



Sammamish-Juanita 115 kV Project

Advisory Group Meeting #3a



November 3, 2011



Chapter 1: Response to information requests

Chapter 2: GeoRoute Model

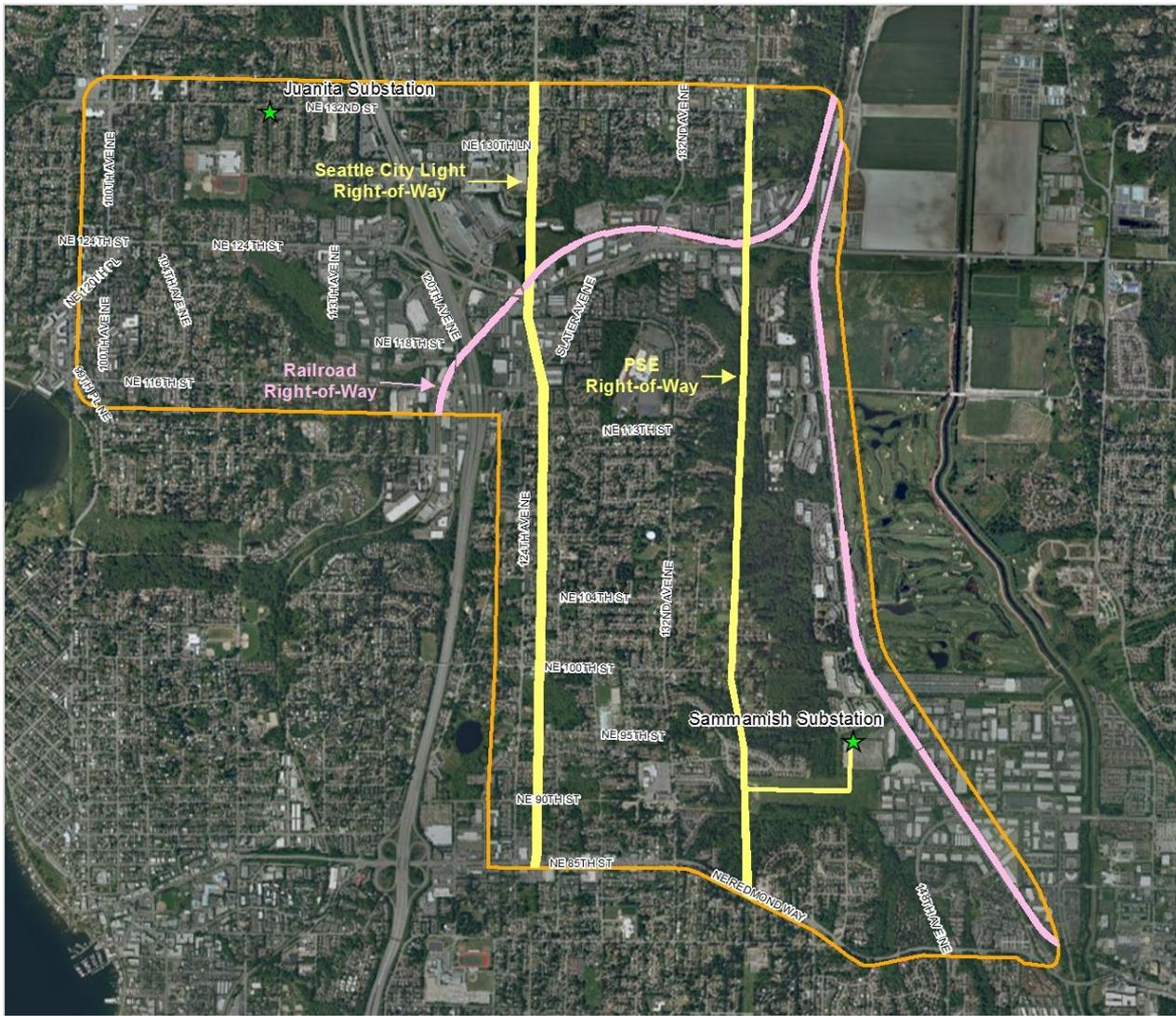
- Review criteria
- Discuss weighting for avoidance and opportunity areas
- Run model and discuss route options



Information requested at Meeting #2

- Existing PSE and Seattle City Light transmission corridor information
- Landslide activity along the Sammamish-Beverly corridor
- GeoRoute Model grid size and past uses
- EMF as a criteria

