



Airport Master Plan Update



Public Open House Meeting #2

February 17, 2022

Introductions



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Airport Master Plan Update

Participation



This presentation will be recorded and posted on the Port's Airport Master Plan Update website.

We will mute all participants during the presentation.

Please type in the chat box if you have a comment or question.

Comments will be heard and answered at the end during the Comments portion of the presentation.

Airport Master Plan Update

Agenda



1. **Review of Master Plan Update Process**
2. **Master Plan Update Focus Area & Goals**
3. **Master Plan Update Schedule & Progress**
4. **Review Facility Requirements**
5. **Development Alternatives – What future development will best meet the airport's facility requirements?**
6. **Alternative Fuels**
7. **Next Steps**
8. **Comments**

Airport Master Plan Update

Master Plan Update Process



According to the Federal Aviation Administration (FAA), an airport master plan is...

A comprehensive study of an airport that usually describes the short-, medium-, and long-term development plans to meet future aviation demand.

Follows FAA Advisory Circular 150/5070-6B

A master plan's purpose is not to solve an airport's management, operations, or maintenance issues.

Master Plan Tasks:

- Inventory
- Forecast
- Facility Requirements
- Alternatives
- Airport Layout Plan
- Capital Improvement Plan

Overall Airport Property Map

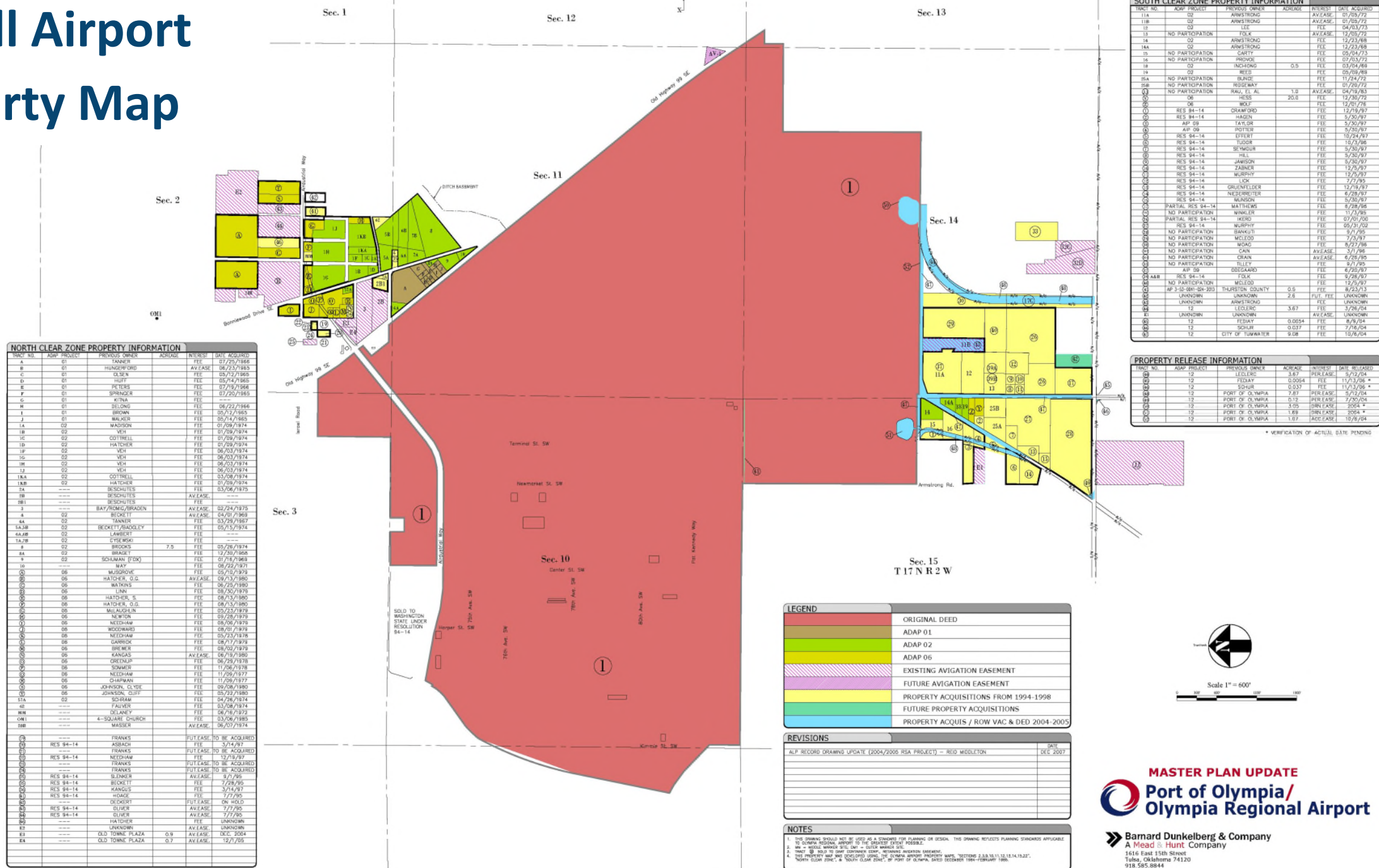
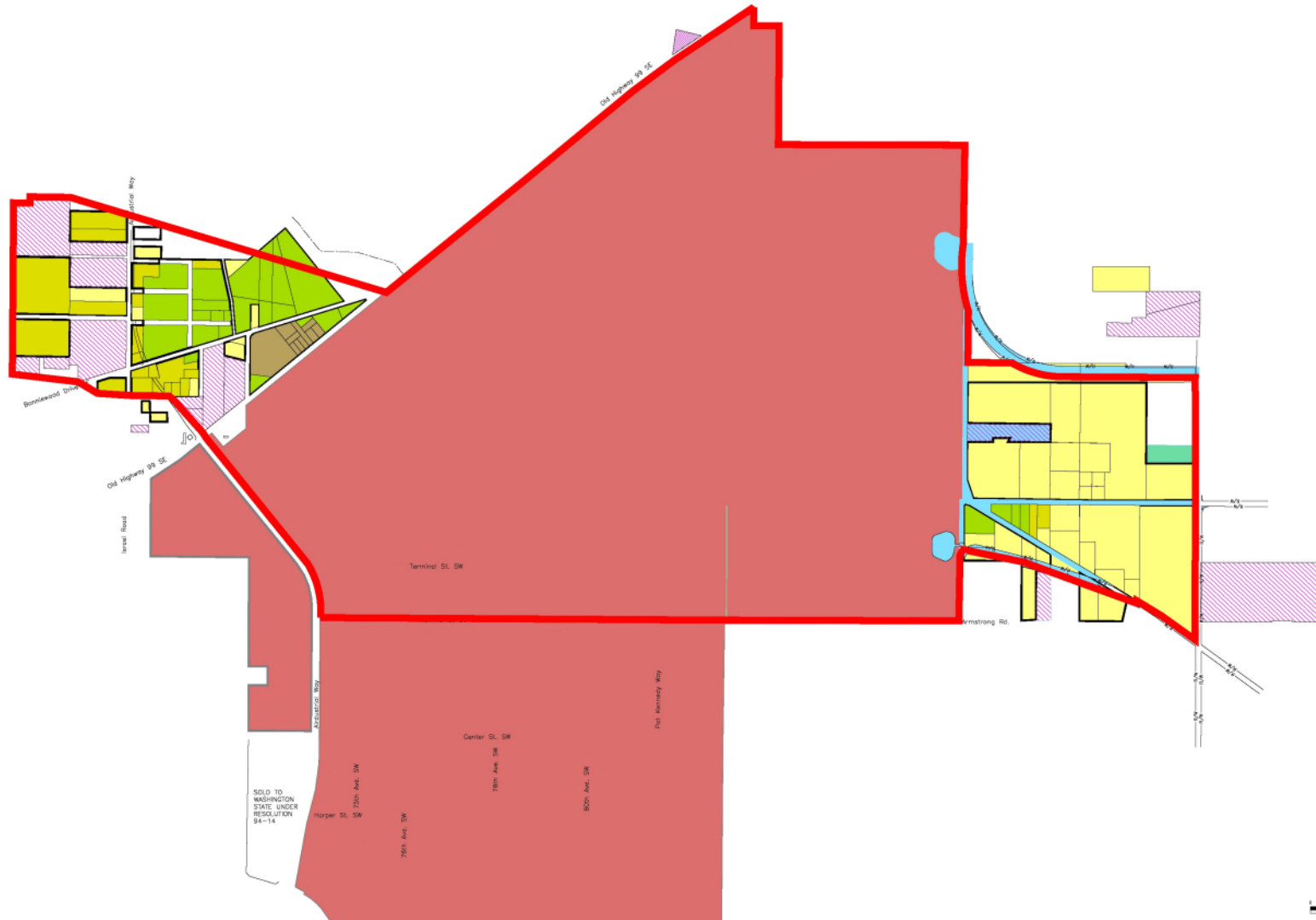


