Project Overview

Evan Barrett
Team Introduction

Evan Barrett, AICP, CM
Project Manager

Stephanie Nikho, CM
Deputy Project Manager

Colleen Bosold
Sustainability Lead

Stephanie Green, CM
Senior Airport Planner

Patrick Casey, AIA, NCARB
GA Terminal & Operations Facility Planning

Sarah Emmel, AICP
Sustainability Lead
Project Background

- Recently completed Master Plan focused primarily on airfield needs
- Size of airline and based aircraft are anticipated to increase over the next five years
- General aviation activity and based aircraft have outpaced Master Plan forecasts
- Master Plan landside concepts are no longer viable due to recent airport improvements
- Several landside facilities are reaching the end of their useful life
Focus Areas

- General Aviation (GA)
  Arrival/Departure Building
- Airport Equipment Maintenance and Storage Shop
- Air Carrier and GA Aircraft Parking Aprons
- GA Aircraft Hangar Areas
- Sustainable Airport Construction, Operations, and Maintenance
Project Goals

- Re-evaluate airport landside needs based on evolving activity trends
- Identify proposed short-term and long-term landside facility concepts that:
  - Meet existing and forecasted airport user needs
  - Maximize productive use of limited developable space
  - Maintain compatibility between different airport uses
- Prepare a practical and feasible capital improvement plan
- Apply sustainable practices to future airport construction, operations, and maintenance
- Position the airport to tap new and emerging capital funding sources
Stakeholder Feedback

- General aviation should continue to grow at CWA and complement nearby airports (Downtown Wausau and Stevens Point)
- Make GA facilities more competitive with airports like ATW and MSP
- Consider youth education/STEM activities (e.g. Boy Scouts)
- Reduce competition for space between airlines and GA
Planning Process

- Aviation Activity Forecasts
- Facility Inventory & Requirements
- Alternatives Analysis
- Sustainability Plan
- Implementation Plan
- Airport Layout Plan
- Stakeholder Engagement
## Project Schedule

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<th>Project Element</th>
<th>2022</th>
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Forecasts

Evan Barrett
Forecast vs. TAF
# Forecast Summary

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<th>Forecast Year</th>
<th>Air Carrier Operations (Scenario 2)</th>
<th>Air Taxi/Commuter Operations</th>
<th>General Aviation Operations</th>
<th>Based Aircraft</th>
<th>Itinerant ADPM Demand</th>
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FBO Terminal & ARFF/SRE

Pat Casey
Existing Facilities Overview
Existing and Projected Facility Needs

- WAITING AREA HAS SEATING FOR ABOUT 6 PEOPLE
- HOSTS FLIGHT TRAINING SCHOOL
- FBO FUNCTIONS
- PILOTS LOUNGE

- 5,300 SF ESTIMATED FACILITY
- BASED ON 30 PAX CAPACITY
- INCLUDES SPACE FOR FLIGHT TRAINING

- TOTAL BUILDING = 16600 SF
- ADMIN = 1400 SF
- WEST HANGAR = 6800 SF
- EAST HANGAR = 8400 SF
Concept Development FBO

- Waiting room capacity for 30 passengers
- Seating, coffee bar, and vending
- Pilots lounge separated from main traffic areas
- Access to maintenance hangars
- More customer focus reception area
- Multipurpose space
Existing and Projected Facility Needs

- ARFF APPARATUS BAY IS AN ADEQUATE SIZE BUT IS CURRENTLY ALSO USED FOR ADDITIONAL SRE EQUIPMENT STORAGE
- SRE FACILITY HAS HAD ADDITIONS TO IT PREVIOUSLY
- STORAGE FOR SRE EQUIPMENT NEEDS TO BE AT OTHER FACILITIES ON THE AIRPORT

- WATCHROOM / SNOW DESK
- EMERGENCY OPERATION CENTER (EOC)
- ARFF VEHICLE AND AGENT STORAGE
- MAINTENANCE SPACES
- OPERATIONS EQUIPMENT
- STORAGE FOR VEHICLES AND EQUIPMENT
- STORAGE FOR PARTS, SAND, DE-ICE

- 39,000 SF ESTIMATED - COMBINED FACILITY

- TOTAL BUILDING = 21600 SF
- ARFF BAYS = 6300 SF
- ADMIN = 2400 SF
- SRE AND SHOP = 9600 SF
- MEZZANINE = 3300 SF
Requirements ARFF/SRE

