Volume 8 *Issue 1*

CalAERO

DIVISION OF AERONAUTICS
CALIFORNIA DEPARTMENT OF TRANSPORTATION

Winter 2016

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Division of Aeronautics' Terry Barrie Retires

***By* Carol Glatfelter**

In 1979, Terry began a long and distinguished career of service with the State of California after graduating with a Bachelor of Science degree in Environmental Planning and Management from the University of California at Davis. He entered public service as an Assistant Transportation Planner in District 10, which covers eight central California counties. There he coordinated Regional Transportation Plans and overall Work Programs for the San Joaquin Council of Governments and Stanislaus Area Association of Governments. After 10 years, Terry left District 10, and in 1989, he continued his work as an Associate Transportation Planner in Caltrans' District 4 for another five years.

When he joined Catrans' Division of Aeronautics in June of 1995, Terry worked as Project Manager for the Interregional California Aviation System Plan (ICASP). He coordinated details of the ICASP System Requirements, Policy Elements, and Action Plans with Aeronautics' staff and Regional Transportation Planning Agencies. The Inventory Element for the California Aviation System Plan (CASP) was developed at this time, and Terry had a leadership role in building the airport classification system the Division uses today for California's public-use airports.

In December 2000, Terry was promoted to Chief of the Office of Aviation Planning as a Senior Transportation Planner, supervising a staff of seven to nine Associate Transportation Planners. He supervised work on the CASP, airport land use planning, and various aviation research projects around California.

Finishing his career on December 31, 2015, Terry's desire to continue improving his golf game and travel with his wife made retirement an easy alternative to drive-time commutes. A friendly and lasting relationship with his staff remains, and those who know him regret seeing his career come to a close.

The Division of Aeronautics wishes Terry the best of luck in his retirement and notes the State has lost one of its most knowledgeable Aviation Planners.

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Completing California Environmental Quality Act Compliance for the California Aid to Airports Program

The California Aid to Airports Program (CAAP) regulations require sponsors to submit an application form (DOA-0012) to the Division of Aeronautics for our grants and loans. Among the list of required supporting documents in the application is verification that the sponsor is in compliance with the California Environmental Quality Act (CEQA). Projects funded through the CAAP are subject to CEQA, and the Division is responsible for ensuring that the public agency carrying out the project is in compliance with CEQA.

In accordance with the application, sponsors must provide evidence that CEQA has been addressed. The Division is not allowed to fill-in the CEQA verification section of DOA-0012. We recommend to airport staff who prepare DOA-0012 and are unsure of how to complete the CEQA section, that they consult with their city or county planning staff for assistance to complete the form. If a lead agency determines that a project is exempt from CEQA, it may prepare a notice of exemption and include it with the application for CAAP funding. The proper CEQA exemption number should always be added to form DOA-0012.

Providing the Division with a Categorical Exclusion Approval issued by the FAA is not sufficient CEQA documentation as it is proof of compliance with the National Environmental Policy Act (NEPA) only. A jointly prepared CEQA/NEPA environmental document is rarely prepared for projects, so completing the NEPA item on DOA-0012 is not likely to be proper supporting documentation for our AIP matching grants.

Division of Aeronautics Form DOA-0012: http://www.dot.ca.gov/hq/planning/aeronaut/publication.htm
State Clearinghouse Notice of Exemption: http://www.opr.ca.gov/s_ceqadocumentsubmission.php

If you have any questions, please contact Philip Crimmins at (916) - 654-6223

PART III. REQUIRED SUPPORTING DOCUMENTS

Pursuant to Public Utilities Code Sections 21681-21684 and Section 4067 of the CAAP Regulations, please submit the following documents with this application:

- Local government approval *(resolution or minute order)* as described in Section 4067(a).
- FAA Grant Agreement with FAA and sponsor signatures.
- Verification of full compliance with the California Environmental Quality Act (CEQA) by submitting information to fulfill either 1. or 2. below:

