



# Water Plant Transmission Mains

*Home Road to Blazer Parkway Area*

## Advisory Group Meeting #2

May 8, 2024, 1:30 – 3:30 p.m.

# Welcome

Tim Huffman

Division of Water – Distribution Engineering Manager



Water Plant  
Transmission Mains

*Home Road to Blazer Parkway Area*

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# Your Facilitator

Marie Keister, AICP, APR

Stakeholder/Public Engagement, MurphyEpson



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# Introductions

Share your name, title and organization



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# Agenda



- Welcome and introductions
- Advisory Group role
- Project scope/schedule
- Evaluation process
- Alignment recommendations
- Public outreach
- Next steps
- Q+A throughout



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# Advisory Group Role



The Water Plant Transmission Mains Advisory Group will **provide advisory input and local information** to the City of Columbus Department of Public Utilities as it designs and constructs new water transmission mains. The mains will connect a new water plant near Home and Dublin Roads in Delaware County near the Blazer Parkway area at Frantz Road and Parkcenter Avenue and other strategic areas in northwest Columbus.



# Project Scope

Matt Casey, P.E.

Project Manager, ms consultants



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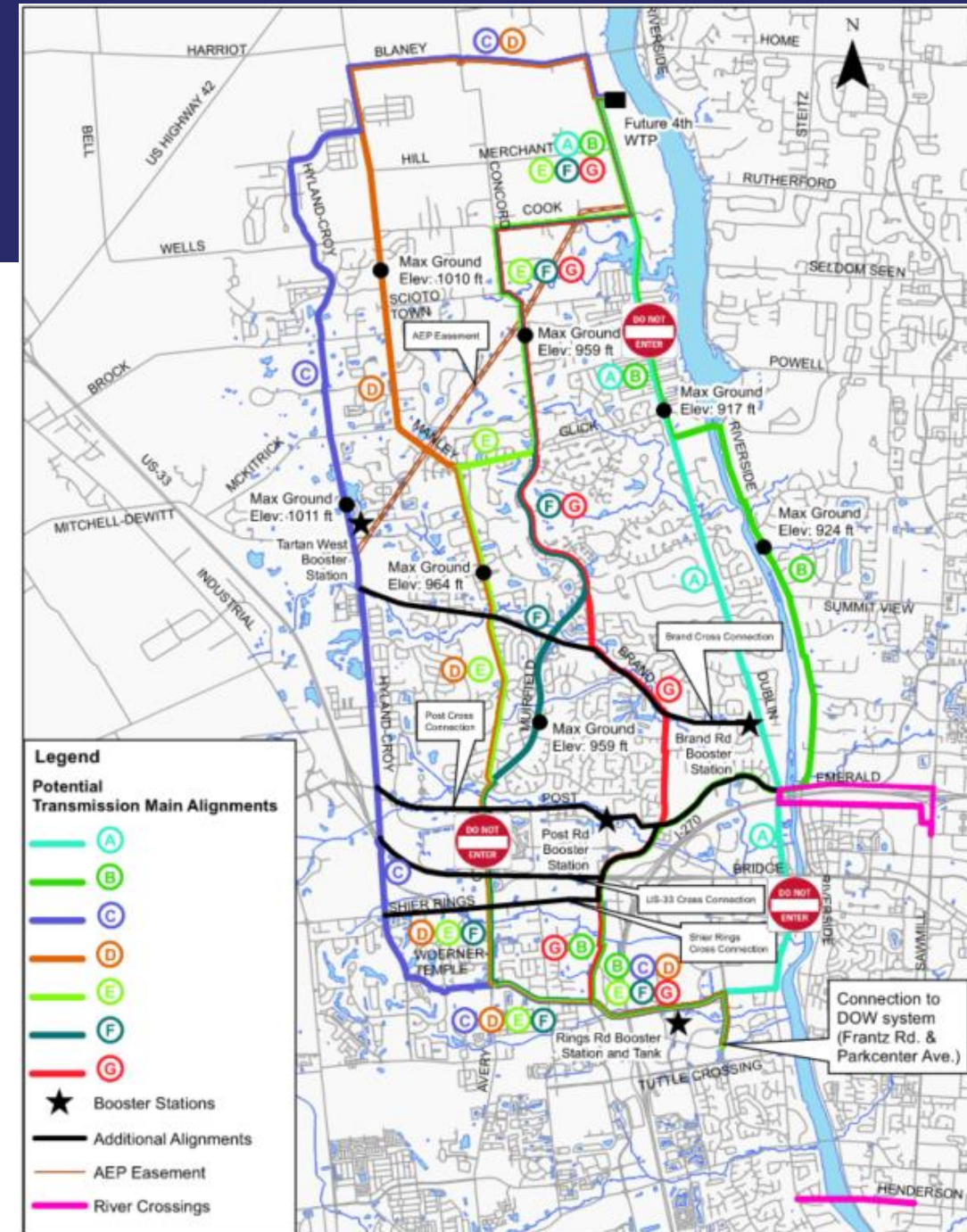
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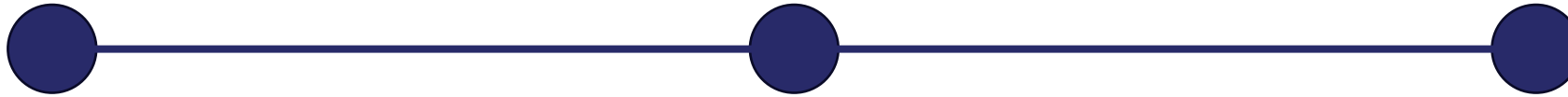
# Project Scope

