

Environmental Assessment for the Proposed HIO 13R-31L RSA Improvements



Draft EA

Hillsboro Airport (HIO), Hillsboro, Oregon | April 2021

Appendix A: Figures

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Figure 1. Project Vicinity Map



Figure 2. HIO Property Boundaries and RSA

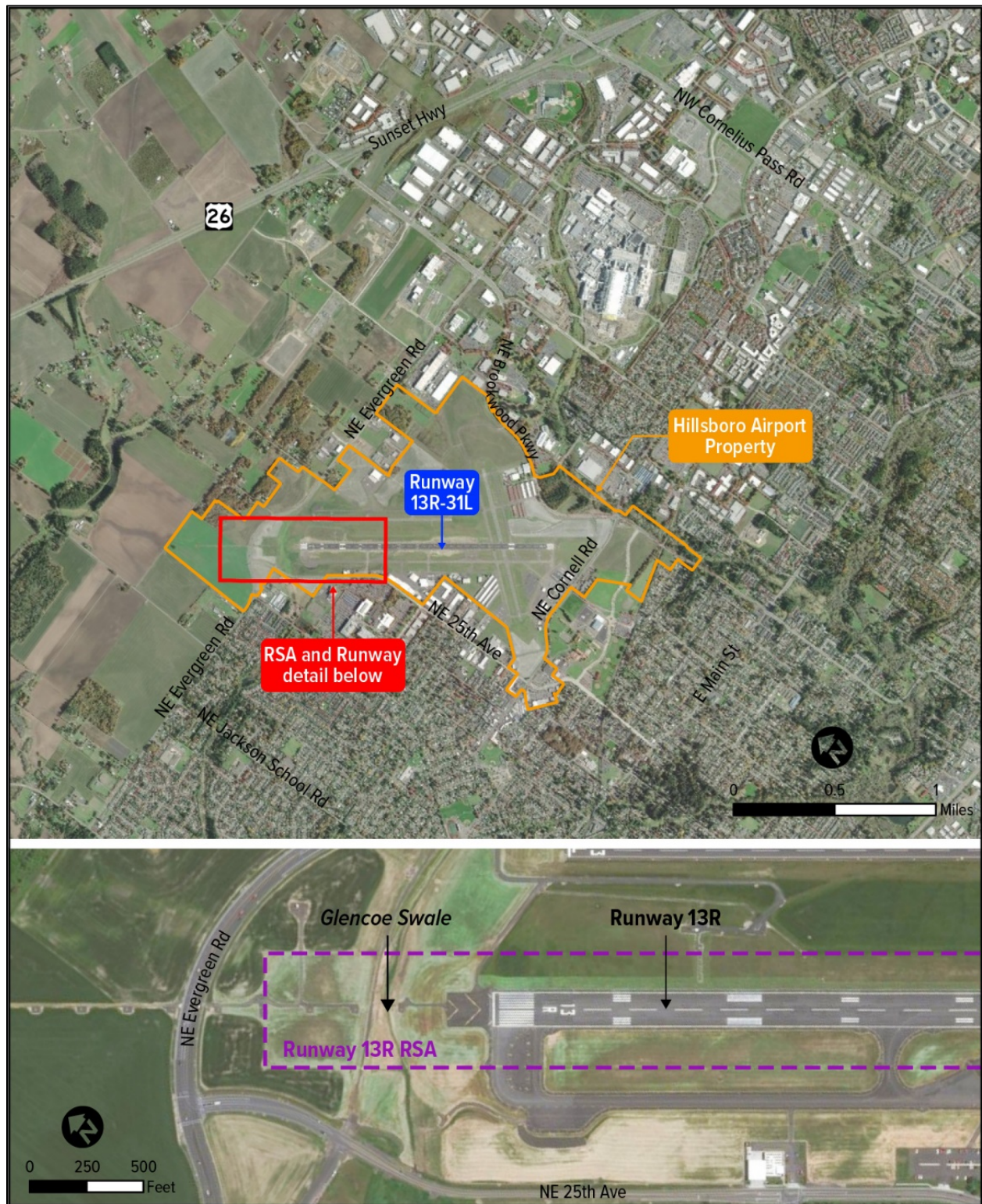
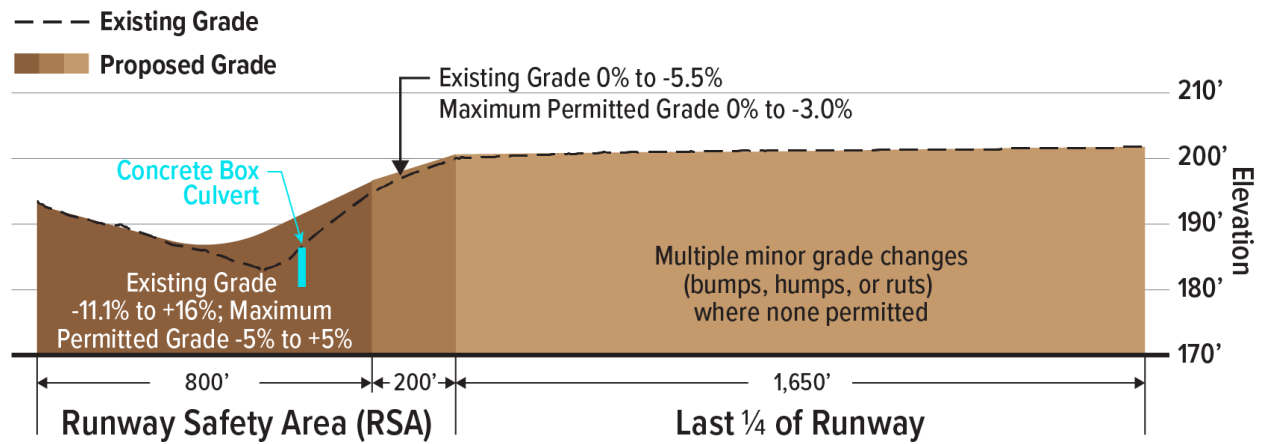


Figure 3. Proposed Action: Cross-Section of Existing Grade and Proposed Gradient Corrections



Sources: Maximums permitted from FAA 2014; existing grades from January 2019 survey conducted by the Port
 Note: Illustration not to scale

