Northgate Pedestrian & Bicycle Bridge

Open House

October 15, 2015

SDOT

Seattle Department of Transportation

INTRODUCTION | Our Mission, Vision, and Core Values

Mission: deliver a high-quality transportation system for Seattle

Vision: connected people, places, and products

Committed to 5 core values to create a city that is:

- Safe
- Interconnected
- Affordable
- Vibrant
- Innovative

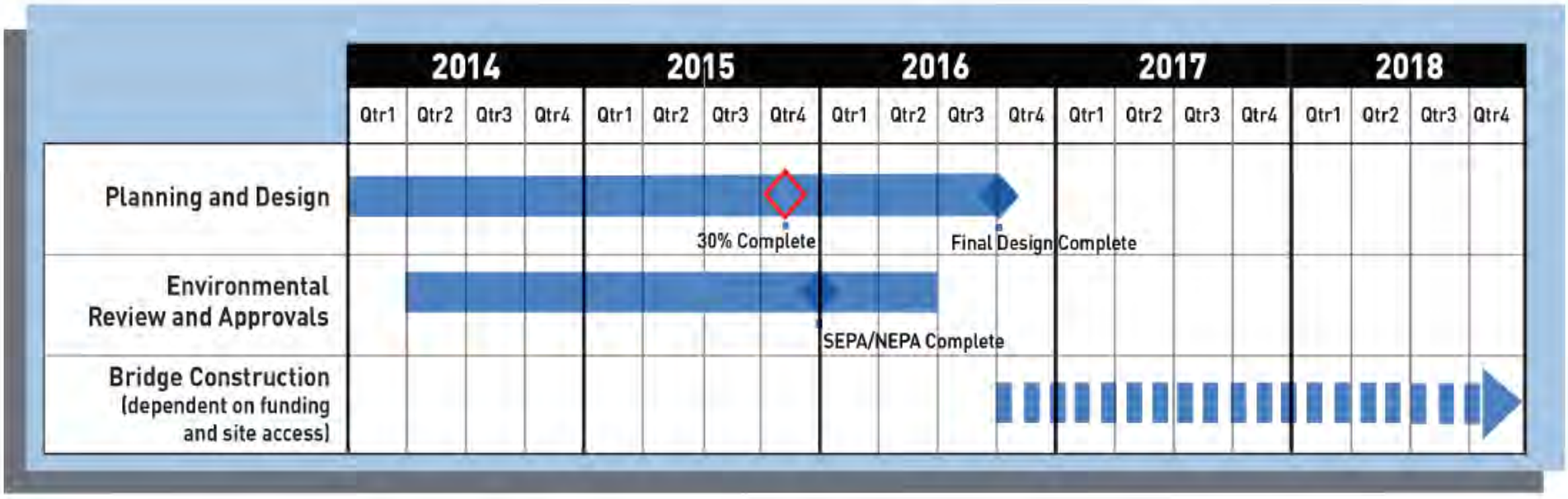
INTRODUCTION Design Collaboration

- West side ramp alignment, storm water detention, circulation & safety
- Connection to station mezzanine and construction timing
- Right-of-Way, lighting, and environmental design
- Traffic planning and design of intersection at 1st Ave NE and NE 100th St

See stations for more info!

- Project Overview
- Timeline
- Project Funding
- Design Criteria
- Bridge Alignment and Design
- Next steps

INTRODUCTION | Project Timeline



See stations for more info!

INTRODUCTION | Project Funding

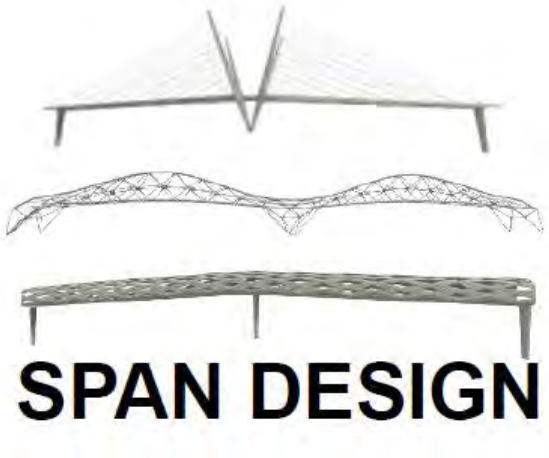
Committed	
$5 million	Sound Transit
$5 million	City of Seattle
$10 million	Washington State
Potential Additional Funding	
$15 million	Federal TIGER Grant (out of a total $25 million grant)
$10 million	Move Seattle Levy (out of the $15 million designated in levy)

Planning-level project cost estimate: $26.3 million

See stations for more info!

- Safety
- Connectivity
- Cost + Constructability
- Visual Impact + Presence
- Environmental Impact

+



CPTED: Crime Prevention Through Environmental Design

- A multi-disciplinary approach to deterring criminal behavior through environmental design.

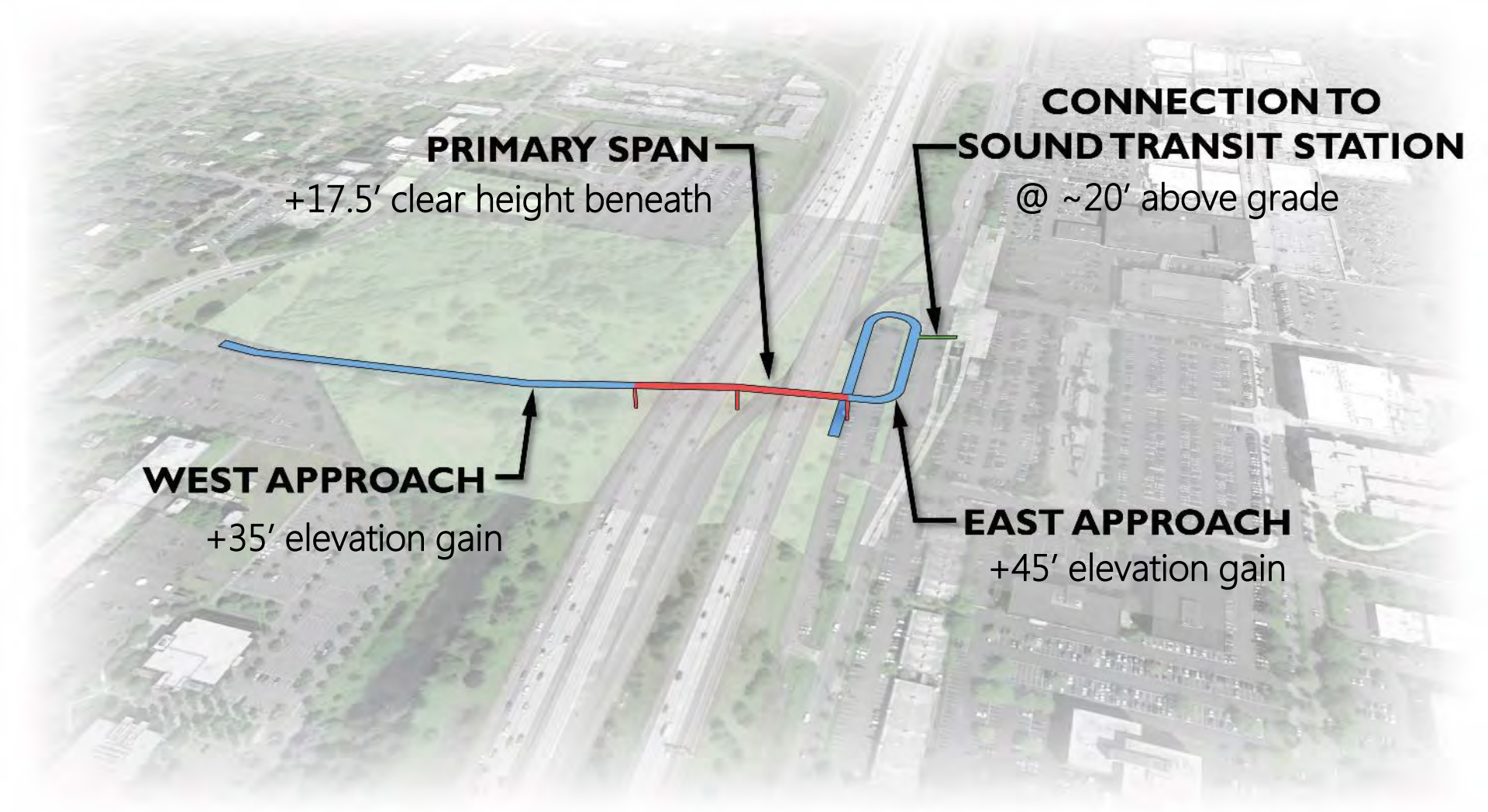
- CPTED strategies rely upon the ability to influence offender decisions that precede criminal acts by affecting the built, social and administrative environment.

CPTED: Crime Prevention Through Environmental Design

Defining Design Characteristics of this project:

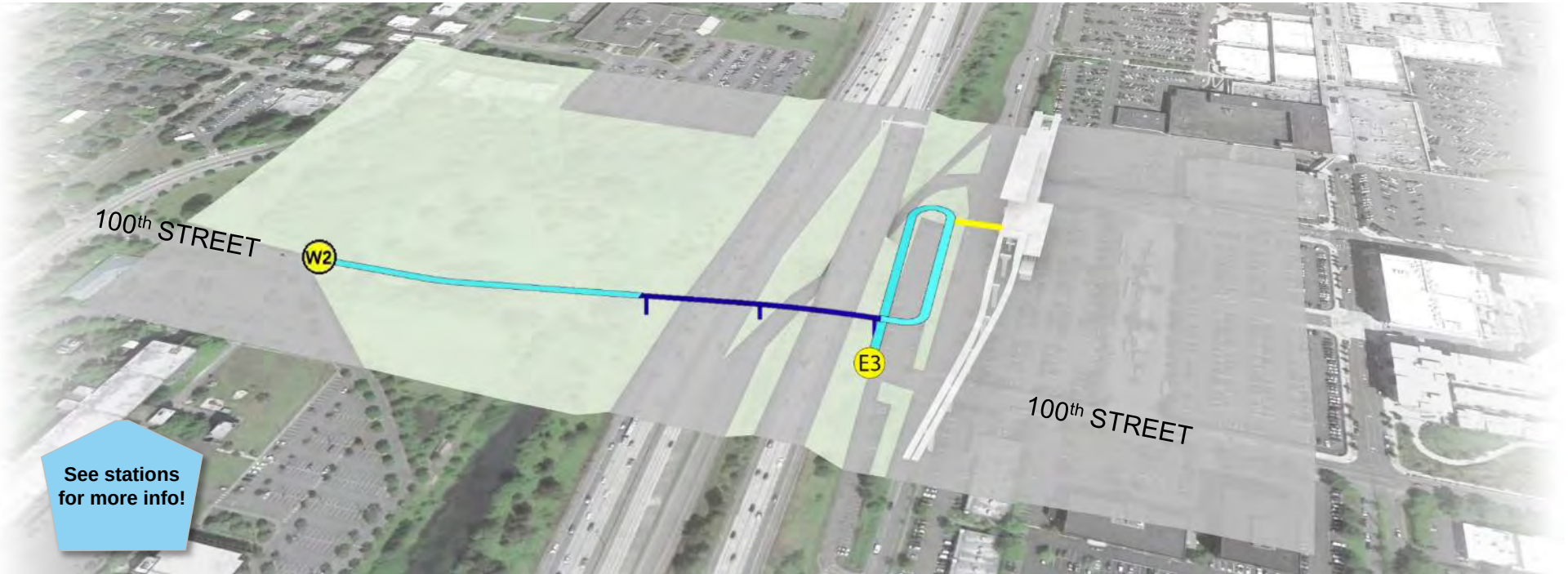
- Visibility
- Lighting
- Geometry
- Connectivity

INTRODUCTION | Bridge Components



RECAP | Preferred Alignment

- Provides better sight lines for safety
- Links to existing and future bike facilities
- Proximity to NSC campus
- Ideal connection elevation at future Sound Transit Light rail station
- Minimizing ramp length/crossing time
- Minimizes environmental impacts

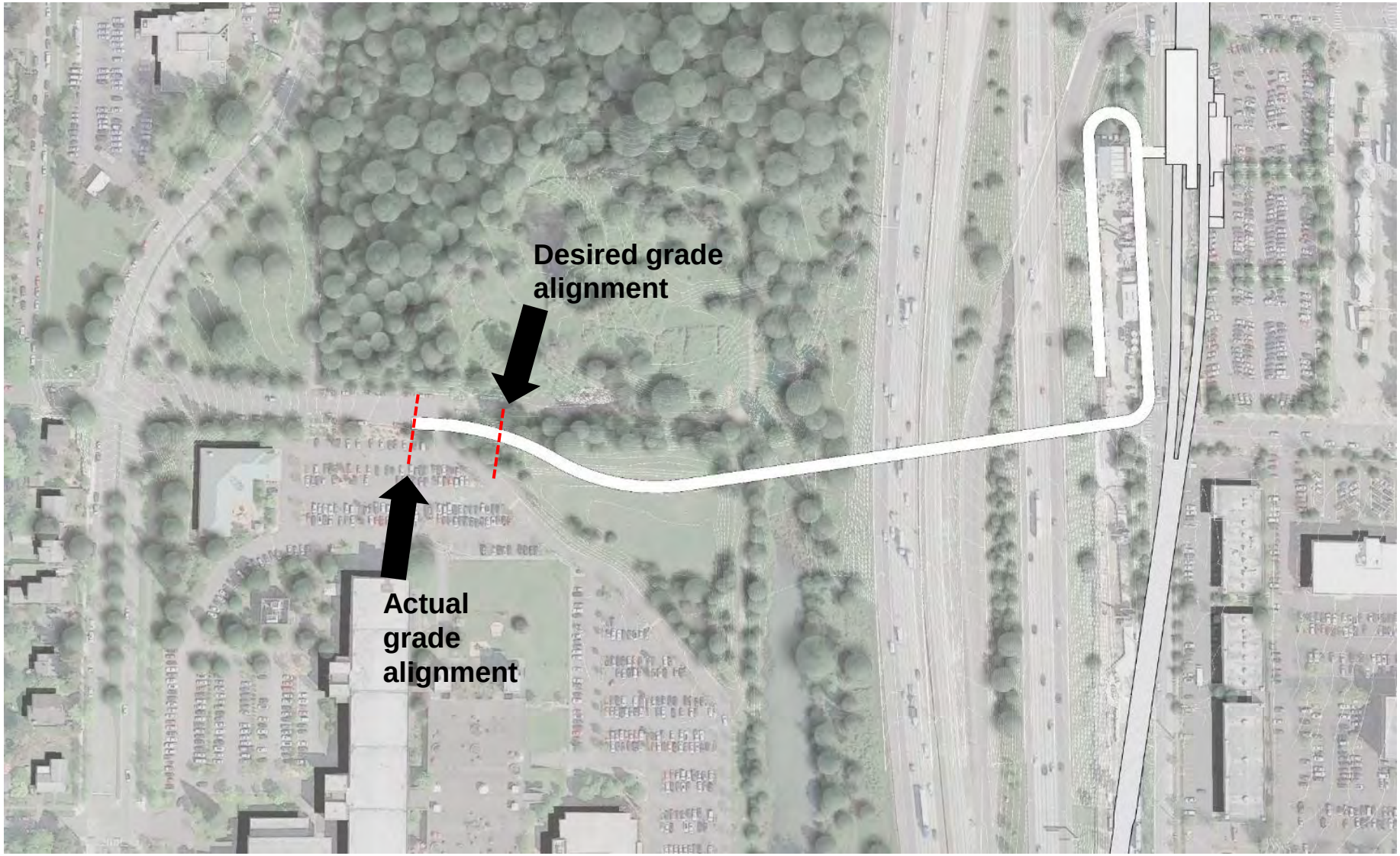


RECAP | Preferred Span Design: Tube/Truss

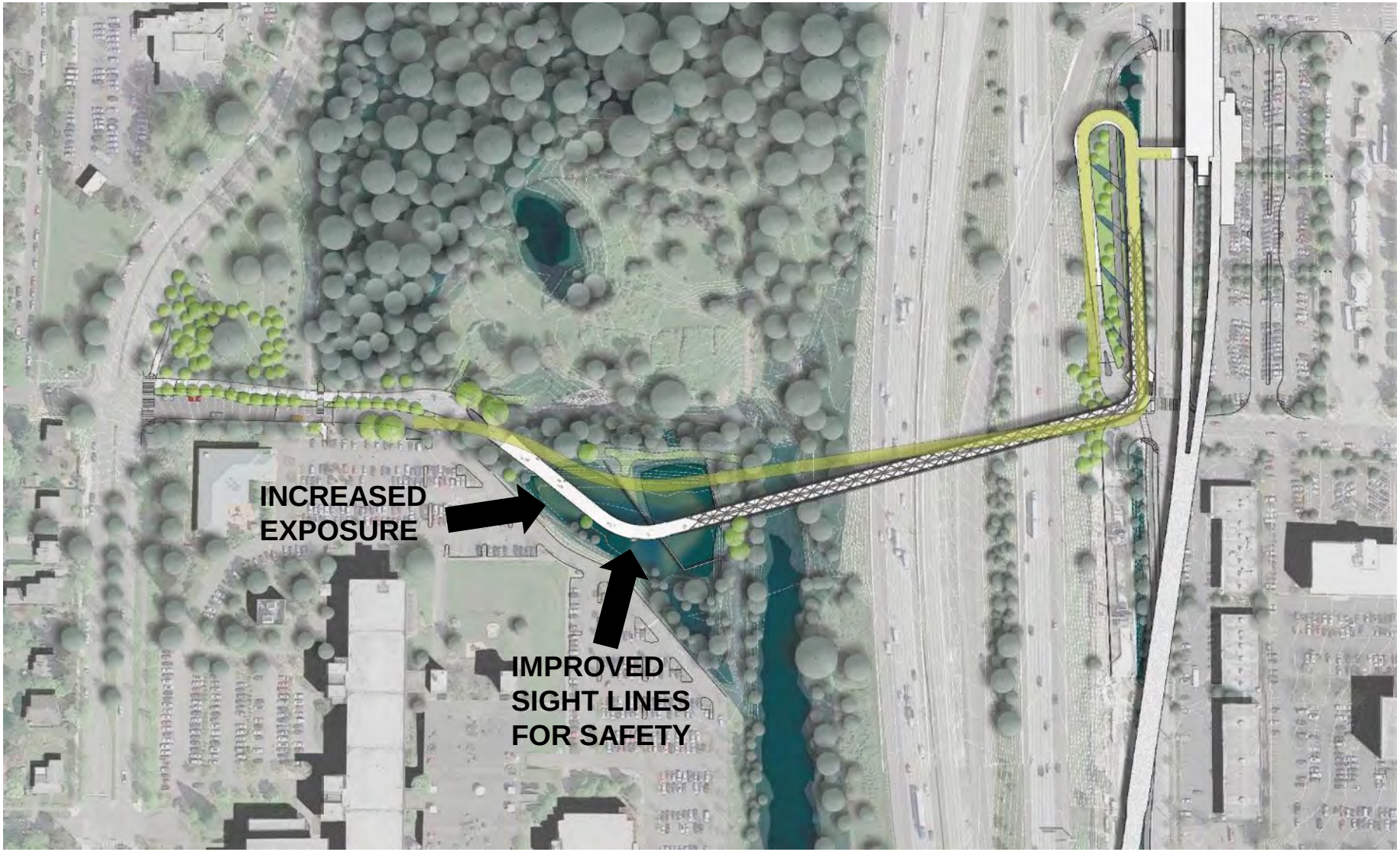
- Integration of safety systems: railings, barriers, and lighting
- Structural depth minimizes ramping
- Constructability and cost
- Unique aesthetic qualities
- Community preference

See stations for more info!

