



## PROPOSAL for Truckee Tahoe Airport District

*Operations Monitoring, Transient Aircraft Fee  
Revenue Collection Services, and Noise Abatement  
System*

***RFP#: 2025-03***

***Proposal Valid for 180 Days from October 8, 2025***

## LETTER OF INTRODUCTION

On behalf of Vector Airport Systems, I am pleased to present this proposal to the Truckee Tahoe Airport District (TTAD). The district seeks to implement a fully automated, turnkey solution for managing aircraft landing fees and noise abatement while addressing several key objectives:

- **Aircraft tracking and identification**
- **Production and distribution of invoices**
- **Landing Fee collection**
- **Aircraft Noise Compliance and Monitoring**
- **Operations and financial reporting**
- **Online access to operations and billing data**

To meet these goals, Vector proposes our full-service solutions of PLANEPASS® and VNOMS. In addition, we are pleased to be able to offer a direct partnership with PLANENOISE for additional noise capabilities. The PLANEPASS outsourced service handles the entire billing and collections process, including aircraft tracking, operator identification, invoice production, customer service, fee collection, and reporting while delivering collected revenue directly back to the Airport. VNOMS is an extension of PLANEPASS for airports looking for a noise and operations management system that is easy to learn and use, cost-effective. Our VNOMS solution is currently integrated with your existing PLANENOISE Public Portal that allows the community to see flight tracking data and enter noise complaints directly into the system through a web page. VNOMS is also unique in that it integrates operations and identification data from Vector's PLANEPASS system, giving users like TTAD who need to reach out to pilots easy access to their telephone numbers and email addresses.

Additionally, Vector has entered into a Strategic Alliance with Altaport to be able to provide their services directly to TTAD. These will include the existing Hanger reservation system and Automobile parking services.

Vector has been dedicated to improving aircraft fee billing for over 20 years. We are proud of our 100% PLANEPASS® client retention rate and our annual 99.6% collection rate across 110+ airports nationwide. Operators of all types are familiar with Vector, and we serve as a trusted partner to our airport clients by offering guidance on fee implementation and insight into national aviation trends.

Sincerely,



William Repole  
Chief Revenue & Operating Officer

## Table of Contents

LETTER OF INTRODUCTION.....	1
COMPANY PROFILE .....	3
PROPOSED SYSTEM OVERVIEW .....	7
FEE CAPTURE AND TECHNOLOGY INTEGRATION METHODOLOGY.....	12
NOISE ABATEMENT MONITORING AND NOTIFICATION APPROACH .....	15
SYSTEM FOR SEARCHING, PLAYING, AND ANALYZING AIRCRAFT TRACKS.....	28
SYSTEM FOR ANALYZING OPERATION DATA BY DATE, TAIL, OTHER DATA.....	31
TIMELINE FOR IMPLEMENTATION .....	34
CLIENT REFERENCES .....	35
COST PROPOSAL AND COMMISSION STRUCTURE .....	41
ADDITIONAL OPTIONAL ENHANCEMENTS .....	43
APPENDIX 1 – Altaport Hangar Rental and Auto Parking Solution .....	44

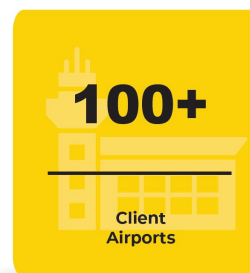
## COMPANY PROFILE

Name: Vector Airport Systems, LLC		
Principal Address of Firm: 280 Sunset Park Drive		
City: Herndon	State: VA	Zip Code: 20170
Website Address of Firm: <a href="http://www.vector-us.com">www.vector-us.com</a>		Telephone No : 703-817-7777
Number of Employees: 37		Years in business: 20
Contact: William Repole <a href="mailto:will.repole@vector-us.com">will.repole@vector-us.com</a>		630-854-8030

### Additional Vector Company Information:

- Vector Mission Statement: *“Vector fully manages and maximizes aircraft fee revenue streams, freeing our clients to best achieve their core mission.”*
- Vector has no current or past fraud convictions related to the performance of any public contracts.
- Vector has no violations of any local, state and/or federal or regulatory requirements.

## VECTOR BY THE NUMBERS



**Vector RFP Wins** - Vector has won every RFP Issued for Landing Fees in 2024 & 2025 Including:

- APF – Naples, FL – September 2025
- FNL – Norther Colorado Regional Airport - Feb 2025
- LAWA LAX & VNY – Van Nuys, CA – July 2025
- SPK – Spanish Fork, UT – Awarded July 2025
- 2024 wins - LUK – Lunken Field, OH, TOA – Torrance CA, and ACV – Humbolt County, CA

## Why Vector is the Trusted & Proven Choice for Aircraft Billing:

### Aircraft Tracking and Operation Data Collection:

- Only Vector uses a custom AI process that **fuses multiple (anywhere from 3 to 5) unique surveillance and aircraft flight tracking data sources** to correlate and interpret flight track data to get the most accurate picture of all flights in and out of the airport.
- **Camera Support:** Deploys airport-mounted cameras when needed. 120+ cameras used for billing already active nationwide.
- **Comprehensive Aircraft Identification:** Capable of identifying:
  - Aircraft enrolled in FAA LADD or PIA programs
  - VFR flights and helicopters
  - Drop & Go operations
  - Aircraft with missing or incorrect flight plans, including diversions
  - Touch & Go and low approach operations (at 40+ airports)
- **Operation Type Detection:** Proprietary algorithm evaluates speed, position, timing, aircraft type, and weather to distinguish between full-stop, touch & go, or low approach landings.

### Comprehensive Billing, Collections & Support

- The PLANE PASS® solution provides an extremely high historical collection rate of 99.6%
- Only Vector has an active dedicated collections team to get revenue to the airport quickly
- Only Vector accepts checks to our lockbox which represent 40% of all operator payments
- Our **US-based customer service** is available by phone, email or through our web-based Operator Portal that allows aircraft operators to interact with PLANE PASS® online including the ability to print invoices, pay fees with credit card/AVCARD, and ask questions or refute charges

### Proprietary Aircraft Operator/Owner Database:

Vector maintains and continuously improves a comprehensive aircraft owner/operator database—critical to converting operations into revenue

- **Industry-Leading Data Coverage:**
  - 120,000+ aircraft and 66,000+ operator records
  - FAA registry feed updated nightly enhanced with secondary sources, client feedback, and internal research
- **Precision Matching Capabilities:**
  - N-number to aircraft model, sub-model, and weight
  - N-number to billing contacts with full contact info (email, phone, address)
  - Cross-references for aircraft leased or registered under LLCs, trusts, or financial institutions
- **Exemption List Management:**
  - PLANE PASS® supports full exemption logic for:
    - Based aircraft

- Signatory carriers
- Government/military
- Based aircraft:
  - Identified using client-provided lists or automated 200+ days/year activity analysis

### Vector Net Promoter Score (NPS)

- Vector's 2025 NPS survey score is 86 which represents "Exceptional Service".

### Key Vector Team Members for the TTAD Implementation

**Overall Staff Qualifications** - Many Vector team members will be involved on an ongoing basis to support this process for TTAD. This seasoned team was responsible for the successful onboarding of over 35 new airports over the last year including airports such as:

SAT – San Antonio, TX	BZN – Bozeman MT	RIL – Rifle, CO
PTK - Oakland County, MI	PIT – Pittsburgh, PA	DAY – Dayton, OH

PLANE PASS® has a historical **100% client retention rate** for outsourced aircraft fee billing and collection due to our outstanding team members who provide exceptional service.

#### **William Repole** – Chief Operations/Revenue Officer (COO/CRO)

William Repole has been the Chief Operating and Revenue Officer of Vector for three years. He holds a BS in Industrial Engineering from Northwestern Univ and was previously the COO and Co-Founder of GovQA, the leading provider of Compliance Management, Payment and Workflow Software for governments. William has more than 30 years of information technology, sales, product management and project management experience with emphasis in the financial, insurance, and government marketplaces.

#### **Jillian Smith** – Client Onboarding and Customer Success Manager

Jillian leads Vector's Client Services team and will act as the day-to-day project manager. She is responsible for planning, organizing, and managing new client partnerships as well as ongoing account management. Jillian has been onboarding Vector clients for over 5 years. She works to gather and clarify requirements, and coordinates across departments to ensure each team understands their role in guaranteeing project success. Jillian manages the timeline for delivery of PLANE PASS® and keeps management and the airport aware of deliverables and expectations. Jillian and her team will help guide TTAD post billing start as well to review the pre invoicing report and work through any further clarifications with setup specific to any operators.

#### **Joel Kimble** – Director of Air Operations

Joel leads the Air Operations team at Vector and is responsible for all flight tracking and aircraft operations data, both pre and post contract. Joel holds a BS in Computer Science from the College of Wooster and has more than 18 years of aviation tracking, billing and operations software experience with 12 of those years at Vector and 4 as a Software Engineer

at L3 Harris. Joel and his team are responsible for the technical accuracy and integrity of the data during onboarding.

**Catherine Rogers – Systems/Support Manager**

As part of the Air Operations team, Cat manages Vector's field support staff, production hardware, and ADS-B data feeds. With 9 years of experience coordinating installations and equipment maintenance, she ensures safe and effective hardware deployment in airport environments. Cat will support data maintenance at TTAD alongside Ricardo and Patrick.

**Patrick Hanney – Director of Finance and Administration Manager**

Patrick holds a BA in Economics from Yale University and leads the execution of PLANEPASS® billing and collections for all airport clients. With 14 years of finance and administrative experience—including five at Vector—he manages contracts, client onboarding, and compliance with administrative requirements. Patrick's background spans hundreds of client accounts, giving him the versatility to navigate varying airport administrative processes.

**Ricardo McFarlane – PLANEPASS® Department Manager**

Ricardo leads the PLANEPASS® team of 12 staff. He has worked in payment operations management for over 20 years, starting with GC Services, a government contractor focused on billing, collections, and customer services on behalf of 32 counties in the state of CA.

**Tammy Vella – PLANEPASS® Billing and Operations Supervisor**

Tammy oversees Vector's billing processes and operational workflows, ensuring accuracy, efficiency, and compliance across all client accounts. Tenured for 12 years all in the PLANEPASS® billing and collections dept at Vector, she leads the day-to-day PLANEPASS® team activities

**Overall PLANEPASS Billing and Collections team**

This team now consists of 12 people across all US time zones. The average tenure on the team with Vector is 5.6 years.

## **How Vector is continuously working to reduce Operator/Pilot Friction**

- Vector posts all airport clients on the Vector website with links to the airport webpage that outlines landing fees
- Vector continuously posts comments for pilots in the ForeFlight app outlining airport fee information
- Vector sends out monthly communication to all part 135 operators about any new or updated fee information
- Vector is releasing new functionality to allow pilots to self-report and pay fees immediately upon landing
- Vector created a fee feed directly to AOPA to update the AOPA airport directory with fee information. This also feeds Eight Flight and JetInsight

## PROPOSED SYSTEM OVERVIEW

### Project Objective Musts

- **Demonstrate** the ability to achieve a **100%** or higher fee capture rate.

Yes – Through the combination of multiple data feeds and the 4% of billable aircraft activity captured via cameras.

Cameras are proven to ID traffic that ADS-B and flight tracking fails to detect/identify. Other vendor solutions use a single data source leaving them blind to the operations their system misses. Vector redundant systems help Vector aircraft operations team detect flaws in any one system and work to augment/repair that coverage

No other billing system available is so widely proven to capture 100% of aircraft operations. Vector has learned lessons over 20 years at more than 130 client airports (billing and other projects) and has implemented methodologies for capturing more aircraft operations than any other vendor in the industry – 100%. VNOMS multiple flight tracking sources creates flight tracking redundancy like no other NOMS vendor and ensures reliable tracks/targets in the event of any single receiver or track data source. Using VNOMS and built in redundancy helps support safer flight track visualization for ATC situational awareness

- **Demonstrate** the ability to maintain a system uptime of **99%**.


Yes – Existing Functionality of Vector PLANEPASS with SLA of 99.5%. The layering of multiple flight tracking technologies plus multiple aircraft operations data technology feeds along with proprietary aircraft ID cameras provides constant data.

- **Automated Landing Fee** collection system.

Yes – Existing Functionality of Vector PLANEPASS with all TRK operators already familiar with process so there is no learning curve, no risk of revenue loss that could occur if transition to new vendor.

- **Aging Report** on fees collected.

Yes – Existing Functionality. Will be expanded in Airport Portal Redo in Q1 2026

													
Extended AR Aging Report for													
XXXX													
As of Date: MM/DD/YYYY													
Operator	Operator ID	Billed	Adj	Adj Billed	Paid	AR	AR %	AR 120+	% of Billed	AR 90 - 120	% of Billed	AR 60 - 90	
Operator Name	958	\$452.32	\$0.00	\$452.32	\$0.00	\$452.32	100%	\$0.00	0%	\$0.00	0%	\$0.00	
Operator Name	29	\$86.74	\$0.00	\$86.74	\$0.00	\$86.74	100%	\$0.00	0%	\$0.00	0%	\$0.00	
Operator Name	5873	\$21.94	\$0.00	\$21.94	\$0.00	\$21.94	100%	\$0.00	0%	\$0.00	0%	\$0.00	
Operator Name	1598	\$58.76	\$0.00	\$58.76	\$58.76	\$0.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	
Operator Name	78563	\$34.03	\$0.00	\$34.03	\$34.03	\$0.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	
Operator Name	10423	\$131.95	\$0.00	\$131.95	\$131.95	\$0.00	0%	\$0.00	0%	\$0.00	0%	\$0.00	
TOTALS		\$785.74	\$0.00	\$785.74	\$224.74	\$561.00		\$0.00		\$0.00		\$0.00	



- **Noise Complaint** system to capture complaints via web, text, email or phone, correlate noise complaints to aircraft operations, and maximize ability to automate the system.

Yes – Combination of Vector VNOMS and PLANENOISE. Additional Automated responses will be able to be set for communications back to Complainants. See Proposed System section

- **Intuitive and easy** to use operations data collection, reporting, and analysis system.

Yes – Existing Functionality. User interface will be updated with additional functionality to be released with new Airport Portal in Q1 2026

- **Pilot/operator interface** that is intuitive to view payments and receipts.

Yes – Existing Functionality. User interface will be updated with additional functionality to be released with new Airport Portal in Q1 2026

- **Export** flight data tracks.

Yes – Existing functionality within VNOMS

- **Alternative** solution for fee collection should legislation prevent use of ADS- B data for fee collection.

Yes – Vector already has 11 Camera Pods placed at TTAD and if needed, these can act as a single point of aircraft activity for billing purposes. No other solution has the proven ability to integrate aircraft ID cameras into the aircraft operations workflow. TTAD has already made a substantial investment in cameras that work well and survive the harsh winters at TTAD for many years. Choosing a vendor with cameras unproven at TTAD risks failures in winter when repairs would be hardest to make. Vector's real-time automated monitoring of all airport-installed systems allows Vector to troubleshoot device problems immediately.

- Integrate **previous 2 years** of noise and operational data and maintain **3 years of on-demand** access for flight track analysis, noise comment review, and reporting capabilities.

The existing system is in place and historical data is stored for length of contract.

- Ability to integrate and/or interface into a **Point-of-Sale** system.

Yes – As the future TTAD Point-Of-Sale system is undefined, Vector proposes to provide daily detail transaction file. This will contain any bill that has a new invoice amount, paid amount or other alteration such as a credit/reversal. These will be delivered to a SFTP server that TTAD will have access to download from. This can be put in place by the end of 2025. Vector also plans on creating an API

that can be called to return the same data to be consumed by TTAD. Once a point-of-sale system is selected, Vector can

### Project Objective Desirables

- **Automated Ramp** Fees collection system.

Yes - Vector currently performs this function at TTAD and can migrate TTAD from the manual parking file method currently in place to our Automated Parking Solution which is already in place at over ten airports.

- **Automated Overnight Aircraft Parking Fees.**

Yes - Vector currently performs this function at TTAD and can migrate TTAD from the manual parking file method currently in place to our Automated Parking Solution which is already in place at over ten airports.

- **Bi-weekly** electronic payment remittance to TTAD.