Figure 4. Runway 13R-31L RSA Dimensions

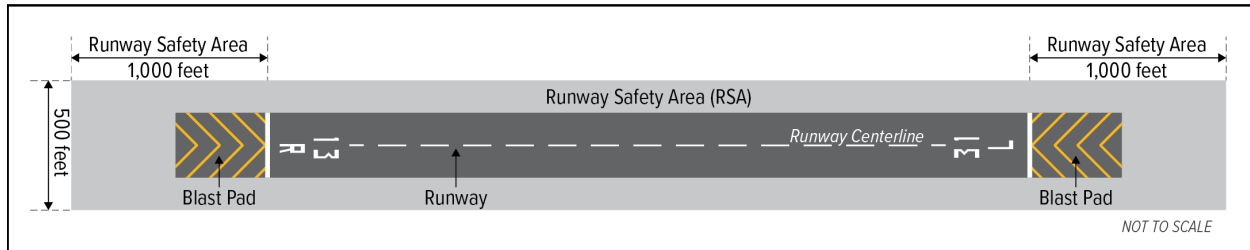


Figure 5. Alternative 1: Reduce Runway 13R-31L Length



Figure 6. Alternative 2: Runway 13R Declared Distances



Figure 7. Alternative 3: Shift Runway 13R-31L South

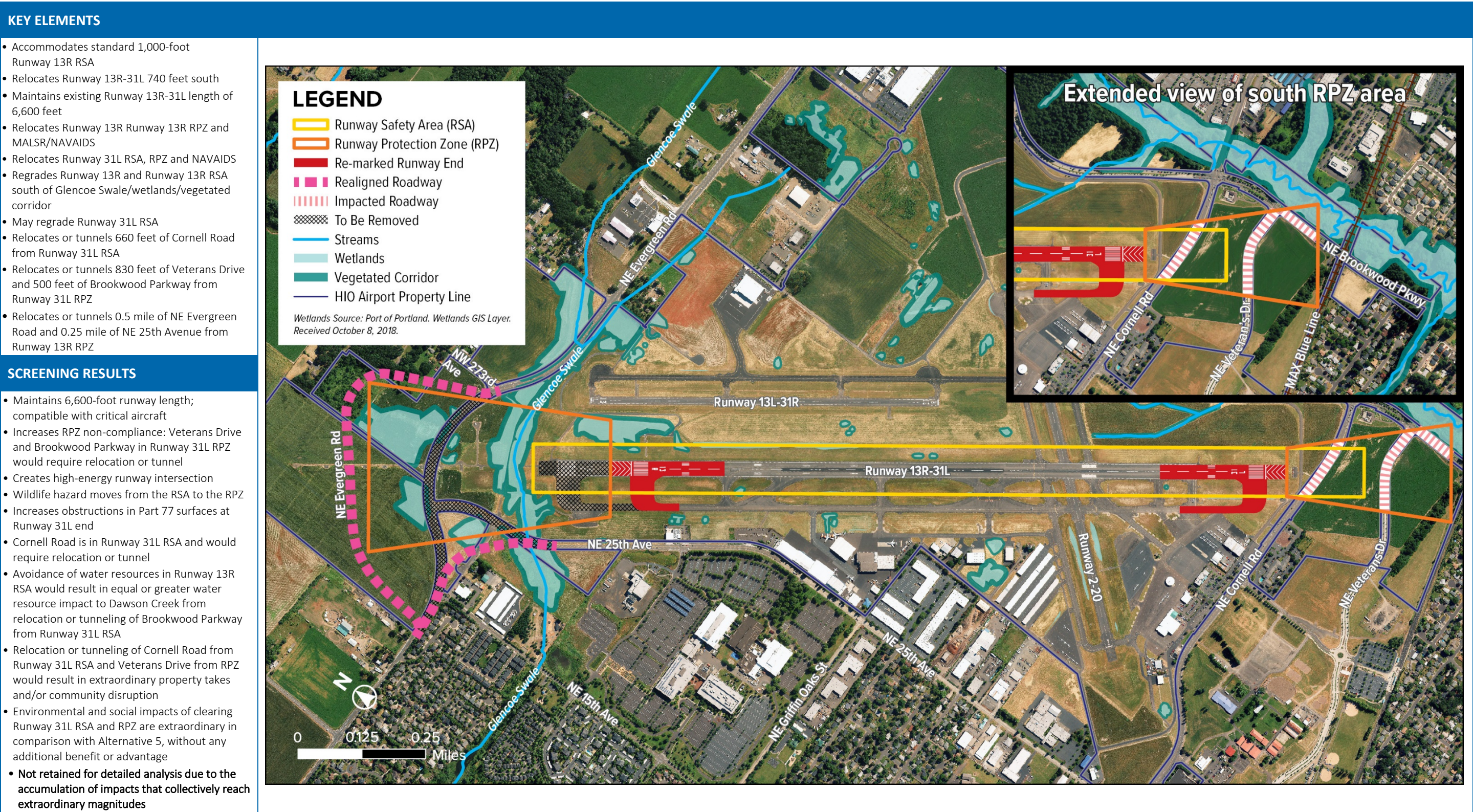


Figure 8. Alternative 4: Install Engineered Material Arresting System (EMAS)

KEY ELEMENTS

- Meets safety area requirement for Runway 13R RSA by installing EMAS
- Relocates Runway 13R threshold 500 feet south
- Reduces Runway 13R-31L length by 500 feet to 6,100 feet
- Relocates Runway 13R RPZ and MALSR/NAVAIDS
- Relocates or tunnels 0.5 mile of NE Evergreen Road and 0.25 mile of NE 25th Avenue from Runway 13R RPZ
- Regrades Runway 13R

SCREENING RESULTS

- Reduced runway length to 6,100 feet is not compatible with critical aircraft
- **Not retained for detailed analysis due to incompatibility with critical aircraft**

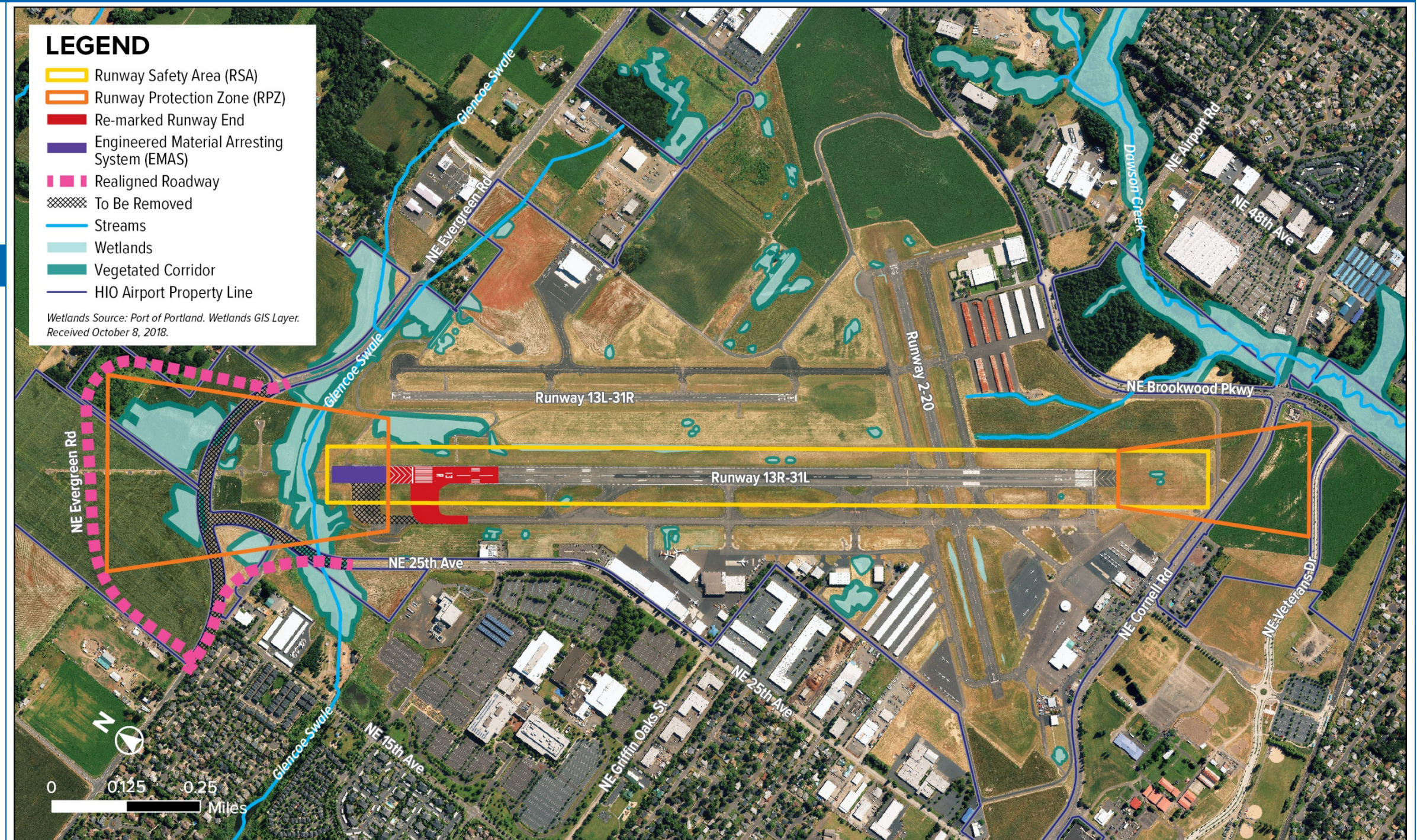


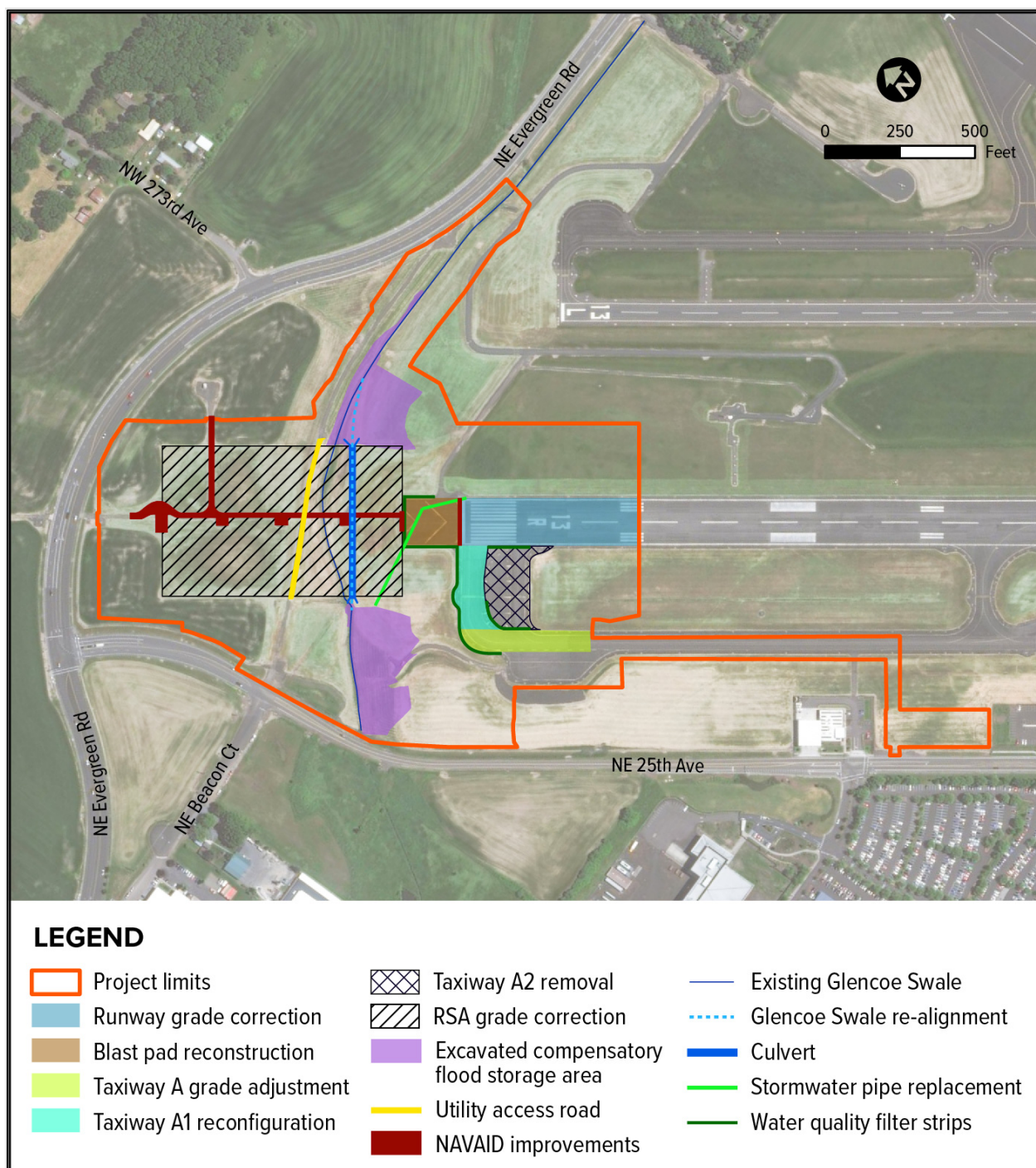
Figure 9. Alternative 5: Underground Conveyance



Figure 10. Alternative 6: Reroute Swale Around Runway Safety Area



Figure 11. Proposed Action: Permanent Project Elements



Note: Two additional areas within the project limits are located southeast of the area shown in this figure; however, no project elements are proposed in the additional areas, they are stockpile areas to be used as a fill material source during construction. The two additional project limit areas are shown in Figure 12.