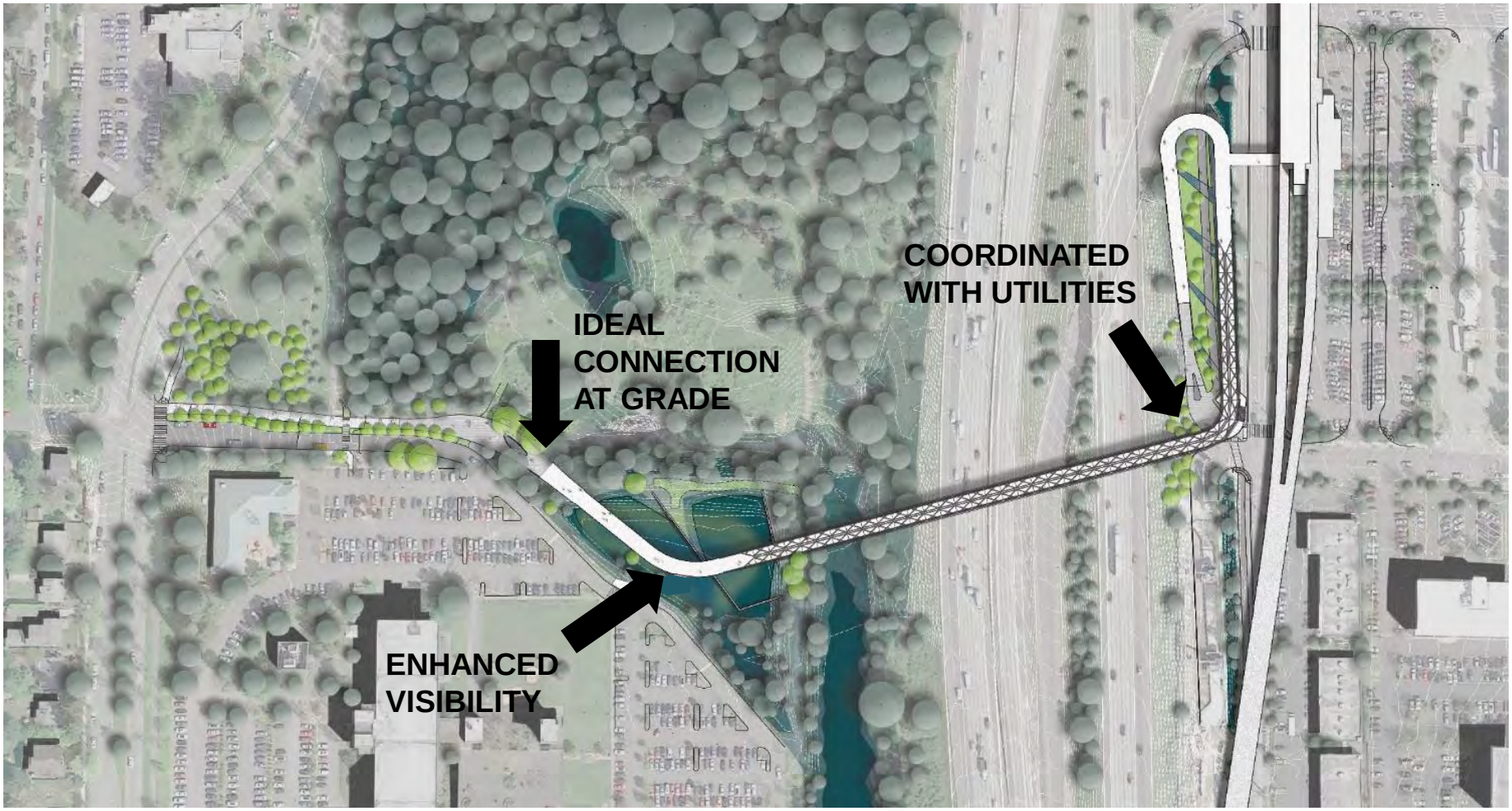
ALIGNMENT UPDATE | Post-Survey Grade Challenges



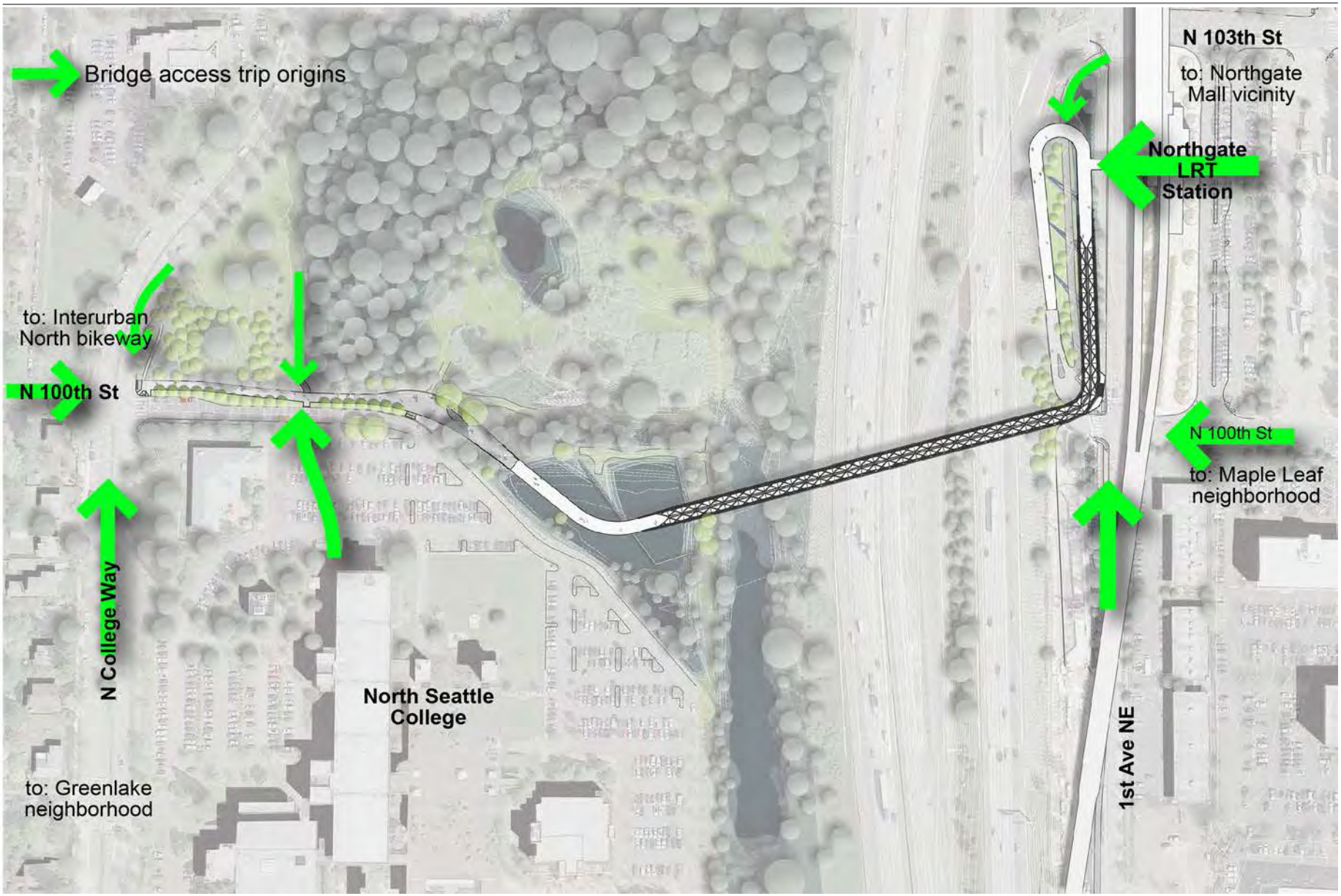
ALIGNMENT UPDATE | CPTED



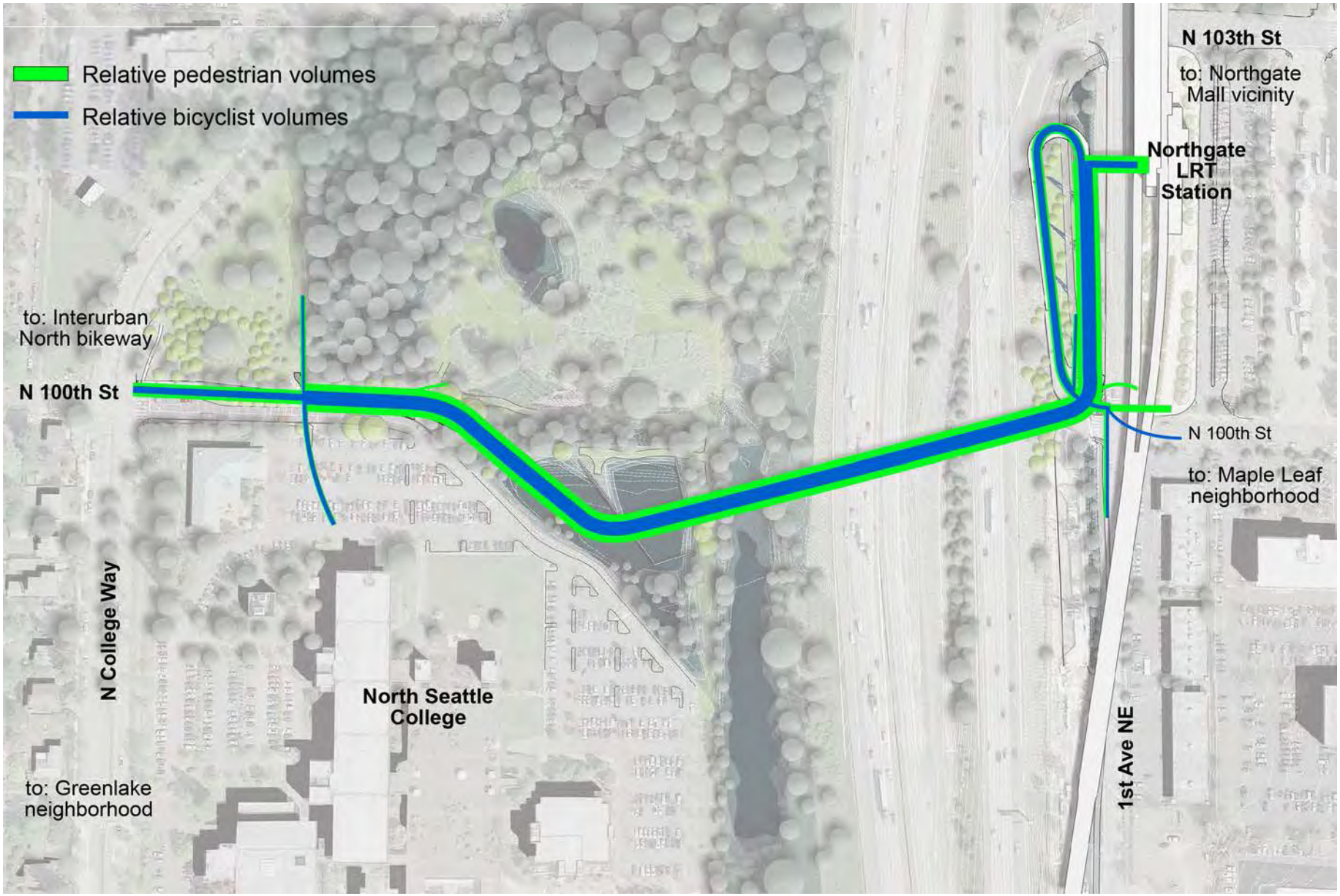
ALIGNMENT UPDATE | Benefits



PROJECT OVERVIEW | Bridge Access

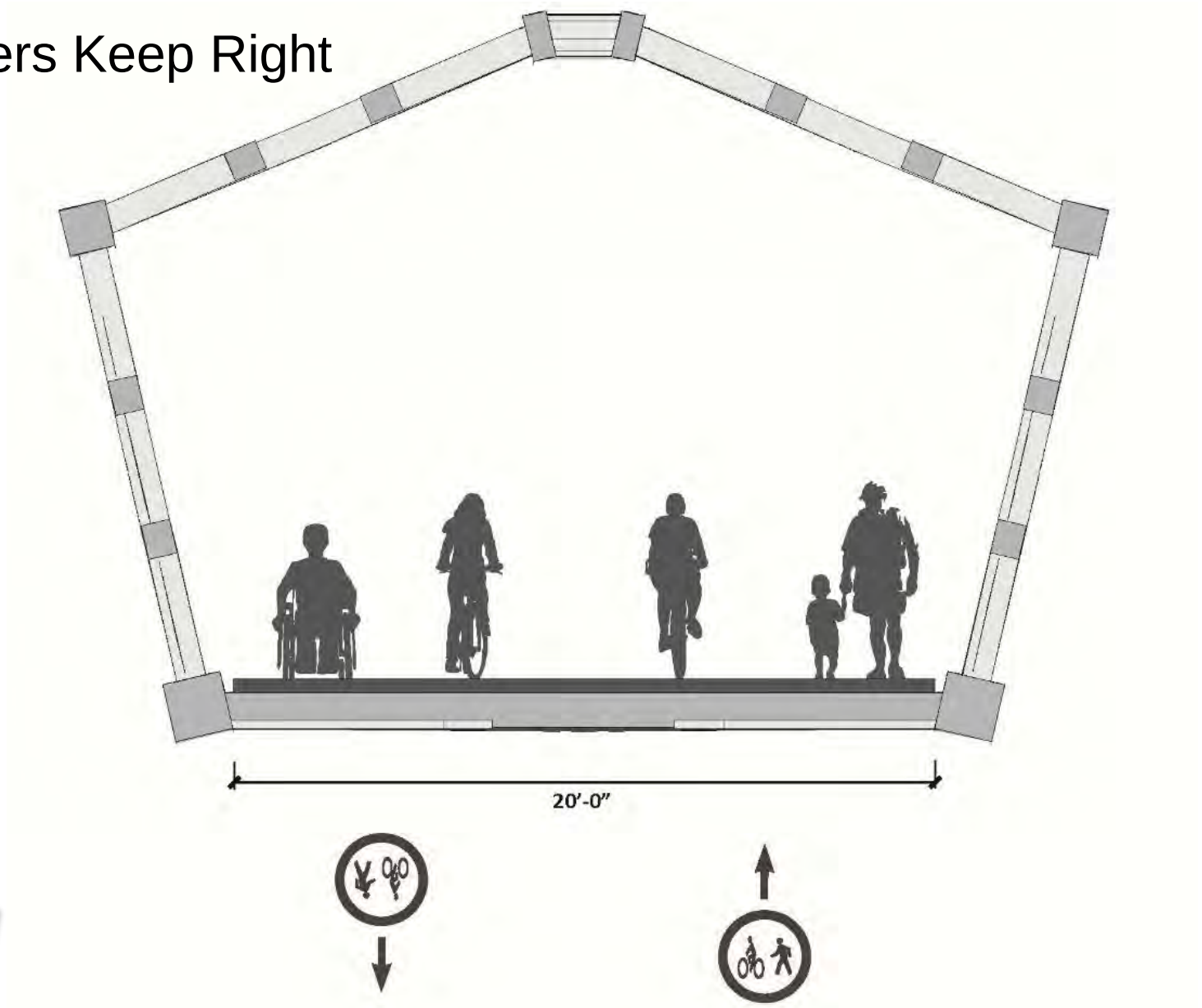


PROJECT OVERVIEW | Bridge Access



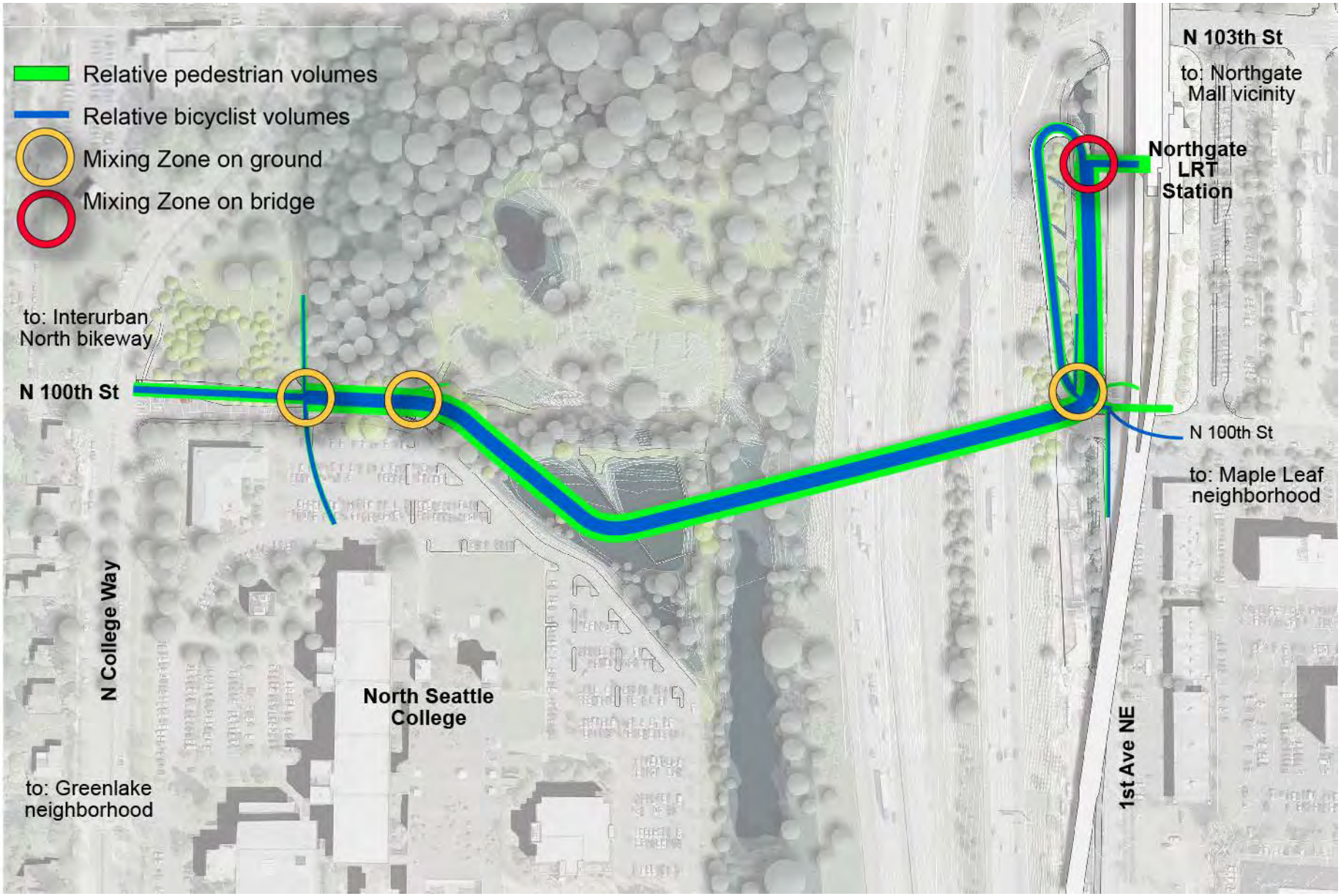
PROJECT OVERVIEW | Channelization

All Users Keep Right



See stations for more info!