Yes - Vector has proposed a weekly remittance to TTAD and this is a current function within the PLANE PASS system

- **Ability to notify** airport staff when an aircraft violates a voluntary curfew or enters a Noise Abatement condition in near real-time state.

Yes – Currently Vector provides a daily report of violations. Vector proposes to augment this with automated triggers to airport staff to send an email for configurable violations.

- **Short-Term** Aircraft Hangar Rental scheduling and fee collection.

Yes - Vector has proposed using the current Altaport reservation system currently in place at TTAD and Vector will act as the prime contractor for these services. Please see Appendix 1

- **Overnight Auto** Parking system with integrated fee collection.

Yes - Vector has proposed using the current Altaport reservation system currently in place at TTAD and Vector will act as the prime contractor for these services. Please see Appendix 1

### Project Objective Optional Items

- **Operator Feedback integrated** into landing fee invoices, both for noise and airport community messaging.

Vector will have invoice messaging functionality in Q1 2026. This will require set rules that trigger the messaging.

- **Near real-time pilot notification** that can send text alerts to pilots within 30 minutes of landing for “thank you” or “noise feedback.”

This proves difficult as there is no automated method to know who is piloting the aircraft. The Vector database contains some phone numbers, but these are for operators. Vector recommends that this initially be accomplished via a message to appearing on the invoice. Vector can examine the viability of adding additional messages in the operator portal when operators are viewing their invoice.

- **Aircraft Parking Reservation system.**

Yes - Vector has proposed using the current Altaport reservation system currently in place at TTAD and Vector will act as the prime contractor for these services. This feature may also be found in future FBO software such as X1 FBO. Please see Appendix 1

- **Aircraft parking** planning module to “what if” various parking configurations.

Vector and Vector partners do not currently provide such functionality in the near future. This feature may also be found in future FBO software such as X1 FBO.

## General Solution Functions

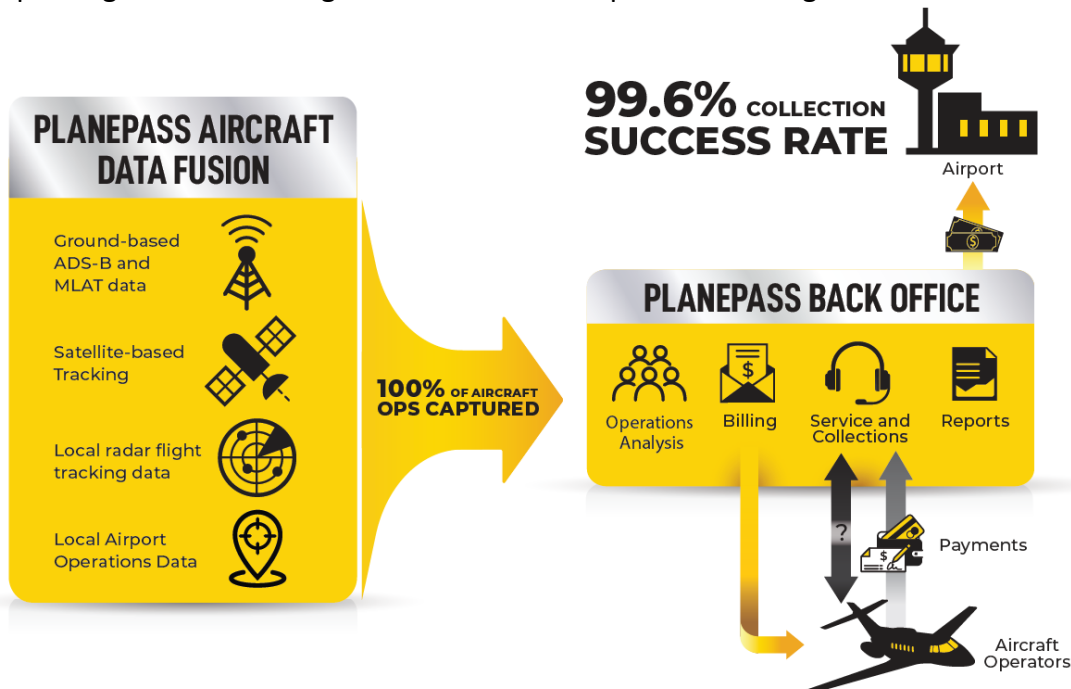
Project Objectives	Currently Available in PLANE PASS®
Minimum of 5 Years of experience with airport landing fee billing and collection.	YES – 20+ years
Ability to identify and categorize flight arrival and departure times, aircraft types, and weights for 99%+ aircraft operating at TTAD, including: <ul style="list-style-type: none"> <li>• Touch &amp; Go’s</li> <li>• aircraft using visual flight rules (VFR) including helicopters.</li> <li>• aircraft diverting to TTAD</li> <li>• aircraft operating with incorrect or missing flight plans.</li> <li>• aircraft on the FAA Limiting Aircraft Data Displayed (LAAD) list for billing purposes.</li> </ul>	YES
<b><u>Aircraft Tracking and Operation Data Collection</u></b>	
Minimum of 5 Years of experience with airport landing fee billing and collection.	YES – 20+ years
Ability to identify and categorize flight arrival and departure times, aircraft types, and weights for 99%+ aircraft operating at TTAD, including: <ul style="list-style-type: none"> <li>• Touch &amp; Go’s</li> <li>• aircraft using visual flight rules (VFR) including helicopters.</li> <li>• aircraft diverting to TTAD</li> </ul>	YES

<ul style="list-style-type: none"> <li>• aircraft operating with incorrect or missing flight plans.</li> <li>• aircraft on the FAA Limiting Aircraft Data Displayed (LAAD) list for billing purposes.</li> </ul>	
<b><u>Operator/Operations Databases</u></b>	
<p>Billing needs to be supplemented beyond the FAA Aircraft Registry Database. The service should use several databases that allow for the creation of landing fee invoices for aircraft operations. The databases should be continuously updated through active research and customer feedback. As TTAD receives international flights, the ability to obtain current billing information from operators originating from other countries is a requirement of the selected vendor. Specifically, the databases should efficiently match:</p> <ul style="list-style-type: none"> <li>• Aircraft registration numbers to equipment type (aircraft model specifications/weights)</li> <li>• Aircraft registration numbers to aircraft weights including Maximum Landing Weight (MLW) and Maximum Take-Off Weight (MTOW)</li> <li>• Aircraft registration numbers with aircraft operator and ownership information, including up to date contact information (phone numbers, physical addresses, email address, etc.)</li> </ul>	YES
<b><u>Invoicing &amp; Collection</u></b>	
<p>Invoicing &amp; collection process must include:</p> <ul style="list-style-type: none"> <li>• Automatic calculation of landing fees based on relevant parameters, such as aircraft weight, type, and landing time</li> <li>• The ability to identify exempt operators (i.e., governmental agencies).</li> <li>• An active collections process that prioritizes past due payments.</li> <li>• Authority to determine the appropriate day of the month when proposer will submit payments</li> </ul>	YES
<b><u>Airport Staff Online Portal Functions</u></b>	
<p>The online portal for City/TTAD Staff should include:</p> <ul style="list-style-type: none"> <li>• An intuitive interface with comprehensive training and support services.</li> <li>• Real-time operations data and fee calculations</li> <li>• The capability to generate detailed transaction reports for auditing purposes</li> </ul>	YES
<b><u>Operator/Online Portal Functions</u></b>	
<p>The online portal for aircraft operators/customers should include:</p> <ul style="list-style-type: none"> <li>• The ability to view and print invoices.</li> <li>• Options for operators to pay fees by check, credit card, debit card, automatic clearing house payments, and direct wire payments.</li> <li>• Customer support available via phone, email, and chat, at least 8 hours per day Monday through Friday, with the exception of federal holidays, enabling aircraft operators to communicate with the service provider to question and/or dispute charges. There must be clear procedures in place for resolving payment discrepancies and handling complaints.</li> </ul>	YES

## FEE CAPTURE AND TECHNOLOGY INTEGRATION METHODOLOGY

### Experience in utilizing ADS-B technology to monitor aircraft activities

The Vector PLANEPASS® system operates for each and every one of our clients 24 hours a day. There are no exceptions. Vector realizes that to maximize revenue for the airport, a system needs to be in place that will capture and identify aircraft operations 24 hours a day, 365 days a year, without interruption. To accomplish this, Vector automatically receives, processes, and analyzes flight track data from multiple third-party vendors and is a combination of ADS-B, radar, and flight plan data. Only Vector uses a custom AI process that **fuses multiple (anywhere from 3 to 5) unique surveillance and aircraft flight tracking data sources** to correlate and interpret flight track data to get the most accurate picture of all flights in and out of the airport.



### Experience in differentiating between based- aircraft and transient activities

Vector works with airport clients who either exempt based aircraft or do not. The first step in identifying based aircraft is to obtain any existing list from TTAD, which can serve as the foundation for our based aircraft exemption list if the airport is not charging landing fees for based aircraft. During our initial Revenue Projection, Vector also creates a potential based aircraft list by analyzing aircraft that spend more than 200 days at the airport. We then review this list with TTAD to develop a comprehensive, up-to-date list. This list can be modified at any time. Additionally, we send a pre-billing list to the airport for the first three months, allowing for further identification of based aircraft before billing begins.

After our PLANEPASS® Correlation Engine processes all the Flight Track Data into an operation for an aircraft at the airport, our identify engine then determines the actual aircraft and its owner. Any matching aircraft identification found in the base list for the airport then cause the operation to be exempted with the reason of based. The airport can update the base list at any time.

PLANEPASS® incorporates an exemption list that contains the registration numbers of based aircraft as well as others that are not invoiced (Based, Signatory, government, et al). All aircraft on this list will be considered exempt activities and are automatically removed from billable activities.

The based aircraft operating at the airport are indicated in Vector’s online Airport Portal with a “strikethrough” in the landing “Fee” column. This indication is a quick visual representation of the based aircraft at the airport or those considered exempt from landing fees.

### Sample Screen Shot of Vector’s Airport Portal

Drag a column header and drop it here to group by that column

Image	Date Time(24hr)	TRKG	Activity	RWY	Orig/Dest	Aircraft	Flight	Model Type	Engine Type	MTW (Lbs)	Fee	DS	Op Id	Op Name
>	09/10/21 00:06			RWY 22	KNEW / KTXK	<del>N88PA</del>		BE20	TURBO	12500	<del>\$26.00</del>	E	93763	Pafford Medical Billing Services Inc.
>	09/10/21 04:33			RWY 31	KTXK /	<del>N407LN</del>		B407	HELI	5000	<del>\$0.00</del>	E	56425	Lifenet Inc.
>	09/10/21 06:29			RWY	KTXK / KDEW	<del>N922AE</del>	ENY4097	E145	JET	45415	\$0.00	F	87745	ENVCY AIR

All other aircraft without this strikethrough are considered billable aircraft and will automatically be subject to a landing fee within the other parameters of the fee (i.e. weight, time) unless otherwise included on the exemption list by the Airport. Vector’s Airport Portal allows airport staff to view activity reports (activity capture, billing details, and collections) and view flight activity.

### Methodology for generating web-based reports on aircraft activities and financial transactions

PLANEPASS® provides airports with reporting features of all billing and collections activities. These standard reports are made available to designated Airport staff via a web-based portal each month to ensure visibility into the entire process and to ensure the solution results. Examples:

#### Aircraft Activity Report showing aircraft activities for a certain period of time

Airport Code	Date	Time	Aircraft Number	Day Of Week	CallSign	Activity	Fee	T&G	Model	MLW	MTW	Runway	DS C	DS F	DS 3	DS R	Engine Type
KASE	04-01-2025	08:16	N7809K	Tuesday	SKW4669	Departure	Exempt		CRJ7	67000	72750	33	cam01	F		R	Jet
KASE	04-01-2025	07:47	N7959K	Tuesday	SKW4700	Departure	Exempt		CRJ7	67000	72750	33	cam01	F		R	Jet
KASE	04-01-2025	07:44	N113SY	Tuesday	SKW5766	Departure	Exempt		E75L	74957	85517	33	cam01	F		R	Jet

#### Operator Activity Report showing aircraft activities for a certain period of time

Operator Activity Report

Airport: 5C1 From: 4/1/2025 12:00 AM To: 5/1/2025 12:00 AM Activity Type: Arrival/Departure Engine Type: All Search Export

Drag a column header and drop it here to group by that column

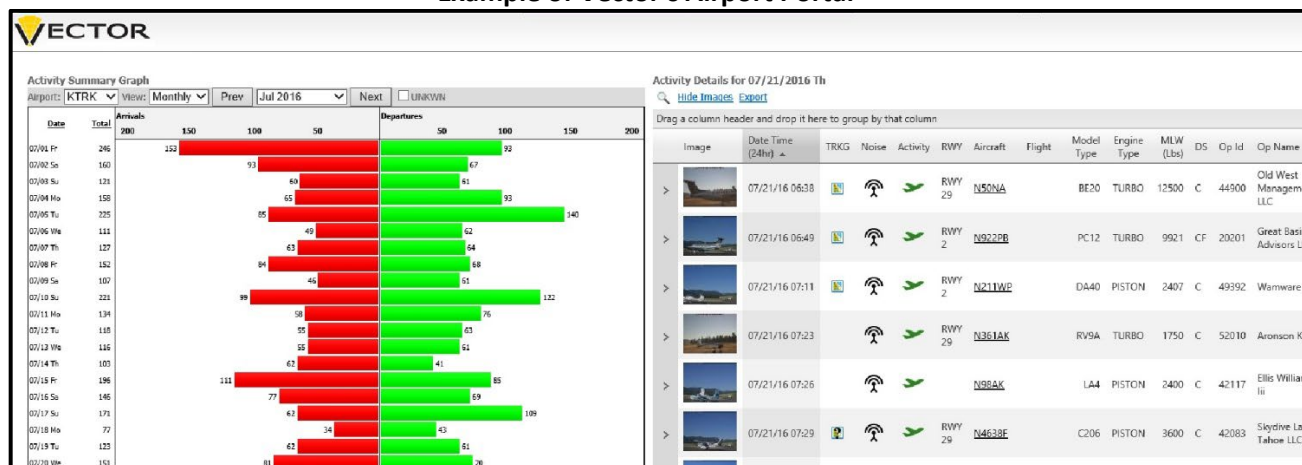
1534 items in 8 pages

Aircraft Number	Date	Time	Activity Type	Engine Type	Model Type	Max Landing Weight	Max Takeoff Weight	Operator Name	Contact Name	Contact Phone Number	Address	City	State	Zip
N322P	04/01/25	07:05	Departure	TURBOPROP	C441	9850	9850	Bellagray LLC			15821 Canyon Side	Helotes	TX	78023
N181ME	04/01/25	07:11	Departure	JET	C680	27100	30300	N818ml LLC	Dan Carrigan	361-548-7552	C/O Watts Guerra Up 4 Dominion Drive	San Antonio	TX	78257
N410AB	04/01/25	08:05	Departure	PISTON	C210	3799	4000	Blossom Allan P III	Allan P. Blossom III	830-537-3680	161 Ranch Drive	Boerne	TX	78015-8319

#### Monthly Billable Operations Report including Aircraft Model, Type, Weight, etc.

#### Monthly Collections Report showing all payments collected for a given month

## Example of Vector's Airport Portal



## Performance Summary Report showing all payments collected for a given month

### PLANEPASS® Performance Summary (Invoicing & Collection)

Report Run Date: 3/26/2024  
Period Included: 1/1/2023 - 12/31/2023  
Airport: KTRK

