



King County

Department of
Natural Resources and Parks
**Wastewater Treatment
Division**

Black Diamond Trunk Capacity Upgrade Project

Project Review Committee Presentation

GCCM Application

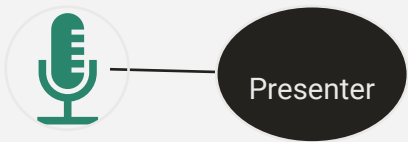
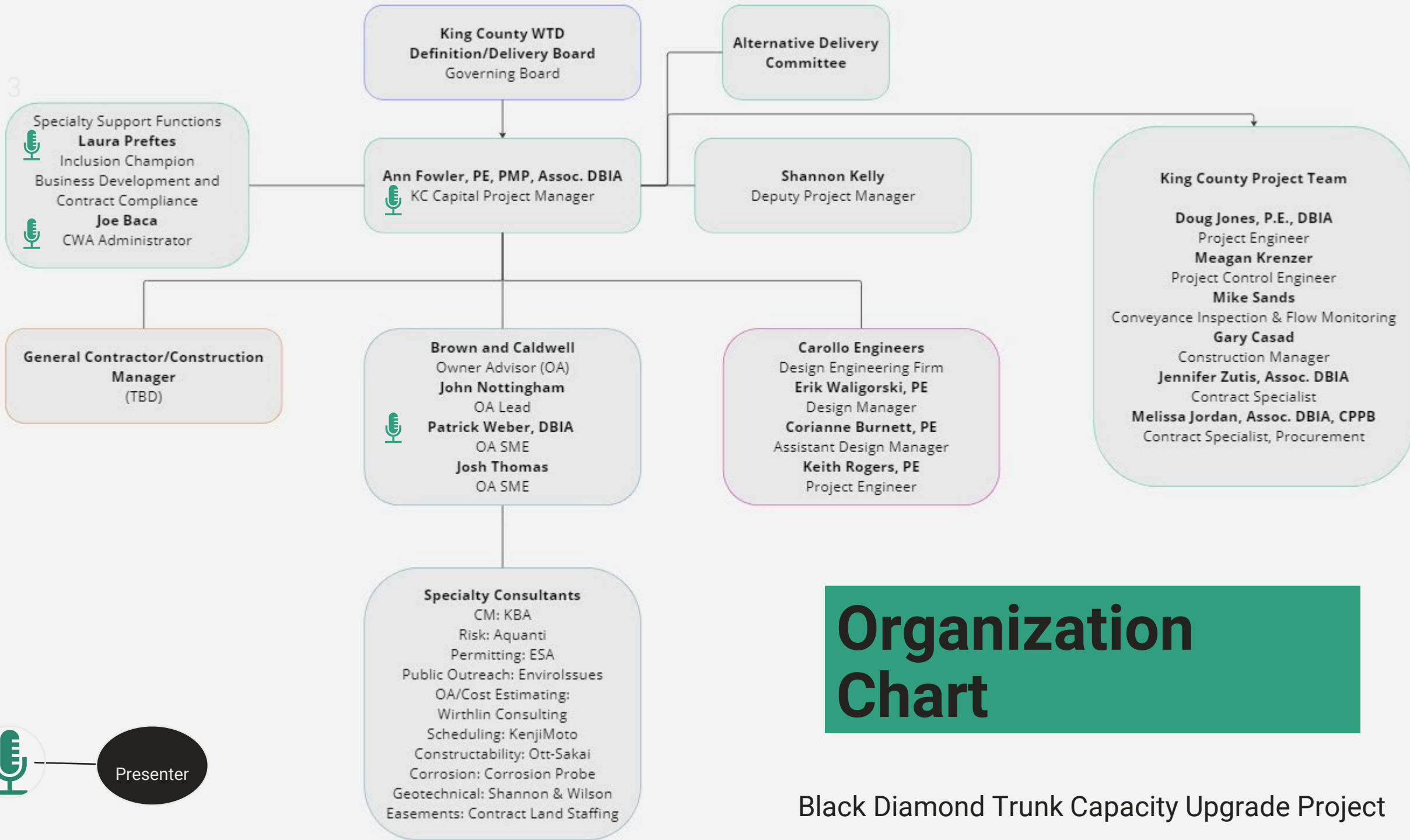
December 5, 2024

Agenda

- 1 Introductions
- 2 Project Overview
- 3 Benefit of GCCM
- 5 Owner Team Qualifications
- 6 Equity and Social Justice
- 7 RCW 39.10 Compliance
- 8 PRC Questions
- 9 Closing