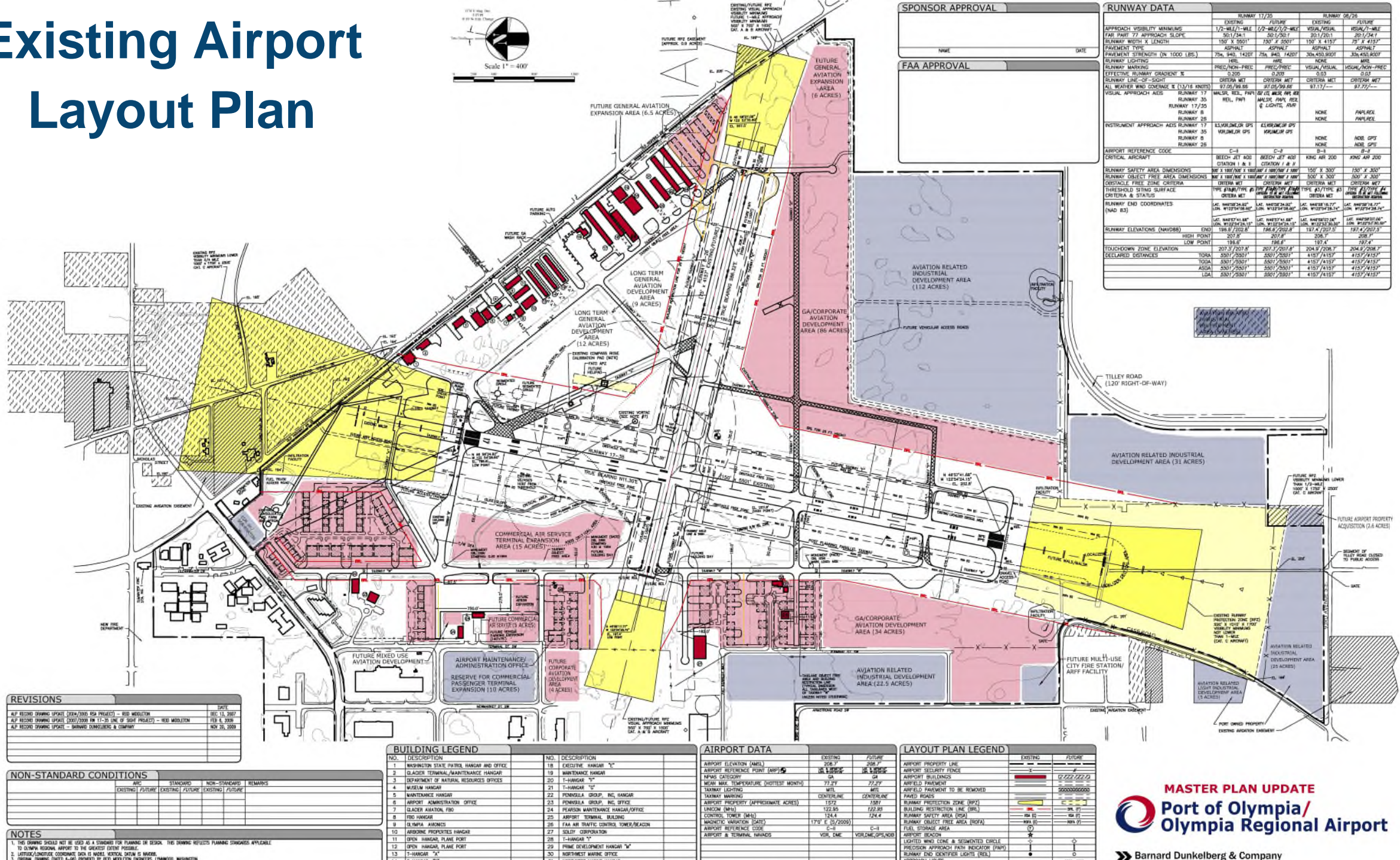
Figure E17 Airport Property Map - Exhibit 'A'

Master Plan Focus Area

Airport Master Plan Update



Existing Airport Layout Plan



Master Plan Update Goals



- Meet Aviation Demand
- Meet FAA design standards
- Prepare OLM for future development
- Prepare OLM for emerging aviation technologies
- Continued Airport self-sufficiency

Airport Master Plan Update



Airport Master Plan Update

Project Update



- Completed
 - Inventory
 - Forecast Approved by FAA
 - Facility Requirements
- Current focus areas
 - Coordination with the HCP Team
 - Alternatives
 - Airport Layout Plan
- Future Focus Areas
 - Implementation
 - Part 139 Commercial Service Feasibility Study

Facility Requirements



- Meet based and transient aircraft demand
- Correct taxiway design to meet standards
- Maintain crosswind runway for smaller aircraft
- Evaluate Terminal building
- Airport maintenance building
- Fuel storage expansion
- Integration of emerging trends

Development Alternatives



Alternatives Focus Areas:

- Runways
- Taxiways
- Development Areas
- Alternative Fuels

Development Areas

- **Airport Related Industrial** - support aviation and industrial related uses. Discourages incompatible uses and heights.