1. Copy of Notice of Exemption or provide the Categorical Exemption Class # _____ (CEQA Guidelines Sections 15300-15333)
2. Copy of Notice of Determination or provide the following information:
   - Environmental Impact Report (Title/Date) _____ State Clearinghouse (SCH)# _____ or
   - Negative Declaration (Title/Date) _____ State Clearinghouse (SCH)# _____ or
   - National Environmental Policy Act (NEPA) document (Title/Date) _____
     (NEPA documents-Environmental Impact Statement or Finding of No Significant Impact must comply with CEQA provisions)

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FAA Publishes Northern California Tower Enroute Control Routes

The Federal Aviation Administration (FAA) has recently published Tower Enroute Control (TEC) routes for Northern California (NorCal). Pilots who have used the Southern California (SoCal) TEC routes, or those in other parts of the country, will know that the NorCal TEC routes are a welcome addition for Instrument Flight Rules (IFR) flying in the greater Bay Area and Central Valley regions.

For those unfamiliar with TEC routes, the FAA has recognized that "it is possible for a pilot to fly IFR from one point to another without leaving approach control airspace." This concept is known as "Tower Enroute" and the FAA has allocated airspace to "allow flight planning between city pairs while remaining within approach control airspace." As a result, designated routes and altitudes between certain airports have been developed and accepted for use. In practice, this enables pilots to request a specific TEC route upon radio call up to air traffic control from the aircraft and receive clearance for that flight plan. More details about use of the TEC routes can be found in FAA's Airport/Facility Directory (A/FD) for the Southwest U.S. and other flight publications such as those published by Jeppesen. Pilots should review this information to understand the parameters of the TEC route system.

Departure airports in the NorCal TEC route system include Modesto City-County Airport-Harry Sham Field, Monterey Regional Airport, Oakland International Airport, Sacramento Executive Airport, Sacramento Mather Field, Sacramento International Airport, San Francisco International Airport, and Mineta San Jose International Airport. At least eighteen destination airports are shown, although it may be possible to use the routes for flights to additional "satellite" airports near the major airports listed. Flight altitudes and routing between city pairs may vary depending upon the type of aircraft flown, so it is necessary to determine your aircraft classifications according to the following guidance:

J = Jet powered
M = Turbo Props/Special (cruise speed 190 knots or greater)
P = Non-jet (cruise speed 190 knots or greater)
Q = Non-jet (cruise speed 180 knots or less)

Also note that as the NorCal TEC routes are relatively new, their depictions in the publications currently vary somewhat. For instance, the AF/D does not list specific Route IDs for each route, while Jeppesen has included the NorCal TEC routes within the SoCal TEC route information.

Pilots should, of course, be aware that these TEC routes, while facilitating expedited filing of IFR flight plans, are not a substitute for other components of the flight planning process. Pilots will need to receive a qualifying weather brief and check for Notices to Airmen and Temporary Flight Restrictions as part of their normal due diligence.

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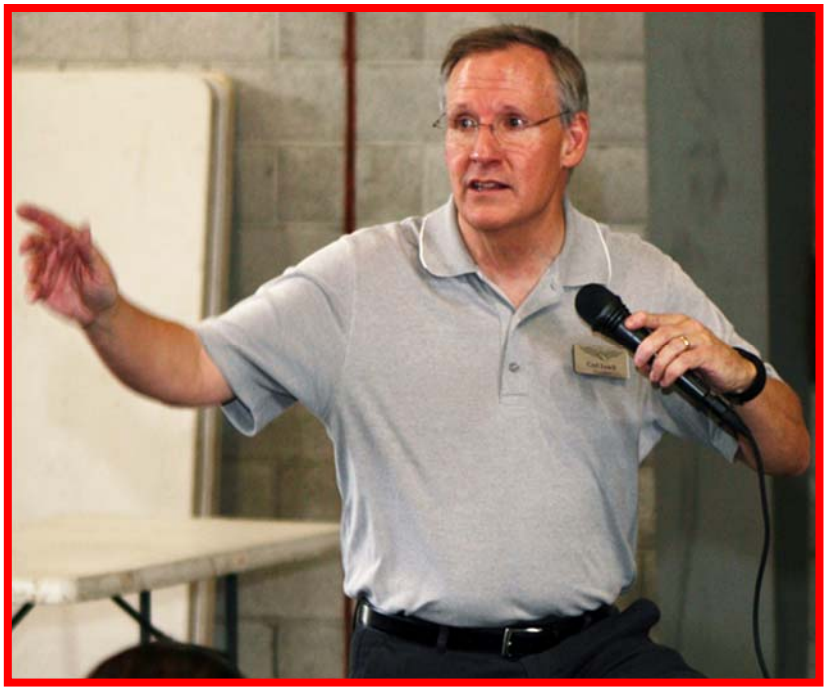
Trim Tabs

