

Ground Run-Up Enclosure (GRE) Feasibility/Siting Study

February 28, 2012



GRE Facts

- A GRE is a term used for an enclosed, noise suppressed, aircraft engine testing facility
- Typically consists of 3 walls that deflect jet blast
- A GRE will typically reduce noise by 15-20 dB
- Size would accommodate at least a Boeing 737-900
- Expected to accommodate up to 96% of all run-ups at Sea-Tac



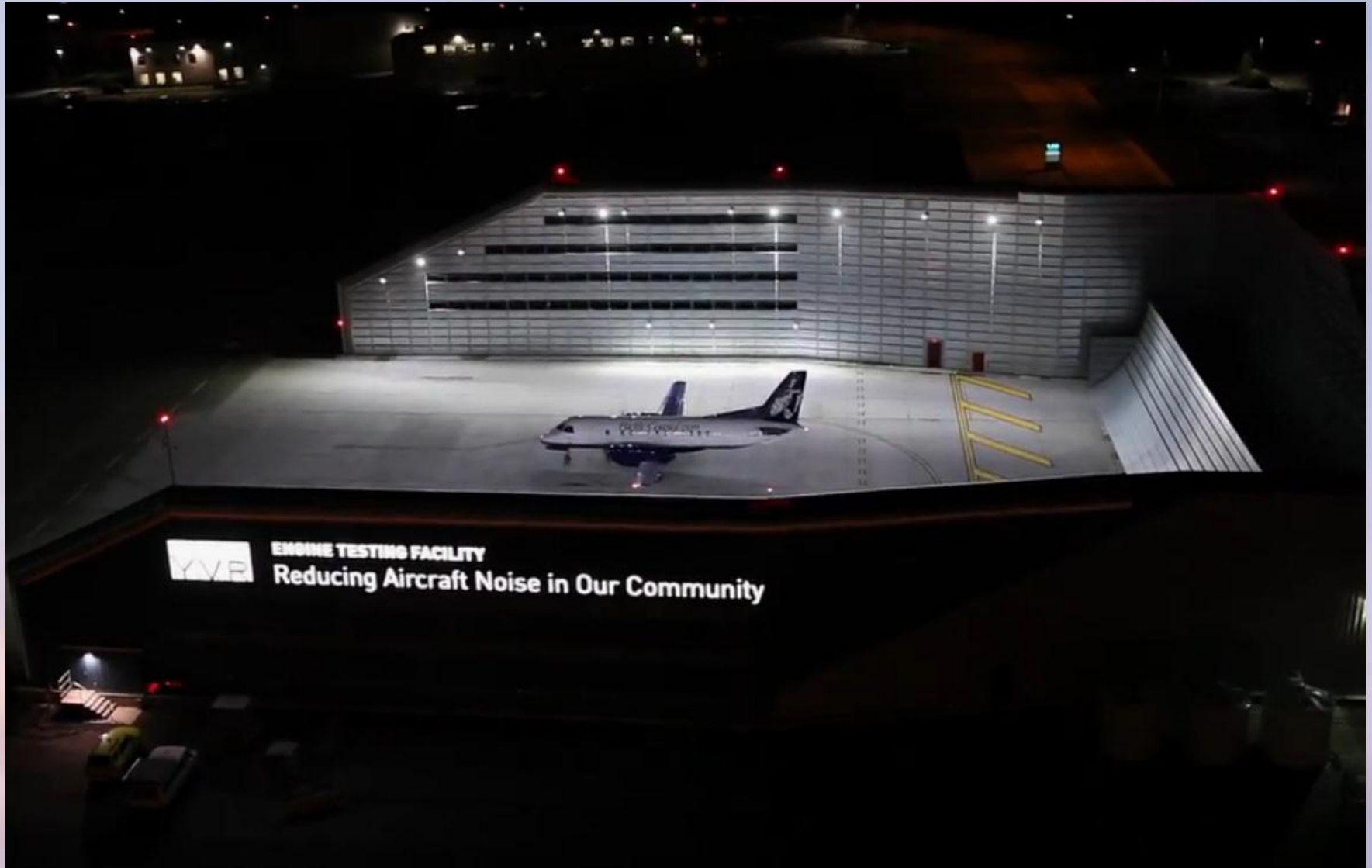
Vancouver BC GRE Construction



Vancouver BC GRE Construction



Vancouver Opened January 2012



Airports with GRE's

North America

- Tampa, FL
- Portland, OR
- Chicago, IL
- Albany, NY
- Norfolk, VA
- St Louis, MO
- Memphis, TN
- Oakland, CA
- Vancouver, BC (Opened January 2012)
- Portsmouth, NH
- Indianapolis, IN
- Milwaukee, WI
- Pontiac, Michigan

