TRANSPORTATION PROJECT DELIVERY METHOD OVERVIEW

HOUSE TRANSPORTATION COMMITTEE

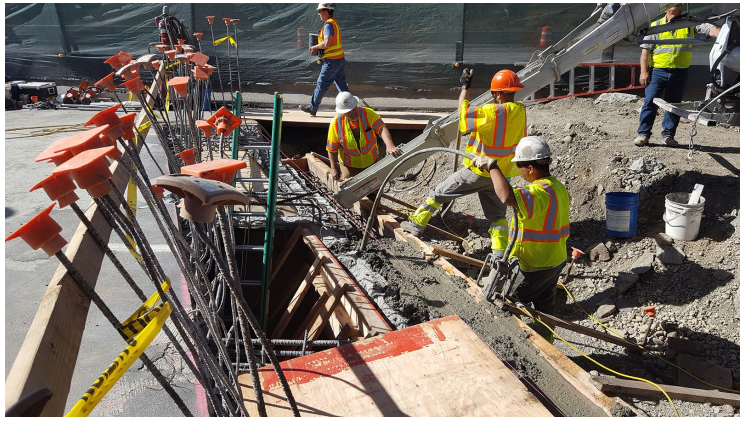
CHRIS CHRISTOPHER, CONSTRUCTION DIVISION DIRECTOR
JULIE MEREDITH, UMA and MEGAPROGRAMS ASSSISTANT SECRETARY
KIM RYDHOLM, FISH PASSAGE DELIVERY MANAGER

December 4, 2023

Roger Millar, Secretary of Transportation

Delivery method history

- In **1998**, the Legislature authorized use of alternative public works contracting methods
- In **2001**, WSDOT contracted its first project using an alternative delivery method (Design-Build)
- WSDOT's experience includes:
  - **15,000+** design-bid-build contracts delivered
  - **81** design-build projects delivered/underway
  - **3** progressive design-build projects underway



Delivery method overview

	Design-Bid-Build	Design-Build	Progressive Design Build
Process	1. WSDOT fully designs (100%) 2. Contract advertised 3. Contractor builds	1. WSDOT designs to conceptual level (~30%) 2. WSDOT identifies what end results need to be 3. Contract advertised 4. Design-builder completes design and constructs	1. WSDOT hires a design builder 2. WSDOT/D-B collaboratively finalize design 3. Negotiate price 4. Design-builder constructs project
Ideal project (type/size)	• Standard projects, with limited complexity and innovation opportunities	• Complex projects • High-risk projects • Typically projects more than $100M	• Complex projects • High-risk projects • When early builder involvement is beneficial

Delivery method overview

	Design-Bid-Build	Design-Build	Progressive Design-Build
Benefits	• Effective delivery method when clear and narrow scope • Low cost to submit bids • Depth of industry experience	• Schedule savings • Opportunities for innovation • More risk is shared by the builder • Often more cost certainty, less change orders	• Schedule savings • Relatively low effort to get the design-builder on board • Early involvement of builder • Negotiate price and risk along the way
Drawbacks	• Limited opportunity for innovation • WSDOT typically owns risk of contract changes	• High effort for D-B to prepare proposals • Limited pool of designers and builders • There is a limit to risk design-builders are willing to take	• Limited pool of qualified designers and builders • Price negotiations are complex and require staffing expertise • Final cost is not known until negotiations are complete

Current bid environment

External cost and risk factors creating cost escalation both here and nationwide

- Material cost volatility and availability
- Market conditions and competition among agencies
- Inflation volatility
- Workforce shortages
- Unanticipated events and risks impacting project schedules

The Seattle Times

Prices skyrocket on WA transportation projects, and fewer contractors want the jobs

Sep. 21, 2023 at 6:00 am | *Updated Sep. 21, 2023 at 6:00 am*

The New York Times

How the Supply Chain Crisis Unfolded

By Lazaro Gamio and Peter S. Goodman Dec. 5, 2021

Ships stuck at sea, warehouses overflowing, trucks without drivers: The highly intricate and interconnected global supply

