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Welcome, Alisha S Pettit

[Procurement](#)[Budgeting](#)[Accounts Receivable](#)[Accounts Payable](#)**Solicitation Response(SR)**

Dept: 0603

ID: ESR01302500000004665

Ver.: 1

Function: New

Phase: Final

Modified by batch , 01/30/2025

Header 1

[List View](#)**General Information**[Contact](#)[Default Values](#)[Discount](#)[Document Information](#)[Clarification Request](#)

Procurement Folder: 1605858

Procurement Type: Central Purchase Order

Vendor ID: VS0000037669



Legal Name: AIRPORT DESIGN CONSULTANTS INC

Alias/DBA:

Total Bid: \$0.00

Response Date: 01/30/2025



Response Time: 10:40

Responded By User ID: ADCInc



First Name: Stephanie

Last Name: Alder

Email: salder@adci-corp.com

Phone: 4104659600

SO Doc Code: CEOI

SO Dept: 0603

SO Doc ID: ADJ2500000013

Published Date: 1/16/25

Close Date: 1/30/25

Close Time: 13:30

Status: Closed

Solicitation Description: Camp Dawson Army Airfield PAPI Lights Installation Design

Total of Header Attachments: 1

Total of All Attachments: 1



Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Solicitation Response

Proc Folder: 1605858
Solicitation Description: Camp Dawson Army Airfield PAPI Lights Installation Design
Proc Type: Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2025-01-30 13:30	SR 0603 ESR01302500000004665	1

VENDOR
VS0000037669
AIRPORT DESIGN CONSULTANTS INC

Solicitation Number: CEOI 0603 ADJ2500000013
Total Bid: 0
Response Date: 2025-01-30
Response Time: 10:40:41
Comments:

FOR INFORMATION CONTACT THE BUYER
David H Pauline
304-558-0067
david.h.pauline@wv.gov

Vendor
Signature X **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Camp Dawson Army Airfield PAPI Lights Installation Design				0.00

Comm Code	Manufacturer	Specification	Model #
81101508			

Commodity Line Comments:

Extended Description:

Provide professional architectural and engineering design services per the attached documentation.



BUYER:

STATE OF WEST VIRGINIA

SOLICITATION NUMBER:

CEOI 0603 ADJ2500000013

SOLICITATION NAME:

CAMP DAWSON ARMY AIRFIELD

PAPI LIGHTS INSTALLATION DESIGN

BID OPENING DATE / TIME:

JANUARY 30, 2025 / 13:30



VENDOR:

AIRPORT DESIGN CONSULTANTS, INC.

100 AIRPORT ROAD, SUITE 168

CHARLESTON, WV 25311

PHONE:

(410) 465-9600

FAX:

(410) 465-9602

1

COVER LETTER

January 30, 2025

State of West Virginia
Department of Administration Purchasing Division
David H. Pauline
2019 Washington Street East
Charleston, WV 25305

Reference: CEOI 0603 ADJ2500000013 – Camp Dawson Army Airfield PAPI Lights Installation Design

Dear Mr. Pauline:

Airport Design Consultants, Inc. (ADCI) is excited about the opportunity to again assist West Virginia Army National Guard (WVARNG), Construction and Facilities Management Office (CFMO) in improving their airfield capability and continue their important mission. As our name indicates, ADCI focuses exclusively on airports and aviation facilities, with a majority of our clientele being in the Mid-Atlantic Region. We specialize in serving airport clients on an on-call basis and employ a proactive approach to project delivery, which has resulted in long-standing client relationships. Our experienced professionals accelerate project schedules when needed, allowing our clients to take full advantage of funding opportunities. In fact, we boast an unprecedented **100% reselection rate with our on-call clients**.

Our enclosed response demonstrates our experience and approach to completing all aspects of the Camp Dawson Army Airfield (3G5) Precision Approach Path Indicators (PAPIs) Installation Design project on time and on budget. As Project Principal, I will guide our qualified team through the duration of the project and ensure that the project is staffed with appropriate resources at all times. Our familiarity of Camp Dawson and our collective experience with siting, designing, installation, and commissioning of PAPI systems will allow our team to hit the ground running at full speed.

For this contract, we have selected **Vince DeCarlo, PE as your Project Manager and day-to-day contact**. Vince reports from ADCI's Blairsville, Pennsylvania office, which is less than a two (2) hour drive from Camp Dawson. Vince will call upon a deep bench of airport navigational aid (NAVAID) experts with recent experience in all aspects of the implementation of PAPIs. Additionally, Vince has successfully managed hundreds of tasks over his twenty (20) years of experience in the aviation consulting business and brings boundless energy and enthusiasm that matches his experience.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Waibel", is written over a light gray rectangular background.

Mike Waibel
Project Principal
(410) 258-1341
mwaibel@adci-corp.com



Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Expression of Interest

Proc Folder: 1605858			Reason for Modification:
Doc Description: Camp Dawson Army Airfield PAPI Lights Installation Design			
Proc Type: Central Purchase Order			
Date Issued	Solicitation Closes	Solicitation No	Version
2025-01-16	2025-01-30 13:30	CEOI 0603 ADJ2500000013	1

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code: VS0000037669
Vendor Name : Airport Design Consultants, Inc.
Address :
Street : 100 Airport Road, Suite 168
City : Charleston
State : West Virginia
Country : United States
Zip : 25311
Principal Contact : Cedrick Johnson, PE - President
Vendor Contact Phone: (410) 465-9600
Extension: x302

FOR INFORMATION CONTACT THE BUYER

David H Pauline
304-558-0067
david.h.pauline@wv.gov

Vendor
Signature X

FEIN# 20-431-2991

DATE 01/28/2025

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION
The West Virginia Purchasing Division, for the agency, the West Virginia Army National Guard, Construction and Facilities Management Office, is soliciting Expressions of Interest from qualified firms to provide professional design services to develop construction documents to provide for the installation of new PAPI (Precision Approach Path Indicator) lights at the Army Airfield on the Camp Dawson garrison, at Camp Dawson, near Kingwood WV, per the attached documentation.

INVOICE TO	SHIP TO
ADJUTANT GENERALS OFFICE 1707 COONSKIN DR CHARLESTON WV 25311 US	CAMP DAWSON ARMY TRAINING SITE 240 ARMY RD KINGWOOD WV 26537-1077 US

Line	Comm Ln Desc	Qty	Unit Issue
1	Camp Dawson Army Airfield PAPI Lights Installation Design		

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description:
 Provide professional architectural and engineering design services per the attached documentation.

SCHEDULE OF EVENTS		
<u>Line</u>	<u>Event</u>	<u>Event Date</u>

2

QUALIFICATIONS, EXPERIENCE, AND PAST PERFORMANCE

Introduction to ADCI



Airport Design Consultants, Inc. (ADCI) was formed in 2006 to provide planning, design, and construction management services to the air transportation industry. ADCI offers a full range of personalized, professional engineering services tailored to the size and scope of the project. Every ADCI project is led by one of the firm's principals who ensure responsive, high-quality services to our airport management partners in implementing well-planned and technically sound solutions within established budgets.

Supporting ADCI is a staff of over eighty (80) planning, design, and construction management/inspection professionals who are specialized in developing aviation infrastructure and support facilities. As Prime Consultant, ADCI will be responsible for overall project management; civil, airfield, construction management and inspection; and procurement assistance. **Services will be provided from our Charleston, WV, Blairsville, PA, and Ellicott City, MD offices.**

ADCI is pleased to present a talented and dedicated team of aviation project management, design, and construction professionals to work together with the West Virginia Army National Guard (WVARNG) to provide Airfield PAPI Lights Installation Design at Camp Dawson Army Airfield (3G5). This team has been assembled specifically because of its comprehensive expertise in all aspects required by the Centralized Expression of Interest (CEOI).

ADCI is Minority-Owned firm located in West Virginia and in close proximity to the project. We are committed to the community and the State and bringing economic development opportunities to our clients.

Local to West Virginia with an office located in **Charleston**.

18+ Years of experience delivering successful projects.

ARMY NATIONAL GUARD ★ Direct experience working at Camp Dawson Army Airfield.

80+ Dedicated aviation professionals on staff.

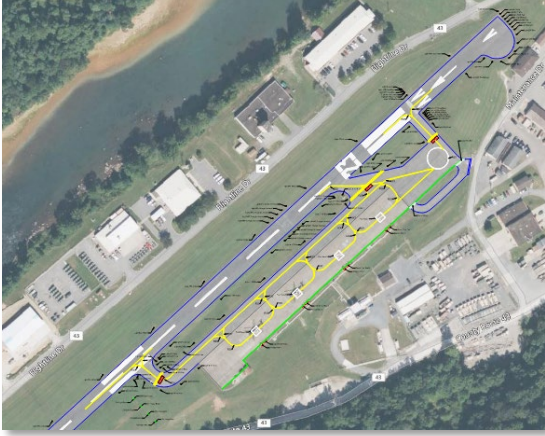
The infographic is set against a black background. It features a blue outline of West Virginia with a red pushpin in the center. The text is in white and blue. The Army National Guard logo is in yellow and black. The numbers 18+, 80+, and the star are in blue.

ADCI Experience

We have carefully selected five (5) projects that effectively highlight our extensive experience in delivering services comparable to those proposed for airports of similar size and complexity. Each project profile has been thoughtfully chosen to demonstrate our proven capabilities in managing and executing such projects with excellence. Additionally, each profile on the following pages includes a client reference, which may be contacted for further insight into ADCI's track record of success, professionalism, and commitment to delivering high-quality results. These references provide an opportunity to gain firsthand knowledge of our performance and the value we bring to each project.

