

MAGNOLIA BRIDGE PLANNING STUDY



PRESENTED TO THE COALITION FOR MAGNOLIA, QUEEN ANNE, & INTERBAY NEIGHBORHOODS
APRIL 9, 2018



PROJECT PHASES

1) EMERGENCY BRIDGE CLOSURE TRANSPORTATION PLAN

- ✓ Guide the **movement of people and goods** between the Magnolia neighborhood and the 15th Ave W corridor **immediately following a catastrophic event** if one or more of the bridges serving Magnolia are closed.

2) SHORT-TERM CLOSURE TRANSPORTATION PLAN

- ✓ **Improve the resilience of the transportation system in advance of a catastrophic or closure event**, and help with recovery after an event. The plan focuses on the potential that the Magnolia Bridge—the most vulnerable of the bridges serving Magnolia—could be closed to all traffic until a permanent facility can be constructed.



Magnolia Bridge - Traffic Maintenance During Bridge Closure

Figure A – Potential Surface Routes for Emergency Responders



X = Railroad crossing that will need temporary surface to allow a vehicle to cross.

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3) LONG-TERM PLANNING STUDY

- Develop a financially feasible permanent alternative replacing the functional needs served by existing Magnolia Bridge structure

MAGNOLIA BRIDGE
PLANNING STUDY
FUNDED THROUGH THE
2015 MOVE SEATTLE LEVY

LONG-TERM PLANNING STUDY PURPOSE & GOALS

Mission:

Develop an alternative that provides safe and efficient access to the Magnolia area that has stakeholder support and is financially feasible.

