Mead & Hunt, Inc.
M&H Architecture, Inc.
Cherry Street Building
1616 East 15th Street
Tulsa, Oklahoma 74120
918-585-8844
meadhunt.com

Planning Memorandum – Truckee Tahoe Airport (TRK)

To: Mr. Kevin Smith, A.A.E.
General Manager
Truckee Tahoe Airport District (TTAD)
10356 Truckee Airport Road
Truckee, CA 96161
530.587.4119 x 105

From: MEAD & HUNT, Inc./Aviation Services

Date: March 28, 2022

Subject: TRK – Runway 11/29 & Runway 2/20 Planning Design Standards Review

Dear Mr. Smith and Ad Hoc Committee:

As part of the Phase 1 of the TRK Master Plan Update (2022 MPU), Mead & Hunt is updating the Facility Requirement Chapter. Runway and airside design requirements are detailed in the Facility Requirement Chapter. These requirements are directly influenced by operations data, the largest aircraft that regularly use the airport, and wind data. The Facility Requirement update is being performed concurrent to siting Runway 16/34 to maximize length and instrument procedure capabilities for alternative analysis.

Updated wind coverage and aircraft operations data were collected for the 2022 MPU and new planning considerations that may influence the future development recommendations for the Airport have been identified. These include the documentation of the appropriate *existing* and *future* design standards for each of the TRK's runways (primary and crosswind), as well as their future classification in consideration of the potential development of a new third runway.

This memo includes a presentation of the updated TRK data, an explanation of how this data could impact the Critical Aircraft Analysis and associated design standards for each runway, and how this will affect the Third Runway Feasibility Study, with the following significant findings:

- **Runway 11/29 Runway Design Code (RDC).** Based on an increase in business jet activity since the 2015 Airport Master Plan, Runway 11/29 should be classified as RDC C-II-5000. This change will increase the size in runway design surfaces and runway-to-taxiway separation standards.
- **Runway 2/20 wind coverage.** Based on analysis of current wind data, crosswind coverage on Runway 11/29 exceeds the 95% threshold for Group II aircraft. The coverage no longer supports the funding eligibility of the future design standard upgrade of Runway 2/20 from Runway Design Code (RDC) B-I-5000 to RDC B-II-5000.
- **The change in RDC on Runway 11/29 will impact Runway 16/34 analysis.** Three options are presented on the configuration of Runway 16/34 with revised Runway 11/29 design standards.

This memo also incorporates some bolded text that highlights how this data would be reviewed by the FAA in the context of the Master Plan and ALP approval process. It should be noted for TTAD review that the analysis contained in this memo and recommended design surfaces will make TRK compliant with FAA design standards and will help TTAD receive funding to enhance safety and efficiency.

A copy of the current FAA approved (2015) TRK Airport Layout Plan (ALP) and Data Sheet drawings that were prepared in conjunction with the 2015 Airport Master Plan (2015 AMP) are included for reference in **Attachment One** of this document.

Runway Design Code and Design Aircraft Analysis

Knowledge of the types of aircraft currently using, and expected to use an airport are an important design consideration in the aviation planning process. Runways should be designed in accordance with the appropriate RDC standards as specified in FAA's Advisory Circular (AC) 150/5300-13A, Change 1, *AIRPORT DESIGN*. The RDC is a coding system used to relate and compare the design criteria of the runway and taxiway system to the operational and physical characteristics of the "Design Aircraft" that is determined the most critical aircraft, or group of aircraft, using or projected to use a runway on a "regular" basis. Regular use is defined as 500 or more annual itinerant and local operations (excluding touch and go operations). This threshold is not a cap or limit on aircraft operations, but rather a planning metric for consideration of the potential need to upgrade an airport's runway/taxiway design criteria or evaluate runway length requirements.

RUNWAY DESIGN CODE

The RDC is representative of three components and two of these relate specifically to the airport's Design Aircraft. The first aircraft component, depicted by a letter (i.e., A, B, C, D, or E), is the Aircraft Approach Category (AAC) and is related to the aircraft approach speed based upon operational characteristics. The second aircraft component, depicted by a roman numeral (i.e., I, II, III, IV, V, or VI), is the Airplane Design Group (ADG) and is related to the aircraft wingspan and tail height**. The identified Design Aircraft can either be a single aircraft, or a composite of more than one aircraft, representing the most demanding AAC and ADG.** The third component relates to the visibility minimums for the runway, defined as RVR values in measurements of feet at 1,200, 1,600, 2,400, 4,000, 5,000 and visual (corresponding to lower than ¼ mile, lower than ½ mile but not lower than ¼ mile, lower than ¾ mile but not lower than ½ mile, lower than 1 mile but not lower than ¾ mile, and not lower than 1 mile respectively).

Based upon the FAA's design criteria noted above, one of the deliverables of a typical Airport Master Plan includes the identification of the airport's existing and future Design Aircraft for each runway facility. This Design Aircraft analysis for TRK was last examined in the 2015 AMP using 2012 baseline aircraft operational data. For that planning effort, the existing and future Design Aircraft for Runway 11/29 were identified as the Cessna Citation V 560. This compares to the Beech Baron and Super King Air that were identified as the existing and future Design Aircraft, respectively, for Runway 2/20. **Based upon the current 1-mile instrument approach procedure (IAP) visibility minimums provided by each runway, and the previous 2012 operations data, the RDC for the runways is identified as follows:**

- Runway 11/29: RDC B-II-5000
- Runway 2/20: RDC B-I-5000

Design Aircraft

Since 2007, TRK Staff have utilized a variety of technologies to document aircraft activity and runway utilization at the facility. These systems initially consisted of a camera system, the Wireless Airport Surveillance Platform (WASP), that was supplemented the Wide Area Multilateration (WAM) surveillance system. It was the aircraft operational data generated from these data collection systems that was utilized to support aviation activity forecasts and design aircraft determinations noted above for the 2015 AMP. In 2017, the FAA updated their planning guidance on the determination of "Design" or "Critical" Aircraft for FAA decision making at federally obligated airports. As defined in AC 150/5000-17, *CRITICAL AIRCRAFT AND REGULAR USE DETERMINATION,* **"Once the Critical Aircraft has been identified in accordance with this AC, and the resulting RDC established, then this should be reflected on the ALP as the Critical Aircraft regardless of whether the airport meets that standard and regardless of whether the sponsor plans to reconfigure the airport to meet the standard".**

In accordance with AC 150/5000-17, a snapshot assessment of the TRK operational data recorded in FAA's Traffic Flow Management System Counts (TFMSC) for calendar year 2012 (the base year for the previous 2015 AMP) and 2017-2021 (the previous five years) have been generated for review. TFMSC data is compiled from IFR filed flight plans to or from an airport, and/or when flights are radar detected by the National Airspace System. The TFMSC is an incomplete data source and excludes most VFR and some non-enroute IFR traffic. However, it can provide a good baseline estimate of the larger and more sophisticated aircraft currently operating at an airport (e.g., the business jet operators) that nearly always file IFR flight plans regardless of weather conditions.

Given the amount of business jet activity that is being recorded at TRK, this TFMSC data was further screened for business jet operations that includes a compilation of activity levels for the specified AAC and ADG categories. **Table 1** below provides the 2012, 2017-2021 TFMSC calendar year (CY) operations data for business jets by RDC at TRK, and a copy of the complete TFMSC Report for each year that includes aircraft specific operations data is provided in **Attachment Two** of this planning memo. In addition, **Table 2** includes a representative listing of the aircraft types by RDC for the most recent 2021 CY operations.

As can be noted in **Table 1**, the TFMSC Report for 2012 validates the previous RDC B-II-5000 design aircraft designation for Runway 11/29 in the 2015 AMP. However, by 2017, business jet activity at TRK increased by 135%, with a rising number of these operations being conducted by larger Category C and D aircraft. In addition, operations by these larger business jets have well exceeded the "regular use" threshold of 500 or more annual operations for each of the past five years. Based upon the 2021 CY operations data presented below in **Table 2,** the appropriate current critical aircraft for Runway 11/29 is contained in the RDC C-II category. **However, any change in the current or future Design Aircraft that redefines the RDC for a runway requires FAA approval of an updated airport aviation activity forecast. This process is normally conducted as an element of a Master Plan or ALP Narrative Report Update. Additionally, the TFMSC is the operations dataset typically used by the FAA to validate RDC revisions during the MPU process**.

Table 1 SUMMARY OF BUSINESS JET OPERATIONS BY AIRPORT REFERENCE CODE (ARC), 2012, 2017-2021 CY

ARC & ADG	2012/Ops. %	2017/Ops. %	2018/Ops. %	2019/Ops. %	2020/Ops. %	2021/Ops. %
AAC A Subtotal	**14/0.9%**	**22/0.6%**	**49/1.2%**	**71/1.8%**	**85/1.9%**	**108/2.4%**
A-I	14	20	49	71	85	108
AAC B Subtotal	**1,178/74.5%**	**2,561/68.8%**	**2,824/68.7%**	**2,755/70.8%**	**2,902/66.0%**	**3,196/70.5%**
B-I	397	794	766	844	726	689
B-II	781	1,761	2,054	1,909	2,166	2,495
B-III	---	2	4	2	10	12
AAC C Subtotal	**276/17.5%**	**905/24.3%**	**981/23.9%**	**847/21.8%**	**1,078/24.5%**	**1,082/23.9%**
C-I	112	237	191	198	206	249
C-II	162	597	746	605	768	800
C-III	2	71	44	44	104	33
AAC D Subtotal	**113/7.1%**	**233/6.3%**	**255/6.2%**	**220/5.7%**	**333/7.6%**	**146/3.2%**
D-I	11	22	18	12	16	---
D-II	70	142	163	145	210	77
D-III	32	69	74	63	107	69
Total	**1,581**	**3,721**	**4,109**	**3,893**	**4,398**	**4,532**

Source: *Mead & Hunt analysis from FAA Traffic Flow Management System Counts (TFMSC) data for TRK, March 2022.*

Table 2 SUMMARY OF TRK TFMSC BUSINESS JET AIRCRAFT OPERATIONS BY RDC, 2021 CY

AAC & ADG[1]	Representative Aircraft[2]	Operations	Percentage
A-I	Embraer Legacy, Eclipse 500	108	3.3%
B-I	Cessna CitationJet CJ1, Cessna Citation CJ2, Cessna Citation Mustang	689	20.8%
B-II	Cessna Citation CJ3, Cessna Citation Sovereign, Embraer Phenom 300, Dassault Falcon 2000	2,495	75.5%
B-III	Dassault Falcon F7X	12	0.3%
AAC A & B Subtotal		**3,304**	**72.9%**
C-I	BAe HS 125/700-800/Hawker 800, Bombardier Learjet 45, Bombardier Learjet 60	249	20.3%
C-II	Bombardier Challenger 300, Bombardier Challenger 600/601/604	800	65.1%
C-III	Bombardier BD-700 Global Express, Bombardier Global 5000	33	2.7%
D-II	Gulfstream IV/G400	77	6.2%
D-III	Gulfstream V/G500, Gulfstream G600	69	5.60%
AAC C & D Subtotal		**1,228**	**27.1%**
Total		**4,532**	**100.0%**

Source: *Mead & Hunt analysis from FAA Traffic Flow Management System Counts (TFMSC) data for TRK, March 2022.*
Notes: *[1] AAC: Aircraft Approach Category, ADG: Airplane Design Group*
[2] See Attachment Two for complete aircraft listing.

WIND DATA AND CROSSWIND COMPONENT

As part of the 2015 AMP, a variety of airfield development layout alternatives were analyzed that would potentially reallocate the number of aircraft operations being conducted on Runway 11/29. These alternatives included both design standard upgrades to Runway 2/20, as well as consideration for the development of a new third runway. **Ultimately, it was determined in the 2015 AMP that future improvements to the crosswind runway (e.g., runway widening and lengthening to the extent practical), in conjunction with RDC B-II upgrades would be the recommendation of the 2015 AMP and ALP to potentially redistribute operations from Runway 11/29.**

One of the factors in the decision to upgrade Runway 2/20 was the AIP funding eligibility of the proposed improvements for a crosswind runway, which is dependent upon the wind coverage provided by the *Primary* runway. In consideration of the RDC B-II-5000 designation for Runway 11/29, these standards specify the 13-knot crosswind component be utilized for the all-weather wind coverage analysis. According to the wind data compiled for the 2015 AMP, the 13-knot crosswind coverage for Runway 11/29 was documented at 94.21%, which is below the required 95% threshold. The previous wind coverage deficiency supported the funding eligibility of the future design standard upgrade of Runway 2/20 from RDC B-I-5000 to RDC B-II-5000.

As part of the 2022 MPU, wind coverage data was reanalyzed using the past 10 years of avaialbe data to determine the crosswind component. This update used the all-weather wind analysis tabulation for NCDC Station 725846/Truckee-Tahoe Airport (Period of Record: 2011-2020), utilizing the FAA Airport Data and Information Portal (ADIP) was prepared for this memo and is presented in **Table 3** below.

Table 3 ALL-WEATHER WIND COVERAGE SUMMARY

Runway	10.5-Knot	13-Knot	16-Knot	20-Knot
Runway 11/29 (Primary)	**93.51%**	**95.93%**	98.44%	99.54%
Runway 11	86.04%	87.61%	89.47%	90.23%
Runway 29	91.68%	93.87%	96.18%	97.19%
Runway 2/20 (Crosswind)	**97.98%**	99.04%	99.88%	99.99%
Runway 2	84.45%	84.86%	85.33%	85.38%
Runway 20	95.13%	96.27%	97.09%	97.19%
Combined Existing Runways	99.57%	99.9%	99.98%	100%

Source: *Wind analysis tabulation provided by Mead & Hunt utilizing the FAA Airport Data and Information Portal (ADIP), Wind Analysis. Wind data obtained from NOAA, NCDC Station 725846/Truckee-Tahoe Airport. Period of Record: 2011-2020.*
NOTE: A 5-knot tailwind component was used for the individual runway end analysis.

