

HIO MASTER PLAN UPDATE

Planning a Shared Future

Planning Advisory Committee #6
March 21, 2018

HILLSBORO AIRPORT MASTER PLAN UPDATE

Welcome and Meeting Introduction

Jerry Willey, Committee Chair

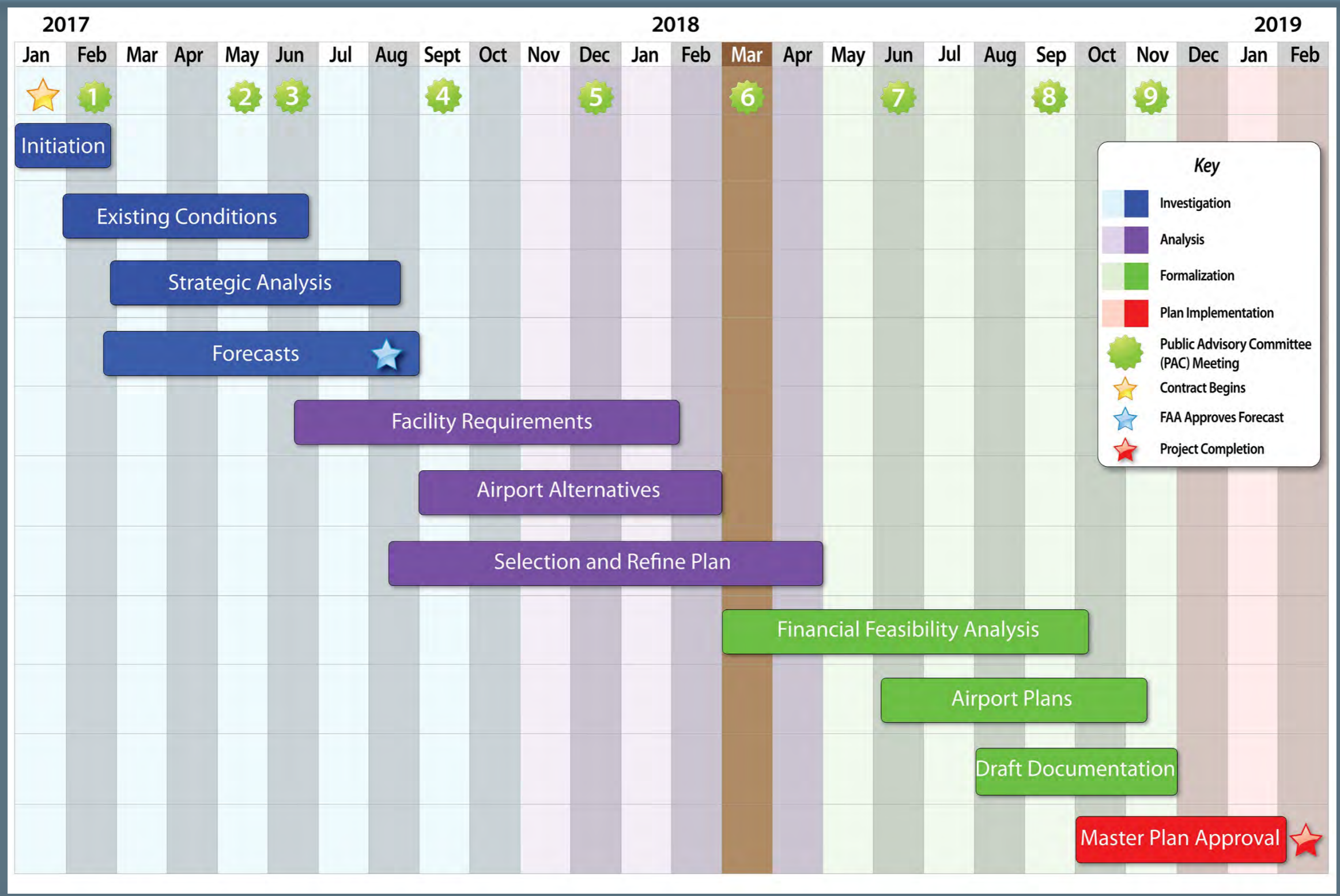
Anne Pressentin, EnviroIssues



Agenda

- Welcome and Meeting Introduction
- Airport Business Report
- Community Involvement Update
- Wrap Up: Updated Airport Alternatives
- Washington County – Event Center Update
- Cornell Market Study
- Overview: Cornell Subarea Alternatives
- PAC Small Group Activity: Cornell Subarea
- Break
- Public Comment
- Overview: Evergreen Subarea Alternatives
- PAC Small Group Activity: Evergreen Subarea
- Next Steps and Meeting Evaluation

Project Schedule



HILLSBORO AIRPORT MASTER PLAN UPDATE

Hillsboro Airport Business Report

Steve Nagy, Port of Portland



Hillsboro Airport Business Report

Port Social Equity Policy and Guidelines

- February 2018 – Port Commission adopted new social equity policy and implementation guidelines
- Focus on racial equity
- Complementary to criteria we are using in the HIO Master Plan Update
- Implementation over time is key to success

HILLSBORO AIRPORT MASTER PLAN UPDATE

Community Involvement Update

Seth Baker, EnviroIssues



Winter Outreach Summary

Activities

- Tamale Night
- Airport Tours for Spanish Speakers

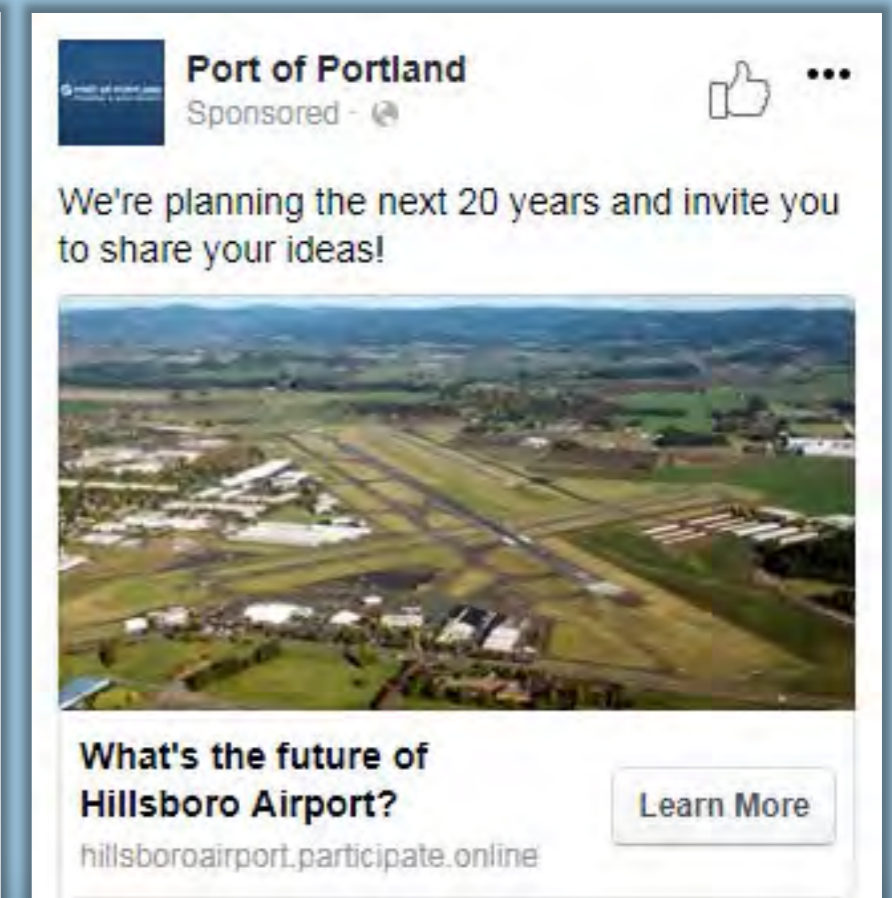
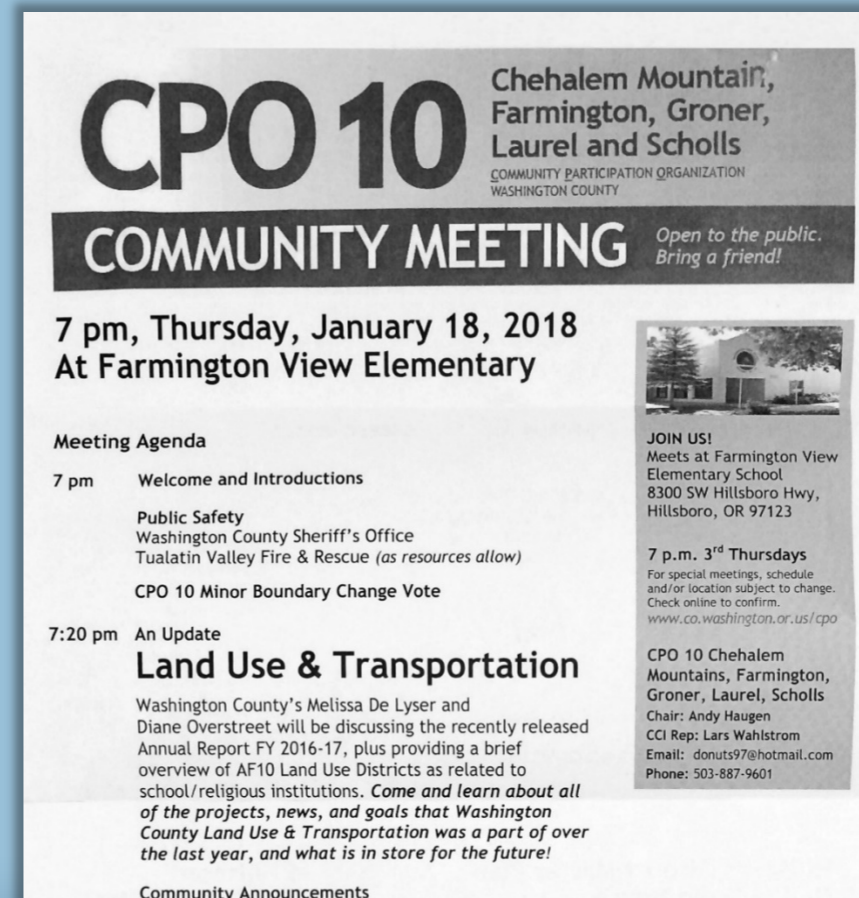
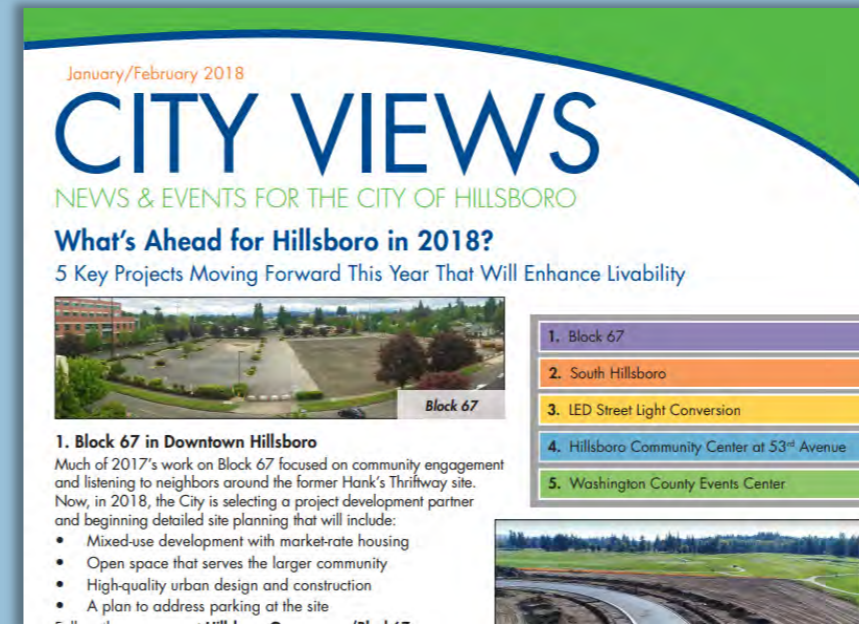
Online open house (Dec. 20 – Feb. 5)

- English site users: 2,844
- Spanish site users: 53
- Comments on alternatives: 94
- Comments on ongoing involvement: 125

