Agenda

I. Welcome & Introduction – Port Staff
II. Project Update on Work Completed to Date – Reid Middleton
III. Upcoming Project Steps & Schedule
IV. Pilot Perspectives:
   Jefferson County Pilots Association (Presentation)
   Aircraft Owners & Pilots Association (AOPA)
VI. Public Comments & Questions
VII. Closing/Next Steps
Port of Port Townsend Jefferson County International Airport Runway Rehabilitation
Public Open House – April 7, 2018
Introduction

Meeting Goals
- Provide a Project Work Status Update & Discuss Key Findings/Conclusions
- Explain Remaining Engineering Work & Schedule
- Hear & Understand Pilot’s Concerns & Suggestions Regarding:
  - Future construction schedule
  - Approaches to mitigate impacts to airport users
Introduction
Introduction

• Rehabilitate Runway Project
  • Rehabilitate 3,000’ x 75’ runway
  • Improve safety by relocating midfield taxiway

• Project is required to be in compliance with FAA criteria

• Project is currently in preliminary design at 30% completion

• Project will be refined and further developed based on:
  • Ongoing FAA review and input
  • Ongoing pilots, users, and tenant input
  • Port maintenance and staff input
  • Regulatory agency requirements and input
Design Process

• Initial Field Work – Complete
  • Site topographic survey
  • Geotechnical study
  • Environmental site review
  • Electrical system review
• 30% Design - Complete
• 60% Design – In Progress
Design Process

- 30% Design - Preliminary
  - Information gathering & site data
  - Shed vs crown slope designs for runway rehabilitation
  - Determine location of relocated midfield Taxiway B
  - General stormwater & electrical modifications required
  - Draft construction safety & phasing plan
  - Analysis for NAVAID & airspace impacts
  - Obstruction analysis & action plan
  - Cost estimates
Design Process

- **Analysis & Design**
  - AC 150/5300-13A  Airport Design
  - AC 150/5320-5D  Airport Drainage Design
  - AC 150/5320-6E  Airport Pavement Design & Evaluation
  - AC 150/5340-1L  Standards for Airport Markings
  - AC 150/5340-18F  Standards for Airport Sign Systems
  - AC 150/5340-30H  Design & Installation Details for Airport Visual Aids
  - AC 150/5345-46E  Specification for Runway & Taxiway Light Fixtures
  - AC 150/5050-8  Environmental Management Systems for Airport Sponsors
  - AC 150/5370-2F  Operational Safety on Airports During Construction
  - AC 150/5370-10G  Standards for Specifying Construction of Airports
  - Department of Ecology Stormwater Regulations
  - Local Stormwater Regulations & Code Requirements
  - Other Codes & Regulations
Design Process

- Information Gathering & Background
  - Existing conditions
  - Review fleet mix & use
  - Environmental review
    - Identify environmental considerations
  - Electrical & navigation aid systems
  - Geotechnical field investigation
    - Identify site soil properties & subsurface conditions
  - Code & criteria review
Design Process

- General Environmental Review
  - Wetlands, floodplain, threatened & endangered species
Design Process

- Environmental Review
  - Three wetlands on site
  - Design development will work to eliminate or minimize any impacts to wetlands

Wetland C Looking Southeast
Design Process

- Environmental Review

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Status</th>
<th>Habitat</th>
<th>Potential to Occur in Project Area</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marbled Murrelet</td>
<td>Brachyramphus marmoratus</td>
<td>Federal Threatened</td>
<td>Old-growth forest</td>
<td>None</td>
<td>Habitat is not present</td>
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<tr>
<td>Yellow-billed Cuckoo</td>
<td>Coccyczas americanus</td>
<td>Federal Threatened</td>
<td>Wooded habitat with dense cover and water nearby</td>
<td>None</td>
<td>Habitat is not present</td>
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<tr>
<td>Streaked-horned lark</td>
<td>Eremophila alpestris surigua</td>
<td>Federal Threatened</td>
<td>Early successional habitat, typically maintained by disturbance.</td>
<td>Unlikely</td>
<td>Habitat is present, but nesting areas have not been documented within 100 miles of the project</td>
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<tr>
<td>Fish</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bull trout</td>
<td>Salvelinus confluentus</td>
<td>Federal Threatened</td>
<td>Cold, freshwater streams.</td>
<td>None</td>
<td>Habitat is not present</td>
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<tr>
<td>Dolly Varden</td>
<td>Salvelinus malma</td>
<td>Federal Proposed</td>
<td>Cold, freshwater streams.</td>
<td>None</td>
<td>Habitat is not present</td>
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<tr>
<td>Plants</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Golden Paintbrush</td>
<td>Castilleja levigata</td>
<td>Federal Threatened</td>
<td>Upland prairies</td>
<td>None</td>
<td>Habitat is not present</td>
</tr>
</tbody>
</table>
Design Process