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Organization Chart

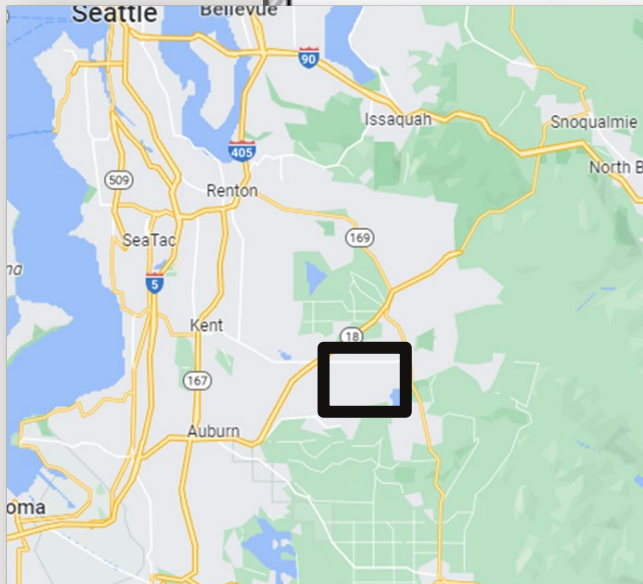
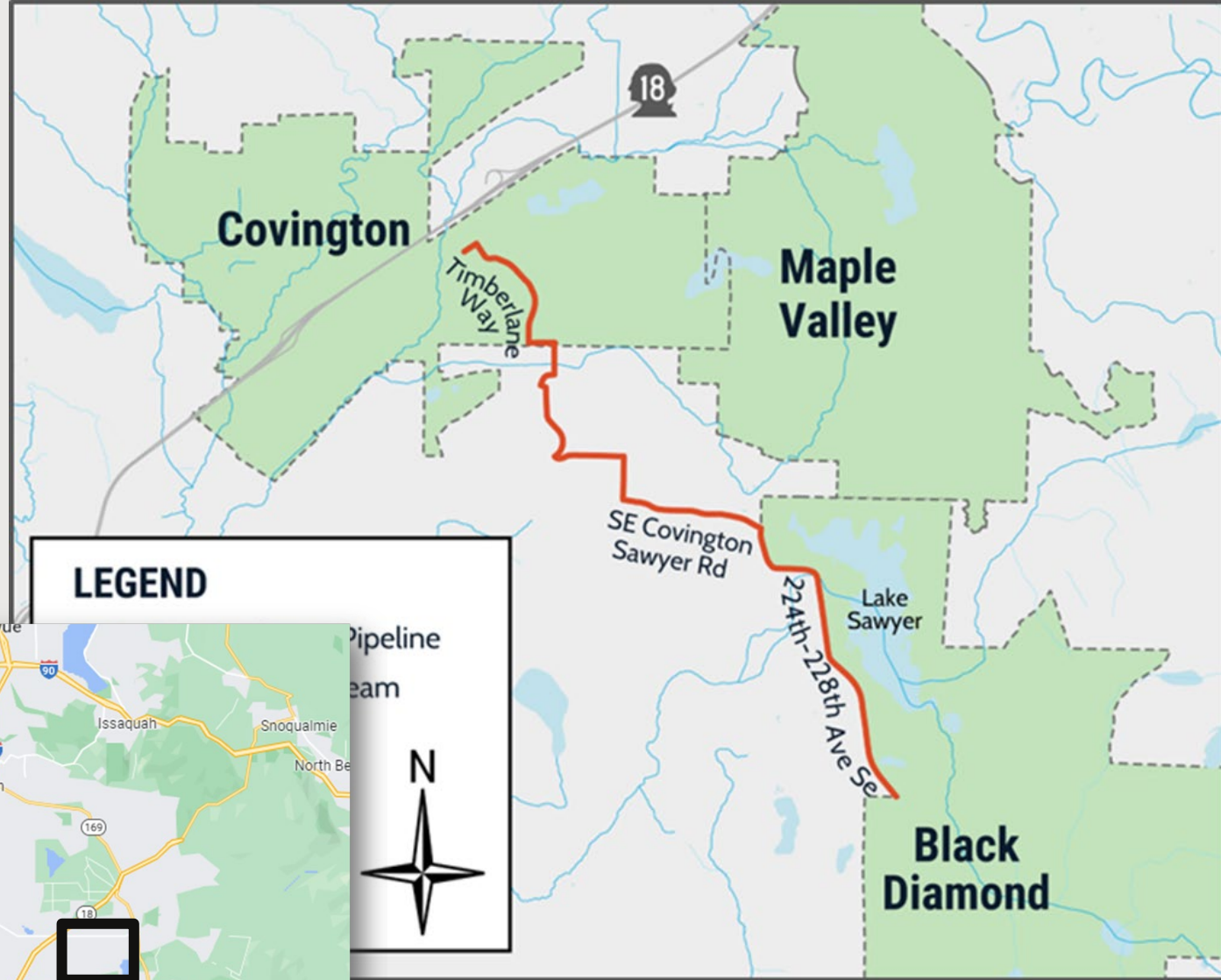
Black Diamond Trunk Capacity Upgrade Project