As shown in **Table 3**, Runway 11/29 currently satisfies the 95% coverage requirements for the 13-knot crosswind component at 95.93%. Thus, the previously programmed RDC B-II upgrades to the crosswind runway would no longer be eligible for AIP funding. However, Runway 2/20 is still needed to support the crosswind operating requirements of the smaller aircraft fleet (i.e., the RDC A-I and B-I aircraft) for the 10.5-knot crosswind component, and the runway would continue to be AIP eligible to support maintenance and reconstruction projects up to the RDC B-I standards. Additional information regarding the appropriate existing and future Critical Aircraft designation for Runway 2/20 is presented in the *Runway 2/20 Design Standards* section of this planning memo.

Runway 11/29 Design Standards (Primary)

In consideration of the updated aircraft operational data that was presented above in the Runway Design *Code (RDC)/Critical Aircraft Analysis* section of this memo, a comparison of the RDC B-II-5000 and RDC C-II-5000 FAA design standards applicable to Runway 11/29 have been excerpted from AC 150/5300-13A and are presented in following two tables. **Table 4** reflects the current RDC B-II-5000 standards that were identified in the 2015 AMP and reflected on the TRK ALP. Runway 11/29 meets or exceeds all of the specified RDC B-II-5000 standards for this runway. These criteria for Runway 11/29 are also illustrated in **Figure 1** below.

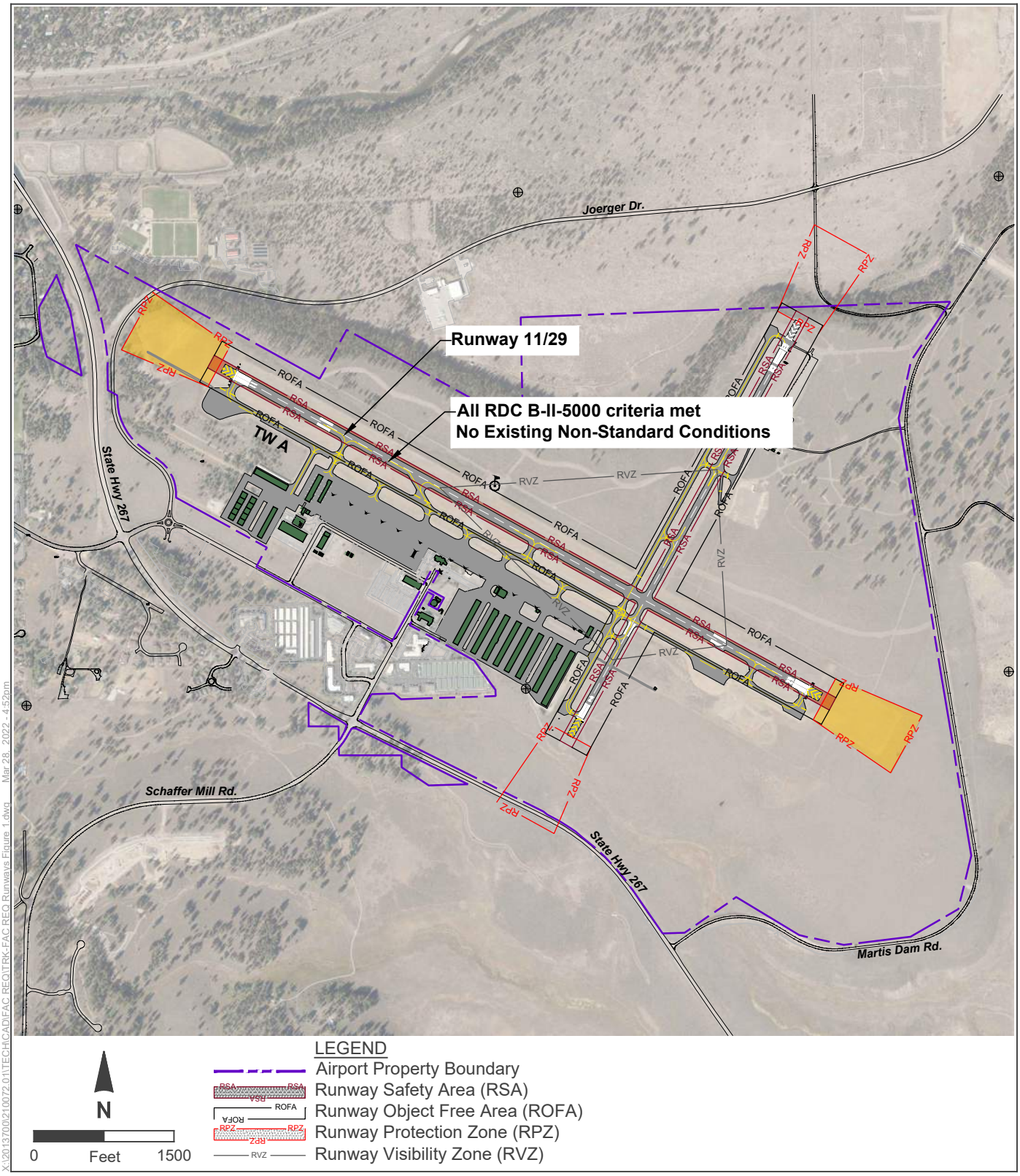
Table 4 RUNWAY 11/29 DESIGN STANDARDS MATRIX/RDC B-II-5000 (APPROVED ALP – EXISTING AND FUTURE)

Runway Design Code		B-II-5000		
Aircraft Approach Speed		<121 kts		
Aircraft Wingspan		<79 ft.		
Aircraft Weight Group		>12,500 lbs.		
Approach Visibility Minimums		Not Lower Than 1 mile		
Item	**Existing Conditions**	**FAA Design Standards[1]**	**Meets Standards?**	**Disposition**
Runway Design				
Width	100 ft.	75 ft.	Yes	No Action
Shoulder Width	10 ft.	10 ft.	Yes	No Action
Blast Pad Width	100 ft.	95 ft.	Yes	No Action
Blast Pad Length	150 ft.	150 ft.	Yes	No Action
Crosswind Component		13 knots	Yes	No Action
Gradient (maximum)	0.1%	2.0%	Yes	No Action
Runway Protection				
Runway Safety Area (RSA) Width	150 ft.	150 ft.	Yes	No Action
RSA Length Beyond Departure End	300 ft.	300 ft.	Yes	No Action
RSA Length Prior to Threshold	300 ft.	300 ft.	Yes	No Action
Object Free Area (OFA) Width	500 ft.	500 ft.	Yes	No Action
OFA Length Beyond Departure End	300 ft.	300 ft.	Yes	No Action
OFA Length Prior to Threshold	300 ft.	300 ft.	Yes	No Action
Obstacle Free Zone (OFZ) Width	400 ft.	400 ft.	Yes	No Action
OFZ Length Beyond Departure End	200 ft.	200 ft.	Yes	No Action
Runway Protection Zone (RPZ) Length	1,000 ft.	1,000 ft.	Yes	No Action
RPZ Width at Inner End	500 ft.	500 ft.	Yes	No Action
RPZ Width at Outer End	700 ft.	700 ft.	Yes	No Action
Runway Separation				
From Runway Centerline to:				
Hold Line	200 ft.	200 ft.	Yes	No Action
Parallel Taxiway Centerline	250 ft.	240 ft.	Yes	No Action
Aircraft Parking Area	475 ft.	250 ft.	Yes	No Action

Notes:

[1] *Source: FAA Advisory Circular 150/5300-13A/Change 1, Airport Design (February 2014).*

Figure 1: **RUNWAY 11/29 CRITERIA: RDC B-II-5000 (APPROVED ALP)**



X:\2013700\210072.01\TECH\CAD\FAC REQ\TRK-FAC REQ Runways Figure 1.dwg Mar 28, 2022 - 4:52pm

RUNWAY 11/29 CRITERIA: RDC-B-II-5000 (APPROVED ALP)

Truckee Tahoe Airport

For comparison, **Table 5** below reflects the more restrictive RDC C-II-5000 standards that are applicable for Runway 11/29 in consideration of the increased Category C and D business jets operations that have been recorded at TRK over the past several years. There are several non-standard design conditions that are documented with the more restrictive criteria, but for most, adequate space is available within airport property to accommodate the increased setback dimensions. This is true of the various *Runway Protection* standards: the RSA and ROFA length and width, and the majority of the larger RPZ[1] requirements. The most significant non-standard criteria are the distance between the Runway 11/29 centerline to the Taxiway A centerline and holdlines. Adequate separation does exist between the Runway 11/29 centerline and Taxilane Q to accommodate the relocation of Taxiway A, and still meet the ADG II taxiway to taxilane centerline separation criteria between Taxiway A and Taxilane Q. **The funding of realigning Taxiway A would be FAA AIP eligible. Also, with the recent reconstruction of Taxiway A, the FAA may not require the immediate realignment of this taxiway and a modification of standards may help delay realignment through the projected lifespan pavement.** The upgraded criteria for Runway 11/29 are illustrated in **Figure 2** below.

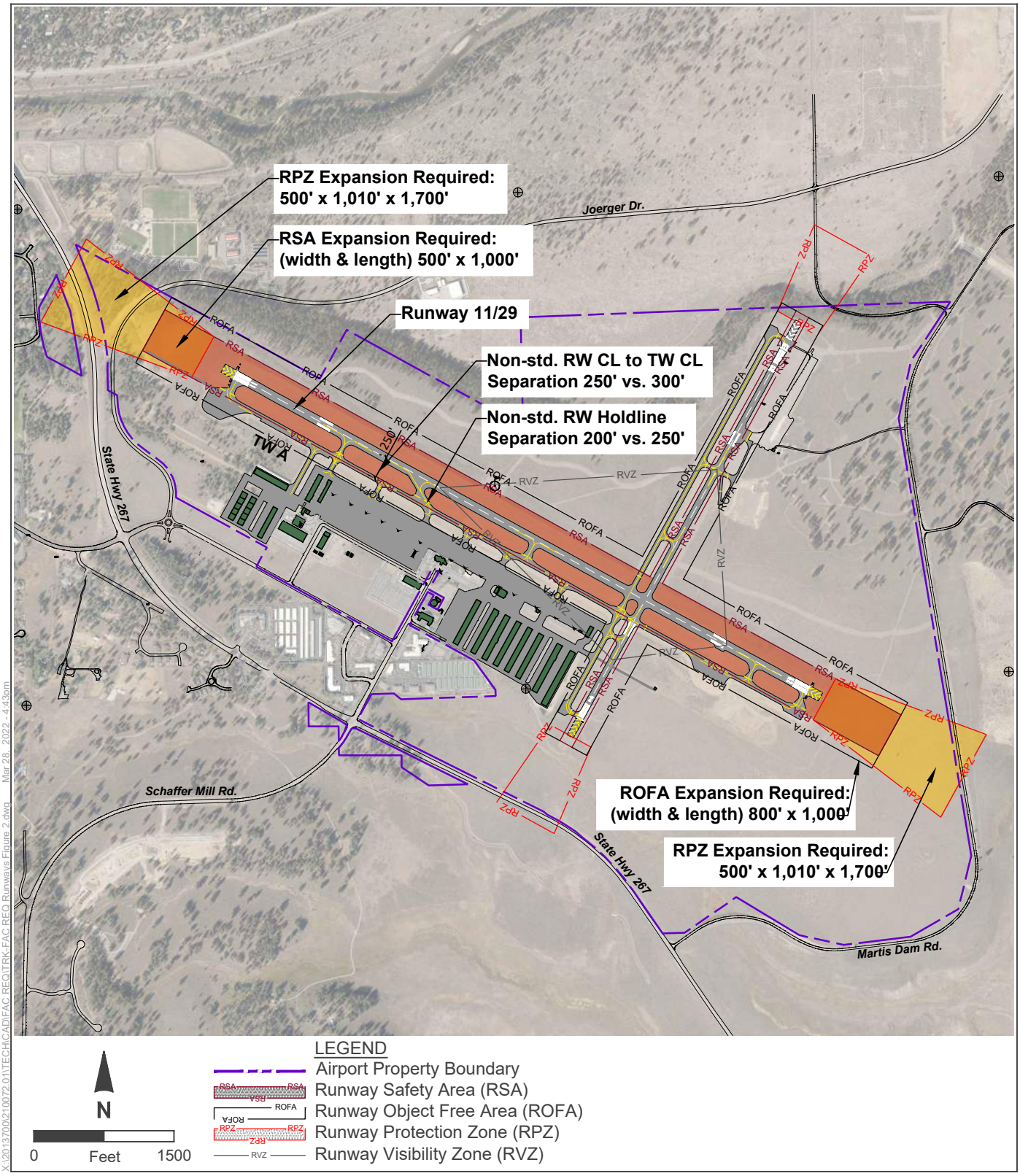
Table 5 RUNWAY 11/29 DESIGN STANDARDS/RDC C-II-5000 (CURRENT OPERATIONS)

Runway Design Code		C-II-5000		
Aircraft Approach Speed		<141 kts		
Aircraft Wingspan		<79 ft.		
Aircraft Weight Group		>12,500 lbs.		
Approach Visibility Minimums		Not Lower Than 1 mile		
Item	**Existing Conditions**	**FAA Design Standards[1]**	**Meets Standards?**	**Disposition**
Runway Design				
Width	100 ft.	100 ft.	Yes	No Action
Shoulder Width	10 ft.	10 ft.	Yes	No Action
Blast Pad Width	100 ft.	120 ft.	**No**	**Widen**
Blast Pad Length	150 ft.	150 ft.	Yes	No Action
Crosswind Component		16 knots	Yes	No Action
Gradient (maximum)	0.1%	1.5%	Yes	No Action
Runway Protection				
Runway Safety Area (RSA) Width	150 ft.	500 ft.	**No**	**Widen**
RSA Length Beyond Departure End	300 ft.	1,000 ft.	**No**	**Lengthen**
RSA Length Prior to Threshold	300 ft.	600 ft.	**No**	**Lengthen**
Object Free Area (OFA) Width	500 ft.	1,000 ft.	**No**	**Widen**
OFA Length Beyond Departure End	300 ft.	1,000 ft.	**No**	**Lengthen**
OFA Length Prior to Threshold	300 ft.	600 ft.	**No**	**Lengthen**
Obstacle Free Zone (OFZ) Width	400 ft.	400 ft.	Yes	No Action
OFZ Length Beyond Departure End	200 ft.	200 ft.	Yes	No Action
Runway Protection Zone (RPZ) Length	1,000 ft.	1,700 ft.	**No**	**Lengthen**
RPZ Width at Inner End	500 ft.	500 ft.	Yes	No Action
RPZ Width at Outer End	700 ft.	1,010 ft.	**No**	**Widen**
Runway Separation				
From Runway Centerline to:				
Hold Line	200 ft.	250 ft.	**No**	**Relocate**
Parallel Taxiway Centerline	250 ft.	300 ft.	**No**	**Relocate**
Aircraft Parking Area	475 ft.	400 ft.	Yes	No Action

Notes: *1 Source: FAA Advisory Circular 150/5300-13A/Change 1, Airport Design (February 2014).*

[1] Pending guidance on the introduction of new incompatible land uses within an RPZ due to changes in critical aircraft are presented in Draft AC 150/5190-4B that was published in June 2021.