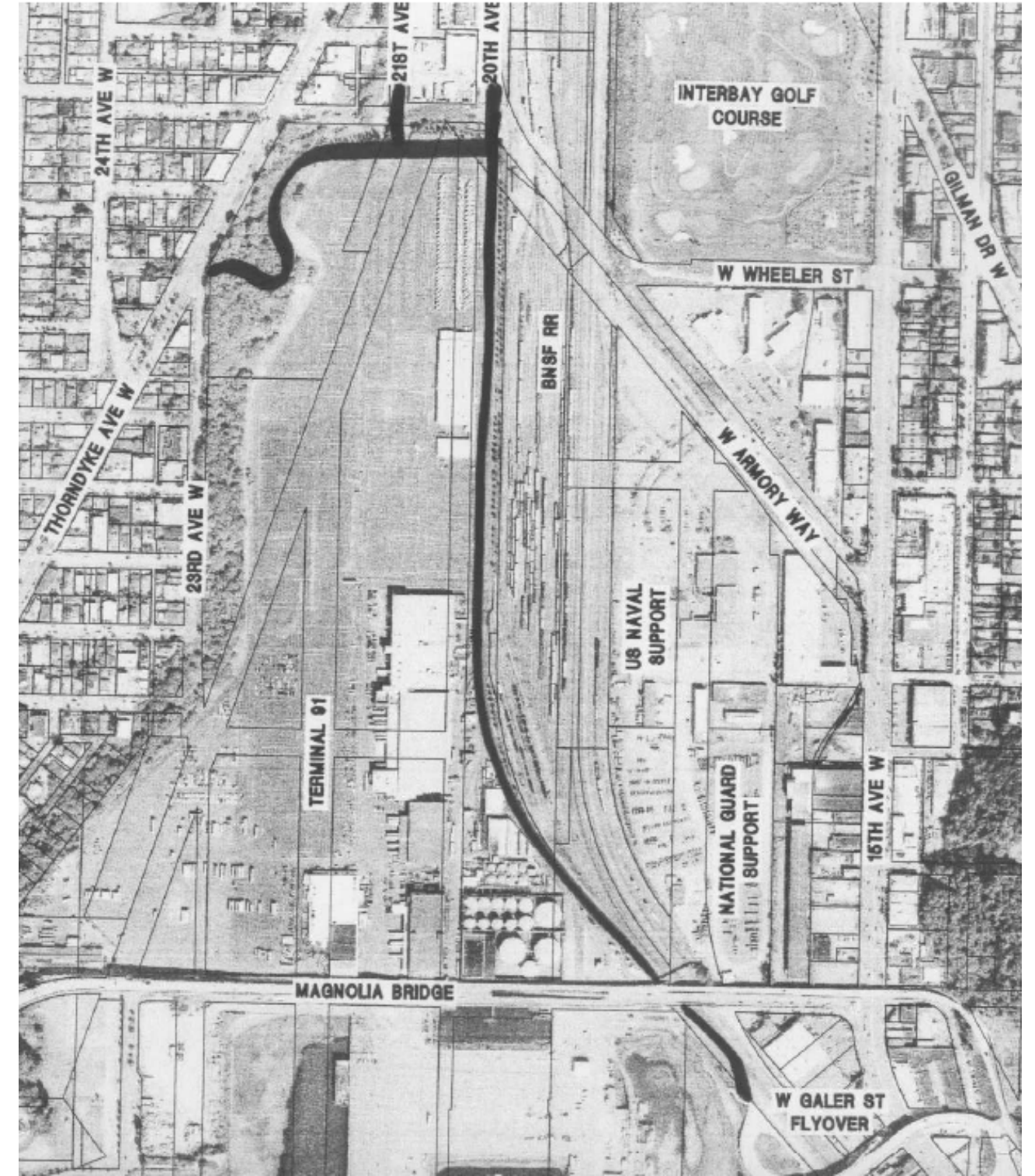
