Colorado Asphalt Pavement Association

Federal Aviation Administration

COLORADO AIRPORT OPERATORS ASSOCIATION

Asphalt & Airport Pavement Meeting

9:30am – 12:00 noon, March 31, 2026

BOLTON & MENK

Real People. Real Solutions.

5680 Greenwood Plaza, Greenwood Village, CO
Conference Center, South Building

AGENDA

9:30am Networking
10:00 am Program

- Welcome/Self Introductions
  - Tom Peterson, Colorado Asphalt Pavement Association
  - Jake Hoban, Aviation Senior Project Manager, Bolten-Menk
- 2026 CDOT Aeronautics Program Update
  - Kip McClain, Planning Manager, CDOT Aeronautics
- 2026 Colorado Airport Operators Association Update
  - Erinn Hoban, Executive Director, CAOA
- 2026 FAA Denver ADO CO & WY Update
  - Paulette Lugo, Program Manager, Denver Airports District Office, FAA
- Airfield Asphalt Pavement Technology Program
  - Brandon Brever, Director of Engineering & Technology, CAPA

- Featured Project: Colorado Springs Taxiway A Realignment
    - Mike Dierks/Brock Leger – Pyramid Construction
    - Amanda Girten – RS&H
    - Bud Geng, Colorado Springs Airport

- Asphalt Industry Update
    - Asphalt Binder Grades/Supply
    - Remote Projects

- Sponsor Presentation: Jake Hoban, Bolten-Menk

- Open Discussion

Lunch, Sponsored by Bolten-Menk

CAPA Website:
www.co-asphalt.com

AAPTP

Airport Asphalt Pavement Technology Program

Built for Runways... Backed by Research

NAPA
NATIONAL ASPHALT PAVEMENT ASSOCIATION

Inside the Airport Asphalt Pavement Technology Program

The AAPTP drives innovation in asphalt pavement design, materials, and construction to help build safer, more reliable, and efficient airfield surfaces. The program brings together the Federal Aviation Administration (FAA), the National Asphalt Pavement Association (NAPA), industry leaders, and research institutions to:

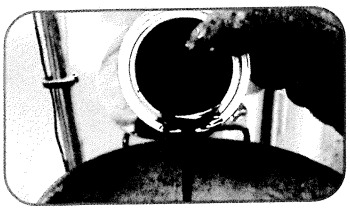
- Reduce premature pavement distress
- Improve construction consistency and quality
- Modernize specifications

By focusing on real-world needs and field-tested practices, AAPTP equips airfield pavement designers and engineers with durable, cost-effective asphalt technologies that extend runway life, reduce maintenance requirements, and support safe airfield operations.

2025 AAPTP Projects

To access these AAPTP reports, scan the code.

REPORTS



Simplifying Asphalt Binder Choices for Airfields

This project transforms complex FAA and Department of Defense binder requirements into a standardized selection process and online tool. It simplifies decisions, reduces design errors, streamlines design reviews, and improves specification consistency across regions.

Updating and Expanding the Asphalt Paving Handbook

The 2025 Asphalt Paving Handbook unifies best practices across the FAA, the U.S. Army Corps of Engineers, the Federal Highway Administration, and industry experts into a modern reference. It helps inspectors, designers, and contractors enhance asphalt quality, consistency, and durability on both airfield and roadway projects. This edition expands guidance for airfield-specific challenges and introduces new video training resources.

Improving Longitudinal Joint Performance

Researchers created the first manual for longitudinal joint maintenance, clarifying FAA requirements and offering practical guidance. It supports more consistent planning and introduces innovative materials, such as void-reducing asphalt membranes and rapid-penetrating emulsions, reinforced by long-term test sections to help refine treatments and inform future FAA adoption.

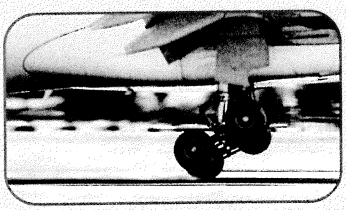
Enhancing Balanced Mix Design with Laboratory Rutting Tests

This study identified reliable rutting performance tests that more accurately predict mixture behavior under heavy aircraft loading and high temperatures. A four-test framework, centered on Hamburg Wheel-Tracking and APA testing, supports design verification and acceptance. Results inform updates to FAA P-401 and P-403 specifications and advance performance-focused asphalt design approaches to reduce early deformation and improve long-term reliability.