Helicopter Movement and Parking Analysis

Camp Dawson Army National Guard Facility, *Preston, WV*



ADCI performed an analysis of the planned marking enhancement for Camp Dawson and whether the geometry of the proposed marking meets Federal Aviation Administration (FAA) criteria for Heliport Design (As included in FAA Advisory Circular 150/5390-2C, Heliport Design). The conclusions of the analysis were that the marking would not meet FAA criteria for taxiway separation to accommodate the design aircraft – the UH60 helicopter. In reviewing the original planned marking layout, ADCI had particular concerns over the separation of the proposed two taxiway centerlines. Based on

the calculations, this separation would only provide a five (5) foot wingtip clearance between two (2) UH-60s operating or parked on each of the parallel taxiways.

ADCI developed four (4) options to increase the separation of the two taxiway centerlines (east and west). The stakeholders chose option four from ADCI's memo, which would shift the West Taxiway centerline five (5) feet to the west (towards the runway) and shift the East Taxiway centerline five (5) feet east towards the fuel pads. This option would result in a wingtip clearance of fifteen (15) feet between two (2) UH-60s operating on each of the parallel taxiways. Although ADCI found it not possible to meet the calculated FAA requirement for wingtip clearance with dual parallel taxiways, the preferred Option improved the clearance from what was originally proposed.

Relevance

- Direct experience providing services at Camp Dawson
- FAA and Stakeholder Coordination
- Airfield Design

Reference

Client: S&S Engineers, Inc.
Contact Name: Jessie O. Parker, Jr., President/CEO
Phone: (304) 342-7168
Email: jop@s-s-eng.com

Runway 1-19 System Extension Design

Harford County Airport (0W3), *Churchville, MD*

ADCI played a pivotal role in the near-total reconstruction of the runway at Harford County Airport (0W3), which originally featured a turf runway and a non-standard paved crosswind. Since our selection



as the On-Call consultant in 2022, ADCI has designed the extension of Runway 1-19 to its current 3,353-foot length, assisted in removing tree and power pole obstructions, resited the PAPI to accommodate the runway extension, supported the acquisition of several residential parcels, and secured FAA approval for a new GPS approach. The project also introduced five (5) large box hangars, four (4) nested T-hangars, and space for multiple aviation-related businesses, significantly enhancing the airport's operational capacity, safety, and economic potential.

Relevance

- PAPI Relocation
- Airfield lighting

Reference

Client: Harford Air Services, LLC
Contact Name: Kevin Hess, President
Phone: (410) 836-2828
Email: kevin@harfordair.com

Runway 10-28 Rehabilitation with PAPI Replacement

Albany International Airport (ALB), *Albany, NY*



ADCI provided airfield design and construction management services for the Runway 10-28 and Taxiway C Rehabilitation Project at Albany International (ALB) Airport. The project was designed and bid within a six (6) month period to obtain a Federal Aviation Administration (FAA) discretionary grant. The project included the pavement rehabilitation of the full 7,700 linear feet of the crosswind runway, as well as 4,300 linear feet of the parallel Taxiway C and the various connecting taxiways.

The Program's primary goal was to improve the asphalt pavement condition of the runway, runway blast pads, parallel Taxiway C, and associated connector taxiways. In addition to the pavement rehabilitation, the project included drainage improvements on the north side of Runway 10-28 (east of Runway 1-19), electrical upgrades, and Visual Aids

(VISAIDS) improvements. The drainage improvements included providing improved flow of water out of the wing inlets on the north side of the runway to resolve existing ponding issues along the runway during storm events. The runway centerline lights were removed and reinstalled for the milling and paving operations.

Additionally, ADCI's responsibilities included the design of asphalt milling, crack remediation, runway/taxiway resurfacing, blast pads rehabilitation, pavement grooving, drainage upgrades, centerline lighting improvements, Runway 28 Precision Approach Path Indicator (PAPI) replacement, Runway 28 Runway End Identifier Light (REIL) replacement, and pavement markings. One of the key elements was the construction safety and phasing plan (CSPP), which identified the appropriate construction staging and sequence requirements to maximize work safety and airport operations. Project plans, specifications and other supporting bid documents were prepared in accordance with Authority, Federal Aviation Administration (FAA), and New York State Department of Transportation (NYSDOT) standards. Design tasks were expedited and completed in less than three months to meet aggressive funding constraints.

The ADCI team also provided bidding assistance, grant administration, and construction management and inspection (CMI) services for the runway rehabilitation. The team coordinated with the airport to plan an extended closure of the runway in September 2022 so that all milling, paving, and temporary markings for the rehabilitation could be accomplished in one week (7 calendar days). All work was completed within the specified timeframe and the runway reopened to air traffic as planned. Installation of the new centerline lights, navigational aids, and Taxiway C rehabilitation was completed in Spring 2023.

Relevance

- PAPI Replacement
- Airfield Electrical Design
- Runway Rehabilitation
- FAA and Stakeholder Coordination

Reference

Client: Albany County Airport Authority (ACAA)

Contact Name: John LaClair, PE, Chief Engineer

Phone: (518) 453-8764

Email: jlaclair@albanyairport.com



Runway 15-33 Rehabilitation with PAPI Relocation

Martin State Airport (MTN), *Middle River, MD*

ADCI provided Civil Engineering and Construction Administration services for this fast-track project, which leveraged a \$32 million grant from the Department of Defense to rehabilitate Runway 15-33 at MTN. **This project was vital in supporting the Maryland Air National Guard (MDANG) operations by improving the runway's infrastructure to accommodate larger military aircraft in the future.**



As part of the ongoing Phase 2 of the project, which is currently in the planning stages at 30% design, ADCI is undertaking a critical upgrade to the airfield lighting and navigational systems. This involves replacing the outdated Pulse Light Approach Slope Indicator (PLASI) systems (see picture to the left) located on both ends of the runway with more modern Precision Approach Path Indicator (PAPI) systems. The new PAPI systems will

enhance the accuracy and reliability of visual glide path information for pilots during landing, ensuring compliance with current aviation standards and improving overall safety and efficiency for airport operations. Additionally, all navigational aids (NAVAIDs) will be relocated to accommodate the new configuration of the runway.

During Phase 1 of the project, the team participated in several planning studies to develop a phased approach to achieve an eventual extension of the runway to provide the necessary length for continued military operations. The first phase was to rehabilitate the full length of the runway pavement, which had not been rehabilitated in over twenty (20) years, while addressing several standards deficiencies to ensure safer and more efficient operations. ADCI served as the overall Program Manager for the project and also provided comprehensive civil design services for the runway rehabilitation. The design scope included pavement design, geometric design of connecting taxiways, grading and drainage plans, pavement markings, and coordination with electrical design to provide new LED runway elevated edge lights and airfield signs and a new ductbank to the airfield lighting vault. The connecting taxiway to the MDANG apron was reconstructed in concrete to provide added pavement strength for the military aircraft. ADCI developed a construction phasing plan in coordination with airport stakeholders which included a 21-day full runway closure to perform the final lifts of paving and ensure the highest quality construction on the runway.



The ADCI team provided support during construction by closely coordinating with airport stakeholders, managing project budget and schedule, reviewing submittals, responding to requests for information, and settling concerns which arose in the field. ADCI also provided an experienced civil construction inspector to support the Construction Management and Inspection team during paving operations. During the 21-day closure, frequent coordination calls and site visits were held to ensure that all issues were resolved quickly to maintain construction progress. Due to the diligent work of the construction team, the runway was reopened on time without incident. This project greatly enhanced the current operations at MTN and is a critical step toward the eventual runway extension to further support military mission requirements.

Relevance

- PAPI / NAVAID Relocation
- Airfield Electrical Design
- Maryland Air National Guard (MANG) Experience
- Runway Rehabilitation
- FAA and Stakeholder Coordination

Reference

Client: Maryland Aviation Administration (MAA)
Contact Name: Paul Shank, PE, CM, Chief Engineer
Phone: (410) 859-7061
Email: pshank@bwiairport.com

Taxiway E Reconstruction and Extension

Eastern West Virginia Regional Airport (MRB), Martinsburg, WV



This project includes the design of the Reconstruction and Extension of Taxiway E. Taxiway E is a partial parallel taxiway on the south side of Runway 8-26. The only full-length parallel taxiway of Runway 8-26 is Taxiway A, which is on the **West Virginia Air National Guard (WVARNG)** side of the Airfield. Currently, for civilian aircraft to access the ends of Runway 8-26, they either have to back-taxi down the runway, or cross over the runway to utilize Taxiway A. A full-length Taxiway on the civilian side of the airfield will eliminate the need for back

taxiing on the Runway and allow civilian aircraft to taxi, and queue as needed, without inhibiting WVARNG operations. ADCI has aided the Eastern West Virginia Airport Authority (EWVAA) for securing a Federal Earmark and satisfying the requirements of the Federal Aviation Administration (FAA) including airspace approval; airport layout plan pen and ink update; environmental assessment and permitting. Currently, ADCI is designing Phase I of the program that entails reconstruction and strengthening of the existing portion of Taxiway E. It is slated to be advertised for bid in Spring 2025. Concurrently, ADCI is performing a preliminary design of the three subsequent phases of the extension of Taxiway E.

Relevance

- Direct experience working for the West Virginia Army National Guard (WVARNG)
- Airfield lighting
- Coordination with FAA Beckley ADO

Reference

Client: Eastern West Virginia Airport Authority (EWVAA)

Contact Name: William Walkup,
Airport Operations & Maintenance
Manager

Phone: (304) 263-2106

Email: wwalkup@flymrb.com



Goals and Objectives

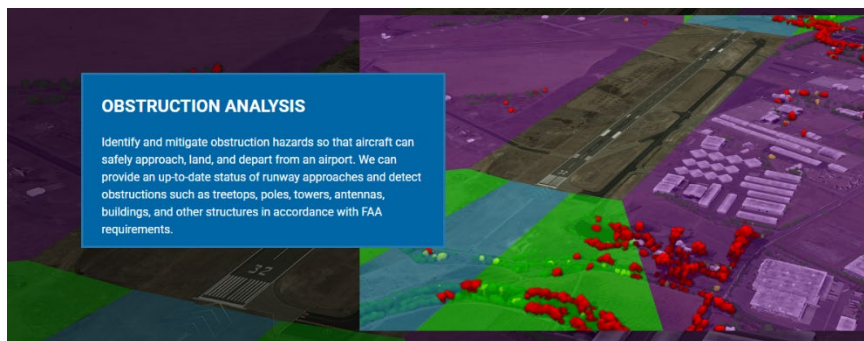
ADCI has reviewed the Goals and Objectives for the project, presented in Section 3.2 of the Centralized Expression of Interest (CEOI). Below, we have summarized how ADCI will achieve each of the four (4) goals identified.