• Electrical Review
  • Airfield electrical systems are nearing the end of design life
  • Edge lighting & other systems will be impacted by runway regrading
  • Recommended replacement of runway edge lighting including wiring/cable & base cans, illuminated signs, & PAPIs
  • Relocate Runway End Identifier Light (REILs) to meet FAA standards
  • Some maintenance & improvements to systems in lighting vault
Design Process

- General Geological Conditions of Area
  - Recessional outwash (cobbles, gravel, sand)
  - Glaciomarine outwash (sand with silt often capped by silt & clay)
  - Mixed fill materials in disturbed areas
Design Process

• Geotechnical Field Investigation
  • Seven borings at JCIA (Borings to approx. 11.5 feet below grade)
Design

- Original Runway Design Criteria
  - Asphalt pavement surface course 2” thickness
  - Aggregate base course 4” thickness
  - Aggregate subbase course 9” thickness

Photo from pavementinteractive.org

Base Course Materials
William R. Fairchild international Airport Apron Repaving, Port Angeles

Port of Port Townsend Jefferson County International Airport Runway Rehabilitation – April 7, 2018
Design Process

- **Geotechnical Investigation Results**
  - **Existing asphalt pavement**
    - Ranged from 1” to 6” thick
    - Averaged 3” thick
  - **No distinguishable aggregate base & subbase material was found**
  - **Fill soils in three of borings on runway**
    - Very silty sand
    - Sandy, silty gravel
  - **Clay directly under asphalt in one boring on runway**
Design Process

- Geotechnical Investigation Results
Design Process

- Geotechnical Investigation Results
Design Process

- Geotechnical Investigation Results

Port of Port Townsend Jefferson County International Airport Runway Rehabilitation – April 7, 2018
Design Process

• Initial Pavement Rehabilitation Options Considered
  • New layer of asphalt over existing asphalt
    • Existing asphalt & subbase material must be in good condition
    • Would require FAA to approve a nonstandard shed cross slope
  • Grind up existing asphalt & place new asphalt
    • Existing subbase material must be in good condition
    • Would require FAA to approve a nonstandard shed cross slope or addition of subbase material to create crown slope
  • Replace existing subbase & asphalt materials
    • Existing subbase material lacking or in poor condition
    • Placement of new subbase material should be per FAA crown slope requirement
Design Process

- **Pavement Design Criteria**
  - Appropriate subbase material is lacking, therefore asphalt & subgrade material require removal & replacement
  - Pavement cross section was designed per FAA FAARFIELD program
    - Based on aircraft types & usage, & subgrade conditions
  - Preliminary section recommendations
    - Minimum 3” of asphalt
    - 6” of base course
    - 4” of subbase course

- **Because New Subbase Material is Required, the Rehabilitated Runway Should be Constructed Per FAA Standards at a Crown Slope, Final Decision on Slope Pending FAA Review & Approval**
Design Process

- **Grading**
  - FAA required slopes
  - Runway centerline slope
  - Cross slopes – 1.5%
  - Shoulders – 5%
  - Cut & fill in infield & south of runway

- **Storm Drainage System**
  - New underdrains along edges of runway
  - Infield drainage swale
  - Drainage swale south of runway
  - Buried piping at ends of runway to route storm water discharge
Design Process
Design Process

- Relocated Center Taxiway
Design Process

- Preliminary Construction Safety Plan
  - Reviewing potential phasing opportunities
  - Input on staging areas to minimize impacts
Design Process
Design Process

60% Design Next Steps

- Receive & review comments from FAA on 30% design
- Pilot/public open house
- Receive & review comments from users & pilots
- Review design with Port maintenance staff
- Design for selected cross slope & midfield taxiway relocation
- Design of pavement marking & other associated features
- Refine & further develop stormwater system design
- Design for required electrical modifications
- Refine construction safety & phasing plan
  - Determine if phased use of taxiway & other potential landing areas is feasible
- Review of permit requirements & initial permit coordination
Design Process

- **Schedule**
  - 30% design completed January 2018
  - 60% design target completion June 2018
  - Final design target completion early 2019
  - Bid process early spring 2019
  - Construction summer 2019

- Schedule is Dependent on FAA Review & Funding Timelines
WSDOT PAVEMENT ASSESSMENT

• WSDOT Pavement Assessment for JCIA
  • Site work currently scheduled for April 20\textsuperscript{th} or 22\textsuperscript{nd} depending on weather and overall assessment project timing
  • Will not require closure of runway, will have radio contact and work around airfield operations
Pilot Considerations

Jefferson County Pilots Association
(Presentation)
Pilot Considerations

Aircraft Owners & Pilots Association
(AOPA)
Questions & Discussion