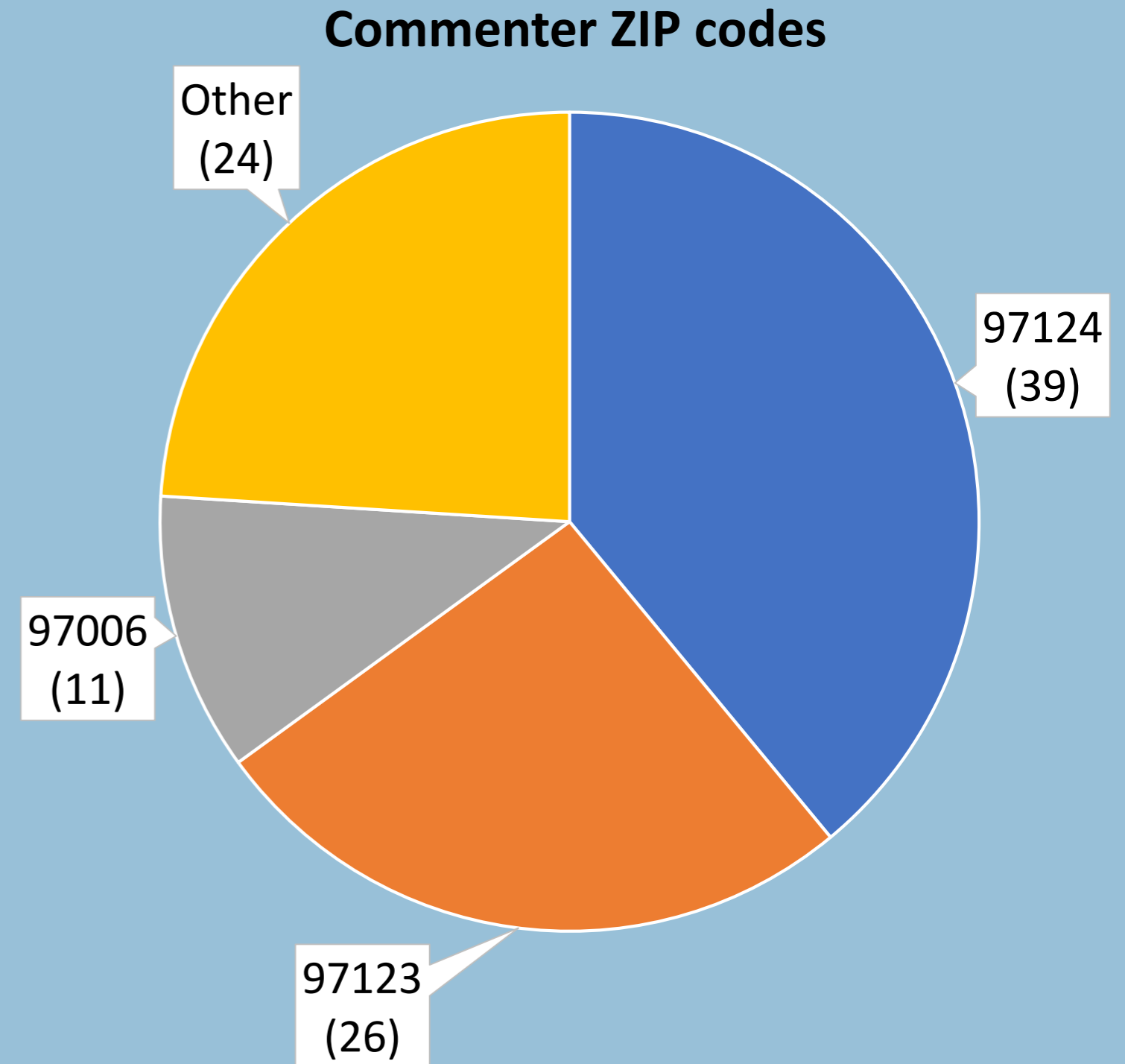
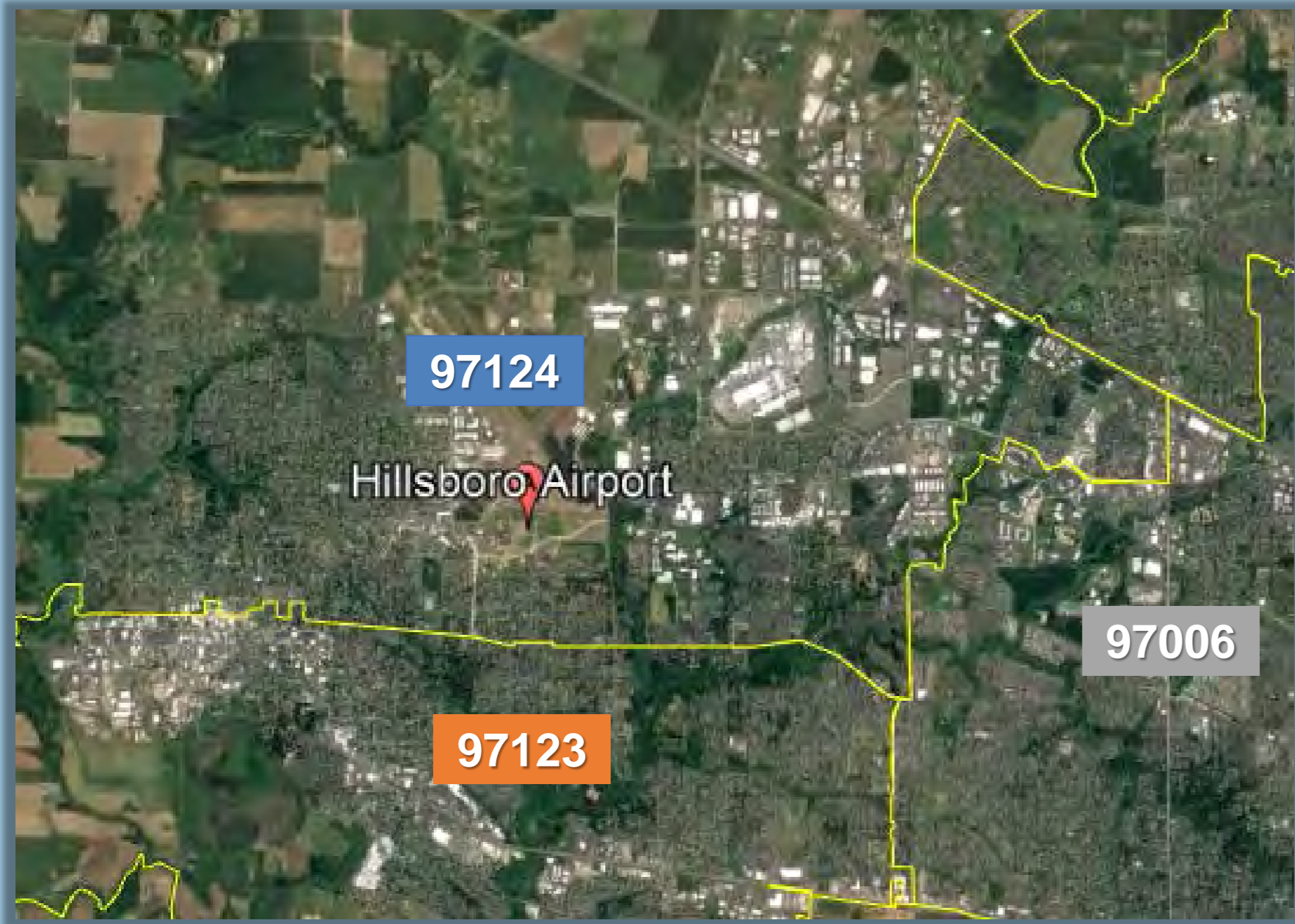


Online open house notification and reach

- PAC member channels
- Port of Portland website
- Email
 - Port of Portland Hillsboro Airport distribution list
 - City of Hillsboro City Views
 - Wash. County CPO Program
- Direct mail
 - Postcard to 12,000 residents within two miles of Hillsboro Airport
 - CPO 10 Newsletter
- Facebook posts and advertisements
- Flyers and bookmark leave-behinds

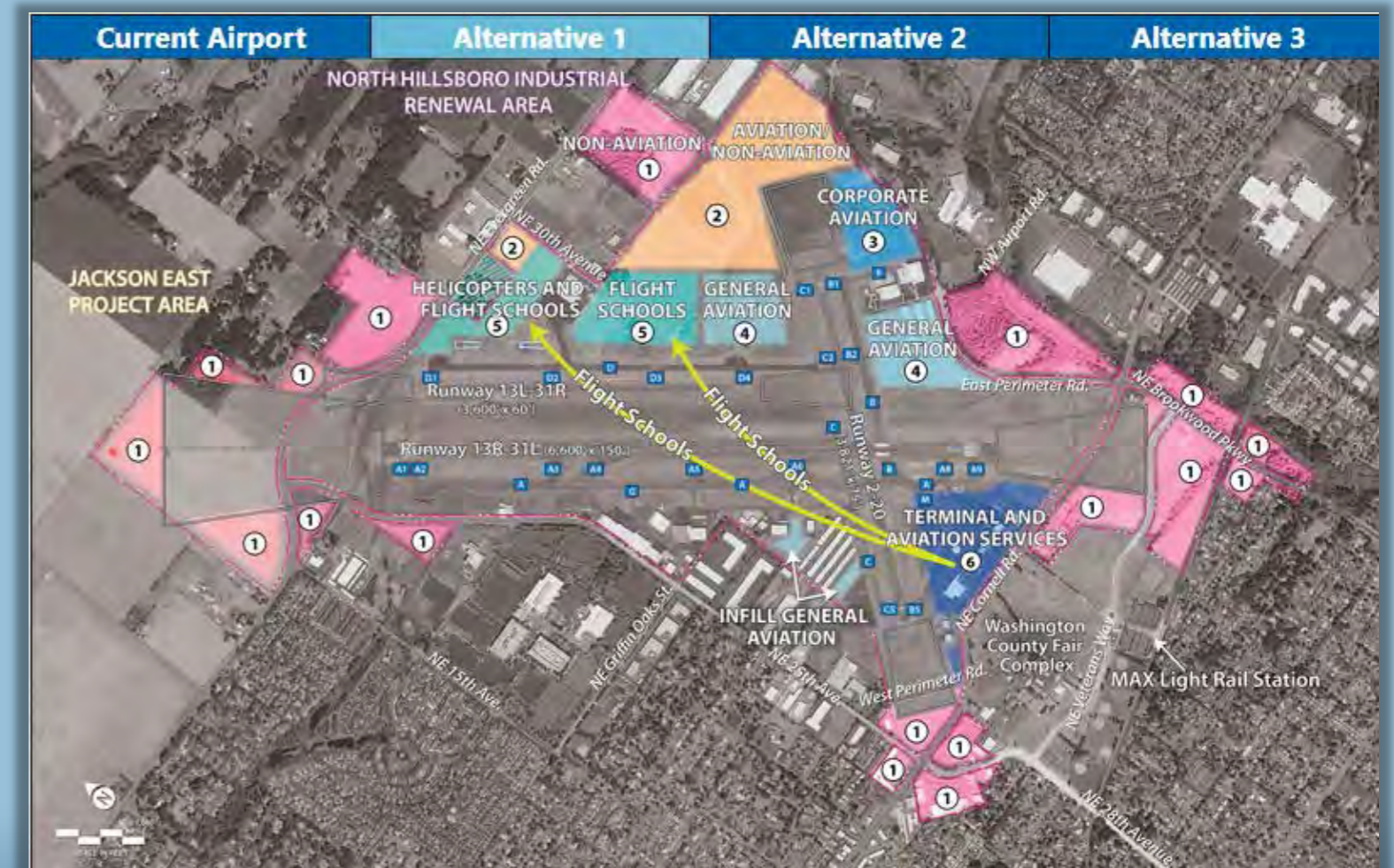


Online open house notification and reach



Comments on airport alternatives

- Support options that would be the least disruptive to the current airport layout and require minimal costs
- Support investments in aviation facilities that would improve airport efficiency and attract users
- Keep the terminal building on the Cornell parcel to maintain connection to Washington County Fairgrounds and MAX Light Rail station
- Support development options that shift noise patterns away from denser residential areas
- Support changes to the airport that improve community compatibility