Existing PSE and Seattle City Light rights of way



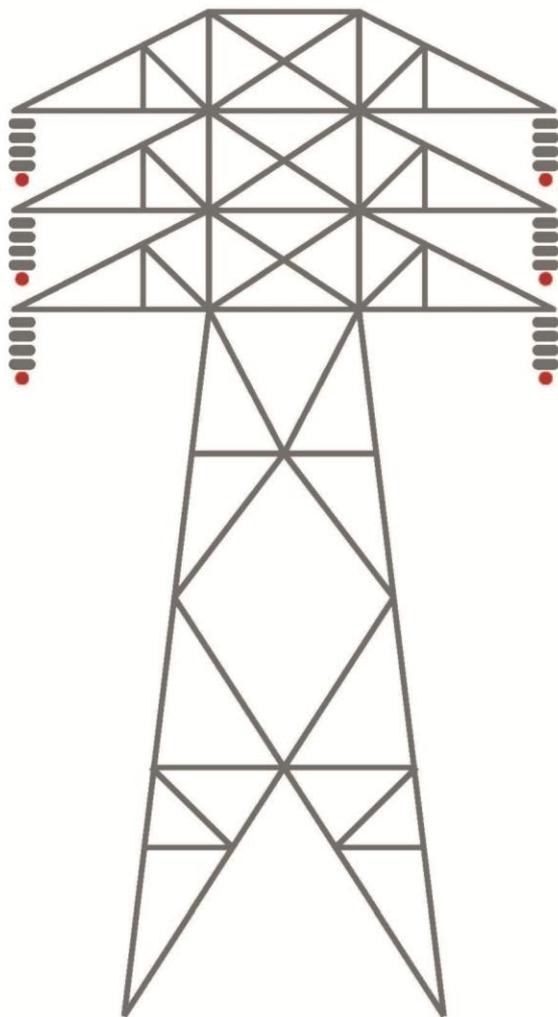


Seattle City Light corridor

- Acquired in the 1930s to bring power from the Upper Skagit River Dams to City of Seattle
- Seattle City Light currently maintains a double-circuit 230 kV line within the western portion of their easement
- The corridor running through Redmond and Kirkland is 150 feet wide
- Easements:
 - Some allow up to four towers for electrical transmission line purposes
 - Others are limited only to aerial trespass
 - Most do not allow buildings within the transmission corridor and provide for vegetation management



Chapter 1: Responses



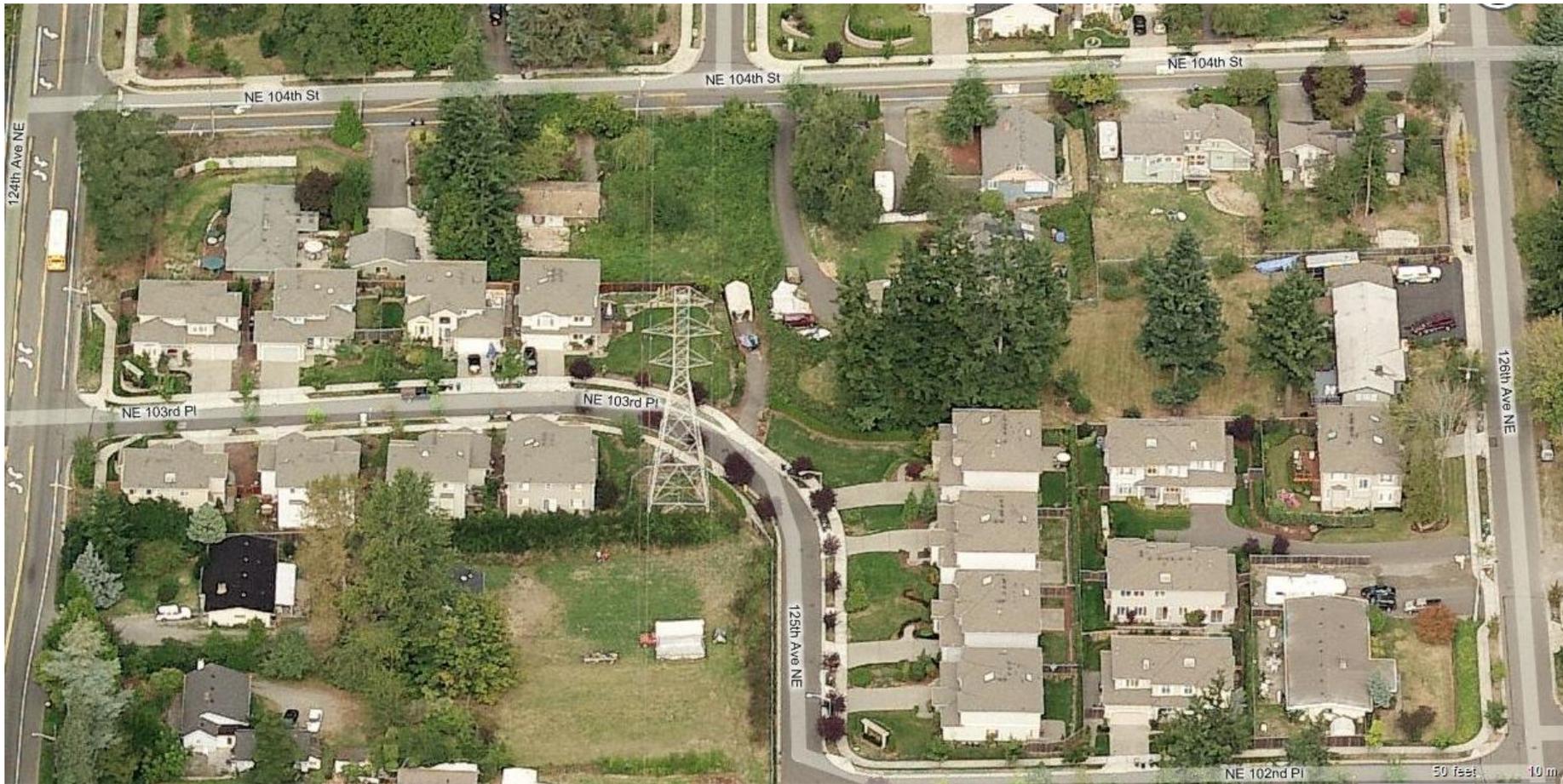
Lattice towers range from approximately 120 feet to 150 feet in height

Note: PSE is uncertain of exact heights for the Redmond-Kirkland corridor



75 ft.

