other species that may serves as surrogates for swim performance information, developing management objectives, contributing to design concepts for the fish management structure, and developing an operations and management framework for the structure.

California Tahoe Conservancy, Upper Truckee River and Blackwood Creek Bioassessment Monitoring, South Lake Tahoe, CA. *Project Manager*. Chris managed a large-scale, two-year bioassessment monitoring program at 24 sites on the Upper Truckee River and Blackwood Creek. The work included collaborating with CTC on site location identification, review of methodologies, implementation of data collection, including benthic macroinvertebrate specimen collection and handling, data processing and analysis, and reporting.

California Department of Parks and Recreation, Sierra District, Upper Truckee River Restoration and Golf Course Relocation Project EIR/EIS/EIS, El Dorado County, CA. *Fisheries Biologist*. Chris provided analysis of fisheries and aquatic resources and conducted fish surveys and bioassessments for this proposed restoration project along the Upper Truckee River in Washoe Meadows State Park and Lake Valley SRA in South Lake Tahoe. He worked with a team that prepared a joint EIR/EIS/EIS to meet CEQA, NEPA, and TRPA requirements. The project would restore the river's natural geomorphic processes, planform, and profile and reduce its discharge of suspended sediment to Lake Tahoe. The project would require relocation of several golf course holes to reduce the area of stream environment zone occupied by the golf course and allow for establishment of a buffer area between the golf course and the river. Key environmental issues addressed include hydrology, geomorphology, water quality, biological resources, cultural resources, recreation, land use, and scenic resources.

Autumn Ward, CM, ENV SP

Community/Stakeholder Engagement



EDUCATION

M.S., Aeronautics (specialization in Aviation/Aerospace Safety Systems), Embry Riddle Aeronautical University

B.S., Aviation Business Administration, Embry Riddle Aeronautical University

20 YEARS' EXPERIENCE

CERTIFICATIONS/ REGISTRATION

Certified Member, American Association of Airport Executives, 2012

Envision™ Sustainability Professional and Verifier, 2013

PROFESSIONAL AFFILIATIONS

Board Co-Chair, Tony Jannus Distinguished Aviation Society

Former Vice Chair, Florida Airports Council, Noise Abatement and Community Affairs Committee

Past President, WTS International – Tampa Bay Chapter

Autumn has 20 years of experience in the aviation field. She has a strong background in aviation noise, stakeholder engagement and community outreach, and environmental planning. Her project experience has included facilities ranging in size from small general aviation airports to major large-hub air carrier airports in the United States and abroad. She is experienced with the Federal Aviation Administration (FAA) and regulatory requirements and skilled in documenting and presenting the results of technical analyses in a manner that can be clearly understood by the public.

Relevant Experience

Sacramento County Department of Airports and WattEV, Sacramento County [Department of Airports]/WattEV Commercial Charging Center, Sacramento, CA. *Project Director.* Autumn is the project director for an Environmental Assessment (EA) for a publicly accessible Electric Vehicle (EV) charging facility to be built on a 110+-acre parcel of land owned by the Sacramento International Airport (SMF). The facility would include EV charging stations powered by a new solar array and would serve shippers and transporters as well as public transportation and passenger vehicles. The charging stations along with three accessory structures would provide services to the traveling public (i.e., convenience store, resting lounge, restrooms, etc.) and would be located on the northern portion of the Proposed Project site while the solar array would be located on the approximately 100 acres in the southern portion of the site. ¶Agency coordination on the EA includes Section 7 consultation with the U.S. Fish and Wildlife Service related to the Giant Garter Snake; Section 106 consultation with the California State Historic Preservation Office for historic resources; consultation with the Federal Emergency Management Agency for floodplains; and consultation with the U.S. Environmental Protection Agency, the California Air Resources Board, and the Sacramento Metropolitan Air Quality Management District for air quality.

San Bernardino International Airport Environmental Assessment (EA) for the Eastgate Air Cargo Facility. San Bernardino, CA. *Project Manager.* This Project included the development of the Eastgate Air Cargo Facility, a sorting and distribution center with an air cargo hub. Autumn led preparation of the EA, the complex Public Workshop and Public Hearing, and coordination with the San Bernardino International Airport Authority and FAA. Public outreach efforts included translating outreach materials in multiple languages, providing translators for the Workshop and Hearing, and additional court reporters. This project was challenged, and successfully defended, in the 9th Circuit Court.

Bishop Airport NEPA/CEQA Analyses. Bishop, CA. *Project Director*. ESA prepared NEPA and CEQA studies for Bishop Airport (BIH) to obtain a 14 CFR Part 139 Airport Operating Certificate and amending Operations Specifications to provide scheduled commercial air passenger service to BIH. ESA is now preparing NEPA and CEQA analyses for Runway Safety Area improvements. Autumn provides guidance and oversight throughout the NEPA evaluation process, quality assurance, and leads the public outreach activities.

Fort Lauderdale-Hollywood International Airport Part 150 Study. Broward County Aviation Department. Fort Lauderdale, FL. *Deputy Project Manager.* ESA is preparing a 14 Code of Federal Regulations (CFR) Part 150 Study to address noise concerns after the opening of the new south runway. This Study evaluates aircraft noise compatibility of Fort

Lauderdale-Hollywood International Airport (FLL) with the local community, which included coordination with numerous land use jurisdictions located as far as 10 miles from FLL. Autumn led the noise modeling effort, documentation of the findings, and coordination of the Technical Advisory Committee (TAC) and public outreach throughout the Study.

Naples Municipal Airport Part 150 Study and On-Call Services. Naples Airport Authority. Naples, FL. *Project Manager.* ESA is preparing a Part 150 Study to address noise concerns in the vicinity of the Airport. This Study includes an extensive outreach program led by Autumn, including four rounds of Public Workshops, more than a dozen small community meetings, Technical Advisory Committee meetings, and other community outreach. Autumn also led the noise modeling effort in support of the Noise Exposure Maps (NEMs) approved in December 2021, the Noise Compatibility Program, and documentation of the findings. Autumn Ward is also leading the additional on-call services contracts which, to date, includes more than 20 task orders totaling nearly $500,000. The additional analyses have included supplemental noise contours, seasonal population review, aircraft profile analyses, and additional outreach support and analyses.

Snohomish County Airport/Paine Field New Airline Service Supplemental Environmental Assessment. Alaska Airlines and United Airlines. Everett, WA. *Project Manager.* 2016-2019. ESA prepared a Supplemental EA for Alaska and United Airlines in order to initiate air carrier service at Paine Field, necessitating the need for a Part 139 Certificate and Operation Specification Amendments. Primary concerns related to the increase in aircraft noise, traffic, and air quality emissions. Autumn was the Project Manager and led the EA analysis, NEPA documentation, complex public outreach including Public Workshop and Public Hearing, and response to comments.

Philadelphia International Airport, Capacity Enhancement Program Environmental Impact Statement, Philadelphia, PA. *Airport Planner.* Autumn assisted with preparation of an Environmental Impact Statement (EIS) and Record of Decision (ROD) for the proposed major airfield reconfiguration of Philadelphia International Airport. Responsibilities included technical writing and quality assurance for the Final EIS and ROD and responding to public and agency comments on the Draft EIS. She was also responsible for development of the project's Administrative Record and supported the FAA and Department of Justice throughout the litigation process.

FAA Advisory Circular 150-5050.4, Community Involvement in Airport Planning. *Airport Planner.* Advisory Circular (AC) 5050-4, *Citizen Participation in Airport Planning*, was issued on September 26, 1975, and had not been updated. Autumn assisted with the revision of this AC, which included effective measures for citizen participation in NEPA environmental processes, Airport Master Planning, the Part 150 noise compatibility process, and Part 161 access and noise restriction process.

Aspen/Pitkin County Airport Airfield Development Supplemental Environmental Assessment. Pitkin County. Aspen, CO. *Project Manager*. ESA is leading the NEPA effort to review the Proposed Project elements of the Airport Improvements Environmental Assessment that have changed since approval of the EA. The Proposed Project elements include development airfield changes including a taxiway shift, relocated Air Traffic Control Tower and ASOS, and apron expansions. Based on community interest, it is anticipated that community engagement will be a large part of the EA process.

San Antonio International Airport Part 150 Noise Exposure Map Update. San Antonio Airport System. San Antonio, TX. *Public Outreach Task Leader.* ESA completed a Noise Exposure Map (NEM) update for the San Antonio International Airport (SAT). This study evaluated the aircraft noise compatibility of SAT with the surrounding local communities. Autumn led the public outreach effort, which was the first Part 150 Study ever to conduct the public information workshops on a completely virtual platform; these meetings were conducted in both English and Spanish. Community concerns were primarily related to potential eligibility for residential acoustical treatment and shifting arrival and departure patterns and nighttime/early morning cargo operations associated with the COVID-19 pandemic.

Brian Schuster

Air Quality and Greenhouse Gas Emissions



EDUCATION

BS, Atmospheric, Oceanic, and Environmental Science, University of California, Los Angeles

17 YEARS' EXPERIENCE

PROFESSIONAL AFFILIATIONS

Association of Environmental Professionals (AEP), Active Member, 2017-present

AEP Climate Change Committee, Active Member, 2018-present

Bay Planning Coalition, Board Member, Air Quality Committee, 2025-present

National Association of Environmental Professionals (NAEP), Active Member, 2020-present

Air and Waste Management Association, Active Member, 2022-present

Brian Schuster leads ESA's Northern California Air Quality, Climate, and Acoustics practice. Since 2008, Brian has been consulting in the fields of air quality and climate change for CEQA, NEPA, and Climate Action Planning. Brian has many years of project management and technical leadership experience, often for large, complex, and controversial projects. He has authored dozens of EIR chapters for Air Quality, Climate Change, and Energy for a wide variety of projects. He develops, plans, and implements Climate Action Plans (CAPs) for public and private agencies throughout California. Brian was or is CAP project manager or project director for Los Angeles County, Sacramento County, Orange County, San Bernardino County, Riverside County, Sonoma County, Marin County, the City of Long Beach, and the City of Ontario, and has served as deputy project manager or technical lead for numerous other CAPs.

Relevant Experience

Napa County, 2025 Baseline Data Report, Napa County, CA. *Air Quality Technical Lead.* The Baseline Data Report (BDR) intends to catalog and assess baseline environmental conditions throughout Napa County on various resource topics. ESA is providing full planning and implementation support for this project, from data-gathering to report and application development for public viewing. This includes preparing administrative draft Baseline Data Report (BDR) chapters designed to support the County's General Plan Update and associated EIR. Brian is leading a team performing air quality services such as ambient monitoring summaries and an inventory of emissions estimates.

San Francisco International Airport, Recommended Airport Development Plan EIR, San Francisco, CA. *Air Quality and Greenhouse Gas Technical Lead*. Brian is currently leading a team to prepare an Air Quality Technical Report along with Air Quality and Greenhouse Gas sections for a complex EIR for SFO's next long term masterplan—the Recommended Airport Development Plan (RADP). Brian is leading a team to model construction and operational emissions of criteria pollutants, TACs, and GHGs. His team is conducting a detailed, comprehensive HRA for both construction and operational TAC exposure for all sources at SFO related to the RADP. The RADP will support the strategic development of the airport over the next two decades. ESA managed the EIR for SFO's previous 1989 masterplan (EIR certified in 1992), which served the continuous growth of the airport over the last 25 years.

San Francisco International Airport, Shoreline Protection Program Project EIR, San Francisco, CA. *Technical Lead*. Brian managed the air quality and greenhouse gas analysis for a complex EIR for SFO's Shoreline Protection Program Project, which looks to armor the approximately 8-mile coastline around SFO in order to accommodate sea-level rise through end of century. Brian led a team to model construction emissions of criteria pollutants, TACs, and GHGs. His team is conducting a detailed, comprehensive HRA for

operational TAC exposure to nearby sensitive receptors, and is preparing the Air Quality Technical Report and EIR section for the project.

San Francisco International Airport, SFO Environmental Management System and Sustainability Plan, San Francisco, CA. *Technical Analyst*. Prior to ESA, Brian supported the San Francisco International Airport (SFO) in developing their Environmental Management System (EMS) as part of the airport's Sustainability Plan. He reviewed EMS software, worked with SFO staff to develop environmental tracking parameters and metrics, provided guidance to staff on the use of the software, and presented findings and recommendations to the SFO team.

Port of San Francisco, Waterfront Plan Update Program EIR, San Francisco, CA. *Technical Lead*. Brian led a team to prepare the air quality analysis for the Port of San Francisco's Waterfront Plan Update Project, a programmatic EIR that analyzed amendments and updates the Waterfront Land Use Plan (WLUP)—the governing policy document for the Port's approximately 7.5-mile waterfront property. The Plan updates focus on advancing new goals and policies in the areas of waterfront resilience, environmental sustainability, financial strength, and continued public engagement.

El Dorado County Water Agency (EDCWA), El Dorado Water Reliability Project (WRP), CEQA Environmental Impact Report, El Dorado County, CA. *Air Quality and Greenhouse Gas Strategy.* EDCWA has applied for assignment of a 1927 priority State "area of origin" water right to the Upper American River totaling 40,000 acre-feet per year (AFY). EDCWA, working with other agencies within the American River basin, desires to put this water to beneficial use as a regional asset to meet both interim and long-term water needs within the watershed. ESA is preparing an EIR that will ultimately support a State-filing water rights application. Brian advised on the strategy for evaluating the project's air quality and greenhouse gas impacts and mitigation. He also provided senior review for the air quality and greenhouse gas chapters of the EIR.

Stonestown Development Project, San Francisco, CA. *Air Quality Technical Lead*. Brian served as the technical lead for the air quality analysis for the project, which would include up to approximately 2,930 residential units; up to 160,000 square feet of new retail; up to 200,000 square feet of office; up to approximately 100,000 square feet of hotel; approximately 53,000 square feet of cultural, institutional, and educational uses; approximately 4,000 parking spaces; 6 acres of open space; and infrastructure improvements. The EIR also analyzed one variant to the project. Brian led the preparation of the air quality EIR chapter. The analyses includes criteria pollutant emissions modeling for project construction and operations and a comprehensive project-level HRA for construction and operational TAC exposure along with a cumulative HRA for all nearby existing TAC sources.

City of San Francisco, 2012 Community-wide and Municipal GHG Inventory Verification, San Francisco, CA. *Technical Analyst*. Prior to ESA, Brian conducted third-party verification of San Francisco's 2012 community-wide GHG emissions inventory as well as its Fiscal Year (FY) 2011-2012 municipal GHG inventory. He prepared a thorough review of the inventories, identified opportunities for improvement and correction, and authored verification reports for both inventories.

U.S. Environmental Protection Agency, Zero Waste and GHG Emissions Tool, San Francisco, CA. *Project Manager and Technical Analyst*. Prior to ESA, Brian developed a custom Excel-based tool to help decision-makers select appropriate waste management options for meeting their GHG reduction goals. The tool analyzes baseline waste management characteristics and five separate strategies, including residential recycling and composting, commercial diversion, and construction and demolition debris diversion. The tool calculates the lifecycle GHG benefits of each of these strategies and allows users to adjust strategy characteristics in order to maximize GHG reductions.

Becky Urbano

Historic Resources/Section 106



PHONE: 415.896.5900

EDUCATION

M.S., Historic Preservation, Columbia University

B.A., Physics, Middlebury College

18 YEARS' EXPERIENCE

QUALIFICATIONS

Secretary of the Interior's Professional Qualifications Standards for Architectural History

PROFESSIONAL AFFILIATIONS

Sacred Sites International (Board Member)

California Preservation Foundation

National Trust for Historic Places

Oakland Heritage Alliance

AWARDS

California Preservation Foundation Design Award (2009, 2015)

California Legislative Recognition (2014)

Governors' Preservation Award (2010)

Los Angeles Conservancy Award (2009)

Becky offers successful project management strategies for complex resource management issues. She has a solid background in materials science, on-site investigations, compliance regulation requirements (CEQA, NEPA, Section 106, Section 110, etc.), and environmental review procedures at the local, state, and federal levels. Through her years of work in California, Becky has extensive knowledge of the wide range of local archives, historic resources, and regional development patterns. Becky currently leads ESA's Northern California Architectural History team.

Relevant Experience

Lake Tahoe Airport, TVL TRPA/CEQA Documentation, South Lake Tahoe, CA. *Architectural Historian.* Becky prepared a historic resource evaluation of the airport facility and completed relevant portions of the CEQA documentation.

SFO Environmental Review On Call, San Francisco, CA. *Technical Lead and Architectural Historian.* ESA currently provides environmental consulting services for CEQA, NEPA, Section 106, and local planning processing. Becky is responsible for all services related to architectural resources and environmental review. Projects range from single structures to campus-wide projects, critical infrastructure to community outreach and compliance. Working closely with SFO staff, ESA assists with technical studies as well as agency consultation for both local and federal agencies.

SFO Noise Improvement Program Section 106 Compliance, various. *Technical Lead and Architectural Historian.* To mitigate airport-related noise in residential and commercial neighborhoods surrounding San Francisco Airport, ESA conducts regular Section 106 compliance documentation in support of the FAA-funding Noise Improvement Program at SFO. Becky leads a team of architectural historians to conduct field surveys, archival research, and evaluations of historical significance against the requirements for the National Register of Historic Places. All of ESA's compliance reports have received concurrence with FAA review on the initial submission, greatly reducing the timeline for SFO to release funds for program implementation.

Napa County, 2025 Baseline Data Report, Napa County, CA. *Technical Lead and Architectural Historian.* The Baseline Data Report (BDR) intends to catalog and assess baseline environmental conditions throughout Napa County on various resource topics. ESA is providing full planning and implementation support for this project, from data-gathering to report and application development for public viewing. This includes preparing administrative draft Baseline Data Report (BDR) chapters designed to support the County's General Plan Update and associated EIR. Becky is leading a team providing historical resources which includes records searches and policy updates.

SFO Shoreline Protection Plan CEQA, San Francisco, CA. *Senior Technical and QA/QC Review*. ESA is currently managing a complex EIR for SFO's Shoreline Protection Program Project. Becky manages the archtiectural history team completing all technical

documentation, assessments, and document preparation related to architectural resouces potentially impacted by the project.

Section 106 Support for the Environmental Assessment of the RNAV (GPS) Runway 4L approach procedure at Boston Logan International Airport, MA. *Technical Lead.* As a member of the RoVolus project team, ESA is assisting the Federal Aviation Administration in preparing an Environmental Assessment for the implementation of an approach procedure into Runway 4L at Boston Logan International Airport. Becky provides technical support for Section 106 consultation efforts. This includes providing adjunct support to the FAA and project team with regard to architectural resources, Section 106 procedures, and ongoing consultation between SHPO and the FAA.

Amazon Prime Air, Environmental Assessments (EAs) for Commercial Drone Delivery, Various Locations. ESA is currently assisting Amazon Prime Air to prepare EAs, in accordance with the National Environmental Policy Act, so that they can secure Part 135 Operations Specification approval to conduct commercial drone delivery services. The scope of environmental analyses includes detailed assessments of potential impacts to biological resources, historic resources, noise and land use, Section 4(f) properties, and environmental justice communities. Agency consultation efforts include a wide variety of state and federal regulatory agencies, including state and tribal historic preservation offices, FWS, and state coastal zone management agencies.

Port of San Francisco Waterfront Land Use Plan Update EIR, San Francisco, CA. *Senior Technical and QA/QC Review.* Working with the Port of San Francisco and the City and County of San Francisco, ESA is preparing a programmatic level EIR for the 2019 update to the Port of San Francisco Waterfront Land Use Plan. This project encompasses over seven miles of shoreline and adjacent Port-owned property, including dozens of historic resources. Becky oversees the team of architectural historians preparing the relevant portions of the EIR and is responsible for technical review and quality control of that work.

SFPUC Vista Grande Tunnel and Canal HAER Documentation, San Francisco, CA. *Technical Lead.* In compliance with a Memorandum of Agreement between SFPUC, Daly City, Golden Gate National Recreation Area (GGNRA), and the National Park Service (NPS), ESA is preparing a Historic American Engineering Record (HAER) for the 1896 Vista Grande Tunnel and Canal in San Francisco. Becky is the lead architectural historian on the project which includes consultation between two federal agencies (GGNRA and NPS) and agencies from two cities (SFPUC and Daly City Public Works). Develop of the HAER package includes preparing a submittal package that relies on existing documentation to cut costs and streamline production, as well as creation of new photographic and descriptive documentation to meet the HAER program requirements as stipulated by the Library of Congress.

Historic Stone Ranch Building Stabilization Guide, Fallon Naval Air Station, NV and China Lake Naval Air Weapon Station, CA. *Architectural Historian / Architectural Conservator. Dixie Valley, Nevada was once part of a small but resilient group of 19th century homesteaders who arrived in Nevada via the Carson River route of the California Trail. Several remnants of their early ranch buildings, constructed of stone, lime-based mortar, and limited timbering still exist deep in the valley. Today, the area is subject to vibration from frequent sonic booms resulting from high-speed flight training originating from the nearby Fallon Naval Air Station. Under an as-needed historic preservation contract with the General Services Administration, Becky worked with a small team of architects to document and assess the conditions of one homesteading site for the purposes of developing a stabilization guide for use by Fallon NAS cultural resources staff.*

Matthew Brennan, PhD, PE

Senior Engineering Hydrologist



EDUCATION

PhD, and MS, Civil and Environmental Engineering, Stanford University, Stanford, CA

BS, Civil and Environmental Engineering, Princeton University

20 YEARS' EXPERIENCE

CERTIFICATIONS/ REGISTRATION

Civil Engineer, State of California, C72551

Matt is an engineering hydrologist with more than 20 years specializing in estuarine management and restoration. His strengths include evaluating and designing management and restoration scenarios from hydrologic and geomorphic perspectives to support ecosystem sustainability. In conjunction with these technical skills, Matt's management experience includes active client communication, integrating input from expert advisors, overseeing and providing senior review of technical tasks.

Relevant Experience

San Francisco International Airport, Shoreline Protection Program, Millbrae, CA. *Task Lead – Coastal Hydraulics.* SFO is planning shoreline flood protection infrastructure to protect its facilities from coastal flooding increased by sea level rise while also maintain airfield operations. This requires new shoreline flood barriers and placing fill in the Bay. Matt led the development and application of hydrodynamic and wave models to assess the potential impacts of the project on Bay habitats and adjoining shoreline. These modeling results serve as the technical basis for CEQA impacts analysis in the Environmental Impact Report. In addition, Matt has led the permitting and design team's Engineering Criteria Review Board efforts for Bay Conservation and Development Commission permitting.

California Department of Water Resources, Lookout Slough Tidal Restoration and Flood Improvement Project, Sacramento-San Joaquin Delta, CA. *Hydrodynamics and Water Quality.* This project aims to create approximately 3,000 acres of natural freshwater tidal marsh in the Cache Slough Complex in the northern Sacramento-San Joaquin Delta and increase the regional flood conveyance capacity of the Yolo Bypass. ESA provided services include 2D hydrodynamic analysis and vegetation colonization surveys to support restoration design, permitting and crediting; 2D hydraulic and wind-wave analyses to support the project team's levee design, erosion countermeasure design, and permitting through the CVFPB encroachment permit and USACE Section 408 permitting process; preparation of the Final EIR and Final EA. In addition to serving as a water quality subject matter expert during CEQA public comment period, Matt also led the project's two-dimensional wind-wave runup analysis, the results of which were used to inform design of nature-based features (HPTRM erosion protection) that saved the project over $4 million in construction cost and significantly reduced impacts during construction.

California Department of Water Resources, Grizzly Slough Floodplain Restoration Project, Thornton, CA. *Hydraulic Modeling Lead.* The Grizzly Slough Floodplain Restoration Project at the Cosumnes River Preserve will restore wetland and riparian habitat by reintroducing tidal and seasonal flooding and establishing native vegetation. The site (489 acres) is owned by DWR and managed by the Preserve. ESA is working with DWR and Wagner & Bonsignore Engineers to provide restoration planning, CEQA documentation, environmental permitting, and engineering design. The restoration

design includes elements to avoid impacts expected to be common to other future Delta restorations: special status species that currently use the site; potential for fish stranding; on-site infrastructure for power and gas; and real estate inholdings for ecosystem mitigation and mineral rights. ESA also assisted in with a successful Proposition 1 Grant Application. Matt designed and oversaw the collection of hydrologic data during the large floods of January 2017, and then led the development of the site's 2D hydrodynamic model. After the model was calibrated with the 2017 data, Matt collaborated with the project's civil engineers and biologists to characterize the restoration's effect on hydraulics and habitat. This modeling informed the design of tidal channels, a setback levee, an overflow weir, and culverts, as well as characterized the hydrology under restored conditions that determine the site's future vegetation, habitats, and uplands agricultural uses. Matt has also participated in outreach to neighboring landowners and Central Valley Flood Protection Board.

California State Coastal Conservancy, South Bay Salt Pond Restoration Project, San Francisco Bay, CA. *Hydrodynamic Modeler*. California State Coastal Conservancy, South Bay Salt Pond Restoration Project, San Francisco Bay, CA. Hydrodynamic Modeler. The project consists of restoring 15,000 acres of former salt ponds to tidal action, enhancing wetland habitat and providing flood protection. Matt performed DELFT3D hydrodynamic modeling for NEPA/CEQA, and assessed the long-term impacts on water levels, salinity, tidal prism and habitat. Further particle transport modeling optimized specific project features to meet the multiple criteria of sediment management, water quality and ecological habitat. In addition, Matt provided hydraulic analysis and design guidance to inform adaptive management of shoreline erosion.

Solano County Water Agency, Dissolved Organic Carbon (DOC) in Cache Slough: Assessing Potential Wetlands Restoration Changes and Establishing Baseline Monitoring, Sacramento-San Joaquin Delta, CA. *Project Manager*. Provided a scoping assessment of potential increases in DOC delivery to Barker Slough Pumping Plant as a result of proposed large-scale wetlands restoration within the Cache Slough region of the Delta. In light of the potential impacts, aided client in developing a DOC monitoring plan to establish baseline conditions for detecting possible future changes resulting from restoration.

Solano County Water Agency, Barker Slough Hydrodynamic Study, Sacramento-San Joaquin Delta, CA. Dr. Brennan assessed water quality impacts to the Barker Slough Pumping Plant using a two-dimensional hydrodynamic model of a system influenced by both riverine and tidal forcing. Quantified the relative contribution of different water sources and the flushing times for a range of hydrologic scenarios.

City of Oakland, Oakland A's Waterfront Ballpark District EIR, Oakland, CA. *Coastal Engineer*. ESA prepared an EIR to analyze potential impacts of development of the Oakland Athletics' proposed new baseball stadium and mixed-use development at the Port of Oakland. The project site is 55 acres and is immediately adjacent and to the west of the Oakland ferry terminal. ESA's team of technical experts analyzed a full range of environmental issues for the EIR, as well as peer-reviewed technical studies prepared by others. ESA worked extensively with Port of Oakland staff throughout the process to ensure the Port's input, as a Responsible Agency for the project, was thoroughly incorporated. The work involved detailed transportation and air quality analyses, potential impacts on Port operations, and consideration of off-site transportation and connectivity improvements. Potential conflicts between recreational watercraft, commercial vessels, and ferries in the channel were also assessed. The EIR was certified in February 2022. After characterizing the existing site's vulnerability to flooding, Matt analyzed the proposed project for sea-level rise resilience to coastal flooding, stormwater management, and groundwater rise.

Chris Nottoli, INCE

Noise (Aviation)



EDUCATION

B.S., Acoustics, Columbia College Chicago, 2014

9 YEARS' EXPERIENCE

CERTIFICATIONS/ REGISTRATION

Institute of Noise Control Engineering Certification, INCE-USA, 2023

Private Pilot, ASEL, 2018, No Expiration

Instrument Rating, ASEL, Anticipated 2023

PROFESSIONAL AFFILIATIONS

Member, Federal Aviation Administration (FAA), Aviation Environmental Design Tool (AEDT) User Review Group

Member, Airport Consultants Council (ACC), Planning and Environmental

Chris Nottoli has 10 years' of experience in modeling aviation and surface transportation noise. He serves as the technical lead of ESA's aircraft noise modeling group. Chris has worked on over 40 domestic and international airports supporting the needs of the client and community. He has advanced knowledge of aviation practices and environmental concepts of aircraft noise modeling. Chris has served as technical lead, project manager, quality control manager, and noise modeler on Environmental Impact Statements (EIS), Environmental Assessments (EA), Noise Compatibility Programs (NCP) and various special studies in aviation, residential sound insulation, and highway noise projects. He is an expert user of regulatory software and industry standard programs including Aviation Environmental Design Tool (AEDT), Traffic Noise Model (TNM), Microsoft SQL, and ESRI ArcGIS Pro.

Recent Relevant Experience

Los Angeles World Airports (LAWA), Quarterly Noise Contours, Los Angeles, CA. *Task Manager and Modeler.* Chris oversaw the collection of radar data for Los Angeles International Airport (LAX) and Van Nuys Airport (VNY) for bulk insertion into an MSSQL database and then into the AEDT. Chris coordinated with the data supplier, Envirosuite, to correct an atypical rotation in the radar data. An appropriate counter rotation was determined and applied to the radar tracks prior to running the AEDT. The Community Noise Equivalent Level (CNEL) contours were sent to LAWA for inclusion in the California State Airport Noise Standard Quarterly Report. LAWA must complete and submit the quarterly reports to the Caltrans Division of Aeronautics to satisfy the requirements of Section 5012 of Title 21 of the California Code of Regulations (21 CCR § 5012).

Port of Oakland, Quarterly Noise Reports, Oakland, CA. *Task Manager.* Chris coordinated with the Port of Oakland to obtain quarterly noise and radar data and delegated data analysis and modeling tasks to other staff. Chris ensured all radar flight tracks, runway use, and AEDT aircraft assignments were accurate and bulk inserted into AEDT. The daily noise measurement data were analyzed to determine the monthly noise level at each NMT. The monthly data was included in the 12-month running average and compared against the modeled CNEL results for each NMT. Chris was also responsible for the quality control of the technical report that outlined the inputs used in the AEDT as well as the noise model results. The Port of Oakland must complete and submit the quarterly reports to Caltrans Division of Aeronautics to satisfy the requirements of 21 CCR § 5012.

Naples Airport Authority, Naples Airport Noise Compatibility Program (NCP), Naples, FL (2022-present). *Noise Modeling Lead.* Chris developed and analyzed potential noise abatement measures with input from stakeholders and the community. Measures include noise modeling of offset approaches, varying approach glide slopes, and evaluating the effects of air traffic hold downs on arriving and departing aircraft operations. The Naples NCP is scheduled for completion in early 2023.

Chris Nottoli, INCE (Continued)

Noise (Aviation)

Allegheny County Airport Authority (ACAA), Pittsburg International Airport (PIT) Concourse A Voluntary Airport Low Emission (VALE) Program, Pittsburg, PA. *Noise Modeling Lead.* Chris assisted with developing the fleet mix and operational calculations for air quality modeling. Chris also assisted with the documentation required for submittal to the FAA for approval. ACAA sought out funding through the VALE program that would support the purchase and installation of 17 electric point-of-use pre-conditioned air (PCA) units in Concourse A of PIT. This request was the third and final VALE application for PIT what would award $9 million in federal funding to supply electrification equipment at most gates throughout each terminal, replacing the existing units that were installed over 30 years ago.

WSP, San Antonio International Airport Airfield Alternative, San Antonio, TX. *Noise Modeling Lead.* Chris developed the noise modeling inputs and assisted in preparing the technical memorandum for the future 2040 airport layout plan. As part of the noise exposure map update completed in 2021, the City of San Antonio Aviation Department is evaluating noise exposure from the expansion of Runway 13R/31L and Runway 13L/31R. The expansion consists of adding 1,247- and 340-foot displaced threshold on Runway 13R and Runway 31L, respectively. The Runway 13L threshold is being moved to extend the 5,519-foot runway to 8,500 feet.

Federal Aviation Administration (FAA), Written Re-Evaluation of the O'Hare Modernization Environmental Impact Statement or the Interim Fly Quiet Runway Rotation Plan, Chicago, IL. *Noise Modeling Lead.* Chris collaborated with FAA air traffic control and Airport District Office representatives to develop representative modeled flight tracks. He led the noise modeling effort and assisted in the development of a comprehensive environmental justice analysis for three scenarios. The program proposed temporary changes in the nighttime runway use at Chicago O'Hare International Airport. The project team assisted the FAA and the Chicago Department of Aviation in determining potential environmental impacts of the Proposed Interim Fly Quiet Runway Rotation Program.

Palm Beach International Airport (PBI), 2018 Annual Noise Report, West Palm Beach, FL. *Project Manager.* Chris provided oversight and guidance of the production modeled flight tracks, aircraft fleet mix, and runway use as well as the development of the 2018 annual PBI noise contour. Chris was responsible for preparing the technical report, which outlined the inputs used in the noise model, as well as the investigation into impacted sensitive receptors and land uses. PBI's annual noise study develops the noise contours for the prior year. The Palm Beach County Department of Airports uses this information to make informed decisions and to have ongoing knowledge of which communities are being affected by PBI's operations.

City of Newport Beach, John Wayne Airport Noise Abatement Departure Procedure (NADP) Study, Newport Beach, CA. *Lead Analyst.* Chris modeled and analyzed noise measurement data related to numerous NADP configurations. He assisted in the coordination with airport-based airlines to gather and review noise measurement data to validate noise model results. The project team reviewed the single event level SEL noise contours of all the existing NADPs as well as NADP alternatives, which included reduced thrust departures with varying altitudes at which the pilot would reconfigure flap settings. The analysis led to the implementation of a new NADP at John Wayne Airport.

PBI, Noise Monitoring Terminal (NMT) Evaluation, West Palm Beach, FL. *Assistant Project Manager/Analyst.* Chris developed and implemented a noise measurement protocol to assess aircraft noise events at several location in West Palm Beach. The data was analyzed to determine parameters to capture aircraft noise events and to identify an alternative location for one of PBI's NMTs. The Palm Beach County Department of Airports needed to investigate the relocation of one NMT along Southern Boulevard. Adjacent roadway noise was contaminating the results of aircraft noise events at this location. The analysis provided recommendations for new NMT locations.

Luke Evans

Socioeconomics & Environmental Justice



EDUCATION

MS, Environmental Policy and Natural Resource Management, University of Arizona, Tucson

BA, History and Religious Studies, University of Arizona, Tucson

25 YEARS' EXPERIENCE

Luke Evans has developed a reputation throughout his 25-year career for being able to successfully manage a wide range of project types. He has managed large-scale residential, commercial, and industrial development projects in urban and rural settings, military installation master plans, utility-scale solar developments, communication site networks, and light rail transportation network extensions in urban areas. His multi-disciplinary training allows him to work within a broad range of environmental fields, including biological and cultural resources management, wildland fire management, environmental conflict resolution, and general land use policy. Luke has additional expertise in the analysis and presentation of technical environmental and natural resource policy and legislation from his time serving on a legislative staff.

Relevant Experience

Sacramento Regional Housing Authority/Sacramento Regional Transit District, Twin Rivers Transit-Oriented Development and Dos Rios Light Rail Station Project, Sacramento County, CA. *Project Manager.* Luke successfully led a complex environmental compliance effort for a combined NEPA/CEQA document that evaluated the effects of a rehabilitated and expanded affordable housing project and construction and operation of RT's proposed Dos Rios light rail station near the intersection of North 12th Street and Richards Boulevard. The Department of Housing and Urban Development was the federal lead agency, and the City of Sacramento and RT served as cooperating local lead agencies. The Federal Transit Administration also used the combined NEPA/CEQA document to prepare its own findings with respect to the light rail station. Issues associated with the project were highly complex, including property acquisition, environmental justice, endangered species, cultural resources, protected trees, and site drainage and flooding.

County of El Dorado, Dorado Oaks Subdivision and State Route 49 Intersection Project, El Dorado County, CA. *Project Manager*. Luke is currently leading a multi-disciplinary team on the EIR effort for a controversial subdivision project in unincorporated El Dorado County, which also includes construction of a roundabout intersection on State Route 49. The EIR will ultimately serve as the CEQA document for both the County's consideration of the subdivision project, and also Caltrans' consideration of the proposed improvements to the State Highway System. The subdivision component proposes construction of 374 residential units and associated infrastructure on a 142-acre raw land site. The intersection improvements will construct a roundabout at the subdivision project's frontage on State Route 49. Since the project involves a significant undertaking on a State Highway, the EIR effort will require preparation of various reports for Caltrans relating to historic resources, biological resources and wetlands, hazardous materials, and traffic. Issues associated with the overall project include impacts to a designated historic landmark, a Gold Rush-era

cemetery, sensitive biological resources, wetlands, Tribal Cultural Resources, and traffic. Other issues of concern include the project's location with a fire hazard severity zone and emergency evacuation.

County of Sacramento, Grandpark Specific Plan EIR, Sacramento County, CA. *Project Manager.* Luke is currently serving as project manager for preparation of a program EIR for a 5,600-acre mixed use project in unincorporated Sacramento County. The Specific Plan envisions the construction of ±22,000 residential units, ±400 acres of commercial uses, and ±2,000 acres of parks and open space. Issues of concern include transportation and traffic, drainage and hydrology, consistency with an existing Habitat Conservation Plan, nearby Sacramento international Airport operations, and conversion of prime agricultural land.

County of Sacramento, Upper Westside Specific Plan EIR, Sacramento, CA. *Project Director*. Luke is overseeing the preparation of an EIR for a large mixed-use community that encompass approximately 2,066 acres in the unincorporated Natomas community of Sacramento County, approximately 3.5 miles from downtown Sacramento. The project consists of 9,356 residential units covering approximately 852 acres, about 3.1 million square feet of commercial use covering approximately 136 acres, about 146 acres of educational use, and about 74 acres pf recreational use. Key environmental issues being addressed in the EIR include aesthetics, agricultural resources, air quality, biological resources, cultural resources and tribal cultural resources, global climate change, and traffic and circulation.

County of Placer, The Park at Granite Bay Focused EIR, Placer County, CA. *Senior Advisor*. Luke acted as senior advisor tasked with completing a Focused Environmental Impact Report and getting it out for public circulation. This task involved careful coordination between the project applicant and County staff, and facilitating negotiations between the two parties. Issues of concern for the project included strong community opposition to the project, consistency with adopted General and Community Plans and area zoning, hydrology and drainage, noise, aesthetics, and traffic.

County of Marin, Donahue Highlands Master Plan, Marin County, CA. *Project Manager***.** Luke served as project manager for preparation of an EIR for a proposed master plan development in an unincorporated portion of Marin County. The applicant proposed to construct 18 residences on a ridgeline overlooking the City of Sausalito. The site lies adjacent to the Golden Gate National Recreation Area. ESA's scope has also included preparation of a comprehensive constraints analysis prior to initiation of the EIR, covering topics such as aesthetics, biological and cultural resources, geology and soils (landslides), hydrology, and traffic. The project was uniquely controversial, as it would develop one of the last remaining ridgelines in southern Marin County.

County of Napa, Inn at the Abbey EIR, Napa, CA. *Senior Reviewer, Wildfire*. ESA is preparing an EIR for development of a 79-room hotel in multiple buildings on a 15-acre site owned by Jackson Family Vineyards north of St. Helena in unincorporated Napa County. The project would preserve an existing stone building (currently a winery/restaurant) and demolish other structures on the site with the exception of six residential dwelling units, which would be used for employee housing. Luke reviewed the EIR's Wildfire chapter for quality, made revisions and corrections, and strengthened the section's CEQA defensibility.

Michael Burns, CHG, CEG, PG, QSD

Utilities & Service Systems



EDUCATION

BS, Geology, San José State University, 1980

30+ YEARS' EXPERIENCE

CERTIFICATIONS/ REGISTRATION

Certified Hydrogeologist (CHG), No.280, CA, 1995

Certified Engineering Geologist (CEG), No.1846, CA, 1993

Professional Geologist (PG), No.4532, CA, 1989

Qualified SWPPP Developer (QSD) #PG4532

PROFESSIONAL AFFILIATIONS

Bay Planning Coalition, Dredging and Beneficial Reuse Committee

Michael Burns is a highly skilled and effective project manager and technical analyst with more than 30 years of experience in the environmental and geological sciences. He provides expert services in CEQA and NEPA planning and permitting, site characterization, water quality investigations, remedial investigation/feasibility studies (RI/FS), waste management, litigation support, property assessments, development and redevelopment, soil and groundwater remediation, and groundwater banking. His projects include municipal and regional water supply, industrial and manufacturing facilities, general plan updates, airports, levees, landfills, refineries, research and development facilities, hazardous waste management, vineyards, and commercial properties.