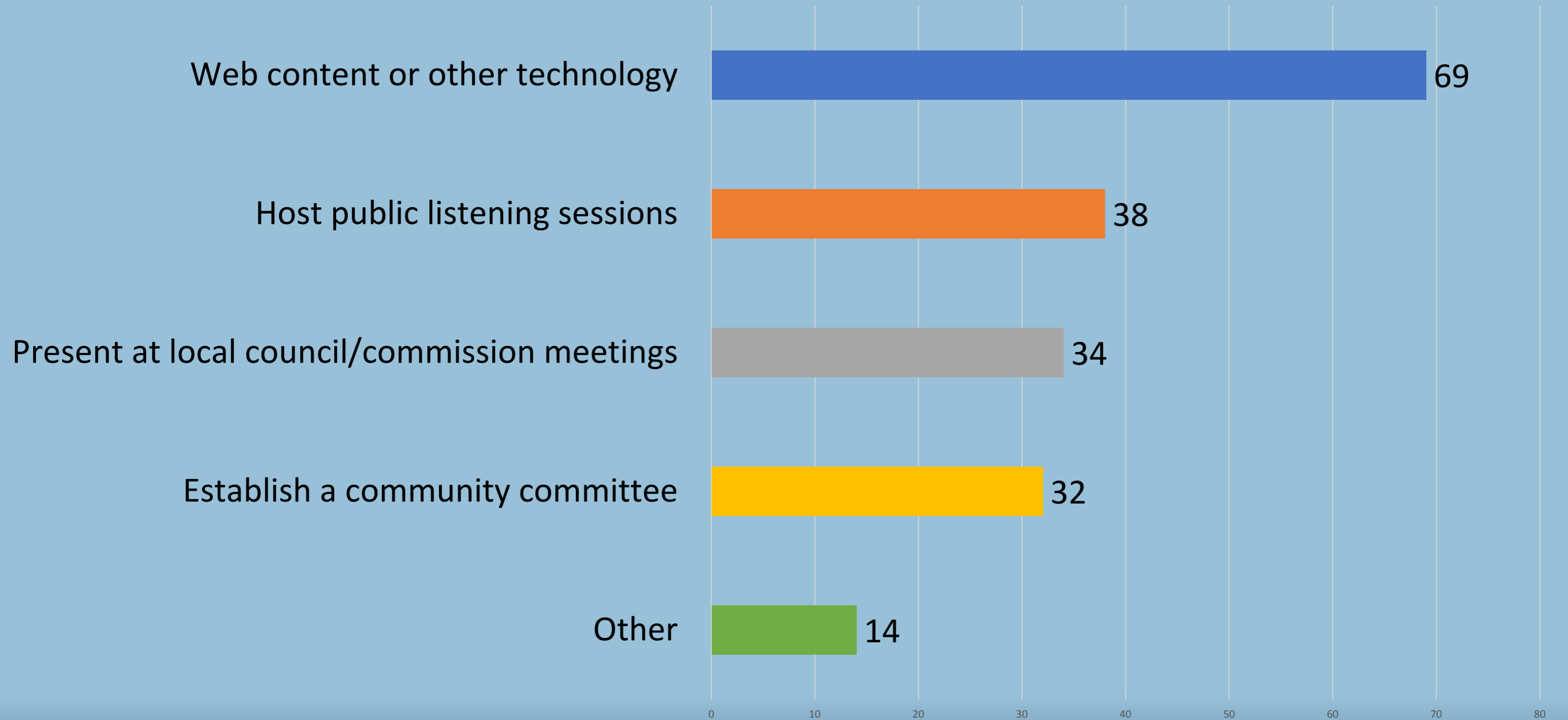


Other comments on airport alternatives

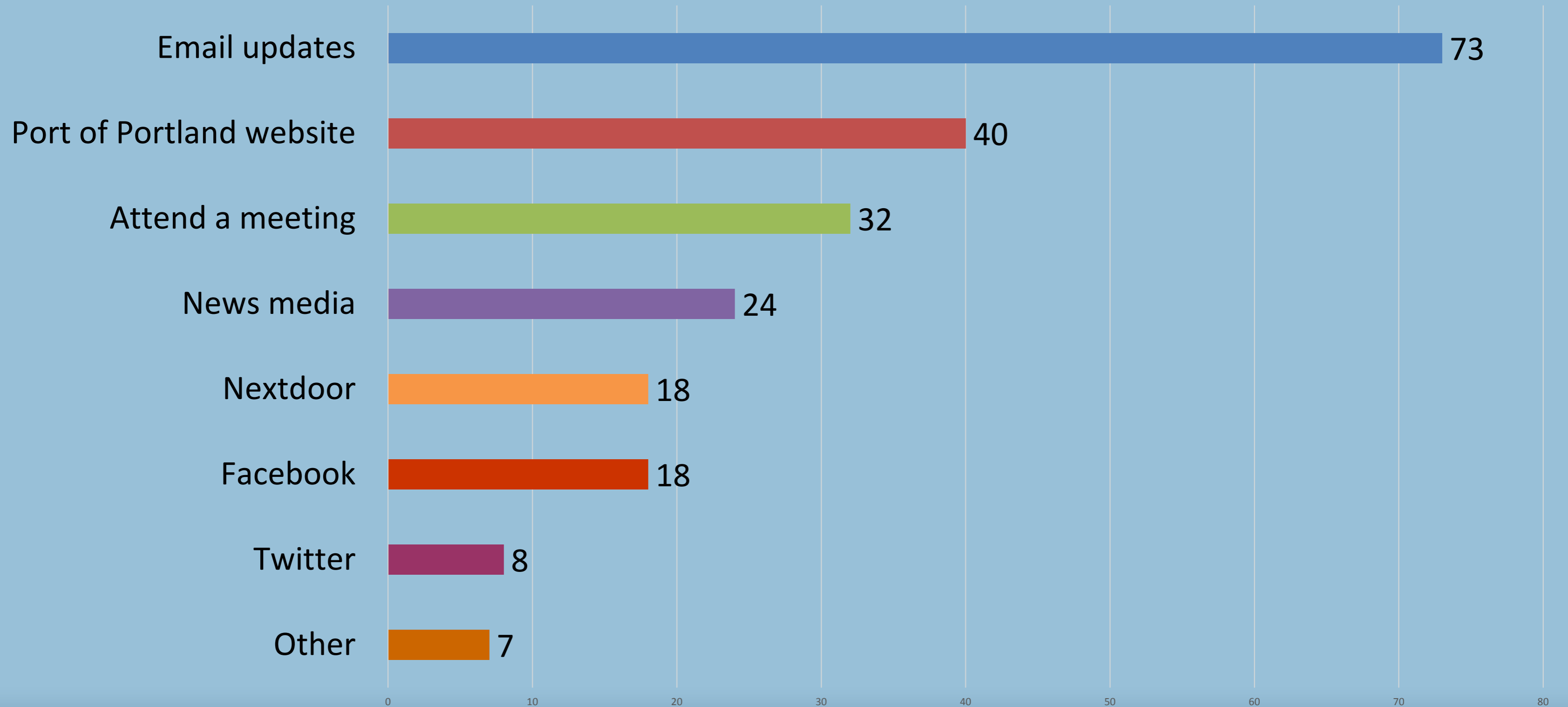
Community members shared a range of priorities to consider when deciding how Hillsboro Airport should change over time.

Balance the benefits of airport development against any negative effects related to airport activity.	Prioritize community compatibility before further developing aviation uses.
Airport property should be reserved for aviation uses.	Encourage non-aviation uses that could broaden the range of people who directly benefit from airport property.
Plan to add commercial passenger service to Hillsboro Airport in the future.	Do not change the airport's role if it would increase negative effects to nearby residents.