- ARFF – (2) 1500 gal Oshkosh Strikers
- 3 min Response to Midpoint of Furthest Runway
- Emergency Operation Center
- Resilience

- SRE – Eligible Equipment Storage Area = 15000 SF
- Onsite Equipment Maintenance Area = 1500 SF
- Sand and Chemical Storage
- Parts and Equipment Storage
- Overhead Hoist
- Offices and Support Spaces
Concept Development ARFF/SRE

- ARFF and SRE to remain a combined facility
- Shared personnel between functions
- Requirement for ARFF to meet response times limits relocating elsewhere on the airport
- Desire to have drive through bays for SRE equipment
- ARFF bays to house 2 vehicles and response trailer
- 2 Story option available – if can tie into terminal with existing elevator would save costs
- Landside delivery point
- Low maintenance construction
Development Constraints

- EXISTING ELECTRICAL VAULT
- LOCATION OF EXISTING ARFF/SRE IS PREFERRED LOCATION FOR NEW FACILITY DUE TO PROXIMITY TO TERMINAL AND RUNWAY
- DEVELOPABLE AREA BETWEEN TERMINAL AND FBO IS APPROXIMATELY 43000 SF WITHOUT ENCROACHING ON AIRCRAFT PARKING APRON
Development Opportunities

- DEMOLISH FBO OFFICE AND EAST HANGAR
- DEVELOPABLE AREA BETWEEN TERMINAL AND FBO HANGAR INCREASES TO 60600 SF
- NEW FBO OFFICE CAN BE DEVELOPED TO THE SOUTH OF THE EAST HANGAR
- NEW FBO MAINTENANCE HANGAR LOCATED ON ANOTHER SITE ON THE AIRPORT
- BUILD OUT ONTO THE EXISTING APRON
Program Elements

- New FBO Arrivals and Departures Lounge and FBO Offices
- Landside to Airside Access Point for FBO
- Combined ARFF and SRE Facility
Concept Development

- FBO APPROX. 4900SF
- AIRSIDE PRESENCE, HIGHER PROFILE
- MAINTAINS ACCESS TO MAINTENANCE HANGAR
- VEHICLE ACCESS POINT
- SRE DRIVE THROUGH OPTION
- TWO STORY OFFICE AND EOC SPACE
- ACCESS TO TERMINAL
- REQUIRES DEMO OF WEST FBO HANGAR
- EXTENDS ONTO APRON
Concept Development

- FBO APPROX. 4900SF
- MAINTAINS FBO HANGARS
- MAINTAINS ACCESS TO MAINTENANCE HANGAR
- VEHICLE ACCESS POINT
- SRE LARGER BACK-IN STORAGE
- TWO STORY OFFICE AND EOC SPACE
- ACCESS TO TERMINAL
- LIMITED SHOP AND STORAGE SPACES
- EXTENDS ONTO APRON
Concept Development

- FBO APPROX. 5000SF
- AIRSIDE PRESENCE, HIGHER PROFILE
- MAINTAINS ACCESS TO MAINTENANCE HANGAR
- VEHICLE ACCESS POINT
- WEST HANGAR DEMO
- MAINTAINS EXISTING RAMP ACCESS TO THE WEST
- LIMITS ENCROACHMENT ONTO APRON
- SMALLER OFFICE AND EOC SPACE
- LIMITED SHOP AND STORAGE SPACES
- 2 STORY OPTIONS LIMITED
Stakeholder Feedback

- Understand the needs of businesses we are trying to attract
- Consider the needs of different types of GA users
- Improve aesthetics of FBO terminal
- Provide adequate semi-private space, separation of spaces, informal social space
- Provide easy access to refreshments, rental cars
- Keep space open in front of FBO terminal for arriving airplanes
- Improve landside visibility of / wayfinding to the FBO terminal
- Consider needs of small freight operations
- Consider needs of passengers with disabilities
- Consider options to relocate FBO terminal
Existing Apron Overview
Air Carrier Apron Existing Issues/Needs

Issues:
- Some aircraft tails penetrate taxilane Object Free Area
- Deicing activity interrupts gate pushback activity
- Ground Service Equipment scattered around apron

Needs:
- Additional apron depth
- Designated deicing location
Stakeholder Feedback

- Separate deicing from GA corporate jet activity
- Consider more indoor storage for ground service equipment
- Consider expansion to outbound baggage make-up area in terminal
Air Carrier Apron Development Constraints

- New Passenger Boarding Bridges
- ARFF/SRE & FBO Concepts
- Airspace Surfaces
- Object Free Areas
Air Carrier Apron Concept Development
GA Apron Existing Issues