- Water plant capacity:
  - 48 MGD at opening
  - 80 MGD in the future
  - Online by 12.31.28 (partial)
- Two mains (resiliency and reliability) from the water plant to the connection point
- One river crossing
- One main open by 12.31.28





# Schedule at a Glance



**PHASE 1  
PRELIMINARY DESIGN**

January 2023 –  
August 2024

**PHASE 2  
FINAL DESIGN**

March 2024 –  
June 2026

**PHASE 3  
CONSTRUCTION**

January 2027 –  
December 2028  
(one main)



# Project Parameters



# Evaluation Process

Matt Casey, P.E.

Project Manager, ms consultants



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# Evaluation Process



- Aerial mapping
- OUPS calls
- Preliminary base mapping
- Prepared evaluation guidelines
- Alignment layout
- Site visits
- Pairwise comparison
- Risk analysis
- Cost estimates



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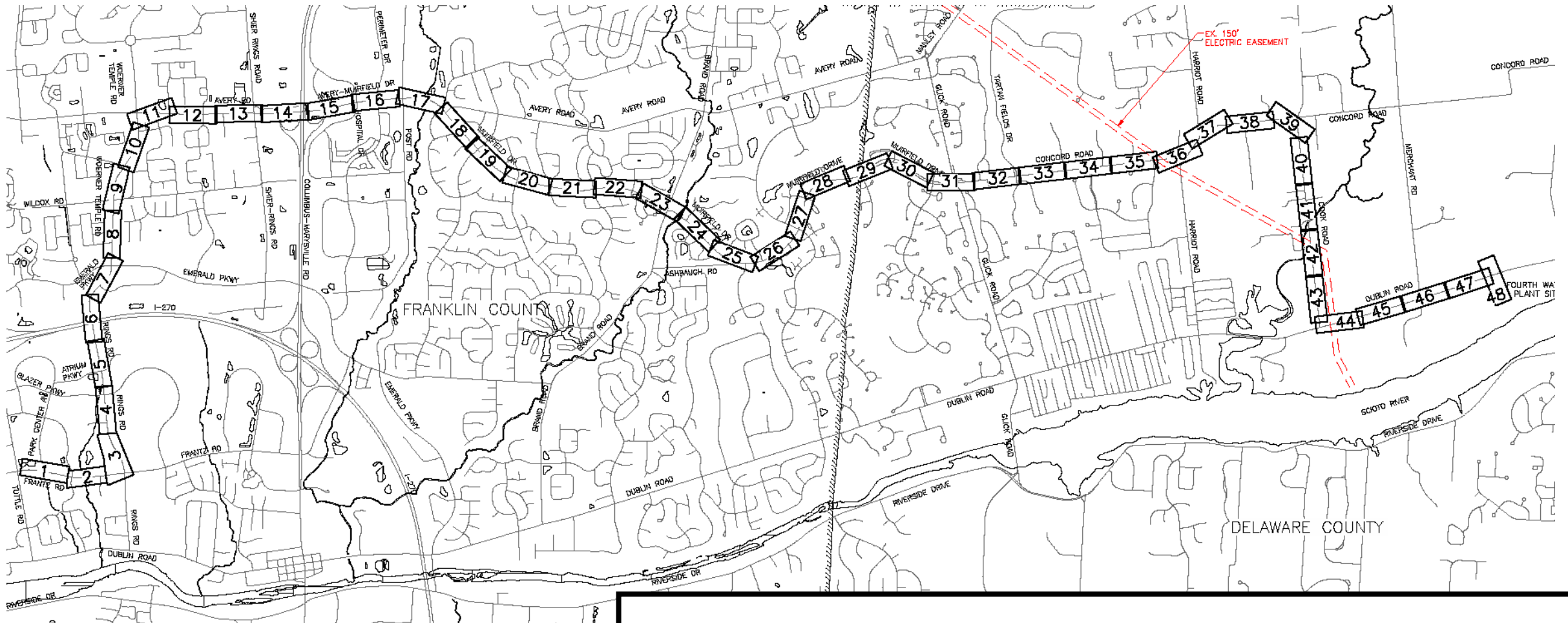
# Evaluation Process: Guidelines