***By* Colette Armao**

The guiding principles that have charted the life work of this issue's Trim Tab guest are his love for general aviation (GA) and commitment and passion to flight safety. Corl Leach, California Pilots Association (CalPilots) President, described himself as, "I'm GA through and through," although ironically, he flies for commercial air carrier, Southwest Airlines. Corl described his first flying experience as "magazine flying" reading every article and book he could about aviation. His uncle took him for his first plane ride when he was seven years old. A small inheritance provided him with the means to start flying lessons, and he earned the rest by working as a line boy at an airport, completing his private and commercial pilot's license and instrument rating by the time he finished high school in 1979.



Corl was able to join the University of Missouri (MU) flying club while still in high school. It was in the flying club that Corl met Mike Tumbleson an MU professor and flying club president. Mike taught the young aviator several important flying lessons that Corl still lives by today. Mike's philosophy was, "There are no tolerances. Either you're on or you're not. You don't have to go anywhere, ever, and if you're flying along and ask yourself a question, and the answer includes probably," don't do it!"

Taking a break from college, Corl enlisted in the Navy becoming a nuclear electronics technician and was stationed at Pearl Harbor, where he continued to fly for fun. He applied for and was accepted into a naval commissioning program, and returned to MU to complete his degree, switching majors to general studies with an emphasis on atmospheric science. While at MU, he continued to fly, earning both his Certified Flight Instructor and Certified Flight Instructor Instruments along with a degree.

Pensacola, Florida came next for basic flight training. Because he was first in his class, Corl was able to choose the flying track he wanted for advance flight training, choosing the Maritime Pipeline to fly multi engine aircraft instead of fighters. His introduction to multi engine aircraft was a T44A (King Air), and he earned his wings in July 1988. Corl rounded out his naval flying career as a flight instructor.

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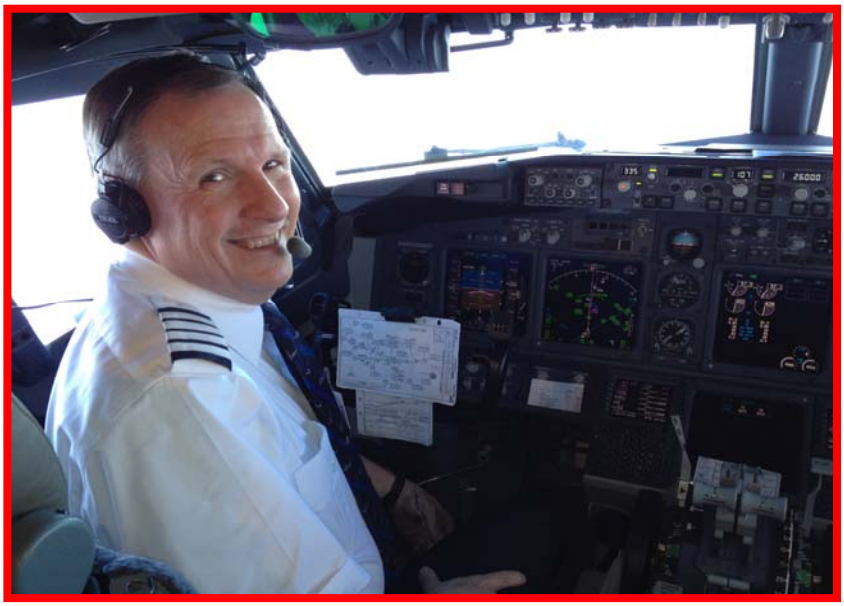
Corl's start with Southwest began in Dallas, where he started a GA test and training center. He joined a local flying club working as a flight instructor. In 2004, he transferred to Southwest's Oakland crew base, and bought a home in Rocklin to be near his wife's teaching job and daughter's school.