Los Angeles Times

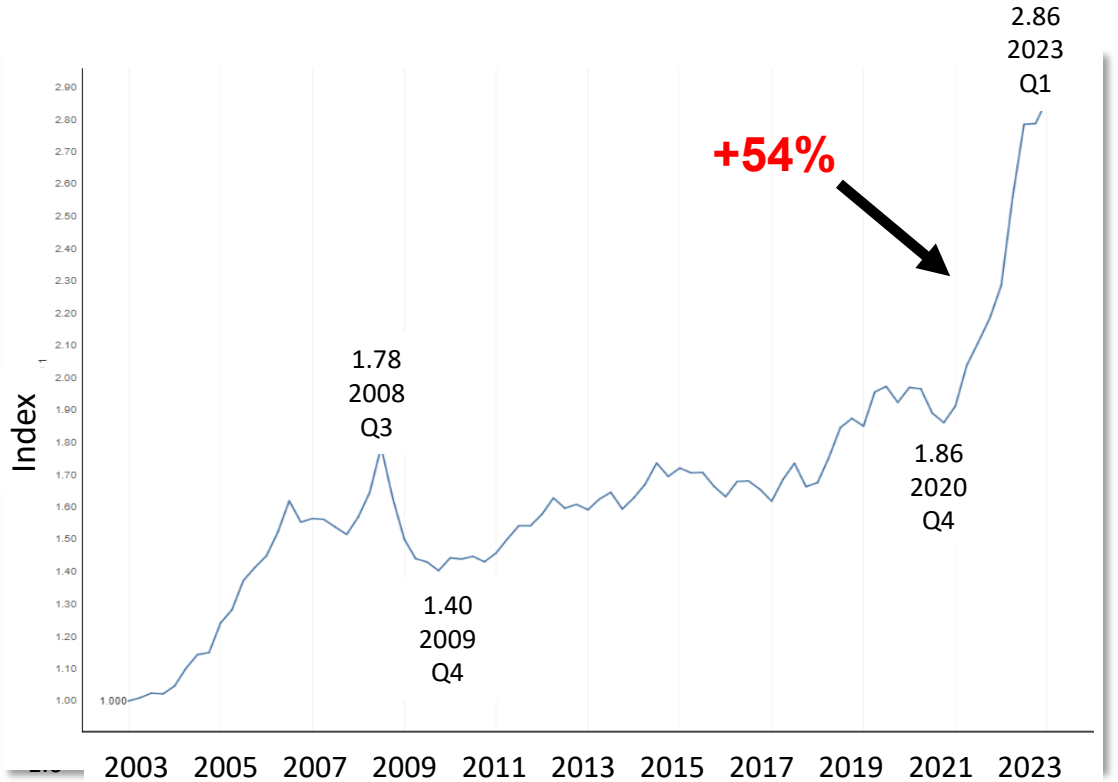
HOUSTON CHRONICLE

LOCAL // TRANSPORTATION

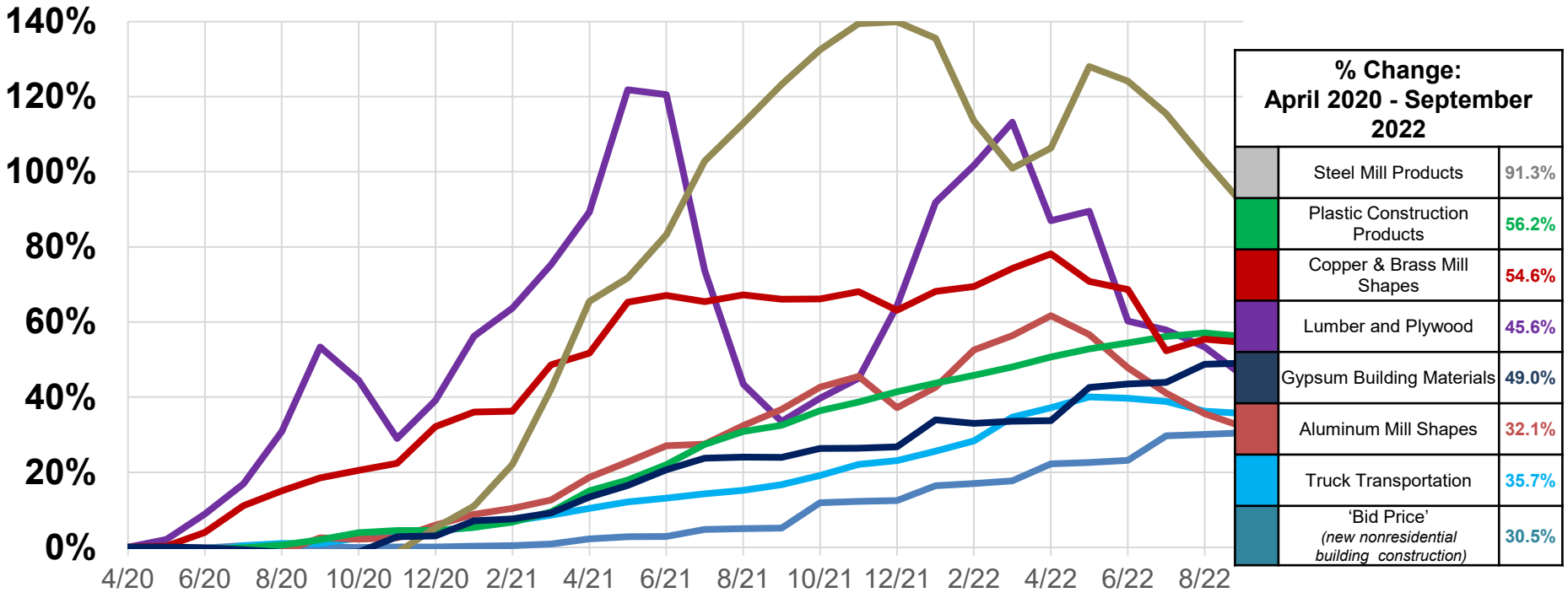
TxDOT officials, citing rising costs, predict they will need to say 'no' to some highway projects

Historic escalation in National Highway Construction Cost Index

- Measures the average change in prices paid by State DOTs for roadway construction materials and services over time
- Used to track price changes in highway construction nationally.
- Many states and regions experienced more exaggerated cost spikes for certain commodities