- Assumed a 20-ft wide corridor for a single main
- Priority evaluation criteria to narrow corridor options:
  1. In right-of-way (R/W), **outside** of pavement limits (P/L) with no utility impacts. If not available, move to priority 2 and so on
  2. In R/W, **inside** of pavement limits with no utility impacts
  3. In R/W, **inside or outside** of pavement limits, **relocate** utilities
  4. Out of R/W, minimize the need for easements (largest schedule threat)



# Evaluation Process: Drawings

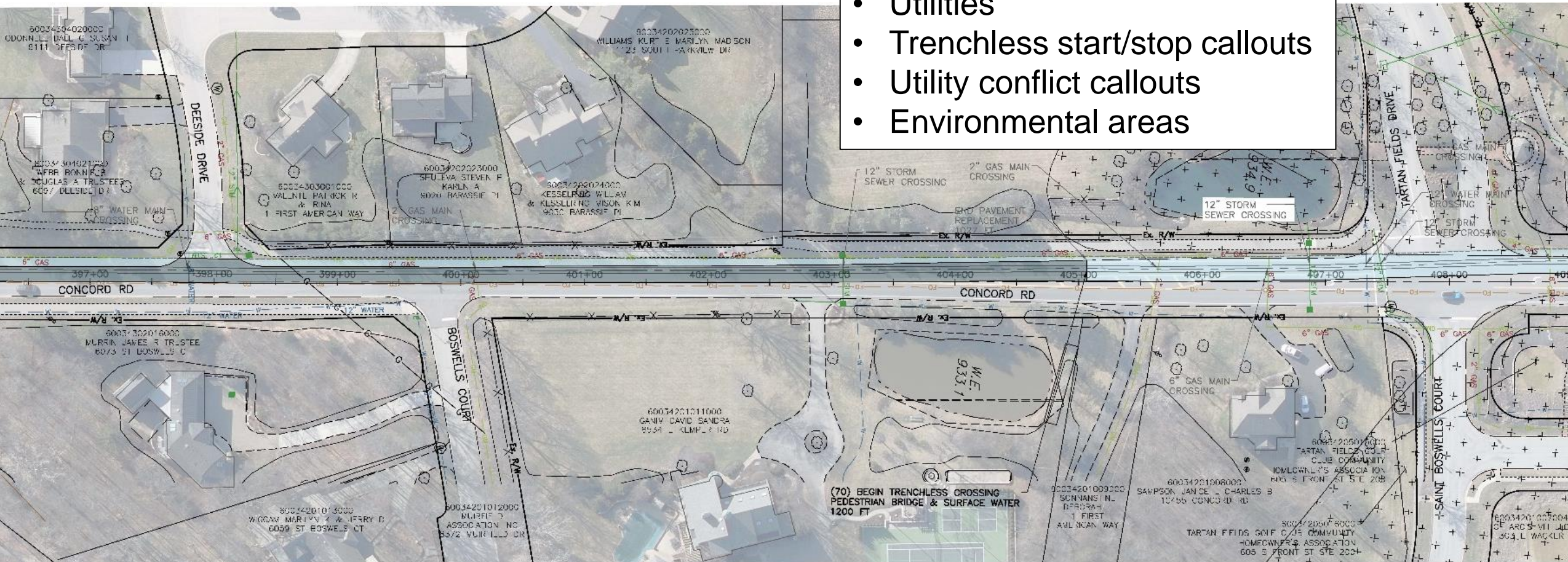


All alignments reviewed total over 100 miles

# Evaluation Process: Drawings



- Aerial
- R/W & P/L
- Landowners
- Street names
- Utilities
- Trenchless start/stop callouts
- Utility conflict callouts
- Environmental areas



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# Evaluation Process: Pairwise Comparison



PRIORITY SCALE				
EXTREMELY MORE IMPORTANT	MODERATELY MORE IMPORTANT	EQUALLY IMPORTANT	MODERATELY LESS IMPORTANT	EXTREMELY LESS IMPORTANT
5	3	1	1/3	1/5