Figure 2: **RUNWAY 11/29 CRITERIA: RDC C-II-5000**



X:\2013700\210072.01\TECH\CAD\FAC REQ\TRK-FAC REQ Runways Figure 2.dwg Mar 28, 2022 - 4:43pm

RUNWAY 11/29 CRITERIA: RDC C-II-5000

Truckee Tahoe Airport

Runway 2/20 Design Standards (Crosswind)

As with the previously described Runway 11/29 design standards, the updated wind coverage and aircraft operations data could potentially impact the future Critical Aircraft designation for Runway 2/20. From the wind coverage data discussed above, the current RDC B-I-5000 design criteria designation for Runway 2/20 is still appropriate, as depicted on the existing TRK ALP, and presented below in **Table 6**. This runway meets or exceeds most of the specified standards, with the exception of the *Runway Separation* criteria. The Runway 2/20 centerline to Taxiway G centerline and holdline is non-standard. However, there is adequate space adjacent to realign Taxiway G to accommodate the increased separation, which is needed to support the Airport's 10.5-knot crosswind coverage requirements. **In addition, the funding of this project would be FAA AIP eligible.** These specified RDC B-I-5000 design criteria for Runway 2/20 are illustrated in **Figure 3** below.

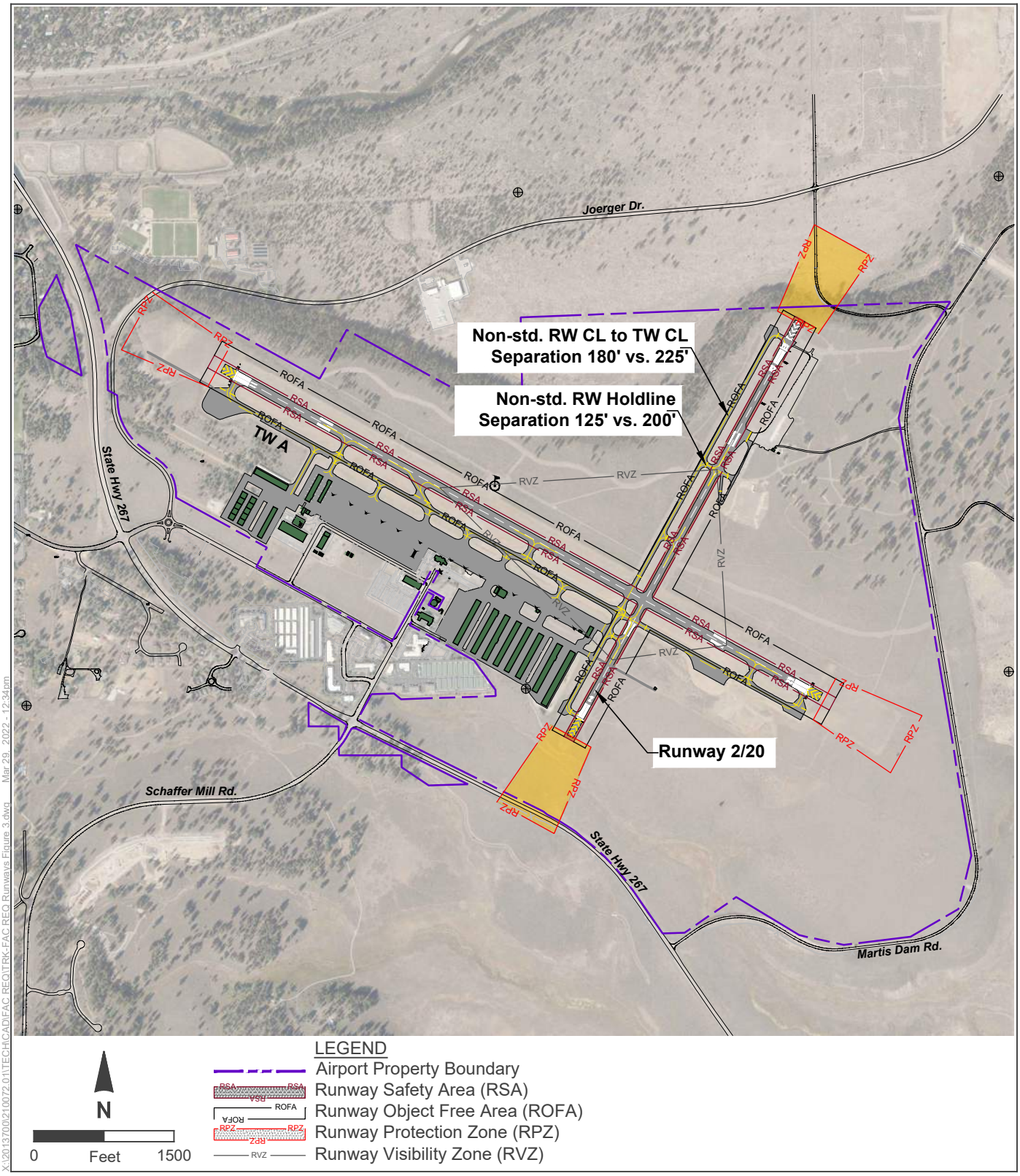
Table 6 RUNWAY 2/20 DESIGN STANDARDS MATRIX/RDC B-I-5000 (APPROVED ALP - EXISTING)

Runway Design Code	B-I-5000			
Aircraft Approach Speed	<121 kts			
Aircraft Wingspan	<49 ft.			
Aircraft Weight Group	>12,500 lbs.			
Approach Visibility Minimums	Not Lower Than 1 mile			
Item	**Existing Conditions**	**FAA Design Standards[1]**	**Meets Standards?**	**Disposition**
Runway Design				
Width	75 ft.	60 ft.	Yes	No Action
Shoulder Width	10 ft.	10 ft.	Yes	No Action
Blast Pad Width	75 ft.	80 ft.	**No**	**Widen**
Blast Pad Length	200 ft.	100 ft.	Yes	No Action
Crosswind Component	---	10.5 knots	Yes	No Action
Gradient (maximum)	0.0%	±2.0%	Yes	No Action
Runway Protection				
Runway Safety Area (RSA) Width	120 ft.	120 ft.	Yes	No Action
RSA Length Beyond Departure End	240 ft.	240 ft.	Yes	No Action
RSA Length Prior to Threshold	240 ft.	240 ft.	Yes	No Action
Object Free Area (OFA) Width	400 ft.	400 ft.	Yes	No Action
OFA Length Beyond Departure End	240 ft.	240 ft.	Yes	No Action
OFA Length Prior to Threshold	240 ft.	240 ft.	Yes	No Action
Obstacle Free Zone (OFZ) Width	400 ft.	400 ft.	Yes	No Action
OFZ Length Beyond Departure End	200 ft.	200 ft.	Yes	No Action
Runway Protection Zone (RPZ) Length	1,000 ft.	1,000 ft.	Yes	No Action
RPZ Width at Inner End	500 ft.	500 ft.	Yes	No Action
RPZ Width at Outer End	700 ft.	700 ft.	Yes	No Action
Runway Separation				
From Runway Centerline to:				
Hold Line	125 ft.	200 ft.	**No**	**Relocate**
Parallel Taxiway Centerline	180 ft.	225 ft.	**No**	**Relocate**
Aircraft Parking Area	380 ft.	200 ft.	Yes	No Action

Notes:

[1] *Source: FAA Advisory Circular 150/5300-13A/Change 1, Airport Design (February 2014).*

Figure 3: **RUNWAY 2/20 CRITERIA: RDC B-I-5000 (APPROVED ALP - EXISTING)**



X:\2013700\210072.01\TECH\CAD\FAC REQ\TRK-FAC REQ Runways Figure 3.dwg Mar 29, 2022 - 12:34pm

RUNWAY 2/20 CRITERIA: RDC-B-I-5000 (APPROVED ALP - EXISTING)

Truckee Tahoe Airport

For comparison, **Table 7** below reflects the design standards for a more restrictive B-II-5000 runway. This is the future designation for Runway 2/20 on the 2015 AMP and current TRK ALP. Based on wind coverage on Runway 11/29, **the future upgrade to RDC B-II-5000 standards for this runway would no longer be FAA eligible for AIP funding. However, the various projects could still be implemented, and funded locally in support of the 2015 AMP's goal to potentially reallocate a number of aircraft operations from Runway 11/29 to Runway 2/20.** The B-II-5000 design criteria for Runway 2/20 are illustrated in **Figure 4** below.

There are several non-standard design conditions with the more restrictive criteria (i.e., the RSA and ROFA length & width, and the runway centerline to holdline and to Taxiway G centerline). However, adequate space is available within airport property to accommodate these increased setbacks. About 400 feet of additional runway length (to provide a future length of 5,055 feet) was also identified to better accommodate the operation of larger GA on this runway.

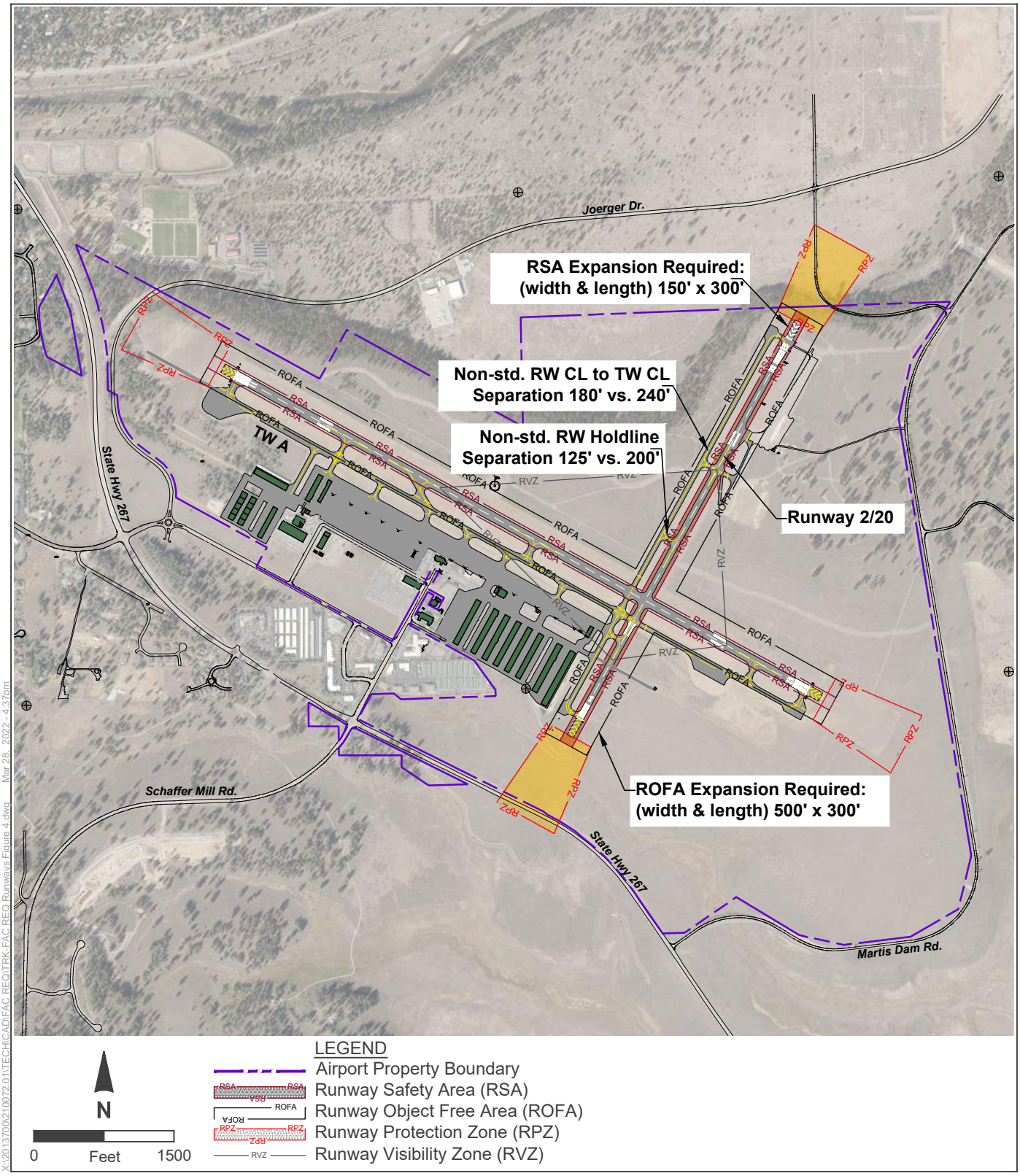
Table 7 RUNWAY 2/20 DESIGN STANDARDS MATRIX/RDC B-II-5000 (APPROVED ALP - FUTURE)