Project Overview

Black Diamond Trunk Capacity Upgrade Project

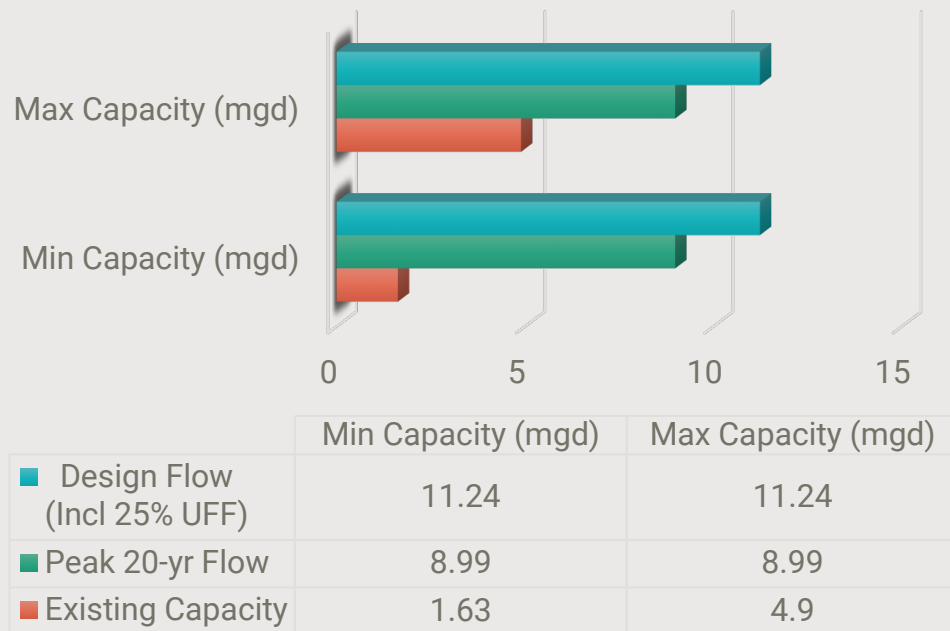
Project Location

- Located within the City of Black Diamond, City of Covington, and King County
- Sewer Service areas also include Soos Creek Water & Sewer District



Black Diamond Interceptor Capacity

Flow Requirements with Projected Full Development Build-out



Design Standard

- **Policy:** King County requires WTD to design conveyance facilities to meet the 20-year peak flow standard (King County Code 28.86.060).
- **Purpose:** Protect public health and the environment.
- **Goal:** Reduce conveyance system overflows



Black Diamond Interceptor Service Life

Pipe Segment	Current Capacity	2020	2030	2040	2050	2060	2070
RE*BLKDIA.120(6)	2.04	16 -yr	9.0 -yr	5.1 -yr	3.7 -yr	2.6 -yr	2.0 -yr
RE*BLKDIA.114(10)	2.15	20 -yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr
RE*BLKDIA.104(9)	1.77	7.0 -yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr
RE*BLKDIA.95(9)	1.75	6.6 -yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr
RE*BLKDIA.87(1)	1.76	6.8 -yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr
RE*BLKDIA.86(1)	3.06	20 -yr	3.1 -yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr
RE*BLKDIA.85(21)	1.73	6.2 -yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr
RE*BLKDIA.64(6)	1.62	4.5 -yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr
RE*BLKDIA.58(4)	1.64	4.7 -yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr
RE*BLKDIA.54(28)	1.71	5.8 -yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr
RE*BLKDIA.26(3)	4.9	20 -yr	20 -yr	4 -yr	2 -yr	1 -yr	< 1-yr
RE*BLKDIA.25(14)	1.71	5.8 -yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr
RE*BLKDIA.11(4)	1.66	4.9 -yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr
RE*BLKDIA.07(6)	2.27	20 -yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr	< 1-yr

Capacity Concerns Resulting from Projected Growth

- **Nearly 80%** of the system falls below the 1-year capacity mark by 2030, significantly impacting service reliability.
- **Nearly 100%** of the system has less than 10 years of capacity remaining by 2030
- By **2070**, 93% of the system has a capacity life of less than 1 year and **100%** of the system has a capacity life of less than **2 years**.



Benefits of GCCM

Black Diamond Trunk Capacity Upgrade Project

PRC Panel Project Evaluation Criteria A and B

Benefits of GC/CM

PRC Project Evaluation Criteria A

Delivery Schedule

- Early contractor construction planning and sequencing.
 - GC/CM allows for early work packages.
 - Ensures work completion within required timeframes.
 - Controls project costs.
- Coordinates schedule impacts through design and early construction planning.

