

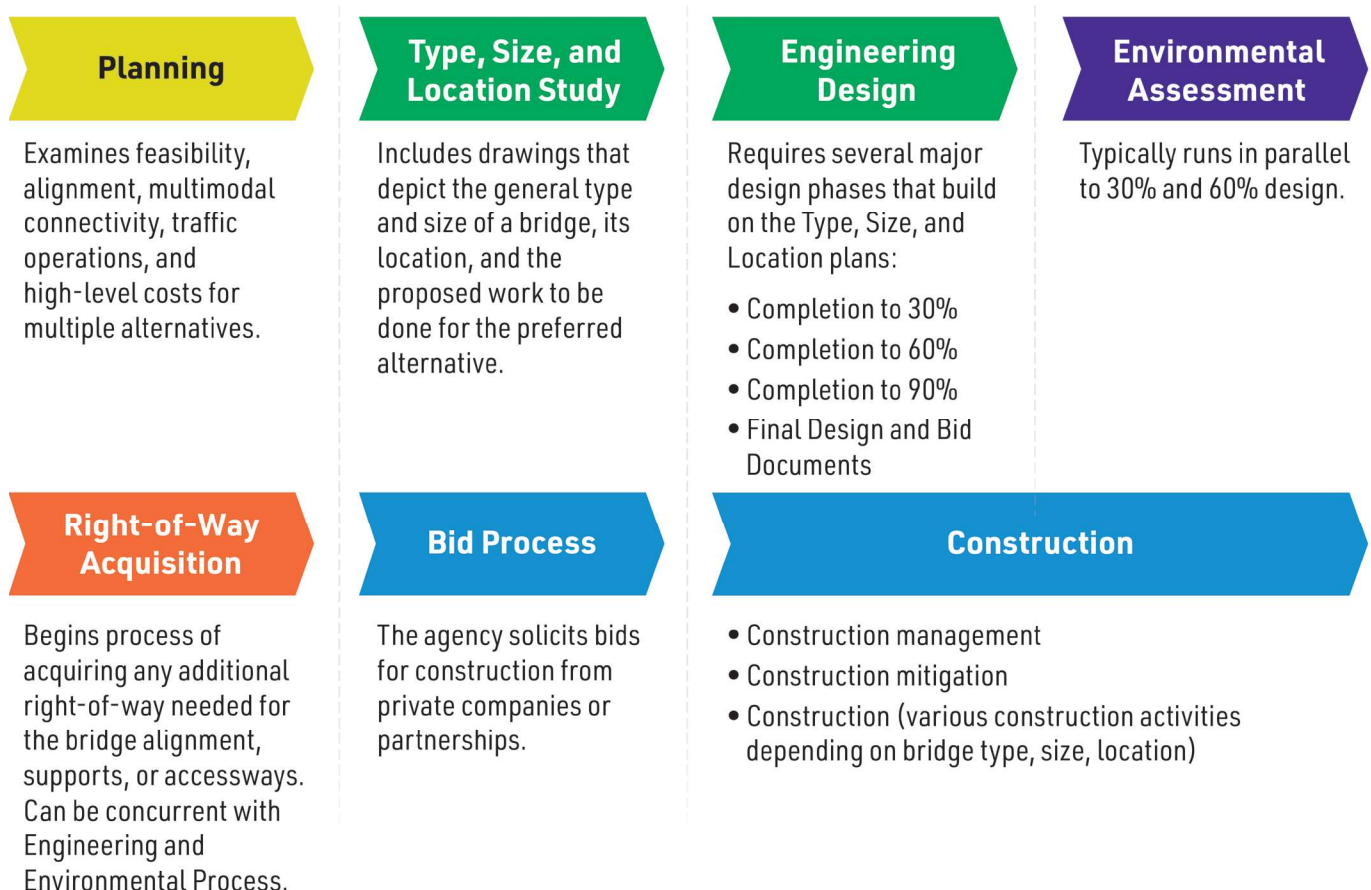
CHAPTER 7: TIMELINE, COSTS, AND FUNDING STRATEGY

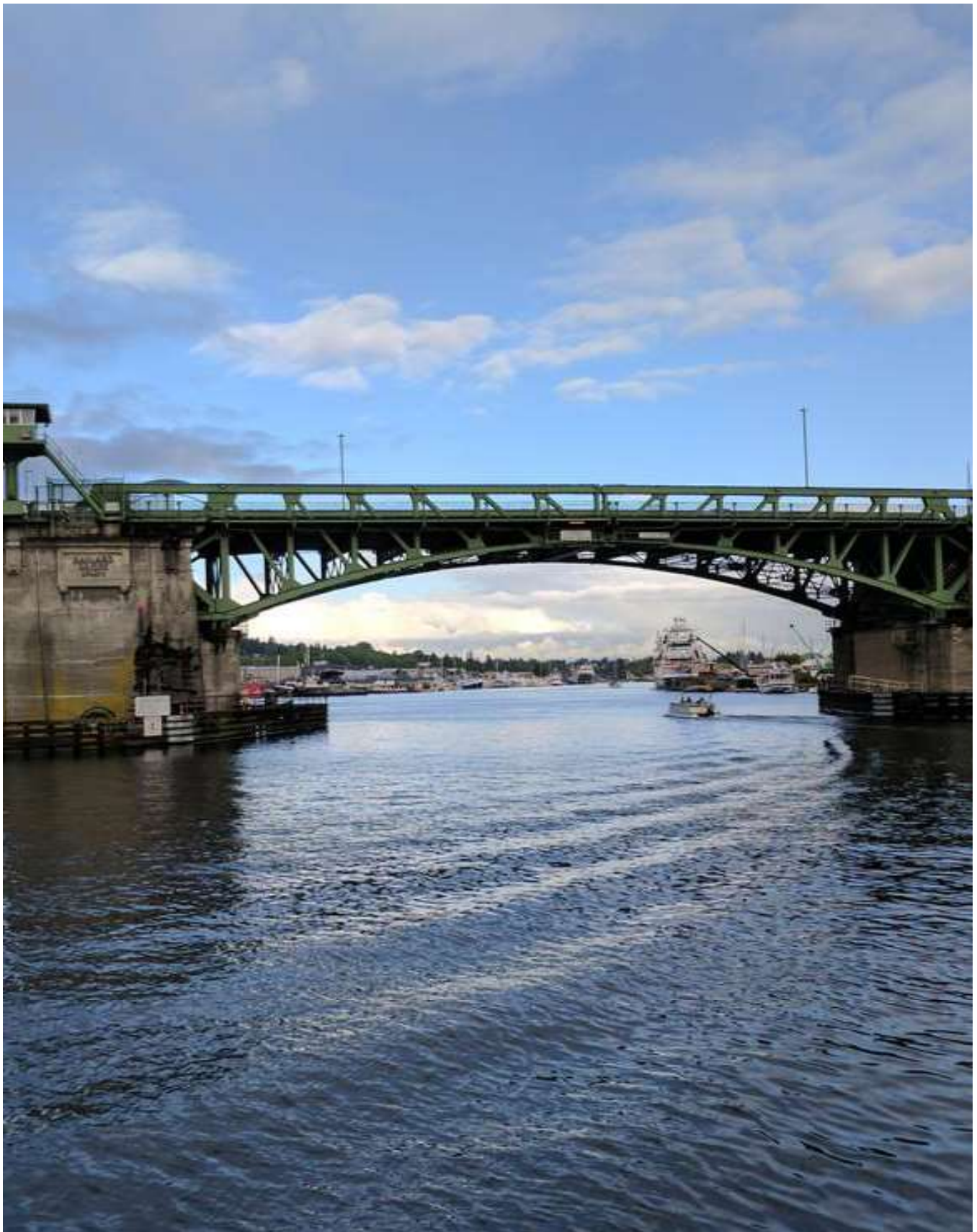
This chapter provides a timeline for replacing or rehabilitating the Magnolia and Ballard bridges. The timeline aligns funding needs for various phases of planning, design, and construction. SDOT's ability to replace or rehabilitate the 2 bridges is reliant on acquisition of funds from multiple sources, including state and federal partners, to complete the various stages of design and construction. Recommendations for procuring funding and guidance for the level of funding required to advance each stage of project development and construction are also covered in this chapter.

BRIDGE REPLACEMENT TIMELINE

The opening of a replacement bridge, or bridge that has undergone major rehabilitation, is preceded by a lengthy and complex process to plan, design, and construct it. That process requires several major project development stages, each of which has many sub-components. Since it can take years to acquire the funding for a full bridge replacement or rehabilitation, each major element may be funded individually, ensuring continued progress while SDOT seeks funding for the next step in the process or for full construction. Figure 7-1 describes these key steps.