Validating Gyrations for Superpave Gyratory Compactor

Findings confirmed that FAA's current Superpave Gyratory Compactor (SGC) levels are equivalent to Marshall hammer compaction. This validation builds confidence in modernized laboratory practices and supports broader adoption of SGC, which offers lower variability between facilities and aligns with performance-based design approaches.

Mitigating Plastic Flow and Delamination at High-Speed Exits



Researchers determined that interface delamination is the primary cause of slippage failures at high-speed exit taxiways. They established performance thresholds to help airfield pavement designers select materials and layer configurations that resist shear flow and delamination. The study provides guidance on overlay thickness and considers aircraft braking, turning, and temperature conditions to enhance safety and extend pavement life.

2026-2027 AAPTP Projects

Feasibility of Cold Central Plant Recycling (CCPR)

Evaluates whether CCPR can meet airfield performance needs while reducing energy use and emissions.

P-401 Mixtures: Aggregate Gradation Bands

Develops improved gradation limits that enhance mixture constructability and performance.

Use of RAP in P-401 Mixtures

Assesses how reclaimed asphalt affects performance and environmental impacts in airfield mixes.

Balanced Mix Design: Cracking Tests

Identifies laboratory cracking tests that reliably predict field performance.

Airfield Asphalt Pavement Resilience

Creates a resilience framework to help pavements better withstand climate and operational stresses.

Advanced Technologies for Airfield Pavement Projects

Synthesizes global research to recommend AI- and data-driven improvements to materials, modeling, and construction.

PFAS in Airfield Pavements

Studies how pavement recycling interacts with PFAS and its implications for airfield environments.

Porous Asphalt Pavements Feasibility Study

Evaluates potential airfield applications for porous asphalt to support stormwater management.

About AAPTP

LEARN MORE

The Airport Asphalt Pavement Technology Program (AAPTP) is a cooperative agreement effort between the National Asphalt Pavement Association (NAPA) and the Federal Aviation Administration (FAA) to advance asphalt pavements and pavement materials. The AAPTP advances solutions for asphalt pavement design, construction, and materials deemed important to airfield reliability, efficiency, and safety. The program leverages NAPA's unique technology implementation capabilities with assistance from the FAA and industry to advance deployment and adoption of innovative asphalt material technologies.

Video Series

VIEW

The Asphalt Airfield Video Series showcases content from the Asphalt Paving Handbook to help practitioners designing, producing, and constructing airfields for the FAA.

Mailing list

SUBSCRIBE

Subscribe to our mailing list to receive a quarterly emailed newsletter.

AAPTP

NAPA
NATIONAL ASPHALT PAVEMENT ASSOCIATION

Project Delivery Success for Small, Remote Airport Pavement Improvement Projects

a panel presentation

Thursday, June 19, 2025

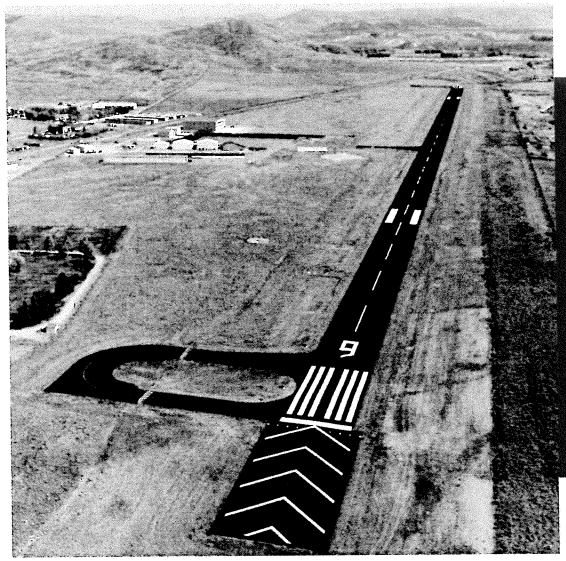
Moderator:
Tom Peterson, P.E.
Executive Director