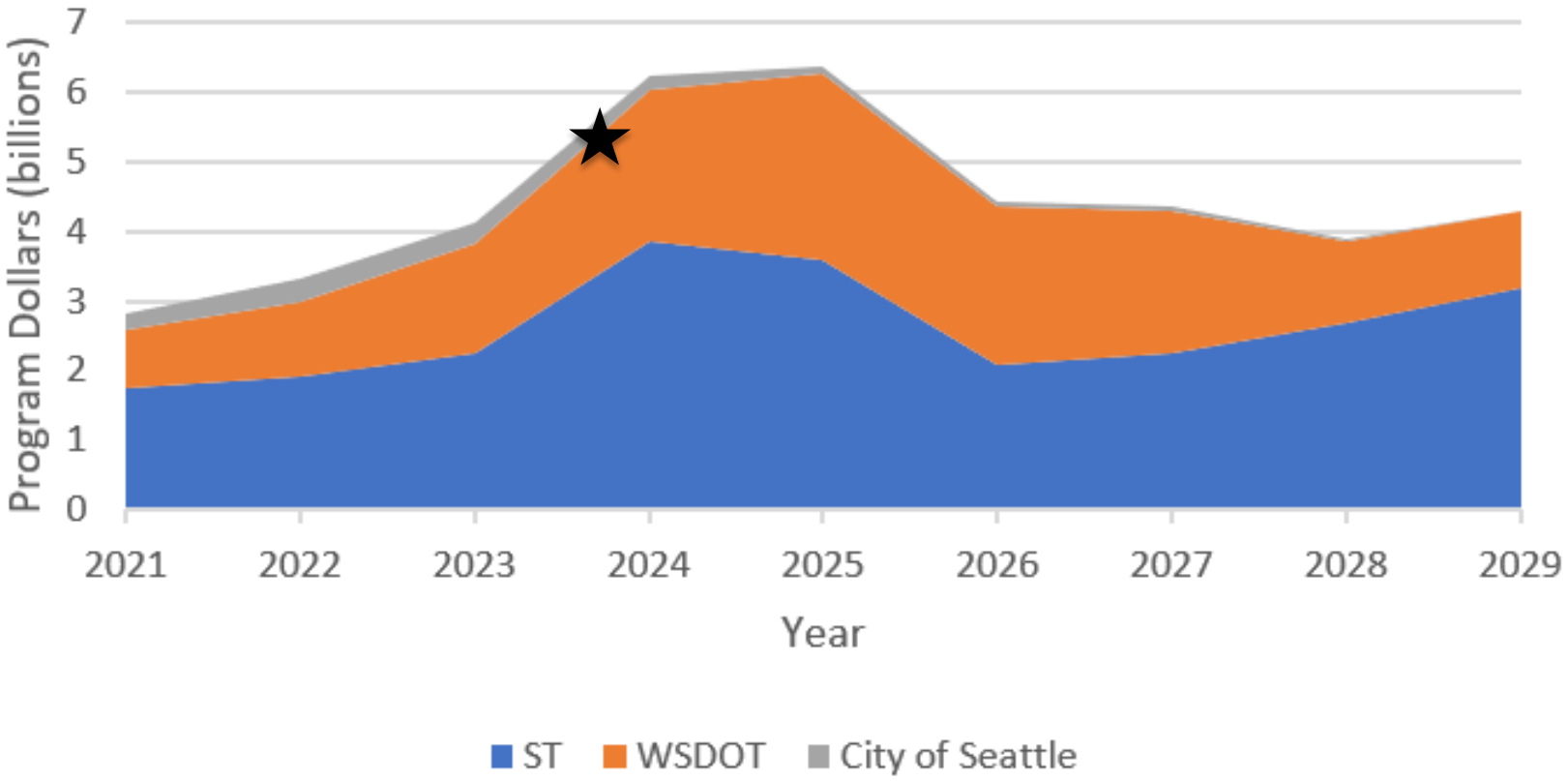


Continued material pricing volatility adds risk



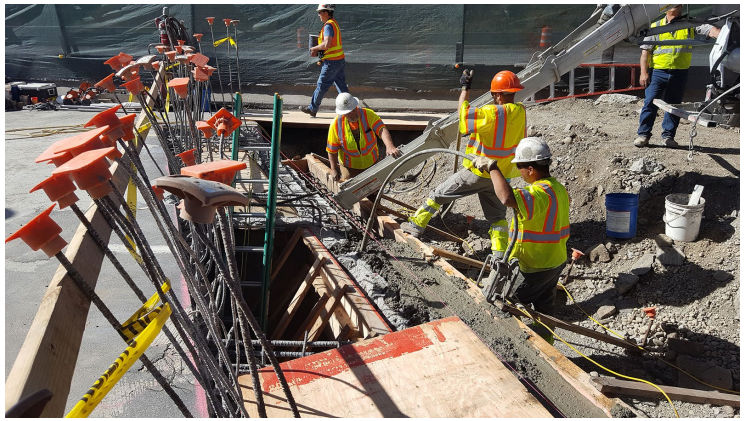
Source: Bureau of Labor Statistics, producer price indexes, www.bls.gov/ppi

Competition among Puget Sound agencies



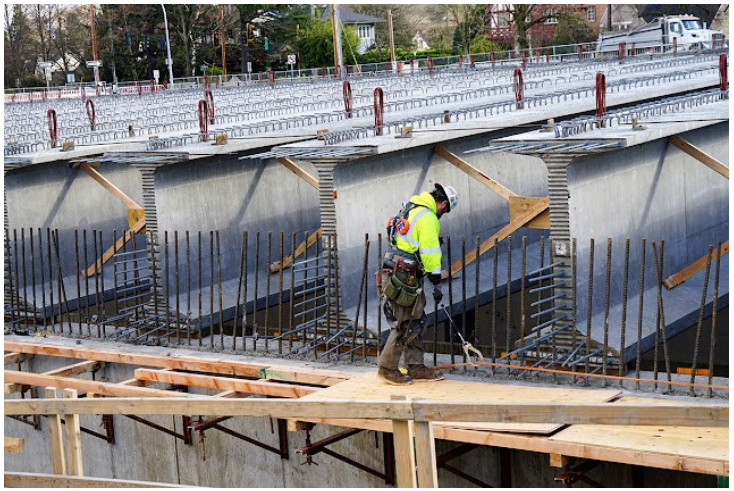
Bids by the numbers: Design-Bid-Build

- Current bid climate appears to be normalizing
- Typical average of 3.5 bidders per project in 2023, compared to downward trend in 2022
- While costs are up, average difference between Engineer's Estimates and bid prices in 2023 is within one percent



Bids by the numbers: Design-Build

- Number of bidders on larger, complex, long-duration projects is down
- Bid prices compared to Engineer's Estimate are up



WSDOT Capital Program – Significant Projects (2023-2025)

Bids opened

- Puget Sound Gateway SR 509 Stage 2 Project
- SR 520 Portage Bay Bridge and Roanoke Lid Project
- WSF Jumbo Mark II – Hybrid Conversion Project
- I-405 / Brickyard to SR 527 Project
- I-90 / Vantage Bridge

Upcoming

- Puget Sound Gateway SR 167 Stage 2 Project
- SR 18 / Hobart to Deep Creek Widening
- I-5 / Yesler Way to Northgate Vicinity (Ship Canal Bridge)
- US 395 / North Spokane Corridor
- I-5 / East Fork Lewis River Bridge NB
- Fish passage projects

I-405/SR 167 Corridor Program

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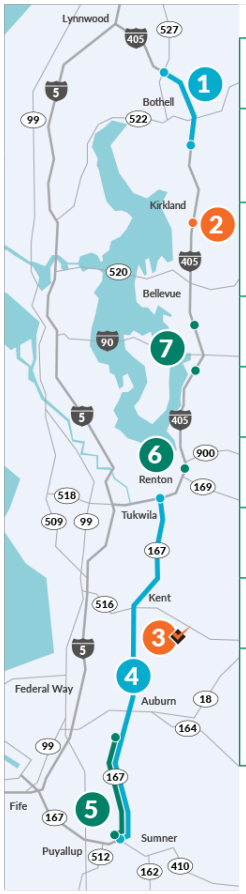
JULIE MEREDITH, UMA and MEGAPROGRAMS ASSSISTANT SECRETARY

December 4, 2023

Delivery of SSB 5165 (2021)



	2023	2024	2025	2026	2027	2028	2029	2030
1 I-405/Brickyard to SR 527 Improvements Project	Construction							
1a Operational Improvements associated with Brickyard to SR 527 Project		PE		Construction				
1b Crystal Creek Downstream Conveyance Project associated with Brickyard to SR 527 Project		PE			Construction			
2 I-405/NE 85th Street Direct Access ramps toll equipment	Construction							
3 SR 167 Master Plan	✓							
4 SR 167 Corridor Improvements Project		Construction						
5 SR 167 Congestion Management Southbound ETL Extension		PE		Construction				
6 I-405/North 8th Street Direct Access Interchange			PE		Construction			
7 I-405 Renton to Bellevue Widening and Express Toll Lanes Project–Interchange Improvements			PE		Construction			