Invoice Period	Invoice Count	Invoice Count YoY	Invoiced Activities	Invoiced Activities YoY	Invoiced Original \$	Adjustments \$	Adjustments %	Invoiced Adjusted \$	Invoiced Adjusted YoY	Collected	Collected %	AR \$
2/1/2023 - 2/28/2023	164	(34%)	534	(35%)	71,672.50	(336.50)	(0.5%)	71,336.00	41%	71,619.50	100.4%	(283.50)
3/1/2023 - 3/31/2023	210	(28%)	653	(32%)	97,862.50	(893.50)	(0.9%)	96,969.00	63%	97,007.00	100.0%	(38.00)
4/1/2023 - 4/30/2023	253	(20%)	858	(27%)	138,242.00	(2,890.50)	(2.1%)	135,351.50	82%	136,633.50	100.9%	(1,282.00)
5/1/2023 - 5/31/2023	274	(19%)	972	(27%)	156,648.00	(404.00)	(0.3%)	156,244.00	83%	155,005.00	99.2%	1,239.00
6/1/2023 - 6/30/2023	232	(27%)	709	(42%)	105,351.50	(1,202.50)	(1.1%)	104,149.00	35%	103,879.00	99.7%	270.00
7/1/2023 - 7/31/2023	232	(10%)	767	(27%)	89,317.00	0.00		89,317.00	29%	89,763.04	100.5%	(446.04)
8/1/2023 - 8/31/2023	267	(14%)	822	(37%)	97,877.50	(10.00)	(0.0%)	97,867.50	13%	95,334.00	97.6%	2,533.50
9/1/2023 - 9/30/2023	311	(16%)	900	(44%)	104,180.00	(82.00)	(0.1%)	104,098.00	12%	101,723.50	97.7%	2,374.50
10/1/2023 - 10/31/2023	300	(22%)	903	(43%)	109,289.00	(235.00)	(0.2%)	109,054.00	9%	107,268.00	98.4%	1,786.00
11/1/2023 - 11/30/2023	294	(5%)	871	(36%)	117,145.50	(702.00)	(0.6%)	116,443.50	40%	115,446.79	99.1%	996.71
12/1/2023 - 12/31/2023	152	2%	406	(21%)	42,506.00	(172.50)	(0.4%)	42,333.50	22%	41,128.00	97.2%	1,205.50
<b>Totals</b>					<b>\$1,129,891.50</b>	<b>(\$6,928.50)</b>		<b>\$1,122,963.00</b>		<b>\$1,114,807.33</b>	<b>99.4%</b>	<b>\$8,155.67</b>
Totals 121 days or older (based on Invoice Date)								<b>\$964,166.00</b>		<b>\$958,232.54</b>		<b>\$5,933.46</b>

## Technology Integration

Vector agrees to create the following integration options:

- Vector agrees to provide a REST API that can be called to extract aircraft fee transactional data.
- Vector agrees to provide extracted aircraft fee transactional data directly on a daily basis to a SFTP server that TTAD can access



---

## NOISE ABATEMENT MONITORING AND NOTIFICATION APPROACH

### Proposed System Enhancements to Existing Functionality

#### Public Portal and Communications

Vector proposes PlaneNoise Complaint Box which is a proven system that has been successfully collecting, managing and analyzing aircraft noise complaints since 2012. Through this proposed program, TTAD will continue to gain realtime access to critical data that may lead to the further development of fair and equitable noise abatement procedures balancing the needs of aircraft operators and affected citizens and communities.

As described above, the proposed TTAD Complaint Box Program features the following:

- Automated data collection
- Dedicated noise complaint line
- Complaint Box Mobile app (optional)
- Complaint webform
- Auto-generated email complaint receipts
- Issue-based template responses (via email)
- Vector VNOMS Integration
- Complaint Box Smart Receipt (jointly developed with Vector) (optional)
- Web portal access to secure, online complaint database
- Complaint Box Dashboard
- Simplified complaint tracking from receipt to response
- Noise sensitive area & trend Identification
- Detailed GIS maps & reports
- Continued product evolution and operations-based solution development
- PlaneNoise manual system reviews, daily (M-F; ensuring data accuracy)
- Ongoing PlaneNoise technical support & training

Having enhanced capabilities to efficiently collect and respond to noise complaints, analyze the data and generate comprehensive reports and maps allows TTAD to continue benefiting from:

- Significant time savings and increased utilization of staff resources as well as realtime analysis of complaint data.
- Expeditious identification of and addressing new noise-related issues before they escalate to the stakeholder level,
- Increased intelligence on TTAD overall community compatibility levels.
- Further demonstration of the Airport District's commitment to addressing noise-related concerns and issues.



PlaneNoise will continue providing TTAD with advanced technology solutions to enhance its collection and analyses of noise complaint line data as well as capture online complaints via our custom mobile app and webform. All complaint collection methods automatically feed the already established, dedicated TTAD Complaint Box database. This reduction in manual data entry provides significant workflow improvements and time savings allowing for increased utilization of staff resources as well as realtime analysis of noise complaint data. These enhancements also lead to improved operator and stakeholder interactions, and as needed, the continued identification of aircraft noise affects on surrounding communities and developing targeted noise abatement procedures.

Additionally, Complaint Box allows airport staff to (1) quickly identify and address new noise-related issues before they escalate to the stakeholder level, (2) provide management as well as stakeholders with increased intelligence on the airport's overall community compatibility levels, and (3) further demonstrate TTAD's ongoing commitment to addressing noise-related concerns of individual constituents, community groups and local-elected officials.

### **What is PlaneNoise Complaint Box?**

PlaneNoise's innovative, cloud-based aircraft noise complaint management application — **Complaint Box** — automates and simplifies the labor and cost intensive tasks of noise complaint collection, response, database management and reporting.

Complaint Box breaks down the various elements of noise complaint management and reconstructs the process using advanced business automations. Manual data entry is virtually eliminated and detailed online reports, charts, graphs and maps are updated in realtime and are always accessible by designated users via the web-based Dashboard. Complaint Box will save time and stretch available resources, while providing increased intelligence on local community compatibility issues.

With just a quick glance at Complaint Box's Dashboard, airport staff will know where noise complaints are being generated, how often and by whom. And the airport will always have complete complaint access. When the system receives a complaint by phone, mobile app, webform or manually, Complaint Box charts, graphs and maps (hourly/daily, 12-month trends, etc.) are updated in realtime or as requested.

Detailed descriptions of each PlaneNoise Complaint Box component are provided below.

### **Online Databases**

PlaneNoise utilizes a series of secure, enterprise-based SaaS (Software as a Service) databases on remote, cloud-based hosted servers. Complaint Box is accessible from any computer (Windows or Mac) with a web browser and an internet connection. Noise complaint information is automatically entered into the system, eliminating the current time consuming tasks of manually entering complaints into a stand alone system. Of primary importance is the complainant's location. As such,

all addresses (obtained directly and/or through secondary sources) are geocoded for detailed GIS mapping and reporting.

### **Automated Data Collection**

Complainants will be provided with up to three means to submit their noise concerns: a mobile app (iPhone & Android compatible), an online webform and noise complaint hotline. Callers into the system will be prompted to leave a detailed voicemail with their noise-related Issues and concerns that will automatically generate a new noise complaint record in Complaint Box with a date and time stamp and all associated complainant/contact information. Additionally, complaint records will contain the voicemail's audio file (.WAV) as well as a voice-to-text transcription allowing realtime review — no manual data entry is required. The complaint line can also be configured where calls during certain specified time periods can be directed to a staff line for direct and personal handling.

Noise complaint line voicemail calls will also feature advanced voice recognition technology that automatically searches for key terms (acoustic and non-acoustic) such as “low,” “loud,” “constant,” “responsiveness,” etc., and categorizes the complaints accordingly. In addition, designated airport staff can enter internal complaints and directions/notes to facilitate complaint response and closeout. Voice recognition will also be used to identify threats and security concerns in a similar manner, in this case, automatically sending alert emails to designated airport management within minutes of receiving the questionable complaints.

Additionally, complainants will be provided with a mobile web app and online Complaint Box webform featuring enhanced functionality. Above and beyond contact information (name, address, phone, email, etc.), complainants will be required to submit the noise event date and time, the complaint and aircraft type(s) as well as provide an optional description detailing their concern. Please note that Complaint Box mobile app and webforms include security features and multi-layered spam filters (internal and external) to minimize potential abuses. PlaneNoise online-generated complaints are directly entered into Complaint Box and require no manual data entry.

Additionally, Complaint Box online submission methods feature address auto-complete functionality where the complainant's complete location (address and geocode) is provided on the form after only a few characters are typed. Further, regarding time and date data entry, the webform provides complainants with the option to enter the current time with one-click instead of using the pull-down menu choice lists. Both features are designed to increase convenience and improve the overall noise complaint submission experience.

### **Mobile Phone Compatibility**

Complaint Box standalone webforms feature responsive design that maximizes the online user experience depending on the screen width of the computer device being used — from mobile phones to tablets to desktops and laptops.

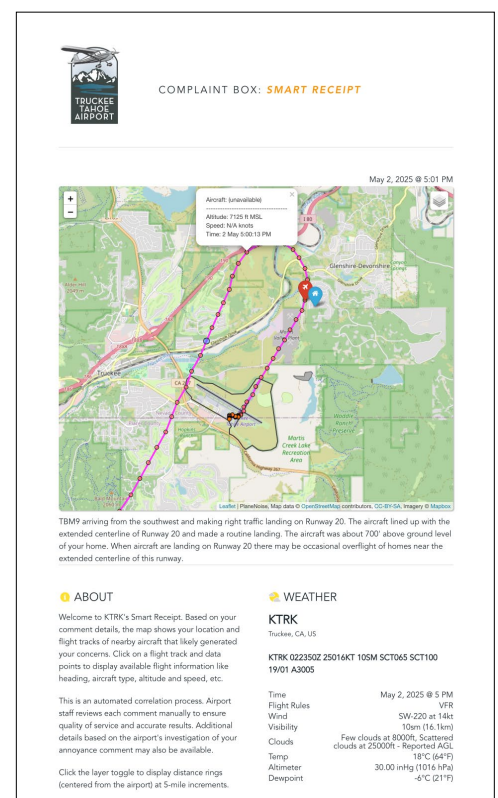
## Automated Complaint Confirmations

For each complaint received by phone, webform or mobile app with a valid email address, Complaint Box automatically issues in realtime a customized HTML email receipt back to the complainant confirming that their concerns/issues have been logged into the system and will be reviewed, analyzed and mapped. The actual confirmation language will be crafted and approved by airport management. Complaint Box confirmation emails can also include links back to TTAD's or other websites to provide complainants with additional information on current noise issues.

## Smart Receipt

Our Complaint Box Smart Receipt feature, jointly developed with Vector, provides airport staff and, if desired, complainants with complaint correlations using Vector VNOMS ADS-B flight track data. Smart Receipt geolocates the complainant's household on a map and overlays proximate flight tracks within a given distance from that household. Flight tracks can also be filtered to only show tracks below a certain altitude. Smart Receipt will provide complainants or aircraft operators with aircraft-specific information as deemed relevant by the airport, such as: routings/flight paths, aircraft type and model, altitude, speed, heading and point of closest approach (PCA) distances. Smart Receipt is designed to address complainants' typical noise questions and operators of route compliance and noise abatement issues. Smart Receipt is a staple of TTAD's noise abatement workflow.

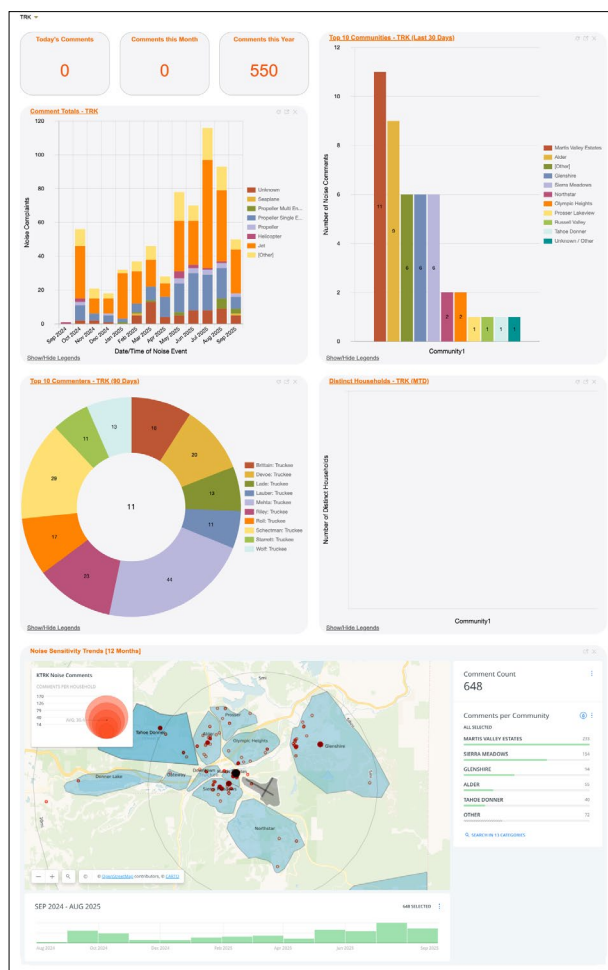
Shown below is a Smart Receipt that was automatically emailed to a complainant displaying the aircraft that likely generated their Truckee-Tahoe East Airport (TTAD) noise complaint. The complainant's household is indicated by the blue map marker. On the live Smart Receipt, clicking on the specific track would display all available metadata including tail number, altitude and speed and aircraft type. The information made available to the public on Smart Receipt is completely up to TTAD management.



## Complaint Box Dashboard

The online, web-based Complaint Box Dashboard shows at a glance how many complaints are being filed, where, when and by whom. Access will be determined solely by airport management based on specific need. When the system receives a complaint, it automatically updates the charts and graphs in realtime. Everything is done for you.

Driving the charts and reports are the actual noise complaint and complainant database tables. Additionally, the Dashboard's GIS maps are dynamic, meaning that you can zoom in and drill-down all the way to the roof-top level for each household. Lastly, complaint records are accessible via the Dashboard allowing designated staff to listen to each voicemail and/or read automated voice to



text transcriptions and enter notes or follow up tasks, as needed.

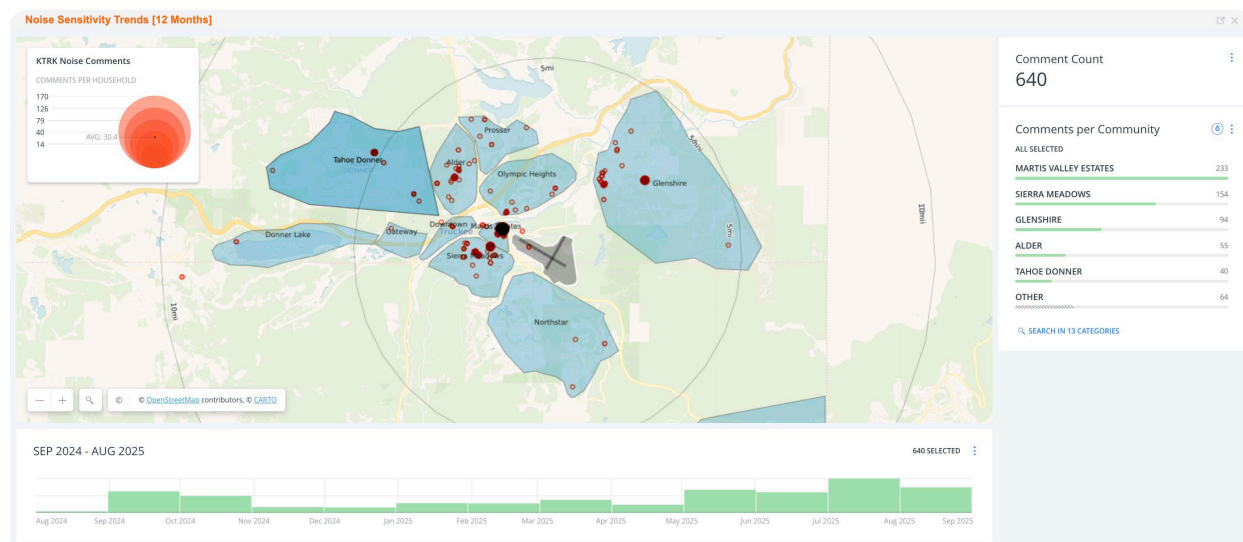
## Complainant Responses

Complaint Box will provide TTAD with quick and easy ways to respond to complainants via email. Airport staff can create any number of custom template responses based on frequent issues and concerns and then send those emails directly from Complaint Box to the complainant. These templates can include any field data from a complaint record through a built-in mail merge-like process. Responses can be sent to individual complainants or an entire filtered batch of the airport's choosing.

