

RENTON MUNICIPAL AIRPORT MASTER PLAN PREFERRED AIRSIDE ALTERNATIVE



ISSUE:

After four years of study and analysis City Administration is recommending that the City Council approve Airside Alternative #5 – North Runway Safety Area Shift, Engineered Material Arresting System (EMAS) on both ends. This will establish the City's preferred airport airside layout that will be submitted to the Federal Aviation Administration (FAA) and incorporated into the pending environmental impact statement.

BACKGROUND:

In 2014 the Airport initiated an Airport Master Plan Update, a Federal Aviation Administration (FAA) mandated, systematic planning process that allows the Airport to define a framework for future development. The Master Plan study takes into account current conditions and capabilities and sets the stage for future planning and development based on key conditions. The last Airport Master Plan Study was conducted in 1997, with a supplemental update in 2007. The Master Plan is funded by the Federal Aviation Administration under a 5-year grant, due to expire on December 31, 2018.

With the April 18, 2018 approval of the Aviation Forecast, the FAA provided the Airport with a new Airport Reference Code (ARC). The ARC relates airport design criteria to the operational and physical characteristics of the most critical aircraft utilizing the airport (approach speed and wingspan). The ARC is determined by 500 or more annual operations of a specific aircraft type grouping. Under the previous ARC the Airport design standard was B-II, which typified aircraft such as the Cessna Citation CJ3 and the Embraer 120 Brasilia. With the designation of the new ARC the Airport design standard increased to D-III, which typifies aircraft such as the HS 121 Trident and the Boeing 737. The current annual operation count of the D-III group of aircraft at the Airport is over 700 operations, which includes business aircraft and Boeing production aircraft. To comply with federal obligations the Airport must now develop to the D-III standard to accommodate the change in ARC and to meet the safety standard.

Staff and the City's consultant Mead and Hunt, had previously drafted a range of seven possible alternatives for consideration that comply with the new federal standard. Airport staff presented these alternatives to the Renton Airport Advisory Committee (RAAC) and requested comments and feedback, during multiple meetings in 2016 and 2017. In December 2017 Airport staff opened a 45-day comment period to solicit feedback from the Airport Advisory Committee on the seven alternatives.

Using the comments and feedback provided by the Airport Advisory Committee, Airport staff and Mead and Hunt narrowed the possible range of alternatives. This was done to help identify a preferred alternative for approval by the FAA. Of the range of alternatives, three were immediately removed from consideration because they did not incorporate the Engineered Material Arresting System (EMAS). Those plans removed were alternatives 1A, 1B and 2. The impacts of these alternatives to Lake Washington and the portion of the City to the south of the Airport would have been unreasonably substantial. Airport staff also removed from consideration Alternative #3 – Declared Distances with a North Shift due to the substantial impacts to Lake Washington and the lack of additional benefits associated with this alternative.

The three remaining alternatives for consideration are:

- Alternative #4 – EMAS on both ends with South Runway Safety Area Shift.
- Alternative #5 – EMAS on both ends with North Runway Safety Area Shift.
- Alternative #6 – Declared Distances with EMAS North and Traditional Runway Safety Area South. •

In May 2018 Airport staff explored the benefits and drawbacks of the remaining alternatives and crafted an initial recommendation to the City Administration. The table on the following page outlines a range of the issues the Airport explored based on empirical and theoretical data when providing the initial recommendation.

Master Plan Alternative Benefits and Drawbacks			
	Alternative #4	Alternative #5	Alternative #6
Meets Safety Compliance Standards	✓	✓	✓
Development Costs	✗	✓	✗
Addresses current operations/activity	✓	±	✓
Environmental/Ecological Impacts	✗	±	✗
Addresses forecasted operations/activity	✓	✗	✓
Sustainability - Financial, Operational	✓	±	✓
Increased airside flexibility/aircraft parking	✓	✗	✓
Increased landside flexibility/vehicle parking	✓	±	✓
Economic development/business growth	✓	✗	✓
Potential for noise mitigation through land use	±	✗	±
Avoids tenant displacement	✓	✗	✓
Increased aviation system efficiency	✓	✗	✓
Impacts to Renton High School (ball fields)	✗	✗	✗
Impacts to off-airport neighborhood/business	✗	±	✗
Impacts to Airport Way	✗	✓	✗
Impacts to Lake Washington	✓	✗	✗
Fit with other city-wide initiatives	✗	✓	✗

