Department of Transportation

REQUEST FOR INFORMATION (RFI)

HAMILTON LYTLE TUNNEL AND FORT WASHINGTON WAY PUMP STATION MONITORING, OPERATIONS, AND MAINTENANCE

State of Ohio, Department of Transportation
Jack Marchbanks, Director

Submission Deadline:

June 19, 2024, at 2:00 p.m. eastern time

Submitted by: Luke Erickson, PE

Name of Company/Entity Representing: Jacobs Associates (dba Delve Underground)

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Contact Person and Phone Number: (authorized to answer questions about your company's RFI)	Luke Erickson, PE 614.347.9224	
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E-Mail Address (required): (for notification of future RFI or bid opportunities)	erickson@delveunderground.com	
Telephone Number	**800 Number**	**Fax Number**
614.254.6599	N/A	N/A

This response does include information considered a 'trade secret' (check one)	**Yes**	X **No**

SUBMIT ANY QUESTIONS, CLARIFICATIONS, OR INQUIRIES REGARDING THIS RFI

TO THE FOLLOWING E-MAIL ADDRESS:

DOT.D08.Tunnel-PumpStation@dot.ohio.gov

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June 14, 2014

Tammy Campbell, P.E.
District Deputy Director
Ohio Department of Transportation
505 OH-741, Lebanon, OH 45439

Subject: Response to the Request for Information: ODOT Hamilton Lytle Tunnel and FWW Pump Station Monitoring, Operation, & Maintenance

Dear Ms. Campbell,

The Ohio Department of Transportation (ODOT) excels at building, maintaining, and operating highways and bridges of all types and sizes. The agency is supported by internal subject matter experts among its own staff, plus an abundance of consultants and contractors eager to help them. Unfortunately, District 8 is responsible for some unique assets that stray from ODOT's core competencies. These special assets include a pump station along with SCADA, fire-life-safety, mechanical, and electrical systems associated with the Lytle Tunnel.

Delve Underground is providing information in this packet to help District 8 with their discernment on how best to deal with these assets going forward. As District 8 explores their options, some interesting questions might arise: Should ODOT consider divesting these assets to a private owner? What are the chances of a toll authority emerging for this portion of the Interstate 71/75 corridor to manage the Lytle Tunnel and the Brent Spence Bridge? What is the opportunity cost of ODOT retaining these assets? These big picture policy questions are probably beyond the scope of the request for information issued by District 8 but warrant some discussion at least internally within the agency.

For now, it appears District 8 is looking for industry guidance on how to efficiently retain these assets. One key takeaway in our replies to the inquiries is that an intermediate step needs to occur before entering a procurement process. A root cause analysis and evaluation of the existing systems will help prioritize necessary improvements and shed some light on which procurement method might be the best fit for these unique assets.

It is good that District 8 is considering some alternative delivery methods to solve these infrastructure challenges. More and more we are seeing public agencies move away from traditional design-bid-build delivery. From Delve Underground's point of view, we believe the progressive design-build approach to be the most amenable to the development of cost-efficient solutions, while also allowing the public agency to have significant input into the process.

The information in this response from Delve Underground is meant to be brief and to the point. However, we are available to further discuss our experiences with alternative project delivery methods. For more information beyond the contents of this response submittal, please contact Luke Erickson at (614) 347-9224 or erickson@delveunderground.com.