75 ft.



Seattle City Light corridor – east of 124th Avenue Northeast



Seattle City Light corridor – near the intersection of 124th Avenue Northeast and Northeast 124th Street



Questions for PSE to answer

- 1) Will Seattle City Light allow us to utilize a portion of their transmission line corridor?
 - Our design proposal would need to be compatible with Seattle City Light's plans for future use

- 2) Are there encroachments in the corridor?



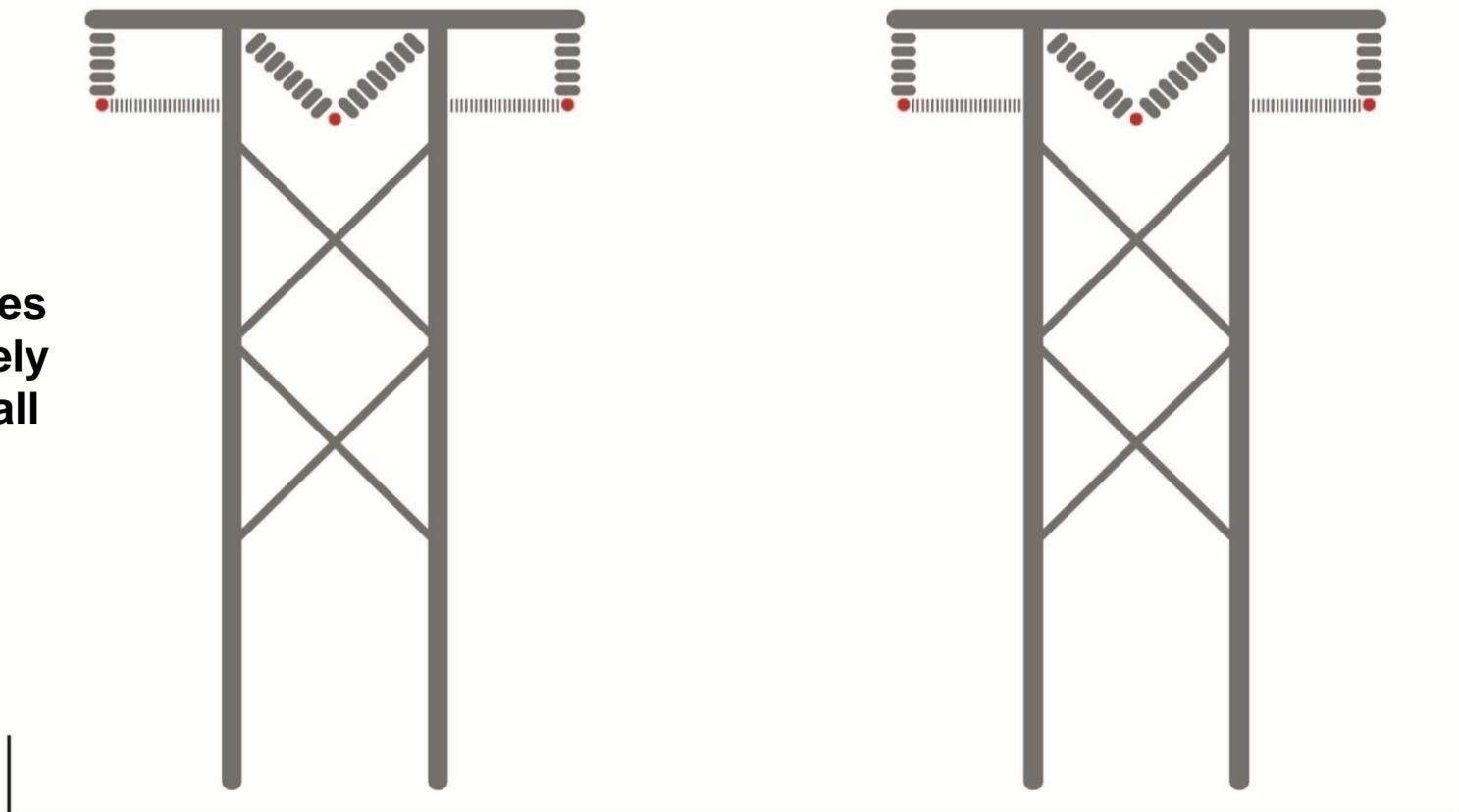
Puget Sound Energy corridor

- Acquired in 1929 to bring power to the Eastside communities
- The corridor is presently occupied by a 115 kV and 230 kV line
- The corridor running through Redmond and Kirkland is 100 feet wide
- Easements:
 - Limited to two electrical transmission systems
 - Most easements restrict the owner's use of the property and provide for vegetation management



Chapter 1: Responses

**H-frame poles
approximately
60-70 feet tall**



100 ft.