Fiscal Benefit

- Early contractor input in design helps plan and mitigate complex construction challenges.
 - Provides cost transparency and certainty.
 - Decreases the incidence of change orders.
- Heavy Civil allows negotiation for the GC/CM to self-perform critical or higher-risk work, maintaining schedule, quality, and execution.



Benefits of GC/CM

PRC Project Evaluation Criteria B

Challenges:

- Spatial constraints, traffic planning, high groundwater levels, poor soils, stream crossings, utility conflicts.
- Maintaining the schedule is critical to meet the capacity needs of the contributing area.



Benefits of GC/CM

PRC Project Evaluation Criteria B

Project Challenges

<p>Sewer Diversion Planning</p> <ul style="list-style-type: none"> • Maintain continuous flows during replacement. • Temporary piping on streets/sidewalks, buried crossings. 	<p>Trenchless Construction</p> <ul style="list-style-type: none"> • High gravel/cobble quantities, gravel pits, and mines. • Contractor involvement in trenchless installation approach. 	<p>Protection of Surface Water</p> <ul style="list-style-type: none"> • Stream crossings at Covington and Cranmar Creek. • High-risk areas for water runoff and heavy excavation. 	<p>Traffic Impacts</p> <ul style="list-style-type: none"> • Extensive road construction along the project corridor. • Design must consider ROW changes, utilities, environmental impacts.
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Benefits of GC/CM

PRC Project Evaluation Criteria B

GC/CM Solutions

<p>Sewer Diversion Planning</p> <ul style="list-style-type: none"> • Manage pumping systems, monitor flows, control noise/odor. • Develop safety plan, traffic control plans. 	<p>Trenchless Construction</p> <ul style="list-style-type: none"> • Develop a risk register with the contractor. • Formulate mitigation strategies, including alternate methods if necessary. 	<p>Protection of Surface Water</p> <ul style="list-style-type: none"> • Implement robust solutions for creek protection. • Collaborative contractor engagement. 	<p>Traffic Impacts</p> <ul style="list-style-type: none"> • Minimize disruptions to local communities, schools, commuters. • Plan/mitigate traffic impacts, closures, detours, utility interruptions.
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Owner Team Qualifications

Black Diamond Trunk Capacity Upgrade Project

PRC Panel Project Evaluation Criteria C

WTD and Owner Advisor Team Experience

Evaluation Criteria C.1

Project Delivery Experience

- Strong Capital Project Delivery History
- Multiple alternative public works delivery projects underway
 - 3 PDB contracts: ESI 8, M Street, and South Interceptor
 - 2 GC/CM Contracts: West Point TP and Elliott West Wet Weather Treatment Station
- Owner Advisor and Engineering Firm with extensive GC/CM experience

DBIA Certified Training Program

- 34 KCWTD staff participated in DBIA training in 2022
- 5 KCWTD staff obtained DBIA or Assoc. DBIA Certifications
- Additional Collaborative Delivery training opportunities planned for 2025

Documented GC/CM Processes

- Alternative Delivery Committee
- Internal processes and control systems to efficiently plan and execute the work
- Developed new GC/CM procurement and contract templates in 2023.
 - Successful Implementation for West Point Treatment Plant programmatic and Elliott West Wet Weather project-specific heavy civil GC/CM procurements.

King County Alternative Delivery Experience

Evaluation Criteria C.1

Ann Fowler (Project Manager)

- (1) Eastside Interceptor Section 8 Rehabilitation (PDB)

Doug Jones (Project Engineer)

- (1) Elliot West Wet Weather Treatment Facility (GC/CM)
- (1) Eastside Interceptor Section 8 Rehabilitation (PDB)

Meagan Krenzer (Project Controls Engineer)

- (1) WPTP PE and RAS Pipe Restoration (GC/CM)

Jennifer Zutis (Contract Administrator)

- (4) Seattle Public Schools - Multiple (GC/CM)
- (1) Eastside Interceptor Section 8 Rehabilitation (PDB)

Melissa Jordan (Procurement Specialist)

- (4) Sound Transit - Multiple (GC/CM)
- (1) Sound Transit Puyallup Station Access Improvements DB
- (1) Eastside Interceptor Section 8 Rehabilitation (PDB)



Owner Advisor Alternative Delivery Experience

Evaluation Criteria C.1

John Nottingham, OA Lead (Brown and Caldwell)

- City of Everett – WPCF Phase C (GCCM)
- City of Everett – Reservoir 3 (PDB)
- City of Everett WFP - Phase 2 (PDB)