Figure 12. Proposed Action: Construction Project Elements

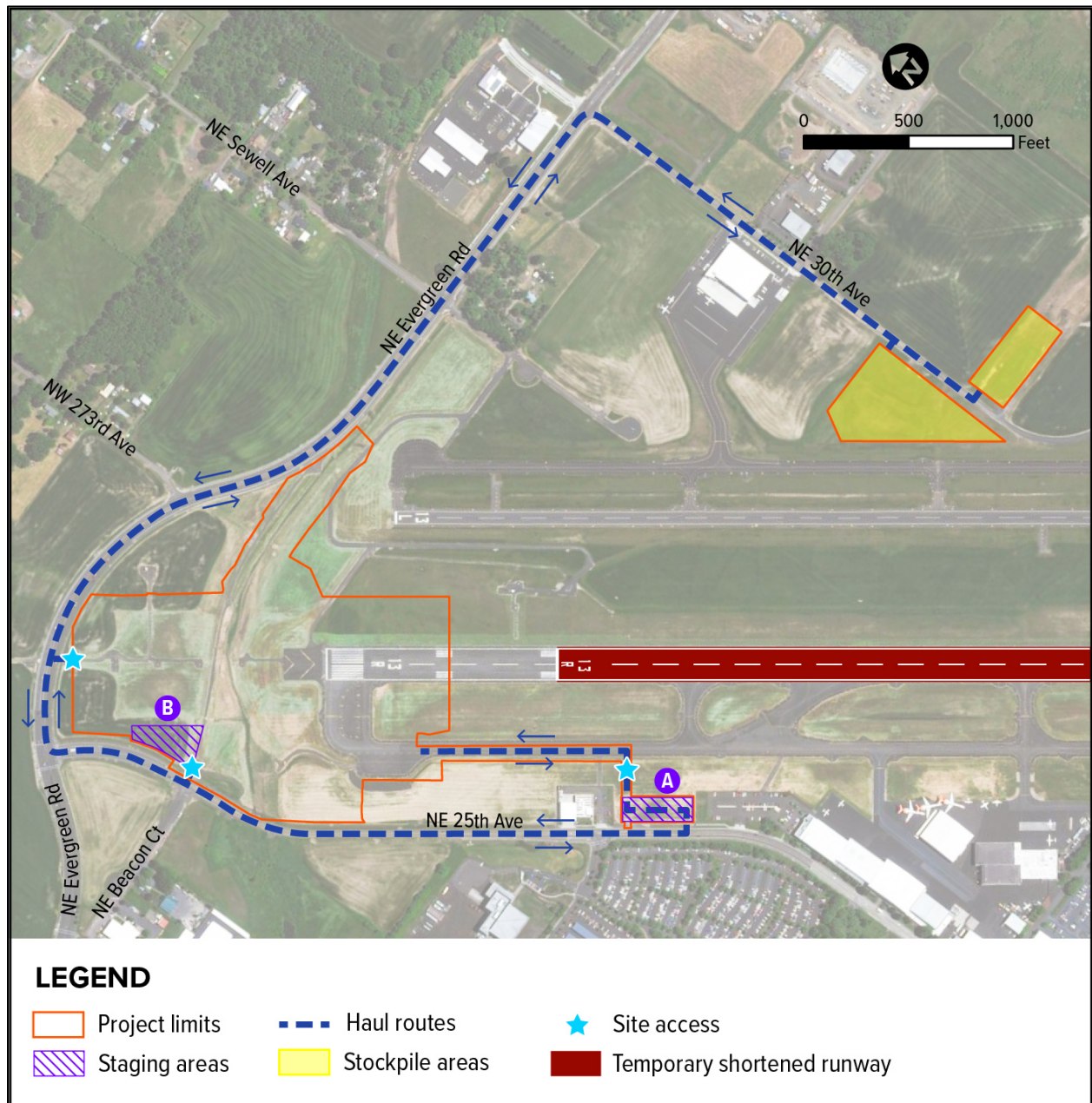


Figure 13. Habitat Types within Study Area

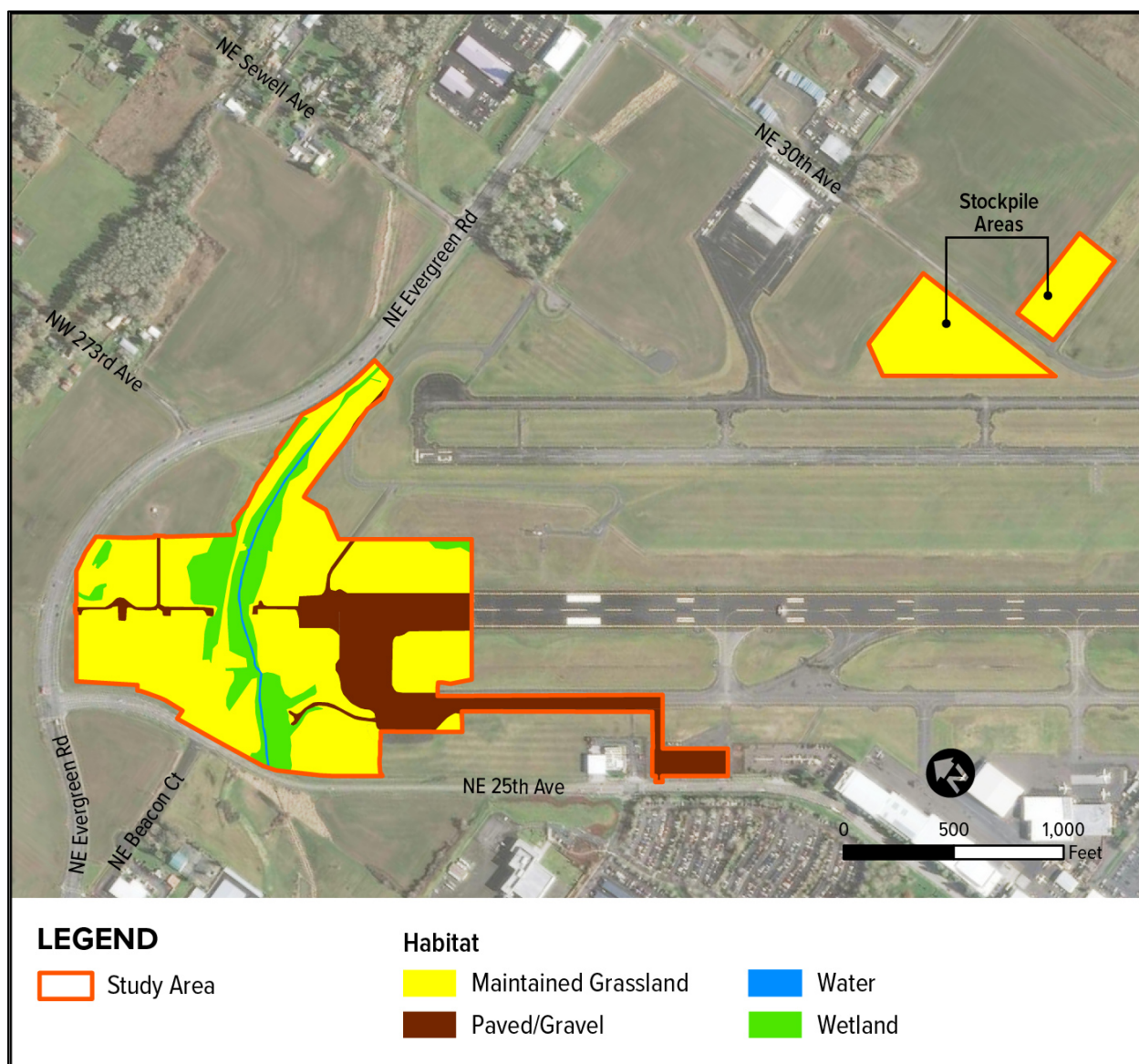


Figure 14. Watershed Map

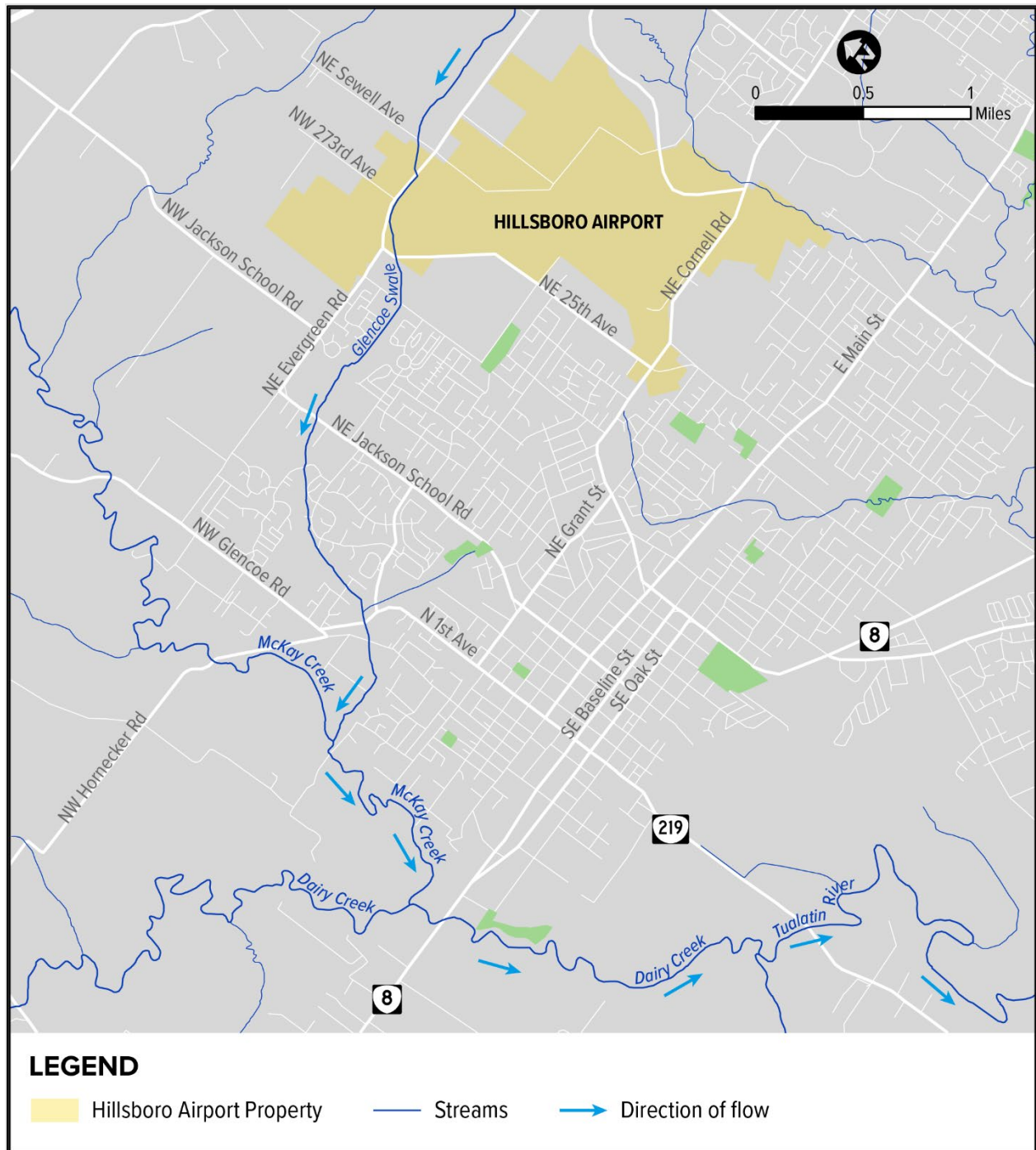