Community involvement tools – survey results



Information sharing tools – survey results



HILLSBORO AIRPORT MASTER PLAN UPDATE

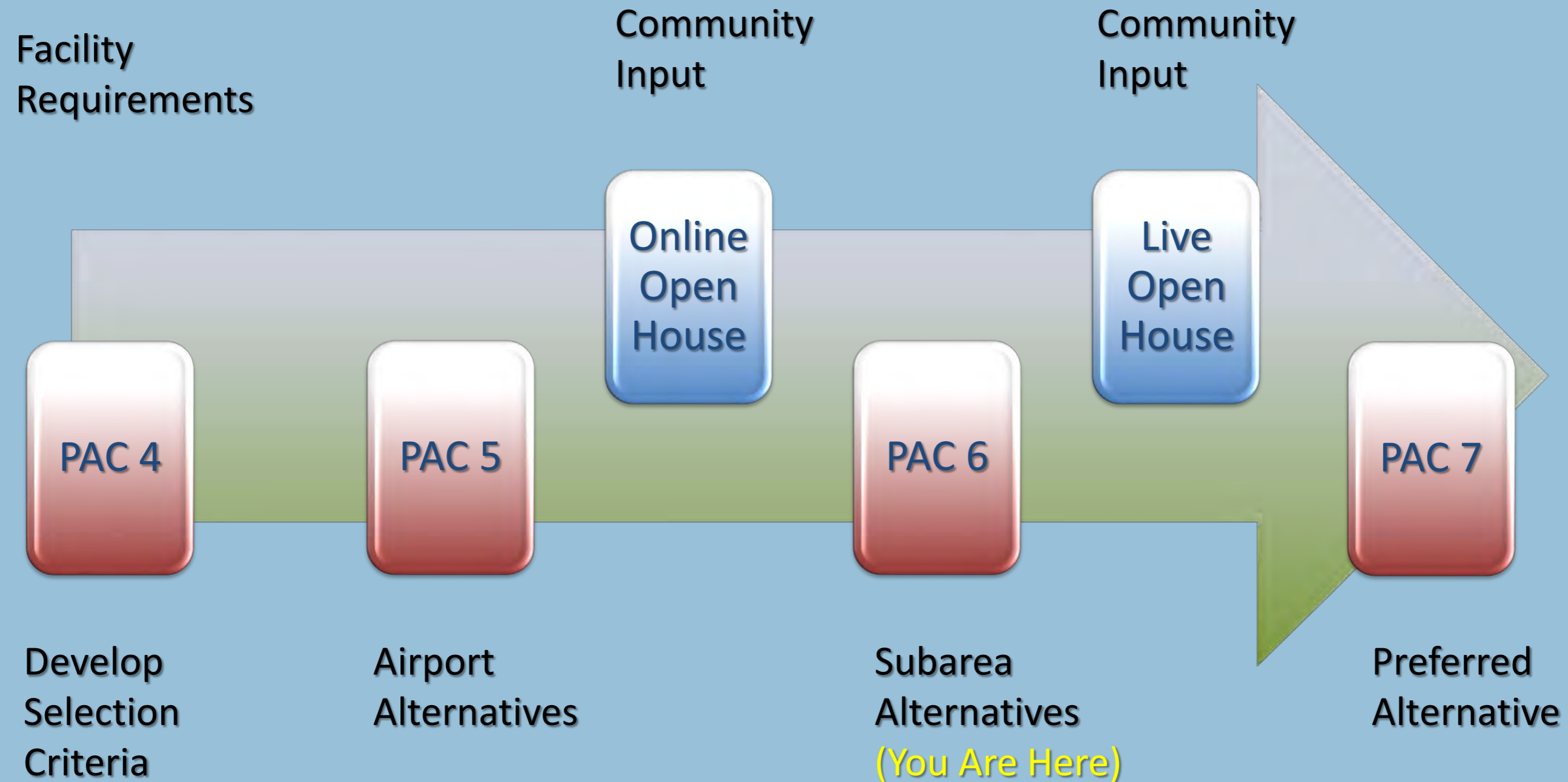
Wrap Up: Updated Airport Alternatives

Patrick Taylor, Coffman Associates



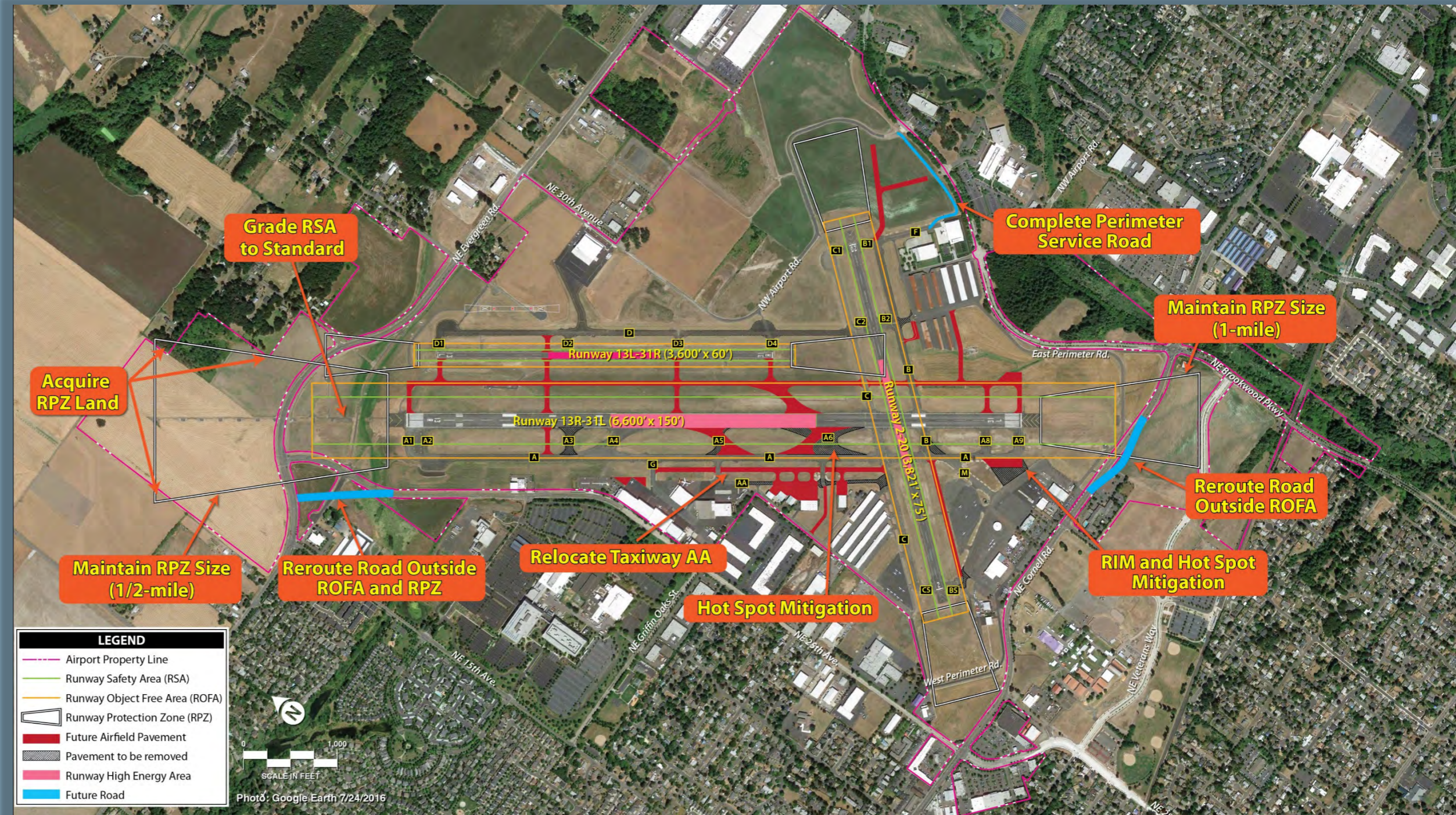
Alternatives Process

Process Overview



Airside Achievements/Decisions So Far

- **ROFA** – Ultimately reroute roads.
- **RSA** – Drainage ditch to be graded to standard.
- **RPZ** – Maintain current size.
- Mitigate RIM and ‘hot spot’ locations with redesigned hold apron.
- Mitigate Taxiway A6 ‘hot spot’ with redesign.
- Central taxiway between parallel runways.
- Crossing taxiways.
- Shift Taxiway AA creating movement efficiency.





NORTH HILLSBORO INDUSTRIAL RENEWAL AREA

JACKSON EAST PROJECT AREA

EVERGREEN SUB-AREA

CORNELL SUB-AREA

LEGEND

- Airport Property Line
- Runway Protection Zone (RPZ)
- Aviation Development
- Aviation/Non-Aviation Revenue Support
- Compatible Non-Aviation
- Investment Preservation



Runway 13L-31R (3,600' x 60')
(Training Runway: 50% of Operations)

Runway 13R-31L (6,600' x 150')
(Primary Runway: 45% of Operations)

Runway 2-20 (3,821' x 75')
(Crosswind Runway: 5% of Operations)

Washington County Fair Complex

Planned MAX Light Rail Station

Achievements/Decisions So Far

Overall Airport

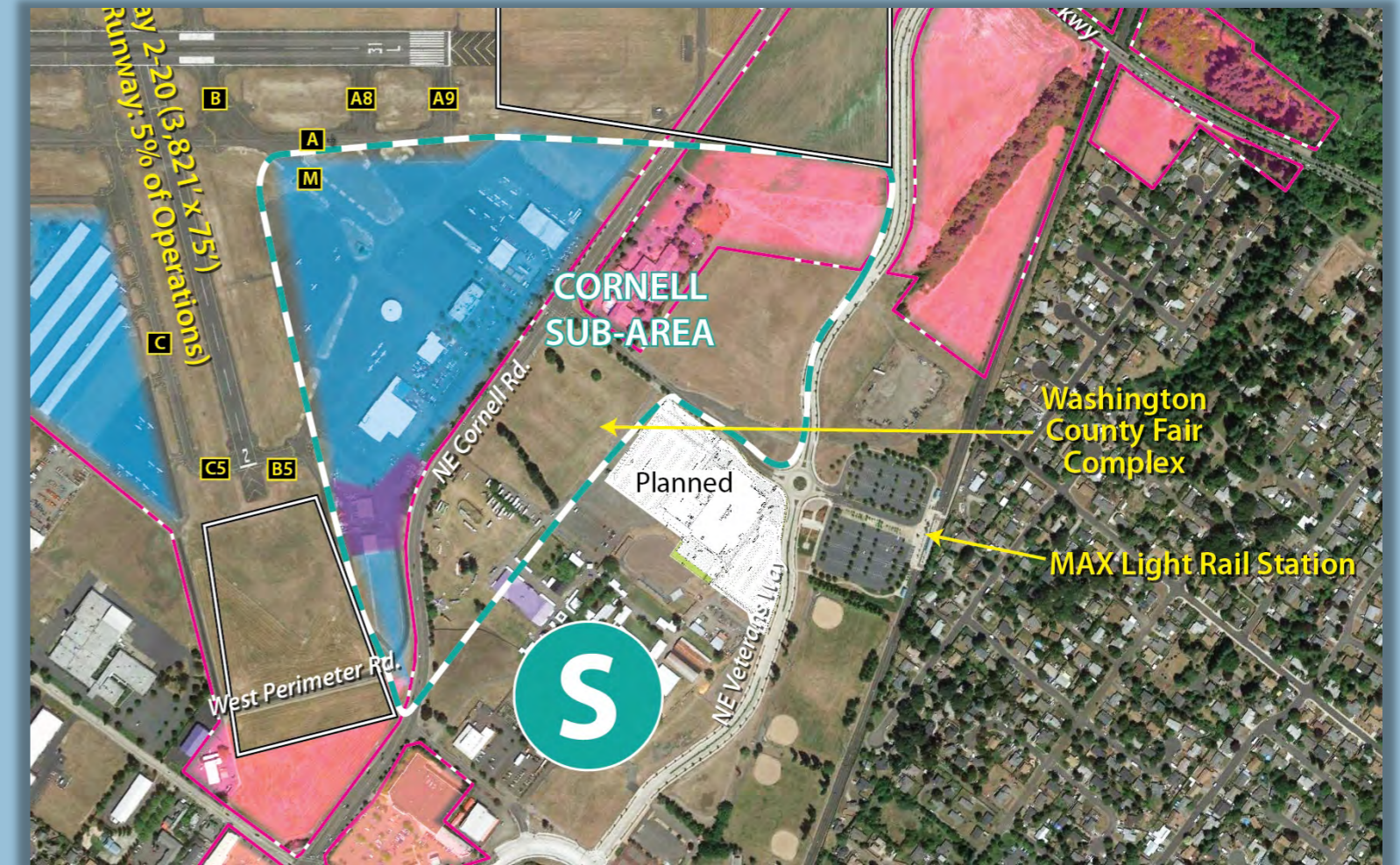
- Meet 20-year aviation facility needs.
- Meet FAA aviation safety standards.
- Reserve land to meet aviation needs beyond 20 years.
- Introduce non-aviation land uses where a demand exists.
- Integrate with other local plans and comply with area zoning.
- Make use of west side in-fill development to satisfy hangar needs.
- Conserve facilities with recent investments.
- Meet current and future stormwater needs.



Achievements/Decisions So Far

Cornell Subarea

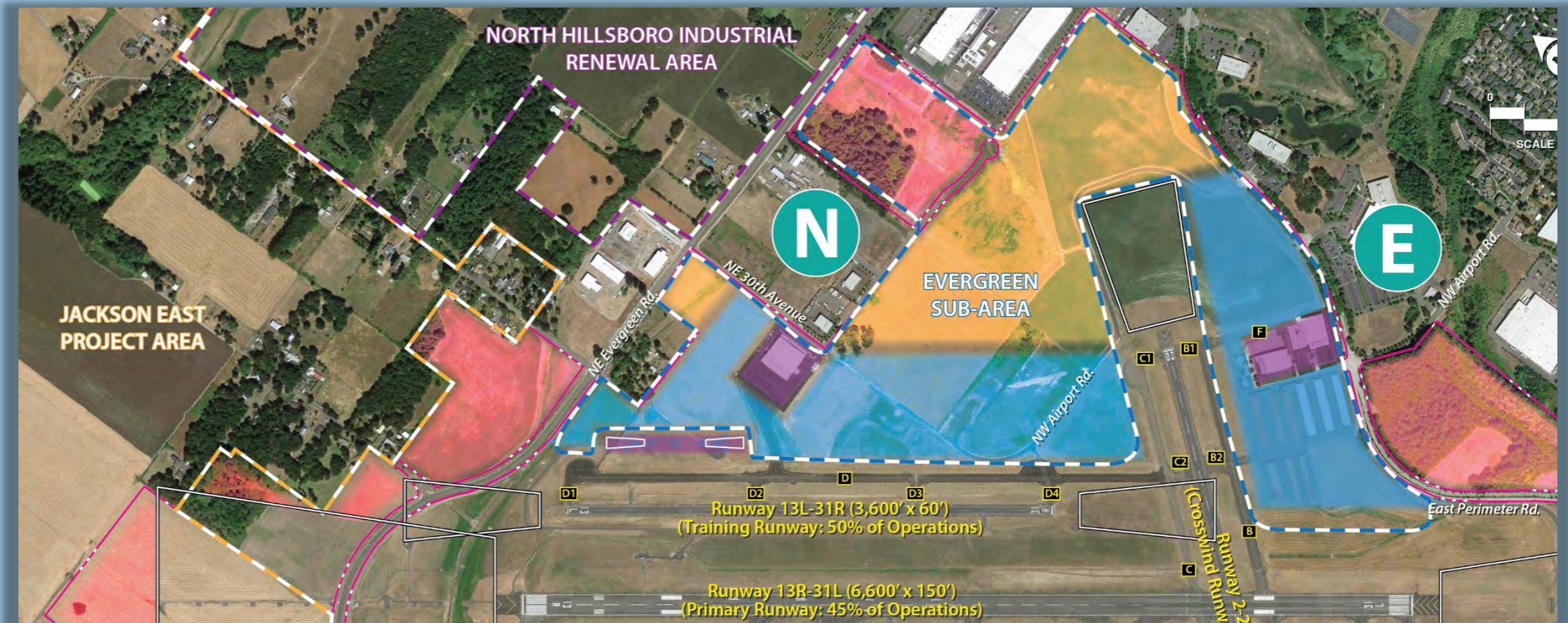
- Redevelop terminal facilities to be adaptable to future needs.
- Facility focus on large aircraft.
- Eventually relocate flight schools to Evergreen subarea.
- A sense of place
 - “Gateway” approach focused on NE 34th Avenue and TriMet corridor.
 - Complement Washington County Fairplex and Event Center.
- Identify opportunities for non-aviation amenities like commercial/retail.



Achievements/Decisions So Far

Evergreen Subarea

- Consider flight school alternatives in North or East quadrants.
- Consider corporate aviation facilities in the East quadrant, north of existing T-hangars.
- Accommodate small GA in the North quadrant and infill in the West quadrant.
- Aviation reserves identified, but not needed specifically to meet a 20-year facility requirement.
- Non-aviation uses identified on land outside of aviation reserves.



Context for General Airport Alternatives

Overall Goal: Maintain a sustainable approach to long term development of the airport.