- **General Aviation (small)**

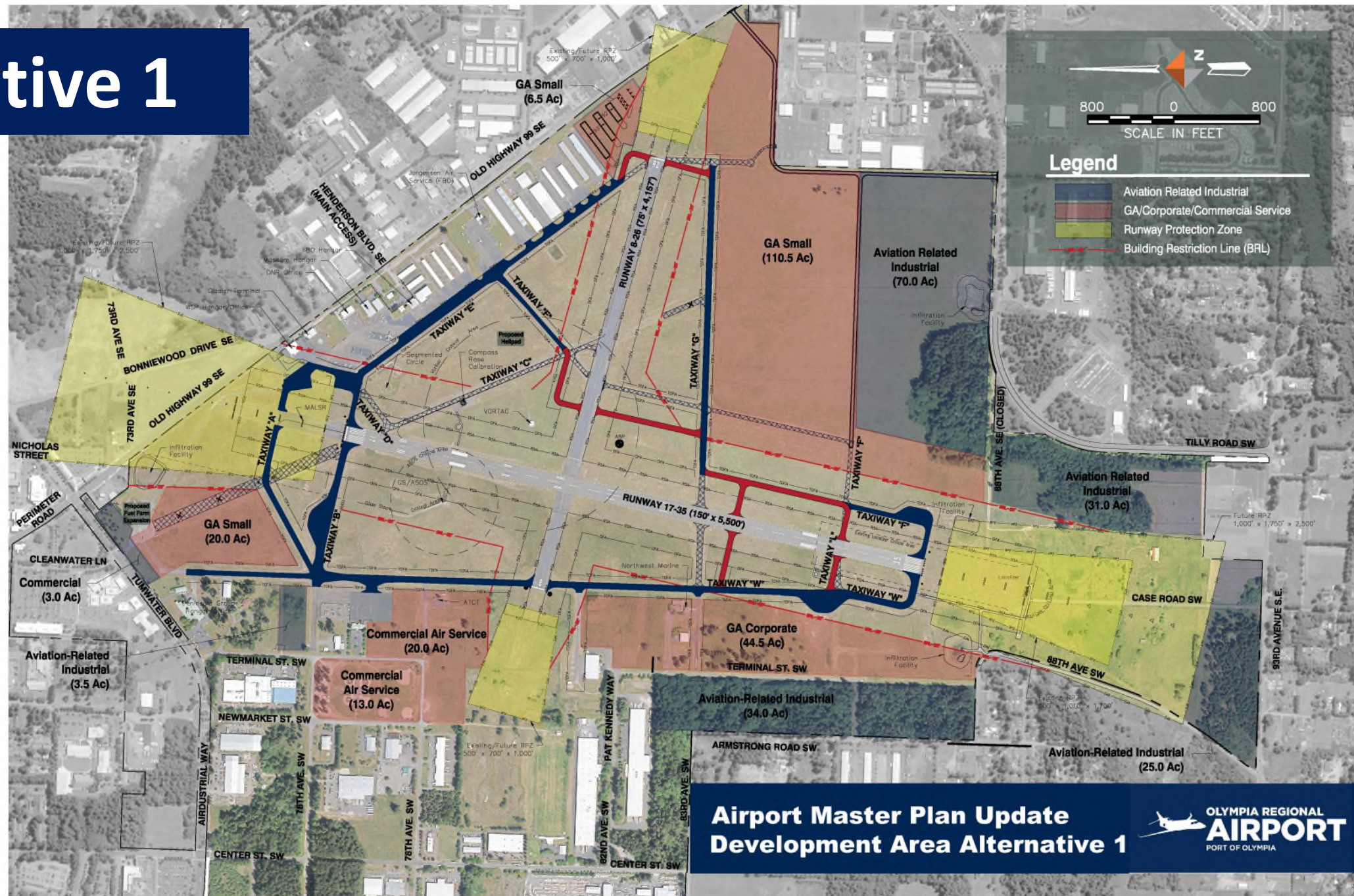


- **General Aviation (corporate)**



- **Commercial Air Service** - placeholder for potential future terminal building and associated parking and facilities.
- **Commercial** – prime road frontage for commercial business