## Criteria Ranking

	EASEMENTS	TRAFFIC IMPACT	ENVIRONMENTAL IMPACT	BUSINESS IMPACT	ACCESSIBILITY	Geometric Mean	Normalized Weight
EASEMENTS	1	3	1	3	1	1.552	0.266
TRAFFIC IMPACT	1/3	1	1/3	1/3	1/5	0.375	0.064
ENVIRONMENTAL IMPACT	1	3	1	3	1	1.552	0.266
BUSINESS IMPACT	1/3	3	1/3	1	1/3	0.644	0.110
ACCESSIBILITY	1	5	1	3	1	1.719	0.294
						5.842	1.000



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# Evaluation Process: Risk Analysis



<b>Risk score matrix</b>						
<b>Consequence</b>	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5
	Rating	1	2	3	4	5
<b>Likelihood</b>						
	NEGLIGIBLE	MINOR	MODERATE	MAJOR	CATASTROPHIC	
Cost	\$ < 250k	250k < \$ < 1M	1M < \$ < 2M	2M < \$ < 5M	\$ > 5M	
Time	T < 1w	1w < T < 4w	1m < T < 3m	3m < T < 6m	T > 6m	



# Evaluation Process: Risk Analysis



Consequence	Severity				
	1	2	3	4	5
Project Cost ≤ \$100M	C < \$250,000	C = \$250,000 to \$1M	C = \$1M to \$2M	C = \$2M to \$5M	C > \$5M
Project Schedule	1 week or less	1 week+ to 1 month	1 month to 3 months	3 months to 6 months	Greater than 6 months
Social Environment	Complaints from a small minority of neighbors / public	Adverse local media coverage	Complaints from local politicians	Complaints from State-level politicians and major commercial interests	Actions taken by major commercial interests, adverse national media coverage and/or Political intervention
Regulatory / Legal	Isolated non-compliance	Non-compliance with potential for third-party claims	Systematic non-compliance with potential for fines or third party claims less than \$500,000 (Regulatory) and \$1 million (Legal)	Systematic non-compliance with potential for fines or third party claims greater than \$500,000 (Regulatory) and \$1 million (Legal)	Non-compliance with potential for significant implications for senior personnel and potentially large damages, project shut
Health and Safety	Minor injury or near-miss (non-reportable)	Minor injury (reportable)	Major injury and/ or multiple minor injuries, including minor traffic accidents-public	Multiple major injuries, minor injury to public	Significant injury to public or any fatalities
Operating and Maintenance	Minor increase in expected O&M activity (barely measurable)	Measurable increase in expected O&M activity	Major increase in O&M activity or any shutdown not requiring access to tunnel	Planned shutdown of tunnel for 3 to 6 months or any unplanned shutdown involving surface work	Unplanned loss of service or shutdown requiring access to tunnel, or catastrophic loss of service to tunnel or pump
Natural Environment	Minor short-term limited impact	Minor short-term local impact	Major short-term local impact	Short term regional impact	Long term local impact



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# Evaluation Process: Risk Analysis



Date Added	Risk ID	Phase/Location	Risk Description	Cause(s)	Effect(s)	Initial				
						Likelihood of occurrence	Severity			Score
							Cost	Time	Other	
4/5/2023	2.00.01	ROW	Insufficient lay-down area at site locations	inadequate work areas acquired for project	increased costs and schedule delays	5	3	5		25

Mitigation Measures	Current/Residual					Action Items	Action Item Completion Date	Responsible Party
	Likelihood of occurrence	Severity			Score			
		Cost	Time	Other				
	5	3	5	0	25	1. Review work areas for planned activities at each site during preliminary design. 2. Confirm work areas for planned activities at each site during detailed design.	6/14/2024 12/20/2025	Ken Ricker