Figure 15. Potential Section 4(f) Resources and Noise Exposure Levels

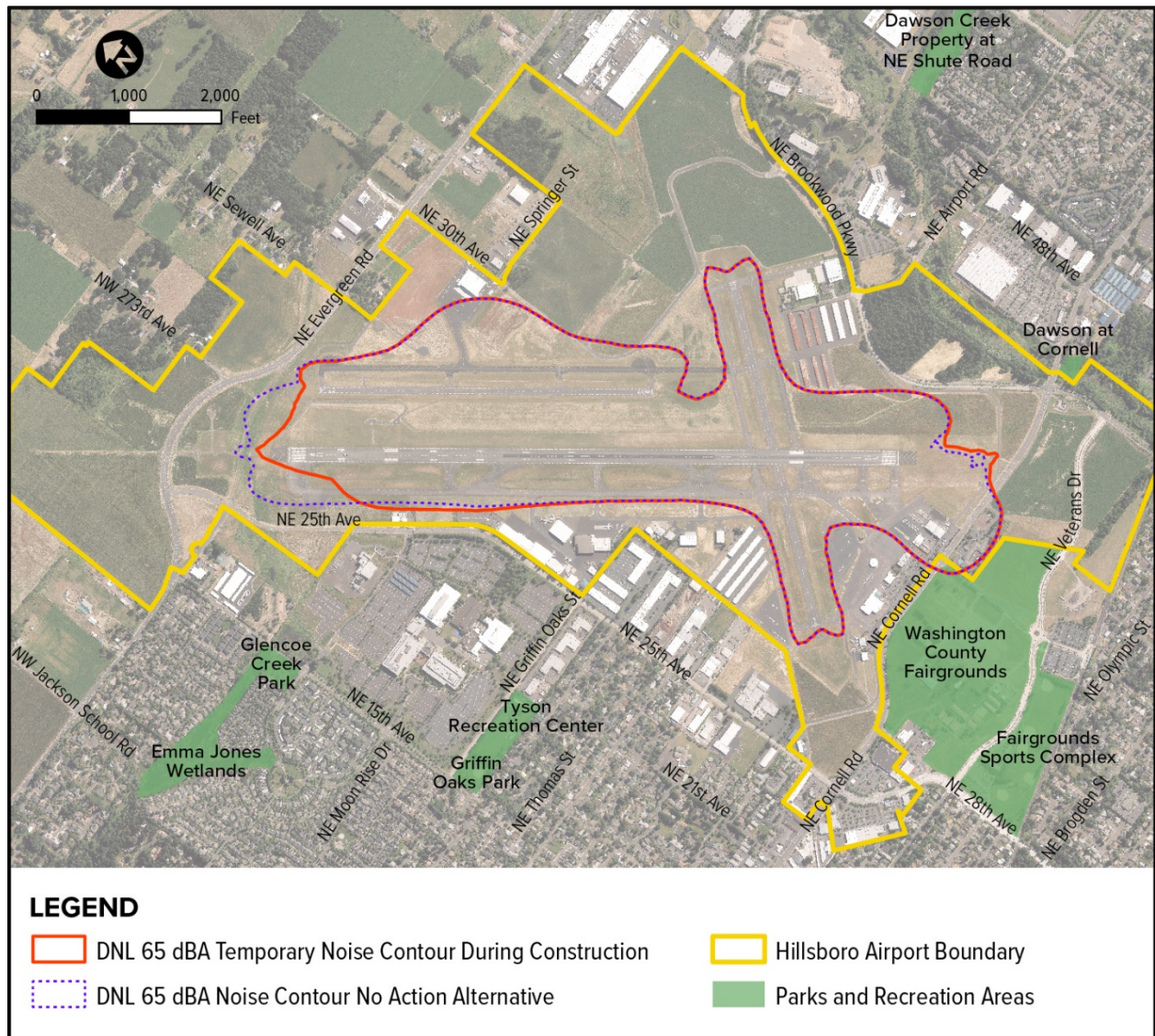


Figure 16. Farmland Categorizations by Soil Type and Active Farmland

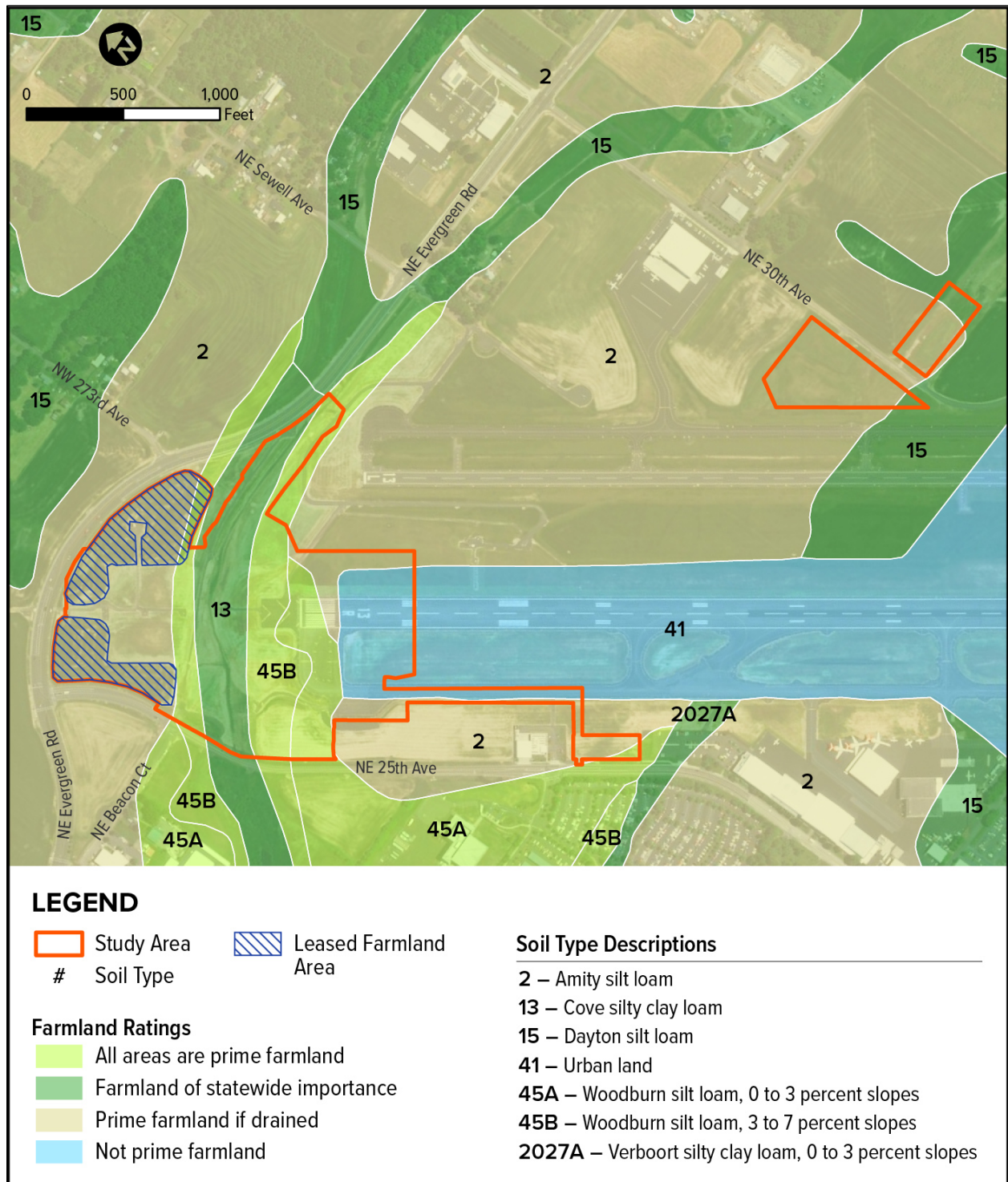