Runway Design Code		B-II-5000		
Aircraft Approach Speed		<121 kts		
Aircraft Wingspan		<79 ft.		
Aircraft Weight Group		>12,500 lbs.		
Approach Visibility Minimums		Not Lower Than 1 mile		
Item	**Existing Conditions**	**FAA Design Standards[1]**	**Meets Standards?**	**Disposition**
Runway Design				
Width	75 ft.	75 ft.	Yes	No Action
Shoulder Width	10 ft.	10 ft.	Yes	No Action
Blast Pad Width	75 ft.	95 ft.	**No**	**Widen**
Blast Pad Length	200 ft.	150 ft.	Yes	No Action
Crosswind Component	---	13 knots	Yes	No Action
Gradient (maximum)	0.0%	2.0%	Yes	No Action
Runway Protection				
Runway Safety Area (RSA) Width	120 ft.	150 ft.	**No**	**Widen**
RSA Length Beyond Departure End	240 ft.	300 ft.	**No**	**Lengthen**
RSA Length Prior to Threshold	240 ft.	300 ft.	**No**	**Lengthen**
Object Free Area (OFA) Width	400 ft.	500 ft.	**No**	**Widen**
OFA Length Beyond Departure End	240 ft.	300 ft.	**No**	**Lengthen**
OFA Length Prior to Threshold	240 ft.	300 ft.	**No**	**Lengthen**
Obstacle Free Zone (OFZ) Width	400 ft.	400 ft.	Yes	No Action
OFZ Length Beyond Departure End	200 ft.	200 ft.	Yes	No Action
Runway Protection Zone (RPZ) Length	1,000 ft.	1,000 ft.	Yes	No Action
RPZ Width at Inner End	500 ft.	500 ft.	Yes	No Action
RPZ Width at Outer End	700 ft.	700 ft.	Yes	No Action
Runway Separation				
From Runway Centerline to:				
Hold Line	125 ft.	200 ft.	**No**	**Relocate**
Parallel Taxiway Centerline	180 ft.	240 ft.	**No**	**Relocate**
Aircraft Parking Area	380 ft.	250 ft.	Yes	No Action

Notes:

[1] *Source: FAA Advisory Circular 150/5300-13A/Change 1, Airport Design (February 2014).*

Figure 4: **RUNWAY 2/20 CRITERIA: RDC B-II-5000 (APPROVED ALP - FUTURE)**



X:\2013700\210072.01\TECH\CAD\FAC REQ\TRK-FAC REQ Runways Figure 4.dwg Mar 28, 2022 - 4:37pm

RUNWAY 2/20 CRITERIA: RDC-B-II-5000 (APPROVED ALP - FUTURE)

Truckee Tahoe Airport

Impact on Third Runway Analysis

The change in RDC for Runway 11/29 may impact design or alignment of the Third Runway (Runway 16/34). Concurrent with the Facility Requirement analysis above, Runway 16/34 was sited for alternative analysis to maximize length and instrument procedure capabilities. With Runway 11/29 now classified a RDC C-II-5000 runway, the RSA will increase in width and length beyond runway ends.

The change in RSA on Runway 11/29 will result in overlapping RSAs with Runway 16/34, and FAA design standards preclude this condition on non-intersecting runways. Section 304 in AC 150/5300-13A describes design criteria for non-intersecting runways and states that, "runway separation must take into account the full dimensional requirements of the safety areas of the runway and taxiway systems … safety areas should not overlap." To avoid overlapping safety areas, three options are proposed to separate the Runway 11/29 and 16/34 RSAs.

- **Option One – Runway 11/29 Displacement:** Maintain the Runway 16/34 location and relocate the Runway 29 threshold 84 feet to provide the required 600 feet of RSA for landings on Runway 29. This option would also require the incorporation of declared distances that would reduce the Landing Distance Available (LDA) and Accelerate-Stop Distance Available (ASDA) on Runway 11 by 484 feet to meet RSA requirements. Option One is presented in **Figure 5** below.

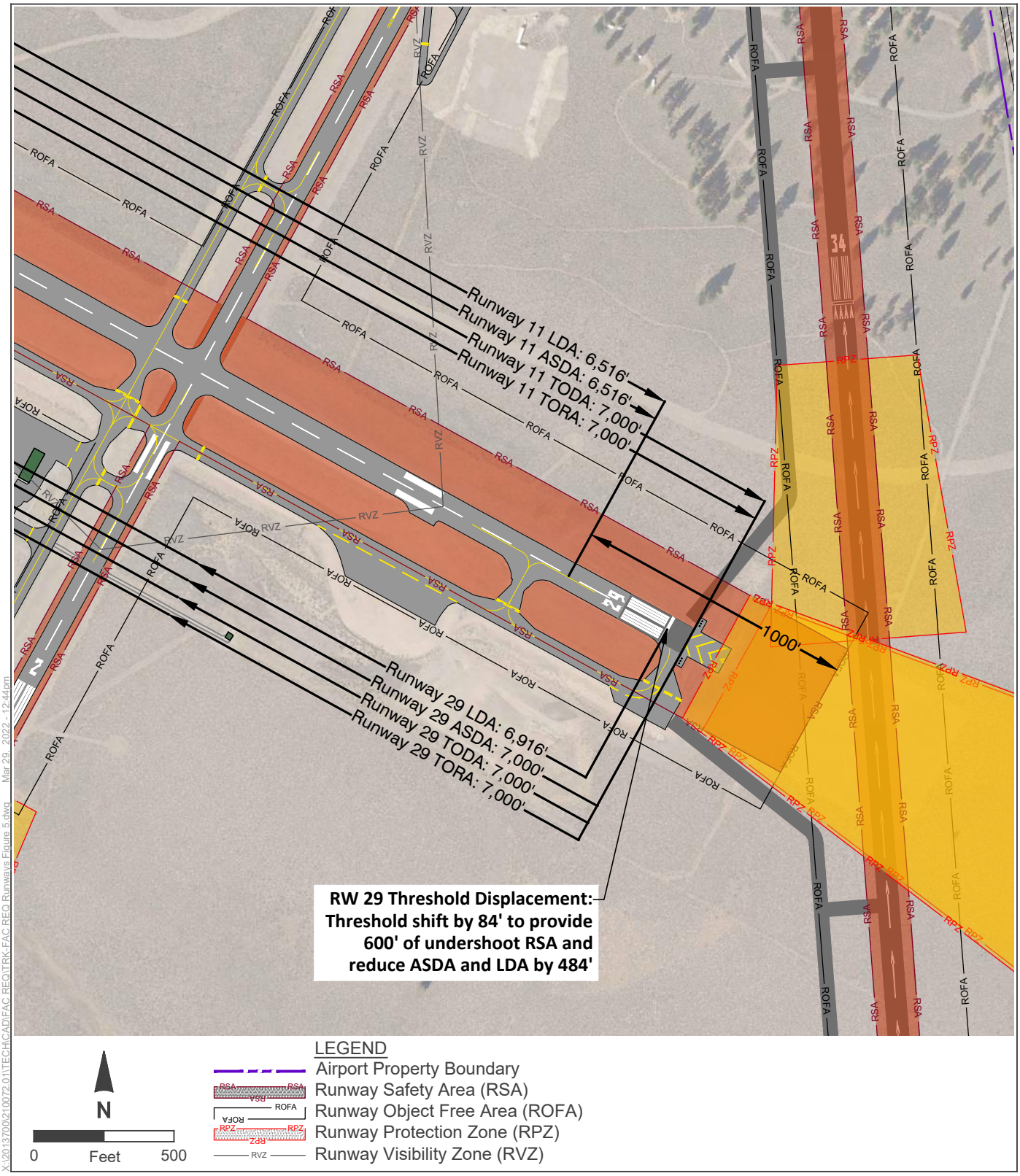
- **Option Two – Runway 11/29 Shift:** Maintain the Runway 16/34 location and relocate the Runway 29 threshold by 484 feet to provide the 1,000' RSA for landings on Runway 29. No declared distances would be required, but the total length on Runway 11/29 would be reduced to 6,516 feet. Option Two is presented in **Figure 6** below.

- **Option Three – Runway 16/34 Shift**: Shift Runway 16/34 70 feet to the east, remaining parallel to the existing alignment. This would provide the needed 600 feet of RSA for landings on Runway 29. Option Three would also maintain the Runway 29 threshold for landings, however, would require the incorporation of declared distances that would reduce the LDA and ASDA on Runway 11 by 400 feet to meet RSA requirements.

Option Three is not recommended since any rotation or shift in Runway 16/34 to the east would limit the capabilities and increase minimums of the draft instrument procedures being developed. For example, shifting Runway 16/34 to the east would create an offset approach and eliminate the possibility for an LPV approach to Runway 16. This would also increase the climb gradient for instrument departure procedure on Runway 34.

Feedback from the Ad Hoc committee is required on how to proceed with Runway 11/29 as a C-II-5000 runway (Option One or Two) in relation to the conceptual Runway 16/34 and the ongoing alternative analysis.

Figure 5: **RUNWAY 11/29 DISPLACEMENT OPTION**

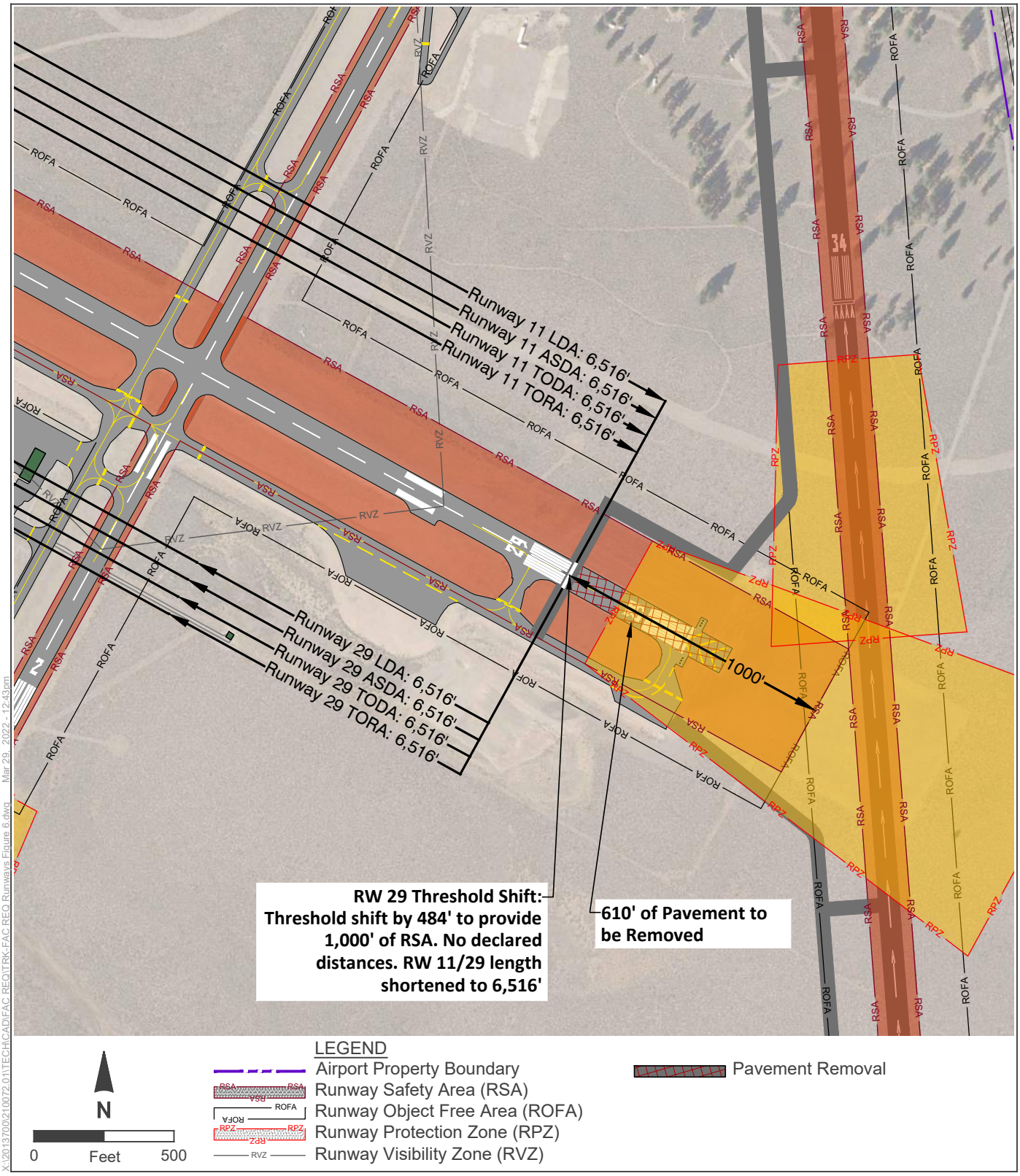


X:\2013700\210072.01\TECH\CAD\FAC REQ\TRK-FAC REQ Runways Figure 5.dwg Mar 29, 2022 - 12:44pm

RUNWAY 11/29 DISPLACEMENT OPTION

Truckee Tahoe Airport

Figure 6: **RUNWAY 11/29 SHIFT OPTION**



X:\2013700\210072.01\TECH\CAD\FAC REQ\TRK-FAC REQ Runways Figure 6.dwg Mar 29, 2022 - 12:43pm

RUNWAY 11/29 SHIFT OPTION

Truckee Tahoe Airport

A secondary option TTAD may consider – if Runway 16/34 is ultimately considered feasible – is to reconsider the composition and future RDC designation of Runway 2/20 and designate Runway 16/34 as the crosswind runway. This option is presented here for preliminary feedback from TTAD and to potentially help maximize funding eligibility for the runways. However, this is not intended to be an alternative that is analyzed at this point unless TTAD requests a project scope change.

For this option, the third runway (i.e., Runway 16/34) could be designed to RDC B-II-5000 standards, which would provide the needed 10.5 knot crosswind coverage requirements to support the upgraded RDC C-II-5000 standards provided by Runway 11/29. This could allow the funding for the relocation of Taxiway G on Runway 2/20 (which is AIP eligible) to be reallocated to the funding of the third runway. Ultimately, Runway 16/34 could be reclassified as the crosswind runway at TRK, making it eligible for future AIP funding and provide a more capable runway (i.e., both longer and with improved instrument approach capabilities) that could better serve the communities planning objectives for reducing overflights and noise impacts over the more densely populated areas of the surrounding community. This would also permit the RDC for Runway 2/20 to be downgraded to RDC B-I (Small Aircraft)-5000 design standards. Runway 2/20 could then be reclassified as an *Additional* runway and either maintained with local funding or eventually decommissioned. **Table 8** below reflects the less restrictive future standards for Runway 2/20, which are currently met or exceeded by the existing facility. These criteria for Runway 2/20 are illustrated in **Figure 7** below.

