Hillsboro Airport (HIO) Runway Safety Area (RSA) Improvements Project Summary

Introduction:

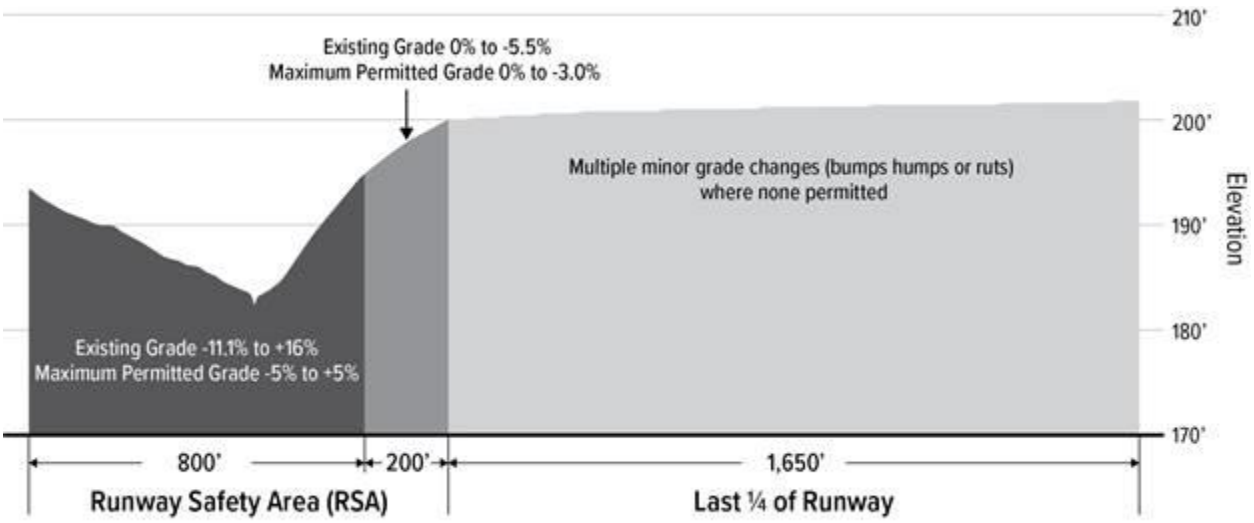
The Port of Portland (Port) is planning to modify features at Hillsboro Airport (HIO) to meet current Federal Aviation Administration (FAA) airfield design standards for Runway 13R-31L and its runway safety area (RSA).

The northern portion of Runway 13R-31L and the portion of the RSA northwest of the end of Runway 13R do not fully comply with FAA design standards for longitudinal gradients. The location of Runway 13R and the Runway 13R RSA is shown in the figure below. The longitudinal gradient is the grade or slope along the length of the runway and the part of the RSA that extends beyond the runway. FAA currently considers Runway 13R-31L to be operating safely and will continue to provide an acceptable level of safety until the runway elevations and grades are modified as required to comply with the FAA grade requirements.

Runway 13R and the Runway 13R RSA do not fully comply with current FAA design standards, as they deviate from standards in the Airport Design AC in the following ways:

- Runway 13R has a 200-foot vertical curve starting 315 feet from the end of Runway 13R and there are several other modest changes in grade in the last quarter of the runway; these are deviations, since the standards do not allow any grade change in the first or last quarter (1,650 feet) of the runway length.
- Longitudinal grades in the Runway 13R RSA range from -11.1 percent to +16.0 percent, which exceed the allowable grade of -5.0 percent to +5.0 percent by as much as 11 percent.
- Runway 13R RSA is bisected by a tributary, Glencoe Swale, and wetlands that impound water year-round; therefore, the RSA deviates from drainage design standards.

This project will bring the grades on Runway 13R and the Runway 13R RSA and the other deviations in the Runway 13R RSA into compliance with current FAA design standards.



Proposed Project:

Several alternatives have been considered; however, due to feasibility constraints, only one alternative meets all evaluation criteria. This alternative consists of conveying the water in Glencoe Swale through the RSA in a pipe or a culvert (See figure below). Preliminary designs indicate that a pre-cast 6' x 14' culvert will meet fish passage and flow requirements.

Based on preliminary engineering estimates, approximately 5 acres of wetland and 3 acres of vegetated corridors impacts are expected. Additional design is underway to better understand and quantify these impacts.

