

IESALC 2023 : Temporary Solar Taxiway Lighting at Vance Air Force Base

Presented by: Jeffrey Trottier, Cory Brigham

Company Confidential

November 17, 2023



Agenda

1. Background
2. Project
3. Requirements
4. Obstacles
5. Solution
6. Benefits



Company Overview



Avlite Systems is part of the SPX Aids to Navigation family as a division of SPX Technologies.

Operating within the SPX Aids to Navigation division enables us to develop the most diverse portfolio of solar airfield lighting solutions in the world.



FLASH
ITL

Obstruction

AVLITE

Aviation

SEALITE
SABIK

Marine

Airside Solutions, Inc (ASI) is a full-line supplier and provider of Airfield and Heliport Lighting, and Navigation systems including Equipment, Logistics and Technical Services.

Our core mission is to provide the Airside Market with value-added products and services, supporting the safety and reliability of airfield navigation.

Background



Project	Vance AFB, Repair Center Runway, B17235
Customer	US Army Corps of Engineers – Tulsa District
Engineers	Joint Venture with Mason & Hanger, Mead & Hunt
General Contractor	IHC Scott
Electrical Contractor	Libra Electric Company



Background

Vance Air Force Base

- 90 miles north by northwest of Oklahoma City
- Air Education and Training Command
- Undergraduate Training Base – 300 graduates/year



Background

The Wing operates over 200 aircraft

- T-1A Jayhawk
 - T-6A Texan II
 - T-38C Talon
-
- 50,000 sorties and 74,000+ flying hours annually
 - Day and night training 6 days a week



Project



01

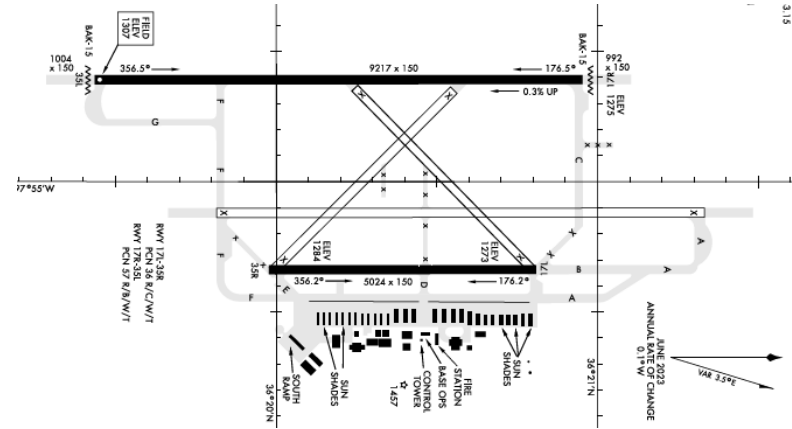
Rehabilitate runway and two primary taxiways

(TWY C and TWY F) associated with runway 17R/35L

02

Project time Schedule: 12 Months

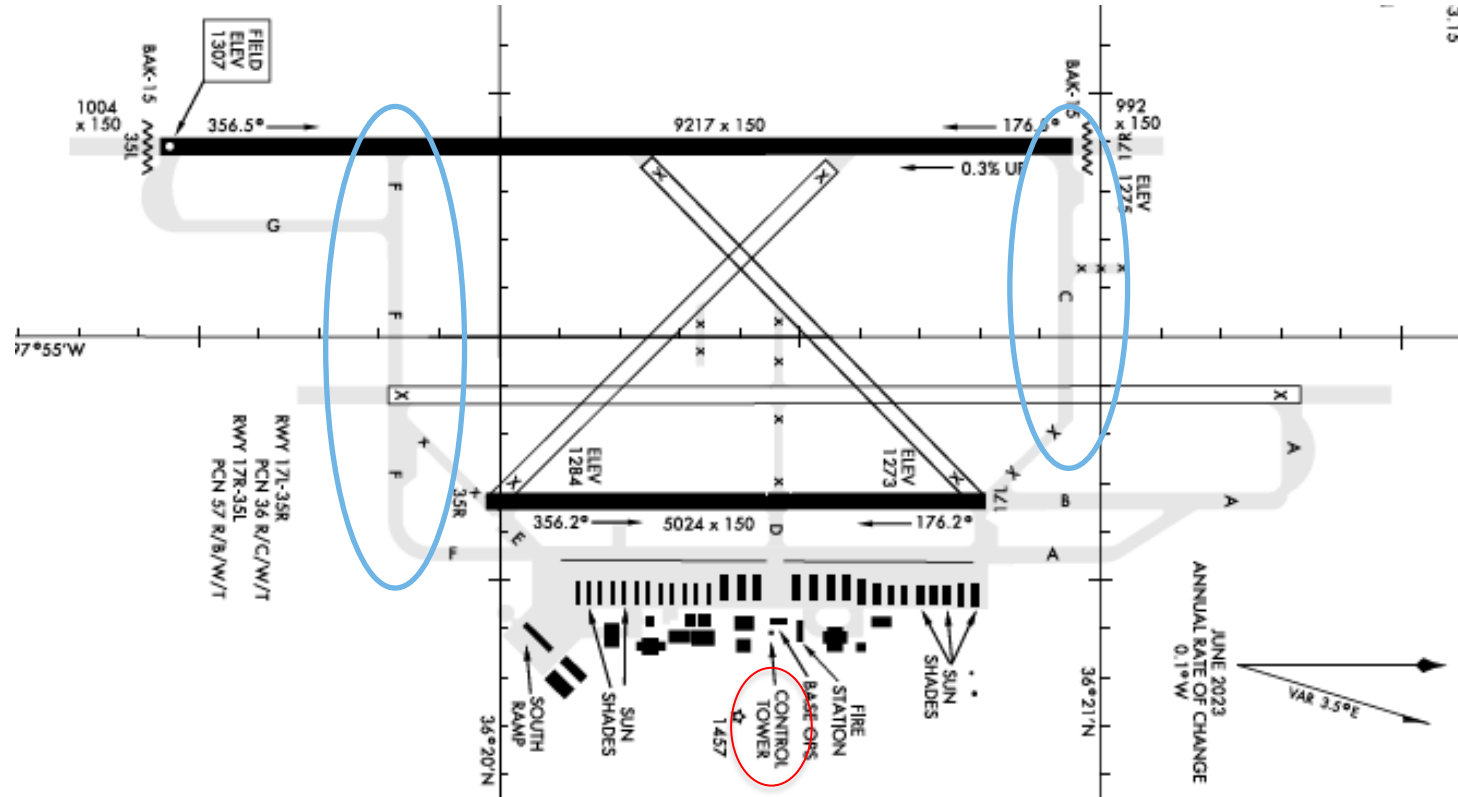
Limited access to the airfield due to training schedules