PROJECT OVERVIEW | Mixing Zones

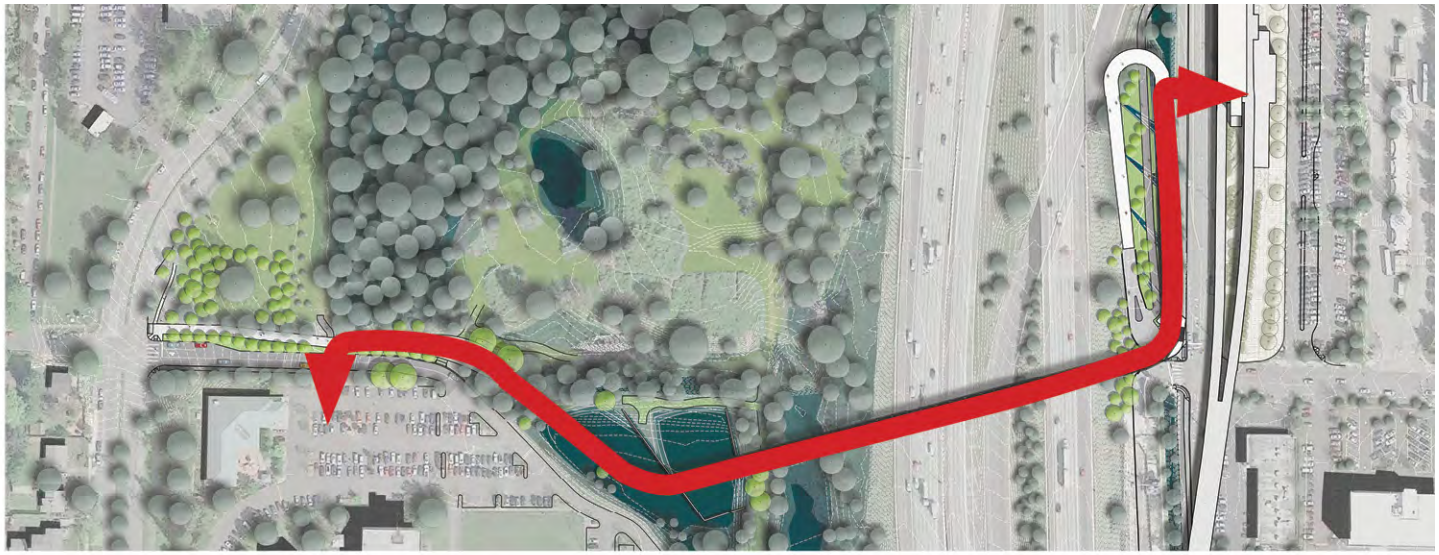


PROJECT OVERVIEW | Crossing Times

DISTANCE: 1,750 FT

WALK: 7.0 min

RUN: 3.5 min



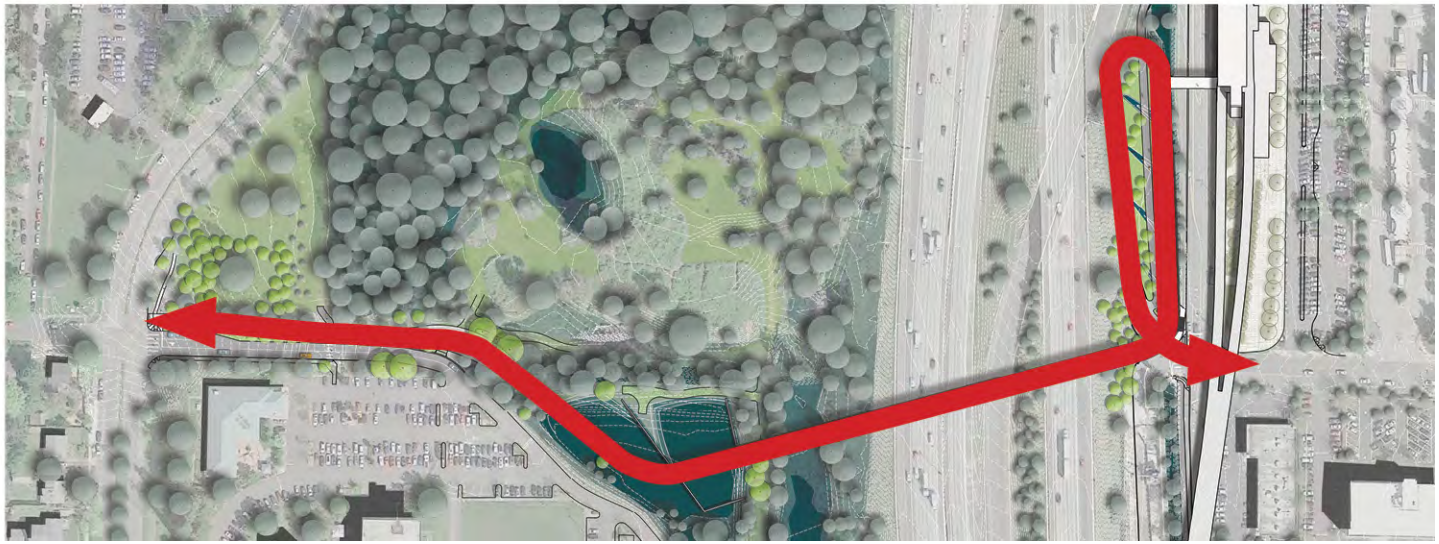
DISTANCE: 2,584 FT

WALK: 10.0 min

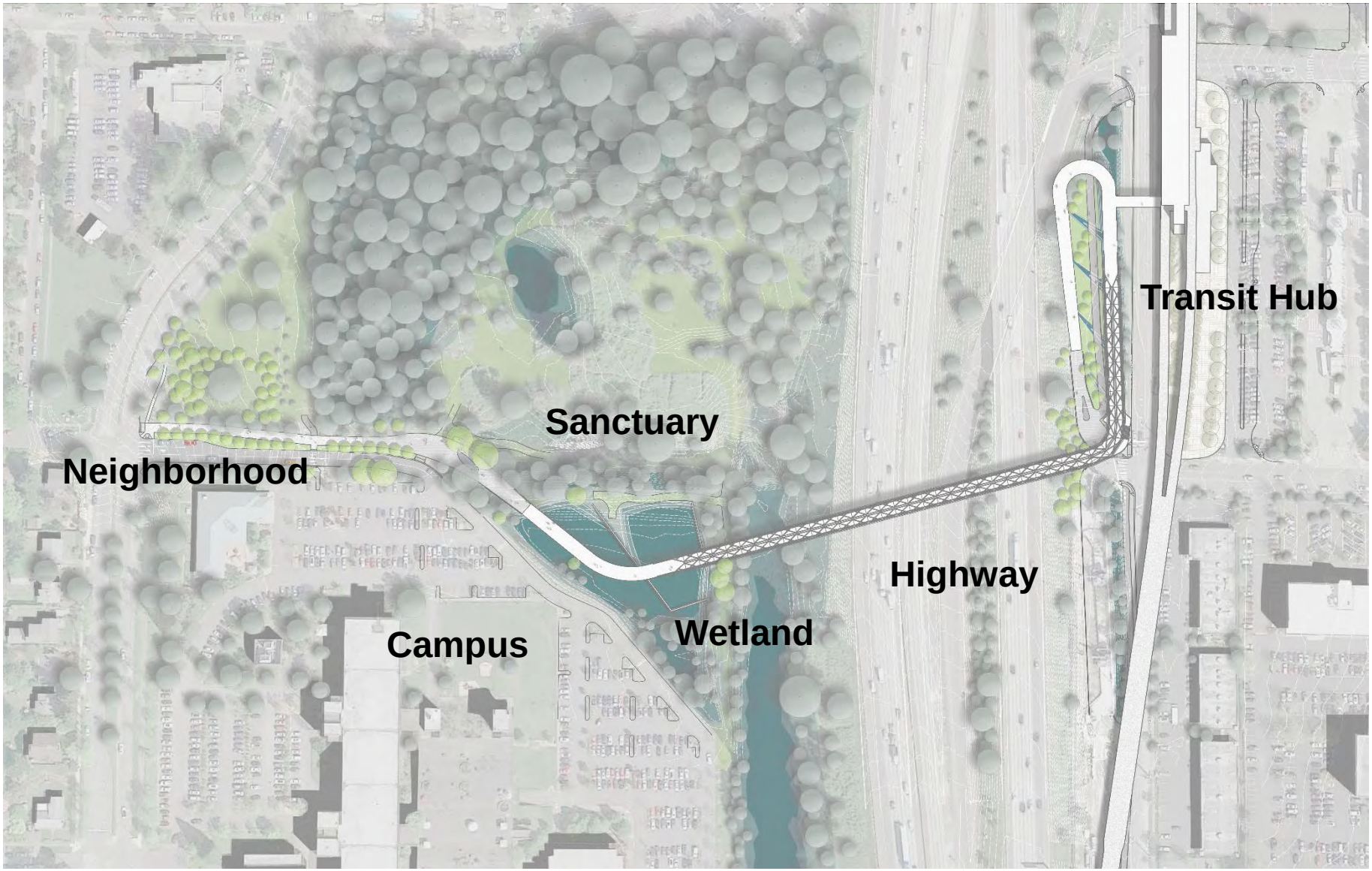
RUN: 5.0 min

WHEELCHAIR: 15 min

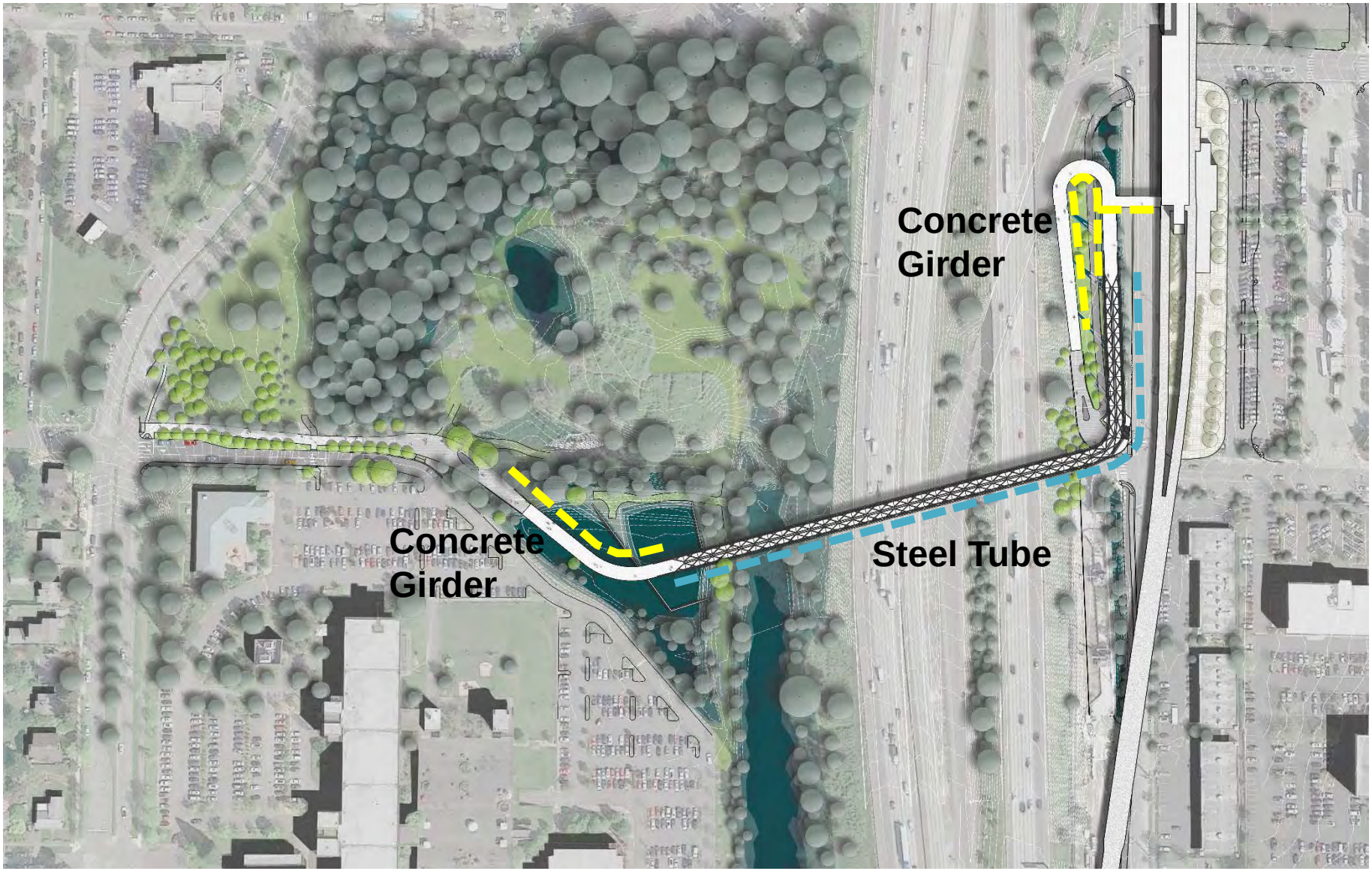
SKATE/BIKE: 3.5 min



PROJECT OVERVIEW | Characters of Place

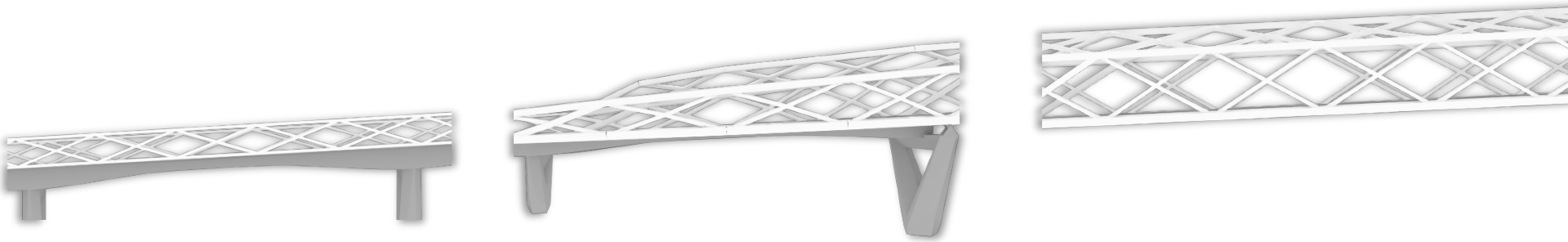


PROJECT OVERVIEW | Structural Systems



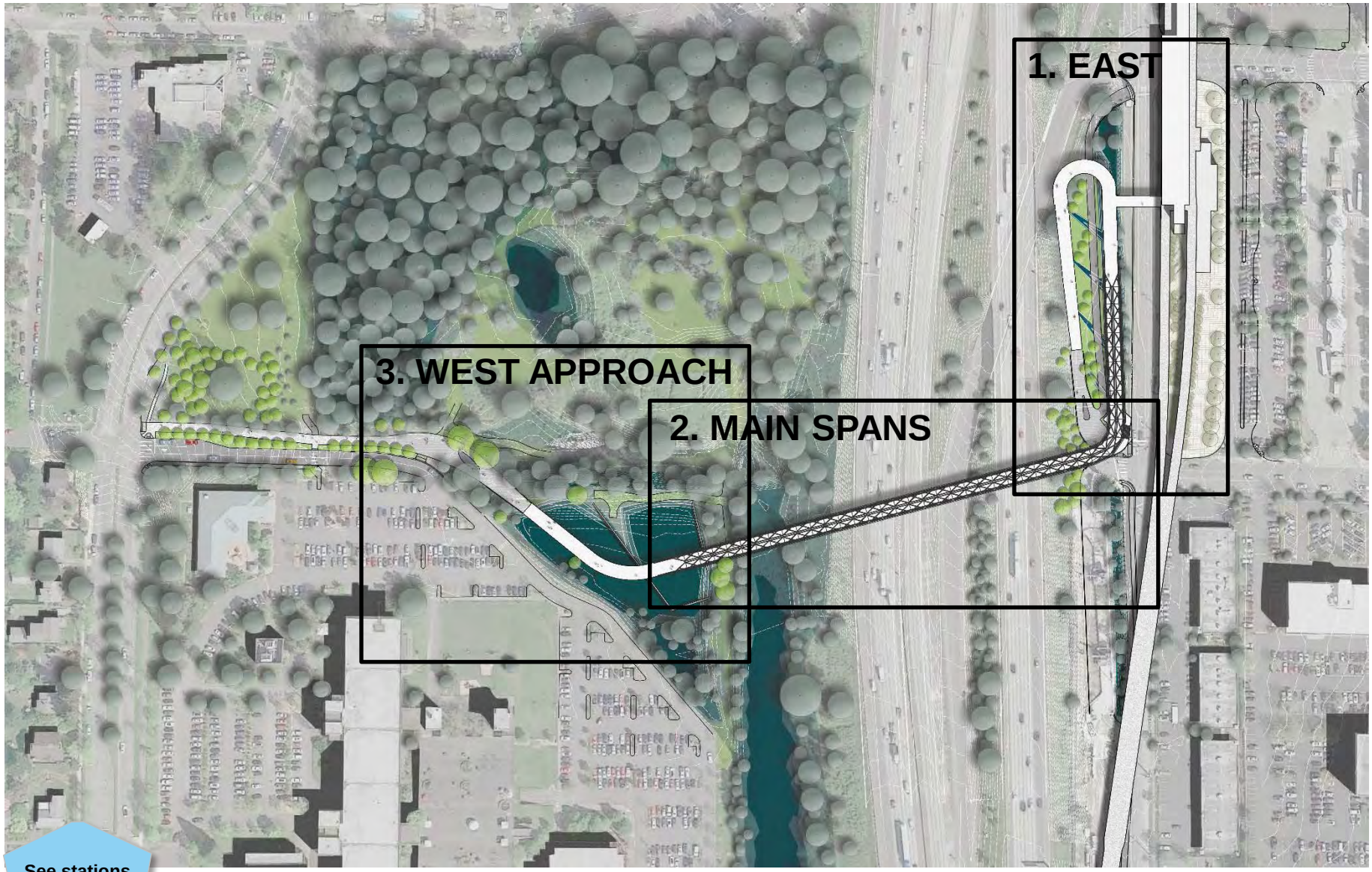
PROJECT OVERVIEW | Sinuous Structural Expression

PROJECT OVERVIEW | Structural Typologies



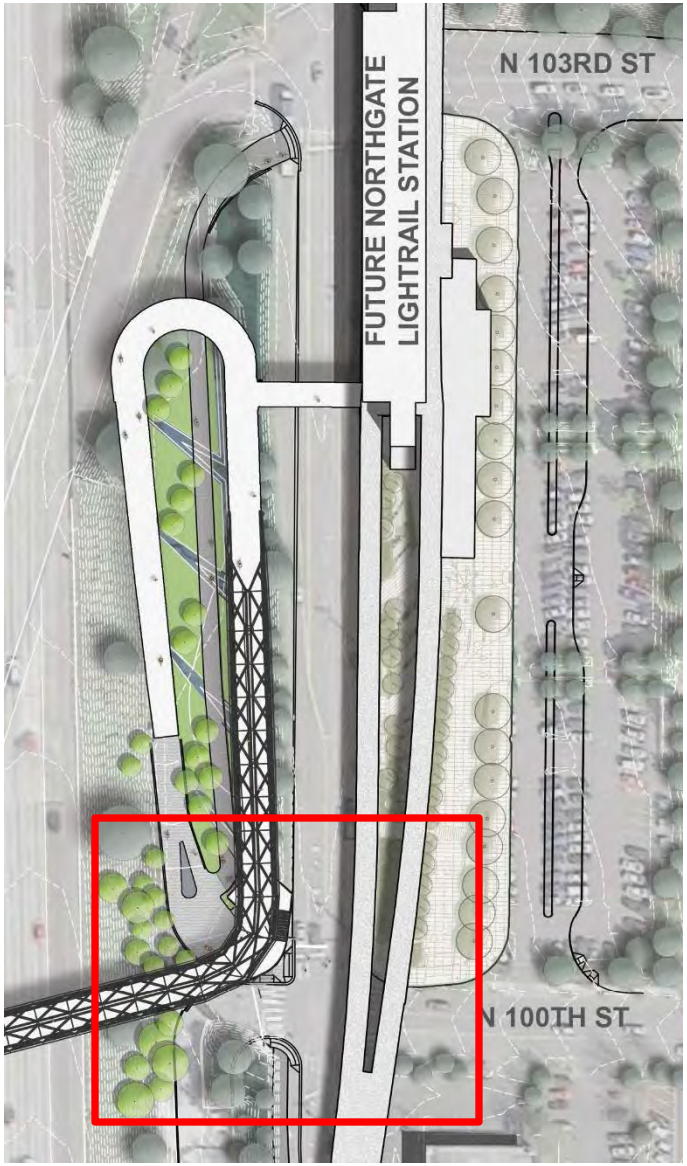
Concrete Girder ⟷ **Transitional Truss** ⟷ **Structural Steel Tube**

DESIGN | Three Segments



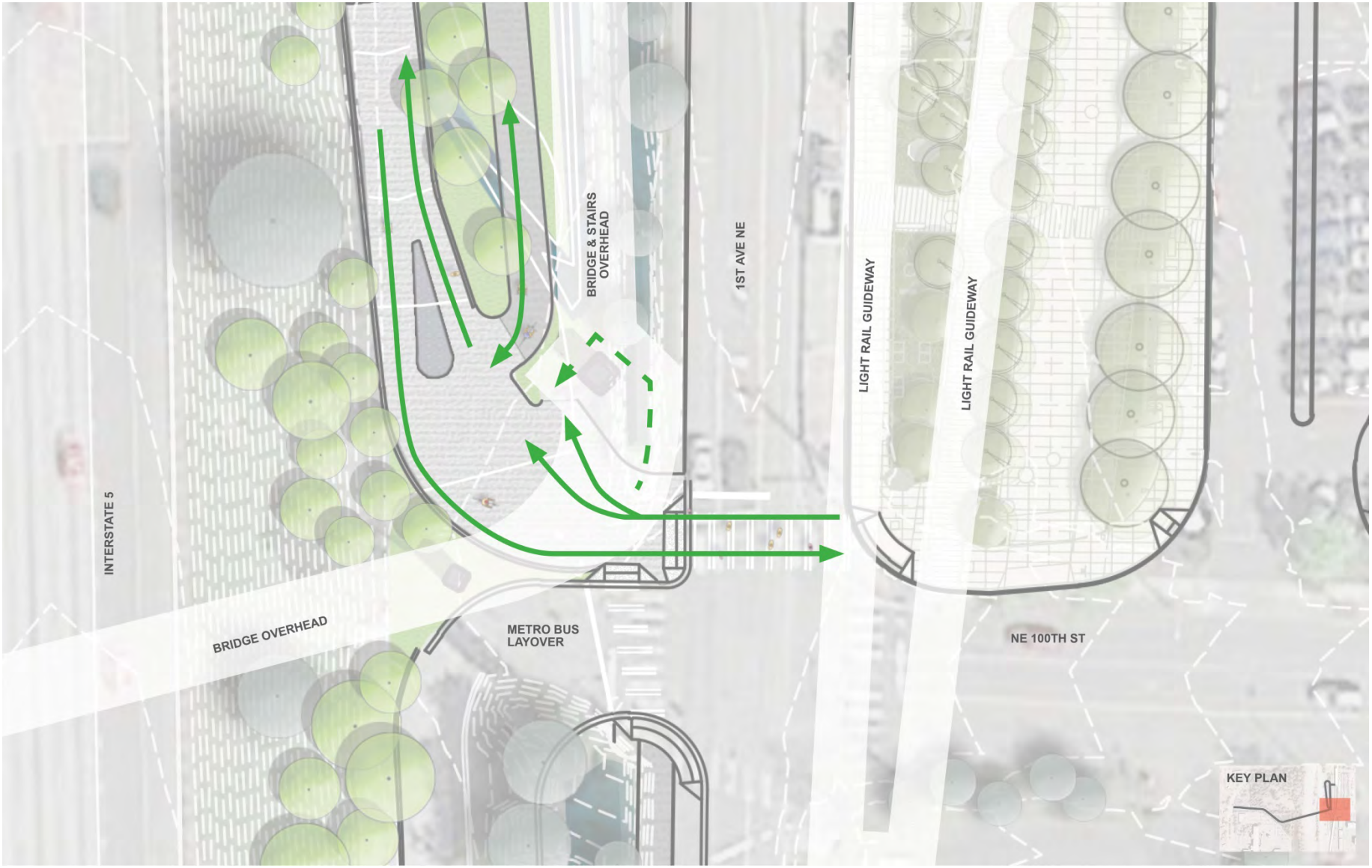
See stations for more info!

