



P-629

# Micro-surfacing Case Study

PRATTVILLE GROUBY FIELD AIRPORT

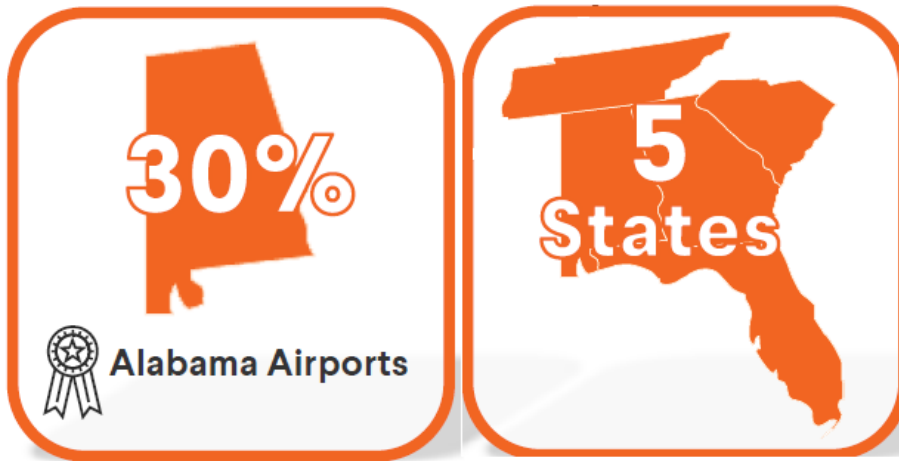


PRESENTED TO: ASCE – OCTOBER 22, 2020

# INTRODUCTION

Matthew K. Thomason, AICP, CM, PE

Aviation Planning Leader  
Aviation Project Manager  
Goodwyn, Mills and Cawood, Inc.