Shortly after moving to California, he joined CalPilots, stating that, "State pilot organizations are essential to the well-being of a state's GA airport system." He sees their role as unique among the GA flying organizations. Making Lincoln Regional Airport his GA home base, he founded the Lincoln Regional Aviation Association chapter of CalPilots.

Corl participates in Aviation Day at the Capitol, an annual event promoting the benefits of aviation to the State of California. A cadre of aviation interests formed the California Aviation Alliance to serve as a unifying body where members can meet with each other, elected officials, and the public to promote aviation's benefits and to build support for airports throughout the State.

When asked about the relationship between CalPilots and other pilot organizations, Corl explained that aviation issues can be divided into three tiers—local, mid-level, and national. He described local pilots as best suited to work locally. The big national organizations such as National Business Aviation Association, Aircraft Owners and Pilots Association, and Experimental Aircraft Association are best suited to work on national level issues, such as air space, medical certificates, and Next Gen implementation. State pilot organizations shine best at the mid-level, working on local and regional issues such as land use, state grants, and protecting GA airports.

Corl's fondest hope for aviation is, "Pilots need to stop talking to just pilots and start talking to the public and local governments instead of just their own airports. The local elected are the ones who will save an airport, if they see the benefits." He said, "We need to show communities that their airport is an important resource to them. He described aviation as fragmented and that the different organizations need to come together to create a common vision for aviation and promote that. He'd also like to create a closer working relationship with Caltrans' Division of Aeronautics. In the end, he described it as, "about creating relationships and getting to know each other better, to find common ground, and to promote what we love to the people of California."



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Estimating the Cost of a Runway Paving Project

***By* The Office of Technical Services and Programs**

Every two years, the Division of Aeronautics requests that the airport managers submit a ten-year Capital Improvement Plan (CIP) for their airports. Documentation in the CIP is a statutory requirement for eligibility to receive California Airport Aid Program (CAAP) non-discretionary grants.

Preparing a cost estimate for the CIP may prove challenging at times because available data may be limited and the scope of work conceptual. Despite that challenge, a sound estimate in the CIP reduces potential delays down the line and improves the likelihood of funding.

Pavement improvement projects are a common type of airport project, and are usually expensive. Their scope can vary from a thin conventional slurry seal to full depth reconstruction. A formal pavement evaluation will describe the existing pavement condition and provide recommendations on appropriate pavement improvement alternatives along with life cycle costs.

Estimating Method

Once the type of pavement improvement project is selected, an estimate can be developed. The most common estimating method, an Engineer's Estimate, represents the total sum of the different components of a project (items of work) multiplied by associated unit prices. The unit price represents the cost of a predefined quantity of work and includes materials, labor, transport, and profit. Segregating components of the project makes adjustments to quantities or costs easier as new information becomes available. Preferred sources of unit costs are recent contractor item bids, preferably in the general vicinity of the airport and for a similar size project. Your local transportation agency or office may be able to assist with this data.

Table I in this article lists items associated with pavement runway work and average recent statewide unit prices. For the purposes of this article, runways are assumed to be asphalt concrete and designed for aircraft under 12,500 pounds. Unit prices may not be representative of your particular region.

Contingency should be part of any estimate. A CIP estimate should have up to 20 percent of the total added on as contingency. The final Engineer's Estimate accompanying design plans typically has a contingency of 5 percent. Cost escalation is also another factor. Historically, construction costs escalate over time due to inflation as well as increases in costs of material and labor. A 2–3 percent per year compounding escalation should be applied to an estimate from the current year to its assumed construction year.