2.1. Complete Design and Testing

ADCI will deliver comprehensive design services encompassing all engineering disciplines, along with their supervision, to develop construction bid documents for West Virginia State Purchasing. Additionally, ADCI will conduct thorough testing of all existing Precision Approach Path Indicator (PAPI) light-related systems, including electrical systems, wiring, grounding, and transformers, to verify their functionality. Systems requiring replacement or repair will be designed and documented by ADCI.

2.2. Survey

ADCI has brought on our reliable, Subject Matter Expert (SME), NV5 Geospatial (NV5), to perform Topographic, Obstacle Clearance Surface (OCS) and PAPI Light Signal Clearance Surface (LSCS) surveys. **NV5 is a trusted partner of the Federal Aviation Administration (FAA) in performing Airports Geographic Information Systems (AGIS) surveys.**



NV5 supports over 100 airport projects annually, with airport base mapping and obstruction analysis. Daily, their airport focused team builds obstruction surfaces and analyzes obstacles using the specifications of Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5300-18B, AC 150/5300-13B, Part 77, PAPI OCS/LSCS, and other airport specific surfaces. Their projects range from small one (1) runway airports to some of the largest airports in the country.

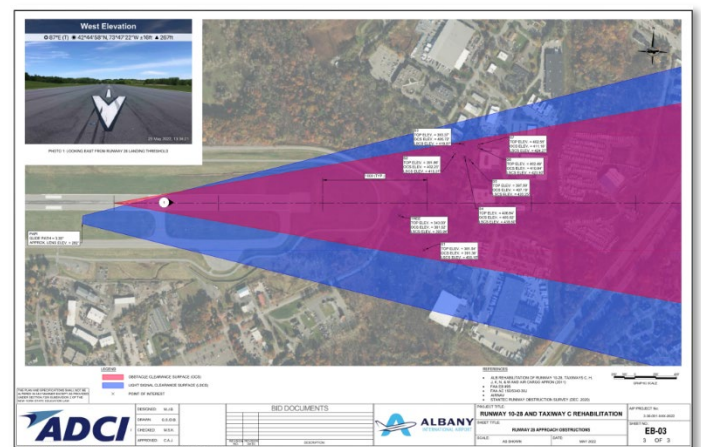
Additional services that NV5 can provide include mapping for Aeronautical Surveys, FAA Airport Data and Information Portal (ADIP) submittals, GIS solutions, Instrument Procedure Development, Master Plans, and Airport Layout Plans (ALPs). NV5 has performed these types of projects with international, regional, and local airports across the country.

In addition, NV5 supports airports with LiDAR solutions for meeting FAA Obstacle Action Plan requirements. All airports need to manage their property near the runways to eliminate safety hazards for pilots. The FAA Safety Regulations require that growth is controlled in areas of trees and shrubs surrounding airports. NV5 can provide high-resolution LiDAR data of the Airport property for obstruction information for vegetation management purposes. With over 133 airport LiDAR projects completed, NV5 has developed a defined workflow for determining the height of vegetation surrounding the airport and evaluating that information with the protected airspace in a cost-effective manner.

2.3. Drawings and Specifications

ADCI will follow a structured approach for the design submittals to ensure clear communication and alignment with project goals, timelines, and budget. The submission process will be broken down into two (2) major milestones:

- (1) **35% Design Submittal.** At this stage, ADCI will provide preliminary design drawings and specifications for the PAPI system. These will include conceptual layouts, basic system requirements, and proposed installation locations. The goal is to establish the general approach and receive early feedback from stakeholders, including CMFO, regulatory authorities, engineers, and Airport representatives.



A preliminary cost estimate will be submitted with the 35% design. This estimate will include the initial material, labor, and equipment costs, but will be subject to revision as the design progresses. The estimate will provide an early understanding of the project's budget, identifying any major cost drivers and areas that may require further review.

- (2) **100% Design Submittal:** The final, complete set of design drawings and specifications will be submitted at this stage. These will include detailed plans, specifications, and calculations for the PAPI system, ensuring all components meet the necessary operational, safety, and regulatory standards. This submittal will be the basis for construction and implementation.

A final, revised cost estimate will accompany the 100% design submission. This updated estimate will reflect any changes or refinements made during the design process, ensuring the final budget is accurate and aligned with the detailed scope of work. The estimate will account for all construction-related costs, including materials, labor, and any unforeseen adjustments.

2.4. Construction Bid and Administrative Services.

ADCI will work as a member of a team to advertise the project for competitive bidding. Each phase of the project will need to be scoped and phased commensurate with funding. This Project will be bid through *West Virginia Oasis* and administered by the West Virginia Army National Guard (WVARNG), however ADCI will assist in preparing appropriate responses to bid questions and clarifications. ADCI will also be responsible to generate addenda, facilitate and document the pre-bid meeting, ensure responsible and responsive bids, and provide an engineering report that summarizes findings and provides a recommendation.

It is expected that construction administration services will include general project management and construction coordination, attending pre-construction and pre-phase meetings, submittal/shop drawing reviews, responding to Requests for Information (RFIs), reviewing contractor pay applications, permit coordination assistance, attendance at progress meetings, construction site visits, substantial and final completion inspections, and preparing record documents in AutoCAD Civil 3D.



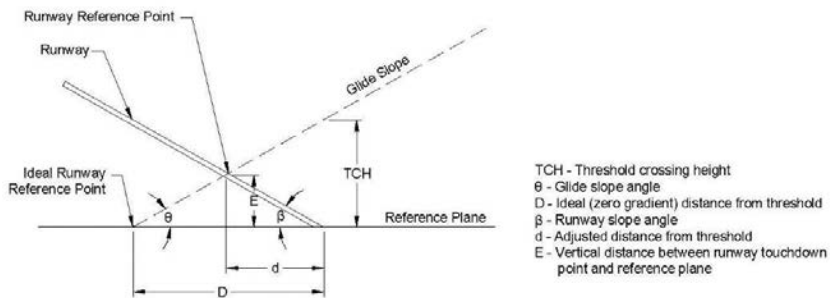
We have identified Mara Thompson, PE to provide Construction Administration services for this project. **Mara is a West Virginia native who brings over a decade of experience. Mara is located in our Charleston, WV office, and maintains strong relationships with the Federal Aviation Administration (FAA) Beckley Airports District Office (ADO).** She has a background and familiarity working with local utility companies to coordinate and plan out resources for various projects throughout West Virginia. Part of her experience and skills include project management for Capital Improvement Projects (CIP)

through managing project priority, funding, and budgets; as well as permit coordination, submittals, and change requests. Mara's local knowledge, stakeholder relationships, and local presence make her a valuable and dependable member of the ADCI team to ensure project success.

Project Approach

This Project is for the design and installation of new FAA L-880 Precision Approach Path Indicator (PAPI) System that has already been procured by the CFMO. This system enhances safety by providing beneficial visual approach slope guidance to assist the pilot of an aircraft in flying a stabilized approach. The system has an effective visual range of approximately 5 miles during the day and up to 20 miles at night. The presence of objects in the approach area may present a serious hazard if an aircraft descends below the normal path. This is especially true where sources of visual reference information are lacking or deceptive: i.e., hilltops, valleys, terrain grades, and remote airports. The PAPI assists the pilot in maintaining a safe distance above hazardous objects. The visual aiming point obtained with the PAPI reduces the probability of undershoots or overshoots. Pursuant to UFC 3-535-01, the standard installation for DOD facilities is the L-880 4-box PAPI system. These PAPI's can also be used for mitigating obstruction penetrations to the established Approach-Departure Clearance Surface (ADCS) Slope as defined in UFC 3-260-01. FAA AC 150/5340-30 design standards for PAPI installation,

stipulate that the nominal glide path angle is 3°; for non-jet runways, and the glide path may be raised to a 4° maximum to provide obstacle clearance. Since there is no anticipated based jet activity at 3G5, the PAPI glide path angle could be increased to the 4° maximum.



Advisory Circular 150/5340-30 Design and Installation Details for Airport Visual Aids. PAPI placement is a function of three variables: 1) Threshold Crossing Height; 2) Glide Slope angle; and 3) Approximate runway centerline slope angle between the threshold and the 1000'

The placement of the Type L-880 (4 Box) PAPI's are determined in accordance with AC 150/5345-28G Precision Approach Path Indicator System. The PAPI will be sited in accordance with FAA

point. The distance that the PAPI is placed from the runway threshold is calculated trigonometrically. Given the standard 40-foot threshold crossing heights and 3° glide slope angle, along with the centerline elevation of the runway threshold and the 1000' point for each runway, PAPI placement is determined by inserting these values into the equations. The standard for placement of the PAPI System is to provide light units that project the visual signal towards an approaching aircraft with the innermost light unit located 50 ft. (15 m) from the left runway edge. The light units are installed in a line perpendicular to the runway edge. Each light unit emits a two-color (red and white) light beam. When the light units are properly aimed, the optical system provides visual approach slope information. Where terrain, intersecting runways, or taxiways make an installation on the left side of the runway impractical, the light housing units may be located on the right side of the runway. In the case 3G5 a standard installation is anticipated.

As requested in the CEOI, Phase 1 of the contract award will be for the Type A (Investigative Services) and Type B (Design) Services. Phase 2 of the contract award will be for the Type C (Construction Administration- SIOH) services. To accomplish the Project, ADCI will follow a systematic approach using the following seven (7) steps.