Puget Sound Energy corridor – near the intersection of 136th Avenue Northeast and Northeast 104th Street



Puget Sound Energy corridor – west of 137th Place Northeast



Puget Sound Energy corridor – near Northeast 124th Street



Challenges of using the PSE corridor

- The PSE easement is at capacity (only allows for two systems)
- Either the existing PSE easement needs to be re-negotiated to allow for another system OR additional right of way needs to be acquired
- The width of the additional right of way is dependent upon design requirements to meet electrical safety codes



Landslide activity along the Sammamish-Beverly corridor

- No record of landslides or erosion since 1997
- During construction projects in 2005 and 2008, a potential erosion area was identified at the south end of the line
 - Applied preventative erosion control measures for construction
 - Installed a permanent drain pipe from the corridor to the bottom of the hill
- PSE Vegetation Management teams inspect the corridor yearly and report signs of erosion





GeoRoute Model size and uses

- Grid size is 10 feet
- GeoRoute Model has evolved since used on past PSE projects
 - Other transmission siting projects have used similar GIS-based routing tools, which are based on the same GIS methodology
 - Example: EPRI-GTC siting model in Georgia
- EMF will not be a siting criteria since there are no federal or state regulatory limits



Chapter 1: Response to information requests

Chapter 2: GeoRoute Model

- Review model
- Review criteria
- Discuss weighting for avoidance and opportunity areas
- Run model and discuss route options

- Challenging siting with complex issues
- Promotes discussion of alternative scenarios
- Identify a route the SAG and PSE can support





People make decisions NOT models

- Balance values of the community
- Priority of the data used in the model
- How to interpret/ use the results

Chapter 2: GeoRoute Model



GEOENGINEERS Geo Route

115 kV Transmission Line Route Study
Sammamish – Juanita

Locating a route for a 115 kV transmission line that is compatible with:

- Sensitive Land Uses
- Sensitive Natural Features
- Engineering Design and Safety Standards
- Community Values





■ Opportunities Data Layers



Data Reviewed, Used for Modeling	Data Reviewed, Not Used for Modeling
Commercial/Industrial Zoning	Open Vegetative Cover
Arterial Street	Community Plan Compatibility
Trails R/W	
Railroad R/W	
Parcel size > 5 acres	
Existing PSE Rights-of-Way	