Josh Thomas, OA SME (Brown and Caldwell)

- South Adams County Water Sanitation District PFAS Treatment Facility (GC/CM)
- Betasso Water Treatment Facility Upgrade Program (6 Projects) (GC/CM)
- Timpanogos WWTP Package C (GM/CM)
- Boise Recycled Water Program (CM/GC)
- Nampa WWTP Group G (CM/GC)
- Nampa WWTP Group F (PDB)
- Mountain AFB Pump Station and Pipeline (FPDB)

Patrick Weber, OA SME (Brown and Caldwell)

- Mill Creek WTP Slow Sand Filter Improvements (GC/CM)
- Eastside Interceptor Section 8 Rehabilitation Project (PDB)
- M Street Sewer Rehab (PDB)
- Jefferson & Hood Street Surface Water Interceptor (PDB)



Engineering Firm Alternative Delivery Experience

Evaluation Criteria C.1

Erik Waligorski, PM (Carollo Engineers)

- Lake Oswego Blue Heron (GC/CM)
- Grants Pass Replacement Water Treatment Plant (PDB)
- Oak Harbor Wastewater Treatment Plant Design (GC/CM)

Corianne Burnett, Deputy PM (Carollo Engineers)

- Lake Oswego Blue Heron (GC/CM)
- TVWD/Slayden 189th Pump Station and Pipeline (PDB)
- Willamette Water Supply Program (GC/CM)

Keith Rogers, PE (Carollo Engineers)

- TVWD/Slayden 189th Pump Station and Pipeline (PDB)



Contract Administration and Project Management

Evaluation Criteria C.2 and C.5

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Contract Administration and Continuity

- PM (Assoc. DBIA) and PE (DBIA) have experience delivering multiple large sewer capital projects, including rehabilitation
- WTD CM have administered construction contracts for numerous sewer capital projects of similar type and scale
- Contract Administrator holds Assoc. DBIA Certification
- Procurement Lead has procured multiple GC/CM projects, and holds Assoc. DBIA Certification
- Brown and Caldwell serving as owner advisor to support GC/CM delivery through procurement, design, and construction