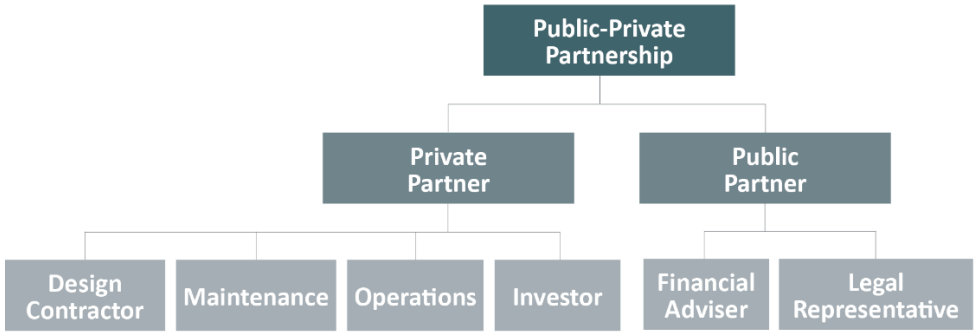
Sincerely,

Luke Erickson, PE
Senior Associate Engineer
Columbus Office Manager

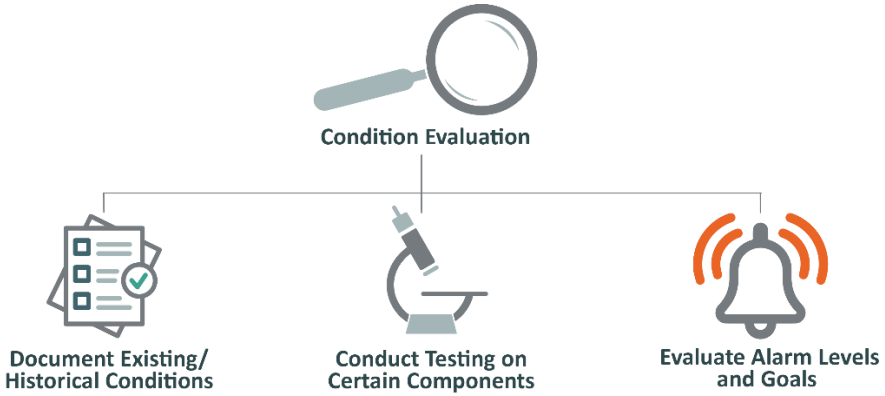
Joseph Rigney, PE
Tunnel Rehab and Maintenance Specialist

1. **Do you have an alternative, creative, approach to addressing the asset monitoring, operation, and maintenance that you would like to propose? Please describe.**

   One alternate approach may be simply to delegate operation of the tunnel system as done for other public-private-partnerships (P3s). The organization chart below describes the structure of the program. While these typically have a revenue source, there are other financial options that could be implemented for this situation. At one end of the spectrum of options, ODOT could dedicate an annual specific budget line item to pay a private operator to maintain these assets. The other end of the spectrum might involve creating toll mechanisms or an authority to maintain the tunnel and possibly the portion of Interstate 71 from the tunnel to the Brent Spence Bridge. The figure below depicts the former arrangement.



   If ODOT's desire is to retain these unique assets, there needs to be some work performed in advance of the procurement of this project. It is our opinion that an in-depth inspection be completed to determine the root cause of the systems failures at the Lytle Tunnel and the pump station. Additional analysis should be completed to determine which systems are essential, and which may be superfluous. These initial steps would advise on which procurement method would be most effective for implementing upgrades and performing on-going maintenance.



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2. **Is any information in the response considered a "trade secret"? (Yes/No) If yes, each and every occurrence of the information within the response that is a trade secret should be identified with an asterisk before and after each line containing trade secret information and underline the trade secret information itself.**

   None of the information and responses in this information packet are considered "trade secrets".

3. **Example 1 in the Scope notes an approach where a State DOT contracts with a design build team through a progressive design build delivery. Please provide your perspective and preferences on this approach.**

   We believe this would be a most effective approach as the owner has flexibility and control of the project scope. It allows for the most innovation where price is not the driving factor and the owner, designer, and contractor are all working together. It allows the owner to define the project with the support of subject matter experts and allows them to make scope of work changes in real-time and openly bid work if desired in the end. Additional commentary is provided in the response to Question 6.