Alternative 1



Alternative 1

Potential
Fuel Farm
Expansion

Realign Angled
Intersections

Remove Taxiway C
and D

Realign Taxiway F

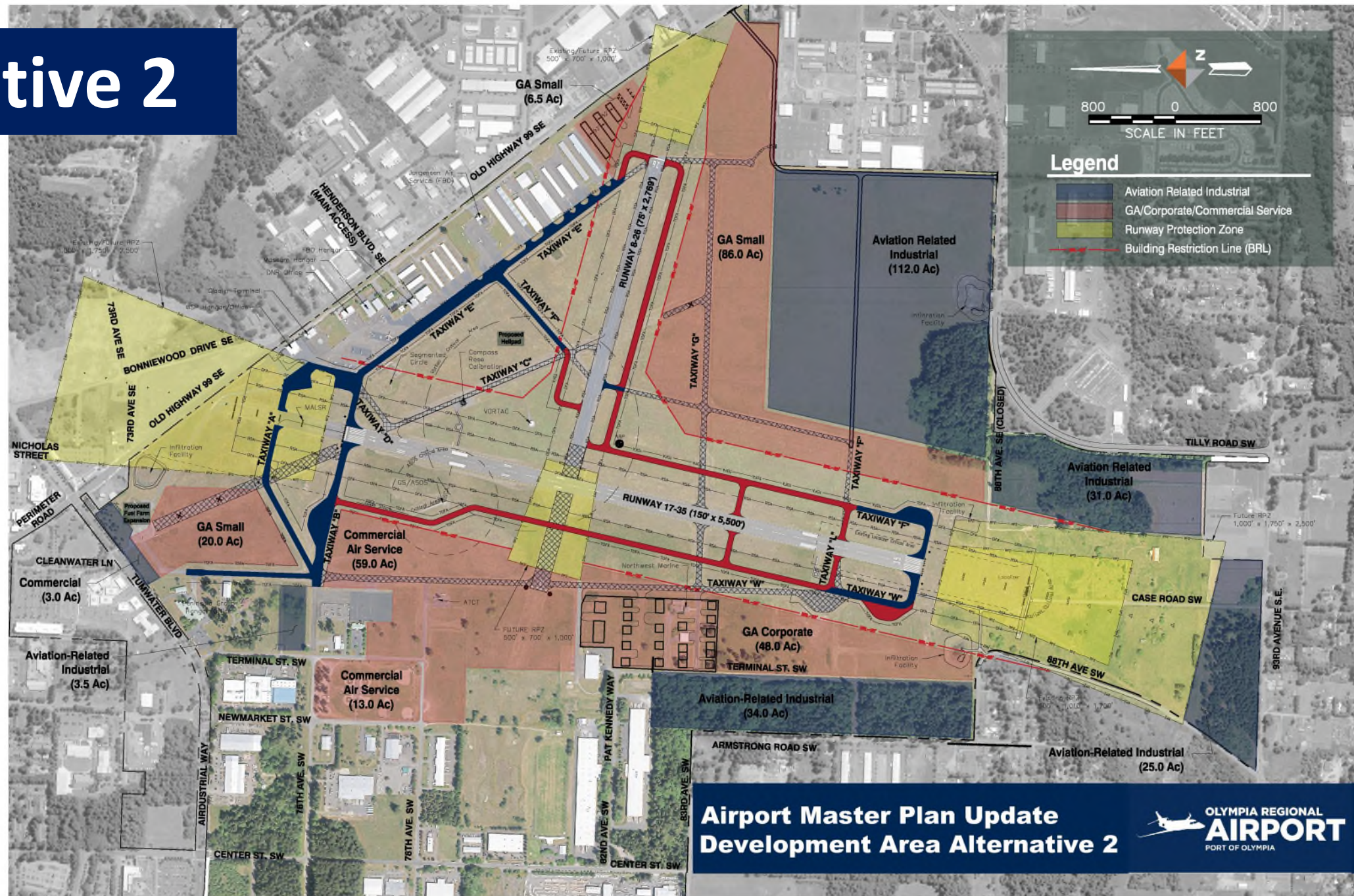
Legend

- Aviation Related Industrial
- GA/Corporate/Commercial Service
- Runway Protection Zone
- Building Restriction Line (BRL)