FIGURE 7-1: KEY STAGES OF A BRIDGE PROJECT





Looking east toward the 218-foot opening span of the Ballard Bridge, which was constructed in 1917

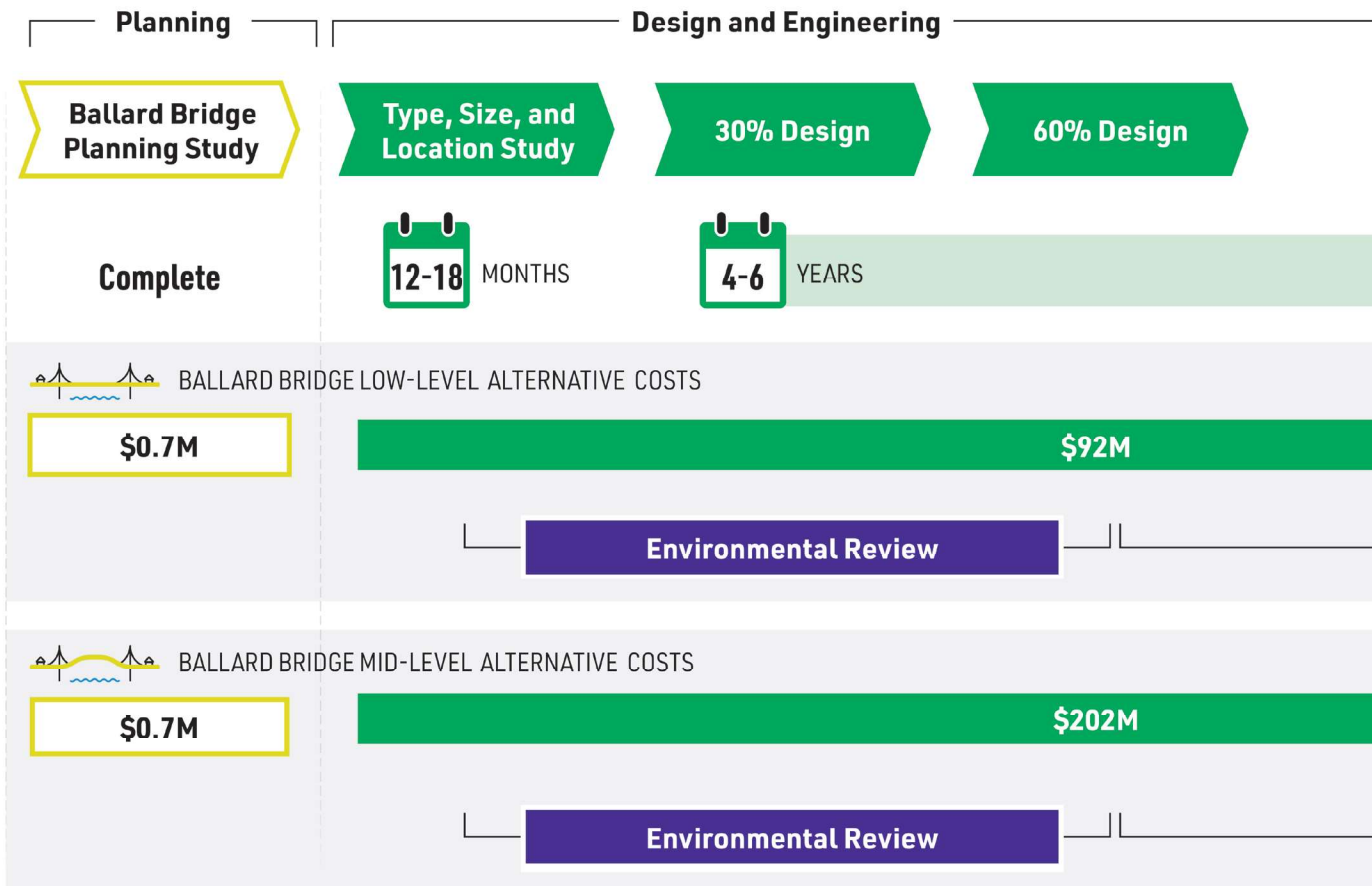
Ballard Bridge Conceptual Costs and Replacement Timeline

As described in Chapters 1-3, the Ballard Bridge is an older structure with a “fair” condition rating, and is the only connection across the Lake Washington Ship Canal along the 15th Ave north-south corridor. SDOT completed the Ballard Bridge Planning Study (BBPS) in the Fall of 2020. This study is a first step in a bridge replacement process that could take as long as 12 years to complete. The estimated timeframe of 8 to 12 years from inception to completion relies on funding being available for the next step of design or construction as the previous phase is completed. Based on this timeline, the Ballard Bridge would be approximately 110 to 115 years old at the time of replacement or rehabilitation. Currently, no funding has been identified to advance bridge design, an indication that the replacement timeline may be extended to match funding availability.

The BBPS developed bridge replacement and rehabilitation options with planning-level cost assumptions assigned to each alternative. Presented in 2020 dollars, the 2 leading alternatives from the BBPS include: (1) a low-level rehabilitation costing between \$330 million and \$710 million and (2) a mid-level replacement costing between \$680 million and \$1,460 million.

FIGURE 7-2: CONCEPTUAL COSTS AND TIMELINE FOR BALLARD BRIDGE PLANNING, DESIGN, AND CONSTRUCTION

This graphic illustrates the key phases required to prepare for and construct the bridge repair/replacement. The actual timing of replacement will be based on continued assessment by the facility owner (SDOT). The delivery method selected may influence this timeline.



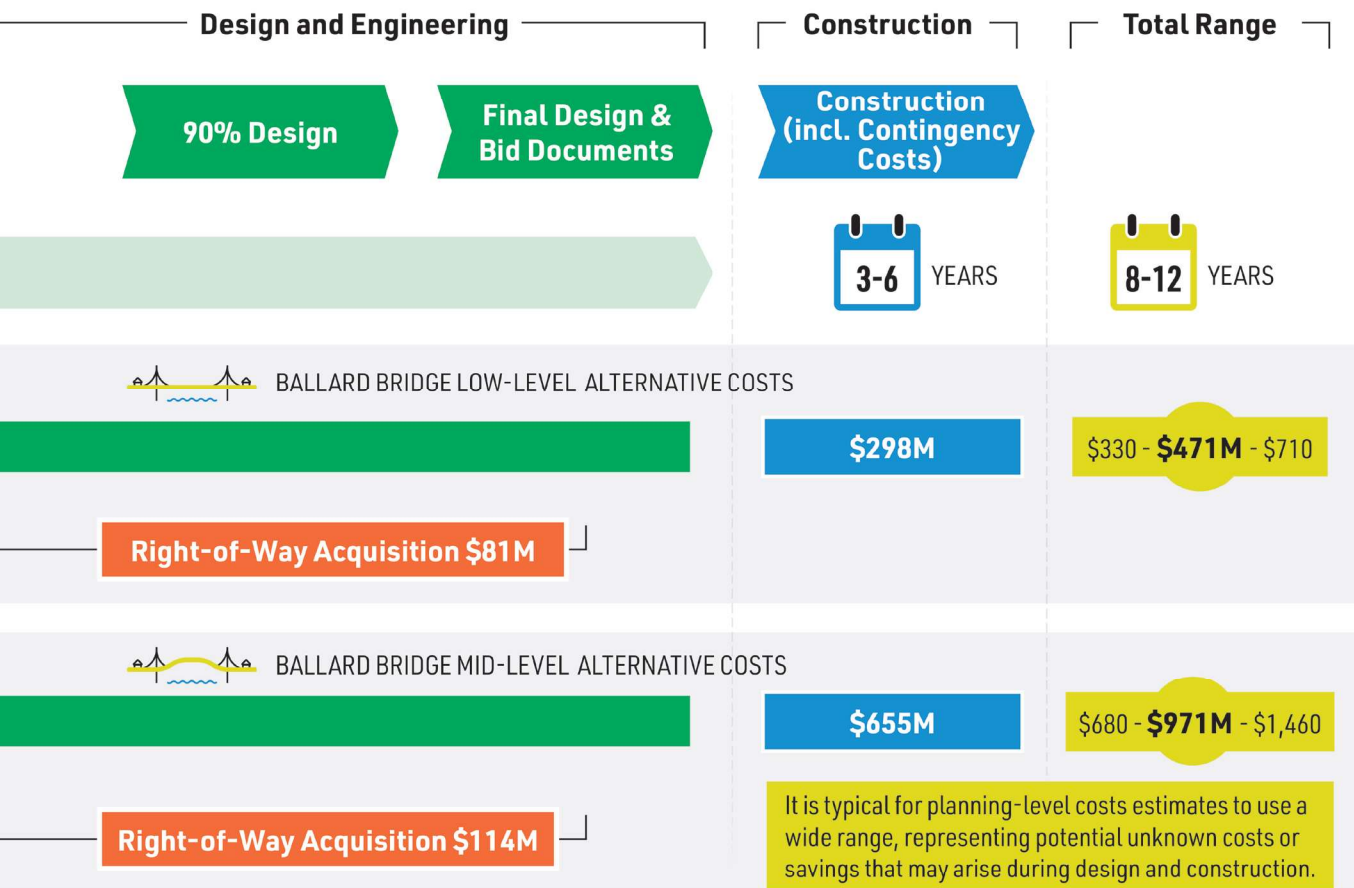
Funding availability key to timely advancement

