Fulfilling a Levy to Move Seattle commitment, in 2017 we launched a planning study to identify route alternatives for the 90-year-old Magnolia Bridge that meet the needs of the community, update the bridge replacement cost estimate, and create an emergency transportation plan for unexpected closures.

The study area included the Magnolia Bridge and W. Dravus Street and alternative transportation scenarios, weighing factors such as environmental impact, ease of mobility and access, cost, construction duration and impact.
ALTERNATIVE 1: NEW ARMORY WAY BRIDGE & WEST UPLANDS PERIMETER ROAD

Component 1: West Uplands Perimeter Road
Provides primary access to the Smith Cove Waterfront & Marina.

Component 2A: 20th Ave W Improvements
Provides a connection between Smith Cove access (1 & 2A) and Magnolia.

Component 5B: Armory Way Bridge
New bridge provides southern access to Magnolia from 15th Ave W along Armory Way over the BNSF tracks.

Component 6D: Thorndyke Ave W Improvements
Provides connection between the new Armory Way Bridge (5B) and Smith Cove access (1 & 2A).

Component 7: Magnolia Bridge Spur
New bridge is important for future traffic on 15th Ave W. Provides Southbound traffic on 15th Ave W a right turn option to access Elliott Bay over the BNSF tracks.

Component 8: Alaskan Way W Connector
Provides connection between W Garfield St Flyover (7) and existing W Galer St Flyover.

2018 Total Cost: $200M-$350M
ALTERNATIVE 2: DRAVUS ST IMPROVEMENTS & WEST UPLANDS PERIMETER ROAD

2018 Total Cost: $190M-$310M
ALTERNATIVE 3: DRAVUS ST IMPROVEMENTS & NEW GARFIELD ST BRIDGE

Component 3:
W Dravus Street Improvements
Provide additional capacity at existing crossing into Magnolia through intersection upgrades and additional travel lanes from 15th Ave W to 20th Ave W.

Component 10:
Garfield St Bridge to 23rd Ave W (Lower Magnolia Bridge)
New bridge provides access to 23rd Ave W & Smith Cove Waterfront over the BNSF tracks and Port's Terminal 91.

2018 Total Cost: $210M-$360M
ALTERNATIVE 4: REPLACE MAGNOLIA BRIDGE (2006 RECOMMENDATION)

2018 Total Cost: $340M-$420M
# Alternatives Analysis Results

## Cost

|------------------|-----------------------------------|---------------------------------------|---------------------------------------|---------------------------------------------------|

## Mobility and Connectivity

<table>
<thead>
<tr>
<th>Mobility and Connectivity</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to and from Magnolia Village</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access between Smith Cove/Elliott Bay Marina and Elliott Bay/Ballard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access between Smith Cove/Elliott Bay Marina and Magnolia Village</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to and from T-91/Expedia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Along 15th Ave W</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedestrian and Bicycle Connectivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freight Access</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transit Access</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Community Input

<table>
<thead>
<tr>
<th>Community Input</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Input</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agency Input</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Environmental Impacts

<table>
<thead>
<tr>
<th>Environmental Impacts</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjacent Land Use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitive Areas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Hazards</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Implementation Characteristics

<table>
<thead>
<tr>
<th>Implementation Characteristic</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
<th>Alternative 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Duration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Impacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Phasing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# MAGNOLIA NEIGHBORHOOD - EMERGENCY BRIDGE CLOSURE TRANSPORTATION PLAN

This plan will guide the movement of people and goods between the Magnolia neighborhood and 15th Avenue W corridor following a catastrophic event damaging one or all the bridges serving Magnolia. **Safety priorities in order of importance are life safety, incident stabilization, reuniting families, and property/environmental conservation.** This plan will be implemented by the Seattle Department of Transportation (SDOT) with actions in order of priority based on the magnitude of the event. SDOT is prepared to partner with the Seattle Fire Department, Port of Seattle, BNSF, King County Metro and Seattle Public Schools to implement these actions as deemed necessary.

<table>
<thead>
<tr>
<th>GOALS/PRIORITY</th>
<th>PURPOSE</th>
</tr>
</thead>
</table>
| **ASSESS AND COMMUNICATE VIABLE ROUTES**<br>1. Assess infrastructure damage<br>2. Identify safe travel routes<br>3. Communicate available routes to others. | **IMMEDIATE**<br>PURPOSE: <br>**Identify route options for residents to return to Magnolia by vehicle, bicycle and/or by foot.**
- **1.** Seattle Fire Department to perform windshield survey to assess damage (See Figure A on back).<br>- **2.** SDOT dispatches personnel to inspect the three bridge connections to the Magnolia neighborhood.<br>- **3.** Close affected bridge(s) and implement detour route(s) accordingly (see Figure A).<br>- **4.** Use communication protocols (see Table A on back) to relay roadway status (e.g., downed power lines or broken water mains). Key groups include:<br>  - Neighborhood emergency preparedness team (feedback about route blockages).<br>  - Port of Seattle (available routes to/from Terminal 91).<br>  - Seattle Public Schools<br>  - BNSF<br>  - Elliott Bay Marina<br>- **5.** Use existing dynamic messaging signs on 15th Ave W (near W Garfield St and NW 61st St) to inform the public about traffic conditions and detour routes.

