

I-90/Front Street Interchange Justification Report

Greater Maple Valley Unincorporated Area Council

Presented by:

WSDOT

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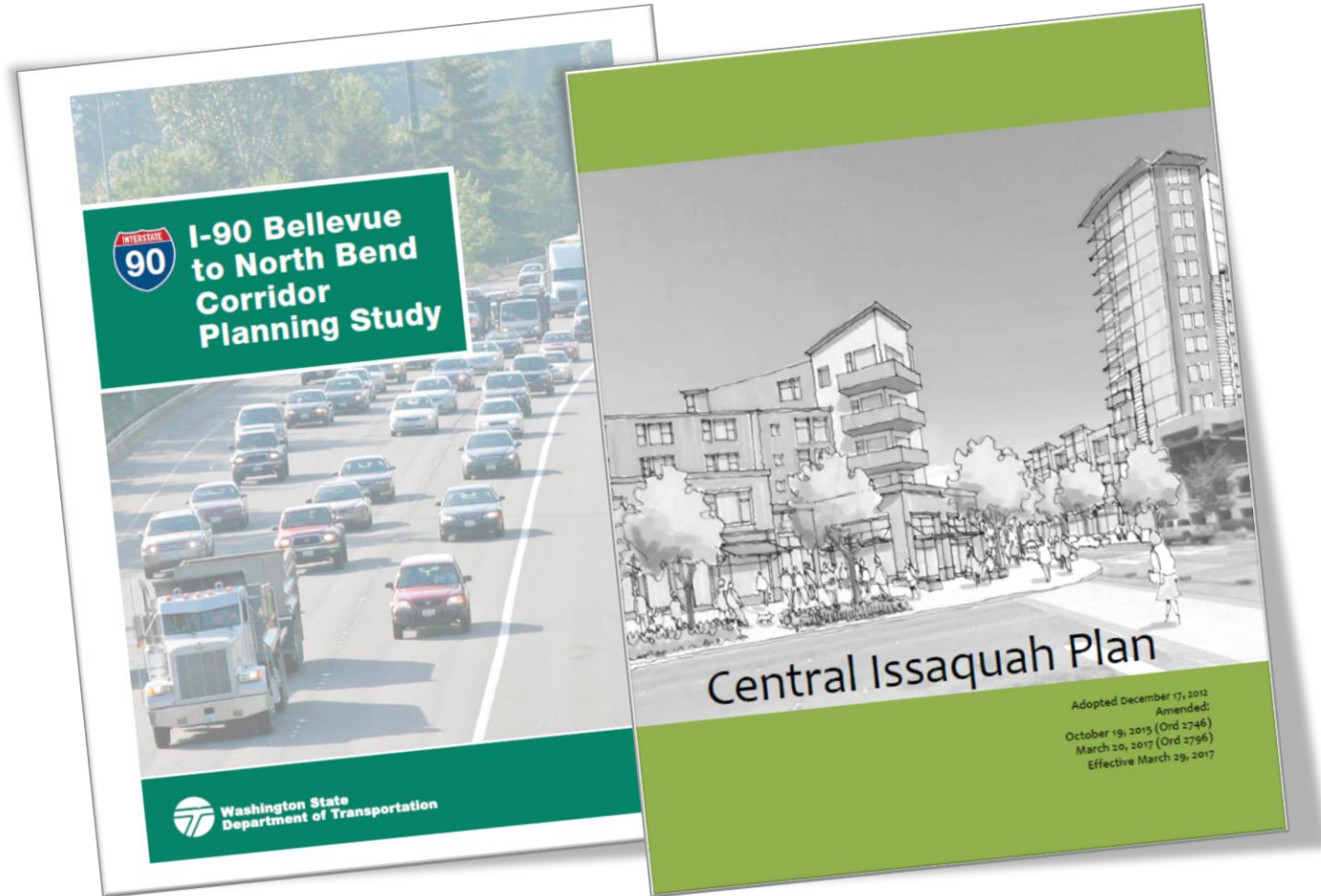
BergerABAM, Inc.

November 5, 2018

Agenda

- Background & Objectives
- Stakeholder & Community Input
- Data & Analysis Findings
- Purpose & Need
- Study Process
- Alternatives
 - *Types of Alternatives*
 - *Top Alternatives*
- Screening Process and Results
- Next Steps
- Key Takeaways

Study Background



Objectives

1. Advance Previous Studies

2. Answer Three Key Questions

- a. Are congestion problems due to local network issues or are they related to the interstate/interchange?
- b. If problems are interstate/interchange related, then what is the preferred alternative to improve congestion and address safety?
- c. What are the costs of recommended improvements?

Community Engagement Overview

STAKEHOLDERS

Local Businesses/ Groups

DOWNTOWN ISSAQUAH
HISTORICALLY HIP

THE GREATER ISSAQUAH CHAMBER OF COMMERCE
Where Business & Community Meet

ISSAQUAH HIGHLANDS COMMUNITY ASSOCIATION
MAINTAINING COMMUNITY

ROWLEY PROPERTIES

ISSAQUAH SCHOOL DISTRICT 411

COSTCO WHOLESALE

General Public

- Property owners
- Local Businesses
- Developers
- Residents
- Traveling public



Support Team

WSDOT

CITY OF ISSAQUAH WASHINGTON

City of Sammamish Washington

CITY OF RENTON

U.S. Department of Transportation Federal Highway Administration

CITY OF BELLEVUE WASHINGTON

Puget Sound Regional Council

King County

SOUNDTRANSIT

Stakeholder & Community Input

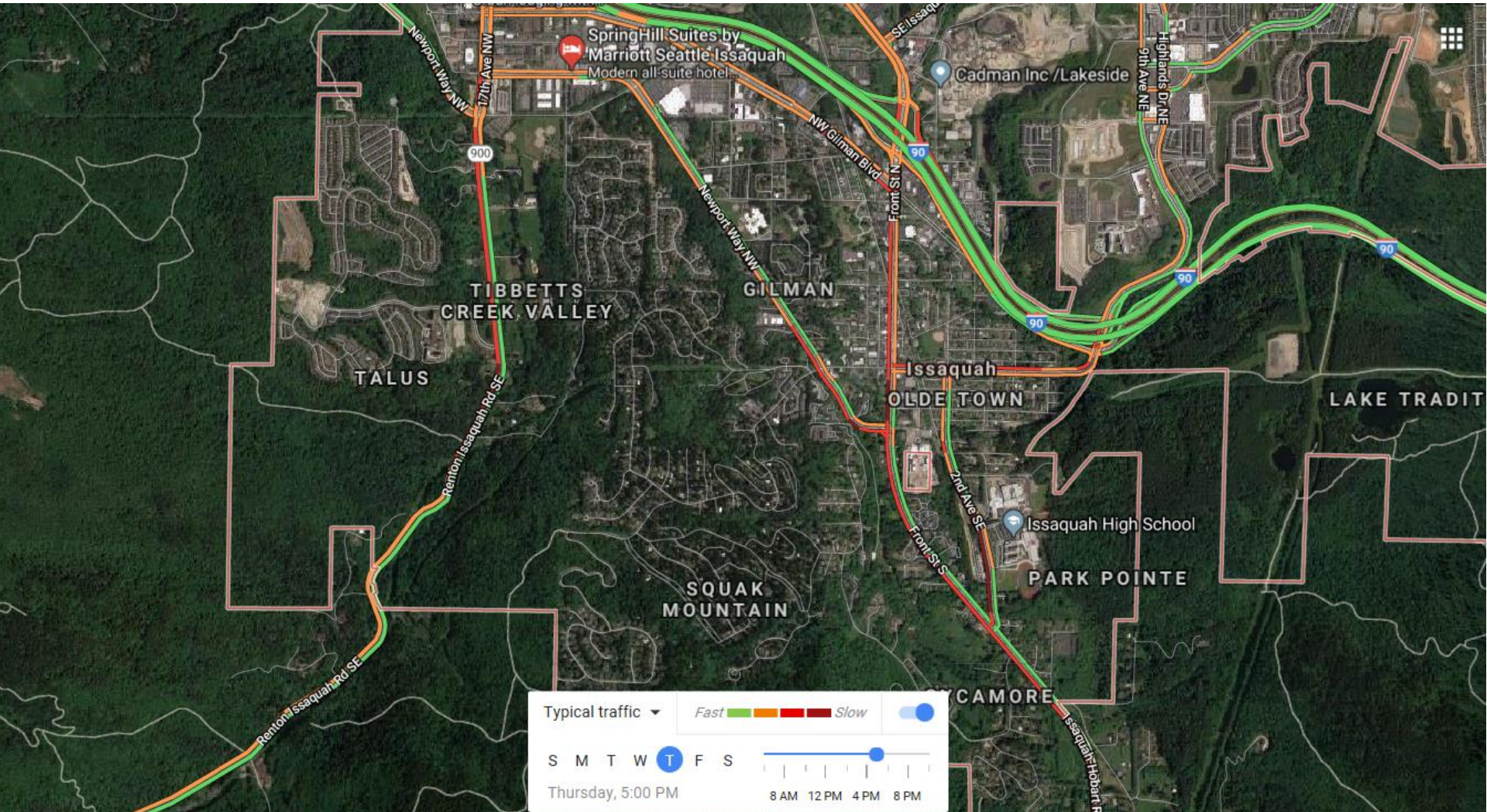


Stakeholder & Community Input

Key Themes

- Front Street congestion caused by regional traffic passing through Issaquah
- Both local and regional improvements needed to relieve congestion
- Need to encourage city through traffic to use alternate routes
- Growth in Issaquah will mean more cars and more congestion
- There is need for more north-south corridors in Issaquah
- Planned improvements must consider/accommodate all modes (e.g. transit)

Data & Analysis Findings





Data & Analysis Findings

090v01717_2018-04-17-17.00.01.027_PDF_Exp300.J-90 Front St Off Ramp





Purpose & Need



41% of collisions in the vicinity of the interchange occurred on the interstate.