Airport Master Plan Update
Development Area Alternative 1

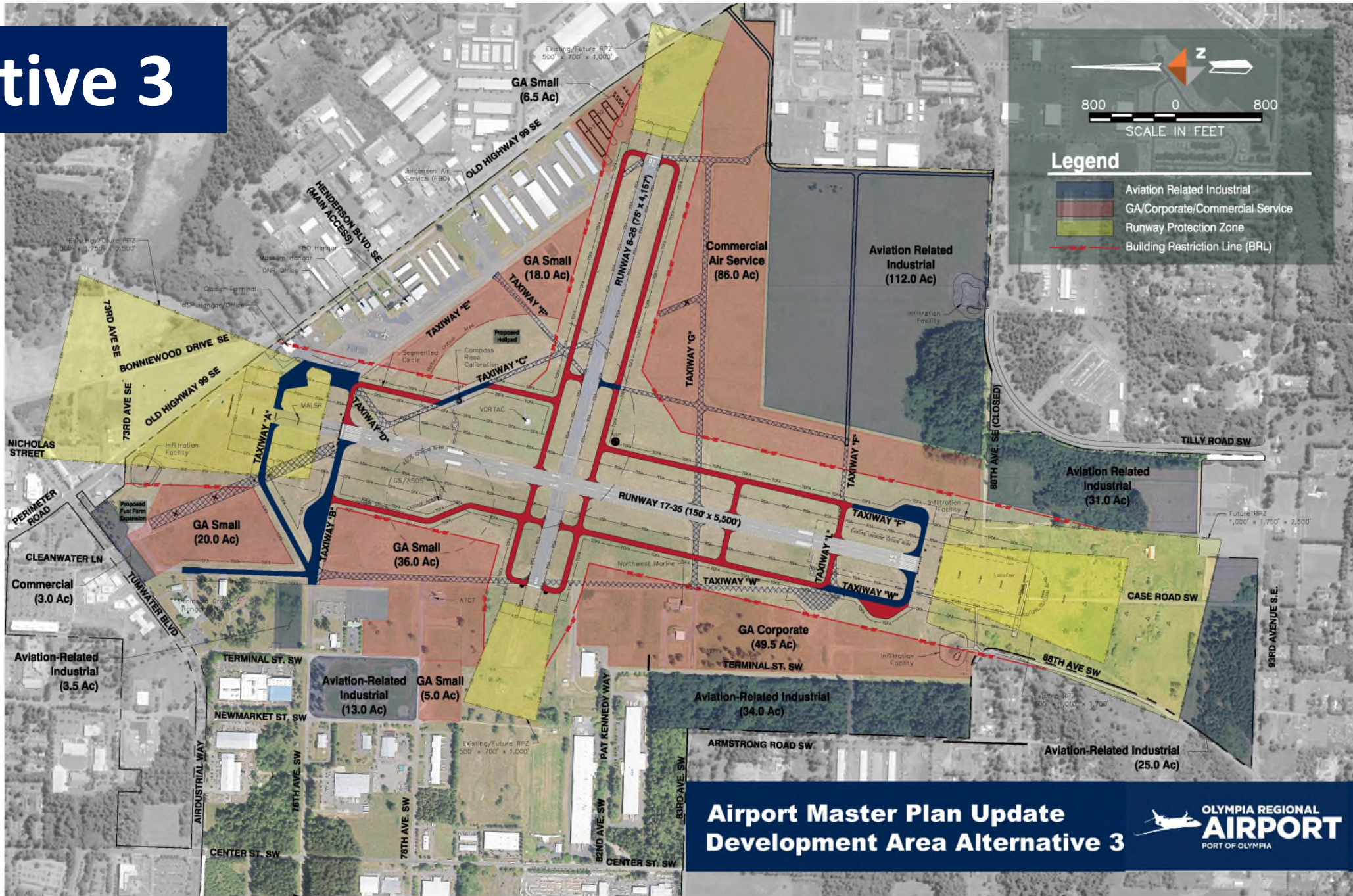


Alternative 2

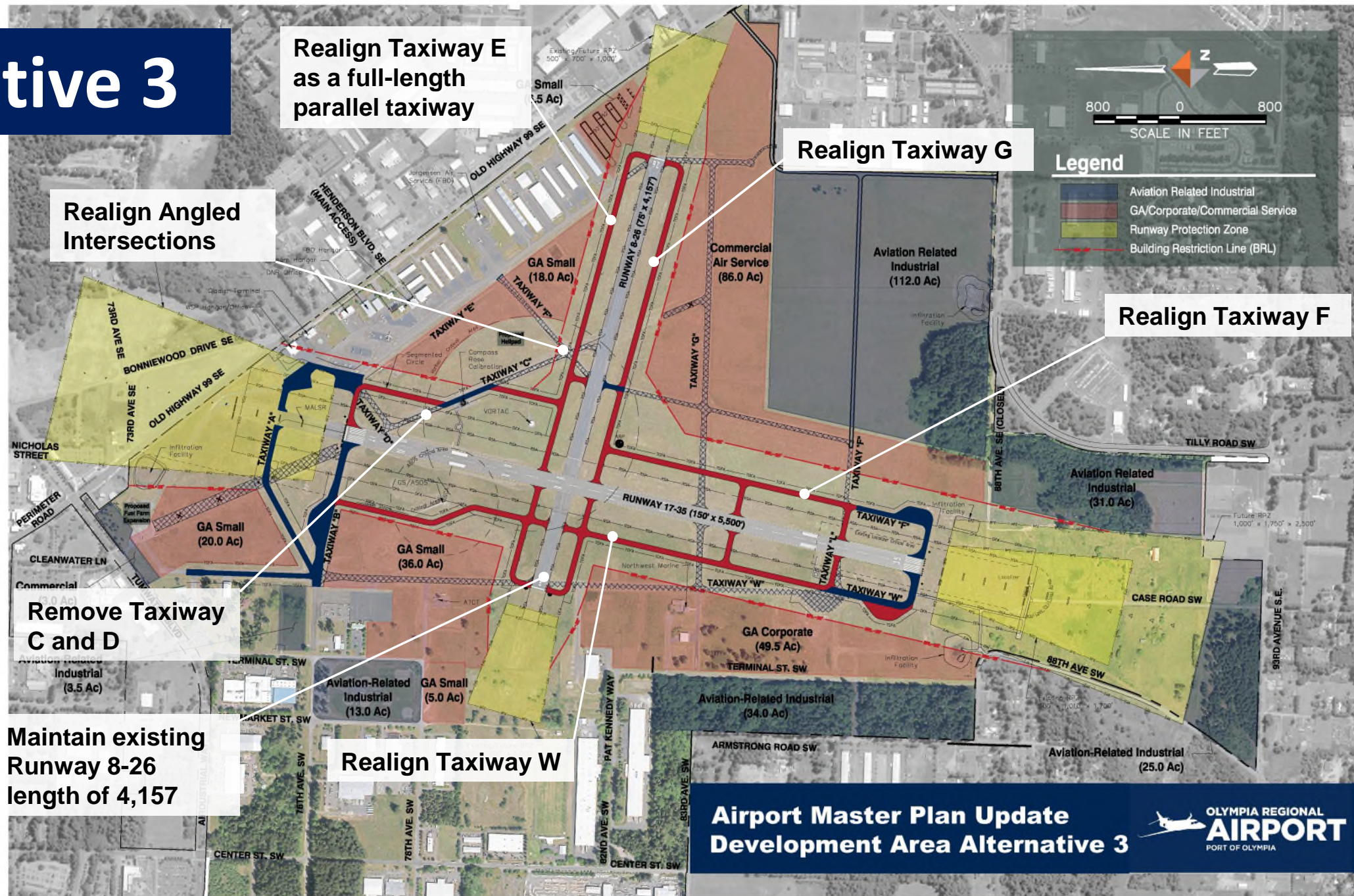


**Airport Master Plan Update
Development Area Alternative 2**

Alternative 3



Alternative 3

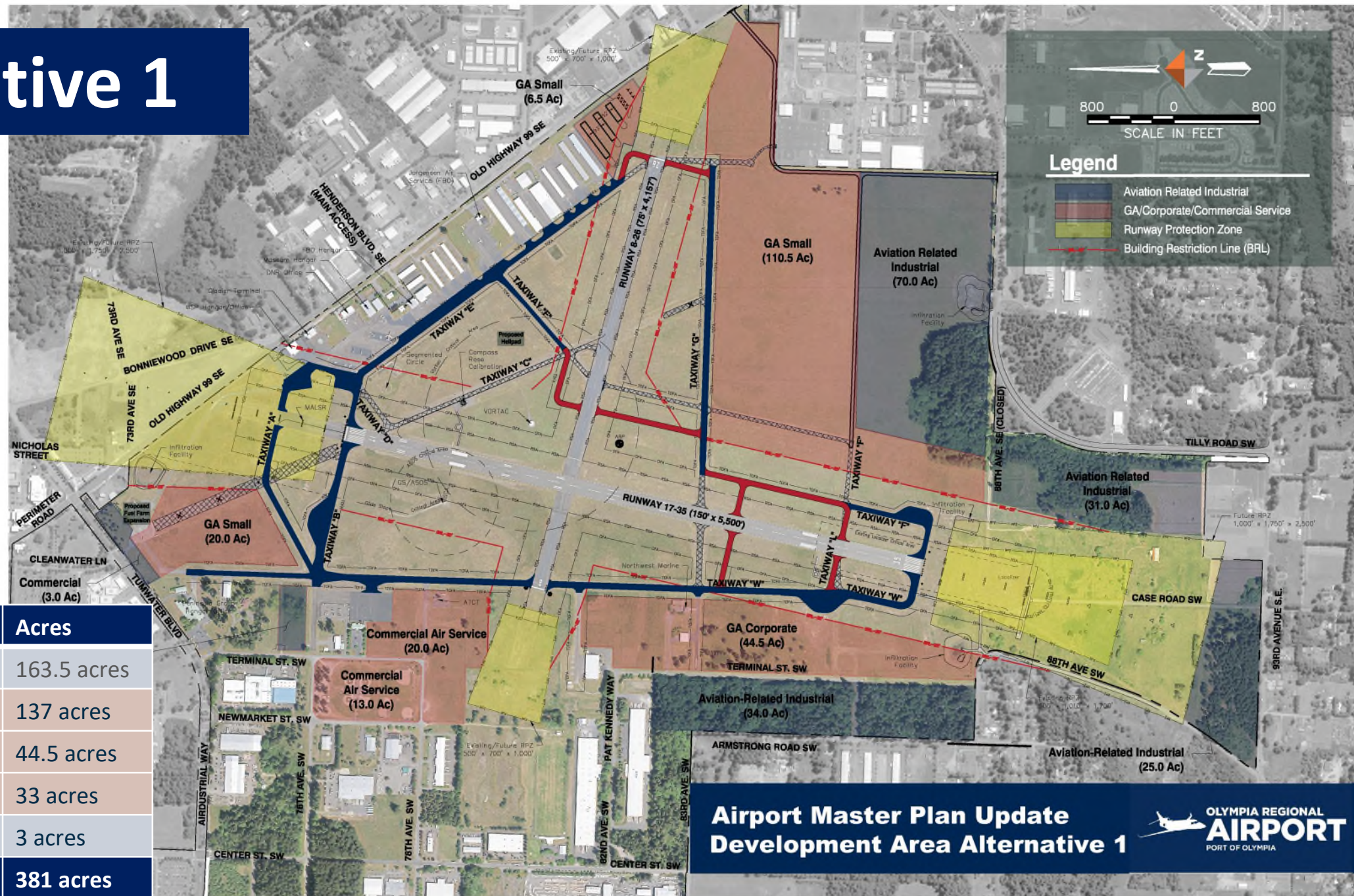


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Summary of Proposed Taxiway/ Runway Pavement Changes from Existing ALP