Chapter 2: GeoRoute Model

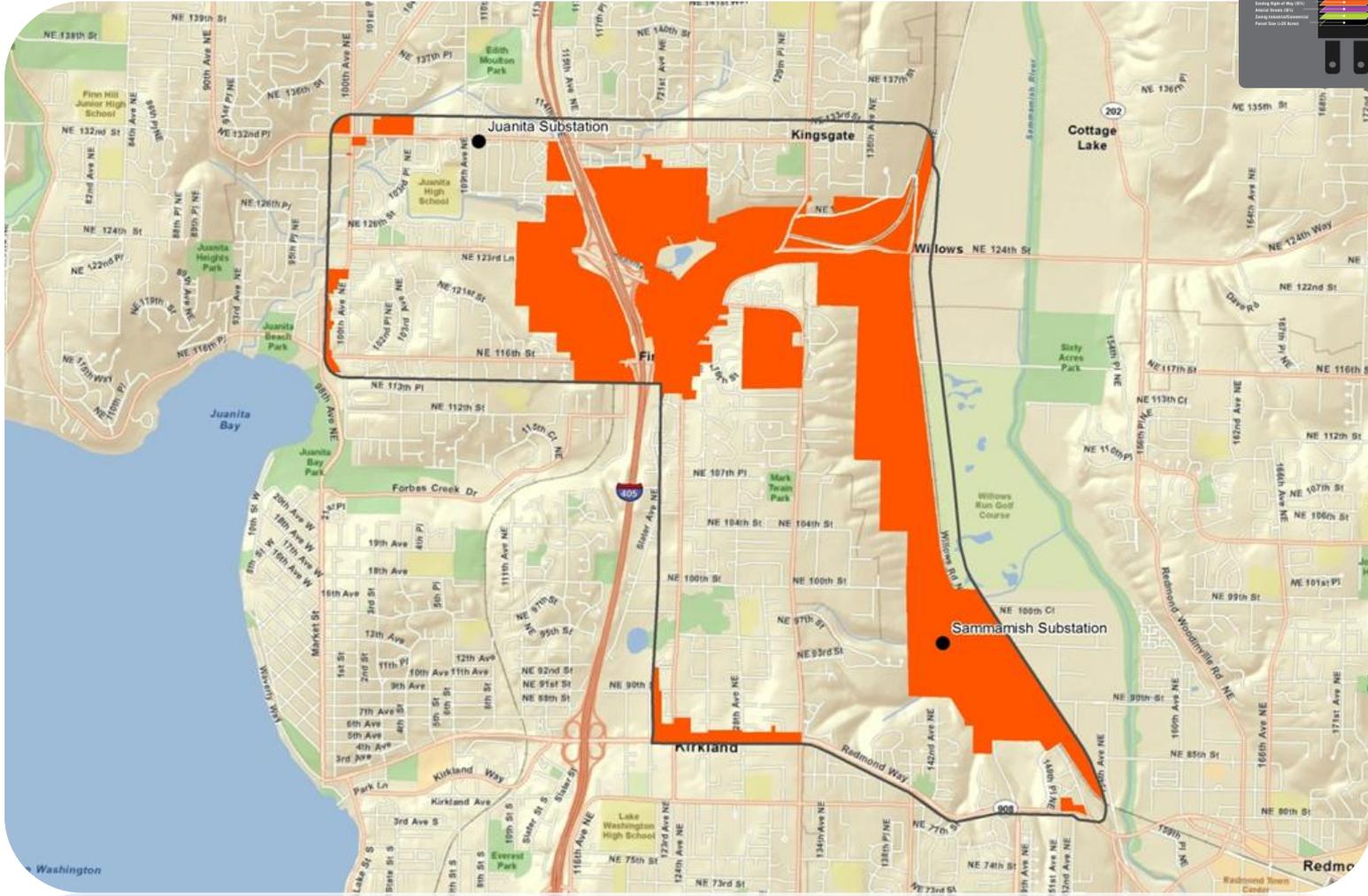


Industrial/Commercial Zoning

OPPORTUNITIES
IDENTIFY, WEIGHT, & MAP

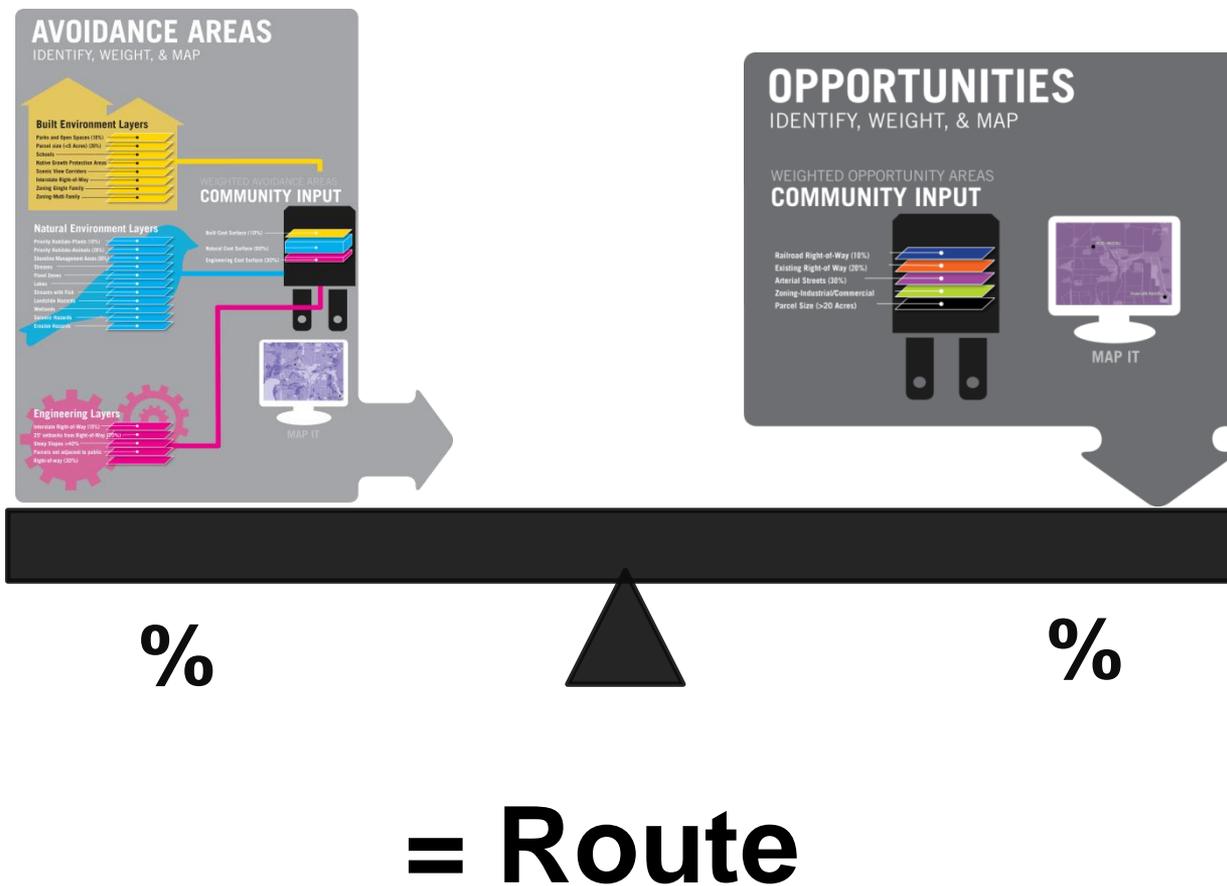
WEIGHTED OPPORTUNITY AREAS
COMMUNITY INPUT