Relevant Experience

San Francisco International Airport (SFO), West of Bayshore Project, San Francisco, CA. *Hazardous Materials Analyst and Hydrogeologist*. As part of ongoing flood maintenance, SFO periodically removes accumulated sediment and vegetation from drainage channels along the west side of the Bayshore Freeway. Michael conducted a sediment sampling program to identify appropriate recycling or disposal of the removed sediment, and to characterize the concentrations of chemicals in sediment being transported from the City of Millbrae stormwater system into said drainage channels. Key issues included evaluating whether the levels of chemicals in sediment exceed ecological regulatory action levels.

San Francisco International Airport (SFO), CA. *Hazardous Materials Analyst and Hydrogeologist.* Michael has provided services for the following SFO projects:

SFO South Airport Boulevard Phase I Environmental Site Assessment and Phase II Site Investigation. *Task Manager.* Michael conducted a Phase I environmental site assessment for this northern street section of SFO for upgrades to current road standards. The Phase 1 assessment was conducted in general accordance with the ASTM 1527 standard. The assessment included research of historical and regulatory agency records, interviews, and a site inspection. Key issues included the degraded pressure-treated wood posts and guardrails along pone portion of the road. Michael conducted sampling of soil beneath the guardrails and determined that soil had not been contaminated with wood preservative chemicals. However, the soil is contaminated with lead from historical use of leaded gasoline and will require management as hazardous waste.

SFO North Field Road Parking Area Phase II Site Investigation. *Task Manager.* Michael conducted a Phase II drilling and soil sampling investigation for this northern portion of SFO to investigate whether redevelopment of the area might encounter contaminated soil from historical uses. The investigation consisted of six soil borings, the collection of various soil samples, and the analysis for petroleum hydrocarbons and metals. The results were compared to regulatory action levels and determined that soil had not been contaminated above actin levels.

SFO West Field Cargo Area Phase I Environmental Site Assessment. *Task Manager.* Michael conducted a Phase I environmental site assessment for this western portion of SFO for the redevelopment of airport cargo and support areas. The Phase 1 assessment was conducted in general accordance with the ASTM 1527 standard. The assessment included research of historical and regulatory agency records, interviews, and a site inspection. Key issues included fuel and oil releases from former USTs, and former and current aircraft loading uses that could affect redevelopment of the area.

SFO Boarding Area H Phase I Environmental Site Assessment. *Task Manager.* Michael conducted a Phase I environmental site assessment for this western portion of SFO for the redevelopment of airport cargo and support areas. The Phase 1 assessment was conducted in general accordance with the ASTM 1527 standard. The assessment included research of historical and regulatory agency records, interviews, and a site inspection. Key issues included fuel and oil releases from former and current aircraft loading uses that could affect redevelopment of the area.

SFO Shoreline Protection Program Project. SFO proposes to implement the SFO Shoreline Protection Program to address flood protection and future sea level rise for the expected lifespan of the shoreline improvements. It will install new shoreline protection infrastructure that would comply with current Federal Emergency Management Administration requirements for flood protection and incorporate protection for future sea level rise. The project will construct shoreline protection improvements to eliminate the probability of substantial inundation at the Airport until 2085. Michael analyzed hazards and hazardous materials issues relative to the proposed project.

Landrum & Brown and Marin County, Gnoss Field Environmental Impact Statement/Environmental Impact Report, Novato, CA. *Project Manager, Hydrogeologist, Mineral Resources, and Hazardous Materials Analyst*. Michael provided planning services to assist Marin County and the FAA with NEPA and CEQA analysis for the proposed 1,100-foot extension of Runway 13/31 of the Gnoss Field Airport into a disturbed wetland and former agricultural area. A combined Environmental Impact Statement/Environmental Impact Report was prepared to comply with NEPA and CEQA, respectively, and described and analyzed the affected environment and potential impacts of the proposed project within the affected area. Successful extension of Runway 13/31 will enable Gnoss Field Airport to handle modern aircraft and improve the safety of the airport.

Priya Finnemore

Regulatory Permitting



EDUCATION

MA, Geography, emphasis in Coastal Geomorphology, UCLA

BA, Geography, emphasis in Physical Geography, UCLA

24 YEARS' EXPERIENCE

TRAINING

Wetland Delineation PROSPECT course, USACE

USACE Courses: Endangered Species Act/Essential Fish Habitat (ESA/EFH); Hydrogeomorphic Method (HGM), and Scope of Analysis

Continuing Legal Education (CLE) – California Wetlands – Insight from Policymakers & Regulators (2014, 2016)

Priya Finnemore is a senior Regulatory Specialist and Project Manager with more than 24 years experience providing guidance and representation on the suite of environmental permits required for projects involving waters, wetlands, and associated resources at the state and federal level. Priya started her career as a federal regulator, with more than 6 years as a Regulator with the U.S. Army Corps of Engineers (USACE), processing permits under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, as well as conducting interagency coordination under the many related state and federal environmental laws. As a consultant, Priya has prepared and negotiated permits and approvals for a wide range of project types and scales, in accordance with Sections 404 and 401 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, Section 1600 of the California Fish and Game Code, the Porter-Cologne Act, Section 7 of the federal Endangered Species Act, Sections 2080/1 of the California Endangered Species Act, Section 106 of the National Historic Preservation Act, the Magnuson-Stevens Fishery Conservation and Management Act, and the Coastal Zone Management Act. Priya also has experience navigating the more complex Individual Permit process (for the USACE), including preparation of alternatives analyses in compliance with the 404(b)(1) Guidelines. Priya has also prepared documentation for environmental impact assessment and mitigation measures in compliance with CEQA/ NEPA.

Relevant Experience

Port of San Francisco, As-Needed Environmental and Related Professional Services, City and County of San Francisco, CA. *Project Manager and Regulatory Permitting Lead.* Priya served as Project Manager and permitting lead in pursuit of required regulatory permits and authorizations for two projects under an as-needed on-call agreement between Weiss Associates and the Port of San Francisco: 1) Programmatic Permitting for Port-Wide Maintenance (which included obtaining a Regional General Permit, or RGP, specific to the Port of San Francisco's maintenance needs); and the Crane Cove Park Project (within the Pier 70 Master Plan area). Both projects required permits from the USACE, the RWQCB, and San Francisco BCDC; consultations with the USFWS and NMFS; and coordination under Section 106 of the NHPA. The RGP was designed to streamline the Port's environmental approval process for routine activities over a 5-10 year period, and required preparation of an Alternatives Analysis in compliance with the 404(b)(1) Guidelines. For both projects, Priya was involved with presentations at the USACE's monthly Interagency meetings and collaborated with Port staff to prepare and submit permit applications and supporting technical and baseline studies (including Biological Assessments and Cultural Resource Reports). As of 2017, the Port was involved in ongoing agency negotiations for the Crane Cove Park Project permits, and the Port had successfully obtained all approvals including the new RGP 22 for Port-wide Maintenance, as issued by the USACE's San Francisco District.

Priya Finnemore (Continued)

Regulatory Permitting

California Department of Transportation (Caltrans), San Francisco-Oakland Bay Bridge (SFOBB) Marine Foundation Demolition, Oakland, CA. *Permitting and Compliance Support.* Priya worked with the Kiewit Infrastructure West Co./Caltrans project team, to move this unique project forward from planning through permitting, and to implementation in the fall of 2015. Priya assisted in the preparation of a regulatory permitting Project Description for controlled implosion of the Pier E3 marine foundation as a demonstration project, and assisted in developing the Alternatives Analysis to demonstrate how the preferred controlled implosion method, an alternative to mechanical demolition, was the Least Environmentally Damaging Practicable Alternative (LEDPA) for the removal of the Pier E3 marine foundation of the SFOBB, in compliance with the Clean Water Act 404(b)(1) Guidelines. The project required a highly-complex regulatory effort, involving numerous agency jurisdictions, overlapping authorities, and a wide range of aquatic resources. In addition, the project and its associated environmental review required a high degree of technical analysis, much of which was incorporated into regulatory permitting submittals. Caltrans obtained all approvals, and successfully conducted the demonstration project in late 2015; since that time, Caltrans successfully continued this superior method for additional marine foundation removal in 2016 in 2017.

City of San Francisco and America's Cup Event Authority, 34th America's Cup EIR/EA and Permitting, San Francisco, CA. *Regulatory Permitting Specialist.* Priya contributed to the preparation of regulatory permitting applications and documentation for the multi-year, high profile America's Cup race. The project required a highly-complex regulatory effort, including numerous agency jurisdictions, overlapping authorities, and a wide range of aquatic resources. Priya assisted in the coordination of multiple Interagency Working Group meetings to solicit ongoing agency input into the project evolution and regulatory review process, leading to the successful and timely permitting of the high-profile sporting events which took place in 2012-2013.

Golden Gate Bridge and Highway Transportation District (GGBHTD), Ferry Terminal Facility Improvements, Sausalito and San Francisco, CA. *Regulatory Permit Specialist.* Priya is responsible for the preparation of permit applications and negotiating compensatory mitigation in pursuit of permits and approvals pursuant to Section 10 of the Rivers and Harbors Act (USACE), Section 401 Certification (RWQCB), the San Francisco Bay Plan and Coastal Zone Management Act (BCDC), and the Dredged Material Management Office (DMMO), for the modification and improvement of ferry terminal facilities at both Sausalito and San Francisco. Priya and the ESA team are supporting the Federal Transit Administration's coordination with the CDFW, USFWS, and NMFS, for potential project impacts to aquatic species and habitat, while ensuring consistency between permitting and the preparation of CEQA/NEPA documentation, also by the ESA team. To support project success, Priya led in the development of a creative mitigation solution for the ferry terminal projects, to address the dearth of open water/Essential Fish Habitat (and eelgrass) mitigation actions in the Bay.

East Bay Municipal Utility District (EBMUD) Happy Valley Pipeline Project, Orinda, CA. *Regulatory Permitting Specialist.* Priya was responsible for overseeing the preparation of a Biological Habitat Assessment and Jurisdictional Delineation, followed by providing comprehensive permitting services for the Happy Valley Pipeline Project, one of 20 projects analyzed in the District's Water Treatment and Transmission Improvements Program (WTTIP) EIR, for which ESA prepared a Supplemental EIR and permit applications. The project included pipeline replacement in a constrained alignment within a residential community the City of Orinda. ESA also provided additional traffic, geotechnical, and biological analyses to support modifications to the pipeline alignment and pipeline construction methods. The pipeline project was delayed in order to enable concurrent construction with an associated pumping plant facility, and is currently planned for completion in 2018.

Neal Wolfe, JD, SFP, CEM

Sustainability



EDUCATION

JD, Salmon P. Chase College of Law

MS, Biochemistry and Molecular Genetics, University of Cincinnati

22 YEARS OF EXPERIENCE

CERTIFICATIONS/ REGISTRATIONS

Sustainability Facility Professional (SFP), 2019

Certified Energy Manager (CEM), 2022

PROFESSIONAL AFFILIATIONS

Airports Council International – North America (ACI-NA)

American Association of Airport Executives (AAAE)

International Facility Management Association (IFMA)

Airport Maximo User's Group (AMUG)

U.S. Green Building Council (USGBC)

Neal has 22 years of experience in airport asset and facilities management, airfield, air quality, noise, environmental, sustainability, resilience, and energy planning. He has extensive experience in air quality and noise modeling, developing sustainability management plans, and preparing state and federal environmental grant funding opportunities. He is also highly experienced in performing geometric glint and glare studies related to solar photovoltaic arrays, developing new and analyzing existing aircraft arrival and departure procedures, and solving environmentally based scientific and legal problems. Neal's diverse experience with successfully negotiating a wide variety of airport-related technical, organizational, and relationship challenges makes him ideally suited to lead large and complex planning projects. Before his career in consulting, Neal served as a team leader in the U.S. Army Rangers, where he participated in multiple overseas deployments with distinction.

Relevant Experience

PANYNJ, Newark Liberty International Airport, End Around Taxiway/Airfield Planning, Newark, NJ. *Project Manager.* Neal served as the on-site project manager to assist PANYNJ in assessing the feasibility of constructing an end-around taxiway (EAT) at the Newark Liberty International Airport (EWR). His duties included: analyzing existing and future airfield delays and impacts associated with increasing arrival and departure rates using the Total Airspace and Airport Modeler tool; altering 14 CFR Part 77 surfaces through an FAA-approved Modification of Standards; construction cost estimating; scheduling and phasing of construction activities to minimize airfield impacts; identifying new opportunities to accommodate displaced passenger and employee parking; and assessing potential environmental impacts. The EAT project also included the development of new performance-based navigation arrival and departure procedures using the TARGETS model to enhance airfield and airspace efficiency and safety. While managing the EAT project involved solving a number of technical challenges, it was navigating the complex intra- and inter-organizational challenges that presented the greatest barriers to the project's overall success. Neal was able to build a consensus of shared understanding by bringing a wide variety of stakeholders to the table, which included: key EWR-based and PANYNJ staff, such as operations, planning, parking, and engineering; EWR air traffic control tower and New York Terminal Radar Approach Control personnel; FAA; and United Airlines.

Amazon Prime Air, EAs for Commercial Drone Delivery, Various Locations. *Project Manager.* Neal is currently assisting Amazon Prime Air to prepare EAs, in accordance with the National Environmental Policy Act (NEPA), so that they can secure Part 135 Operations Specification approval to conduct commercial drone delivery services. The scope of environmental analyses includes detailed assessments of potential impacts to biological resources, historic resources, noise and land use, Section 4(f) properties, and environmental justice communities. Agency consultation efforts include a wide variety of

state and federal regulatory agencies, including state and tribal historic preservation offices, U.S. Fish and Wildlife Service (FWS), and state coastal zone management agencies. Because noise emissions from drones have not been certificated by FAA, he led a team of acoustic experts to establish noise levels and sound exposure. Neal successfully secured FONSI/RODs for drone projects at College Station, Texas, and Tolleson, Arizona, in 2022 and 2024, and is actively working with Prime Air at more than 30 other locations across the country.

City/County of San Francisco, Sustainability Management Plan, San Francisco, CA. *Technical Lead.* Neal led the data collection and technical analysis effort that served as the foundation for the sustainability management plan for the San Francisco International Airport (SFO). He was also instrumental in the ideation of novel and cutting-edge solutions to address priorities for energy, emissions, and waste reductions, many of which were ultimately implemented in subsequent planning efforts, as documented in SFO's Zero Waste, Net Zero Energy, Zero Net Carbon plans.

City of San Jose, Sustainability Management Plan, San Jose, CA. *Technical Lead.* Neal led the effort to collect and analyze a comprehensive set of data related to utility and resource consumption and disposal at the San Jose Mineta International Airport (SJC), which he then used to define targets and set goals for performance for energy, carbon emissions, and solid/organic waste management. He was also an active leader in the stakeholder engagement process, which included outreach sessions with internal staff, tenants, and local officials.

Ontario International Airport Authority (OIAA), Sustainability Program Development, Ontario, CA. *Project Manager.* Neal is currently assisting OIAA to develop a comprehensive suite of initiatives to integrate sustainability and resilience-based projects at the Ontario International Airport (ONT). More than two dozen conceptual project ideas have been developed and analyzed, which include projects that reduce carbon emissions, conserve energy, transition conventional vehicles to electric, increase employee and passenger well-being, and promote green purchasing and leasing. Captured in the Environmental and Sustainability Opportunities Guidebook, the projects are assessed based on potential viability, capital and maintenance costs, environmental benefits, and alignment with current and proposed capital projects. Neal will also be assisting with the development of a "scoring" rubric that can be used to assess capital projects and track long-term commitment and success of OIAA priorities.

Broward County Aviation Department (BCAD), Environmental Planning and Acoustical Consulting Services, Fort Lauderdale, FL. *Project Manager for Sustainability and Resilience Planning.* Neal is currently assisting BCAD in developing a series of initiatives intended to increase the sustainability and resilience of the Fort Lauderdale-Hollywood International Airport (FLL) and North Perry Airport (HWO). As part of their sustainability planning efforts, BCAD is seeking closer alignment with the local and regional planning efforts to effectively address the impacts associated with climate change and ensure operational resilience. Neal is assisting the organization in identifying risks and threats to all critical lines of airport business, including planning, maintenance, operations, security, finance, human resources, and environmental. As these risks and vulnerabilities are clearly identified, he will be working with departmental managers to effectively address them through targeted risk control plans. Other projects he is leading include a comprehensive solar PV master plan study for both FLL and HWO, Airport Carbon Accreditation Level 1 certification for both FLL and HWO, and campus-wide ASHRAE Level 2 energy audits for all of FLL's facilities. The results of the solar study and energy audits will help BCAD better inform their capital improvement plan priorities by ensuring that funding is allocated to projects that most effectively enhance operational resilience. To ensure alignment with Broward County and BCAD strategic priorities, Neal has facilitated discussions with external stakeholders and led numerous sustainability and resilience working group sessions to ensure all internal stakeholder concerns are heard and addressed.

Frank (Eryn) Pimentel, GISP

GIS



EDUCATION

BA, Geography, Humboldt State University

Certificate of Study, GIS and Remote Sensing, Humboldt State University

BA, Art, Humboldt State University

17 YEARS' EXPERIENCE

CERTIFICATIONS/ REGISTRATION

GIS Professional (GISP) Certification, GIS Certification Institute, 2014

PROFESSIONAL AFFILIATIONS

North American Cartographic Information Society

Eryn Pimentel is a GIS analyst whose expertise lies in spatial analysis, map design, and production. His experience centers primarily on visualizing spatial data using digital and manual drafting techniques. Eryn uses a variety of systems and software, including Esri ArcGIS, Adobe Creative Suite, Google products, and GPS. His project work has covered subjects including land use planning, biological resources, parks and recreation, development, energy, transportation, restoration, water resources, and environmental impact analyses, primarily in California. Eryn's interests include cartography and human geography.

Relevant Experience

San Francisco International Airport (SFO), Shoreline Protection Program Project EIR, San Francisco, CA. *GIS Analyst*. Eryn is currently supporting a complex EIR for SFO's Shoreline Protection Program Project, which looks to armor the approximately 8-mile coastline around SFO in order to accommodate sea-level rise through end of century. Eryn is preparing maps and analyses for various sections of the project working closely with ESA's in-house team.

San Francisco International Airport, SFO As-Needed CEQA Services, San Francisco, CA. *GIS Analyst*. ESA is supporting the ongoing development and delivery of various CEQA addenda, technical reports, permitting documents, and other services for SFO. As GIS Analyst, Eryn is supporting these efforts with mapping, survey data collection, geospatial data management, calculations, and figure production.

Port of San Francisco, Waterfront Plan Update Project EIR or IS/MND, San Francisco, CA. *GIS Analyst*. Eryn assisted with the Port of San Francisco's Waterfront Plan Update Project, which included amendments and updates to the Waterfront Land Use Plan (WLUP)—the governing policy document for the Port's approximately 7.5-mile waterfront property. The Plan updates focus on advancing new goals and policies in the areas of waterfront resilience, environmental sustainability, financial strength, and continued public engagement. Depending on the level of updates to the Plan, the project will result in either an IS/MND or an EIR. Eryn provided mapping support for this project.

City of Sacramento, Central City Specific Plan, Sacramento, CA. *GIS Analyst.* Eryn served as the GIS analyst for the preparation of a specific plan for the Central City area of Sacramento, including the Broadway corridor. The key objectives of the specific plan were to facilitate achievement of the City's downtown housing initiative which seeks to result in the construction of 10,000 new housing units over the coming decade, as well as to create a planning regulatory framework that facilitates transit-oriented development along the City's proposed Downtown-Riverfront Streetcar project. The specific plan focuses on creating development-ready parcels in the downtown area, including CEQA coverage sufficient to support expedited housing and mixed-use construction. Eryn prepared maps

and compiled data for these efforts, as well as managed a land use survey using mobile data collection tools in an online web map environment.

Sacramento Convention Center Expansion EIR, Sacramento, CA. *GIS Analyst.* The City of Sacramento planned an expansion to the Sacramento Convention Center. ESA prepared an EIR to analyze the environmental impacts of the Convention Center expansion. Key issues considered in the analyses included land use compatibility and effects related to production of light and glare. Eryn supported this effort with mapping, mobile data collection, and spatial analyses.

Napa County, 2025 Baseline Data Report, Napa County, CA. *GIS Analyst.* The Baseline Data Report (BDR) intends to catalog and assess baseline environmental conditions throughout the Napa County on various resource topics. ESA is providing full planning and implementation support for this project, from data-gathering to report and application development for public viewing. Eryn provided GIS data management and mapping support for this effort.

Stonestown Development Project, San Francisco, CA. *GIS Analyst*. The project includes the development of nearly 3,500 residential units, new retail, office, hotel, open space, and infrastructure improvements, as well as including areas for cultural, institutional, and educational uses. The EIR analyzed one variant to the project, which included the development of the Authentic Church parcel. Under the Authentic Church Variant, the redevelopment of the 27 acres surrounding the Stonestown Galleria would be the same as the project; however, the Authentic Church parcel would be developed with an additional 150 residential units; 10,000 square feet of cultural, institutional, and educational uses; and 200 parking spaces. Eryn prepared figures and compiled data for this effort.

Downtown Railyard Venture, LLC., Sacramento Railyards Specific Plan Update, Kaiser Permanente Medical Center, Major League Soccer Stadium, & Stormwater Outfall Subsequent EIR, Sacramento, CA. *GIS Analyst*. ESA prepared a Subsequent EIR (SEIR) for the 2016 update to the Railyards Specific Plan, including consideration of a new Kaiser Permanente Medical Center and a multi-purpose soccer and entertainment stadium intended to house a new Major League Soccer franchise. An update of the specific plan for the Railyards approved in 2007, the 2016 Railyards Specific Plan Update refined the planned land uses and infrastructure that will result in the long-awaited development of the historic Sacramento Railyards. Eryn prepared figures for the SEIR concerning multi-modal circulation, noise from stadium and helicopter operations, sensitive biological issues, public services, and hazardous materials, as well as provided impact calculations for permitting of the associated stormwater outfall.

Department of Water Resources Grizzly Slough Floodplain Restoration Project. *GIS Analyst.* 2015-present.The Grizzly Slough Floodplain Restoration project is a restoration project located at the confluences of Grizzly Slough and Bear Slough with the Cosumnes River. This project has been in development for over a decade, including earlier biological resources reports by ESA, hydrology modeling conducted by PWA, and installation of the Phase 1 and Phase 2 restoration areas in the northern part of the site. Eryn is part of an interdisciplinary team reviewing the existing biotic and abiotic conditions, project goals, and resource constraints to develop a Restoration Plan that will restore riparian floodplain habitat while providing flood protection to neighboring properties. Eryn provided mapping support and spatial analyses for the baseline biological surveys, site assessment, and conceptual restoration design.



EDUCATION

Bachelor of Science, Civil Engineering, San Jose State University 1999

Bachelor of Science, Zoology, San Francisco State University 1994

21 YEARS EXPERIENCE

CERTIFICATIONS/ REGISTRATION

Registered Civil Engineer, California C 67556

Certified QSD/QSP #00726

DISCIPLINES

Civil Engineering

Project Management

Permitting

SWPPP/Stormwater Compliance

River & Wetland Restoration

Bank Stabilization

Drainage Design

Mitigation Monitoring

Carol Beahan, PE, QSD, QISP

President

Ms. Beahan is a registered civil engineer experienced in the planning, design and construction of river, wetland, and upland restoration and water quality improvement projects. She has managed multi-disciplinary teams to plan and design for drainage, water quality, recreation, habitat, and transportation improvements. Ms. Beahan has developed and implemented SWPPPs, pre- and post- construction and mitigation monitoring plans, provided hydrology, water quality and flooding analyses for master plans and transportation environmental planning documents and acquired numerous constructions permits. Areas of expertise include stormwater drainage, river, wetland and habitat restoration planning, design, and implementation; construction documents and permitting.

Relevant Experience

SWPPP/WPCP and QSD/QSP Monitoring Services, Various Counties in CA and Nevada Produced SWPPP and Water Pollution Control Plans (WPCPs) for timely approval and provided QSD/QSP monitoring services on various utility infrastructure and Caltrans highway and drainage improvement projects throughout northern California and western Nevada including Caltrans I-5 Highway Expansion in San Joaquin County, Emerald Bay and Hwy 50 Drainage Improvement Projects in El Dorado County, Diamond Valley Ranch Pipeline Project Phase 1 in Alpine County and Military Housing at Fallon Naval Air Base.

Arroyo Del Valle Pedestrian Bridge, Alameda County, CA. Managed a pedestrian bridge project that connected two important park trail systems over Arroyo Del Valle Creek in Livermore, CA. Oversaw CEQA development and adoption, hydraulic modeling and analysis and the successful completion of a FEMA CLOMR and LOMR. Managed construction plan set development, permit acquisitions and provided design support during construction. The bridge was completed and named in honor of a popular Alameda County supervisor in 2019.

Lee Vining Substation Improvements, Mono County, CA. As a subcontractor, managed SWPPP weekly site inspections on a Southern California Edison (SCE) substation upgrade project adjacent to an active creek. Inspections included identifying site specific BMPs, working with the Site representative to make repairs, provide onsite crew trainings and report to SCE via Cloud Compli software.

California Pacific Electric Company's (Calpeco) 625 and 650 Electrical Line Upgrade Project EIR/EIS/EIS, Placer County, CA. Provided the hydrology and water quality analysis in support of a combined Environmental Impact Report (EIR) and Environmental Impact Statement (EIS) under the California Public Utilities Commission, USDA Forest Service, and Tahoe Regional Planning Agency leads. The project involved several miles of new electrical utility lines within two pristine alpine watersheds and numerous creeks, drainages, and wetland crossings. Produced an approved hydrology and soils specialist report per USFS requirements and several map figures for the environmental document.

San Joaquin County General Plan Update and EIR – San Joaquin County, CA. Provided the hydrology and flooding setting and analysis for the County's General Plan update and EIR with specific emphasis on the complex network of flood

protection infrastructure that exists in the region and the continuously changing requirements resulting from recent state regulations developed in response to damaging floods that have occurred throughout the nation.

Bijou Park Creek Restoration Project, South Lake Tahoe, CA. Managing an 850-acre watershed-wide stormwater conveyance, water quality improvement and flood alleviation project for the City of South Lake Tahoe. Identified, evaluated, and developed concept designs for ten projects per City standards through field assessment, hydrologic and hydraulic analysis, and stakeholder input. Coordinated public scoping and development and ultimate adoption of the CEQA document. Currently managing final design development, NEPA and permitting.

Lower American River Resource Management Plan, Sacramento County, CA Managed the hydrology and geomorphology assessment for the Lower American River Natural Resource Management Plan released to the public in March 2021. Researched geologic and geomorphic setting, conducted field assessments, reviewed hydraulic models, produced a technical report, plan chapters and several map figures to illustrate the setting and recommended goals and policies

Marin County Parks & Open Space District – Road and Trail Management Plan & EIR, Marin County, CA. Identified and prioritized water quality improvement opportunities to be addressed in the park's master plan by evaluating mapped parameters across the 34 park preserves scattered throughout Marin County including road and trail type, placement and grade, evidence of concentrated flow or gullying, drainage crossing infrastructure, density of redundant recreational trails, and proximity to sensitive water bodies or other natural resources. Provided hydrology, geology, and soils impacts analysis for the EIR in support of the plan.

Upper Truckee River Reach 5 Restoration and Utility Reconfiguration Project, El Dorado County, CA. Managed field investigations, engineering and hydraulic analysis, and final design development and permitting for restoration of 1.5 miles of the Upper Truckee River adjacent to the South Lake Tahoe Airport. Designs included construction of over 1.5 miles of new channel, grade control structures, installation of fish habitat and complexity structures, stormwater outfalls, revegetation, water quality protection, accommodation of recreational rafting and public access, and rerouting of existing water and sewer lines.

Tolay Lake Restoration Park Master Plan and EIR, Sonoma County, CA. Provided geomorphic surveys, CAD mapping, hydrology, and hydraulic analysis in support of alternative restoration designs for Tolay Lake as part of a Park Master Plan that were compatible with the cultural preservation and recreational desires of the site. Produced hydrology and water quality sections under CEQA, managed a hydrologic & hydraulic modeling effort to assess how changes to the lake system configuration could affect conveyance and seasonal inundation and whether there were any potential flooding impacts to the neighboring properties.

STPUD B Line Pipeline Replacement Project Mitigation Monitoring, El Dorado County. Managed a mitigation monitoring effort under a three-party contract for a 2.5 mile pipeline replacement project. Conducted daily monitoring of storm water and resource protection BMPs during blasting, trenching and pipe installation activities within old growth forests, along creek crossings and SEZ and adjacent to culturally significant wagon trails. Worked closely with the project owner, landowner (USFS), regulatory agencies, and Contractor to ensure all construction activities complied with the mitigation measures established in the EIR.



YEARS OF EXPERIENCE
30

PROFESSIONAL CERTIFICATIONS
Professional Engineer, UT, ID, NV

EDUCATION
Master of Business Administration
Bachelor of Science, Civil Engineering

Kirk Nielsen, PE

Program Director

Kirk has been managing complex airport projects and programs since 1996. Prior to joining Jviation, Kirk served as Program Manager and Aeronautical Planner for the Utah Department of Transportation's Division of Aeronautics (UDOT Aeronautics). He supervised the state's airport grant program and airport development throughout Utah from 2003 to August 2012. While working for UDOT, he served as Project Manager on the State System Plan, Programmatic Sensitive Species Habitat Management Plan, and the yearly CIP.

Kirk is the Office Manager of Woolpert's St. George office. He a Project Manager and Project Liaison for Woolpert, and he coordinates all the CIPs with the states and FAA for the Jviation clients in Arizona, California, Idaho, Nevada, and Utah.

Project Experience

Lake Tahoe Airport (TVL) Master Plan, Lake Tahoe Airport—South Lake Tahoe, CA. Client Liaison. The last comprehensive airport master plan for TVL was completed in 2016. The airport sponsor contracted Woolpert to update the master plan and airport layout plan (ALP) in 2023. The update analyzed current conditions and facilities, anticipated travel demand, and identified the projects required to meet that need. Woolpert worked closely with TVL staff, the South Lake Tahoe community, the California Department of Transportation (Caltrans) Aeronautics Division, and the Federal Aviation Administration (FAA) to deliver an actionable plan that effectively guides the airport's growth.

Lake Tahoe Airport (TVL) Apron Rehabilitation – Phase V—South Lake Tahoe, CA. Project Manager. This project consisted of design and construction oversight for the reconstruction of the north general aviation ramp near Taxiway H and pavement rehabilitation on C19 and C20.

St. George Regional Airport (SGU) Runway Reconstruction—St. George, UT. Client Manager. Designed the reconstruction of the 9,300 – foot runway that was plagued with heaving due to the blue clay materials underneath the existing runway. The design required crews to excavate 5,400 feet of the existing runway's footprint to a depth of 17 feet. After that, the excavated clay was "conditioned" on-site by mixing the blue clay with water until it reached the correct moisture level. The conditioned clay was then re-poured and used to plug and prevent future heaving in the new runway.

St. George Regional Airport (SGU) Terminal Expansion, St. George Regional Airport—St. George, UT. Serving as Program Manager for the terminal expansion project, Kirk oversees the design effort that will double the size of the existing terminal and add four new gates with jet bridges. He leads a multidisciplinary delivery team that includes architects; civil, structural, and mechanical engineers (covering fire protection, HVAC, and baggage systems); interior designers; cost estimators; and a Construction Manager at Risk (CMAR).

As part of assembling the delivery team, Kirk also managed the implementation of the CMAR selection process. The project recently achieved the 50% design milestone, accompanied by a reconciled estimate between the CMAR and an independent third-party estimator. Final design completion is expected in the coming months, with construction scheduled to begin this fall.

St. George Regional Airport (SGU) Apron Layout, St. George Regional Airport—St. George, UT. Project Director responsible for overseeing layout modifications to improve aircraft movement and parking on the general aviation apron. The FBO requested these

changes to better support their growing operational needs. Tie-down configurations were revised to accommodate additional aircraft, and new taxilane markings were added to support the updated layout. Woolpert led both the design and construction phases of the project.

Carbon County Municipal Airport (PUC) Master Plan— Price, UT. Program Director who oversaw the planning efforts, which included an existing-conditions inventory, aviation activity forecasts, an airport layout plan, terminal area requirements, design studies, and an analysis of alternatives.

Elko Regional Airport (EKO) Master Plan—Elko, NV. Project Director supporting the development of a master plan for a commercial service airport serving both general aviation and commercial operations. The master plan included operations and enplanement forecasting, runway length analyses, the airport layout plan, terminal area requirements, design studies, and an alternatives analysis. In addition, the runway safety area (RSA) and obstacle-free area (OFA) were evaluated and determined to be deficient. The plan included mitigation strategies to correct these conditions.

Cedar City Regional Airport (CDC) Taxiway A, C, and Apron Rehabilitation—Cedar City, UT. Project Director. Completed the design and construction oversight for the rehabilitation of Taxiway's C pavement from the south end of the terminal ramp to Taxiway. The project also included rehabilitating the south and center apron, including pavement, drainage, and electrical design.

Cedar City Regional Airport (CDC) Terminal Apron Hardstand and Asphalt Rehabilitation and Taxiway D Pavement Maintenance—Cedar City, UT. Project Director. Completed the design and construction oversight for constructing a new concrete hardstand to be utilized for parking for Skywest and charter jets. The project required the rehabilitation of the remainder of the apron (122,135 square feet). Pavement maintenance was also completed for Taxiway D for the project.

Elko Regional Airport (EKO) Runway 5/23 Rehabilitation—Elko, NV. Client Manager. Provided design and construction services to rehabilitate Runway 5/23. The existing surface was milled and rehabilitated. Runway shoulders, 25 feet on both sides were constructed with approximately 12 inches of crushed aggregate base course and 3 inches of asphalt surface course. Lighting and signage were designed as required in the runway environment and new Runway Distance Remaining Signs (RDR's) were installed at new locations along Runway 5/23 as the current locations do not accurately reflect the displaced threshold.

Provo Airport (PVU) Runway 13/31 Rehabilitation—Provo, UT; Client/UDOT Liaison. Provided design and construction services for the rehabilitation of Runway 13/31. In order to maintain the Airport and Runway 13/31 operations to the maximum extent possible, a complex construction phasing plan was developed to mitigate the overall effect of construction activities to the Airport. The project included demolition, asphalt paving, striping, and electrical work of the entire runway, and was completed in five phases.

Elko Regional Airport (EKO) Airfield Lighting and Signage—Elko, NV. Client Manager. This project consisted of replacing existing runway and taxiway guidance signs with new LED signs and installing a new power circuit for the runway and taxiway signs. An existing spare constant current regulator was used as the power source for the new signage circuit. New control wiring and relay logic was designed for the new circuit. Also included was the relocation of the holding position paint and signs on connector taxiways for Runway 5/23. Also included was the installation of new signage on airport perimeter roads at various locations where the roads intersect aircraft movement areas.

Wendover Airport (ENV) Runway 8/26 Runway Extension—Wendover, UT. Project Liaison**.** This project consists of extending Runway 8/26 approximately 2,000 feet to the east from the threshold of the approach end of Runway 26, including runway pavement, inlets, lighting, signage, striping, construction traffic control, airfield access and phasing.



YEARS OF EXPERIENCE
30

EDUCATION
Master of Business Administration, West Chester University
Bachelor of Science, Aviation Business Management, Wilmington College
Associate of Science, Aeronautical Science, Northern Virginia Community College

REGISTRATION/CERTIFICATIONS
FAA Flight Certificates: Commercial (May 1994); Instrument (January 1993); Private Pilot (November 1991)

Tony Davis

Senior Aviation Planner

Tony has been an aviation consultant since 1994, providing master planning, system planning, and economic impact analysis to airport and state clients throughout the country. For most of his career, he has served as a senior aviation project manager for airport planning projects and has led dozens of airport master plans throughout the United States and was responsible for all phases of the planning process. His development of short-, medium-, and long-term alternative concepts assist airports in understanding the phased construction of airport infrastructure while maintaining critical components of airfield operation, terminal and landside facilities.

Project Experience

Lake Tahoe Airport (TVL) Master Plan, Lake Tahoe Airport—South Lake Tahoe, CA. Environmental Lead. The last comprehensive airport master plan for TVL was completed in 2016. The airport sponsor contracted Woolpert to update the master plan and airport layout plan (ALP) in 2023. The update analyzed current conditions and facilities, anticipated travel demand, and identified the projects required to meet that need. Woolpert worked closely with TVL staff, the South Lake Tahoe community, the California Department of Transportation (Caltrans) Aeronautics Division, and the Federal Aviation Administration (FAA) to deliver an actionable plan that effectively guides the airport's growth.

Airport Master Plan, Colorado Springs Airport (2020-present)—Colorado Springs, Colorado. The City of Colorado Springs is the second most populous city in Colorado and has recently experienced significant growth that is forecasted to continue at an unprecedented rate. In 2021, Jviation initiated a new airport master plan to address the growth. The plan ensures FAA design standards are met so proposed improvements remain eligible for federal AIP grants and also included an in-depth analysis and alternative development discussions to decouple the runways and address a significant hotspot on the airfield. In addition, the team developed an innovative Story Map to present study findings and collect public input in an interactive, online format. The airport master plan developed new airport noise contours based on forecasted activity levels and overall airport capacity.

Airport Master Plan, Wendover Airport (2018-present)—Wendover, Utah. Wendover Airport (ENV) is an important transportation facility for Wendover, Utah and the northeastern Nevada and northwestern Utah region. The last airport master plan was prepared in 1999 and ENV was required to complete a new airport master plan to stay eligible for future federal airport improvement grants. Many of the key issues for this plan were related to inventory of existing facilities and environmental resources as well as assessing alternative development areas and relocation areas for facilities at the airport.

Airport Master Plan, Archuleta County Airport (2019-present)—Pagosa Springs, Colorado. Archuleta County Airport (PSO) is an important transportation facility for Pagosa Springs and the southwestern Colorado region. The last master plan for PSO was completed in 2008 and only included an airport layout plan (ALP) update. A new plan was required to remain eligible for FAA grants so that PSO can continue to be an economic hub to Archuleta County.

Airport Master Plan, Southeast Colorado Regional Airport (2020-present)—Lamar, Colorado. Southeast Colorado Regional Airport (LAA) is an important transportation facility for Lamar, Colorado and the southeastern Colorado region. The previous airport master

plan (AMP) for LAA was completed in 2003 and no longer addressed current conditions. A new AMP was required to continue to be eligible for FAA grants and to address future needs of airport users and the local community. The plan assessed common AMP issues as well as a wind and runway analysis on Runways 8/26 and 18/36.

Airport Master Plan Update, Elko Regional Airport (2017-2018)—Elko, Nevada. EKO's last Airport Master Plan (AMP) was prepared in 2004, and the new Master Plan addresses the significant changes that occurred between 2004 and 2014. These changes reflect updates to the aviation industry, national and local economy, and FAA Airport Design Standards. Tony prepared the AMP study to specifically address the dynamics in the aviation industry, the impact that air service has on the local economy, and future trends and facility needs.

Airport Master Plan, Colorado Plains Regional Airport—Akron, Colorado. Tony worked with the City of Akron prepare its 20-year Master Plan and lay the necessary groundwork to grow its business and tenant base. To accomplish that goal, Tony helped establish a clear vision for the Airport and determined the appropriate steps the City should take to promote, advertise, and grow the Airport. The project included an active project advisory committee (PAC) made up of key airport tenants/businesses and community leaders who contributed to the Airport vision.

Airport Master Plan Update, West Plains Regional Airport—West Plains, Missouri. Tony helped create a new AMP for the West Plains Regional Airport that addressed the significant changes that occurred since the previous 2001 AMP. The new plan assessed changes to local, regional, and national general aviation (GA) and commercial industry; FAA airport design standards; existing and future aviation needs; national and local economy; and the Airport's development and operational policies.

Development Plan, Smithville-Crawford Municipal Airport (2016)—Smithville, Texas. The Airport was interested in expanding its landside and airside facilities to meet the needs of a larger cross-section of general aviation aircraft. The rapid growth of airports within the Austin, TX metroplex is pushing general aviation users to smaller airports in the surrounding communities, including Smithville. Tony created a development plan to accommodate the growing need for hangars and other basic airport facilities. Later stages of the development plan recommend a full-length parallel taxiway and runway extension to satisfy the need to accommodate turbine and jet aircraft.