This response method provides increased community engagement and further demonstrates TTAD's commitment to addressing aircraft noise concerns.

## Noise Sensitivity Alerts

Similarly, based on a series of conditions, Complaint Box can issue emails to airport management and staff providing realtime information on community compatibility and noise sensitivity issues. For example, a high volume of complaints from specified zip codes, communities, etc., would trigger automated emails such as: "Noise Sensitivity Alert: 20 noise complaints from five households in Olympic Heights were received in the last hour." Increased realtime data management tools will allow airport management to stay ahead of the curve on current noise issues.



## GIS Mapping

Complaint Box Dashboard maps are always available online and are updated in realtime (hourly for "Today's" complaints and daily for our 90-day trend maps). Our GIS maps feature proportional symbology that identifies each reporting household and adjusts the associated map marker's size and color intensity based on annoyance levels as defined by the number of complaints filed. Additionally, the map may feature a zip code or community layer, which is also color coded based

on the number of reporting households. When you click on a map marker, an info-window pops up displaying the detail for that household and when you click within a zip code or community boundary, another info-window pops up showing the total number of reporting households for that given area.

The map on the previous page shows TTAD's 12-month Complaint Trends through August 2025. The Noise Sensitivity map clearly illustrates the concentrations of affected households (by community) and identifies those households filing the most complaints within the time period.

PlaneNoise GIS maps can include multiple data layers including ESRI or similar shapefiles to display local data such as property parcels, geographic boundaries, noise abatement procedures, etc. This feature will provide TTAD with enhanced mapping capabilities.

## **Reporting**

The unique flexibility afforded by specific Complaint Box database tables allows for a variety of reports on any collected information. These reports are generated online and can be run whenever needed. PlaneNoise can also provide TTAD with monthly reports presenting and summarizing complaint and household data (including an area map) based on your reporting needs and requirements.

Additional reporting features include auto-generated email reports (to an unlimited number of recipients) of any information contained within the Complaint Box databases. For example, an email graphically depicting how many complaints were received the previous day broken down by location or aircraft type is currently generated daily. An HTML report providing detail on each complaint received (e.g., name, contact information, time of noise event, complaint type, etc.) can also be attached to supplement the daily charts.

Regardless of medium (online — within Complaint Box or issued by email) complaint-based reports will be presented in tabular form and will include such data as total complaints by location, number of distinct households, frequent callers, etc.





[Home](#)
[Admin](#)
[Airport Activity](#)
[Live Flight Tracking](#)
[Reports](#)
[Noise Management](#)
[Import Data](#)
[Profile](#)

Airport: **KTRK**

KTRK Noise Complaints

Add
Edit
Delete
Select Track
Export All
Search
Map
Generate Report

State	Noise Start Time	Name	E-mail	Address	Aircraft Type	Last Modified By	Tracks	Alt. ID	Method Rcvd
Completed	03/06/2020 15:46:00	Paul Iddings					h 1	PNTRK84090	KTRK Webform
Completed	03/05/2020 08:33:00	Pam Madigan					h 1	PNTRK84089	KTRK Webform
Active	02/28/2020 09:32:00	Peter Morris					h 1	PNTRK84088	Hotline
Completed	02/27/2020 22:20:00	Collin Butcher					h 1	PNTRK84087	KTRK Webform
Active	02/27/2020 10:42:00	Jim Quickstad					h 1	PNTRK84086	Hotline
Active	02/26/2020 15:16:00	Brian Devoe					h 1	PNTRK84085	Hotline
Completed	02/24/2020 08:03:00	Dan Cockrum					h 1	PNTRK84084	KTRK Webform
Active	02/23/2020 14:22:00	Brian Devoe					h 1	PNTRK84083	
Active	02/15/2020 14:02:00	Brian Devoe					h 1	PNTRK84080	
Active	02/15/2020 13:38:00	Brian Devoe					h 1	PNTRK84079	
Active	02/15/2020 12:55:00	Brian Devoe					h 1	PNTRK84077	
Active	02/13/2020 19:55:00	Brian Devoe					h 1	PNTRK84076	
Active	02/14/2020 09:43:00	Kahlil Johnson					h 1	PNTRK84072	Hotline
Completed	02/20/2020 08:19:00	Dan Cockrum					h 1	PNTRK84075	KTRK Webform
Completed	02/18/2020 18:00:00	Janice Brittain					h 1	PNTRK84073	KTRK Webform
Completed	02/08/2020 16:48:00	Brian Devoe					h 1	PNTRK84071	
Completed	02/06/2020 13:20:00	Andrew Mccadd					h 1	PNTRK84070	KTRK Webform
Completed	02/02/2020 21:30:00	Amanda Serna					h 1	PNTRK84069	KTRK Webform

Edit Complaint - Peter Morris - 02/28/20 09:32 AM

Complainant: Peter Morris  
Complaint Time: 02/28/20 09:32 AM  
Internal ID: 121215  
Last modified by david.vanquest@truckeeahoeairport.com on 2/29/2020 6:07:15 PM GMT

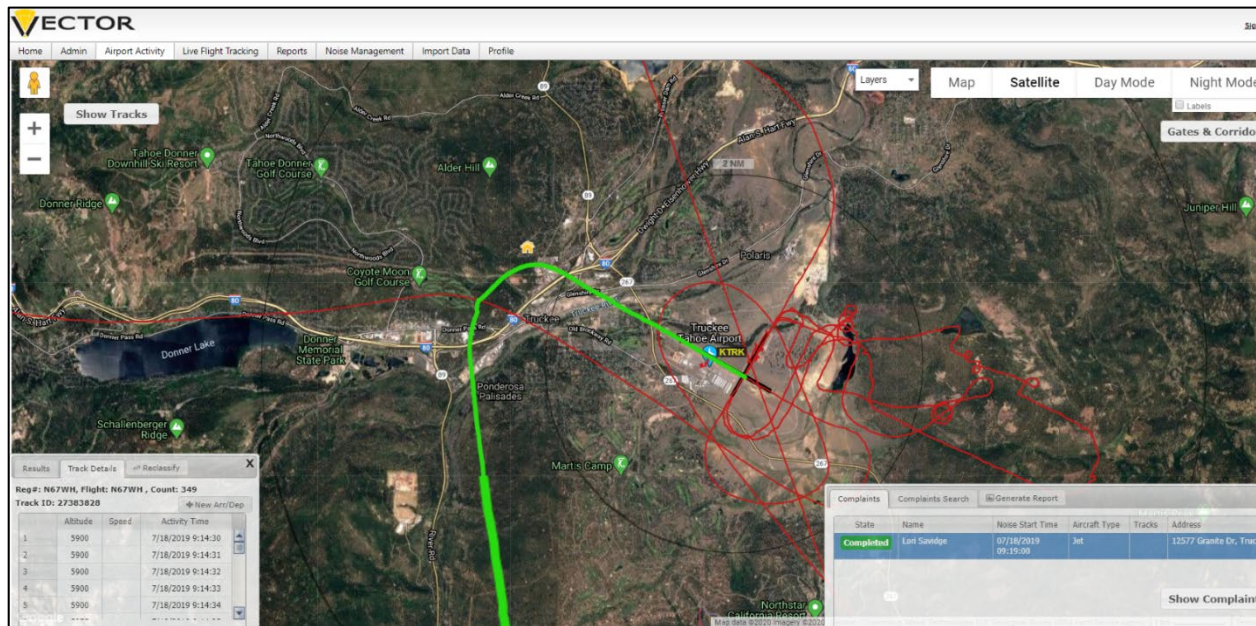
Alt Source: WebApi  
Alt ID: PNTRK84088  
Active

Edit Complaint
Complaint Response
View Flight Data

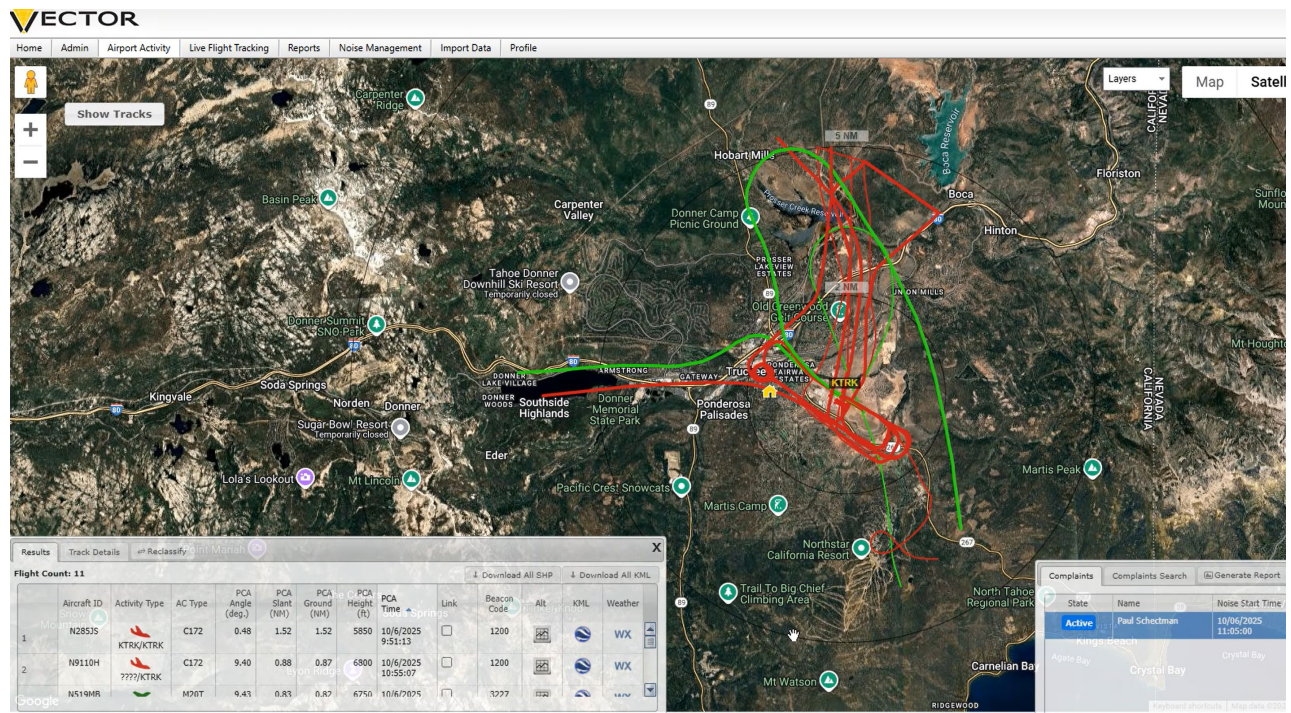
First: Peter  
Last: Morris  
Home Phone: ( 530 ) 330 - 4300  
Cell Phone: ( ) - -  
Email Address: peter@plmrealestate.com  
Address: 206 Bitter Brush, Truckee, CA 96161  
Lat.: 39.2946376  
Long.: -120.1201796  
Res Zone: Northstar/ Martis  
Select any combination of the types below:  
Disturbance Type: Noise  
Other  
Low Altitude  
Excessive Noise  
Noise Start: 02/28/20 09:32 AM  
Noise End: 02/28/20 09:32 AM  
Aircraft Type: Jet  
Operation:  
Airline:  
Curfew:  
Method Rcvd: Hotline  
Add:  
Time Received: 2/28/2020 9:32:00 AM  
Complaint Comment:  
9:29 Friday the 28th whatever that jet was it just took off probably(?) entire valley sitting inside with windows closed and I thought an earthquake was happening. So that's a noise complaint in general and it went the other direction. This call is from 214 Bass Drive. Thanks for nothing.



## Static Flight Track Display on Satellite Map



## Replay Track Display for specific Complaint on Satellite Map



---

## Key VNOMS Features

1. Live tracking enabled for airport login (delayed 10 minutes to the public through optional Public Portal)

Vector supports live tracking for authenticated airport users. This feature is very useful for public interaction and situation awareness.

Vector abides by the FAA's wishes and will not show live flight tracking data on public-facing websites. However, we can show flight track data on the Public Portal if we delay it 10 minutes, as this complies with the FAA's wishes. Replying historic flight tracking data is also possible with fast forward and rewind capability.

2. Flight track and noise complaint heat map reports

After noise complaints are processed and correlated, users can produce and view flight track and noise complaint heat maps, allowing users to visualize the high-density areas of flights and complaints for specific periods. This feature allows the airport to see its operations and resulting complaints at a high level, allowing it to diagnose issues quickly without getting too much detail.

3. Runway usage reports

When Vector processes the flight tracking data, we assign a runway to each arrival and departure. Every track is assigned a runway in the Airport Portal, and aircraft operations can be sorted and filtered by runway. An exportable runway usage summary report is included with VNOMS.

4. Ability to organize complaints and use historical flight tracks to match based on location and time.

VNOMS automatically correlates flight tracks with complaints based on location and time. VNOMS also allows the user to manually assign the flight tracks and override the automated selection if necessary.

5. Filter historical flight tracks based on altitude, operator, and time/date.

The flight tracks selection box allows the user to filter data based on time, date, activity type (arr/dep/overflight), engine type (jet, turboprop, piston, electric, helicopter, unknown), ceiling, range, and aircraft ID. The aircraft ID is the aircraft's registration number, and VNOMS is set up to handle aircraft at this level. Operator information is available for each aircraft in tabular form in the Vector Airport Portal.

6. Export data into Excel

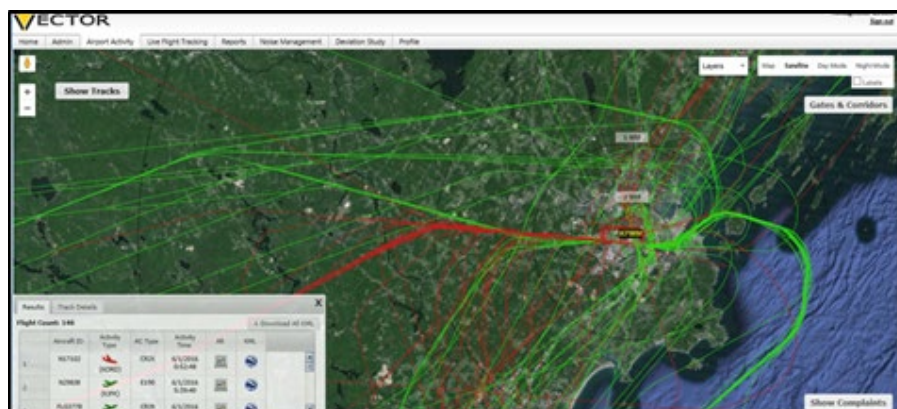
All tabular data in VNOMS is exportable to Excel. The Airport Portal and the reports all include an



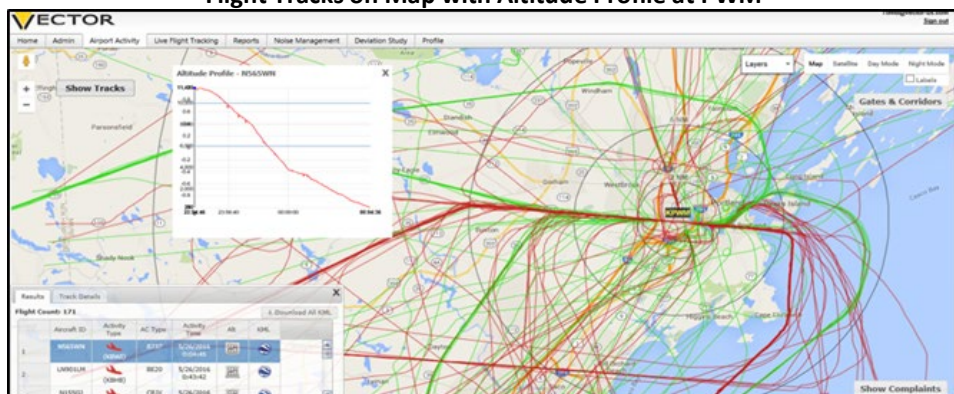
export button to export the data as comma-separated values, which are automatically imported into Excel. This allows the Airport to use tools that they are familiar with to process the data rather than learning another new system. Flight track data can be exported to Google Earth for viewing in three dimensions.