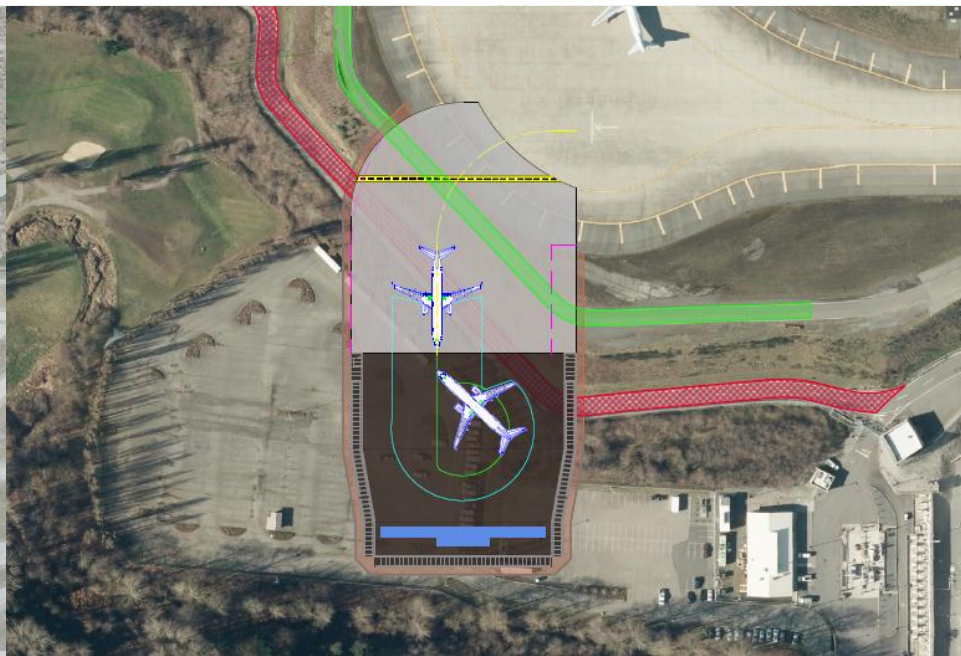
International

- Cologne/Bonn, Germany
- Kuala Lumpur, Malaysia
- Hannover , Germany
- Seoul, Korea
- Naples, Italy
- Hong Kong
- London – Stansted
- Basel, Switzerland
- Toulouse, France
- Sofia, Bulgaria
- Dubai, UAE
- Bogota, Columbia

Siting Analysis

Option A

- Community Noise Benefits/Impacts 
- Compatibility w/ Existing & Future Facilities 
- Operational Impacts 
- Cost 
- Environmental 



A

B
AS
DL






D

UA

E

Siting Analysis






Option B

- Community Noise Benefits/Impacts 
- Compatibility w/ Existing & Future Facilities 
- Operational Impacts 
- Cost 
- Environmental 



Siting Analysis

Option D

- Community Noise Benefits/Impacts 
- Compatibility w/ Existing & Future Facilities 
- Operational Impacts 
- Cost 
- Environmental 