# Evaluation Process: Cost Estimates



WATER TRANSMISSION MAINS								
	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT COST*	TOTAL	BID PCKG	CODE	COMMENTS
<b>G</b>	<b>Alignment - G</b>			<b>\$2,901.59</b>	<b>\$168,437,417</b>			<b>58,050 LF route</b>
	<b><u>Piping and Vavles</u></b>	<b><u>58,050</u></b>	<b>LF</b>	<b><u>\$730.83</u></b>	<b><u>\$42,424,615</u></b>			
G1	54" PCCP Pipe, material and labor	31,977	LF	\$730.00	\$23,343,210		G	Sheets 15-50, Transition 177+25
G2	54" PCCP Pipe, material only for trenchless installation	8,348	LF	\$635.00	\$5,300,980		G	Sheets 15-50, Transition 177+25
G3	42" PCCP Pipe, material and labor	14,595	LF	\$495.00	\$7,224,525		G	Sheets 1-15, Transition 177+25
G4	42" PCCP Pipe, material only for trenchless installation	3,130	LF	\$430.00	\$1,345,900		G	Sheets 1-15, Transition 177+25
G5	54" BFV Valve, Manual, Flanged, in Precast Valve Vault	40	EA	\$110,000.00	\$4,400,000		G	Assume every 1,000 LF
G6	42" BFV Valve, Manual, Mechanical Joints, Direct Buried	18	EA	\$45,000.00	\$810,000		G	Assume every 1,000 LF
	<b><u>Trench Under Pavements</u></b>	<b><u>31,672</u></b>	<b>LF</b>	<b><u>\$725.61</u></b>	<b><u>\$22,981,445</u></b>			<b>Below all Pavements: 31,672 LF</b>
G7	Excavate Trench: 9' wide, 15' Deep, using Trench Box	158,360	CY	\$12.00	\$1,900,320		G	Exclude portions at Trenchless
G8	Haul Spoils Off Site, 30 miles each way	158,360	CY	\$24.00	\$3,800,640		G	
G9	Bedding #57 Stone: 9' wide, 6" high	5,279	CY	\$70.00	\$369,507		G	
G10	Haunching #57 Stone: 9' wide, 2'-9" high	17,486	CY	\$70.00	\$1,223,991		G	
G11	Above Haunching #304 Granular: 9' wide, 3'-9" high	28,043	CY	\$60.00	\$1,682,575		G	
G12	Final Backfill #304 Granular: 9' wide, 8" high	84,459	CY	\$60.00	\$5,067,520		G	
G13	9" Asphalt over 4" of #304 Granular Base, incl. Berm an 4" Pipe Uderdrain per County Standards, incl. Pavement Demo	732,768	SF	\$12.01	\$8,800,544		G	<b>Roadway: 30,532 LF x 24' wide</b>
G14	6" Asphalt on 6" of #304 Granular Base at Drives, incl. Demo	14,160	SF	\$8.85	\$125,316		G	<b>Drives: 1,180 LF x 12' wide</b>
G15	4" Asphalt on 4" #304 Granular Base at Bike Paths, incl. Demo		SF	\$6.50			G	<b>Bike Path: 0 LF x 8' wide</b>
G16	4" Concrete on 4" #304 Granular Base at Walks, incl. Demo	1,100	SF	\$10.03	\$11,033		G	<b>Sidewalks: 220 LF x 5' wide</b>
	<b><u>Trench Outside Pavements</u></b>	<b><u>14,900</u></b>	<b>LF</b>	<b><u>\$295.39</u></b>	<b><u>\$4,401,357</u></b>			<b>Outside Pavements: 14,900 LF</b>

American Association of Cost Engineering  
(AACE) Class 4 (Feasibility Study)