Some sample screenshots of VNOMS at Portland, Maine, and San Carlos, California (PWM and SQL)

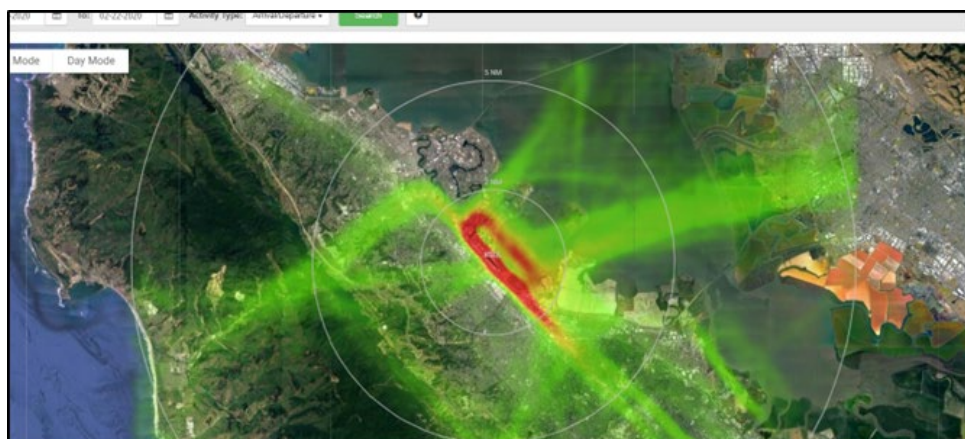
**Flight Tracks on Satellite Map at PWM**



**Flight Tracks on Map with Altitude Profile at PWM**



**Flight Track Heat Map on Satellite Base Map at SQL**

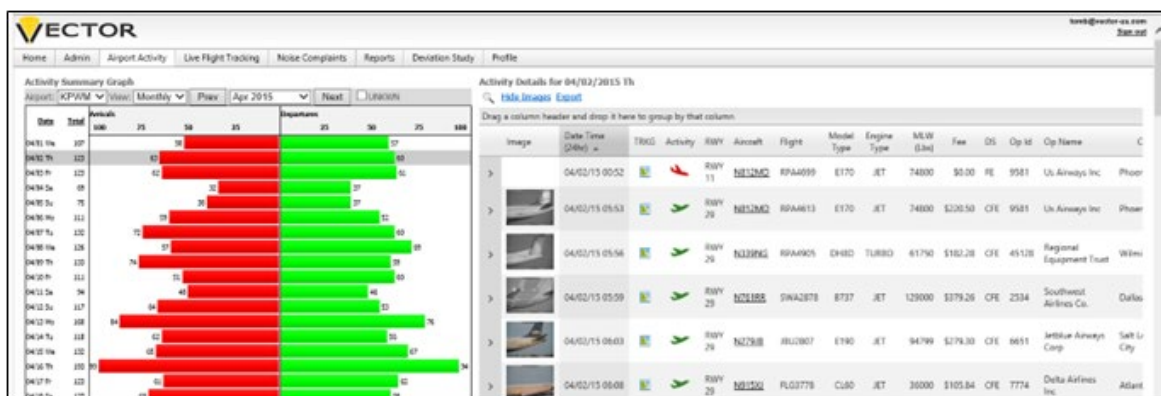


**Airport Portal and Flight Track Data**

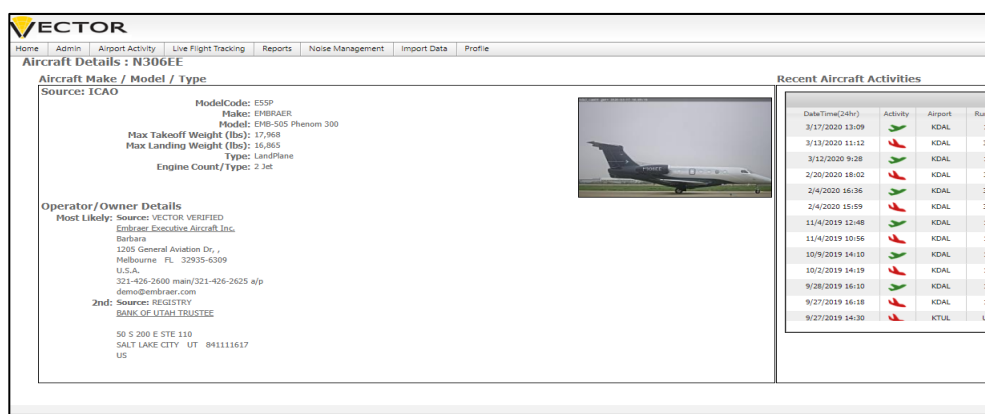
Vector will track ADS-B and UAT-equipped aircraft at TTAD. Vector acquires this data directly, using our dual-band ADS-B receiver and/or integrating third-party data. Vector is agnostic about data and will work with any available operations or flight tracking data. Vector will fuse all the data sources using a proprietary process that eliminates duplicate operations, increasing accuracy, completeness, and reliability.

All the identification and tracking data is available for the user to visualize, analyze, and report. Vector provides this access through our web-based Airport Portal, which can be accessed only by authorized users. In addition to providing metadata of all aircraft in the system (registration number, aircraft type, owner, contact information), all data visible through the Airport Portal can be sorted and exported as a CSV file.

### Airport Portal showing arrivals and departures



Vector's detailed aircraft operator database allows airport staff to quickly find aircraft owner/operator information if the airport needs to contact the aircraft owner regarding a noise complaint.

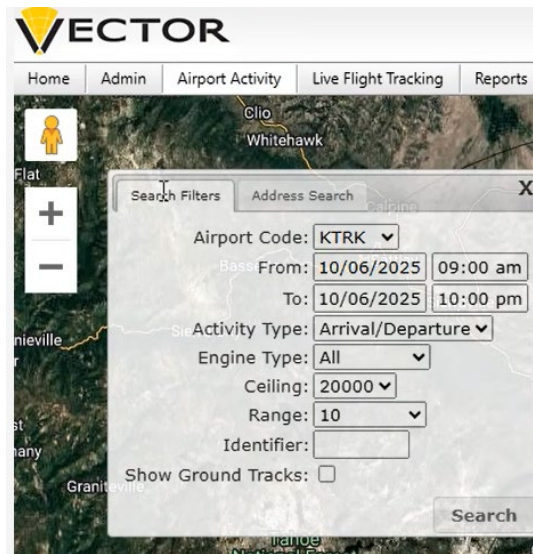


## SYSTEM FOR SEARCHING, PLAYING, AND ANALYZING AIRCRAFT TRACKS

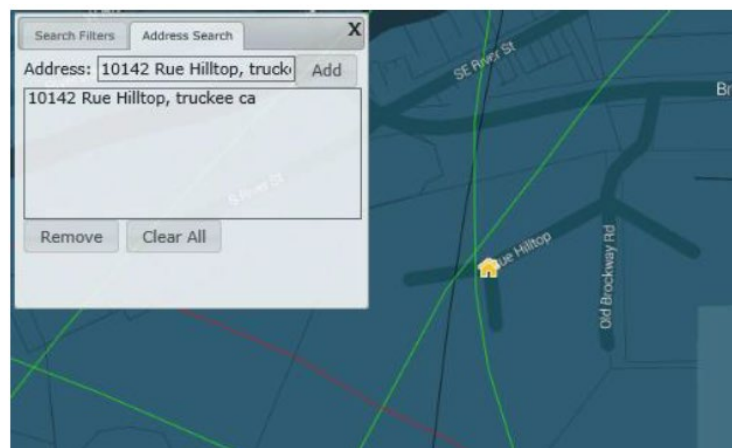
### Searching for Tracks in VNOMS

Vector provides the ability to search aircraft tracks by several parameters including date/time, activity type, engine type, altitude, range from airport or actual identifier. This tab contains a number of flight track filtering options including the From:/To: time & date, Activity Type (All, Arrival/Departure, Arrival, Departure, and Overflight), Ceiling (20000, 15000, 10000, 5000, 2500 and 1,000 FT MSL), Range (Maximum, 20, 15, 10, 5, and 2 miles), and Identifier (registration number or flight number).

The Show Ground Tracks check box allows the user to see flight track points whose altitude are at or below ground level. These points are normally not visible as they clutter the display on and near the airport.



The Address Search tab allows the user to locate an address on the map and store addresses in the system for that session. Each address is represented on the map by a yellow house icon. This is useful for locating and marking a physical site.





Once the flight track data is retrieved the Show Flights box appears in the bottom left-hand corner of the screen. Clicking the Show Flights box causes a tabular representation of all the flight tracks shown on the screen to appear. The user can scroll through the data in the Show Flights box utilizing the up/down arrows or the mouse roller. The selected track in the table is highlighted in the track map display so the user can visually determine which track is selected. This is reciprocal as selecting a track on the screen causes its entry in the Show Flight box to highlight

The screenshot displays the VECTOR Airport Systems web interface. The main map shows flight tracks (green and red lines) radiating from KTRK (Tahoe-Tioga Airport) in a mountainous region. A 'Gates' table is overlaid on the map, listing flight data. Below the map, a 'Results' panel shows a list of flight tracks with columns for Aircraft ID, Activity Type, T&G, AC Type, Activity Time, Beacon Code, Alt, KML, Noise, and Weather.

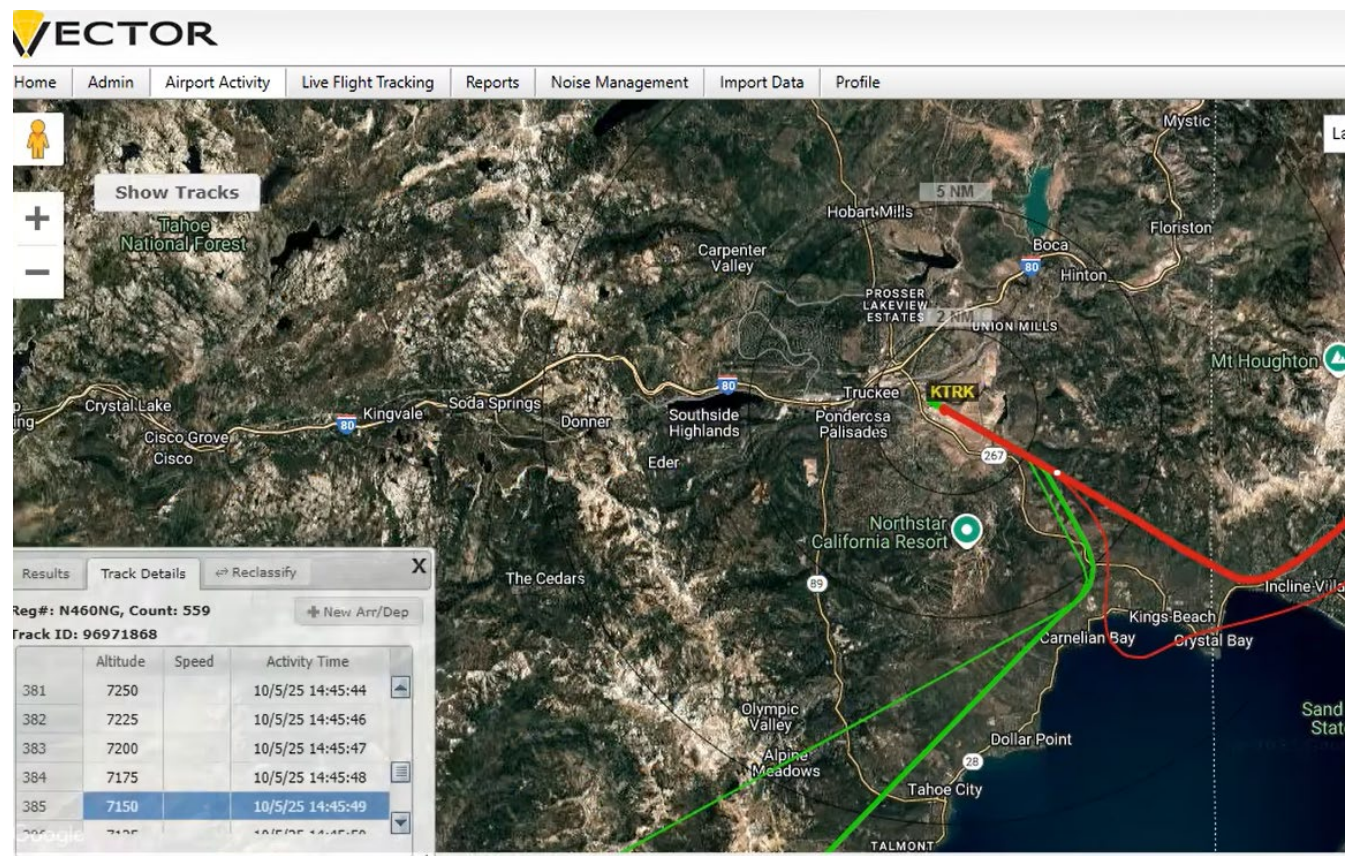
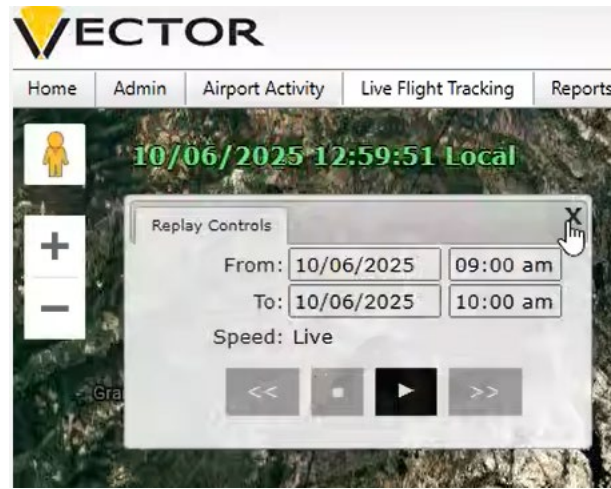
ID	Gate_Name	LatitudeA	LongitudeA	LatitudeB	LongitudeB	Base Alt	Ceiling Alt	Select
154	LEKYI IAF GATE RNAV 11	39.527575	-120.355081	39.535	-120.20436	10000	12000	<input type="checkbox"/>
80	Downwind 29 MC	39.3142955811	-120.14784836	39.2823305	-120.17865	6000	8000	<input type="checkbox"/>
70	Scott 2	39.3261562887	-120.16434822	39.3244796	-120.16188	5800	7500	<input type="checkbox"/>
60	Cnrtt 1	39.3743771190	-120.16436967	39.3750485	-120.16168	5800	7500	<input type="checkbox"/>

Results	Track Details	Reclassify							
Flight Count: 70									
Aircraft ID	Activity Type	T&G	AC Type	Activity Time	Beacon Code	Alt	KML	Noise	Weather
1 N460NG	Runway	????/KTRK	PC12	10/5/25 09:52:44	1200				WX
2 N71KF	Runway	KTRK/????	C182	10/5/25 09:56:45	1200				WX
3 N257JS	Runway	????/KTRK	C182	10/5/25 10:01:55	3607				WX



The Replay Controls tab allows the user to replay a track. The user will see a white cursor at each track point along the way.



---

## SYSTEM FOR ANALYZING OPERATION DATA BY DATE, TAIL, OTHER DATA

### **Experience in converting tracked activities into billable events and managing invoicing systems**

The PLANEPASS® automated billing engine seamlessly processed data through Vector's flight analysis algorithms and converted into operations and operator invoices, according to the airport's specific fee structure. The airport has enormous flexibility to implement rates and charges that best suit its needs. PLANEPASS® tracks every aircraft that operates at the airport and can determine if the aircraft is conducting a full-stop arrival, a touch & go operation, or a low-approach. PLANEPASS® has a variety of settings to derive these operation types based on arrival/departure pairings, with one of these specifically for touch & gos based on timing of arrival and departure for the same aircraft. This, in combination with other potential information to analyze the position, speed, type of aircraft, and wind speed & direction, can help determine if an aircraft could have been flying or was on the ground (below stall speed for the current conditions).

Once the aircraft registration number is determined, relevant data about that aircraft including model type, operator, weight, etc., is accessed by the system and the landing fees for all aircraft are automatically applied based on the Airports rates and charges table. In parallel, PLANEPASS® uses the proprietary PLANEPASS® owner/operator database to determine the best billing contact for each aircraft. The system automatically calculates landing and other fees, generates detailed invoices for these fees, and delivers these invoices to the operators.