4. **Example 2 in the Scope notes an approach where a State DOT contracts separately with a designer and with a contractor via a traditional design-bid-build method. Please provide your perspective and preferences on this approach.**

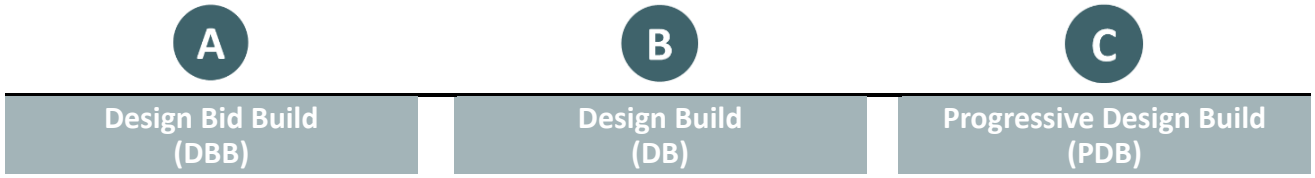
   We believe this can be effective but having input from technicians and contractors during design is lost. Traditional design-bid-build project delivery often limits innovations and creates more potential for change orders.

5. **Example 3 in the Scope notes an approach where a State DOT contracts with a design build team through a two-step, value-based design build delivery. Please provide your perspective and preferences on this approach.**

   We believe this would be the least effective approach as the scope, budget, and schedule are locked in on a project with a lot of unknowns.

6. **What is your preferred approach?**

   As mentioned in response #1, we believe an in-depth inspection and root cause analysis should be performed to better advise on the preferred delivery method. However, of the options listed in the RFI, we believe the progressive-design-build would be most appropriate. The graphics below are meant to illustrate the differences between the delivery methods identified in the RFI and help discern the added value of a progressive design-build approach for this situation. Please note that the graphics were derived from original charts and images developed by the Design Build Institute of America (DBIA). As a point of reference, the three delivery methods compared below include:



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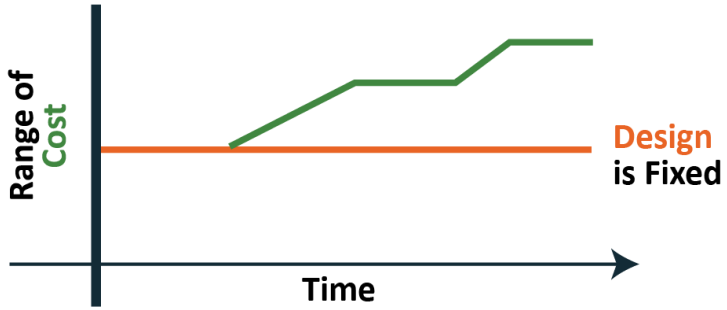
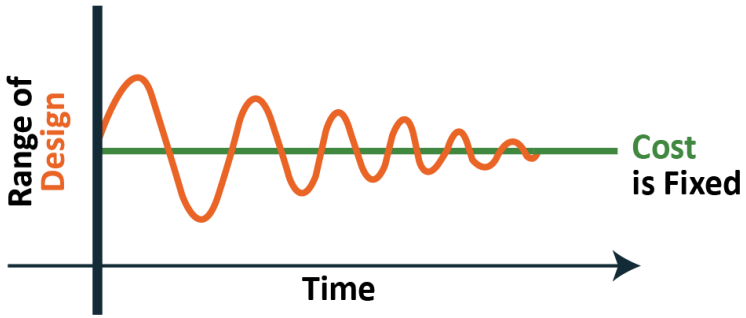
CONSTRUCTION COST & DESIGN VARIABILITY

A **Design Bid Build (DBB)**



DBB: Design is fixed, cost is estimated (bid) and changes as conditions change and/or project advances.

B & C **Design Build (DB) & Progressive Design Build (PDB)**



DB & PDB: Once price is set (at bid in DB, at stage 2 in PDB) it sticks, while design changes to meet it.