DESIGN | East Approach Elements

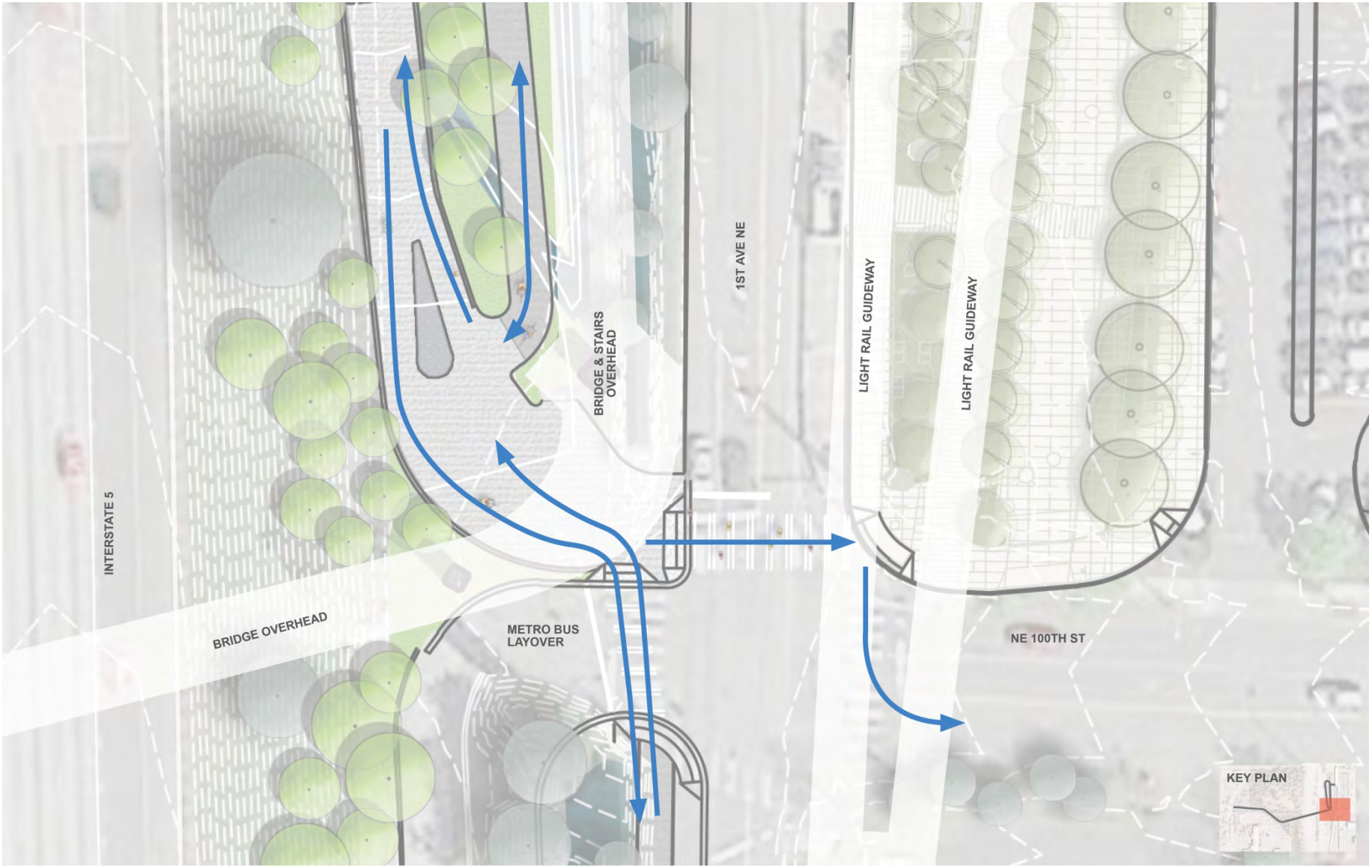


1. Access
2. Bridge Components
3. Sound Transit Connection

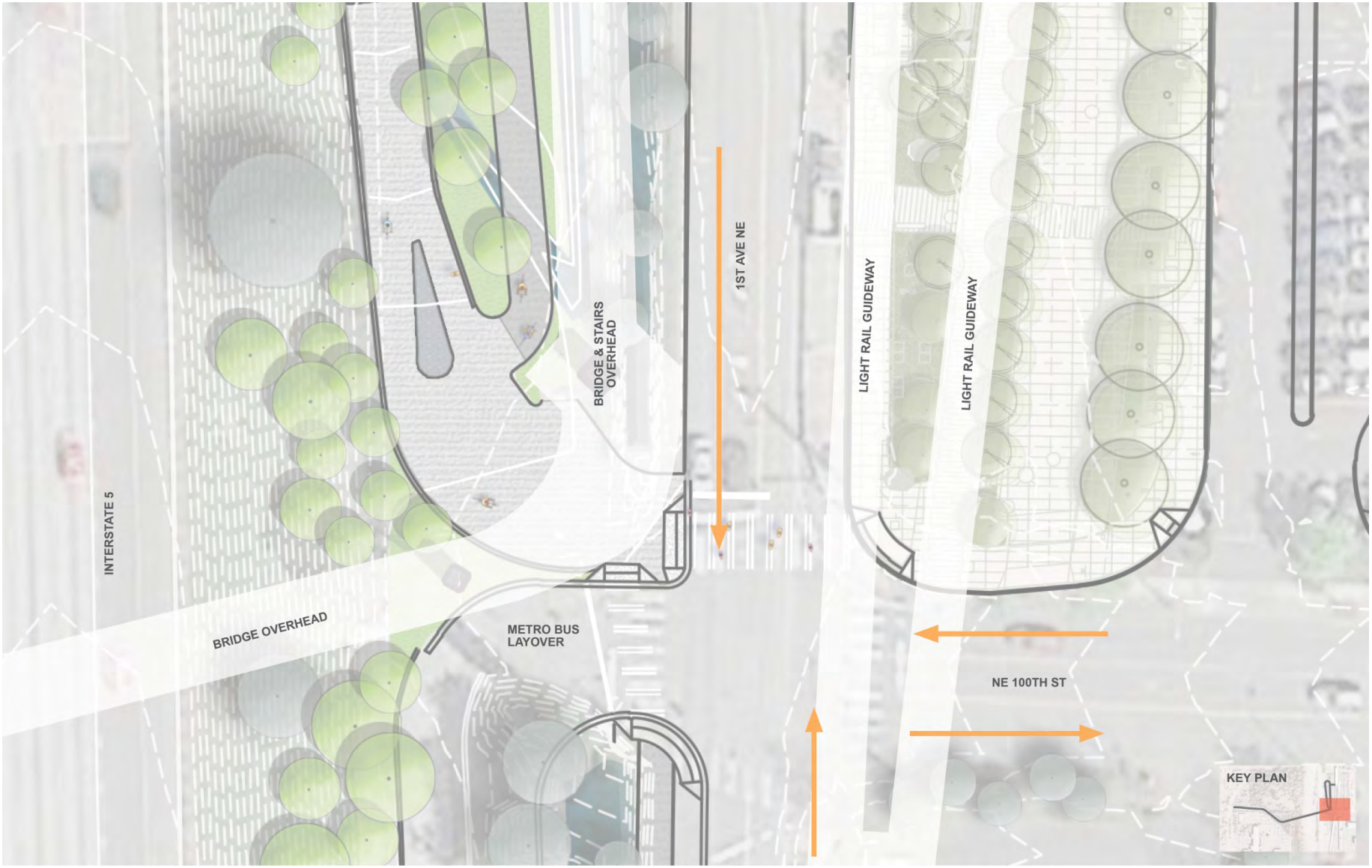
EAST APPROACH | Access: Pedestrians



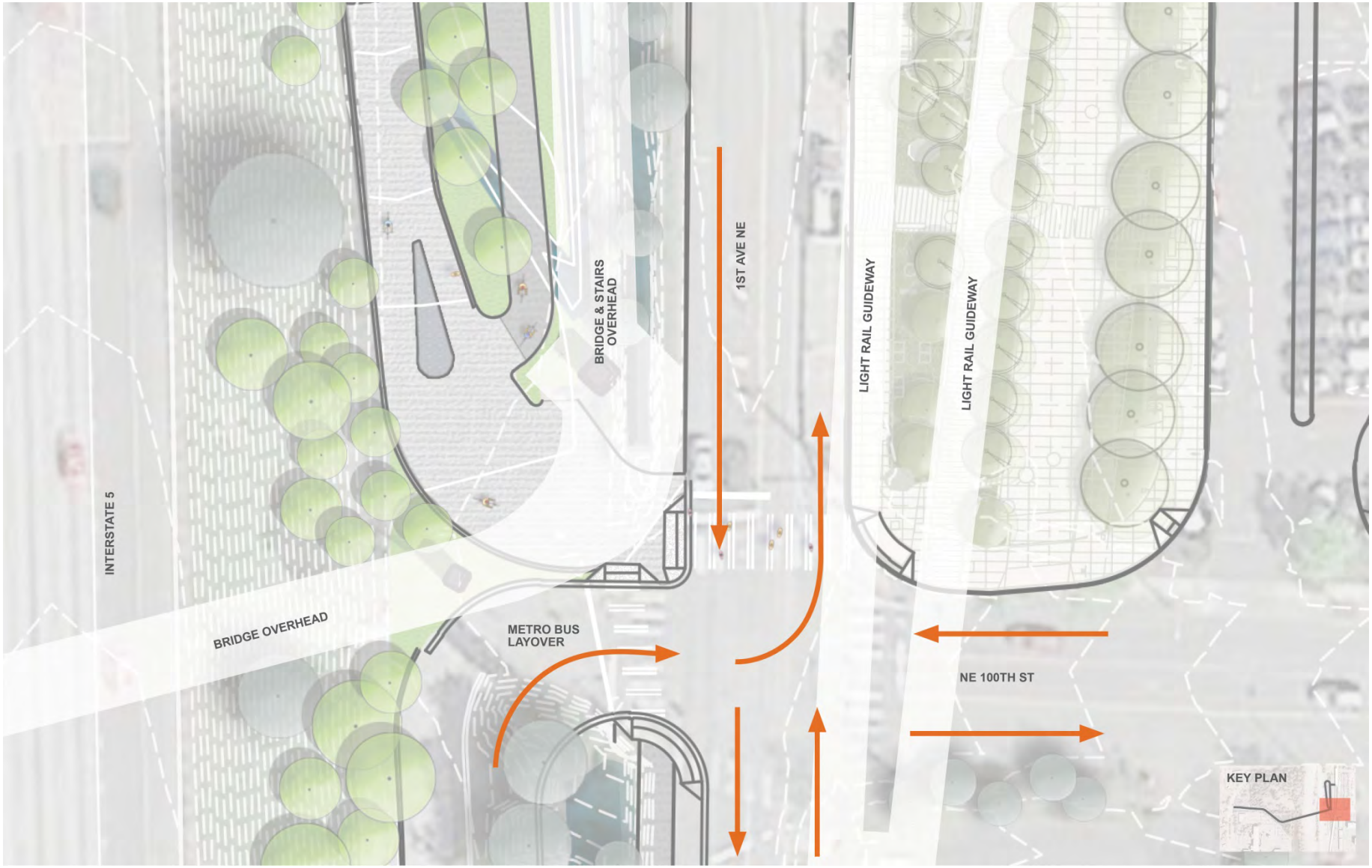
EAST APPROACH | Access: Bikes



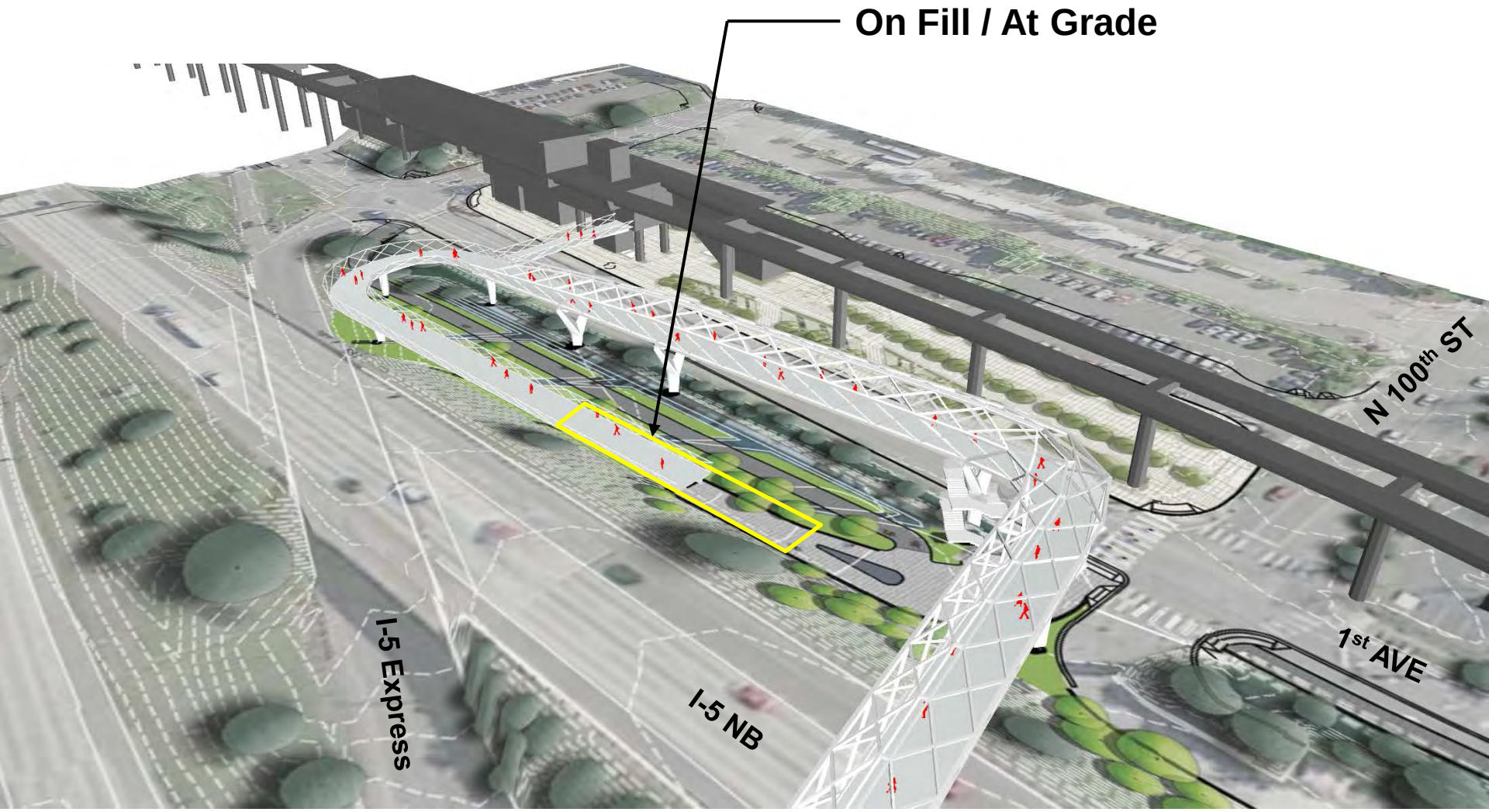
EAST APPROACH | Access: Adjacent Automobile Movement



EAST APPROACH | Access: Transit



EAST APPROACH | Bridge Components



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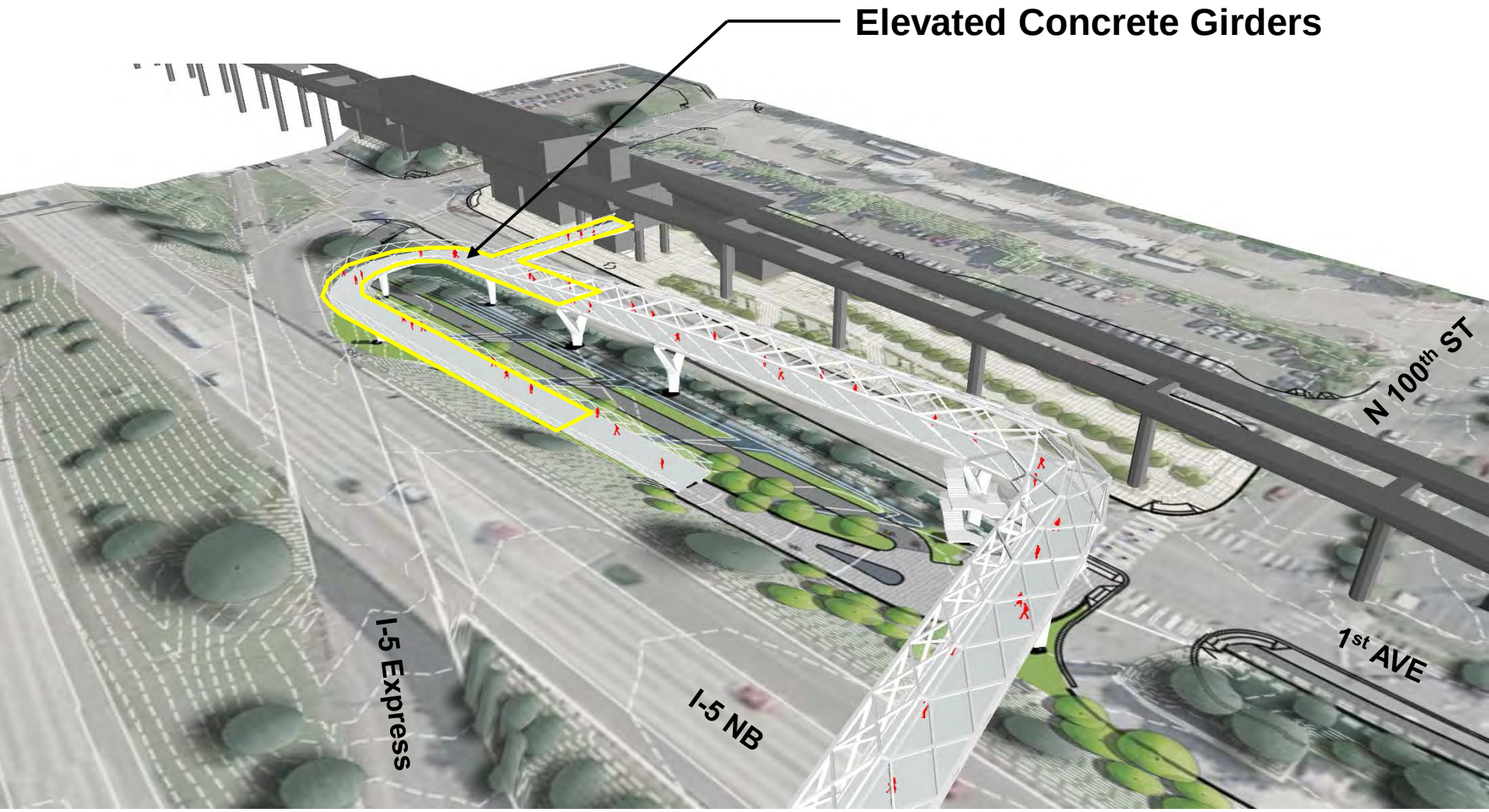

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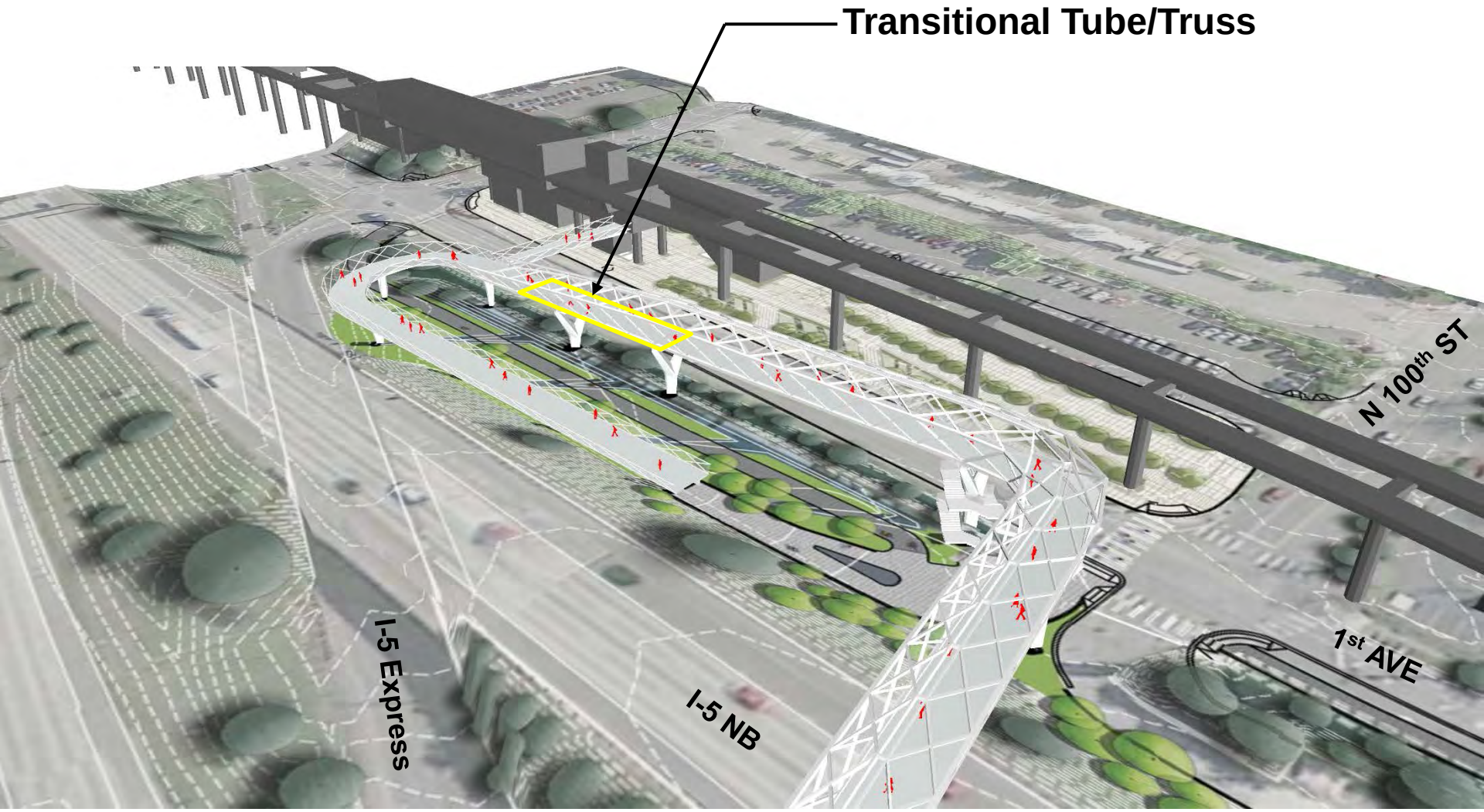

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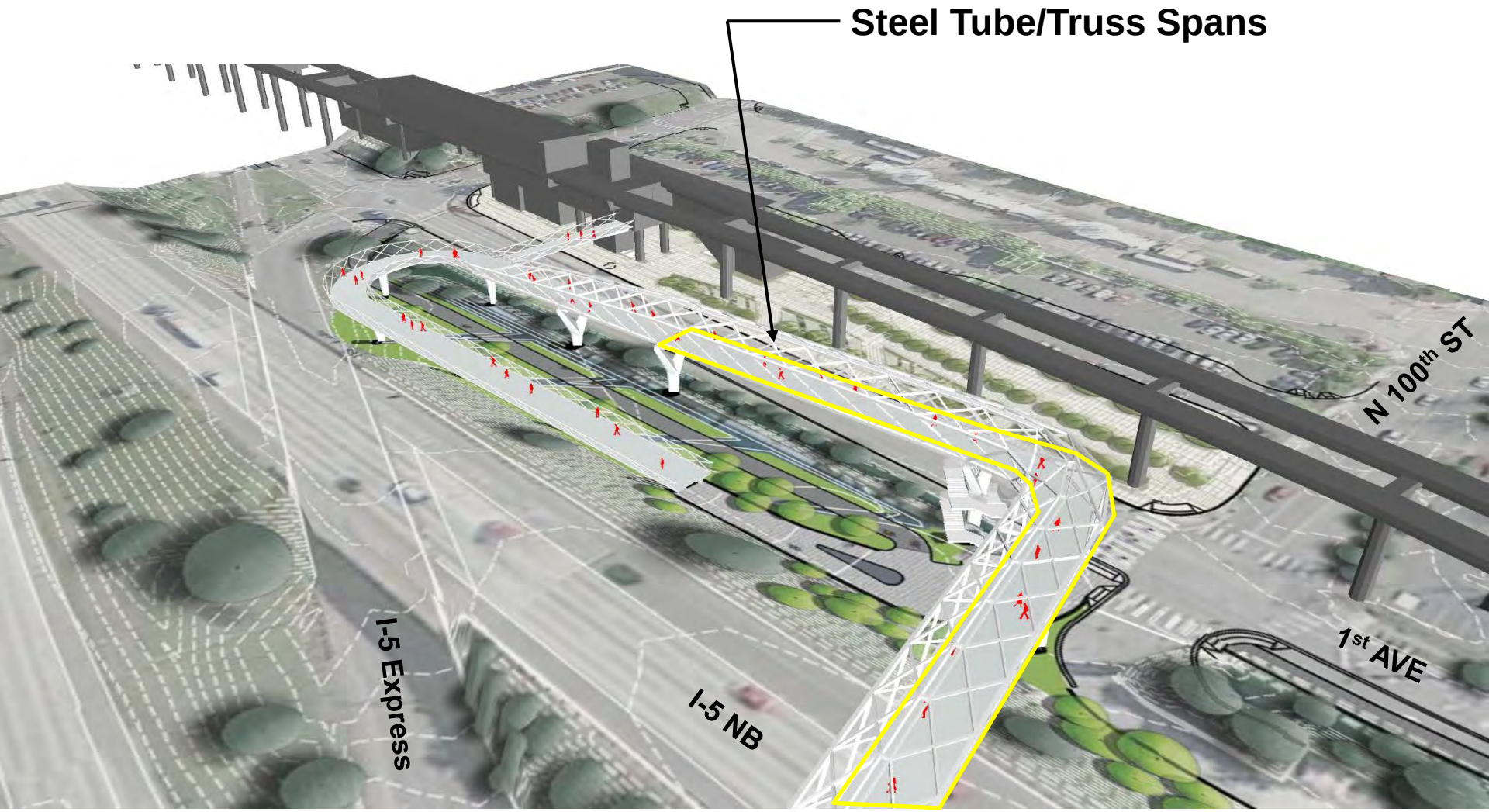