53% of these collisions were rear-end accidents and likely attributed to stop-and-go conditions.

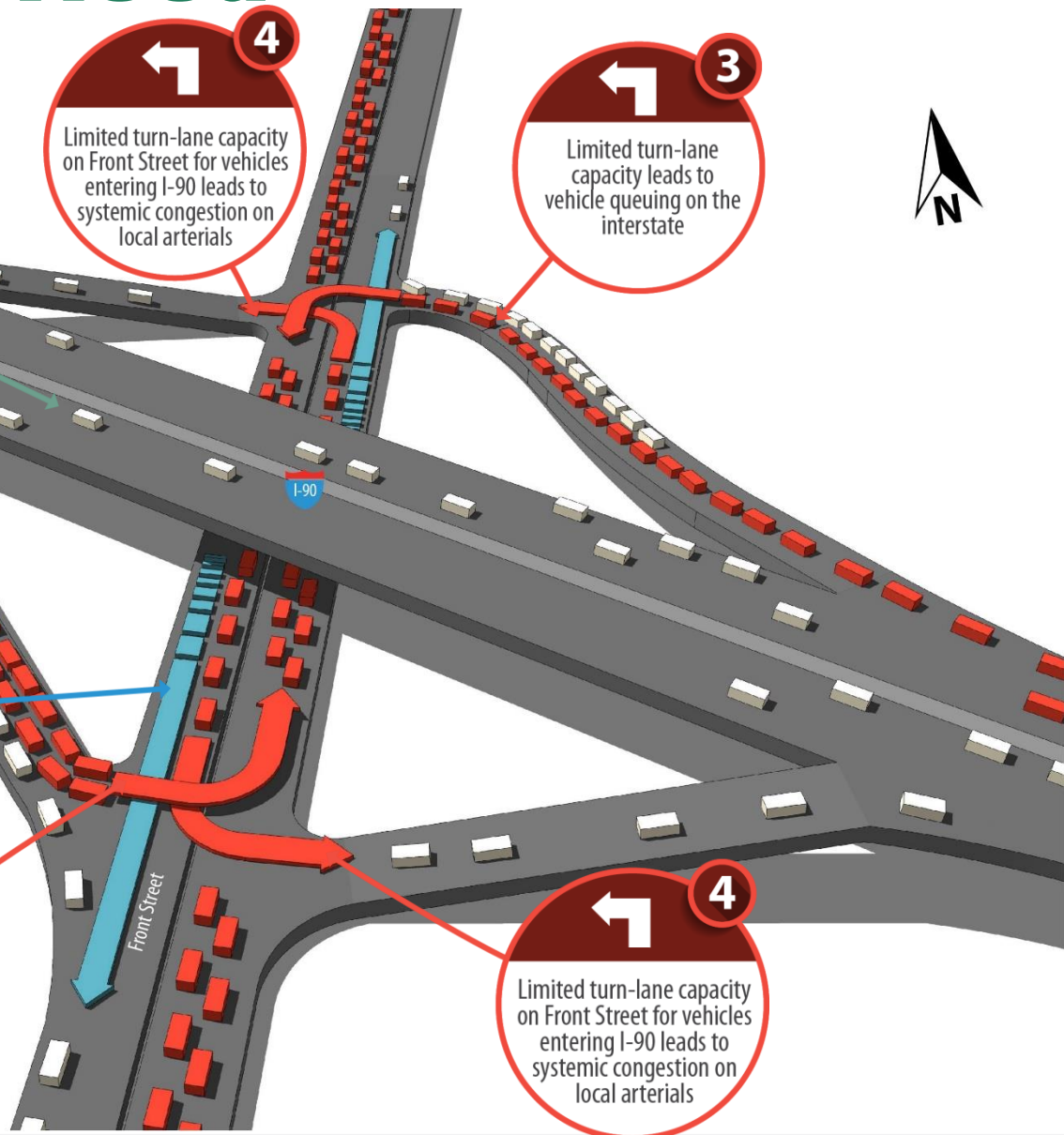

1
Vehicles often travel to destinations north and south of the interstate without accessing the interchange.


2
Limited turn-lane capacity leads to vehicle queuing on the interstate


4
Limited turn-lane capacity on Front Street for vehicles entering I-90 leads to systemic congestion on local arterials


3
Limited turn-lane capacity leads to vehicle queuing on the interstate


4
Limited turn-lane capacity on Front Street for vehicles entering I-90 leads to systemic congestion on local arterials



Purpose & Need *(bullets)*

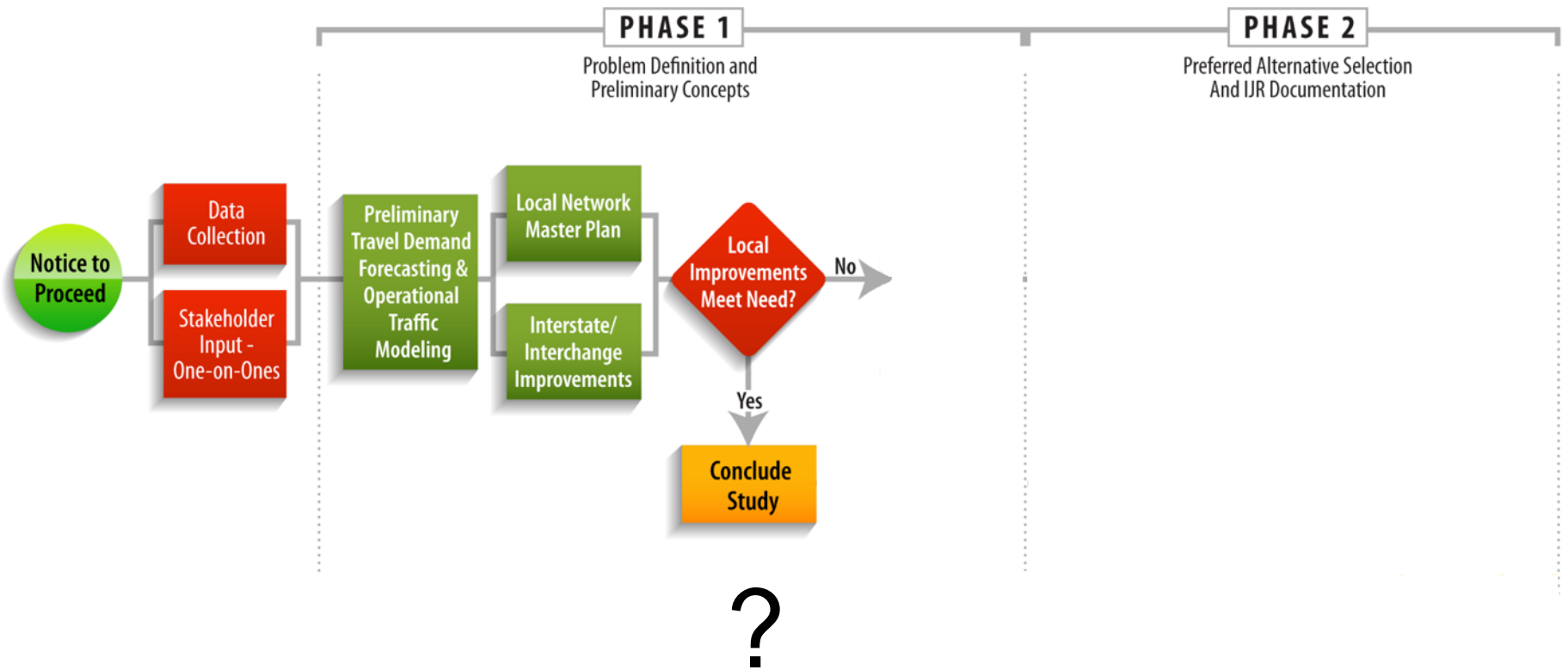
Need

1. Limited number of N/S I-90 crossings
2. Limited capacity of left turn pockets on the EB off-ramp at Front Street leads to queues that extend onto the I-90 mainline
3. Limited capacity of left turn pockets on the WB off-ramp at Front Street leads to queues that extend onto the I-90 mainline,
4. Limited capacity of existing turn-lane pockets on Front Street limits I-90 access
5. Local and regional growth is expected to make congestion worse and increase travel delays

Purpose

1. Increase capacity for vehicles crossing I-90 near and/or at Front Street
2. Improve local and regional circulation through the I-90/Front Street interchange
3. Improve safety on I-90 and/or the Front Street Interchange (especially at the EB off-ramp)
4. Provide solutions to improve mobility at the Front Street interchange to accommodate current and expected growth

Study Process and Timeline



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Study Process and Timeline

Washington State Design Manual

550.01 General

The primary function of limited access freeways and highways is to provide safe and reliable travel for people, goods, and services from state to state and region to region within a state. They should not be used for local trips as an extension of the local street network. Adding or revising access can adversely impact the safety and operations of these facilities; therefore, access revisions must be done with caution. For this reason, new and/or modified access must be justified, and this chapter contains the process for seeking access approval.