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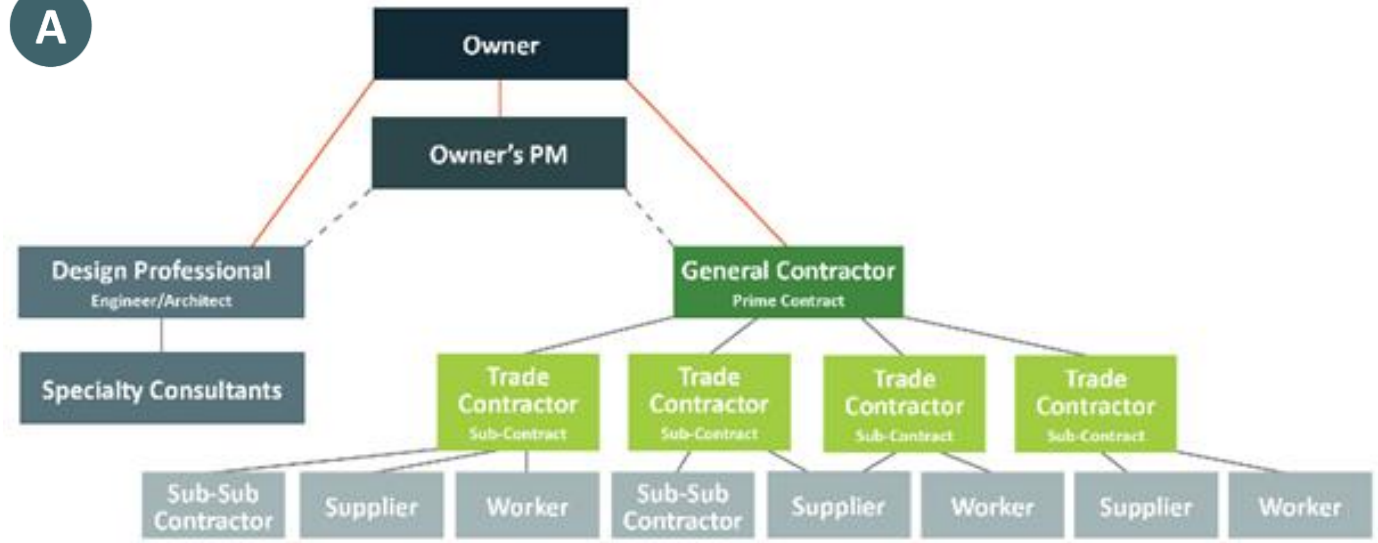
CONTRACT RELATIONSHIPS AND OWNER CONTROL

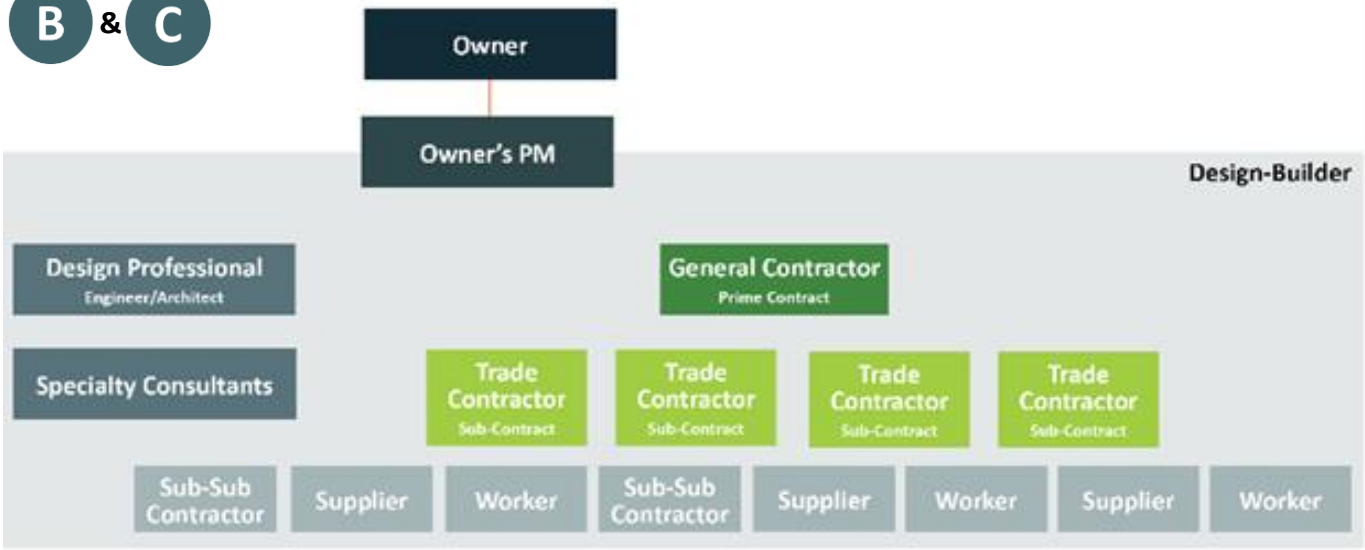
Typical Structure for Design Bid Build (DBB)

