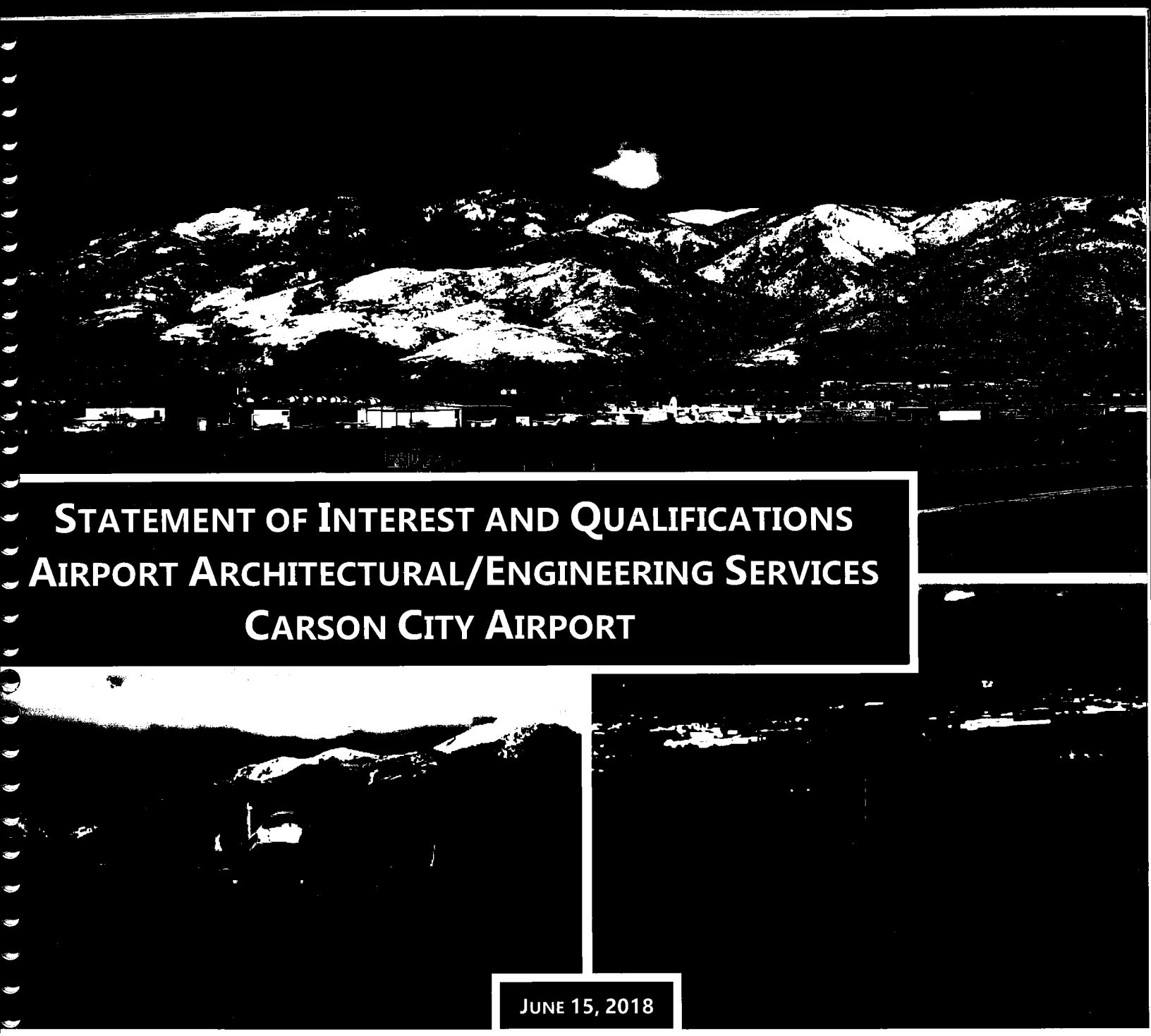


STATEMENT OF INTEREST AND QUALIFICATIONS
AIRPORT ARCHITECTURAL/ENGINEERING SERVICES
CARSON CITY AIRPORT

JUNE 15, 2018

CARSON CITY AIRPORT

DYER
ENGINEERING
CONSULTANTS

Dyer Engineering Consultants, Inc. | 9130 Double Diamond Parkway | Reno, NV 89521

TABLE OF CONTENTS

1. CAPABILITY TO PERFORM PROJECT ASPECTS 1
2. KEY PERSONNEL 6
3. CAPABILITY TO MEET SCHEDULES & DEADLINES 16
4. PAST PROJECTS 20
5. SUB-CONSULTANTS 22
6. GEOGRAPHIC LOCATION 23
7. QUALIFIED INSPECTORS 23
8. POTENTIAL CHALLENGES AND SPONSOR'S CONCERNS 24
9. FAMILIARITY WITH AND PROXIMITY TO GEOGRAPHIC LOCATION 27
10. BLEND AESTHETIC & ARCHITECTURAL CONCEPTS 28
11. DBE GOALS 28
12. VALUE ENGINEERING 28
13. REFERENCES 30

1. CAPABILITY TO PERFORM PROJECT ASPECTS

The DEC team presents CXP a highly experienced and diverse group of engineers and professionals. Our team consists of talented individuals that are experts in their respective fields of pavement engineering, airfield design, geotechnical engineering, and land surveying. We collectively have experience at over 100 airports across the United States. **Table 1-1** displays some of the services DEC and its team members have provided at other airports. This list is a testament to the DEC team's vast knowledge of airport design and expertise.

Our team has provided the full range of professional services at airports. This has included civil engineering, electrical engineering, geotechnical investigations, project inspections, and materials testing for landside and airside pavement management, aprons, runways, taxiways, buildings, parking lots, facility remodels, and more. **Table 1-2** is a sample list of projects that DEC team members have been a part of during the past ten years. Additionally, DEC has the capability to provide professional services for the NEPA process. Our team of experts has provided environmental services for numerous clients with an impeccable track record of successful permitting.

Table 1-1 – Airport Experience

Airfield Engineering
- Runways, Taxiways, Aprons
- Access & Service Roads
- Safety Areas
- Pavement Maintenance & Management
- CSPPs
- Value Engineering
- Airfield Lighting/ Obstruction Lighting
- Generators
- PAPIs
- AWOS

FAA Coordination
- Grant Assurances
- AIP Guidance
- Cost Estimates
- FAA Requirements

General & Administrative
- FAA Grant Applications & Administration
- ACIP Development and Maintenance
- Financial Feasibility Studies
- Benefit Cost Analyses
- Aesthetics and Visual

Airfield Security
- Perimeter Security Fencing
- Security Gates

Environmental
- Environmental Studies & Assessments
- Full Service NEPA Compliance
- Regulatory Agency Coordination
- Section 401/404 Permitting
- Wetland Delineation
- Wildlife Hazard Assessments

Airport Planning
- Master Planning and Updates
- Drainage and Utilities
- Landside Planning
- Terminal Areas
- Hangar Development

Construction Phase Support
- Construction Administration
- Cost Estimating
- Constructability Plan Reviews
- Resident Construction Administration
- Construction Observation

Table 1-2: DEC Team Member Prior Experience & Expertise

	Const. Safety & Phasing Plan	Pavement Design	Grant Administration	Construction Administration	Stakeholder Outreach	Basis of Design Report	Construction Plan Docs	Technical Specifications	Alternates Study	Cost Estimating	Bidding Support Services	Constructability Reviews	Final Closeout Report
Elko Regional Airport Obstruction Removal – Phases I and II	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Elko Regional Airport Movement Area Pavement Maintenance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Elko Regional Airport ARFF Building			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Elko Regional Airport Runway 5-23 Rehabilitation		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Reno-Stead Airport Taxiway B Rehabilitation		✓			✓	✓	✓	✓		✓	✓	✓	✓
Reno-Stead Airport T-Hangar Taxilanes		✓			✓		✓	✓		✓	✓	✓	✓
Reno-Stead Airport Aircraft Parking Apron-Concrete Pads	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reno-Tahoe International Airport Gate 170 Access Road		✓		✓	✓		✓	✓	✓	✓	✓	✓	
Boulder City Municipal Airport Apron Expansion		✓	✓				✓	✓	✓	✓	✓	✓	✓
Boulder City Municipal Airport Perimeter Road & Security Fence			✓	✓	✓		✓	✓		✓	✓	✓	✓
Boulder City Municipal Airport Runway 9R-27L Safety Enhancements	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Boulder City Municipal Airport Airport Drainage Master Plan			✓			✓			✓			✓	✓
Creech Air Force Base Apron Lighting		✓		✓		✓	✓	✓		✓		✓	
Salinas Municipal Airport Taxiway, Service Road, Tie-Down Reconfiguration, and Beacon		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
San Jose International Airport Taxiway W	✓	✓			✓		✓	✓		✓	✓	✓	✓
San Jose International Airport Terminal B Apron Reconstruction	✓	✓			✓		✓	✓	✓	✓	✓	✓	✓
McCarran International Airport Runway 7R-25L, Taxiways A & A2–A8	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
LAX International Airport Taxiway T and RON Apron	✓	✓					✓	✓	✓	✓	✓	✓	
Oakland International Airport North Field RSA Improvements	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	

Mr. Heath Hildebrandt, while working for another firm, was the Project Manager for the Civil Airfield Design of the following projects:

LAX International Airport - Taxiway T and RON Apron
Final Construction Cost: $36 million

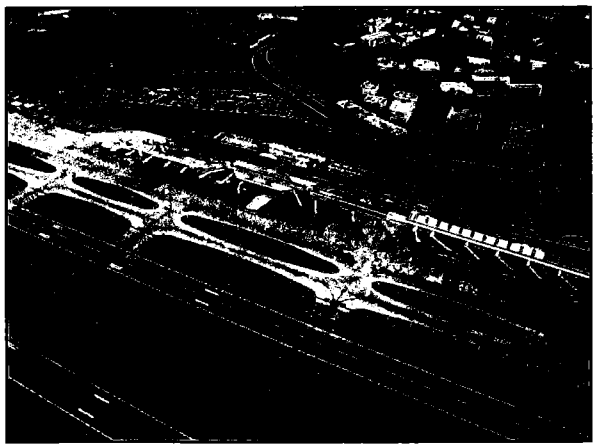
Construction Period: June 2013 - August 2014

This project consisted of the design and preparation of construction documents for a new Taxiway in the heart of one of the busiest airports in the world. This project was the third in a series of implementation projects to construct the new Mid-Field Satellite Concourse. The new infrastructure is designed to accommodate the Airbus A380 aircraft. Taxiway T, 86,000 square yards of new Portland Cement Concrete (PCC) pavement, now serves as a critical connection between the North and South airfields. The new Remain Overnight (RON) Apron, approximately 25,000 square yards of new PCC pavement, now provides aircraft parking on the American Airlines leasehold area. The project was designed to maximize the amount of PCC pavement that meets ultimate grades for the Mid-Field Satellite Concourse. As a major construction project in the center of LAX, the phasing plans were very complex to ensure air carrier schedules were not compromised. Significant efforts were required to ensure the project was coordinated with two major active projects adjacent to the proposed improvements.