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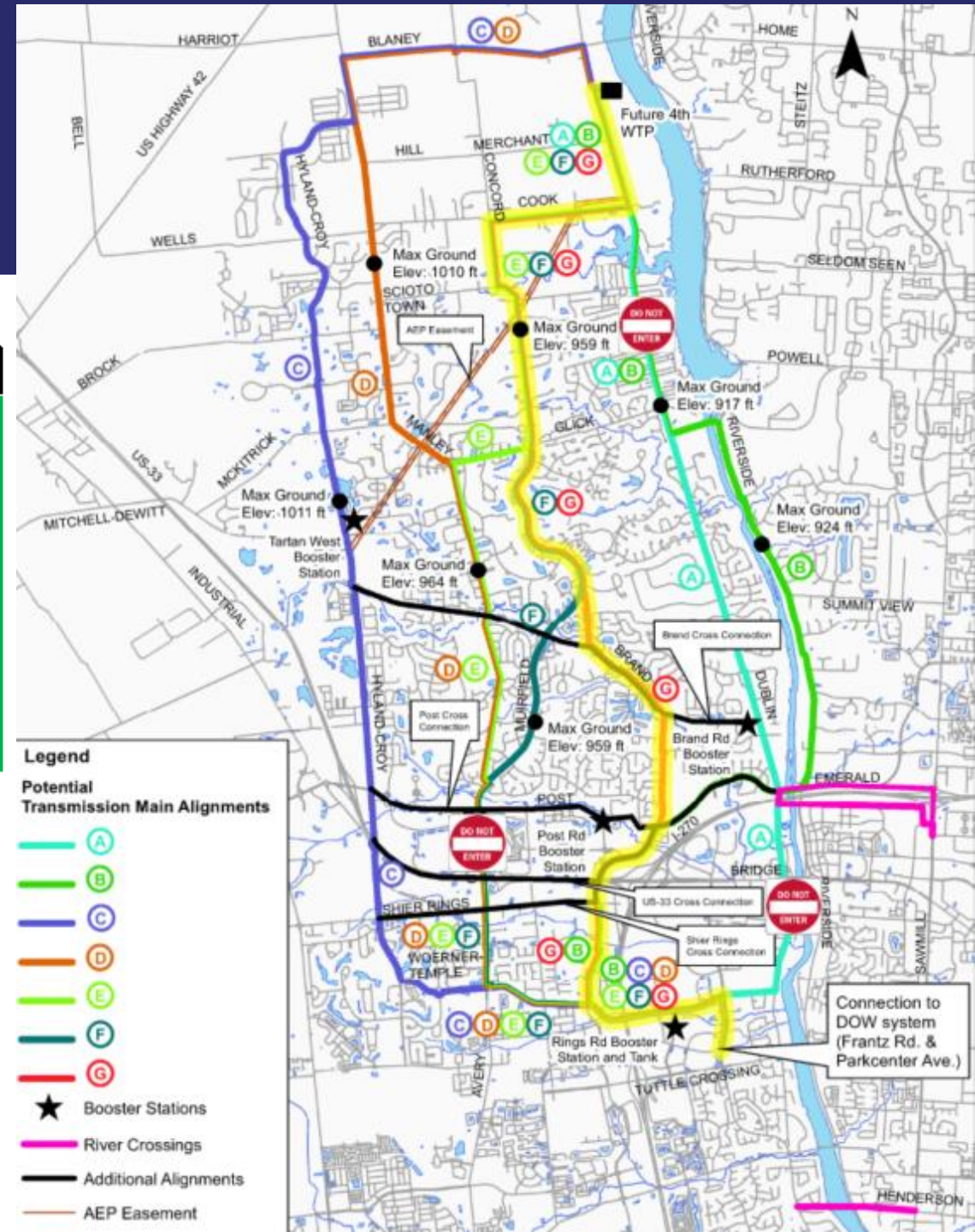
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# Evaluation Process: Summary

	North/South Alignments						
	A	B	C	D	E	F	G
Total Length (LF)	44,200	58,700	71,989	66,955	60,600	60,663	58,050
Total Easements	87	19	85	92	50	37	18
Cost	\$250M	\$342M	\$335M	\$351M	\$296M	\$302M	\$303M
Cost Rank	1	6	5	7	2	3	4
Pairwise Rank	7	3	2	4	5	6	1
Risk Rank	7	6	2	4	5	3	1

**Notes:**

1. Cost includes assumptions for rock excavation, dewatering, utility conflicts, traffic control, and tree removal/restoration.
2. Cost includes assumptions for general conditions, bonds, insurances, mobilization, phasing premium, escalation, construction contingency, and owners contingency.