Pavement	Development Alternative 1	Development Alternative 2	Development Alternative 3
TOTAL	885,000 SF less taxiway/runway pavement than existing ALP	911,500 SF less taxiway/runway pavement than existing ALP	490,000 SF less taxiway/runway pavement than existing ALP

Alternative 1

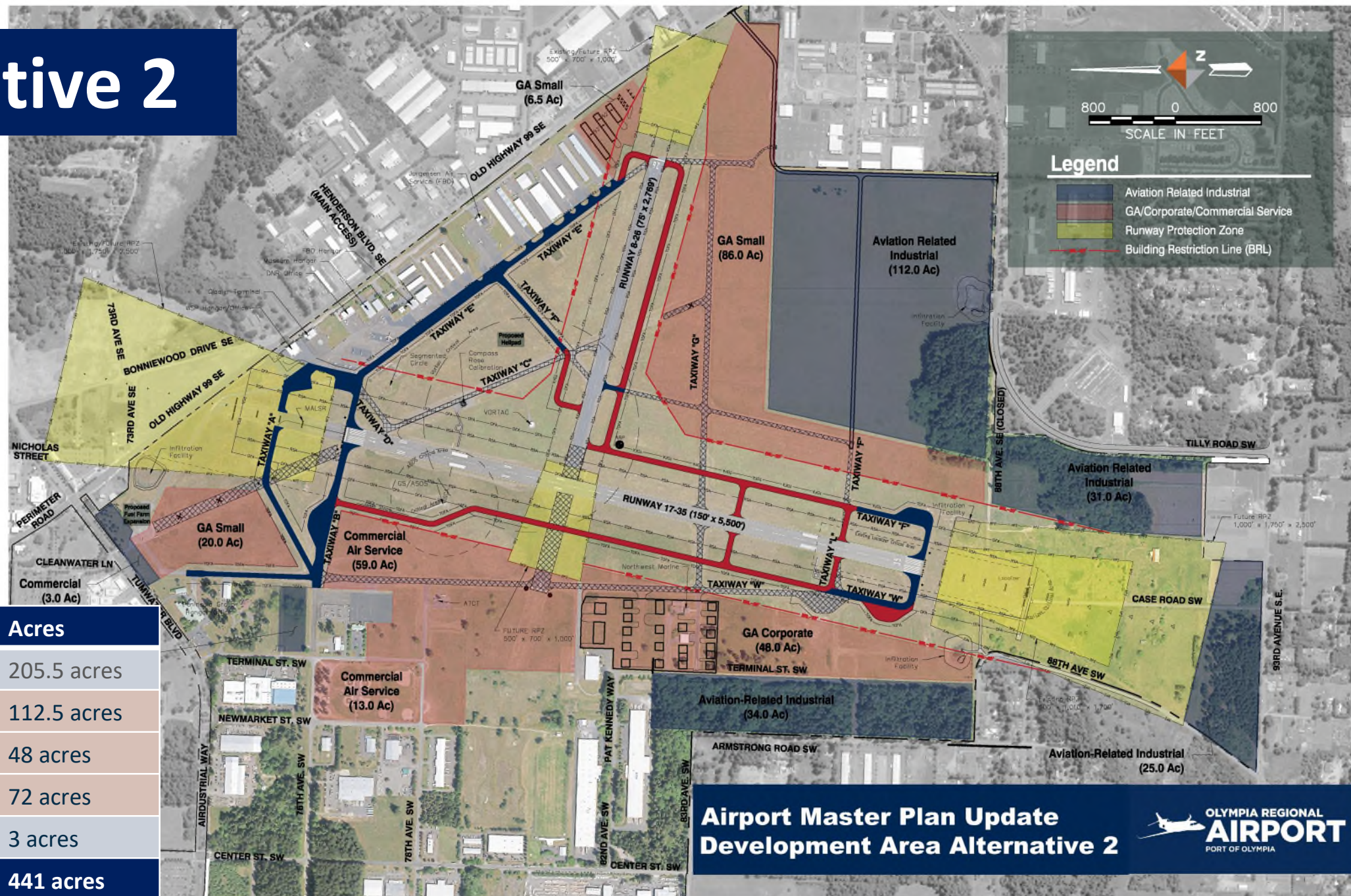


Development Area	Acres
Aviation Industrial	163.5 acres
GA (Small)	137 acres
GA (Corporate)	44.5 acres
Commercial Air Service	33 acres
Commercial	3 acres
TOTAL	381 acres

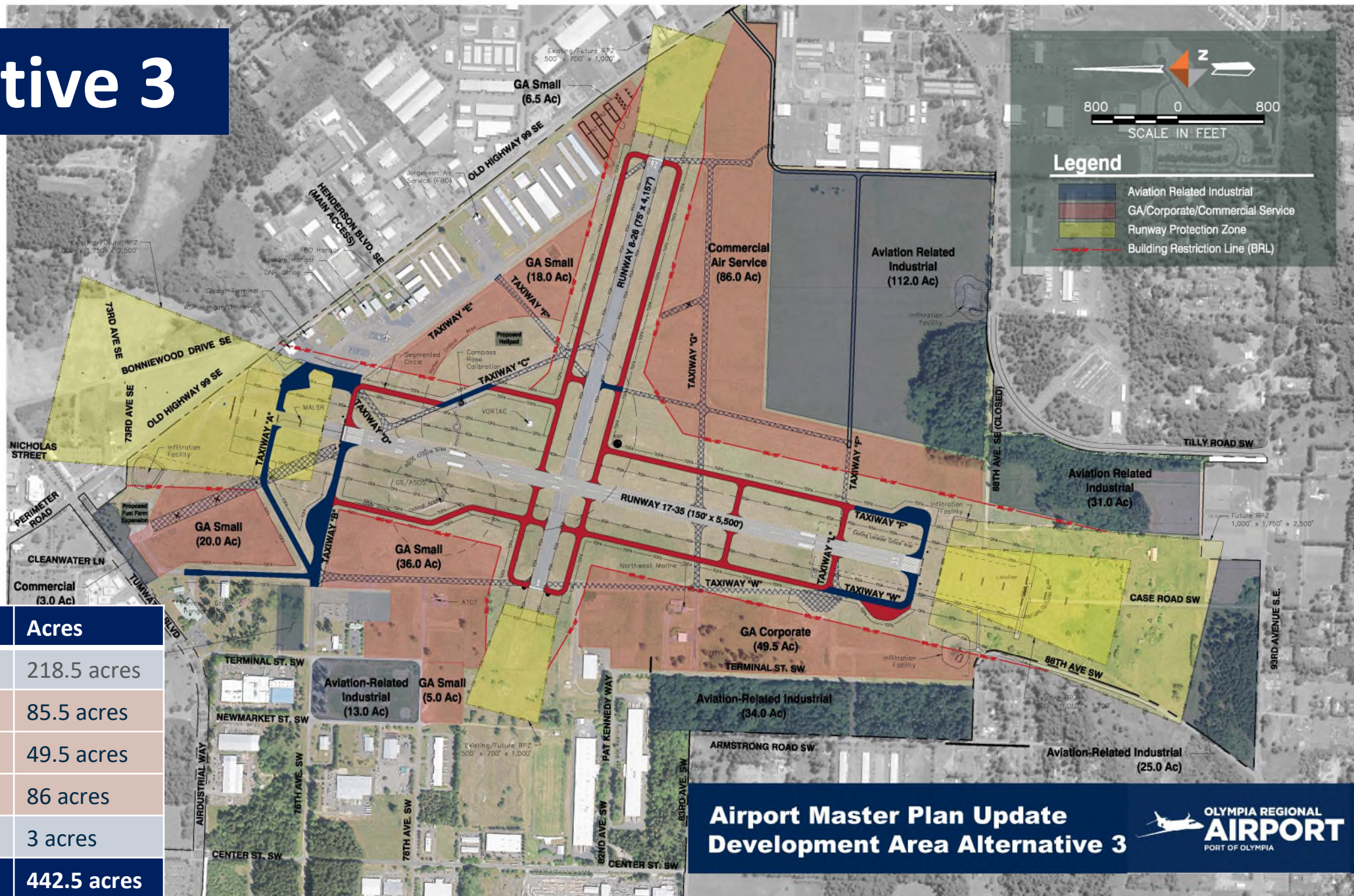
Airport Master Plan Update Development Area Alternative 1