Key:

✓ - Benefits

✗ - Drawbacks

± - Benefits and Drawbacks

In June 2018 City Administration asked Airport staff to provide additional information on the number of properties impacted by each of the alternatives south of the Airport, as

well as the cost of each alternative. The Airport briefed the City Administration with the following data (estimates only):

Property Acquisition (Industrial and Residential)	
Alternative	Number of Properties Impacted
Alternative #4 – EMAS with South Shift	95 properties 22 easements
Alternative #5 – EMAS with North Shift	36 properties 5 easements
Alternative #6 – Declared Distances with EMAS North and Traditional Runway Safety Area South	67 properties 7 easements

The Airport staff briefed City Administration with cost estimates for each alternative as follows:

Alternative Plan and Estimated Cost	
Alternative #4 – EMAS with South Shift	\$113,817,870.00
Alternative #5 – EMAS with North Shift	\$87,011,185.00
Alternative #6 – Declared Distances with EMAS North and Traditional Runway Safety Area South	\$108,059,055.00

On October 16, 2018 Airport staff and Mead and Hunt held a special meeting of the Renton Airport Advisory Committee (RAAC) at the membership's request. The RAAC is an advisory board made up of nine appointed representatives of eight Renton neighborhoods and the City of Mercer Island, seven airport representatives and two City government representatives. The special meeting provided another briefing and was to secure a vote of the RAAC to recommend to the City the selection of a preferred airside layout alternative. The attendance by the membership was not enough to provide a quorum for an official vote, but nevertheless resulted in five votes for Alternative #4, zero votes for Alternative #5 and two votes for Alternative #6.