### **Experience in accurately identifying and verifying aircraft ownership**

Vector's in-house, U.S.-based PLANEPASS® team handles all aspects of the landing fee billing process, including aircraft owner and operator research. Typically, billable aircraft are already part of our proprietary aircraft operator database, which contains detailed information on over 120,000 distinct aircraft and almost 66,000 distinct operators. If an aircraft identified by PLANEPASS® is not already part of this database, the PLANEPASS® team leverages proprietary and secondary data sources to identify the correct name and address of the aircraft operator (rather than a leasing company, bank, or aircraft owner) that will pay the invoice. Once this aircraft is part of our system, all airport clients benefit from the shared pool of information, as this database grows daily.

We maintain a complete copy of the FAA registry database, which is continually updated through a nightly automated process that captures daily changes. As a result, even if we've never billed an operator before, we have access to their registration data from both the FAA and other non-FAA sources. New aircraft, as well as those recently sold or transferred, are proactively sent to PLANEPASS®. Any discrepancies are thoroughly investigated by our team of experienced professionals, who have years of expertise in researching aircraft owners and operators. That is one of the main advantages that Vector provides is that we have a whole team of people that focus on knowing how to contact operators with active collections activities. **Our annual**



collection rate of 99.6% shows that we can identify and bill the correct owner/operator.

## Experience in invoice creation and mailing processes

The Vector PLANEPASS® team leverages the automation of the PLANEPASS® system to send out over 16,000 invoices per month to operators.

Once processed and generated, invoices are automatically sent by PLANEPASS® one of two ways:

- 1) Electronic invoice (PDF format) and emailed to the aircraft operator if they have elected e-invoicing
- 2) Printed invoices that are addressed and mailed by the PLANEPASS® team. International invoices are given special attention to make sure addresses are correct and that postage is metered correctly to eliminate returned mail and additional delays. A sample invoice is shown to the right.
- 3) Any unpaid Invoices will be included in a monthly statement that is sent as well to operators

**Operator INVOICE**  
For Aircraft Operations at Keesport-Hanscom Field (KBD)  
Invoice generated and serviced by Vector (www.Vector-us.com)  
(Regulate@vector.com)

**Vector-PLANE PASSPORT**  
P.O. Box 786231  
Philadelphia, PA 19178-4231 US

You MUST include OperatorID: 1132 and InvoiceID: 62520 on your check for your payment to be credited to your account.

**ABBOTT LABORATORIES INC**  
2900 W. AVIATION DR  
WILKESSBURG, IL 60087  
US

Invoice Number: 62520  
Invoice Period: 10/01/07 - 10/31/07  
Invoice Date: 11/12/07  
Invoice Total: \$25.90  
Other Invoiced Amount: \$32.55  
**AMOUNT DUE: \$58.45**

Operator Number: 1132  
Operator Contact: Steve Hawkins - Aviation Planner  
Contact Phone: 817-337-0132  
Contact Email: shawkins@vector.com

**Invoice 62520 Detail**

Signature / Fee	Aircraft Number	Model	Date/Time	Airport Code	Activity Type	Fee	Note
	N300AL	B737	10/20/07 11:50 AM	KBD	Departure	\$25.90	
						<b>Departure FEES SUBTOTAL</b>	<b>\$25.90</b>

**UnPaid Invoice/Payment Summary**

Invoices				Payments			
Invoice ID	Period	Date Sent	Billed Total	Payment ID	Date Paid	Applied Amount	Unpaid (Overpaid)
58005	05/01/07	06/17/07	\$40.55				\$40.55
62520	10/01/07	11/12/07	\$25.90				\$25.90
<b>Subtotal Invoiced</b>			<b>\$66.45</b>	<b>Subtotal Paid</b>			<b>\$7.00</b>
<b>AMOUNT DUE</b>							<b>\$58.45</b>

## Experience in collecting and managing payments from aircraft operators

All operator payments by check are received and processed through a secure Wells Fargo Lockbox. More than 40% of all invoices issued by Vector are paid via check. The Vector collections team utilizes daily electronic data uploads from the bank and check images to accurately apply each payment to the respective operator and invoice, ensuring precise management of accounts receivable (AR) balances. PLANEPASS® generates payment receipt reports aligned with these bank-generated escrow account reports, providing assurance to the airport and its stakeholders that all funds are properly reported and accounted for.

In addition to sending check payments, operators also have the option to pay by credit card/AVCARD through Vector's web-based Operator Portal. The Operator Portal also allows operators to access their invoices, view airport landing fee billing rates, change their contact information, and e-mail statements to themselves.

### Our U.S. In-House Staff Handles It All

- ▶ Researches Aircraft Operator, Model, and Weight
- ▶ Processes Payments and Monthly Remittance to Airport
- ▶ Delivers Invoices and Statements to Aircraft Operators
- ▶ Actively Collects Fees with 99.6% Success Rate
- ▶ Automatically Applies Airport Fee Rules
- ▶ Handles All Customer Service

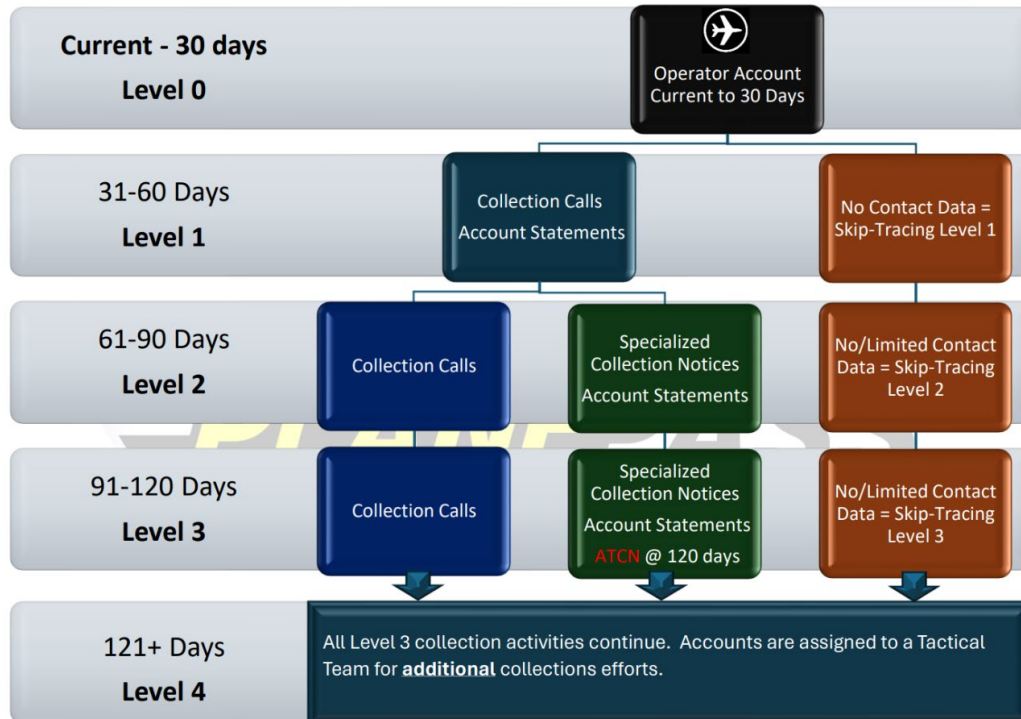


## STANDARD OPERATING PROCEDURES



### Section 2

## PLANEPASS® Collection Workflow



\*ATCN=Authorization to Collect Notice sent

Vector performs active collections on aged receivables. Collecting money from aircraft operators can be a challenge, especially considering the fluid and fragmented nature of aircraft ownership. Vector understands that an active collections process consisting of calls, emails, and letters is ultimately necessary to ensure that the right aircraft operators receive invoices and pay their bills in full and in a timely manner. To address this, Vector assigns Accounts Receivable Specialist to operators that have significant operations (For example: NetJets). These established contacts ensure that operators know in advance of Vector invoicing on behalf of new airports, customer service questions are quickly addressed and, as a result, payments are sent faster. If a billing error does occur, the charge is reversed. If a charge was paid prior to reversal, a refund request is submitted for processing and the operator will be notified upon completion. Vector has a team of 12 people solely devoted to billing and operator support. The PLANEPASS® Support team can be reached at [1-888-588-0028](tel:1-888-588-0028) or [billing@vector-us.com](mailto:billing@vector-us.com) M-F 9am to 7PM EST.

## TIMELINE FOR IMPLEMENTATION

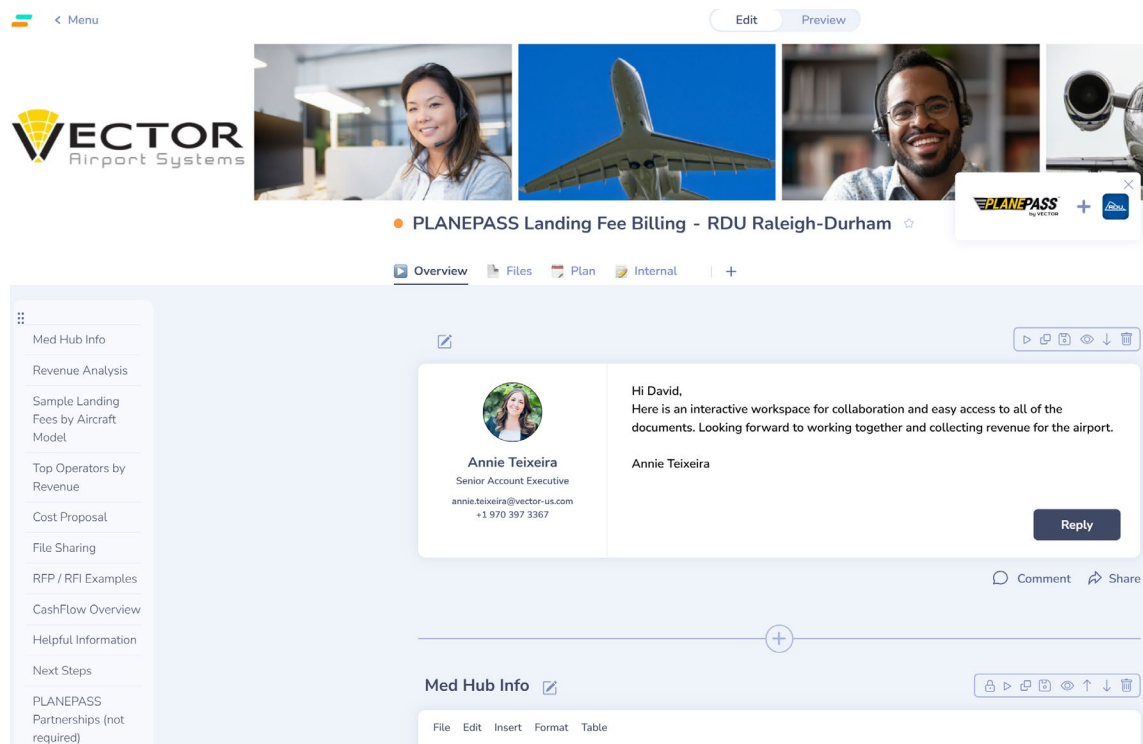
All three proposed core platforms PLANENOISE, PLANEPASS® and VNOMS are already in place at TTAD. As such, the following is specific to the timeline for enhancements proposed in this RFP.

### Timeline for Proposed System Enhancements:

- Automate Aircraft Parking – Immediate starting 11/1/2025 billing
- Automate Customer Feedback – Q1 2026
- Automate additional notifications for airport staff on noise violations – Q1 2026
- Automate Export of Transactional Data – Q4 2025
- Self-Reporting Pay for Landing Fees via QR code – Q1 2026
- Informational text on TTAD specific invoices – Q1 2026

### Project Management Tool

Vector utilizes a tool called Aligned to assist with pre-sales and airport onboarding. This is essentially a mutual project room for all sharing of information and interaction between Vector staff and the airport. Your Aligned room contains ways to share files, project plans, other documentation with easy tabs to access key information for anyone on the TTAD project team. This would be used for any proposed system enhancement rollouts. See Example below:



## CLIENT REFERENCES

<b>NAME OF AGENCY:</b>	<b>Dallas Love Field - KDAL</b>	
<b>CITY, STATE:</b>	Dallas, TX	
<b>CONTACT PERSON:</b>	Sheneice Hughes	<b>EMAIL:</b> <a href="mailto:sheneice.hughes@dallascityhall.com">sheneice.hughes@dallascityhall.com</a>
<b>PHONE #:</b>	214-670-6084	<b>ROLE:</b> Deputy Director
<b>ANNUAL OPERATIONS:</b>	249,000	
<b>DESCRIPTION OF SCOPE OF WORK:</b>	Since Aug 2015, Vector has provided billing collection including General Aviation & Non signatory (Customs and landing fees) Total annual billings \$11,400,000.	

<b>NAME OF AGENCY:</b>	<b>San Antonio International Airport - KSAT</b>	
<b>CITY, STATE:</b>	San Antonio, TX	
<b>CONTACT PERSON:</b>	Steve Milburn	<b>EMAIL:</b> <a href="mailto:steve.milburn@sanantonio.gov">steve.milburn@sanantonio.gov</a>
<b>PHONE #:</b>	210-207-3461	<b>ROLE:</b> Properties & Business Development Manager
<b>ANNUAL OPERATIONS:</b>	166,000	
<b>DESCRIPTION OF SCOPE OF WORK:</b>	Landing & Customs Fee Collection Service started October 2024, new fees including many international operators. Total Annual Billing \$2,600,000.	

<b>NAME OF AGENCY:</b>	<b>Pittsburgh International Airport - KPIT</b>	
<b>CITY, STATE:</b>	Pittsburgh, PA	
<b>CONTACT PERSON:</b>	Rebecca Fennell	<b>EMAIL:</b> <a href="mailto:RFennell@Flypittsburgh.com">RFennell@Flypittsburgh.com</a>
<b>PHONE #:</b>	412-472-3556	<b>ROLE:</b> Revenue Control Specialist
<b>ANNUAL OPERATIONS:</b>	132,000	
<b>DESCRIPTION OF SCOPE OF WORK:</b>	Landing Fee Collection Service started June 2025, took over collection of an existing fee. Total Annual Billings \$1,365,000	

<b>NAME OF AGENCY:</b>	<b>Rifle Garfield County Airport - KRIL</b>	
<b>CITY, STATE:</b>	Rifle County, CO	
<b>CONTACT PERSON:</b>	Sam Carver	<b>EMAIL:</b> <a href="mailto:scarver@garfield-county.com">scarver@garfield-county.com</a>
<b>PHONE #:</b>	970-625-1091 x4118	<b>ROLE:</b> Airport Director
<b>ANNUAL OPERATIONS:</b>	20,000	
<b>DESCRIPTION OF SCOPE OF WORK:</b>	Landing Fee Collection Service started December 2024, took over collection of an existing fee. Total Annual Billing \$835,000.	

<b>NAME OF AGENCY:</b>	<b>Napa County Airport - KAPC</b>	
<b>CITY, STATE, ZIP:</b>	<b>Napa, CA</b>	
<b>CONTACT PERSON:</b>	Mark Witsoe	<b>EMAIL:</b> <a href="mailto:mark.witsoe@countyofnapa.org">mark.witsoe@countyofnapa.org</a>
<b>PHONE #:</b>	707-253-4665	<b>ROLE:</b> Airport Director
<b>ANNUAL OPERATIONS:</b>	72,000	
<b>DESCRIPTION OF SCOPE OF WORK:</b>	Since March 2018, Vector has provided billing and collection of GA landing and parking fees. Total annual billings \$917,000.	

<b>NAME OF AGENCY:</b>	<b>Laredo International Airport - KLRD</b>	
<b>CITY, STATE, ZIP:</b>	Laredo, TX	
<b>CONTACT PERSON:</b>	Virginia Hunt	<b>EMAIL:</b> <a href="mailto:vlhunt@ci.laredo.tx.us">vlhunt@ci.laredo.tx.us</a>
<b>PHONE #:</b>	956-795-2000 x2838	<b>ROLE:</b> Assistant Airport Director
<b>ANNUAL OPERATIONS:</b>	45,900	
<b>DESCRIPTION OF SCOPE OF WORK:</b>	Since January 2023, Vector has provided billing and collection of Signatory, Non-Signatory, and General Aviation landing fees. Total annual billings \$1,373,000.	