- **Efficient:** Both airside and landside
- **Flexible:** Able to address uncertainty
- **Incremental:** Project phasing (TBD by PAC #8)
- **Affordable:** Plan with a general understanding of costs and sources of funds

Process is iterative:

- Informed by prior work
- Reflects input from PAC, County, City, Public, Tenants, and the Port

Consistency with Evaluation Criteria:

- Goals/Evaluation criteria influence alternative development
- Help us select and refine a preferred alternative

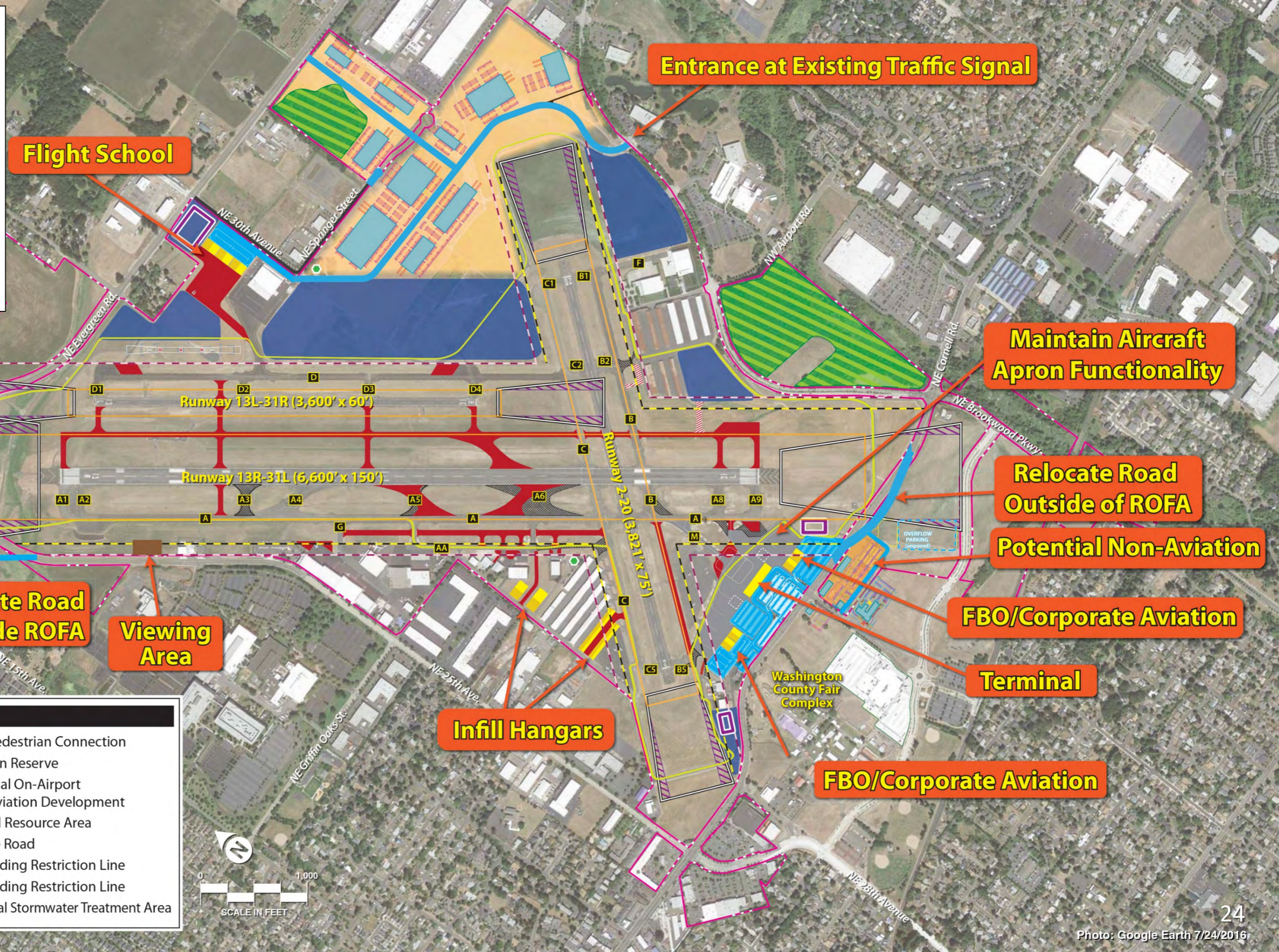
Other Considerations: Stormwater

- General approach to evaluation
- Water quality
 - Treatment
 - Treated areas vs. untreated areas
 - Redevelopment of existing impervious areas vs. undeveloped area
 - Treatment Methods
 - Regional vs. Local
 - Surface features
 - Subsurface features
- Detention vs. Water Quality
- Differences among concepts – preferred uses of land



Airport Alternative 1

- Terminal moved north of existing terminal.
- Retain other aviation services in the Cornell parcel.
- Retain current functionality of the terminal aircraft apron.
- Flight schools relocated north near the planned helipad.



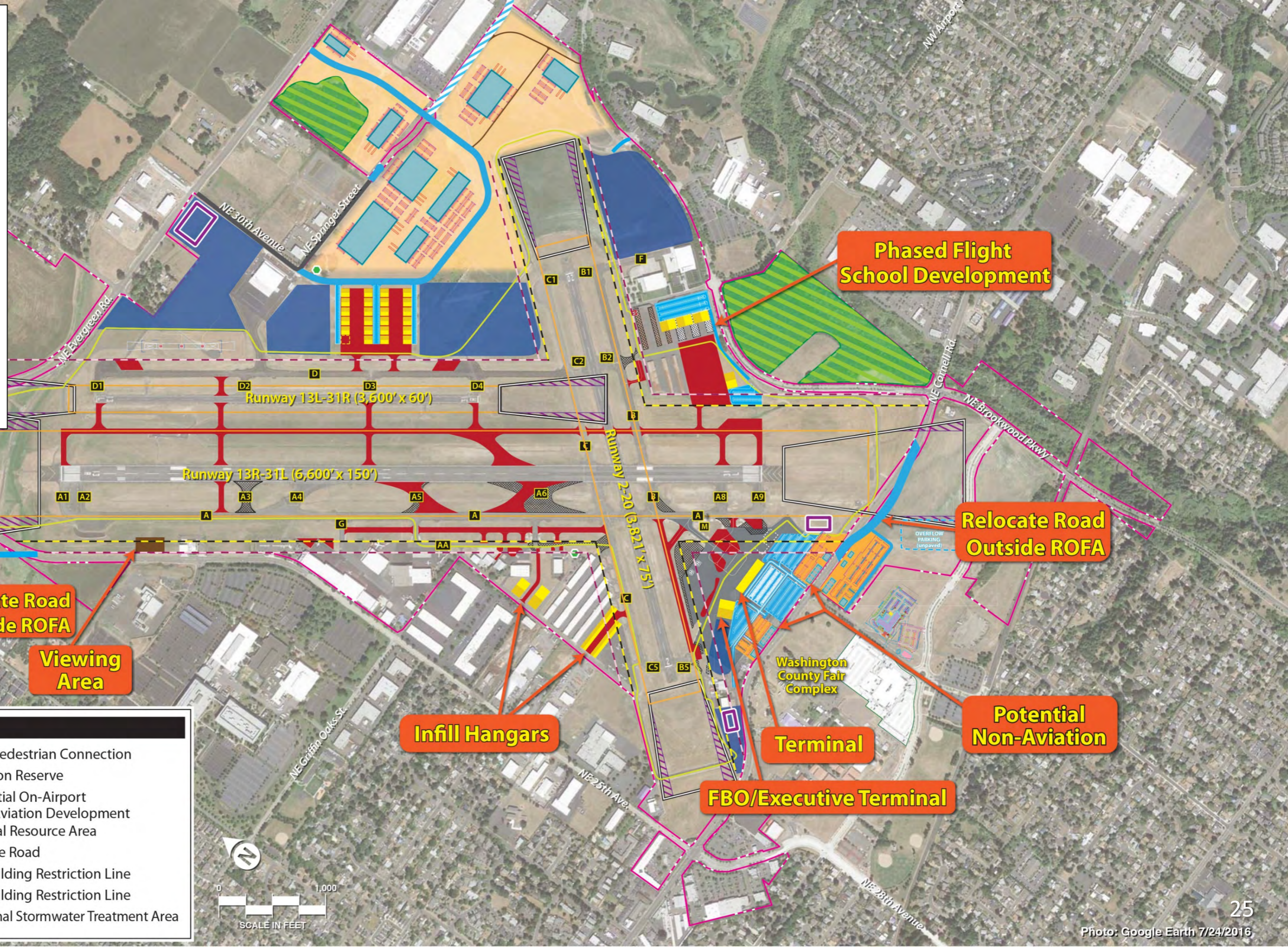
LEGEND

Airport Property Line	Bike/Pedestrian Connection
Runway Protection Zone (RPZ)	Aviation Reserve
Runway Object Free Area (ROFA)	Potential On-Airport Non-Aviation Development
Future Airfield Pavement	Natural Resource Area
Future Aviation Building	Service Road
Future Non-Aviation Building	20' Building Restriction Line
Future Road/Parking	35' Building Restriction Line
Pavement to be removed	Regional Stormwater Treatment Area
Controlled Activity Area of RPZ	

SCALE IN FEET: 0, 1,000

Airport Alternative 2

- Terminal moved north of existing terminal to maximize Cornell parcel.
- Potential non-aviation uses on north side of Cornell Rd.
- FBO/executive terminal in Cornell area.
- Flight schools relocated to east side.
- Eastern flight school location would trigger replacement hangars on north side.



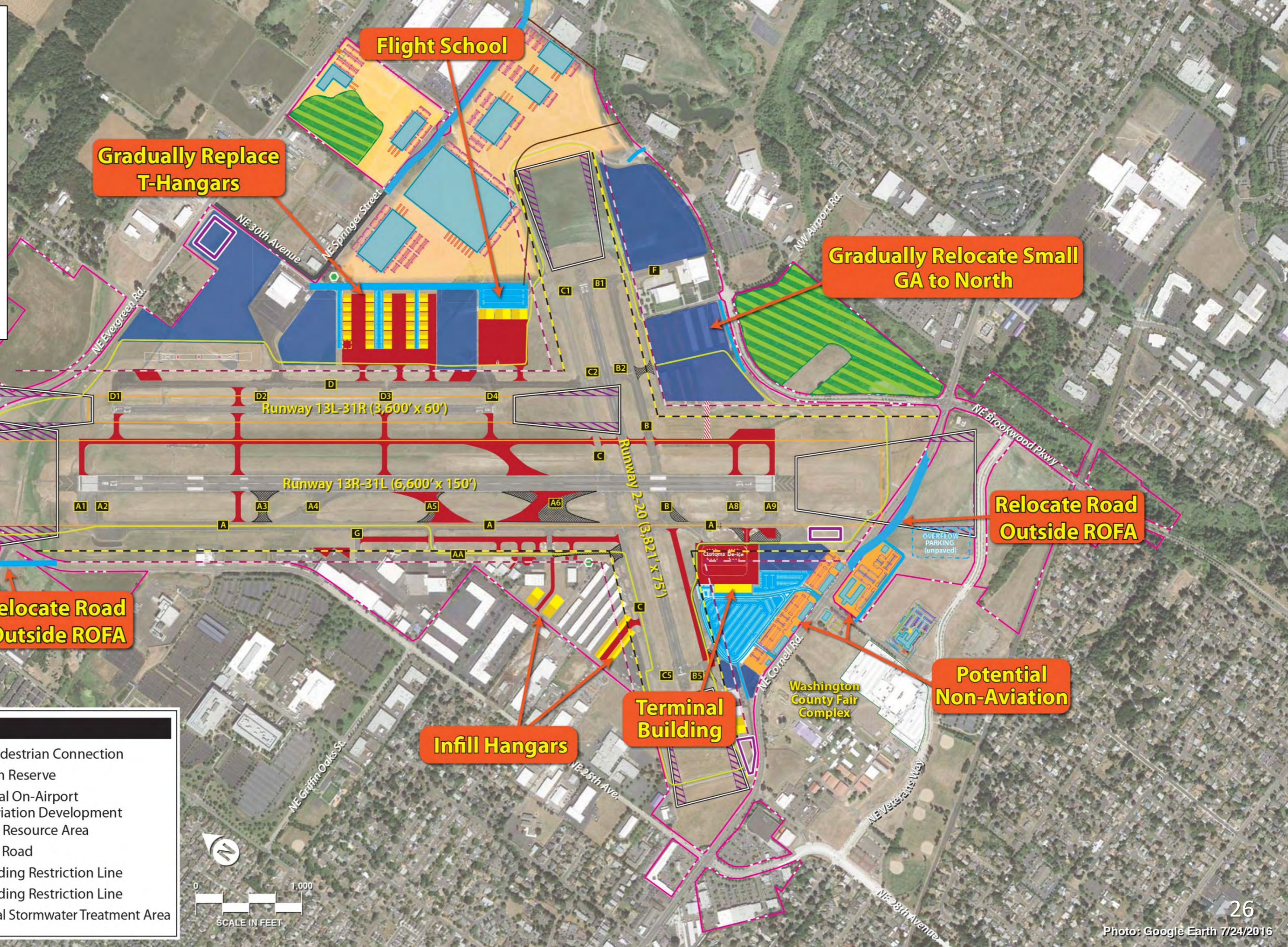
LEGEND

Airport Property Line	Bike/Pedestrian Connection
Runway Protection Zone (RPZ)	Aviation Reserve
Runway Object Free Area (ROFA)	Potential On-Airport Non-Aviation Development
Future Airfield Pavement	Natural Resource Area
Future Aviation Building	Service Road
Future Non-Aviation Building	20' Building Restriction Line
Future Road/Parking	35' Building Restriction Line
Pavement to be Removed	Regional Stormwater Treatment Area
Controlled Activity Area of RPZ	



Airport Alternative 3

- Terminal oriented parallel to primary runway.
- No other aviation uses planned in Cornell area.
- Flight schools relocated to central north quadrant location.
- East T-Hangars gradually replaced with north side box hangars through the long-term.