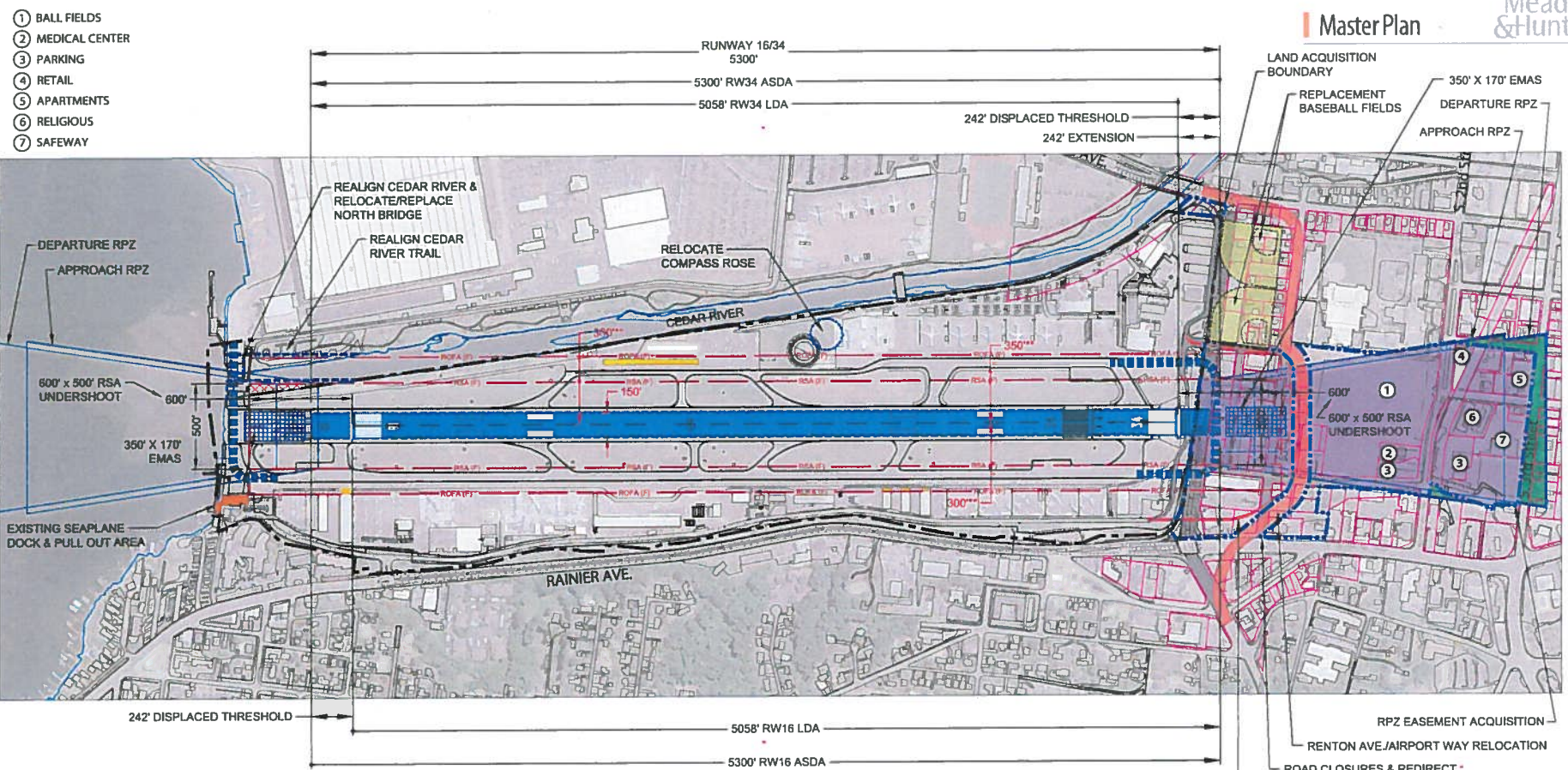
On October 17, 2018 the Airport held an Open House at the Kennydale Memorial Hall and invited the public to comment on the alternatives under consideration. Upon completion of the outreach process, the City Administration analyzed the data provided by the Airport, as well as assessed the preferences of the members present at the October 16 meeting of the RAAC and comments from the public open house. After analyzing these factors and incorporating the assessed property acquisition, community, traffic and citywide initiative impacts the City formulated a recommendation to the City Council to approve the selection of Alternative #5, EMAS on both ends with North Runway Safety Area Shift as the City's preferred alternative.

BASIS OF THE RECOMMENDATION:

All three alternatives include safety improvements required to support the increased design standards associated with the D-III designation. It was recognized that a balance needed to be struck between benefits to the Airport and impacts on the surrounding community. Cost of the improvements also needed to be taken into account. While not providing as many benefits to Airport operations as alternatives #4 and #6, Alternative #5 will require reduced encroachment of the Airport into the community to the south, require fewer property acquisitions, provide the largest area adjacent to Renton High School that could be used for the necessary relocation of the ball fields, eliminate the need to relocate Airport Way and be more consistent with planning efforts in the downtown city core. Alternative #5 is also significantly less expensive than the other alternatives. Administration believes that Alternative #5 best serves the diverse and often conflicting interests of the Airport and the neighboring communities.

NEXT STEPS:

After the Renton City Council selects a preferred airside layout alternative, the FAA will review this preferred alternative. The review by the city, RAAC and other parties of interest of the landside alternatives (layout and land use of Airport property outside of the runway object free area) will begin in the first quarter of 2019. Other elements of the Airport Master Plan including environmental review, financial implementation analysis, Airport plans and the Draft Master Plan Report will be evaluated and finalized. Upon City Council approval, the Airport Layout Plan including the airside and landside plans will be submitted to the FAA for review and approval. A multi-year environmental impact statement process will be initiated. The overall Airport Master Planning process is lengthy. At this point, the City has been working on this for four years. The steps listed above will be conducted over the next several years. It is predicted that the ongoing public process and environmental review will bring about revisions to the preferred airside layout alternative, and construction of elements of the plan will not begin for a number of years.