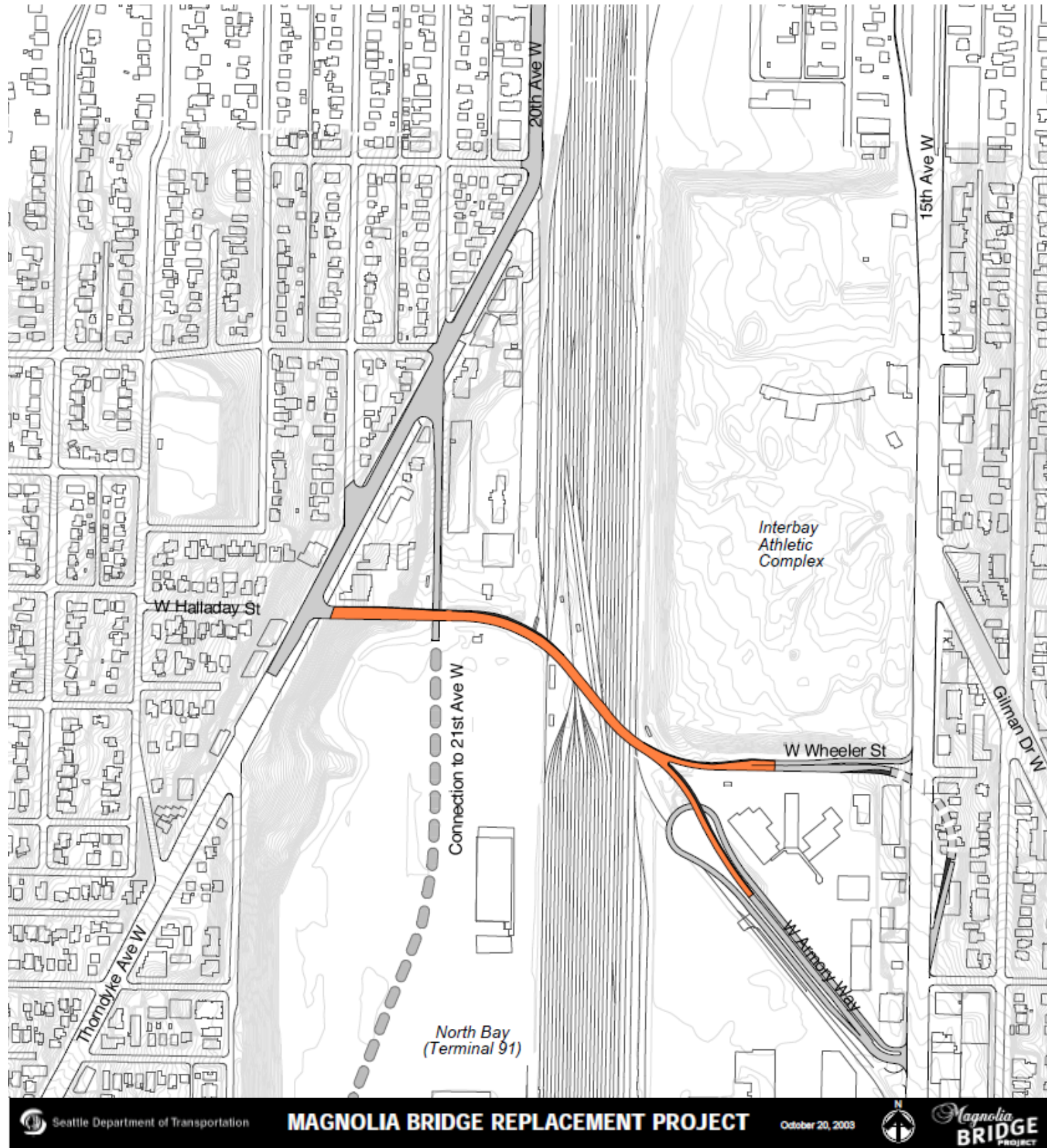
Project Goals:

- *Provide a safe route(s) to Magnolia.*
- *Provide reliable and redundant access to and from Magnolia.*
- *Any new route must be grade separated from the BNSF Mainline railroad tracks.*
- *Provide a route that will support Magnolia Village.*
- *Maintain or improve traffic flow on, and connections to, the 15th Avenue W corridor.*
- *Maintain access to the Smith Cove waterfront and improve connection between Magnolia and the Smith Cove waterfront.*
- *Maintain or improve access to Terminal 91.*
- *Improve the level of bicycle and pedestrian connections within and beyond the project area.*
- *Consider future ST3 light rail project when evaluating alternatives.*
- *Design an alternative that is financially feasible.*
- *Minimize or mitigate environmental impacts.*
- *Minimize disruption during construction.*

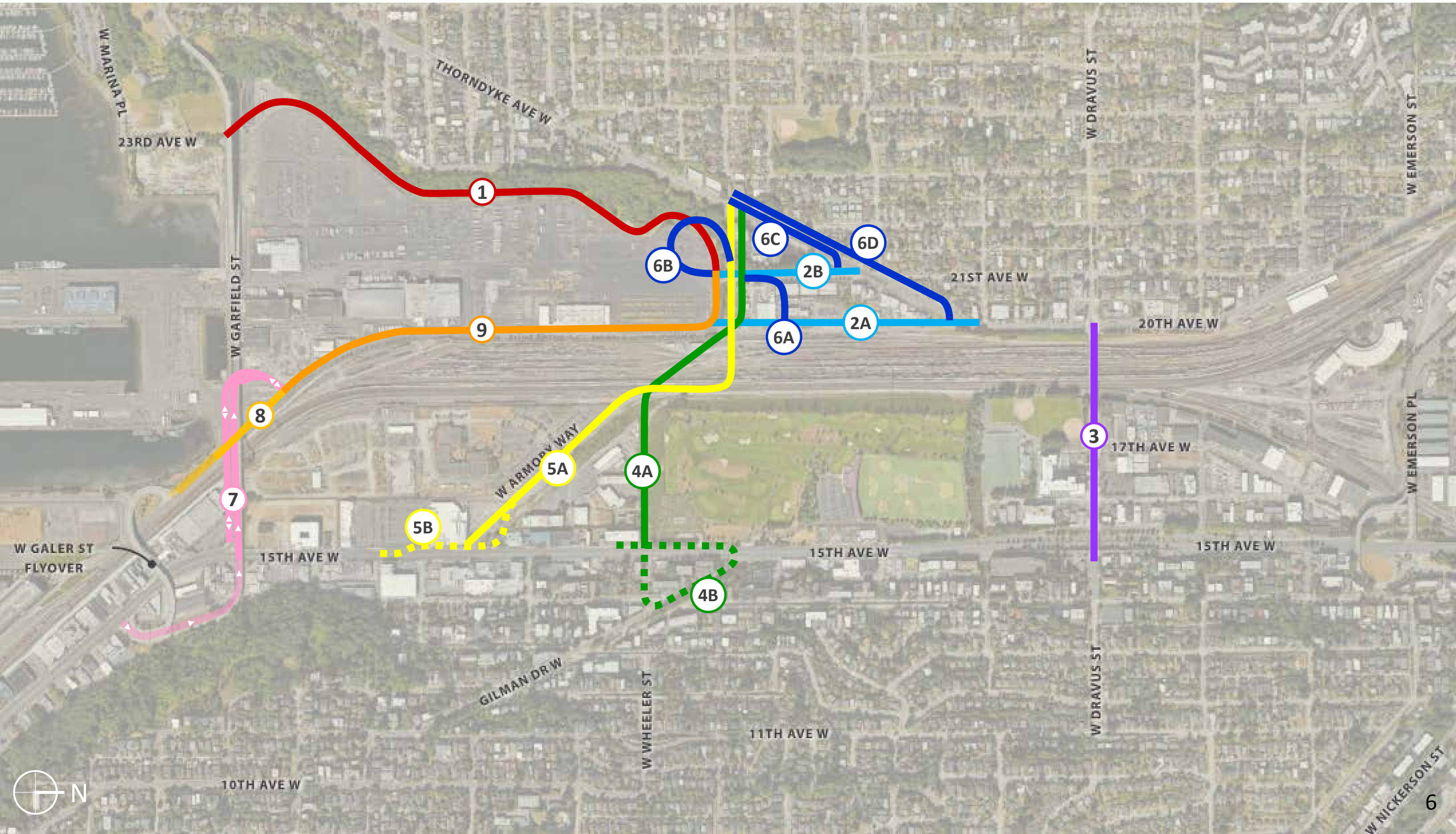


BUILDING OFF PAST WORK

Magnolia BRIDGE PROJECT



PROJECT COMPONENTS



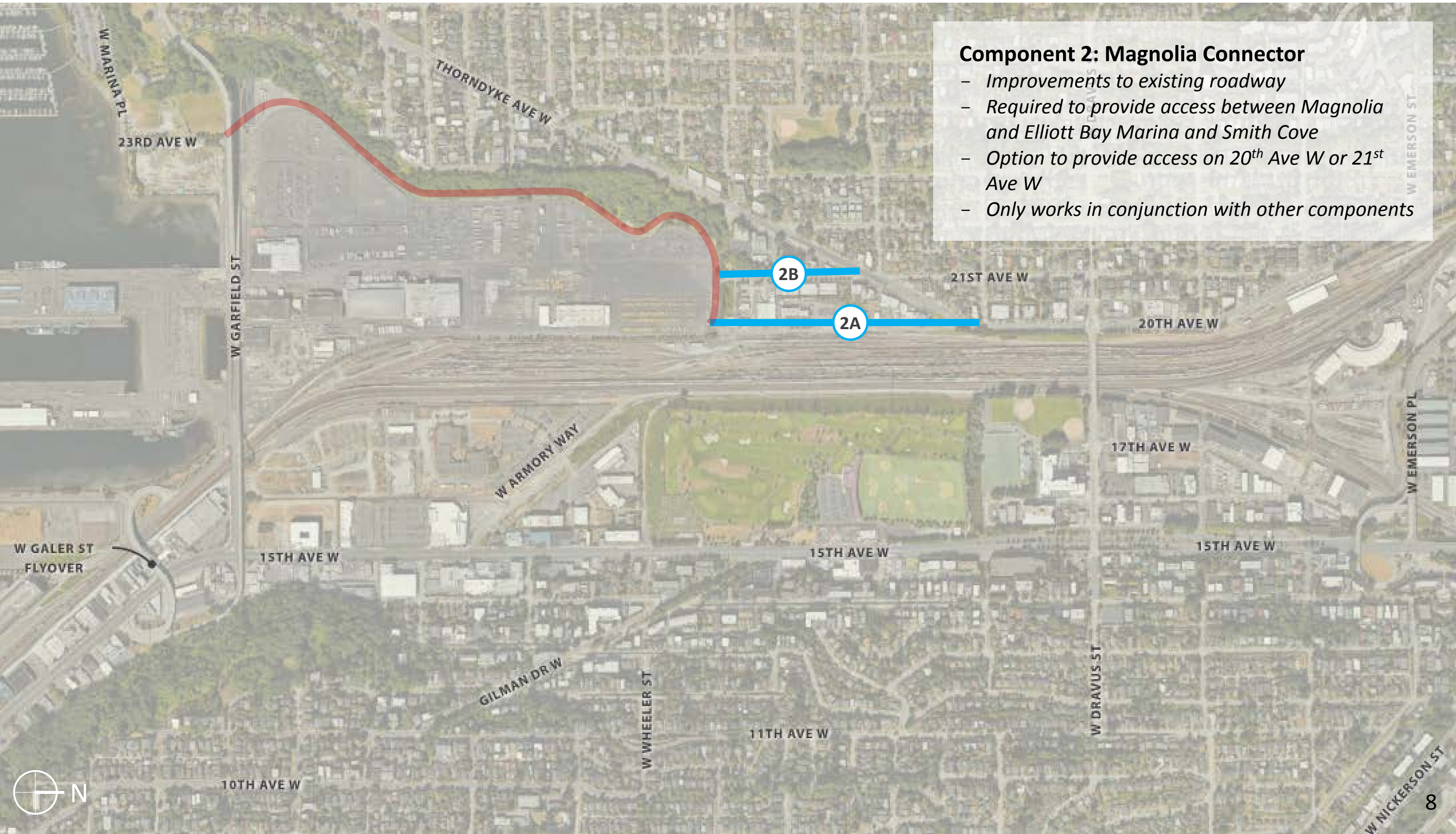
PROJECT COMPONENTS



Component 1: West Uplands Perimeter Road

- New roadway parallel to existing Elliott Bay Trail
- Required to provide access to/from Elliott Bay Marina and Smith Cove
- Required to provide access between Magnolia and Elliott Bay Marina and Smith Cove
- Only works in conjunction with other components