Phase 1 – Type A (Investigative Services) and Type B (Design) Services

Step 1 | Pre-Scope Meeting

ADCI will visit Camp Dawson Army Airfield (3G5) for a scoping charrette with the WVARNG and selected stakeholders to understand the Airport's objectives and any known constraints so that a detailed scope of work can be formalized. Expected talking points include funding expectations, permissible operational impacts, required schedules, technical criteria, and potential permitting/environmental concerns. ADCI would then finalize a scope for preliminary engineering that would cover the full scope "wish list" along with an order of magnitude cost and program schedule to compare various paths forward for final design. ADCI is committed to meeting the WVARNG's schedule from design Notice to Proceed (NTP) through construction completion and project closeout. Our team will develop and maintain a detailed schedule of the design, permitting, bid/award and construction phases and include key milestone dates for the project deliverables, permit approvals, and construction phasing.

The projected total design time is kept to a minimum with an emphasis on early permit coordination and timely review submittals. Agency pre-design coordination meetings are also included for early introductions of project scope to the various local and regional governmental offices.

Step 2 | Survey (Investigative Services)

Using data provided by WVARNG, Our Subject Matter Expert (SME) Subconsultant, NV5 will generate imaginary surfaces for the Precision Approach Path Indicator (PAPI), Obstacle Clearance Surface (OCS) and Light Signal Clearance Surface (LSCS). The lowest on-course aiming angle will be projected in the approach zone at one degree less, per Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5240-30J. All features that penetrate each of the surfaces will be extracted. Any features that fall within ten (10) feet of the surface (to account for tree growth) are compiled and included in the reports. These comprehensive reports are used to identify features that violate the obstacle clearance surface at the proposed location and aid in determining the ultimate location and aiming angle of the light array. **This process ensures optimal safety and efficiency in the placement and operation of the PAPI system.**

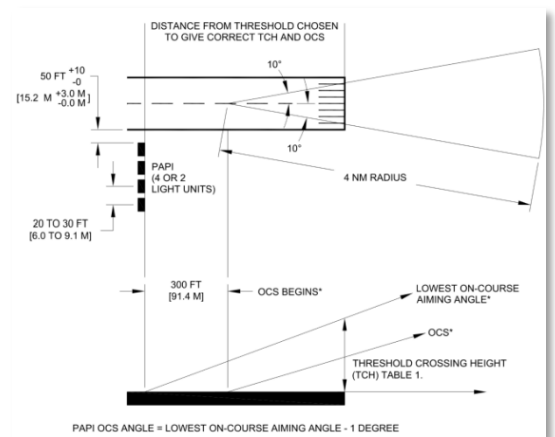
Step 3 | Design

ADCI will execute a preliminary design of the full project scope for schematic design (35%) based on the technical criteria (UFC 3-260-01, Airfield and Heliport Planning and Design; UFC 3-535-01, Visual Air Navigation Facilities) and the outcome of Steps 1 and 2. The 35% submission will solidify the project scope, identify areas of concern and recommend the number of construction packages. This preliminary submission will include an Engineer's Report (with discussions of options), key plan sheets and a cost estimate.

Step 4 | Stakeholder Coordination

ADCI will facilitate regular coordination meetings with stakeholders throughout the process. Any airfield closures or interruptions in airfield lighting/NAVAIDS systems will be communicated to stakeholders well in advance. The coordination efforts will begin upon execution of the contract.

Step 5 | Final Design



After the 35% submission has been reviewed and a path forward been agreed to by the WVARNG, the ADCI team will move into final design. A thorough QA review will be performed prior to bid to ensure the documents comply with the detailed scope of work and our internal ADCI Design Manual.

Step 6 | Bidding Services

ADCI will assist in bidding as deemed appropriate by the WVARNG. We will be at the WVARNG's disposal to answer any questions. ADCI will provide the following services during the bidding phase: develop the notice to bidders, upload bid documents to the owner's selected clearing house for perspective bidders to access, prepare for and attend one pre-bid meeting on-site, record all questions (verbal and written) generated during the pre-bid meeting as well as those received in writing prior to the cut-off date, prepare and issue addenda to all prospective bidders, attend bid opening, and check all bids for completeness and responsiveness, tabulate all received bids and recommend for award the lowest, most responsive bid.



Phase 2 – Type C (Construction Administration- SIOH) Services

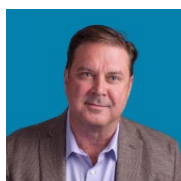
Step 7 | Construction Administration (CA)

ADCI will provide construction administration services at the Owner's discretion. ADCI can provide overall management of Construction effort to include general written correspondence. Correspondence is generally provided with the agencies, and Contractor regarding quality, progress, change orders, measurement, payment and quantities. Services can also include the review of weekly certified payrolls submitted by the Contractor. Utilizing the Construction Schedules provided by the Construction Contractor, ADCI can review the update of the Project construction schedule incorporating the activities of the Contractors and Subcontractors on the Project, including activity sequences and durations, allocation of labor and materials, processing of Shop Drawings, Product Data and Samples, and delivery of products requiring long lead time and procurement. The Project construction schedule shall include phasing and occupancy requirements showing portions of the Project having occupancy priority. ADCI can review the Contractor's update of the Project construction schedule as required to show current conditions and if an update indicates that the previously approved Project construction schedule may not be met, ADCI can recommend corrective actions.

If so desired, ADCI can provide a full or part-time Resident Project Representative (RPR) and conduct regularly scheduled progress meetings with the agencies, Contractor, RPR, and other affected parties/agencies to discuss such matters as procedures, progress and scheduling. ADCI can prepare and provide interested parties with meeting minutes after each progress meeting. Track old business and action items and prepare notes for use as an agenda for next meeting. If necessary, ADCI can visit the Airport at additional times to review construction questions/problems. The purpose of ADCI's visits to and representation by the Resident Project Representative (and assistants, if any) at the site will be to enable us to better carry out the duties and responsibilities assigned to and undertaken by ADCI during the Construction Phase, and, in addition, by exercise of ADCI's efforts as an experienced and qualified design professionals, to provide the agencies a greater degree of confidence that the completed work of Contractor(s) will conform generally to the Contract Documents and that the integrity of the design concept as reflected in the Contract Documents has been implemented and preserved by Contractor(s).

Key Personnel Available

We have provided detailed resumes in our proposal for the Key Personnel identified below.



Mike Waibel | Project Principal

- Familiarity with 3G5 through experience working on the Helicopter Movement and Parking Analysis project.
- Extensive experience with airfield lighting siting/design.
- Experience at seven (7) West Virginia airfields.



Vince DeCario, PE | Project Manager

- Over twenty (20) years of aviation engineering experience, including the design and implementation of PAPI systems at airports and military airfields.
- Skilled in coordinating PAPI design projects, working with stakeholders to ensure compliance with standards and regulations.



Ron Morris, PE, CM | Quality Assurance Quality Control (QA/QC)

- Over three (3) decades of experience in planning, design and construction management for airport projects across the Northeast US, with a focus on FAA standards and regulations.
- Proficient in Navigational Aid (NAVAID) Design, including expertise in PAPI systems.



Chuck Dennie, PE, LC, LEED AP | Airfield Electrical Design Lead

- Led PAPI system design and implementation, ensuring compliance and integration with airfield lighting.
- Applied pertinent specifications to optimize PAPI systems for improved pilot guidance and safety.
- Collaborated on PAPI installation, testing, and commissioning to enhance airfield operations.



Mara Thompson, PE | Construction Administration

- West Virginia native with experience managing projects at West Virginia airports (CRW, MRB, and SXL).
- Strong relationships with local utility companies for project coordination across West Virginia.
- Expertise in project management, including budgeting, permits, and stakeholder engagement, with a focus on local needs.

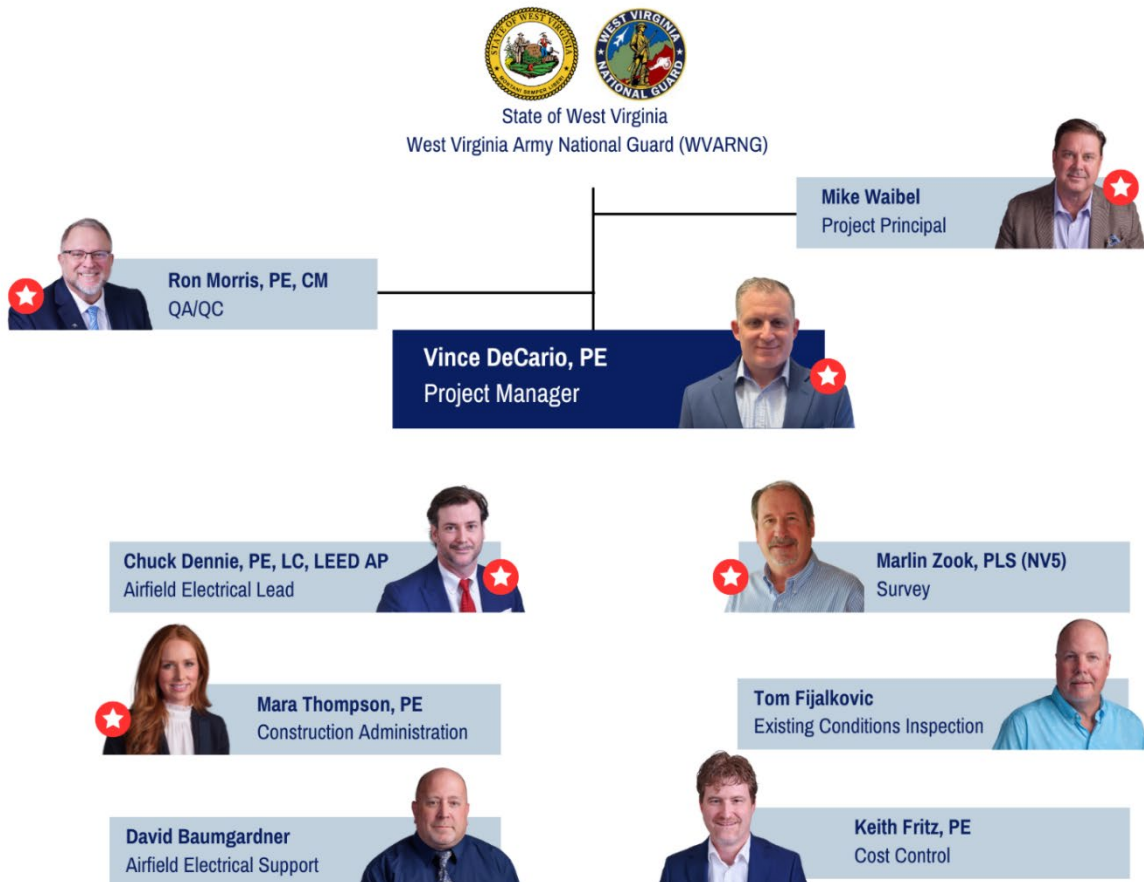


Marlin Zook, PLS | Survey

- Oversees the photogrammetric processes, including aerial triangulation, orthoimagery, and mapping.
- Extensive airport survey experience, including Obstacle Clearance Surface (OCS) and PAPI Light Signal Clearance Surface (LSCS) survey.
- Experience with FAA AC 150/5300-16A, -17B, and -18B training and contributed to 700+ 18B AGIS projects.