Each key planning, typing, and design phase can be funded incrementally, but cannot proceed without full funding for that phase. A full construction funding/financing package will need to be secured prior to bid release, contractor selection, and initiation of construction activities. Grant cycles for funds to support engineering activities may operate on multi-year cycles, meaning SDOT needs to plan ahead to avoid delay between design phases. Failure to secure funding for the next phase of design or construction can lead to delay.



8-12 years

Estimated time to complete project development, design, and construction phases.



It is typical for planning-level costs estimates to use a wide range, representing potential unknown costs or savings that may arise during design and construction.

Construction timeline detail

Bridge construction is a multi-phase process. Given the lack of detail about bridge type and design requirements, this study categorizes costs into 2 buckets:

- Construction – includes labor, materials, and various professional services required to construct the bridge
- Contingency and Additional Soft Costs – unplanned costs engineers use to ensure early estimates are able to accommodate future increases in material, labor, right-of-way, or other costs

Contractor Selection

Construction

- All costs are order of magnitude planning costs and are not based on design plans
- All time frames reflect the time to complete the work and do not account for funding acquisition
- Rough order of magnitude costs are based on the Ballard Bridge Planning Study and the Magnolia Bridge Planning Study



A truck crosses the Magnolia Bridge

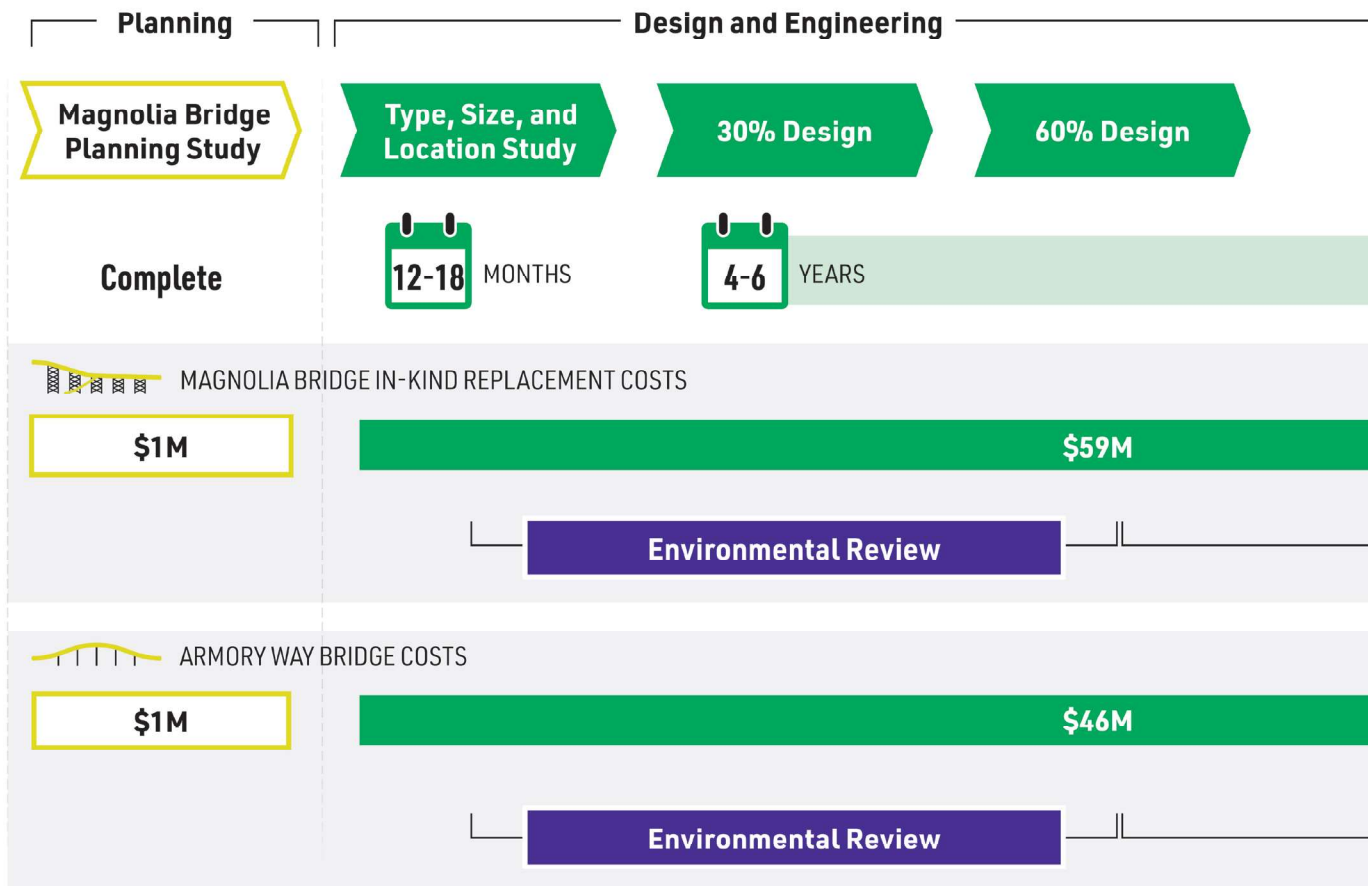
Magnolia Bridge Replacement Timeline

The Magnolia Bridge has been in need of rehabilitation or replacement since the 2001 Nisqually earthquake, and is 1 of 5 vehicle bridges SDOT owns that is rated in “poor” condition. SDOT completed the Magnolia Bridge Planning Study (MBPS) in the Fall of 2019. Completion of the planning study is the first step in a bridge replacement process that could take as long as 12 years to complete. The estimated timeframe of 8 to 12 years from inception to completion relies on having funding available for the next step of design or construction as the previous phase is completed. Built in 1930, the Magnolia Bridge would be approximately 98 to 102 years old at time of replacement. As with the Ballard Bridge, no funding is currently available to advance bridge design, an indication that the replacement timeline may be extended to match funding availability.

The MBPS developed bridge replacement and rehabilitation options with planning-level cost assumptions assigned to each alternative. Presented in 2020 dollars, the 2 leading alternatives from the MBPS include: (1) an in-kind replacement costing between \$340 million and \$420 million and (2) an Armory Way replacement costing between \$200 million and \$350 million. It is notable that planning-level costs from the MBPS were developed at different times. The Armory Way Alternative costs were developed during the MBPS study, whereas the Magnolia Bridge In-Kind Replacement costs are adjusted from an earlier study.

FIGURE 7-3: CONCEPTUAL TIMELINE AND COSTS FOR MAGNOLIA BRIDGE PLANNING, DESIGN, AND CONSTRUCTION

This graphic illustrates the key phases required to prepare for and construct the bridge repair/replacement. The actual timing of replacement will be based on continued assessment by the facility owner (SDOT). The delivery method selected may influence this timeline.