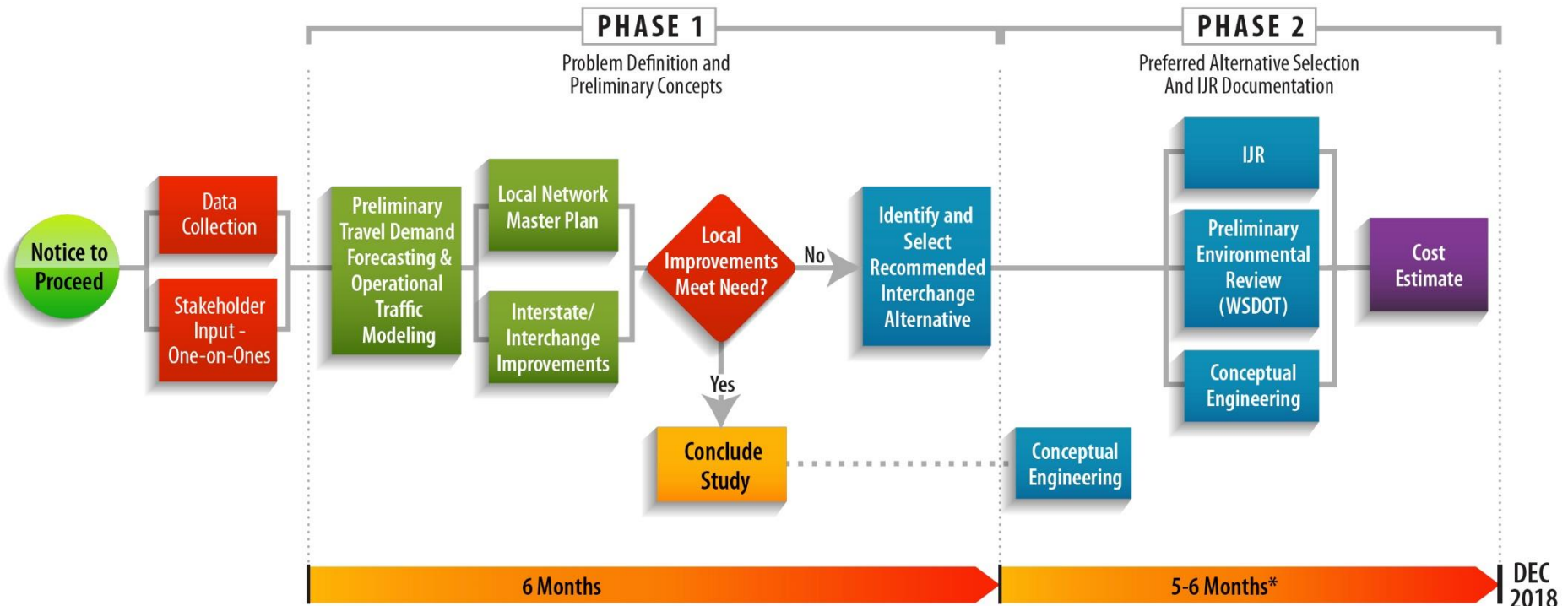
An Interchange Justification Report (IJR) is the document used to justify a new access point or access point revision on existing limited access freeways and highways in Washington State. This chapter provides policy and guidance on developing the required documentation for an IJR, and the sequence of an IJR presentation, for both Interstate and non-Interstate limited access routes.

Federal law requires Federal Highway Administration (FHWA) approval of all revisions to the Interstate system, including changes to limited access. Both FHWA and Washington State Department of Transportation (WSDOT) policy require the formal submission of a request to either break or revise the existing limited access on Interstate routes. This policy also facilitates

550.02 Procedures

An access point revision is a multistep process. It begins with assembling a support team to conduct a feasibility or planning-level study. The purpose of this study is to determine whether there are improvements that can be made to the local roadway network to meet the purpose and need of the proposed access modification. If the study shows that the purpose and need of the proposal cannot be achieved with the local infrastructure only, the next step would normally be to prepare an IJR (see the Interstate IJR: Process Flow Chart, [Exhibit 550-3](#)).

Study Process and Timeline

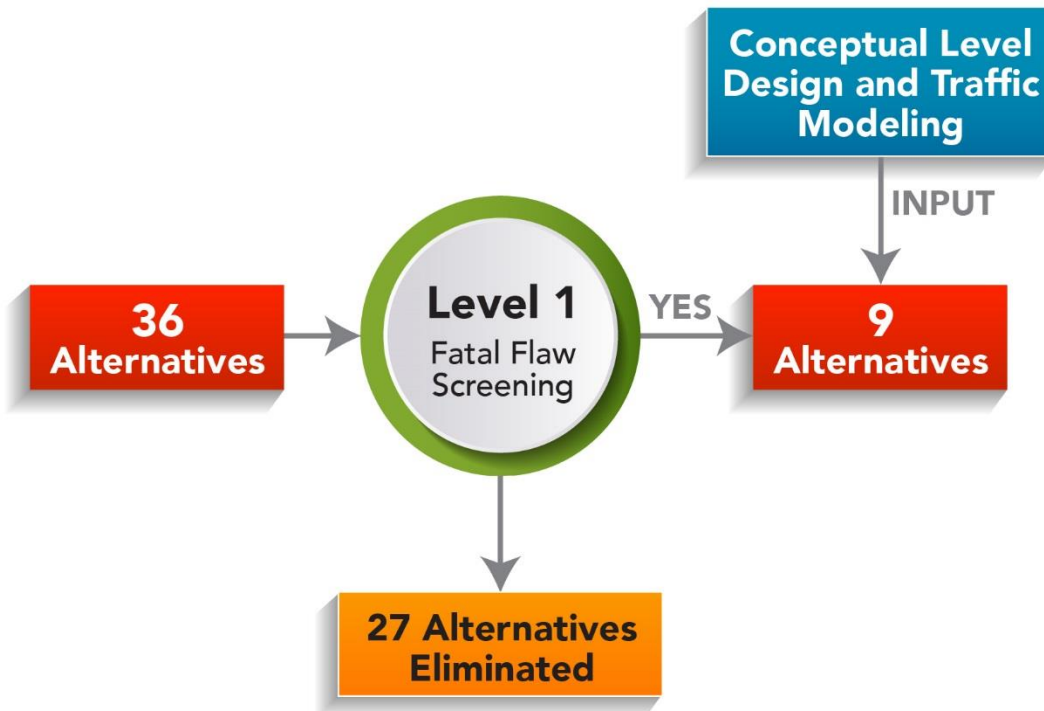


* Depending on type and extents of recommended improvements

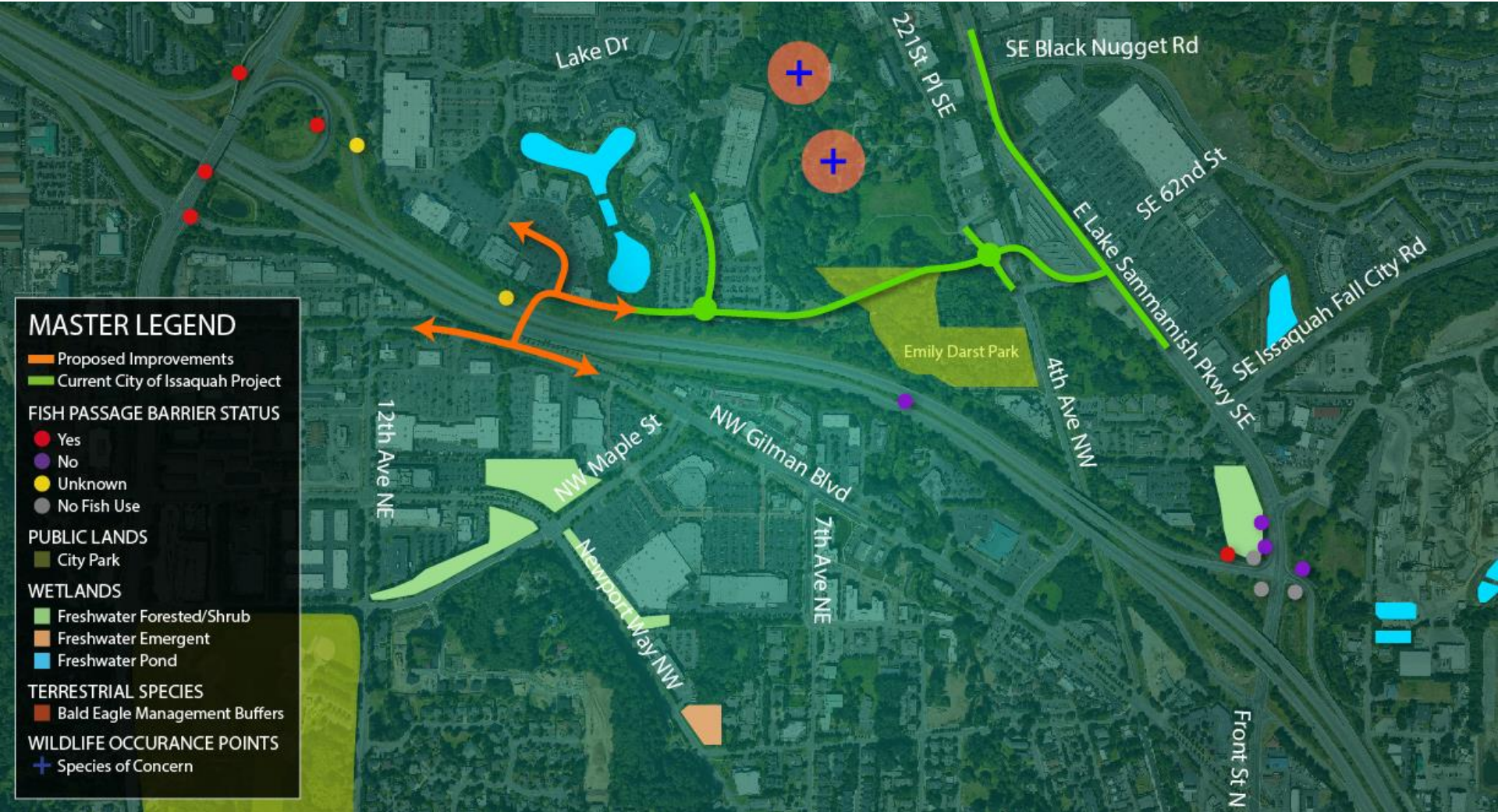
Alternatives Considered

Group #	Types	Count
1	New North-South Crossing of I-90	5
2	Widening of Existing Roads	9
3	New Roads or Corridors	7
4	Freeway and Interchange Revisions/ Improvements	13
5	Other Transit/Access Improvements/Programs	2
	Total	36