Project Organization

The proposed project Organizational Chart is below, detailed resumes for all Key Personnel proposed will follow this page.



Key Staff, Resume Included



Mike Waibel

Project Principal



Years of Experience

Total: 36

With ADCI: 2.5

Education

B.A., Geography and Environmental Planning,
Towson University

M.A., Geography and Environmental Planning,
Towson University

Professional Licenses & Certifications

Cartographer

Value to the Contract

Previous experience at Camp Dawson Army Airfield.

A trusted resource to deliver quality while maintaining project scope, schedule, and budget expectations.

An industry leader focused on general aviation and non-hub airports and client satisfaction.

Reconstruction and Extension, which is a partial parallel taxiway to Runway 8-26. The reconstruction and extension of Taxiway E will allow for civilian aircraft to access the runway, without impacting the West Virginia Air National Guard (WVANG). Mike has developed a strong relationship and has been working with MRB Airport since 2017.

Construction Management and Inspection Airfield Lighting Rehabilitation. Mike was the **Project Manager**, and he oversaw all aspects of the management of this project including: scope development, contract document development, client management, invoicing, and bidding.

Construction Management and Inspection for West Virginia Air National Guard (WVANG) LZ Lighting. Mike was the **Project Manager** the siting design and installation of in-pavement marking and lighting to simulate a Landing Zone within the confines of the Runway 8-26 pavement.

Marshall University Aviation Department | *Huntington, WV*

Flight School Hangar and Aircraft Parking Apron Development. As **Planning Lead**, Mike is currently overseeing all aspects of the ongoing programming effort for the development of a second flight school hangar and classroom facility. The facility will include a 30,000 square-foot hangar and adjacent support facilities to accommodate a growing demand by a local university's Division of Aviation.

Harford County Airport (0W3) | *Churchville, MD*

Runway 1-19 System Extension Design. Mike is the **Project Manager** and ADCI designed the extension of Runway 1-19 to its current 3,353-foot length, assisted in removing tree and power pole obstructions, re-sited the Precision Approach Path Indicator (PAPI) to accommodate the runway extension, supported the acquisition of several residential parcels, and secured FAA approval for a new GPS approach. The project also introduced five (5) large box hangars, four (4) nested T-hangars, and space for multiple aviation-related businesses, significantly enhancing the airport's operational capacity, safety, and economic potential.

Overview

Mike has over three (3) decades of experience in the planning, design, and construction management of improvements at seventy (70) airports nationwide. **Mike has previously worked at Camp Dawson Army Airfield.** Mike has authored over ten (10) Master Plans and updated over fifteen (15) Airport Layout Plans (ALPs) and has provided airfield planning and design solutions for a wide variety of airports, including many in the West Virginia region. His expertise includes environmental assessment, runway length analysis, obstruction analysis, airfield condition assessment, forecasting, Air Traffic Control Tower (ATCT) siting, NAVAIDs, benefit/cost analysis, federal and local funding procedures, and land acquisition.

Camp Dawson Army National Guard Facility | *Preston, WV*

Helicopter Movement and Parking Analysis. ADCI performed an analysis of the planned marking enhancement for Camp Dawson and whether the geometry of the proposed marking meets Federal Aviation Administration (FAA) criteria for Heliport Design (As included in FAA Advisory Circular 150/5390-2C, Heliport Design). ADCI developed four (4) options to increase the separation of the two taxiway centerlines (east and west).

West Virginia International Yeager Airport (CRW) | *Charleston, WV*

West Virginia Army National Guard (WVANG) Apron Expansion. Mike was the **Project Planner** for the expansion of the WVARNG Apron at CRW. ADCI's scope of work included rerouting utilities and installing an underground deicing tank to enhance operational efficiency and environmental compliance. Mike provided coordination between WVANG and CRW.

On-Call Airport Engineering Services. In his role as **Task Manager/Planning Lead**, Mike also reviewed the planning study for a new terminal at CRW. Mike ensured plans were in conformance with state and FAA standards. Mike also reviewed cost estimates for the program's application for funding under the Airport Terminal Program funds as part of the Bipartisan Infrastructure Law (BIL).

Eastern West Virginia Regional Airport (MRB) | *Martinsburg, WV*

On-Call Architectural/Engineering Consulting Services. ADCI is providing services to MRB under the current five-year on-call contract. As **Project Manager**, Mike has managed multiple projects including Taxiway E Reconstruction and Extension; Corporate Hangar Development Assistance; and the Airport Capital Improvement Program (ACIP) Update. The new 3,600 square foot Corporate Hangar Development included a pen and ink update to the current ALP, FAA airspace approval, and an FAA Categorical Exclusion document to satisfy the FAA's NEPA requirements. Mike is leading the Taxiway E



Vince DeCario, PE

Project Manager



Years of Experience

Total: 20

With ADCI: 1

Education

B.S., Civil Engineering
Technology, University
of Pittsburgh at
Johnstown

Professional Licenses & Certifications

Professional Engineer
Pennsylvania
License [REDACTED]

OSHA-10 Certified

Value to the Contract

Over twenty (20) years
of experience in Airport
Development including
Planning, Design,
Environmental, and
Construction
Management throughout
the Mid-Atlantic Region.

Knowledgeable in the
Unified Facilities Criteria
(UFC) for Airfield and
Heliport Planning and
Design.

Overview

Vince has over twenty (20) years of aviation engineering experience and has implemented all phases of airport development, both airside and landside, including planning, design, environmental, bidding and construction management. He is skilled in coordinating large and small projects with stakeholders and providing management and guidance. Along with his deep understanding of Federal Aviation Administration (FAA) standards and regulations, Vince is also knowledgeable in the Unified Facilities Criteria (UFC) for Airfield and Heliport Planning and Design, demonstrated through his completion of a PAPI design project at Dover Air Force Base. Located in ADCI's Blairsville, PA Office, Vince is within two (2) hours of Camp Dawson Army Airfield.

Dover Air Force Base (DOV) | Dover, DE

Runway 14 PAPI Installation. As **Project Manager**, Vince played a pivotal role in the comprehensive design of a new Precision Approach Path Indicator (PAPI) system for Runway 14, replacing the temporary system previously in use. He ensured the design adhered to the Unified Facilities Criteria (UFC) by optimizing the placement, orientation, and light angle for accurate approach guidance for pilots during landing. The scope of work included the following elements: 4-box PAPI, new PAPI foundations, new regulator, installation of conduit, cabling, and grounding, as well as upgrades to the existing electrical vault to accommodate the new PAPI circuit, ensuring seamless operation and compliance with safety standards.

Taxilane A Light Replacement. As **Project Engineer**, Vince was responsible for the comprehensive design and replacement of the Taxilane A edge lighting system between parking spots K and W, ensuring compliance with Unified Facilities Criteria (UFC) and operational efficiency. This included the complete removal of the outdated and inefficient lighting system, and the design and installation of a completely new infrastructure. The new system encompassed the installation of regulators, conduit, electrical cabling, grounding systems, and base-mounted airfield edge lights, all designed to enhance the safety and functionality of the airfield. Additionally, the project required upgrades to the existing electrical vault, which were crucial to accommodate and support the new lighting circuit. Vince ensured that the upgrades were seamlessly integrated with the airfield's existing infrastructure, resulting in a reliable, efficient lighting system that would improve visibility and operational safety. His attention to detail and leadership throughout the project guaranteed that the new system would meet all necessary standards, support continuous airfield operations, and provide long-term durability and reliability.

Williamsport Regional Airport (IPT) | Montoursville, PA

Runway 12-30 Rehabilitation with PAPI Replacement. Vince was the **Project Manager** at IPT overseeing the successful completion of a multimillion-dollar runway rehabilitation project, which also involved the removal and replacement of the existing voltage-driven PAPI units at both the Runway 12 and Runway 30 Ends. The project, meticulously designed to adhere to FAA standards, included not only the installation of the new LED PAPI systems but also the construction of new foundations, new regulator, the addition of a pilot radio control box, and the installation of necessary conduit, cable, and counterpoise. Under Vince's leadership, the project was executed efficiently and in full compliance with FAA regulations, including the coordination of a successful flight check with the FAA. These efforts ultimately enhanced the safety and reliability of visual glide path information, providing pilots with improved guidance during landing.

Somerset County Airport (2G9) | Somerset, PA

Runway and Taxiway Extension with Lighting and PAPI Replacement. Vince was the **Construction Manager**, leading the successful completion of a multi-year project that involved extending the runway and parallel taxiway, as well as removing and replacing the 4-box PAPI units at the Runway 7 End. Designed with strict adherence to FAA standards, the project included the installation of new PAPI systems, new foundations, new regulator, a pilot radio control box, and the required conduit, cable, and counterpoise. Under Vince's leadership, the project was executed successfully in full compliance with FAA regulations, including the coordination of a successful flight check with the FAA to ensure all systems were functioning properly. These upgrades greatly improved the accuracy and reliability of visual glide path information for pilots landing on Runway 7.