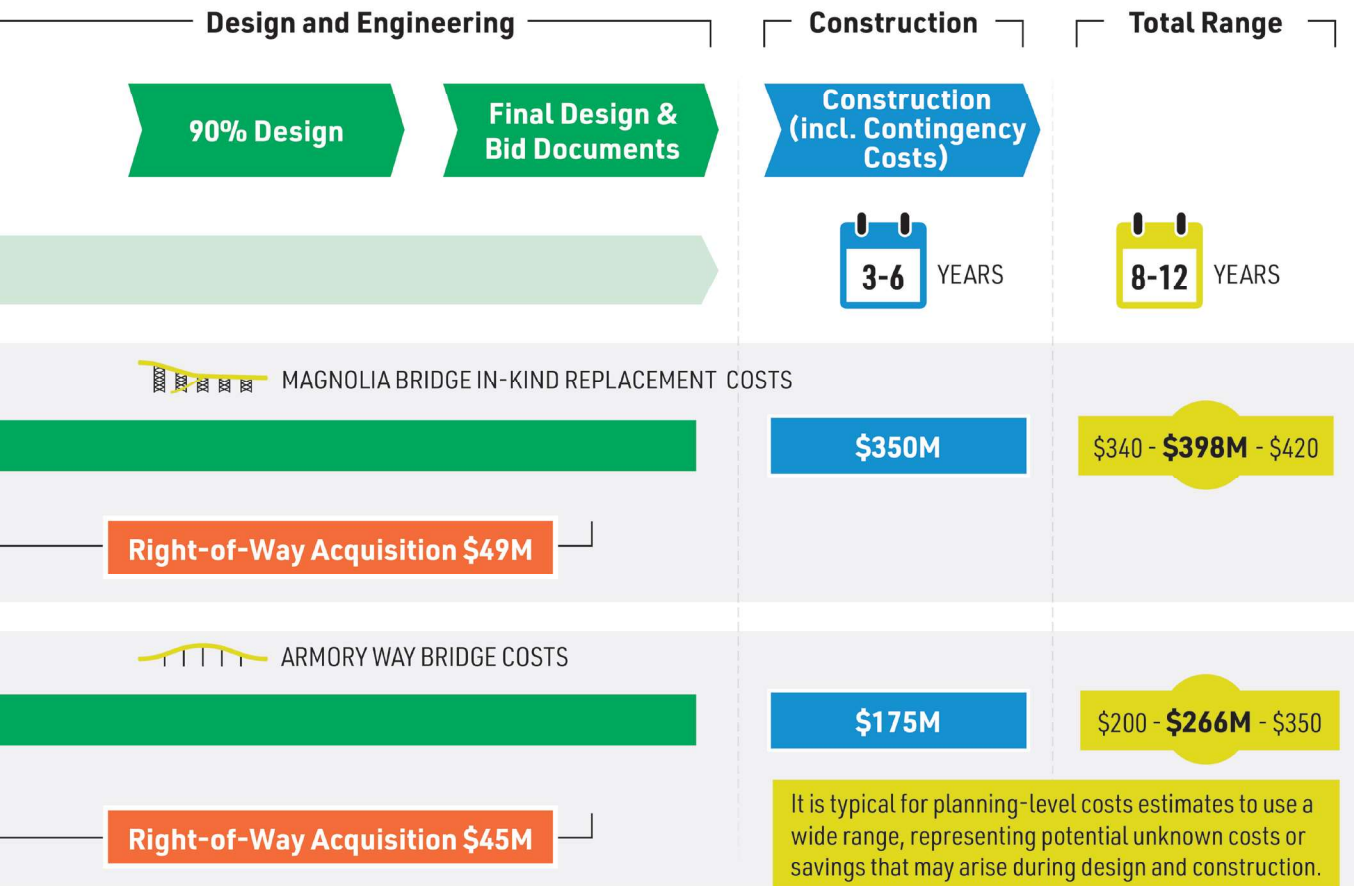
Funding availability key to timely advancement

Each key planning, typing, and design phase can be funded incrementally, but cannot proceed without full funding for that phase. A full construction funding/financing package will need to be secured prior to bid release, contractor selection, and initiation of construction activities. Grant cycles for funds to support engineering activities may operate on multi-year cycles, meaning SDOT needs to plan ahead to avoid delay between design phases. Failure to secure funding for the next phase of design or construction can lead to delay.



8-12 years

Estimated time to complete project development, design, and construction phases.



Construction timeline detail

Bridge construction is a multi-phase process. Given the lack of detail about bridge type and design requirements, this study categorizes costs into 2 buckets:

- Construction – includes labor, materials, and various professional services required to construct the bridge
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Contractor Selection

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- All costs are order of magnitude planning costs and are not based on design plans
- All time frames reflect the time to complete the work and do not account for funding acquisition
- Rough order of magnitude costs are based on the Ballard Bridge Planning Study and the Magnolia Bridge Planning Study

BRIDGE DELIVERY METHODS

Building a bridge is a complex undertaking requiring considerable planning, knowledge, and a variety of professional expertise. Several variables, including engineering constraints, funding sources and amounts, staff capacity, and bridge type, come into play when determining which delivery method to use. Standard bridge delivery methods include:

- **Traditional:** Agency develops design plans (likely using a design consultant) and releases a bid to which private construction companies make proposals. The agency then selects a company or partnership to complete the construction.
- **Design-Build:** In this approach, the bidding stage comes first, and the design and build (construction) stages are combined. As such, the winning bidder conducts the design and completes the construction project. This approach can reduce burden on the agency to manage design and speed up the delivery of the project.
- **Design-Bid-Build:** Under this approach, the agency hires independent consultants, designers and engineers to complete a set of design documents that best reflects the intent of the developing agency. This is followed by the public solicitation and bidding of the documents to determine the lowest price for the documented scope of work.

The timelines presented in Figures 7-2 and 7-3 assume a *traditional* delivery method, which is also typically the longest duration. Use of *design-build* or *design-bid-build* alternatives could reduce the time required to design and construct either the Magnolia or Ballard bridges. It should be noted that speeding delivery through alternative delivery methods such as design-build can present risk, as they cede responsibility to a private contractor.

FUNDING STRATEGY

Background

The BIRT study is being completed during a highly disruptive time, with national, state, and local transportation agencies facing major budget challenges due to the COVID-19 pandemic. Even as this report is finalized, the long-term economic impacts will not be fully realized. We also face an unprecedented decline in the condition of our road and bridge infrastructure, leading to financial need that is staggering even in a strong economy. As SDOT and our local, regional, state, and federal partners consider the funding required to rebuild or rehabilitate the Magnolia and Ballard bridges, several priorities emerge:

- **What is best for the communities served by the Ballard and Magnolia bridges, as well as the City of Seattle more broadly, will drive the final bridge alternative and cost of replacement or rehabilitation.**
- **Projects at the scale of the Magnolia Bridge and Ballard Bridge rehabilitation or repair require multiple funding sources.** Considering all funding options (local, regional, state, and federal) will be essential given the very high costs of these projects, the City's overall bridge maintenance and capital funding backlog, and the very limited local funding currently available. This is true even if economic conditions dramatically improve from 2020 conditions, meaning the City will need to develop and gain support for new local funding sources, and partner with regional, state, and federal entities to identify and secure additional grant sources. Future funding support from the Washington State Legislature could be essential to maintaining the critical transportation connectivity provided by these bridges.

- **Like every major city in the United States, Seattle is stepping up to the challenge of maintaining our aging infrastructure in the face of notably insufficient funding support from the federal government.** Federal infrastructure investment in relation to gross domestic product has fallen by half over the last 35 years, leaving a disproportionate bulk of this financial burden to state and local governments to deal with a \$123 billion national backlog of unfunded bridge rehabilitation needs.¹ Despite these challenges, SDOT continues to prioritize the safety and resiliency of transportation infrastructure while simultaneously making the new investments necessary to keep our city moving as our population grows at unprecedented rates.
- **Local funding for the Ballard and Magnolia bridges will be limited by emergency requirements to repair or replace the West Seattle High Bridge (WSHB).** At the time of this study, SDOT does not have a cost estimate for the repair or replace options. The current cost estimate range is between \$159M and \$225M. City Council has approved \$190M in local funding (Real Estate Excise Tax) for 2020-2021 costs to advance planning and design work to determine a repair or replacement option and support the Reconnect West Seattle transportation mitigation program. A program cost estimate will be provided after the mayor makes a decision in November 2020. Key local partners, such as the Port of Seattle, King County, and WSDOT, are also focused on working toward a fix for the WSHB, which is a critical link to Seattle's largest manufacturing and industrial area in the Duwamish.

¹ American Society of Civil Engineers (2017). 2017 Infrastructure Report Card. Available at: <https://www.infrastructurereportcard.org/wp-content/uploads/2017/01/Bridges-Final.pdf>

Strategy

SDOT will need local, state, regional, and federal funding partnerships to deliver bridge replacements and incrementally fund project development phases. As of November 2020, the City of Seattle's greatest infrastructure priority is to fund and replace or repair the West Seattle High Bridge. The City has declared the closure of this bridge, which previously carried over 84,000 buses, trucks, and cars daily, a state of emergency and is deploying unprecedented resources to respond. This could limit resources available to advance other bridge replacement projects until WSHB replacement or rehabilitation funding is secured and connectivity is restored to West Seattle.