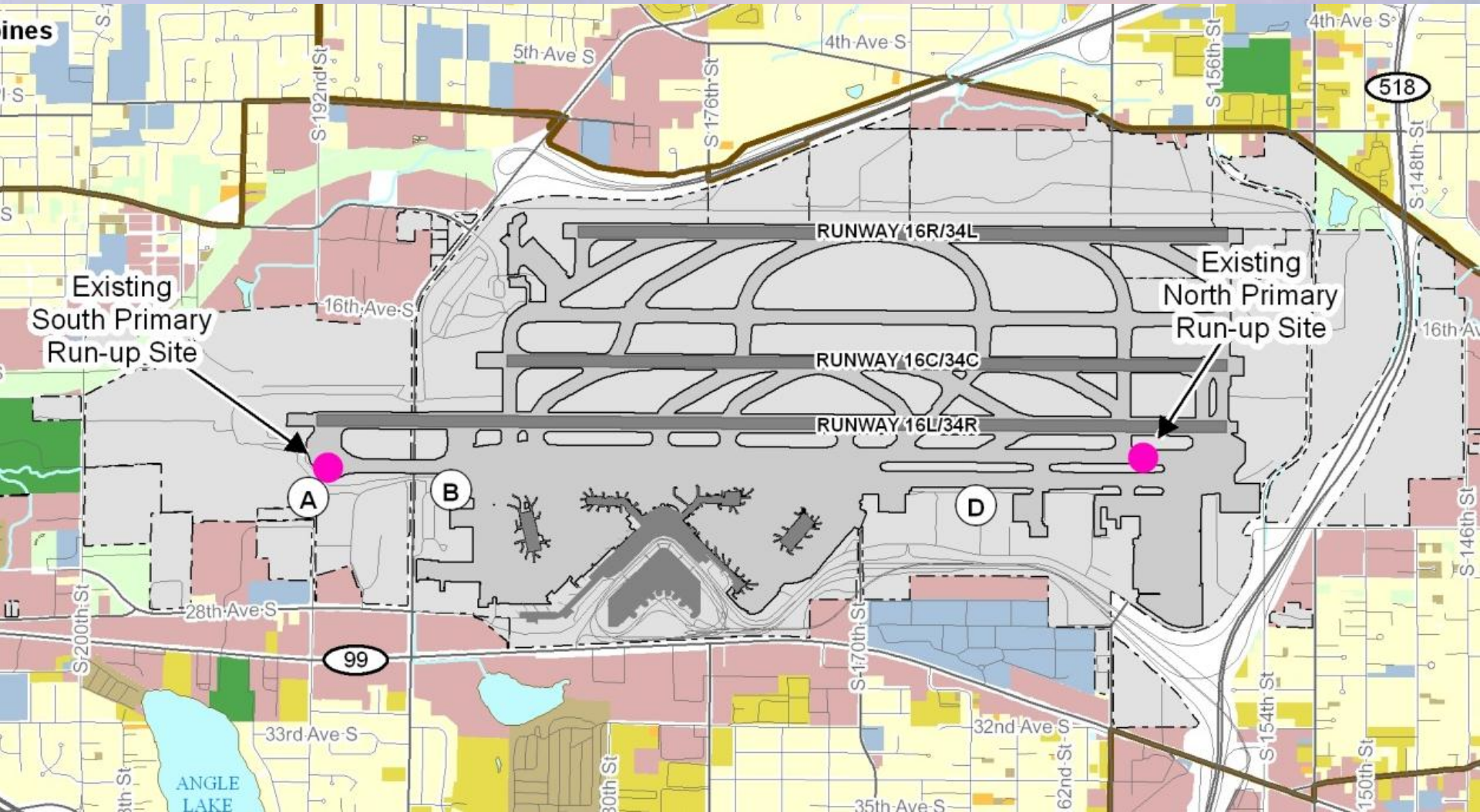
Siting Analysis

Option E

- Community Noise Benefits/Impacts 
- Compatibility w/ Existing & Future Facilities 
- Operational Impacts 
- Cost 
- Environmental 