Notes:
 * Airport Way and portions of Tillicum St., Tobin St. & Lake Ave. to be closed. Airport Way traffic between Renton Ave. and Logan Ave. would be redirected to 2nd & 3rd streets.
 ** RW/TW separation to be addressed with operational mitigation.

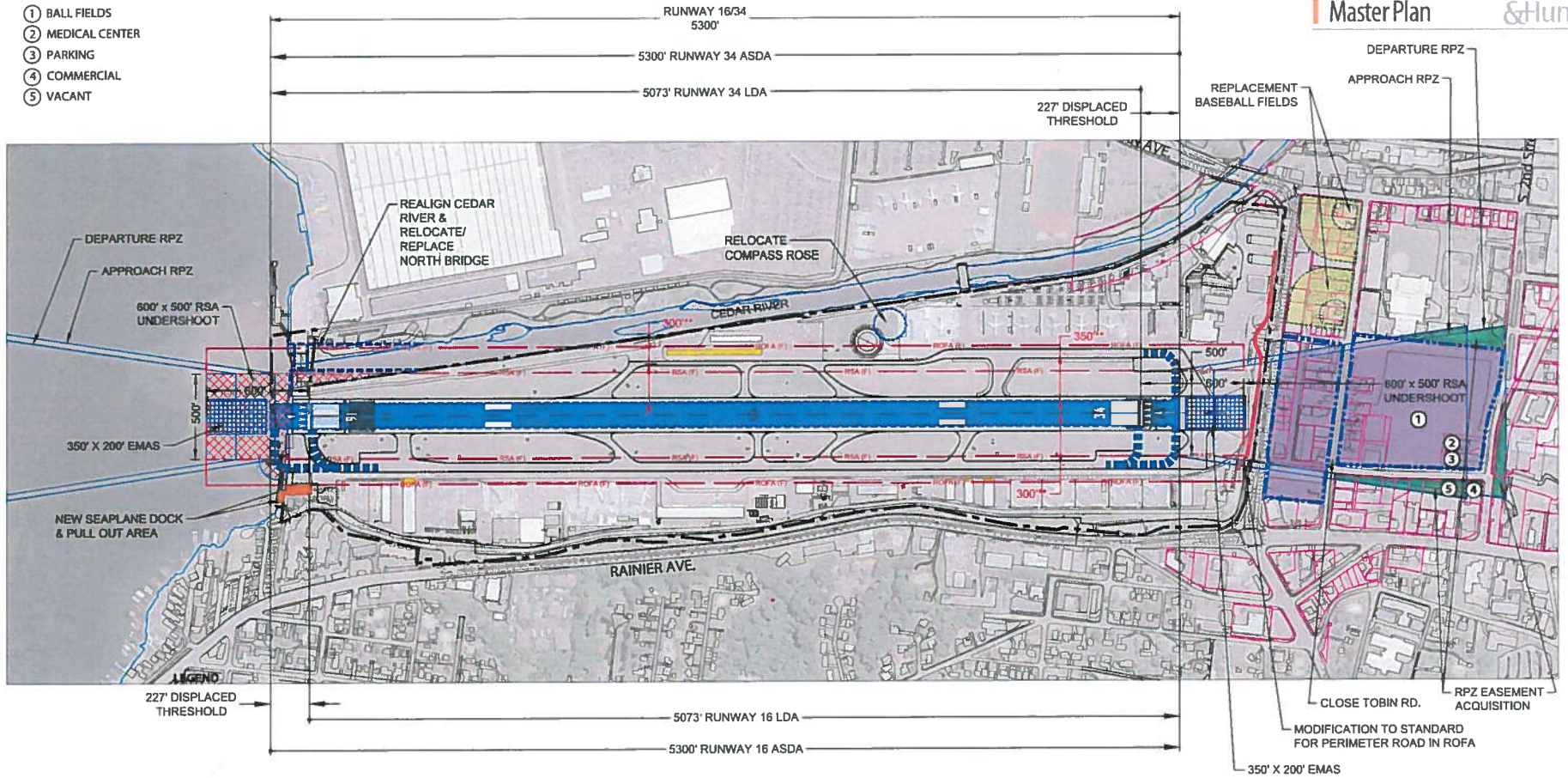
Disclaimer:
 This illustration is for study purposes only, based on national FAA standards, and is not necessarily intended for implementation. For further information please see Chapter D of the Airport Master Plan and the FAQ document on the Airport's website.