Two-Tiered Screening Process



Alt #3 NW Gilman Blvd 'T' Intersection



MASTER LEGEND

- Proposed Improvements
- Current City of Issaquah Project

FISH PASSAGE BARRIER STATUS

- Yes
- No
- Unknown
- No Fish Use

PUBLIC LANDS

- City Park

WETLANDS

- Freshwater Forested/Shrub
- Freshwater Emergent
- Freshwater Pond

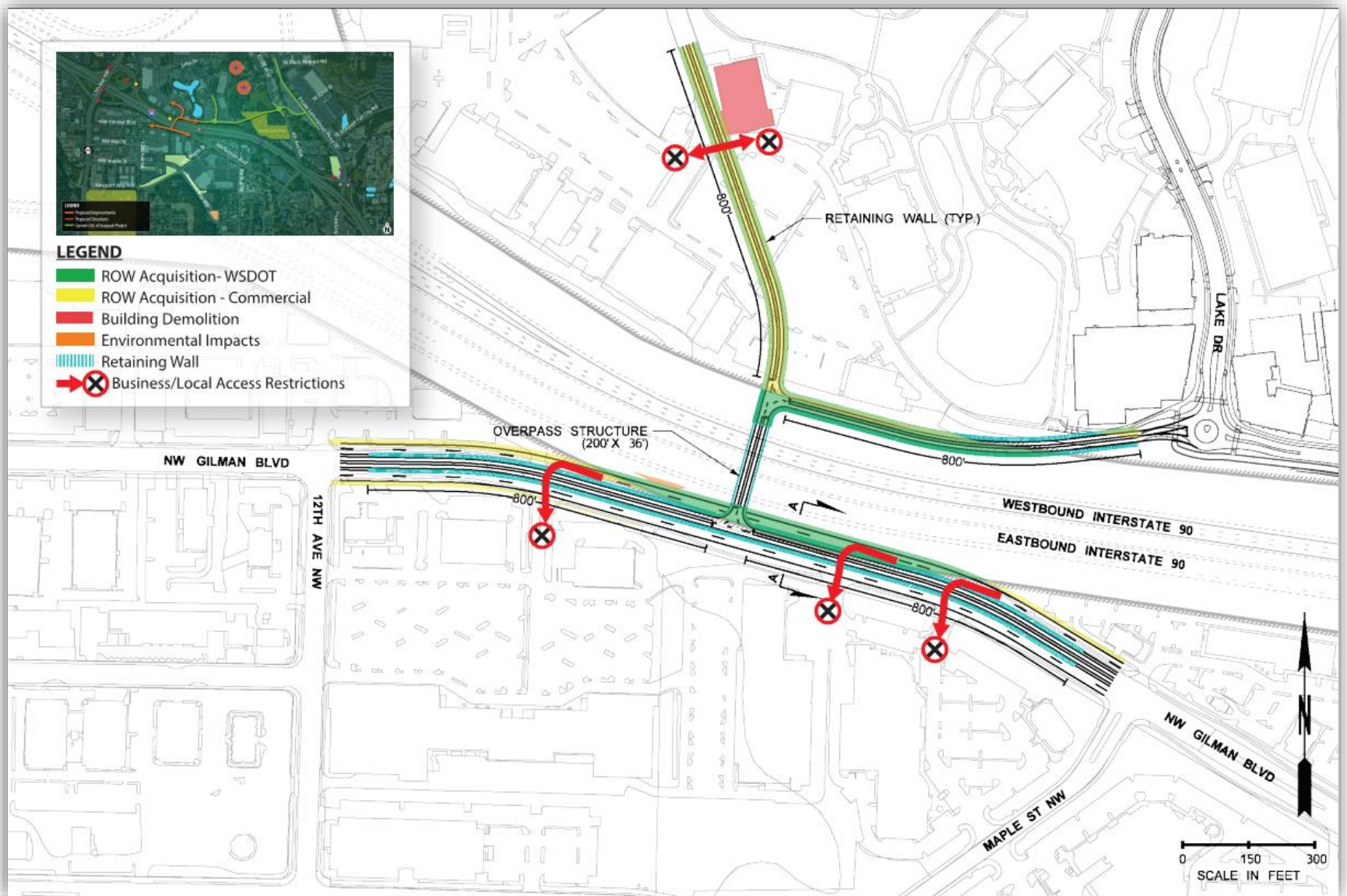
TERRESTRIAL SPECIES

- Bald Eagle Management Buffers

WILDLIFE OCCURANCE POINTS

- Species of Concern

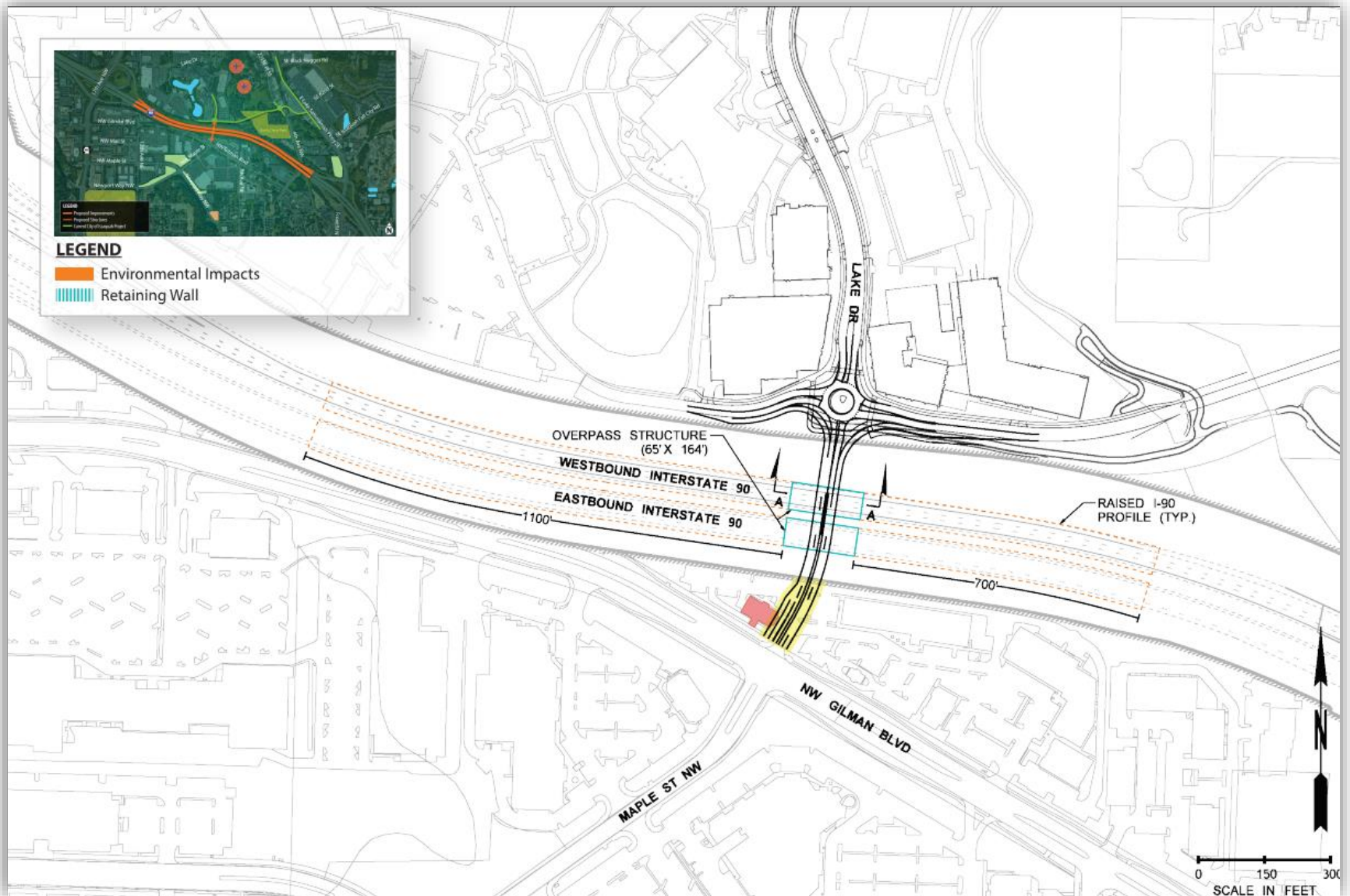
Alt #3 NW Gilman Blvd 'T' Intersection



Alt #4 NW Maple at Grade (Raise I-90)