Business Plan, Weslaco Mi-Valley Airport—Weslaco, Texas. As one of the country's leading employment growth centers and a border town to Mexico, Weslaco is at a critical point to expand its infrastructure. Tony led the development of a business plan that is key to the growth and development of the region and airport. The plan identifies the Airport's target market industries and tenants, then recommends development options that will accommodate those users. The City was interested in discontinuing public management of FBO services, so Tony evaluated options to contract FBO services to a private company. A return-on-investment (ROI) analysis was performed as a method for alternative evaluation.

Chennault International Airport, 2015 Master Plan—Lake Charles, Louisiana. This master plan focused on the development of airport landside facilities intended to expand economic development for the City of Lake Charles and the region. Key tenants of the Airport include Northrop Grumman and AAR, both of which provide maintenance, repair, and overhaul (MRO) services for very large aircraft. Tony, after detailed economic development research, made recommendations that allowed for tenant expansion as well as large and small aircraft manufacturing campuses. Local and state Economic Development Corporations can use Tony's recommendations to draw in future prospects.

Master Plan, Garner Field (2015)—Uvalde, Texas. Tony helped produce this master plan for a highly productive and active general aviation airport, where several on-airport businesses provide aircraft MRO and interior modification services to a wide variety of corporate aircraft. The master plan helped Jviation discover that the Airport could benefit from a runway extension designed to accommodate large corporate aircraft, such as Challenger and Gulfstream. Although the runway extension was justified, Tony worked closely with Texas Department of Transportation (TXDOT) and the FAA to resolve significant airport geometric challenges and examine off-airport impacts. Lastly, Tony created alternative hangar development layouts to accommodate growing airport businesses and based aircraft.

Master Plan, Ruston Regional Airport (2014)—Ruston, Louisiana. Ruston Regional Airport accommodates extensive flight training operations and houses several demanding corporate aircraft. The Airport's limited runway length limits the capacity for critical aircraft; therefore, the focus of the master plan was to study, evaluate, and justify a runway extension. Tony performed all of the technical analysis for the master plan. Significant topography issues required creative solutions to accommodate the growing number of based aircraft. Tony organized project meetings and review sessions with Louisiana Department of Transportation and Development (LaDOTD) and FAA staff. Thanks to Tony's open communication, the agencies approved the runway extension, improved approach procedures, and expanded landside facilities.



YEARS OF EXPERIENCE
15

EDUCATION
Master of Science, Environmental Management, University of Denver
Bachelor of Science, Aviation Management, Florida Institute of Technology

Morgan Einspahr

Environmental Planner

Morgan specializes in environmental planning for aviation-related projects, including National Environmental Policy Act (NEPA) document preparation, Categorical Exclusion (CATEX) clearances, environmental assessments, public involvement, and airport master plans. Morgan is a commercial and instrument-rated pilot and has extensive hands-on experience in airport operations and aviation planning. She has prepared numerous specialized environmental studies in support of airport improvement or development projects such as cultural resource investigations, air quality modeling, wetlands delineations, endangered species surveys, and compatible land use planning. She has also participated in several statewide aviation economic impact, system planning, and rates and charges studies. In addition to her environmental background, she has provided document control support to airport construction projects. Morgan's broad and varied experience, coupled with her specialized knowledge of NEPA policies and processes, provides comprehensive approach to aviation and environmental planning projects.

Project Experience

Lake Tahoe Airport (TVL) Master Plan, Lake Tahoe Airport—South Lake Tahoe, CA. Environmental Lead. The last comprehensive airport master plan for TVL was completed in 2016. The airport sponsor contracted Woolpert to update the master plan and airport layout plan (ALP) in 2023. The update analyzed current conditions and facilities, anticipated travel demand, and identified the projects required to meet that need. Woolpert worked closely with TVL staff, the South Lake Tahoe community, the California Department of Transportation (Caltrans) Aeronautics Division, and the Federal Aviation Administration (FAA) to deliver an actionable plan that effectively guides the airport's growth.

Angelina County Airport (LFK) Taxiway Extension (Design and Bidding), Texas Department of Transportation (TxDOT)—Angelina County, Texas. Environmental planner responsible for leading the categorical exclusion (CATEX) required to meet National Environmental Policy Act (NEPA) guidelines. Woolpert was engaged to provide engineering and design services to extend Taxiway E for runway incursion mitigation. The team completed field surveys, soil investigations, and materials testing to collect the data necessary for the design and created a preliminary engineering report, including probable costs and potential increases. Woolpert also created an updated airport layout plan (ALP).

Brownsville South Padre Island International Airport (BRO) Categorical Exclusion, Survey, and Platting for Land Acquisition for Runway 31, City of Brownsville—Brownsville, Texas. Environmental planner responsible for overseeing a Phase I environmental assessment for the acquisition of approximately 7.5 acres of land. Woolpert's team aided BRO with the survey, categorical exclusion (CATEX), and platting for land acquisitions dedicated as expanded runway safety areas (RSA) for the reconstruction of Runway 18/36. Woolpert's team prepared and submitted a documented CATEX to the FAA. Woolpert's environmental and engineering teams worked closely to prepare the environmental documentation quickly to meet grant and construction deadlines. The CATEX was approved by the FAA.

South Apron Reconstruction Design and Bidding, North Texas Regional Airport (GYI)—Grayson County, Texas. Environmental planner responsible for providing categorical exclusion (CATEX) services following current FAA guidelines along with a State Historic Preservation Office request due to the proximity of Perrin Air Force Base, an official Texas historical marker. This project consists of

the design and construction of a general aviation hangar development taxilane corridor on the south side of the airfield. This corridor will partially overlap the deteriorated south apron and create an additional access point to the parallel Taxiway A from both the main and south aprons. The project includes the reconstruction of a portion of the south apron, which is currently in poor condition, to accommodate a new 35-foot-wide taxilane. Tasks include the removal of the asphalt pavement, unclassified excavation, and subgrade preparation. The new taxilane will feature an asphalt pavement section designed to support future general aviation hangar development.

MD Helicopter E Ramp Categorial Exclusion, Falcon Field Airport —Mesa, Arizona. Morgan is overseeing the environmental documentation process and developing an environmental assessment at Falcon Field Airport. This project will assess the impacts of hangar/office development near the airport's northeast corner.

Davcon Hangar Development Environmental Assessment, Falcon Field Airport —Mesa, Arizona. Morgan oversaw the environmental documentation process and prepared this environmental assessment that examined the impact of proposed development at Falcon Field Airport. Her efforts ensured the eventual finding of No Significant Impact was quickly delivered—enabling the significant 23-acre development project.

Statewide Airport Economic Impact Study, Wyoming Department of Transportation, Aeronautics Division—Wyoming. Jviation has

Environmental Assessment for Runway Shift, Driggs-Reed Memorial Airport—Driggs, Idaho. Completed the EA for potential impacts associated shifting the runway to the northeast. The runway shift would allow for improved safety by addressing deficiencies of the runway safety areas and bring the runway into compliance with FAA standards.

Various Environmental Clearance and Coordination Projects, St. George Regional Airport—St. George, Utah. Numerous environmental clearance and coordination projects have been completed at the St. George Regional Airport. Most notably, these include the environmental documentation and extensive cultural resource coordination as part of the airport master plan update; a documented CATEX for a pavement maintenance and drainage improvement projects, to include specific coordination with the U.S. Army Corps of Engineers; a documented CATEX for the newly constructed SRE building; documented CATEX for various hangar development projects, and coordination of threatened and endangered species surveys. Woolpert has also assisted, as needed, for coordination of development projects with the FAA.

Various Environmental Clearance and Coordination Projects, Cedar City Regional Airport—Cedar City, Utah. Jviation has completed many environmental clearance documents for the Cedar City Regional Airport in the recent past. Most notably, a CATEX was completed for the rehabilitation of Runway 2-20; this CATEX included significant coordination with the FAA, and subconsultants performing cultural and biological resource surveys. The project included numerous onsite changes and required timely coordination. Woolpert also completed the necessary CATEX and Environmental Assessment (EA) required for the installation of the new airport perimeter fence and relocation of a pond dike. The EA was expedited to meet FAA deadlines and completed in a timely manner. In addition to these projects, ongoing environmental coordination for various construction and development projects continues to be completed.

Environmental Document for Terminal Development, Provo Airport—Provo, Utah. The ongoing terminal development project required extensive environmental documentation; through extensive coordination with the FAA, the project was able to be cleared through a documented CATEX and in a timely manner to meet FAA deadlines. The project included numerous special resource surveys, permits through the USACE, and ongoing coordination throughout the construction of the project. Jviation also completed various documented CATEX for hangar development projects occurring throughout airport property, several of which, included the documentation and coordination of historic hangars. Woolpert acts as the liaison between the airport and FAA for ongoing environmental coordination.

Environmental Assessment, Durango-La Plata County Regional Airport—Durango, Colorado. This EA evaluated potential impacts associated with the proposed terminal identified and studied in the 2016 Master Plan. The Master Plan's preferred alternative was to relocate the terminal to the undeveloped east side. The EA also evaluated other alternatives including a no action, renovation and expansion plan, and construction of a new terminal on the west side. A significant aspect of the study required Morgan to coordinate with the Southern Ute Tribe, as the Airport is located within that tribe's reservation. Analyses of wetlands, cultural resources, biotic, noise, air quality, and traffic were included in the EA.

EXHIBIT B

SCHEDULE OF CHARGES AND TIMELINE

BUDGET

Estimated fees (not to exceed) $ Negotiated during contract amendments

Hourly Rate: $ Please see attached schedule of hourly rates

Travel and out-of-pocket expenses $ N/A

(travel is included in the TOTAL (not to exceed amount)

TOTAL (not to exceed) $ Negotiated during contract amendments

TIMELINE

Contract starts on June 1, 2026 and ends on May 31, 2031.

ESA

EXHIBIT B

Environmental Science Associates & Subsidiaries: 2026 Schedule of Fees

I. Personnel Category Rates

Charges will be made at the Category hourly rates set forth below for time spent on project management, consultation or meetings related to the project, field work, report preparation and review, travel time, etc. Time spent on projects in litigation, in depositions and providing expert testimony will be charged at the Category rate times 1.5.

LABOR CATEGORY	BILLING STEP I	BILLING STEP II	BILLING STEP III	BILLING STEP IV	BILLING STEP V	BILLING STEP VI
Project Technician	$86	$109	$131	$150	$170	$194
Consultant	$116	$130	$144	$160	$173	$188
Associate Consultant	$154	$170	$184	$198	$213	$228
Senior Consultant	$171	$189	$212	$234	$257	$279
Managing Consultant	$205	$228	$253	$277	$301	$324
Principal Consultant	$222	$253	$282	$311	$341	$370
Senior Principal Consultant	$261	$288	$317	$347	$379	$409

A. The range of rates shown for each staff category reflects ESA staff qualifications, expertise and experience levels. These rate ranges allow our project managers to assemble the best project teams to meet the unique project requirements and client expectations for each opportunity.

B. From time to time, ESA retains outside professional and technical labor on a temporary basis to meet peak workload demands. Such contract labor may be charged at regular Employee Category rates.

C. ESA reserves the right to revise the Personnel Category Rates periodically to reflect changes in its operating costs.

II. Subcontracts

Subcontract services will be invoiced at cost multiplied by 1.15.

III. Other

The fees above do not include sales tax. Any applicable or potential sales tax will be charged when appropriate.

IV. Payment Terms

Unless otherwise agreed in writing, ESA will submit invoices on a monthly basis. Any unpaid balances shall draw interest at one and one half percent (1.5%) per month or the highest rate allowed by law, whichever is lower, commencing thirty (30) days after date of invoice. All invoices not contested in writing within fifteen (15) business days of receipt are deemed accepted by Client as true and accurate and Client thereafter waives any objection to Clients invoices, which are payable in full.

V. ESA Expenses

A. Travel Expenses

1. Transportation
    a. Company vehicle – fixed rate + fee for mileage in excess of 100 miles.
    b. Common carrier or car rental – actual expense multiplied by 1.15
    c. If company vehicle is to be used in off-road conditions, a daily $15 use fee will be added to the standard daily vehicle rate.
2. Lodging, meals and related travel expenses – direct expenses multiplied by 1.15

B. Technology and Data Management Fee

Starting January 2023, ESA implemented a 3% Technology and Data Management fee on all applicable contracts, excluding charges related to equipment rentals, reimbursable expenses, and subcontractor fees. This fee plays a pivotal role in mitigating an array of technology and data management expenditures incurred by ESA to ensure the delivery of the comprehensive and high-quality services our clients expect. These expenses include, but are not limited to:

1. Long-Term Data Retention and Security Administration: Covering the expenses associated with administering the protection of client data and assets throughout and beyond the contractual period.
2. Development and Maintenance of Internal ESA Software Tools: Accounting for the ongoing investments required to create and maintain tools integral to our client engagements.
3. Data Privacy and Security Maintenance: Encompassing the costs involved in maintaining data privacy and security, including regular security audits to uphold the highest standards.
4. Advanced Technology-Related Costs: Addressing the escalating expenses associated with subscriptions for cutting-edge technical software, licenses, and cloud data services.

This fee structure enables ESA to uphold its commitment to providing clients with top-tier services while managing the ever-evolving demands of technology and data management in the work that we do.

C. Cloud-based Services

ITEM	RATE/HOUR	RATE/DAY	RATE/WEEK	RATE/MONTH
Cloud-based Services				
Nearmap High Resolution Images		$55/image		
ArcGIS Online Hosting (Web Maps/Apps)				$225
Website Hosting				$200
Custom Application & Services Hosting*				$300*
Modeling (GeoHECRAS, TUFLOW, Delft3D) + Drone Processing	$7	$160	$950	$3,900
Aviation Environmental Design Tool (AEDT) Processing	$13	$190	$1,120	$4,600

*includes support for database, SSL, IT support – costs vary by project. Contact software development services for firm pricing.

D. Printing/Reproduction Rates

If a weekly or monthly rate is not provided, equipment usage is billed at a daily rate.

ITEM	RATE/PAGE	SAMPLE PRICING
Black & White – 8.5 x 11	$0.15	
Black & White – 11 x 17	$0.30	
Color – 8.5 x 11	$0.50	
Color – 11 x 17	$0.80	
B&W – Plotter (Toner – ECO Quality)	$0.50/sf	24x36 B/W CAD drawing would cost $3 per sheet
B&W – Plotter (Toner – Presentation Quality)	$1.25/sf	24x36 B/W CAD drawing would cost $7.50 per sheet
Color – Plotter (Inkjet – ECO Quality)	$2.50/sf	24x36 Color Drawing would cost $15 per sheet
Color – Plotter (Inkjet – Presentation Quality)	$5.00/sf	24x36 Color Drawing would cost $30 per sheet
CD	$10.00	
Digital Photography	$20.00 (up to 50 images)	
All Other Items (including bindings and covers)	At cost plus 10%	

E. Equipment Rates

ITEM	RATE/DAY	RATE/WEEK	RATE/MONTH
Project Specific Equipment:			
Vehicles – Standard size (no off-road usage)	$ 115[a]	$ 550[a]	$
Vehicles – 4x4 /Truck (light duty)	175[a]		
Vehicles – 4x4 /Truck (heavy duty)	200[a]		
Vehicles – ATV	175		
Noise Meter	115		
Hydroacoustic Noise Monitoring Equipment	175		
Satellite Phone	15	70	250
Electrofisher	350	1,750	
Field Traps	50		
Digital Hypsometer (Nikon)	25		
Backpack Sprayer	30		
360-Degree 4k Camera	35	175	
High Resolution Time-Lapse Camera	20	100	350
Beach Seine	60		
Block Net	30		
PIT Tagging Kit	25		
Underwater Light Meter		500	
Otter Trawl	115		
Wildlife Acoustics Bat Detector	125	400	
Wildlife Trail Camera	30	100	
Fiber Optic Endoscope	150	750	
Spotting Scope	50	200	
Sand Transport Station			460
Wind Monitoring Station			1540
Personal Protective Equipment (PPE)	25		
Photo and Video Production Equipment:			
Mirrorless Camera + Lens + SD Card	$ 220	$ 550	$2000
Tripod + Camera Case	50	175	500
Lighting Equipment	20	75	250
Shotgun Microphone Kit	15	50	180
2 Person Microphone Kit	10	25	85

ITEM	RATE/DAY	RATE/WEEK	RATE/MONTH
Topographic/Bathymetric Survey Equipment:			
Total Station	$ 300	$	$
UAV/Drone	300	1,500	
RTK-GPS	300		
RTK-GPS Smartnet Subscription	80		
Hypack Survey Software	150		
Laser/Auto Level	50		
Single-Beam Echoshounder	175	600	
Sidescan Sonar	200		
Sound Velocity Profiler	75		
1m GNSS Data Collection System	90	425	1,700
Sub-meter GNSS Data Collection System	120		
Sub-foot Data Collection System	245		
Garmin GPS or equivalent	45		
Hydrologic Data Collection, Water Current, Level and Wave Measurement Equipment:			
ISCO 2150 Area Velocity Flow Logger	$ 50	$ 300	$ 800
SonTek IQ-Plus Area Velocity Flow Logger	100	500	1,500
Logging Rain Gage	10	50	200
Hand-Held Current Meter	50		
Surface Velocity Radar	50		
Wave Pressure Sensor		115	460
Wave Buoy		175	700
Sonic Wave Sensor	35	175	500
Logging Water Level - Pressure Transducer			125
Logging Barometric Pressure Logger			60
Well Probe / Water Level Meter	25		
Bottom-Mounted Tripod / Mooring	30	150	400
Stormwater Crest Sampler			20
ADCP Riverboard	700		
Radar Wave Sensor with Logger Box	150	300	1000
Boats:			
Small Watercraft	$ 100	$ 400	
15’-17’ Boat	375	1,500	
18’-21’ Boat	450	2,000	
22’-25’ Boat	550	2,250	
Houseboat Floating Laboratory		4,500	
Water Quality Equipment:			
Logging Turbidimeter/Water Level Recorder	$	$	$ 400
Logging Conductivity/Water Level Recorder			250
Remote Monitoring Logger Box		75	250
Recording Conductivity Meter w/Datalogger	20	60	200
Hand-Held Turbidimeter	50	200	
Hand-Held Salinity Meter or pH meter	35		
Logging Salinity Gauge			150
Logging DO/Temp Probe			150
Logging Water Quality Sonde 1 Sensor	50	200	700
Logging Water Quality Sonde 2 Sensor	65	250	800
Logging Water Quality Sonde 3 Sensor	75	300	900
Logging Water Quality Sonde 4 Sensor	90	350	1,000
Telemetry System Hardware			125
Water Quality Multi-Probe Depth Profiler	200		
Niskin Water Sampler	50		
ISCO 6712 Portable Sampler w/ISCO 2105 Module	60	350	900

ITEM	RATE/DAY	RATE/WEEK	RATE/MONTH
Sedimentation / Geotechnical Equipment:			
Peat Corer	$ 85		
60lb Helly-Smith Bedload Sampler	200		
Mini-Ponar Grab Sampler	50		
DH-76 Suspended Sediment Sampler	100		
D-96 Suspended Sediment Sampler	200		
Bridge Crane	150		
RSET	50		
AMS Soil Sampling Kit	50		
Hand-Held Helley-Smith Bedload Sampler	30		
Guelph Permeameter	60		
Sludge Sampler	60		
Shear Strength Vane	60		
Handheld DH-48 Suspended Sediment Sampler	30		

[a] Actual project charges will include the daily rate plus $0.75 per beyond 100 miles

EXHIBIT C

ANTI-LOBBYING CERTIFICATION

Consultant shall submit to City this certification prior to or at the time of the execution of this Agreement.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U. S. Code. Any person who fails to file the required certification shall be subject to a civil penalty not less than $10,000 and no more than $100,000 for such failure.

The undersigned certifies, to the best of his or her knowledge or belief, that:

1. No federal appropriated funds have been paid or will be paid, by or on behalf of it, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement; and

2. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, cooperative agreement, it will complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instruction.

Consultant:
Patrick Hickman, Project Manager

By:_____

EXHIBIT D

TRADE RESTRICTION CERTIFICATION

Trade Restriction Certification. By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror:

1. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);

2. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and

3. has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC Section 1001.

The Offeror/Consultant must provide immediate written notice to the Owner if the Offeror/Consultant learns that its certification or that of a Sub-Consultant was erroneous when submitted or has become erroneous by reason of changed circumstances. The Consultant must require Sub-Consultant provide immediate written notice to the Consultant if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or Sub-Consultant:

a. who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR or,

b. whose Sub-Consultant are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or,

c. who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a Consultant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Consultant may rely on the certification of a prospective Sub-Consultant that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Consultant or Sub-Consultant knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

Consultant: Environmental Science Associates

Patrick Hickman, Project Manager

By:_____

EXHIBIT E

TAX DELINQUENCY AND FELONY CONVICTION CERTIFICATION

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications (Check one)

1) The applicant represents that it is ☐ is not ☐ a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
2) The applicant represents that it is ☐ is not ☐ is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

Note:

If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The applicant therefore must provide information to the owner about its tax liability or conviction to the Owner, who will then notify the FAA Airports District Office, which will then notify the agency's SDO to facilitate completion of the required considerations before award decisions are made.

Term Definitions

Felony conviction: Felony conviction means a conviction within the preceding twenty-four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. § 3559.

Tax Delinquency: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

Consultant: Environmental Science Associates

Patrick Hickman, Project Manager

By:_____

EXHIBIT F

CERTIFICATION OF OFFERER / BIDDER REGARDING DEBARMENT

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

Consultant: Environmental Science Associates
Patrick Hickman, Project Manager

By:_____

EXHIBIT G

COPY OF W9

Form **W-9**
(Rev. March 2024)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Go to *www.irs.gov/FormW9* for instructions and the latest information.

Give form to the requester. Do not send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

Print or type. See ***Specific Instructions*** on page 3.

1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)

ENVIRONMENTAL SCIENCE ASSOCIATES

2 Business name/disregarded entity name, if different from above.

3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor ☐ C corporation ☒ S corporation ☐ Partnership ☐ Trust/estate

☐ LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) . . . . .

Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.

☐ Other (see instructions)

3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions . . . . . ☐

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any)

Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any)

(Applies to accounts maintained outside the United States.)

5 Address (number, street, and apt. or suite no.). See instructions.

575 MARKET STREET, SUITE 3700

6 City, state, and ZIP code

SAN FRANCISCO, CA 94105

Requester's name and address (optional)

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

9	4	–	1	6	9	8	3	5	0

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here **Signature of U.S. person** Sven Svenson **Date** 03/05/26

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

EXHIBIT H

COI

ENVISCI-05 MCCOWANA

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 4/14/2026

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER License # 0E67768 IOA Insurance Services 3636 Nobel Drive Suite 410 San Diego, CA 92122	CONTACT NAME: Ali Smith PHONE (A/C, No, Ext): (619) 788-5795 50206 FAX (A/C, No): (619) 574-6288 E-MAIL ADDRESS: Ali.Smith@ioausa.com
INSURED Environmental Science Associates 575 Market Street, Suite 3700 San Francisco, CA 94105	INSURER(S) AFFORDING COVERAGE / NAIC # INSURER A : RLI Insurance Company 13056 INSURER B : SiriusPoint Specialty Insurance Corporation 16820 INSURER C : INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR X Limited Cont Liab X Serv Interest GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC X OTHER: XCU/BFPD/Cont Liab	X	X	PSB0007416	12/1/2025	12/1/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Ded	$ 2,000,000 $ 1,000,000 $ 10,000 $ 2,000,000 $ 4,000,000 $ 4,000,000 $ 0
A	AUTOMOBILE LIABILITY X ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY X Comp Ded $1,000 X Coll Ded $1,000	X	X	PSA0002468	12/1/2025	12/1/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ 1,000,000 $ $ $ $
A	X UMBRELLA LIAB X OCCUR EXCESS LIAB [ ] CLAIMS-MADE [ ] DED X RETENTION $ 0			PSE0004550	12/1/2025	12/1/2026	EACH OCCURRENCE AGGREGATE 	$ 10,000,000 $ 10,000,000 $
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	X	PSW0004135	12/1/2025	12/1/2026	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
B	Professional Liab.			CPPLD000281900	12/1/2025	12/1/2026	Per Claim	10,000,000
B	Ded.: $50k Per Clm			CPPLD000281900	12/1/2025	12/1/2026	Aggregate	10,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

FIVE YEAR MASTER PROFESSIONAL SERVICES CONTRACT FOR THE LAKE TAHOE AIRPORT (TVL) 2026-2031 D202502149.00

City of South Lake Tahoe, its elected or appointed officers, officials, employees, agents and volunteers are Additional Insureds with respect to General and Auto Liability per the attached endorsements as required by written contract. Insurance is Primary and Non-Contributory. Waiver of Subrogation applies to General Liability, Auto Liability and Workers' Compensation. Stop-Gap coverage is included for the State of Washington.

30 Days Notice of Cancellation with 10 Days Notice for Non-Payment of Premium in accordance with the policy provisions.

CERTIFICATE HOLDER

City of South Lake Tahoe
1901 Lisa Maloff Way
South Lake Tahoe, CA 96150

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
T. Kelly Howell

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ENVIRONMENTAL SERVICES
LAKE TAHOE AIRPORT 2026-2031

Initial Submittal Review Ranking Sheet
Statement of Qualifications March 26, 2026

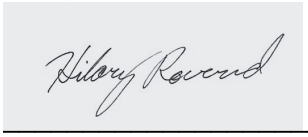
Company Name	Employee 1	Employee 2	Employee 3	SOQ Score	Ranking
ESA	93	85	100	278	1
Dudek	92	76	100	268	2
Avalex	79	76	61	216	3
Langan	89	53	61	203	4
Soar	85	44	68	197	5

Firm Recommended for Selection: **Environmental Service Associates (ESA)**

City of South Lake Tahoe

Agenda Item Executive Summary

Hilary Roverud, Interim City Manager



Meeting Date: May 19, 2026
Agenda Item #:5

Agenda Item: Additional Grant Application to the Federal Aviation Administration (FAA) and Caltrans for Lake Tahoe Airport Runway Maintenance

Executive Summary: On February 10, 2026, the Airport received authorization to apply for an FAA Airport Improvement Program (AIP) grant in the amount of $250,000 for the update of the Lake Tahoe Airport Pavement Maintenance Program. On March 10, 2026, the Airport received additional authorization to apply for an additional FAA Airport Improvement Program (AIP) grant in the amount of $50,000. Due to the availability of additional federal funding, the Airport now recommends approval of additional authorization to apply for FAA Airport Improvement Program (AIP) grants increasing the total FAA grant amount to $500,000, and to include any additional funding the FAA may make available for this project, which could modify the Caltrans matching share. Staff will submit a matching grant application to Caltrans for the update of the Lake Tahoe Airport Runway Maintenance in the amount of $23,750 (4.75%). The new total amount the airport would be responsible for would be $131,250. NO GENERAL FUNDS WILL BE USED.

Requested Action / Suggested Motions: Pass a Resolution authorizing the Airport Manager to apply for additional FY 2025 -2026 Federal Aviation Administration Airport Improvement Program (AIP) Grant in the amount of $200,000.00 for the combined amount of $500,000.00 and FY 2025-2026 Caltrans State Matching Grant for Lake Tahoe Airport in the amount of $23,750 or any additional funding the FAA or Caltrans will provide.

Responsible Staff Member: Milan Jevic, Airport Maintenance Supervisor

Reviewed and Approved By: John Dickinson, Airport Manager Susan Blankenship, City Clerk Olga Tikhomirova, Finance Director Heather Stroud, City Attorney

Attachments:

01-Staff Report FAA Grant for Runway.docx
02-Resolution Airport Pavement .docx

City of South Lake Tahoe
Report to **City Council**

Meeting Date: May 19, 2026

Title: Additional Grant Application to the Federal Aviation Administration (FAA) and Caltrans for Lake Tahoe Airport Runway Maintenance

Location: Airport, 1901 Lisa Maloff Way, South Lake Tahoe, CA 96150

Responsible Staff Member: Milan Jevic, Airport Maintenance Supervisor

Background: The Lake Tahoe Airport (or "TVL" or the "Airport") is a historically significant and important transportation facility for the City of South Lake Tahoe and the surrounding region. The Airport directly impacts the area's economic vitality as an essential transportation resource.

The existing pavements throughout the airport are inclusive of Runway 18/36, parallel taxiway and adjoining taxiway connectors, and general aviation aprons. Each of these airfield pavements was initially constructed in the 1950s. Runway 18/36 was last reconstructed in 2008. This project shall consist of asphalt pavement maintenance on Runway 18/36, and the runway blast pads. The proposed maintenance for these asphalt pavement areas includes the routing and filling of cracks greater than ¼" inch in width with crack sealant, application of an asphalt-based surface treatment, and application of pavement markings. The proposed periodic maintenance will mitigate pavement cracking and provide a surface treatment resistant to UV rays, water and oxidation.

Staff would like to extend the existing runway pavement's useful life, maintain the pavement condition for the safe operation of aircraft, and minimize the potential for foreign object debris (FOD) and other environmental issues. The Runway 18/36 Pavement Preservation project will be designed by Consultant Jviation, a Woolpert company, and will be constructed in accordance with current requirements, regulations, rules, policies, grant assurances, and Advisory Circulars (ACs).

Issue and Discussion: The Federal Aviation Administration (FAA) allows eligible general aviation airports to receive up to a 95 percent federal share for Airport Improvement Program (AIP) grants, with the airport sponsor responsible for the remaining 5 percent match through a combination of state and/or local funds. The California Transportation Commission provides 4.75 percent of FAA grant amounts as state matching funds, with the Airport certifying the remaining 0.25 percent of total project costs from local sources.

On February 10, 2026, the Airport received authorization to apply for an FAA Airport Improvement Program (AIP) grant in the amount of $250,000 for the update of the Lake Tahoe Airport

Pavement Maintenance Program. On March 10, 2026, the Airport received additional authorization to apply for an additional FAA Airport Improvement Program (AIP) grant in the amount of $50,000. Due to the availability of additional federal funding, the Airport now recommends approval of additional authorization to apply for FAA Airport Improvement Program (AIP) grants increasing the total FAA grant amount to $500,000, and to include any additional funding the FAA may make available for this project, which could modify the Caltrans matching share. Staff will submit a matching grant application to Caltrans for the update of the Lake Tahoe Airport Runway Maintenance in the amount of $23,750 (4.75%). The new total amount the airport would be responsible for would be $131,250.

Staff Recommendation:

Pass a Resolution approving and authorizing the Airport Manager to apply for all FAA AIP grants for the pavement maintenance project. Also, allow the Airport Manager to apply for the Caltrans grant for the same project.

Financial Implications: Upon approval of the FAA and Caltrans Matching grants, staff will bring this back to city council for acceptance of award and for authorization of the Finance Director to appropriate the budget in account# 50180052 as follows:

2025-2026 AIP Grants and Caltrans: Lake Tahoe Airport Pavement Maintenance
Estimated Project Cost $630,000.00
95% FAA grants - $500,000.00, total in grants
4.75% Caltrans AIP Matching Grant Participation $23,750.00
0.25% City Grant Match and Airport Cash balance of $131,250.00 NO GENERAL FUNDS WILL BE USED

Environmental Considerations: The project is exempt from review under CEQA Guidelines section 15301(d) (Existing Facilities - restoration or rehabilitation of deteriorated or damaged facilities to meet current standards of public health and safety).

Policy Implications: This pavement maintenance project will extend the useful life of the airfield pavements until the next rehabilitation and reconstruction project in 5-7 years.

Resolution 2026-XXX

Adopted by the City of South Lake Tahoe
City Council

May 19, 2026

Authorization for the Airport Manager to Apply for Additional FY 2025-2026 Federal Aviation Administration Airport Improvement Program (AIP) Grant and Caltrans Grant Program

BACKGROUND

A. The Airport Manager requests to apply for 2025-2026 AIP grants to fund the Runway Maintenance Project with the FAA and to accept when received. This project will be funded 95% from the FAA and 4.75% from Caltrans, which will leave the City's contributions at 0.25% and the airport's cash balance for all funds not received from the FAA.

B. On February 10, 2026, City Council approved the airport to apply for FAA and Caltrans funding in the amount of $250,000.00 from FAA and $11,875.00 from Caltrans. On March 10, 2026, City Council approved the airport to apply for additional FAA and Caltrans funding in the amount of $50,000.00.

C. The FAA has approved an additional $200,000.00 to the airport for the Runway Pavement Maintenance Project, which will bring the total not to exceed amount to $500,000.00.

D. Caltrans will also match 4.75%, which will bring an additional amount up to $23,750.00.

E. The FAA may make additional funding available for this project. To streamline the authorization process, staff is requesting City Council approval to apply for any additional funding without returning to City Council for further approval.

F. Upon award of the final amount, the Airport Manager will submit to the City Council a request for authorization to accept each of the awards and appropriate the City's share for the match and additional funding as necessary.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, BE IT RESOLVED, that the City Council of the City of South Lake Tahoe:

1. Authorizes the Airport Manager to file the application with the Federal Aviation Administration (FAA) for the Pavement Maintenance Project for an amount of $500,000.00 and to include any additional funding the FAA may make available for this project, which could modify the Caltrans matching share.

2. Authorizes the Airport Manager to file an application for a State AIP Matching grant for this project in the amount of $23,750.00. Total amount of Caltrans grant match increase will be $9,500.00 and may increase further depending on the FAA's final funding amount.

3. Authorizes the Airport Manager to sign any documents required to apply for these subject funds on behalf of the City of South Lake Tahoe.

4. Acknowledges that the City's Match of 0.25% will be appropriated from the Airport's Cash Balance in an amount up to $131,250.00, which may increase further depending on the FAA's final funding amount, plus any additional funding required for the project, upon the acceptance of all grant awards.

Adopted by the City of South Lake Tahoe City Council on May 19, 2026, by the following vote:

Yes:
No:
Absent:
Abstain:

_____ Date:_____
Cody Bass, Mayor

Attest:

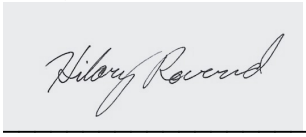
_____
Susan Blankenship, City Clerk

The presence of electronic signature certifies that the foregoing is a true and correct copy as approved by the South Lake Tahoe City Council.

City of South Lake Tahoe

Agenda Item Executive Summary

Hilary Roverud, Interim City Manager



Meeting Date: May 19, 2026
Agenda Item #:6

Agenda Item: Senate Bill 1 Road Maintenance and Rehabilitation Account Project List for FY26/27

Executive Summary: Senate Bill 1 stipulates that the City must establish a Road Maintenance and Rehabilitation Account Project List for FY26/27 and adopt that list with a resolution in order to receive the FY 26/27. allocation. This is an action the council must take annually.

Requested Action / Suggested Motions: Pass a Resolution approving the Senate Bill 1 Road Maintenance and Rehabilitation Account Project List for FY26/27

Responsible Staff Member: Stephen Anderjack, Project Manager

Reviewed and Approved By: Mohammad Qureshi, Director of Public Works Susan Blankenship, City Clerk Olga Tikhomirova, Director of Finance Heather Stroud, City Attorney

Attachments:

01-Staff Report-RMRA Project List 2027.docx
02-Resolution - SB1 Road Maintenance and Rehabilitation 2027.docx
03_RMRA Estimate.pdf

City of South Lake Tahoe
Report to **City Council**

Meeting Date: May 19, 2026

Senate Bill 1 Road Maintenance and Rehabilitation Account Project List for FY26/27

Location: Citywide

Responsible Staff Member: Stephen Anderjack, Project Manager (530) 542-6033

Background: In April 2017, the State passed Senate Bill 1 (SB 1), increasing the State's Gas Tax. "This act presents a balance of new revenues and reasonable reforms to ensure efficiency, accountability, and performance from each dollar invested to improve California's transportation system."

SB 1 creates the Road Maintenance and Rehabilitation Account (RMRA) and the Road Maintenance and Rehabilitation Program (RMRP). Programs funded by this account include the Local Partnership Program (LPP), the Active Transportation Program (ATP), the State Highway Operation and Protection Program (SHOPP), and Local Streets and Roads apportionments.

SB 1 states that "it is the intent of the Legislature that the Department of Transportation and local governments are held accountable for the efficient investment of public funds to maintain the public highways, streets, and roads, and are accountable to the people through performance goals that are tracked and reported."

Under SB 1 the City is eligible to receive funds for local streets and road rehabilitation and maintenance from the RMRA. The funds are a census-based apportionment and subject to certain eligibility requirements. According to the latest estimate of the State FY 26/27 RMRA apportionment for Cities (Attachment A), the City is eligible to receive approximately $601,126 in FY 26/27.

These funds help maintain City roadway infrastructure and are available on an annual basis with so long as Council adopts a resolution listing proposed projects and the City submits an annual expenditure report. These funds are very sustainable and should continue to be available in future years

Issue and Discussion: For the City to be eligible for the RMRA funds, the City must submit a list of proposed projects to the California Transportation Commission (CTC) no later than July 1, 2026.. The City also needs to adopt a resolution listing the projects that could be funded by RMRA funds.The streets listed below are included in the resolution and the FY 26/27 annual budget will include the 2027 Road Rehab Project.

1. Palmira Ave

2. Chris Ave
3. William Ave
4. Elwood Ave
5. Armstrong Ave
6. Knox Ave
7. Bertha Ave
8. Osborne Ave
9. Kubel Ave
10. Alma Ave
11. Rose Ave
12. Pinter Ave
13. Fountain Ave
14. Lodi Ave
15. Stockton Ave
16. Reno Ave
17. Carson Ave
18. Martin Ave
19. Charles Ave
20. Omalley Dr

The proposed construction will typically include grinding 4" of asphalt and replacing it with new asphalt, based on pavement boring testing and sub-base evaluation. The addition of a pavement base may also be included. This rehabilitation technique should provide a 20-year life extension to the roadways. The selected projects, based on overall funding capacity, will commence summer of 2027 and will be completed by fall of 2027.

Each of these streets has low Pavement Condition Index (PCI) ratings. Coordination with the utility providers has also occurred and no utility work is expected in these areas.

The amount of funds received through SB 1 is limited and will be insufficient to cover paving of entire length of these streets. These funds will be added to the overall project budget and will supplement the paving portion of the project. The Department expects that these funds will pave approximately 2,500 lane feet of roadway. The exact street to be paved with these funds will be determined in the future and will be dependent on additional funding allocation for the projects.

Financial Implications: RMRA funds have no match requirement but must be used for road rehabilitation or they will be rescinded back to the State. The City will utilize the estimated $580,235 worth of RMRA funding to pave streets within the multiple proposed project areas.

Environmental Considerations: This project is considered roadway rehabilitation and will not extend the boundaries of the existing roadways. As such, the project is exempt from Tahoe Regional Planning Agency (TRPA) permits and the California Environmental Quality Act (CEQA) under CEQA Guidelines section 15301(c) (Existing Facilities). All applicable best management practices will be utilized to protect air and water quality during construction.

Policy Implications: The use of these funds to supplement paving on these projects is consistent with the City's Strategic Plan 2025-2030. It aligns with goal 5.5 which states "Increase annual road repair through innovative maintenance and rehab program."

Resolution 2026-XXX

Adopted by the City of South Lake Tahoe
City Council

May 19, 2026

Adopting a List of Projects for the Fiscal Year 2026/2027 Funded by SB 1: The Road Repair and Accountability Act of 2017

BACKGROUND

A. Senate Bill 1 (SB 1), the Road Repair and Accountability Act of 2017 (Chapter 5, Statutes of 2017) was passed by the Legislature and Signed into law by the Governor in April 2017 to address the significant multi-modal transportation funding shortfalls statewide.

B. SB 1 includes accountability and transparency provisions that will ensure the residents of our City are aware of the projects proposed for funding in our community and which projects have been completed each fiscal year.

C. The City must adopt by resolution a list of projects proposed to receive fiscal year funding from the Road Maintenance and Rehabilitation Account (RMRA), created by SB 1, which must include a description and the location of each proposed project, a proposed schedule for the project's completion, and the estimated useful life of the improvement.

D. The City will receive an estimated $601,126 in RMRA funding in the Fiscal Year 2026-27 from SB 1

E. This is the tenth year in which the City is receiving SB 1 funding and will enable the City to continue essential road maintenance and rehabilitation projects, safety improvements, repairing and replacing aging bridges, and increasing access and mobility options for the traveling public that would not have otherwise been possible without SB 1.

F. The City has undergone a robust public process to ensure public input into our community's transportation priorities/the project list.

G. The funding from SB 1 will help the City maintain and rehabilitate roads throughout the City this year and next year.

H. The 2018 California Statewide Local Streets and Roads Needs Assessment found that the City's streets and roads are in an "at-risk" condition and this revenue will help us increase the overall quality of our road system and over the next decade will bring our streets and roads into a "at-risk" condition.