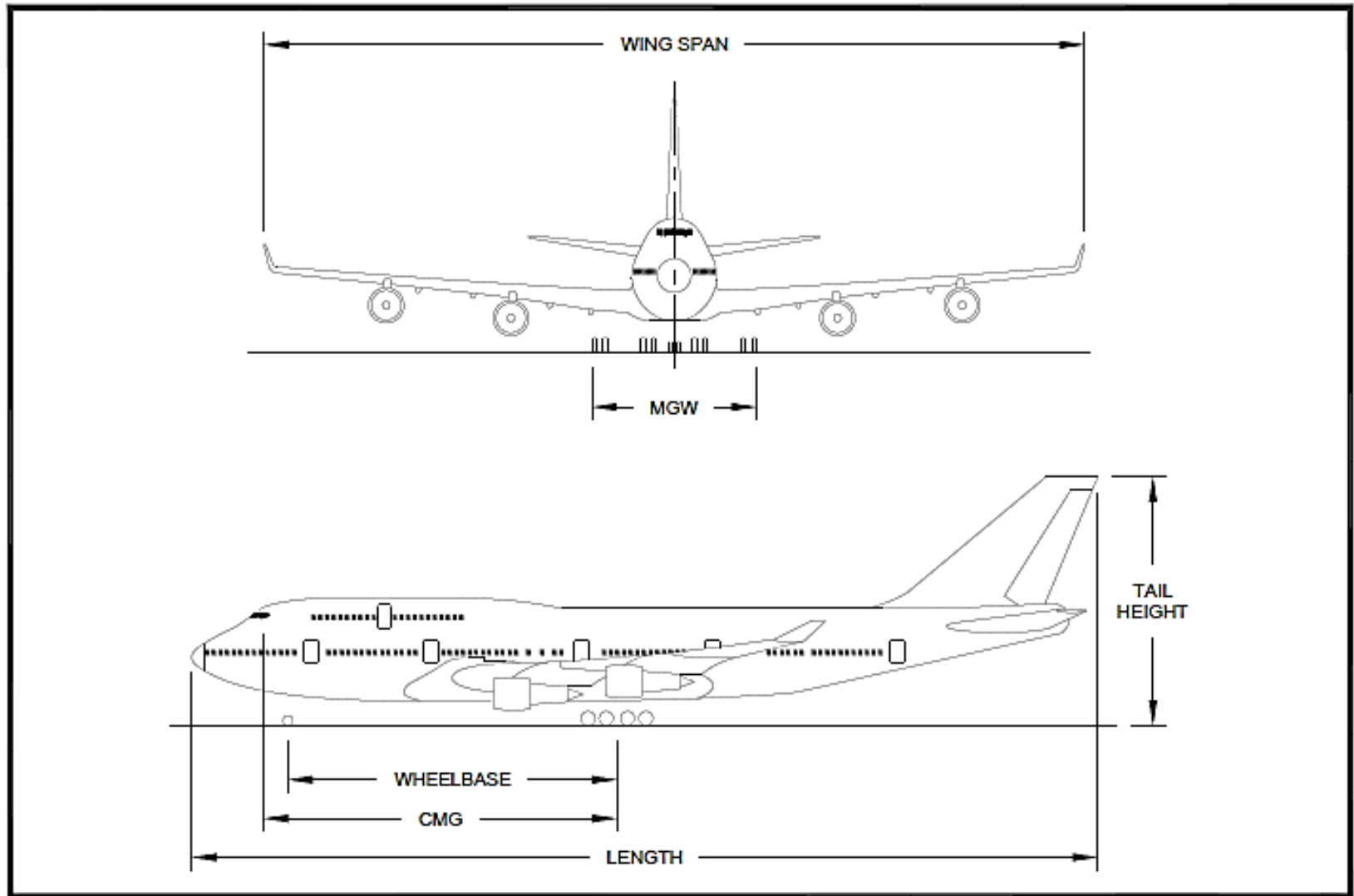
# AUBURN UNIVERSITY ASCE STUDENT CHAPTER 2005-2006 CONCRETE CANOE CAPTAIN



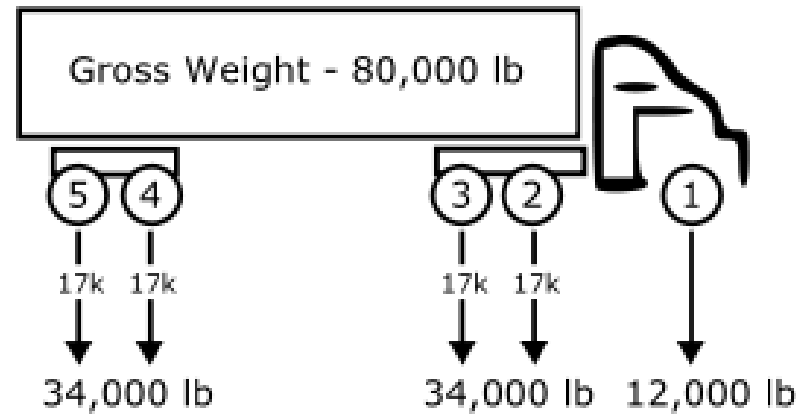
# WHAT LED ME TO BE AN AIRPORT ENGINEER...



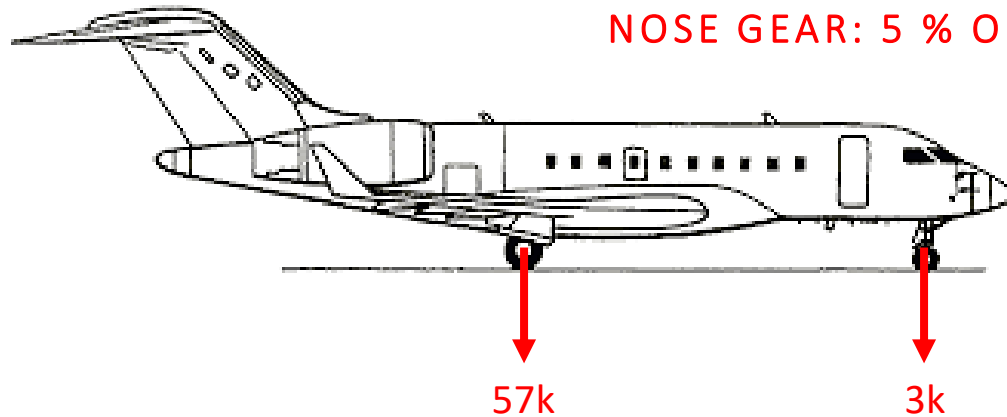
# WHAT DRIVES THE DIFFERENCES? THE VEHICLES.



# WHAT DRIVES THE DIFFERENCES? THE VEHICLES.



MAIN GEAR: 95% OF THE GROSS WT.  
NOSE GEAR: 5 % OF THE GROSS WT.