LEGEND	
	Airport Property Line
	Runway Protection Zone (RPZ)
	Runway Object Free Area (ROFA)
	Future Airfield Pavement
	Future Aviation Building
	Future Non-Aviation Building
	Future Road/Parking
	Pavement to be Removed
	Controlled Activity Area of RPZ
	Bike/Pedestrian Connection
	Aviation Reserve
	Potential On-Airport Non-Aviation Development
	Natural Resource Area
	Service Road
	20' Building Restriction Line
	35' Building Restriction Line
	Regional Stormwater Treatment Area



Noise Contours by Alternative

- AEDT Noise/Emissions model
- Day-Night average sound Level (DNL)
- 65 DNL is threshold of significance
- 55 DNL is for Oregon informational purpose
- Helicopter activity is noticeable
- Alternative metrics are being produced:
 - Time Above
 - Number Above



AEDT: Airport Environment Design Tool; noise / air quality modeling tool

DNL (Day-Night Level): A model of the *average* noise level; nighttime noise is weighted higher

2016 – Existing Condition

H2-Taxiway D:
20% of Helicopters

H1-Flight Schools:
80% of Helicopters

LEGEND

- Airport Property Line
- 55 Day-Night Noise Level (DNL)
- 65 DNL
- 70 DNL
- 75 DNL



This noise analysis demonstrates that the current noise exposure levels conform to land use compatibility guidelines established by the FAA, which states that residential land uses at or above the 65 DNL are non compatible land uses. In general, most land uses (including residential) are considered compatible below the 65 DNL contour. These guidelines are also accepted as the basis for land use planning in Oregon. However, Oregon Department of Environmental Quality goes one step further by requiring noise information out to the 55 DNL contour for local land use planning purposes.

2036 - Alternative 1

H2-Helipad:
80% of Helicopters

H1-FBO/Corporate:
20% of Helicopters

LEGEND

- Airport Property Line
- - - 55 Day-Night Noise Level (DNL)
- 65 DNL
- 70 DNL
- 75 DNL

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2036 - Alternative 2

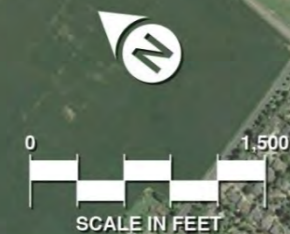
**H2-Helipad:
60% of Helicopters**

**H3-Flight Schools:
30% of Helicopters**

**H1-FBO/Corporate:
10% of Helicopters**

LEGEND

-  Airport Property Line
-  55 Day-Night Noise Level (DNL)
-  65 DNL
-  70 DNL
-  75 DNL








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H2-Helipad:
60% of Helicopters

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H1-FBO/Corporate:
10% of Helicopters

LEGEND

-  Airport Property Line
-  55 Day-Night Noise Level (DNL)
-  65 DNL
-  70 DNL
-  75 DNL

0 1,500
SCALE IN FEET

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HILLSBORO AIRPORT MASTER PLAN UPDATE

Washington County – Event Center Update

Rob Massar, Washington County









NORTHEAST AERIAL VIEW
3D PERSPECTIVE

WASHINGTON COUNTY EVENT CENTER
FEBRUARY 27, 2016 | LRS PROJECT 216163









MEETING ROOM ENTRY PORTAL
3D PERSPECTIVE

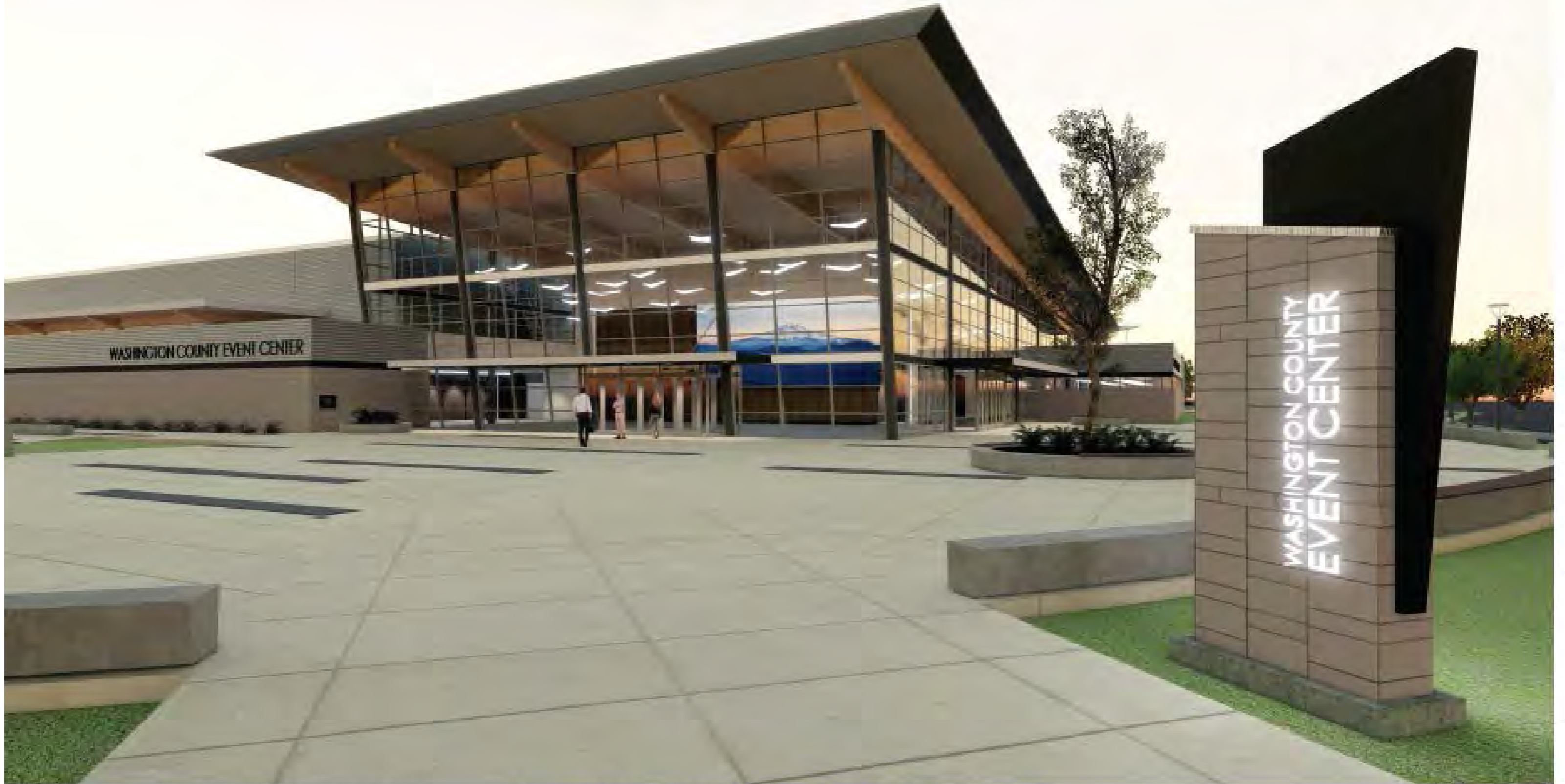
WASHINGTON COUNTY EVENT CENTER
FEBRUARY 27, 2018 | LRS PROJECT 216163





EXPO HALL – VIEW TO SOUTHWEST
3D PERSPECTIVE

WASHINGTON COUNTY EVENT CENTER
FEBRUARY 27, 2016 | LRS PROJECT 216163



HILLSBORO AIRPORT MASTER PLAN UPDATE

Market Study

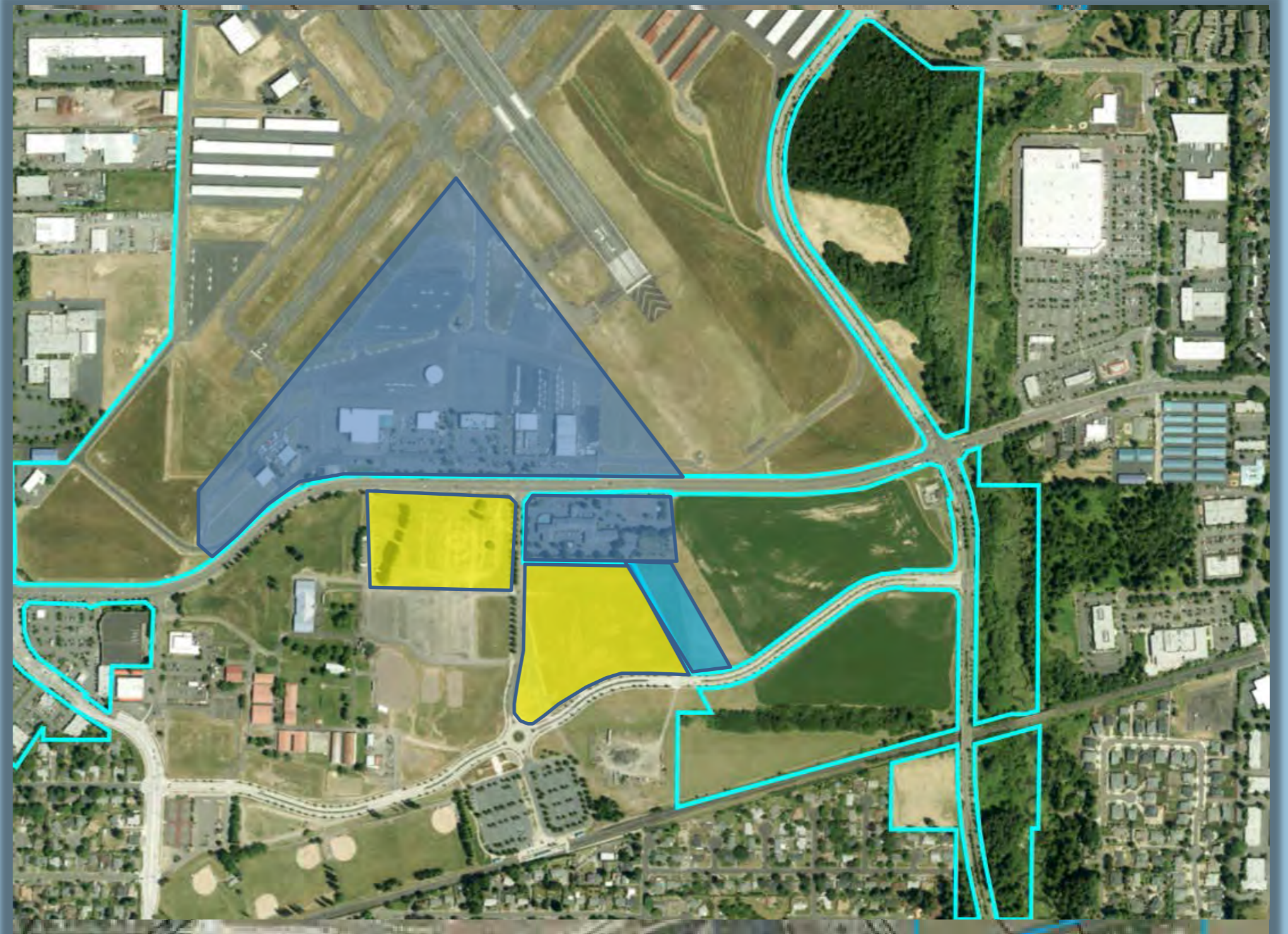
Steve Winkle, Port of Portland



Market Study – Cornell Subarea

Incorporated Insights

- Near 100% occupancy of commercial/retail in area.
- Commercial/retail needs to be supported by the community.
- Demand for 1-2 hotel/extended stay developments.
- Commercial/retail needs Cornell, lodging can be off Cornell.
- Potential for 1 sit-down restaurant south of Cornell.