Ron Morris, PE, CM

Quality Assurance/Quality Control (QA/QC)



Years of Experience

Total: 32
With ADCI: 2

Education

B.S., Structural
Engineering, Penn State
University

A.A.S., Architectural
Engineering, Delaware
Tech

Professional Licenses & Certifications

Professional Engineer
Virginia
License [REDACTED];
Also licensed in 6 other
States.

AAAE, Certified Member

OSHA-10 Hour Certified

Student Pilot / FF-
[REDACTED]

FAA Academy
Certification – NAVAIDS
and Lighting

Military Service

Department of the
United States Army,
Army National Guard
(ANG) Infantryman;
Scout / Sniper
1988-1996

Value to the Contract

Over thirty (30) years of
experience in Airport
Planning, Environmental,
Civil Engineering, and
Construction
Management throughout
the US.

Overview

Ron brings over three (3) decades of experience to the ADCI team. Ron has extensive experience in planning, design, program management, and construction management for dozens of airport projects throughout the Northeast US. In addition to his impressive knowledge of Federal Government and Federal Aviation Administration (FAA) standards and regulations, Ron is also familiar with Unified Facilities Criteria (UFC) for Airfield and Heliport Planning and Design and regarding your particular needs the Design Drawings for Visual Air Navigation Facilities. His comprehensive background gives Ron the ability to understand quickly and fully how all the pieces must fit together for successful project implementation. He is well versed in FAA Navigational Aid (NAVAID) Design, Rigid and Flexible Iterative Elastic Layer Design (FAARFIELD) pavement design software and airfield Pavement Management Program (PMP) process.

Martin State Airport (MTN) | Middle River, MD

Runway 15-33 Rehabilitation with PAPI Replacement. Ron was the QA/QC reviewing the design associated with the rehabilitation and reconstruction of Runway 15-33. The Airport is a Joint Use facility and home to the Maryland Air National Guard's 175th Wing where they base A-10C aircraft. Main project elements included the re-grading of existing RSA, the excavation and stockpiling of excess material, the installation of new storm drain and other drainage structures, the removal/modification of existing trench drains, pavement removal, and sediment and erosion control during construction. Phase 2 of the Runway 15-33 Rehabilitation includes replacing the outdated Pulse Light Approach Slope Indicator (PLASI) systems with modern Precision Approach Path Indicator (PAPI) systems, which will enhance the accuracy and reliability of visual glide path information for pilots during landing.

Albany International Airport (ALB) | Albany, NY

Runway 10-28 and Taxiway C Rehabilitation with PAPI Relocation. As QA/QC, Ron provided QA/QC review of the PAPI design, including final aiming angles and obstacle clearance mitigation. These services include the review of plans, Design Engineer's Report, and project specifications to ensure that the design followed Federal Aviation Administration (FAA) regulations.

Harrisburg International Airport (MDT) | Middletown, PA

Air Cargo Apron Rehabilitation. Ron was the **Project Manager** responsible for project administration, project budgeting, scheduling, staffing, meeting and coordinating with clients/public agencies, sub-consultant coordination, preparation of deliverables, topographical surveying, project research and overall design of the existing 50-year-old Portland Cement Concrete (PCC) apron pavement on the location of the former Olmsted Air Force Base, which was closed in 1969. The Airport is home to the Pennsylvania Air National Guard facility, where the 193d Special Operations Wing currently operates Lockheed Martin MC-130J Commando Solo II aircraft at the field. The project included construction phasing and safety, concrete joint repair details, concrete spall repair details for partial and full-depth replacement, full depth slab replacements, drainage structure repair details, pavement markings, quantities/cost estimates, and specifications/engineering report preparation.

Dover Air Force Base (DOV) | Dover, DE

Taxiway C Pavement Repairs. Ron was the **Senior Engineer** for the repair of Taxiway C at DOV, under the operational control of Air Mobility Command (AMC), which is home to the 436th Airlift Wing and is the busiest and largest air freight terminal in the Department of Defense. Rons' work on this Project included design reconstruction of the existing pavement to accommodate the increased operations and loads of the based C-5 aircraft.

Sussex County Airport (GED) | Georgetown, DE

Runway 10-28 Rehabilitation, Phase IV. Ron was the **Senior Engineer** responsible for the design and preparation of construction plans, cost estimates, construction phasing requirements, and contract time. This project included services for constructing a new ARC B-II asphalt runway, as well as the construction of new taxiways D, M and H, new edge lighting circuits, PAPI's, Runway End Identifier Lights (REIL's), Windcone and obstruction removal.



Chuck Dennie, PE, LC, LEED AP

Airfield Electrical Design Lead



Years of Experience

Total: 20
With ADCI: 2

Education

B.S., Electrical
Engineering, Drexel
University

Professional Licenses & Certifications

Professional Engineer
West Virginia
License [REDACTED]; *Also
licensed in 12 other
States.*

Lighting Certified (LC)
Professional

LEED Accredited
Professional (LEED AP)

OSHA-10 Certified

Value to the Contract

Industry expert with
extensive experience
with airfield electrical
systems and NAVAIDS.

Successfully sited PAPI
systems for non-
standard approach path
angles and runway
offsets.

Co-Author of ACRP
guidebook on LED
airfield lighting system
operation and
maintenance.

Overview

As ADCI's Electrical Practice Leader, Chuck manages and provides electrical design and construction phase services for navigational aids, instrument landing systems, airfield ground lighting, and high, medium, and low voltage power distribution systems. Chuck has extensive knowledge of Federal Aviation Administration (FAA) Advisory Circulars (AC), and FAA Orders related to approach lighting systems, visual aids, and airfield ground lighting. His knowledge of FAA standard drawings and details has led to approval and construction of many successful projects.

West Virginia International Yeager Airport (CRW) | Charleston, WV

Runway 5-23 Rehabilitation. As **Airfield Electrical Engineer**, Chuck provided electrical design support for the multi-phase design of the runway rehabilitation, that included full-depth pavement rehabilitation; runway width reduction; runway safety area (RSA) and runway lighting improvements; and addressing FAA runway geometry design standards deficiencies. The electrical scope of work included the replacement of the runway centerline lighting system with new LED style fixtures.

Martin State Airport (MTN) | Middle River, MD

Runway 15-33 Rehabilitation with PAPI Relocation. MTN Airport is undergoing the first major runway rehabilitation in over twenty (20) years, and significant updates to the airfield geometry are required to meet FAA standards. This runway features civilian threshold as well as a military run-up taxiway on the Runway 15 End. Chuck is the **Lead Airfield Electrical Engineer** for this project. As a part of Phase 1, the width of the runway was reduced from 180 feet to 150 feet, providing 15 foot shoulders on either edge. Phase 2 of the project is currently in the planning stages at 30% design, which includes upgrading the airfield lighting and navigational systems. Both Runway 15 and 33 Ends will have displaced thresholds, affecting the location of NAVAIDS. In addition to those relocations, this project includes replacing the outdated Pulse Light Approach Slope Indicator (PLASI) systems located on both ends of the runway with modern Precision Approach Path Indicator (PAPI) systems.

Albany International Airport (ALB) | Albany, NY

Runway 10-28 and Taxiway C Rehabilitation with PAPI Replacement. The Runway 10-28 and Taxiway C Rehabilitation included improvement of the asphalt pavement condition of the runway, runway blast pads, parallel Taxiway C, as well as electrical upgrades, PAPI Replacement, and Visual Aids (VISAIDS) improvements. As **Senior Electrical Engineer**, Chuck was responsible for reviewing submittals, completing the original engineering documents, and coordinating the replacement of the Runway 28 PAPI system at ALB.

Dover United States Air Force Base | Dover, DE

Runway 01-19 Repairs with PAPI Replacement. Chuck was the **Lead Electrical Engineer** for design services for the navigational aids (NAVAIDS), approach lighting systems and related electrical/lighting work associated with the rehabilitation of Runway 01-19 at Dover Air Force Base. Chuck managed the relocation of the Runway 01 Glide Slope facility, relocation of the Runway 19 Glide Slope facility, replacement of PAPI for Runway 01 and 19 with new LED equipment, modifications to Runway 01 Localizer (power feed, site upgrade, etc.), modifications to Runway 19 Localizer (new power feed, site upgrade, equipment change-out, etc.), upgrade to Existing Runway 01 ALSF2 to include interleaved circuiting for steady burn approach lights and new SFL system, new Runway 19 ALSF1 approach lighting to replace existing approach light system, and upgrades to power feeders and controls.

Hagerstown Regional Airport (HGR) | Hagerstown, MD

Runway 9-27 Edge Lighting and Signage Replacement. As **Lead Airfield Electrical Engineer**, Chuck is performing the design of the replacement of electrical features associated with the Runway 9-27 circuit. This includes converting the High-Intensity Edge Lights from incandescent to LED, as well as replacing forty-five (45) airfield guidance signs to accommodate the preferred alphanumeric taxiway nomenclature. Chuck is also performing Quality Control (QC) reviews in addition to developing the Engineering Design Report and Engineer's Cost Estimate.



Mara Thompson, PE

Construction Administration



Years of Experience

Total: 10
With ADCI: 2.5

Education

B.S. Mining Engineering,
West Virginia
University

M.S. Engineering
Management, Marshall
University

Professional Licenses & Certifications

Professional Engineer
West Virginia
License [REDACTED]

Value to the Contract

West Virginia native with
Extensive local civil
engineering experience.

Skilled in improvement
projects fostering
solutions to unforeseen
field conditions.