<b>NAME OF AGENCY:</b>	<b>Kissimmee Gateway Airport - KISM</b>	
<b>CITY, STATE, ZIP:</b>	Kissimmee, FL 34741	
<b>CONTACT PERSON:</b>	Shaun Germolus	<b>EMAIL:</b> <a href="mailto:shaun.germolus@kissimmee.gov">shaun.germolus@kissimmee.gov</a>
<b>PHONE #:</b>	407-518-2505	<b>ROLE:</b> Airport Director
<b>ANNUAL OPERATIONS:</b>	134,000	
<b>DESCRIPTION OF SCOPE OF WORK:</b>	Feb 2025 Implemented new landing fees billing all part 91/part 135 aircraft focused on increasing airport revenues. Estimated Total Annual Billing \$525,000.	

## Bozeman, MT (BZN) – Self Reported Reference by Airport



### A. REFERENCE QUESTIONNAIRE

<b>Solicitation: RFP – Airport Landing Fees Collection and Billing Services</b>	
Name of Company Requesting Reference Information: Vector Airport Systems	
Name of Client/Individual Providing Reference Information :	
Name: Troy Watling	Company: Gallatin Airport Authority (BZN)
Email: troy.watling@bozemanairport.com	Tel: (406) 924-5131

Please rate each criteria to the best of your knowledge on a scale of 1 to 10, with 10 representing that you were very satisfied and 1 representing that you were very unsatisfied. If you do not have sufficient knowledge of past performance in a particular area, leave it blank.

Project/Contract Name: Gallatin Airport Authority (Bozeman Yellowstone International Airport)

Summarize the scope: Monthly billing and reporting of landing fees and customs facility fees

Item	Criteria	Score
1	Ability to manage the project costs (minimize change orders to scope).	10
2	Ability to maintain project schedule (complete on-time or early).	10
3	Quality of work.	10
4	Quality of consultative advice provided on the project.	10
5	Professionalism and ability to manage personnel.	10
6	Project administration (completed documents, final invoice, final product turnover; invoices; manuals or going forward documentation, etc.)	10
7	Ability to verbally communicate and document information clearly and succinctly.	10
8	Ability to manage risks and unexpected project circumstances.	10
9	Ability to follow contract documents, policies, procedures, rules, regulations, etc.	10
10	Overall comfort level with hiring the company in the future (customer satisfaction).	10
<b>TOTAL SCORE OF ALL ITEMS</b>		<b>100</b>



## Aspen, CO (ASE) – Self Reported Reference by Airport



### A. REFERENCE QUESTIONNAIRE

<b>Solicitation: RFP – Airport Landing Fees Collection and Billing Services</b>	
Name of Company Requesting Reference Information: Vector Airport Systems	
Name of Client/Individual Providing Reference Information :	
Name: Nora Waivers	Company: Aspen/Pitkin County Airport
Email: <a href="mailto:nora.waivers@aspenairport.com">nora.waivers@aspenairport.com</a>	Tel: (970)975-3896

Please rate each criteria to the best of your knowledge on a scale of 1 to 10, with 10 representing that you were very satisfied and 1 representing that you were very unsatisfied. If you do not have sufficient knowledge of past performance in a particular area, leave it blank.

Project/Contract Name: Aspen/Pitkin County Airport Landing Fee and Based Aircraft Lease Billing Services

Summarize the scope: Vector uses their technology to identify arriving and departing aircraft, then contacts the aircraft owner directly to collect applicable landing fees. In addition, using information provided to Vector from the airport, Vector invoices leaseholders for the airport's aircraft storage facilities and collects monthly rent.

Item	Criteria	Score
1	Ability to manage the project costs (minimize change orders to scope).	10
2	Ability to maintain project schedule (complete on-time or early).	10
3	Quality of work.	10
4	Quality of consultative advice provided on the project.	10
5	Professionalism and ability to manage personnel.	10
6	Project administration (completed documents, final invoice, final product turnover; invoices; manuals or going forward documentation, etc.)	10
7	Ability to verbally communicate and document information clearly and succinctly.	10
8	Ability to manage risks and unexpected project circumstances.	10
9	Ability to follow contract documents, policies, procedures, rules, regulations, etc.	10
10	Overall comfort level with hiring the company in the future (customer satisfaction).	10
<b>TOTAL SCORE OF ALL ITEMS</b>		100



## KISSIMMEE, FL (ISM) – Self Reported Reference by Airport



### A. REFERENCE QUESTIONNAIRE

#### **Solicitation: RFP – Airport Landing Fees Collection and Billing Services**

Name of Company Requesting Reference Information: Vector

Name of Client/Individual Providing Reference Information :

Name: Shaun Germolus \_\_\_\_\_ Company: Kissimmee Gateway Airport, FL

Email: shaun.germolus@kissimmee.gov \_\_\_\_\_ Tel: 407-518-2505 \_\_\_\_\_

Please rate each criteria to the best of your knowledge on a scale of 1 to 10, with 10 representing that you were very satisfied and 1 representing that you were very unsatisfied. If you do not have sufficient knowledge of past performance in a particular area, leave it blank.

Project/Contract                      Name:                      PlanePass                      RFP                      Landing                      Fees

Summarize the scope: Vector utilizes PlanePass and coordinates, invoices, and collect landing fees on behalf of the Kissimmee Gateway Airport.

Item	Criteria	Score
1	Ability to manage the project costs (minimize change orders to scope).	10
2	Ability to maintain project schedule (complete on-time or early).	10
3	Quality of work.	10
4	Quality of consultative advice provided on the project.	10
5	Professionalism and ability to manage personnel.	10
6	Project administration (completed documents, final invoice, final product turnover; invoices; manuals or going forward documentation, etc.)	10
7	Ability to verbally communicate and document information clearly and succinctly.	10
8	Ability to manage risks and unexpected project circumstances.	10
9	Ability to follow contract documents, policies, procedures, rules, regulations, etc.	10
10	Overall comfort level with hiring the company in the future (customer satisfaction).	10
<b>TOTAL SCORE OF ALL ITEMS</b>		100

## East Hampton, NY (JPX) – Self Reported Reference by Airport



### A. REFERENCE QUESTIONNAIRE

<b>Solicitation: RFP – Airport Landing Fees Collection and Billing Services</b>	
Name of Company Requesting Reference Information: Naples, FL	
Name of Client/Individual Providing Reference Information :	
Name: James Brundige, Airport Director _____ Company: East Hampton Town Airport _____	
Email: jbrundige@EHamptonNY.gov _____	Tel: _____

Please rate each criteria to the best of your knowledge on a scale of 1 to 10, with 10 representing that you were very satisfied and 1 representing that you were very unsatisfied. If you do not have sufficient knowledge of past performance in a particular area, leave it blank.

Project/Contract Name: \_\_\_\_\_

Summarize the scope: Billing and Collection of Landing Fees \_\_\_\_\_

Item	Criteria	Score
1	Ability to manage the project costs (minimize change orders to scope).	10
2	Ability to maintain project schedule (complete <u>on-time</u> or early).	10
3	Quality of work.	10
4	Quality of consultative advice provided on the project.	10
5	Professionalism and ability to manage personnel.	10
6	Project administration (completed documents, final invoice, final product turnover; invoices; manuals or going forward documentation, etc.)	10
7	Ability to verbally communicate and document information clearly and succinctly.	10
8	Ability to manage risks and unexpected project circumstances.	10
9	Ability to follow contract documents, policies, procedures, rules, regulations, etc.	10
10	Overall comfort level with hiring the company in the future (customer satisfaction).	10
<b>TOTAL SCORE OF ALL ITEMS</b>		100

## COST PROPOSAL AND COMMISSION STRUCTURE

### Cost Proposal Summary

The Proposed Vector Costs below represent a \$36,700 annual cost savings for TTAD over the existing contract in place. The Planenoise and Altaport fees are the same as what TTAD currently pays

### PLANEPASS Landing Fee Cost

The Vector PLANEPASS service is based on a revenue share model using actual COLLECTED fees on behalf of TTAD. There are no start-up fees or other escalating fees. The Revenue share cost below represents an existing customer discount.

Fee Type	Cost
Landing Fees All Types	13% of Collected Fees for all initial and optional years of contract
Parking Fees All Types	13% of Collected Fees for all initial and optional years of contract

Vector is proposing moving from a **monthly** remittance format to a **weekly** format. Vector already provides this capability for other customers.

- Last 12 Months of Landing and Parking billing - \$1,095,783.
- Last 24 Month Collections rate – 98.9%

### Vector Weekly Fee Remittance to Airport

For TTAD we are proposing moving from a monthly to a weekly close process. Vector will email a weekly Collection Report to the airport showing all the invoices paid during the previous week on Tuesday of the following week along with the airport's remittance amount being transferred to the Airport by electronic funds transfer to the Airport's specified bank account.

### Vector Weekly Remittance Reporting to Airport

Example Report shown below.

<b>Vector PLANEPASS® - Monthly Collections Report</b> Airport = SAMPLE 10/01/2021 - 10/31/2021														
Result	Payment Master ID	Account Label	Deposit Date	Transaction Category	Transaction Method	Paid By/To	Check Serial Number / Transaction Number	Transaction amount	InvoiceID	Invoice Airport	Period Start	Period End	Days to Collect	OpID
237	386099	Small Lbox	10/29/2021	Payment	CK	Prime Jet Us LLC	209201	\$ 99.00	454310	SAMPLE	9/1/2021	9/30/2021	17	81193
238	386099	Small Lbox	10/29/2021	Payment	CK	Prime Jet Us LLC	209201	\$ 49.50	454342	SAMPLE	9/1/2021	9/30/2021	17	79765
239	386106	Small Lbox	10/29/2021	Payment	CK	Axis Jet	20341	\$ 33.00	454319	SAMPLE	9/1/2021	9/30/2021	17	70179
240	386106	Small Lbox	10/29/2021	Payment	CK	Axis Jet	20341	\$ 33.00	454193	SAMPLE	9/1/2021	9/30/2021	17	91793
241	386117	Small Lbox	10/29/2021	Payment	CK	Tacoma Screw Products Inc	246252	\$ 175.00	454099	SAMPLE	9/1/2021	9/30/2021	17	27920
242	386122	Small Lbox	10/29/2021	Payment	CK	BEJA LLC	51414752	\$ 309.60	445686	SAMPLE	8/1/2021	8/31/2021	51	71668
243	386182	Small Lbox	10/29/2021	Payment	AC	Executive Jet Management	IA000016755180	\$ 1,579.85	454102	SAMPLE	9/1/2021	9/30/2021	17	637
244	386185	Small Lbox	10/29/2021	Payment	AC	Solairus Aviation	IA081667389431	\$ 1,350.00	435245	SAMPLE	6/1/2021	6/30/2021	109	81192
245	386185	Small Lbox	10/29/2021	Payment	AC	Solairus Aviation	IA081667389431	\$ 1,080.00	439909	SAMPLE	7/1/2021	7/31/2021	79	81192
246	386185	Small Lbox	10/29/2021	Payment	AC	Solairus Aviation	IA081667389431	\$ 1,350.00	445389	SAMPLE	8/1/2021	8/31/2021	51	81192
247	386185	Small Lbox	10/29/2021	Payment	AC	Solairus Aviation	IA081667389431	\$ 1,620.00	454090	SAMPLE	9/1/2021	9/30/2021	17	81192
								A. Total Credits - this airport (SAMPLE) \$						
								B. Total Payment Debits - this airport (SAMPLE) \$						
								Disbursement Calculation						
								A. Total Credits (from above) \$						
								Minus B. Payment Debits (from above) \$						
								Net Operator Payments for calculating Vector Commission \$						
								Vector Commission %						
								Vector Commission Due \$						
								Disbursement to Airport (SAMPLE) Due \$						

### **VNOMS Noise System Cost**

Vectors VNOMS system cost has no-startup fees and consists of two parts:

1. Operation, Processing, Monitoring, & Maintenance (OPM&M) for the Aircraft ID & Tracking system
2. VNOMS Annual Software License, which includes ongoing software, support, data processing and Public Portal maintenance

Currently at TTAD, Vector has 11 Camera Pods installed at TTAD. These currently account for approximately 4% of landing fee billable activities for an amount of \$44,000.

	Year 1	Year 2	Year 3	Year 4 (Option Year 1)	Year 5 (Option Year 2)
Camera System OPM&M	\$20,000	\$21,000	\$22,000	\$23,000	\$24,000
VNOMS Annual License	\$30,000	\$31,000	\$32,000	\$33,000	\$34,000

### **PLANENOISE System Cost**

Vector will act as a prime contractor for PLANENOISE:

- PLANENOISE – Existing Customer Complaint System currently in place - **\$19,500**
- COMPLAINT BOX – Existing already in place Including Smart Receipt - **\$9,000**

### **Altaport System Cost**

Vector will act as a prime contractor for Altaport:

Hangar Reservation System and Automobile Parking – **12% of Actual Collected Fees**

---

## ADDITIONAL OPTIONAL ENHANCEMENTS

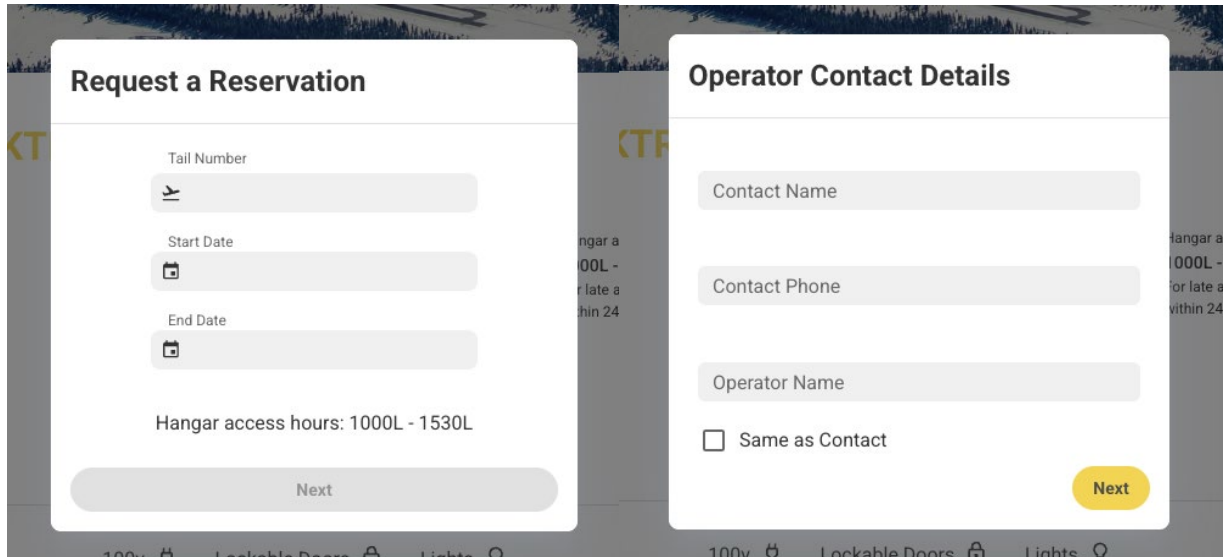
Vector is currently undergoing technology improvements to the PLANEPASS platform which includes:

- 1) New “Self-Report” Feature:
  - a. Ability to scan QR code to self-report landing by entering tail number
- 2) New Airport Portal – New features will include:
  - a. New UI
  - b. Additional Aging reports
  - c. Direct Airport Aircraft Based List Updates
- 3) New Operator Engagement/Payment Portal
  - a. New UI
  - b. Additional Dispute Features
- 4) Vector Communications Module for Noise Violations
  - a. Configurable rules to generate additional communications to either operators or airport staff
- 5) Data Integrity & Integration Section 1.6
  - Vector agrees to provide a REST API that can be called to extract aircraft fee transactional data.
  - Vector agrees to provide extracted aircraft fee transactional data directly on a daily basis to a SFTP server that TTAD can access.