San Jose International Airport - Terminal B Apron Reconstruction
Project Cost: $5 million

Date of Completion: 2009

This project consisted of reconstructing the existing apron adjacent to the new terminal building. There were approximately 32,000 square yards of new PCC pavement that was constructed, along with improvements to the storm drain system. Extensive subsurface investigations were performed prior to design to ensure there were no unanticipated items during construction. The construction of the project had to be coordinated closely with air carriers and Air Traffic Control Tower (ATCT) personnel. This project required close coordination with operations personnel to ensure baggage handling was not interrupted during construction. A unique phasing operation was established to ensure that baggage handlers would have access.

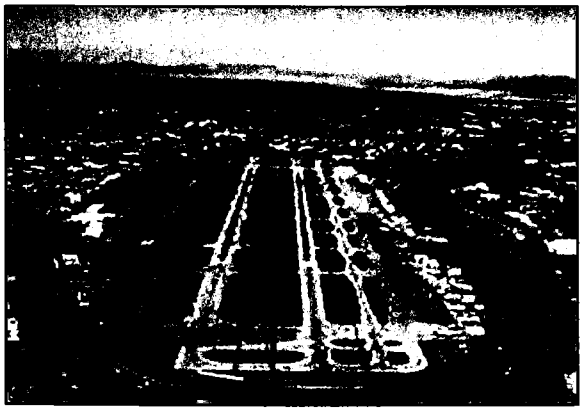


San Jose International Airport – Taxiway W Phase 2

Project Cost: $6.5 million

Date of Completion: 2011

This project was the second phase of a multi-phase effort to construct a new full parallel taxiway adjacent to Runway 12R-30L approximately 10,000 feet in total length. Taxiway W was designed and implemented as AIP funding became available. Phase 2 consisted of the reconstruction of Taxiway W from Taxiway B to Taxiway C. The new PCC taxiway also included major improvements to the storm water conveyance system and required close coordination with airfield operations and the FAA tower to ensure the project was phased to maintain efficient aircraft movement and maintain air carrier schedules. The existing General Aviation was also reconstructed, and existing sanitary sewer infrastructure was modified to accommodate the project. This project also included the design of multiple cross taxiways and phasing to allow hangar access during construction.



Elko Regional Airport - Movement Area Pavement Maintenance

This project consisted of maintenance of the asphalt pavements on the airfield. Most of these pavements needed crack repair and pavement rejuvenating surface seal to maintain and prolong their functional life. A visual inspection of the pavements was performed. In addition, measurement of the width and length of the cracks were performed to evaluate the pavement distresses. Repair solutions were developed and coordinated with the airport staff. This project included full-time on-site construction administration services.

McCarran International Airport - Runway 7R-25L, Taxiway A and Taxiways A2 – A8

Project Cost: $65 million

Date of Completion: 2009

This project included the design and preparation of construction documents for the reconstruction of Runway 7R-25L, Taxiway A and Taxiways A2 – A8. The 10,000-foot runway, parallel taxiway and seven cross taxiways were originally asphalt concrete and reconstructed to be PCC pavement. Additionally, two high-speed taxiways were added. The project also included taxiway edge and centerline lights, guidance signs, drainage, grading, paving, utility relocations and pavement striping. In addition to the design services, Construction Administration services were provided for the project, which included, review of contractor submittals, responding to contractor inquiries, periodic field review of construction activities and the preparation of record drawings.

Boulder City Municipal Airport - Perimeter Road and Security Fence

This project included the design and preparation of construction documents for a new perimeter road and security fence. This project addressed the need to prevent wildlife from entering the Airport Operations Area (AOA). The service road provides access to areas of the airport that were previously difficult for maintenance personnel to reach. The new chain-link perimeter fence provides enhancements to airport security and functions as a wildlife deterrent.

Elko Regional Airport, Elko, Nevada: Runway 5-23 Rehabilitation

This project involved preliminary engineering and investigation of distresses within the runway asphalt pavement structure. The runway surface had been deteriorating and foreign object debris (FOD) was an increasing problem on the runway. The Sponsor wanted to determine the cause of the pavement failures and develop a plan for repairs within available FAA funding.

Preliminary engineering focused on pavement and subgrade investigations. Construction methods were developed to minimize runway closure while repairing the runway pavement structure and re-establishing the cross slope of the runway. Final plans, specifications and estimate were prepared for the preferred solution which consisted of reusing the existing material to the maximum extent possible. The asphalt pavement was milled to different depths, depending on the level of pavement distress observed in the pavement investigations. The asphalt millings were incorporated into the infields as base for new asphalt shoulders. New asphalt pavement was installed to restore geometric standards for cross slope and profile of the runway.

Phasing plans were prepared to maximize the available FAA funding and maintain a usable runway for the duration of the project. There was constant coordination with the Airport to obtain stakeholder/tenant input and provide status updates to the stakeholders.

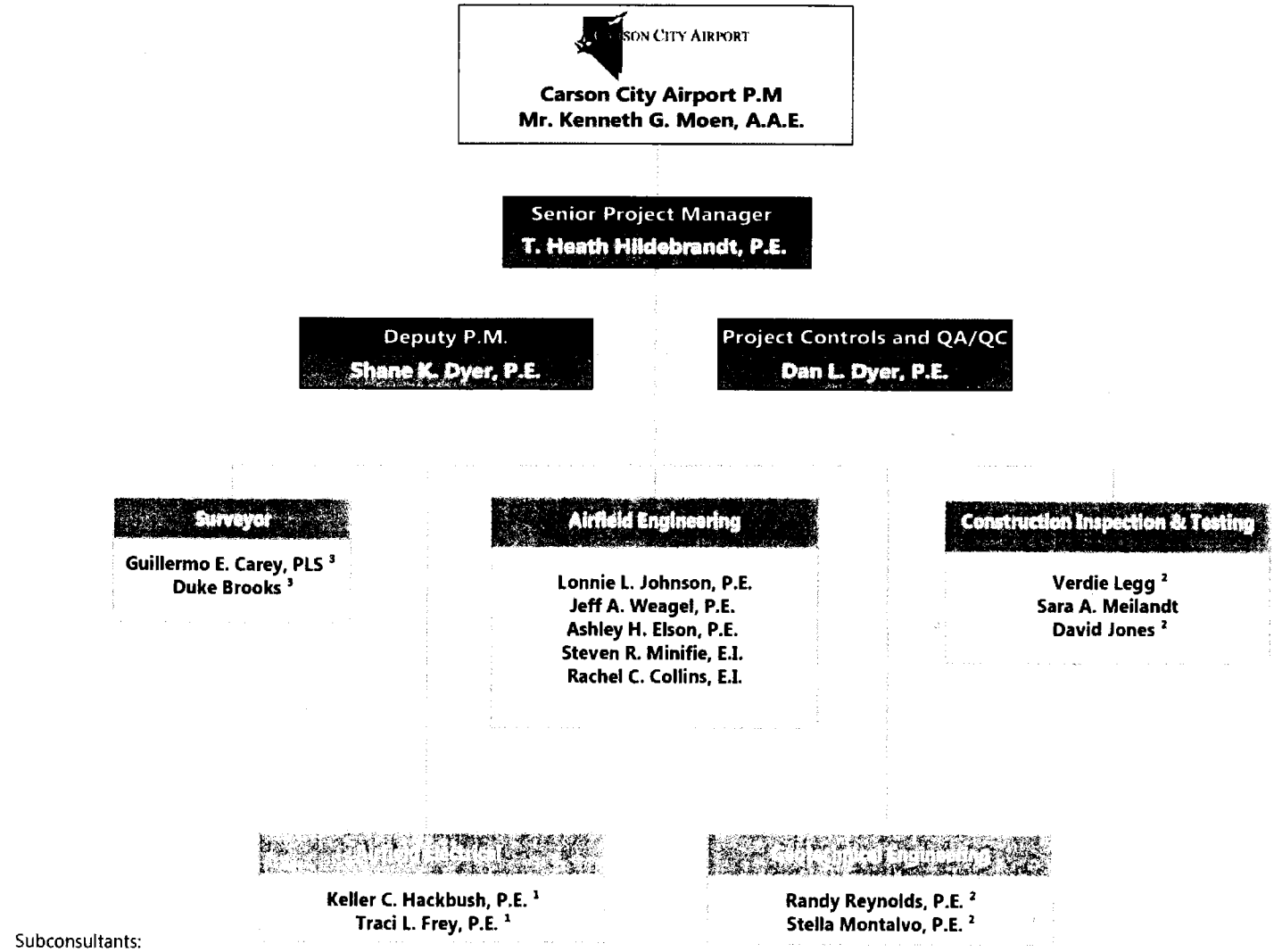
Nevada Air National Guard Air Intelligence Exploitation Facility, RTIA, Reno, NV

Mr. Lonnie Johnson, while working for others, teamed with the project architects, Van Woert Bigotti, to provide civil engineering site and utilities design services for this two-story, 36,150 square foot building for the Nevada Air National Guard, located at the Reno-Tahoe International Airport. Site work included demolition, site drainage, grading and infrastructure distribution systems. All engineering was consistent with base master planning studies. Security for the building was maintained around the site perimeter with proper "standoff" distances, which requires no obstructions. The project was completed in 2008. The Associated General Contractors selected this project as the recipient of the 2008 Pinnacle Award for projects over $5 million in the category of Excellence in Project Management.

2. KEY PERSONNEL

DEC is the prime consultant of the team assembled for the Carson City Airport Engineering Services. Our team personnel are familiar with current FAA requirements, procedures and protocols. Furthermore, several of our team members have substantial experience on projects at Carson City Airport. This will provide significant institutional knowledge for efficient design. We will function as an integrated team of professionals to serve the needs of CXP. **Figure 2-1** represents our team organization structure. Followed by the organizational chart are brief overviews of each key team member.

Figure 2-1: Airport Architectural/Engineering Services Team Organization



Subconsultants:
1. Dinter Engineering
2. Construction Materials Engineering, Inc.
3. Mapca Surveys, Inc.