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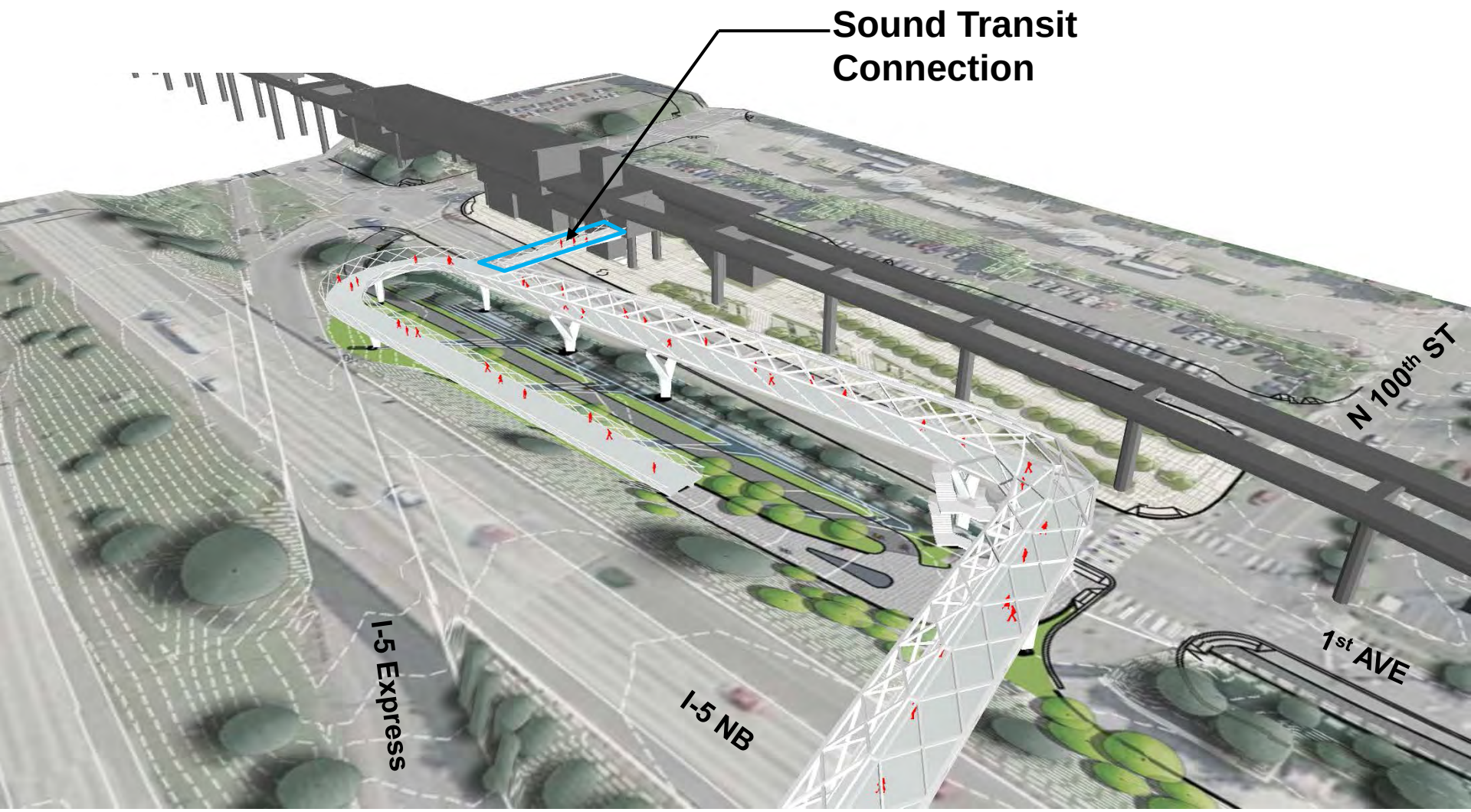
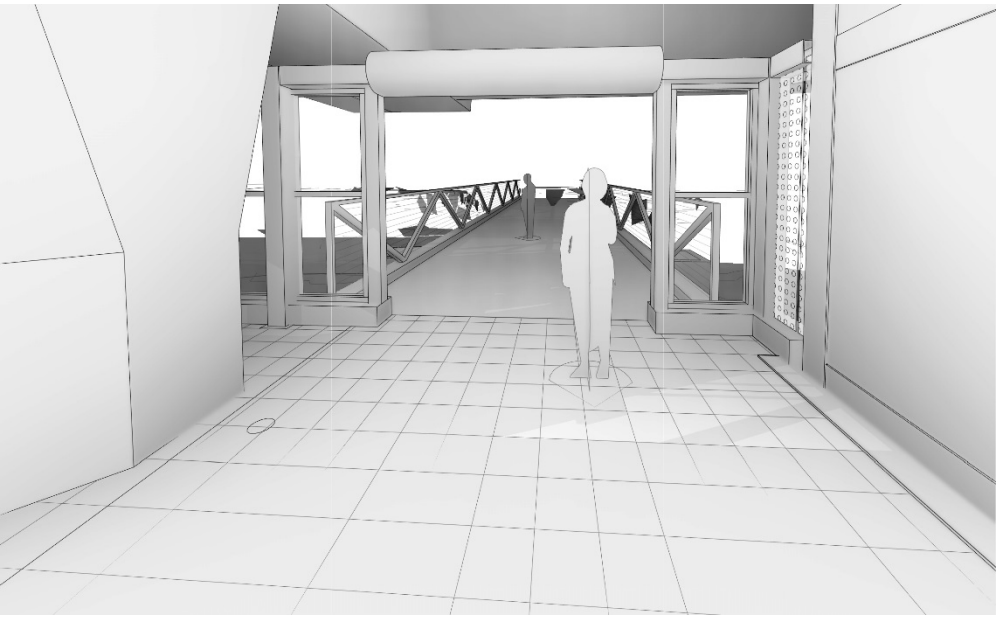


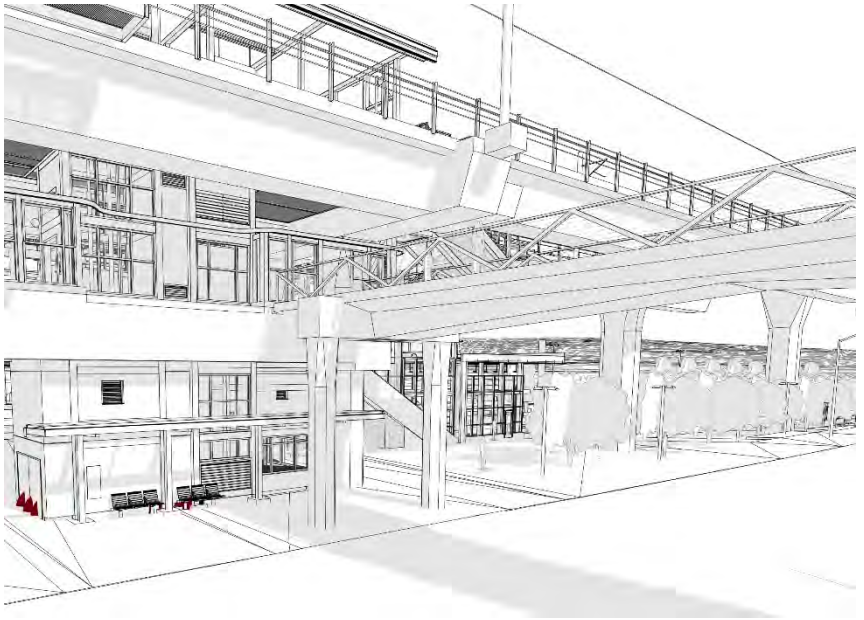
EAST APPROACH | Sound Transit Connection

View South along 1st Ave

EAST APPROACH | Sound Transit Connection



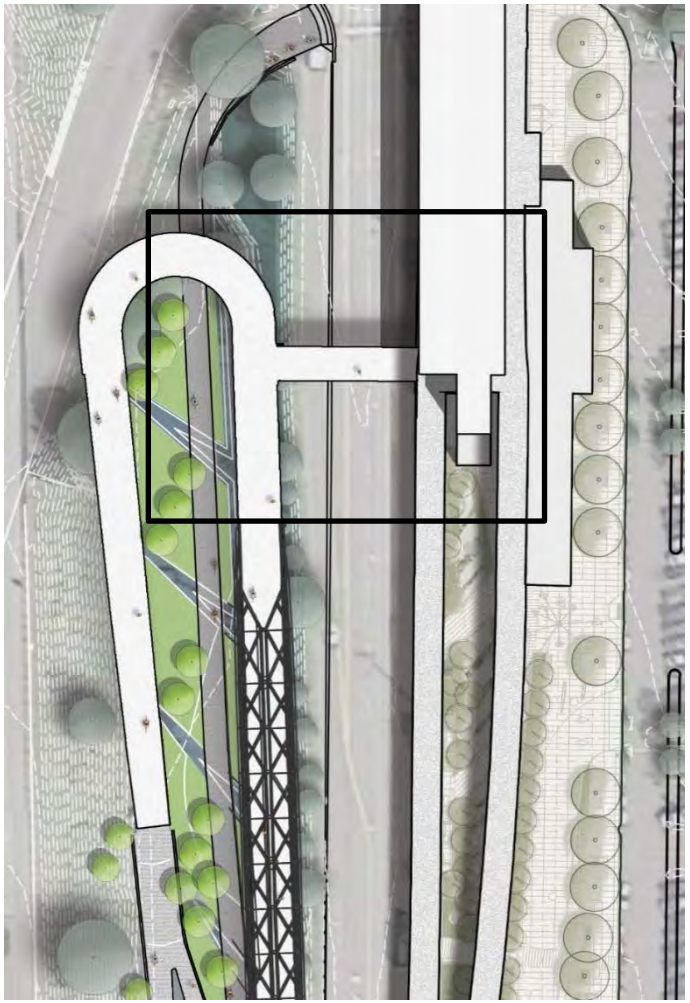
View from Station Mezzanine

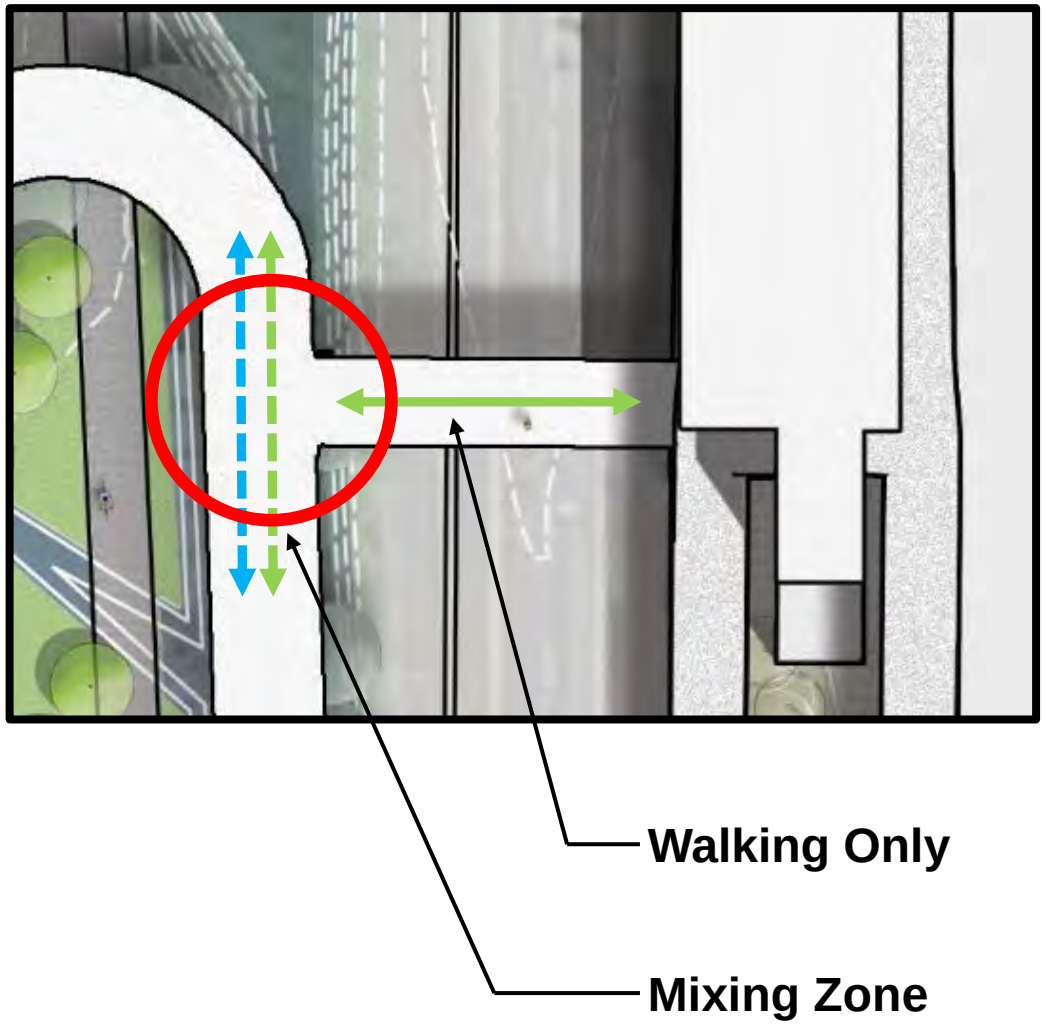


View East from 1st Ave

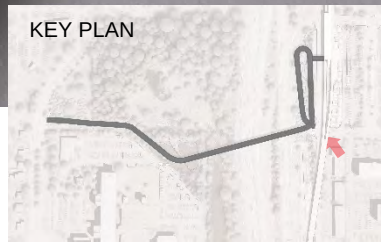
See stations for more info!