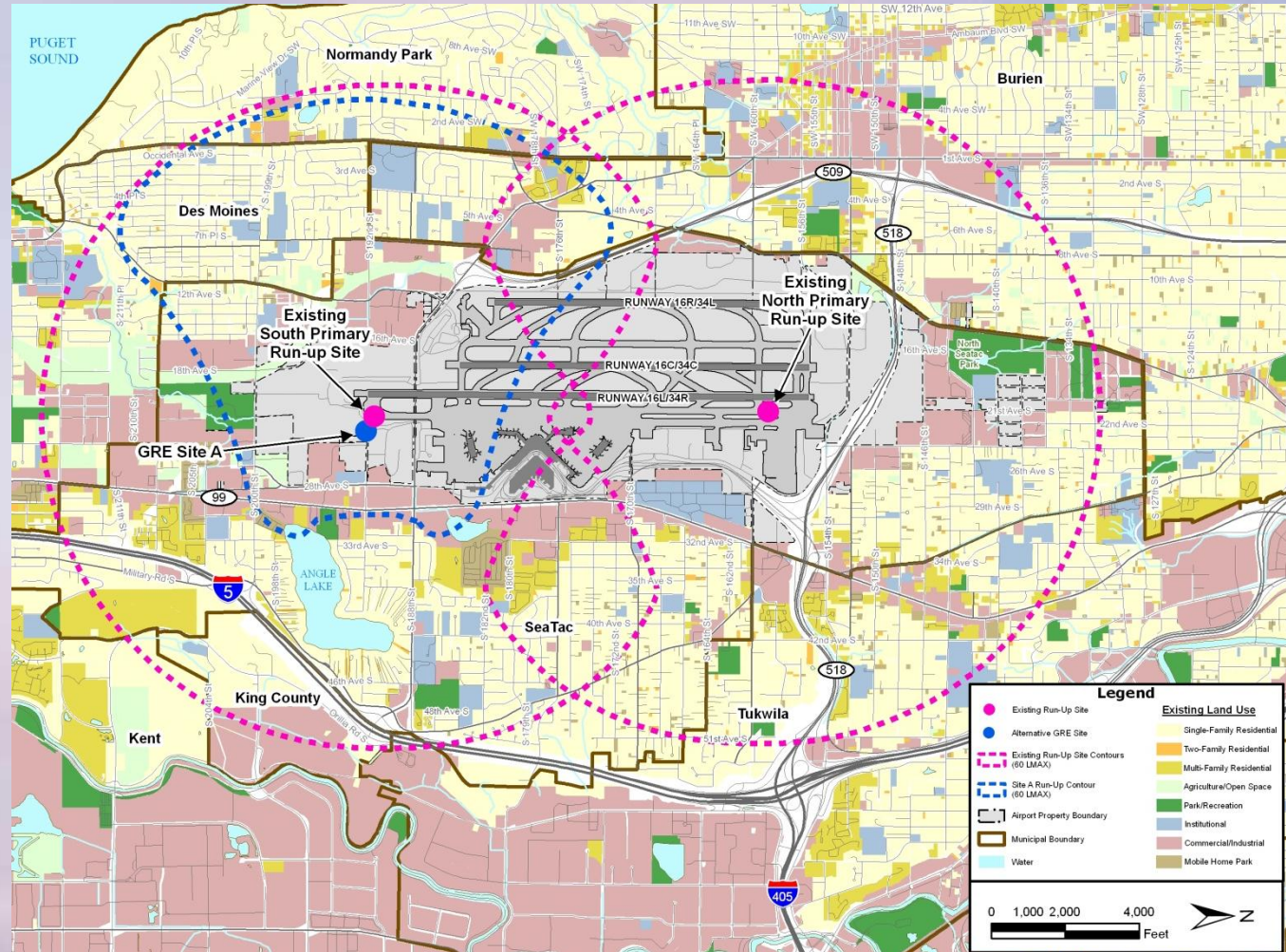


Short-Listed GRE Sites



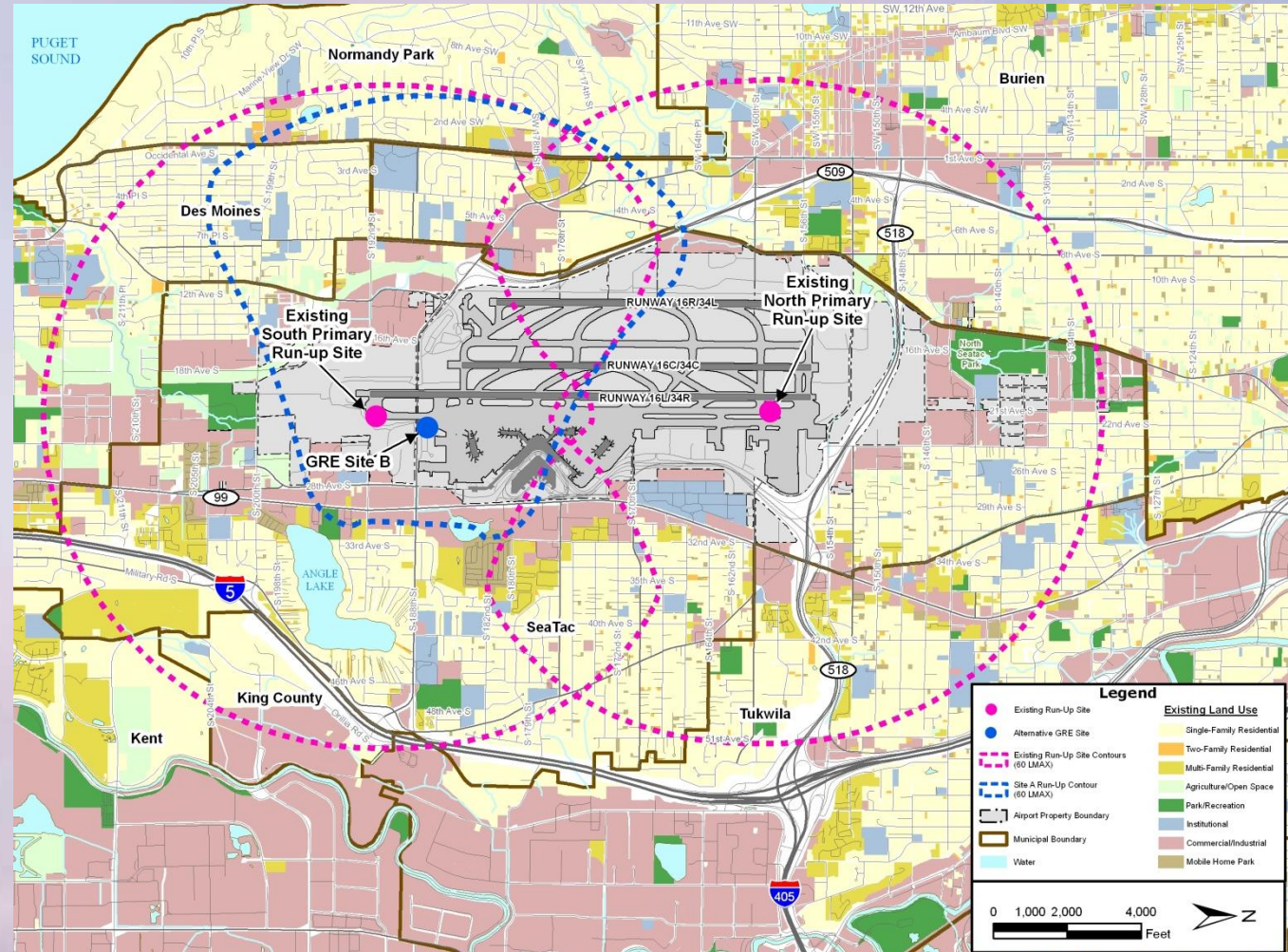
Site A

- Reduces single-event noise levels as compared to existing sites
- Largest benefits to the north, south, and east of the airport
- Slight reduction in single event noise to the west of the site