T. Heath Hildebrandt, P.E.

Education
B.S., Civil Engineering, University of Evansville 2000

Licenses/Registration
PE No. 18207 Nevada
PE No. C71966 California
PE No. 2005000991 Missouri

Professional Affiliations:
Nevada Airports Association
Association of California Airports
American Society of Civil Engineers
American Public Works Association

Civil Engineering
Dyer Engineering Consultants, Inc., 2013-current
Kimley-Horn and Associates Inc, 2005-2013
Great River Engineering, 2003-2005
Horner and Shifrin, Inc. 2000-2003

Skills Summary
AutoCAD Civil 3D, Microstation, Geopak, FAARFIELD, StormCAD, HY8, HEC-HMS, HEC-RAS, TR-55, Word, Excel

Principal Engineer

Mr. Hildebrandt is the Vice President of Dyer Engineering, Inc. and is one of the most respected aviation professionals in the U.S. due to his expertise in the design and construction of multi-disciplinary airport projects. His previous experience is a value-added benefit that will facilitate maximum efficiencies to meet schedule milestones. Among his core philosophies are, client service and a keen sense for project costs and budget driven decisions. He strives to provide value to the project and serve in a role that is a virtual extension to the airport staff. He has extensive experience with the FAA grant process, runway design, taxiway design, apron construction, relocations, planning, and rehabilitation projects. His experience also includes high-speed exits, run-up areas, drainage facilities, right-of-way issues, NAVAID relocation, lighting/signage, utility relocations, and landside facilities. He has been a Construction Manager for numerous airfield construction projects, during which he observed and monitored construction activities, processed contractor progress payments, coordinated and documented QC/QA testing, and led weekly construction progress meetings.

Project Experience

- Elko Regional Airport – ARFF Building, Project Manager
- Elko Regional Airport – Obstruction Removal Phases 1&2, Project Manager
- Elko Regional Airport – Movement Area Pavement Maintenance, Project Manager
- Elko Regional Airport – Ramp Reconstruction
- Lambert St. Louis International Airport – Taxiway H, Construction Inspection
- San Jose International Airport – Taxiway W, Project Manager
- San Jose International Airport – Terminal B Apron, Project Manager
- McCarran International Airport – Runway 7R-25L and Taxiway A Reconstruction, Project Engineer, Design and Construction
- Boulder City Airport – Drainage Master Plan, Project Manager
- Boulder City Airport – Runway 9R-27L RSA Safety Enhancements, Project Manager, Design
- Oakland International Airport – North Field RSA Improvements, Project Engineer
- Salinas Municipal Airport – Taxiway B, Project Manager, Design
- Chino Airport – RSA Improvements, Project Engineer
- LAX – Crossfield Taxiway T Project, Deputy Project Manager, Design

Shane K. Dyer, P.E., W.R.S.

Education
M.S., Civil Engineering, BYU
M.S. Minor, Business, BYU
B.S., Civil Engineering, USU

Licenses/Registration
PE No. 21000 Nevada; PE No. 5677 Utah; PE No. 15936 Idaho

Professional Affiliations
Nevada Airport Association; Association of California Airports

Principal Engineer

Mr. Shane K. Dyer is the President of Dyer Engineering. He will be the Deputy Project Manager for the team. Shane has 17 Years of Northern Nevada based industry experience and is currently the Treasurer of The Nevada Airports Association. Shane has had the opportunity to work on several airports over the years and has a thorough expertise on FAA requirements and practical engineering implementation leading to successful construction on airfields. Shane's broad experience allows him to understand projects holistically from geotechnical investigation, storm water controls, and geometric design of airfield facilities, to paving, complex utility conflict resolution, and construction management.

Project Experience

- Dunsmuir Municipal-Mott Airport – Pavement Maintenance
- Creech Air Force Base – Apron Lighting
- RTAA RTIA – Gate 170 Access Road Reconstruction
- RTAA Reno/Stead Airport – Stead Aircraft Parking Apron
- Zunino Concrete Ramp Geotechnical Investigation & Civil Design

Dan L. Dyer, P.E.

Education
M.S., Civil Engineering, Brigham Young University
B.S., Economics, Brigham Young University

Licenses/Registration
PE No. 8766 Nevada
PE No. 5611E Montana

Professional Affiliations
American Society of Civil Engineers

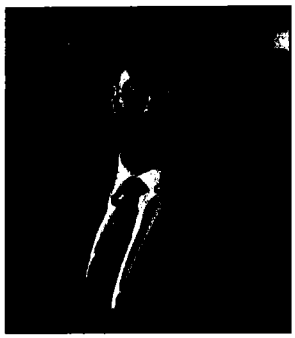
Principal Engineer

Mr. Dan L. Dyer is the Founding Principal of Dyer Engineering with over 43 years of Northern Nevada based engineering experience. Mr. Dyer has managed and conducted geotechnical engineering investigations for more than 30 years. His experience has included pavement foundation design, groundwater studies, pipe culvert load analyses, utility investigations, pavement rehabilitation, foundation analysis, pavement section design, seismic engineering evaluations, bridge foundation design, slope stability analysis, construction management and inspection, and construction quality control.

Project Experience

- RTIA – Runway Quality Assurance Testing/Dry Creek Slope Stability Analysis
- Glasgow International Airport– Runway 12-30 Asphalt Overlay
- Billings Logan International Airport– Runway 10L-28R Extension
- RTAA RTIA – Gate 170 Access Road Reconstruction
- RTAA Reno/Stead Airport – Stead Aircraft Parking Apron

Lonnie J. Johnson, P.E.



Education
M.S., Civil & Environmental Engineering, Utah State University, 2000
B.S., Environmental Engineering, Utah State University, 1997
Licenses/Registration
PE No. 19440 Nevada
PE No. 334402-2202 Utah
Professional Affiliations
APWA, ASCE
Associated General Contractors
N. Nevada Development Authority

Principal Engineer

Mr. Johnson is a Principal Engineer at Dyer Engineering with over 18 years of experience. Mr. Johnson has expertise in managing Public Works Infrastructure and Transportation projects. He has a passion for helping our communities thrive through projects that enhance our public works infrastructure and implement sustainable practices. He has expert knowledge in the management, design, specifications and construction administration of roadway rehabilitation, sanitary sewer, storm drain and water systems projects. He is also an expert in the project management, permitting, site design and construction administration of municipal, commercial, mixed-use and residential land development projects.

Project Experience

- Nevada Air National Guard Air Intelligence Exploitation Facility
- RTC Reno - Avenida de Landa Roadway Rehabilitation
- RTAA RTIA – Gate 170 Access Road Reconstruction
- RTAA Reno/Stead Airport – Stead Aircraft Parking Apron
- RTC Reno - Delucchi Lane Roadway Rehabilitation

Sara A. Meilandt

Education
B.S., Civil Engineering, University of Nevada, Reno
Professional Affiliations
American Society of Civil Engineers
Engineers without Boarders

Environmental & Planning Analysis

Ms. Meilandt has over 9 years of civil engineering and construction administration experience. She has extensive knowledge of reporting projects associated with civil infrastructures, including roadways, water treatment, and other improvements. Sara also has experience in construction management, inspection, and environmental analysis. She has established capacity to actively and effectively manage the technical development of contracts and contact documents for multiple projects together with the ability to successfully monitor schedule progress to meet deadlines and budget objectives.

Project Experience

- North Hollywood West Entrance – Los Angeles, CA, Project Inspector
- Arterial Spot Rehabilitation – Seattle, WA, Field Supervisor
- 2nd Ave and 4th Ave Roadway Rehabilitation – Seattle, WA, Field Supervisor
- 15th Ave Utility Improvement – Seattle, WA, Field Supervisor

Ashley H. Elson, P.E.

Education
B.S., Civil Engineering, University of Nevada Reno, 2011
Licenses/Registration
PE No. 24729 Nevada
Professional Affiliations
American Society of Civil Engineers
American Public Works Association

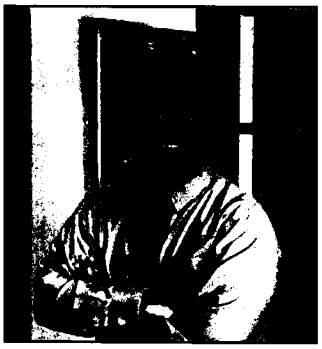
Project Engineer

Mr. Elson is a Project Engineer at Dyer Engineering with experience in Public Works Infrastructure, Mining and Land Development. He has expertise working with multi-disciplinary teams in preparation of construction documents including plans, specifications, estimates, earthwork quantities and construction administration of pavement rehabilitation, utilities, and storm drain system projects. He also has extensive experience in site development and transportation including design and construction administration of municipal and residential land development projects.

Project Experience

- RTAA RTIA – Gate 170 Access Road Reconstruction
- RTAA Reno/Stead Airport – Stead Aircraft Parking Apron
- Dunsmuir Municipal-Mott Airport – Pavement Maintenance & Master Plan
- RTC Reno – Sutro Complete Street Rehabilitation
- RTC Reno – Liberty & Ryland Street Rehabilitation

Jeff A. Weagel, P.E.



Education
B.S., Civil Engineering, University of Nevada, Reno, 2010
M.S. Civil Engineering, Oregon State University, 2012
Licenses/Registration
PE No. 23468 Nevada
Professional Affiliations:
American Society of Civil Engineers
American Public Works Association

Project Engineer

Mr. Weagel is a Project Engineer with six years of Civil Engineering consulting experience. He has extensive experience in preparation of construction documents including plans, specifications, and estimates for a variety of projects including road construction and reconstruction, construction and retrofit of storm drain systems, storm water treatment system installation, and parking lot construction and reconstruction.

Project Experience

- RTAA RTIA – Gate 170 Access Road Reconstruction
- RTAA Reno/Stead Airport – Stead Aircraft Parking Apron
- Dunsmuir Municipal-Mott Airport – Pavement Maintenance & Master Plan
- City of Lincoln – East Ninth Street Road Rehabilitation
- San Francisco International Airport - West Field Garage Retrofit Design

Steven R. Minifie, E.I.

Education
B.S. Civil Engineering
University of Nevada, Reno, 2012
Licenses/Registration
Engineer Intern- EI 0T6851
Nuclear Density Gauge Cert.
Commercial Pilot – Rotorcraft
w/ instrument Rating - FAA
Professional Affiliations
American Society of Civil Engineers
Nevada Airports Association
Nevada Air National Guard

Civil Analyst

Mr. Minifie is a Civil Analyst at Dyer Engineering Consultants. Steven has diverse experience in both Civil Engineering and Aviation. His engineering experience includes aviation design, geotechnical exploration and testing, and construction quality assurance. He also has experience utilizing ASTM standards for material testing both in the field and laboratory environment. He has provided construction inspection and testing such as slump, air content, and compression tests on concrete cylinders, asphalt pavement mix design verification and compaction tests, native soil and structural fill compaction testing for roadways, utility trenches and building pads.

Project Experience

- RTAA RTIA – Gate 170 Access Road Reconstruction
- RTAA Reno/Stead Airport – Stead Aircraft Parking Apron
- NDOT – Interstate-80 Mill and Replace Open Grade Friction Course
- NDOT – Highway 395 Full Pavement Reconstruction
- N. Virginia St. Route 427 to Bordertown – Mill and Replace Dense Course

Rachel C. Collins, E.I.