Figure 17. Floodplains and Hydrology Study Area

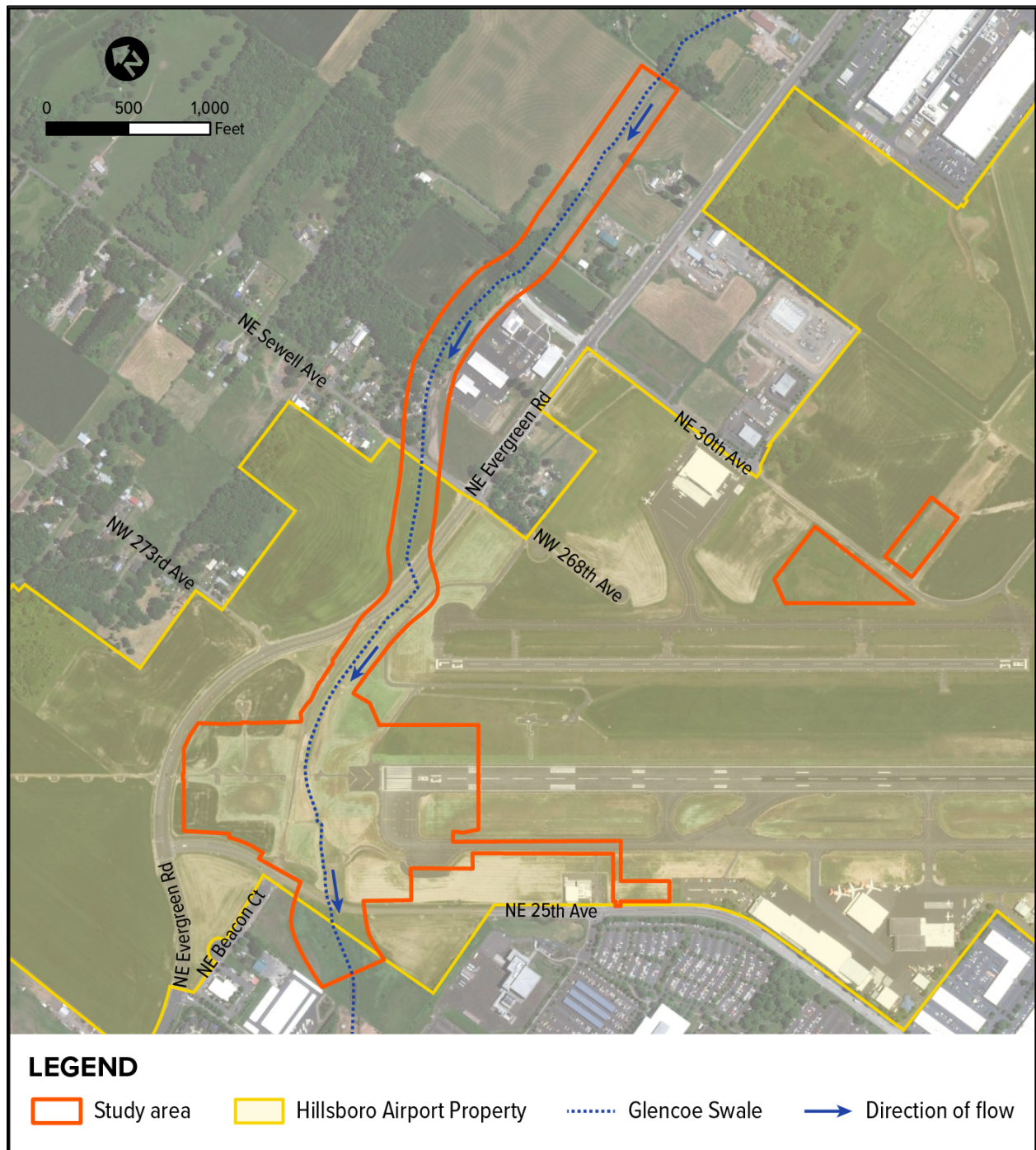


Figure 18. Changes in Impervious Surfaces

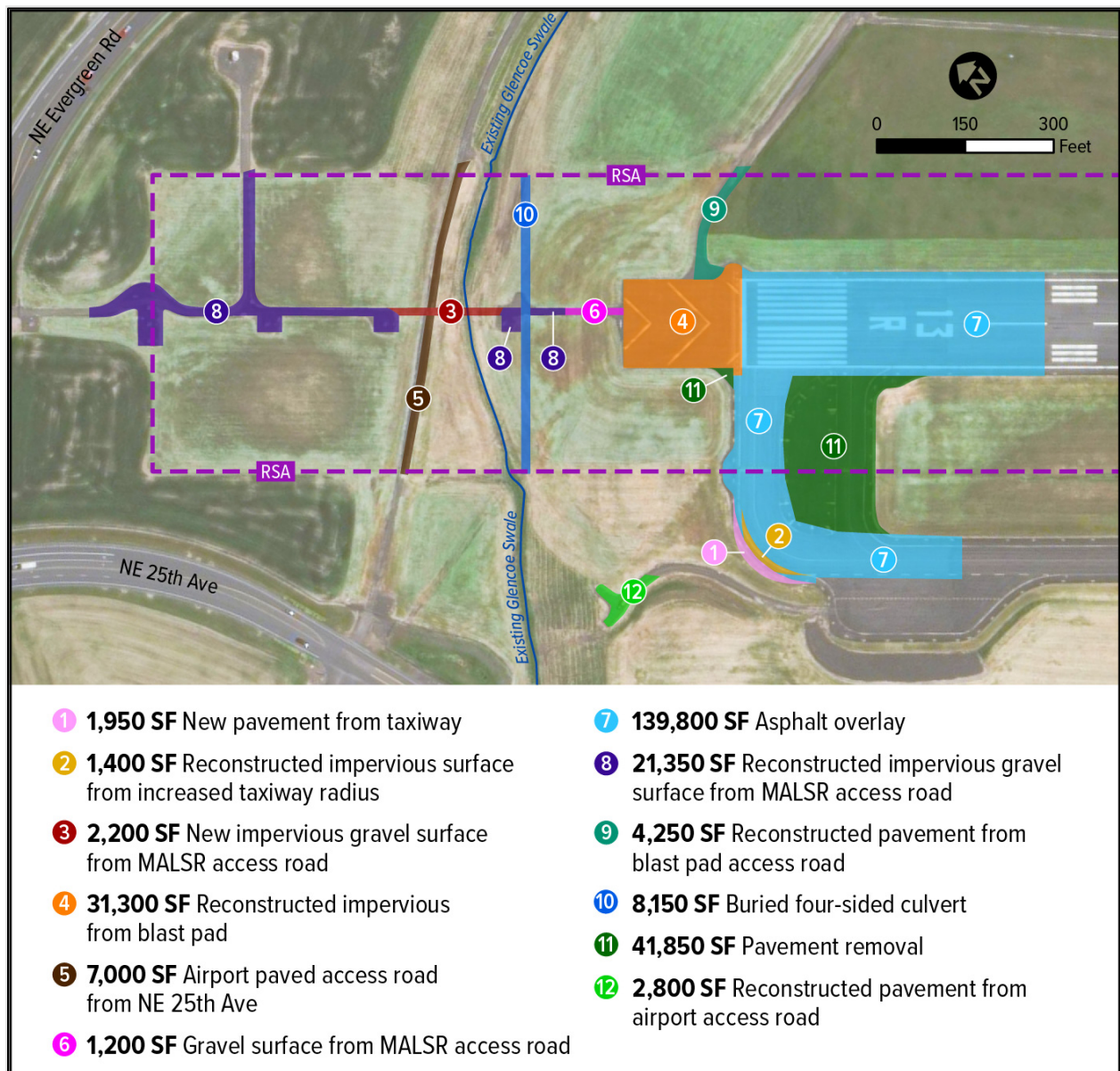


Figure 19. Area of Potential Effect

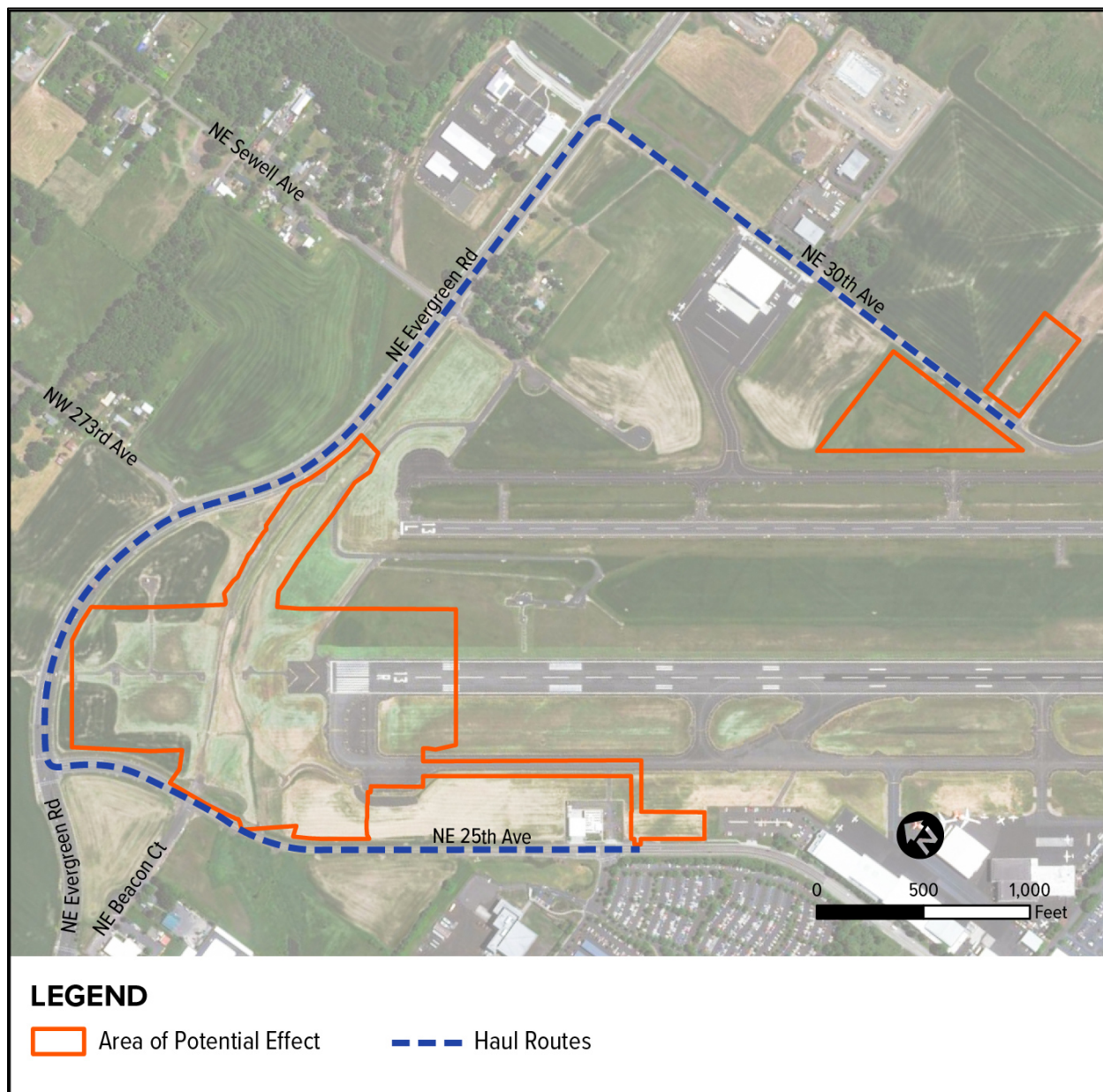


