

Puget Sound Gateway Program

SR 509

Steering Committee
March 24, 2016

CRAIG J. STONE, PE GATEWAY PROGRAM ADMINISTRATOR
OMAR JEPPEPERSON, PE SR 509 PROJECT MANAGER

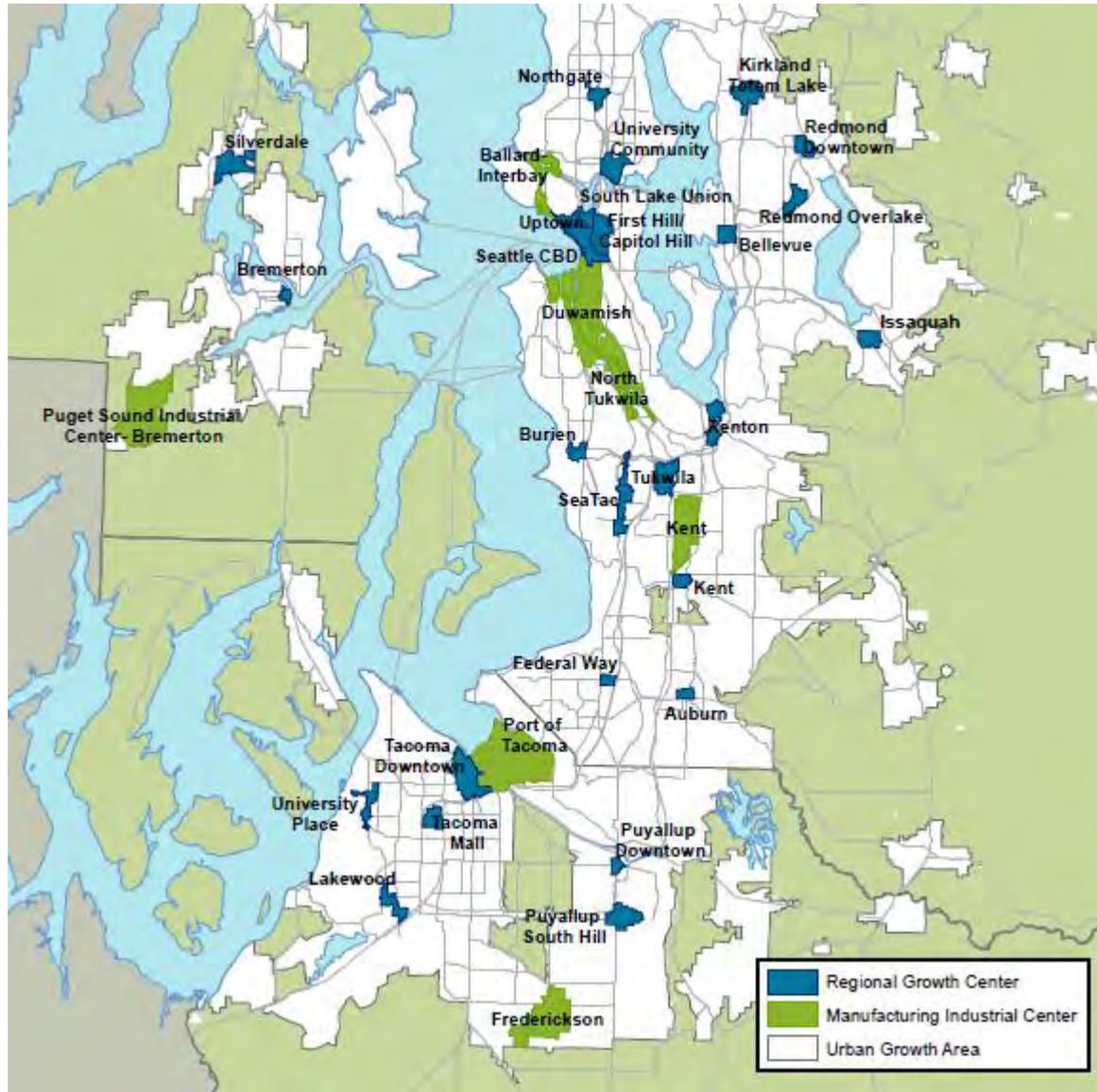
Agenda

- Welcome & Introductions
- Travel Demand Forecasting Model
- Draft Performance Metrics and Targets
- Next Steps