I. The SB 1 project list and overall investment in our local streets and roads infrastructure with a focus on basic maintenance and safety, investing in complete streets infrastructure, and using cutting-edge technology, materials, and practices, will have significant positive co-benefits statewide.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, BE IT RESOLVED, that the City Council of the City of South Lake Tahoe:

1. Declares the foregoing recitals are true and correct.
2. Adopts the following list of newly proposed projects that may be funded in-part with Fiscal Year 2026-27 Road Maintenance and Rehabilitation Account revenues:

Location	Description	Component	Priority Status	Est. Schedule		Useful Life		Assembly District	Senate District
				Start	Finish	Min	Max		
Palmira Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Chris Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
William Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Elwood Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Armstrong Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Knox Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Bertha Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Osborne Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Kubel Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Alma Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Rose Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Pinter Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Fountain Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1

Lodi Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Stockton Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Reno Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Carson Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Martin Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Charles Ave	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1
Omalley Dr	Project will include rehabilitation of existing pavement	CON	26/27	5/1/27	10/15/27	20	20	5	1

Adopted by the City of South Lake Tahoe City Council on May 19, 2026 by the following vote:
Yes:
No:
Absent:
Abstain:

_____ Date:_____

Cody Bass, Mayor

Attest:

_____

Susan Blankenship, City Clerk

The presence of electronic signature certifies that the foregoing is a true and correct copy as approved by the South Lake Tahoe City Council.

Local Streets and Roads - Projected Revenues

Based on State Dept of Finance statewide r
Estimated January 2026

	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
ALAMEDA COUNTY						
ALAMEDA	2,237,775	2,091,323	4,329,098	2,279,092	2,217,185	4,496,277
ALBANY	606,048	560,306	1,166,355	617,118	594,027	1,211,145
BERKELEY	3,629,522	3,396,825	7,026,347	3,696,630	3,601,256	7,297,886
DUBLIN	2,115,856	1,976,753	4,092,609	2,154,909	2,095,719	4,250,628
EMERYVILLE	387,190	356,520	743,710	394,233	377,976	772,210
FREMONT	6,566,152	6,156,435	12,722,587	6,687,780	6,526,946	13,214,726
HAYWARD	4,634,421	4,341,149	8,975,571	4,720,186	4,602,412	9,322,598
LIVERMORE	2,484,008	2,322,713	4,806,721	2,529,896	2,462,500	4,992,397
NEWARK	1,387,598	1,293,804	2,681,402	1,413,159	1,371,669	2,784,828
OAKLAND	12,213,739	11,463,584	23,677,323	12,440,216	12,153,495	24,593,711
PIEDMONT	325,146	298,216	623,362	331,037	316,163	647,201
PLEASANTON	2,259,855	2,112,072	4,371,928	2,301,582	2,239,183	4,540,765
SAN LEANDRO	2,573,033	2,406,371	4,979,404	2,620,574	2,551,193	5,171,767
UNION CITY	1,986,332	1,855,037	3,841,369	2,022,981	1,966,678	3,989,659
County of Alameda	31,524,134	26,097,421	57,621,555	32,111,203	27,668,037	59,779,240
Total Cities & County: Alameda	74,930,810	66,728,530	141,659,340	76,320,595	70,744,441	147,065,036
ALPINE COUNTY						
County of Alpine	629,901	504,422	1,134,323	634,030	534,780	1,168,810
AMADOR COUNTY						
AMADOR	11,655	5,293	16,948	11,764	5,612	17,375
IONE	271,369	239,171	510,540	276,272	253,565	529,837
JACKSON	154,088	133,149	287,238	156,818	141,162	297,981
PLYMOUTH	38,648	29,695	68,342	39,257	31,482	70,738
SUTTER CREEK	83,206	69,975	153,182	84,641	74,187	158,828
County of Amador	2,504,054	2,572,129	5,076,183	2,548,338	2,726,927	5,275,265
Total Cities & County: Amador	3,063,021	3,049,412	6,112,433	3,117,090	3,232,935	6,350,024
BUTTE COUNTY						
BIGGS	61,853	52,217	114,070	62,893	55,359	118,252
CHICO	3,249,179	3,013,045	6,262,225	3,309,203	3,194,379	6,503,582
GRIDLEY	214,931	193,888	408,819	218,793	205,557	424,350
OROVILLE	577,253	529,553	1,106,806	587,803	561,423	1,149,226
PARADISE	327,866	293,452	621,318	333,711	311,113	644,824
County of Butte	8,062,403	8,469,874	16,532,277	8,205,436	8,979,615	17,185,050
Total Cities & County: Butte	12,493,484	12,552,030	25,045,514	12,717,839	13,307,446	26,025,285

Local Streets and Roads - Projected Revenues

Based on State Dept of Finance statewide r
Estimated January 2026

	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
CALAVERAS COUNTY						
ANGELS CAMP	120,937	96,653	217,590	123,065	102,470	225,535
County of Calaveras	3,750,643	3,897,391	7,648,034	3,817,712	4,131,947	7,949,659
Total City & County: Calaveras	3,871,580	3,994,044	7,865,624	3,940,777	4,234,416	8,175,193
COLUSA COUNTY						
COLUSA	184,389	172,980	357,370	187,692	183,391	371,082
WILLIAMS	158,659	147,917	306,576	161,482	156,819	318,301
County of Colusa	2,494,606	2,998,917	5,493,523	2,531,875	3,179,400	5,711,275
Total Cities & County: Colusa	2,837,654	3,319,814	6,157,468	2,881,049	3,519,610	6,400,659
CONTRA COSTA COUNTY						
ANTIOCH	3,332,036	3,090,696	6,422,732	3,393,598	3,276,703	6,670,301
BRENTWOOD	1,879,884	1,740,043	3,619,927	1,914,543	1,844,764	3,759,307
CLAYTON	322,080	292,817	614,897	327,912	310,440	638,352
CONCORD	3,580,273	3,321,980	6,902,253	3,646,442	3,521,906	7,168,348
DANVILLE	1,251,188	1,155,680	2,406,868	1,274,207	1,225,232	2,499,439
EL CERRITO	748,750	687,554	1,436,303	762,445	728,932	1,491,377
HERCULES	755,737	694,064	1,449,801	769,562	735,835	1,505,397
LAFAYETTE	733,013	672,892	1,405,904	746,416	713,388	1,459,804
MARTINEZ	1,077,118	993,498	2,070,616	1,096,907	1,053,289	2,150,196
MORAGA	500,302	457,937	958,239	509,424	485,497	994,920
OAKLEY	1,340,921	1,239,285	2,580,206	1,365,606	1,313,869	2,679,475
ORINDA	563,306	516,638	1,079,944	573,597	547,730	1,121,327
PINOLE	546,660	501,129	1,047,789	556,642	531,288	1,087,930
PITTSBURG	2,181,751	2,021,295	4,203,045	2,222,012	2,142,942	4,364,954
PLEASANT HILL	991,135	913,386	1,904,520	1,009,328	968,356	1,977,684
RICHMOND	3,307,011	3,067,380	6,374,391	3,368,109	3,251,983	6,620,092
SAN PABLO	925,603	852,329	1,777,932	942,580	903,625	1,846,205
SAN RAMON	2,415,387	2,238,975	4,654,362	2,459,984	2,373,723	4,833,707
WALNUT CREEK	2,009,385	1,860,701	3,870,086	2,046,448	1,972,683	4,019,130
County of Contra Costa	26,814,607	22,047,339	48,861,946	27,342,374	23,374,210	50,716,583
Total Cities & County: Contra Costa	55,276,147	48,365,615	103,641,762	56,328,135	51,276,394	107,604,529

Local Streets and Roads - Projected Revenues

Based on State Dept of Finance statewide r
Estimated January 2026

	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
DEL NORTE COUNTY						
CRESCENT CITY	192,674	178,167	370,842	196,128	188,890	385,018
County of Del Norte	1,368,358	1,534,419	2,902,777	1,393,749	1,626,765	3,020,514
Total City & County: Del Norte	1,561,032	1,712,586	3,273,619	1,589,878	1,815,655	3,405,533
EL DORADO COUNTY						
PLACERVILLE	341,501	286,359	627,860	347,665	303,593	651,258
SOUTH LAKE TAHOE	2,199,738	567,002	2,766,740	2,211,943	601,126	2,813,069
County of El Dorado	9,859,201	8,221,799	18,081,000	10,014,141	8,716,610	18,730,751
Total Cities & County: El Dorado	12,400,440	9,075,160	21,475,600	12,573,750	9,621,329	22,195,079
FRESNO COUNTY						
CLOVIS	3,609,046	3,417,283	7,026,329	3,675,809	3,622,945	7,298,754
COALINGA	510,910	477,389	988,300	520,237	506,120	1,026,357
FIREBAUGH	249,365	230,622	479,988	253,871	244,502	498,373
FOWLER	220,221	202,913	423,133	224,185	215,125	439,310
FRESNO	15,530,488	14,742,266	30,272,754	15,818,506	15,629,497	31,448,003
HURON	199,761	183,461	383,221	203,345	194,502	397,847
KERMAN	496,909	464,077	960,986	505,975	492,006	997,982
KINGSBURG	377,605	351,597	729,202	384,474	372,758	757,231
MENDOTA	361,599	336,380	697,978	368,171	356,624	724,795
ORANGE COVE	277,285	257,168	534,453	282,309	272,645	554,954
PARLIER	415,573	387,697	803,270	423,148	411,029	834,177
REEDLEY	751,328	704,068	1,455,396	765,083	746,441	1,511,524
SANGER	763,409	715,554	1,478,963	777,389	758,618	1,536,007
SAN JOAQUIN	108,738	97,870	206,609	110,651	103,760	214,411
SELMA	697,718	654,048	1,351,765	710,496	693,410	1,403,906
County of Fresno	28,822,021	28,857,904	57,679,925	29,346,149	30,594,654	59,940,803
Total Cities & County: Fresno	53,391,976	52,080,297	105,472,273	54,369,797	55,214,636	109,584,433
GLENN COUNTY						
ORLAND	247,372	230,358	477,730	251,842	244,221	496,063
WILLOWS	185,764	171,366	357,130	189,089	181,679	370,768
County of Glenn	3,053,068	3,666,727	6,719,795	3,095,140	3,887,401	6,982,540
Total Cities & County: Glenn	3,486,204	4,068,451	7,554,654	3,536,071	4,313,301	7,849,372

Local Streets and Roads - Projected Revenues

Based on State Dept of Finance statewide r
Estimated January 2026

	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
HUMBOLDT COUNTY						
ARCATA	553,877	502,876	1,056,753	563,988	533,140	1,097,128
BLUE LAKE	40,368	31,891	72,259	41,009	33,811	74,819
EUREKA	784,539	713,834	1,498,373	798,892	756,795	1,555,687
FERNDALE	45,789	36,893	82,683	46,531	39,114	85,645
FORTUNA	367,245	331,616	698,861	373,913	351,573	725,486
RIO DELL	103,048	89,719	192,767	104,852	95,118	199,970
TRINIDAD	14,607	8,125	22,732	14,770	8,614	23,384
County of Humboldt	6,252,900	6,879,228	13,132,128	6,366,211	7,293,239	13,659,450
Total Cities & County: Humboldt	8,162,373	8,594,182	16,756,555	8,310,167	9,111,404	17,421,570
IMPERIAL COUNTY						
BRAWLEY	832,316	766,236	1,598,552	847,563	812,350	1,659,913
CALEXICO	1,147,876	1,060,562	2,208,437	1,168,979	1,124,389	2,293,368
CALIPATRIA	192,203	172,927	365,130	195,644	183,334	378,978
EL CENTRO	1,316,254	1,217,609	2,533,863	1,340,482	1,290,889	2,631,370
HOLTVILLE	168,112	150,458	318,570	171,106	159,513	330,619
IMPERIAL	658,625	605,166	1,263,791	670,667	641,586	1,312,253
WESTMORLAND	64,934	55,155	120,088	66,031	58,474	124,505
County of Imperial	10,693,113	12,998,832	23,691,945	10,894,915	13,781,139	24,676,053
Total Cities & County: Imperial	15,073,433	17,026,945	32,100,377	15,355,386	18,051,674	33,407,061
INYO COUNTY						
BISHOP	116,384	102,025	218,410	118,436	108,166	226,601
County of Inyo	3,620,688	4,295,530	7,916,218	3,672,365	4,554,047	8,226,412
Total City & County: Inyo	3,737,072	4,397,555	8,134,628	3,790,800	4,662,213	8,453,013

Local Streets and Roads - Projected Revenues

Based on State Dept of Finance statewide r
Estimated January 2026

	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
KERN COUNTY						
ARVIN	553,208	529,077	1,082,284	563,330	560,918	1,124,248
BAKERSFIELD	11,431,754	11,095,445	22,527,199	11,644,035	11,763,201	23,407,236
CALIFORNIA CITY	417,780	397,463	815,242	425,384	421,383	846,767
DELANO	1,451,027	1,398,212	2,849,239	1,477,778	1,482,360	2,960,138
MARICOPA	33,741	27,154	60,895	34,260	28,788	63,048
MCFARLAND	394,857	376,158	771,015	402,054	398,796	800,850
RIDGECREST	783,825	751,257	1,535,082	798,199	796,469	1,594,668
SHAFTER	648,541	620,754	1,269,295	660,418	658,113	1,318,531
TAFT	240,211	226,838	467,049	244,551	240,490	485,040
TEHACHAPI	362,941	345,140	708,081	369,544	365,911	735,455
WASCO	749,158	717,566	1,466,724	762,887	760,751	1,523,638
County of Kern	27,010,038	26,463,640	53,473,678	27,454,060	28,056,296	55,510,356
Total Cities & County: Kern	44,077,081	42,948,702	87,025,783	44,836,500	45,533,475	90,369,975
KINGS COUNTY						
AVENAL	382,948	362,422	745,370	389,922	384,233	774,155
CORCORAN	602,246	572,348	1,174,594	613,259	606,794	1,220,052
HANFORD	1,689,920	1,620,709	3,310,629	1,721,104	1,718,248	3,439,352
LEMOORE	769,424	732,889	1,502,314	783,526	776,997	1,560,523
County of Kings	5,051,254	5,580,838	10,632,092	5,149,914	5,916,709	11,066,623
Total Cities & County: Kings	8,495,792	8,869,207	17,364,999	8,657,724	9,402,981	18,060,705
LAKE COUNTY						
CLEARLAKE	481,064	446,477	927,541	489,834	473,347	963,181
LAKEPORT	147,499	133,017	280,516	150,112	141,022	291,134
County of Lake	3,662,500	3,818,617	7,481,117	3,730,899	4,048,433	7,779,331
Total Cities & County: Lake	4,291,063	4,398,111	8,689,174	4,370,845	4,662,802	9,033,647
LASSEN COUNTY						
SUSANVILLE	487,784	429,618	917,402	496,046	455,474	951,520
County of Lassen	3,231,296	3,684,819	6,916,115	3,276,941	3,906,582	7,183,523
Total City & County: Lassen	3,719,080	4,114,437	7,833,517	3,772,987	4,362,056	8,135,043

Local Streets and Roads - Projected Revenues

Based on State Dept of Finance statewide r
Estimated January 2026

	2025-26			2026-27		
LOS ANGELES COUNTY	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
AGOURA HILLS	580,446	535,455	1,115,900	591,039	567,680	1,158,719
ALHAMBRA	2,342,634	2,186,626	4,529,260	2,385,894	2,318,224	4,704,118
ARCADIA	1,616,521	1,505,292	3,121,814	1,646,302	1,595,885	3,242,187
ARTESIA	471,279	433,959	905,238	479,865	460,076	939,940
AVALON	102,910	91,122	194,032	104,713	96,606	201,318
AZUSA	1,429,578	1,329,877	2,759,455	1,455,889	1,409,913	2,865,801
BALDWIN PARK	2,044,083	1,906,486	3,950,569	2,081,801	2,021,224	4,103,025
BELL	973,553	903,382	1,876,935	991,425	957,750	1,949,175
BELLFLOWER	2,236,441	2,086,983	4,323,424	2,277,730	2,212,583	4,490,314
BELL GARDENS	1,124,648	1,045,159	2,169,806	1,145,325	1,108,059	2,253,384
BEVERLY HILLS	933,079	865,403	1,798,482	950,200	917,486	1,867,686
BRADBURY	31,749	24,348	56,097	32,230	25,814	58,044
BURBANK	3,037,569	2,836,360	5,873,929	3,093,684	3,007,060	6,100,744
CALABASAS	664,863	614,667	1,279,530	677,024	651,659	1,328,683
CARSON	2,658,361	2,482,884	5,141,245	2,707,483	2,632,311	5,339,794
CERRITOS	1,403,032	1,306,376	2,709,407	1,428,877	1,384,997	2,813,874
CLAREMONT	1,092,014	1,014,538	2,106,552	1,112,086	1,075,596	2,187,682
COMMERCE	356,838	327,514	684,352	363,318	347,224	710,542
COMPTON	2,722,556	2,543,120	5,265,676	2,772,870	2,696,172	5,469,041
COVINA	1,459,222	1,357,693	2,816,914	1,486,082	1,439,402	2,925,485
CUDAHY	652,115	602,704	1,254,819	664,039	638,977	1,303,016
CULVER CITY	1,151,273	1,070,142	2,221,416	1,172,445	1,134,547	2,306,992
DIAMOND BAR	1,562,311	1,454,425	3,016,736	1,591,086	1,541,956	3,133,042
DOWNEY	3,227,869	3,014,925	6,242,793	3,287,516	3,196,371	6,483,887
DUARTE	679,558	628,456	1,308,014	691,992	666,278	1,358,270
EL MONTE	3,093,330	2,888,683	5,982,013	3,150,480	3,062,532	6,213,012
EL SEGUNDO	497,115	458,201	955,316	506,180	485,777	991,957
GARDENA	1,730,132	1,611,896	3,342,028	1,762,022	1,708,905	3,470,926
GLENDALE	5,540,123	5,184,586	10,724,709	5,642,695	5,496,609	11,139,304
GLENDORA	1,493,181	1,389,557	2,882,738	1,520,672	1,473,185	2,993,857
HAWAIIAN GARDENS	401,148	369,091	770,240	408,450	391,304	799,755
HAWTHORNE	2,494,095	2,328,747	4,822,842	2,540,167	2,468,898	5,009,065
HERMOSA BEACH	564,723	521,640	1,086,362	575,043	553,034	1,128,076
HIDDEN HILLS	55,046	46,209	101,255	55,960	48,990	104,950
HUNTINGTON PARK	1,555,514	1,448,047	3,003,561	1,584,162	1,535,194	3,119,356
INDUSTRY	17,956	11,407	29,363	18,182	12,093	30,275

Local Streets and Roads - Projected Revenues

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Estimated January 2026

	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
INGLEWOOD	3,075,364	2,871,824	5,947,188	3,132,180	3,044,659	6,176,839
IRWINDALE	48,361	39,937	88,298	49,152	42,340	91,492
LA CANADA FLINTRIDGE	589,161	543,633	1,132,794	599,916	576,350	1,176,266
LA HABRA HEIGHTS	166,272	149,637	315,909	169,232	158,643	327,875
LAKEWOOD	2,333,382	2,177,945	4,511,328	2,376,471	2,309,020	4,685,491
LA MIRADA	1,401,565	1,304,999	2,706,565	1,427,384	1,383,538	2,810,921
LANCASTER	5,028,764	4,704,762	9,733,526	5,121,844	4,987,908	10,109,752
LA PUENTE	1,082,819	1,005,910	2,088,729	1,102,720	1,066,448	2,169,169
LA VERNE	925,491	858,284	1,783,775	942,472	909,938	1,852,410
LAWNDALE	907,102	841,028	1,748,130	923,741	891,644	1,815,385
LOMITA	600,161	553,954	1,154,115	611,120	587,293	1,198,413
LONG BEACH	13,109,977	12,287,621	25,397,598	13,353,076	13,027,125	26,380,201
LOS ANGELES	109,983,397	103,177,654	213,161,050	112,024,676	109,387,175	221,411,851
LYNWOOD	1,945,816	1,814,280	3,760,096	1,981,710	1,923,468	3,905,178
MALIBU	310,610	284,136	594,746	316,231	301,236	617,468
MANHATTAN BEACH	1,011,009	938,528	1,949,537	1,029,577	995,011	2,024,589
MAYWOOD	719,538	665,031	1,384,569	732,695	705,055	1,437,749
MONROVIA	1,108,542	1,030,047	2,138,589	1,128,921	1,092,038	2,220,959
MONTEBELLO	1,781,662	1,660,249	3,441,911	1,814,509	1,760,167	3,574,676
MONTEREY PARK	1,735,265	1,616,713	3,351,978	1,767,250	1,714,011	3,481,261
NORWALK	2,931,602	2,736,928	5,668,531	2,985,750	2,901,644	5,887,394
PALMDALE	4,789,387	4,480,148	9,269,535	4,878,023	4,749,775	9,627,799
PALOS VERDES ESTATES	384,394	353,371	737,765	391,386	374,637	766,023
PARAMOUNT	1,520,342	1,415,044	2,935,386	1,548,337	1,500,205	3,048,543
PASADENA	3,981,311	3,721,904	7,703,215	4,054,946	3,945,899	8,000,845
PICO RIVERA	1,764,739	1,644,370	3,409,109	1,797,272	1,743,332	3,540,604
POMONA	4,331,365	4,050,370	8,381,735	4,411,498	4,294,133	8,705,631
RANCHO PALOS VERDES	1,201,309	1,117,093	2,318,402	1,223,410	1,184,322	2,407,732
REDONDO BEACH	1,992,890	1,858,451	3,851,341	2,029,658	1,970,298	3,999,956
ROLLING HILLS (2)						
ROLLING HILLS ESTATES	247,813	226,150	473,962	252,287	239,760	492,047
ROSEMEAD	1,453,270	1,352,108	2,805,379	1,480,021	1,433,482	2,913,503
SAN DIMAS	992,394	921,061	1,913,455	1,010,616	976,493	1,987,109
SAN FERNANDO	678,035	627,026	1,305,062	690,440	664,763	1,355,203
SAN GABRIEL	1,123,548	1,044,127	2,167,674	1,144,205	1,106,965	2,251,170
SAN MARINO	361,718	332,092	693,810	368,288	352,078	720,366
SANTA CLARITA	6,569,016	6,150,030	12,719,047	6,690,689	6,520,156	13,210,846

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	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
SANTA FE SPRINGS	538,153	496,709	1,034,862	547,980	526,602	1,074,583
SANTA MONICA	2,643,131	2,468,592	5,111,723	2,691,970	2,617,159	5,309,129
SIERRA MADRE	323,020	295,781	618,801	328,872	313,582	642,454
SIGNAL HILL	339,464	311,211	650,674	345,621	329,940	675,561
SOUTH EL MONTE	559,815	517,035	1,076,850	570,044	548,151	1,118,195
SOUTH GATE	2,634,105	2,460,123	5,094,228	2,682,776	2,608,180	5,290,957
SOUTH PASADENA	771,097	713,411	1,484,507	785,211	756,346	1,541,557
TEMPLE CITY	1,041,471	967,111	2,008,582	1,060,604	1,025,315	2,085,919
TORRANCE	4,155,873	3,885,700	8,041,573	4,232,748	4,119,553	8,352,301
VERNON	11,751	5,584	17,336	11,862	5,920	17,782
WALNUT	812,671	752,421	1,565,092	827,557	797,704	1,625,261
WEST COVINA	3,105,374	2,899,984	6,005,358	3,162,747	3,074,513	6,237,260
WEST HOLLYWOOD	1,017,355	944,483	1,961,838	1,036,041	1,001,325	2,037,366
WESTLAKE VILLAGE	236,531	215,563	452,094	240,795	228,537	469,332
WHITTIER	2,490,118	2,325,016	4,815,134	2,536,116	2,464,942	5,001,058
County of Los Angeles	189,206,694	157,417,218	346,623,912	192,756,084	166,891,029	359,647,114
Total Cities & County: Los Angeles	444,070,879	395,658,347	839,729,226	452,333,661	419,470,181	871,803,842

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	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
MADERA COUNTY						
CHOWCHILLA	529,541	509,995	1,039,536	539,227	540,688	1,079,915
MADERA	1,807,817	1,758,463	3,566,280	1,841,214	1,864,293	3,705,507
County of Madera	7,272,838	8,171,541	15,444,379	7,404,980	8,663,327	16,068,307
Total Cities & County: Madera	9,610,196	10,439,999	20,050,196	9,785,421	11,068,308	20,853,729
MARIN COUNTY						
BELVEDERE	66,673	56,213	122,886	67,802	59,596	127,399
CORTE MADERA	300,444	270,242	570,685	305,872	286,506	592,378
FAIRFAX	224,470	201,007	425,477	228,508	213,105	441,612
LARKSPUR	382,668	346,172	728,840	389,622	367,006	756,628
MILL VALLEY	412,789	373,987	786,777	420,302	396,495	816,797
NOVATO	1,536,018	1,407,078	2,943,096	1,564,285	1,491,760	3,056,045
ROSS	72,749	61,824	134,573	73,991	65,545	139,536
SAN ANSELMO	374,214	338,365	712,578	381,011	358,728	739,739
SAN RAFAEL	1,777,648	1,630,210	3,407,858	1,810,397	1,728,321	3,538,718
SAUSALITO	210,828	188,410	399,238	214,613	199,749	414,362
TIBURON	268,548	241,712	510,260	273,404	256,259	529,663
County of Marin	6,624,885	5,959,122	12,584,007	6,749,204	6,317,758	13,066,962
Total Cities & County: Marin	12,251,934	11,074,341	23,326,276	12,479,012	11,740,826	24,219,838
MARIPOSA COUNTY						
County of Mariposa	2,114,959	2,445,658	4,560,617	2,146,100	2,592,845	4,738,945
MENDOCINO COUNTY						
FORT BRAGG	212,525	190,209	402,734	216,341	201,657	417,998
POINT ARENA	18,967	12,174	31,142	19,212	12,907	32,118
UKIAH	484,025	439,384	923,409	492,841	465,828	958,669
WILLITS	147,406	130,926	278,332	150,033	138,806	288,838
County of Mendocino	5,091,826	5,624,290	10,716,116	5,186,315	5,962,776	11,149,090
Total Cities & County: Mendocino	5,954,749	6,396,984	12,351,733	6,064,742	6,781,972	12,846,714
MERCED COUNTY						
ATWATER	884,072	843,252	1,727,324	900,305	894,001	1,794,305
DOS PALOS	165,629	153,369	318,998	168,581	162,599	331,181
GUSTINE	173,413	160,885	334,298	176,510	170,568	347,078
LIVINGSTON	403,598	382,192	785,790	410,955	405,193	816,149
LOS BANOS	1,350,939	1,294,069	2,645,008	1,375,850	1,371,950	2,747,800
MERCED	2,699,348	2,594,675	5,294,023	2,749,295	2,750,830	5,500,125
County of Merced	10,056,550	10,912,295	20,968,845	10,241,406	11,569,027	21,810,433
Total Cities & County: Merced	15,733,550	16,340,737	32,074,287	16,022,903	17,324,168	33,347,070

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	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
MODOC COUNTY						
ALTURAS	83,846	71,987	155,832	85,266	76,319	161,585
County of Modoc	3,051,415	3,610,791	6,662,206	3,093,482	3,828,099	6,921,581
Total City & County: Modoc	3,135,261	3,682,778	6,818,038	3,178,748	3,904,418	7,083,166
MONO COUNTY						
MAMMOTH LAKES	2,229,924	191,083	2,421,007	2,234,320	202,583	2,436,902
County of Mono	2,361,773	2,647,851	5,009,624	2,392,636	2,807,206	5,199,843
Total City & County: Mono	4,591,697	2,838,934	7,430,631	4,626,956	3,009,789	7,636,745
MONTEREY COUNTY						
CARMEL-BY-THE-SEA	92,576	83,843	176,420	94,189	88,889	183,079
DEL REY OAKS	49,051	41,789	90,841	49,855	44,304	94,159
GONZALES	240,942	226,229	467,171	245,294	239,844	485,139
GREENFIELD	579,131	550,090	1,129,222	589,714	583,196	1,172,911
KING CITY	400,703	379,625	780,328	408,006	402,472	810,478
MARINA	642,159	610,988	1,253,147	653,914	647,759	1,301,673
MONTEREY	790,744	753,586	1,544,330	805,242	798,938	1,604,181
PACIFIC GROVE	418,069	396,404	814,473	425,695	420,261	845,956
SALINAS	4,446,080	4,281,522	8,727,602	4,528,451	4,539,196	9,067,647
SAND CITY	16,017	9,872	25,889	16,207	10,466	26,673
SEASIDE	907,350	866,250	1,773,600	924,015	918,384	1,842,399
SOLEDAD	765,435	729,131	1,494,566	779,462	773,012	1,552,474
County of Monterey	12,853,089	12,118,379	24,971,468	13,085,946	12,847,698	25,933,644
Total Cities & County: Monterey	22,201,346	21,047,709	43,249,055	22,605,992	22,314,420	44,920,412
NAPA COUNTY						
AMERICAN CANYON	626,953	592,727	1,219,680	638,422	628,399	1,266,821
CALISTOGA	151,113	138,601	289,714	153,795	146,943	300,737
NAPA	2,159,494	2,062,211	4,221,705	2,199,397	2,186,320	4,385,717
SAINT HELENA	155,494	142,809	298,303	158,258	151,404	309,661
YOUNTVILLE	88,056	79,000	167,056	89,584	83,755	173,339
County of Napa	4,463,841	4,157,207	8,621,048	4,548,754	4,407,399	8,956,153
Total Cities & County: Napa	7,644,952	7,172,555	14,817,507	7,788,209	7,604,220	15,392,429
NEVADA COUNTY						
GRASS VALLEY	456,441	360,199	816,640	464,716	381,877	846,593
NEVADA CITY	121,764	88,607	210,371	123,799	93,940	217,739
TRUCKEE	2,500,616	448,012	2,948,628	2,510,908	474,975	2,985,883
County of Nevada	4,693,914	4,381,512	9,075,426	4,772,335	4,645,203	9,417,539
Total Cities & County: Nevada	7,772,734	5,278,330	13,051,064	7,871,759	5,595,995	13,467,754

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ORANGE COUNTY	2025-26 Hwy Users Tax Account	2025-26 Road Mntnc Rehab Acct	2025-26 TOTAL	2026-27 Hwy Users Tax Account	2026-27 Road Mntnc Rehab Acct	2026-27 TOTAL
ALISO VIEJO	1,498,516	1,370,767	2,869,283	1,526,086	1,453,263	2,979,349
ANAHEIM	9,953,487	9,166,648	19,120,136	10,137,850	9,718,323	19,856,173
BREA	1,385,279	1,267,709	2,652,988	1,410,775	1,344,003	2,754,779
BUENA PARK	2,428,714	2,228,707	4,657,421	2,473,539	2,362,837	4,836,375
COSTA MESA	3,242,931	2,977,370	6,220,301	3,302,813	3,156,556	6,459,370
CYPRESS	1,457,224	1,332,683	2,789,907	1,484,028	1,412,887	2,896,915
DANA POINT	961,716	877,048	1,838,764	979,355	929,832	1,909,187
FOUNTAIN VALLEY	1,651,517	1,511,882	3,163,399	1,681,924	1,602,871	3,284,796
FULLERTON	4,143,287	3,807,785	7,951,072	4,219,870	4,036,949	8,256,819
GARDEN GROVE	4,948,777	4,550,705	9,499,483	5,040,303	4,824,579	9,864,882
HUNTINGTON BEACH	5,705,688	5,248,819	10,954,506	5,811,254	5,564,707	11,375,961
IRVINE	9,157,782	8,432,753	17,590,535	9,327,384	8,940,260	18,267,644
LAGUNA BEACH	669,435	608,395	1,277,830	681,671	645,009	1,326,681
LAGUNA HILLS	910,926	830,204	1,741,130	927,623	880,168	1,807,791
LAGUNA NIGUEL	1,884,834	1,727,075	3,611,909	1,919,569	1,831,015	3,750,585
LAGUNA WOODS	517,960	469,608	987,568	527,405	497,870	1,025,275
LA HABRA	1,812,523	1,660,381	3,472,904	1,845,917	1,760,308	3,606,225
LAKE FOREST	2,527,080	2,319,431	4,846,511	2,573,729	2,459,021	5,032,750
LA PALMA	455,663	412,151	867,814	463,953	436,955	900,908
LOS ALAMITOS	352,309	317,748	670,057	358,700	336,871	695,571
MISSION VIEJO	2,698,129	2,477,194	5,175,323	2,747,951	2,626,278	5,374,230
NEWPORT BEACH	2,454,109	2,252,129	4,706,238	2,499,405	2,387,668	4,887,073
ORANGE	4,051,951	3,723,545	7,775,496	4,126,841	3,947,638	8,074,479
PLACENTIA	1,561,300	1,428,674	2,989,974	1,590,034	1,514,655	3,104,690
RANCHO SANTA MARGARITA	1,385,709	1,268,106	2,653,815	1,411,214	1,344,424	2,755,638
SAN CLEMENTE	1,851,720	1,696,534	3,548,254	1,885,841	1,798,636	3,684,477
SAN JUAN CAPISTRANO	1,024,557	935,008	1,959,565	1,043,362	991,280	2,034,642
SANTA ANA	9,062,974	8,345,311	17,408,285	9,230,818	8,847,555	18,078,373
SEAL BEACH	736,720	669,530	1,406,250	750,186	709,825	1,460,010
STANTON	1,174,430	1,073,239	2,247,669	1,196,015	1,137,829	2,333,845
TUSTIN	2,317,694	2,126,311	4,444,005	2,360,459	2,254,278	4,614,737
VILLA PARK	174,923	155,063	329,985	178,041	164,395	342,436
WESTMINSTER	2,621,629	2,406,636	5,028,265	2,670,032	2,551,474	5,221,506
YORBA LINDA	1,964,892	1,800,914	3,765,807	2,001,113	1,909,299	3,910,411
County of Orange	70,421,524	56,834,095	127,255,619	71,752,945	60,254,531	132,007,476
Total Cities & County: Orange	159,167,911	138,310,157	297,478,067	162,138,006	146,634,052	308,772,058

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	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
PLACER COUNTY						
AUBURN	401,570	364,354	765,924	408,876	386,282	795,158
COLFAX	64,316	52,905	117,221	65,377	56,089	121,466
LINCOLN	1,571,707	1,442,912	3,014,619	1,600,638	1,529,751	3,130,389
LOOMIS	201,497	180,152	381,649	205,109	190,994	396,104
ROCKLIN	2,105,201	1,936,551	4,041,752	2,144,029	2,053,098	4,197,128
ROSEVILLE	4,548,121	4,194,662	8,742,783	4,632,226	4,447,108	9,079,334
County of Placer	15,342,259	12,455,628	27,797,887	15,596,311	13,205,242	28,801,553
Total Cities & County: Placer	24,234,671	20,627,164	44,861,835	24,652,566	21,868,565	46,521,131
PLUMAS COUNTY						
PORTOLA	214,005	55,869	269,874	215,058	59,232	274,289
County of Plumas	2,943,845	2,957,686	5,901,531	2,981,212	3,135,688	6,116,900
Total City & County: Plumas	3,157,850	3,013,555	6,171,405	3,196,270	3,194,920	6,391,190
RIVERSIDE COUNTY						
BANNING	925,206	845,554	1,770,760	942,170	896,442	1,838,612
BEAUMONT	1,721,190	1,580,217	3,301,407	1,752,894	1,675,318	3,428,212
BLYTHE	546,241	496,974	1,043,215	556,212	526,883	1,083,095
CALIMESA	322,457	290,964	613,421	328,295	308,475	636,770
CANYON LAKE	324,346	292,711	617,057	330,219	310,327	640,546
CATHEDRAL CITY	1,490,592	1,366,982	2,857,575	1,518,018	1,449,251	2,967,269
COACHELLA	1,281,105	1,174,656	2,455,761	1,304,672	1,245,350	2,550,022
CORONA	4,569,999	4,212,208	8,782,208	4,654,508	4,465,711	9,120,219
DESERT HOT SPRINGS	962,785	880,304	1,843,088	980,446	933,283	1,913,729
EASTVALE	2,010,003	1,847,282	3,857,285	2,047,064	1,958,457	4,005,521
HEMET	2,643,524	2,433,102	5,076,625	2,692,339	2,579,533	5,271,871
INDIAN WELLS	144,954	128,676	273,631	147,536	136,421	283,956
INDIO	2,660,839	2,449,113	5,109,953	2,709,975	2,596,508	5,306,483
JURUPA VALLEY	3,046,543	2,803,463	5,850,006	3,102,788	2,972,184	6,074,972
LAKE ELSINORE	2,124,028	1,952,722	4,076,750	2,163,205	2,070,242	4,233,447
LA QUINTA	1,121,172	1,026,765	2,147,937	1,141,772	1,088,559	2,230,331
MENIFEE	3,315,235	3,051,924	6,367,159	3,376,465	3,235,597	6,612,062
MORENO VALLEY	6,048,721	5,579,587	11,628,309	6,160,663	5,915,383	12,076,046
MURRIETA	3,214,290	2,958,579	6,172,869	3,273,647	3,136,635	6,410,282
NORCO	772,914	704,730	1,477,644	787,053	747,142	1,534,196
PALM DESERT	1,500,009	1,375,689	2,875,698	1,527,609	1,458,482	2,986,091
PALM SPRINGS	1,283,738	1,177,090	2,460,829	1,307,354	1,247,931	2,555,285
PERRIS	2,337,453	2,150,077	4,487,530	2,380,590	2,279,475	4,660,064

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	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
RANCHO MIRAGE	498,788	453,094	951,881	507,878	480,362	988,240
RIVERSIDE	9,183,098	8,477,957	17,661,055	9,353,190	8,988,184	18,341,374
SAN JACINTO	1,586,157	1,455,351	3,041,509	1,615,356	1,542,938	3,158,294
TEMECULA	3,226,625	2,969,986	6,196,611	3,286,211	3,148,728	6,434,939
WILDOMAR	1,071,973	981,270	2,053,243	1,091,660	1,040,326	2,131,986
County of Riverside	58,032,085	50,121,491	108,153,576	59,137,787	53,137,944	112,275,731
Total Cities & County: Riverside	117,966,073	105,238,519	223,204,592	120,177,575	111,572,070	231,749,645
SACRAMENTO COUNTY						
CITRUS HEIGHTS	2,537,549	2,321,601	4,859,151	2,584,386	2,461,322	5,045,708
ELK GROVE	5,278,325	4,839,049	10,117,374	5,375,950	5,130,277	10,506,227
FOLSOM	2,677,340	2,450,119	5,127,460	2,726,770	2,597,574	5,324,344
GALT	761,918	690,544	1,452,462	775,849	732,103	1,507,952
ISLETON	28,686	21,040	49,726	29,110	22,307	51,417
RANCHO CORDOVA	2,472,202	2,261,524	4,733,727	2,517,827	2,397,629	4,915,456
SACRAMENTO	15,223,882	13,973,357	29,197,239	15,505,786	14,814,313	30,320,098
County of Sacramento	39,587,332	34,619,382	74,206,714	40,322,278	36,702,874	77,025,152
Total Cities & County: Sacramento	68,567,234	61,176,618	129,743,852	69,837,956	64,858,399	134,696,355
SAN BENITO COUNTY						
HOLLISTER	1,253,339	1,151,048	2,404,387	1,276,393	1,220,321	2,496,714
SAN JUAN BAUTISTA	65,339	55,155	120,493	66,443	58,474	124,917
County of San Benito	2,813,408	2,964,948	5,778,356	2,865,120	3,143,387	6,008,507
Total Cities & County: San Benito	4,132,086	4,171,151	8,303,236	4,207,956	4,422,183	8,630,138