LEGEND

- EXISTING PROPERTY LINE
- FUTURE PROPERTY LINE
- ROAD CLOSURE
- FUTURE ROADWAY ALIGNMENT
- FUTURE RUNWAY SAFETY AREA (RSA)
- FUTURE RUNWAY OBJECT FREE AREA (ROFA)
- FUTURE TAXIWAY OBJECT FREE AREA (TOFA)
- FUTURE TAXIWAY
- FUTURE RUNWAY SAFETY AREA EXPANSION
- FUTURE PAVEMENT
- FUTURE SEAPLANE DOCK
- PROPOSED BUILDING/FACILITY DEMOLITION
- RPZ FEE SIMPLE ACQUISITION FOR APPROACH PROTECTION PURPOSES
- OPTION 1 - FUTURE RPZ EASEMENT ACQUISITION
- FUTURE ENGINEERED MATERIAL ARRESTING SYSTEM (EMAS)

Figure A - Preferred Alternative #4 - Declared Distances & EMAS w/South Shift

- ① BALL FIELDS
- ② MEDICAL CENTER
- ③ PARKING
- ④ COMMERCIAL
- ⑤ VACANT



Notes:
 ** RW/TW separation to be addressed with operational mitigation.

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LEGEND

- EXISTING PROPERTY LINE
- ROAD CLOSURE
- FUTURE ROADWAY ALIGNMENT
- RSA (F) FUTURE RUNWAY SAFETY AREA (RSA)
- ROFA (F) FUTURE RUNWAY OBJECT FREE AREA (ROFA)
- TOFA (F) FUTURE TAXIWAY OBJECT FREE AREA (TOFA)
- FUTURE TAXIWAY
- Future Runway Safety Area Expansion
- Future Pavement
- RPZ Controlled Activity Area (Easement)
- Future Seaplane Dock
- Proposed Building/Facility Demolition
- RPZ Fee Simple Acquisition for Approach Protection Purposes
- Future RPZ Easement
- Future Engineered Material Arresting System (EMAS)