| **PROVIDE REDUNDANT EMERGENCY VEHICLE ACCESS ROUTES**<br>2. Provide temporary surface route(s) across BNSF railroad tracks for emergency vehicle access. | **IMMEDIATE**<br>PURPOSE: <br>**Recreate pedestrian and bicycle paths for people in need of medical care.**
- **1.** Work with BNSF to provide one or more surface crossings of tracks for emergency use only. The following potential surface access routes for emergency vehicles could be created by laying temporary gravel or mats over the tracks, and are shown on Figure A:
  - A. Galer Street south of Magnolia Bridge (open the sliding gates).
  - B. Through National Guard Armory N/O Magnolia Bridge (break through the BNSF fence).
  - C. Via Armory Way (break through the BNSF fence).
  - D. N/O Balmer Yard between Emerson Street and Gilman Blvd.
  - E. W Ewing Street from east of 15th Ave W and under Ballard Bridge.

| **PROVIDE SYSTEM REDUNDANCY FOR MAGNOLIA RESIDENTS**<br>3. Identify route options for residents to return to Magnolia by vehicle, bicycle and/or by foot. | **ONCE STABILIZED**<br>PURPOSE: <br>**Identify critical services including food, medicine, and water.**
- **1.** If all three bridges are damaged, direct residents returning by vehicle to park near Interbay Golf Course or Interbay Stadium and walk to an emergency transportation hub (described at right).<br>- **2.** Guide people to one or more foot access routes across the tracks (see Figure B).<br>- **3.** Clear surface rubble to evacuate Elliott Bay Marina through Terminal 91.<br>- **4.** Implement ad hoc ferry passengers from downtown Seattle to Elliott Bay Marina and/or from Lake Union/Ship Canal to Fisherman’s Terminal.<br>- **5.** If W Dravus Street is a functional access route to Magnolia, have a temporary flagger posted at the W Dravus Street / 15th Ave W when needed to allow double left-turns from northbound ramps (unless intersection has already been upgraded so that signal provides the dual left).<br>- **6.** Reroute traffic on 15th Avenue W southbound off-ramp to W Bertona Street (instead of W Dravus Street).<br>- **7.** Open one or more transportation/communication hubs east and west of the railroad tracks at locations coordinated with MiQA volunteers. Potential locations are shown on Figure B:
  - Interbay (East of Tracks)<br>    1. Interbay Stadium & Playfield<br>    2. Interbay Golf Course<br>    3. Fisherman’s Terminal West Wall<br>  - Magnolia (West of Tracks)<br>    4. Magnolia Community Center / Catherine Blanc K-8 School<br>    5. Magnolia Manor Park<br>    6. Magnolia Metropolitan Market<br>    7. Our Lady of Fatima Church<br>- **8.** Communicate with King County Metro Transit and Seattle Public Schools about status of hub locations and routes available on 15th Ave W corridor.<br>- **9.** If needed, have volunteers shuttle people to and from the pick-up/drop-off hubs west of the bridges.<br>- **10.** Encourage residents to walk and bicycle to hubs.

| **PROVIDE TRANSPORTATION HUBS AND TRANSIT CONNECTIONS**<br>4. Identify transportation hub locations with connections to public transit, school buses and/or ad-hoc shuttle services. | **ONCE STABILIZED**

| **PROVIDE FOR GOODS DELIVERY**<br>5. Provide routes for critical services including delivery of food, water, and medicine. | **ONCE STABILIZED**

**JUNE 2019**
Table A. Emergency Contacts & Websites

- **SDOT Emergency Management and Security**
  - Lawrence Eichhorn
  - Lawrence.Eichhorn@Seattle.Gov
  - 206-684-7574

- **Office of Emergency Management (OEM)**
  - Seattle OEM Staff Duty Officer
  - Seattle-EOC@Seattle.Gov
  - 206-233-5147

- **BNSF**
  - Emergency contact number: 1-800-832-5452

- **Ham Radio Protocols**
  - Mark Sheppard
  - Mark.Sheppard@Seattle.Gov
  - 206-684-5027

- **Port of Seattle Security & Preparedness**
  - Randy Hansen
  - Sr. Mgr. Emergency Preparedness
  - (206) 787-7871 Office
  - (206) 519-7454 Mobile

- **Websites for Traffic Conditions**
  - [http://alert.seattle.gov](http://alert.seattle.gov)
  - [https://www.google.com/maps](https://www.google.com/maps)

---

**Potential Surface Routes for Emergency Responders**

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

**Potential Transportation Hubs and Foot Routes**

- ★ = Communication and Transportation Hub
- 🔥 = Fire Station
- ⚲ = Potential Ferry Landing
- ➔ = Potential foot access route
- 🐈 = Transit stops on the 15th Ave W corridor

---

**Legend**

- Blue dashed line = Post Earthquake Windshield Route
- Red line = Potential Surface Routes across RR tracks for Emergency Responders
NEXT STEPS

With cost estimates spanning from $190M to $420M, bridge replacement and alternative options considered in the study exceed available local funds without significant outside investment from our State or Federal partners. In the meantime, here are our plans:

**Ongoing maintenance and inspections** of the Magnolia Bridge. We perform regular maintenance, frequent inspections and 24/hour monitoring to ensure safe use.

**Levy to Move Seattle funds a ten-bridge study** to help assess and manage roadway structure maintenance needs and maximize future investments. The Magnolia Planning Study was the first of ten. We’re launching the Ballard Bridge Planning Study soon.

**Continue working with the community** and elected officials to be creative in examining funding opportunities. We’ll also launch the Ballard-Interbay Regional Transportation system study pending confirmation of state funding.