Alternative 2



Alternative 3



Development Area	Acres
Aviation Industrial	218.5 acres
GA (Small)	85.5 acres
GA (Corporate)	49.5 acres
Commercial Air Service	86 acres
Commercial	3 acres
TOTAL	442.5 acres

Airport Master Plan Update Development Area Alternative 3

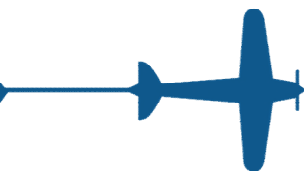


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Summary of Developable Land

Development Area	Existing ALP	Alternative 1	Alternative 2	Alternative 3
Aviation Industrial	195.5 acres	163.5 acres	205.5 acres	218.5 acres
GA (Small)	12.5 acres	137 acres	112.5 acres	85.5 acres
GA (Corporate)	160.8 acres	44.5 acres	48 acres	49.5 acres
Commercial Air Service	30 acres	33 acres	72 acres	86 acres
Commercial	1.3 acres	3 acres	3 acres	3 acres
TOTAL	403.3 acres	381 acres	441 acres	442.5 acres

Electric Aircraft in PNW



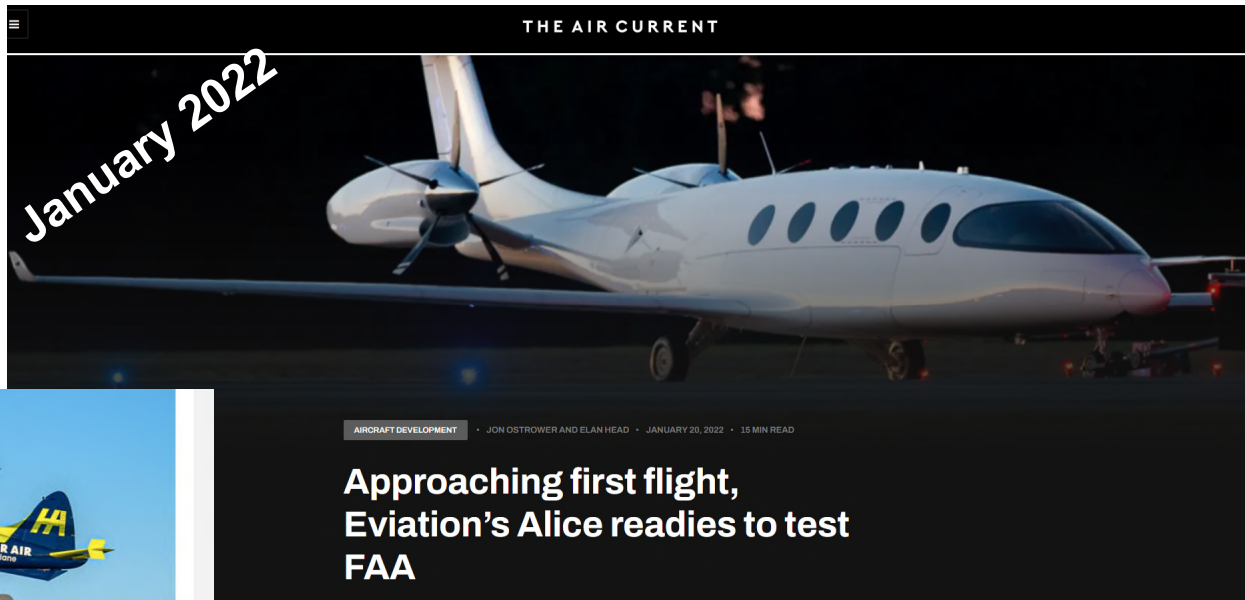
December 2019



Harbour Air, magniX, and H55 are partnering to certify the world's first electric Beaver (eBeaver) commuter airplane through a supplemental type certificate program. Harbour Air Photo

In December 2019, [Harbour Air made aviation history](#) when the eBeaver flew for the first time, powered by the 750-horsepower magni500 electric motor, on a test flight from Vancouver International Airport's floatplane terminal. The airline's CEO and founder, Greg McDougall, was at the controls.