Recently awarded | In construction or complete | Future projects

Recently awarded projects

#	Project	Appropriated Budget	Updated Cost	Difference between appropriated budget
1	*SR 522 to I-5 Capacity Improvements*			
	• **Brickyard to SR 527 Improvements Project**	$521M	$775M	$254M
4	*Renton to Bellevue (Contract 3)*			
	SR 167 Corridor Improvements Project	$77M	$98M	$21M

Potential cost drivers

- Limited prime contractor availability to deliver Design Build of this $-value (Brickyard to SR 527)
- Complicated staging/scheduling to maintain function of existing system
- Increase in materials pricing: specialized ITS, electrical equipment, rebar, concrete
- Localized geotechnical conditions resulted in added risk (Brickyard to SR 527)

SR 167 Corridor Improvements Project

Overview

- Replaces original toll system from 2008
- Upgrades SR 167 toll system for customer experience and management consistency
- Adds strategic capacity by constructing a southbound auxiliary lane including preservation

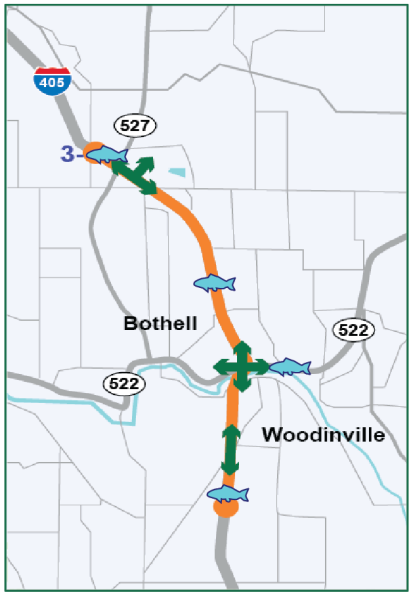
Funded by:

Toll Revenue | Move Ahead Washington

I-405/Brickyard to SR 527 Express Toll Lanes Improvement Project

Overview

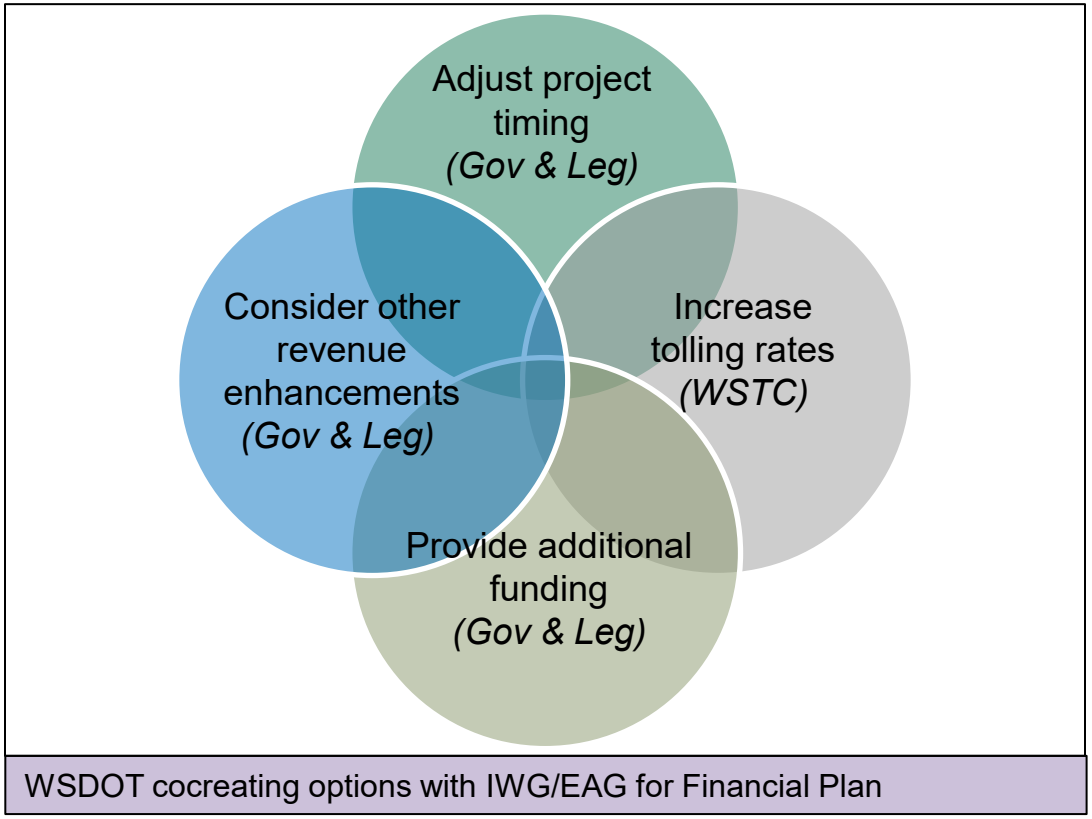
- Extends dual ETLs from SR 522 to SR 527
- Builds direct access ramps with inline stations at SR 522 and SR 527 interchanges
- Connections to urban growth centers and transit nodes



Funded by:

Toll Revenue | Move Ahead Washington | Sound Transit

Legislative direction of options to consider



WSDOT cocreating options with IWG/EAG for Financial Plan

SR 520 Program

HOUSE TRANSPORTATION COMMITTEE

JULIE MEREDITH, UMA and MEGAPROGRAMS ASSSISTANT SECRETARY

December 1, 2023

Where we've been (2022 - 2023)

- 2022 Move Ahead WA allocated $406M to close SR 520 Program funding gap for the Portage Bay Bridge & Roanoke Lid Project.
- 2022 Engineer's estimate was $812M; Portage Bay Project RFP released in Jan. 2023 using $725M-$900M range.
- Like other programs across the state, we continued to monitor cost escalation factors stemming from:
  - Cost and schedule impacts related to four-month concrete strike
  - Inflation and materials cost volatility
  - Supply chain issues
  - Highly saturated market conditions and workforce shortages