Figure 20. Locations of Noise-Sensitive Land Use

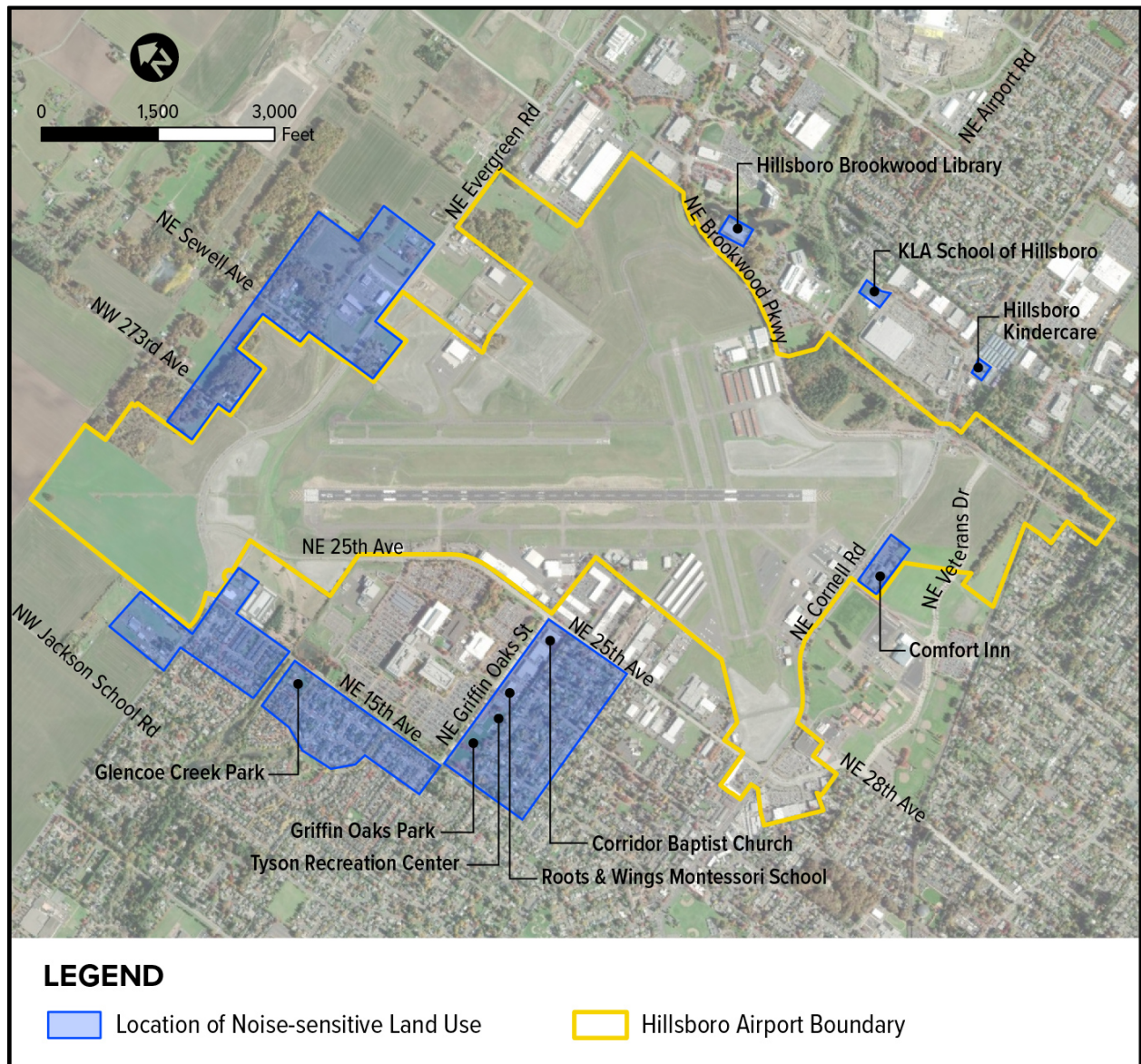


Figure 21. Construction Activity Noise Analysis Locations

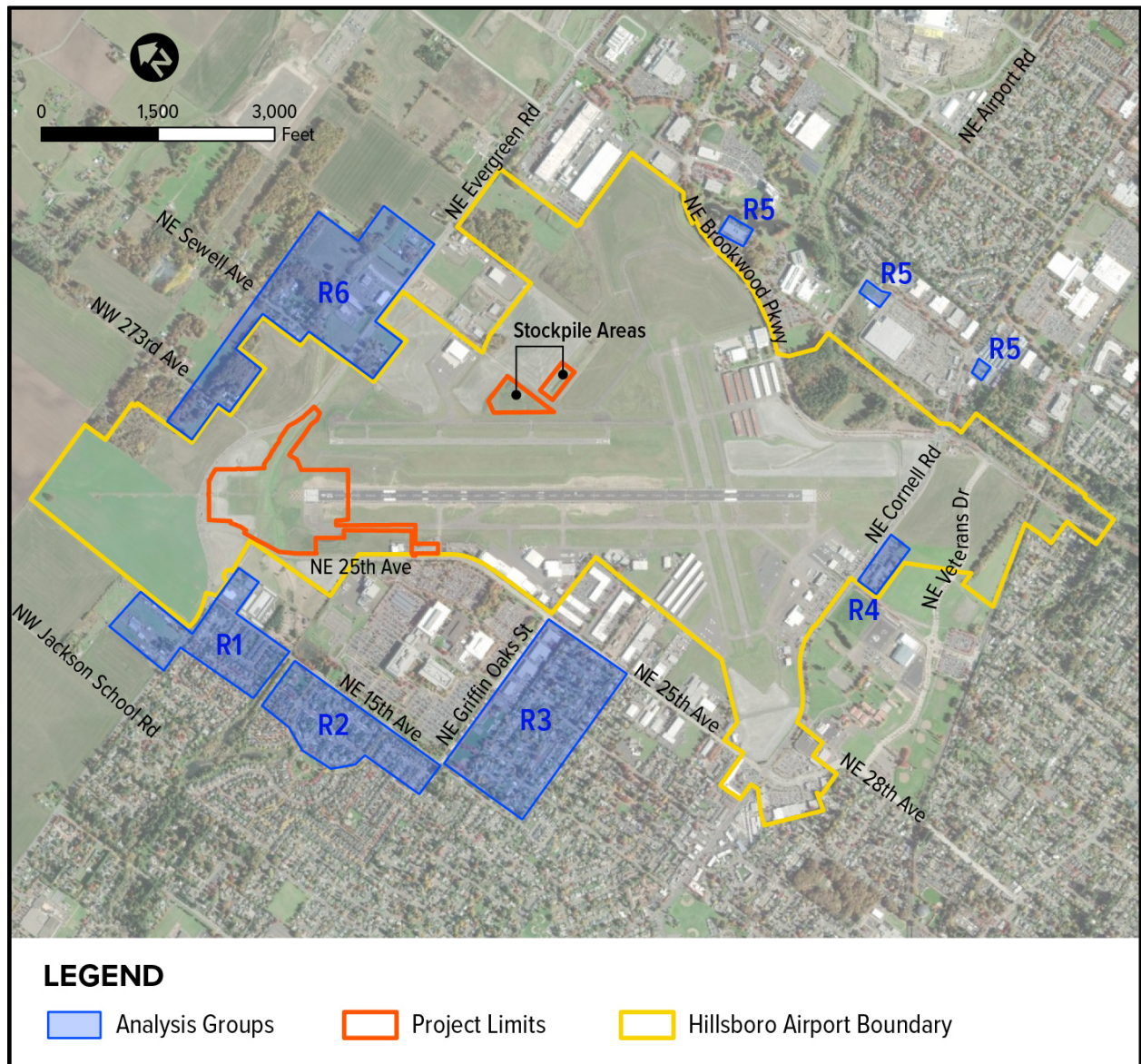


Figure 22. Aircraft Noise Emissions: Existing