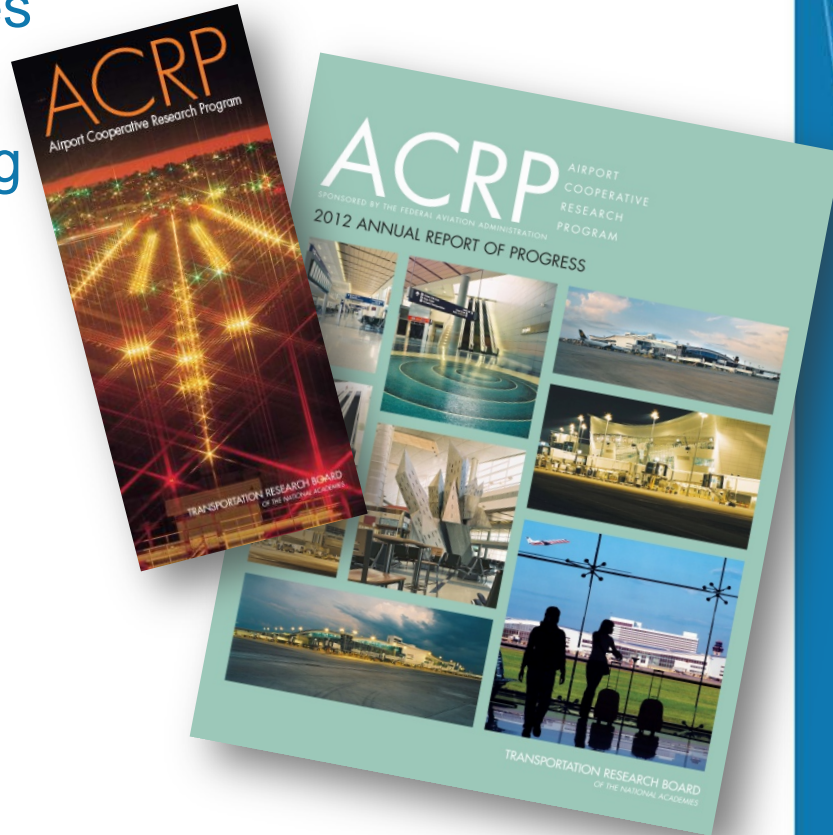


Information on ACRP

- www.TRB.org/ACRP
- Regular news and updates on:
 - Upcoming and ongoing research projects
 - New publications
 - Success stories
 - Announcements
 - Webinars
- Find ACRP on Facebook and LinkedIn



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- *May 24 – Legal Aspects of Airport Programs*
- *June 9 – Transporting Passengers to, and Through, Airport Facilities*
- *July 13 – Unmanned Aircraft Systems*

*You can register for and learn more about
upcoming 2016 webinars by visiting:*

<http://www.trb.org/ACRP/ACRPwebinars.aspx>



Opportunities to Get Involved!

- ACRP's Champion program is a **new initiative!**
- Designed to help early- to mid-career, young professionals grow and excel within the airport industry.
- Airport industry executives sponsor promising young professionals within their organizations to become ACRP Champions.
- Visit ACRP's website to learn more.



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Additional ACRP Publications Available on this Topic

- **ACRP Report 82** – Preparing Peak Period and Operational Profiles—Guidebook
- **ACRP Report 138** Preventive Maintenance at General Aviation Airports Volume 1: Primer
- **ACRP Report 143** – Guidebook for Air Cargo Facility Planning and Development
- **ACRP Synthesis 20** – Airport Terminal Facility Activation Techniques

*You can learn more about these publications by
visiting www.trb.org/publications*

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Today's Speakers

Moderated by Tom Mahoney, MassDOT, Aeronautics

- 1) Report 113: Guidebook on General Aviation Facility Planning
 - Doug Sander and Rusty Chapman, Delta Airport Consultants, Inc.

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ACRP Report 113: Guidebook on General Aviation Facility Planning

Doug Sander, P.E., C.M.
Rusty Chapman, P.E., C.M.

Delta Airport Consultants, Inc.