# Alignment Recommendation

Matt Casey, P.E.  
Project Manager, ms consultants

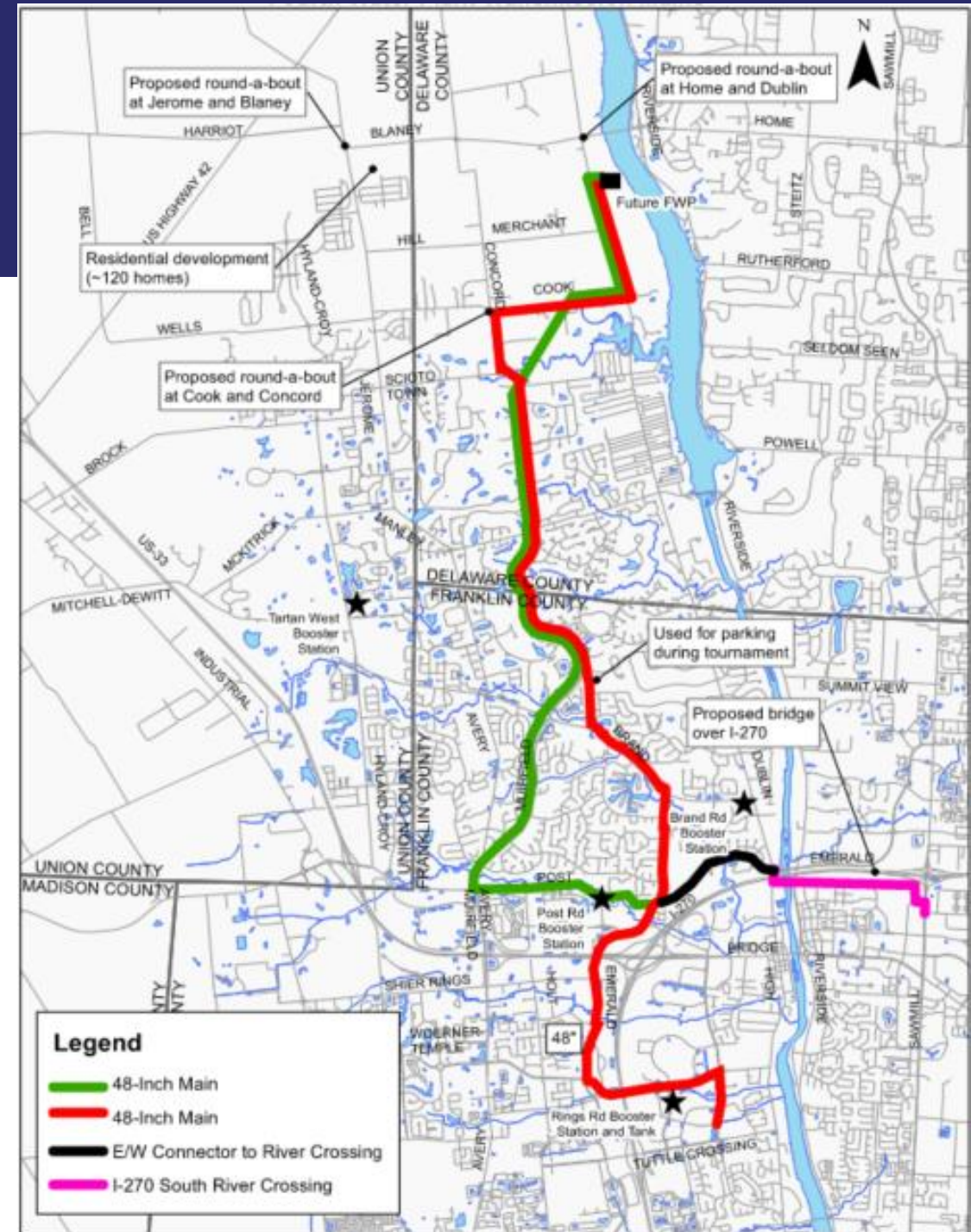


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# Alignment(s) Recommendation

- Geotech and survey fieldwork is occurring along these alignments
- Pipe size: two 48-inch mains
- Construction phasing is being evaluated



# Pause for Discussion





# Public Outreach

Marie Keister, AICP, APR  
Public Information/Engagement



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# Public Outreach



- Website  
<https://cbuswater4.com/>
- Letters
- Door hangers
- Dublin weekly soil boring updates
- Business cards

The City of Columbus Department of Public Utilities (DPU) is building a new water plant and transmission mains to prepare for the growing need for clean, safe drinking water in central Ohio.

To learn more about these improvements, visit the project webpage at [cbuswater4.com](https://cbuswater4.com).

Water Plant Transmission Mains  
Home Road to Blazer Parkway Area

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KRISTEN ATHA  
Director of Public Utilities

Water Plant Transmission Mains  
Home Road to Blazer Parkway Area

THE CITY OF COLUMBUS  
DEPARTMENT OF PUBLIC UTILITIES

February 28, 2024

Re: Geotechnical Field Investigations and Topographical Surveys: Water Plant Transmission Mains

Dear resident/property owner,

The City of Columbus Department of Public Utilities (DPU) is building a new water plant and transmission mains to prepare for the growing need for clean, safe drinking water in central Ohio. The new plant will be built along the Scioto River near the corner of Home and Dublin roads in Delaware County. Water transmission mains will connect the new plant to the Columbus water distribution system near the Blazer Parkway area and other strategic areas in northwest Columbus.

Field crews will be in your area to conduct geotechnical investigations and topographical surveys from now through the end of May 2024. All work will be within the road right of way.

While your property is located near the vicinity of this fieldwork, we do not anticipate any disruptions or inconvenience to you or your property.

Our field crews have received strict instructions concerning preserving private property and public lands. If access to your property is required, the project team will notify and coordinate with you directly before initiating any work.

Field crews will carry identification and all vehicles will display their company logo. Participating companies include Aldea Services, Eagon Associates, ms consultants and 7NT.

Field personnel will not be able to answer questions about the project, they will simply be collecting information for further evaluation.

You should also receive a door hanger near the front of your home with similar information. If you have questions or concerns, or feel that our representatives have not given proper attention to your property, please contact Mike Nuhfer, P.E., Geotechnical Team Lead, at [mnuhfer@aldeaservices.com](mailto:mnuhfer@aldeaservices.com) or call 740.972.6838. For additional information about the Water Plant Transmission Mains improvements, visit <https://cbuswater4.com/>.