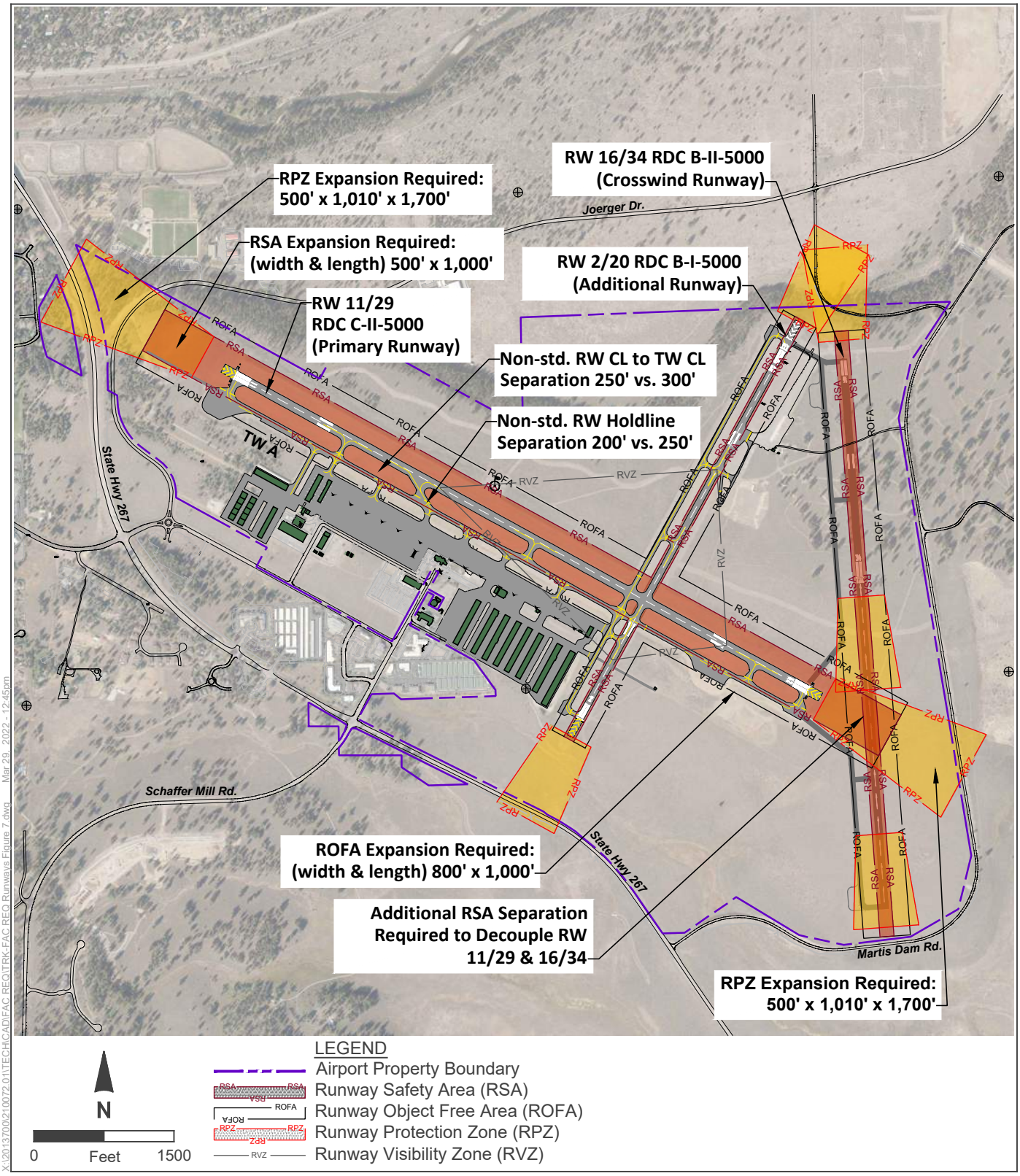
Table 8 RUNWAY 2/20 DESIGN STANDARDS MATRIX/RDC B-I (SMALL AIRCRAFT)-5000 (THIRD RUNWAY OPTION)

Runway Design Code	B-I (Small Aircrft)-5000			
Aircraft Approach Speed	<121 kts			
Aircraft Wingspan	<49 ft.			
Aircraft Weight Group	>12,500 lbs.			
Approach Visibility Minimums	Not Lower Than 1 mile			
Item	**Existing Conditions**	**FAA Design Standards[1]**	**Meets Standards?**	**Disposition**
Runway Design				
Width	75 ft.	60 ft.	Yes	No Action
Shoulder Width	10 ft.	10 ft.	Yes	No Action
Blast Pad Width	75 ft.	80 ft.	**No**	**Widen**
Blast Pad Length	200 ft.	60 ft.	Yes	No Action
Crosswind Component	---	10.5 knots	Yes	No Action
Gradient (maximum)	0.0%	±2.0%	Yes	No Action
Runway Protection				
Runway Safety Area (RSA) Width	120 ft.	120 ft.	Yes	No Action
RSA Length Beyond Departure End	240 ft.	240 ft.	Yes	No Action
RSA Length Prior to Threshold	240 ft.	240 ft.	Yes	No Action
Object Free Area (OFA) Width	400 ft.	250 ft.	Yes	No Action
OFA Length Beyond Departure End	240 ft.	240 ft.	Yes	No Action
OFA Length Prior to Threshold	240 ft.	240 ft.	Yes	No Action
Obstacle Free Zone (OFZ) Width	400 ft.	300 ft.	Yes	No Action
OFZ Length Beyond Departure End	200 ft.	200 ft.	Yes	No Action
Runway Protection Zone (RPZ) Length	1,000 ft.	1,000 ft.	Yes	No Action
RPZ Width at Inner End	500 ft.	250 ft.	Yes	No Action
RPZ Width at Outer End	700 ft.	450 ft.	Yes	No Action
Runway Separation				
From Runway Centerline to:				
Hold Line	125 ft.	125 ft.	Yes	No Action
Parallel Taxiway Centerline	180 ft.	150 ft.	Yes	No Action
Aircraft Parking Area	380 ft.	125 ft.	Yes	No Action

Notes:

[1] *Source: FAA Advisory Circular 150/5300-13A/Change 1, Airport Design (February 2014).*

Figure 7: **POTENTIAL 3-RUNWAY CONFIGURATION**

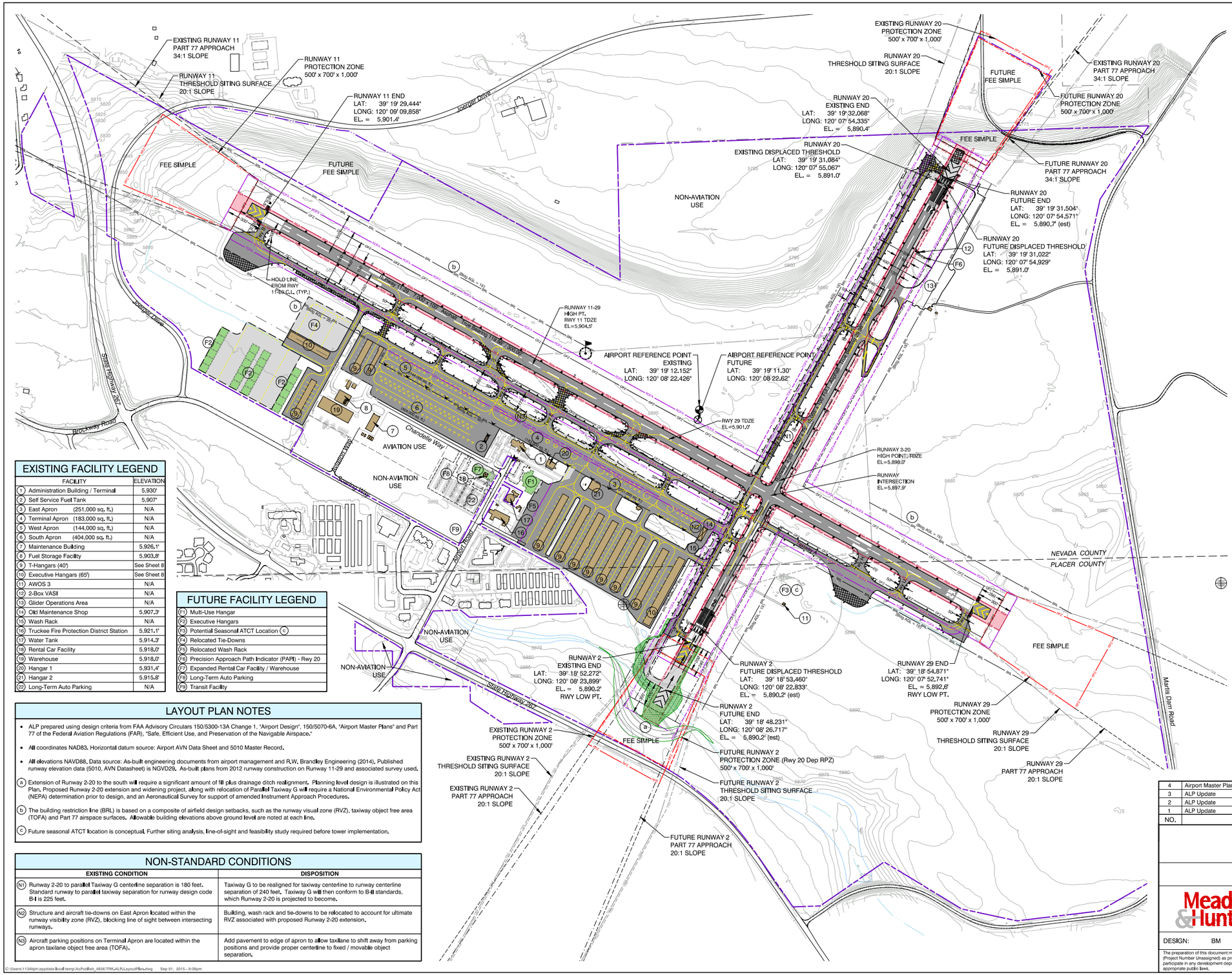


X:\2013700\210072.01\TECH\CAD\FAC REQ\TRK-FAC REQ Runways Figure 7.dwg Mar 29, 2022 - 12:45pm

POTENTIAL 3-RUNWAY CONFIGURATION

Truckee Tahoe Airport

Appendix One: Existing 2015 TRK ALP & Data Sheets



DRAWING LEGEND

	EXISTING	FUTURE
ACTIVE AIRFIELD PAVEMENT		
PAVEMENT TO BE REMOVED	N/A	
AIRPORT PROPERTY		
AIRPORT REFERENCE POINT		
COUNTY BOUNDARY		N/A
TOWN OF TRUCKEE BOUNDARY		N/A
RUNWAY SAFETY AREA (RSA)		
RUNWAY PROTECTION ZONE (RPZ)		
RUNWAY OBJECT FREE AREA (ROFA)		
TAXIWAY OBJECT FREE AREA (TOFA)		
OBSTACLE FREE ZONE (OFZ)		
AWOS CRITICAL AREA (ACA)		N/A
BUILDING RESTRICTION LINE (BRL) (b)		N/A
RUNWAY VISIBILITY ZONE (RVZ)		
FAR PART 77 APPROACH SURFACE		
THRESHOLD SITING SURFACE (TSS)		
BUILDING - ON AIRPORT		
BUILDING - ON AIRPORT - TO BE RELOCATED		N/A
BUILDING - OFF AIRPORT		N/A
TAXIWAY MARKING (C.L. / TIE-DOWNS)		
BEACON		N/A
VISUAL APPROACH SLOPE INDICATOR (VASI)		N/A
PRECISION APPROACH PATH INDICATOR (PAPI)	N/A	
WIND CONE		N/A
RUNWAY LIGHTS (EDGE/THRESHOLD/REIL/TWY)	/ / /	/ / N/A /
RUNWAY / TAXIWAY SIGN		
UTILITY / LIGHT POLE		N/A
PUBLIC ROAD / PARKING LOT		
FENCE		N/A
FILL FOR RUNWAY AND RSA EXTENSION	N/A	
CHANNEL / STREAM / DITCH		N/A
TERRAIN CONTOUR		
CENTER SECTION MARKER		N/A

EXISTING FACILITY LEGEND

	FACILITY	ELEVATION
(1)	Administration Building / Terminal	5,930'
(2)	Self Service Fuel Tank	5,907'
(3)	East Apron (251,000 sq. ft.)	N/A
(4)	Terminal Apron (183,000 sq. ft.)	N/A
(5)	West Apron (144,000 sq. ft.)	N/A
(6)	South Apron (404,000 sq. ft.)	N/A
(7)	Maintenance Building	5,926.1'
(8)	Fuel Storage Facility	5,903.8'
(9)	T-Hangars (40')	See Sheet 8
(10)	Executive Hangars (65')	See Sheet 8
(11)	AWOS 3	N/A
(12)	2-Box VASI	N/A
(13)	Glider Operations Area	N/A
(14)	Old Maintenance Shop	5,907.3'
(15)	Wash Rack	N/A
(16)	Truckee Fire Protection District Station	5,921.1'
(17)	Water Tank	5,914.3'
(18)	Rental Car Facility	5,918.0'
(19)	Warehouse	5,918.0'
(20)	Hangar 1	5,931.4'
(21)	Hangar 2	5,915.8'
(22)	Long-Term Auto Parking	N/A

FUTURE FACILITY LEGEND

(F1)	Multi-Use Hangar
(F2)	Executive Hangars
(F3)	Potential Seasonal ATCT Location (c)
(F4)	Relocated Tie-Downs
(F5)	Relocated Wash Rack
(F6)	Precision Approach Path Indicator (PAPI) - Rwy 20
(F7)	Expanded Rental Car Facility / Warehouse
(F8)	Long-Term Auto Parking
(F9)	Transit Facility

LAYOUT PLAN NOTES

- ALP prepared using design criteria from FAA Advisory Circulars 150/5300-13A Change 1, "Airport Design", 150/5070-6A, "Airport Master Plans" and Part 77 of the Federal Aviation Regulations (FAR), "Safe, Efficient Use, and Preservation of the Navigable Airspace."
- All coordinates NAD83. Horizontal datum source: Airport AVN Data Sheet and 5010 Master Record.
- All elevations NAVD88. Data source: As-built engineering documents from airport management and R.W. Brandley Engineering (2014). Published runway elevation data (5010, AVN Datasheet) is NGVD29. As-built plans from 2012 runway construction on Runway 11-29 and associated survey used.
- (a) Extension of Runway 2-20 to the south will require a significant amount of fill plus drainage ditch realignment. Planning level design is illustrated on this Plan. Proposed Runway 2-20 extension and widening project, along with relocation of Parallel Taxiway G will require a National Environmental Policy Act (NEPA) determination prior to design, and an Aeronautical Survey for support of amended Instrument Approach Procedures.
- (b) The building restriction line (BRL) is based on a composite of airfield design setbacks, such as the runway visual zone (RVZ), taxiway object free area (TOFA) and Part 77 airspace surfaces. Allowable building elevations above ground level are noted at each line.
- (c) Future seasonal ATCT location is conceptual. Further siting analysis, line-of-sight and feasibility study required before tower implementation.