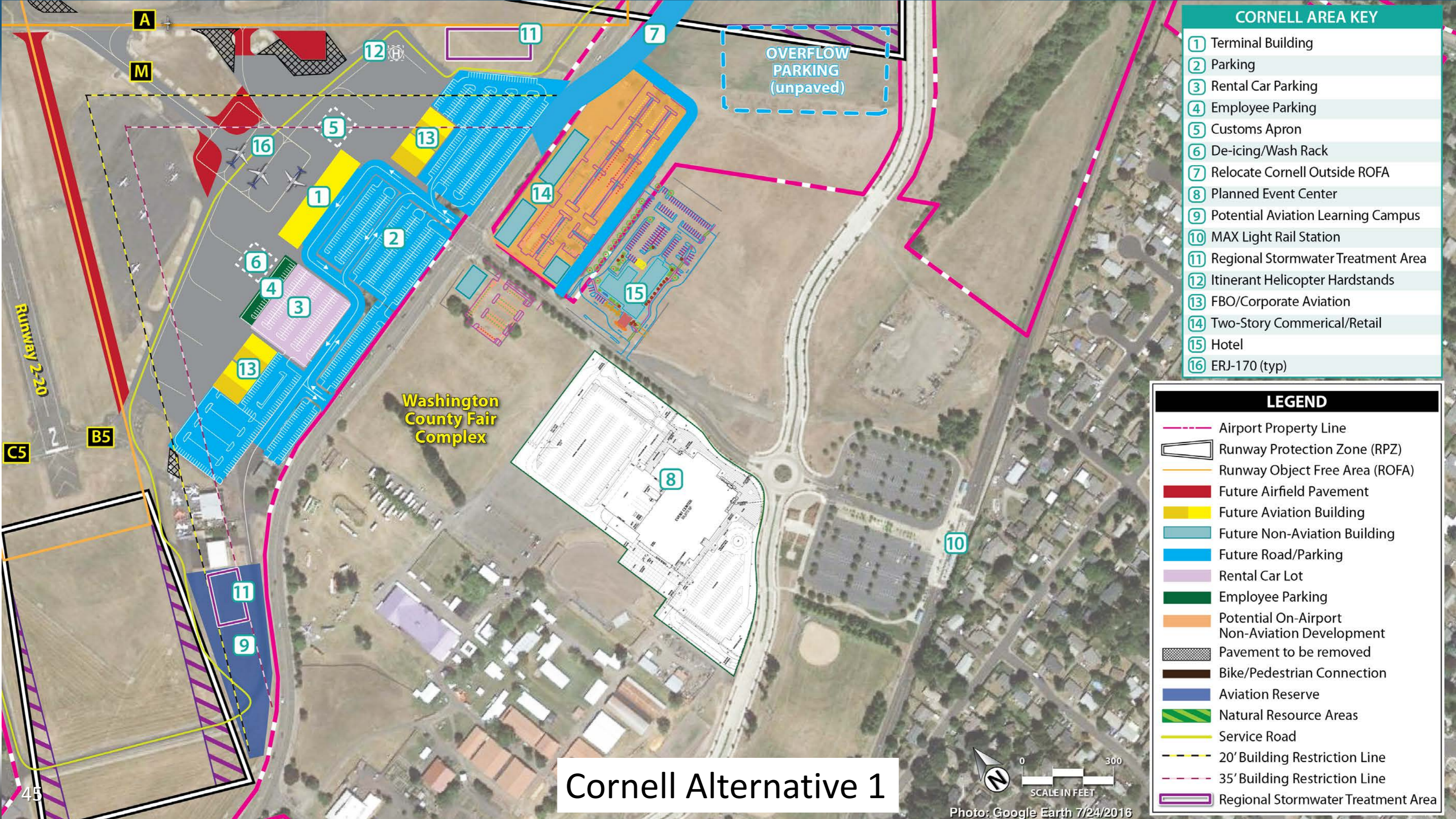


HILLSBORO AIRPORT MASTER PLAN UPDATE

Overview: Cornell Subarea

Patrick Taylor, Coffman Associates





CORNELL AREA KEY

- ① Terminal Building
- ② Parking
- ③ Rental Car Parking
- ④ Employee Parking
- ⑤ Customs Apron
- ⑥ De-icing/Wash Rack
- ⑦ Relocate Cornell Outside ROFA
- ⑧ Planned Event Center
- ⑨ Potential Aviation Learning Campus
- ⑩ MAX Light Rail Station
- ⑪ Regional Stormwater Treatment Area
- ⑫ Itinerant Helicopter Hardstands
- ⑬ FBO/Corporate Aviation
- ⑭ Two-Story Commerical/Retail
- ⑮ Hotel
- ⑯ ERJ-170 (typ)

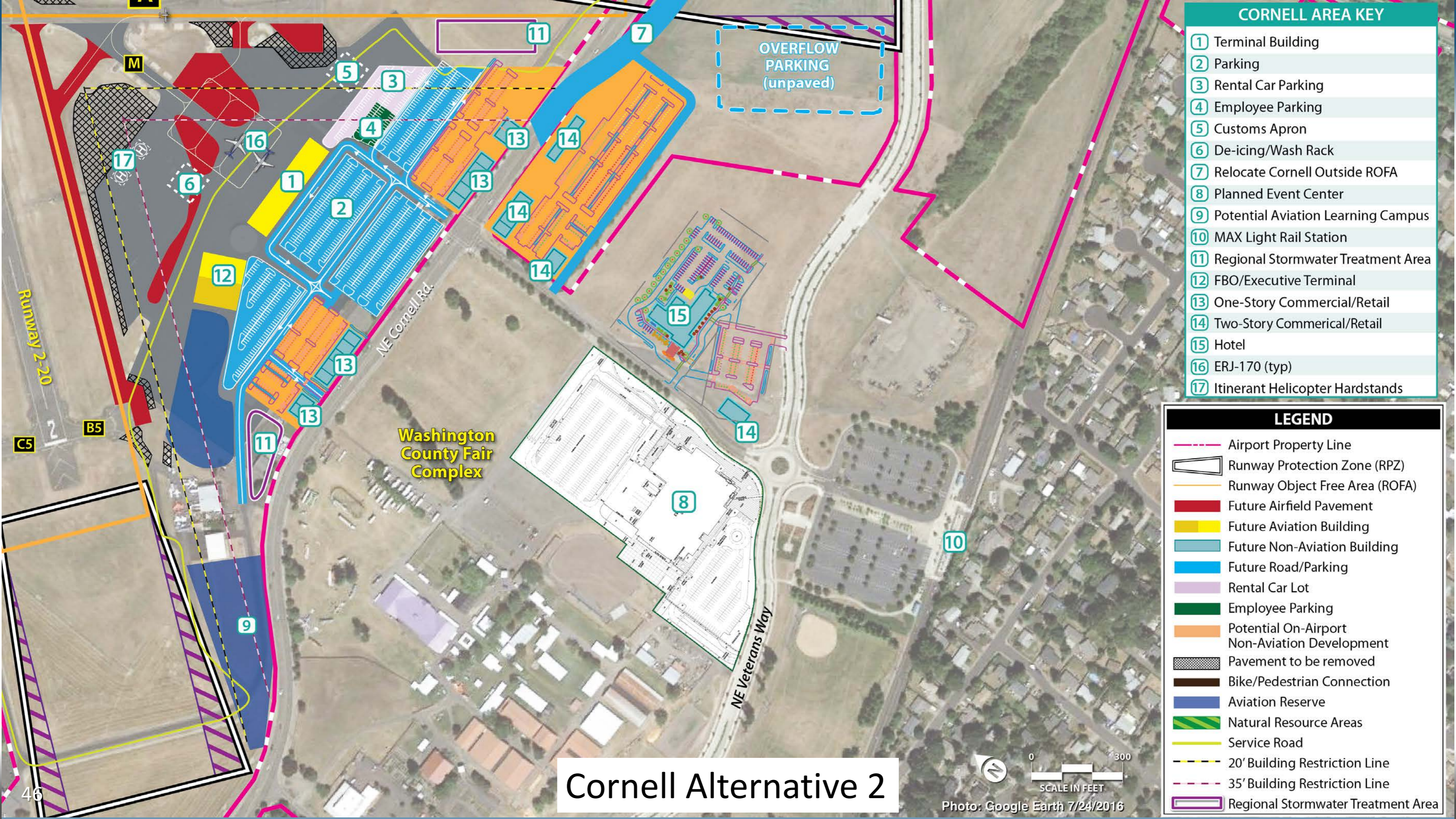
LEGEND

- Airport Property Line
- Runway Protection Zone (RPZ)
- Runway Object Free Area (ROFA)
- Future Airfield Pavement
- Future Aviation Building
- Future Non-Aviation Building
- Future Road/Parking
- Rental Car Lot
- Employee Parking
- Potential On-Airport Non-Aviation Development
- Pavement to be removed
- Bike/Pedestrian Connection
- Aviation Reserve
- Natural Resource Areas
- Service Road
- 20' Building Restriction Line
- 35' Building Restriction Line
- Regional Stormwater Treatment Area

Cornell Alternative 1



Photo: Google Earth 7/24/2016



CORNELL AREA KEY

- ① Terminal Building
- ② Parking
- ③ Rental Car Parking
- ④ Employee Parking
- ⑤ Customs Apron
- ⑥ De-icing/Wash Rack
- ⑦ Relocate Cornell Outside ROFA
- ⑧ Planned Event Center
- ⑨ Potential Aviation Learning Campus
- ⑩ MAX Light Rail Station
- ⑪ Regional Stormwater Treatment Area
- ⑫ FBO/Executive Terminal
- ⑬ One-Story Commercial/Retail
- ⑭ Two-Story Commercial/Retail
- ⑮ Hotel
- ⑯ ERJ-170 (typ)
- ⑰ Itinerant Helicopter Hardstands

LEGEND

- Airport Property Line
- ▭ Runway Protection Zone (RPZ)
- Runway Object Free Area (ROFA)
- Future Airfield Pavement
- Future Aviation Building
- Future Non-Aviation Building
- Future Road/Parking
- Rental Car Lot
- Employee Parking
- Potential On-Airport Non-Aviation Development
- ▨ Pavement to be removed
- ▬ Bike/Pedestrian Connection
- Aviation Reserve
- ▨ Natural Resource Areas
- Service Road
- 20' Building Restriction Line
- 35' Building Restriction Line
- ▭ Regional Stormwater Treatment Area

Cornell Alternative 2



Photo: Google Earth 7/24/2016

Runway 2-20

NE Cornell Rd.

Washington County Fair Complex

NE Veterans Way

OVERFLOW PARKING (unpaved)

46

M

C5

B5

9

16

6

12

1

2

13

11

13

3

4

11

7

13

14

13

14

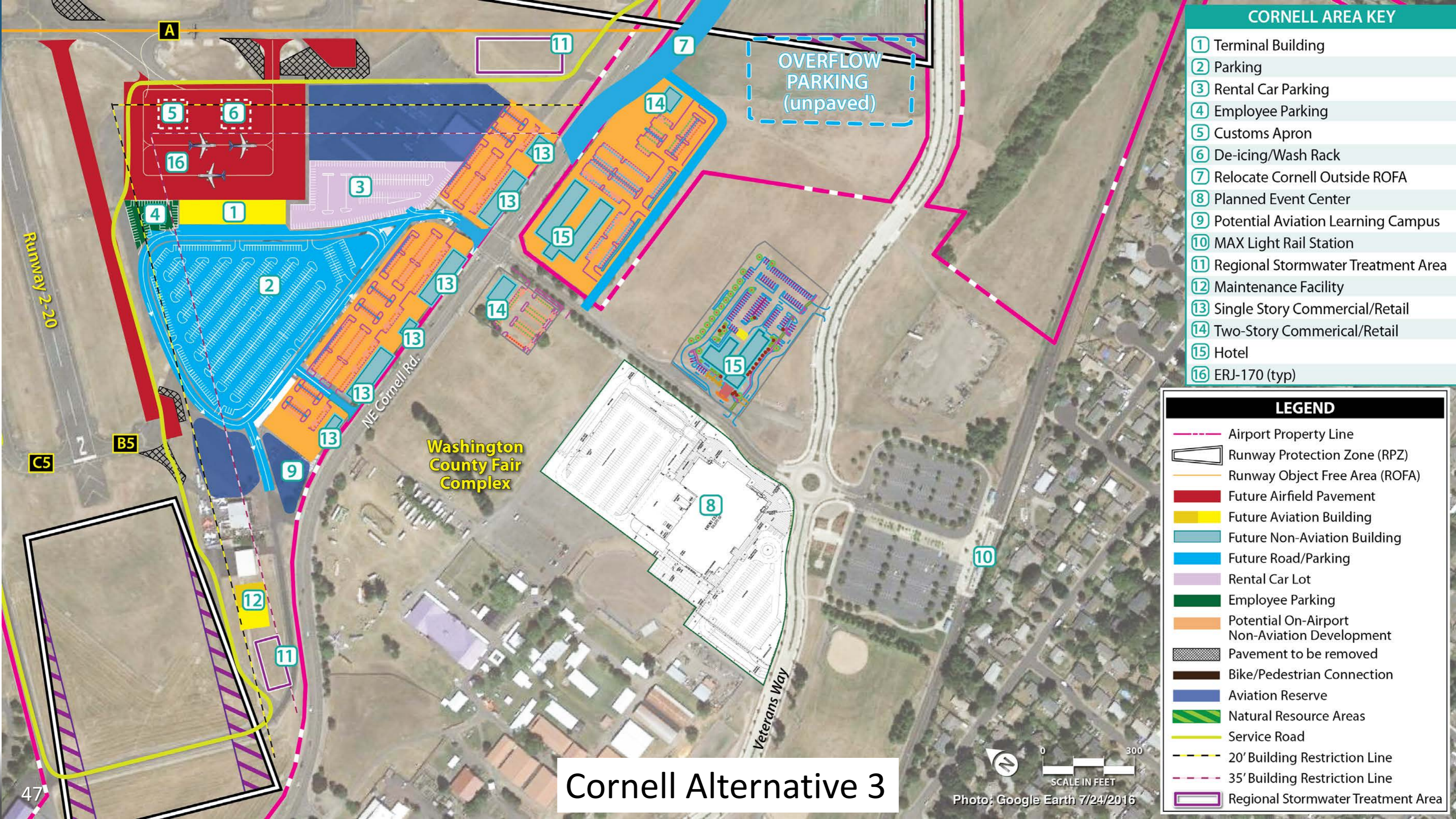
14

15

14

8

10



CORNELL AREA KEY

- ① Terminal Building
- ② Parking
- ③ Rental Car Parking
- ④ Employee Parking
- ⑤ Customs Apron
- ⑥ De-icing/Wash Rack
- ⑦ Relocate Cornell Outside ROFA
- ⑧ Planned Event Center
- ⑨ Potential Aviation Learning Campus
- ⑩ MAX Light Rail Station
- ⑪ Regional Stormwater Treatment Area
- ⑫ Maintenance Facility
- ⑬ Single Story Commercial/Retail
- ⑭ Two-Story Commercial/Retail
- ⑮ Hotel
- ⑯ ERJ-170 (typ)