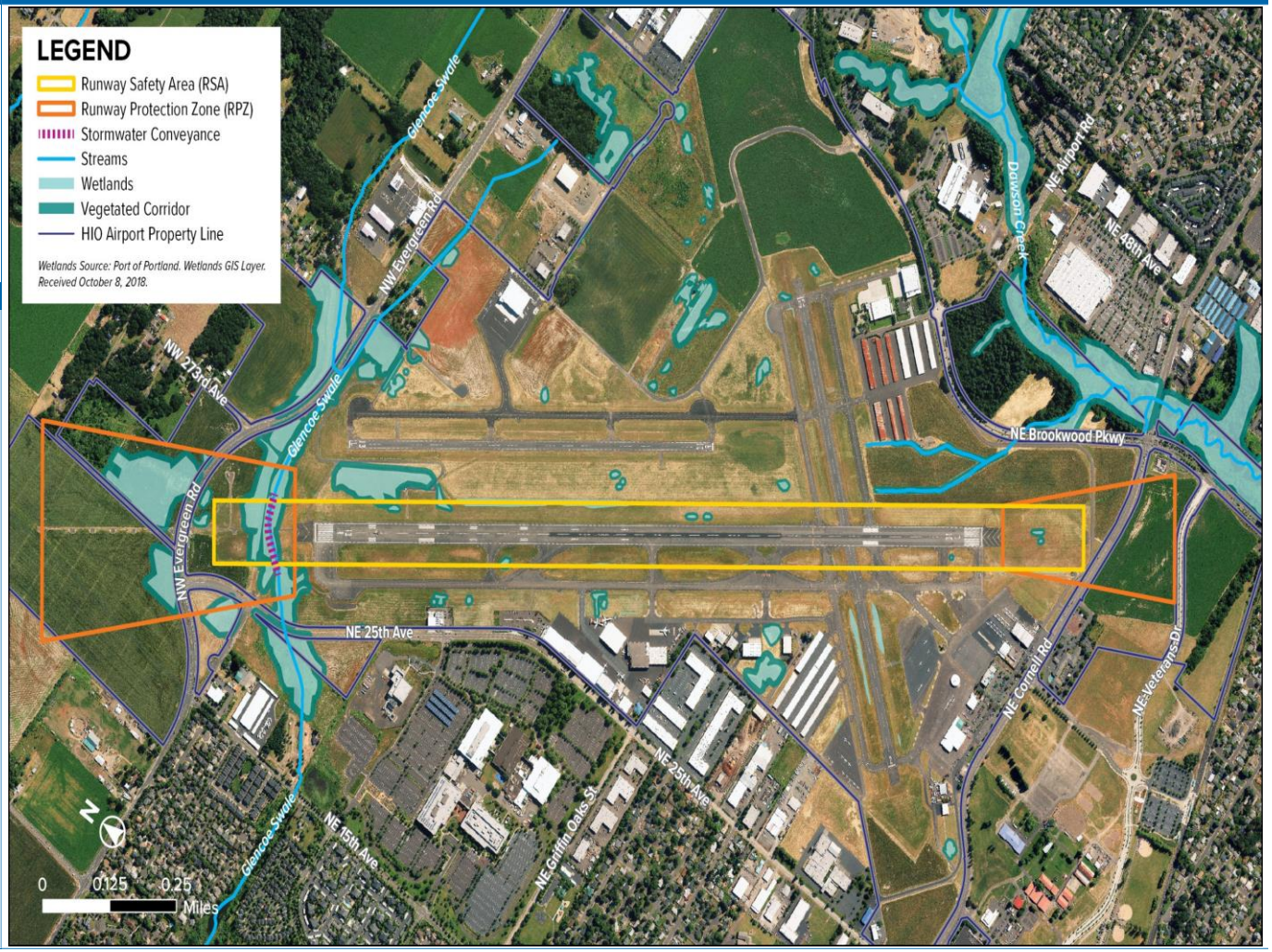
Construction of this project is programmed to begin in early 2023. The FAA NEPA finding is expected in Spring of 2021. Permit authorizations from CWS, Corps, DSL, and FEMA/Floodplain are also needed also needed at this time to inform the final design. Final design will commence immediately after FAA has approved the project and all permits have been received.

KEY ELEMENTS

- Accommodates standard 1,000-foot Runway 13R RSA
- Conveys Glencoe Swale under Runway 13R RSA in a conduit
- Maintains existing 6,600-foot runway length in existing location
- Removes MALSR and other NAVAIDS from Runway 13R RSA during construction and replaces in same locations
- Regrades Runway 13R and Runway 13R RSA, including Glencoe Swale/wetlands/vegetated corridor

SCREENING RESULTS

- Maintains 6,600-foot runway length; compatible with critical aircraft
- Would not cause safety or operational problems
- Impacts up to 8 acres of wetlands and up to 7 acres of vegetated corridors – same as Alternative 6 and same or less than Alternative 3
- **Retained for detailed analysis**



NEPA Process

HILLSBORO AIRPORT
PORT OF PORTLAND

National Environmental Policy Act (NEPA)