Local Streets and Roads - Projected Revenues

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SAN BERNARDINO COUNTY	2025-26 Hwy Users Tax Account	2025-26 Road Mntnc Rehab Acct	2025-26 TOTAL	2026-27 Hwy Users Tax Account	2026-27 Road Mntnc Rehab Acct	2026-27 TOTAL
ADELANTO	1,069,136	983,202	2,052,339	1,088,775	1,042,374	2,131,149
APPLE VALLEY	2,175,038	2,009,200	4,184,238	2,215,169	2,130,119	4,345,288
BARSTOW	738,217	675,776	1,413,994	751,715	716,446	1,468,162
BIG BEAR LAKE	736,398	133,414	869,812	739,063	141,443	880,506
CHINO	2,724,546	2,519,698	5,244,244	2,774,874	2,671,340	5,446,215
CHINO HILLS	2,245,147	2,074,332	4,319,479	2,286,580	2,199,171	4,485,751
COLTON	1,543,739	1,422,719	2,966,458	1,572,157	1,508,342	3,080,499
FONTANA	6,258,613	5,800,550	12,059,163	6,374,472	6,149,643	12,524,116
GRAND TERRACE	381,736	347,389	729,125	388,675	368,296	756,971
HESPERIA	2,914,670	2,694,001	5,608,671	2,968,479	2,856,134	5,824,613
HIGHLAND	1,638,634	1,510,876	3,149,510	1,668,812	1,601,805	3,270,617
LOMA LINDA	732,178	670,166	1,402,343	745,564	710,498	1,456,062
MONTCLAIR	1,093,835	1,006,148	2,099,984	1,113,932	1,066,701	2,180,633
NEEDLES	146,076	130,317	276,393	148,679	138,160	286,839
ONTARIO	5,268,136	4,880,389	10,148,525	5,365,616	5,174,105	10,539,720
RANCHO CUCAMONGA	5,028,493	4,657,759	9,686,252	5,121,527	4,938,076	10,059,603
REDLANDS	2,105,840	1,944,915	4,050,754	2,144,687	2,061,965	4,206,652
RIALTO	3,022,155	2,793,856	5,816,012	3,077,960	2,961,998	6,039,958
SAN BERNARDINO	6,371,084	5,905,037	12,276,121	6,489,031	6,260,418	12,749,449
TWENTYNINE PALMS	816,360	748,372	1,564,732	831,308	793,411	1,624,719
UPLAND	2,266,855	2,094,499	4,361,354	2,308,690	2,220,552	4,529,242
VICTORVILLE	4,032,005	3,732,014	7,764,019	4,106,548	3,956,617	8,063,165
YUCAIPA	1,574,535	1,451,328	3,025,864	1,603,524	1,538,673	3,142,197
YUCCA VALLEY	637,309	582,961	1,220,270	648,953	618,045	1,266,998
County of San Bernardino	53,172,142	46,280,572	99,452,714	54,150,186	49,065,867	103,216,052
Total Cities & County: San Bernardino	108,692,879	97,049,490	205,742,369	110,684,975	102,890,201	213,575,176

Local Streets and Roads - Projected Revenues

Based on State Dept of Finance statewide r
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	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
SAN DIEGO COUNTY						
CARLSBAD	3,357,142	3,079,766	6,436,907	3,419,140	3,265,115	6,684,254
CHULA VISTA	8,097,248	7,447,487	15,544,734	8,247,171	7,895,697	16,142,868
CORONADO	684,886	622,051	1,306,937	697,408	659,488	1,356,896
DEL MAR	119,281	104,566	223,847	121,386	110,859	232,246
EL CAJON	3,068,570	2,813,864	5,882,434	3,125,215	2,983,211	6,108,426
ENCINITAS	1,791,811	1,639,712	3,431,522	1,824,819	1,738,394	3,563,213
ESCONDIDO	4,360,149	4,003,976	8,364,124	4,440,752	4,244,946	8,685,698
IMPERIAL BEACH	774,149	703,380	1,477,529	788,309	745,711	1,534,020
LA MESA	1,761,710	1,611,976	3,373,686	1,794,160	1,708,989	3,503,149
LEMON GROVE	819,703	745,355	1,565,057	834,707	790,212	1,624,919
NATIONAL CITY	1,705,903	1,560,553	3,266,455	1,737,318	1,654,471	3,391,789
OCEANSIDE	5,022,223	4,614,038	9,636,261	5,115,107	4,891,724	10,006,831
POWAY	1,459,294	1,333,318	2,792,612	1,486,135	1,413,561	2,899,695
SAN DIEGO	40,492,530	37,288,565	77,781,095	41,243,176	39,532,696	80,775,872
SAN MARCOS	2,801,883	2,570,432	5,372,316	2,853,628	2,725,128	5,578,756
SANTEE	1,725,692	1,578,787	3,304,480	1,757,475	1,673,803	3,431,278
SOLANA BEACH	380,786	343,684	724,470	387,705	364,368	752,073
VISTA	2,930,444	2,688,893	5,619,337	2,984,573	2,850,718	5,835,291
County of San Diego	76,367,553	63,831,470	140,199,023	77,791,049	67,673,027	145,464,076
Total Cities & County: San Diego	157,720,957	138,581,872	296,302,828	160,649,233	146,922,119	307,571,351
SAN FRANCISCO COUNTY						
SAN FRANCISCO - City Allocation	23,639,540	23,130,133	46,769,673	24,078,779	24,522,170	48,600,949
SAN FRANCISCO - County Allocation	12,361,097	11,969,329	24,330,426	12,590,824	12,689,677	25,280,501
Total San Francisco	36,000,637	35,099,462	71,100,099	36,669,602	37,211,847	73,881,450
SAN JOAQUIN COUNTY						
ESCALON	218,722	197,011	415,733	222,654	208,868	431,522
LATHROP	1,109,582	1,021,472	2,131,053	1,129,971	1,082,947	2,212,918
LODI	1,922,357	1,775,666	3,698,023	1,957,801	1,882,531	3,840,331
MANTECA	2,680,766	2,480,714	5,161,479	2,730,283	2,630,010	5,360,293
MOUNTAIN HOUSE	831,537	762,081	1,593,618	844,771	807,945	1,652,716
RIPON	463,959	423,134	887,093	472,405	448,600	921,005
STOCKTON	9,149,781	8,492,248	17,642,030	9,319,294	9,003,336	18,322,630
TRACY	2,808,363	2,599,333	5,407,696	2,860,248	2,755,768	5,616,016
County of San Joaquin	20,959,126	19,618,834	40,577,960	21,353,886	20,799,551	42,153,437
Total Cities & County: San Joaquin	39,312,655	36,608,412	75,921,067	40,046,542	38,811,609	78,858,152

Local Streets and Roads - Projected Revenues

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	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
SAN LUIS OBISPO COUNTY						
ARROYO GRANDE	547,374	485,567	1,032,941	557,355	514,790	1,072,144
ATASCADERO	914,930	815,145	1,730,075	931,685	864,203	1,795,888
EL PASO DE ROBLES	932,044	830,574	1,762,619	949,116	880,561	1,829,677
GROVER BEACH	383,220	338,470	721,690	390,177	358,840	749,017
MORRO BAY	317,699	279,399	597,098	323,442	296,214	619,656
PISMO BEACH	243,224	213,155	456,379	247,606	225,983	473,589
SAN LUIS OBISPO	1,464,864	1,310,954	2,775,819	1,491,811	1,389,851	2,881,662
County of San Luis Obispo	10,674,268	10,637,141	21,311,409	10,865,041	11,277,314	22,142,355
Total Cities & County: San Luis Obispo	15,477,624	14,910,406	30,388,030	15,756,233	15,807,756	31,563,989
SAN MATEO COUNTY						
ATHERTON	212,942	190,077	403,019	216,766	201,516	418,282
BELMONT	820,385	746,493	1,566,878	835,403	791,419	1,626,822
BRISBANE	145,036	128,385	273,422	147,619	136,112	283,731
BURLINGAME	916,424	835,047	1,751,471	933,223	885,303	1,818,526
COLMA	48,337	39,222	87,559	49,126	41,583	90,709
DALY CITY	3,023,864	2,774,563	5,798,427	3,079,682	2,941,544	6,021,225
EAST PALO ALTO	872,853	794,872	1,667,726	888,844	842,710	1,731,554
FOSTER CITY	977,675	891,525	1,869,200	995,611	945,180	1,940,790
HALF MOON BAY	345,084	310,999	656,083	351,341	329,716	681,056
HILLSBOROUGH	334,235	300,995	635,229	340,290	319,110	659,399
MENLO PARK	990,850	903,673	1,894,523	1,009,030	958,058	1,967,088
MILLBRAE	679,173	617,208	1,296,381	691,590	654,353	1,345,943
PACIFICA	1,120,872	1,023,563	2,144,435	1,141,464	1,085,164	2,226,628
PORTOLA VALLEY	133,153	117,429	250,582	135,516	124,496	260,011
REDWOOD CITY	2,407,646	2,208,672	4,616,318	2,452,079	2,341,596	4,793,675
SAN BRUNO	1,273,742	1,164,519	2,438,262	1,297,170	1,234,603	2,531,773
SAN CARLOS	893,060	813,504	1,706,564	909,426	862,463	1,771,889
SAN MATEO	3,049,151	2,797,879	5,847,030	3,105,438	2,966,263	6,071,701
SOUTH SAN FRANCISCO	1,914,076	1,753,567	3,667,643	1,949,353	1,859,102	3,808,455
WOODSIDE	159,125	140,454	299,578	161,950	148,907	310,857
County of San Mateo	17,140,396	14,253,879	31,394,275	17,470,269	15,111,717	32,581,986
Total Cities & County: San Mateo	37,458,081	32,806,524	70,264,605	38,161,188	34,780,913	72,942,101

Local Streets and Roads - Projected Revenues

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	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
SANTA BARBARA COUNTY						
BUELLTON	150,205	136,140	286,344	152,868	144,333	297,201
CARPINTERIA	374,145	347,786	721,932	380,950	368,717	749,667
GOLETA	923,722	866,674	1,790,396	940,679	918,833	1,859,511
GUADALUPE	253,549	234,248	487,797	258,132	248,346	506,478
LOMPOC	1,252,628	1,178,917	2,431,544	1,275,693	1,249,867	2,525,560
SANTA BARBARA	2,449,065	2,313,318	4,762,382	2,494,324	2,452,540	4,946,864
SANTA MARIA	3,142,940	2,969,668	6,112,608	3,201,041	3,148,391	6,349,433
SOLVANG	168,883	153,872	322,755	171,893	163,132	335,026
County of Santa Barbara	12,129,055	10,705,924	22,834,979	12,363,098	11,350,236	23,713,334
Total Cities & County: Santa Barbara	20,844,192	18,906,546	39,750,738	21,238,679	20,044,395	41,283,074
SANTA CLARA COUNTY						
CAMPBELL	1,254,093	1,157,268	2,411,360	1,277,165	1,226,915	2,504,080
CUPERTINO	1,727,894	1,596,890	3,324,784	1,759,731	1,692,995	3,452,727
GILROY	1,780,979	1,646,302	3,427,280	1,813,801	1,745,381	3,559,182
LOS ALTOS	912,697	839,493	1,752,190	929,434	890,016	1,819,450
LOS ALTOS HILLS	249,846	226,229	476,075	254,356	239,844	494,200
LOS GATOS	961,744	885,147	1,846,891	979,391	938,417	1,917,808
MILPITAS	2,341,395	2,167,941	4,509,336	2,384,617	2,298,414	4,683,031
MONTE SERENO	109,211	96,256	205,467	111,130	102,049	213,179
MORGAN HILL	1,335,752	1,233,277	2,569,030	1,360,340	1,307,499	2,667,839
MOUNTAIN VIEW	2,472,130	2,289,631	4,761,761	2,517,778	2,427,427	4,945,205
PALO ALTO	1,968,324	1,820,684	3,789,009	2,004,623	1,930,258	3,934,881
SAN JOSE	28,811,914	26,795,295	55,607,209	29,346,130	28,407,911	57,754,041
SANTA CLARA	3,841,521	3,561,945	7,403,466	3,912,535	3,776,313	7,688,848
SARATOGA	895,353	823,349	1,718,702	911,768	872,901	1,784,668
SUNNYVALE	4,554,793	4,225,865	8,780,658	4,639,044	4,480,189	9,119,233
County of Santa Clara	39,483,272	33,048,319	72,531,591	40,216,946	35,037,260	75,254,206
Total Cities & County: Santa Clara	92,700,917	82,413,891	175,114,808	94,418,789	87,373,791	181,792,580

Local Streets and Roads - Projected Revenues

Based on State Dept of Finance statewide r
Estimated January 2026

	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
SANTA CRUZ COUNTY						
CAPITOLA	284,590	260,926	545,515	289,747	276,629	566,376
SANTA CRUZ	1,835,162	1,712,201	3,547,363	1,869,003	1,815,246	3,684,250
SCOTTS VALLEY	347,859	319,415	667,274	354,172	338,638	692,811
WATSONVILLE	1,472,083	1,371,164	2,843,247	1,499,184	1,453,684	2,952,868
County of Santa Cruz	7,806,822	6,853,490	14,660,312	7,947,817	7,265,953	15,213,770
Total Cities & County: Santa Cruz	11,746,516	10,517,196	22,263,711	11,959,923	11,150,151	23,110,074
SHASTA COUNTY						
ANDERSON	338,020	295,649	633,669	344,138	313,442	657,580
REDDING	2,783,478	2,481,058	5,264,536	2,834,818	2,630,375	5,465,193
SHASTA LAKE	313,515	273,709	587,223	319,178	290,181	609,360
County of Shasta	7,932,178	8,150,831	16,083,009	8,076,084	8,641,371	16,717,454
Total Cities & County: Shasta	11,367,191	11,201,246	22,568,438	11,574,218	11,875,368	23,449,587
SIERRA COUNTY						
LOYALTON	27,043	19,532	46,575	27,411	20,707	48,118
County of Sierra	1,319,971	1,448,977	2,768,948	1,336,971	1,536,181	2,873,152
Total City & County: Sierra	1,347,014	1,468,509	2,815,523	1,364,382	1,556,888	2,921,270
SISKIYOU COUNTY						
DORRIS	31,020	22,708	53,728	31,488	24,074	55,562
DUNSMUIR	92,380	45,071	137,451	93,308	47,784	141,091
ETNA	25,906	18,103	44,008	26,278	19,192	45,470
FORT JONES	26,200	18,367	44,567	26,578	19,473	46,050
MONTAGUE	41,925	32,526	74,452	42,595	34,484	77,079
MOUNT SHASTA	163,392	85,775	249,167	165,157	90,938	256,095
TULELAKE	32,255	23,819	56,074	32,745	25,253	57,998
WEED	132,757	77,254	210,010	134,347	81,903	216,249
YREKA	245,783	208,524	454,307	250,075	221,073	471,148
County of Siskiyou	5,194,625	5,838,701	11,033,326	5,266,311	6,190,090	11,456,401
Total Cities & County: Siskiyou	5,986,242	6,370,848	12,357,090	6,068,881	6,754,263	12,823,143

Local Streets and Roads - Projected Revenues

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	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
SOLANO COUNTY						
BENICIA	785,935	716,745	1,502,680	800,315	759,881	1,560,196
DIXON	586,215	533,920	1,120,135	596,928	566,053	1,162,980
FAIRFIELD	3,470,019	3,194,945	6,664,964	3,534,121	3,387,225	6,921,346
RIO VISTA	303,692	273,603	577,295	309,181	290,069	599,250
SUISUN CITY	853,825	779,522	1,633,347	869,465	826,436	1,695,901
VACAVILLE	2,968,022	2,730,762	5,698,784	3,022,811	2,895,107	5,917,917
VALLEJO	3,619,310	3,332,990	6,952,300	3,686,182	3,533,579	7,219,760
County of Solano	11,048,788	10,059,557	21,108,345	11,253,932	10,664,969	21,918,901
Total Cities & County: Solano	23,635,807	21,622,043	45,257,850	24,072,934	22,923,319	46,996,252
SONOMA COUNTY						
CLOVERDALE	265,276	238,430	503,706	270,071	252,779	522,850
COTATI	224,305	200,637	424,942	228,340	212,712	441,052
HEALDSBURG	332,236	299,275	631,511	338,254	317,286	655,540
PETALUMA	1,728,816	1,583,392	3,312,208	1,760,657	1,678,686	3,439,343
ROHNERT PARK	1,275,263	1,166,398	2,441,661	1,298,719	1,236,595	2,535,314
SANTA ROSA	5,134,738	4,722,865	9,857,603	5,229,714	5,007,100	10,236,814
SEBASTOPOL	222,641	199,102	421,743	226,645	211,084	437,729
SONOMA	316,800	285,036	601,836	322,532	302,190	624,723
WINDSOR	762,988	693,852	1,456,840	776,941	735,610	1,512,551
County of Sonoma	15,936,239	14,815,219	30,751,458	16,225,847	15,706,841	31,932,688
Total Cities & County: Sonoma	26,199,302	24,204,206	50,403,508	26,677,720	25,660,884	52,338,604
STANISLAUS COUNTY						
CERES	1,436,127	1,329,374	2,765,501	1,462,553	1,409,380	2,871,933
HUGHSON	232,917	211,117	444,034	237,114	223,823	460,937
MODESTO	6,244,291	5,816,244	12,060,535	6,359,910	6,166,282	12,526,192
NEWMAN	358,980	327,884	686,865	365,498	347,617	713,115
OAKDALE	668,309	614,826	1,283,135	680,531	651,828	1,332,359
PATTERSON	744,058	684,616	1,428,674	757,667	725,818	1,483,485
RIVERBANK	750,351	690,491	1,440,842	764,077	732,047	1,496,124
TURLOCK	2,059,430	1,911,330	3,970,760	2,097,425	2,026,359	4,123,784
WATERFORD	266,706	242,664	509,370	271,530	257,269	528,798
County of Stanislaus	15,876,689	15,239,264	31,115,953	16,168,328	16,156,406	32,324,734
Total Cities & County: Stanislaus	28,637,859	27,067,810	55,705,669	29,164,633	28,696,828	57,861,461

Local Streets and Roads - Projected Revenues

Based on State Dept of Finance statewide r
Estimated January 2026

	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
SUTTER COUNTY						
LIVE OAK	279,142	255,606	534,748	284,198	270,989	555,187
YUBA CITY	1,998,978	1,864,591	3,863,569	2,035,859	1,976,807	4,012,666
County of Sutter	4,240,916	4,649,433	8,890,349	4,319,708	4,929,249	9,248,957
Total Cities & County: Sutter	6,519,036	6,769,630	13,288,666	6,639,765	7,177,046	13,816,811
TEHAMA COUNTY						
CORNING	239,957	218,819	458,775	244,285	231,988	476,273
RED BLUFF	425,384	391,905	817,289	433,136	415,491	848,627
TEHAMA	18,039	11,486	29,525	18,266	12,177	30,443
County of Tehama	4,310,399	5,136,169	9,446,568	4,375,913	5,445,278	9,821,191
Total Cities & County: Tehama	4,993,778	5,758,379	10,752,157	5,071,600	6,104,934	11,176,534
TRINITY COUNTY						
County of Trinity	2,379,374	2,707,654	5,087,028	2,412,112	2,870,608	5,282,720
TULARE COUNTY						
DINUBA	741,547	688,771	1,430,318	755,116	730,223	1,485,339
EXETER	298,414	273,920	572,335	303,810	290,406	594,216
FARMERSVILLE	299,594	275,032	574,626	305,011	291,584	596,596
LINDSAY	365,101	336,777	701,878	371,735	357,045	728,780
PORTERVILLE	1,798,721	1,683,804	3,482,525	1,831,891	1,785,140	3,617,031
TULARE	2,062,099	1,932,052	3,994,151	2,100,159	2,048,329	4,148,488
VISALIA	4,141,747	3,889,882	8,031,629	4,218,375	4,123,986	8,342,361
WOODLAKE	231,570	211,858	443,428	235,743	224,609	460,352
County of Tulare	16,798,739	18,422,164	35,220,903	17,110,221	19,530,862	36,641,083
Total Cities & County: Tulare	26,737,532	27,714,260	54,451,792	27,232,063	29,382,182	56,614,245
TUOLUMNE COUNTY						
SONORA	163,250	137,701	300,951	166,147	145,989	312,135
County of Tuolumne	3,594,460	3,605,615	7,200,075	3,658,131	3,822,611	7,480,742
Total City & County: Tuolumne	3,757,710	3,743,316	7,501,026	3,824,278	3,968,599	7,792,877

Local Streets and Roads - Projected Revenues

Based on State Dept of Finance statewide r
Estimated January 2026

	2025-26			2026-27		
	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL	Hwy Users Tax Account	Road Mntnc Rehab Acct	TOTAL
VENTURA COUNTY						
CAMARILLO	2,043,475	1,873,060	3,916,535	2,081,153	1,985,786	4,066,939
FILLMORE	497,702	450,844	948,546	506,771	477,977	984,748
MOORPARK	1,050,309	958,589	2,008,898	1,069,592	1,016,280	2,085,871
OJAI	227,444	203,469	430,913	231,537	215,714	447,251
OXNARD	5,803,532	5,338,114	11,141,646	5,910,912	5,659,377	11,570,289
PORT HUENEME	643,062	583,967	1,227,029	654,809	619,111	1,273,921
SAN BUENAVENTURA	3,174,080	2,913,349	6,087,429	3,232,684	3,088,683	6,321,367
SANTA PAULA	919,380	837,853	1,757,233	936,234	888,277	1,824,511
SIMI VALLEY	3,636,693	3,339,950	6,976,643	3,703,879	3,540,958	7,244,837
THOUSAND OAKS	3,654,688	3,356,544	7,011,232	3,722,207	3,558,551	7,280,758
County of Ventura	20,897,117	17,339,270	38,236,387	21,285,366	18,382,796	39,668,163
Total Cities & County: Ventura	42,547,482	37,195,009	79,742,491	43,335,145	39,433,509	82,768,654
YOLO COUNTY						
DAVIS	1,898,472	1,731,468	3,629,941	1,933,454	1,835,673	3,769,127
WEST SACRAMENTO	1,609,591	1,466,282	3,075,873	1,639,215	1,554,527	3,193,742
WINTERS	238,049	212,282	450,330	242,338	225,057	467,395
WOODLAND	1,788,917	1,630,899	3,419,815	1,821,866	1,729,051	3,550,917
County of Yolo	6,604,226	6,655,039	13,259,265	6,726,537	7,055,558	13,782,095
Total Cities & County: Yolo	12,139,255	11,695,969	23,835,224	12,363,409	12,399,866	24,763,275
YUBA COUNTY						
MARYSVILLE	372,009	348,316	720,324	378,776	369,278	748,054
WHEATLAND	116,825	106,181	223,006	118,888	112,571	231,459
County of Yuba	3,589,434	3,830,709	7,420,143	3,656,011	4,061,252	7,717,263
Total Cities & County: Yuba	4,078,268	4,285,205	8,363,473	4,153,675	4,543,101	8,696,776
Statewide Total	$ 1,870,616,000	$ 1,606,740,000	$ 3,477,356,000	$ 1,944,947,000	$ 1,770,173,000	$ 3,715,120,000

City of South Lake Tahoe

Agenda Item Executive Summary

Hilary Roverud, Interim City Manager



Meeting Date: May 19, 2026
Agenda Item #:7

Agenda Item: Community Corrections Partnership

Executive Summary: Assembly Bill 109 created the California Public Safety Realignment Act of 2011, which shifted supervision of non-violent, non-serious, and non-high-risk sex offenders from state parole to local county probation upon release from state prison; this group, known as the realigned population, is now supervised at the county level rather than by state parole officers. Each county is required to establish a Community Corrections Partnership (CCP), consisting of local justice stakeholders such as Probation, the Sheriff, and the District Attorney, to plan and oversee the use of AB 109 funds, which support community-based corrections, supervision, and evidence-based programs aimed at reducing recidivism. In March 2023, SLTPD entered into a Memorandum of Understanding with El Dorado County Probation, making the department eligible for AB 109 funding, although it has not yet utilized these funds. In October 2025, the El Dorado County Board of Supervisors approved the FY 2025â€“26 CCP budget, allocating $20,000 for SLTPD to partner with El Dorado County Probation, with the funding designated to support training and specialized enforcement services in South Lake Tahoe in alignment with the CCPâ€™s goal of reducing recidivism among the realigned population.

Requested Action / Suggested Motions:

Pass a Resolution: 1) authorizing and directing the Chief of Police to execute the First Amendment to Memorandum of Understanding #7399 for the FY 2025-26 Community Corrections Partnership Budget; 2) authorizing reimbursement up to $20,000.00 from the El Dorado County Probation Department into the Administration - Police Special Services account; and, 3) approving an amendment to the Fiscal Year 2025-2026 budget as follows: 10002110 - 34210

Responsible Staff Member: Lt. Russell Liles

Reviewed and Approved By: Susan Blankenship, City Clerk Olga Tikhomirova, Director of Finance Heather Stroud, City Attorney

Attachments:

01-Staff Report - Community Corrections Partnership.docx
02-Resolution - Community Corrections Patrnership.docx
03-2023 MOU between El Dorado Probation and SLTPD
04-Amendment No. I to MOU between El Dorado Probation and the Police Departments - unsigned.pdf

City of South Lake Tahoe
Report to **City Council**

Meeting Date: May 19, 2026

Title: Community Corrections Partnership

Location: Citywide

Responsible Staff Member: Lt. Russell Liles (530) 542-6120

Background: Assembly Bill 109 established the California Public Safety Realignment Act of 2011, which allows for current non-violent, non-serious, and non-high-risk sex offenders, after they are released from California State prison, to be supervised at the local County level. Instead of reporting to state parole officers, these offenders - known as the realigned population - report to local county probation officers.

Each county is required to establish a Community Corrections Partnership (CCP), composed of local justice system stakeholders such as Probation, the Sheriff, and the District Attorney, to develop and implement a plan for the use of AB 109 funds. These funds are intended to support community-based corrections, supervision, and evidence-based programs designed to reduce recidivism among the realigned population. On March 21, 2023, former South Lake Tahoe Police Department (SLTPD) Chief Stevenson executed a Memorandum of Understanding #7399 with the El Dorado County Probation Department, authorizing SLTPD's participation in the agreement and establishing eligibility to access AB 109 funding. To date, SLTPD has not accessed these funds.

On October 28, 2025, the El Dorado County Board of Supervisors approved the Fiscal Year 2025–26 Community Corrections Partnership budget, which included $20,000 for the South Lake Tahoe Police Department to partner with the El Dorado County Probation Department (EDCPD) to receive training and provide specialized enforcement services for the City of South Lake Tahoe in support of the CCP's operational goal of reducing recidivism among the realigned population.

Issue and Discussion: This item is before the City Council for approval of the attached First Amendment to Memorandum of Understanding No. 7399 between the City of South Lake Tahoe Police Department and the El Dorado County Probation Department. Upon execution of this MOU amendment, the South Lake Tahoe Police Department may request up to $20,000 in funding for training and may provide specific enforcement and support operations directed toward the realigned population within the city limits and in unincorporated areas of El Dorado County. These enforcement operations will be provided at a base hourly regular or overtime rate for regular full-time or reserve officers during the Fiscal Year 2025–26 Community Corrections Partnership budget period.

Financial Implications: There will be no additional burden to the General Fund as a result of this agreement. Any Officers utilized for the specialized enforcement details or trainings have been budgeted as an existing allocation for the Police Department. The El Dorado County Probation District may reimburse the South Lake Tahoe Police Department for training cost or specialized

enforcement details related to reducing recidivism among the realigned population in the amount up to $20,000.

Once received, these funds will be applied to account # 100 02110 34210

Environmental Considerations: The proposed action is not a “project” subject to review under the California Environmental Quality Act (CEQA) under CEQA Guidelines section 15378(b)(4) (creation of government funding mechanisms or government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment).

Policy Implications: This proposed agreement with El Dorado County Probation supports the following strategic priorities: Priority 3 – Public Safety

Resolution 2026-XXX

Adopted by the City of South Lake Tahoe
City Council

May 19, 2026

First Amendment to Memorandum of Understanding #7399 with El Dorado County Probation Department for FY 2025-26 Community Corrections Partnership with reimbursement from El Dorado County Probation Department to the City in the amount up to $20,000.00

BACKGROUND

A. Assembly Bill 109 created the California Public Safety Realignment Act of 2011, shifting supervision of non-violent, non-serious, and non-high-risk sex offenders from state parole to local county probation upon release from state prison. This population, known as the realigned population, is supervised at the county level rather than by state parole officers.

B. Each county must establish a Community Corrections Partnership (CCP) made up of local justice stakeholders, including Probation, the Sheriff, and the District Attorney, to plan and oversee the use of AB 109 funds. These funds support community-based corrections, supervision, and evidence-based programs aimed at reducing recidivism. In March 2023, SLTPD entered into a Memorandum of Understanding with El Dorado County Probation, making the department eligible for AB 109 funding, though it has not yet utilized these funds.

C. In October 2025, the El Dorado County Board of Supervisors approved the FY 2025–26 CCP budget, allocating $20,000 for SLTPD to partner with El Dorado County Probation. The funding supports training and specialized enforcement services in South Lake Tahoe, aligning with the CCP's goal of reducing recidivism among the realigned population.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, BE IT RESOLVED, that the City Council of the City of South Lake Tahoe:

1. Authorizes and directs the Chief of Police to execute the First Admendment to Memorandum of Understanding # 7399 for the FY 2025-26 Community Corrections Partnership Budget, which is attached hereto as Exhibit "A."

2. Authorizes reimbursement up to $20,000.00 from the El Dorado County Probation Department into the Administartion - Police Special Services account and approves an amendment to the Fiscal Year 2025-2026 budget as follows:

10002110-34210	Police Special Services	(+) $20,000.00

Adopted by the City of South Lake Tahoe City Council on Mayy 19, 2026 by the following vote:

Yes:
No:
Absent:
Abstain:

_____ Date:_____

Cody Bass, Mayor

Attest:

_____

Susan Blankenship, City Clerk

The presence of electronic signature certifies that the foregoing is a true and correct copy as approved by the South Lake Tahoe City Council.

Placerville Police Department Memorandum of Understanding #7398

South Lake Tahoe Police Department Memorandum of Understanding #7399

Managing the Effects of Public Safety Realignment Enforcement Operations Program Funded through Community Corrections Partnership

THIS MEMORANDUM OF UNDERSTANDING ("MOU"), entered into this 21 day of March, 2023, by and between the Placerville Police Department, hereinafter called "PPD," South Lake Tahoe Police Department, hereinafter called "SLTPD," and the El Dorado County Probation Department, hereinafter called "EDCPD"; is related to public safety operations necessary as a direct result of the public safety realignment legislation (AB109) passage, hereinafter called "Managing the Effects of Public Safety Realignment Enforcement Operations" program funded through the Community Corrections Partnership ("CCP").

WHEREAS, it is necessary and desirable that PPD and SLTPD, working in participation with EDCPD, be retained for the purpose of performing certain special enforcement services for the Cities of Placerville and South Lake Tahoe that are needed to support the operational goal of reduced recidivism as identified by the CCP in the plan for realignment.

WHEREAS, EDCPD has agreed to facilitate the reimbursement to PPD and SLTPD for services under this MOU through such Partnership;

NOW, THEREFORE, it is hereby agreed by the Parties hereto as follows:

1. **Services to be Performed by PPD, SLTPD, and Participation from EDCPD**
   During the term of each CCP approved fiscal year budget, PPD and SLTPD may provide specific enforcement and support operations directed toward the realigned population, both within city limits and in unincorporated areas of El Dorado County. These enforcement operations will be provided on a base hourly regular or overtime rate for regular full-time or Reserve officers, as staffing levels allow.

   PPD and SLTPD salary schedules as published will be used for determining claimable program staff. Enforcement operations shall occur four (4) times, minimally, per MOU term. These enforcement operations are to be funded as long as approved in advance by EDCPD and will include, but are not limited to:

   a. Sweeps/clean-ups in specific "target areas" frequented by the realigned population as identified by either EDCPD or the respective local police agency. Assisting EDCPD with individual visitations to the realigned population that have been assessed to have a high risk of recidivism.
   b. Completing special investigations in cooperation with EDCPD, focused on the realigned population who are suspected of new criminal law violations and/or in non-compliance with terms and conditions of supervision.
   c. Joint operation funding when dealing with target areas.

d. Enforcement of ordinances frequently violated by the realigned population.
e. Temporary housing specifically pertaining to the realigned population.
f. Enforcement operations provided by the South Lake Tahoe Police Department Homeless Liaison Officer (AKA: STACS Officer).
g. Activities pertaining to Tahoe Coalition for Homeless, specifically pertaining to the realigned population.
h. Alternative enforcement activity.

Upon reasonable notice and request, EDCPD commits to participate in each such enforcement by providing sworn personnel to assist as staffing levels allow and, at minimum, providing intelligence pertaining to individuals released to Post Release Community Supervision (PRCS) and/or Mandatory Community Supervision (MCS) in El Dorado County. EDCPD shall participate with PPD and SLTPD in planning activities for Managing the Effects of Public Safety Realignment Enforcements and shall assist with facilitating the funding+- to PPD and SLTPD, as established by CCP Implementation plan.

During the term of each CCP approved fiscal year budget, PPD and SLTPD shall be able to have staff attend program or operations related trainings. Authorization by the Chief Probation Officer is required prior to attendance. Reimbursement, in accordance with El Dorado County Travel Policy D-1, will consist of actual cost of registration, tuition, materials, meals, and travel related costs (hotel and mileage), but shall not include salary.

2. **Payment**

Upon completion of each enforcement operation PPD and SLTPD will submit an invoice to the EDCPD, due and payable within forty five (45) days following receipt and verification by EDCPD, defining the date, hours, and list of personnel (name, rank, and salary step) involved in the operation. Using the published salary rates for City of Placerville, and City of South Lake Tahoe, only base hourly rate or overtime rates, exclusive of benefits, associated with the specific operation will be claimable. Invoices shall be mailed to County at the following address:

County of El Dorado
Probation Department - Fiscal
3974 Durock Rd, Ste. 205
Shingle Springs, CA 95682

or emailed to pb-fiscal-m@edcgov.us

EDCPD will verify each invoice before submitting it to the Chief Administrative Office for reimbursement through the CCP funding.

The annual maximum amount of reimbursement provided under this MOU shall not exceed the Local Law Enforcement Enhancement amount as stated in the AB109 Budget approved by the CCP each year.

Funding for this agreement is approved by the CCP Executive Committee on an annual basis. Should the CCP Executive Committee, during the course of a given year for financial reasons reduce, or order a reduction, in the funding for services provided under this agreement, pursuant to this paragraph, this agreement may be deemed to be canceled in its entirety subject to payment for services performed prior to cancellation.

3. **Statistical Reporting**
The parties hereto agree to meet on a quarterly basis during the term of this MOU to collaborate on the progress of the Managing the Effects of Public Safety Realignment Enforcements. PPD and SLTPD shall make available to EDCPD statistical information resulting from Managing the Effects of Public Safety Realignment Enforcements. This information shall include, but not be limited to, burglary and theft statistics, calls for service relating to transient offenders, and calls for service relating to the targeted treatment areas. Furthermore, the parties agree to share all information gained under the Managing the Effects of Public Safety Realignment Enforcements that is mutually beneficial to share from a public safety standpoint. At the end of the operational year, the PPD, SLTPD, and EDCPD will collaborate on a report to the CCP detailing activities and success of the program.

4. **Alteration of Memorandum of Understanding**
This MOU is entire and contains all of the terms and conditions agreed upon by the parties. No alteration or variation shall be valid unless made in writing and signed by the parties hereto, and no oral understanding or agreement shall be binding on the parties hereto.

5. **Records**
   a. **Access** PPD and SLTPD agree to provide to EDCPD, to any Federal or State department having monitoring or reviewing authority, to authorized representatives and/or their appropriate audit agencies upon reasonable notice; access to and the right to examine and audit all records and documents necessary to determine compliance with relevant Federal, State, and local statutes, rules and regulations, and this MOU; and to evaluate the quality, appropriateness, and timeliness of services performed; for a period of at least three (3) years from the termination date of this MOU, or until audit findings are resolved; whichever is greater.
   b. **Retention** EDCPD shall maintain and preserve in its possession all records relating to this MOU for a period of at least three (3) years from the termination date of this MOU, or until audit findings are resolved, whichever is greater.

6. **Compliance with Applicable Laws**
All services to be performed by PPD, SLTPD, and EDCPD pursuant to this MOU shall be performed in accordance with all applicable Federal, State, County, and Municipal laws, ordinances, and regulations.

7. **Term of the Agreement**
Subject to compliance with the terms and conditions of this MOU, the term of this MOU shall be upon final execution through June 30, 2023. Commencing July 1, 2023 and each July 1 thereafter, the term of this MOU shall be renewed automatically for one year beyond its then expiration date contingent upon CCP Executive Committee approval, CCP budget and funding

approval, and El Dorado County Board of Supervisors approval of the CCP budget for that fiscal year.

8. **Contract Administrator**
The County Officer or employee with responsibility for administering this MOU is Brian Richart, Chief Probation Officer, Probation Department, or successor.

9. **Counterparts**
This MOU may be executed in one or more counterparts, each of which shall be an original and all of which together shall constitute one and the same instrument.

10. **Electronic Signatures**
Each party agrees that the signatures, whether digital or encrypted, of the parties included in this Agreement, are intended to authenticate this writing and to have the same force and effect as manual signatures. Electronic Signature means any electronic visual symbol or signature attached to or logically associated with a record and executed and adopted by a party with the intent to sign such record, including facsimile or email electronic signatures, pursuant to the California Uniform Electronic Transactions Act (Cal. Civ. Code §§ 1633.1 to 1633.17) as amended from time to time.

11. **Agreement**
This document and the documents referred to herein or exhibits hereto are the entire Agreement between the parties, and they incorporate or supersede all prior written or oral agreements or understandings.

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IN WITNESS WHEREOF, the parties have executed this Memorandum of Understanding on the day and year last written below.

-- COUNTY OF EL DORADO --

Dated: 3-21-23

By: Wendy Thomas
Chair
Board of Supervisors
"County"

ATTEST:
Kim Dawson
Clerk of the Board of Supervisors

By: _____ Dated: 3-21-23
Deputy Clerk

PLACERVILLE POLICE DEPARTMENT

By: _____ Dated: 2/21/2023
Joseph Wren
Chief of Police

SOUTH LAKE TAHOE POLICE DEPARTMENT

By: _____ Dated: _____
David Stevenson
Chief of Police

IN WITNESS WHEREOF, the parties have executed this Memorandum of Understanding on the day and year last written below.

-- COUNTY OF EL DORADO --

Dated: _____

By: _____
Chair
Board of Supervisors
"County"

ATTEST:
Kim Dawson
Clerk of the Board of Supervisors

By: _____ Dated: _____
Deputy Clerk

PLACERVILLE POLICE DEPARTMENT

By: _____ Dated: _____
Joseph Wren
Chief of Police

SOUTH LAKE TAHOE POLICE DEPARTMENT

By: _____ Dated: 3/13/23
David Stevenson
Chief of Police

Placerville Police Department

South Lake Tahoe Police Department

FIRST AMENDMENT TO MEMORANDUM OF UNDERSTANDING
Identified as #7398 & #7399
Managing the Effects of Public Safety Realignment Enforcement Operations Program
Funded through Community Corrections Partnership

THIS FIRST AMENDMENT to that Memorandum of Understanding Identified as #7398 & #7399, made and entered by and between the Placerville Police Department, hereinafter called "PPD," South Lake Tahoe Police Department, hereinafter called "SLTPD," and the El Dorado County Probation Department, hereinafter called "EDCPD"; is related to public safety operations necessary as a direct result of the public safety realignment legislation (AB109) passage, hereinafter called "Managing the Effects of Public Safety Realignment Enforcement Operations" program funded through the Community Corrections Partnership ("CCP").

RECITALS

WHEREAS, it is necessary and desirable that PPD and SLTPD, working in participation with EDCPD, be retained for the purpose of performing certain special enforcement services for the Cities of Placerville and South Lake Tahoe that are needed to support the operational goal of reduced recidivism as identified by the CCP in the plan for realignment, in accordance with Memorandum of Understanding Identified as #7398 & #7399, dated March 21, 2023; incorporated herein and made by reference a part hereof (hereinafter referred to as "MOU");

WHEREAS, the parties hereto desire to amend the MOU to clarify verbiage in **Section 1. Services to be Performed by PPD, SLTPD, and Participation from EDCPD;**

WHEREAS, the parties hereto desire to amend the MOU to clarify and update verbiage in **Section 2. Payment;**

NOW THEREFORE, in consideration of the foregoing and the mutual promises and covenants hereinafter contained, PPD, SLTPD, and EDCPD agree to amend the terms of the MOU in this First Amendment to Memorandum of Understanding identified as #7398 & #7399 on the following terms and conditions:

I. **Section 1., Services to be Performed by PPD, SLTPD, and Participation from EDCPD** of the MOU is amended in its entirety to read as follows:

1. **Services to be Performed by PPD, SLTPD, and Participation from EDCPD**
During the term of each CCP approved fiscal year budget, PPD and SLTPD may request funds (1) to reimburse specific enforcement and support operations ("Enforcement Operations") directed toward the realigned population, both within city limits and in unincorporated areas of El Dorado County, and (2) for law enforcement duty training.

Enforcement Operations

Reimbursement for Enforcement Operations will be provided on a base hourly regular or overtime rate for regular full-time or Reserve officers, as staffing levels allow.