SR 509 Steering Committee 2016 Work Plan



Context for the Project



- PSRC 2040
- Comprehensive Plans
- Urban and Manufacturing Industrial Centers
- Input from stakeholders

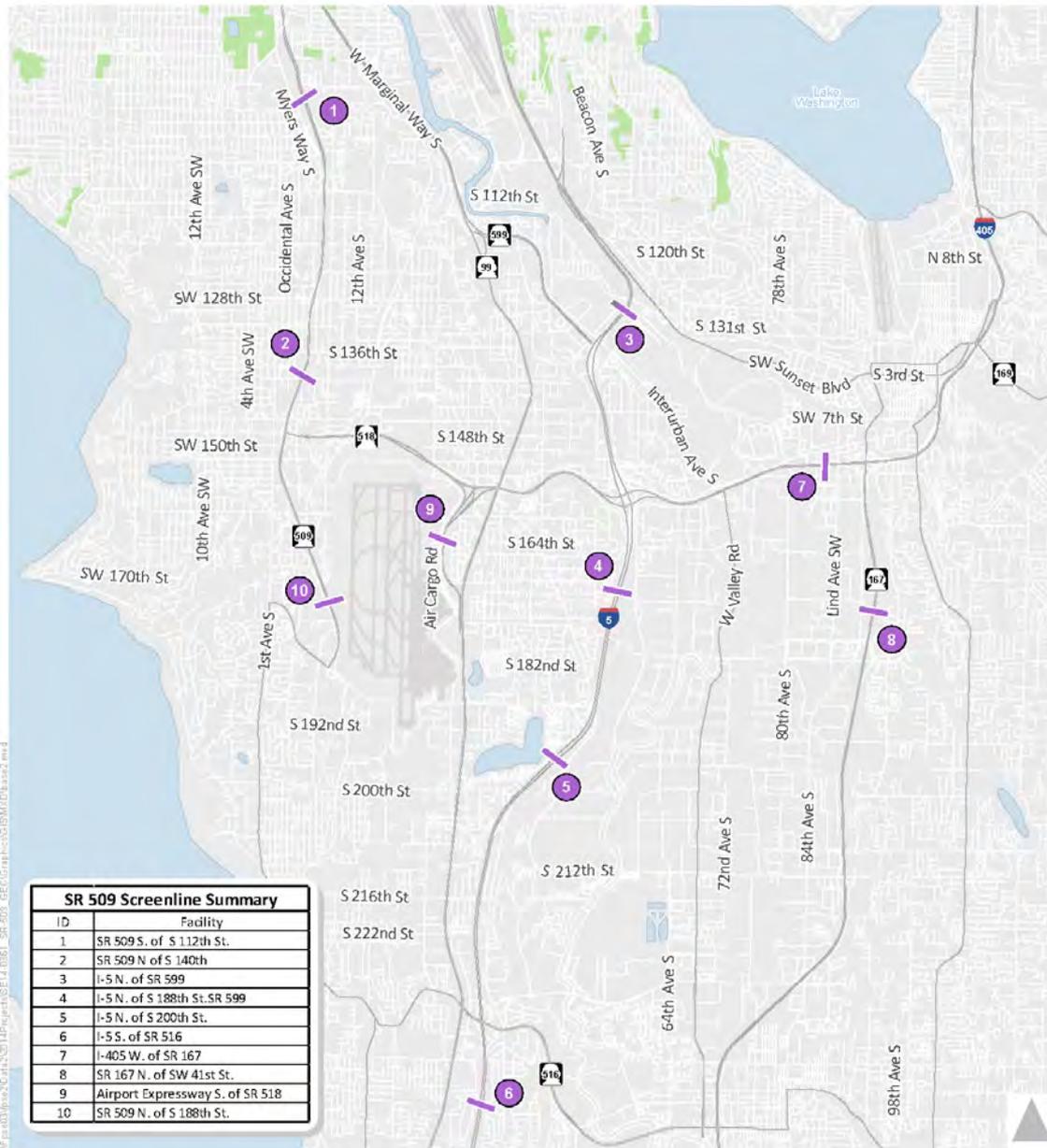
Previous Traffic Forecasting

- High levels of peak period demand
- Used state-of-the-art forecasting that was available at the time (1999)
 - Daily demand factored to peak hour
 - Upstream and downstream physical constraints not fully captured