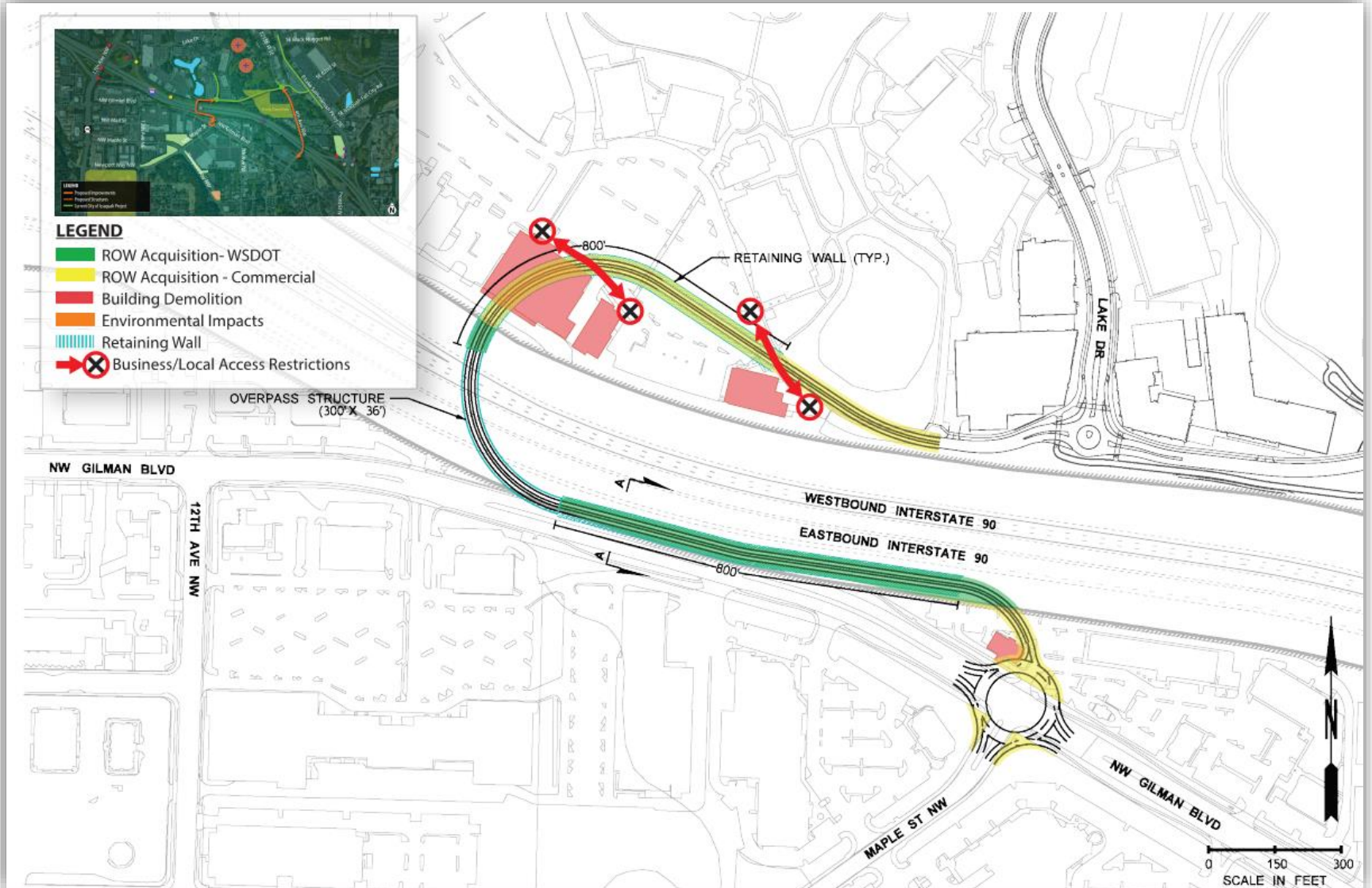
Alt #4 NW Maple at Grade (Raise I-90)



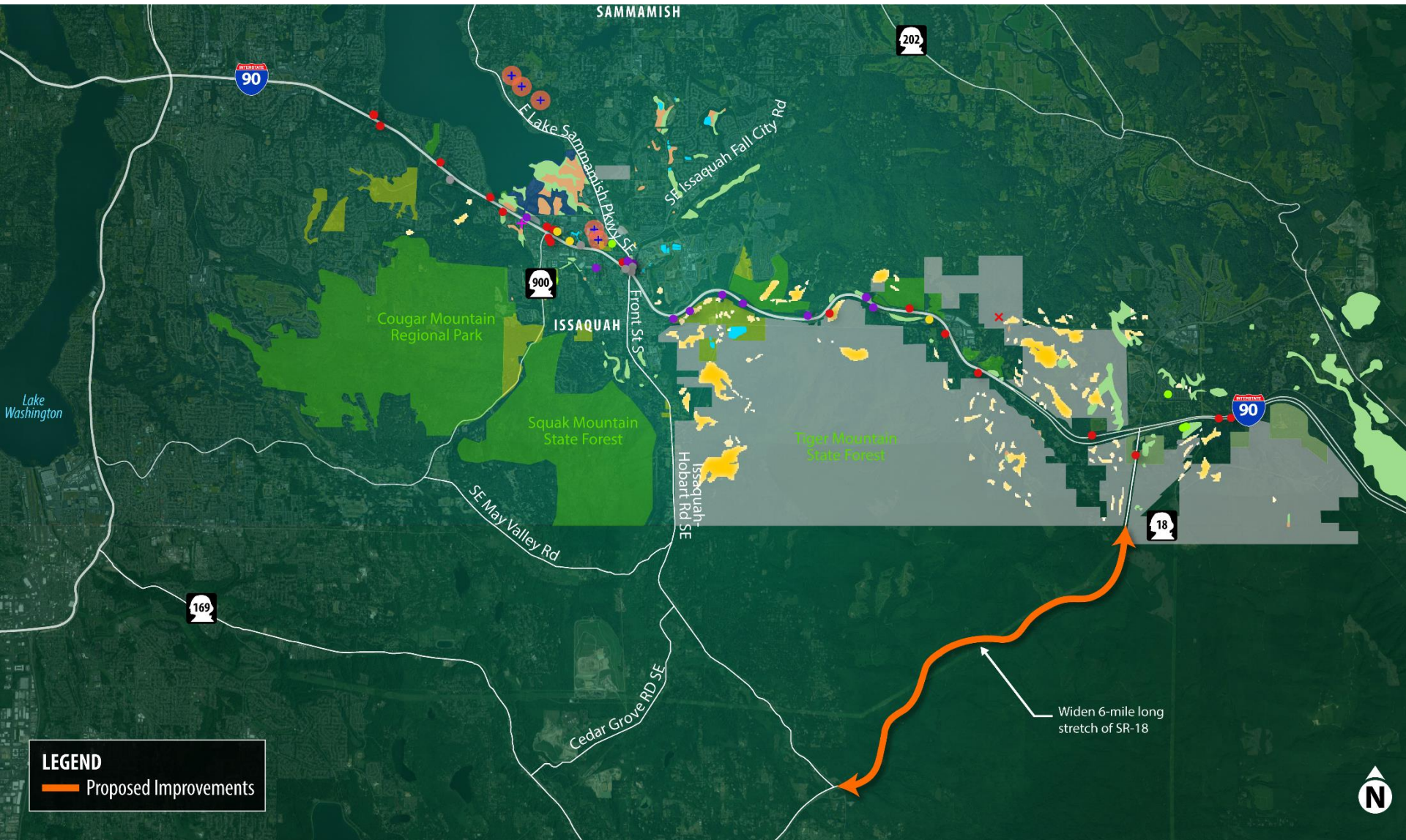
Alt #9 4th Avenue NW Widening with Maple Overcrossing



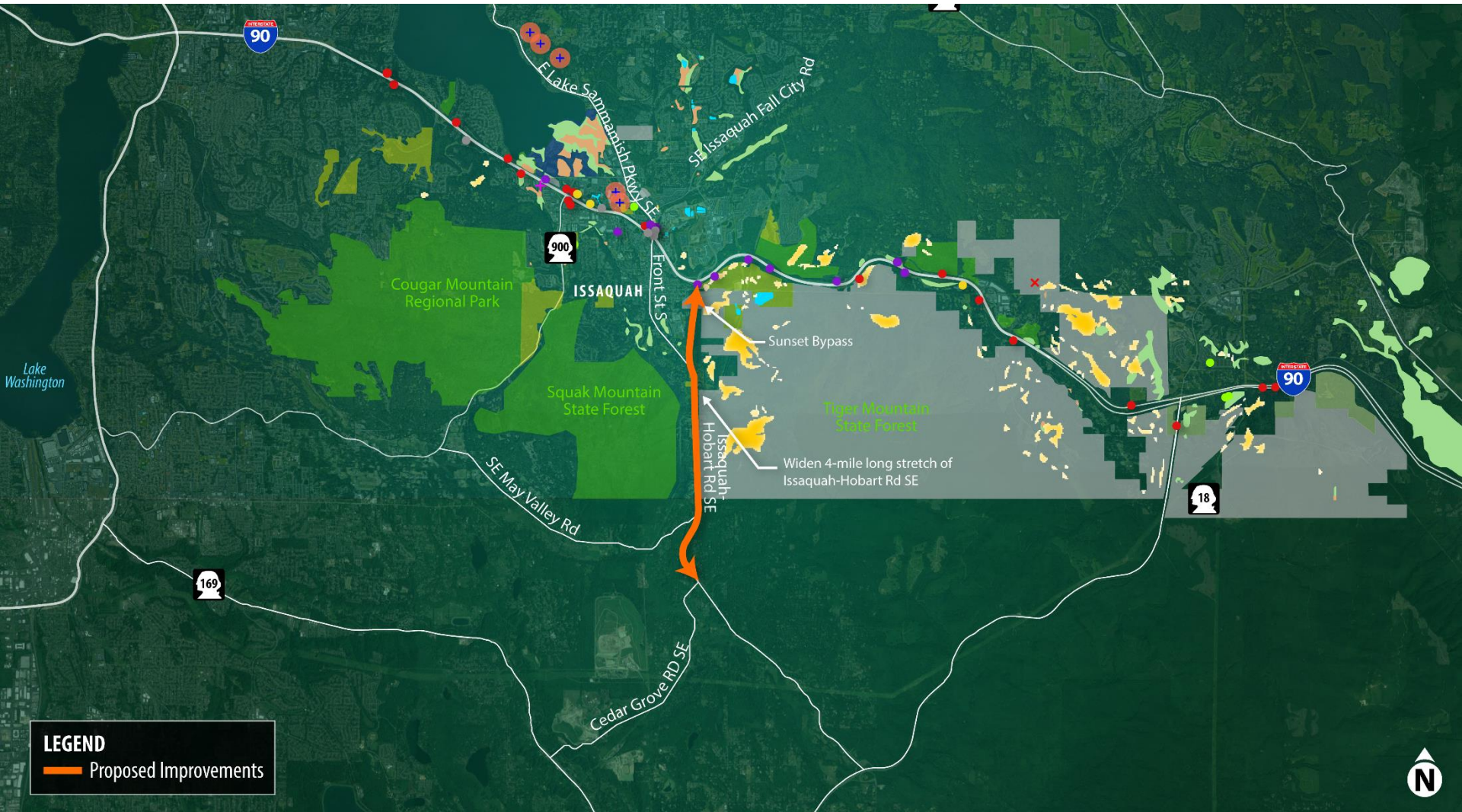
Alt #9 4th Avenue NW Widening with Maple Overcrossing