Education
B.S., Civil Engineering, University of Nevada Reno, 2014

Civil Analyst

Ms. Collins is a civil analysis with experience in hydraulic and hydrologic modeling, grading, creating civil plan sets, emergency action planning, site visits, sensitivity modeling, and calculations. She has gained much airport engineering experience from a variety of airfield projects and the guidance of several licensed Professional Engineers, as well as consulting experience.

Project Experience

- RTAA Reno/Tahoe International Airport – Gate 170 Access Road Reconstruction
- RTAA Reno/Stead Airport – Stead Aircraft Parking Apron
- Dunsmuir Municipal-Mott Airport - Pavement Maintenance
- Creech Air Force Base – Apron Lighting

Verdie Legg

CME CONSTRUCTION MATERIALS ENGINEERS, INC.

Licenses/Registration
Certified: NAQTC, ACI

Senior Materials Engineer

Mr. Legg has been with CME for 20 years and offers certifications and extensive experience for airside, landside, horizontal, and vertical projects of all types. In his 35 years of experience in Northern Nevada, he has provided asphalt and concrete mix designs, aggregate source exploration, aggregate source quality control, as well as consulting for construction methods with various local materials. This experience has been gained by involvement with over 40 local airport projects. He is regionally known for his working knowledge of FAA requirements for construction and materials.

Project Experience

- Carson City Airport - Rehabilitate North Apron QC, Geotech
- Carson City Airport - Main Apron Phases 1, 2, and 3 QC, Materials Testing and Inspection
- Carson City Airport – Runway 9/27, Taxiway A & D, Material Testing and Inspection
- Carson City Airport – Taxiway D, Testing and Inspection

David Jones, RG

CME CONSTRUCTION MATERIALS ENGINEERS, INC.

Education
M.S. Geology- 1984, University of New Mexico, Albuquerque
B.S. Geology- 1984, University of Idaho, Moscow

Licenses/Registration
Professional Geologist – Nevada
AWS-CWI No. 09092431
NAQTC Certified Testing Technician
Certified Special Inspector in 8 Categories
OSHA 40-Hour HAZOPER Course Certified

Senior Project Inspector

Mr. Jones has been with CME since 2001 and serves as a project coordinator. In this role, Mr. Jones supervises field personnel, as well as providing IBC Special Inspections, construction inspection, and materials testing for a variety of public and private sector projects. Additionally, as a licensed Geologist, he assists CME's geotechnical team, providing exploration and testing as required. Prior to coming to CME, Mr. Jones worked for 25 years as a Senior Exploratory Geologist for several mineral assessment and development firms with exploratory project experience throughout the world.

Project Experience

- Carson City Airport – Runway 9/27, Taxiway A & D, Material Testing and Inspection
- Carson City Airport – Runway 9 Connector Taxiway D, Material Sampling and Laboratory Testing
- Reno-Stead Airport Terminal Emergency Operations Center,
- RTIA – Snow Removal Equipment Building, Inspector
- RTIA – Taxiway Q Geotechnical Investigation

Randal A. Reynolds, P.E.

CME CONSTRUCTION MATERIALS ENGINEERS, INC.

Education
B.S. Geological Engineering, University of Nevada, Reno, 1979
Licenses/Registration
PE No. 8028 Nevada
PE No. 47761 California

Senior Geotechnical Engineer

Mr. Reynolds has 38 years of geotechnical and construction materials/testing experience. During this time, he has completed approximately 1,000 geotechnical investigations for a variety of projects. Mr. Reynolds has provided geotechnical design recommendations for both PCC and AC surfaces, as well as providing geotechnical and other professional services for airport projects including landside and airside roadways, various buildings, and parking garages. He is familiar with FAA design guidelines as well as Asphalt Institute and AASHTO design procedures including flexible and rigid pavement designs.

Project Experience

- Fallon Municipal Airport – Center Apron Geotech
- RTIA – Airfield and Landside Pavement Management System
- Reno-Stead Airport – ARNG Access Roadway Pavement Rehab Geotech
- RTIA – Parking Area Pavement Investigation
- RTIA – Taxiway Q Geotech

Stella Montalvo, P.E.

CME CONSTRUCTION MATERIALS ENGINEERS, INC.

Education
B.S. Civil Engineering, University of Nevada, Reno, 2006
Licenses/Registration
PE No. 21801 Nevada
CESSWI
QSP
ACI Grade I

Geotechnical Engineer

Ms. Montalvo is a project manager specializing in geotechnical engineering with 11 years of experience. As a licensed Professional Engineer, she has been responsible for geotechnical field investigations, report preparation, and geotechnical design for a variety of projects in the area. She has provided geotechnical design and analysis for shallow and deep foundations, retaining walls, pavement design, slope stability, anchors, liquefaction analysis, groundwater, and soft soil remediation.

Project Experience

- Fallon Municipal Airport – Center Apron Geotech
- Fallon Municipal Airport – Runway 13/31 Rehab Geotech
- RTIA – Airfield and Landside Pavement Management System Structural Section
- Reno-Stead Airport – ARNG Access Roadway Pavement Rehab Geotech
- Silver Springs Airport – Soils Investigation

Keller C. Hackbusch, P.E.

DINTER Engineering Confidence.

Education
B.S. Electrical Engineering- 2001, University of Nevada, Reno

Licenses/Registration
Electrical P.E. No. 018326, Nevada
Electrical P.E. No. E19598, California
Electrical P.E. No. 119863, Texas
Electrical P.E. No. 48919, Massachusetts

Professional Affiliations
Educator for ACC/AAAE Airport Planning, Design and Construction Symposiums
Speaker for Airport Facilities Management Conferences
Speaker for APWA Conferences

Airfield Electrical Manager

Mr. Hackbusch has 22 years of experience in electrical project management, design and construction observation services. In 2004, he became manager of Dinter's Airfield Electrical Department and is now also Chief Executive for the firm. Keller's considerable airfield project experience includes work for 70 airports and 14 military air bases in 15 states. Mr. Hackbusch has lead educational presentations at two *ACC/AAAE Airport Planning, Design and Construction Symposiums*, two *NWAAAE Annual Conferences*, and an *APWA Conference*.

Project Experience

- Carson City Airport- Rehabilitate and Realign Runway 9/27 and Taxiway A
- Creech Air Force Base – UAS Main Gate and Infrastructure
- Fallon Municipal Airport – AWOS A-V
- Gooding Municipal Airport – New AWOS

Traci L. Frey

DINTER Engineering Confidence.

Education
Associate of Applied Science, Engineering Drafting Technology - 1992

Airfield Electrical Designer

Mrs. Frey has 25 years of engineering experience. Prior to her Dinter employment, she spent 13 years as an AutoCAD drafter/designer/assistant project manager for ABB, which manufactures sensors and instruments for liquid property measurements. She has been with Dinter Engineering since March 2006 as an Airfield Electrical Project Manager and Designer for power, lighting, signage, and NAVAID systems. Traci has performed all phases of electrical engineering including design, project scheduling, estimating, submittal review, field inspections, overseeing staff and drafters and assisting with project management duties. Mrs. Frey's airfield project experience includes work for 38 airports and 9 military air bases in 10 states.

Project Experience

- Carson City Airport- Runway 9 Connector and Taxiway D
- Carson City Airport- Taxiway D West
- Rehabilitate and Realign Runway 9/27 and Taxiway A
- Reno-Stead Airport – Taxiways C and A2 Reconstruction

Guillermo E. Carey, P.L.S.

MAPCA SURVEYS INC.

Education
B.S., Surveying Geomatics, California State University, Fresno
Licenses/Registration
PLS. No 17758 Nevada
PLS No. 7954 California
Professional Affiliations:
Nevada Association of Land Surveyors
California Land Surveyors Association
National Hispanic Professional Organization
Sparks Chamber of Commerce
American Society of Civil Engineers

Professional Land Surveyor

Mr. Guillermo E. Carey, PLS has more than 20 years of experience supporting private and public clients in Northern Nevada and California, including Carson City Public Works, Douglas County, RTC of Washoe County, NDOT, Reno-Tahoe Airport Authority, TMWA, Washoe County, City of South Lake Tahoe, Town of Truckee, Truckee-Donner PUD. His experience includes boundary and right of way surveys, topographic surveys, photogrammetric surveys, flood plain surveys, construction surveying, GPS surveys, and Survey Control Networks. Mr. Carey also has extensive knowledge in FAA Survey Guidelines.

Project Experience

- Minden-Tahoe Airport – Apron Reconstruction & Taxiway D Improvements
- Silver Springs Airport – Taxilanes and Hanger Reconstruction
- Fallon Municipal Airport – Taxiway A Reconstruction
- Lake Tahoe Airport – Terminal Ramp Construction
- Truckee-Tahoe Airport – Hanger J & K Reconstruction

Roland "Duke" Brooks

MAPCA SURVEYS INC.

Education
National Society of Professional Surveyor Certified Survey Technician
Professional Affiliations:
American General Contractors Association (AGC)

Certified Survey Technician

Mr. Roland Brooks joined MAPCA in early 2017 as a Project Surveyor from ATKINS and a long-term relationship with NCE. He has more than 25 years of experience supporting public clients in Nevada and throughout 48 States, including Carson City Airport, Silver Springs Airport, Gabbs Airport, Beatty Airport, Tonopah Airport, Reno-Stead Airport, Fallon Airport, Jackpot Airport and Reno-Tahoe Airport. His experience on airport projects includes Survey Control Networks, topographic surveys, aerial mapping, QA\QC surveys and construction surveys.

Project Experience

- Carson City Airport - Lead Surveyor for 10 Year Contract
- Tonopah Airport - Land Surveyor for 11 Year Contract
- Fallon Municipal Airport – Lead Surveyor for 11 Year Contract
- Silver Springs Airport – Lead Surveyor
- Reno-Stead Airport – Runway 8/23 Reconstruction

3. CAPABILITY TO MEET SCHEDULES & DEADLINES

DEC uses several planning tools to ensure we have sufficient resources available to produce projects for client driven deadlines. Scheduling begins with a clear definition of the project scope, the project objectives, a list of deliverables, budget, and milestone completion dates for specific tasks and the overall project. Scheduling will be developed under close communication and coordination with CXP and the FAA.

DEC uses Microsoft Project scheduling software to track and update the project schedule. The progress of each task in the original project schedule is reviewed by the project manager monthly. The percent completion is determined for each task and then used to update the schedule. Upon request, a copy of the schedule can be sent to our client along with our monthly invoice, and a monthly progress report. This ensures that DEC stays on the same page with the client's deadlines and milestones. DEC has developed a project schedule template to be used for projects at CXP. This schedule template will be tailored to the necessary schedule and tasks associated with each unique project. Please see **Figure 3-1** for this detailed schedule template.

Additionally, efficient management of the work will be another key to the success of a project. Management of the project and understanding how each component fits into the overall objective is fundamental to delivering a product that meets the airport's objectives. To meet this goal, close coordination will be required with CXP and project stakeholders. Also, each subconsultant team member will need an understanding of roles, goals, responsibilities, and authorities, and will need to communicate frequently. An outline of DEC's project management approach has been provided in **Table 3-1**. This system has been used by the DEC team successfully on other projects to ensure the project remains on schedule, within budget and within scope.