Current Traffic Forecasting

- Still showing growth
- State-of-the-art forecasting
 - Time of day demands
 - More accurate trip generation detail
- Greater network resolution
- Capacity constraints reflected
- Tolling is accounted for
 - Legislative intent to toll

SR 509 Traffic Forecasting Approach



Baseline Calibration

- OFM census tract household estimates
- Refined network
- AM and PM peak hour vehicle demands match 2015 counts

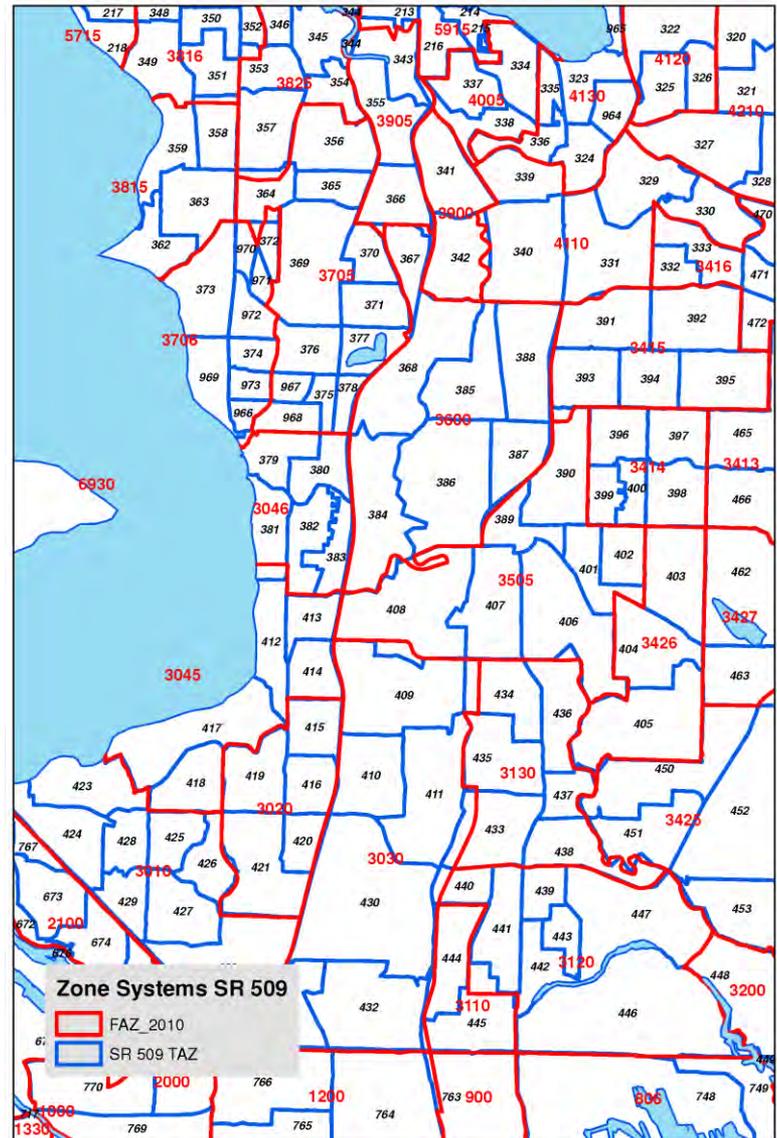
Model Input

- Refined network
- Assumes tolling
 - Tolled similarly to SR 520

SR 509 Traffic Forecasting Approach

Model Input (cont.)