MAP IT





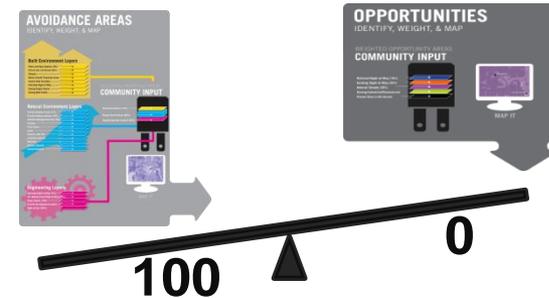
Chapter 2: GeoRoute Model





Chapter 2: GeoRoute Model

Engineering Criteria Most Important, No Opportunities Considered



0%

0%

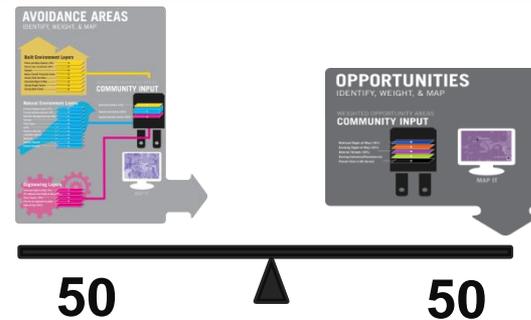
100%





Chapter 2: GeoRoute Model

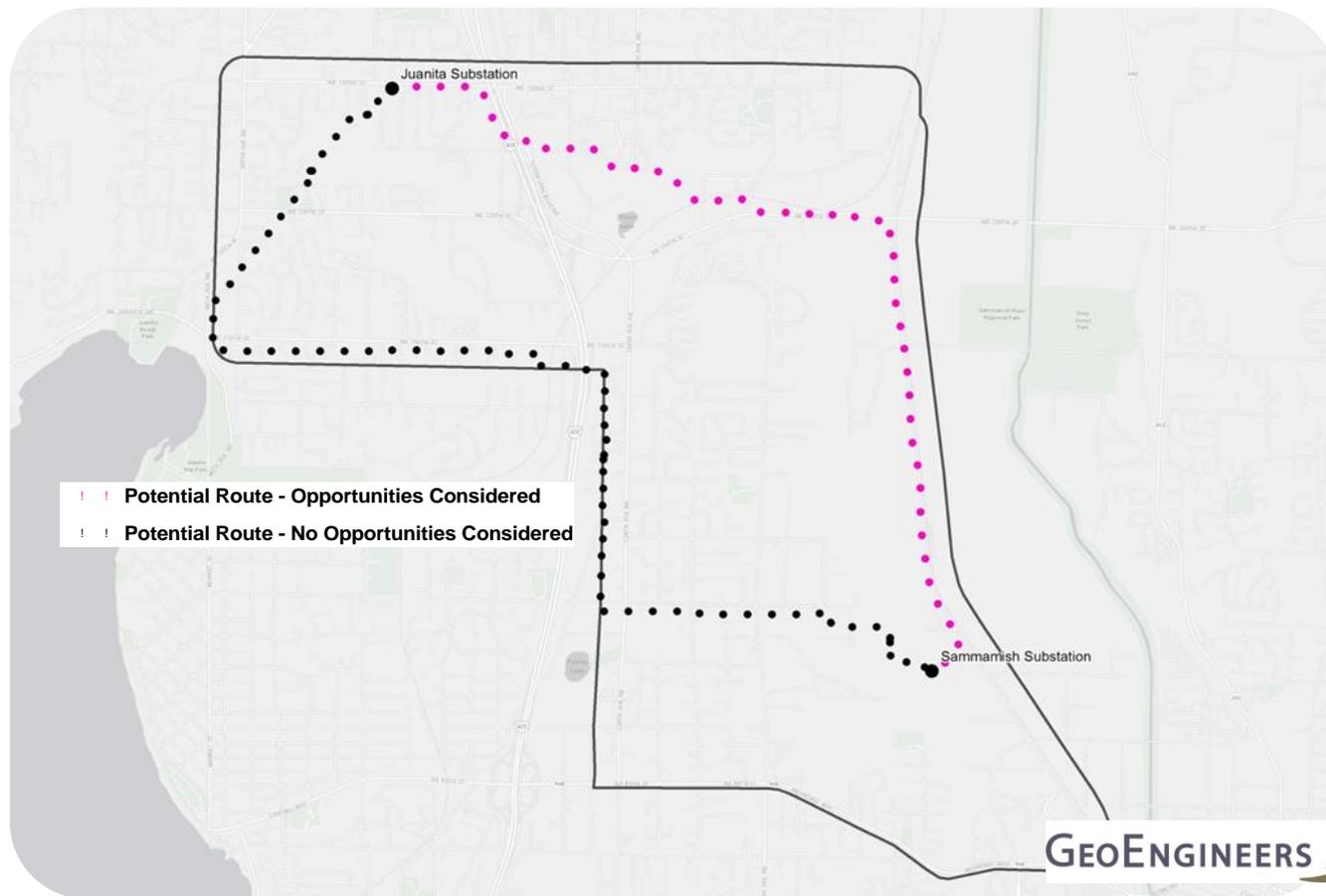
Engineering Criteria Most Important, Opportunities Considered