Project funding need

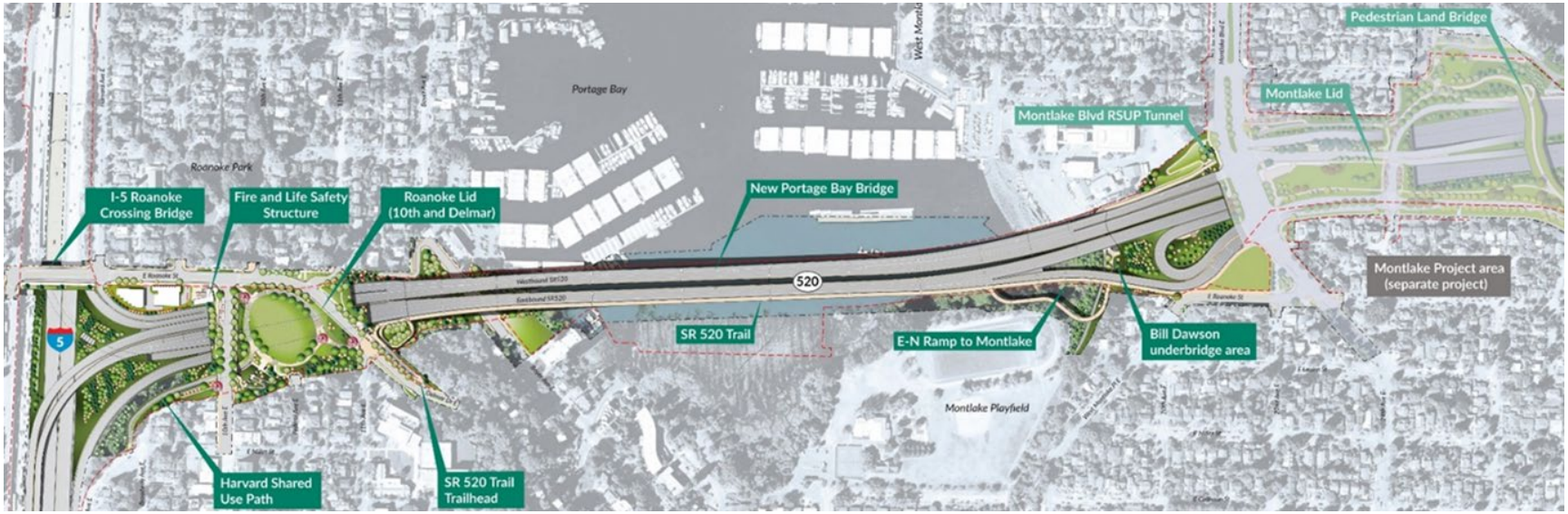
Estimate	Contract amount	+ Contract admin, sales tax, contingency & risk reserve	Total Portage Bay Bridge Project
2022 Engineer's Estimate	$812M	$226M	$1.038B
2023 Apparent Best Value Price Proposal	$1.375B	$346M	$1.721B
Total Project funding need	**$563M** ***(contract price increase)***	**$120M***	**$683M**

**$120M = $12M contract administration + $63M sales tax (10.25%) + $25M contingency (4%) + $20M risk reserve*

Program funding need

Project	Estimated funding authorization needed in 2024	Additional funding appropriation in 2023 - 2025
Portage Bay Bridge and Roanoke Lid Project	$683M	$29M
SR 520/I-5 Express Lanes Connection Project	$10M	$10M
Montlake Project	$32M	$32M
Total SR 520 Program funding needed (*inclusive of Program management and other project risks*)	**$725M**	**$71M**

Options considered



- **Option 1**: Fund project and move forward
- **Option 2**: Replace bridges first; lid second
- **Option 3:** Replace north bridge first; then south bridge and lid second
- **Option 4**: Replace north bridge; pause the project
- **Option 5**: Cancel project; close down program

Key considerations for each option

- Safety
- Legal risks
- Mobility
- Constructability
- Schedule implications
- Cost and finance impacts
- Agreements and environmental compliance
- Community impacts
- Staffing

All options that involve repackaging the project add:

- Time (approximately 7 years)
- Cost (an estimated $1B - $1.5B in additional cost)
- Risk (safety and legal).

Next steps

- Negotiate with the contractor to extend the proposal price validity to the end of 2024 legislative session (March 7).
  - This path forward allows additional time for collaboration with policy makers.
  - Delivering the project as one package is the most cost and time efficient option.
- Preparing information to inform project funding discussions, including tolling analysis, sales tax deferral and other financing and grant opportunities.