Key actions to advance planning, design, and construction of the Ballard and Magnolia bridge replacement projects, include:

- Finalize the decision for bridge alternative replacement based on the Ballard Bridge and Magnolia Bridge planning studies and continued work to identify project funding. In both cases, a lower cost replacement option would enhance the viability of developing a funding package and advancing construction of a seismically sound bridge. Seattle City Council approval is needed to finalize preferred alternative replacement options for both bridges.²
 - Establish priority of the Ballard and Magnolia bridge replacements in relation to other critical Seattle bridge infrastructure needs. Based on a September 2020 audit of SDOT's bridge maintenance and operations, the department is committed to developing an analysis and detailed plan for 77 of the City's bridge assets, which will help determine future investment.
 - Develop a plan for coordinated grant procurement to align with type, size, and location (TS&L) study and design plans, environmental, and early design phases (30% design) for the Ballard Bridge. Attempt
- to procure funding in a manner that allows sequential advancement through design phases.
 - Include initial phases of project development for Ballard and Magnolia bridges in a future transportation funding measure to replace the Levy to Move Seattle, which expires in 2024. The Levy to Move Seattle, approved by voters in 2015, provides roughly a third of the City's transportation budget. It includes funding to maintain and repair existing infrastructure—such as bridges—among other investments to keep people and goods moving in our growing city.
 - Evaluate facility tolling options for both bridges, building on the findings of the West Seattle High Bridge Traffic and Revenue Study currently underway. This option could impact bridge timelines.
 - Consider options for packaging multiple BIRT projects for funding, particularly for larger grant sources such as BUILD or INFRA that focus on broader economic development initiatives, productive reuse, and access improvements for ports and industrial areas (BINMIC and Port of Seattle). Potential packaging concepts could include:
 - Ballard Bridge replacement/rehabilitation packaged with 15th Ave W corridor projects and W Dravus St corridor improvements.
 - Projects in Sound Transit's West Seattle and Ballard Light Rail Extensions (WSBLE) station areas could be packaged with either the Ballard or Armory Way Bridge alternatives and include important north-south trail connectivity options such as the proposed Elliott Bay Trail Extension Project that would run east of the railroad tracks.

2 If the In-Kind Replacement alternative is selected for the Magnolia Bridge, a reassessment of the design may be required.

- The Armory Way Bridge alternative could be packaged with improvements on 15th Ave W, local Sound Transit station access projects for the Smith Cove Station, and projects that improve connectivity to the Armory redevelopment site.
- Explore innovative funding and delivery methods, such as public-private partnerships (P3), that could expedite replacement of the Ballard and Magnolia bridges and potentially support delivery of other recommended BIRT projects. Given the significant bridge funding shortage at all levels of government and the need for bridge repair and replacement, the City could consider a P3 structure that delivers improvement or replacement of multiple bridges. This approach has precedent at the state department of transportation level in Pennsylvania. PennDOT used a multi-asset, multi-location P3 to rapidly replace and repair many structurally deficient bridges.
- Continue to coordinate with the Mayor's Maritime & Industrial (M & I) Strategy. This process is engaging industrial and maritime stakeholders to guide development of strategies to ensure a strong industrial and maritime sector now and in the future. BIRT has coordinated closely and aligned recommendations with land use scenarios being developed through this process, but it is notable that the M&I scenario development was mid-process as the BIRT study was being developed. A full strategy is scheduled for delivery in 2021.
- Continue to work with agency project partners including the Port of Seattle, WSDOT, and King County Metro to develop funding partnerships. In particular, the Port of Seattle has a strong economic interest in regional access to its facilities and reliable movement of freight to and from the study area. The Port has a history of sharing in joint funding strategies with the City of Seattle, particularly where there are

demonstrable benefits accruing to the Port from acceleration of delivery.

- Conduct further research in collaboration with the Port of Seattle, King County, the Washington State Military Department, the Department of Commerce, and WSDOT on how redevelopment of the Port property and the Armory site could fund direct public benefits, potentially including bridge replacement and other projects identified in the BIRT study. The Interbay Public Development Advisory Board Committee (Interbay Project) proposal to establish a public development authority would be a step toward establishing a connection between potential property redevelopment and funding of transportation projects.

Bridge replacement will require a suite of funding sources, and current economic realities mean that funding for major infrastructure projects is limited.

Potential Bridge Funding and Financing Options

The Ballard and Magnolia bridges are 2 of 77 vehicular bridges managed by SDOT, many in need of major maintenance and rehabilitation. With 2021 funding declines, SDOT is being required to pause several bridge planning and design efforts funded by the Levy to Move Seattle. Dedicated revenue for the planning, environmental, engineering, and construction work required to maintain this backlog is very limited. SDOT has no dedicated funding source for bridge replacement; even bridge maintenance backlogs are significantly underfunded. A 2020 audit identified that SDOT should dedicate annual funding to bridge maintenance and operations;³ in recent years it has spent \$6.6 million per annum. Based on an audit recommendation, SDOT has committed to develop a strategic bridge asset management plan by 2023.

In considering how to pay for 2 major bridge replacements, the City of Seattle and its local, state, and federal partners will need to look at options that include direct funding and forms of financing.

- **Funding** includes direct sources of funding to pay for project development and construction. This could include direct funding sources such as local revenues (property tax and/or other), one-time grants from state or federal sources, and partnerships with other agencies.
- **Financing** includes mechanisms such as loans or bonding to provide up-front funding to cover project costs that will need to be paid back over time. This approach requires a dedicated revenue stream that can be used to repay the loan or bond over time.

Major capital projects, such as large bridge replacements, typically require multiple sources of funding and financing approaches. As illustrated in the conceptual timelines presented in Figures 7-2 and 7-3, funding can be and often is sourced incrementally, with the agency acquiring

sufficient funds to advance through one project development step at a time. Funding for the next step can be acquired as work on the previous is complete. It is preferable to have a full funding/financing package at inception, as it allows the agency to move more rapidly and to convey greater certainty about the project timeline including the construction period and estimated year of opening.

SDOT will need to pursue local, regional, state, and federal funding and financing sources to pay for the replacement of each bridge. The City of Seattle's ability to raise local funding is limited by law, demanding a broad funding partnership to complete capital projects at this scale. The following section describes potential sources of funding at the local, regional, state, and federal levels for project development and construction.

Local Funding and Financing Options

This section covers potential funding and financing sources that could be viable for the City of Seattle to cover some portion of bridge replacement costs. Of these options, the renewal or replacement of the 2015 Levy to Move Seattle, which provides capital funds for road and bridge projects, could be an important local source. The 9-year levy will be up for renewal in 2024, and its renewal could provide funding for interim bridge design phases or partial construction funding for one or both bridges. The 2015 levy provided \$930 million in funding; however, SDOT could explore a different mix of funding sources to add financial flexibility, including the ability to bond, or possibly a larger measure pending voter support. SDOT will likely need to consider bridge projects other than Magnolia and Ballard in a levy renewal package. Required voter approval mandates the City also demonstrate a commitment of funding to other elements of Seattle's multimodal transportation system.

There are several innovative and speculative funding and financing options available to

3 Seattle Department of Transportation: Strategic Approach to Vehicle Bridge Maintenance is Warranted, Seattle Office of the City Auditor, September 11, 2020.

the City of Seattle. Equitable road pricing is a concept that can generate revenue for any local transportation project but would require significant local process and action to institute. Under Mayor Durkan's leadership, the City of Seattle has begun to explore the opportunities and challenges associated with various forms of equitable road pricing, but study is still at an early phase. Facility-specific tolling may present a more direct and immediate opportunity for bridge replacement funding. There is recent precedent for facility tolling on the state freeway system—both the SR 520 Bridge Replacement and the SR 99 Tunnel used facility tolling to back finance packages. It is notable that facility tolling has not historically been used on City-owned transportation infrastructure in Seattle.



















Both tolling and equitable road pricing will require detailed study of traffic and revenue modeling to understand the potential for toll rates and impacts on travel. Both would also require detailed equity analyses to identify who would benefit and who pays, based on social demographics including income, race and ethnicity, and what types of businesses are impacted. SDOT is undertaking a Traffic and Revenue Analysis for the West Seattle High Bridge that will answer some of these questions for the Duwamish crossing, and it could also be beneficial for the City in considering tolling for future facilities.

The City of Seattle has several options for bonding against general fund revenues. Given the City's significant citywide funding gap for bridge replacement, leaders could consider the possibility of seeking a 60% majority bond measure that would fund a package of citywide bridge replacement and repair projects. This approach could generate a significant source of funds over time and be meaningful for multiple projects.

Table 7-1 includes a comprehensive list of potential local funding and financing options the City of Seattle could consider.