- 2025 / 2045
- PSRC Land Use Vision (LUV) forecasts
- Area specific forecasts
 - Comprehensive Plans
 - Land use distributions



SR 509 Traffic Forecasting Approach

Assumed Transportation Projects

- Local agency plans
- WSDOT regional projects
- Sound Transit

Trucks

- Limited truck data available
 - PSRC truck module
 - Freight Analysis Framework
 - Existing truck counts
 - Seattle marine terminal truck info

SR 509 Traffic Forecasting Application

Data extracted from the model

- By facility and area
 - Future year demands
 - Travel time
 - Delay

SR 509 Traffic Forecasting Application

Discussion

Review of Project Needs

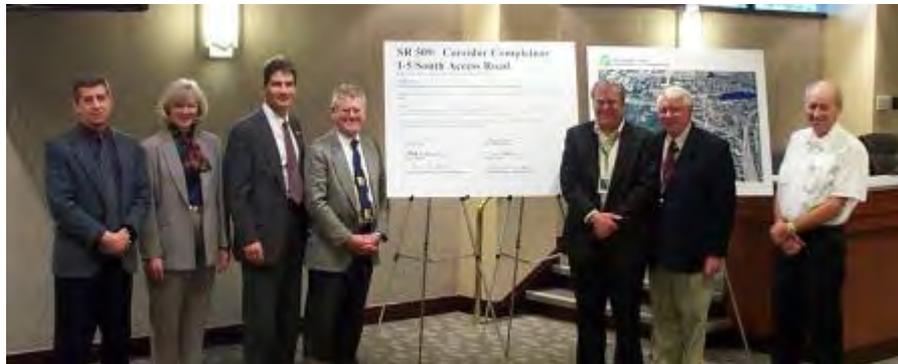
2003 EIS Purpose and Need:

- **Purpose:**

- Improve regional highway connections with an extension of SR 509 to serve current and future transportation needs in southwest King County and to enhance southern access to Sea-Tac International Airport.

- **Need:**

- Create system linkages, accommodate travel demand and capacity needs, and improve intermodal relationships.
- Close the gap between existing SR 509 and I-5
- Ease capacity and travel demands on local streets and major transportation routes, like I-5