Since then, flight tests with the eBeaver prototype have been ongoing "to measure and collect data on cruise performance and take-off thrust efficiency; electro-magnetic interference; battery management software logic; noise levels; and more," Harbour Air said in a press

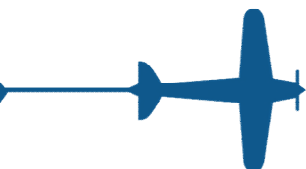


Electric Aircraft



- Electric aircraft technology is projected to help the aviation industry reach reduced emission goals
- Electric aircraft are projected to have lower operating cost
- Prototype electric aircraft have completed flights in the last few years
- Certifications for 20 passenger electric aircraft air taxi operations and regional flights could be completed by the end of the year
- Electric aircraft are projected to make up 5% of the fleet in the U.S. within a decade

Electric Aircraft



- Electric aircraft will require megawatts of electrical power
- Airports may need to be involved in the generation, distribution, and supply of electric power to ensure that demand is reliably met
- Existing electrical grid infrastructure may need to be upgraded
- Renewable energy can be utilized to provide power through solar installations and wind turbines
- Development of smart hangars, existing aircraft parking facilities with solar panels and charging stations, can provide an off-grid solution



Electric Aircraft Outlook for OLM



- Electric aircraft will create new opportunities for airports such as OLM
- Electric aircraft are significantly quieter and have shorter takeoff and landing capabilities allowing smaller or constrained airports to become transportation hubs
- Upgraded capacity will be explored on the west side of the airport



Hydrogen Aircraft



anet

What is BBC Future? Future Planet Follow the Food Family Tree

By Caspar Henderson 7th April 2021

A record-breaking commercial-scale hydrogen plane has taken off in the UK, with more set to join it soon. How far can such planes go in cutting the aviation industry's emissions?

Designers hope hydrogen-powered plane will fly halfway around the world without refueling

Kris Holt 12:24 PM EST • December 6, 2021

[Comment](#)



Image Credits: Aerospace Technology Institute

Hydrogen Aircraft



Lightweight

Hydrogen contains 3x more energy per weight than jet fuel, and enables vastly longer trips than battery power. It is the most energetic non-nuclear fuel and aviation is the most weight-sensitive application.



Carbon-free

Hydrogen is a true zero-carbon fuel. It is made from water and its only emission is water.



Affordable

Hydrogen will be at cost parity with jet fuel starting in 2025, with costs decreasing exponentially.



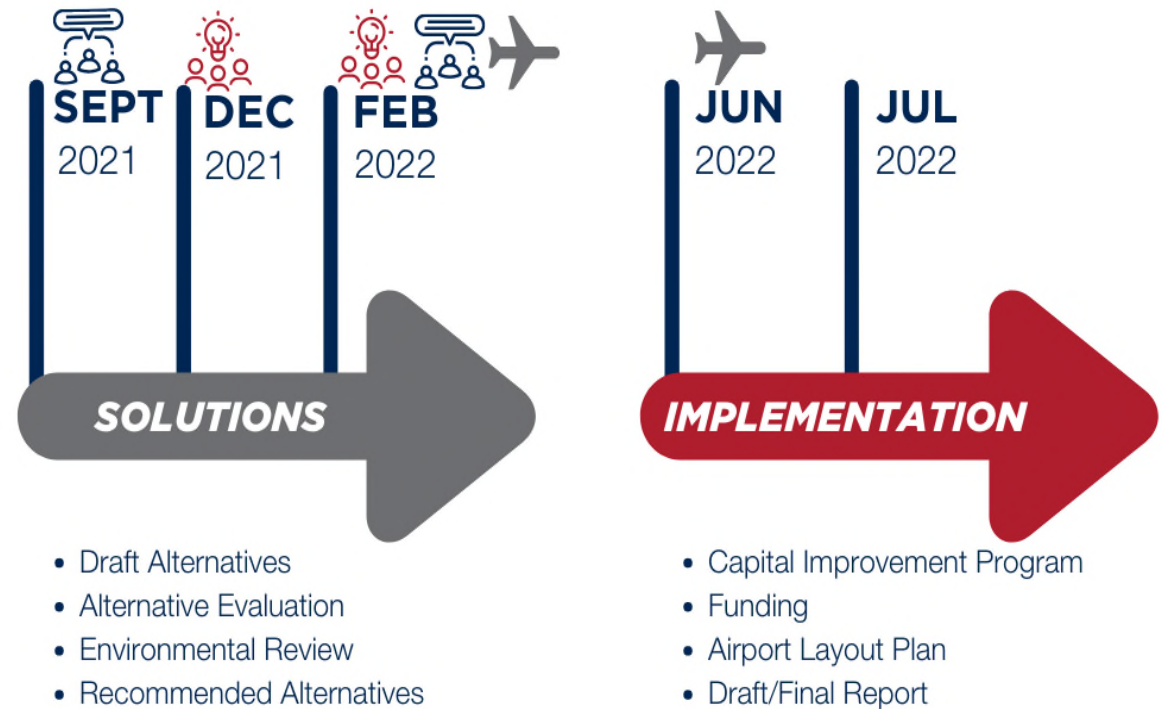
Safe

Hydrogen is significantly safer than jet fuel. It has a great safety record in hydrogen-powered vehicles.



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Next Steps



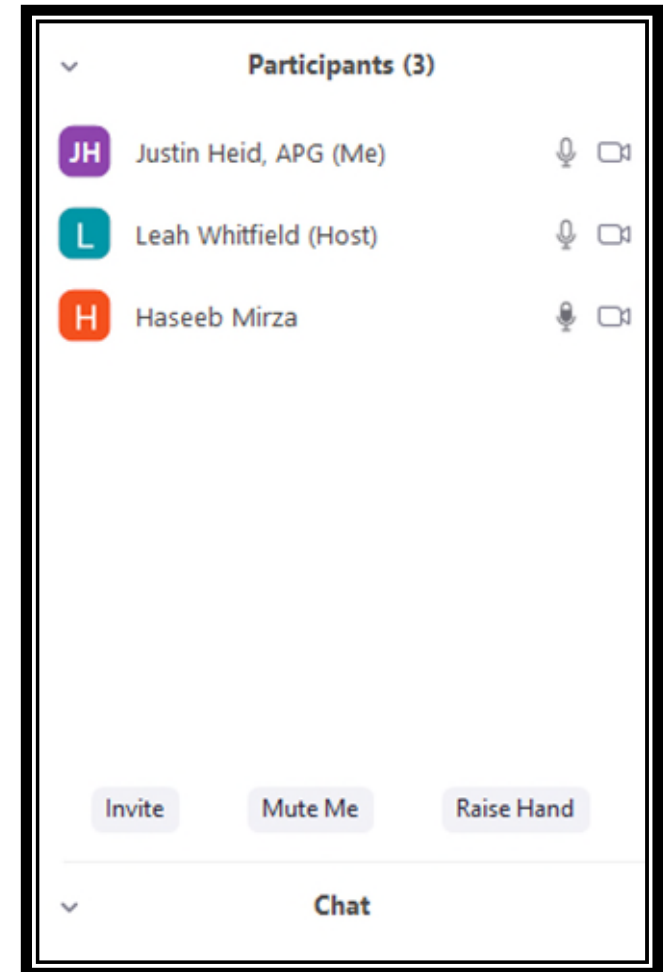
Questions & Comments



If you have a comment you can:

- Use the “Raise Hand” button
- Under “Participants” or
 - Under “Reactions”

Comments are limited to 3 minutes.
Type a comment in the chat box



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Thank you

Any Comments or Questions?

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