PROJECT COMPONENTS

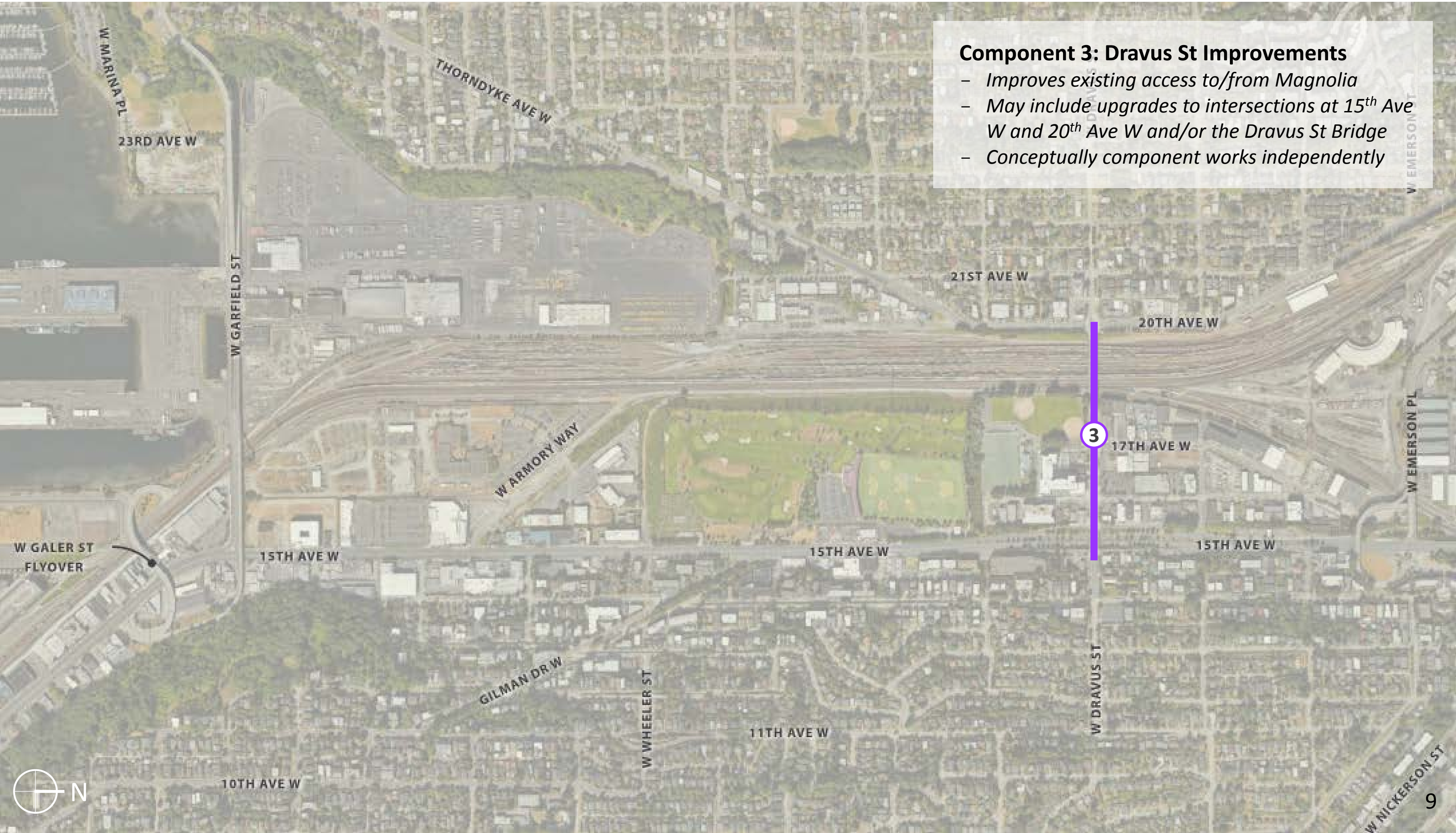


Component 2: Magnolia Connector

- Improvements to existing roadway
- Required to provide access between Magnolia and Elliott Bay Marina and Smith Cove
- Option to provide access on 20th Ave W or 21st Ave W
- Only works in conjunction with other components



PROJECT COMPONENTS



Component 3: Dravus St Improvements

- Improves existing access to/from Magnolia
- May include upgrades to intersections at 15th Ave W and 20th Ave W and/or the Dravus St Bridge
- Conceptually component works independently



PROJECT COMPONENTS

Component 4: Wheeler Street Bridge

- Provides new access to/from Magnolia
- Options for 15th Ave W access include intersection treatment (4A) or Gilman Dr W loop (4B)
- Conceptually component works independently



PROJECT COMPONENTS

Component 5: Armory Way Bridge

- Provides new access to/from Magnolia
- Options for 15th Ave W access include intersection treatment (5A) or braided fly-over ramp (5B)
- Conceptually component works independently



PROJECT COMPONENTS



Component 6: New Bridge Port Connector

- Provides access between new bridge and Port property, Elliott Bay Marina, and Smith Cove
- Needs to accommodate freight traffic
- Options include EL-ramp to 20th Ave W (6A), loop-ramp to 21st Ave W (6B), Thorndyke Ave W/21st Ave W (6C), or Thorndyke Ave W/ 20th Ave W (6D)
- Only works in conjunction with other components

PROJECT COMPONENTS



Component 7: Magnolia Bridge Segment

- Improvements to existing Magnolia Bridge segment
- Provides direct access to/from Port properties
- Provides partial access to/from Magnolia in combination with other components
- Relieves pressure on Galer Street Flyover
- Particularly important to freight traffic
- Conceptually component works independently however, if intended for public use, only works in conjunction with other components



PROJECT COMPONENTS



Component 8: Alaskan Way Connector

- Extend portion of Alaskan Way
- Provides access between Port property/Magnolia Bridge segment and Galer St Flyover
- Provides partial access to/from Magnolia in combination with other components and/or the Galer Street Flyover
- Relieves pressure on the Galer St Flyover
- Only works in conjunction with other components