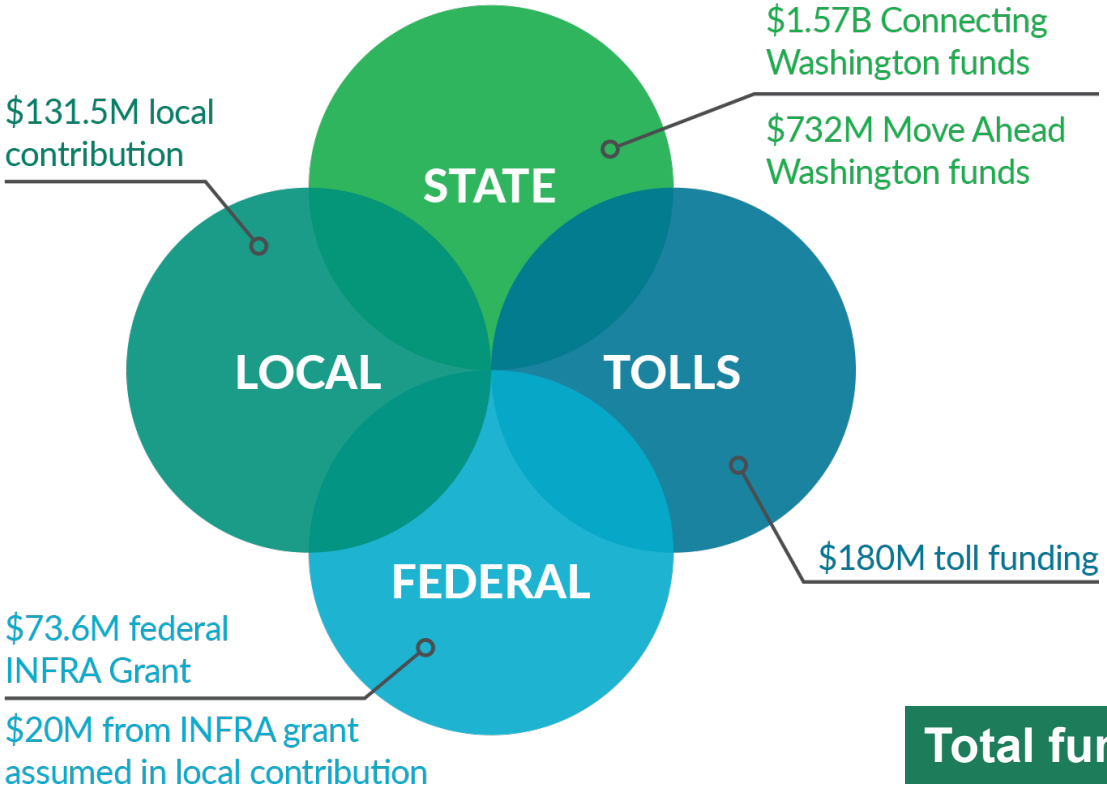
Puget Sound Gateway Program

HOUSE TRANSPORTATION COMMITTEE

JULIE MEREDITH, UMA and MEGAPROGRAMS ASSSISTANT SECRETARY

December 4, 2023

Puget Sound Gateway Program funding



Total funding: $2.69 billion

Gateway Program design-build contracts

D-B CONTRACTS	STAGE 1a	STAGE 1b	STAGE 2
SR 509	Open to traffic	Under construction	Apparent Best Value: Atkinson Construction
SR 167	Open to traffic	Under construction	*Stage 2a* Sept. 12 RFQ Jan. 17 RFP *Stage 2b* Q3 2024 RFQ

Stage 2 procurement outcomes

- **SR 509 Stage 2** – Guy F. Atkinson Construction has provided a best value proposal to build the project, based on a combination of technical points for design and price. Atkinson's price proposal of $478,875,985 was within 1% of the state engineer's estimate of $475,440,375. We expect to award by the end of the year.

- **SR 167 Stage 2a** – the Statement of Qualifications were due on Nov. 22, and we have multiple submitters

- **SR 167 Stage 2b** – the team is working on an application to Capital Projects Advisory Review Board to move forward with Progressive Design-Build contracting method. A decision is expected early next year.

Next steps

- Ongoing coordination with WSTC on updated traffic and revenue study related to toll funding
- Continue construction on two contracts
- Continue to advance contract procurement for the SR 167 Stage 2 contracts

***SR 167 Stage 1b**: When inner bridge lanes are complete, traffic will shift towards the I-5 median while crews work on outer bridge portions in Fife.*

***SR 509 Stage 1b**: Crews set girders for the new bridge over I-5 and continue work to complete the bridge deck.*

WSDOT Fish Passage Program Update

SENATE TRANSPORTATION COMMITTEE MEETING

Kim Rydholm, P.E., Fish Passage Delivery Manager

December 1, 2023

Roger Millar, Secretary of Transportation

Amy Scarton, Deputy Secretary of Transportation

Injunction Requirements

2013 List Significant* Gain Barriers

- Open 90% blocked habitat by 2030
- Open remaining 10% deferred habitat at the end of the structure's useful life or as part of another project

2013 List Limited Gain Barriers**

- Correct at the end of the structure's useful life or as part of another project

Newly Identified Barriers - those identified after the 2013 List was developed

- Correct within a reasonable period of time

*Significant means a barrier has 200 or more meters of upstream habitat.

**Limited means a barrier with less than 200 meters of upstream habitat.

We organized our plan as follows:

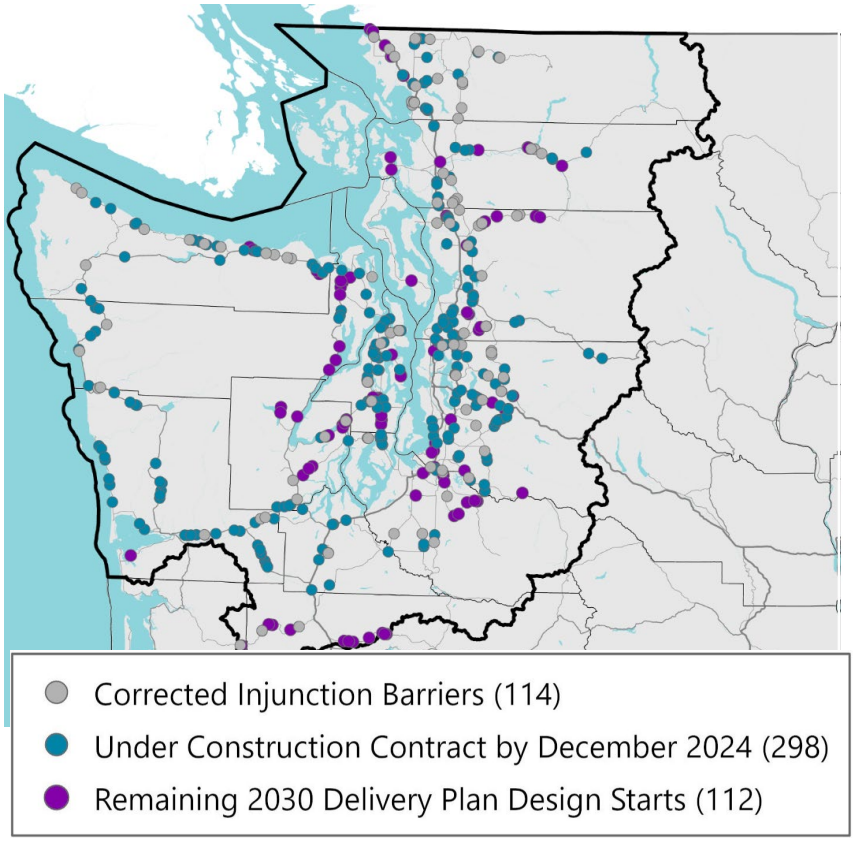
1) 2030 Delivery Plan:

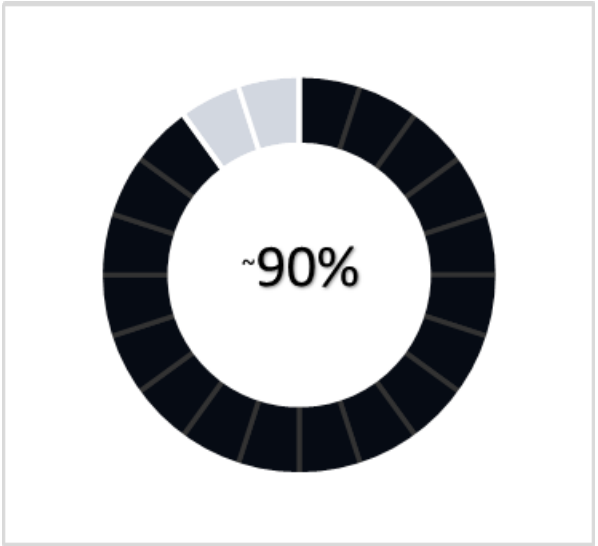
This plan restores access to 90% blocked habitat of 2013 significant gain barriers by 2030 and corrects some high value newly identified barriers.