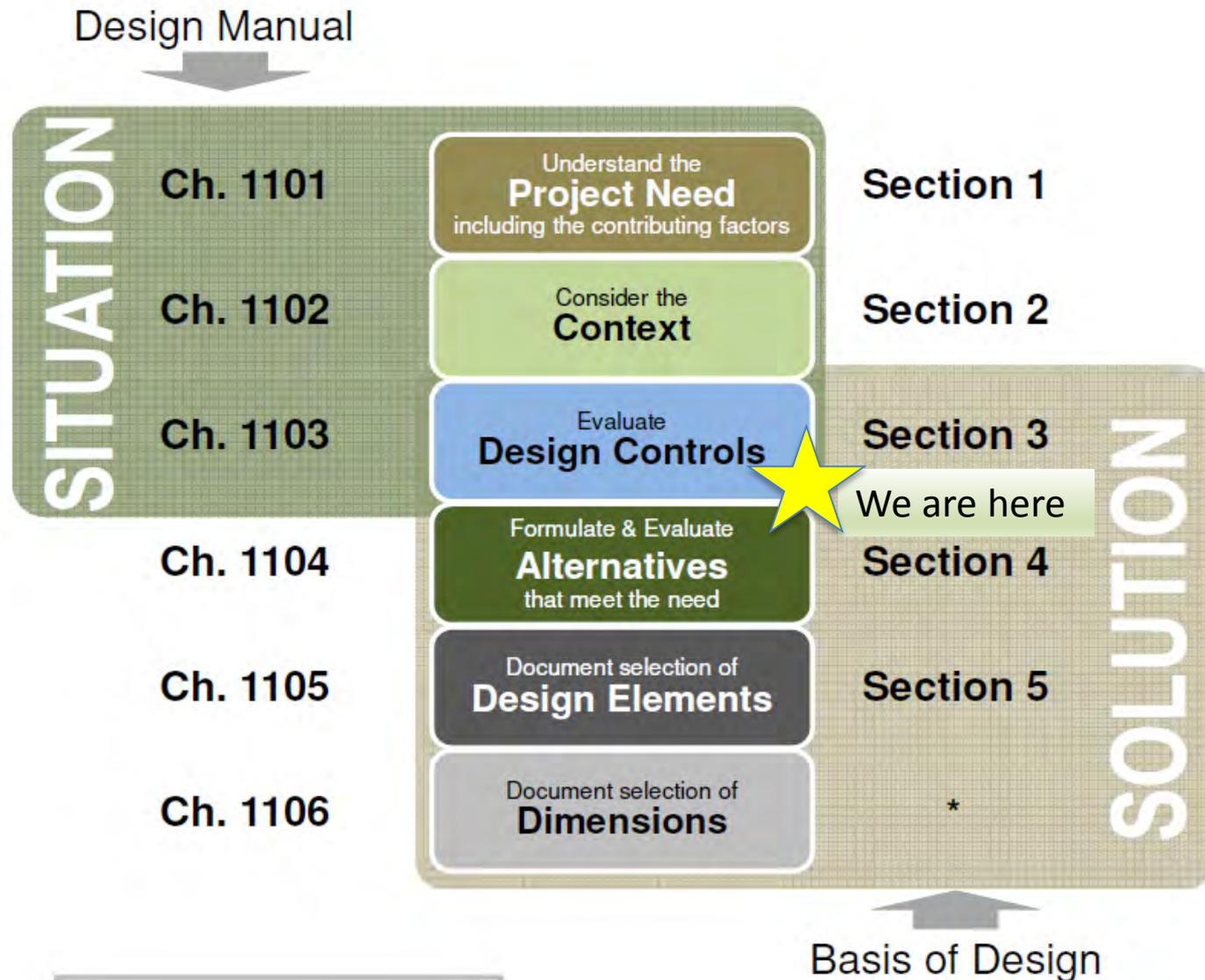
Review of Project Needs

2003 EIS Objectives:

- Support local and regional comprehensive planning and development
- Maintain efficiency of existing roadways in the immediate vicinity of the airport terminals and parking garage
- Relieve local congestion
- Serve harbor freight operations
- Improve regional mobility and safety
- Be compatible with connections to High Capacity Transit
- Develop broad public and political support for the preferred alternative
- Design project in an environmentally responsible manner
- Provide cost-effective alternatives and solutions



Practical Solutions Approach



Essential Needs

Essential Needs Meeting 1		Updated Essential Needs
1	<ul style="list-style-type: none"> Complete freeway network (close the gap) 	<ul style="list-style-type: none"> Reduce travel time between Urban Centers and Manufacturing Industrial Centers in South King County
2	<ul style="list-style-type: none"> Improve freight travel time and reliability 	<ul style="list-style-type: none"> Improve travel time reliability between Urban Centers and Manufacturing Industrial Centers in South King County
3	<ul style="list-style-type: none"> Improve southern connection to Sea-Tac Airport for people and goods 	<ul style="list-style-type: none"> Reduce travel time from South Sound to Sea-Tac Airport Improve travel time reliability from South Sound to Sea-Tac Airport
4	<ul style="list-style-type: none"> Ease congestion between Seattle and Tacoma by utilizing unused capacity on SR 509 	<ul style="list-style-type: none"> Reduce hours of delay in the project subarea network Maintain or improve I-5 operations
5	<ul style="list-style-type: none"> Support Regional Growth Centers for Burien, SeaTac, Kent and Federal Way, and Industrial Centers for Duwamish and Kent 	<ul style="list-style-type: none"> Improve economic vitality Support local and regional comprehensive land use planning and development
6		<ul style="list-style-type: none"> Reduce number of serious injury and fatal crashes
7	<ul style="list-style-type: none"> Improve transit operations and connections to transit 	<i>Will be addressed by mode in the performance metrics</i>