TABLE 7-1: POTENTIAL LOCAL FUNDING AND FINANCING OPTIONS

Program or Source	Description
<p>Renewal or Replacement of the Move Seattle Levy</p>	<p>A 2024 renewal could include funding for bridge project development and construction. This is a property tax-based source, and the tax levy could be increased to generate more revenue for bridge replacement or other types of projects.</p> <p>Potentially significant but there are many demands for funds from a levy renewal.</p>
<p>Revenue Backed Bonds</p>	<p>Revenue backed bonds don't always rely on municipal tax-free instruments and usually are for higher cost projects. Seattle was assigned AAA ratings by Moody's for its latest general obligation improvement bond offering in 2019.</p> <p>Potentially significant but requires funding source to back bonds.</p>
<p>Limited Tax General Obligation Bonds (LGTO) and Unlimited Tax General Obligation Bonds (UTGO)</p>	<p>LTGO (councilmanic) debt can be leveraged by Seattle City Council within existing property tax base capacity, or by a majority public vote for a temporary lid lift beyond existing capacity, backed by an increase in property tax for up to 9 years (as with Move Seattle Levy).</p> <p>UTGO bonds can be leveraged for capital projects backed by a longer-term property tax increase (30 years is typical) but requires approval by a 60% super-majority from 40%+ voter turnout (e.g., Seawall replacement in 2012).</p> <p>Potentially significant source, but requires voter approval.</p>
<p>Facility Tolling</p>	<p>Facility tolling could provide a dedicated source of funding to support bonding of financing (facility tolling has been used in the Seattle area for the SR 520 Bridge and SR 99 Tunnel). Tolling on state facilities requires approval from the Washington State Transportation Commission.</p> <p>Potentially significant source, but politically challenging with high costs to establish.</p>
<p>Equitable Road Pricing</p>	<p>The City of Seattle has conducted early phase studies to explore equitable road pricing. This early phase study identifies potential approaches to equitable road pricing and evaluates how Seattle could implement equitable road pricing in a manner that centers outcomes on equity and climate. Future phase studies could explore how much revenue might be generated by equitable road pricing and potential use of revenue.</p> <p>Potentially significant source, but politically challenging with high costs to establish.</p>
<p>Public-Private Partnership (P3)</p>	<p>Alternative method for funding and delivery of a project. Up-front financing is borne by a private investor or consortium, and public agency partners leverage private resources and expertise through the transfer of risk. The private entity would need to benefit financially from the arrangement, which would require them to toll the facility or capture value from property. A P3 could be developed for a single or multiple bridge(s). This is not an approach that the City of Seattle has used for major infrastructure projects.</p> <p>Key aspects of a project that will help determine the suitability for a P3 include opportunities for available revenue streams, risk transfer scalability, proper statutory authority, public vs. private cost of financing, and the long-term performance strategy for asset owners.</p> <p>Washington passed enabling legislation for infrastructure P3s in 2005 (Wash. Rev. Code Ann. §§47.29.010 to 290). Legislative approval is required.</p> <p>Potentially significant source, but unprecedented in Seattle.</p>




Type	Phases	Potential Value	Viability/ Fit
City of Seattle property tax			
Locally backed finance option			
Locally backed finance option			 to 
Ongoing revenue to back financing			
Ongoing revenue to back financing			
Alternative delivery, financing, and ownership model		 to 	

Funding and Financing Options Legend

PHASES OF PROJECT DEVELOPMENT




-  Planning/Concept Design
-  Environmental
-  Design
-  Construction

ESTIMATED LEVEL OF POTENTIAL FUNDING FROM SOURCE

-  One-time allocation of >\$25M or bondable revenue equivalent
-  One-time allocation of >\$5M and <\$25M or bondable revenue equivalent
-  One-time allocation of <\$5M

Financing options do not generate new revenue but rather allow the City to leverage regularly collected streams of revenue to pay larger capital costs upfront.

VIABILITY OR FIT OF PROJECT TO SOURCE

-  Funds are highly appropriate and generally available for bridge replacement/rehabilitation
-  Funds are occasionally allocated to bridge replacement/rehabilitation; bridge project is reasonably competitive given other uses
-  Funds are rarely allocated to or a poor fit for bridge replacement/rehabilitation, but there is no prohibition

Program or Source	Description
Value Capture	<p>Value capture is a practice by which governments capture some of the increased value of land that results from building a new piece of infrastructure. Typically, the money the government “captures” is used to help fund the project. This may be challenging for both the Ballard and Magnolia bridges due to relatively limited redevelopment potential around the bridgeheads and the fact that existing facilities are in place, meaning the capital project may not drive a significant change in value to adjacent property.</p> <p>Likely politically challenging.</p>
Local Improvement District (LID)	<p>A Local Improvement District (LID) is a form of value capture that uses a special assessment district where a portion of value from increased property values is dedicated to a capital project. LIDs are traditionally used to allocate capital costs to benefitting properties.</p> <p>Has substantial property owner acceptance requirements. Value capture in Washington State is very limited by state law and might require special legislative authority.</p>
Regional Transportation Investment District (RTID)	<p>King, Pierce, and Snohomish Counties, or each county individually, can form a special district to plan and finance certain highway improvements, subject to voter approval. Up to 0.1% in sales tax or \$100 in vehicle licensing fees, special fuel tax, parking tax, etc. could be implemented.</p> <p>No RTID currently exists in the Puget Sound region.</p>
Transportation Benefit District (TBD)	<p>A city, county, or even multiple jurisdictions jointly may form a Transportation Benefit District (TBD) to generate revenue for transportation projects; revenue typically comes from a sales tax or vehicle license fee. In October 2020, the Washington State Supreme Court overturned statewide Initiative 976, which would have lowered vehicle registration renewals to \$30 per year. Seattle currently collects an \$80 car license fee and 0.10% sales tax as part of a city TBD, \$60 of which expires at the end of 2020. A referendum to raise the 0.10% sales tax to 0.15% through 2026 is on the November 2020 ballot.</p> <p>The existing TBD has primarily funded bus service expansions in and around the city, with more limited funding for transit corridor improvement projects, transit pass subsidies, street maintenance, and bicycle/pedestrian improvements.</p> <p>Limited due to existing priority for transit funding.</p>
Public Development Authority (PDA)	<p>Work conducted by the Department of Commerce for the Armory site identified a PDA as a potential option for funding the significant transportation and public improvements needed to support new development on the site.</p> <p>In Washington, PDAs are authorized under RCW 35.21.730-.759. PDAs are often used to limit liability or administer funds for a larger development or redevelopment project and to manage ongoing operations of a site or development. Like a city, PDAs can generate revenue from multiple sources.</p> <p>Dependent on significant future development.</p>
External or Partner Agency Contributions	<p>Direct contributions from outside agencies such as the Port of Seattle, King County, or others to fund portions of the bridges. Contributions would come with underlying terms and conditions that may change.</p> <p>No current guideline for contribution amount.</p>

Type	Phases	Potential Value	Viability/ Fit
Transfer of value/ assessment	D C		
Assessment based on property value increase	D C		
Financing mechanism supported by regional sales tax, fuel tax, parking tax, etc.	P E D C		
Financing mechanism supported by local sales tax, fuel tax, parking tax, etc.	P E D C		
Geographically constrained structure for managing funds	P E D C		
Discretionary funding	P E D C		

Funding and Financing Options Legend

PHASES OF PROJECT DEVELOPMENT

- P** Planning/Concept Design
- E** Environmental
- D** Design
- C** Construction

ESTIMATED LEVEL OF POTENTIAL FUNDING FROM SOURCE

- One-time allocation of >\$25M or bondable revenue equivalent
- One-time allocation of >\$5M and <\$25M or bondable revenue equivalent
- One-time allocation of <\$5M

Financing options do not generate new revenue but rather allow the City to leverage regularly collected streams of revenue to pay larger capital costs upfront.

VIABILITY OR FIT OF PROJECT TO SOURCE

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State Funding and Financing Options

A primary source of funding for statewide transportation projects is Connecting Washington, a funding package passed by Governor Inslee and Washington's State Legislature in 2015. The \$16 billion investment package is supported by a 16-year, 11.9-cent gas tax increase. These funds are allocated to projects across the state, including projects in Seattle such as the South Lander St overpass, which opened in October 2020. While funds from the current package are fully allocated to projects around the state, an update to the Connecting Washington legislation could provide funds for priority projects in Seattle. Proposals have been brought forth to develop a Part II of Connecting Washington prior to the 16-year expiration but have not made it through the State Legislature.