0%

0%

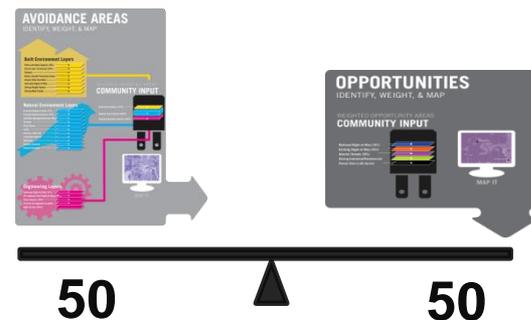
100%





Chapter 2: GeoRoute Model

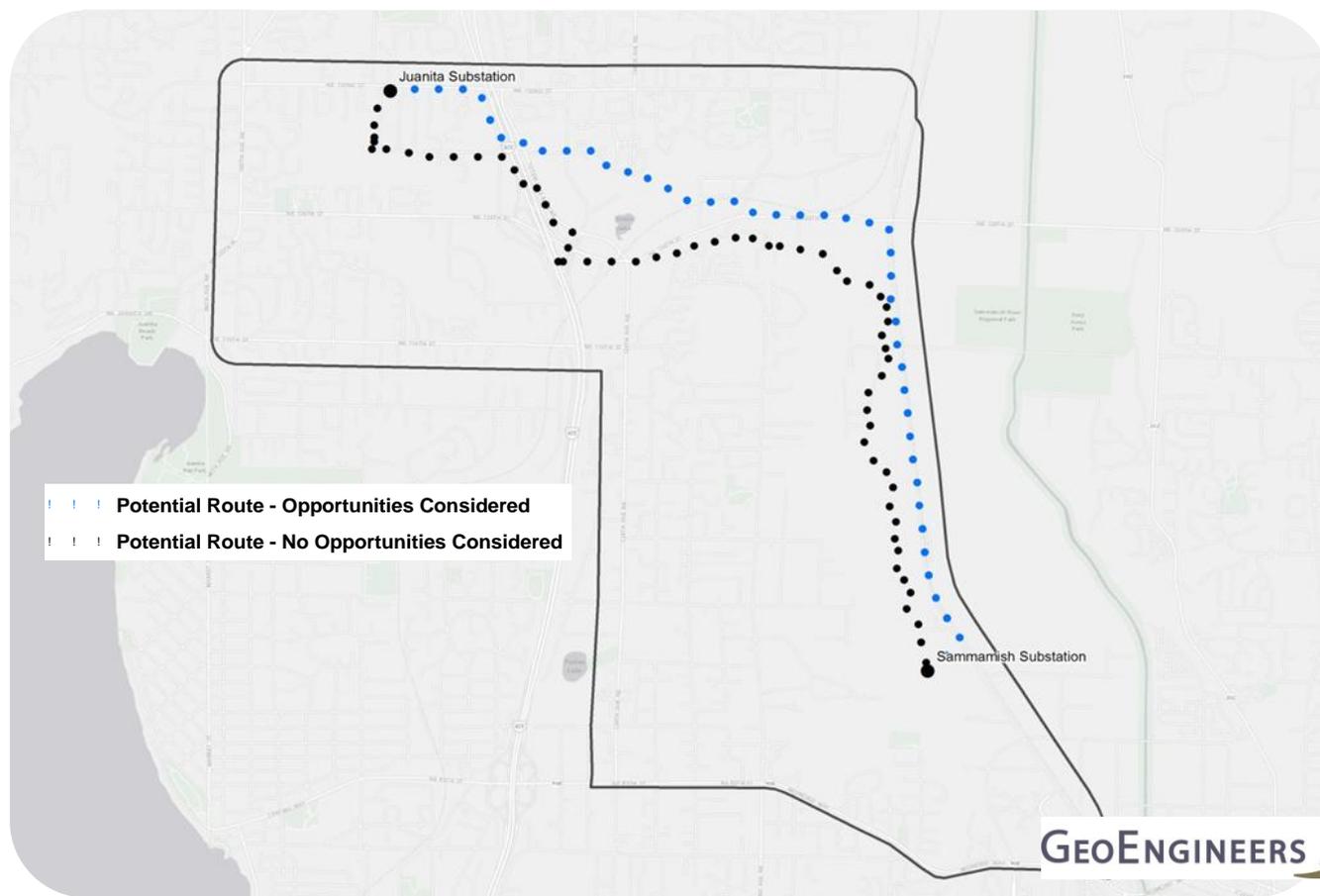
Natural Environment Criteria Most Important, Opportunities Considered