A



Typical Structure for Design Build (DB) & Progressive Design Build (PDB)

B & C



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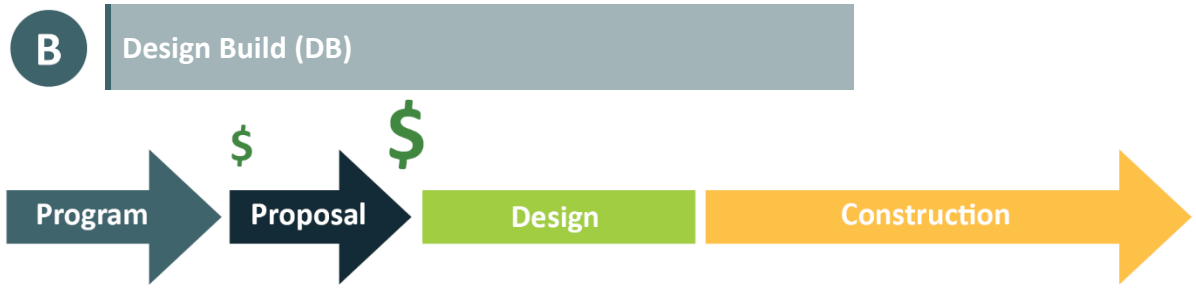
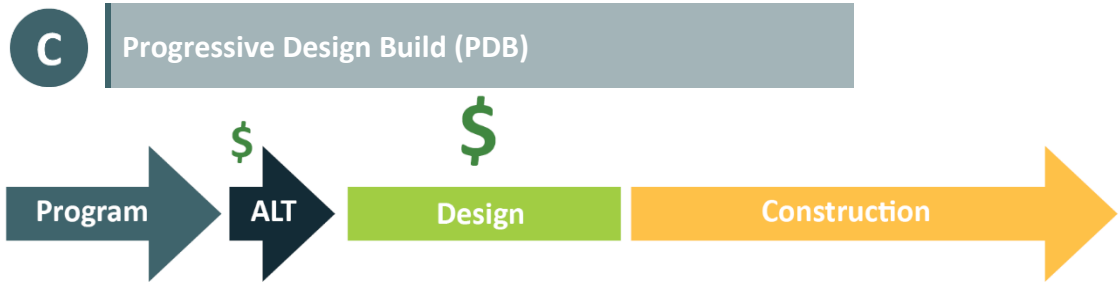
UNDERSTANDING PROJECT DELIVERY CASHFLOW

Final design complete before contractor engaged. Window for "innovation" is bid time.



Final design overlaps construction. Innovation is practically continuous.



Alternatives analysis by team; design overlaps construction. Innovation/alternatives are agreed to prior to final pricing.