EAST APPROACH | Sound Transit Connection

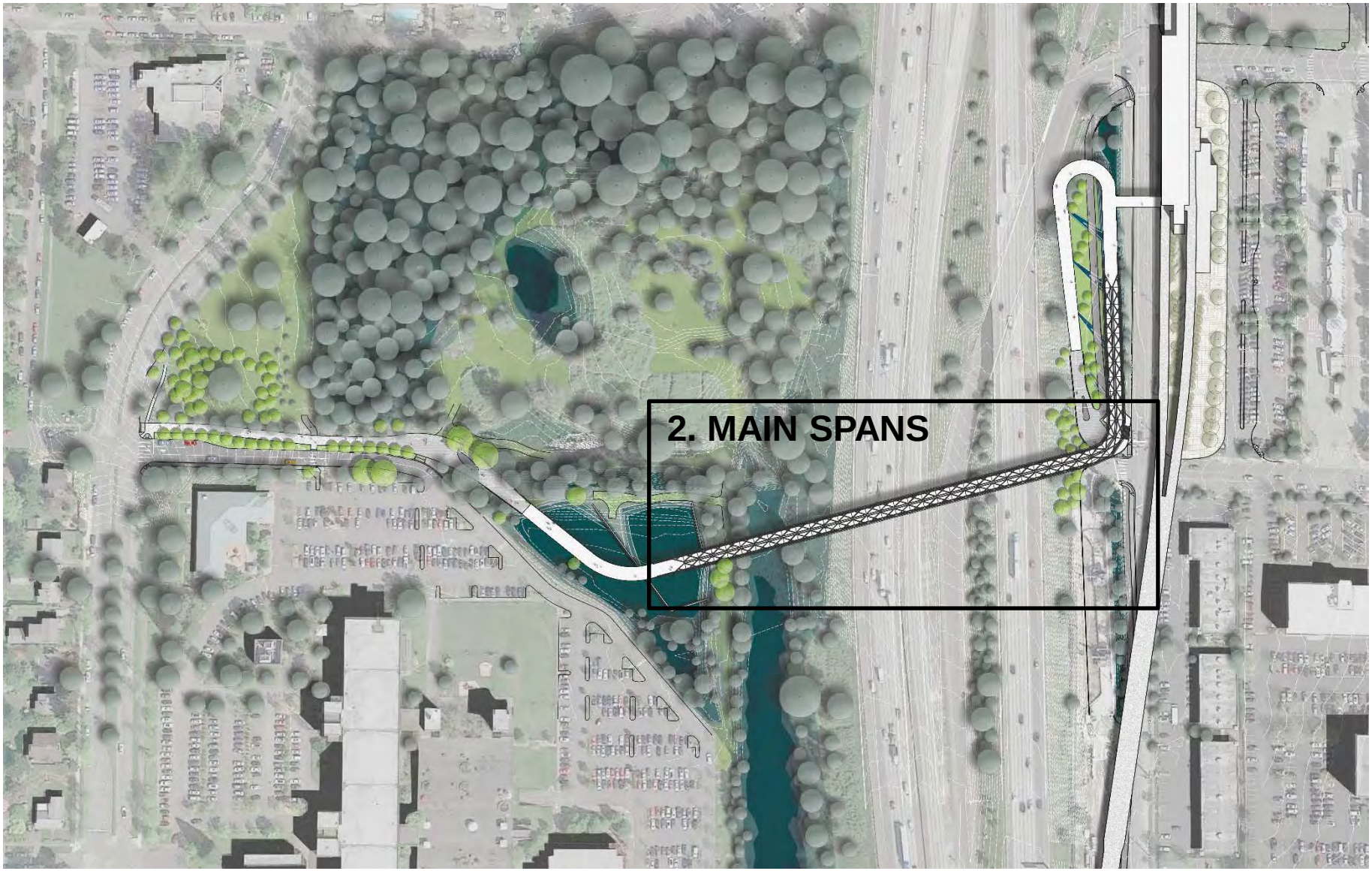




EAST APPROACH | View from South East

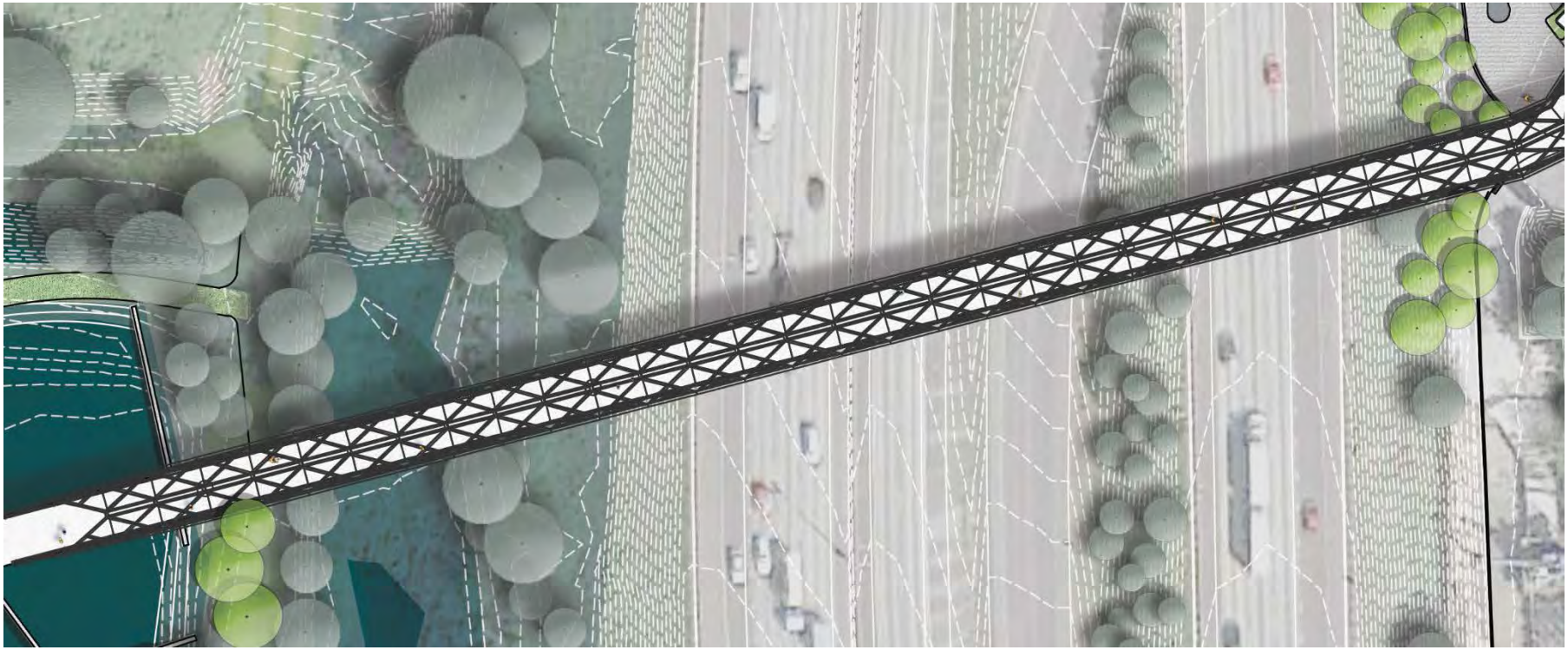


DESIGN | Main Spans

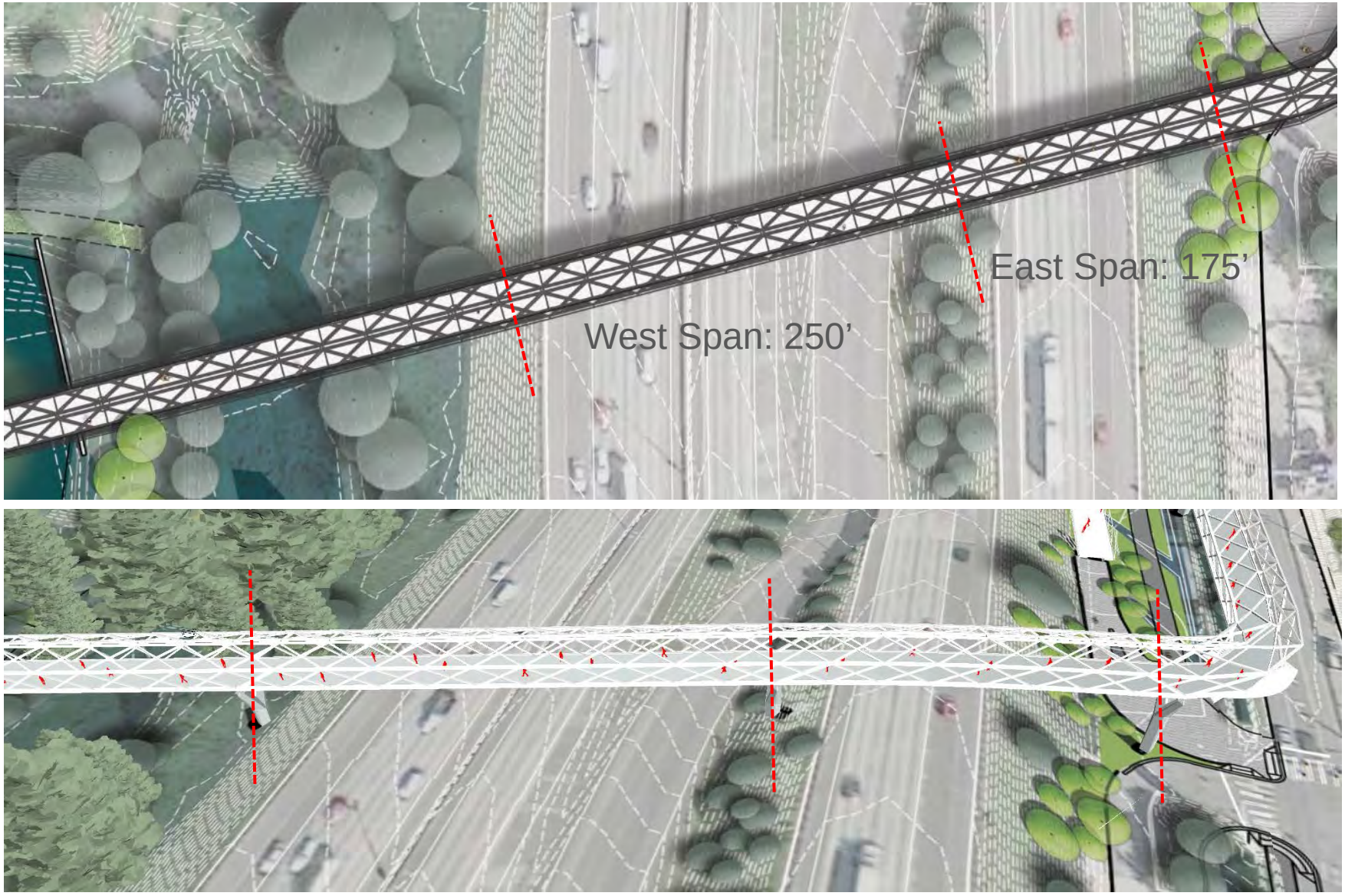


MAIN SPANS | Summary

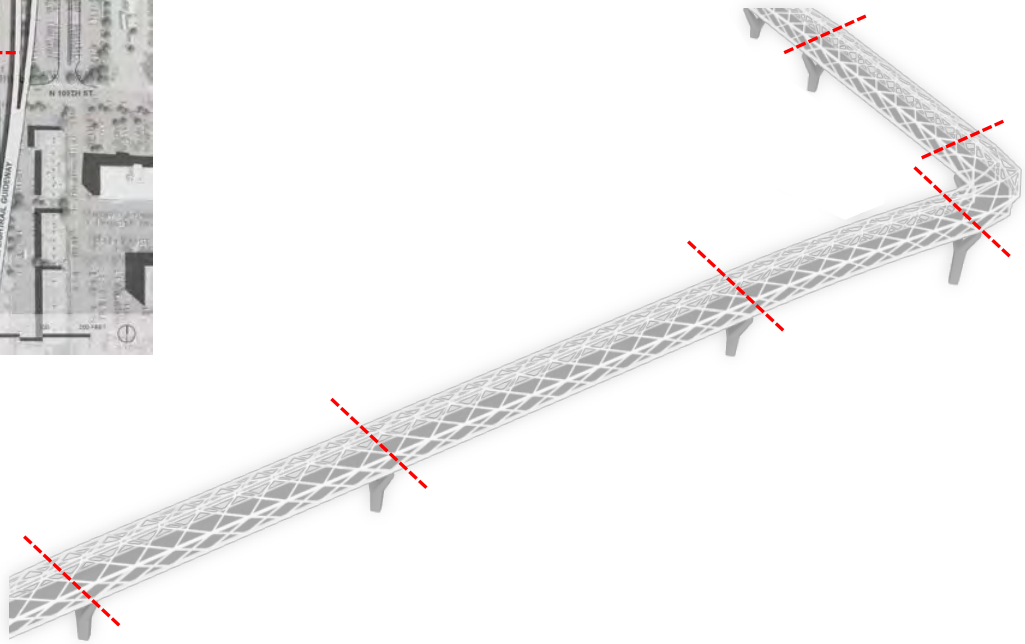
1. Spans
2. Structural Concept
3. Railings Barrier + Lighting
4. Column Design
5. Transition Truss



MAIN SPANS | Span Distances

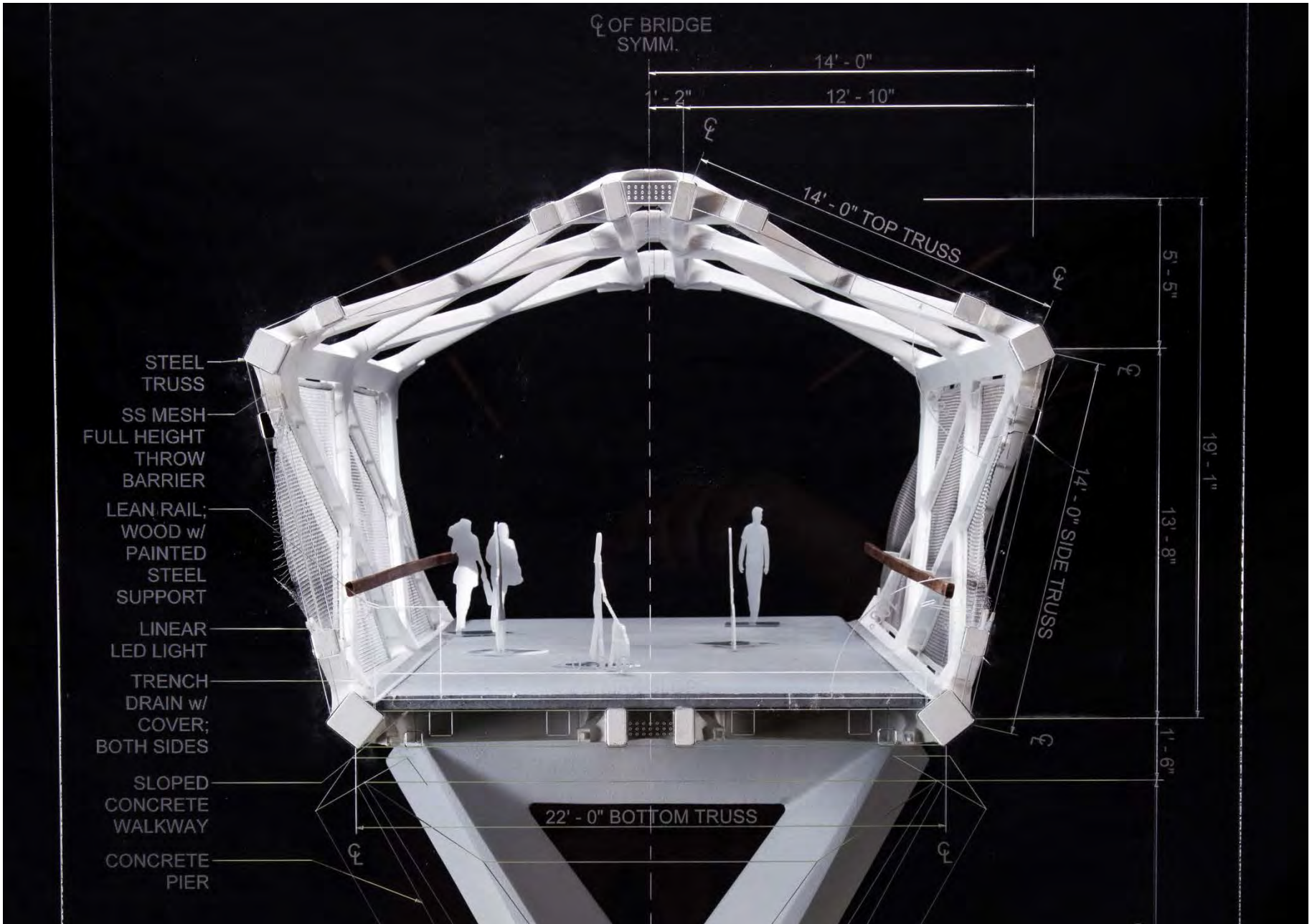


MAIN SPANS | Pre-fabrication



- Higher quality fabrication
- Minimizes costly on-site labor
- Minimized impact to I-5

MAIN SPANS | Structural Tube Concept



MAIN SPANS | Architectural Materials

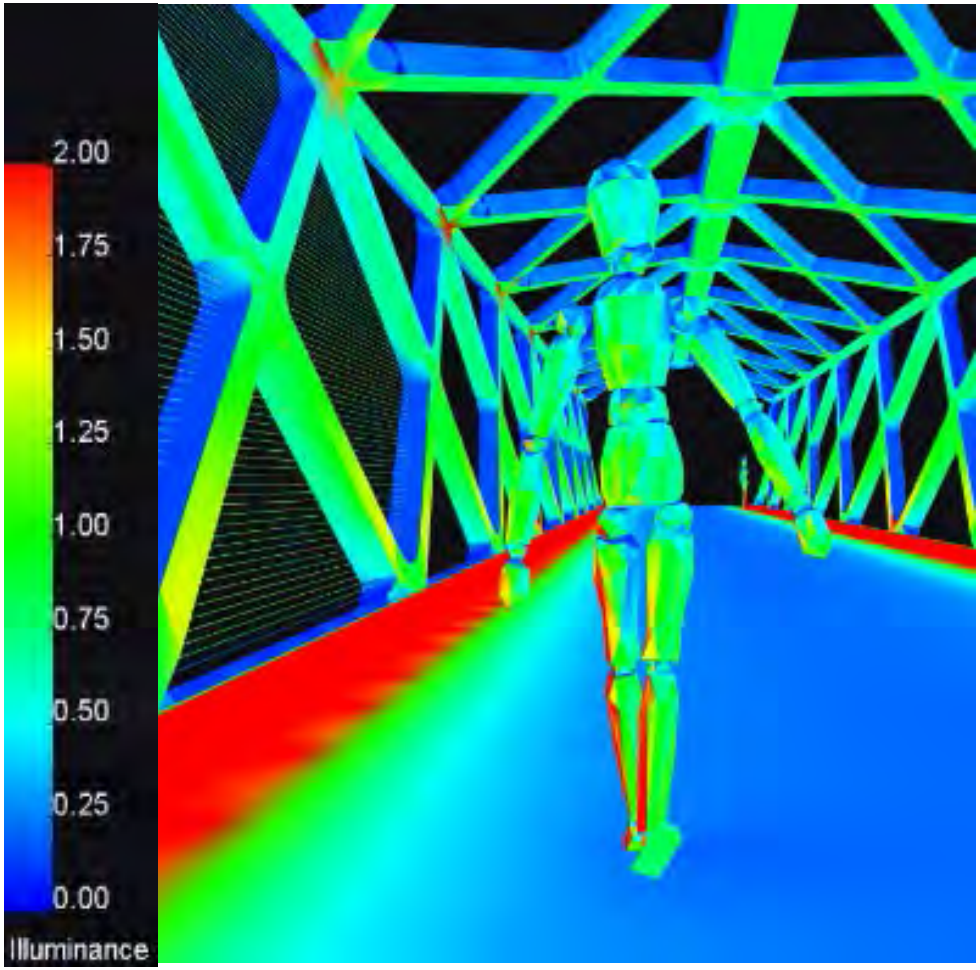
Throw Barrier / Guardrail:
Stainless Steel Cable Mesh

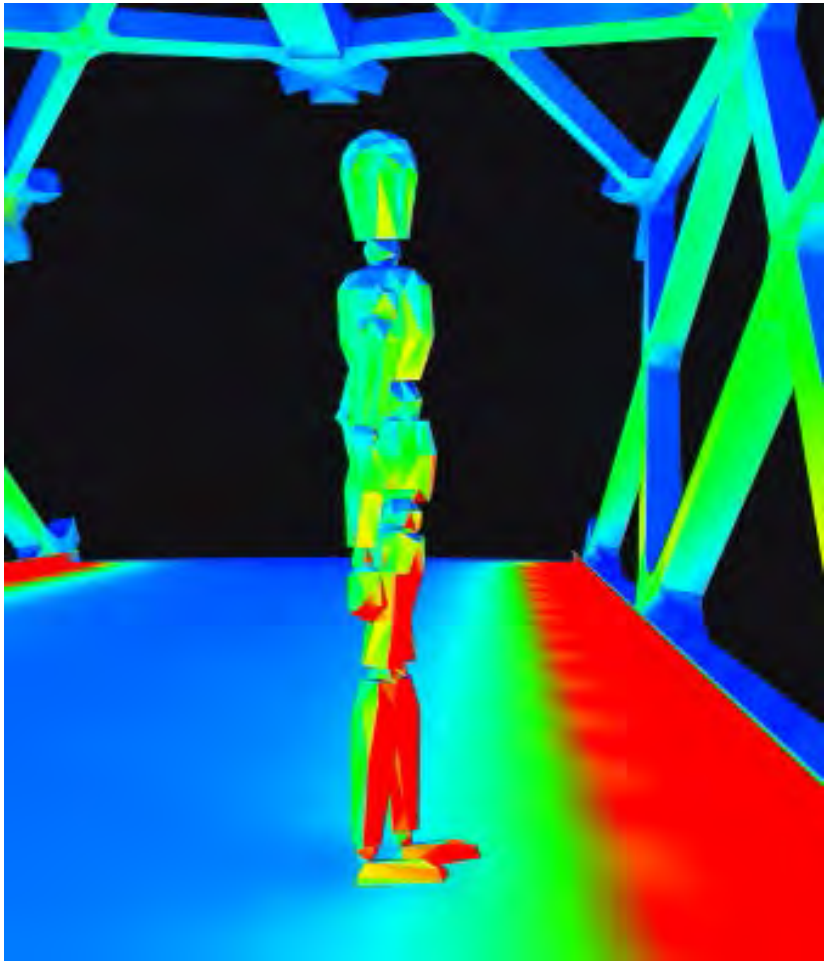
Railing:
Sustainably Harvested
Hardwood

Support Structure:
Stainless Steel

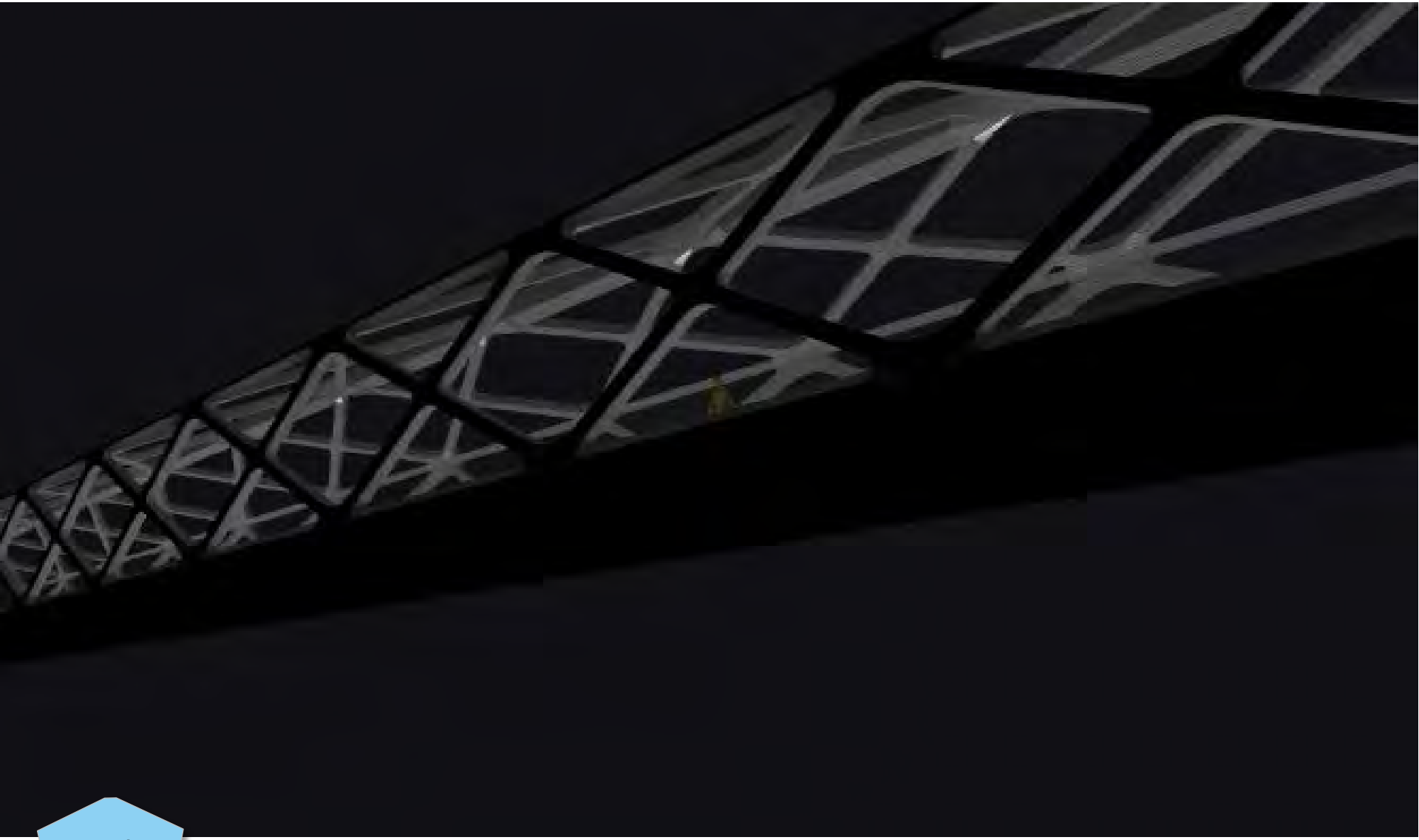
MAIN SPANS | Lighting Precedent

MAIN SPANS | Lighting Simulations



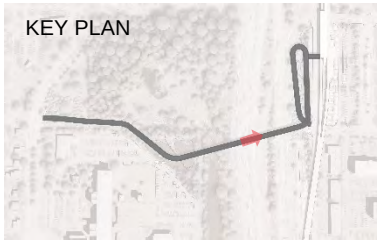


MAIN SPANS | Lighting Simulation from Roadway

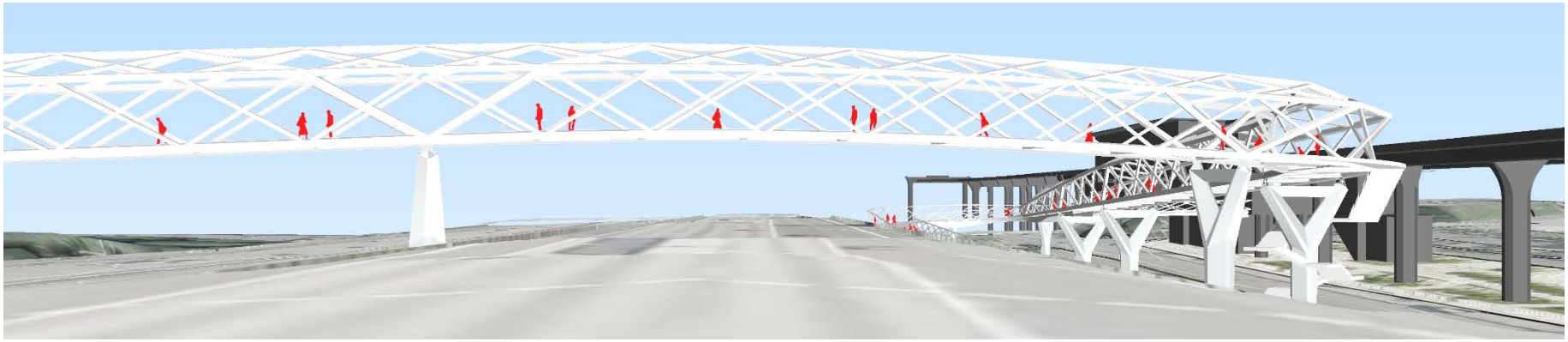


See stations for more info!