PPD and SLTPD salary schedules as published will be used for determining claimable program staff. Enforcement Operations shall occur four (4) times, minimally, per MOU term. These Enforcement Operations are to be funded as long as approved in advance by EDCPD and will include, but are not limited to:

a. Sweeps/clean-ups in specific "target areas" frequented by the realigned population as identified by either EDCPD or the respective local police agency. Assisting EDCPD with individual visitations to the realigned population that have been assessed to have a high risk of recidivism.
b. Completing special investigations in cooperation with EDCPD, focused on the realigned population who are suspected of new criminal law violations and/or in non-compliance with terms and conditions of supervision.
c. Joint operation funding when dealing with target areas.
d. Enforcement of ordinances frequently violated by the realigned population.
e. Temporary housing specifically pertaining to the realigned population.
f. Enforcement operations provided by the South Lake Tahoe Police Department Homeless Liaison Officer (AKA: STACS Officer).
g. Activities pertaining to Tahoe Coalition for Homeless, specifically pertaining to the realigned population.
h. Alternative enforcement activity.

Upon reasonable notice and request, EDCPD commits to participate in each such enforcement by providing sworn personnel to assist as staffing levels allow and, at minimum, providing intelligence pertaining to individuals released to Post Release Community Supervision (PRCS) and/or Mandatory Community Supervision (MCS) in El Dorado County. EDCPD shall participate with PPD and SLTPD in planning activities for Managing the Effects of Public Safety Realignment Enforcements and shall assist with facilitating the funding+- to PPD and SLTPD, as established by CCP Implementation plan.

During the term of each CCP approved fiscal year budget, PPD and SLTPD shall be able to request reimbursement for Enforcement Operations from the CCP allocation. The Probation Department Fiscal Unit will confirm the invoice is compliant with the scope of the MOU. The Chief Probation Officer will sign off on the invoice prior to entry into FENIX.

Trainings

PPD and SLTPD staff shall be able to attend program or operations related trainings through EDCPD. Authorization by the Chief Probation Officer or Probation Department's Training Manager is required prior to training attendance. For EDCPD hosted trainings, every effort shall be made to invite PPD and SLTPD to attend to increase cost efficiencies on behalf of all departments.

PPD and SLTPD may request CCP funds to reimburse attendance at law enforcement duty trainings. Reimbursement shall be in accordance with El Dorado County Travel Policy D-1 and consist of actual cost of registration, tuition, materials, meals, and travel related costs (hotel and mileage), but shall not include salary.

II. **Section 2., Payment** of the MOU is amended in its entirety to read as follows:

2. **Payment**

Upon completion of each Enforcement Operation or training PPD and SLTPD will submit an invoice to the EDCPD, due and payable within forty-five (45) days following receipt and verification by EDCPD, defining the date, hours, and list of personnel (name, rank, and salary step) involved in the operation. Using the published salary rates for City of Placerville, and City of South Lake Tahoe, only base hourly rate or overtime rates, exclusive of benefits, associated with the specific operation will be claimable.

Invoices shall be mailed to County at the following address:

County of El Dorado
Probation Department - Fiscal
3974 Durock Rd, Ste. 205
Shingle Springs, CA 95682

or emailed to pb-fiscal@edcgov.us

EDCPD will verify each invoice before processing for payment through the Community Corrections Sub Account. The Probation Department's Fiscal Division will process these invoices.

The annual maximum amount of reimbursement provided under this MOU shall not exceed the Local Law Enforcement Enhancement amount as stated in the AB109 Budget approved by the CCP each year.

Funding for this agreement is approved by the CCP Executive Committee on an annual basis. Should the CCP Executive Committee, during the course of a given year for financial reasons reduce, or order a reduction, in the funding for services provided under this agreement, pursuant to this paragraph, this agreement may be deemed to be canceled in its entirety subject to payment for services performed prior to cancellation.

Except as herein amended, all other parts and sections of that MOU #7398 & #7399 shall remain unchanged and in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this First Amendment to MOU #7398 & #7399 on the dates indicated below.

-- COUNTY OF EL DORADO --

By: _____ Dated: _____
Kaci Smith
Interim Chief Probation Officer

CITY OF PLACERVILLE

By: _____ Dated: _____
Joseph Wren
Chief of Police

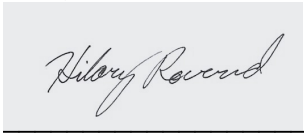
CITY OF SOUTH LAKE TAHOE

By: _____ Dated: _____
Jeff Roberson
Chief of Police

City of South Lake Tahoe

Agenda Item Executive Summary

Hilary Roverud, Interim City Manager



Meeting Date: May 19, 2026
Agenda Item #:8

Agenda Item: Amendment to Ordinance Regulating Shared Mobility Devices (Second Reading)

Executive Summary: On February 11, 2020, City Council adopted Ordinance 2020-1140 adding Chapter 4.185 to the South Lake Tahoe City Code (SLTCC). On March 26, 2024, City Council adopted Ordinance 2024-1184 amending SLTCC Chapter 4.185 to add a requirement that shared mobility devices be parked in corrals and adding additional requirements to implement the corrals. At the City Council meeting on March 11, 2025, City Council directed staff to bring an item back with a presentation of potential options for amending Chapter 4.185 to increase the Cityâ€™s liability protections from shared mobility device accidents, add safety measures for same, and update operator insurance requirements. Staff brought this item back at the City Council meeting on June 3, 2025 at which time Council directed staff to incorporate the proposals into an ordinance. Staff brought this item back for a first reading of a proposed ordinance on March 10, 2026. At that time, Council declined to adopt the ordinance and instead requested additional amendments related to parking, permissible bikeways, and photo enforcement. A first reading of the proposed amendment, with the additional revisions requested by Council, was considered and approved by City Council at the Council meeting on May 5, 2026. The present agenda item brings that proposed amendment back for a second reading and adoption.

Requested Action / Suggested Motions: Pass an Ordinance amending Chapter 4.185 of the South Lake Tahoe City Code (Shared Mobility Devices) to increase the City's liability protections from shared mobility device accidents, add safety measures for shared mobility device operations, and revise operator insurance requirements.

Responsible Staff Member: Dan Bardzell, Assistant City Attorney; Jeff Roberson, Police Chief

Reviewed and Approved By: Susan Blankenship, City Clerk Olga Tikhomirova, Director of Finance Heather Stroud, City Attorney

Attachments:

- 01 - Staff Report (Second Reading)
- 02 - SMD Ordinance (Redline)
- 03 - SMD Ordinance Amendments
- 04 - Proof of Publication-SMD Ordinance

City of South Lake Tahoe
Report to City Council

Meeting Date: May 19, 2026

Title: Ordinance Amending Shared Mobility Device Regulations (Second Reading)

Location: Citywide

Responsible Staff Members: Dan Bardzell, Assistant City Attorney; Jeff Roberson, Chief of Police

Background: On February 11, 2020, City Council adopted Ordinance 2020-1140 adding Chapter 4.185 to the South Lake Tahoe City Code (SLTCC). This ordinance regulates Shared Mobility Devices (SMDs). For purposes of this ordinance, a "shared mobility device" is defined, in pertinent part, as any wheeled transportation device, other than a bicycle, e-bicycle, automobile or motorcycle, by which a person can be propelled, moved or drawn; is accessed via an on-demand portal, whether a smartphone application, membership card, or similar method. On March 26, 2024, City Council adopted Ordinance 2024-1184 amending SLTCC Chapter 4.185 to add a requirement that SMDs be parked in corrals and adding additional requirements to implement the corrals.

At the City Council meeting on March 11, 2025, Council considered and declined to adopt an ordinance to further amend SLTCC Chapter 4.185 which would have caused a 50 percent reduction in SMDs permitted within the City. Instead, City Council directed staff to bring an item back with a presentation of potential options for increasing (1) the City's liability protections from SMD accidents, (2) safety measures for SMD operations, and (3) updating shared mobility device operator insurance requirements. Staff brought this item back at the City Council meeting on June 3, 2025 at which time Council directed staff to incorporate the proposals into an ordinance and bring it back for Council's consideration.

Staff brought this item back for a first reading of a proposed ordinance on March 10, 2026. At that time, Council declined to adopt the ordinance and instead requested additional amendments related to parking, permissible bikeways, and photo enforcement.

Staff brought the item back, with Council's requested revisions, as a first reading of the proposed amendment which was considered and approved by City Council at the Council meeting on May 5, 2026. The present agenda item brings that proposed amendment back for a second reading and adoption.

Issue and Discussion:

City Council's requested amendments are included in the proposed Ordinance, as summarized below.

Liability Protections

End User Agreement Liability Waivers

Both operators already utilize municipal waivers in their end user agreements including generic language in which riders waive liability against public entities for incidents which occur during a ride. Based on discussions with the operators, staff learned that some public entities require Bird and/or Lime to include waivers *specific* to the public entity. The proposed amendment would add permitting requirements in which operators must require riders to acknowledge waivers specifically waiving claims against the City.

Add a Permitting Requirement that Operators will Pay the City's Attorney's Fees

SLTCC section 4.185.050(C)(2) requires the operator to agree to indemnify, defend, and hold harmless the City from liability for SMD accidents, including "any and all costs and expenses." The proposed amendment would add language which requires the operator to expressly pay the City's attorney's fees for claims, lawsuits and similar matters. Although this section may already potentially cover attorney's fees, adding clarifying language would provide additional protection.

Drivers License Re-Scanning

The proposed amendment would add permit requirements to require operators to make each rider re-scan their ID the first time they ride an SMD in the operator's fleet within the City each calendar year.

Operator Insurance Updates

State law has been amended to revise the insurance requirements for SMD operators. To bring the City's SMD framework into compliance with changes to state law, the proposed Ordinance revises City Code Chapter 4.185.050 as follows:

(1) increases the aggregate amount of liability insurance an operator must carry for all occurrences during the policy period from $4,000,000 to $5,000,000;

(2) requires SMD operators procure insurance from an admitted insurer, or a nonadmitted insurer that is eligible to insure a home state insured;

(3) requires operators to offer or make available, or confirm the rider maintains, insurance coverage for bodily injury or death suffered by a pedestrian when the injury or death involves the negligent conduct of the rider, of $10,000 for each occurrence, and for property damage to an assistive technology device, of $1,000 for each occurrence, and

(4) make additional clarifying changes.

Engagement, Outreach, and Education

Modifications of SLTCC section 4.185.090 require operators to create a parking and safety education plan as part of their permit application. Operators should engage with riders to protect the safety of customers and all roadway users. Operators must educate riders about safety, and riding rules and etiquette at the time of sign-up. Operators must educate customers on how to appropriately park SMD devices. SMD apps must regularly inform and educate riders when they have ridden into prohibited riding areas such as Geofenced area, public parking facilities, public parks, and about staying off of sidewalks. Operators must inform their riders about special events, operational changes or scheduled and publicly-announced SLTPD enforcement actions through the mobile app. Operators must inform their riders that operating SMDs under the influence of drugs or alcohol is against the law. Operators must regularly deploy ambassadors and/or street teams to inform riders on safety and appropriate device use (including parking). Operators must conduct at minimum six community events or safety workshops per year, half of which must be targeted to less-served community members in multiple languages. Operators must host at minimum two learn to ride education opportunities per year. Engagements shall include a mix of virtual (digital media and in-app communications), physical, and in-person methods. This engagement should consider the needs and concerns of riders as well as non-riders. Operators shall plan for community outreach and engagement that shall include engagement activities and schedules, along with planned presentation, activities, and events with community-based organizations (CBO), business improvement districts (BIDS), and other key stakeholders. Operators must - on a monthly basis - report information from this outreach.

Safety Measures

Vehicle Code Enforcement

To address safety concerns centered on SMDs, staff has modified the following sections of the SLTCC.

4.185.020 (Definitions). Adds the definition of a Class III and Class IV bikeway. Although, CSLT has no Class IV bikeway, it is added to the definitions in the event that this class is subsequently built in the City.

SLTCC section 4.185.060 has been modified to add only Class IV bikeways. This section identifies a permit requirement to prohibit parking an SMD on such bikeways.

SLTCC section 4.185.060 (Issuance of Permits), has been modified from “City Manager” to “Chief of Police” wherein the authority sits for determining ride area prohibition (geofences). An additional modification to 4.185.060 includes the addition of larger contrasting serial numbers on the SMDs for the purpose of unit identification in enforcement.

A modification of section 4.185.080 includes a consultation with the Director of Public Works to establish areas for ride and/or parking restrictions as well as parking corrals.

In conversations with the operators, they have agreed to facilitate holding riders accountable for ride violations, including vehicle code violations. Section 4.185.090 has been modified to reflect this agreement, in that the operators will provide rider information to assist with issuing administrative citations to riders.

SLTCC section 4.185.120 (Enforcement) has been modified to reinforce the use of photographic evidence from which to hold the operator and the rider accountable for violations of California Vehicle Code ("CVC") sections 21228(b) (left turn must dismount), and 21235(e) (no passenger allowed). Additional potential CVC sections which were proposed to be added for photo enforcement in the previous version of the proposed ordinance have been removed from the version brought forward hereto. The photographic evidence would allow the operator sufficient information with which to provide rider information for the purpose of issuing a notice of such violations. The above SMD-specific sections of the California Vehicle Code have been added to clarify administrative citation through the use of photo enforcement.

The following additional issues were raised at the Council meeting on March 10, 2026:

1. Review and analyze possible updates to painting and signage on bikeways to ensure safety.

   There was not sufficient time to conduct a comprehensive cost analysis before the present meeting but staff will work with Public Works to modify signage and paint to be consistent with the California Manual on Uniform Traffic Control Devices and aligned with existing signage on the Class I Shared Use path.

2. Enhancement of the corrals, including corral signage.

   In line with guidance from City Council and collaboration with the operators, additional locations for corrals have been identified. The operators have agreed to "help" with the corral signage and location designation. However, while the undertone of help was to cover costs, that estimation or limit has yet to be defined. It might be more expedient for Public Works to physically mark the current corrals that are already defined and mark the additional corrals when those locations come online within the respective operator web applications. Finally, SLTPD and Public Works will collaborate on the corral signage language with the operators and identify the means of cost sharing.

3. Consider methods to further enforce the prohibition on riders under the age of 18.

   The proposed amendment would add permit requirements to require operators to make each rider re-scan their ID the first time they ride an SMD in the operator's fleet within the City each calendar year. This is intended to support the prohibition on underage riders. While helpful to this goal, this mechanism will not achieve 100% compliance. Staff is not aware of any additional mechanism that will achieve that level of compliance. While the addition of a bicycle patrol officer may assist in reducing underage ridership, that result remains to be seen. Notably, SMDs are deployed from May 1 through October 31; a

season to which the temporary seasonal bicycle patrol officer may be limited to 1000 work hours.

Environmental Considerations: This Ordinance is exempt from the California Environmental Quality Act ("CEQA") under CEQA Guidelines section 15061(b)(3) because it can be seen with certainty that there is no possibility that the Ordinance may have a significant effect on the environment.

Financial Implications:

The recommended amendments to increase liability and safety measures would minimize the City's potential financial exposure for Shared Mobility Device accidents. It is not possible to forecast specific savings to the City associated with such measures.

While the amendments would not directly change the cost of permit fees and administrative citations issued under SLTCC Chapter 4.185, the amendments allow City Council the discretion to change such costs in the future by resolution thus making program cost recovery more flexible.

Policy Implications:

The proposed amended Ordinance would support Strategic Priority Three: Enhance Public Safety.

The following is provided for future policy guidance.

2025 Year End Summary:
Bird summarized the 2025 season as follows:

Rides in South Lake Tahoe:	52.221
Avg SMD rides per month	8703
Unique Users:	22,872
Avg ride distance:	1.45 miles (annual report)
Use by locals:	28%*
Peak use month:	17,192 in July (33% of all rides)
Lowest use month:	3,245 in October (6% of all rides)

- Using Bird data to extrapolate the number of riders, as they suggest 28% are local riders finds that 14,621 rides of the total were locals. Additionally, Bird explains that 55.9% of those local riders are from Reno zip codes. Removing these 8173 Reno riders from the local total leaves 6448 rides from zip codes around the basin, including Truckee and North Lake Tahoe. Total rides on Bird from users with zip codes in the Basin, 12%. This is the direct comparison of local ridership percentage with Lime, below.

Lime summarized the 2025 season as follows:

Rides in South Lake Tahoe:	124.212
Avg SMD rides per month:	20702
Unique Users:	37,842
Avg ride distance:	1.14 miles (lifetime impact)
Use by locals:	1.3%
Peak use month:	33,853 in July (27% of all rides)
Lowest use month:	8441 in October (6.8% of all rides)

Chapter 4.185
SHARED MOBILITY DEVICES

Sections:

4.185.010 Purpose.
4.185.020 Definitions.
4.185.030 Shared bicycles prohibited.
4.185.040 Permit required.
4.185.050 Application for permit.
4.185.060 Issuance of permits.
4.185.070 Fleet limits.
4.185.080 Geofencing and City-designated riding and parking zones.
4.185.090 Operating regulations.
4.185.100 Impoundment and retrieval of shared mobility devices.
4.185.110 Revocation of permit.
4.185.120 Enforcement.

4.185.010 Purpose.

The purpose of this chapter is to establish a process for permitting and regulating operators and riders of shared mobility devices to achieve the city's goals of encouraging alternative modes of transportation while protecting public health and safety.

4.185.020 Definitions.

For the purposes of this chapter, the following terms, phrases and words shall have the meanings hereinafter set forth:

"Assistive technology device" means any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of an individual with a disability.

"Bikeway" means a facility that is provided primarily for bicycle travel as defined by California Streets and Highways Code section 890.4.

"Class I bikeway" means a bike path or shared use path which provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized.

“Class II bikeway” means a bike lane which provides a restricted right-of-way designated for the exclusive or semi exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted.

“Class III bikeway” means a bike route established along a route not served by other classes of bikeways or to connect discontinuous segments of bikeways. Class III bikeways are to be shared with motor vehicles and pedestrians, and shall be designated by signs or permanent markings.

“Class IV bikeway” means a bikeway for the exclusive use of bicycles and includes a separation required between the separated bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible posts, inflexible barriers, or on-street parking.

“Corral” means an area designated by the chief of police for staging or parking shared mobility devices that is created either by geofencing, or by physical striping, marking or signage.

“Fleet” means all shared mobility devices in the city owned by a specific operator.

“Geofencing” means the creation of a virtual geographic boundary, defined by Global Positioning System (GPS), radio-frequency identification (RFID), or other technology, that enables an operator to regulate speed, issue notifications, and take other actions, when a shared mobility device within its fleet enters or leaves an area.

“Operator” means any individual, firm, association, partnership, or corporation arranging to provide shared mobility devices within the city.

“Permit” means a permit issued to an operator under this chapter.

“Rider” means any person who is riding or is in actual physical control of a shared mobility device.

“Shared mobility device” means any wheeled transportation device, other than a bicycle, e-bicycle, automobile or motorcycle, by which a person can be propelled, moved or drawn; is accessed via an on-demand portal, whether a smartphone application, membership card, or similar method; is displayed,

placed or offered for rent in any public area or public right-of-way by an operator for shared use by members of the public; and is available to members of the public in unstaffed, self-service locations.

4.185.030 Shared bicycles prohibited.
Shared bicycles and shared e-bicycles are prohibited.

4.185.040 Permit required.
It is unlawful for any operator to conduct a shared mobility device business without a permit.

4.185.050 Application for permit.
A. An operator shall submit a permit application to the chief of police containing, at a minimum, the following:

1. The operator's name and business address, and the name and natural person or persons who will serve as a local point of contact for the operator;

2. Proof of a valid city business and professions certificate;

3. The type and number of shared mobility devices the operator intends to deploy with a list of identifying serial numbers designated for each device, and a schedule for phased deployment of the fleet, if applicable;

4. The location of any building or property proposed to be used by the operator for its shared mobility device business operations within the city; and

5. A ~~$75.00~~ nonrefundable fee for each shared mobility device in the operator's fleet for use within the city. If phased deployment of the fleet is proposed, payment for the first phase of deployment is due with the application and payment for any subsequent phases of deployment is due prior to each deployment. The city council may set the fee per resolution.

B. At the time of application, the operator must provide proof of commercial general liability insurance with an admitted insurer, or a nonadmitted insurer that is eligible to insure a home state insured under Chapter 6 (commencing with Section 1760) of Part 2 of Division 1 of the Insurance Code, naming the city of South Lake Tahoe as an additional insured for an amount no less than $2,000,000 per occurrence for bodily injury, personal injury, and property

damage, and with an aggregate amount of no less than $54,000,000 for all occurrences during the policy period, and which meets the following requirements:

1. If the operator maintains broader coverage and/or higher limits than the minimums required for all policies, the city requires and shall be entitled to the broader coverage and/or higher limits maintained by the operator. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the city.

2. The operator's insurance coverage shall be the primary insurance coverage with respect to the city, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the city, its officers, officials, employees, or volunteers shall be excess of the operator's insurance and shall not contribute with it.

3. The operator agrees to waive rights of subrogation which any insurer of operator may acquire from operator by virtue of the payment of any loss. The operator agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the city has received a waiver of subrogation endorsement from the insurer.

4. The operator shall provide immediate written notice to the city if (1) any of the required insurance policies is terminated; (2) the limits of any of the required polices are reduced; or (3) the deductible or self-insured retention is increased. In the event of any cancellation or reduction in coverage or limits of any insurance, the operator shall obtain and submit proof of substitute insurance.

C. The operator must also offer or make available, or confirm the rider maintains, insurance coverage for bodily injury or death suffered by a pedestrian when the injury or death involves, in whole or in part, the negligent conduct of the rider, of $10,000 for each occurrence of bodily injury to, or death of, one pedestrian in any one accident, and for property damage to an assistive technology device, or $1,000 for each occurrence. This paragraph shall not be interpreted to limit or supersede the other insurance requirements set forth pursuant this Section.

D. Each application must bear the operator's signature agreeing to:

1. Provide the city with anonymized data on its fleet trip activity within the city, including the Zip Code of each rider; and

2. Indemnify, defend, and hold harmless the city, its elected and appointed boards, officers, employees, agents, volunteers, contractors, and invitees from any and all liability, for any and all claims, demands, actions, losses, damages, and injuries direct or indirect, including any and all attorneys' fees, costs and expenses, in connection therewith, arising from operator's activities, from and against each and every claim and demand of whatsoever nature made on behalf of or by any person, persons, firm, partnership, corporation or otherwise, including operator's employees, except for claims arising out of the sole negligence or willful misconduct of the city.

3. Require all riders who operate a shared mobility device in the operator's fleet within the City to acknowledge a waiver prior to the rider's initial ride within the City to waive all claims, demands, actions, losses, damages, and injuries direct or indirect, including any and all attorneys' fees, costs and expenses in connection therewith, against the City arising from the rider's operation of a shared mobility device within the City, except for claims arising out of the sole negligence or willful misconduct of the City.

4~~3~~. Submit to photo enforcement violations of this chapter, including the requirement to effectively prohibit riders under 18 years of age.

4.185.060 Issuance of permits.

A. Each permit shall contain the following:

1. The number and each type of shared mobility devices the operator is authorized to deploy, up to no more than 500 shared mobility devices per operator;

2. A requirement to effectively prohibit shared mobility devices in the operator's fleet from entering or operating on the public walkways and public rights-of-way within the Heavenly Village area, ~~with~~to an extent to be determined by the ~~city manager~~chief of police, through geofencing or similar technology;

3. A requirement to effectively prohibit, using geofencing or similar technology, any shared mobility devices in the operator's fleet from being

locked, parked, or ending a ride within any Class I, ~~or~~ Class II, or Class IV bikeway or trail in the city;

4. A requirement to effectively prohibit, using geofencing or similar technology, any shared mobility devices in the operator's fleet from being locked, parked, or ending a ride except within a corral if the shared mobility device is within 1,000 feet from a corral; and

5. A requirement that each shared mobility device in the operator's fleet have affixed to it a designated serial number in Arial Bold, ~~a~~ font size 130~~and style that may be observed with the naked eye from 50 feet away~~. This serial number will be of contrasting color to the device and placed on both the left and right side of the SMD upright.

6. A requirement to effectively prohibit riders under 18 years of age. The operator shall annually require each rider to re-scan the rider's proof of identification card prior to the first instance the rider operates a shared mobility device in the operator's fleet within the City each calendar year.

B. No permit will be issued prior to the operator obtaining any discretionary and building permits required to occupy any building or property within the city proposed to be used for operations, such as warehouse or office space.

C. Any operator in compliance with this chapter may apply for a permit annually.

4.185.070 Fleet limits.

A. No more than 1,000 shared mobility devices shall be permitted within the city at a time. Once that limit is reached, no more permits will be issued to operators.

B. It is unlawful for an operator to deploy more shared mobility devices than allowed by that operator's permit.

4.185.080 Geofencing and City-designated riding and parking zones.

A. The chief of police, in consultation with the director of public works, may establish special parking, no-ride zones, speed zones, or other areas where riding and/or parking restrictions may apply. These locations may either be permanent or temporary.

B. The chief of police, in consultation with the director of public works, may establish locations of corrals. All corral locations will be published on the city's website.

C. The chief of police may require that an operator mark or geofence these areas and make that information available through ~~its~~ the operator's smartphone app.

D. The chief of police may require that operators direct riders to specified designated parking areas (city designated parking zones, or special areas for events). Geofencing must be integrated into the operator's app within one week of notice from the chief of police.

E. The chief of police~~The city manager, or their designee,~~ may adopt additional rules to implement the provisions of this chapter, including geographic restrictions for shared mobility devices.

4.185.090 Operating regulations.

A. Operators shall comply with the following:

1. Each operator is subject to all applicable laws, rules and regulations including those in this code and the California Vehicle Code pertaining to the operation and safety standards of the shared mobility devices in its fleet.

2. Each operator shall limit the motorized-assisted speed of each shared mobility device to no more than 15 miles per hour.

3. Through geofencing or similar technology, each operator shall effectively prohibit riders from entering or operating shared mobility devices on public walkways and public rights-of-way within the Heavenly Village area, as designated in the operator's permit.

4. Through geofencing or similar technology, each operator shall effectively prohibit, using geofencing or similar technology, any shared mobility devices in the operator's fleet from being locked, parked, or ending a ride within any Class I, ~~or~~ Class II, or Class IV bikeway or trail in the city.

5. Through geofencing or similar technology, each operator shall effectively prohibit, using geofencing or similar technology, any shared mobility devices in the operator's fleet from being locked, parked, or

ending a ride except within a corral if the shared mobility device is within 1,000 feet from a corral.

6. The chief of police may require operators, through geofencing or similar technology, to temporarily prevent the operation of shared mobility devices in a specific area during an emergency situation or within the perimeter of a permitted special event, when necessary to maintain public health and safety. ~~For permitted special events, the city will provide 10 days' notice to operators of any additional geofencing requirements.~~

7. When a rider operates a shared mobility device in the operator's fleet within an area subject to geofencing, the operator shall notify the rider of the restricted area.

8. Each operator must effectively prohibit a person and account holder from renting more than one shared mobility device at a time.

9. Each operator must effectively prohibit riders under 18 years of age. Operators shall annually require each rider within the city limits to re-scan the rider's proof of identification card prior to the first instance the rider operates a shared mobility device in the operator's fleet within the city each calendar year.

10. Operators shall ban the accounts of riders with two or more citations under this chapter.

11. Operators shall remove all shared mobility devices from operation within the city during the period of November 1 through April 30 each year.

12. Operators shall agree to provide rider information from the identified date, time, and serial number that would allow identification of any rider allegedly in violation of specified California Vehicle Codes shown in photographic evidence. This information shall only be used to assist the city in issuing administrative invoice(s) to the rider for violation(s) of South Lake Tahoe City Code.

13. Operators shall inform their riders about special events, operational changes, or scheduled and publicly announced South Lake Tahoe Police Department enforcement actions through the mobile app.

14. Operators shall inform their riders that operating shared mobility devices under the influence of drugs or alcohol is against the law.

15. Engagement, Outreach, and Education.

a. Operators shall provide a parking and safety education plan as part of their permit application. Operators shall engage with riders to protect the safety of customers and all roadway users. Engagements shall include a mix of virtual (digital media and in-app communications), physical, and in-person methods. This engagement should consider the needs and concerns of riders as well as non-riders.

b. Operators shall educate riders about safety, riding rules, and etiquette at the time of signup. Messages must include, but are not limited to:

i. Advise to wear helmets when legally required;
ii. Sidewalk riding is prohibited;
iii. Park in appropriate locations including designated corrals;
iv. Riding age restrictions;
v. Ride one person per device;
vi. Obey the rules of the road, and potential penalties;
vii. Yielding to pedestrians;
viii. How to report an issue;
ix. Prohibition on riding under the influence.

c. Operators shall educate riders about safety, riding rules and etiquette at the time a rider commences a SMD rental.

16. Digital Outreach and Education.

a. Each rental messaging must be engaging, easy to understand, and require interactive acknowledgement or confirmation by the rider, such as a “rules quiz” or yes or no questions.

b. Operators shall educate customers on how to appropriately park devices at the time of each rental through in-app or audio

messaging. Messages should inform riders that improper parking puts others at risk.

c. Operators shall develop systems to review and link riders to violations.

d. Operator's software and mobile apps shall regularly inform and educate riders when they have ridden into prohibited riding areas such as geofenced areas, public parking facilities, public parks, and sidewalks.

e. Operators shall inform their riders about special events, operational changes, or scheduled and publicly-announced South Lake Tahoe Police Department enforcement actions through the mobile app.

f. Operators shall inform their riders that operating shared mobility devices under the influence of drugs or alcohol is against the law.

17. Physical Outreach and Education.

a. Operators shall regularly deploy ambassadors and/or street teams to inform riders on safety and appropriate device use (including parking). Ambassador teams should be clearly identifiable as operator staff.

b. Operators must conduct at minimum six community events or community/stakeholder safety workshops per year. Operators may host these safety workshops at community events, such as the Live at Lakeview summer concert series.

c. Half (per season) of the community events or community/stakeholder meetings must be targeted toward engaging low-income or other disadvantaged community members. Operators shall conduct outreach in multiple languages.

d. Operators must host at least two learn-to-ride education opportunities per year.

e. Operators shall provide, to the city at fleet deployment, a plan for community outreach and engagement that shall include ambassador/street teams' engagement activities and schedules, along with planned presentation, activities, and events with community-based organizations, business improvement districts, and other key stakeholders.

f. Operators shall - on a monthly basis - report information from this outreach to the chief of police to inform problem solving efforts, including, but not limited to, the number of people, time, length, location, and general comments from community members regarding engagement.

B. Riders shall comply with the following:

1. All riders are subject to all applicable laws, rules and regulations including, but not limited to, those in this code and the California Vehicle Code.

2. All riders must be 18 years of age or older with a valid driver's license. All riders shall re-scan their proof of identification card prior to the first instance the rider operates a shared mobility device in an operator's fleet within the city each calendar year.

3. No rider shall operate a shared mobility device with more than one rider per device at a time.

4. Riders must park shared mobility devices on a sidewalk or other hard surface, in a manner that does not impede pedestrian access and provides a minimum of three feet for a pedestrian walkway; does not impede or obstruct access to ADA parking zones, street furniture, curb ramps, entry ways, driveways, sidewalk cafes, bus stops, loading zones, or landscaping; and does not impede or obstruct vehicular traffic on a street or alley.

5. No rider shall lock, park, or end a ride within any Class I ~~or,~~ Class II, or Class IV bikeway or trail in the city.

6. If a rider is within 1,000 feet from a corral, the rider shall only lock, park, or end a ride within a corral.

4.185.100 Impoundment and retrieval of shared mobility devices.

A. Within three hours of notice from the city, an operator shall retrieve a shared mobility device that is in any of the following conditions:

1. Inoperable or not safe to operate and parked on a city street, sidewalk or other city property; or

2. Parked, displayed, offered or made available for rent in violation of this chapter or the California Vehicle Code.

B. The city may impound a shared mobility device that is:

1. Not retrieved within three hours of notice to the operator; or

2. In a condition or parked in a manner that poses an imminent life safety hazard. No notice is required prior to impounding a shared mobility device posing an imminent life safety hazard.

4.185.110 Revocation of permit.

A. The city manager may revoke a permit on any of the following grounds, and shall provide written notice of the reason for the revocation to the operator:

1. The violation by operator of any of the terms, conditions or requirements of the permit or of this chapter.

2. Failure to effectively prohibit riders under the age of 18 from accessing shared mobility devices, which may be established either by multiple administrative citations issued to the operator based on photographic evidence of underage riders, by a city-conducted survey identifying a pattern of underage riders using the operator's shared mobility devices, or any combination thereof.

B. An operator may appeal the city manager's decision to revoke or not renew a permit to the city council under the administrative appeal procedures in Chapter 2.35 SLTCC.

C. Within 10 business days of the revocation of an operator's permit, the operator shall remove its fleet from the city and shall retrieve any shared mobility devices impounded by the city. If the operator fails to remove or retrieve any of its shared mobility devices, the city may remove and dispose of the shared mobility device at the operator's cost.

4.185.120 Enforcement.

A. Any operator or rider violating any provision of this chapter is subject to administrative citations under Chapter 2.30 SLTCC.

B(1). The city may issue an administrative citation with a $100.00 fine to an operator based on photographic, or other, evidence that includes the serial number of an operator's shared mobility device and demonstrates that a rider is using that shared mobility device in violation of this chapter, including a rider under the age of 18, riders operating a shared mobility device with more than one rider per device at one time, and operating or parking a shared mobility device within a restricted area subject to geofencing requirements. City Council may set the amount of the fine per resolution.

B(2) The city may issue an administrative citation with a $100.00 fine to rider based on photographic, or other, evidence that includes the serial number of an operator's shared mobility device, a date and time stamp or other evidence of a date and time, and demonstrates the rider is using that shared mobility device in violation of this chapter. City Council may set the amount of the fine per resolution.

B(3) By incorporation, photo enforcement for rider violations includes only specific California Vehicle Code (CVC) violations on a shared mobility device as enumerated below:

a. CVC 21228(b) (when preparing for a left turn, the rider must dismount);
b. CVC 21235(e) (no passenger allowed).

The above listed violations, when cited, will reference this chapter, section, and subsections of SLTCC, as applicable.

C. Any operator violating, permitting, or assisting the violation of any provisions of this chapter shall be subject to any and all civil remedies, including, without limitation, permit revocation. All remedies provided herein shall be cumulative and not exclusive. Any violation of these provisions shall

constitute a separate violation for each and every day during which such violation is committed or continued.

D. In addition to the remedies set forth in this chapter, operating a shared mobility device business in violation of any provision of this chapter is hereby declared to constitute a public nuisance under Chapter 4.40 SLTCC and, as such, may be abated or enjoined from further operation in the city.

Ordinance 2026-XXX

Adopted by the City of South Lake Tahoe
City Council

May 19, 2026

An Ordinance Amending Chapter 4.185 of the South Lake Tahoe City Code (Shared Mobility Devices) to Increase the City's Liability Protections and Safety Measures, and Revise Operator Insurance Requirements

FINDINGS

A. On February 11, 2020, City Council adopted Ordinance 2020-1140 (Shared Mobility Devices) adding Chapter 4.185 to the South Lake Tahoe City Code (SLTCC), which established a process for permitting and regulating operators and riders of shared mobility devices to achieve the City's goals of encouraging alternative modes of transportation while protecting public health and safety.

B. On March 26, 2024, City Council adopted Ordinance 2024-1184 amending SLTCC Chapter 4.185 to add a requirement that shared mobility devices be parked in corrals and adding additional requirements to implement the corrals. These requirements were added to address public safety concerns due to improper parking of shared mobility devices.

C. At the City Council meeting on November 19, 2024, Mayor Pro Tem Wallace requested, and Councilmember Creegan seconded, that an item be brought back to City Council to adopt an ordinance to amend SLTCC Chapter 4.185 to reduce the maximum number of shared mobility devices an operator may deploy in the City.

D. At the City Council meeting on March 11, 2025, City Council considered and declined to adopt an ordinance to further amend Chapter 4.185 which would have caused a 50 percent reduction in shared mobility devices permitted within the City. Instead, City Council directed staff to bring an item back with a presentation of potential options for increasing the City's liability protections, adding additional safety measures for shared mobility device operations, as well as updating operator insurance requirements.

E. City staff brought the requested item back at the City Council meeting on June 3, 2025 at which time City Council directed staff to incorporate the proposals into an ordinance and bring it back for City Council's consideration. City staff prepared the requested item and included City Council's direction on increasing the City's liability protections, adding additional safety measures for shared mobility device operations, as well as updating operator insurance requirements.

F. Staff brought this item back for a first reading of a proposed ordinance on March 10, 2026. At that time, Council declined to adopt the ordinance and instead requested additional amendments related to parking, permissible bikeways, and photo enforcement. The present Ordinance incorporates these requests with the remaining previously proposed amendments.

G. California Vehicle Code section 21225 authorizes cities to regulate the parking and operation of these devices on pedestrian and bicycle facilities and city streets and highways, so long as such regulations are not in conflict with the California Vehicle Code.

Now, Therefore, the City Council of City of South Lake Tahoe does ordain as follows:

SECTION 1. Chapter 4.185 (Shared Mobility Devices) of the South Lake Tahoe City Code is amended to read in its entirety as follows:

4.185.010 Purpose.
The purpose of this chapter is to establish a process for permitting and regulating operators and riders of shared mobility devices to achieve the city's goals of encouraging alternative modes of transportation while protecting public health and safety.

4.185.020 Definitions.
For the purposes of this chapter, the following terms, phrases and words shall have the meanings hereinafter set forth:

"Assistive technology device" means any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of an individual with a disability.

"Bikeway" means a facility that is provided primarily for bicycle travel as defined by California Streets and Highways Code section 890.4.

"Class I bikeway" means a bike path or shared use path which provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized.

"Class II bikeway" means a bike lane which provides a restricted right-of-way designated for the exclusive or semi exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted.

"Class III bikeway" means a bike route established along a route not served by other classes of bikeways or to connect discontinuous segments of bikeways. Class III bikeways are to be shared with motor vehicles and pedestrians, and shall be designated by signs or permanent markings.

"Class IV bikeway" means a bikeway for the exclusive use of bicycles and includes a separation required between the separated bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible posts, inflexible barriers, or on-street parking.

"Corral" means an area designated by the chief of police for staging or parking shared mobility devices that is created either by geofencing, or by physical striping, marking or signage.

"Fleet" means all shared mobility devices in the city owned by a specific operator.

"Geofencing" means the creation of a virtual geographic boundary, defined by Global Positioning System (GPS), radio-frequency identification (RFID), or other technology, that enables an operator to

regulate speed, issue notifications, and take other actions, when a shared mobility device within its fleet enters or leaves an area.

“Operator” means any individual, firm, association, partnership, or corporation arranging to provide shared mobility devices within the city.

“Permit” means a permit issued to an operator under this chapter.

“Rider” means any person who is riding or is in actual physical control of a shared mobility device.

“Shared mobility device” means any wheeled transportation device, other than a bicycle, e-bicycle, automobile or motorcycle, by which a person can be propelled, moved or drawn; is accessed via an on-demand portal, whether a smartphone application, membership card, or similar method; is displayed, placed or offered for rent in any public area or public right-of-way by an operator for shared use by members of the public; and is available to members of the public in unstaffed, self-service locations.

4.185.030 Shared bicycles prohibited.
Shared bicycles and shared e-bicycles are prohibited.

4.185.040 Permit required.
It is unlawful for any operator to conduct a shared mobility device business without a permit.

4.185.050 Application for permit.
A. An operator shall submit a permit application to the chief of police containing, at a minimum, the following:

1. The operator’s name and business address, and the name and natural person or persons who will serve as a local point of contact for the operator;

2. Proof of a valid city business and professions certificate;

3. The type and number of shared mobility devices the operator intends to deploy with a list of identifying serial numbers designated for each device, and a schedule for phased deployment of the fleet, if applicable;

4. The location of any building or property proposed to be used by the operator for its shared mobility device business operations within the city; and

5. A nonrefundable fee for each shared mobility device in the operator’s fleet for use within the city. If phased deployment of the fleet is proposed, payment for the first phase of deployment is due with the application and payment for any subsequent phases of deployment is due prior to each deployment. The city council may set the fee per resolution.

B. At the time of application, the operator must provide proof of commercial general liability insurance with an admitted insurer, or a nonadmitted insurer that is eligible to insure a home state insured under Chapter 6 (commencing with Section 1760) of Part 2 of Division 1 of the Insurance Code, naming the city of South Lake Tahoe as an additional insured for an amount no less than $2,000,000 per occurrence for bodily injury, personal injury, and property damage, and with an aggregate amount of

no less than $5,000,000 for all occurrences during the policy period, and which meets the following requirements:

1. If the operator maintains broader coverage and/or higher limits than the minimums required for all policies, the city requires and shall be entitled to the broader coverage and/or higher limits maintained by the operator. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the city.