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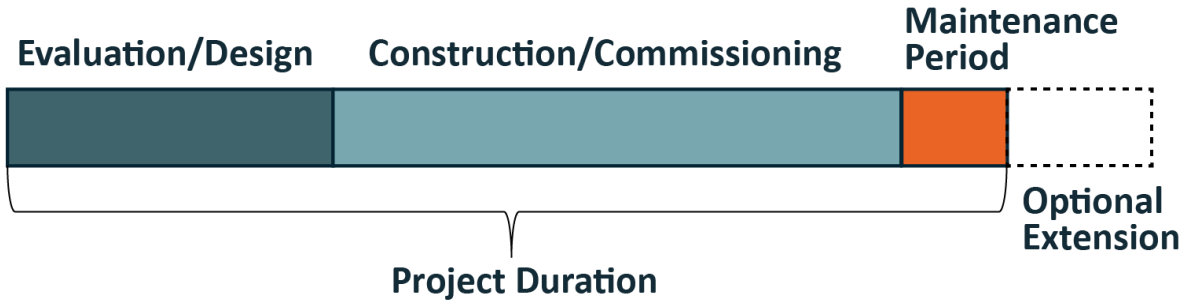
7. What is your perspective on the risks of advancing a monitoring, operations, and maintenance contract, and how you would want such risks assigned between the public and private sectors, or otherwise mitigated?

From our perspective, a significant source of risk is the potential of a contract term that is too short. Anything less than three to five years creates a possible scenario where most of the contract term is spent on evaluation/design and construction and not enough time on monitoring how it functions. Sufficient time should be allocated for maintenance to be "normalized". The RFP should list desired timelines for the evaluation, implementation of a fix, and maintenance period. Contract extensions should also be left as an option. However, we recommend a minimum contract length of five years.



8. Describe a potential concept or opportunity to upgrade the SCADA system and to monitor, operate, and maintain the Lytle Tunnel and the FWW Pump Station.

If the question is related to the direct implementation of upgrading the SCADA system, there are examples of other DOTs upgrading their systems while occasionally detouring traffic at electrical cut-overs from one system to another. For instance, a new system can be installed while an existing system is still active and a cut-over can happen in one single temporary outage rather than a prolonged shut down of a given system or the entire tunnel.

Once a system is in place, allowing for wireless/remote controlling, monitoring, and troubleshooting is an important upgrade. However, it is no substitute for physical checking of components routinely. The procurement RFP should include regular physical checking on a consistent basis.

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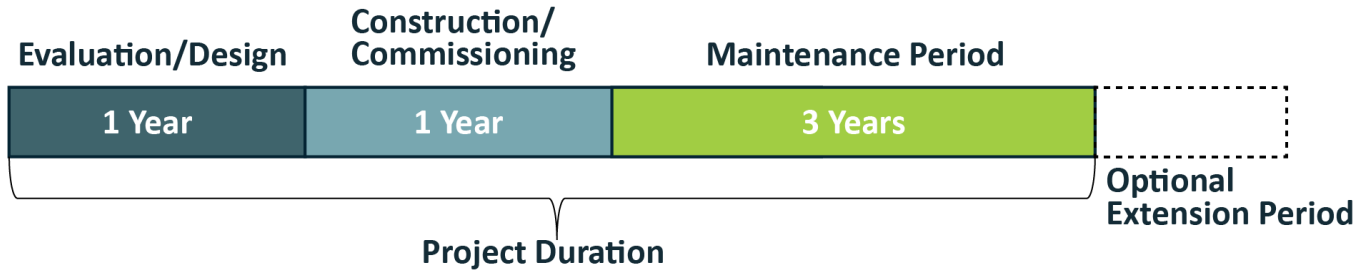
9. What is your perspective on the reasonableness of different contract lengths (2, 5, and 7 years) and the ability to comply with same?

We believe a minimum contract length of five years is appropriate for this type of program with an option for extensions. A minimum of five years allows for the proper development of solutions, implementation of improvements, and normalization of maintenance routines. Anything less than five years presents a challenge in achieving the desired outcomes.



10. Please provide any additional relevant information or additional comments that pertain to this RFI.

No additional comments.