NON-STANDARD CONDITIONS

	EXISTING CONDITION	DISPOSITION
(N1)	Runway 2-20 to parallel Taxiway G centerline separation is 180 feet. Standard runway to parallel taxiway separation for runway design code B-II is 225 feet.	Taxiway G to be realigned for taxiway centerline to runway centerline separation of 240 feet. Taxiway G will then conform to B-II standards, which Runway 2-20 is projected to become.
(N2)	Structure and aircraft tie-downs on East Apron located within the runway visibility zone (RVZ), blocking line of sight between intersecting runways.	Building, wash rack and tie-downs to be relocated to account for ultimate RVZ associated with proposed Runway 2-20 extension.
(N3)	Aircraft parking positions on Terminal Apron are located within the apron taxilane object free area (TOFA).	Add pavement to edge of apron to allow taxilane to shift away from parking positions and provide proper centerline to fixed / movable object separation.

SUBMITTED BY:
Truckee Tahoe Airport Board

By _____ Date

FAA Approval Space

NO.	REVISION	SPONSOR	DATE
4	Airport Master Plan Update (Rwy 2-20 extension, 13A requirements)	Mead & Hunt, Inc.	2015
3	ALP Update	PBS&J	2009
2	ALP Update	PBS&J	2007
1	ALP Update	PBS&J	2005

TRUCKEE-TAHOE AIRPORT
TRUCKEE, CALIFORNIA

AIRPORT LAYOUT PLAN

Mead & Hunt
133 Aviation Boulevard, Suite 100
Santa Rosa, California 95403
(707) 526-5010
Fax (707) 526-9721
www.meadhunt.com

DESIGN:	DRAWN:	DATE:	SHEET
BM	TE/BM	JULY 2015	2 OF 11

The preparation of this document may have been supported, in part, through the Airport Improvement Program financial assistance from the Federal Aviation Administration (Project Number Unassigned) as provided under Title 49 U.S.C., Section 47104. The contents do not in any way constitute a commitment on the part of the United States to participate in any development depicted therein nor does it indicate that the proposed development is environmentally acceptable or would have justification in accordance with appropriate public laws.

C:\Users\11348pm\appdata\local\temp\AcPublish_4936\TRK_ALPLayoutPlan.dwg Sep 01, 2015 - 9:38pm

AIRPORT DATA

		EXISTING	FUTURE
AIRPORT IDENTIFIER		KTRK	No Change
AIRPORT REFERENCE CODE		B-II-5000	No Change
MEAN MAX. TEMP. (Hottest Month) (d)		82.3° F (July)	No Change
AIRPORT ELEVATION (Above Mean Sea Level) (c)		5,904.5'	No Change
AIRPORT NAVIGATIONAL AIDS		Beacon, Seg.Circle, GPS, VASI, REILs	Same + PAPI, -VASI
AIRPORT REFERENCE POINT (b)	LATITUDE	39° 19' 12.152" N	39° 19' 11.30" N
	LONGITUDE	120° 08' 22.426" W	120° 08' 22.62" W
MISCELLANEOUS FACILITIES		Fuel 100LL JET-A, powerplant and airframe service	No Change
CRITICAL AIRCRAFT		Citation Citation V 560	No Change
MAGNETIC VARIATION		13° 50' 4" E Feb. 2013	Moving 0° 7.1' W / Year
NPIAS SERVICE LEVEL		Regional/General Aviation	No Change
STATE SERVICE LEVEL		Regional	No Change
AIRPORT ACREAGE (f)	Fee Simple	936 acres	966 acres
	Avigation Easement	None	No Change

ALP DATA NOTES

(a) ALP prepared using design criteria from FAA Advisory Circulars 150/5300-13A Change 1, "Airport Design", 150/5070-6A, "Airport Master Plans" and Part 77 of the Federal Aviation Regulations (FAR), "Safe, Efficient Use, and Preservation of the Navigable Airspace."

(b) All coordinates NAD83. Horizontal datum source: Airport AVN Datasheet and 5010 Master Record.

(c) All elevations NAVD88. Data source: As-built engineering documents from airport management and R.W. Brandley Engineering (2014). Published runway elevation data (5010, AVN Datasheet) is NGVD29. As-built plans from 2012 runway construction on Runway 11-29 and associated survey used instead.

(d) Temperature data source: Western Regional Climate Center, Station ID: Truckee Ranger Station, CA #049043.

(e) Pavement design strength source: Truckee-Tahoe Airport District management per 2014 pavement maintenance plan.

(f) Airport acreage calculated for immediate property dedicated to aviation functions. All Truckee-Tahoe Airport District property holdings are detailed on the Airport Property Maps, Sheets 10 and 11.

(g) Declared distances proposed for future Runway 2-20 to obtain necessary length while obtaining standard RSA, and to mitigate unacceptable incompatible land uses in the RPZ (Highway 267). See Sheet 8 (Runway 2-20 Declared Distances) for more information.

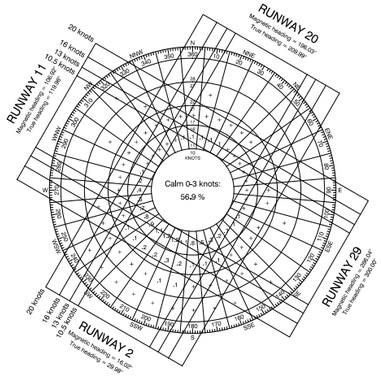
RUNWAY DATA

		RUNWAY 11-29				RUNWAY 2-20			
		EXISTING		FUTURE		EXISTING		FUTURE	
UTILITY / GREATER THAN UTILITY		Greater than Utility		No Change		Greater than Utility		No Change	
RUNWAY DESIGN CODE		B-II-Vis		B-II-5000		B-II-5000		B-II-5000	
APPROACH REFERENCE CODE		B-II-Vis		B-II-5000		B-II-5000		B-II-5000	
CRITICAL AIRCRAFT	AIRCRAFT	Citation Citation V 560		No Change		Beech Baron		Super King Air	
	WINGSPAN	55.8'		No Change		37.7'		54.5'	
	APPROACH SPEED (kts)	107		No Change		101		103	
	MAX. TAKEOFF WT. (lbs.)	16,830		No Change		6,200		12,500	
	COCKPIT TO MAIN GEAR	19'		No Change		7'		10'	
	MAIN GEAR WIDTH	15'		No Change		8'		18'	
	TAXIWAY DESIGN GROUP	2		No Change		1A		2	
PAVEMENT STRENGTH AND MATERIAL TYPE (e)	SURFACE MATERIAL	Asphalt		No Change		Asphalt		No Change	
	DESIGN STRENGTH (1,000#) - S/D/DT	50/80/NA		No Change		35/50/-		No Change	
	STRENGTH BY PCN	N/A		No Change		N/A		No Change	
	SURFACE TREATMENT	Grooved		No Change		N/A		No Change	
EFFECTIVE GRADIENT (%) (c)		0.126%		No Change		0.004%		0.010%	
MAXIMUM GRADIENT (%) (c)		0.377%		No Change		0.004%		No Change	
VERTICAL LINE OF SIGHT PROVIDED		No - Parallel Txwy		Yes		No - Parallel Txwy		Yes	
RUNWAY LENGTH		7,000'		No Change		4,650'		5,055'	
RUNWAY WIDTH		100'		No Change		75'		100'	
RUNWAY END ELEVATIONS (c)		11: 5,901.4'	11	No Change	2	5,890.2'	2	5,890.2' (est)	
		29: 5,892.6'	29	No Change	20	5,890.4'	20	5,890.7' (est)	
DISPLACED THRESHOLD		11: N/A	11	No Change	2	N/A	2	611'	
		29: N/A	29	No Change	20	115'	20	55'	
DISPLACED THRESHOLD ELEVATIONS (c)		11: N/A	11	No Change	2	N/A	2	5,890.2' (est)	
		29: N/A	29	No Change	20	5,891.0'	20	No Change	
RUNWAY TOUCHDOWN ZONE ELEVATIONS (c)		11: 5,904.5'	11	No Change	2	5,898.0'	2	No Change	
		29: 5,901.0'	29	No Change	20	5,898.0'	20	No Change	
RUNWAY HIGH POINT (c)		5,904.5'		No Change		5,898.0'		No Change	
RUNWAY LOW POINT (c)		5,892.6'		No Change		5,890.2'		No Change	
RUNWAY EDGE LIGHTING		Medium Intensity		No Change		Medium Intensity		No Change	
RUNWAY MARKING		11: Non-Precision	11	No Change	2	Non-Precision	2	No Change	
		29: Non-Precision	29	No Change	20	Non-Precision	20	No Change	
RUNWAY SAFETY AREA (RSA) LENGTH BEYOND RUNWAY END	REQUIRED	11: 300'	11	No Change	2	240'	2	300'	
		29: 300'	29	No Change	20	240'	20	300'	
	ACTUAL	11: 300'	11	No Change	2	240'	2	300'	
		29: 300'	29	No Change	20	240'	20	300'	
RUNWAY SAFETY AREA WIDTH	REQUIRED	150'		No Change		120'		150'	
	ACTUAL	150'		No Change		120'		150'	
RUNWAY PROTECTION ZONE (RPZ) (Inner Width x Outer Width x Length)		11: 500' x 700' x 1,000'	11	No Change	2	500' x 700' x 1,000'	2	No Change	
		29: 500' x 700' x 1,000'	29	No Change	20	500' x 700' x 1,000'	20	No Change	
PART 77 APPROACH CATEGORY		11: Non Prec. [C]	11	No Change	2	Visual [B(V)]	2	No Change	
		29: Visual [B(V)]	29	No Change	20	Non Prec. [C]	20	No Change	
PART 77 APPROACH SLOPE		11: 34:1	11	No Change	2	20:1	2	No Change	
		29: 20:1	29	No Change	20	34:1	20	No Change	
APPROACH VISIBILITY MINIMUMS		11: 1¼ Mile	11	No Change	2	Visual	2	No Change	
		29: Visual	29	No Change	20	1 ¼ Mile	20	No Change	
AERONAUTICAL SURVEY REQUIRED (VERTICALLY GUIDED OR NOT)		11: Vert. Guided	11	No Change	2	Not Required	2	No Change	
		29: Not Required	29	No Change	20	Vert. Guided	20	No Change	
RUNWAY DEPARTURE SURFACE		11: 40:1	11	No Change	2	40:1	2	No Change	
		29: 40:1	29	No Change	20	40:1	20	No Change	
RUNWAY OBJECT FREE AREA (ROFA) (Length Beyond Runway End)		11: 300'	11	No Change	2	240'	2	300'	
		29: 300'	29	No Change	20	240'	20	300'	
RUNWAY OBJECT FREE AREA WIDTH		500'		No Change		400'		500'	
OBSTACLE FREE ZONE (OFZ) (Length Beyond Runway End)		11: 200'	11	No Change	2	200'	2	No Change	
		29: 200'	29	No Change	20	200'	20	No Change	
OBSTACLE FREE ZONE WIDTH		400'		No Change		400'		No Change	
INNER-APPROACH OFZ LENGTH (For Rwys w/ Approach Lighting System. Begins 200' from Rwy end @ 50:1		11: N/A	11	No Change	2	N/A	2	No Change	
		29: N/A	29	No Change	20	N/A	20	No Change	
INNER-APPROACH OFZ WIDTH		N/A		No Change		N/A		No Change	
INNER-TRANSITIONAL OFZ WIDTH (For Runways w/ <3/4-mile Approach Visibility Minimums)		11: N/A	11	No Change	2	N/A	2	No Change	
		29: N/A	29	No Change	20	N/A	20	No Change	
PRECISION OBSTACLE FREE ZONE (Length x Width) (For Rwys w/vert. guided approach and <250' ceiling/<3/4 mile visibility)		11: N/A	11	No Change	2	N/A	2	No Change	
		29: N/A	29	No Change	20	N/A	20	No Change	
THRESHOLD SITING SURFACE (Per AC 150/5300-13A, Table 3-2. See Airspace Plan for more information.)		11: 20:1 - Expected to serve large airplanes (visual day/night) or inst. min ≥ 1 SM (day only)	11	No Change	2	20:1 - Expected to serve large airplanes (visual day/night) or inst. min ≥ 1 SM (day only)	2	No Change	
		29: 20:1 - Expected to serve large airplanes (visual day/night) or inst. min ≥ 1 SM (day only)	29	No Change	20	20:1 - Expected to support instrument night ops, greater than approach Cat. II aircraft	20	No Change	
NAVIGATION AIDS		11: N/A	11	GPS	2	N/A	2	No Change	
		29: N/A	29	No Change	20	GPS	20	No Change	
VISUAL AIDS		11: REILs	11	No Change	2	N/A	2	No Change	
		29: N/A	29	No Change	20	VASI (2B)	20	PAPI	