Gross Weight – 60,000 lb



# PRATTVILLE GROUBY FIELD AIRPORT – 1A9



- 5,400' Runway
- 36,000 sq. yd. Apron
- Full-length parallel Taxiway
- 5,000 sq. ft Terminal
- Full service FBO
- AvGas/Jet-A
- 30+ based aircraft
- 22,000 Annual Ops
- 11,000 Annual Flights





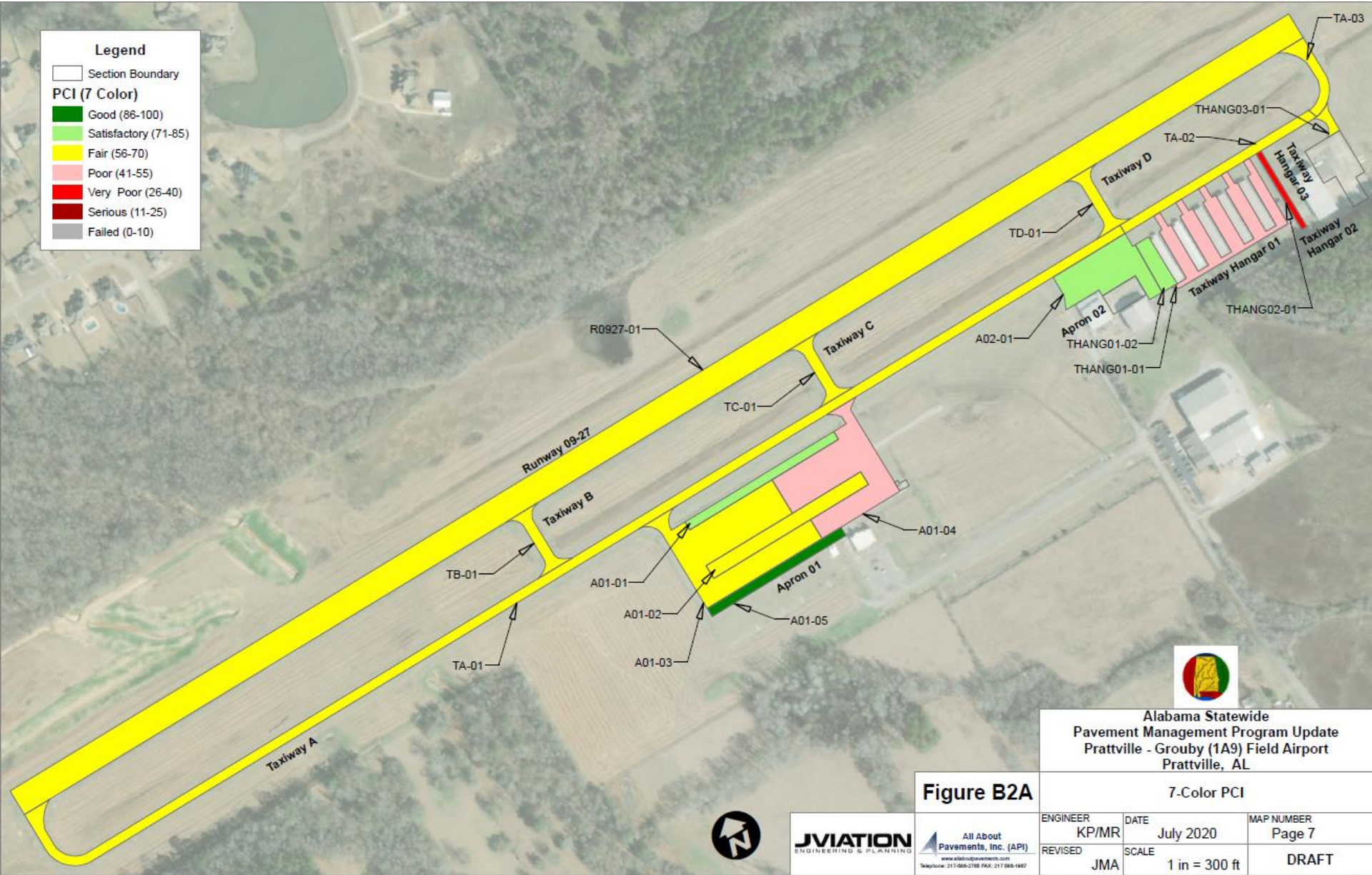


**Legend**

Section Boundary

**PCI (7 Color)**

- Good (86-100)
- Satisfactory (71-85)
- Fair (56-70)
- Poor (41-55)
- Very Poor (26-40)
- Serious (11-25)
- Failed (0-10)