2) Beyond 2030 Delivery Plan (to be developed):

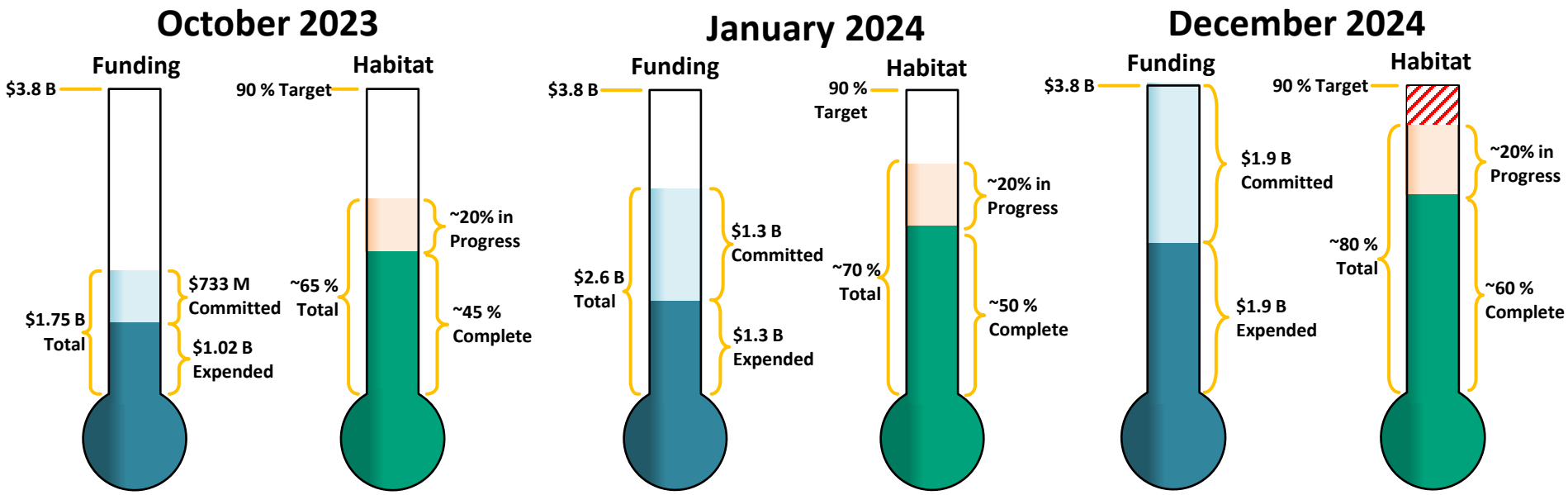
This plan will restore access to 10% deferred blocked habitat of 2013 significant gain barriers, the limited gain barriers, and the remaining newly identified barriers.

The projects getting under construction contract are adding to the percent habitat opened





Fish passage delivery is accelerating quickly!

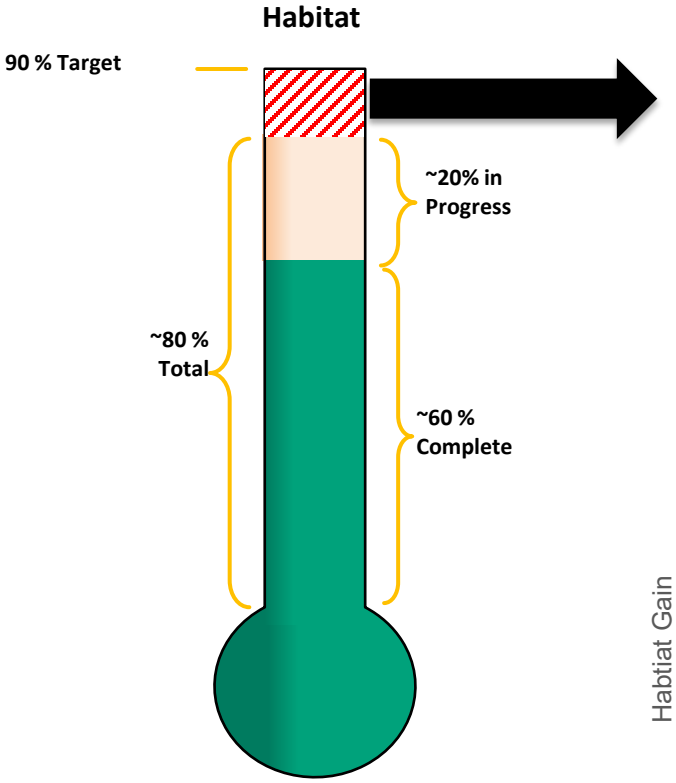


Updated 2030 Delivery Plan Compliance Estimate - 2023

Completed Barriers	# 2013 List Barriers*	# Newly Identified Barriers*	Total Program Budget*	Revised Total Plan Estimate	Additional Funds Needs
114	320	49	$3.8B	$7.3B - $7.8B	$3.5B - $4B