2. The operator's insurance coverage shall be the primary insurance coverage with respect to the city, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the city, its officers, officials, employees, or volunteers shall be excess of the operator's insurance and shall not contribute with it.

3. The operator agrees to waive rights of subrogation which any insurer of operator may acquire from operator by virtue of the payment of any loss. The operator agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the city has received a waiver of subrogation endorsement from the insurer.

4. The operator shall provide immediate written notice to the city if (1) any of the required insurance policies is terminated; (2) the limits of any of the required polices are reduced; or (3) the deductible or self-insured retention is increased. In the event of any cancellation or reduction in coverage or limits of any insurance, the operator shall obtain and submit proof of substitute insurance.

C. The operator must also offer or make available, or confirm the rider maintains, insurance coverage for bodily injury or death suffered by a pedestrian when the injury or death involves, in whole or in part, the negligent conduct of the rider, of $10,000 for each occurrence of bodily injury to, or death of, one pedestrian in any one accident, and for property damage to an assistive technology device, or $1,000 for each occurrence. This paragraph shall not be interpreted to limit or supersede the other insurance requirements set forth pursuant this Section.

D. Each application must bear the operator's signature agreeing to:

1. Provide the city with anonymized data on its fleet trip activity within the city, including the Zip Code of each rider; and

2. Indemnify, defend, and hold harmless the city, its elected and appointed boards, officers, employees, agents, volunteers, contractors, and invitees from any and all liability, for any and all claims, demands, actions, losses, damages, and injuries direct or indirect, including any and all attorneys' fees, costs and expenses, in connection therewith, arising from operator's activities, from and against each and every claim and demand of whatsoever nature made on behalf of or by any person, persons, firm, partnership, corporation or otherwise, including operator's employees, except for claims arising out of the sole negligence or willful misconduct of the city.

3. Require all riders who operate a shared mobility device in the operator's fleet within the City to acknowledge a waiver prior to the rider's initial ride within the City to waive all claims, demands, actions, losses, damages, and injuries direct or indirect, including any and all attorneys' fees, costs and expenses in connection therewith, against the City arising from the rider's operation of

a shared mobility device within the City, except for claims arising out of the sole negligence or willful misconduct of the City.

4. Submit to photo enforcement violations of this chapter, including the requirement to effectively prohibit riders under 18 years of age.

4.185.060 Issuance of permits.

A. Each permit shall contain the following:

1. The number and each type of shared mobility devices the operator is authorized to deploy, up to no more than 500 shared mobility devices per operator;

2. A requirement to effectively prohibit shared mobility devices in the operator's fleet from entering or operating on the public walkways and public rights-of-way within the Heavenly Village area, to an extent to be determined by the chief of police, through geofencing or similar technology;

3. A requirement to effectively prohibit, using geofencing or similar technology, any shared mobility devices in the operator's fleet from being locked, parked, or ending a ride within any Class I, Class II, or Class IV bikeway or trail in the city;

4. A requirement to effectively prohibit, using geofencing or similar technology, any shared mobility devices in the operator's fleet from being locked, parked, or ending a ride except within a corral if the shared mobility device is within 1,000 feet from a corral; and

5. A requirement that each shared mobility device in the operator's fleet have affixed to it a designated serial number in Arial Bold, font size 130. This serial number will be of contrasting color to the device and placed on both the left and right side of the SMD upright.

6. A requirement to effectively prohibit riders under 18 years of age. The operator shall annually require each rider to re-scan the rider's proof of identification card prior to the first instance the rider operates a shared mobility device in the operator's fleet within the City each calendar year.

B. No permit will be issued prior to the operator obtaining any discretionary and building permits required to occupy any building or property within the city proposed to be used for operations, such as warehouse or office space.

C. Any operator in compliance with this chapter may apply for a permit annually.

4.185.070 Fleet limits.

A. No more than 1,000 shared mobility devices shall be permitted within the city at a time. Once that limit is reached, no more permits will be issued to operators.

B. It is unlawful for an operator to deploy more shared mobility devices than allowed by that operator's permit.

4.185.080 Geofencing and City-designated riding and parking zones.

A. The chief of police, in consultation with the director of public works, may establish special parking, no-ride zones, speed zones, or other areas where riding and/or parking restrictions may apply. These locations may either be permanent or temporary.

B. The chief of police, in consultation with the director of public works, may establish locations of corrals. All corral locations will be published on the city's website.

C. The chief of police may require that an operator mark or geofence these areas and make that information available through the operator's smartphone app.

D. The chief of police may require that operators direct riders to specified designated parking areas (city designated parking zones, or special areas for events). Geofencing must be integrated into the operator's app within one week of notice from the chief of police.

E. The chief of police may adopt additional rules to implement the provisions of this chapter, including geographic restrictions for shared mobility devices.

4.185.090 Operating regulations.

A. Operators shall comply with the following:

1. Each operator is subject to all applicable laws, rules and regulations including those in this code and the California Vehicle Code pertaining to the operation and safety standards of the shared mobility devices in its fleet.

2. Each operator shall limit the motorized-assisted speed of each shared mobility device to no more than 15 miles per hour.

3. Through geofencing or similar technology, each operator shall effectively prohibit riders from entering or operating shared mobility devices on public walkways and public rights-of-way within the Heavenly Village area, as designated in the operator's permit.

4. Through geofencing or similar technology, each operator shall effectively prohibit, using geofencing or similar technology, any shared mobility devices in the operator's fleet from being locked, parked, or ending a ride within any Class I, Class II, or Class IV bikeway or trail in the city.

5. Through geofencing or similar technology, each operator shall effectively prohibit, using geofencing or similar technology, any shared mobility devices in the operator's fleet from being locked, parked, or ending a ride except within a corral if the shared mobility device is within 1,000 feet from a corral.

6. The chief of police may require operators, through geofencing or similar technology, to temporarily prevent the operation of shared mobility devices in a specific area during an emergency situation or within the perimeter of a permitted special event, when necessary to maintain public health and safety.

7. When a rider operates a shared mobility device in the operator's fleet within an area subject to geofencing, the operator shall notify the rider of the restricted area.

8. Each operator must effectively prohibit a person and account holder from renting more than one shared mobility device at a time.

9. Each operator must effectively prohibit riders under 18 years of age. Operators shall annually require each rider within the city limits to re-scan the rider's proof of identification card prior to

the first instance the rider operates a shared mobility device in the operator's fleet within the city each calendar year.

10. Operators shall ban the accounts of riders with two or more citations under this chapter.

11. Operators shall remove all shared mobility devices from operation within the city during the period of November 1 through April 30 each year.

12. Operators shall agree to provide rider information from the identified date, time, and serial number that would allow identification of any rider allegedly in violation of specified California Vehicle Codes shown in photographic evidence. This information shall only be used to assist the city in issuing administrative invoice(s) to the rider for violation(s) of South Lake Tahoe City Code.

13. Operators shall inform their riders about special events, operational changes, or scheduled and publicly announced South Lake Tahoe Police Department enforcement actions through the mobile app.

14. Operators shall inform their riders that operating shared mobility devices under the influence of drugs or alcohol is against the law.

15. Engagement, Outreach, and Education.

a. Operators shall provide a parking and safety education plan as part of their permit application. Operators shall engage with riders to protect the safety of customers and all roadway users. Engagements shall include a mix of virtual (digital media and in-app communications), physical, and in-person methods. This engagement should consider the needs and concerns of riders as well as non-riders.

b. Operators shall educate riders about safety, riding rules, and etiquette at the time of signup. Messages must include, but are not limited to:
    i. Advise to wear helmets when legally required;
    ii. Sidewalk riding is prohibited;
    iii. Park in appropriate locations including designated corrals;
    iv. Riding age restrictions;
    v. Ride one person per device;
    vi. Obey the rules of the road, and potential penalties;
    vii. Yielding to pedestrians;
    viii. How to report an issue;
    ix. Prohibition on riding under the influence.

c. Operators shall educate riders about safety, riding rules and etiquette at the time a rider commences a SMD rental.

16. Digital Outreach and Education.

a. Each rental messaging must be engaging, easy to understand, and require interactive acknowledgement or confirmation by the rider, such as a "rules quiz" or yes or no questions.

b. Operators shall educate customers on how to appropriately park devices at the time of each rental through in-app or audio messaging. Messages should inform riders that improper parking puts others at risk.

c. Operators shall develop systems to review and link riders to violations.

d. Operator's software and mobile apps shall regularly inform and educate riders when they have ridden into prohibited riding areas such as geofenced areas, public parking facilities, public parks, and sidewalks.

e. Operators shall inform their riders about special events, operational changes, or scheduled and publicly-announced South Lake Tahoe Police Department enforcement actions through the mobile app.

f. Operators shall inform their riders that operating shared mobility devices under the influence of drugs or alcohol is against the law.

17. Physical Outreach and Education.

a. Operators shall regularly deploy ambassadors and/or street teams to inform riders on safety and appropriate device use (including parking). Ambassador teams should be clearly identifiable as operator staff.

b. Operators must conduct at minimum six community events or community/stakeholder safety workshops per year. Operators may host these safety workshops at community events, such as the Live at Lakeview summer concert series**.**

c. Half (per season) of the community events or community/stakeholder meetings must be targeted toward engaging low-income or other disadvantaged community members. Operators shall conduct outreach in multiple languages.

d. Operators must host at least two learn-to-ride education opportunities per year.

e. Operators shall provide, to the city at fleet deployment, a plan for community outreach and engagement that shall include ambassador/street teams' engagement activities and schedules, along with planned presentation, activities, and events with community-based organizations, business improvement districts, and other key stakeholders.

f. Operators shall - on a monthly basis - report information from this outreach to the chief of police to inform problem solving efforts, including, but not limited to, the number of people, time, length, location, and general comments from community members regarding engagement.

B. Riders shall comply with the following:

1. All riders are subject to all applicable laws, rules and regulations including, but not limited to, those in this code and the California Vehicle Code.

2. All riders must be 18 years of age or older with a valid driver's license. All riders shall re-scan their proof of identification card prior to the first instance the rider operates a shared mobility device in an operator's fleet within the city each calendar year.

3. No rider shall operate a shared mobility device with more than one rider per device at a time.

4. Riders must park shared mobility devices on a sidewalk or other hard surface, in a manner that does not impede pedestrian access and provides a minimum of three feet for a pedestrian walkway; does not impede or obstruct access to ADA parking zones, street furniture, curb ramps, entry ways, driveways, sidewalk cafes, bus stops, loading zones, or landscaping; and does not impede or obstruct vehicular traffic on a street or alley.

5. No rider shall lock, park, or end a ride within any Class I, Class II, or Class IV bikeway or trail in the city.

6. If a rider is within 1,000 feet from a corral, the rider shall only lock, park, or end a ride within a corral.

4.185.100 Impoundment and retrieval of shared mobility devices.

A. Within three hours of notice from the city, an operator shall retrieve a shared mobility device that is in any of the following conditions:

1. Inoperable or not safe to operate and parked on a city street, sidewalk or other city property; or

2. Parked, displayed, offered or made available for rent in violation of this chapter or the California Vehicle Code.

B. The city may impound a shared mobility device that is:

1. Not retrieved within three hours of notice to the operator; or

2. In a condition or parked in a manner that poses an imminent life safety hazard. No notice is required prior to impounding a shared mobility device posing an imminent life safety hazard.

4.185.110 Revocation of permit.

A. The city manager may revoke a permit on any of the following grounds, and shall provide written notice of the reason for the revocation to the operator:

1. The violation by operator of any of the terms, conditions or requirements of the permit or of this chapter.

2. Failure to effectively prohibit riders under the age of 18 from accessing shared mobility devices, which may be established either by multiple administrative citations issued to the operator based on photographic evidence of underage riders, by a city-conducted survey identifying a pattern of underage riders using the operator's shared mobility devices, or any combination thereof.

B. An operator may appeal the city manager's decision to revoke or not renew a permit to the city council under the administrative appeal procedures in Chapter 2.35 SLTCC.

C. Within 10 business days of the revocation of an operator's permit, the operator shall remove its fleet from the city and shall retrieve any shared mobility devices impounded by the city. If the operator

fails to remove or retrieve any of its shared mobility devices, the city may remove and dispose of the shared mobility device at the operator's cost.

4.185.120 Enforcement.

A. Any operator or rider violating any provision of this chapter is subject to administrative citations under Chapter 2.30 SLTCC.

B(1) The city may issue an administrative citation with a fine to an operator based on photographic, or other, evidence that includes the serial number of an operator's shared mobility device and demonstrates that a rider is using that shared mobility device in violation of this chapter. City Council may set the amount of the fine per resolution.

B(2) The city may issue an administrative citation with a fine to rider based on photographic, or other, evidence that includes the serial number of an operator's shared mobility device, a date and time stamp or other evidence of a date and time, and demonstrates the rider is using that shared mobility device in violation of this chapter. City Council may set the amount of the fine per resolution.

B(3) By incorporation, photo enforcement for rider violations includes only specific California Vehicle Code (CVC) violations on a shared mobility device as enumerated below:

a. CVC 21228(b) (when preparing for a left turn, the rider must dismount);
b. CVC 21235(e) (no passenger allowed).

The above listed violations, when cited, will reference this chapter, section, and subsections of SLTCC, as applicable.

C. Any operator violating, permitting, or assisting the violation of any provisions of this chapter shall be subject to any and all civil remedies, including, without limitation, permit revocation. All remedies provided herein shall be cumulative and not exclusive. Any violation of these provisions shall constitute a separate violation for each and every day during which such violation is committed or continued.

D. In addition to the remedies set forth in this chapter, operating a shared mobility device business in violation of any provision of this chapter is hereby declared to constitute a public nuisance under Chapter 4.40 SLTCC and, as such, may be abated or enjoined from further operation in the city.

SECTION 2. If any section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by a decision of any court of competent jurisdiction, such decision will not affect the validity of the remaining portions of this Ordinance. The City Council declares that it would have passed this Ordinance and each and every section, subsection, sentence, clause, or phrase not declared invalid or unconstitutional without regard to whether any portion of the Ordinance would be subsequently declared invalid or unconstitutional.

SECTION 3. The City Council finds that this Ordinance is exempt from the California Environmental Quality Act ("CEQA") under CEQA Guidelines section 15061(b)(3) because it can be seen with certainty that there is no possibility that the Ordinance may have a significant effect on the environment.

SECTION 4. The City Clerk is directed to certify this Ordinance and cause it to be published in the manner required by law.

SECTION 5. This Ordinance shall become effective 30 days following its adoption.

Adopted by the City of South Lake Tahoe City Council on May 19, 2026 by the following vote:

Yes:
No:
Abstain:
Absent:

_____ Date:_____
Cody Bass, Mayor

Attest:

_____
Susan Blankenship, City Clerk

First Reading:
Published:
Second Reading:
Effective:

The presence of electronic signature certifies that the foregoing is a true and correct copy as approved by the South Lake Tahoe City Council.

LEGAL PUBLICATION

CITY OF SOUTH LAKE TAHOE
SUMMARY OF PROPOSED ORDINANCE

NOTICE IS HEREBY GIVEN that on May 5, 2026, the City of South Lake Tahoe City Council waived first reading, read by title only and referred to second reading and adoption to the May 19, 2026, City Council meeting, of the following ordinance:

"An Ordinance Amending Chapter 4.185 of the South Lake Tahoe City Code (Shared Mobility Devices) to Increase the City's Liability Protections and Safety Measures, and Revise Operator Insurance Requirements"

City Attorney's Summary of Ordinance:

"The proposed ordinance would amend the regulations of shared mobility devices (SMDs) such as electric scooters to add permitting requirements in which operators must require riders to acknowledge waivers for claims against the City, require operators to pay the City's attorney's fees for claims, lawsuits and similar matters, and update insurance requirements . This Ordinance would also amend the regulations to add permit requirements to require operators to make each rider re-scan their ID the first time they ride an SMD in the operator's fleet within the City each year.

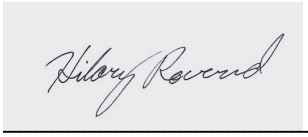
The proposed ordinance would further amend the regulations to require operators to create a parking and safety education plan as part of their permit application. Also, it would define Class III and Class IV bikeways, prohibit parking SMDs on Class IV bikeways, modify the authority for determining ride area prohibition from city manager to chief of police, require larger contrasting serial numbers on SMDs for unit identification, and require the chief of police to consult with the director of public works to establish areas for ride and/or parking restrictions and parking corrals.
Additionally, the proposed ordinance would amend the regulations by requiring operators to provide rider information to assist with issuing administrative citations to riders and allow use of photographic evidence to hold operators and riders accountable for certain California Vehicle Code violations."
A copy of the proposed ordinance in its entirety is available for review at the City Clerk's Office or by contacting the City Clerk.

Susan Blankenship
Susan Blankenship, City Clerk
sblankenship@cityofslt.us
City of South Lake Tahoe
1901 Lisa Maloff Way, Ste 206
South Lake Tahoe, Ca 96150
(530) 542-6005
Published: May 8, 2026

City of South Lake Tahoe

Agenda Item Executive Summary

Hilary Roverud, Interim City Manager



Meeting Date: May 19, 2026
Agenda Item #:9

Agenda Item: Tahoe Bluefins Swim Club City Sponsorship

Executive Summary: The Parks & Recreation Department received a request from the Tahoe Bluefins Swim Club (Swim Club) to support the costs associated with the rental of the pool for their program. Historically, the Swim Club received a discount of 55% on the rental plus the costs associated with staffing one of the two lifeguards necessary for their rental. These historic discounts have not been memorialized in an agreement and the Swim Club requested these costs be covered by the City at the new Multigenerational Recreation & Aquatics Center (Rec Center). Without these discounts, the Swim Club has expressed challenges to retaining participation levels in the program. Staff recommend Council support the costs associated for staffing one of the lifeguards along with increasing the discount to the Swim Club to 55% for their rental of the pool to support the Swim Club program for a six-month rental. The total cost of the City sponsoring these costs is $8,343 from the General Fund. This will support a valued long-term rental while recognizing and accounting for the cost of using City facilities and associated labor. Staff propose a broad review of fees for the new Rec Center be brought back to Council at a future date to evaluate fees for the Swim Club in the context of all other recreation renters and users.

Requested Action / Suggested Motions: Pass a Resolution authorizing the use of General Fund to sponsor facility rental fees and staff labor for the Tahoe Bluefins Swim Club totaling $8,343 for a six-month agreement.

Responsible Staff Member: John Stark, Director of Parks & Recreation

Reviewed and Approved By: Susan Blankenship, City Clerk Olga Tikhomirova, Director of Finance Heather Stroud, City Attorney

Attachments:

01-Staff Report - Tahoe Bluefins Swim Club City Sponorship.docx
02-Resolution-Tahoe Bluefins Swim Club City Sponsorship.docx

City of South Lake Tahoe
Report to **City Council**

Meeting Date: May 19, 2026

Title: Tahoe Bluefins Swim Club City Sponsorship

Location: Multigenerational Recreation & Aquatics Center

Responsible Staff Member: John Stark, Parks and Recreation Director (530) 307-9145

Background: Approximately six months ago, Parks & Recreation staff met with members of the Tahoe Bluefins Swim Club Board to discuss the new fee schedule for the new Recreation & Aquatics Center. It was discussed that the prior fee arrangement the Swim Club had was not part of a formal City Council-approved agreement or adopted fee structure. The historical discount and City-covered lifeguard support were not memorialized in a written agreement approved by the City Council and therefore could not be continued administratively at the new facility. At that time, staff advised the Swim Club that if the organization believed it could not operate under the new fee structure, it could submit financial information and supporting documentation to staff and staff could review and prepare an item requesting the City sponsoring the Swim Club program. Staff do not have authority to approve subsidized facility use, waive adopted fees, or provide City-funded staffing outside the approved fee structure. Any such request would require City Council review and approval.

The Parks and Recreation Department received a request in April 2026 from the Swim Club to support the costs associated with the rental of the pool for their program. The Swim Club has expressed financial challenges with the fees they would pay with the existing fee schedule that would challenge the viability of their program.

Without the fee and staff sponsorship, the Swim Club has expressed challenges to retaining participation levels in the program.

Issue and Discussion:

Staff recommend Council support the costs associated for staffing one of the lifeguards along with increasing the discount to the Swim Club to 55% for their rental of the pool to support the Swim Club program for a six-month rental agreement. City Council authorization is required to allow the Parks and Recreation Department to apply General Fund support toward the facility rental costs and staffing of one lifeguard to support sponsoring the Swim Club rental. This approach enables the City to support a valued long-term rental while still recognizing and accounting for the cost of using City facilities and labor totaling $8,343 sponsored by the City.

Staff propose continuing to evaluate the fees for the Swim Club in the context of all other recreation renters and users for a broader review of the fees to be brought back to City Council at a future date.

Financial Implications: Rental fees for the pool with the 25% nonprofit discount and full cost of paying for two lifeguards total $18,750.96 for six months. Changing the discount from the nonprofit rate to the 55% discount and covering the cost of one lifeguard would reduce these fees to $10,407.96 and would be subsidized for the Swim Club from the General Fund. The Swim Club will pay $10,407.96 total including the cost of one lifeguard and pool rental for their rental for the six-month agreement.

Environmental Considerations: The Swim Club sponsorship is categorically exempt from review under the California Environmental Quality Act (CEQA) because the program will allow for the normal operations of existing facilities for public gatherings for which the facilities were designed (CEQA Guidelines section 15323 – Normal Operations of Facilities for Public Gatherings).

Policy Implications: Strategic Plan Priorities supported by sponsoring the Swim Club include: 7.7 Continue to improve access for people of all abilities to all public spaces.

Resolution 2026-XXX

Adopted by the City of South Lake Tahoe
City Council

May 19, 2026

Authorizing the Use of General Fund to Sponsor Facility Rental Fees and Staff Labor at the Recreation Center for the Tahoe Bluefins Swim Club

BACKGROUND

A. The City's Parks and Recreation Department (City) received a request from the Tahoe Bluefins Swim Club (Swim Club) to support the costs associated with the rental of the pool for their program.
B. Historically, the Swim Club received a discount of 55% along with supporting the costs associated with staffing one of the two lifeguards for their rental. This has not been memorialized in an agreement previously.
C. The Swim Club has expressed financial challenges with the fees they would pay with the existing fee schedule that would challenge the viability of their program.
D. Without the fee and staff sponsorship, the Swim Club has expressed challenges to retaining participation levels in the program.
E. Staff recommend Council support the costs associated for staffing one of the lifeguards along with increasing the discount to the Swim Club to 55% for their rental of the pool to support the Swim Club program for a six-month rental agreement.
F. City Council authorization is required to allow the Parks and Recreation Department to apply General Fund support toward the facility rental costs and staffing of one lifeguard to support sponsoring the Swim Club rental. This approach enables the City to support a valued long-term rental while still recognizing and accounting for the cost of using City facilities and labor totaling $8,343 sponsored by the City.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, BE IT RESOLVED, that the City Council of the City of South Lake Tahoe:

1. Authorizes the Use of General Fund to sponsor facility rental fees and staff labor for the Swim Club totaling $8,343 for a six-month agreement.

Adopted by the City of South Lake Tahoe City Council on May 19, 2026, by the following vote:
Yes:
No:
Absent:
Abstain:

_____ Date:_____

Cody Bass, Mayor

Attest:

_____

Susan Blankenship, City Clerk

The presence of electronic signature certifies that the foregoing is a true and correct copy as approved by the South Lake Tahoe City Council.

City of South Lake Tahoe

Agenda Item Executive Summary

Hilary Roverud, Interim City Manager

Meeting Date: May 19, 2026
Agenda Item #:10

Agenda Item: Amendment to Parking Agreement with Heavenly Mountain Resort

Executive Summary: On 3/10/26, the city council asked for a report on usage of the Heavenly Parking Agreement. They additionally asked for information on potential safety concerns arising out of the agreement. After conducting this assessment, two areas of concern were found which can be addressed by amending the agreement. One safety concern was found arising from citizen complaints. The concerns came from residents of 1390 Ski Run Blvd. The complainants noted the parked vehicles created a substantial visual obstruction when exiting their complex. One complainant mentioned nearly getting in a traffic collision due to this obstruction. They also noted the impact was greater with snow buildup on the roadway. This location on Ski Run Blvd, located between Needle Peak Rd and Regina Rd, has residences on the west side of the roadway. The east side of the roadway has no residences. This would make it an ideal place to relocate the on-street parking to eliminate the visual safety issue and reduce resident/visitor conflicts. The second safety concern arose from a heavy snow day which led the PD to close Ski Run Blvd and Keller Rd due to dangerous road conditions. When the roadways are not closed in these conditions, multiple vehicle collisions occur. Under section 3 of the existing agreement, Heavenly has been designated to plow, de-ice, and sand the roadways used by them for on-street parking on days they are used. These requirements state Heavenly â€œshall ensure that travel lanes to accommodate two-way traffic are maintained in these areas whenever they are used for resort parking.â€ Heavenly might view this obligation as an absolute requirement despite dangerous road conditions and encourage employees to make it to work in order to carry out this function. The safety of motorists and pedestrians supersede Heavenlyâ€™s need to fulfil its obligations on days which the PD closes Ski Run Blvd and Keller Rd. Heavenly employees already on site can still perform these functions, but we donâ€™t want other employees not already at work encouraged to come up the closed roads. Amending section 3, paragraph 1 of the agreement to add guidance regarding roadway closure operations would clarify Heavenlyâ€™s obligations and promote roadway safety.

Requested Action / Suggested Motions: 1) Pass a Motion authorizing and directing the Mayor to execute the Amendment to the Parking Agreement with Heavenly Mountain Resort; and 2) Pass a Resolution amending the seasonal parking restrictions on certain streets in the Heavenly Valley Neighborhood (replaces Resolution 2025-099).

Responsible Staff Member: Lt. Doug Sentell

Reviewed and Approved By: Susan Blankenship, City Clerk Olga Tikhomirova, Director of Finance Heather Stroud, City Attorney

Attachments:

01 STAFF REPORT - Heavenly Parking Agreement Report.docx
02-Amendment No. 1 to Agreement with Heavenly.docx
03- Resolution on Seasonal Parking Agreement.docx
04-C-306-2025 Heavenly Parking Agreement.pdf
05- ExhibitA.pdf

City of South Lake Tahoe
Report to **City Council**

Meeting Date: May 19, 2026

Title: Evaluation of the Heavenly Valley Parking Agreement for the 2025/2026 Ski Season.

Location: Police Department

Responsible Staff Member: Lieutenant Doug Sentell, (530) 542-6520

Background:
The city entered into the Heavenly Valley Parking agreement with Heavenly Mountain Resort (Heavenly) for use of city street parking during the ski season for overflow parking. The agreement, Motion 2025-128 / C-306-2025, was agreed to by the city council on 12/09/2025.

Issue and Discussion:
During the agenda planning calendar discussion of the March 10, 2026 city council meeting, Council Member Horgan requested an assessment of this agreement, which Council Member Jinkens seconded. The information requested was for the following:

1. End of season report of on-street parking usage from Heavenly
2. Parking enforcement by the PD
3. Safety concerns, if any, arising from the on-street parking

Note: The 2025/2026 ski season was affected by low snowfall totals. This likely had an effect on the results of this assessment.

Findings:

1. Heavenly reported parking 2,542 cars on the street over 39 separate days. They averaged 65 cars a day for each of these days
2. The PD issued 56 citations in the on-street parking area from 11/01/25 through 3/22/26. This placed the average at only 1.4 citations per usage day.
3. One safety concern was found arising from citizen complaints. The concerns came from residents of 1390 Ski Run Blvd. The complainants noted the parked vehicles created a substantial visual obstruction when exiting their complex. One complainant mentioned nearly getting in a traffic collision due to this obstruction. They also noted the impact was greater with snow buildup on the roadway

   This location on Ski Run Blvd, located between Needle Peak Rd and Regina Rd, has residences on the west side of the roadway. The east side of the roadway has no residences. This would make it an ideal place to relocate the on-street parking to eliminate the visual safety issue and reduce resident/visitor conflicts.

   An additional safety concern arose from a heavy snow day which led the PD to close Ski Run Blvd and Keller Rd due to dangerous road conditions. When the roadways are not closed in these conditions, multiple vehicle collisions occur.

Under section 3 of the existing agreement, Heavenly has been designated to plow and sand the roadways used by them for on-street parking on days they are used. These requirements state Heavenly "*shall ensure that travel lanes to accommodate two-way traffic are maintained in these areas whenever they are used for resort parking."*

Heavenly might view this obligation as an absolute requirement despite dangerous road conditions and encourage employees to make it to work in order to carry out this function. The PD views the safety of motorists and pedestrians supersede Heavenly's need to fulfil its obligations on days which the PD closes Ski Run Blvd and Keller Rd. Heavenly employees already on site can still perform these functions, but we don't want other employees not already at work encouraged to come up the closed roads.

Amending section 3, paragraph 1 of the agreement to add guidance regarding roadway closure operations would clarify Heavenly's obligations and promote roadway safety.

Recommendations:
Based on analysis of the parking location, input from complainants, and a meeting with Heavenly Director of Base Experience Brian Bigley, I recommend the following:

Amend section 2A of the Heavenly Parking Agreement (C-306-2025) as follows:

Perpendicular parking spaces on the ~~west~~ east side of Ski Run Boulevard between Needle Peak Road and Regina Road, as shown on Exhibit A, which is attached hereto and incorporated by reference. Heavenly shall maintain visible markings and make best efforts to prohibit parking within 15 feet of a fire hydrant.

Amend section 3, paragraph one of the Heavenly Parking Agreement (C-306-2025) as follows:

In order to assist the City with timely snow removal and application of deicer and abrasives on the streets that are covered by this Agreement, snow removal, sanding, and deicing will be primarily performed by Heavenly, using its own equipment, on the roads where non-exclusive use of onstreet parking is granted to Heavenly, specified in Section 2, whenever these areas are used for resort parking. Heavenly shall ensure that travel lanes to accommodate two-way traffic are maintained in these areas whenever they are used for resort parking. During periods of severe weather which the Police Department closes Ski Run Blvd and/or Keller Road, Heavenly will not be penalized for an inability to perform these duties in a timely manner due to road closure. Heavenly understands when conditions cause the roadways to be closed, it can impact its operations.

Financial Implications:
There will be no impact to the general fund.

Environmental Considerations: The proposed action is not a "project" subject to review under the California Environmental Quality Act (CEQA) under CEQA Guidelines section 15378(b)(4) (creation of government funding mechanisms or government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment).

Policy Implications: N/A

AMENDMENT No. 1 TO THE PARKING AGREEMENT WITH HEAVENLY MOUNTAIN RESORT

The Parking Agreement, C-306-2025, entered on December 9, 2025, between the City of South Lake Tahoe, a municipal corporation ("CITY") and Heavenly Mountain Resort (“Heavenly") is hereby amended as set forth below.

RECITALS

A. On December 9, 2025, the City entered into the agreement with Heavenly which allowed them to use certain designated on-street parking locations for their operations. The agreement also tasked Heavenly with *“snow removal, sanding, and deicing”* as their primary responsibility in the areas which they park their cars pursuant to this agreement.

B. During the agenda planning calendar discussion on the March 10, 2026 city council meeting, Council Member Horgan requested an assessment of this agreement, which Council Member Jinkens seconded.

C. I, Lt, Doug Sentell, gathered the information regarding the assessment. The findings are attached in the staff report.

D. A safety issue was found which needed to be addressed regarding parking on Ski Run Blvd. between Needle Peak Rd and Regina Rd. Residents in this section reported visual obscurement due to the vehicles parked on its (west) side of the roadway. They reported near-miss collisions.

E. An assessment of the area showed no residences on the opposite (east) side of Ski Run Blvd. Moving the parking to the opposite side of the roadway would remove the visual obscurement to the residences on the west side of the roadway.

F. An assessment of operations during roadway closures found the need to amend the agreement to give clarification to Heavenly on expectations of duties during events which close Ski Run Blvd. and Keller Road.

AGREEMENT

Section 2(A) of the Heavenly Valley Parking Agreement is hereby amended to read as follows:

> Perpendicular parking spaces on the east side of Ski Run Boulevard between Needle Peak Road and Regina Road, as shown on Exhibit A, which is attached hereto and incorporated by reference. Heavenly shall maintain visible markings and make best efforts to prohibit parking within 15 feet of a fire hydrant.

Section 3, paragraph 1 of the Heavenly Valley Parking Agreement is hereby amended to read as follows:

> In order to assist the City with timely snow removal and application of deicer and abrasives on the streets that are covered by this Agreement, snow removal, sanding, and deicing will

be primarily performed by Heavenly, using its own equipment, on the roads where non-exclusive use of onstreet parking is granted to Heavenly, specified in Section 2, whenever these areas are used for resort parking. Heavenly shall ensure that travel lanes to accommodate two-way traffic are maintained in these areas whenever they are used for resort parking. During periods of severe weather which the Police Department closes Ski Run Blvd and/or Keller Road, Heavenly will not be penalized for an inability to perform these duties in a timely manner due to road closure. Heavenly understands when conditions cause the roadways to be closed, it can impact its operations.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed on the date first written above.

CITY OF SOUTH LAKE TAHOE

By: _____
Cody Bass, Mayor

HEAVENLY VALLEY LIMITED PARTNERSHIP

By: _____
Shaydar Edelmann, VP & General Manager

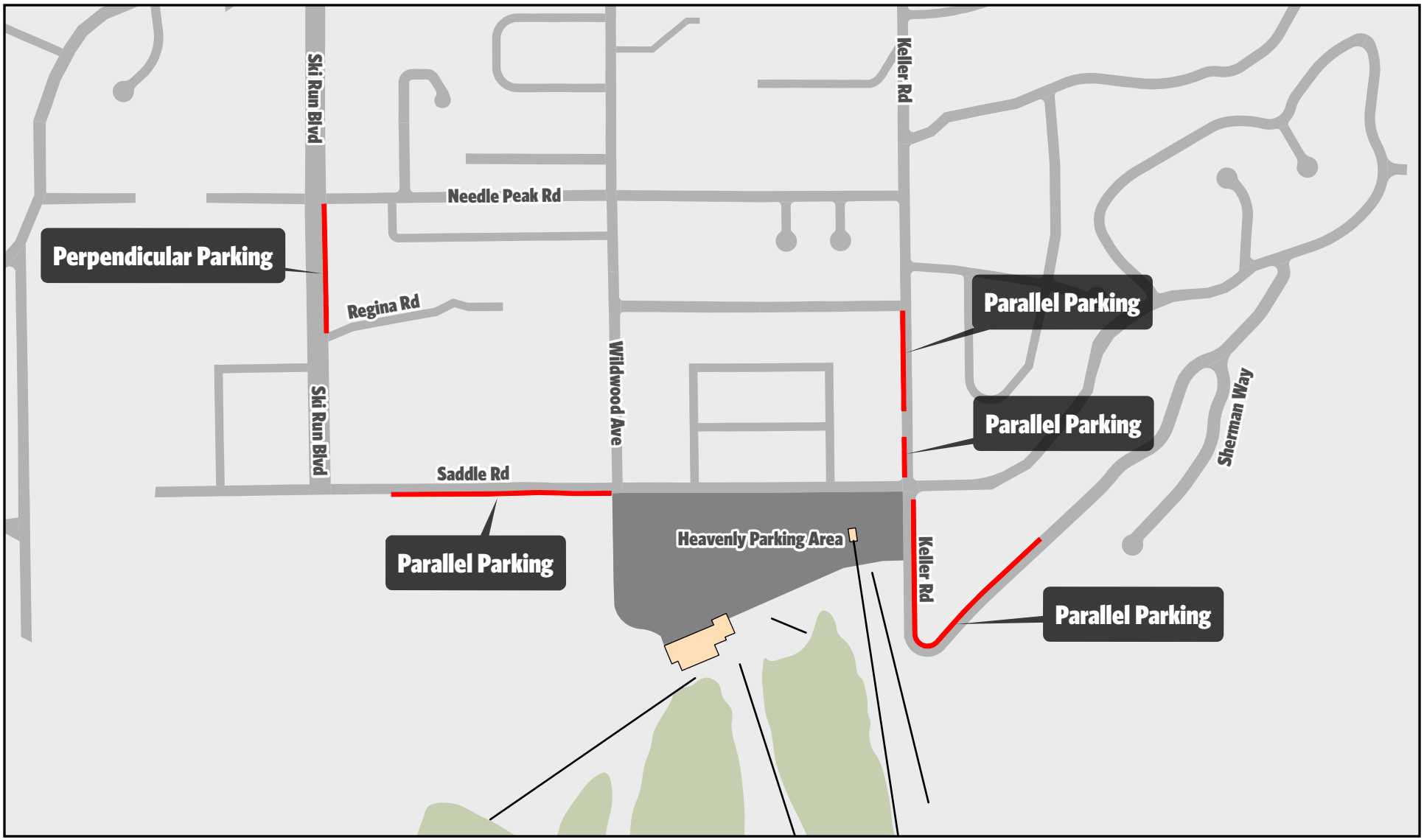
APPROVED AS TO FORM:

_____
Heather Stroud, City Attorney

ATTEST:

_____
Susan Blankenship, City Clerk

CITY SEAL:



CITY OF SOUTH LAKE TAHOE

Heavenly Parking Agreement 2026 Exhibit A

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Resolution 2026-XXX

Adopted by the City of South Lake Tahoe City Council

May 19, 2026

Establishing Seasonal or Permanent No Parking Restrictions on Certain Streets in the Heavenly Valley Neighborhoods

(Replaces Resolution 2025-099)

BACKGROUND

A. As part of the ongoing effort to improve parking and traffic conditions in the Heavenly Valley neighborhoods, especially during winter conditions and the Heavenly ski season, the Public Works Director/City Traffic Engineer recommends establishing certain residential streets as no parking areas or Residential Parking Permit (RPP) from November 1 to May 1.

B. Under South Lake Tahoe City Code section 4.25.300(C) and California Vehicle Code section 22507(a), the City Council is authorized to establish no parking areas by resolution and enforce the no parking areas once appropriate signage is installed.

C. On September 15, 2023, City Council adopted Ordinance No. 2023-1178 to authorize residential permit parking under California Vehicle Code section 22507(a), which the Public Works Director has determined is appropriate for this area because non-resident vehicles do substantially and regularly interfere with the use of the majority of the available on-street spaces by adjacent residents; this interference occurs at regular and significant daily or weekly intervals; the volume of non-resident vehicles in these certain areas cause unreasonable traffic hazards, noise, and trash impacts; a shortage of reasonably available and convenient residential related parking spaces exist in these areas; and alternative solutions are not feasible or practical.

D. On August 8, 2023, the City Council adopted Resolution 2023-074, establishing No Parking and Residential Parking Permits on Certain Roadways in Heavenly Valley Neighborhood. The resolution has most recently been amended with adoption of Resolution 2024-059.

E. As a result of City Council approval of a Parking Agreement with Heavenly Resort, modifications on Saddle Road, Keller Road, and Ski Run Blvd, Resolution 2025-099 was adopted on December 9, 2025 to replace Resolution No. 2024-059.

F. After evaluation of the 2025/2026 season, additional modifications are needed to improve public safety. Modifications are underlined..