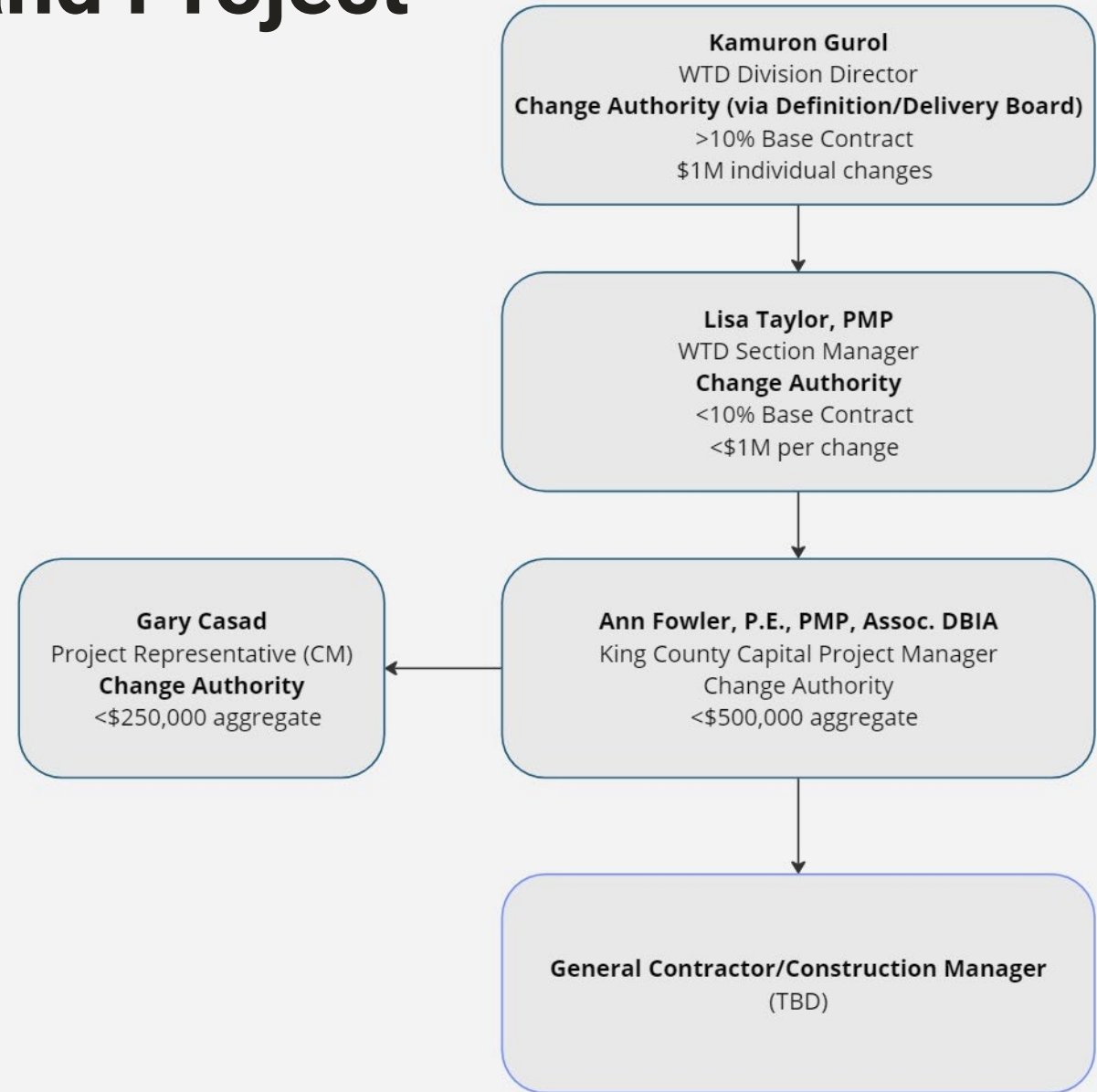


Contract Administration and Project Management

Evaluation Criteria C.3

King County Project Management

- Well-established project oversight procedures and governance structure, including managing scope, schedule, budget:
 - Documented change management processes
 - Designated change approval authority to the project team
- Standard processes outlined in County Manuals and Guides:
 - Project Management Manual
 - Project Control Engineer Manual
 - Project Engineering Manual
 - Construction Management Manual
 - Alternative Public Works Guide



Project Budget

Evaluation Criteria C.4 and C.6

Total Project budget: \$167M

- Funding has been appropriated and approved by the King County Council for the duration of the project.
- May pursue WIFIA funding, but the project is not contingent on the receipt of grant funding.
- Project budget is based on Class 5 estimate and includes contingencies.

Description	Amount
Costs for Professional Services (A/E, Legal etc.)	\$17.3M
GC/CM Total Contract	\$52.4M
GC/CM Preconstruction Services	\$5.5M
GC/CM MACC Contract	\$46.9M
Total Construction Contingencies	\$20.6M
Construction Change Order Contingency (10%)	\$5.9M
Construction Contingency (28%)	\$14.7M
Total GC/CM Contract, including contingencies	\$73.2M
Contract administration costs (owner, cm etc.)	\$10.5M
Contingencies (design & owner)	\$35.2M
Other related project costs *	\$24.2M
Sales Tax	\$6.2M
Total Project Budget	\$167M

* Other related project costs include permitting, right-of-way, sustainability, and escalation.



Anticipated Project Schedule

Evaluation Criteria C.4

Step 1: Interested firms submit proposals.

3 highest ranked firms invited to submit proposals.

Step 2: Shortlisted firms submit fee proposals.

Interactive Proprietary Meetings held with each firm.

Proposal pricing based on design development through 100%.

Description	Start	Finish
GC/CM Procurement		
Step 1: RFP/Shortlisting	Feb 2025	Apr 2025
Step 2: RFFP/Evaluation and Selection	May 2025	Jun 2025
Contract Negotiations	Jun 2025	Sep 2025
Preconstruction Phase		
Preliminary Design/MACC Development	Nov 2025	Jun 2026
Construction		
Final Design/Permitting/Construction	Jun 2026	Aug 2028
Closeout Phase		
	Aug 2028	Oct 2028



Equity and Social Justice

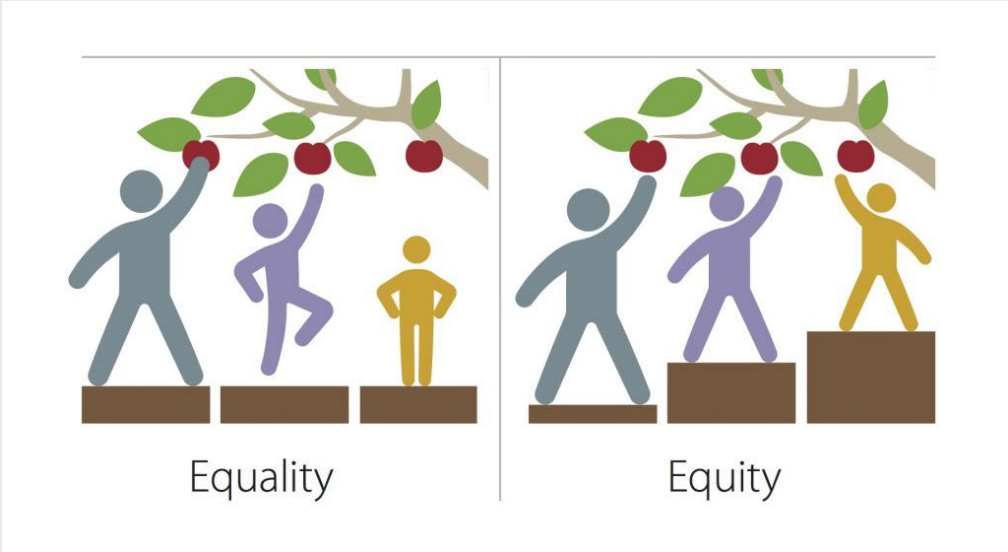
Black Diamond Trunk Capacity Upgrade Project