DEC's current and projected workloads will not impede our ability to offer high quality, timely services. DEC is available and committed to working closely with CXP. We will meet your needs and schedules while maintaining excellent quality control of projects.

Reno-Stead Concrete Pads

Figure 3-1: Sample Project Schedule Template

ID	Task Name	Duration	Start	Finish	Predecessors
1	**Task 1: Data Gathering**	**50 d**	**1/1**	**3/11**	
2	**1.1 Project Stakeholder Meeting (Kick-Off)**	0 d	1/1	1/1	
3	**1.1 Geotechnical Investigation**	**30 d**	**1/1**	**2/11**	
4	Utility Locate	3 d	1/1	1/3	2
5	Drilling & Sampling	2 d	1/4	1/7	4
6	Laboratory Testing	15 d	1/8	1/28	5
7	Geotechnical Report	10 d	1/29	2/11	6
8	**1.2 Utility Identification**	**20 d**	**1/1**	**1/28**	**2**
9	**1.3 Topographic Mapping-Survey Control**	**7 d**	**1/1**	**1/9**	
10	Field Work	2 d	1/1	1/2	2
11	Process Data	5 d	1/3	1/9	10
12	**1.4 Basis of Design Report**	**10 d**	**2/12**	**2/25**	**7,8,11**
13	Sponsor Review of Basis of Design Report	10 d	2/26	3/11	12
14	**Task 2: Schematic Design**	**20 d**	**3/12**	**4/8**	**13**
15	Schematic Design	10 d	3/12	3/25	
16	Sponsor Review of Schematic Design	10 d	3/26	4/8	15
17	Stakeholder Meeting	0 d	4/8	4/8	16
18	**Task 3: Design Development/Contract Documents**	**76 d**	**4/9**	**7/24**	
19	**3.1 60% Plans, Specifications, & Estimate Submittal**	**20 d**	**4/9**	**5/6**	
20	3.1.1 60% PS&E	10 d	4/9	4/22	17
21	3.1.2 60% CSPP	10 d	4/9	4/22	17
22	3.1.3 Sponsor Review of 60% PS&E	10 d	4/23	5/6	20,21
23	3.1.4 Review Meeting	0 d	5/6	5/6	22
24	**3.2 90% Plans, Specifications, & Estimate Submittal**	**20 d**	**5/7**	**6/3**	
25	3.2.1 90% PS&E	10 d	5/7	5/20	23
26	3.2.2 90% CSPP	10 d	5/7	5/20	23
27	3.2.3 Sponsor Review of 90& PS&E	10 d	5/21	6/3	25,26
28	3.2.4 Review Meeting	0 d	6/3	6/3	27
29	**3.3 Final Plans, Specifications, & Estimate Submittal**	**10 d**	**6/4**	**6/17**	
30	3.3.1 Final Project PS&E	10 d	6/4	6/17	28
31	**3.4 Bidding Services**	**27 d**	**6/17**	**7/24**	
32	3.3.1 Advertise	0 d	6/17	6/17	
33	3.3.2 Pre-Bid Meeting	0 d	7/3	7/3	
34	3.3.3 Issue Addenda	0 d	7/8	7/8	
35	3.3.4 Bid Opening	0 d	7/12	7/12	
36	3.3.5 Recommendation of Award	0 d	7/15	7/15	
37	3.3.6 Board Approval	0 d	7/24	7/24	
38	**Task 4: Construction Support/Project Closeout**	**70 d**	**8/5**	**11/8**	
39	Construction NTP	0 d	8/5	8/5	
40	4.1 Construction Support Services	60 d	8/5	10/25	39
41	4.2 Record Documents	5 d	10/28	11/1	40
42	4.3 Final Engineer's Report	10 d	10/28	11/8	40

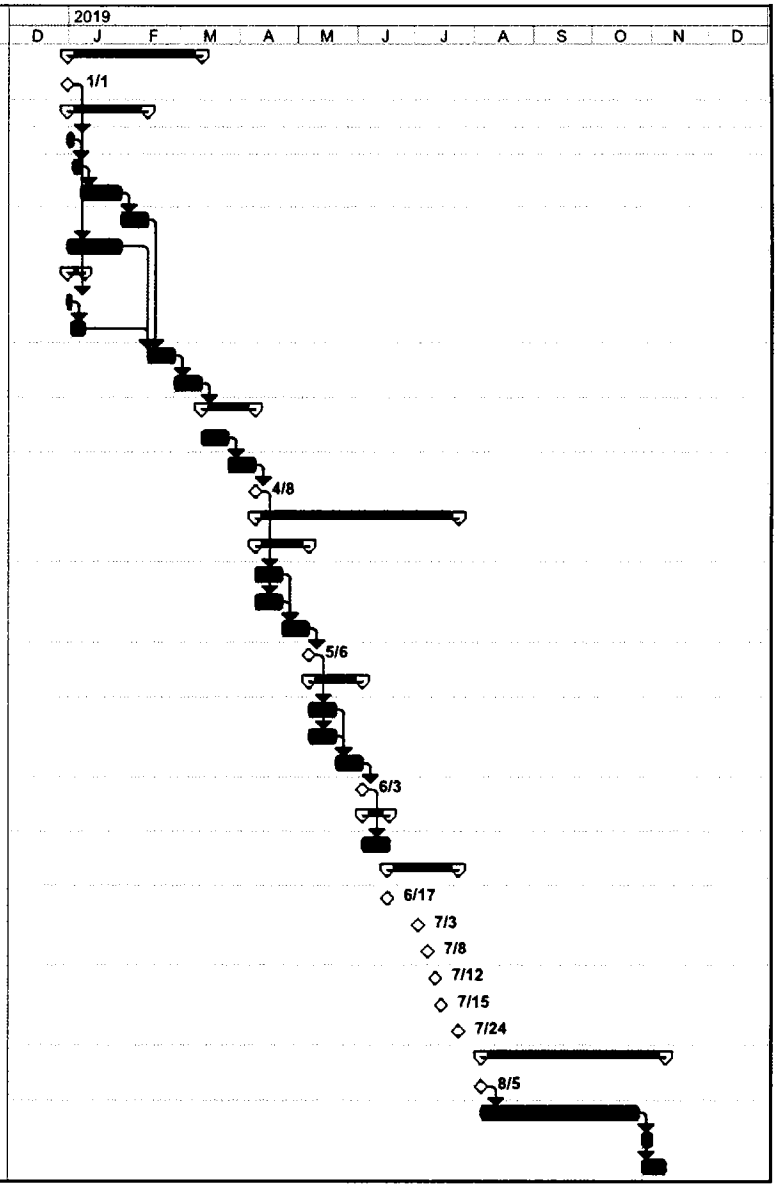


Table 3-1: Project Management Approach

Task	Process	Objective
Programming		
Project Planning	Meeting with CXP, project stakeholders, and other team members.	General introductions, establish communication lines, determine and agree on roles and responsibilities.
Schedule	Meetings and coordination with team members	Provide timeframe for project milestones and establish critical paths items
Development of Criteria	Coordinate development of project criteria with CXP, stakeholders; confirm project goals and objectives	Establish a basis for development of Project Work Plan
Preliminary Studies	Study and present options to CXP, FAA, and project stakeholders	Confirm and Establish the project
Data Gathering and Project Basis of Design		
Functional Requirements	Review project needs and goals	Establish priorities, review construction phasing, determine their relationship to site and parameters
Technical Requirements	Gather design guidelines applicable to the project components	Prepare for the establishment of technical performance documents leading to application of FAA standards, local design guidelines, and codes.
Project Schedule	Review/update the project schedule	Determine critical path project components
Project Organization	Prepare manpower allocation. Set up internal project file system and information resources. Mobilize team members.	Implement project organizational structure and integrate team of consultants
Subconsultant Services	Initiate specialist services (i.e. geotechnical, survey, electrical)	Obtain initial input for the project design
Site and Infrastructure Data Validation	Collect record information regarding existing infrastructure. Perform subsurface investigations where warranted. Conduct site visits to validate data. Photographic documentation where appropriate.	Consider imposed restrictions of existing site conditions and analyze alternate designs if necessary.
Basis of Design Report	Preparation of a comprehensive document detailing needs and alternatives for satisfying requirements, with focus upon a single preferred design. Examine opportunities for value engineering, alternative options, and feasibility.	Establish design parameters and define criteria that gives direction for the detailed design to follow.
Design Approval	Identify project scope with other authorities having jurisdiction (i.e. Carson City). Provide submittals in accordance with protocol.	Obtain approval for proposed development and associated costs. Obtain approval to proceed to next design phase.
Schematic Design		
Schematic Design Improvement Plans	Direct the preparation of design drawings and determine necessary material specifications. Define systems that are to be included.	Begin the process of design approvals and preparation of contract drawings. Solicit comments from project stakeholders.
Cost Benefit Analyses	Analyze value engineering options and construction alternatives	Ensure value and adherence to project goals.
Budgetary Requirements	Prepare preliminary opinion of probable construction cost	Confirm/establish project budget
Assessment of Constructability	Define materials of intended imporvements.	Assess and facilitate possible incorporation of changing requirements.

Table 3-1(cont'd): Project Management Approach

Task	Process	Objective
Design Development/Contract Documents (60%, 90% and Final Deliverables)		
Plans, Specifications & Opinion of Cost	Prepare and submit drawings, material specifications and opinions of construction cost.	Obtain stakeholder approval to move on to the next phase.
Permits/Approvals	Review plans and specifications for local jurisdictional authority requirements. Assist with approval acquisition.	Obtain necessary jurisdictional approvals.
Procurement		
Bid Package Preparation	Provide documents incorporating contractual and the technical requirements.	Ensure an accurate, clear, and competitive contractor procurement process is conducted resulting in a contract for the successful completion of all required work.
Bid Process	Assist with the solicitation and securing of competitive bids for the completion of the specified work. Assist with modifications of contract documents as necessary to clarify contractor questions.	Engage qualified contractors to construct the project.
Contractor Selection	Assist with the bid reviews and check for completeness of bid packages. Assist with the preparation of selection criteria. Prepare a recommendation for the selection of the contractor.	Establish that value is being obtained for the price by checking references and documentation. Ensure that the integrity of the project budget and schedule are intact.
Construction Support		
Construction Administration Support	Assign resources to effectively execute coordination. Establish communication flows and provide reporting, evaluation and liaison with the client and other design consultants. Confirm extent and rationale for contract documents as necessary. Support construction manager, supervision, site inspection, and quality control programs. Evaluate progress payment applications and reports. Approve material submittals and shop drawings.	Ensure adequate site review and continuity between the design stage and construction. Ensure that client is informed and the project is controlled through the use of appropriate management tools. Ensure conformance to design and construction standards.
Change Requests	All revisions to be reviewed by DEC and approved by client. Identify impacts of changes.	Maintain control over changing situations or improvement requests. Ensure informed decision-making.
Project Schedule	Assist with monitoring the progress of construction. Weekly meetings with construction team.	Maintain schedule for project completion.
Project Closeout		
Final Engineer's Report	Document construction records.	Client records, archiving.
Documentation	Historical data base input.	Integrate records with client files.
Commissioning	Check contractor provided record drawings and project record files.	Confirmation of design requirements. Ensure all deficiencies are rectified. Completion of outstanding issues and contractual obligations.
Post Construction Issues	Carry out 12 month warranty inspection. Maintain contact with client and stakeholders to resolve issues.	Final deficiency rectification and continuing support.