Overview

Mara brings experience working on design and program management contracts at several airports, including West Virginia International Yeager Airport (CRW), Eastern West Virginia Regional Airport (MRB), and working with Marshall University's Aviation Department. Mara has a background and familiarity working with local utility companies to coordinate and plan out resources for various projects throughout West Virginia. Part of her experience and skills include project management for capital improvement projects through managing project priority, funding, and budgets; as well as permit coordination, submittals, and change requests. As a West Virginia native, Mara's local knowledge and stakeholder relationships make her a valuable and dependable member of the ADCI team to ensure project success.

West Virginia International Yeager Airport (CRW) | Charleston, WV

Runway 5-23 Rehabilitation. Mara was the **Project Engineer and Construction Administration** for the multi-year pavement rehabilitation and reconstruction of CRW's primary runway. She acted as a liaison between the contractor and the Airport Authority, as well as assisted with ongoing construction management. During construction, Mara provided extensive coordination with the West Virginia Air National Guard (WVANG) On-Site Supervisor to coordinate relocation of the survey monument.

Pavement Management Plan (PMP) Program. Mara was **Project Engineer and Construction Administration** and provided on-site Program Management support at CRW. ADCI developed a Pavement Management Plan (PMP) to assist in determining the current state of the all airfield and landside pavement. The PMP was developed in accordance with FAA Standards and is used to determine airport capital improvement projects for the future of the airport. Mara assisted with pavement analysis and provided on-site inspection services for repairs on an as-needed basis.

General Aviation (GA) Apron Expansion. As **Program Manager**, Mara is a part of the on-site Program Management team that is responsible for managing all technical aspects, FAA coordination, grant administration, Construction Administration, and consultant management for Apron Development Project.

West Virginia International Yeager Airport (CRW) | Charleston, WV

West Virginia Army National Guard (WVANG) Apron Expansion. Mara is the **Project Engineer** responsible for rerouting utilities and overseeing the installation of an underground deicing fluid collection tank, a critical addition that will improve operational efficiency and environmental compliance. ADCI

conducted thorough research, compiled existing as-built drawings and reports, and provided essential project planning data.

Eastern West Virginia Regional Airport (MRB) | Martinsburg, WV

On-Call Architectural/Engineering Services. The ADCI team is providing architectural and engineering consulting services at MRB on multiple projects. As **Project Engineer**, Mara provided design support for the new 3,600 square foot Corporate Hangar Development Assistance. Currently, Mara assists with the design of the Taxiway E Reconstruction and Extension, which is a partial parallel taxiway to Runway 8-26, which will allow for civilian aircraft to access the runway, without impacting the West Virginia Air National Guard (WVANG).

Marshall University Aviation Department | Huntington, WV

Flight School Hangar and Aircraft Parking Apron Development. ADCI has partnered with Marshall University to expand their flight school operations at CRW. The project is in the beginning stages of the design of a 30,000 square foot corporate hangar to accommodate flight school aircraft. The project will also involve doubling the size of the Marshall aircraft parking apron. Mara is the **Project Engineer** and is responsible for cost estimating, design coordination, and production of the design report.

Martin State Airport (MTN) | Middle River, MD

Runway 15-33 Rehabilitation with PAPI Relocation. ADCI is serving as the Engineer of Record (EOR) for this fast-track project to leverage federal funds for the Runway 15-33 Rehabilitation at MTN. The Airport is a Joint Use facility and home to the Maryland Air National Guard's 175th Wing, where they base A-10C aircraft. Phase 1 of the project addressed the runway pavement, as well as correcting standards deficiencies and provided new airfield lighting infrastructure. Phase 2 of the project is currently in the 30% Design, which will include installing modern Precision Approach Path Indicator (PAPI) systems, to enhance visibility and safety. As **Project Engineer**, Mara is a part of the design team and is responsible for preparing design reports, technical memorandums, geometry, grading, and paving.



Marlin Zook, PLS

Survey

Years of Experience

Total: 49

With NV5: 49

Education

A.S., Civil Engineering,
Penn State University

Professional Licenses & Certifications

Professional Land
Surveyor

North Carolina, [REDACTED]

Land Surveyor
Photogrammetrist
Virginia [REDACTED]

Certificate, FAA
Integrated Distance
Learning Environment
(IDLE)

Value to the Contract

Extensive experience
with Aeronautical
Obstruction Survey.

Seasoned Professional
Land Surveyor with
nearly five (5) decades
of experience.

Overview

Marlin oversees all phases of the photogrammetric process for mapping projects including aerial triangulation, orthoimagery, planimetric mapping, feature attribution compilation, and digital edit. He is also responsible for directing the photo lab, quality control, and the survey team. Marlin's responsibilities include all in-house project planning and coordination of digital mapping, orthoimage production, and review of final delivery items to the client. He maintains the production schedule, oversees staffing assignments, and coordinates with the project manager. He has completed Integrated Distance Learning Environment (IDLE) Training in FAA AC 150/5300-16A, -17B, and -18B. Marlin has been involved in over 700 18B AGIS projects and submittals.

Palm Beach County Park (LNA) & North Palm Beach County (F45) Airports | *West Palm Beach, FL*

Airport PAPI Obstructions. As the **Production Manager**, Marlin oversaw the acquisition and processing of vertical stereo aerial photography for obstruction identification due to the replacement of PAPIs for LNA Runways 4-22, 10-28, and 16-34, as well as F45 Runways 9R-27L and 14-32. Marlin ensured compliance with Engineering Brief No.95, evaluated PAPI OCS and LCSC for each runway, and utilized the surface slopes provided in the analysis. Marlin coordinated the identification and mapping of obstruction obstacles using a Digital Mapping Camera II-140, maintaining high-quality standards and meeting project deadlines. He also managed the photogrammetric processes, including image acquisition at a nominal scale of 1"=2,662', and ensured accurate data extraction and obstacle mapping from the acquired imagery.

Tishomingo County Airport (01M) | *Belmont, MS*

Aeronautical Obstruction Survey. As the **Production Manager**, Marlin oversaw the acquisition and processing of vertical stereo digital imagery for the aeronautical obstruction survey at Tishomingo County Airport (01M). Marlin ensured compliance with Airports GIS Program policies and FAA Advisory Circulars, managing the data collection and verification process in coordination with the FAA and the National Geodetic Survey (NGS). Marlin supervised the acquisition of imagery using a Digital Mapping Camera III (DMC-III) during leaf-on conditions, ensuring accurate data extraction for limited landmark feature planimetric mapping, color digital orthophotos, and the identification and mapping of obstruction obstacles for all VG surfaces. Marlin also coordinated the production of obstruction obstacle mapping for VGRPS, VGPCS, and VGPS surfaces, maintaining high-quality standards and meeting project deadlines.

Charlotte Douglas International Airport (CLT) | *Charlotte, NC*

Aeronautical Obstruction Survey. As the **Production Manager**, Marlin oversaw the acquisition and processing of vertical stereo digital imagery for the Airport Layout Plan (ALP) Update and Aeronautical Obstruction Survey at Charlotte/Douglas International Airport (CLT). He ensured compliance with ADIP policies and standards throughout the project, managing separate mobilizations for imagery capture during leaf-off and leaf-on conditions to optimize data collection. Additionally, he coordinated with subconsultants and project teams to conduct airport airspace analysis for existing runways, while supervising the production team to maintain high-quality standards and meet project deadlines.

William H Morse State Airport (DDH) | *Bennington, VT*

Airport Space Analysis Survey. As the **Production Manager**, Marlin oversaw the acquisition and processing of vertical stereo digital imagery for the FAA Airport Airspace Analysis Survey at William H. Morse State Airport. Marlin ensured compliance with FAA Advisory Circular 150/5300-18B and FAA Policy Guidance, managed the evaluation, updating, and incorporation of Obstacle Authoritative Source (OAS) obstacle data using the FAA's Runway Airspace Management tool, and coordinated with subconsultants and project teams to cover all Airspace Analysis surfaces. Additionally, Marlin supervised the production team to maintain high-quality standards and meet project deadlines.

Proposed Subcontractors

N|V|5 NV5, founded in 1969, is one of the nation's largest and most experienced full-service geospatial firms. The company provides comprehensive aerial mapping and GIS services, including advanced photogrammetry, LiDAR, satellite, airborne imaging, and mapping solutions. NV5's client base includes airport authorities, local and regional government agencies, State and Federal entities, and many of North America's top engineering and industrial firms.

The team at NV5 comprises Certified Photogrammetrists, Lidar Specialists, Pilots, Professional Engineers, Licensed Surveyors, Image Processing Specialists, GIS Specialists, CAD Technicians, and Image Analysts. **Their extensive portfolio includes photogrammetry services for over 1,000 airport mapping projects in compliance with FAA AC 150/5300-16, -17, and -18 guidelines.** These projects range from small, single-runway airports to some of the largest and busiest airports in the United States.

NV5 continually enhances its efficiency by automating and adapting tools and procedures to align with FAA and airport-specific requirements. **Four (4) team members have completed the FAA Integrated Distance Learning Environment (IDLE) training, ensuring adherence to current FAA guidelines.** The firm's deep expertise in mapping and obstruction surveys under FAA guidelines has fostered close working relationships with the FAA and the National Geodetic Survey (NGS). This collaboration has provided a strong understanding of project durations, requirements, and review processes.

By leveraging its experience and insights into FAA and NGS review timelines, NV5 ensures the optimal scheduling of resources to maximize critical time periods for data acquisition, creation, and submission, delivering efficient and reliable solutions for airport projects.

Quality

A key emphasis of the ADCI team is QUALITY. We understand the importance of high-quality deliverables and positive interactions with project stakeholders throughout the project. These items provide a direct reflection upon our firm and our team. Deliverables not only include the materials we provide at the conclusion of each phase, but also our daily communication by e-mail and other means as well as our presentations, our punctuality with meetings, and our overall general responsiveness to the WVARNG and the various stakeholders.