Alabama Statewide  
 Pavement Management Program Update  
 Prattville - Grouby (1A9) Field Airport  
 Prattville, AL

**Figure B2A**

7-Color PCI



**JVIATION**  
 ENGINEERING & PLANNING

All About  
 Pavements, Inc. (API)  
 www.allaboutpavements.com  
 Telephone: 217-856-2156 FAX: 217-856-1667

ENGINEER KP/MR	DATE July 2020	MAP NUMBER Page 7
REVISED JMA	SCALE 1 in = 300 ft	DRAFT













# P-629 - TYPE B MICRO-SURFACING





FEATURED LISTING



Updated: Mon, Oct 12, 2020 10:30 AM

## 1966 BEECHCRAFT C33A DEBONAIR

Piston Single Aircraft

Price: **USD \$145,000**



Get Financing as low as  
**USD \$887.87 / monthly\***

**Aircraft Location:**

Fayetteville, Arkansas

**Serial Number:** CE-94

**Registration #:** N7995M

**Number of Seats:** 4

**Engine Notes:** Continental IO-520-BB-8B

S/N: 274814-R SMOH: 414.2 hours by  
Executive Aircraft Engines, Olathe KS...

Compare

**South Delta Aviation, Inc.**

West Helena, Arkansas

Phone: **(479) 935-4891**

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## **Item P-629 Thermoplastic Coal Tar Emulsion Surface Treatments**

### **DESCRIPTION**


\*\*\*\*\*

**This specification for thermoplastic coal tar emulsion includes three options. Any of the options may be used on apron areas that require a fuel resistant coating serving aircraft less than 60,000 lbs (27216 kg).**

- 1. Micro-surface: For use on all pavements on airports serving airplanes less than 60,000 lbs (27216 kg); any pavements on which aircraft do not operate including shoulders, overruns, roads, and parking areas. Micro-surface can be used at airports that server aircraft 60,000 lbs (27216 kg) or greater with FAA approval.**
- 2. Sand slurry seal: For use on all pavements on general aviation airports serving airplanes 12,500 lbs (5670 kg) or less; all pavements, except runways, on airports serving airplanes less than 60,000 lbs (27216 kg); any pavements on which aircraft do not operate including shoulders, overruns, roads, and parking areas.**
- 3. Spray seal coat: For use on all pavements, except runways, on general aviation airports serving airplanes 12,500 lbs (5670 kg) or less and any pavements on which aircraft do not operate including shoulders, overruns, roads, and parking areas.**

**The Engineer, with FAA concurrence, may specify this item for airports serving airplanes less than 60,000 lbs (27216 kg) except for runways and acute-angled exit taxiways.**


# P-629 – THERMOPLASTIC COAL TAR EMULSION SURFACE TREATMENTS



Spray Seal


A rectangular sample of a spray seal treatment. The top surface is a smooth, dark, uniform black. The bottom edge shows a light-colored wooden substrate.

(All Spray Sealcoats)



Micro-Surfacing

A rectangular sample of micro-surfacing treatment. The top surface is a dark, highly textured and porous material. The bottom edge shows a light-colored wooden substrate.



Sand Slurry

A rectangular sample of sand slurry treatment. The top surface is a dark, granular material with a fine, pebbly texture. The bottom edge shows a light-colored wooden substrate.

(Type C Micro-Surfacing)



# WHAT IS MICRO-SURFACING?

- Plastic Resin and Emulsified Coal Tar Pitch, and Aggregate
- 20-22 pounds of aggregate per gallon of undiluted thermoplastic coal tar emulsion.
- Minimum application rate of 6.5 pounds per square yard of uncured slurry.





# WHY MICRO-SURFACING?

- ➔ Fuel Resistant
- ➔ Increased Skid Resistance
- ➔ No Fading – Stays Black
- ➔ Eligible for FAA Funding





































# FACTORS TO CONSIDER / LESSONS LEARNED

- Crack Seal Method is Key
- Color Variation
- Trapped Water
- Stakeholder Expectations
- Extended Warranty







THANK YOU