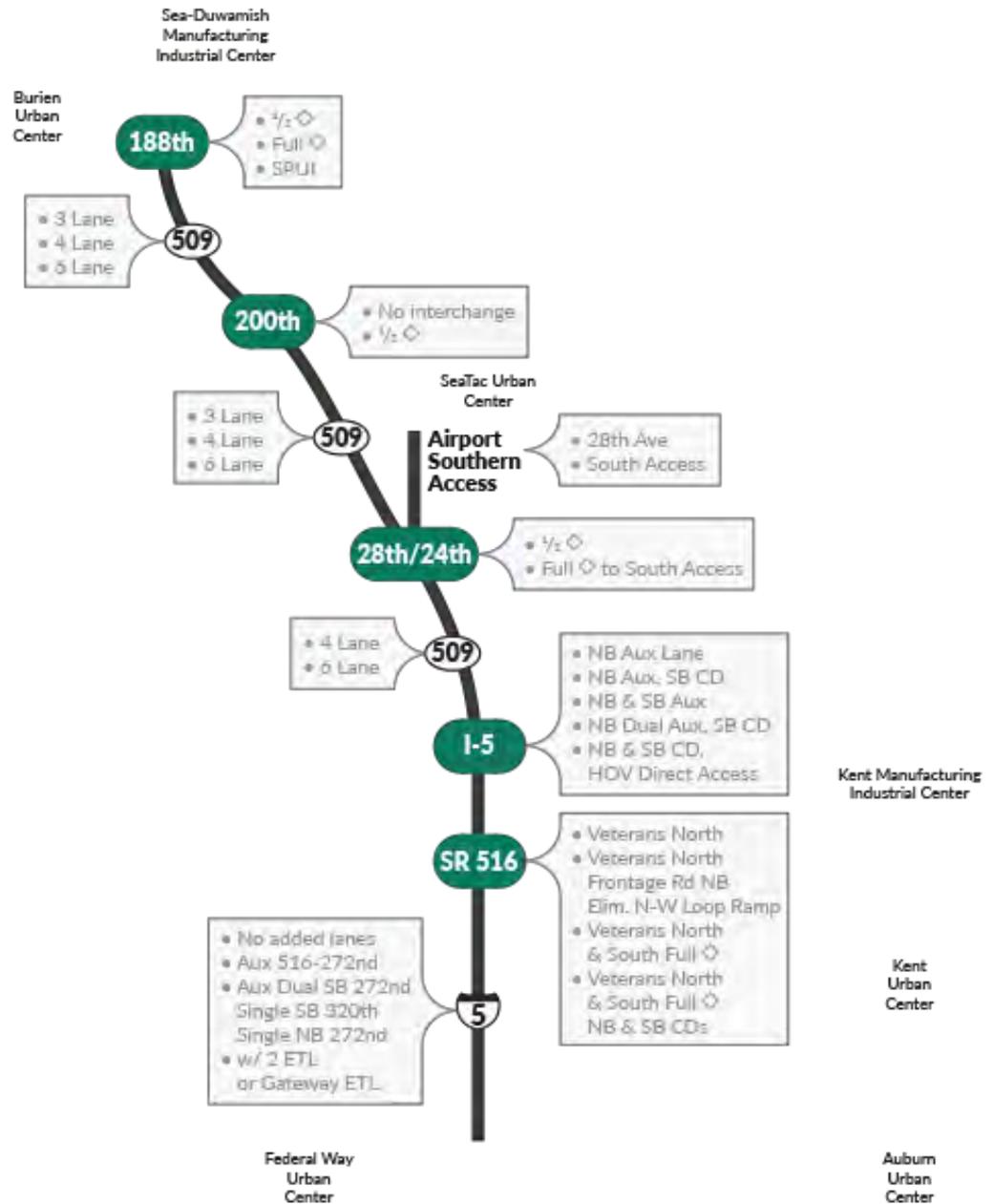
Contextual Needs

Contextual Needs Meeting 1		Updated Contextual Needs
1	<ul style="list-style-type: none"> Support local and regional comprehensive planning and economic development 	<i>Moved to Essential Needs</i>
2	<ul style="list-style-type: none"> Improve mobility and safety between the state's largest cities and counties <ul style="list-style-type: none"> Improve mobility and safety in the I-5 corridor north of SR 516 Improve mobility and safety in the I-5 corridor south of SR 516 	<i>Moved to Essential Needs</i>
3	<ul style="list-style-type: none"> Improve east-west connectivity across the Kent Valley MIC 	<i>Moved to Essential Needs (part of urban centers concept)</i>
4		<ul style="list-style-type: none"> Reduce the number of serious injury and fatal crashes on local arterials
5	<ul style="list-style-type: none"> Decrease demand on local arterials, decreasing delay and increasing safety 	<i>Moved to Essential Needs (part of reduce hours of delay in the subarea network)</i>
6		<ul style="list-style-type: none"> Support multimodal choices to Sea-Tac Airport Improve intermodal relationships
7	<ul style="list-style-type: none"> Provide pedestrian connectivity Provide bicycle connectivity 	<ul style="list-style-type: none"> Reduce pedestrian vehicle exposure Continuity and consistency of pedestrian and bicycle facilities
8		<ul style="list-style-type: none"> Maintains forward compatibility with EIS
9		<ul style="list-style-type: none"> Reduce area of impact to sensitive areas
10		<ul style="list-style-type: none"> Compatibility with Sound Transit Federal Way Link Extension