4. PAST PROJECTS

Reno-Stead Airport

Aircraft Parking Apron - Concrete Pads

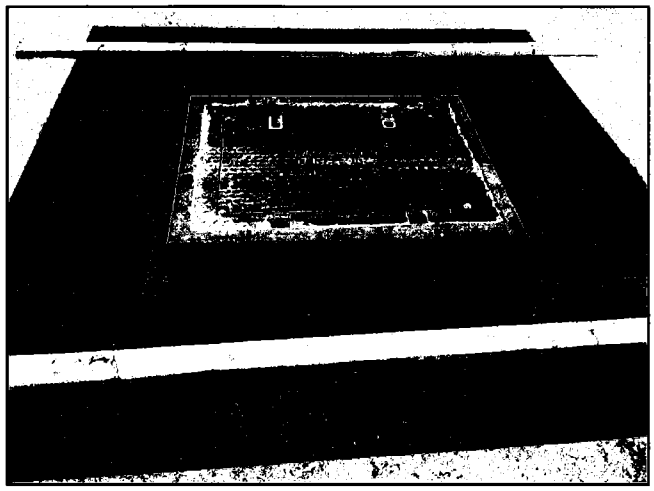
Location: Stead, NV
Construction Budget: $2,223,055
Construction Costs: $2,223,055
Client: Reno-Tahoe Airport Authority
Contact: Mr. Gary Probert, P.E., (775) 328-6459
Date of Completion: June 2018

This project consisted of the design of Portland Cement Concrete Pavement (PCCP) parking pads for heavy aircraft on the apron at Reno-Stead Airport (RTS) in Reno, Nevada. The parking pads were designed to provide a rigid parking surface for BLM air tankers, which typically damage the existing asphalt concrete (AC) pavements. Through a collaborative planning process with the RTAA and project stakeholders, the PCCP pads were divided into nine (9) multiple smaller pads designed for individual aircraft. This proposed design maximized the total number of parking spaces, accommodated the design fleet mix, and consolidated the larger aircraft parking into one area of the ramp. The design aircraft included MD87, BAe146, C130, and C17. The proposed project layout has nine (9) concrete pads within an area of the asphalt AC apron that is approximately 1,000' long x 300' wide. Six (6) of the PCCP pads are 112.5' x 62.5' and three (3) of the pads are 100' x 50'. The six larger pads encompass three-fourths of the western project area. They are configured in two rows of three pads running east-west. The three smaller pads are located on the eastern one-fourth of the project.

Creech Air Force Base

Apron Lighting

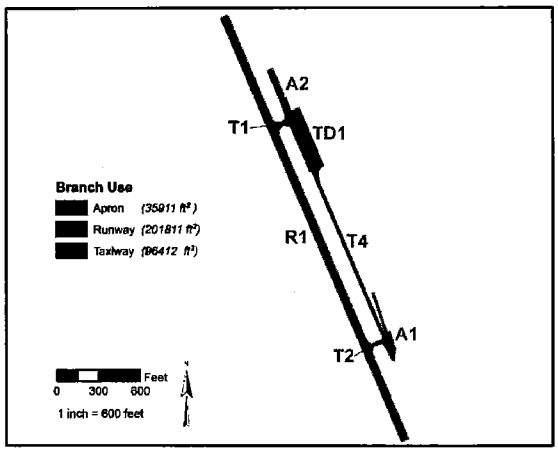
Location: Indian Springs, Nevada
Construction Budget: $2 million
Construction Cost: $2 million
Client: Dinter Engineering
Contact: Mr. Keller Hackbusch, (775) 826-4044
Date of Completion: 2018



The design of this project included civil design services associated with a new apron lighting project at Creech Air Force Base. Electrical conduit was designed to be installed to minimize disturbance to the existing apron pavement. Directional boring depth profiles were designed for each directional bore for the project. Trench details and pavement were designed for aircraft loading. Technical specifications were prepared to Federal standards. The contract documents included plans, technical specifications, engineer's report and opinions of probable construction costs.

Dunsmuir Muni-Mott Airport
Pavement Maintenance and Management Plan

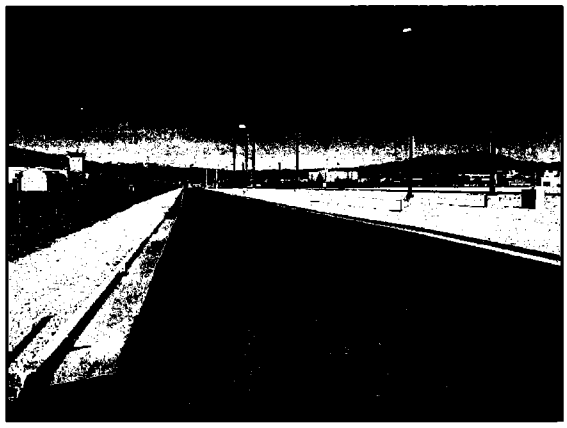
Location: Dunsmuir, CA
Design Budget: $89,900
Design Costs: $89,900
Client: City of Dunsmuir
Contact: Mr. Richard Dinges, (530) 235-2177
Date of Completion: July 2017



This project included the preparation of a Pavement Maintenance and Management Plan document. A pavement database was developed for all the airport pavements using the PAVER software systems. A visual pavement condition survey was performed using the procedures outlined in ASTM D 5340-12, "Standard Test Method for Airport Pavement Condition Index Surveys." PAVER software was used to assess the current condition of pavements; develop models to predict future conditions; report on past and future pavement performance; develop scenarios for Maintenance & Rehabilitation (M&R) based on budget or condition requirements; and plan future projects. Recommendations for the Airport Capital Improvements Program were developed based upon the results of this study including the prioritization of rehabilitation projects. In addition, this document established maintenance strategies for the airport to follow in the future.

Reno-Tahoe International Airport
Roadway Reconstruction Gate 170 Access Road

Location: Reno, Nevada
Construction Budget: $134,007
Construction Cost: $125,307
Client: Reno-Tahoe Airport Authority
Contact: Mr. Gary Probert, P.E., (775) 328-6459
Date of Completion: May 2018



This Project included the design of pavement replacement for an asphalt access road that serves Gate 170 at Reno/Tahoe International Airport. Gate 170 Access Road Reconstruction is funded by the RTAA FY 2017-18 Capital Projects Budget. The Project elements include AC pavement, cement treated base, over excavation of fine grain soils, striping, and loops for the access gate. The existing Portland Cement Concrete (PCC) curb & gutter and catch basins were in good condition and were left protected in place. Construction safety and phasing plans were also prepared for the project. The contract documents included plans and technical specifications prepared to Orange Book Requirements, and opinions of probable construction cost.

5. SUB-CONSULTANTS

DINTER
Engineering Confidence.

Airfield Electrical Engineering

Dinter Engineering Company (Dinter) is a Nevada-Certified Local Emerging Small Business electrical consulting engineering firm with their corporate office in Reno, Nevada, since 1961. Dinter specializes in airfield electrical systems and has an Airfield Electrical Department dedicated to the design of airfield power, lighting, signage and NAVAIDS systems for runways, taxiways, aprons and helipads. Dinter has a substantial staff of airside electrical personnel all of whom have a long association with this company, are knowledgeable in current FAA design requirements, and will provide up-to-date designs utilizing the latest technologies and systems.

Projects completed by Dinter for the Carson City Airport:

- Taxiway D - *Construction Inspections*
- Runway 9 Connector and Taxiway D - *Construction Inspections*
- Rehabilitate and Realign Runway 9/27 and Taxiway A – *Electrical Inspections and Testing*
- Feasibility Study Gonzales Site Improvements for Heritage Hangars – *Electrical Design*

CME CONSTRUCTION MATERIALS ENGINEERS, INC.

Geotechnical Engineering and Inspection

CME has provided geotechnical services in Nevada and eastern California continuously for more than 35 years. Our geotechnical engineers and geologists are skilled in defining and executing field exploration programs to provide cost-effective solutions to geotechnical challenges. Our goal is practical design recommendations to provide for safe and stable structures, with an emphasis on innovative design options to contain construction budgets. Projects completed by CME for the Carson City Airport:

- Runway 9/27, Taxiway A, & Taxiway D (2009)- *Materials Testing and Project Inspections*
- Runway 9 Connector and Taxiway D (2010) – *Materials Sampling and Laboratory Testing*
- Taxiway D West (2011) - *Materials Testing and Project Inspections*
- Main Apron Phases 1, 2, & 3 (2013-2014) – *Quality Control Testing Services*

MAPCA
MAPCA SURVEYS INC.

Surveying

MAPCA Surveys, Inc. is a single discipline surveying and mapping firm dedicated to providing professional, personable and precise services that meet the needs of its clients. MAPCA provides innovative approaches to projects utilizing state-of-the art equipment and cutting-edge technology resulting in successful projects with active participation from senior staff. MAPCA's dedicated team has extensive experience in providing survey and mapping services to public works agencies, special districts, transportation authorities, private developers and the public at-large throughout Nevada. MAPCA Surveys, Inc. is also a State of Nevada DBE Certified company and is a Veteran Owned Company. Local projects completed by MAPCA:

- RTIA: Runway 16L-34R Touchdown Area – *Construction Surveying*
- RTIA: Apron 15-17 Reconstruction Survey – *Construction Surveying*
- RTIA: Taxiway "Q" Reconstruction - *Construction Surveying*

6. GEOGRAPHIC LOCATION

DEC has been an established engineering firm located in Reno, Nevada for over 20 years. In fact, DEC and all its subconsultant team offices are located less than 25 miles from the airport as shown in **Figure 6-1**. It takes approximately 25 minutes to drive to the airport. We are available to attend project team meetings, construction meetings, or be available within minutes to meet face-to-face and discuss project issues as they arise.

With a strong local presence, we are equipped to respond quickly in all situations. We understand the need to be dynamic to respond to client needs. CXP can have confidence that it will be served well throughout all stages of the on-call. Every team member listed in this SOQ lives and works in Northern Nevada. We are NOT just a branch office or a local face for an out-of-state firm. By selecting the DEC team, CXP will get the service and attention that only a local firm can provide. All of this can be expected with the expertise, resources, and professionalism of a large national firm.