Equity and Social Justice

Diverse Business Participation



Voluntary Utilization Goals



10%

MBE

6%

WBE

The Contract requires the selected GC/CM to submit an inclusion plan for Washington State Certified Minority and Women’s Business Enterprises, and businesses certified with the Department of Veterans Affairs.

The GC/CM is required to conduct and document good faith efforts and engage a dedicated ESJ coordinator.

Master Community Workforce Agreement

Priority Hire

Addresses construction workforce shortage, diversifies the construction workforce, and provides access to opportunities to disadvantaged communities.

Prioritizes individuals living in economically distressed areas (Priority Hire ZIP codes) of King County

Provisions in Priority Hire Ordinance (K.C.C. 12.18A) and Contract Specifications including all terms and conditions of the Master Community Workforce Agreement (MCWA)

Workforce Requirements

For Apprenticeship:

Apprentices must work 15% of the total labor hours.

Priority Hire Apprenticeship:

Priority Hire Apprentices shall work 27% of all apprenticeship labor hours.

Priority Hire Journey Workers:

Priority Hire Journey Workers shall work 18% of all Journey worker hours.



Project Meets RCW 39.10

Black Diamond Trunk Capacity Upgrade Project

Satisfies RCW 39.10.340

The project complies with statutory criteria

- Implementation of the project involves complex scheduling, phasing, or coordination.
- The involvement of the General Contractor/Construction Manager during the design stage is critical to the success of the project.
- The project encompasses a complex or technical work environment.



RCW 39.10.340 (cont.)

Heavy Civil

The project is, and the public body elects to procure the project as, a heavy civil construction project.

- GC/CM will be under contract early in design
- GC/CM can self perform critical or high-risk work
- Maintain schedule and tighter control of quality
- Public benefits: Risk Management, Time, Cost



Responses to PRC Questions

Black Diamond Trunk Capacity Upgrade Project

1. Does King County have an Inclusion Champion for the project? (We did not see anyone named)

Yes, Laura Preftes is the King County Inclusion Champion.

Laura Preftes is the lead Business Development and Contract Specialist in King County's Finance and Business Operations Division. Laura implements small business programs such as the Equity and Social Justice Innovation Plan and the King County Contracting Opportunities Program. As a diverse business advocate, she collaborates with King County staff and prime contractors to support diverse business participation on contracts. Prior to her work at King County, Laura was the business manager at two successful certified women-owned civil engineering firms in the Seattle area for over 20 years. She brings an understanding of the barriers small, diverse businesses encounter in public contracting.



2. What is the desired DBE/MBE participation in design and construction? (Note: Using current data from the same program would be a great indicator)

The Contract requires the selected GC/CM to submit an inclusion plan for Washington State Certified Minority and Women's Business Enterprises, and businesses certified with the Department of Veterans Affairs.

The GC/CM is required to conduct and document good faith efforts and engage a dedicated ESJ coordinator.

Below are the ESJ Goals for the Black Diamond Capacity Upgrade Project:

- MBE – 10%
- WBE – 6%

Additionally, as part of the Master Community Workforce Agreement, the following Priority Hire and Apprenticeship Requirements apply:

- Apprenticeship – 15%
- Priority Hire Apprentice – 27%
- Priority Hire Journey – 18%