Conditions (No Action Alternative) and Proposed Action DNL Contours During Construction

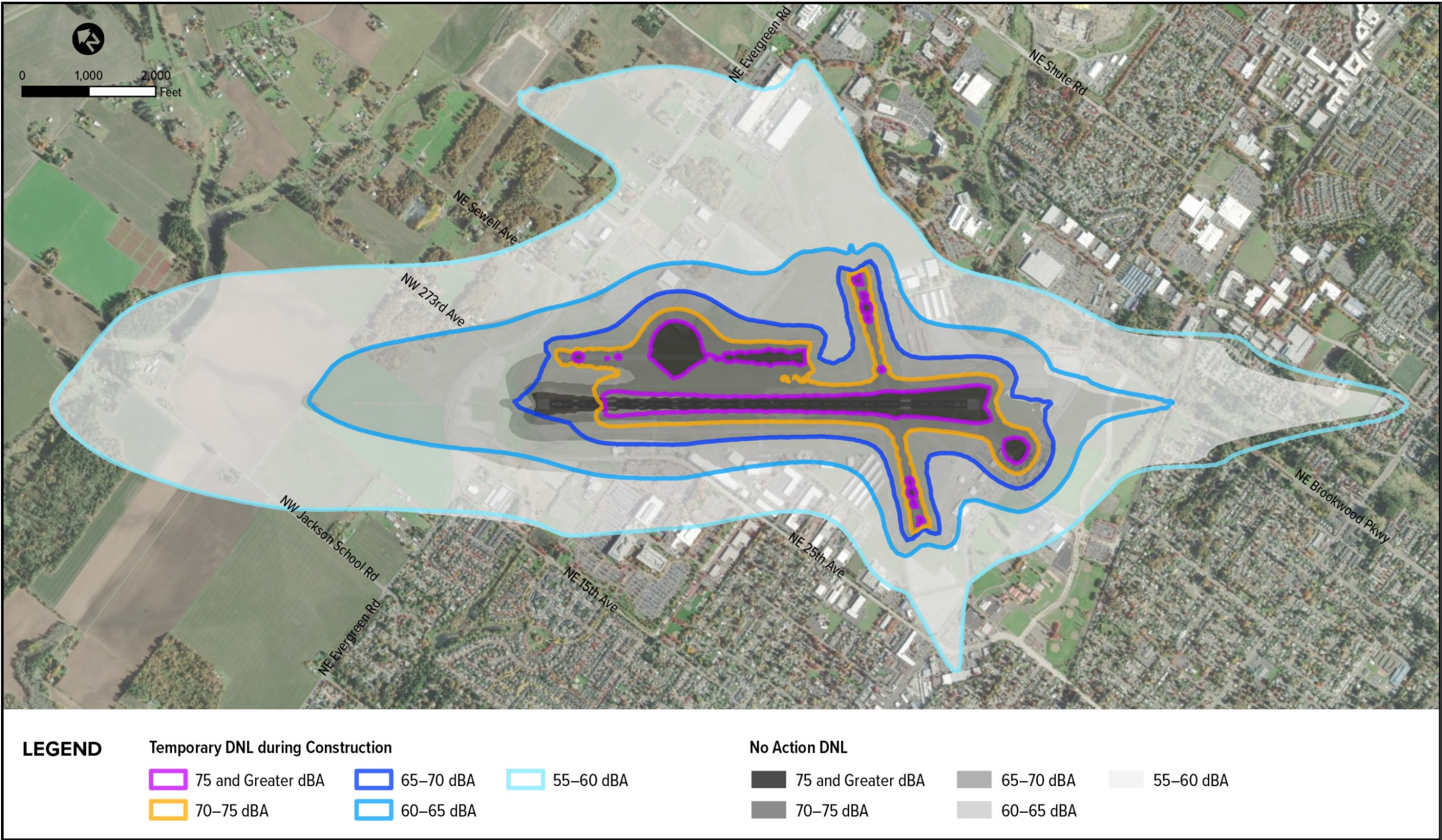


Figure 23. Study Area for Socioeconomics, Environmental Justice, and Children’s Environmental Health and Safety Risks