Alt #10 SR 18 Widening (6 miles stretch)



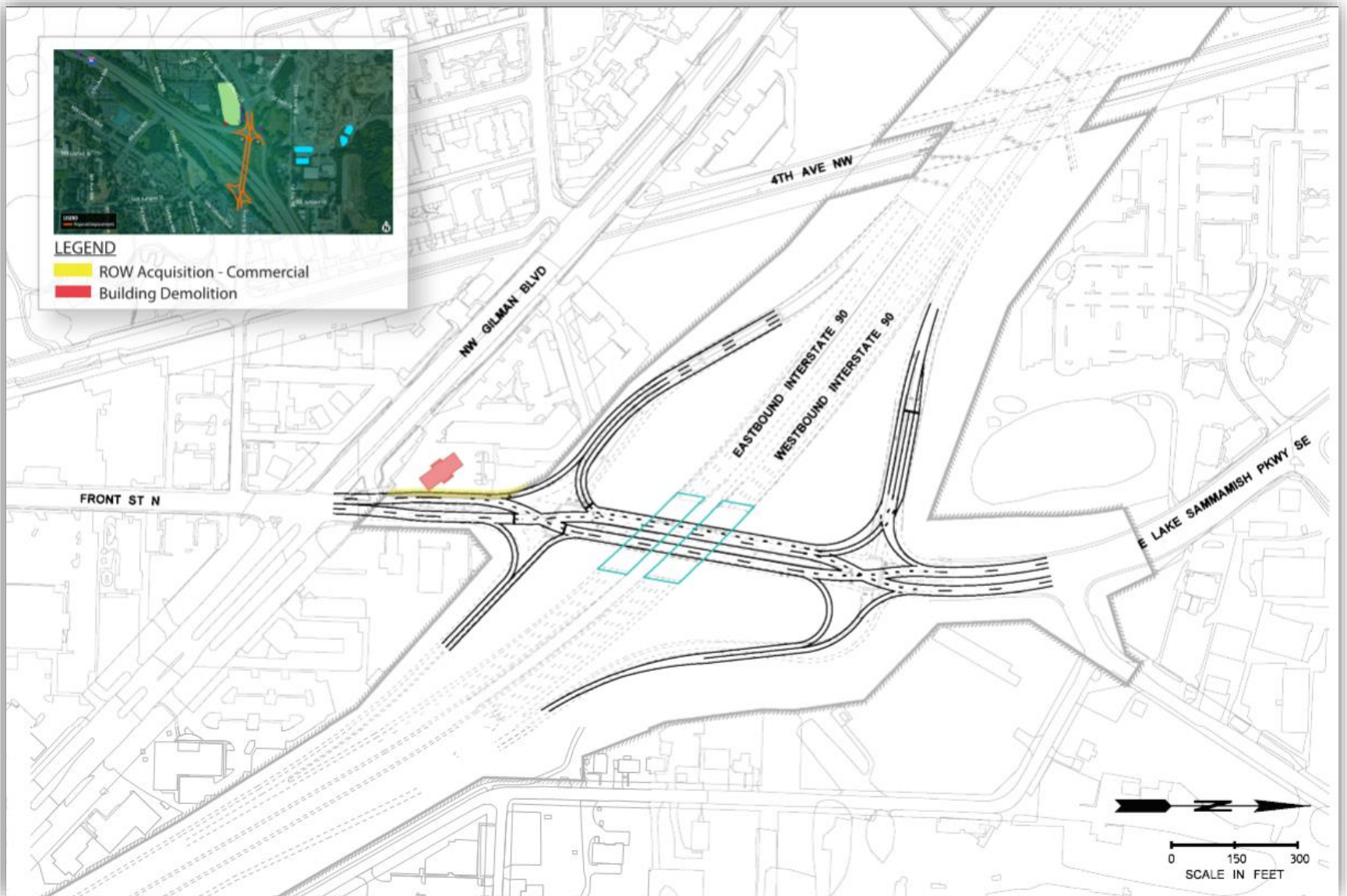
Alt #20 Sunset Bypass with IHR Widening



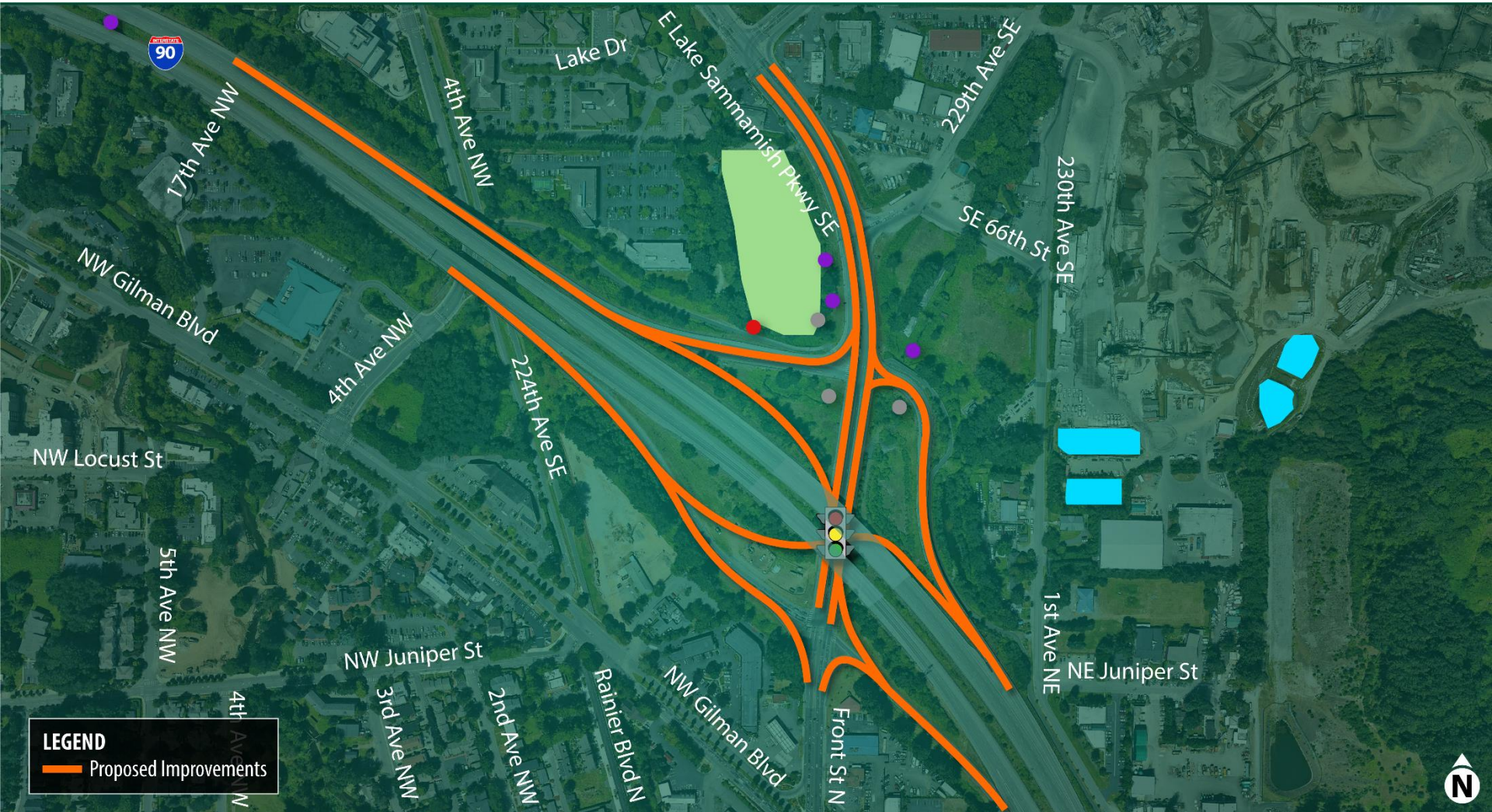
Alt #24 I-90/Front St Diverging Diamond



Alt #24 I-90/Front St Diverging Diamond






Alt #25 I-90/Front St SPUI