Colorado Asphalt Pavement Association

Colorado Airport Operators Association

Panelists:
Todd Green, Program Manager, CDOT Division of Aeronautics
Paul Kastler, P.E., Airport Project Manager, Lochner
Justin Vensel, Estimating Manager, United East, a CRH Company
David Fife, Quality Control Manager, United Companies, a CRH Company
Mark Bettis, President, Bettis Asphalt & Construction

CAOA Annual Conference Steamboat Springs



DESIGN

Challenges & Best Practices

- Quality plans and specs make for a smooth project
- Have your contractor base in the area
  - HMA hot plants, batch plants
  - Aggregate pits
- Opportunities/Challenges with FAA specs (P-207/P-208/P-401 vs. P-403)
- Opinions vs. Approval Design: ability to offer both options
- Importance of project phasing and CSPP: needs of remote communities

PROJECT SCOPING

Challenges & Best Practices

- Importance of having a structured and strong airport capital improvement plan (ACIP)
- Funding sources and timing (FAA & State)
- Budget is key
- Advantages/Challenges of traffic at remote airports

BIDDING & CONSTRUCTION

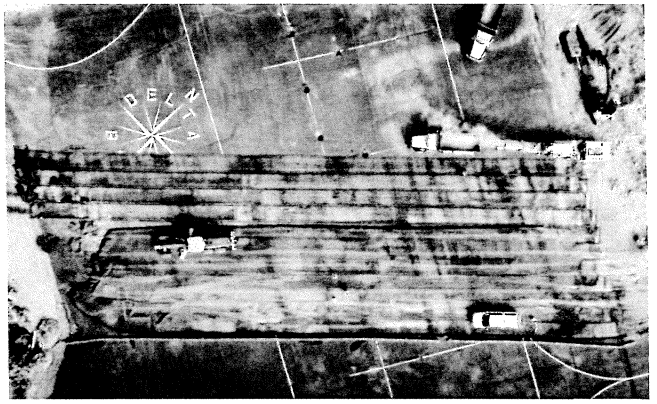
Challenges & Best Practices

Bidding

- Virtual pre-con meetings for smaller projects
- Provide reasonable bid window
- Stagger bid dates with other projects in remote areas

Construction

- Quality on-site construction inspector
- Flexibility on construction start date
- Higher Q/A costs at rural airports



KEY TAKEAWAYS

- Consistent, Quality ACIP = successful projects
- Communication is key to a successful project!
- Flexibility in design and schedule pays dividends

Key Issues

- Time between the Award and Construction to make the material and do the designs that are required on the project

-Producing materials may take months before we can start project

- Asphalt Designs with the APA or Hamburg (Rut Test) takes weeks to complete after the material is produced

Key Issues

- Realistic project schedule

- Contractor input during the planning phase of the project

-Proposed contractor haul routes

Key Issues

- P-209 is extremely difficult to make and place

- CDOT Class 6 material is much more user friendly both to produce and to place

Key Issues

- Less incidentals and more line items

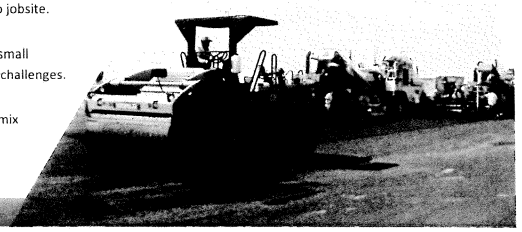
- Prefer the P-403 over the P-401

- Small quantity jobs with the Control Strip requirement

CHALLENGES/OBSTACLES

Navigating Site, Schedule, and Scope

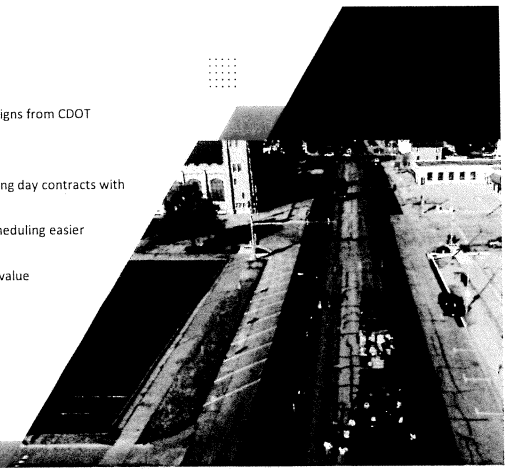
- Smaller scale projects with typical airport specifications are stringent and increase the cost per unit of measure due to mix design, testing, laboratories, and general conditions. This results in higher fixed costs being spread across a small asphalt quantity – plant manufacturing, mobilization, etc.
- Longer distances from the project location to the asphalt plant can increase costs due to trucking materials to plant, then from plant to jobsite.
- Non-Flexible project scheduling and multiple phases with small quantities increases mobilization and presents scheduling challenges.
- Projects with conflicting specifications that include CDOT mix design specs and FAA specs. (Wray Airport, 2024 Bid)