More likely, a new legislative package would be needed that would include funding for the Ballard and/or Magnolia bridge replacement project(s). A renewal of the Connecting Washington 11.9-cent gas tax increase would not be viable until 2031, but other revenue sources could be used to back a funding package. According to the 2019 Washington State Transportation Resource Manual, each penny increase in gas tax would generate \$69.1 million per biennium in new statewide revenue (uses restricted by the 18th Amendment). These estimates were developed prior to COVID-19 impacts to travel and corresponding gas-tax collections. Over last 20 years, Washington State has leveraged substantial proportions of gas tax increase packages for capital projects. The Magnolia and Ballard bridges should be a high priority for any gas tax increases in the future.

The Washington State Transportation Improvement Program (STIP) is a 4-year, fiscally constrained, prioritized multimodal transportation program. The STIP is required by the Federal Transportation Act to prioritize federal transportation funds. Projects programmed in the STIP are the highest priority for the available funding to preserve and improve the state's transportation network and achieve the national goals in the Fixing America's Surface Transportation Act (FAST). The current STIP covers projects through 2023.









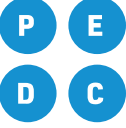





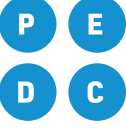








For each region of the state, the Metropolitan Planning Organization (MPO) is responsible for prioritizing and submitting projects for inclusion in the STIP. For Seattle, projects are submitted to the Puget Sound Regional Council (PSRC) and prioritized in the regional Transportation Improvement Program (TIP) process. Fiscal Year 2019 STIP apportionments were approximately \$30.4 billion; the STIP funds include the federal sources listed in the following section as well as others. Federal funds for bridge and highway construction and maintenance are generally categorized as part of either the: (1) Interstate System consisting largely of numbered state and federal highways (e.g., Interstate 5, Interstate 405); and (2) the National Highway System (NHS) more broadly including major arterials and state highways that connect to the Interstate System. The Ballard Bridge and 15th Ave W are part of the NHS. The Magnolia Bridge is not designated as part of the WSDOT Local Agency NHS System Routes in Washington. SDOT should position the Ballard Bridge project development request for the next round of STIP projects.

The focus of the WSDOT Local Bridge Funding Program is to preserve and improve the condition of City- and county-owned bridges that are physically deteriorated or structurally deficient through replacement, rehabilitation, and systematic preventive maintenance. Bridges located on the federal-aid system are eligible for funding under the National Highway Performance Program (NHPP). Bridges that are not located on the federal-aid system are provided a separate set-aside in the Surface Transportation Block Grant (STBG) program. Therefore, WSDOT created a set-aside for a local bridge program that includes funding from the NHPP and STBG for both on- and off-system bridges totaling approximately \$45 million/year. King County communities received about \$7 million in awards for bridge replacement in 2019. The maximum award in fiscal year 2019 was \$6.2 million. Most awards are for smaller bridges in rural areas.

Table 7-2 includes a comprehensive list of potential state funding and financing options the City of Seattle could consider.

TABLE 7-2: POTENTIAL STATE FUNDING AND FINANCING OPTIONS

Program or Source	Description
<p>Legislative Package (Connecting Washington future phase)</p>	<p>Positioning for inclusion in a future legislative package similar to or as a next phase of Connecting Washington (16-year program based on 11.9 cent gas tax increase) should be a priority.</p> <p>Current gas tax is fully allocated; would require new legislation.</p>
<p>Washington State Transportation Improvement Program (TIP)</p>	<p>State program for allocating several federal funding programs on a 4-year cycle. Project requests are submitted to the Puget Sound Regional Council (PSRC) for selection and prioritization in the regional TIP.</p>
<p>WSDOT Local Bridge Funding Program</p>	<p>A \$45 million/year program for replacement and rehabilitation of locally-owned bridges on and off the Federal Aid System. It allocates National Highway Performance Program & Surface Transportation Block Grant (STBG) program funds listed in the Federal Funding section.</p> <p>Individual projects generally receive <\$9 million.</p>
<p>Regional Transportation Investment District (RTID)</p>	<p>A newly formed RTID, established as a countywide gas tax authority, could levy up to 10% of state gas tax rate (i.e., 4.94 cents). This would require a countywide vote (36.120.050(e) and 82.80.120). The City could also discuss potential for new or additional regional/local authority from the legislature, such as a local/regional carbon tax or even expanded regional gas tax authority.</p> <p>Up to \$100 M in new annual, bondable revenue.</p>
<p>New Regional or Local Taxing Authority</p>	<p>The State Legislature has the power to enable a new taxing authority at the local or regional level that could generate bondable revenue from a carbon tax or expansion of regional gas tax authority.</p> <p>High potential to generate bondable revenue.</p>
<p>Freight Mobility Strategic Investment Board (FMSIB)</p>	<p>The FMSIB prioritizes and funds improvements on strategic freight corridors, using state allocations as part of the 2-year budget cycle.</p> <p>Program depends on biannual allocation of funds by Washington State. It was influential in securing funding for the Lander St Crossing.</p> <p>Individual projects typically receive <\$5 million; proportionate to project benefits to the freight system.</p>
<p>Transportation Improvement Board (TIB) Urban Arterial Program (UAP)</p>	<p>The UAP funds projects on a competitive basis annually based on safety, growth and development, physical condition, and mobility criteria.</p> <p>Individual projects generally receive <\$5 million.</p>




Type	Phases	Potential Value	Viability/ Fit
Direct funding through state gas tax		 to 	 to 
Program for allocating federal funds, not a direct source			
Program for allocating federal funds, not a direct source			
Countywide gas tax			
New taxing authority			
Discretionary funding			
Formula funds			

Funding and Financing Options Legend

PHASES OF PROJECT DEVELOPMENT




-  Planning/Concept Design
-  Environmental
-  Design
-  Construction

ESTIMATED LEVEL OF POTENTIAL FUNDING FROM SOURCE

-  One-time allocation of >\$25M or bondable revenue equivalent
-  One-time allocation of >\$5M and <\$25M or bondable revenue equivalent
-  One-time allocation of <\$5M

Financing options do not generate new revenue but rather allow the City to leverage regularly collected streams of revenue to pay larger capital costs upfront.

VIABILITY OR FIT OF PROJECT TO SOURCE

-  Funds are highly appropriate and generally available for bridge replacement/rehabilitation
-  Funds are occasionally allocated to bridge replacement/rehabilitation; bridge project is reasonably competitive given other uses
-  Funds are rarely allocated to or a poor fit for bridge replacement/rehabilitation, but there is no prohibition

Federal Funding and Financing Options

There are several federal funding programs that could help support project development, design, and construction of the Ballard and Magnolia bridges. Most federal funds are administered by WSDOT or PSRC.

The Surface Transportation Act (Fixing America's Surface Transportation Act, or FAST Act) is the federal transportation act under which most road, transit, and bridge funding sources are allocated. This \$305 billion, 5-year bill is funded without increasing transportation user fees and was passed in 2015. Recently renewed until September 2021, the FAST Act will likely be reauthorized for an additional year at FY20 funding levels. It remains to be seen which specific funding programs will be included in a future transportation bill and at what level of funding. However, both House and Senate committees have proposed provisions to make it easier for state and local jurisdictions to fund bridge replacement programs, including a Senate Environmental & Public Works Committee proposal for a Bridge Investment Program that would include a competitive multi-year grant program for bridge funding analogous to the Federal Transit Administration's Full Funding Grant Agreement process for high-capacity transit projects.

Major funding sources available to cities for local road and bridge projects include Surface Transportation Block Grant (STBG) Program (formerly known as the Surface Transportation Program) and Congestion Mitigation and Air Quality (CMAQ) programs. Both are administered through PSRC on a competitive basis. These funds are highly competitive and, as such, these sources cannot be expected to cover a significant portion of a major bridge replacement.

There are 3 federal grant programs that offer large one-time grant awards; both are highly competitive. Most regions and states coordinate submittals for these grants as, historically, USDOT has attempted to balance awards across the U.S.