For incremental submissions, quality reviews will be performed prior to each delivery of products. An essential tool in our quality review process is:

- Methods utilized determine the required scope of services to complete the assignment and minimize the necessity for changes or additional work.
- Coordination of the work effort of the various disciplines and/or subconsultants required to complete the assignments.
- Procedures/techniques utilized to ensure the accuracy and completeness of construction documents.
- Methods utilized to maintain control over costs and periodically report a realistic, detailed summary of the technical and financial status of the assignment.
- Methods used to control the quality of all deliverables, ensure accuracy and completeness, and assure that all applicable Federal, State and/or Local regulations, codes or ordinances are satisfied.
- Methods the Respondent uses to respond in a timely and accurate manner to the inquiries of the WVARNG, regulatory agencies and/or others with a legitimate interest in the project.
- Methods to assure appropriate staffing levels over the anticipated life of the assignment.

Bluebeam Revu

By reviewing and commenting on plans in Bluebeam, deliverables can be efficiently reviewed for quality assurance without the need to print or plot large plan sets, saving resources and increasing productivity. We have found that using Bluebeam for internal reviews results in several advantages. The design team can see the reviews being performed in real time and can start making edits immediately. Also, they can see a comment that may carry over to subsequent sheets. This allows the design team to be proactive and to begin revising the documents while the review is in process. Also, electronic mark-ups are easier to store, find, validate, and "re-hash" in the future if/when the need arises. The documents can be made available to clients and stakeholders upon request. As projects progress through the

6 Step BlueBeam QA/QC Review Process

- | | |
|------------|---------------|
| 1 INITIATE | 4 REVISE |
| 2 REVIEW | 5 VERIFY |
| 3 RESOLVE | 6 CERTIFIED ✓ |

various developmental stages (i.e. 35% and 100%) the quality reviews get more detailed and more in depth. The reviews evaluate several aspects of quality.



As indicated in our organizational chart, **Ron Morris, PE, CM** will lead our QA/QC process to confirm all deliverables have been reviewed for consistency and coordination. ADCI will also include an Independent Technical Review (ITR) team to perform a review of the final construction documents. This independent team will consist of one senior member from each firm that was not involved in the design development to identify any additional concerns and issues. Ron will coordinate the review from each firm. The final ITR review will

be summarized and documented. At this point minimal comments are expected. A spreadsheet will be maintained electronically summarizing and documenting the final comments and respective responses. This will be used to ensure final comments are addressed adequately and have been completed in the construction document

Cost Control

There are two (2) aspects to cost control that we as consultants have direct control over during the delivery process. They include the **design costs and the construction costs**. We constantly monitor each project element that can affect both of these to ensure neither becomes in danger of increasing beyond expectations. ADCI takes pride in our ability to manage projects and avoid cost escalations and overruns.

During design, the first effort is to gain a complete understanding of the scope of work as negotiated with WVARNG, the estimated construction budget, the site and its potential challenges, and the regulations or standards that govern the project. **Our Project Principal and Project Manager will take the lead role in discussing task assignments with WVARNG to fully understand the scope and will subsequently develop a detailed written scope of work document with associated design fees.** When engaging our Subconsultant, NV5, we will ensure that their senior level personnel are involved in their respective scope of work and fee derivation. Recently we have held kickoff meetings for price proposals with virtual Microsoft Teams meetings. We require videos to be on so there is a face-to-face nature of the call. We make sure everyone understands the scope of work and the client expectations. This is where we openly discuss challenges, pitfalls, and potential efforts which may be required to resolve a design constraint or concern.

For task assignments where the scope of the project is not clearly defined or there are multiple design alternatives being evaluated, we have suggested to our clients an initial fee approval to the 35% or preliminary design phase submission. This allows design to progress to a stage where the remaining project design scope is entirely understood, and a more accurate task proposal can be developed. This ensures there are no surprises to the design team or WVARNG on a submitted fee proposal. Site visits are an important element, along with review of as-built documents, of the fee development stage so the designers can see the project area and limits firsthand.



Closing

Since 2006, ADCI has been proud to provide clients like the WVARNG with exceptional engineering services that support its growth, safety, and operational excellence. We pride ourselves on the foundation of key strengths that drive our success and distinguish us in the industry.

Thank you for considering ADCI for the PAPI Lights Installation Design. We look forward to the opportunity to support the WVARNG's vision for the future.

3

REQUIRED FORMS AND COPIES OF STAFF CERTIFICATIONS

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Printed Name and Title) _____

(Address) _____

(Phone Number) / (Fax Number) _____

(email address) _____

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through WV OASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

(Company)

(Signature of Authorized Representative)

(Printed Name and Title of Authorized Representative) (Date)

(Phone Number) (Fax Number)

(Email Address)

Pennsylvania Professional Engineer License - Vince DeCario, PE

DISPLAY THIS CERTIFICATE PROMINENTLY • NOTIFY AGENCY WITHIN 10 DAYS OF ANY CHANGE

Commonwealth of Pennsylvania
Department of State
Bureau of Professional and Occupational Affairs
PO BOX 2649 Harrisburg PA 17105-2649

License Type
Professional Engineer
VINCENT JOHN DECARIO

License Status
Active
Initial License Date
01/17/2013

Expiration Date
09/30/2025

License Number

Arion R. Claggett
Acting Commissioner Arion R. Claggett

John P. Orlain
Signature

ALTERATION OF THIS DOCUMENT IS A CRIMINAL OFFENSE UNDER 18 P.S. § 4911

STATE BOARD FOR PROFESSIONAL ENGINEERS

23 05 32705 RONALD N MORRIS

6222 02-07-2024

MESSAGE (S) :

A LICENSEE SHALL COMPLETE A MINIMUM OF 16 PDH UNITS PER 2-YEAR RENEWAL.

A MINIMUM OF 1 PDH IN EACH BIENNIAL LICENSING TERM SHALL BE EARNED FROM PARTICIPATION IN CONTENT RELATED TO ONE OF THE FOLLOWING: ETHICS, CODE OF CONDUCT, STANDARDS OF PRACTICE OR REGULATIONS APPLICABLE TO THE PRACTICE OF ENGINEERING IN MARYLAND.

A MAXIMUM OF 8 PDH EARNED IN EXCESS OF 16 UNITS CAN BE APPLIED TO THE NEXT LICENSING TERM.

LICENSEES WHO ARE AUDITED SHALL PROVIDE WITHIN 30 DAYS OF RECEIPT OF NOTICE OF AUDIT, ALL DOCUMENTATION REQUESTED BY THE BOARD.



LICENSE * REGISTRATION * CERTIFICATION * PERMIT

STATE OF MARYLAND

MARYLAND DEPARTMENT OF LABOR

Wes Moore

Governor

Aruna Miller

Lt. Governor

Portia Wu

Secretary

STATE BOARD FOR PROFESSIONAL ENGINEERS
CERTIFIES THAT:

RONALD N MORRIS

IS AN AUTHORIZED: 05 - PROFESSIONAL ENGINEER

LIC/REG/CERT

EXPIRATION

EFFECTIVE

CONTROL NO.

[REDACTED]

02-21-2026

N/A

163

[REDACTED]

Signature of Bearer

Secretary

WHERE REQUIRED BY LAW THIS MUST BE CONSPICUOUSLY DISPLAYED IN OFFICE TO WHICH IT APPLIES

23 05 32705

6,219,084

STATE BOARD FOR PROFESSIONAL ENGINEERS
1100 N. EUTAW STREET
BALTIMORE, MD 21201

RONALD N MORRIS



		LICENSE * REGISTRATION * CERTIFICATION * PERMIT	
STATE OF MARYLAND		STATE OF MARYLAND	
DEPARTMENT OF LABOR		DEPARTMENT OF LABOR	
STATE BOARD FOR PROFESSIONAL ENGINEERS			
CERTIFIES THAT:			
RONALD N MORRIS			
IS AN AUTHORIZED: 05 - PROFESSIONAL ENGINEER			
LIC/REG/CERT	EXPIRATION	EFFECTIVE	CONTROL NO.
[REDACTED]	02-21-2026	N/A	[REDACTED]
Signature of Bearer		Secretary	

West Virginia Professional Engineer License - Chuck Dennie, PE, LC, LEED AP

Name:	CHARLES MELVIN DENNIE, III
WV Professional Engineer:	PE License Number: [REDACTED]
	PE License Status: Active
	PE Issue Date: 03/29/2019
	PE Expiration Date: 12/31/2026

West Virginia Professional Engineer License - Mara Thompson, PE

Name:	MARA NICOLE THOMPSON
WV Professional Engineer:	PE License Number: [REDACTED]
	PE License Status: Active
	PE Issue Date: 12/27/2019
	PE Expiration Date: 12/31/2026

POCKET CARD

North Carolina Board of Examiners for Engineers and Surveyors



This is to certify that
Marlin R. Zook
is duly licensed and entitled to practice
Surveying
until December 31, 2025 when this certificate expires.
License Number: L-4207 Status: CURRENT

Cedric D. Fairbanks

Cedric D. Fairbanks, Chair

Vinod K. Goel

Vinod K. Goel, Secretary

Receipt for Annual Renewal

Date: 12/28/2024 6:36:08 AM

Order ID:

Fee: \$75.00

Registrant: Marlin R. Zook , License: L-4207		
Business address NV5 Geospatial, Inc. 45180 Business Ct Sterling , VA 20166	Mailing Address NV5 Geospatial, Inc 45180 Business Ct Sterling , VA 20166	Payment information Card: Expiration: 04 /27 Marlin R. Zook NV5 Geospatial, Inc Sterling , VA 20166
Email: marlin.zook@nv5.com	PDH Reported:: 16.00 Your license status is: CURRENT	

WV Oasis

Transaction Number: [REDACTED]

Status: CompletedOk

Amount: \$125.00

Company Name: Airport Design Consultants, Inc. (ADCI)

Name: Stephanie Allder

Address: Airport Design Consultants, Inc. (ADCI)

6031 University Blvd.

Ellicott City MD 21043

Phone: 4104659600

e-Mail: sallder@adci-corp.com

Card Holder: Radhika Palle

Card Type: Visa

Card: [REDACTED]