LEGEND

- Airport Property Line
- ▭ Runway Protection Zone (RPZ)
- Runway Object Free Area (ROFA)
- Future Airfield Pavement
- Future Aviation Building
- Future Non-Aviation Building
- Future Road/Parking
- Rental Car Lot
- Employee Parking
- Potential On-Airport Non-Aviation Development
- ▨ Pavement to be removed
- Bike/Pedestrian Connection
- Aviation Reserve
- Natural Resource Areas
- Service Road
- - - 20' Building Restriction Line
- - - 35' Building Restriction Line
- ▭ Regional Stormwater Treatment Area

Cornell Alternative 3

Photo: Google Earth 7/24/2016
 SCALE IN FEET
 0 300

PAC Small Group Activity: Cornell Subarea





TIME 😊
FOR A
BREAK

HILLSBORO AIRPORT MASTER PLAN UPDATE

Public Comment Period

Anne Pressentin, EnviroIssues/Facilitator



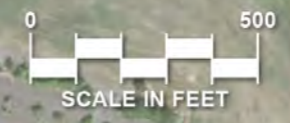
HILLSBORO AIRPORT MASTER PLAN UPDATE

Overview: Evergreen Subarea

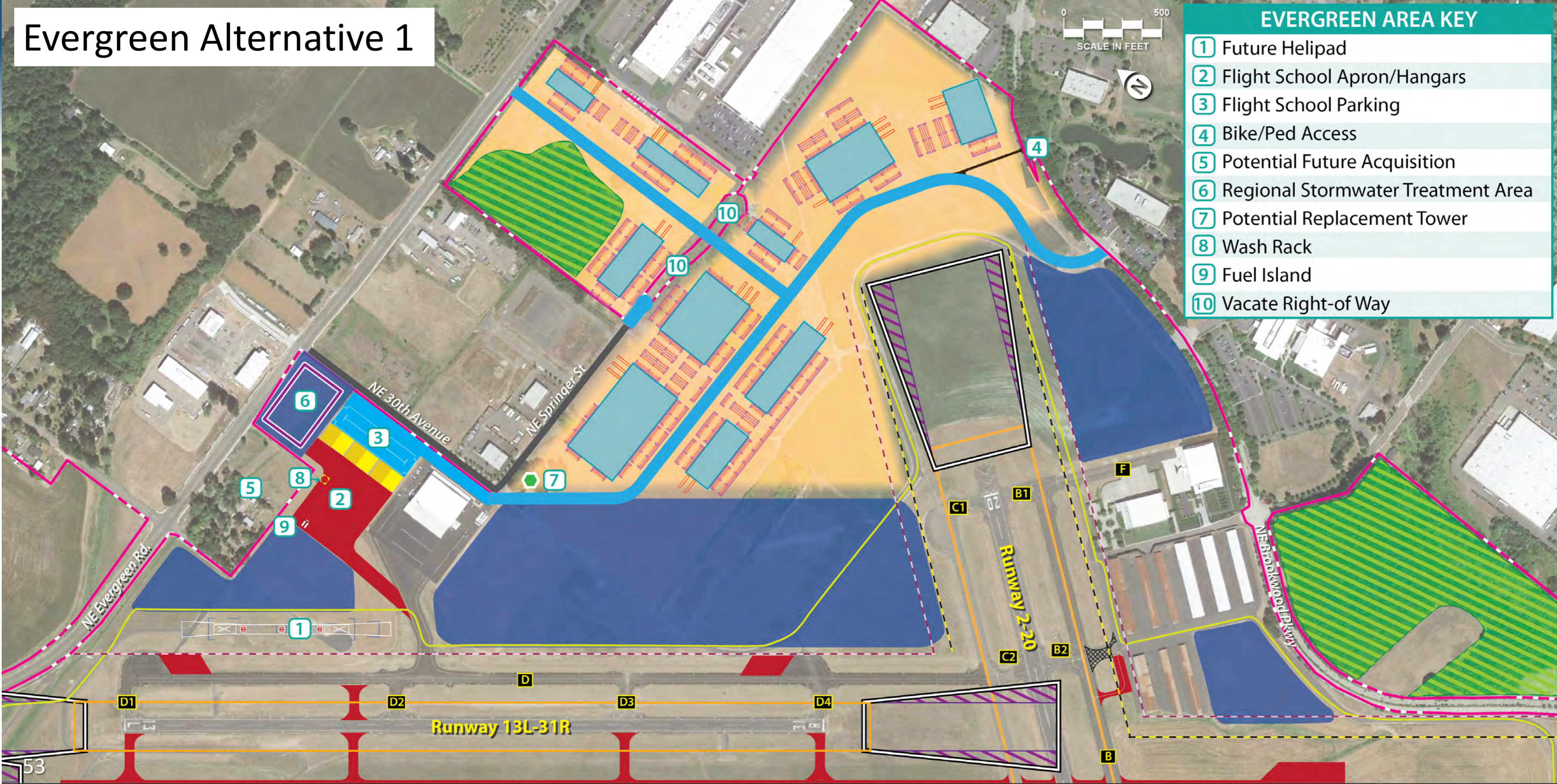
Patrick Taylor, Coffman Associates



Evergreen Alternative 1



- ### EVERGREEN AREA KEY
- 1 Future Helipad
 - 2 Flight School Apron/Hangars
 - 3 Flight School Parking
 - 4 Bike/Ped Access
 - 5 Potential Future Acquisition
 - 6 Regional Stormwater Treatment Area
 - 7 Potential Replacement Tower
 - 8 Wash Rack
 - 9 Fuel Island
 - 10 Vacate Right-of-Way



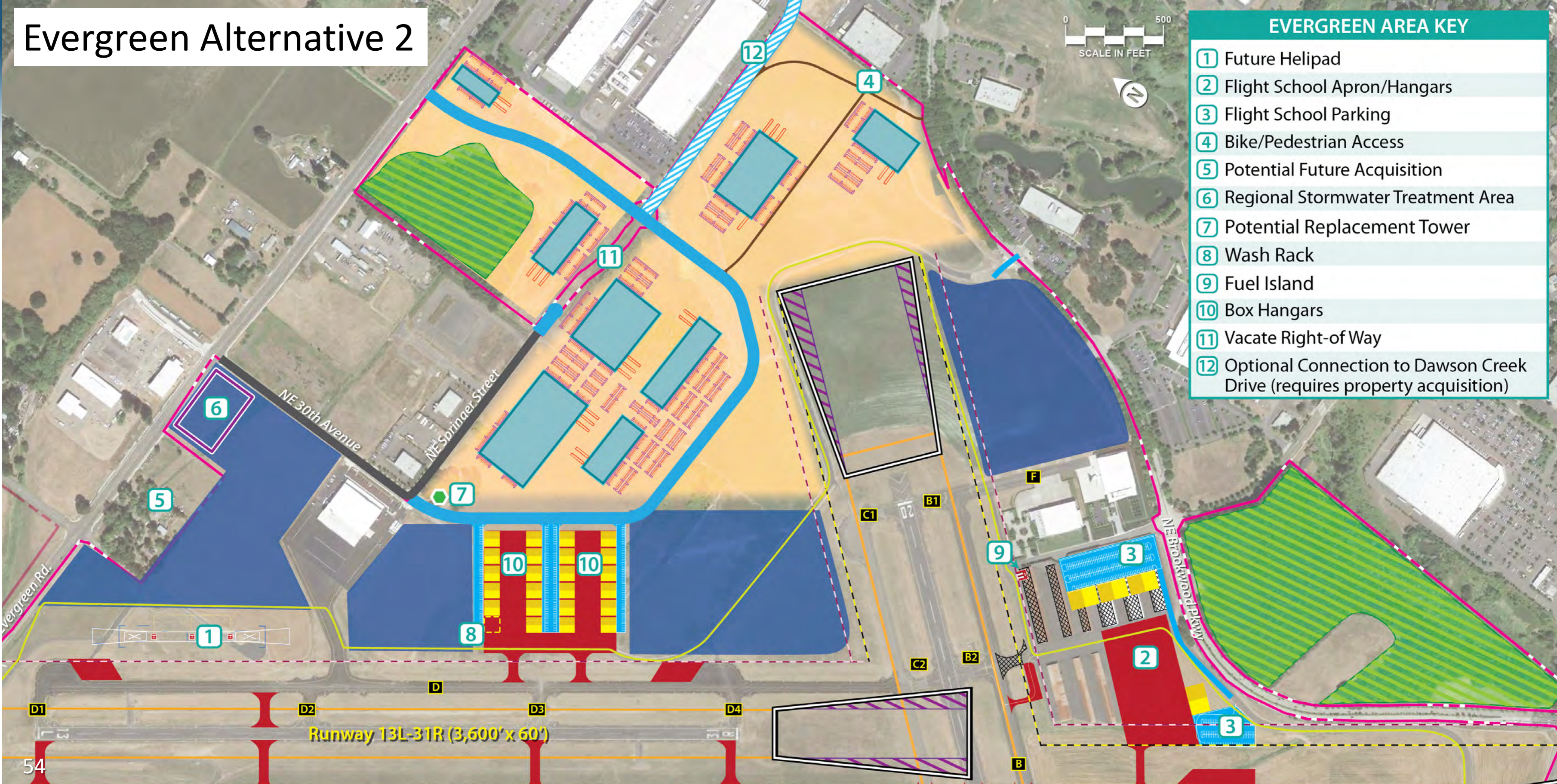
LEGEND

- | | | | | |
|--------------------------------|-------------------------------------|------------------------------------|----------------------------|---|
| Airport Property Line | 20' Building Restriction Line (BRL) | Future Airfield Pavement | Future Road/Parking | Aviation Reserve |
| Runway Protection Zone (RPZ) | 35' Building Restriction Line | Future Aviation Building | Service Road | Potential On-Airport Non-Aviation Development |
| Runway Object Free Area (ROFA) | RPZ Controlled Activity Area | Future Non-Aviation Building | Pavement to be removed | Natural Resource Area |
| | | Regional Stormwater Treatment Area | Bike/Pedestrian Connection | |

Evergreen Alternative 2



EVERGREEN AREA KEY	
①	Future Helipad
②	Flight School Apron/Hangars
③	Flight School Parking
④	Bike/Pedestrian Access
⑤	Potential Future Acquisition
⑥	Regional Stormwater Treatment Area
⑦	Potential Replacement Tower
⑧	Wash Rack
⑨	Fuel Island
⑩	Box Hangars
⑪	Vacate Right-of-Way
⑫	Optional Connection to Dawson Creek Drive (requires property acquisition)



LEGEND

Airport Property Line	20' Building Restriction Line (BRL)	Future Airfield Pavement	Future Road/Parking	Aviation Reserve
Runway Protection Zone (RPZ)	35' Building Restriction Line	Future Aviation Building	Service Road	Potential On-Airport Non-Aviation Development
Runway Object Free Area (ROFA)	RPZ Controlled Activity Area	Future Non-Aviation Building	Pavement to be removed	Natural Resource Area
		Regional Stormwater Treatment Area	Bike/Pedestrian Connection	

Evergreen Alternative 3

EVERGREEN AREA KEY	
1	Future Helipad
2	Flight School Apron/Hangars
3	Flight School Parking
4	Bike/Ped Path
5	Potential Future Acquisition
6	Regional Stormwater Treatment Area
7	Potential Replacement Tower
8	Wash Rack
9	Fuel Island
10	Connection to Dawson Creek Drive (requires property acquisition)
11	Gradually Replace T-Hangars with Box Hangars



LEGEND									
	Airport Property Line		20' Building Restriction Line (BRL)		Future Airfield Pavement		Future Road/Parking		Aviation Reserve
	Runway Protection Zone (RPZ)		35' Building Restriction Line		Future Aviation Building		Service Road		Potential On-Airport Non-Aviation Development
	Runway Object Free Area (ROFA)		RPZ Controlled Activity Area		Future Non-Aviation Building		Pavement to be removed		Natural Resource Area
					Regional Stormwater Treatment Area		Bike/Pedestrian Connection		

PAC Small Group Activity: Evergreen Subarea





HILLSBORO AIRPORT MASTER PLAN UPDATE

Close Out and Meeting Evaluation

Anne Pressentin, Envirolssues