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Our Team

Delta Airport Consultants, Inc. -

Douglas E. Sander - Principal Investigator

Robert (“Rusty”) B. Chapman

Mead & Hunt, Inc. – Stephanie A.D. Ward

Marr Arnold Planning, LLC – Summer Marr and Sarah Arnold



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ACRP Report 113 Oversight Panel

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Kenneth L. Penney, Jr., KLJ (Panel Chairman)

Michael S. Hines, Metropolitan Washington Airports Authority

Richard T. Lanman, Auburn-Lewiston Municipal Airport

David B. Lucas, AV Ports

Thomas F. Mahoney, Massachusetts DOT

Sara D. McCook, United Airlines

Douglas R. Anderson, FAA Liaison

Bill Dunn, AOPA Liaison

Christine Gerencher, TRB Liaison

Joseph D. Navarrete, ACRP Senior Program Officer

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ACRP Report 113: *Guidebook on General Aviation Facility Planning*

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- Multiple audiences
- All types of airports
- Overview of general aviation (GA) and the various factors that influence the planning of GA facilities
- Basic understanding of the airport planning process and context of general aviation planning within other airport owner's plans
- Basic principles of GA facility planning, the types of facilities, and how to evaluate an overall GA facilities plan.
- Presents each type of GA facility and key planning considerations for each
- References
- Published 2014

The Research Problem

Develop practical guidance for the planning of airport facilities designed to accommodate general aviation aircraft.



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The Research Process

- Literature Review
- Airport Visits
- Consultant discussions
- Panel input

Airports Visited

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Airport	Location	Type	FAA ASSET Classification
Dulles International	VA	AC – large hub	N/A
Raleigh-Durham International	NC	AC – medium hub	N/A
Chattanooga Metropolitan	TN	AC – small hub	N/A
Napa County	CA	GA	National
<u>Opa-Locka</u> Executive	FL	GA	National
Centennial	CO	GA	National
Waukesha County	WI	GA	National
Cavern City Air Terminal	NM	CS	Regional
Burlington	NC	GA	Regional
W.K. Kellogg	MI	GA	Regional
Mecklenburg-Brunswick	VA	GA	Local
New Ulm Municipal	MN	GA	Local
Paulding Northwest Atlanta	GA	GA	Basic
<u>Gallia-Meigs</u>	OH	GA	Basic

Observations from Research

- Orderly vs. non-orderly growth
- Unconstrained vs. shoe-horned development
- Community vision and strategic plans
- Surplus property challenges
- Airport management models
- Stormwater management; snow storage
- FBO vs. Airport terminal
- Utilities
- Aircraft parking layouts and efficiency
- Airport revenue issues
- Aircraft mix
- Grant compliance

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The Guidebook

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Chapter 1 Introduction

Chapter 2 General Aviation – Overview

Chapter 3 Airport Planning – General

Chapter 4 GA Facility Planning – General

Chapter 5 GA Facility Planning by Type

Appendix A Abbreviations and Terms

Appendix B Tie-down Parking Areas

Appendix C Determining the Number of
Aircraft Parking Positions

Appendix D References

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Chapter 1. Introduction

- Purpose and audience(s)
- Organization
- Using the Guidebook

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Chapter 2. General Aviation Overview

- GA Operations and Activities
- GA Aircraft
- Airport Types
- GA Services and Facilities



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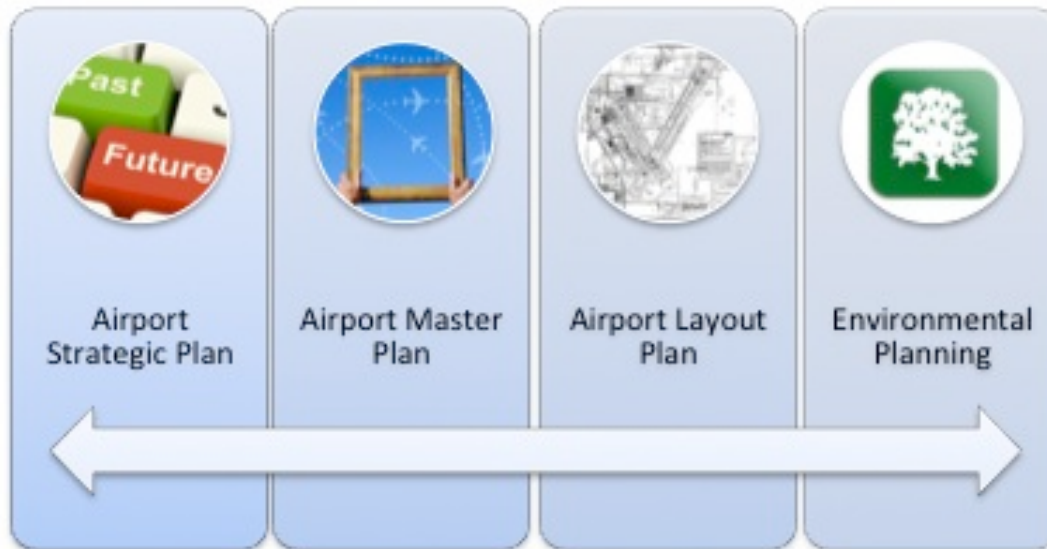
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Chapter 3. Airport Planning - General