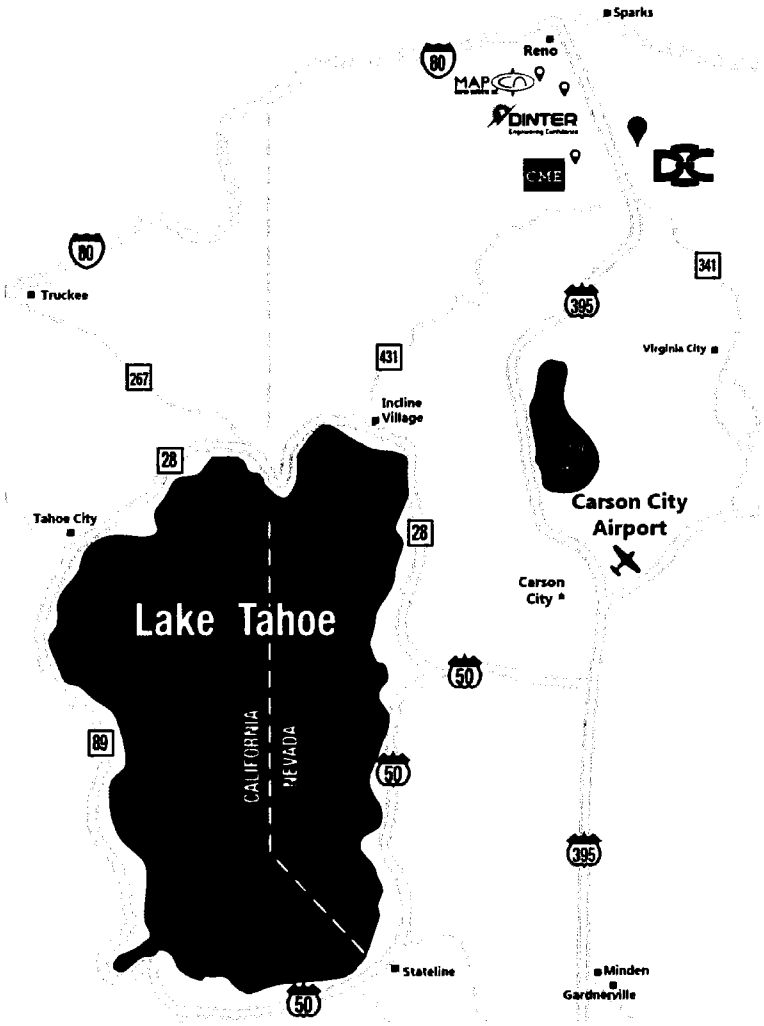


Figure 6-1: Office Locations

7. QUALIFIED INSPECTORS

Inspection and Resident Engineering services are an important aspect of airport capital improvement projects. The FAA has strict standards to ensure eligibility for reimbursement, in addition to obvious safety and security concerns. We have assembled a team that has inspectors with high level of experience and wide array of project experience in the airfield environment. Please see **Section 2** for brief resumes of the inspectors on the DEC team.

The DEC team is committed to pairing the right expertise to the right project. For each project we will analyze our available inspectors with the right experience within both CME and DEC staff and work with CXP - in partnership - to determine the right mix of economics, experience, and safety to utilize the right inspector for any given project.

8. POTENTIAL CHALLENGES AND SPONSOR'S CONCERNS

At DEC, we place a high emphasis on Client service and taking the time to understand the challenges our Clients face. We take our role as the Carson City Airport's consultant very seriously. DEC will dedicate a team of engineers solely committed to building a successful partnership between DEC and CXP. No matter where we provide our services, we strive to become a virtual extension of airport staff.

Throughout the preparation of this SOQ, we have taken the time to learn about the airport and the special concerns surrounding the facility. Our familiarity with the airport and understanding of the project challenges is based in part on the following:

1. DEC representatives have made several visits to the Airport to hold discussions with the Airport Manager and airport staff. This included a trip to analyze drainage concerns immediately following the rainfall event on May 25, 2018.
2. Key team members have been involved with projects for many years at Carson City Airport. This delivers an institutional knowledge that can only be provided by those with experience at the airport.
3. Review of current Airport Capital Improvements Plan (ACIP).
4. Review of the Draft Airport Master Plan document.

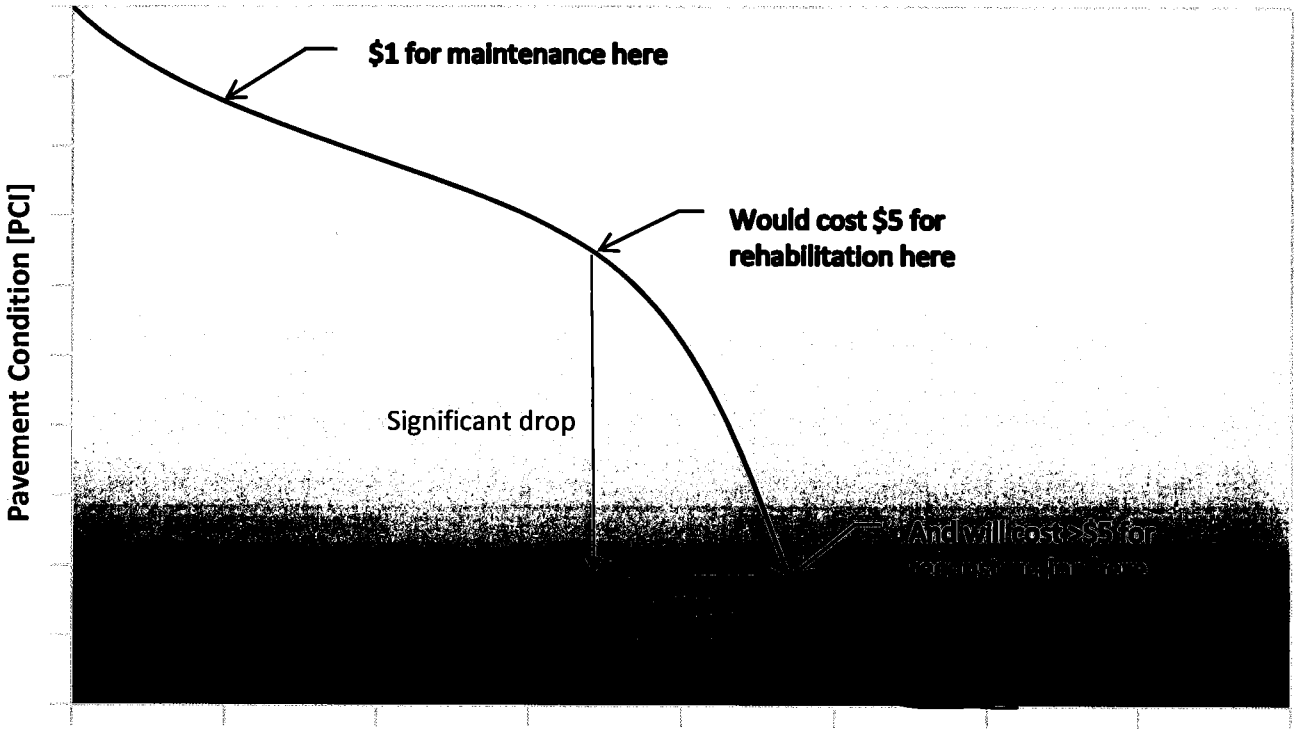
Based on our discussions with the airport, the physical infrastructure is not terribly complex to design and construct. The biggest challenge with

CXP – Main Apron

the projects is the strategic packaging to get them funded and implemented. It will also be important to coordinate with airfield operations to minimize impacts to air traffic. Critical elements are:

- Foresight to anticipate airport needs and integrate them into projects. A dynamic approach will be necessary to ensure the full benefit of FAA AIP funds is realized.
- Frequent and thorough communications with airport stakeholders and the FAA.
- Focus on integrating the airport into the community. The airport is uniquely situated in the State Capital; this can be leveraged to encourage development both airside and landside.
- Attention to schedule and budget.
- Always have a project shovel ready so the airport is positioned to compete for and accept available funding for projects.
- Provide attention to drainage to ensure concerns are addressed when appropriate.

Figure 8-1: Cost of Reconstruction

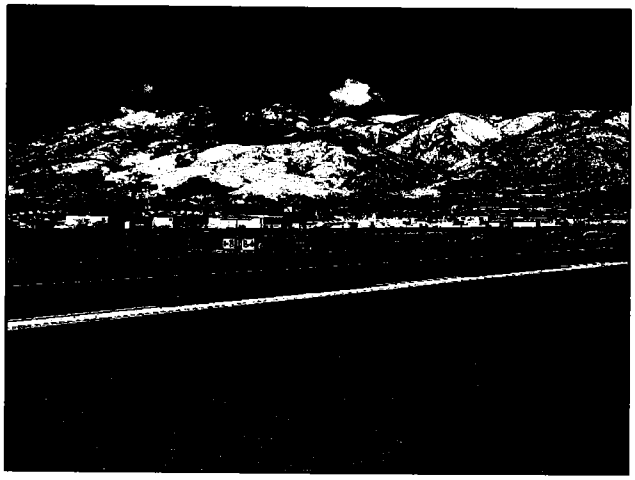


- It is more cost effective to maintain pavements in a serviceable condition rather them allowing them to deteriorate. Crack seals and seal coats can be performed at a fraction of the cost of reconstruction projects. This allows FAA funds to be applied toward other projects to further develop the airfield. See **Figure 8-1** for a visual comparison of the cost of reconstruction projects versus maintenance projects.

Following is a summary of our understanding on some of the upcoming projects on the ACIP:

- Airport Master Plan – Coffman Associates is currently in the process of updating the Airport Master Plan. This will be an important document to guide the airport into its next chapter under new leadership. We intend to provide critical input to this document as it goes through the final stages of completion in 2018. A fresh take on this document will be an advantage to the airport to provide perspective from a different standpoint. Critical components to be addressed include:
  - Land Use: strategic land acquisition to promote safety of the surrounding community and encourage the appropriate land use and development around the airport.
  - Controlling noise while balancing airport growth.
  - Obstruction lighting considerations.
  - Re-analyzing the TERPS with respect to the challenges with terrain and the types of aircraft that utilize the airport.