## APPENDIX 1 – Altaport Hangar Rental and Auto Parking Solution

### Short-Term Aircraft Hangar Rental scheduling and fee collection

Using Altaport, operators can make hangar reservations or airport reservations. As part of the reservation process, operators enter their contact information, aircraft information and arrival and departure dates. Based on asset availability and size, operators are matched with an available asset and provided with a fee for that stay. Operators can then agree to the rental agreements and pay for their reservation.



The image shows a screenshot of the 'Request a Reservation' and 'Operator Contact Details' forms. The 'Request a Reservation' form includes fields for Tail Number, Start Date, and End Date, along with a 'Next' button. The 'Operator Contact Details' form includes fields for Contact Name, Contact Phone, and Operator Name, with a checkbox for 'Same as Contact' and a 'Next' button. The background shows a hangar with aircraft parked inside.

**Request a Reservation**

Tail Number

Start Date

End Date

Hangar access hours: 1000L - 1530L

Next

**Operator Contact Details**

Contact Name

Contact Phone

Operator Name

☐ Same as Contact

Next

*Operator's view to start a reservation*

### Reservation Details

Start Date	End Date
23 Oct 2025	30 Oct 2025
Tail Number	MTOW
NTEST	6000
Contact Name	Contact Email
Matt Broffman	matt@altaport.com
Contact Phone	Operator Name
4077820645	TEST

Daily Rate (7 nights @ \$240)	\$1,680
Towing Service	\$300
Subtotal	\$1,980
Payment Processing Fee	\$50.48
<b>Total</b>	<b>\$2,030.48</b>

Operator Note

Notes do not guarantee that services can or will be provided. For critical needs, please contact the airport directly in advance of your arrival.

### Transient Hangar Rental Agreement

This Transient Rental Agreement ("Agreement") is a binding legal agreement between you ("User") for the use of certain hangar facilities provided by the Truckee Tahoe Airport District, a California special district ("District").

Back

Next

*Reservation Fee Detail View with Rental Agreement Acceptance*

### Payment

<b>Total</b>	<b>\$2,039.44</b>
--------------	-------------------

Card number

1234 1234 1234 1234

VISA

Expiration date

MM / YY

Security code

CVC

Country

United States

ZIP code

12345

☐ I agree to the [Terms of Service](#)

Pay

*Hangar Rental Payment Screen*



Reservations can be automatically approved and placed in the available asset, or they can be manually approved by airport staff. Once approved, the operator's payment method is charged, and an email confirmation is sent to the customer with reservation details.

**ALTAPORT**

**TRUCKEE TAHOE AIRPORT**

**Your reservation has been confirmed for Truckee Tahoe Airport.**

Operator	Matt Broffman	Email	<a href="mailto:mattbroffman@gmail.com">mattbroffman@gmail.com</a>
Start Date	17 Oct 2025	End Date	24 Oct 2025
Tail Number	NTEST	MTOW	~6000
<b>Total</b>		<b>\$2,030.48</b>	

**Arrival Instructions**

Upon arrival, please contact Unicom (122.95) for a parking spot, or taxi directly to the hangar if you plan to self-tow and are familiar with the airport. Access to and from the hangars is facilitated by airport staff and only available during airport operating hours. Please call Airport staff at 530-857-4119 x 1 with any questions.

Please allow up to 24 hours for a response.  
For questions, visit [truckeeatahoeairport.com](http://truckeeatahoeairport.com) or contact us at [info@truckeeatahoeairport.com](mailto:info@truckeeatahoeairport.com) or (530) 587-4119.

*Reservation confirmation e-mail*

Airport staff can manually create reservations, which then sends an invoice to the operator for payment.

**Add Reservation**

Tail Number

Start Date

End Date

Contact Name

Contact Email

Contact Phone

**Submit**

**Add Reservation**

**Aircraft Details**


Aircraft	MTOW	
AERO Aero Commander 500	6000	
Length	Wingspan	Tail Height
36ft. 10in.	49ft. 0in.	14ft. 6in.

All Hangars

- ✓ N1 - Executive H: 17' 6" x W: 63' 6" x L: 61' 10"
- ✓ A10 - Executive H: 17' 7" x W: 54' 8" x L: 55' 0"
- ✗ D4 Unavailable

*Airport Manager views to create and assign a reservation manually.*

# ALTAPORT



**TRUCKEE  
TAHOE  
AIRPORT**

**Finish your reservation request for Truckee Tahoe  
Airport.**

<b>Operator</b>	Matt Broffman	<b>Email</b>	<a href="mailto:mattbroffman@gmail.com">mattbroffman@gmail.com</a>
<b>Start Date</b>	17 Oct 2025	<b>End Date</b>	24 Oct 2025
<b>Tail Number</b>	NTEST	<b>MTOW</b>	~6000

**Total** **\$2,030.48**

[Make Payment](#)

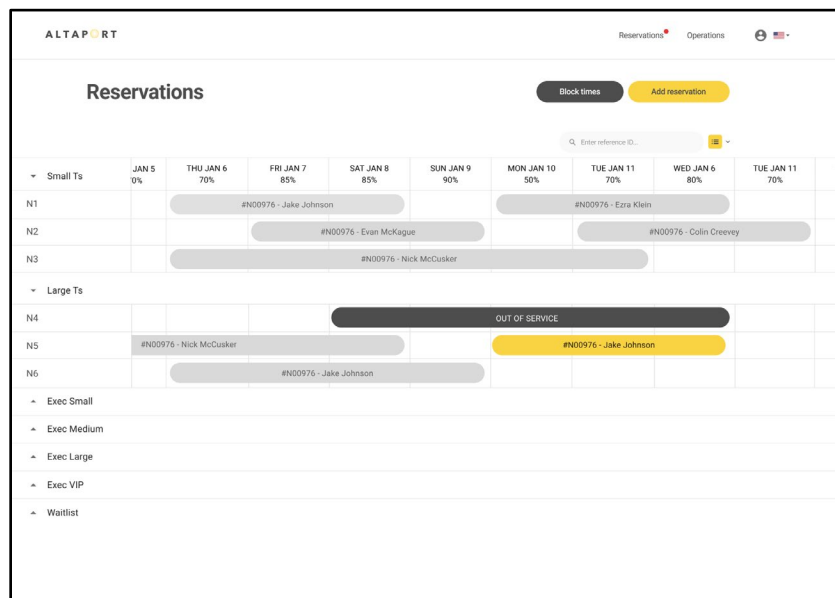
Please note: This reservation will only be guaranteed until October 7, 2025 at 2:46 PM. After this time, the spot may be released to other operators.

Copyright ©2024 Altaport, Inc

*Emailed invoice to customer on manual reservation creation*


Any changes to existing reservations that result in any fee differences being sent to the operator as an invoice or refund.

Airport staff can view upcoming and past reservations in a Gantt chart view or list view, and are able to set asset availability and block out times the asset is not available.



*Airport Manager's calendar view of reservations.*

With the support of the Altaport team, each asset is configured with dimensions and relevant information that can be shared with the customer in each reservation.



**Max Aircraft Dimensions**

Overall Length 37ft. 5in.

Door Width 49ft. 5in.

Door Height 12ft. 2in.

Wing Box Length 19ft. 0in.

**Instructions**

Upon arrival, please contact Unicom (122.95) for parking instructions. Access to and from the hangars is facilitated by airport staff and only available during airport operating hours. Please call Airport staff at 530-587-4119 x 1 with any questions.



Name

Latitude

Longitude

Asset-Level Instructions

Availability

1	39.32126	-120.15212	Upon arrival, please contact Unicom (122.95) for parking instructions. Access to and from the hangars is facilitated by airport staff and only available during airport operating hours. Please call Airport staff at 530-587-4119 x 1 with any questions.	
D4 - Hangar 1	39.32126	-120.15212	Upon arrival, please contact Unicom (122.95) for parking instructions. Access to and from the hangars is facilitated by airport staff and only available during airport operating hours. Please call Airport staff at 530-587-4119 x 1 with any questions.	

Edit Table

*Airport Manager's view of asset configuration.*

## Overnight Auto parking system with integrated fee collection

Altopart provides an automobile parking payment solution. Visitors can pay for auto parking by scanning a QR code at the lot, entering their contact information and parking dates. They are then shown a calculated fee, agree to the terms, and pay for the parking session.

ALTAPORT

Welcome to Palo Alto Airport!

**Car Information**  
Provide your vehicle details

Car Make

Car Model

Vehicle Color

License Plate

State

Continue

Welcome to Palo Alto Airport!

**Parking Duration**  
Specify how long you need to park

Start Date & Time

10/07/2025 06:56

Pacific Daylight Time (GMT-07:00)

End Date & Time

10/10/2025 12:00

Pacific Daylight Time (GMT-07:00)

Advance booking

**Parking Fee Details**

Duration:

4 days

Rate:

\$11/day

Total Fee:

\$44.00

Continue to Payment

*Guest Auto Parking Check-in*

Welcome to Palo Alto Airport!

**Complete Payment**

Duration: 4 days  
Rate: \$11/day  
Processing Fee: \$0.00  
Total: \$44.00

☒ US bank account ☐ Card

Email:

Full name:

First and last name:

Search for your bank

Enter bank details manually (may take 1-2 business days)

☐ I agree to the [Terms of Service](#)

Welcome to Palo Alto Airport!

**Complete Payment**

Duration: 4 days  
Rate: \$11/day  
Processing Fee: \$0.00  
Total: \$44.00

☐ US bank account ☒ Card

Secure, fast checkout with Link

Card number: 1234 1234 1234 1234

Expiration date: MM / YY Security code: CVC

Country: United States

ZIP code: 12345

No account connected

☒ I agree to the [Terms of Service](#)

*Payment Portal for auto parking*

The system allows the airport to view all currently checked-in and parked vehicles at the airport.

KPAO Parking					
Search parking sessions...					
Id	License Plate	Make	Model	Start DateTime	End DateTime
#408		Mazda	CX-5	10/06/2025 19:46	10/09/2025 19:46
#407		Mercedes-Benz	GLA-Class	10/06/2025 19:39	10/09/2025 19:39
#406		Lexus	ES	10/06/2025 17:59	10/09/2025 19:59
#396		Volkswagen	Tiguan	10/02/2025 20:12	10/31/2025 20:12
#150		Lexus	LS	08/01/2025 13:52	12/26/2025 03:00

*Airport Manager view for auto parking*

## Reservations

### Special Event and Space Constrained Airport Reservations

Take control of special events and space-limited operations with Altaport's advanced reservation system. Automatically streamline bookings, allocate resources with precision, and enforce adherence, thereby reducing stress and ensuring your airport runs smoothly during peak periods. Features include:

- Advanced booking and reservation management for special events and limited-space operations.
- Payment collection at the time of reservation to secure bookings.
- Sophisticated pricing structures, including variable and demand-driven pricing

- Automatic discounts and penalties are applied and billed based on adherence to reservation rules.

### Transient Hangar Reservations

Optimize transient hangar utilization and revenue with Altaport's automated reservation system. Manage bookings with ease, fill capacity efficiently, and streamline revenue collection to turn your hangar operations into a self-sustaining profit center. Features include:

- Robust asset configuration based on use, availability, size, type, or category.
- Automated aircraft-to-asset matching based on size and availability.
- Automated revenue collection through integrated checkout and invoicing.
- Resource availability management to keep occupancy optimized.
- Tenant hangar sharing support with automated revenue splitting.

### How it works

- **Schedule Options:** The system provides comprehensive scheduling options for operators, including reserving Arrival, Departure, and parking locations or hangars.
- **Service Addition:** During the booking process, users can seamlessly add required or optional services, such as ground support or fueling, ensuring all needs are met with a single, streamlined transaction.
- **Payment at Reservation:** The platform supports flexible payment structures. This includes Fixed Reservation Fees for simple, transparent pricing, as well as Dynamic Fees that are automatically calculated in real-time based on specific aircraft characteristics, such as category, weight, and size, ensuring fair and accurate cost recovery.
- **Capacity Establishment:** The system manages airport capacity by allowing administrators to define limits based on various parameters, including ramp/hangar size, total aircraft count, or a combination of both, preventing overbooking and optimizing resource allocation.
- **Additional Fees:** The platform can automatically apply fees and penalties for early/late departures or other non-compliance with the reservation, which incentivizes adherence to the schedule and ensures operational efficiency for the airport.
- **Airport Asset Management:** The platform enables airport management to set up various assets for reservations, along with their associated metadata, including size and availability. Airport management can establish availability for each asset and block out dates/times when the asset is unavailable.
- **Airport Reservation Management:** Once a reservation is received, airport managers can have reservations automatically accepted and assets assigned or they can opt to approve reservations manually. Airport managers can manually add or change reservations, which triggers an updated invoice or refund to operators.

ALTA PORT

Welcome to Paso Robles Airport!

Reserve your slot

Please select your planned arrival and departure

08/17/24

18:00

08/19/24

12:00

<

August

>

S	M	T	W	T	F	S
			1	2	3	4
						5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Busy +\$25 Landing Fee

06 12 18 23

Reserve

Reservation Details

Start Date

14 Feb 2025

End Date

24 Feb 2025

ETA 13:00

DTA 13:00

Tail Number

#N00945

MTOW

<15,500 lb.

Operator

Jonathan Cagnacci

Email

jonathancagnacci@gmail.com

☐ Add towing services

Total

\$2250

Terms & Conditions

Refunds

- Cancel at least 1 week prior to the reservation start date...

SEE MORE

☐ Accept Terms & Conditions

Operator Note

Type

Notes do not guarantee that services can or will be provided. For critical needs, please [contact the airport directly](#) in advance of your arrival.

Back

Next

RT

Welcome to Paso Robles Airport!

Receive a \$200 discount on landing fees by honoring your scheduled booking.

Your aircraft is booked to remain at KPRB from **June 7, 13:30 - June 14, 16:00**

You may edit your booking up to 48 hrs. before your flight and still be eligible for the discount.

Continue

Edit Booking

Operators view when creating a reservation.

Add Reservation

Tail Number

Start Date

End Date

Contact Name

Contact Email

Contact Phone

Submit

Airport Manager view to manually create a reservation.

ALTAPORT

Reservations

Operations

Reservations

Block times

Add reservation

Q

Enter reference ID...

▼

▼ Small Ts	JAN 5 0%	THU JAN 6 70%	FRI JAN 7 85%	SAT JAN 8 85%	SUN JAN 9 90%	MON JAN 10 50%	TUE JAN 11 70%	WED JAN 6 80%	TUE JAN 11 70%
N1		#N00976 - Jake Johnson				#N00976 - Ezra Klein			
N2		#N00976 - Evan McKague				#N00976 - Colin Creevey			
N3		#N00976 - Nick McCusker							
▼ Large Ts				OUT OF SERVICE					
N4		#N00976 - Nick McCusker				#N00976 - Jake Johnson			
N5		#N00976 - Nick McCusker				#N00976 - Jake Johnson			
N6		#N00976 - Jake Johnson							

▲ Exec Small

▲ Exec Medium


▲ Exec Large

▲ Exec VIP

▲ Waitlist

*Airport Manager calendar view of reservations.*

D4 - Large T



Max Aircraft Dimensions

Overall Length 37ft. 5in.

Door Width 49ft. 5in.



Door Height 12ft. 2in.

Wing Box Length 19ft. 0in.

Instructions

Upon arrival, please contact Unicom (122.95) for parking instructions. Access to and from the hangars is facilitated by airport staff and only available during airport operating hours. Please call Airport staff at 530-587-4119 x 1 with any questions.

Edit Table

Name	Latitude	Longitude	Asset-Level Instructions	Availability
1	39.32126	-120.15212	Upon arrival, please contact Unicom (122.95) for parking instructions. Access to and from the hangars is facilitated by airport staff and only available during airport operating hours. Please call Airport staff at 530-587-4119 x 1 with any questions.	
D4 - Hangar 1	39.32126	-120.15212	Upon arrival, please contact Unicom (122.95) for parking instructions. Access to and from the hangars is facilitated by airport staff and only available during airport operating hours. Please call Airport staff at 530-587-4119 x 1 with any questions.	

*Airport Manager view of asset configuration.*