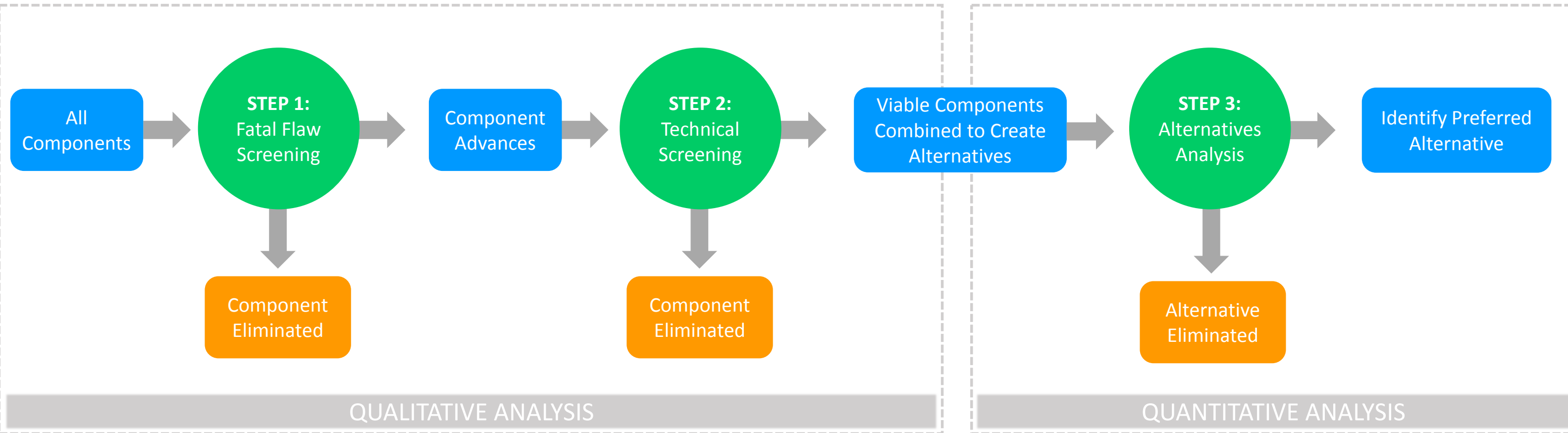
PROJECT COMPONENTS



Component 9: East Uplands Perimeter Road

- Improve and open existing private Port road*
- Provides partial access between Port property and Magnolia and 15th Ave W*
- Provides partial access to/from Magnolia*
- Particularly important for freight traffic*
- Particularly important for transit access to the Port and T91 cruise terminal*
- Only works in conjunction with other components*

EVALUATION PROCESS



Fatal Flaw Criteria:

- *Maintain access to the Smith Cove waterfront and improve connection between Magnolia and the Smith Cove waterfront*
- *Must be grade separated from the BNSF Mainline railroad tracks*
- *Maintain or improve access to Terminal 91 (T91)*
- *Must be financially feasible*

Component to replace the existing Magnolia Bridge was considered financially infeasible.

Technical Screening includes:

- *Traffic operational need*
- *Geometric feasibility*



WE ARE HERE

Alternative Analysis include:

- *Traffic operations metrics (travel time, intersection delay, etc.)*
- *Cost Estimates*
- *Right-of-Way Impacts*
- *Construction Disruption and Duration*

ALTERNATIVE ANALYSIS METRICS

Mobility and Connectivity

- *Vehicular Access to and from:*
 - Magnolia
 - Marina/Waterfront
 - Terminal 91
- *Traffic Flow on 15th Avenue*
- *Bicycle and Pedestrian Connections*
- *Transit Access*