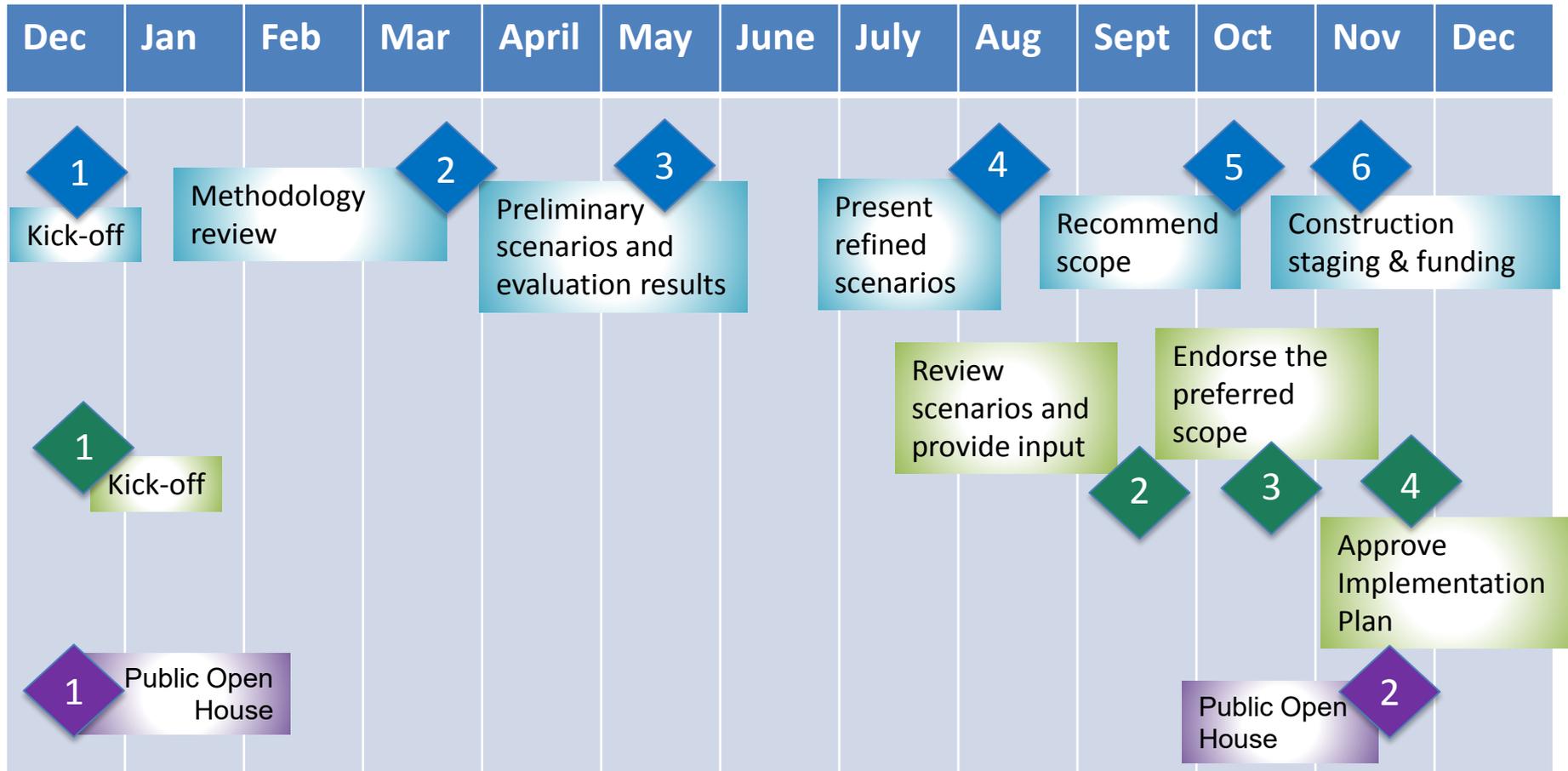
Proposed Project Subarea



Developing Scenarios



Project Schedule (SR 509)



Steering Committee Meeting



Executive Committee Meeting



Open House

More information:

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