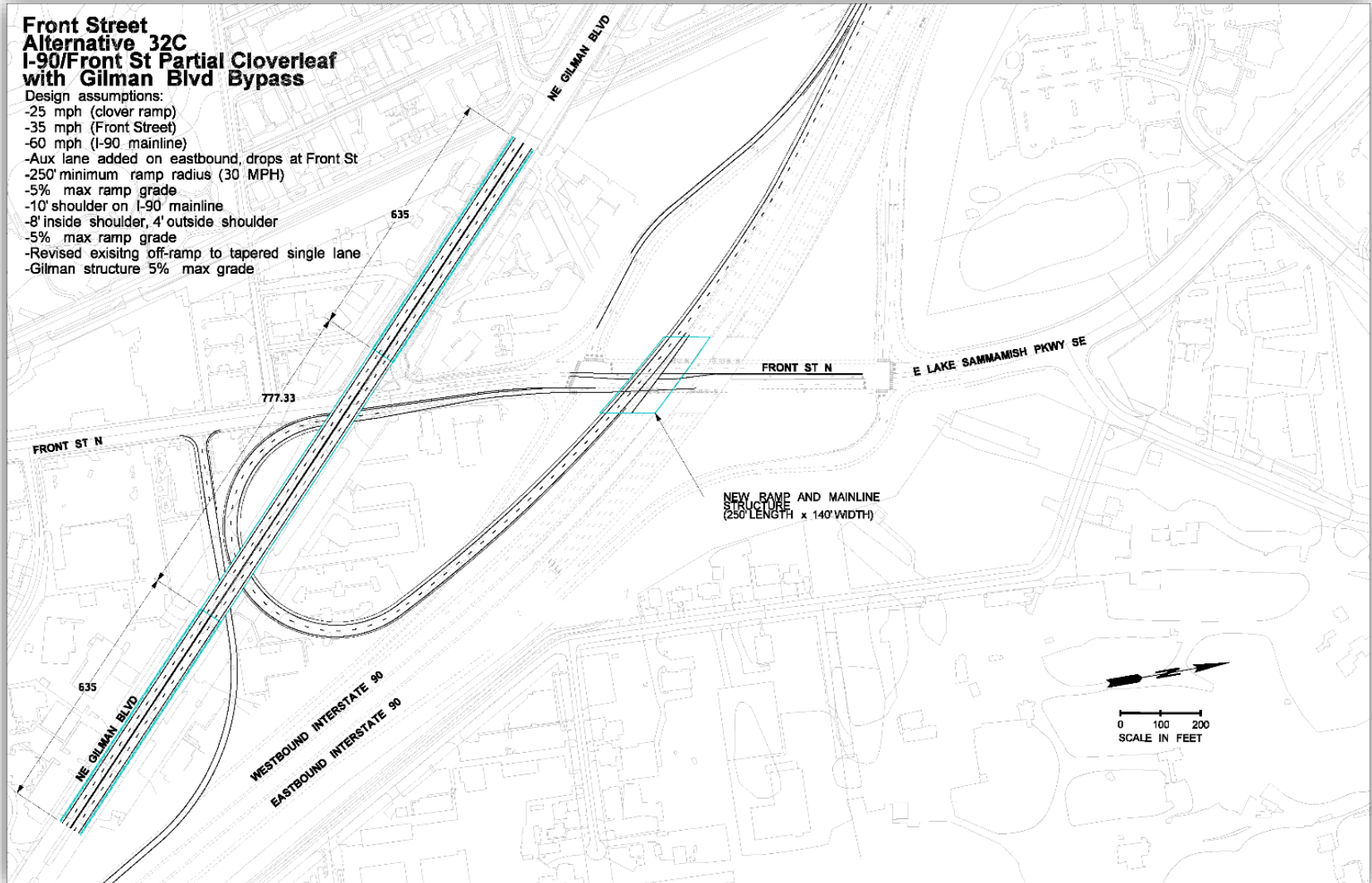
Alt #32 I-90/Front St Partial Cloverleaf



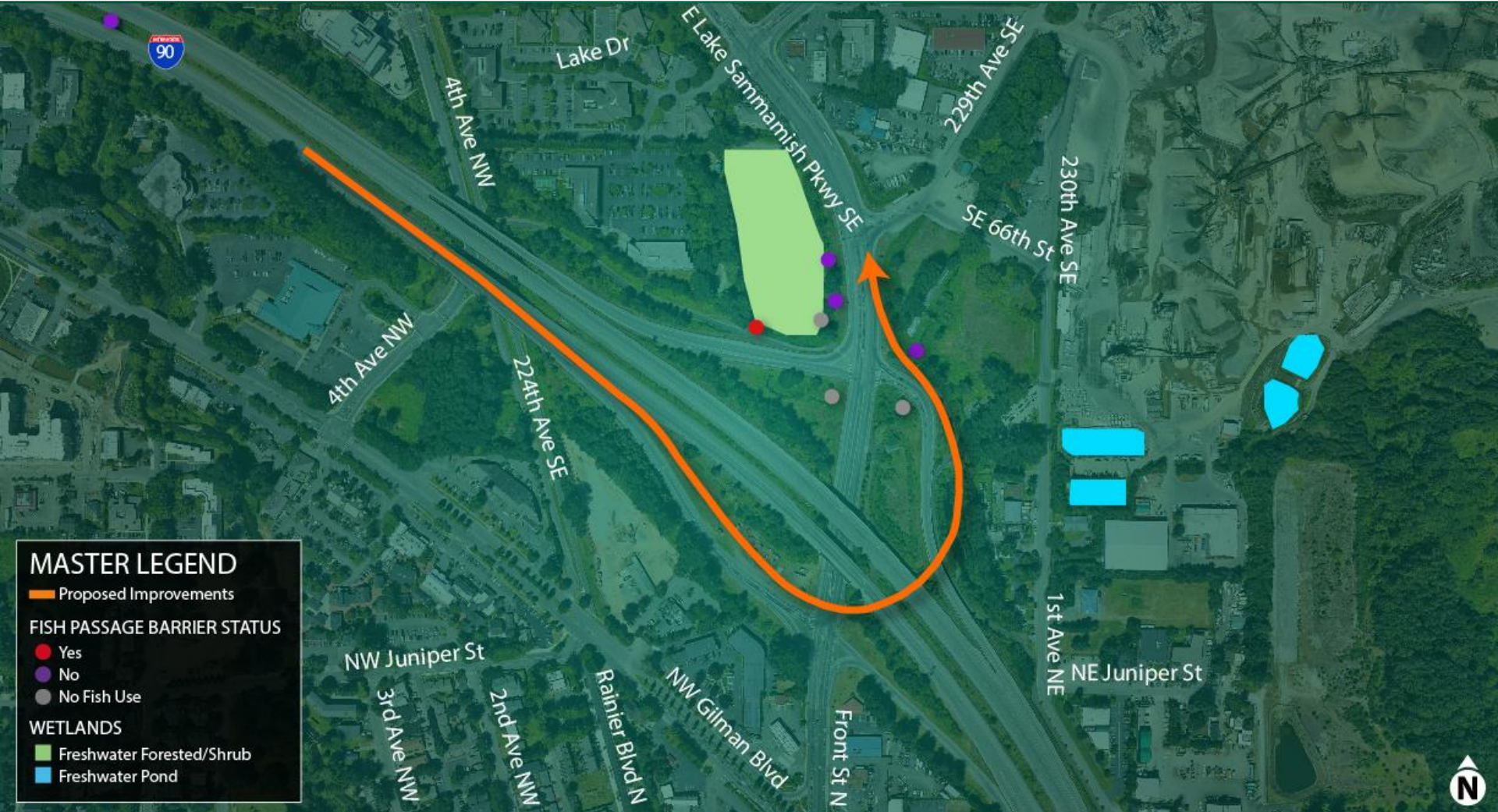
LEGEND

-  Proposed Improvements
-  Proposed Structures
-  Current City of Issaquah Project

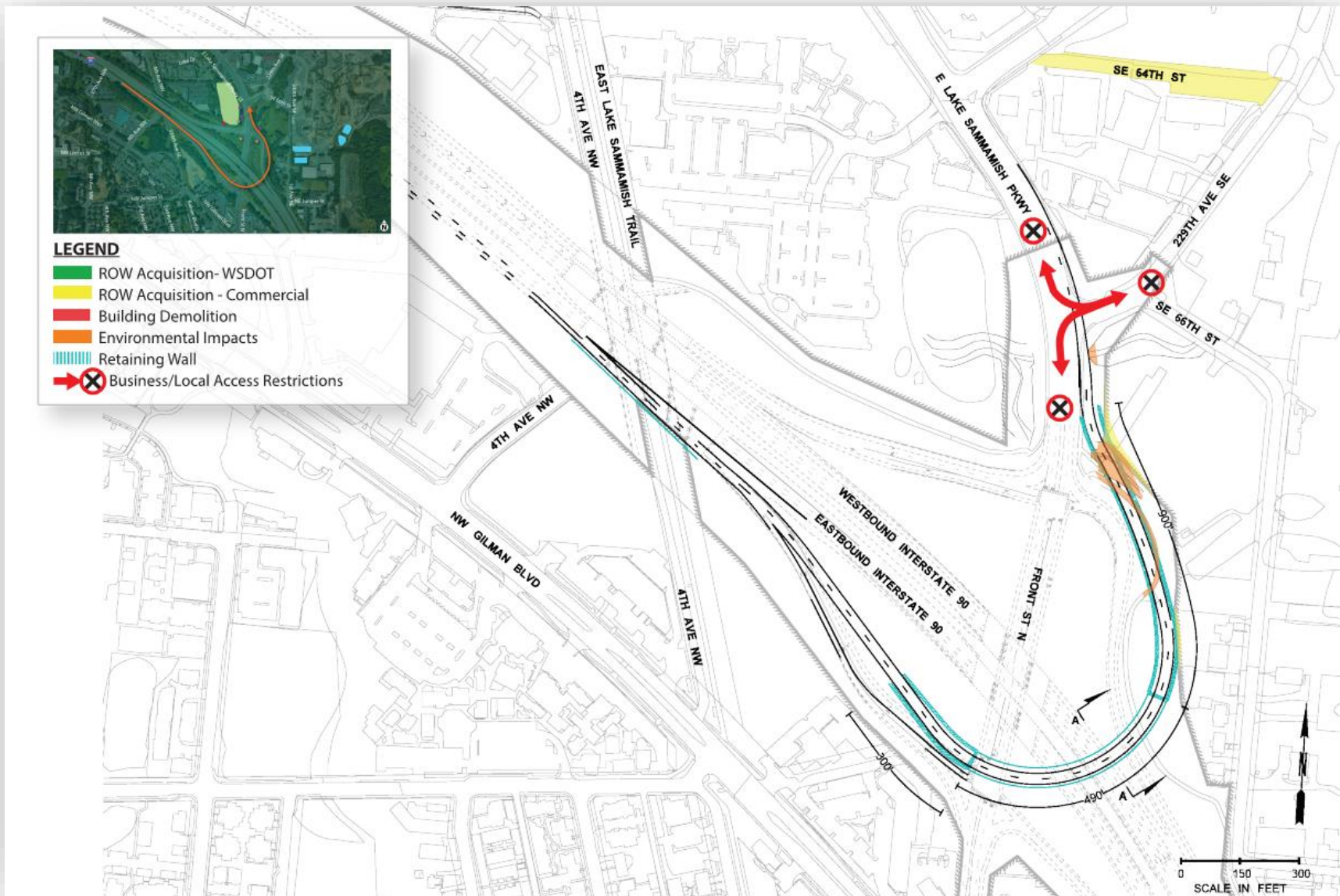
Alt #32 I-90/Front St Partial Cloverleaf