Implementation Characteristics

- *Project Cost*
- *Construction Duration and Impact*
- *Stakeholder Support*

Environmental Impact

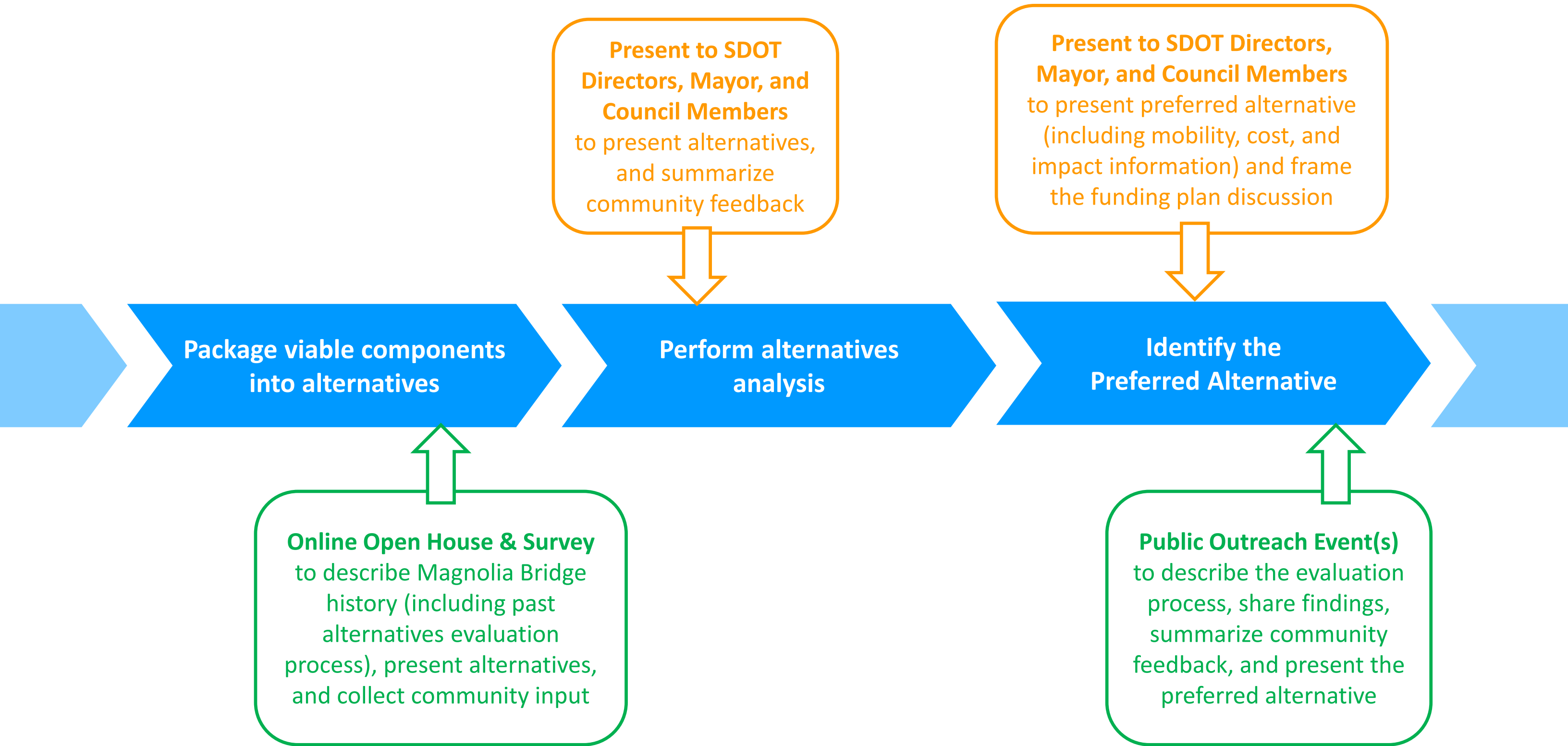
- *Adjacent Land Use (Acquisition, Noise, and Visual)*
- *Sensitive Areas (Cultural, Historic, and Natural Resources)*
- *Natural Hazards (Steep Slopes and Seismic Susceptibility)*



Other Considerations:

- *Neighborhood Advisory Committee (NAC) Agreement*
- *Sound Transit's Link alignment*
- *Freight access and Port security protocol*
- *WA State Shorelines Elliot Marina Stipulated Order*

NEXT STEPS



THANK YOU

QUESTIONS?

<https://www.seattle.gov/transportation/magnoliabridgeplanning>



Wes Ducey, Project Manager
Seattle Department of Transportation
wes.ducey@seattle.gov
206.684.7033