- **Apron is entirely asphalt**
  - Larger aircraft cannot park on asphalt and must park on concrete in front of ARFF/SRE building which interrupts activity
- **Apron depth = 210'**
  - Cannot park more than two ADG II aircraft side by side
- **Parked aircraft often need to be moved to get other aircraft in/out of hangars**
- **Fuel trucks park over tie down positions**
- **Taxilane Object Free Areas**
- **Cargo**
- **Poor pavement**
Stakeholder Feedback

- Separate fuel truck parking from aircraft parking
- Pave grass areas near aircraft parking to reduce airborne dirt/dust
- Concrete is often preferable to and more useful than asphalt
- Park corporate jets in front of FBO terminal
GA Apron Existing Issues
GA Apron Existing Issues
GA Apron Existing Issues
GA Apron Needs

- **Considering Three Scenarios**
  - ADPM Itinerant Operations
  - AirVenture
  - Itinerant ADG III activity (Two ADG IIIs)

- **For planning purposes areas in red are not available for aircraft parking**

- **Total available space approximately 83,800 SF**
Stakeholder Feedback

- Consider Endeavor maintenance hardstand on GA ramp
- Separate deicing, SRE operations, and corporate jet activity
GA Apron Needs

- Area required per aircraft determined using FAA Minimum Parking Position Sizing table
  - (Source: AC 150/5300-13B Table E-1)
GA Apron Needs

- This scenario accommodates the times that the airport sees two ADG III aircraft
- Provides flexibility with AirVenture and high peak times when the ADPM operations are not split 50/50

### ADPM Itinerant Operations with ADG III

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- Total Apron Demand (sq. ft.)
  - 112,230
  - 123,635
  - 135,040
  - 137,990
  - 146,445

- Additional Required Apron (sq. ft.)
  - +28,430
  - +39,835
  - +51,240
  - +54,190
  - +82,645
GA Apron Development Constraints

- ARFF/SRE and FBO Concepts
- Airspace Surfaces (P77 Transitional)
- Object Free Areas
- Reconfiguration Limited
  - (hangars need taxilane access)
GA Apron Concept Development
Hangar Development

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Hangar Development Overview

- T-Hangars
- Corporate Hangars
- Transient Hangars
Hangar Development Needs

- **Two Scenarios:**
  - Conventional Hangars
  - Executive Hangars

- Due to limited space, needs will be determined using executive hangars

- Hangar needs determined using based aircraft forecast

- Hangar dimension requirements determined using ACRP Report 113

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<th>Aircraft Type</th>
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Near-Term, Mid-Term, & Long-Term Development
Near-Term Development
Mid-Term Development

- Dependent on relocation of equipment storage buildings
- Plan will consider:
  - MRO facility
  - Cargo apron
  - Corporate hangars
  - Executive hangars
  - Utilities/Circulation
Stakeholder Feedback

- Provide a variety of aircraft storage options
- Prefer T-hangar location near FBO
- Consider outdoor parking for medevac helicopters
- Current FBO hangar doors not tall enough for many aircraft
- Consider potential need to expand and/or relocate Endeavor operations
Other Focus Areas

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Sustainability Planning

- February 14: Visioning session
- Sustainability chapter will be developed concurrent with alternative concept development
- Project elements include:
  - Vision statement
  - Focus areas
  - Screening criteria
  - Solar photovoltaic assessment
  - Electric vehicle planning
- FAA 2050 Net Zero Climate Challenge
Parking & Access

- Access points
- Circulation
- Passenger convenience
Non-Aeronautical Use
Conclusion & Next Steps

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Upcoming Milestones

- **End of February**
  - Incorporate stakeholder feedback into initial project deliverables
  - Submit revised forecasts and draft facility requirements for FAA review

- **March**
  - Identify/refine development concepts
  - Development sustainability vision, goals, initiatives

- **Early April**
  - FAA in-person meetings
  - Stakeholder group meetings #2
  - Public meeting
Project Timeline

Central Wisconsin Airport (CWA) Terminal Area Master Plan (TAMP)

Projected Timeline

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<th>Task</th>
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| Schedule dependent on FAA, BPA, and airport revenues, and any other unknown issues, subject to change.

*Note: The table and diagram represent the project timeline for Central Wisconsin Airport (CWA) Terminal Area Master Plan (TAMP). The tasks and responsible parties are listed in a structured format.*
Questions?
Thank You!