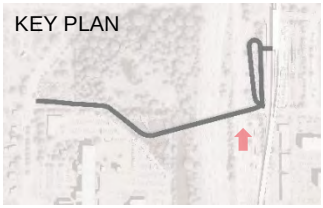
MAIN SPANS | Looking East

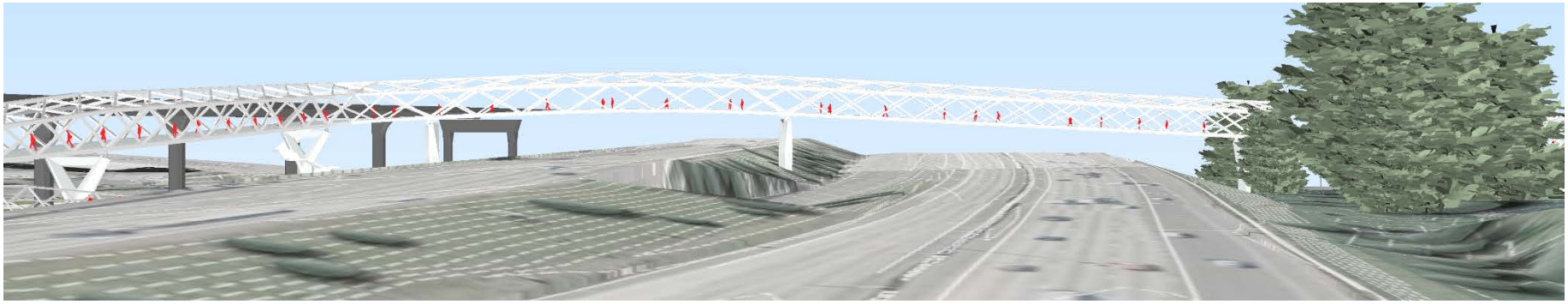


MAIN SPANS | Views From I-5

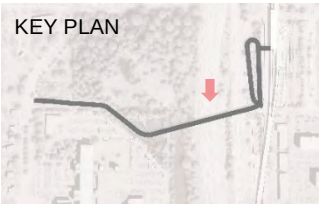


From NB I-5



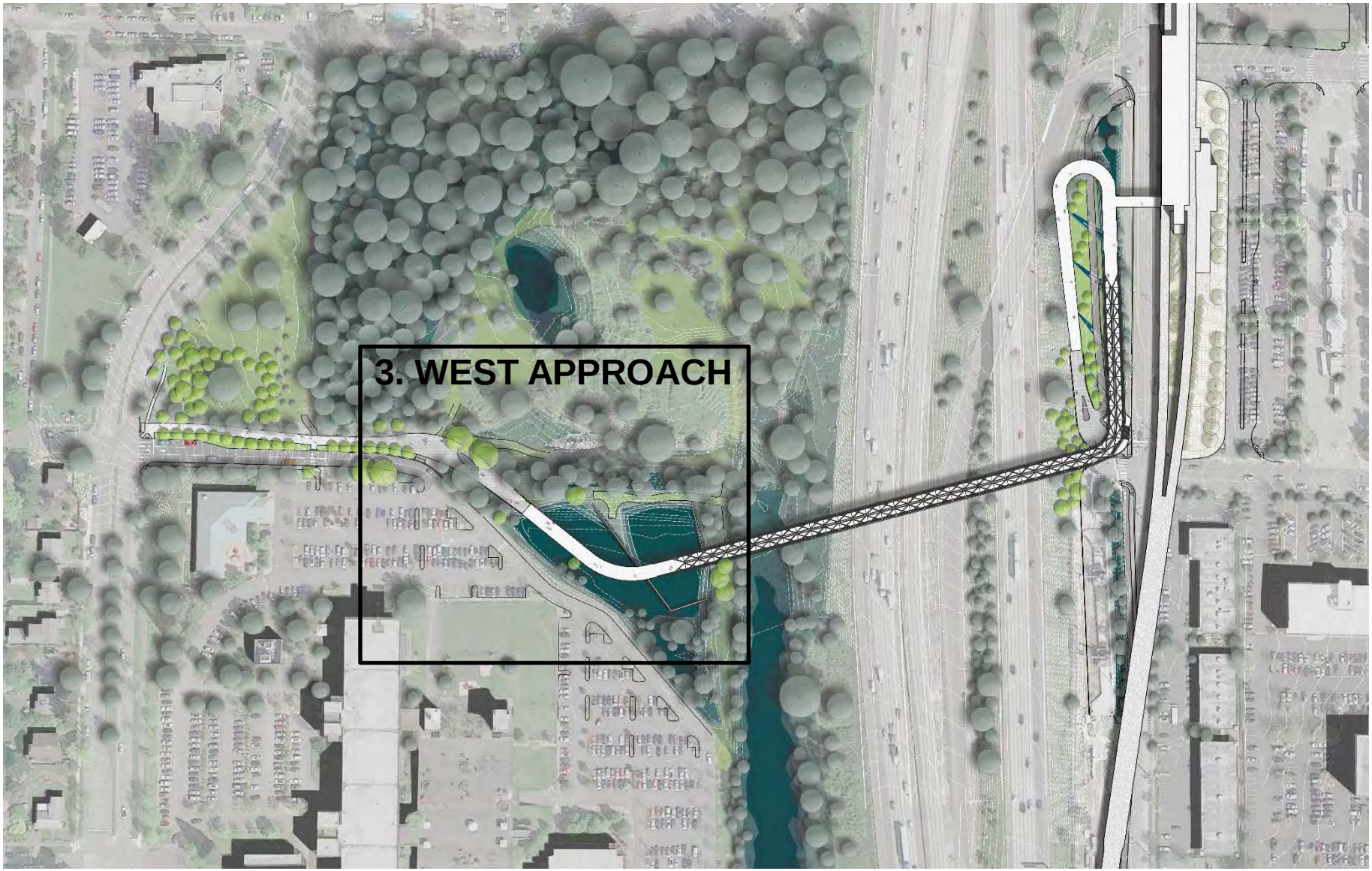


From SB I-5

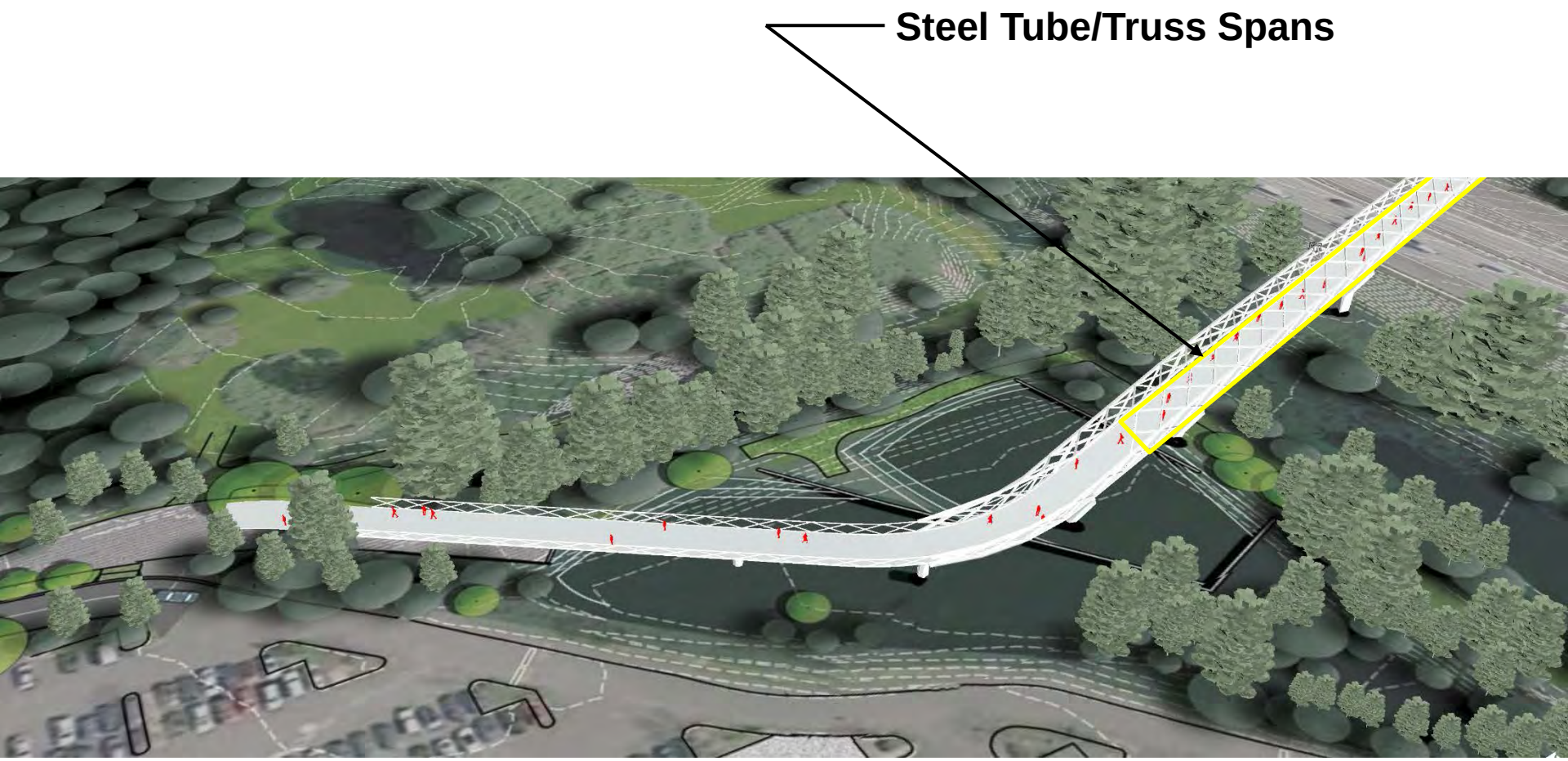


MAIN SPANS | Integrated Column Design

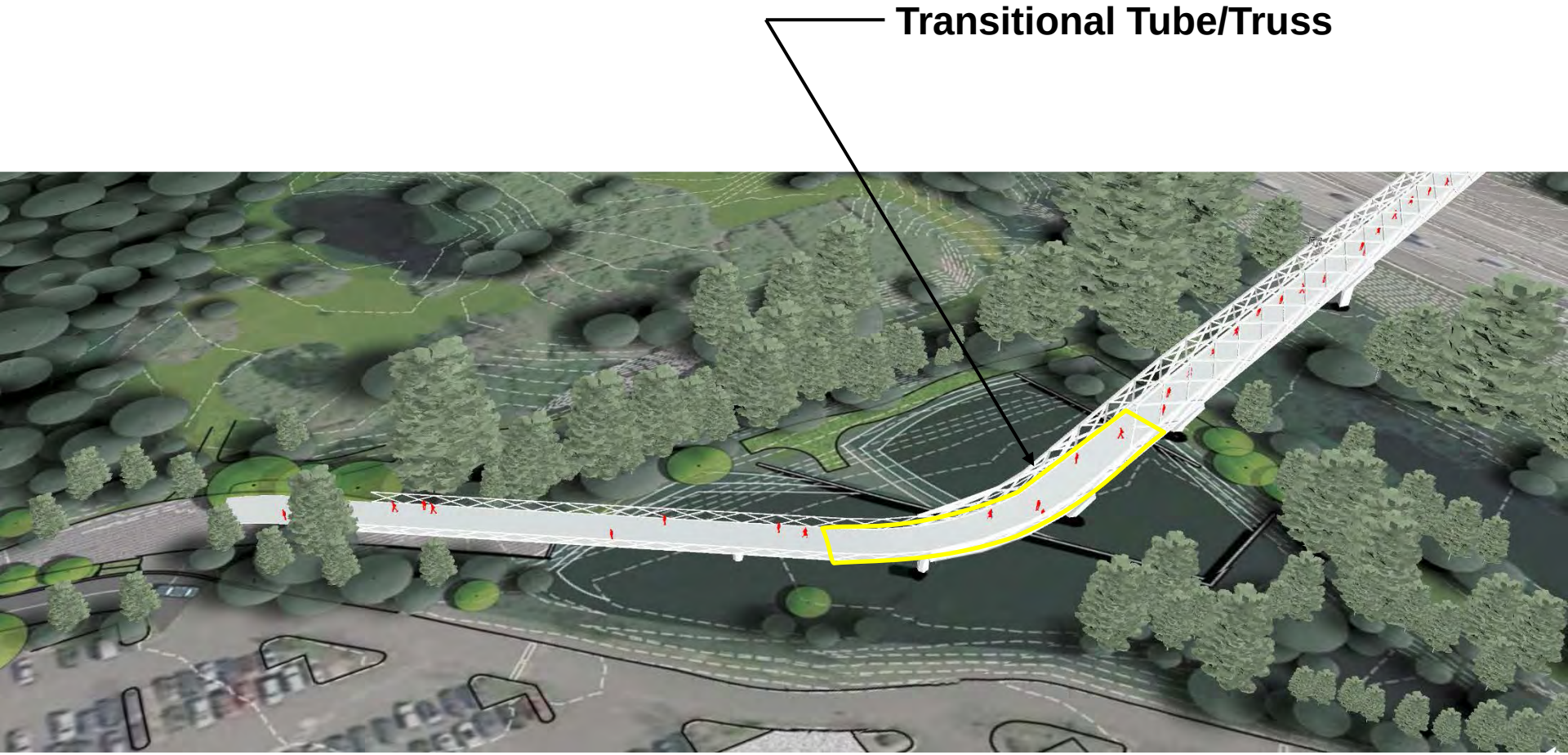
DESIGN | West Approach



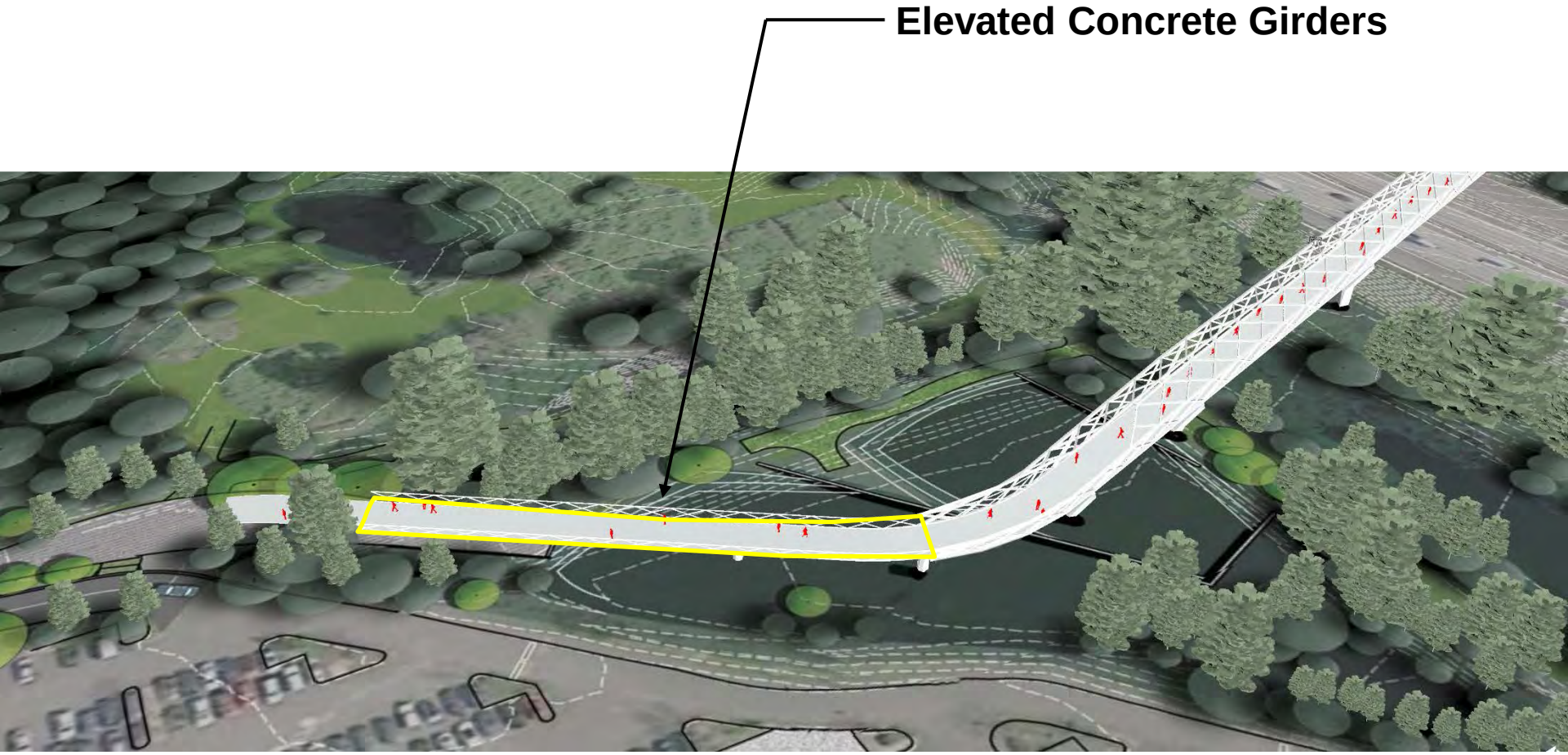
WEST APPROACH | Components



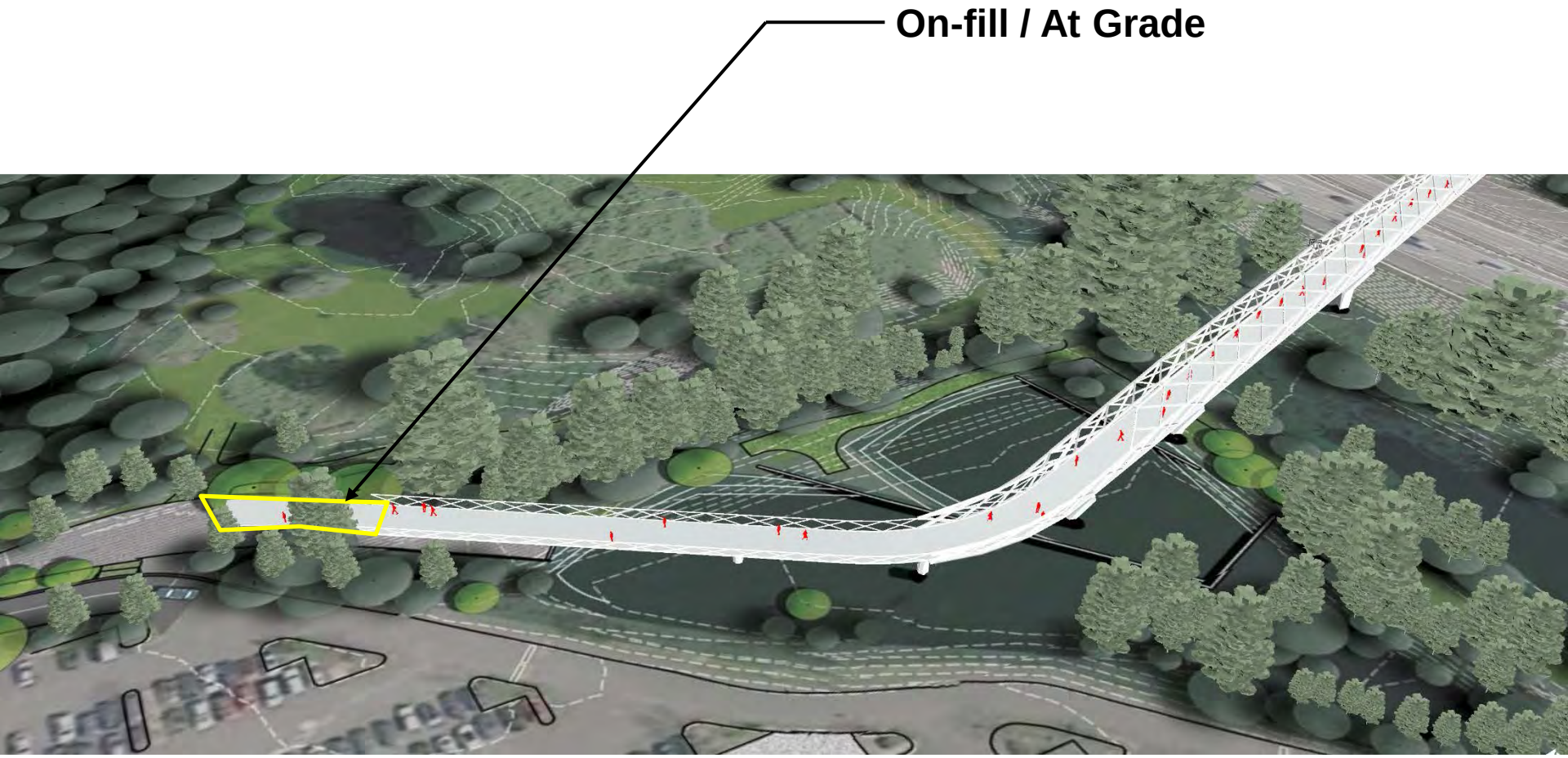
WEST APPROACH | Components



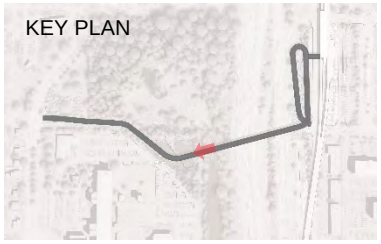
WEST APPROACH | Components



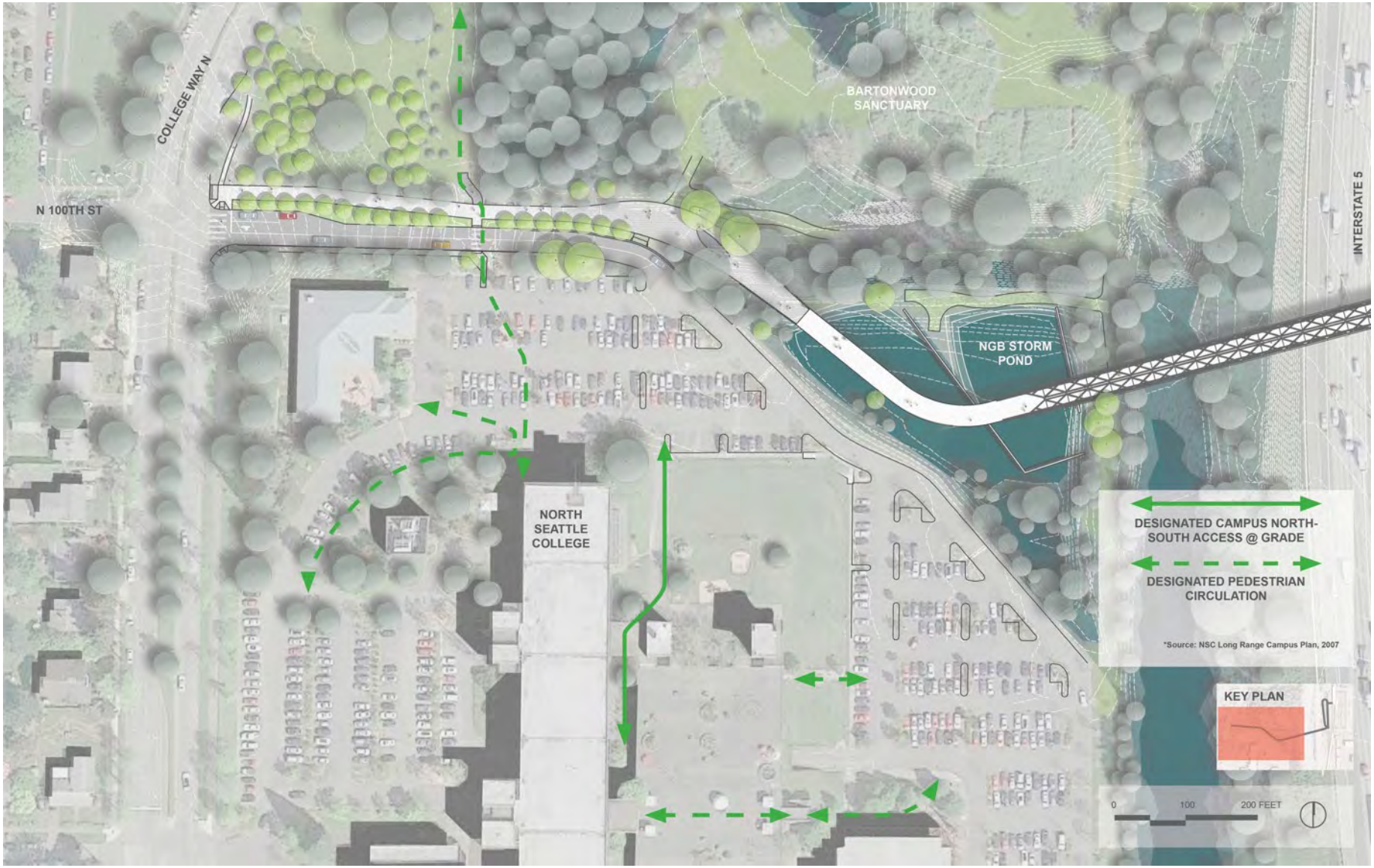
WEST APPROACH | Components



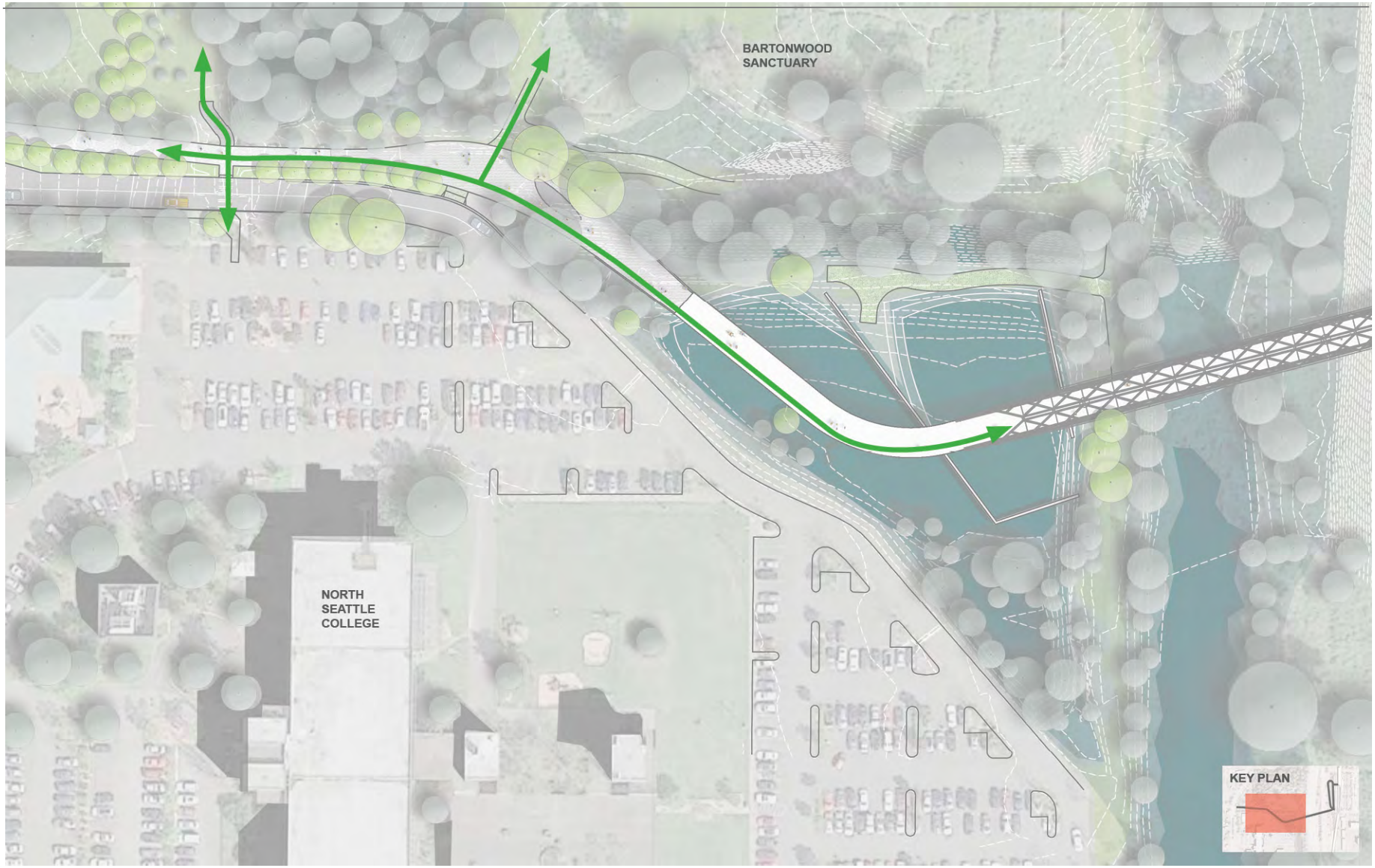
WEST APPROACH | View West to North Seattle College