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- Strategic Planning
- Airport Master Planning
- Airport Layout Plans
- Environmental Planning



Chapter 4. GA Facility Planning - General

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- Basic Principles
- Key Governing Documents
- Planning Considerations
- Grant Assurances
- Financing
- Facility Planning – Process and Key Drivers

Chapter 4. GA Facility Planning - General

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Basic Principles

- Safety
- Efficiency
- Economics
- Expansion
- Balance
- Consistency

Planning Considerations

- Engineering
- Community
- Airport traffic flow
- O&M
- Wildlife hazards
- Aviation trends
- Other

Chapter 5. GA Facility Planning by Type

- Aircraft Aprons
- Helicopter Parking Area
- Hangars by Type
- Fuel Farm Facility
- Aircraft Wash Facility
- GA Terminal Building
- FBO Building
- Airport Admin Building
- MES Building
- Automobile Parking and Access

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Aircraft Aprons

- Key questions
- Location
- Types
- Size/layout
- Plan evaluation



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Characteristics of a Well-planned Apron

- Expandable
- Full circulation
- Nearby auto parking
- Good drainage
- Aircraft Group flexibility
- Other

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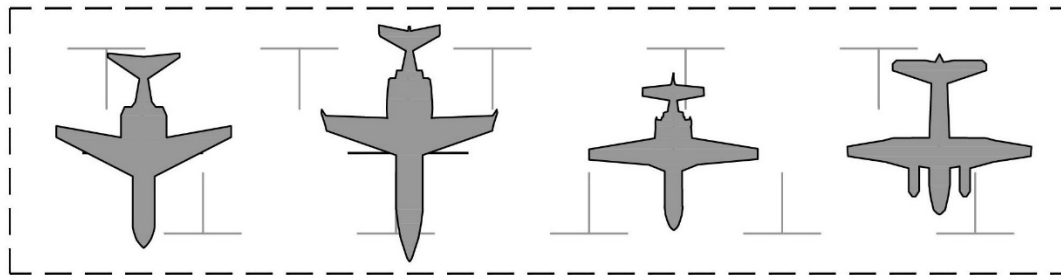
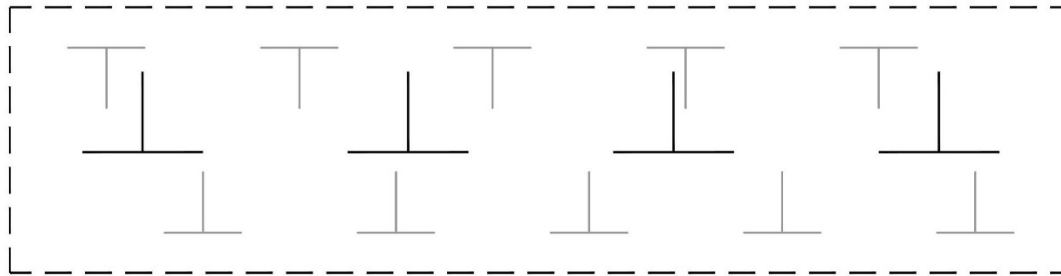
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Aircraft Aprons

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HAWKER 400

LEARJET 60

CITATION MUSTANG

KING AIR 100



Hangars

- Key questions
- Location
- Types
- Size/layout
- Plan evaluation



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Characteristics of a Well-planned Hangar Layout

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- Maximizes development space
- No impact on taxilanes/taxiways
- Considers stormwater
- Room for expansion
- Does not interfere with other facilities
- Other

Fuel Farm Facilities

- Key questions
- Location
- Types
- Size/layout
- Plan evaluation



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Characteristics of a Well-planned Fueling Facility

- Room for expansion
- Right size tanks and containment
- Considers truck requirements
- Inside security fence
- No interference with other facilities
- Other

GA Terminal Buildings

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- Key questions
- Location
- Types
- Size/layout
- Plan evaluation



Characteristics of a Well-planned GA Terminal Building

- Meets user needs
- Room for expansion
- Considers the community
- Circulation
- Properly located relative to other facilities
- Considers utilities
- Other

Facility Relationships

- Aircraft Aprons
- Helicopter Parking Area
- Hangars by Type
- Fuel Farm Facility
- Aircraft Wash Facility
- GA Terminal Building
- FBO Building
- Airport Admin Building
- MES Building
- Automobile Parking and Access

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For additional information:

ACRP Report 113: *Guidebook on General Aviation Facility*

<http://www.trb.org/ACRP/Blurbs/171315.aspx>

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