0%

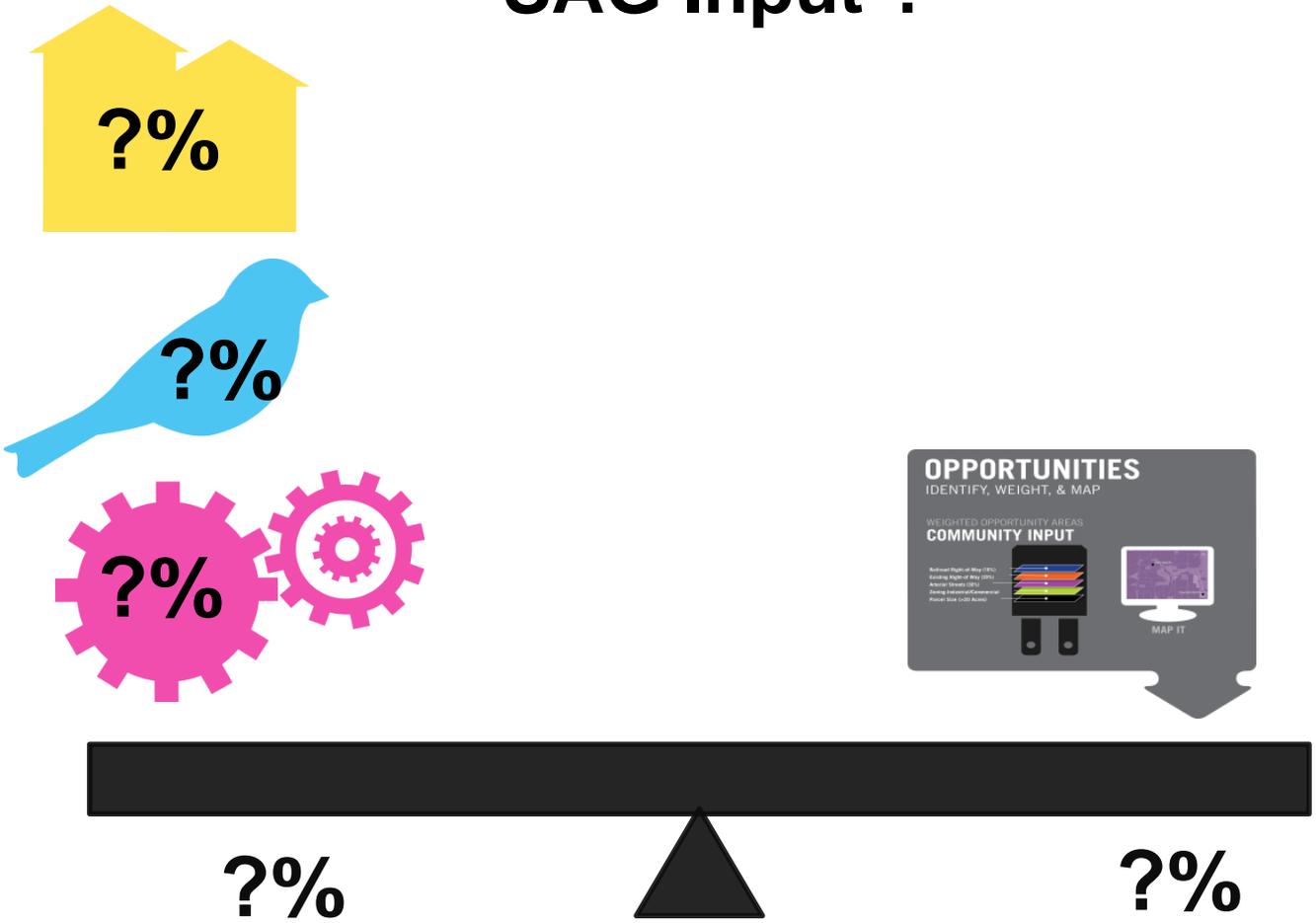
100%

0%





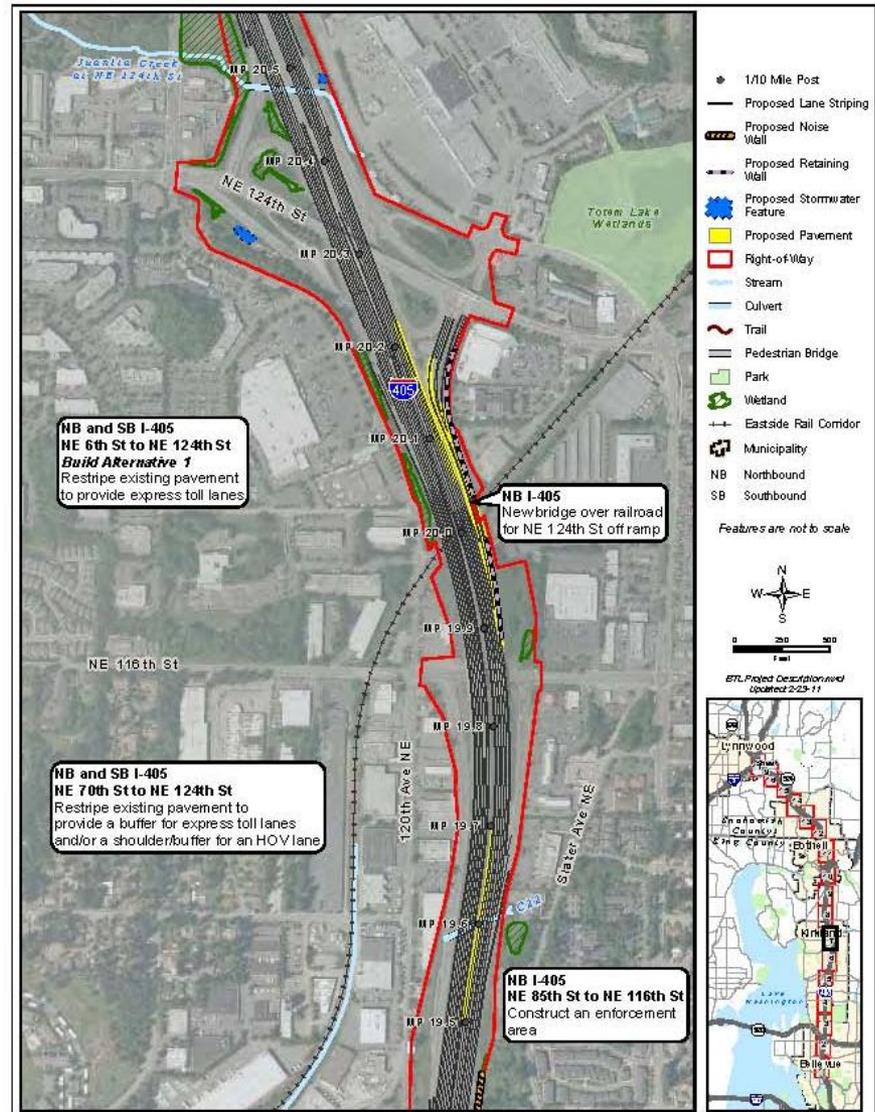
SAG Input ?



WSDOT Master Plan and Totem Lake

- I-405, Bellevue to Lynnwood Improvement Project
- Red lines show rights of way

Exhibit 2: Project improvements - sheet 7 of 17





Public comment from audience



Next steps

- November 17 meeting:
 - Develop and discuss any additional route alternatives
 - Narrow options to three route alternatives
- PSE will host an open house in December to ask the public for feedback on three potential route alternatives



Questions?

- **Sammamish-Juanita Project Contacts:**

Barry Lombard

Project Manager

barry.lombard@pse.com

425-456-2230

Jason Van Nort

Government and Community Relations Manager

jason.vannort@pse.com

425-462-3820



Thank You!