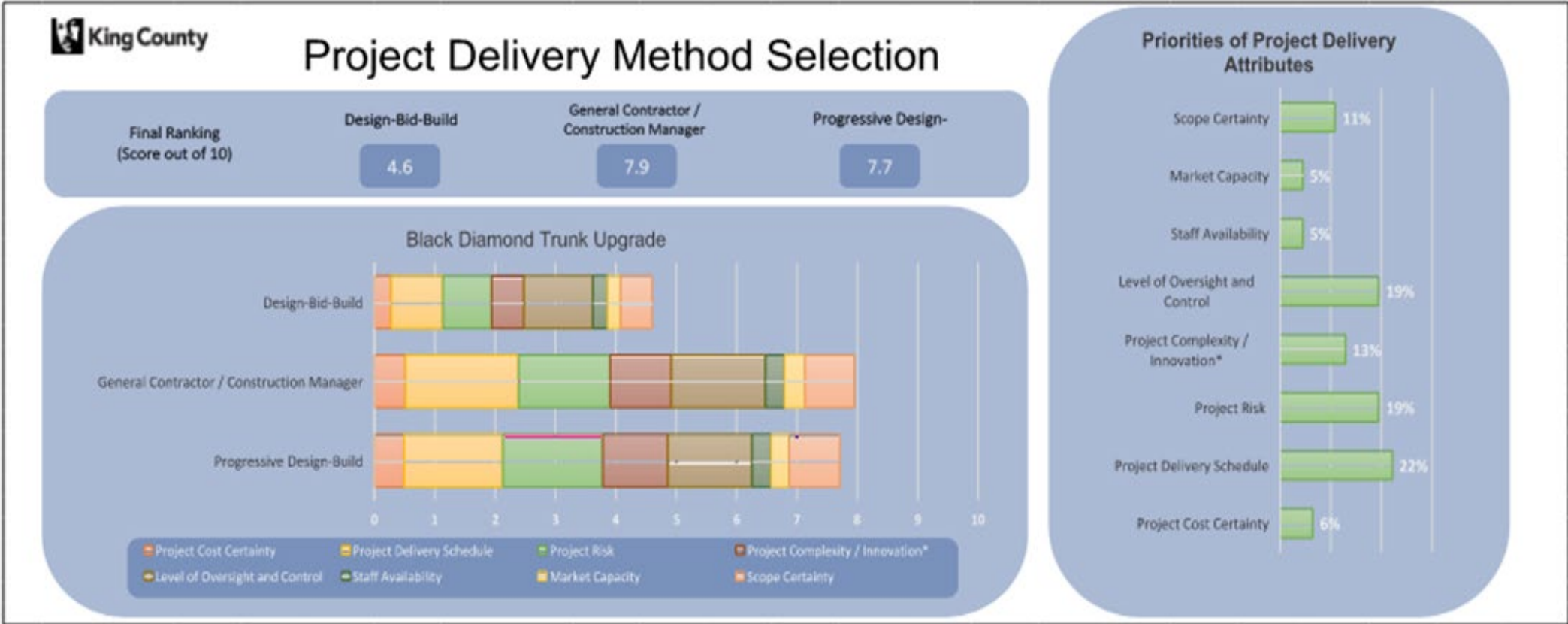
3. Per item 4 of the application, please provide more information on the process, stage gate method, or other scoring criteria used by the agency's internal committee to determine that GC/CM is the optimal delivery method “type selection.”

The County adopted an evaluation process to determine if projects are suitable for alternative delivery, which includes two-steps. Step 1 determines if alternative delivery is a feasible delivery method for the project. Step 2 evaluates Traditional Design-Bid-Build (DBB), Progressive Design-Build (PDB), and General Contractor/Construction Manager (GC/CM) delivery methods to determine the best or optimal delivery method for the project using the following eight criteria: Scope Certainty, Market Capacity, Staff Availability, Level of Oversight and Control, Project Complexity/Innovation, Project Risk, Project Delivery Schedule, and Project Cost Certainty. GC/CM was rated more highly in four out of eight of the criteria with a total rating of 7.9 (GC/CM) over 7.7 (PDB) and 4.6 (DBB).

Utilizing the two-step process noted above, GC/CM scored more highly than PDB in the areas of Level of Oversight and Control, Project Delivery Schedule, and Project Cost Certainty based on rankings from the County evaluation team. All three of these areas are critical to the successful completion of the Black Diamond Upgrade project within the available construction schedule.



Project Delivery Method Selection Charts



Weighted Average Group Rating Table

		Weighted Average Group Rating			
Priority of Project Delivery Attributes		Weight	DBB	GC/CM	PDB
Scope Certainty		11%	0.53	0.83	0.86
Market Capacity		5%	0.25	0.39	0.34
Staff Availability		5%	0.28	0.36	0.36
Level of Oversight and Control		19%	1.11	1.52	1.36
Project Complexity / Innovation		13%	0.54	1.02	1.09
Project Risk		19%	0.79	1.48	1.62
Project Delivery Schedule		22%	0.85	1.85	1.62
Project Cost Certainty		6%	0.26	0.48	0.46
Total			4.61	7.94	7.70



Questions ?

Black Diamond Trunk Capacity Upgrade Project



King County

Department of
Natural Resources and Parks
**Wastewater Treatment
Division**

Black Diamond Trunk Capacity Upgrade Project

Thank you

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