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, BE IT RESOLVED, that the City Council of the City of South Lake Tahoe:

Establishes no parking areas from November 1 to May 1, or maintains permanent no parking areas where such areas already exist, with Residential Permit Parking permitted where noted, on the following streets and segments of streets and as shown in Exhibit A:

a. Bridle Road (RPP on the northerly side and No Parking on southerly side)

b. Bonita Road (No Parking on the northerly side and RPP on the southerly side)

c. David Lane from the intersection of Ski Run Blvd to Ruby Way (No Parking on the easterly side and RPP on the westerly side)

d. Donner Lane (RPP on the westerly side and No Parking on the easterly side)

e. Keller Road from intersection with Sherman Way to intersection with Saddle Road at the CA Base Parking Lot (RPP from Sherman Way intersection to 1,500 feet to the south on the western side and No Parking on the south and eastern side)

f. Keller Road from intersection with Saddle Road to intersection with Regina (RPP on northerly side (450 feet west of Saddle) and No Parking on southerly side between the two driveways of 1474 Keller Road

g. Keller Road from intersection with Regina Road to intersection with Markoffer Way (No Parking both sides) and from the intersection with Sherman Way to the intersection with Saddle Road (No Parking on the easterly side and RPP on the westerly side)

h. Knoll Lane (RPP on easterly side and No Parking on westerly side)

i. Logroad Place (No Parking both sides)

j. Lucinda Court (RPP on westerly side and No Parking on easterly side)

k. June Way (No Parking both sides)

l. MacKedie Way (No Parking both sides)

m. Needle Peak Road from intersection with Keller Road to intersection with Wildwood Avenue (RPP on southerly side and No Parking on northerly side)

n. Overlook Court (No Parking both sides)

o. Regina Road from the intersection with Ski Run Blvd to Keller Road (RPP on the easterly side and No Parking on the westerly side)

p. Saddle Road from the intersection of Ledge Ct. to the intersection of Saddle Road to the south (RPP on western side, No Parking on eastern side)

q. Saddle Road from the intersection of Saddle Road to intersection of Keller Road to the south (No Parking on both sides)

r. Saddle Road from the intersection of Keller Rd to Ledge Court (No Parking on eastern side)

s. Saddle Road from intersection of Keller Road to Wildwood Avenue (No Parking both sides)

t. Saddle Road from intersection of Wildwood Avenue to Ski Run Blvd (No Parking on northerly side)

u. Saddle Road from intersection of Ski Run Blvd to end (No Parking both sides)

v. Sherman Way (RPP on westerly side and No Parking on eastern side and around the cul-de-sac)

w. Ski Run Boulevard from intersection of Pioneer Trail to Saddle Road (No Parking both sides except on ~~western~~ eastern side between Needle Peak and Regina).

x. Needle Peak Road from intersection of Ski Run to Wildwood (No Parking on both sides)

y. Needle Peak Road from intersection of Ski Run to 500 feet west of Ski Run Blvd (No Parking on both sides)

z. Timber Lake Place (No Parking both sides)

aa. Terrace Drive (No Parking both sides)

bb. Wildwood Avenue from intersection with Saddle Road to intersection with Overlook Court (No Parking both sides)

cc. Wildwood Road (No Parking both sides)

dd. Woods Avenue (No Parking both sides)

ee. Verdon Lane (RPP on the westerly side and No Parking on the easterly side)

Adopted by the City of South Lake Tahoe City Council on May 19, 2026, by the following vote:

Yes:
No:
Absent:

_____ _____

,Mayor Date

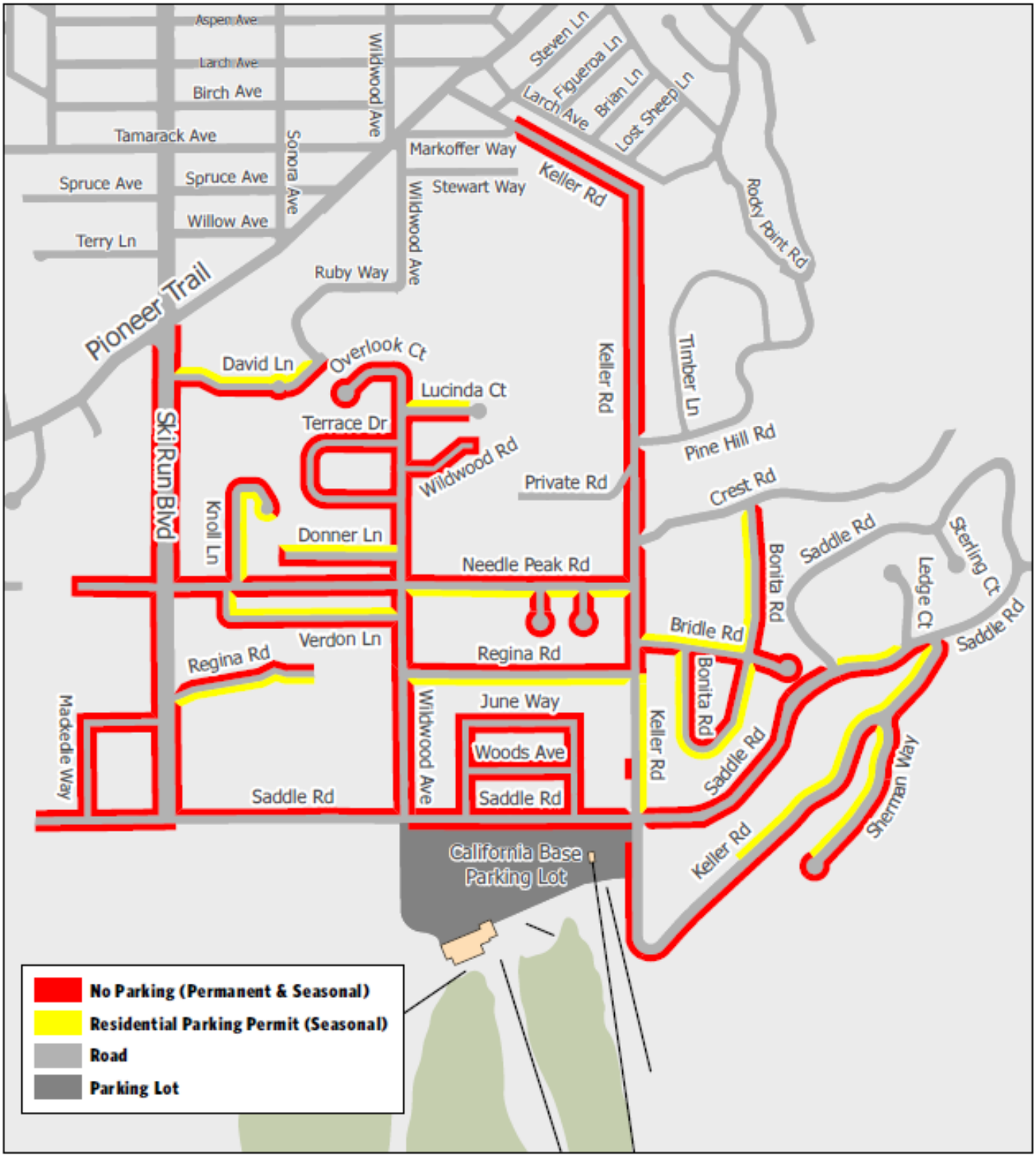
Attest:

_____ _____

Susan Blankenship, City Clerk Date

The presence of electronic signature certifies that the foregoing is a *true and correct copy* as *approved by the South Lake Tahoe City Council.*

Exhibit A



CITY OF SOUTH LAKE TAHOE

Heavenly Area Parking Restrictions

N

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Feet

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CITY OF SOUTH LAKE TAHOE – HEAVENLY PARKING AGREEMENT

This City of South Lake Tahoe – Heavenly Parking Agreement (this "**Agreement**") is entered into and effective as of the 9th day of December 2025 (the "**Effective Date**") by and between the City of South Lake Tahoe, a municipal corporation ("**City**"), and Heavenly Valley Limited Partnership, a Nevada Limited Partnership, d/b/a/ Heavenly Mountain Resort ("**Heavenly**"). The City and Heavenly are sometimes referred to herein individually as a "**Party**" or collectively as the "**Parties.**"

RECITALS

A. Heavenly is the operator of Heavenly Mountain Resort (the **"Resort"**); and

B. Heavenly desires to utilize portions of existing City streets where adequate area exists for limited on-street parking during peak visitor days, and the City desires to allow Heavenly to use these areas.

AGREEMENT

NOW THEREFORE, in consideration of the foregoing Recitals, the mutual covenants set forth herein, and for other good and valuable consideration, receipt of and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. **Term.** This Agreement shall continue from year to year from the Effective Date, unless terminated as provided herein. The Agreement may be terminated as follows:

   - The City and Heavenly shall have the right to terminate the Agreement, with or without cause, by providing ninety (90) days' prior written notice of termination to the other Party; provided, however, the right to submit such notice of termination shall be limited to the following time period: February 1 through and including June 1 of each calendar year the Agreement is in effect.

   - Notwithstanding the foregoing, the Agreement may be terminated, with or without cause, at any time by written mutual agreement of both parties.

2. **Locations of On-Street Parking.** Heavenly agrees to pay the City by January 31 of each year for the current ski season, a flat fee of $45,000 (the "Parking Fee") for the non-exclusive use of the following locations for on-street parking. The Parking Fee will increase each year by 4%. Heavenly shall not charge for use of this public on-street parking. Heavenly staff will manage on-street parking and use its best efforts to communicate to the City's South Tahoe Police Department its intent to utilize on-street parking.

   A. Perpendicular parking spaces on the west side of Ski Run Boulevard between Needle Peak Road and Regina Road, as shown on Exhibit A, which is attached hereto and incorporated by reference. Heavenly shall maintain visible markings and make best efforts to prohibit parking within 15 feet of a fire hydrant.

B. Parallel parking spaces on the south side of Saddle Road between 20 feet west of Wildwood Avenue and the driveway to 3669 Saddle Road, as shown on Exhibit A. Heavenly shall staff and manage parking in this area to direct drivers to turn around and legally park while avoiding use of steeper portions of Saddle Road and Ski Run Blvd for circulation. Driveways and intersections may not be used for vehicle U-turns. Heavenly shall maintain visible markings and make best efforts to prohibit parking within 15 feet of a fire hydrant.

C. Parallel parking spaces on the west and north sides of Keller Road between Saddle Road and 1,500 feet to the south of the intersection with Sherman Way, as shown on Exhibit A. Heavenly shall staff and manage parking in this area to direct drivers to turn around and legally park while avoiding use of steeper portions of Keller Way. Driveways and intersections may not be used for vehicle U-turns. Heavenly shall maintain visible markings and make best efforts to prohibit parking within 15 feet of a fire hydrant.

D. Parallel parking spaces on the west side of Keller Road between Regina Road and the northern driveway to 1474 Keller Road and between the southern driveway to 1474 Keller Road and Saddle Road. Heavenly shall staff and manage parking in this area to direct drivers to turn around and legally park while avoiding use of steeper portions of Keller Road for circulation. Driveways and intersections may not be used for vehicle U-turns. Heavenly shall maintain visible markings and make best efforts to prohibit parking within 15 feet of a fire hydrant.

3. **Snow Removal and Application of Deicer and Abrasives on City Streets.** In order to assist the City with timely snow removal and application of deicer and abrasives on the streets that are covered by this Agreement, snow removal, sanding, and deicing will be primarily performed by Heavenly, using its own equipment, on the roads where non-exclusive use of on-street parking is granted to Heavenly, specified in Section 2, whenever these areas are used for resort parking. Heavenly shall ensure that travel lanes to accommodate two-way traffic are maintained in these areas whenever they are used for resort parking.

   These snow removal, deicer and abrasives responsibilities are in addition to, and do not supersede, obligations of Heavenly and the City agreed to in the "City of South Lake Tahoe-Heavenly Snow Removal Agreement" dated June 17, 2025 (C-117-2025) or as amended in the future.

   Heavenly shall use its best efforts to communicate its intent to remove snow and apply deicer and abrasives. Heavenly and the City's South Tahoe Police Department representatives will meet every two weeks when Heavenly is in winter operations to discuss on-street parking plans, collaborative preparation for storm cycles and peak visitation periods, and potential traffic control. Special meetings may also be requested by any of the aforementioned stakeholders to coordinate preparations for storm events or peak visitation periods.

   A. Heavenly shall reimburse the City for the cost of any road repair work required as a result of damage caused by Heavenly's negligent use of its snow removal or deicer equipment within thirty (30) days from Heavenly's receipt of the undisputed invoice from the City showing repairs performed and monies due.

In the event of dispute over the nature of the charges or the reasonableness of the cost of the repair work invoiced, the dispute shall be submitted to the City Council of South Lake Tahoe for resolution. The decision of the City Council shall be final and binding on all Parties.

4. **Other Heavenly Obligations**.

   A. Heavenly shall provide sufficient personnel to manage the on-street parking in Exhibit A and to support the City's chain control operations when chain controls are in effect.

5. **Insurance**.

   A. Heavenly shall carry and maintain, at its sole cost, the following insurance policies.

      i. Commercial General Liability insurance in an occurrence form in an amount of no less than $1,000,000 per occurrence covering liability arising out of premises operations, personal and advertising injury, products-completed operations, contractual liability and independent contractors.

      ii. Commercial Auto Liability Insurance with a limit of insurance no less than $1,000,000 combined single limit each accident for bodily injury and property damage.

      iii. Worker's Compensation insurance as required by applicable law.

   B. Heavenly shall provide the City with (i) a copy of the carrier notice of cancellation within five days after the notice is received; and (ii) certificates of insurance evidencing the policies listed above prior to any provision of the Services. If any portion of the Services is subcontracted, Heavenly will require the subcontractor to provide the insurance listed above.

6. **Hold Harmless**. Heavenly shall, to the fullest extent permitted by law, defend, indemnify, and hold harmless City, its officials, City Council Members, officers, agents, employees, and their respective principals, officers, employees, and each of them, of and from any and all claims, demands, suits, causes of action, damages, costs, expenses, attorneys' fee, losses or liability, in law or in equity, for personal injury, death, or property damage that may result or arise out of Heavenly's, its agents, employees, officers, or contractors' actions under this Agreement. The obligations of defense and indemnity set forth in this Section 6 shall not be limited by any insurance requirements.

7. **Force Majeure.** Neither party will be deemed to be in default for any delay or failure to perform any of its obligations under this Agreement to the extent that the delay or failure to perform results directly from an occurrence that is not reasonably foreseeable, caused by, or under the control of, the performing party, and occurs despite reasonable efforts to prevent, avoid, delay or mitigate the effect of that occurrence, including (i) acts of God, fire, flood, pandemic, or explosion directly affecting the performing party; (ii) injunctions; (iii) restraint or acts of domestic government; or (iv) terrorism, war, sabotage, vandalism, accident, civil disorder or riots occurring within the United States or directly affecting the performing party.

8. **Governing Law**. This Agreement, and all claims that arise out of or relate to this Agreement, will be governed by the laws of the state of California, including its statutes of limitations, without regard to conflicts of laws principles.

9. **Notices.** All notices under this Agreement must be in writing and delivered to the notice address below: (i) by registered, express, or certified mail; (ii) by courier or messenger service; or (iii) by electronic mail with acknowledgement of receipt. Notice is deemed given on the date received or, if acceptance is refused, the date of attempted delivery. Either party may change its notice address by following the requirements in this Section 8.

If to Heavenly:
Heavenly Mountain Resort
Post Office Box 2180
Stateline, NV 89449
Attn: General Manager
E-mail: Shaydar.Edelmann@vailresorts.com

With a copy to:
Vail Resorts Management Company
Attention: Legal Dept.
390 Interlocken Crescent
Broomfield, Colorado 80021
E-mail: legalnotices@vailresorts.com

If to the City:
The City of South Lake Tahoe
1901 Lisa Maloff Way
South Lake Tahoe, CA 96150
Attention: Assistant City Manager
E-mail: hroverud@cityofslt.gov

With a copy to:
City Attorney
1901 Lisa Maloff Way, Suite 300
South Lake Tahoe, CA 96150
E-mail : hstroud@cityofslt.gov

10. **Amendment**. The parties may alter this Agreement only by written amendment signed by the parties.

11. **Entire Agreement**. This Agreement contains the entire understanding between the parties relating to the subject matter described herein and supersedes all prior agreements, whether written or oral, relating to the same subject. If there is a conflict between the terms of this Agreement and the terms of any other document, the terms of this Agreement will control.

12. **Counterparts**. This Agreement may be executed in counterparts, which taken together form one agreement. Signatures provided by facsimile or other electronic methods are equivalent to original signatures.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of the Effective Date.

CITY OF SOUTH LAKE TAHOE

By: Cody Bass
Cody Bass (Dec 19, 2025 14:29:31 PST)
Cody Bass, Mayor

HEAVENLY VALLEY, LIMITED PARTNERSHIP

By: [redacted]mann (Dec 19, 2025 16:43:57 PST)
Shaydar Edelmann, VP & General Manager

APPROVED AS TO FORM:

Heather Stroud (Dec 19, 2025 13:20:48 PST)
Heather Stroud, City Attorney

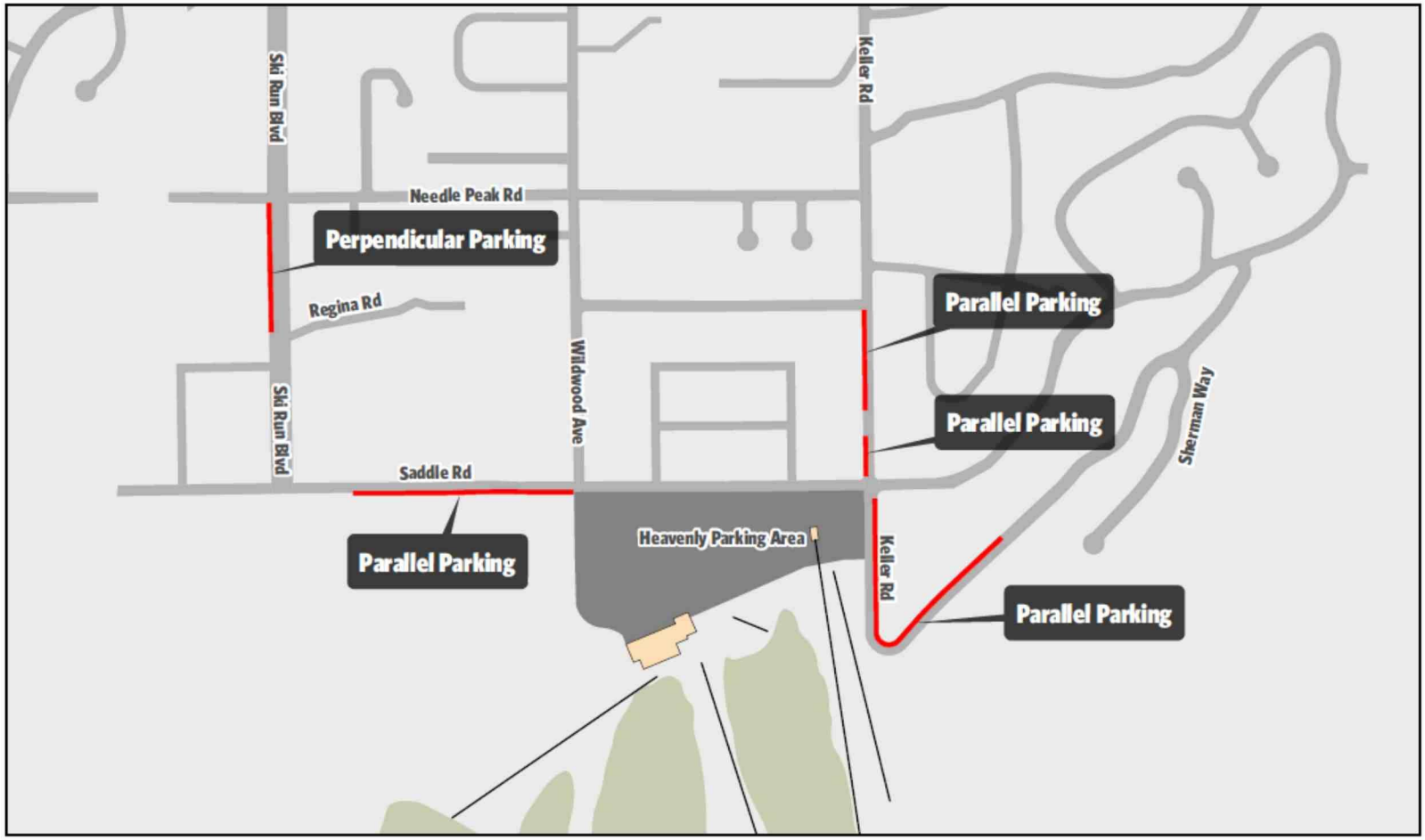
ATTEST:

Susan Blankenship (Dec 19, 2025 12:33:25 PST)
Susan Blankenship, City Clerk

CITY SEAL:

EXHIBIT A

Map of On-Street Parking



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 07/02/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Marsh Risk & Insurance Services CA License #0437153 633 W. Fifth Street, Suite 1200 Los Angeles, CA 90071 Attn: SharedSupport.Certs@Marsh.com CN101927737-STND-GAWU-25-26	**CONTACT NAME:** **PHONE (A/C, No, Ext):** **FAX (A/C, No):** **E-MAIL ADDRESS:**
INSURED Heavenly Valley Limited Partnership 3860 Saddle Road South Lake Tahoe, CA 96150	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** Aspen Specialty Insurance Company — 10717 **INSURER B :** Greenwich Insurance Company — 22322 **INSURER C :** N/A — N/A **INSURER D :** XL Insurance America Inc. — 24554 **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** LOS-002760138-06 **REVISION NUMBER:** 7

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** [ ] CLAIMS-MADE [X] OCCUR X SIR: $6,500,000 X Liquor Liability GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY [ ] PRO-JECT [ ] LOC [ ] OTHER:			CR00X4325	07/01/2025	07/01/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ Excluded $ 1,000,000 $ 2,000,000 $ 2,000,000
B	**AUTOMOBILE LIABILITY** X ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS [ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY			RAD500047409	07/01/2025	07/01/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 2,000,000 $ $ $
	[ ] **UMBRELLA LIAB** [ ] OCCUR [ ] **EXCESS LIAB** [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $						EACH OCCURRENCE AGGREGATE	$ $
D D D	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? **(Mandatory in NH)** Y / N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		RWE500047309 (CA,CO,MN,UT) SIR: $750,000 RWD3001367-07 (AOS) RWR3001183-08 (WI)	07/01/2025 07/01/2025 07/01/2025	07/01/2026 07/01/2026 07/01/2026	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

The City of South Lake Tahoe
1901 Airport Drive Suite 300
South Lake Tahoe, CA 96150

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Marsh Risk & Insurance Services

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C-306-2025 Heavenly Parking Agreement

Final Audit Report 2025-12-20

Created:	2025-12-19
By:	Michelle Davis (medavis@cityofslt.gov)
Status:	Signed
Transaction ID:	CBJCHBCAABAA6JXorlvaCP5l0VSglrCMP0ll5QFRPm-E

"C-306-2025 Heavenly Parking Agreement" History

Document created by Michelle Davis (medavis@cityofslt.gov)
2025-12-19 - 7:58:56 PM GMT

Document emailed to Susan Blankenship (sblankenship@cityofslt.gov) for signature
2025-12-19 - 7:59:02 PM GMT

Email viewed by Susan Blankenship (sblankenship@cityofslt.gov)
2025-12-19 - 8:33:14 PM GMT

Document e-signed by Susan Blankenship (sblankenship@cityofslt.gov)
Signature Date: 2025-12-19 - 8:33:25 PM GMT - Time Source: server

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2025-12-19 - 8:33:27 PM GMT

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2025-12-19 - 9:20:05 PM GMT

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2025-12-19 - 9:20:50 PM GMT

Email viewed by cbass@cityofslt.gov
2025-12-19 - 10:28:47 PM GMT

Signer cbass@cityofslt.gov entered name at signing as Cody Bass
2025-12-19 - 10:29:29 PM GMT

Document e-signed by Cody Bass (cbass@cityofslt.gov)
Signature Date: 2025-12-19 - 10:29:31 PM GMT - Time Source: server

Document emailed to Shaydar Edelmann (shaydar.edelmann@vailresorts.com) for signature

2025-12-19 - 10:29:33 PM GMT

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2025-12-19 - 10:57:16 PM GMT

Document e-signed by Shaydar Edelmann (shaydar.edelmann@vailresorts.com)

Signature Date: 2025-12-20 - 0:43:57 AM GMT - Time Source: server

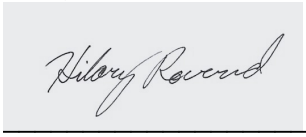
Agreement completed.

2025-12-20 - 0:43:57 AM GMT

City of South Lake Tahoe

Agenda Item Executive Summary

Hilary Roverud, Interim City Manager



Meeting Date: May 19, 2026
Agenda Item #:11

Agenda Item: Long-Term Rental Incentive Program Update and Request for Additional Funding

Executive Summary: The intent of the Long-Term Rental Incentive Program and ongoing efforts is to unlock existing housing for local workers. Since the program started, the program has unlocked 65 households, housed 155 residents, including children. As of today, fifty-five (55) grants have been closed and completed. Additional funding is being requested for continued operation of the program.

Requested Action / Suggested Motions:

Pass a Resolution to allocate $80,000 in additional funding for incentive grants and continue operation of the Long-Term Rental Incentive Program.

Responsible Staff Member: Lydia Zuniga, Associate Management Analyst

Reviewed and Approved By: Zach Thomas, Director of Development Services Department Susan Blankenship, City Clerk Olga Tikhomirova, Director of Finance Heather Stroud, City Attorney

Attachments:

01-Staff Report - LTRIP.docx
02-Resolution - Rental Incentive Program.docx

City of South Lake Tahoe
Report to **City Council**

Meeting Date: May 19, 2026

Title: Long Term Rental Incentive Program Update and Request for Additional Funding

Location: Citywide

Responsible Staff Member: Lydia Zuniga, Associate Management Analyst

Background: On October 19, 2021, the City Council adopted Resolution No. 2021-082 appropriating $500,000 in American Rescue Plan Act (ARPA) funds to initiate a long-term rental incentive grant pilot program. The Resolution authorized $72,000 for program administration, $14,000 for marketing cost, $200,000 for incentive grants to property owners. Leaving a remaining balance of $214,000 for a property management incentive program. During the meeting staff was also directed to execute a sole source Professional Service Agreement (PSA) with Landing Locals to administer the pilot program.

During the City Council meeting of August 9, 2022, staff provided an update on the status of the Lease to Locals program. The update included the success of the program, modifications to the guidelines, including the recommendation to allocate $214,000 towards the continuance of the Lease to Locals program, an extension of the program until December 2023, with a request to return to Council with an amended PSA with Landing Locals; to allow for the continuation of the administration of the program. Shortly after the update, Landing Locals rebranded and changed their name to Placemate. This action included $105,000 towards administrative cost and $9,000 towards marketing efforts.

At the November 21, 2023 City Council meeting, council approved the amended Professional Services Agreement (PSA) authorizing the mayor to enter into Amendment No. 2. This Amendment is to continue administration of the “Lease to Locals” Rental Incentive Grant Program until January 15, 2025 to coincide with the administrative billing cycle. An additional $91,000 was allocated to the administration of the program and $9,000 was allocated towards marketing.

On October 22, 2024, during Councilmember Reports and Comments, Councilmember Robbins requested a change in the Lease to Locals Program Guidelines to include a six-month lease option for half of the grant. Mayor Bass seconded the item to be brought back to City Council on November 19, 2024.

At the November 19, 2024, City Council meeting, City Council directed staff to renew the contract with Placemate for twelve months and to amend the Lease to Locals Program Guidelines to allow six-month leases for half of the incentive.

On January 28, 2025, City Council approved the Resolution No. 2025-005, authorizing the budget appropriation of $90,000 and authorized the Mayor to execute Amendment Number 3, to the Professional Services Agreement to continue administration of the “Lease to Locals” Rental Incentive Grant Program until January 31, 2026. The action also included amending Program Guidelines for the addition of a 6-month lease option and increasing the incentive grant amount to $4,500 per qualified tenant for a 12-month lease and $2,000 per qualified tenant for a 6-month lease.

On June 3, 2025, City Council was provided a quarterly update on the Lease to Locals Program. During the meeting staff highlighted that as of the day of the report, staff had only approved 2 grants during 2025. However, shortly after the council meeting, staff received several grants.

On August 12, 2025, City Council was provided another update on the Lease to Locals Program. The update included, the remaining balance for new grants, number of grants provide and number of people housed since the program started. During the report, staff included four (4) separate options for Council to consider regarding the future operation of the Program. Council voted on Option one (1). End the Professional Services Agreement with Placemate in 30 days. Bring Program management in-house. Change the name to Long-Term Rental Incentive Program.

On February 10, 2026, the staff report highlighted the success of the program since the program was brought in-house, the report included marketing efforts at no cost to the city.

On May 5, 2026, the staff report outlined that the remaining balance for new grants was $15,513.69, during that time, staff had assisted 64 and housed 153 people including children.

Since the last report, staff reviewed and approved another grant, bringing the remaining balance for new grants to $6,513.69. We are in the process of reviewing an additional grant application, which will exhaust the remaining balance.

As of the date of this report, the program has assisted 65 households and housed 155 people (including children).

The table below demonstrates the breakdown of how many households and people have been assisted since the end of 2021.

	Number of Households	Number of People (inc. children)	Grants Closed	Leases Renewed
2021-2022	23	58	23	13
2023	14	31	14	12
2024	15	38	14	8
2025	7	17	3	2
	3	5	1	0
2026	3	6		
	65	**155**	**55**	**35**

Since the program was brought in-house, it has averaged about one grant application approval per month, which is an improvement to the operation of the program.

The table below outlines the funding for the LTR Incentive Program.

Sources	Date	Amount
ARPA Funding	10/19/2021	$500,000
Additional Funding from the sales of commodities	11/21/2023	$100,000
Additional Funding from the General fund undesignated excess reserve revenue	1/28/2025	$90,000
		$690,000

Below are summarized options for the Council to consider regarding the future operation of the Program.

Option	Summary	Pro	Con
Option 1	Allocate additional funding for incentive grants and continue with the Long-Term Rental Incentive Program in-house and pass a Resolution to allocate an additional $80,000 for the program.	Program continuity	Additional funding is required for incentive grants. Source of funding will be as follows: $50,000 from 271-03113-48041 and $30,000 from the General Fund Undesignated Excess Reserve Revenue account.
Option 2	End the Long-Term Incentive Program and gradually close the second grants.	Program completed	No additional properties onboarded and Program would cease operation.

The 271 account is the City's substandard housing relocation account and is funded through substandard housing inspection fees. Staff recommends that the City Council pass a motion allocating an additional $80,000 for the program to continue operation consistent with strategic plan priority number 1.

Issue and Discussion:
The intent of the LTR Incentive Program and ongoing efforts is to unlock existing housing for local workers. Since the program started in late 2021, the program has unlocked 65 households, housed 155 residents.

Fifty-five out of the 65 grants issues have been closed and completed. Out of the 55 closed grants, 35 renewed the lease for another year. The 2022-2027 Housing Element states that there's also a need to provide quality, moderate income housing for year-round residents. As of today, the LTR Incentive program is the only active program within the city that's gear towards Moderate Income level residents.

Financial Implications: The program will be funded through a combination of substandard housing fees and General Fund Undesignated Excess Reserve. Using this combination of funds is intended to allow the program to continue while minimizing direct impact to the General Fund. However, the City's substandard housing relocation account cannot provide sustained funding, and future operation of the program will likely require funding from the General Fund.

Environmental Considerations: The recommendation in this report is not a project under CEQA, because it does not involve any commitment to a specific project which may result in a potentially significant physical impact on the environment, as contemplated by Title 14, California Code of Regulations, Section 15378(b)(2) and 15378(b)(4) and is, therefore, not subject to CEQA pursuant to CEQA Guidelines Section 15060(c)(3).

Policy Implications: The effort to increase the use of existing housing stock for long-term rental is identified as priority Number 1 items 1.6 and 1.7 in the City's 2025-2030 Strategic Plan.

The Long-Term Rental Incentive program is also consistent with the following adopted General Plan Housing Element policies and programs:

Policy 1-1 The City shall adopt programs, ordinances, incentives, land use plans and other regulatory mechanisms that provide opportunities for the private sector to address the housing needs of citizens of all economic levels.

Policy 2-3 The City shall encourage a range of housing options so that people who work in South Lake Tahoe can choose to live in the City.

Policy 2-5 The City shall recognize that it will become difficult to attract employees if they cannot afford to purchase or rent housing in South Lake Tahoe. The City shall encourage and support programs and activities that create a robust local economy that provides residents with good paying employment and the means to purchase and/or rent housing in the City.

Program 3-9 Landlord/Tenant Matching Program

Resolution 2026-XXX

Adopted by the City of South Lake Tahoe
City Council

May 19, 2026

Authorizing an Additional $80,000 Budget Appropriations for the Long-Term Rental Incentive Program

BACKGROUND

A. On June 15, 2021 the City Council adopted Resolution 2021-052 establishing the Local Fiscal Recovery Fund for receipt of American Rescue Plan Act (ARPA) funding.

B. On June 15, 2021 the City Council authorized development of the Long-Term Rental Incentive Pilot Program and allocated $500,000 in ARPA funding for the program.

C. On November 21, 2023 the City Council allocated an additional $100,000 from the sales of commodities for the Long-Term Rental Incentive Program.

D. On January 28, 2025, the City Council allocated an additional $90,000 from the General Fund Undesignated Excess Reserve for the Long-Term Rental Incentive Program.

E. The City of South Lake Tahoe continues to experience a shortage of long-term rental housing, impacting local workers, businesses, and overall housing availability within the community.

F. The Long-Term Rental Incentive Program provides financing incentives to encourage property owners to convert or maintain units as long-term rental in support of workforce housing needs.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, BE IT RESOLVED, that the City Council of the City of South Lake Tahoe:

1. Appropriates an additional $80,000 to continue implementation of the Long-Term Rental Incentive Program.

2. Authorizes the transfer of $50,000 from the Substandard Housing Relocation account 271-03113-48041 to the Long-Term Rental Incentive Program account 320-30003-44029

3. Authorizes the transfer of $30,000 from the General Fund Undesignated Excess Reserve to the Long-Term Rental Incentive Program 320-30003-44029.

Adopted by the City of South Lake Tahoe City Council on May 19, 2026 by the following vote:
Yes:
No:
Absent:
Abstain:

_____ Date:_____

Cody Bass, Mayor

Attest:

_____

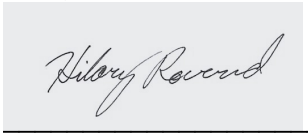
Susan Blankenship, City Clerk

The presence of electronic signature certifies that the foregoing is a true and correct copy as approved by the South Lake Tahoe City Council.

City of South Lake Tahoe

Agenda Item Executive Summary

Hilary Roverud, Interim City Manager



Meeting Date: May 19, 2026
Agenda Item #:12

Agenda Item: Agenda Planning Calendar

Requested Action / Suggested Motions: Identify, with consent of at least two Council Members, any desired future agenda items, and/or modify the Agenda Planning Calendar as desired.

Responsible Staff Member: Susan Blankenship, City Clerk and Hilary Roverud, Interim City Manager

Attachments:

APC 05 14 2026.pdf

2026 Agenda Planning Calendar (Updated 05 14 2026)

		Agenda Item	Section
May 26, 11-2 p.m.	**Special Meeting**	Ethics and Protocols Update	NB
June 2, 9 a.m.	**City Attorney**	Ord-Non-Residential Structures Abandoned Construction (First Reac	NB
	CA/PD	Tobacco/Vape Moratorium Urgency Ordinance	NB
	City Manager	Media Production Contract Award	Consent
	City Clerk	Pride Resolution Update	Consent
	City Manager	CivicSpark Budget Request	Consent
	Dev Services	AHSC Transit Agreement with Capitol Corridor JPA and El Dorado Trans	Consent
		CTC Land Exchange	Consent
		STR Delinquency Report	PH
	HR	Health Insurance Broker Contract Award	Consent
	Parks & Rec	Parks & Recreation Vehicle Purchases	Consent
	Police/CA	Unpermitted VHR Report	NB
	Public Works	CSA 3 Assessment Confirmation	PH
		CIP Presentation	NB
		Wildscape Contract Amendment for Upper Bijou Park Creek	Consent

2026 Agenda Planning Calendar (Updated 05 14 2026)

		El Dorado Beach Update	NB
June 16, 4 p.m.	**Special Closed Session**		
June 16, 5:30 p.m. CC-STRSA	**City Attorney**	Ord-Non-Residential Structures Abandoned Construction (Second R	Consent
		Lukins Bros & TKWC Franchise Agreements	Consent
		Interim City Attorney Appointment	NB
	City Clerk	Resolution Consolidating Election with EDC	Consent
	City Manager	Use of Cannabis Tax Revenue	NB
	Finance	Direct Charge of Mello-Roos Special Tax for CFD 1995-1 for FY 202	Consent
		Report on Collection Services for the Finance Department	Consent
		Annual Special Tax for CFD 2001-1 Series 2015 Special Tax Refunc	Consent
		Disolution STJPPFA	NB
	HR	City Manager Contract Award	NB
	Police	SRO Agreement for 2026-2027 School Year	Consent
	Public Works	Award of Construction Contract for 2026 Cape Sealing Project	Consent
		Contract Extension SieraCon for Energy Savings Project	Consent
June 24, 2026, 5:30 p.m., LTCC, Special City Council Meeting-State of the City Address			

2026 Agenda Planning Calendar (Updated 05 14 2026)

Aug 11, 9 a.m.	**Airport**	Award Runway 1836 Construction Contract	Consent
	City Clerk	Conflict of Interest Code Update	Consent
	City Manager	2026 National Community Survey Report	NB
		Becoming a BearWise Community	NB
	Finance	Financial Policies Update inc. Local, State & US Preference	Consent
	Fire	RFP Contract Award Cole Property project	Consent
	Dev Services	Evaluate Feasibility - Res. Area Plan/SB9 & Remove Tourist Accom	NB
		Tahoe Living Housing and Mobility Fees	UB
		Sign Ordinance Amendments (Sub Committee Recos)	UB
	Parks & Rec	Ice Arena Concessionaire Agreement	NB
	Police	Vista Rise Operating Agreement & Grant report	Consent
	Public Works	Tamarack Culvert Bid Award	Consent
		El Dorado Beach Phase 2 Bid Award	Consent
		Drainage Master Plan Consultant Award	Consent
Aug 25, 9 a.m. Budget Workshop			
Sept 8, 9 a.m.	**Airport**	Airport Master Plan adoption	NB

2026 Agenda Planning Calendar (Updated 05 14 2026)

	City Manager	Progress on Joining a CCA	NB
		Exploration of becoming a public electric utility	NB
		Informational item - Check Cashing + Bill Pay Services Options	NB
	Dev Services	Mid Town Area Plan Adoption	PH
		Quarterly Housing Report	NB
		Housing Element Final Draft Review	NB
	Finance	Investment Policy Update	Consent
Sept 22, 5:30 p.m.	**Finance**	Quarterly Budget and Financial Status Report as of June 2026	Consent
		Investment Portfolio Report as of June 2026	Consent
Oct 5, 5:30 p.m.	**City Clerk**	Ordinance Increasing City Council Compensation (First Reading)	NB
	Finance	GAAN Limit	Consent
Nov 3, 9:30 a.m.	**City Clerk**	Ordinance Increasing City Council Compensation (Second Reading)	Consent
	Finance	TID Annual Report	NB
Nov 17, 5:30 p.m.			
Dec 1, 9 a.m.	**City Clerk**	Certification of Election	If Election is Certified by December 1, if not these items will be brought forward
		Outgoing Councilmember Recognition	

2026 Agenda Planning Calendar (Updated 05 14 2026)

			brought forward December 15
		Oath of Office	
		City Council Re-Organization Mayor/Mayor Pro Tem	
		2027 City Council Meeting Schedule	
Dec 15, 5:30 p.m.	**Finance**	Annual ROPS Approval	
		Investment Portfolio Report as of September 2026	Consent
		Quarterly Budget and Financial Status Report as of September 2026	
Unscheduled/Pending			
	CA/PD	Shared Mobility Device Ordinance 2027 review	
	City Clerk		
	City Manager	LTCC Fire Training Center Coverage Agreement	
		City Green Card Assistance Program	
		Grants/Funding for Undergrounding Utilities	
		Legislative Agenda	
	CM/CA	Rec Center Re-Use Outreach	
	Dev Services	Performance Bond as a Condition of Demolition	
	Fire	MOU Ratification of Auto Aid with TDFD	

2026 Agenda Planning Calendar (Updated 05 14 2026)

	LVFD MOU update for data sharing
	CTC Land Access Agreement for Airport project
Parks & Rec	Events and Facitilies Naming Rights Discussion
	El Dorado Boat Ramp Dock Replacement Purchase
	Regan Beach Environmental & Design RFP
	Future of Senior Center
Police	Barton Community Health Needs and Harm Reduction Update
	SANE Presentation with Barton
	Heavenly Village Employee Discount Parking Passes
	Ratification of Application for CalOES DVRT
	Massage Ordinance Update/Amendments
	Employee Parking at Heavenly Village
Police/PW	Bike Paths/Speed Bumps, Bike Parking, Vehicle Parking
	2026 Update to Parking Fees in the Bellamy Parking Garage
Public Works	Geothermal Use Discussion Item
	Paving Policy Prioritization of Total Users

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	Award of PD Roof Replacement
	TTD US 50 Plans Presentation
	Award Lakeview and Ski Run Electrical Upgrades
	Facilities Condition Assessment
	Ski Run Electrification