Project



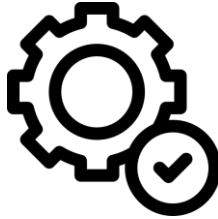
AVLITE



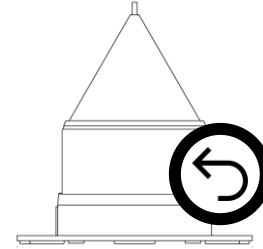
Requirements



ATCT Personnel to Control
the Temporary Taxiway



Install without Temporary
Infrastructure



Remove Temporary
Taxiway When Project is
Completed



Limited Access to Airfield

Due to the ongoing training schedule



Significant Distance from ATCT

The location of the ATCT from the taxiways were 3900' (TWY C) and 4600' (TWY F)



RF Range

ATCT is 100' tall with double-pane glass windows

Solution



AV-70 L-863 Solar Taxiway Light

- L-863 Portable Taxiway photometrics
- Wireless Control
- Autonomous operation via battery and solar recharge



Intertek

PROGRAM ADMINISTRATOR
DEPARTMENT ALECP
INTERTEK
3933 U.S. ROUTE 11
CORTLAND, NY 13045-0950

AVLITE SYSTEMS
11 Industrial Drive
Somerville, Victoria
3912 Australia

ORIGINAL ISSUE DATE: October 25, 2018

Recertification due: March 2026

An Activity Sponsored and Administered by
Intertek

AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM

CERTIFICATE OF CONFORMANCE

The product described below is hereby approved for listing in the next issue of the Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5345-53, Appendix 3 Addendum "Airport Lighting Equipment Certification Program." The approval is based on successful completion of tests in accordance with the specifications listed in, and the requirements for approval described in the Advisory Circular, and the reporting to the Program Administrator the results of such tests, accompanied by related documents by an Intertek recognized testing laboratory. This Certificate is only confirmable in conjunction with equipment being listed in AC 150/5345-53, Appendix 3, Addendum, as currently published by the FAA. The certification is not valid for a product modified with non-OEM replacement parts or non-production components.

L-863B(L) – Lights, Portable Taxiway Edge (AC 150/5345-50B)		
Manufacturer	Type	Manufacturer's Catalog Number
Avlite Systems	L-863B(L)	AV-70-863-B-RF-XX (821)

Note: (821) PCA-1412-REV1

Equipment meets the requirements of FAA Engineering Brief No. 67D additional requirements for "Light Sources Other Than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures" dated March 6, 2012.

1. This Equipment requires continuing validation in accordance with the requirements of AC 150/5345-53, and the Intertek Airport Lighting Equipment Certification Program.

2. Product tested and Report issued by: Intertek

(A) Report No: 103304474CRT-001

(B) Date of Report: 9/2018

NOTE: PLEASE REVIEW, AND ADVISE
ADMINISTRATOR AT INTERTEK IMMEDIATELY
IF DATA, AS SHOWN, NEED TO BE
CORRECTED.

Approved for Certification by:


Jeremy N. Downs, PE, Program Administrator
Date: October 25 2018

Form AL-3 1/2006

Solution



Quantity	Product
175	L-863 Solar Taxiway Lights with RF Control and Manual Switch
175	Mounting Tiles
175	Frangible Mounts
1	RF Handheld Controller
3	Repeaters

Solution

- Project plans detailed temp lighting placement
- Lights placed on tiles with mounts
- Handheld controller placed in ATCT
- Repeaters located as needed



Solution



Benefits



- ✓ **Less Disruptive**
No need for temporary trenching, wiring, power
- ✓ **Remote Control from Air Traffic Control Tower**
- ✓ **Easy and Quick to Deploy**
Less than 1 Day
Flexible geometry without the need of specialized electricians
- ✓ **Project Cost Savings**
- ✓ **Ease of Removal at Completion of Project**

Thank You



Avlite Systems

usa@avlite.com

+1 603 737 1311

Airside Solutions

jtrottier@airsidesolutionsinc.com

+1 603 782 5188