SOLUTIONS

best practices

- Design smaller scale remote projects with standard mix designs from CDOT specifications and not FAA specs
- Reduce phasing of projects when possible
- Provide sufficient time to complete the work and use working day contracts with flexible start dates
- Bid projects with as much lead time as possible to make scheduling easier
- Use CAPA to review bid documents prior to solicitation for value engineering and constructability suggestions



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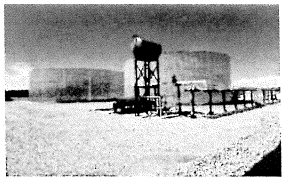

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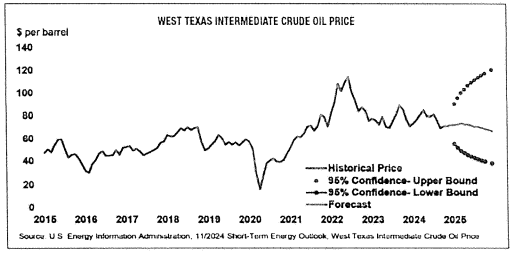

Asphalt Binder Supply & Cost Dynamics

Crude Oil Availability
(Pipelines, Transmountain moving forward moving supply to western Canada/US)

Refinery Capacity *(reduced throughput when lower petroleum fuel demand)*

Refinery reconfigurations, acquisitions, closures

Refinery Startups & Upsets *(ie. production problems)*

Demand vs. Supply *(ie. asphalt production economics and fuels conversion economics)*

Transportation costs *(truck and rail)*

Energy and terminal costs to heat and store asphalt

Asphalt Binder Issues – Small Airport Projects

- Late in the Season, Delays in bid opening to award

Many small airport jobs are let later in the season and we typically see anywhere from 90 to 120 days from bid open to award. This tends to push paving small airports to very late in the season. The biggest issue for paving oil suppliers is the acceptance period for most airport jobs. Oil markets can change quite drastically during that length of time. Many bitumen suppliers quote projects with one-day post-letting acceptance in order to manage this risk. This shifts a great deal of risk to the hot mix producer. Risk that some producers are unwilling to take, which limits competition thus resulting in higher pricing for the owner. The long acceptance period tends to push paving for many small airport jobs to very late in the season—even past Thanksgiving.

Asphalt Binder Issues – Small Airport Projects

- Uncertainty in funding

Uncertainty in funding leads to a lot of elapsed time between bid opening and award. Is it possible to wait until funding is assured prior to taking to letting, then letting it with a much shorter acceptance of say no more than 30 days.

Asphalt Binder Issues – Small Airport Projects

- Use of highly modifed asphalt

These projects typically require highly modified bitumen (asphalt). Most asphalt suppliers cease production in early November. Re-starting production of such binders late in the year is very energy intensive and creates undue challenges for meeting specifications for these materials. Shipping highly modified asphalt is more challenging as a product temperature is more difficult to maintain during shipment in cooler weather. We see more additives used in cooler weather to assist with compaction. The use of these additives add a degree of complexity to meeting specifications. These challenges lead to higher costs which typically get passed on to the owner.

Asphalt Binder Issues – Small Airport Projects

- Asphalt Binder – Grade Requirements

It is challenging for suppliers to provide asphalt binder for low volume projects when the asphalt binder grades and specifications do not match the state DOT specifications.

Examples:

1. The first PG76-34 project in Colorado was for an airport project, CDOT does not specify this grade.
2. The FAA specifications include an elastic recovery. CDOT does not specify this test.

Binder grades and specifications that do not align with CDOT can affect the availability and/or price of the asphalt binder due to the limited tank space we have at our facilities.