Another estimating method is the Square Foot Estimate which is based on historical data of total project costs reduced to a square foot. This method, while not as accurate as an Engineer's Estimate, can serve as an additional "reasonableness" check. Typical Square Foot Estimates based on recent projects are listed in Table II in this article.

The Office of Technical Services and Programs can assist airport managers when developing CIP estimates. Please contact Tarek Tabshouri, Office Chief, at (916) 654-3775, or via email at tarek.tabshouri @dot.ca.gov.

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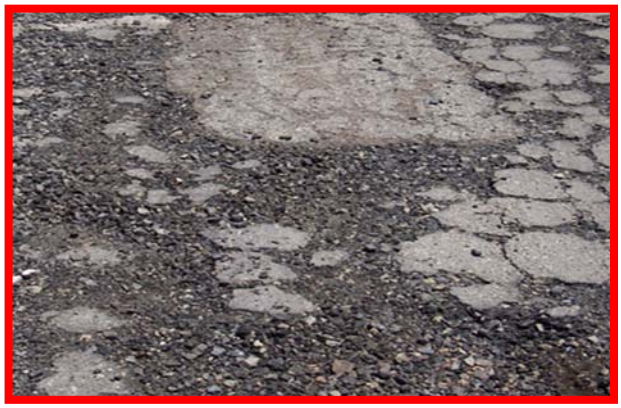
Table 1 - Typical Items of Work and Unit Prices for an Engineer's Estimate (Not a Comprehensive List)

Work Item	Unit Price
Crack seal	$1.50 -$2.00 per Foot
Slurry seal	$0.40 per Square Foot (Sq Ft)
Cold plane (aka Grind)	$0.50-$0.75 Sq Ft
Hot Mix Asphalt (HMA) - aka Asphalt Concrete	$120 per Ton
Shoulder backing	$40 per Ton
Pavement Markings	$1.7 per Sq Ft
Mobilization	$15,000-$30,000 per project
Operation Safety Plan	1,000-$5,000 per project
Storm Water Pollution Prevention Plan	$750- $2,500 per project
Contingency	5%-20% of subtotal



Before

After

Statewide price ranges for 2015 were averaged across the State. Unit prices will vary by location and size of project. Unit prices fluctuate based on overall economy, price of crude oil, other material costs, and inflation.

Table II – Typical Square Foot Estimate for Pavement Projects

Project Type	Range per SQ FT of Pavement (1)
Slurry Seal Project	$0.50 - $0.85
2" Asphalt Concrete Overlay project (no grinding)	$2.5 - $3.0
Full Depth Construction (recycle base material)	$3.5 - $4.0

(1) Not a substitute for an Engineer's Estimate

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Dollars For Your Airport?

Airport Managers: Are you interested in new sources of airport revenue. The Transportation Research Board (TRB) will conduct a webinar that features research to guide airport professionals in identifying, evaluating, and developing innovative sources to generate revenue at airports.

Date: Thursday, March 17, 2016
Time: 2:00 pm–3:30 p.m. Eastern Time

1. ACRP Report 121: Innovative Revenue Strategies—An Airport Guide
   - Innovative Revenue Sources and Techniques in use now
   - Range of revenue-generation opportunities from a variety of sources
2. ACRP Report 141: Renewable Energy as an Airport Revenue Source
   - Renewable energy projects deployed at airports and how those projects were developed and funded
   - How airports use energy and opportunities associated with airport-owned and privately owned facilities

Registration Information:
This webinar is sponsored by the Airport Cooperative Research Program. There is no fee to attend. Please go to the following website to submit your registration:
http://www.trb.org/Calendar/Blurbs/173756.aspx

Upcoming Event

SWAAAE Short Course
Monterey
January 31–February 3, 2016

Mailing Address:
Department of Transportation
Division of Aeronautics, MS 40
P.O. Box 942874
Sacramento, CA 94274-0001

Do you have something noteworthy to suggest for future issues of the CalAERO Newsletter?
Send suggestions to: diana.owen@dot.ca.gov
Phone: (916) 654-4848