  - Long term planning for the aggregate quarry closure on the east end of the runway.
  - Ongoing strategies and creativity to increase revenue when considering the hangars are not airport owned and operated under land leases.
- Rehabilitate Taxiways A, B, C, D, Taxilanes E & F and Access Road – The design of this project has already been completed by Atkins and the project will be constructed this summer. Each piece of pavement has been built in 1998 to 2013. Crack seals, pavements seals and re-striping will be implemented to prolong the useful life of these pavements.
- Replace AWOS Equipment and Radios – The current AWOS was installed in 2010 and some of its equipment has become outdated. This project included the Ceilometer, Central Data Platform, and the UHF and VHF radios.
- Replace Perimeter Wire Fence with Chain Link Fence – While the airport is entirely enclosed by perimeter fence, approximately 40% of the fence does not meet FAA standards for safety and security. This project will provide standard six-foot tall chain link fence with three-strand barbed wire on top.
- Rehabilitate Main Apron – The main apron was constructed in two phases in 2013 and 2014. Regular maintenance is required to keep pavements in a serviceable condition. This project will include crack seals and a new seal coat to prolong the life of the pavement. While a seemingly inconsequential project at first review, this project will save much long-term funding for future project.
- Rehabilitate Perimeter Road – This project includes the rehabilitation of the west perimeter road. The section of road near the Port-A-Port hangars needs reconstruction and drainage improvements. Due to the proximity of private hangars and taxilanes, care shall be taken to ensure the entire project remains AIP grant eligible. The millings from this portion shall be considered for strategic re-use in other locations on the airfield. The remainder of the road will receive a two-inch asphalt overlay.
- Rehabilitate Runway 9-27 – Runway 9-27 was constructed in 2009. As the only runway at the airport, it is critical to keep the pavement in a safe and serviceable condition. Regular maintenance is required to keep pavements in good condition. This project will include crack seals and a new seal coat to prolong the life of the pavement. While a seemingly inconsequential project, this project will save much long-term funding for future projects.
- Rehabilitate North Apron – The North Apron was constructed in 2016. This apron provides critical parking on the north side of the airfield. Regular maintenance is required to keep pavements in a serviceable condition. This project will include crack seals and a new



CXP – Taxiway D

CXP – Taxiway A

seal coat to prolong the life of the pavement. While a seemingly inconsequential project, this project will save much long-term funding for future projects.

- Replace Automatic Gates and Operators – As a part of this project, three outdated gates with operators will be replaced. These gates need constant maintenance which is costly and time consuming. The gates will be cantilever slide gates.
- Emergency Generator – Severe weather tends to cause power outages in the area. The new emergency generator will provide critical power to the airfield lighting systems during power outages. The will keep the airfield safe and operational during interruptions in power service.

9. FAMILIARITY WITH AND PROXIMITY TO GEOGRAPHIC LOCATION

Our project manager, Heath Hildebrandt, and Deputy Project Manager, Shane Dyer, have become very familiar with the Carson City Airport. They have established a great working relationship with CXP's management and staff during the preparation of this SOQ. This has included a tour of the airport to learn about the specific challenges/issues and upcoming projects on the airfield. Heath and Shane also visited the airport after a recent rainfall event to observe and note drainage issues that need to be addressed on the airfield.

DEC and all subconsultant's headquarters are located in Reno, Nevada and all of the work associated with the projects will be performed locally. DEC's office is located 25 miles from the airport. Staff can be available on very short notice to attend meetings and/or visit the site.

Table 9-1: DEC Team Local Presence

Company	Local Corporate Headquarters	Local Office	Local Staff	Local Production
DEC	✓	✓	✓	✓
CME	✓	✓	✓	✓
Dinter	✓	✓	✓	✓
Mapca	✓	✓	✓	✓

10. BLEND AESTHETIC & ARCHITECTURAL CONCEPTS

As a major gateway to the state capital, CXP plays an important role in delivering first impressions to out-of-town visitors. This means that aesthetics and architectural qualities will be considered when developing projects at Carson City Airport. All improvements will consider aesthetics and architectural concepts to blend with the surrounding mountainous terrain and high desert environment. The safety of users will be the number one priority when considering aesthetics. When appropriate and requested by CXP, the services of an architect will be engaged to ensure that project components blend with the mountain environment. DEC has solid working relationships with several local architects and can assist CXP with the selection of one that will best meet their needs.

11. DBE GOALS

DEC does not discriminate on the basis of race, color, creed, national origin, sex, sexual orientation, gender identity or expression, or age in the performance of this or any other contract. DEC hereby pledges to carry out applicable requirements of 49 CFR Section 26.53 in the award and administration of this contract. DEC understands that failure to carry out these requirements is a material breach of the contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

DEC prioritizes the use of qualified DBE sub-consultants on all its contracts. In fact, Dyer Engineering has committed to use Mapca Surveys, Inc., a locally owned and certified firm in the State of Nevada as a DBE, for land surveying services on this contract. This is a testament to DEC's commitment to engage DBE's in meaningful roles in all its projects.

12. VALUE ENGINEERING

Value Engineering is a formal process of analyzing contract items or tasks to ensure that their essential function is provided at the lowest cost. The FAA encourages the use of Value Engineering practices for construction projects to offer reasonable opportunities for cost reductions.

DEC will use Value Engineering methodologies at CXP to identify alternatives, sustainable design features, and traditional design features for cost comparison. In Value Engineering, alternatives can be compared using life-cycle costing because the alternatives for each project component are defined to accomplish the same goal. When the alternatives satisfy the required function, the best value alternative will be identified by comparing the initial costs and life-cycle costs of each alternative. Life-cycle costing will provide estimates for the initial construction cost and the full life-cycle cost differentials of each alternative. Generally, DEC will take the following steps:

1. Establish alternative design strategies;

2. Determine activity timing (analysis period should be sufficient to reflect long term cost differences including at least one rehab of each alternative); and

3. Estimate direct costs (future costs should be estimated in constant dollars and discounted to the present using real discount rate).

Given the upcoming projects in the ACIP, pavement rehabilitation strategies will be critical to ensure value for cost is optimized. When considering alternative pavement rehabilitations, it will be determined which design alternative results in the lowest total cost over the life of the project along with the user-cost impacts of alternative strategies. Present worth or present value economic analyses will be utilized to evaluate airport pavement design or rehabilitation alternatives. The initial cost and life expectancy of the various alternatives will be based on our experience with the local construction industry with consideration given to local materials, environmental factors, and contractor capability.

The Value Engineering Process can be implemented at various stages of project development. It is most beneficial when programming project costs for the ACIP and when completing the design of the project. See **Figure 12-1** below for a visual flowchart showing the development of a project and how value engineering will be implemented into the project timeline.

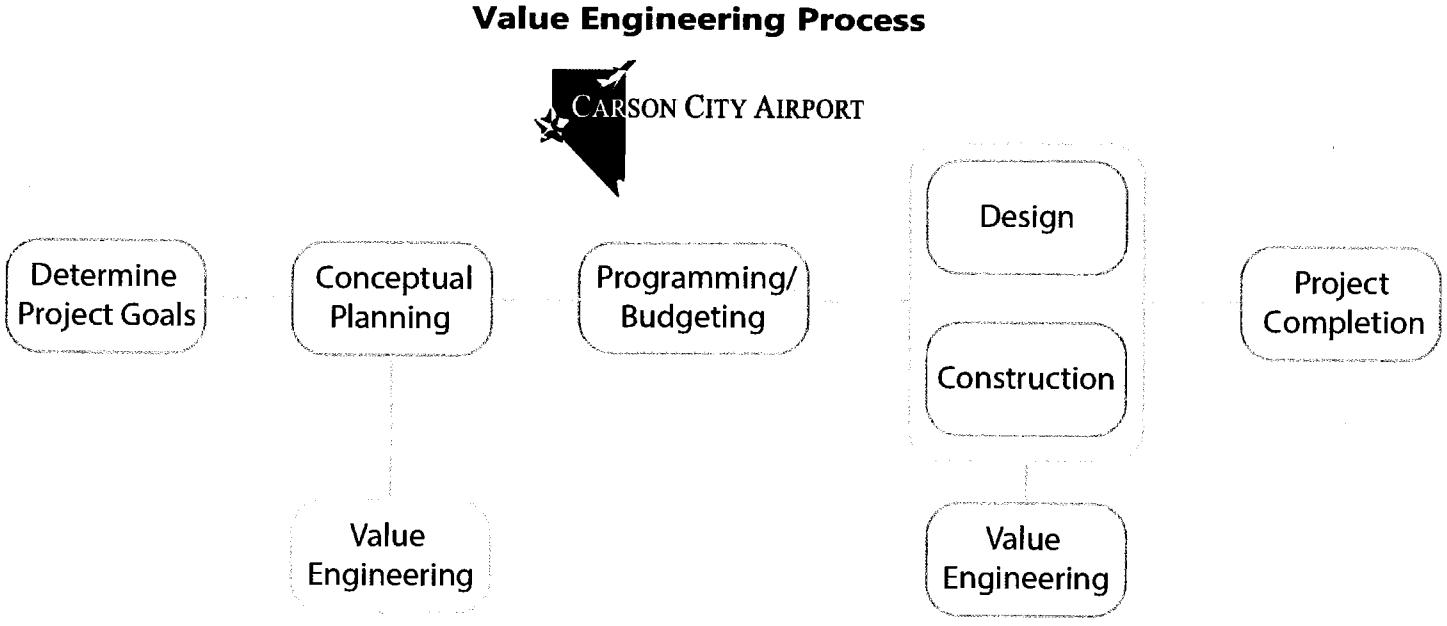


Figure 12-1: Value Engineering Process

13. REFERENCES

Team Member	Project	Client Contact
DYER ENGINEERING CONSULTANTS	Reno-Tahoe Airport Authority Roadway Reconstruction - Gate 170 Access & Aircraft Parking Apron -Concrete Pads	Mr. Gary Probert, P.E. 775-328-6459 gprobert@renoairport.com
DYER ENGINEERING CONSULTANTS	Dunsmuir Municipal-Mott Airport- Pavement Maintenance and Management Plan	Mr. Richard Dinges 530-235-2177 director@dunsmuir.com
CME CONSTRUCTION MATERIALS ENGINEERS, INC.	Carson City Airport Authority Inspection & Geotechnical Projects (2009-2016)	Mr. Rick Cooley, P.E. (775) 283-7302 rcooley@carson.org
CME CONSTRUCTION MATERIALS ENGINEERS, INC.	Reno-Tahoe Airport Authority Inspection & Geotechnical Projects (2013-2018)	Mr. Gary Probert, P.E. (775) 328-6459 gprobert@renoairport.com
DINTER Engineering Confidence.	Gooding Municipal Airport Electrical Design & Construction New AWOS	Mr. Dale Thomas (208) 539-5934 Dalefly@aol.com
DINTER Engineering Confidence.	Sunnyside Municipal Airport Electrical Design & Construction AWOS Installation	Mr. Shane Fisher (509) 837-5399 sfisher@sunnyside-wa.gov
MAPCA SURVEYS INC.	Reno-Tahoe Airport Authority Construction Survey & Topographic Mapping	Mr. Gary Probert, P.E. (775) 328-6460 gprobert@renoairport.com
MAPCA SURVEYS INC.	City of South Lake Tahoe Airport Construction Survey	Mr. Stan Hill, P.E. (530) 542-6032 shill@cityofslt.us