- **INFRA (Infrastructure for Rebuilding America) Grant.** Focused on large projects that show direct economic benefit through building or rebuilding of critical transportation infrastructure. This grant supports National Highway System projects. The Ballard Bridge would be a more competitive candidate than the Magnolia Bridge, as it carries higher truck volumes and provides critical access to the BINMIC.
- **BUILD (Better Utilizing Investments to Leverage Development) Grant.** Like INFRA, this is a highly competitive discretionary program. Projects must demonstrate unique and exceptional economic benefit to gain an award. The regional importance of BINMIC and the Port may make projects in the BIRT study area competitive.
- **BRIC (Building Resilient Infrastructure Communities) Grant.** This competitive discretionary grant program will support communities in building infrastructure projects that reduce the risks they face from disasters and natural hazards. This is a FEMA program. Given some study area lands are situated on lowlands that are susceptible to sea level rise, this may be a viable source for developing resilient infrastructure.⁴

⁴ City of Seattle (October 2020). Sea Level Rise Susceptibility Map. Available at: <http://seattlecitygis.maps.arcgis.com/apps/webappviewer/index.html?id=531658b7209e46acbaed730574214353>

Another important funding option for either bridge is the Transportation Infrastructure Financing and Innovation Act (TIFIA), which provides financing debt options (direct loans, loan guarantees, and standby lines of credit) for large projects and public-private partnerships. TIFIA provides credit assistance for qualified projects of regional and national significance. Any highway or transit capital project eligible for federal aid is eligible, including either the Magnolia or Ballard bridges. The program offers low-cost financing and flexibility of repayment terms but is competitive due to high demand. The project must have a dedicated revenue source pledged to secure both the TIFIA and senior debt financing.

The viability of INFRA, BUILD, or TIFIA as grant or financing sources for the Ballard or Magnolia bridges may also depend on whether these sources are leveraged for replacement of the West Seattle High Bridge or are used for other City of Seattle or regional projects during the funding timeframe.

Economic recovery from the COVID-19 pandemic could be aided by a major federal infrastructure investment. While this has been discussed, no progress is likely to be made until after the November 2020 elections.

Table 7-3 includes a comprehensive list of potential federal funding and financing options that could be considered.

TABLE 7-3: POTENTIAL FEDERAL FUNDING AND FINANCING OPTIONS

Program or Source	Description
<p>Surface Transportation Block Grant (STBG) Program</p> <p>[PSRC administered]</p>	<p>STBG funds are distributed by the Federal Highway Administration (FHWA) to states and metropolitan planning organizations (MPOs) using a highway-based funding formula. It is a flexible funding source for a range of transportation projects including roads, bridges, transit, and other capital investments.</p> <p>Generally, it requires a minimum of 13.5% local share for projects related to local roads and bridges.</p> <p>Individual projects generally receive <\$10 million.</p>
<p>Future Federal Sources/ Bridge Investment Program</p>	<p>Future federal funding programs made available through FAST Act reauthorization. Could include a Bridge Investment Program that would include a competitive multi-year grant program for bridge funding analogous to the Federal Transit Administration’s Full Funding Grant Agreement process for high capacity transit projects.</p> <p>Scale of funding TBD.</p>
<p>Congestion Mitigation and Air Quality (CMAQ)</p> <p>[PSRC administered]</p>	<p>Congestion Mitigation and Air Quality Improvement (CMAQ) funds are federal funds that were created to support transportation projects and related efforts that contribute air quality improvements and provide congestion relief. Funds are flexible to the extent a clear nexus to the fund purpose is established. Typically require 20% local share.</p> <p>Individual projects generally receive <\$2 million.</p>
<p>Transportation Alternatives Program (TAP)</p> <p>[PSRC administered]</p>	<p>The former TAP was replaced by a series of STBGs encompassing a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, and community improvements.</p> <p>Funding would need to be allocated to bicycle or pedestrian elements.</p> <p>Individual projects generally receive <\$2.5 million.</p>
<p>COVID Relief Funds (US Treasury)</p>	<p>The Coronavirus Aid, Relief, and Economic Security (CARES) Act provided over \$131 million to the City of Seattle. It is unlikely that initial rounds of funds will be available for projects in the BIRT plan, and the probability of a future COVID Relief bill is low.</p>
<p>INFRA (Infrastructure for Rebuilding America) Grant</p>	<p>Discretionary grant program established as part of FAST; focused on NHS roads and bridges and projects that are within the boundaries of a public or private freight rail, water (including ports), or intermodal facility. Applies to surface transportation infrastructure projects necessary to facilitate direct intermodal interchange, transfer, or access into or out of the facility.</p> <p>Proximity to Port and MIC would strengthen application.</p> <p>WSDOT awarded \$73.6 million (about 4% of project cost) to the Puget Sound Gateway Project, including the SR 509 Completion Project, the SR 167 Completion Project, and improvements to I-5.</p> <p>Individual awards as high as \$70 million +</p>

Type	Phases	Potential Value	Viability/ Fit
Federal formula funds			
TBD			
Federal formula funds			
Federal formula funds			
Federal discretionary funds			
One-time grant			

Funding and Financing Options Legend

PHASES OF PROJECT DEVELOPMENT

- Planning/Concept Design
- Environmental
- Design
- Construction

ESTIMATED LEVEL OF POTENTIAL FUNDING FROM SOURCE

- One-time allocation of >\$25M or bondable revenue equivalent
- One-time allocation of >\$5M and <\$25M or bondable revenue equivalent
- One-time allocation of <\$5M

Financing options do not generate new revenue but rather allow the City to leverage regularly collected streams of revenue to pay larger capital costs upfront.

VIABILITY OR FIT OF PROJECT TO SOURCE

- Funds are highly appropriate and generally available for bridge replacement/rehabilitation
- Funds are occasionally allocated to bridge replacement/rehabilitation; bridge project is reasonably competitive given other uses
- Funds are rarely allocated to or a poor fit for bridge replacement/rehabilitation, but there is no prohibition

Program or Source	Description
BUILD (Better Utilizing Investments to Leverage Development) Grant	<p>BUILD, previously called Transportation Investment Generating Economic Recovery (TIGER), is a federal supplemental discretionary grant program. Congress has dedicated nearly \$7.9 billion for 11 rounds of National Infrastructure Investments to fund projects that have a significant local or regional impact. The 2019 awards included bridge rehabilitation projects, with BUILD grant awards up to \$25 million.</p> <p>Awards typically <\$25 million.</p>
BRIC (Building Resilient Infrastructure Communities) Grant	<p>This Federal Emergency Management Association (FEMA) competitive discretionary grant program is for infrastructure projects that reduce the risks they face from disasters and natural hazards.</p>
Transportation Infrastructure Financing and Innovation Act (TIFIA)	<p>The TIFIA loan program provides financing debt options (direct loans, loan guarantees, and standby lines of credit) for large projects and public-private partnerships. TIFIA provides credit assistance for qualified projects of regional and national significance. Any highway and transit capital project eligible for federal aid is eligible. The program offers low cost of financing and flexibility of repayment terms but is competitive. The project must have a dedicated revenue source pledged to secure both the TIFIA and senior debt financing.</p> <p>A \$300 million TIFIA loan was used to finance the SR 520 Floating Bridge and Eastside Project in Washington State in 2009.</p> <p>Individual loans of >\$100 million.</p>
Private Activity Bonds (PABs)	<p>The federal Private Loan Program provides favorable financing terms (tax-exempt loans) to private investors such as Private Activity Bonds (PABs). The City of Seattle has local bonding capacity and may be more likely to use that approach.</p> <p>Financing approach.</p>
Federal Transit Administration (FTA) Various Programs (CIG, 5307)	<p>There are multiple transit capital funding programs, but all are an unlikely source for either bridge as they require a transit-specific capital investment. Capital Improvement Grant (CIG) funds are for corridor-based projects such as light rail or Bus Rapid Transit (BRT). In this corridor, light rail is to be constructed in a parallel guideway and there is already a RapidRide (BRT) line in operation.</p> <p>Bridges unlikely to be eligible for FTA capital grant funds.</p>

Type	Phases	Potential Value	Viability/ Fit
One-time grant	D C	●	○
One-time grant	D C	◐	○
Financing option/low interest government loans	P E D C	●	◐
Federally backed financing	P E D C	●	◐
One-time grant (CIG) or allocation of formula tax dollars	D C	○	○

Funding and Financing Options Legend

PHASES OF PROJECT DEVELOPMENT

- P** Planning/Concept Design
- E** Environmental
- D** Design
- C** Construction

ESTIMATED LEVEL OF POTENTIAL FUNDING FROM SOURCE

- One-time allocation of >\$25M or bondable revenue equivalent
- ◐ One-time allocation of >\$5M and <\$25M or bondable revenue equivalent
- One-time allocation of <\$5M

Financing options do not generate new revenue but rather allow the City to leverage regularly collected streams of revenue to pay larger capital costs upfront.

VIABILITY OR FIT OF PROJECT TO SOURCE

- Funds are highly appropriate and generally available for bridge replacement/rehabilitation
- ◐ Funds are occasionally allocated to bridge replacement/rehabilitation; bridge project is reasonably competitive given other uses
- Funds are rarely allocated to or a poor fit for bridge replacement/rehabilitation, but there is no prohibition