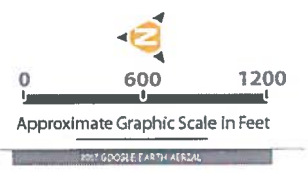
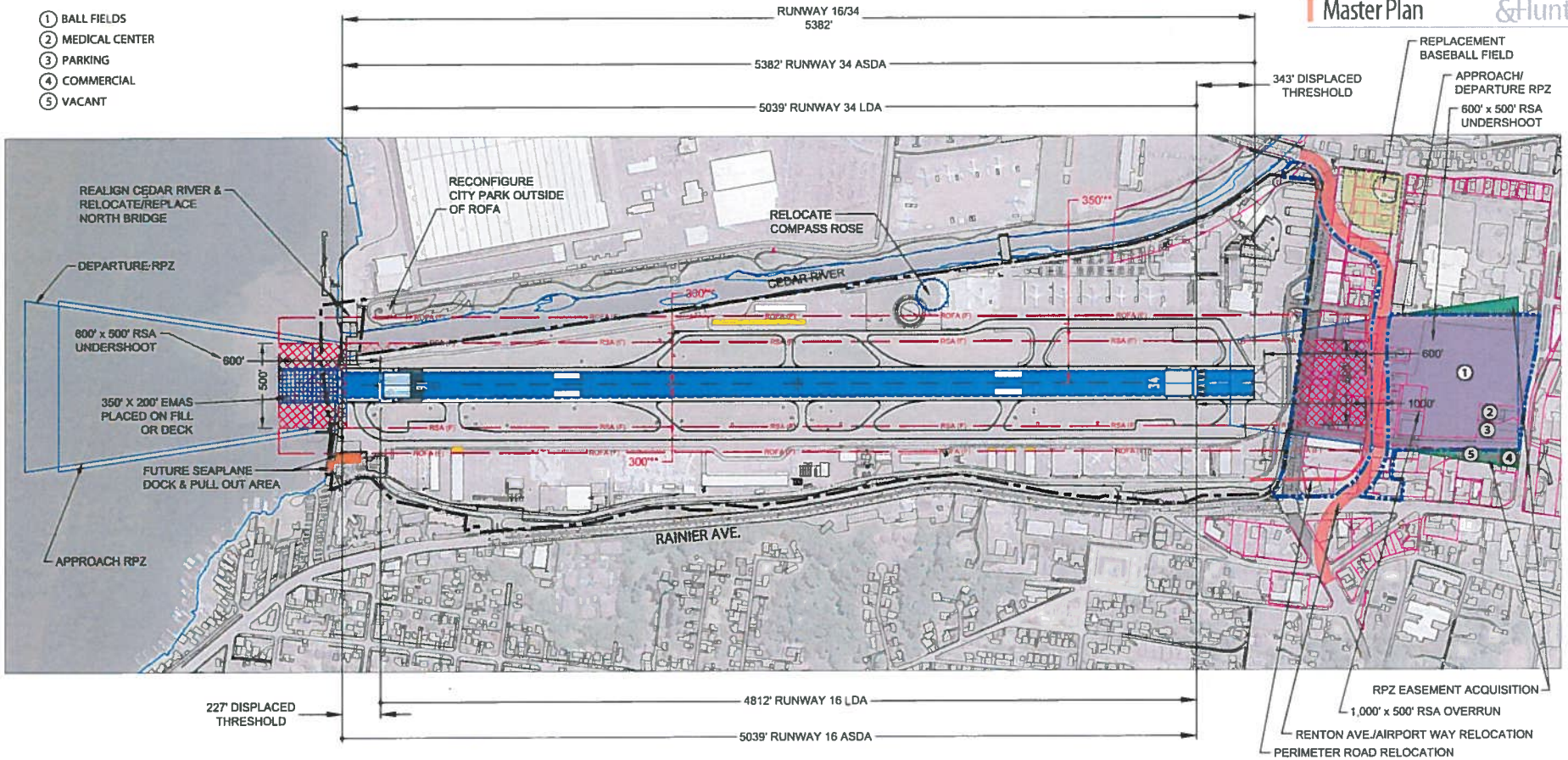


FIGURE C Preferred Alternative #5 - Declared Distances and EMAS w/ North Shift

- ① BALL FIELDS
- ② MEDICAL CENTER
- ③ PARKING
- ④ COMMERCIAL
- ⑤ VACANT



Notes:

- Existing land uses in controlled activity area to remain.
- RW/TW separation to be addressed with operational mitigation.

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LEGEND

- — — EXISTING PROPERTY LINE
- — — FUTURE FUTURE PROPERTY LINE
- — — ROAD CLOSURE
- — — FUTURE ROADWAY ALIGNMENT
- — — FUTURE RUNWAY SAFETY AREA (RSA)
- — — FUTURE RUNWAY OBJECT FREE AREA (ROFA)
- — — FUTURE RSA EXPANSION
- — — FUTURE SEAPLANE DOCK
- — — RPZ CONTROLLED ACTIVITY AREA (EASEMENT)*
- — — PROPOSED BUILDING/FACILITY DEMOLITION
- — — RPZ FEE SIMPLE ACQUISITION FOR APPROACH PROTECTION PURPOSES
- — — FUTURE RPZ EASEMENT
- — — FUTURE ENGINEERED MATERIAL ARRESTING SYSTEM (EMAS)



0 600 1200

Approximate Graphic Scale In Feet

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Renton Municipal Airport/
Clayton Scott Field

FIGURE B Preferred Alternative 6 - Declared Distances with EMAS North and Traditional Graded RSA South