RUNWAY END COORDINATES (b)

		EXISTING	FUTURE
11	LATITUDE	39° 19' 29.444" N	No Change
	LONGITUDE	120° 09' 09.858" W	No Change
29	LATITUDE	39° 18' 54.871" N	No Change
	LONGITUDE	120° 07' 52.740" W	No Change
2	LATITUDE	39° 18' 52.272" N	39° 18' 48.231" N
	LONGITUDE	120° 08' 23.899" W	120° 08' 26.717" W
20	LATITUDE	39° 19' 32.068" N	39° 19' 31.504" N
	LONGITUDE	120° 07' 54.335" W	120° 07' 54.571" W

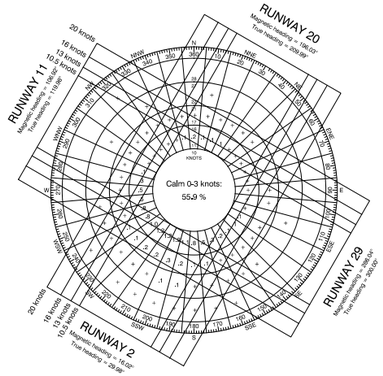
ALL WEATHER WIND ROSE



ALL WEATHER WIND COVERAGE

RUNWAY	10.5 KNOTS (12 M.P.H.)	13 KNOTS (15 M.P.H.)	16 KNOTS (18.5 M.P.H.)	20 KNOTS (23 M.P.H.)
2-20	97.68 %	99.07 %	99.83 %	99.97 %
11-29	90.22 %	94.21 %	98.16 %	99.45 %
Combined	99.38 %	99.85 %	99.96 %	99.99 %
Number of Observations:	74,107			

VFR WIND ROSE

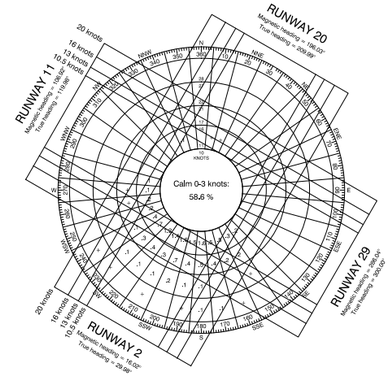


VFR WIND COVERAGE

RUNWAY	10.5 KNOTS (12 M.P.H.)	13 KNOTS (15 M.P.H.)	16 KNOTS (18.5 M.P.H.)	20 KNOTS (23 M.P.H.)
2-20	97.64 %	99.07 %	99.84 %	99.97 %
11-29	90.20 %	94.27 %	98.27 %	99.50 %
Combined	99.41 %	99.86 %	99.97 %	100.0 %
Number of Observations:	68,631			

Wind Data Source: NOAA Weather Station 72584, Truckee, California
Period of Time: Jan. 1, 2000 - Dec. 31, 2009
Note: Windrose compass headings are true north.

IFR WIND ROSE



IFR WIND COVERAGE

RUNWAY	10.5 KNOTS (12 M.P.H.)	13 KNOTS (15 M.P.H.)	16 KNOTS (18.5 M.P.H.)	20 KNOTS (23 M.P.H.)
2-20	97.60 %	98.89 %	99.63 %	99.91 %
11-29	87.21 %	91.42 %	96.14 %	98.55 %
Combined	98.65 %	99.56 %	99.86 %	99.96 %
Number of Observations:	2,913			

TAXIWAY DATA

	PARALLEL TAXIWAYS A		PARALLEL TAXIWAYS G		CONNECTOR TAXIWAYS B,C,H,J,L,M,N,P,Q,S,U,V		CONNECTOR TAXIWAYS D, F		CONNECTOR TAXIWAYS E,H		NOTES
	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE	
TAXIWAY DESIGN GROUP	2	No Change	2	No Change	2	No Change	2	No Change	2	No Change	• Four taxiways to be reconfigured to meet new Advisory Circular 150/5300-13A (Change 1) guidance for enhancing taxiway safety. Direct apron to runway access (Taxiways C, D, E and F) to be eliminated and 45 degree exit taxiways (Taxiways D and F) changed to 90 degrees. • See Taxiway Fillet Data table for more detailed dimension data.
AIRCRAFT DESIGN GROUP	II	No Change	II	No Change	II	No Change	II	No Change	II	No Change	
WIDTH	50'	No Change	50'	No Change	50'	No Change	50'	70'	50'	No Change	
TAXIWAY SAFETY AREA WIDTH	79'	No Change	79'	No Change	79'	No Change	79'	No Change	79'	No Change	
TAXIWAY OBJECT FREE AREA WIDTH	131'	No Change	131'	No Change	131'	No Change	131'	No Change	131'	No Change	
DISTANCE from TWY.℄ to FIXED/MOVABLE OBJECT	65.5'	No Change	65.5'	No Change	65.5'	No Change	65.5'	No Change	65.5'	No Change	
TAXIWAY WINGTIP CLEARANCE	26'	No Change	26'	No Change	26'	No Change	26'	No Change	26'	No Change	
DISTANCE from RUNWAY ℄ to TAXIWAY ℄	250'	No Change	180'	240'	N/A	No Change	N/A	No Change	N/A	No Change	
DISTANCE FROM RUNWAY ℄ to HOLD BARS	200'	No Change	125'	200'	N/A	No Change	N/A	No Change	N/A	No Change	
TAXIWAY SURFACE TYPE	Asphalt	No Change	Asphalt	No Change	Asphalt	No Change	Asphalt	No Change	Asphalt	No Change	
TAXIWAY LIGHTING	Medium	No Change	Medium	No Change	Medium	No Change	Medium	No Change	Medium	No Change	

TAXIWAY FILLET DATA

Table 4-5. Standard intersection details for TDG 2

TDG 2						
Dimension (See Figure 4-13, Figure 4-14, and Figure 4-15)						
Δ (degrees)	30	45	60	90	120	135	150
W-0 (B)	17.5	17.5	17.5	17.5	17.5	17.5	17.5
W-1 (B)	29	35	26	26	27	26	28
W-2 (B)	29	35	40	48	48	50	54
L-1 (B)	192	228	183	185	192	183	194
L-2 (B)	0	0	60	75	65	75	71
L-3 (B)	8	14	23	48	117	170	279
R-Fillet (B)	0	0	0	0	25	25	25
R-CL (B)	75	75	75	60	75	75	80
R-Outer (B)	92	92	92	77	92	92	97

Note: Values in the table are rounded to the nearest foot. 1 foot = 0.305 metres

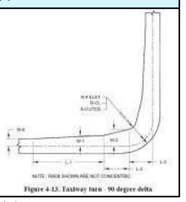


Figure 4-13. Taxiway turn - 90 degree delta

Table 4-5 and Figure 4-13 from FAA Advisory Circular 150/5300-13A (Change 1) "Airport Design".

DECLARED DISTANCES (g)

	EXISTING		FUTURE	
	RUNWAY 11	RUNWAY 29	RUNWAY 11	RUNWAY 29
DISPLACED THRESHOLD	N/A	N/A	No Change	No Change
TAKEOFF RUN AVAILABLE (TORA)	N/A	N/A	No Change	No Change
TAKEOFF DISTANCE AVAILABLE (TODA)	N/A	N/A	No Change	No Change
ACCELERATE-STOP DISTANCE AVAILABLE (ASDA)	N/A	N/A	No Change	No Change
LANDING DISTANCE AVAILABLE (LDA)	N/A	N/A	No Change	No Change
	RUNWAY 2	**RUNWAY 20**	**RUNWAY 2**	**RUNWAY 20**
DISPLACED THRESHOLD	N/A	115'	611'	55'
TAKEOFF RUN AVAILABLE (TORA)	N/A	N/A	5,055'	4,444'
TAKEOFF DISTANCE AVAILABLE (TODA)	N/A	N/A	5,055'	5,055'
ACCELERATE-STOP DISTANCE AVAILABLE (ASDA)	N/A	N/A	5,055'	5,055'
LANDING DISTANCE AVAILABLE (LDA)	N/A	N/A	4,444'	5,000'

NO.	REVISION	SPONSOR	DATE
4	Airport Master Plan Update (Rwy 2-20 extension, 13A requirements)	Mead & Hunt, Inc.	2015
3	ALP Update	PBS&J	2009
2	ALP Update	PBS&J	2007
1	ALP Update	PBS&J	2005

TRUCKEE-TAHOE AIRPORT
TRUCKEE, CALIFORNIA

DATA SHEET

Mead & Hunt
133 Aviation Boulevard, Suite 100
Santa Rosa, California 95403
(707) 526-5010
Fax (707) 526-9721
www.meadhunt.com

TRUCKEE TAHOE AIRPORT

DESIGN:	BM	DRAWN:	TE/BM	DATE:	JULY 2015	SHEET	3	OF	11

The preparation of this document may have been supported, in part, through the Airport Improvement Program financial assistance from the Federal Aviation Administration (Project Number Unassigned) as provided under Title 49 U.S.C., Section 47104. The contents do not in any way constitute a commitment on the part of the United States to participate in any development depicted therein nor does it indicate that the proposed development is environmentally acceptable or would have justification in accordance with appropriate public laws.

C:\Users\1134bjm\appdata\local\temp\AcPublish_2680\TRK-ALP-Layout-Plan.dwg Jul 02, 2015 - 3:19pm

Appendix Two: TRK TFMSC Report/2012, 2017-2021 (Calendar Years)

TFMSC Report (Airport)

From 01/01/2012 To 12/31/2012 | Airport=TRK

Row Labels	Sum of Total Ops
No	**2725**
Yes	**1581**
A	**14**
I	14
EA50 - Eclipse 500	14
B	**1178**
I	397
BE40 - Raytheon/Beech Beechjet 400/T-1	59
C25A - Cessna Citation CJ2	14
C500 - Cessna 500/Citation I	6
C501 - Cessna I/SP	28
C510 - Cessna Citation Mustang	61
C525 - Cessna CitationJet/CJ1	97
E50P - Embraer Phenom 100	125
FA10 - Dassault Falcon/Mystère 10	2
PRM1 - Raytheon Premier 1/390 Premier 1	5
II	781
C25B - Cessna Citation CJ3	43
C25C - Cessna Citation CJ4	37
C550 - Cessna Citation II/Bravo	83
C551 - Cessna Citation II/SP	3
C560 - Cessna Citation V/Ultra/Encore	124
C56X - Cessna Excel/XLS	193
C650 - Cessna III/VI/VII	16
C680 - Cessna Citation Sovereign	126
C750 - Cessna Citation X	64
E55P - Embraer Phenom 300	12
F2TH - Dassault Falcon 2000	40
F900 - Dassault Falcon 900	8
FA20 - Dassault Falcon/Mystère 20	10
FA50 - Dassault Falcon/Mystère 50	20
HA4T - Hawker 4000	2
C	**276**
I	112
H25A - BAe HS 125-1/2/3/400/600	4
H25B - BAe HS 125/700-800/Hawker 800	42
LJ31 - Bombardier Learjet 31/A/B	3
LJ40 - Learjet 40; Gates Learjet	22
LJ45 - Bombardier Learjet 45	16
LJ55 - Bombardier Learjet 55	11
LJ60 - Bombardier Learjet 60	14
II	162
ASTR - IAI Astra 1125	7
CL30 - Bombardier (Canadair) Challenger 300	86
CL60 - Bombardier Challenger 600/601/604	24
G150 - Gulfstream G150	6
GALX - IAI 1126 Galaxy/Gulfstream G200	35
GLF3 - Gulfstream III/G300	4
III	2
GL5T - Bombardier BD-700 Global 5000	2
D	**113**
I	11
LJ35 - Bombardier Learjet 35/36	11
II	70
GLF4 - Gulfstream IV/G400	70
III	32
GLF5 - Gulfstream V/G500	32
(blank)	**4306**
Grand Total	**8612**

Report created on Fri Mar 4 16:02:34 EST 2022

Sources: Traffic Flow Management System Counts (TFMSC), Aviation System Performance Metrics (ASPM)

TFMSC Report (Airport)

From 01/01/2017 To 12/31/2017 | Airport=TRK

Row Labels	Sum of Total Ops
No	**5501**
Yes	**3721**
A	**20**
I	20
E550 - Embraer Legacy 500	16
EA50 - Eclipse 500	4
B	**2557**
I	794
BE40 - Raytheon/Beech Beechjet 400/T-1	45
C25A - Cessna Citation CJ2	72
C501 - Cessna I/SP	13
C510 - Cessna Citation Mustang	107
C525 - Cessna CitationJet/CJ1	235
E50P - Embraer Phenom 100	285
H25C - BAe/Raytheon HS 125-1000/Hawker 1000	2
HDJT - HONDA HA-420 HondaJet	1
PRM1 - Raytheon Premier 1/390 Premier 1	34
II	1761
C25B - Cessna Citation CJ3	200
C25C - Cessna Citation CJ4	26
C550 - Cessna Citation II/Bravo	143
C551 - Cessna Citation II/SP	2
C560 - Cessna Citation V/Ultra/Encore	119
C56X - Cessna Excel/XLS	478
C650 - Cessna III/VI/VII	15
C680 - Cessna Citation Sovereign	136
C68A - Cessna Citation Latitude	36
C750 - Cessna Citation X	113
E545 - Embraer EMB-545 Legacy 450	11
E55P - Embraer Phenom 300	318
F2TH - Dassault Falcon 2000	71
F900 - Dassault Falcon 900	42
FA20 - Dassault Falcon/Mystère 20	6
FA50 - Dassault Falcon/Mystère 50	29
HA4T - Hawker 4000	16
III	2
FA7X - Dassault Falcon F7X	2
C	**905**
I	237
H25B - BAe HS 125/700-800/Hawker 800	114
LJ31 - Bombardier Learjet 31/A/B	12
LJ40 - Learjet 40; Gates Learjet	6
LJ45 - Bombardier Learjet 45	49
LJ60 - Bombardier Learjet 60	49
WW24 - IAI 1124 Westwind	7
II	597
CL30 - Bombardier (Canadair) Challenger 300	193
CL35 - Bombardier Challenger 300	140
CL60 - Bombardier Challenger 600/601/604	101
G150 - Gulfstream G150	39
G280 - Gulfstream G280	17
GALX - IAI 1126 Galaxy/Gulfstream G200	67
GLF3 - Gulfstream III/G300	14
LJ70 - Learjet 70	2
LJ75 - Learjet 75	24
III	71
GL5T - Bombardier BD-700 Global 5000	14
GLEX - Bombardier BD-700 Global Express	57
D	**233**
I	22
LJ35 - Bombardier Learjet 35/36	22
II	142
GLF4 - Gulfstream IV/G400	142
III	69
GLF5 - Gulfstream V/G500	61
GLF6 - Gulfstream	8
No Data	**6**
No Data	6
SF50 - Cirrus Vision SF50	2
SJ30 - Swearingen SJ-30	4
(blank)	**9222**
Grand Total	**18444**