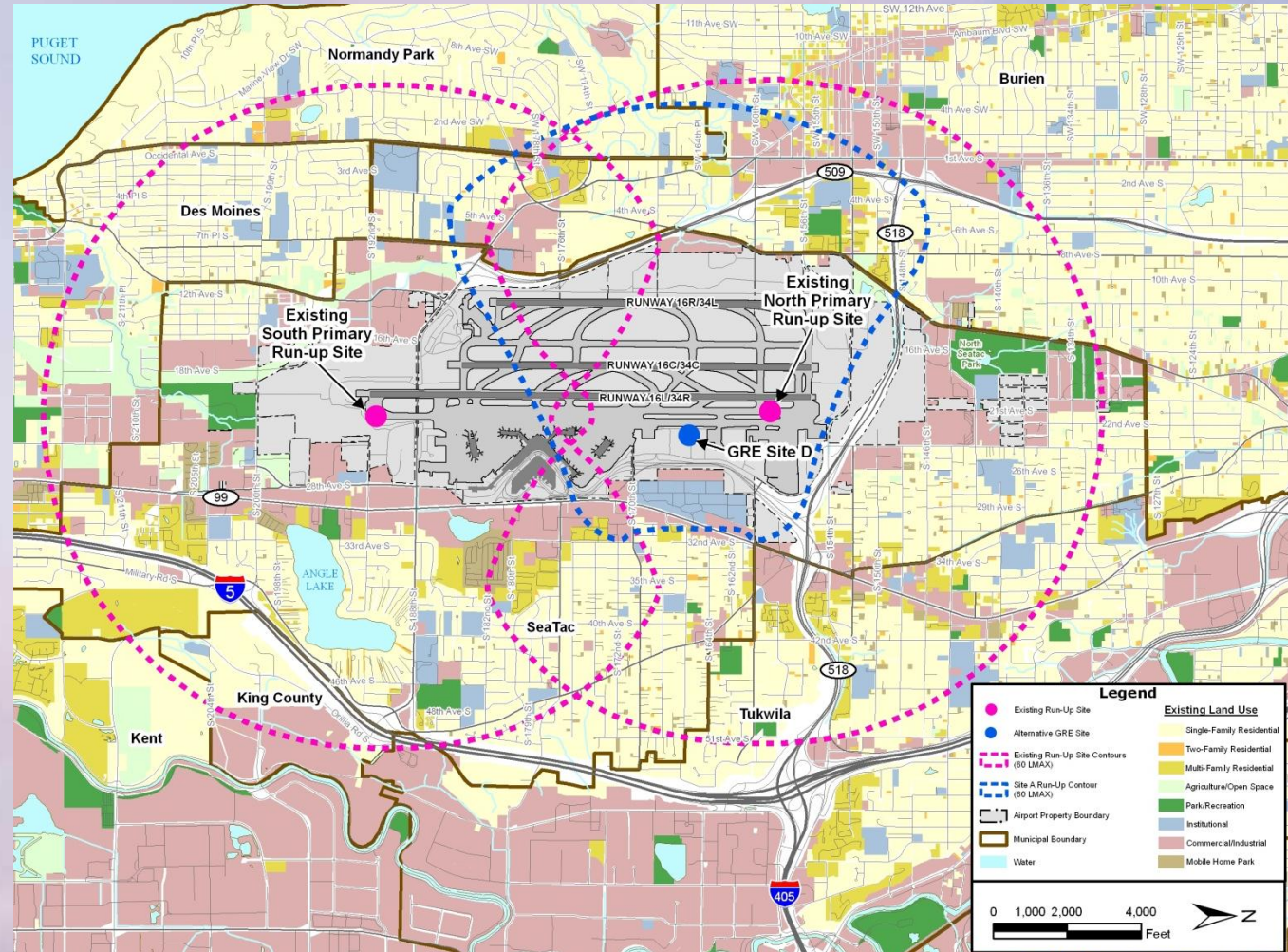
Site B

- Reduces single-event noise levels for most areas compared to existing sites
- Largest benefits to the north, south, and east of the airport
- Slight reduction in single event noise to the west of the site
- Slight increase in single event noise to the northwest of the site



Site D

- Reduces single-event noise levels for most areas compared to existing sites
- Largest benefits to the north, south, and east of the airport
- Slight reduction in single event noise to the northwest and west of the site
- Slight increase in single event noise to the southwest of the site



- A GRE would concentrate *most* run ups in one location
 - Currently, there is an approximate 60/40 split between run ups at the south and north primary run up pads
 - A GRE is expected to accommodate up to 96 percent of all run-ups at Sea-Tac Airport
 - Concentrating *most* run ups in one location could potentially increase cumulative noise levels in the direction of the open end of the GRE
 - Larger aircraft would continue to perform run ups at the primary run up pads

Questions?