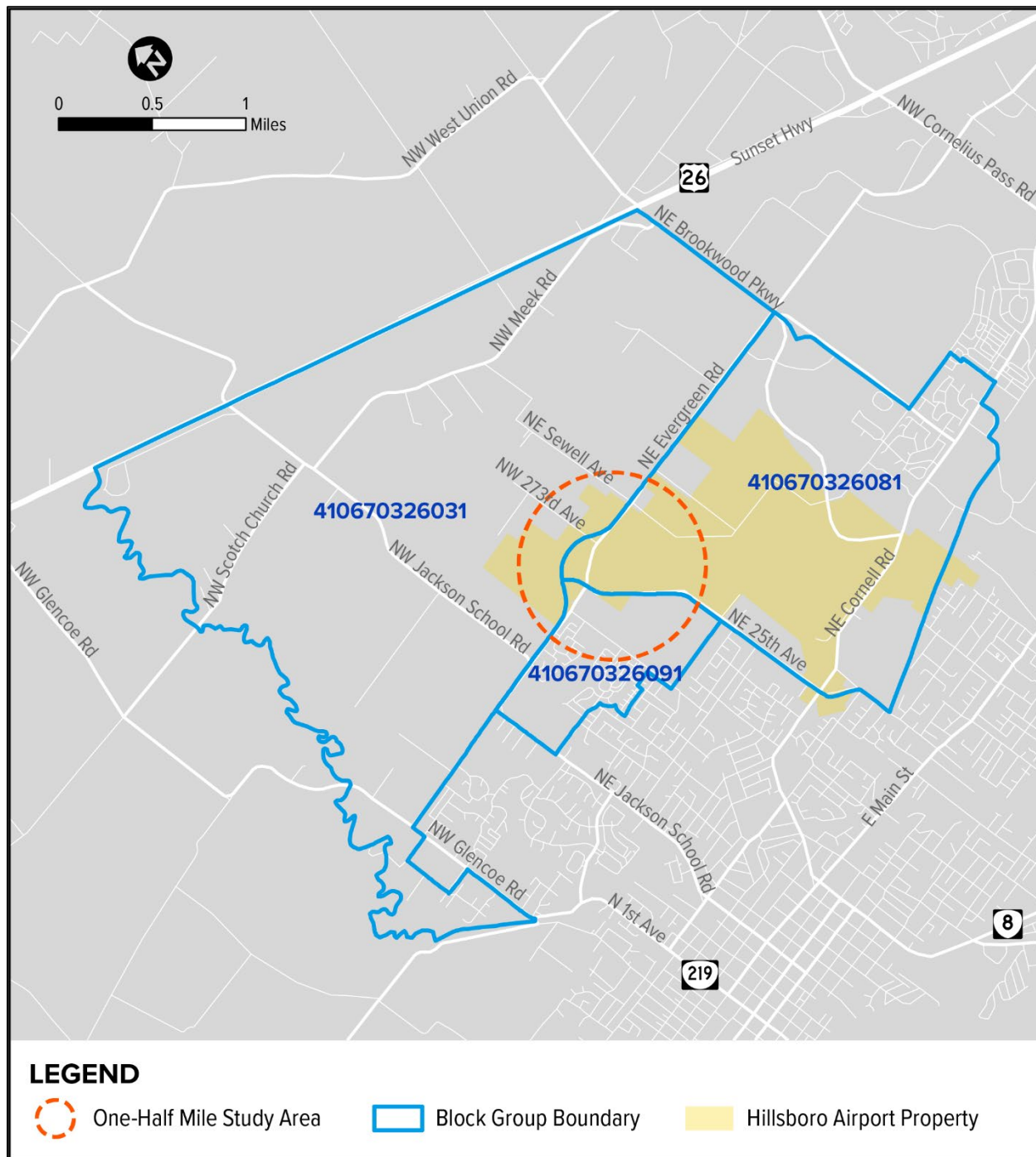


Figure 24. Wetlands, Waters, and Vegetated Corridors in the Study Area

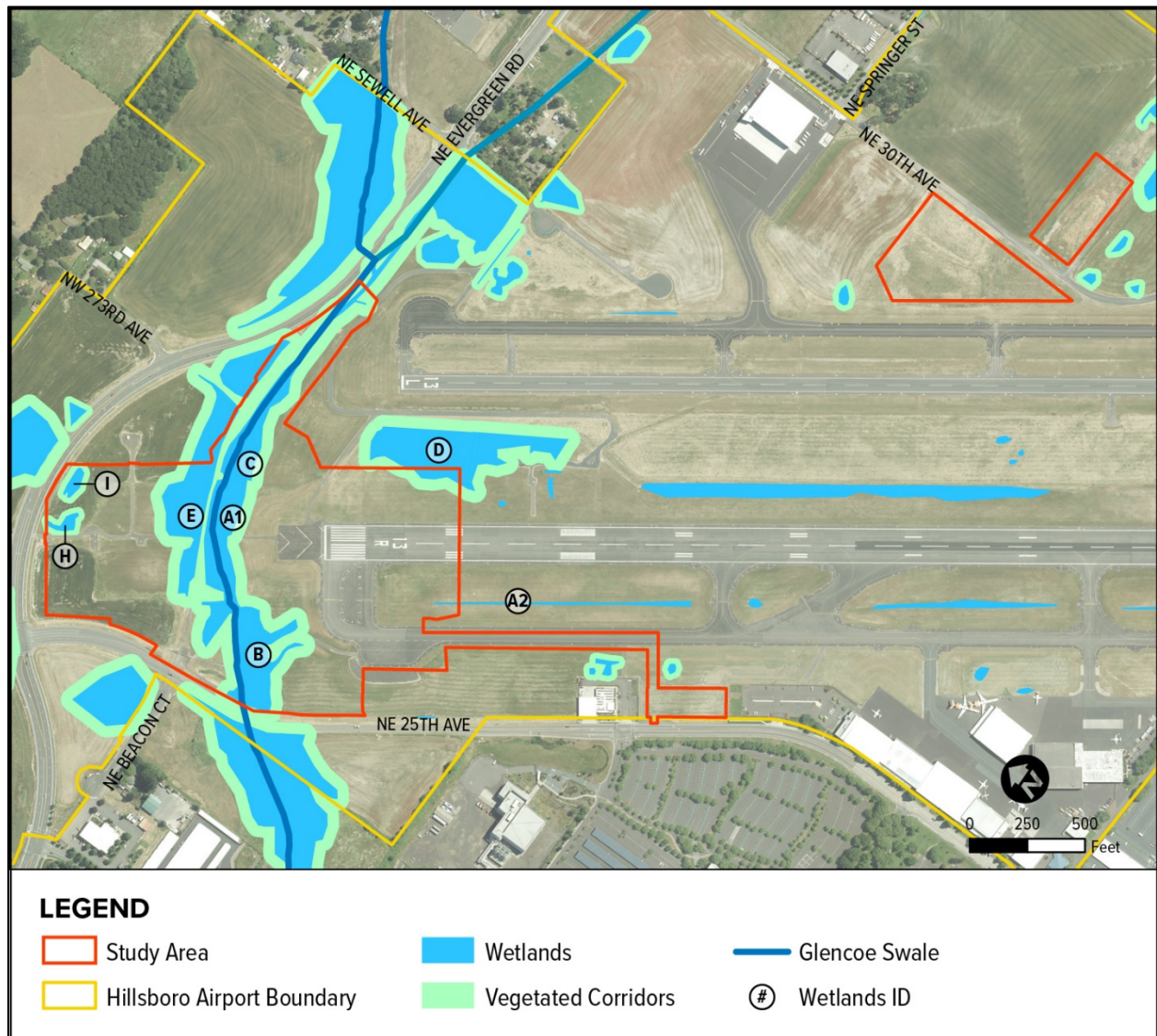


Figure 25. Wetland and Water Impacts of the Proposed Action

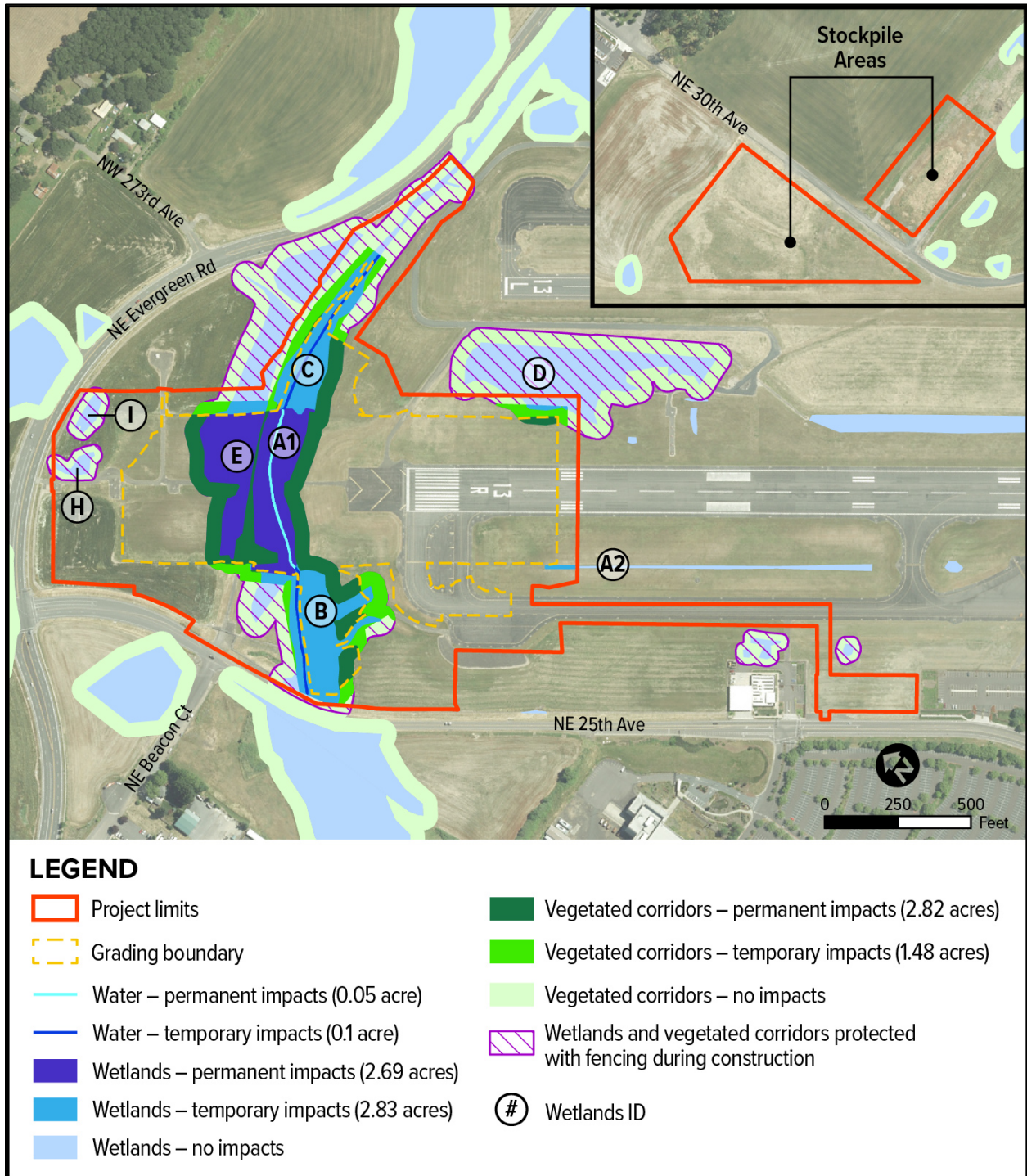


Figure 26. Reasonably Foreseeable Future Projects



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