Report created on Fri Mar 4 17:12:27 EST 2022

Sources: Traffic Flow Management System Counts (TFMSC), Aviation System Performance Metrics (ASPM)

TFMSC Report (Airport)

From 01/01/2018 To 12/31/2018 | Airport=TRK

Row Labels	Sum of Total Ops
No	**5453**
Yes	**4109**
A	**37**
I	37
E550 - Embraer Legacy 500	24
EA50 - Eclipse 500	13
B	**2824**
I	766
BE40 - Raytheon/Beech Beechjet 400/T-1	43
C25A - Cessna Citation CJ2	99
C25M - Cessna Citation M2	13
C501 - Cessna I/SP	17
C510 - Cessna Citation Mustang	110
C525 - Cessna CitationJet/CJ1	193
E50P - Embraer Phenom 100	234
H25C - BAe/Raytheon HS 125-1000/Hawker 1000	12
HDJT - HONDA HA-420 HondaJet	22
PRM1 - Raytheon Premier 1/390 Premier 1	23
II	2054
C25B - Cessna Citation CJ3	299
C25C - Cessna Citation CJ4	46
C550 - Cessna Citation II/Bravo	124
C551 - Cessna Citation II/SP	2
C560 - Cessna Citation V/Ultra/Encore	98
C56X - Cessna Excel/XLS	425
C650 - Cessna III/VI/VII	31
C680 - Cessna Citation Sovereign	136
C68A - Cessna Citation Latitude	140
C750 - Cessna Citation X	129
E545 - Embraer EMB-545 Legacy 450	38
E55P - Embraer Phenom 300	438
F2TH - Dassault Falcon 2000	73
F900 - Dassault Falcon 900	39
FA20 - Dassault Falcon/Mystère 20	4
FA50 - Dassault Falcon/Mystère 50	28
HA4T - Hawker 4000	4
III	4
FA7X - Dassault Falcon F7X	4
C	**981**
I	191
H25B - BAe HS 125/700-800/Hawker 800	49
LJ31 - Bombardier Learjet 31/A/B	8
LJ40 - Learjet 40; Gates Learjet	8
LJ45 - Bombardier Learjet 45	57
LJ55 - Bombardier Learjet 55	2
LJ60 - Bombardier Learjet 60	61
WW24 - IAI 1124 Westwind	6
II	746
ASTR - IAI Astra 1125	2
CL30 - Bombardier (Canadair) Challenger 300	220
CL35 - Bombardier Challenger 300	232
CL60 - Bombardier Challenger 600/601/604	140
G150 - Gulfstream G150	66
G280 - Gulfstream G280	14
GALX - IAI 1126 Galaxy/Gulfstream G200	46
GLF3 - Gulfstream III/G300	12
LJ75 - Learjet 75	14
III	44
GL5T - Bombardier BD-700 Global 5000	10
GLEX - Bombardier BD-700 Global Express	34
D	**255**
I	18
LJ35 - Bombardier Learjet 35/36	18
II	163
GLF4 - Gulfstream IV/G400	163
III	74
GLF5 - Gulfstream V/G500	62
GLF6 - Gulfstream	12
No Data	**12**
No Data	12
SF50 - Cirrus Vision SF50	12
(blank)	**9562**
Grand Total	**19124**

Report created on Fri Mar 4 16:36:14 EST 2022

Sources: Traffic Flow Management System Counts (TFMSC), Aviation System Performance Metrics (ASPM)

TFMSC Report (Airport)

From 01/01/2019 To 12/31/2019 | Airport=TRK

Row Labels	Sum of Total Ops
No	**4841**
Yes	**3893**
A	**39**
I	39
E550 - Embraer Legacy 500	16
EA50 - Eclipse 500	23
B	**2748**
I	844
BE40 - Raytheon/Beech Beechjet 400/T-1	54
C25A - Cessna Citation CJ2	137
C25M - Cessna Citation M2	14
C501 - Cessna I/SP	21
C510 - Cessna Citation Mustang	138
C525 - Cessna CitationJet/CJ1	216
E50P - Embraer Phenom 100	208
H25C - BAe/Raytheon HS 125-1000/Hawker 1000	4
PRM1 - Raytheon Premier 1/390 Premier 1	52
II	1902
C25B - Cessna Citation CJ3	163
C25C - Cessna Citation CJ4	44
C550 - Cessna Citation II/Bravo	101
C551 - Cessna Citation II/SP	2
C560 - Cessna Citation V/Ultra/Encore	59
C56X - Cessna Excel/XLS	375
C650 - Cessna III/VI/VII	22
C680 - Cessna Citation Sovereign	141
C68A - Cessna Citation Latitude	211
C750 - Cessna Citation X	110
E545 - Embraer EMB-545 Legacy 450	35
E55P - Embraer Phenom 300	470
F2TH - Dassault Falcon 2000	58
F900 - Dassault Falcon 900	31
FA20 - Dassault Falcon/Mystère 20	16
FA50 - Dassault Falcon/Mystère 50	56
HA4T - Hawker 4000	8
III	2
FA7X - Dassault Falcon F7X	2
C	**847**
I	198
H25B - BAe HS 125/700-800/Hawker 800	64
LJ31 - Bombardier Learjet 31/A/B	2
LJ40 - Learjet 40; Gates Learjet	17
LJ45 - Bombardier Learjet 45	63
LJ60 - Bombardier Learjet 60	50
WW24 - IAI 1124 Westwind	2
II	605
ASTR - IAI Astra 1125	6
CL30 - Bombardier (Canadair) Challenger 300	176
CL35 - Bombardier Challenger 300	185
CL60 - Bombardier Challenger 600/601/604	112
G150 - Gulfstream G150	46
G280 - Gulfstream G280	8
GALX - IAI 1126 Galaxy/Gulfstream G200	50
GLF3 - Gulfstream III/G300	4
LJ75 - Learjet 75	18
III	44
GL5T - Bombardier BD-700 Global 5000	4
GLEX - Bombardier BD-700 Global Express	40
D	**218**
I	12
LJ35 - Bombardier Learjet 35/36	12
II	145
GLF4 - Gulfstream IV/G400	145
III	61
GLF5 - Gulfstream V/G500	59
GLF6 - Gulfstream	2
No Data	**41**
No Data	41
C55B - Cessna Citation Bravo	7
GA5C - G-7 Gulfstream G500	2
SF50 - Cirrus Vision SF50	32
(blank)	**8734**
Grand Total	**17468**

Report created on Mon Feb 28 17:07:36 EST 2022

Sources: Traffic Flow Management System Counts (TFMSC), Aviation System Performance Metrics (ASPM)

TFMSC Report (Airport)

From 01/01/2020 To 12/31/2020 | Airport=TRK

Row Labels	Sum of Total Ops
No	**4280**
Yes	**4398**
A	**24**
I	24
E550 - Embraer Legacy 500	7
EA50 - Eclipse 500	17
B	**2864**
I	726
BE40 - Raytheon/Beech Beechjet 400/T-1	55
C25A - Cessna Citation CJ2	138
C25M - Cessna Citation M2	22
C500 - Cessna 500/Citation I	2
C501 - Cessna I/SP	11
C510 - Cessna Citation Mustang	173
C525 - Cessna CitationJet/CJ1	201
E50P - Embraer Phenom 100	43
H25C - BAe/Raytheon HS 125-1000/Hawker 1000	10
HDJT - HONDA HA-420 HondaJet	10
PRM1 - Raytheon Premier 1/390 Premier 1	61
II	2128
C25B - Cessna Citation CJ3	183
C25C - Cessna Citation CJ4	32
C550 - Cessna Citation II/Bravo	80
C560 - Cessna Citation V/Ultra/Encore	124
C56X - Cessna Excel/XLS	352
C650 - Cessna III/VI/VII	21
C680 - Cessna Citation Sovereign	126
C68A - Cessna Citation Latitude	244
C750 - Cessna Citation X	131
E545 - Embraer EMB-545 Legacy 450	57
E55P - Embraer Phenom 300	440
F2TH - Dassault Falcon 2000	206
F900 - Dassault Falcon 900	47
FA20 - Dassault Falcon/Mystère 20	18
FA50 - Dassault Falcon/Mystère 50	63
HA4T - Hawker 4000	4
III	10
FA7X - Dassault Falcon F7X	10
C	**1078**
I	206
H25A - BAe HS 125-1/2/3/400/600	2
H25B - BAe HS 125/700-800/Hawker 800	51
LJ40 - Learjet 40; Gates Learjet	20
LJ45 - Bombardier Learjet 45	89
LJ60 - Bombardier Learjet 60	44
II	768
ASTR - IAI Astra 1125	4
CL30 - Bombardier (Canadair) Challenger 300	155
CL35 - Bombardier Challenger 300	331
CL60 - Bombardier Challenger 600/601/604	144
G150 - Gulfstream G150	61
G280 - Gulfstream G280	4
GALX - IAI 1126 Galaxy/Gulfstream G200	57
GLF3 - Gulfstream III/G300	4
LJ70 - Learjet 70	2
LJ75 - Learjet 75	6
III	104
GL5T - Bombardier BD-700 Global 5000	18
GLEX - Bombardier BD-700 Global Express	86
D	**333**
I	16
LJ35 - Bombardier Learjet 35/36	16
II	210
GLF4 - Gulfstream IV/G400	210
III	107
GLF5 - Gulfstream V/G500	81
GLF6 - Gulfstream	26
No Data	**99**
No Data	99
C55B - Cessna Citation Bravo	19
C700 - Cessna Citation Longitude	19
SF50 - Cirrus Vision SF50	61
(blank)	**8678**
Grand Total	**17356**

Report created on Fri Mar 4 16:55:46 EST 2022

Sources: Traffic Flow Management System Counts (TFMSC), Aviation System Performance Metrics (ASPM)

TFMSC Report (Airport)

From 01/01/2021 To 12/31/2021 | Airport=TRK

Row Labels	Sum of Total Ops
No	**4651**
Yes	**4532**
A	**26**
I	26
E550 - Embraer Legacy 500	8
EA50 - Eclipse 500	18
B	**3143**
I	689
BE40 - Raytheon/Beech Beechjet 400/T-1	69
C25A - Cessna Citation CJ2	152
C25M - Cessna Citation M2	33
C501 - Cessna I/SP	4
C510 - Cessna Citation Mustang	128
C525 - Cessna CitationJet/CJ1	191
E50P - Embraer Phenom 100	4
H25C - BAe/Raytheon HS 125-1000/Hawker 1000	2
HDJT - HONDA HA-420 HondaJet	19
PRM1 - Raytheon Premier 1/390 Premier 1	87
II	2442
C25B - Cessna Citation CJ3	268
C25C - Cessna Citation CJ4	33
C550 - Cessna Citation II/Bravo	73
C560 - Cessna Citation V/Ultra/Encore	102
C56X - Cessna Excel/XLS	401
C650 - Cessna III/VI/VII	11
C680 - Cessna Citation Sovereign	155
C68A - Cessna Citation Latitude	286
C750 - Cessna Citation X	118
E545 - Embraer EMB-545 Legacy 450	50
E55P - Embraer Phenom 300	560
F2TH - Dassault Falcon 2000	224
F900 - Dassault Falcon 900	92
FA20 - Dassault Falcon/Mystère 20	14
FA50 - Dassault Falcon/Mystère 50	49
HA4T - Hawker 4000	6
III	12
FA7X - Dassault Falcon F7X	12
C	**1082**
I	249
H25A - BAe HS 125-1/2/3/400/600	1
H25B - BAe HS 125/700-800/Hawker 800	64
LJ31 - Bombardier Learjet 31/A/B	4
LJ40 - Learjet 40; Gates Learjet	18
LJ45 - Bombardier Learjet 45	87
LJ55 - Bombardier Learjet 55	4
LJ60 - Bombardier Learjet 60	67
WW24 - IAI 1124 Westwind	4
II	800
ASTR - IAI Astra 1125	6
CL30 - Bombardier (Canadair) Challenger 300	140
CL35 - Bombardier Challenger 300	410
CL60 - Bombardier Challenger 600/601/604	121
G150 - Gulfstream G150	59
G280 - Gulfstream G280	8
GALX - IAI 1126 Galaxy/Gulfstream G200	50
LJ75 - Learjet 75	6
III	33
GL5T - Bombardier BD-700 Global 5000	13
GLEX - Bombardier BD-700 Global Express	20
D	**146**
II	77
GLF4 - Gulfstream IV/G400	77
III	69
GLF5 - Gulfstream V/G500	58
GLF6 - Gulfstream	11
No Data	**135**
No Data	135
C55B - Cessna Citation Bravo	16
C700 - Cessna Citation Longitude	37
SF50 - Cirrus Vision SF50	82
Grand Total	**9183**

Report created on Mon Feb 28 11:51:17 EST 2022

Sources: Traffic Flow Management System Counts (TFMSC), Aviation System Performance Metrics (ASPM)