Respectfully,

*Tim Huffman*

Tim Huffman, P.E.  
Distribution Engineering Section Manager  
City of Columbus, Division of Water

CC: Kristen Atha, Director; Megan O'Callaghan, City of Dublin City Manager; Paul Hammersmith, City of Dublin Director of Engineering; Michael Hendershot, City of Dublin Deputy Director of Engineer – Utilities; Chris Bauseman, Delaware County Engineer; Doug Riedel, Delaware County Engineer's Office, Concord Township Trustees

Director's Office | 810 Dublin Road | Columbus OH 43215 | T 614.645.6141 | F 614.645.3019  
Division of Power | 2000 Delaware Avenue | Columbus OH 43204 | T 614.645.6711 | F 614.645.7522  
Division of Sewerage and Drainage | 1250 Fairwood Avenue | Columbus OH 43206 | T 614.645.7175 | F 614.645.3801  
Division of Water | 1910 Dublin Road | Columbus OH 43216 | T 614.645.7000 | F 614.645.3863  
Customer Service 614.645.6776 | [101@cbus.gov](mailto:101@cbus.gov)

Water Plant Transmission Mains  
Home Road to Blazer Parkway Area

THE CITY OF COLUMBUS  
DEPARTMENT OF PUBLIC UTILITIES

The City of Columbus Department of Public Utilities (DPU) is building a new water plant and transmission mains to prepare for the growing need for clean, safe drinking water in central Ohio.

To learn more about these improvements, visit the project webpage at

If you have questions or concerns, email Mike Nuhfer, P.E. at [mnuhfer@aldeaservices.com](mailto:mnuhfer@aldeaservices.com) or call 740.972.6838

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- While your property is located near the vicinity of this fieldwork, we do not anticipate any disruptions or inconvenience to you or your private property.
- If access to your property is required, the project team will notify and coordinate with you directly prior to initiating any work.
- Field crews will carry identification and all vehicles will display their company logo. Participating companies include Aldea Services, CTL Engineering, DHDC, Eagon Associates, ms consultants, Resource International, and 7NT.
- Field personnel will not be able to answer questions about the project, they will simply be collecting information for further evaluation.



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# In-Person and Virtual Public Meetings



- In-Person Public Meeting
  - Tuesday, June 18, 2024 6:00-8:00 PM
  - Dublin Community Recreation Center (Talla Rooms)
  - 5600 Post Rd, Dublin, OH 43017
- Virtual Recording
  - <https://cbuswater4.com/>
  - Available online after the June 18 In-Person Public meeting



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# Tools to Promote the Meetings



**More Water!**  
**Learn about plans for the new Home Road Water Plant and Water Plant Transmission Mains.**

The City of Columbus is building its fourth water plant to meet the growing need for clean, safe drinking water in central Ohio. It will be built along the Scioto River near the corner of Home and Dublin roads in Delaware County. Two water transmission mains will connect the new plant to the Columbus water distribution system near the Blazer Parkway area at Frantz Road and Parkcenter Avenue, and other strategic areas in northwest Columbus.

Attend the public meeting to learn more about the water plant and recommended transmission main alignments.

**Public Meeting**  
**Tuesday, June 18, 2024**  
**6:00-8:00 PM**

Dublin Community Recreation Center  
(Talla Rooms)  
5600 Post Rd  
Dublin, OH 43017

Reserve your space and learn more at [cbuswater4.com](http://cbuswater4.com)

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Home Road Water Plant

**More Water!**  
**Learn about plans for the new Home Road Water Plant and Water Plant Transmission Mains.**

**Public Meeting**  
**June 18**

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Home Road Water Plant

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5600 Post Rd  
Dublin, OH 43017

Reserve your space and learn more at [cbuswater4.com](http://cbuswater4.com)

1650 Watermark Drive  
Suite 210  
Columbus, Ohio 43215

Organization  
First and Last Name  
Street  
City, State ZIP



# Pause for Questions



# Next Steps

Marie Keister, AICP, APR  
Public Information/Engagement



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# Next Steps



- Survey, geotech borings, SUE, field walks
- Jurisdictional design review and/or other meetings
  - City of Dublin
  - Concord Township
  - Delaware County
  - Del-Co
  - Franklin County
  - ODOT
  - Washington Township



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# Thank You

*Please email your comments and any related data to Mary Kate Parkinson in Matt Casey's office at ms consultants at [mparkinson@msconsultants.com](mailto:mparkinson@msconsultants.com).*