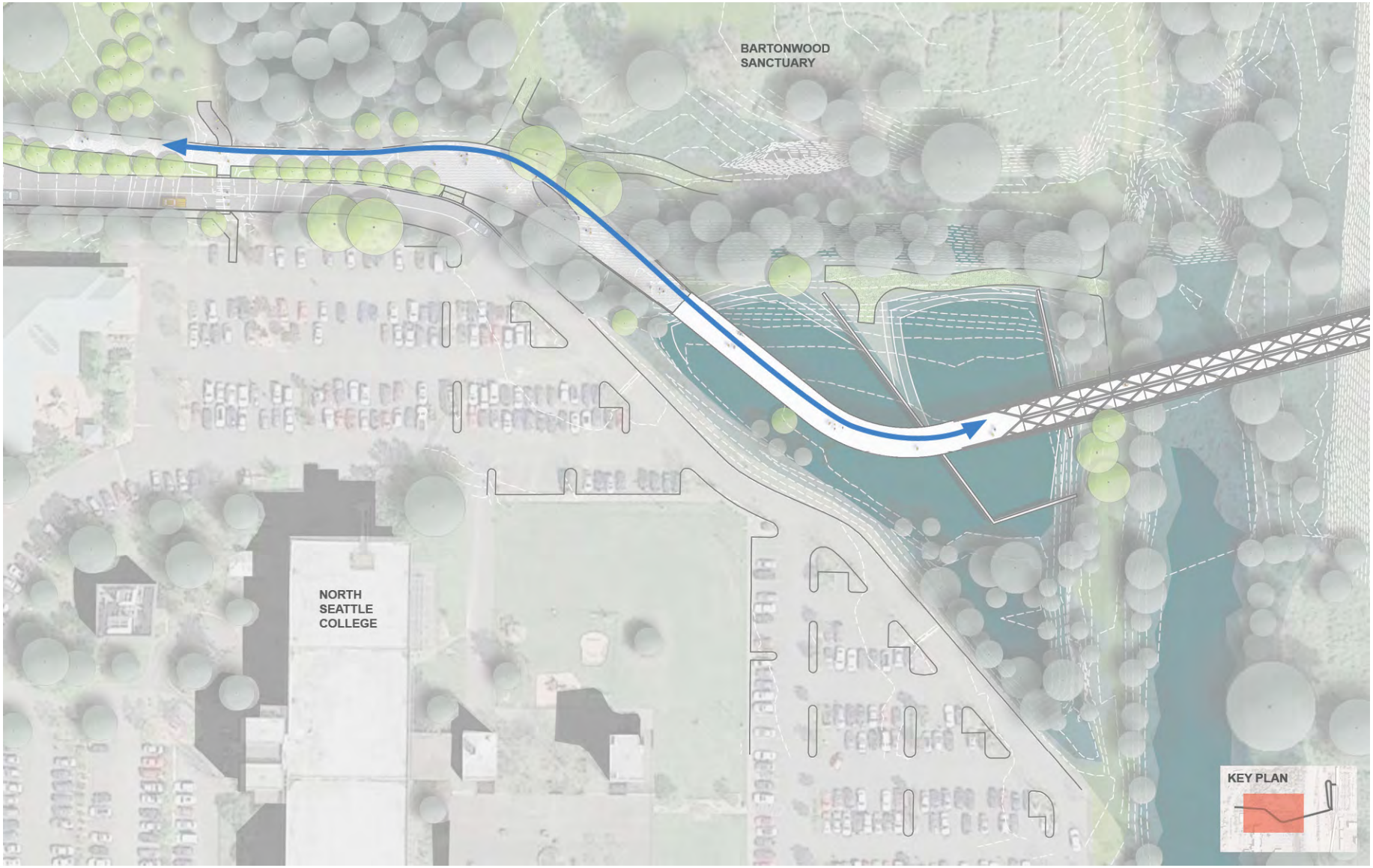
WEST APPROACH | NSC Circulation + Connection



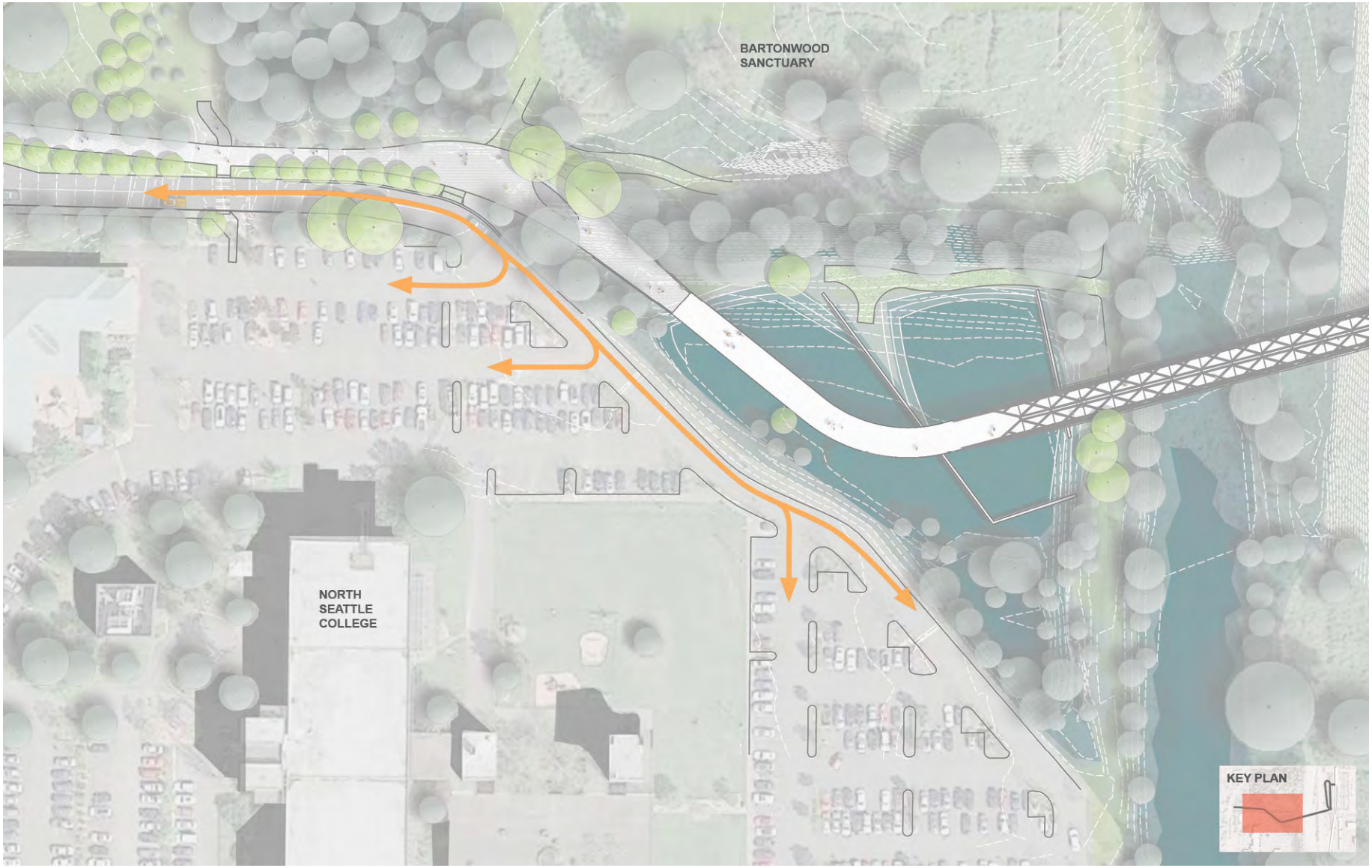
WEST APPROACH | Access: Pedestrians



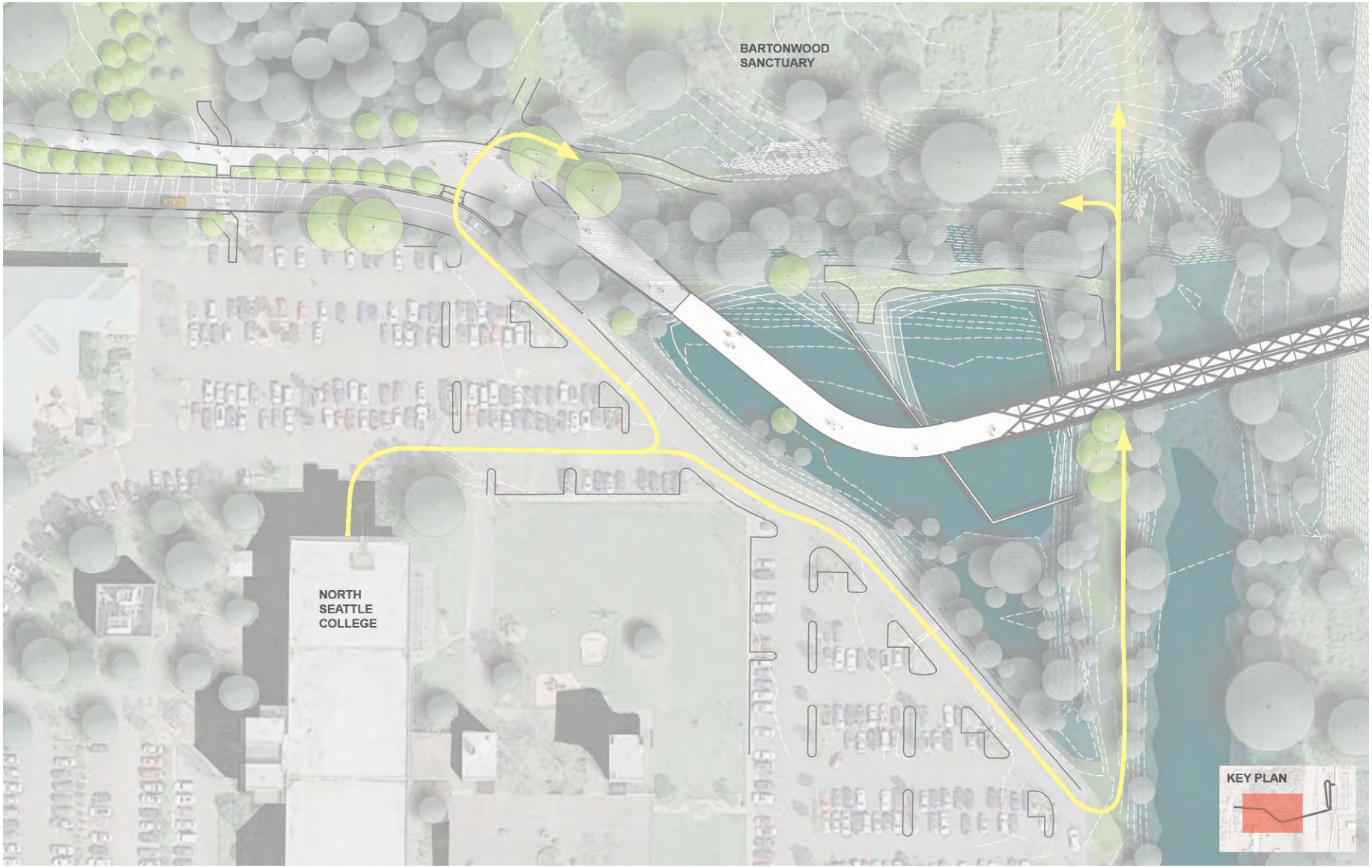
WEST APPROACH | Access: Bikes



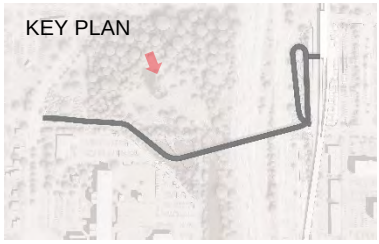
WEST APPROACH | Access: Adjacent Automobile Traffic



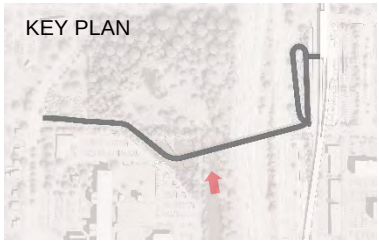
WEST APPROACH | Access: NSC Maintenance



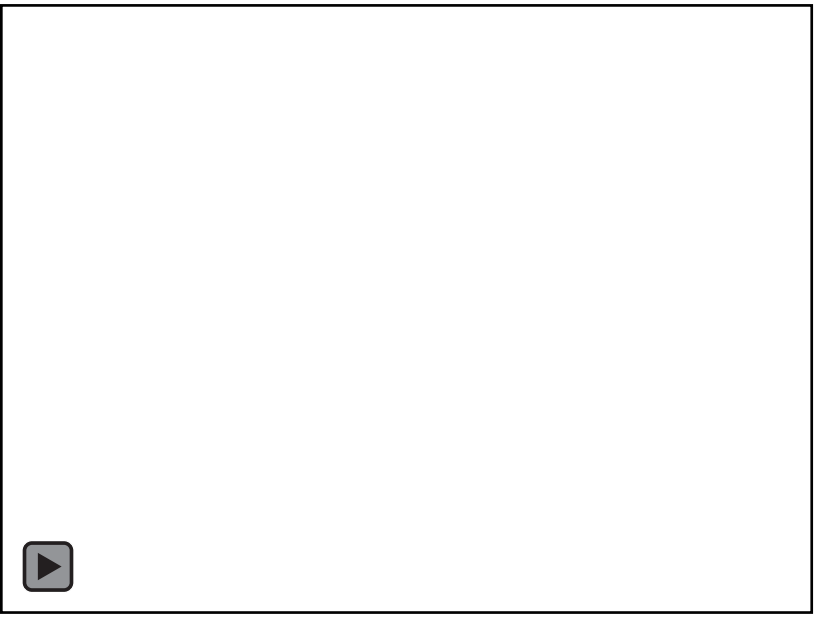
OVERALL | View from North West



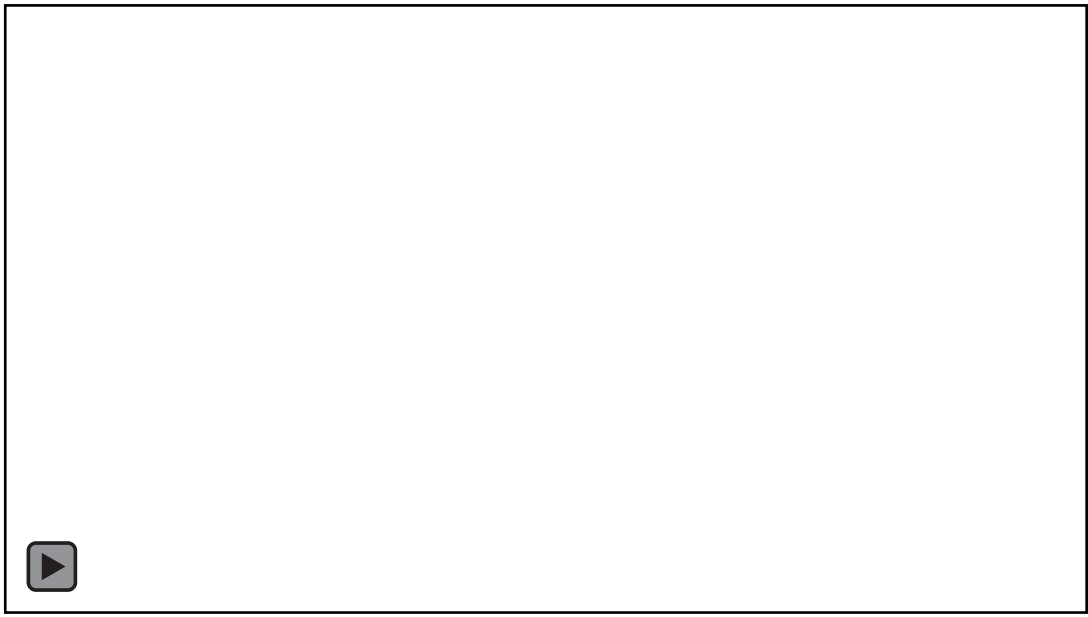
WEST APPROACH| View from South



ART INTEGRATION | Charles Sowers



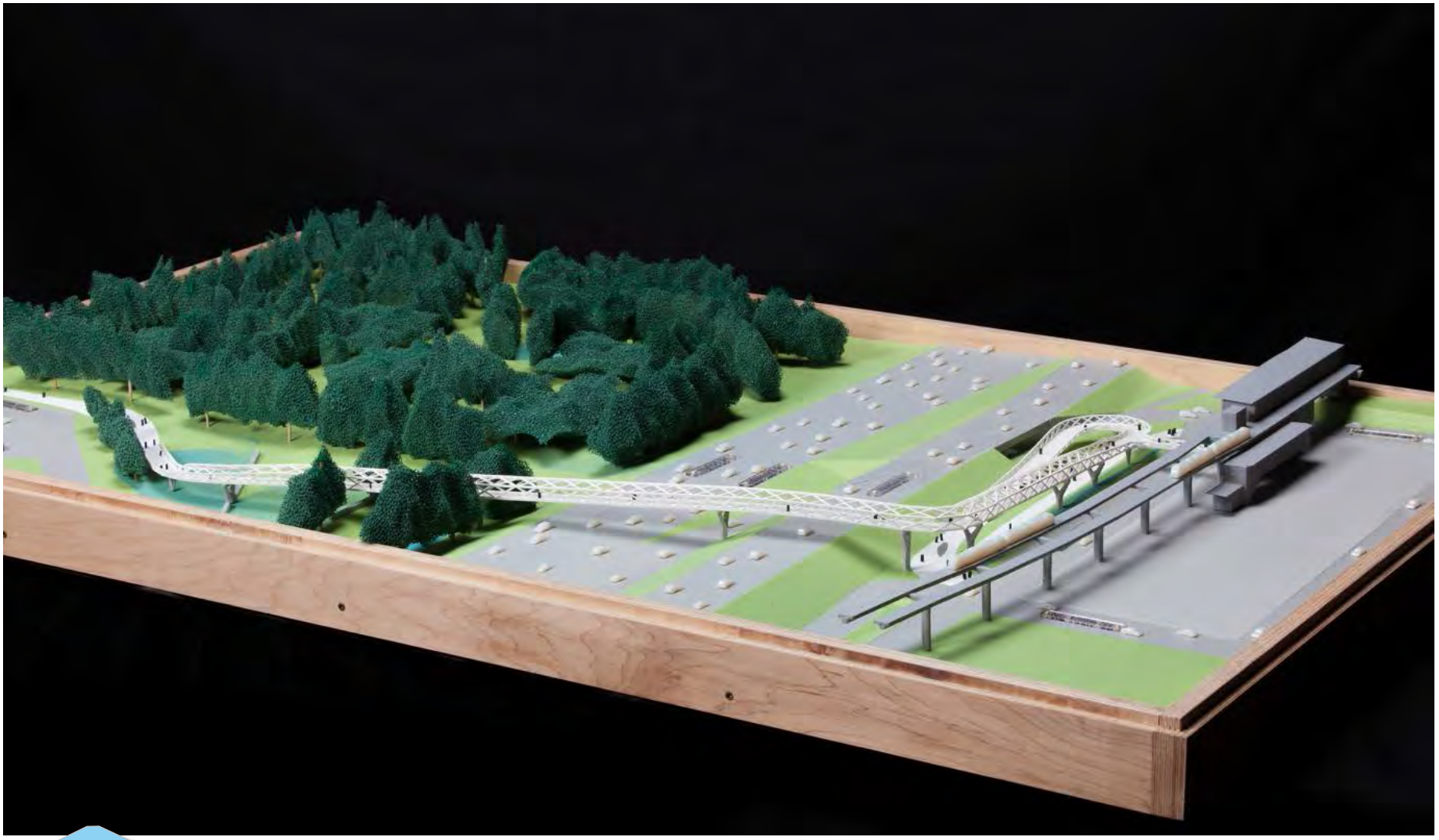
WAVE WALL: LIGO, Livingston, LA



WINDSWEPT: Randall Museum,
San Francisco, CA

See stations for more info!

OVERALL | Model



See stations for more info!

Contact Us

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