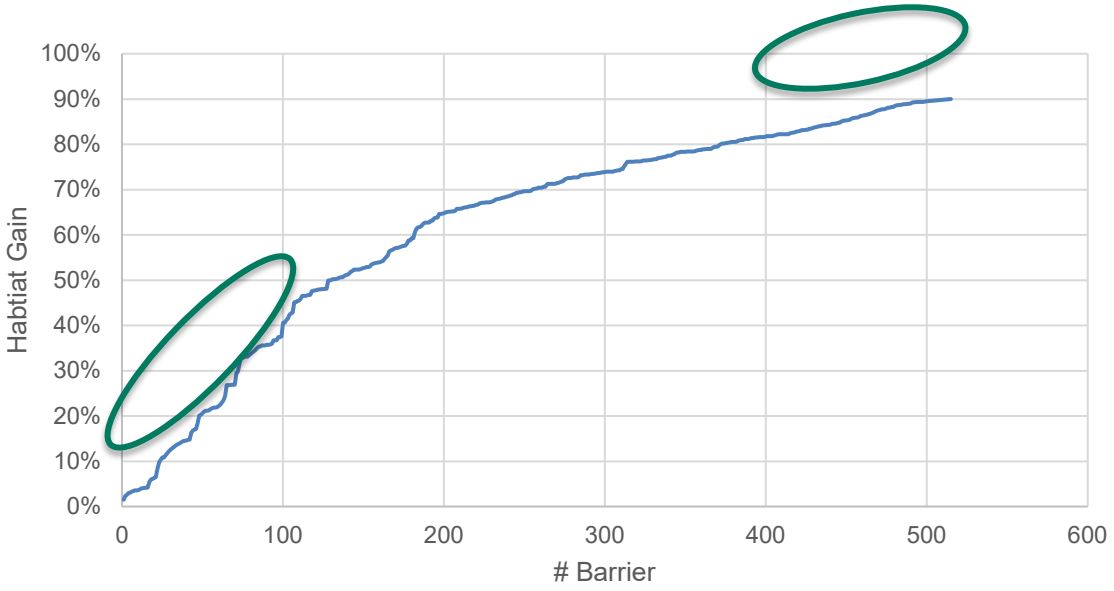
* Doesn't include the barriers corrected by larger transportation projects

From 80% to 90% Habitat Restored by 2030



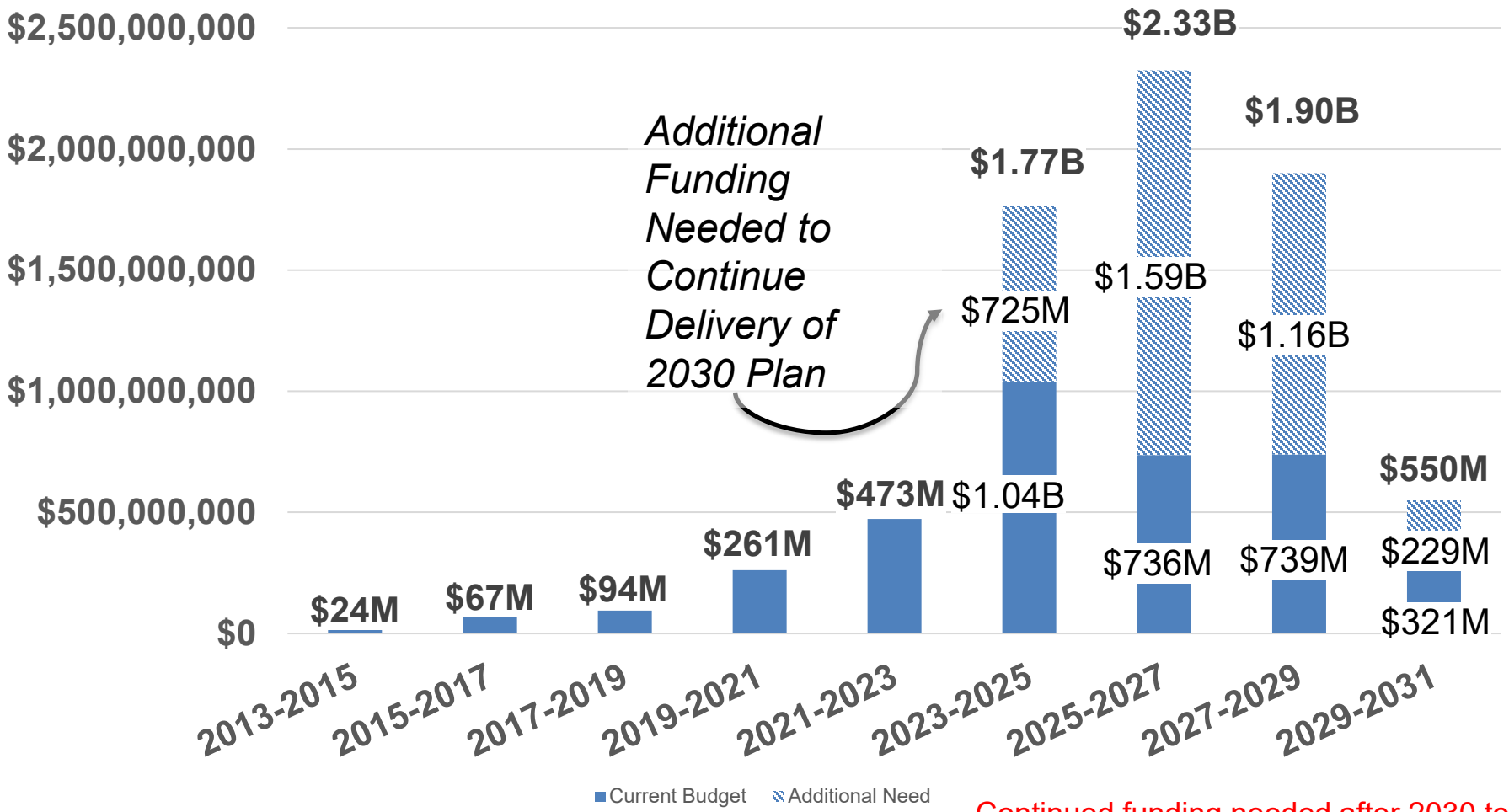
Includes:

- Over 100 barrier corrections
- Lower habitat gain and high-cost barrier corrections



Revised Total Plan Estimate	Additional Funds Needs
$7.3B -$7.8B	$3.5 - $4B

Fish Passage Budget and Additional Need



October 2023

Continued funding needed after 2030 to comply with the permanent injunction

Key takeaways

- Current budget will fund restoring about **80%** of the blocked habitat, which is a correction of **over 400 fish barriers** by 2030.
- We are on track to fully commit the current budget of $3.8B to construction contracts by the **end of 2024**.
- An **additional $3.5-$4.0 billion** is needed to correct remaining over **100 barriers and achieve 90% habitat restoration** by 2030**.**
- Additional funding needed **beyond 2030** for 10% deferred habitat, limited gain, and remaining newly identified barriers.

Next steps

- Further exploration of alternative delivery methods
- Contractor and industry engagement
- Review of cost, risk and delivery assumptions for upcoming programs considered 'mega' in scale
- Evaluation of ways to improve cost and risk assessment processes
- Continued collaboration with Governor’s office, Legislature, partners and traveling public

Questions?

For additional information on
Transportation Project Delivery Methods,
please contact:

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