Add Alt #36 EB to NB Flyover



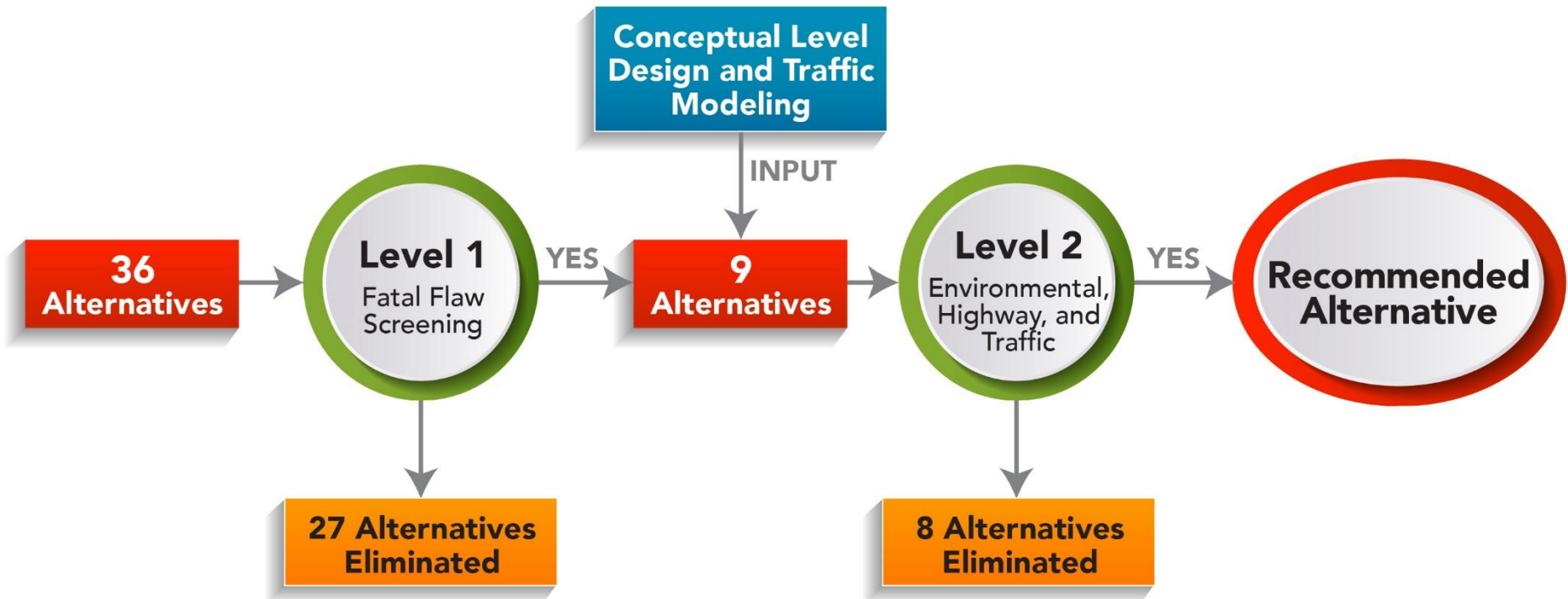
Add Alt #36 EB to NB Flyover



Alternatives Screening

Alt #	Alternative	Action
3	NW Gilman Blvd 'T' Intersection	Advanced
4	NW Maple at Grade (Raise I-90)	Advanced
9	4 th Avenue NW Widening	Eliminated
10	SR 18 Widening (6 miles stretch)	Eliminated
20	Sunset Bypass with IHR Widening	Eliminated
24	I-90/Front St Diverging Diamond	Advanced
25	I-90/Front St SPU	Eliminated
32	I-90/Front St Partial Cloverleaf	Flawed
36	EB to NB Flyover	Advanced

Two-Tiered Screening Process



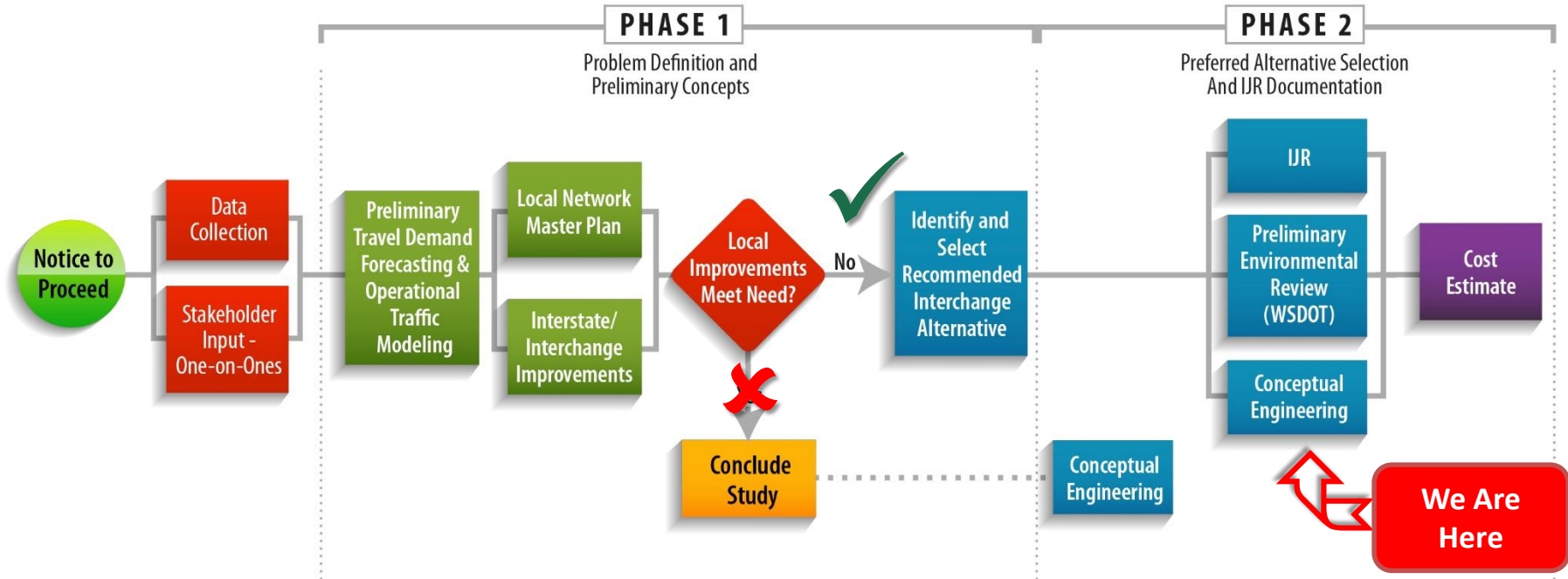
Alternatives Screening Results

Alt #	Alternative	Scores
3	NW Gilman Blvd 'T' Intersection	514
4	NW Maple at Grade (Raise I-90)	640
24	I-90/Front St Diverging Diamond	694
36	EB to NB Flyover	565

Ait #24B – DDI Plus Maple Undercrossing

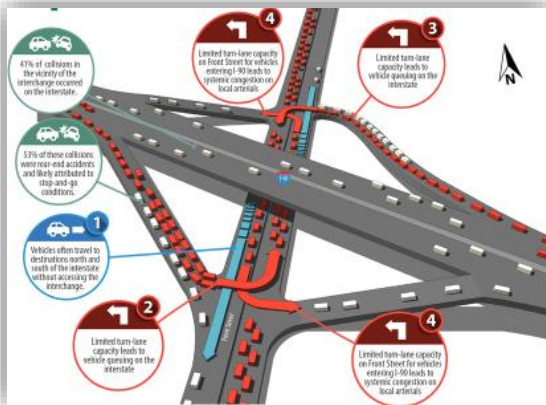


Next Steps



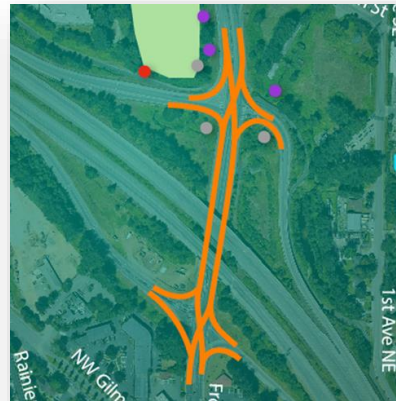
Key Takeaways

Purpose & Need



Capacity of left turns and back-ups on the freeway

Recommended Alternative



DDI addresses study needs and improves interchange capacity

Other Alternatives



Most improve local circulation, but do not meet all study needs

Questions?