



Department of
Transportation

REQUEST FOR INFORMATION (RFI)

**HAMILTON LYTTLE 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: Patrick Cotter

Name of Company/Entity Representing: Webber Infrastructure Management, Inc.

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This response does include information considered a 'trade secret' (check one)	Yes	<input checked="" type="checkbox"/> No
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**SUBMIT ANY QUESTIONS, CLARIFICATIONS, OR INQUIRIES REGARDING THIS RFI
TO THE FOLLOWING E-MAIL ADDRESS:**

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

Ohio Department of Transportation

**Hamilton Lytle Tunnel and
Fort Washington Way Pump Station**
Request for Information



webber
infra

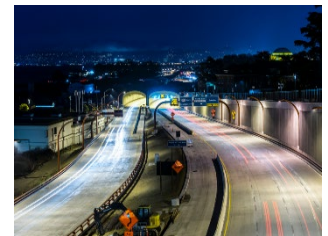
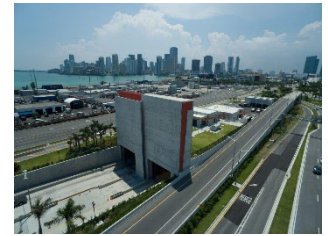
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Introduction

Webber Infrastructure Management, Inc (Webber) appreciates the opportunity to provide feedback in response to the Ohio Department of Transportation’s (“ODOT” or the “Department”) Request for Information (RFI) for monitoring, operations, and maintenance of the Lytle Tunnel and Fort Washington Way (FWW) Pump Station.

Webber is the most experienced tunnel Operations and Maintenance (O&M) service provider in North America. In addition to the five tunnel systems comprising 28 tunnels briefly outlined in *Figure 1* below, our current infrastructure O&M portfolio includes 31 movable bridges, over 2,000 fixed bridges, 6,000 ancillary structures, and 13,000 lane miles of roadway. Through our US parent, Webber LLC, we also have complementary in-house capabilities in civil infrastructure, waterworks, and renewable energy design and construction management.



Current Tunnel O&M Portfolio

	Anton Anderson Memorial Tunnel	DC Tunnels	Port of Miami Tunnel	Presidio Parkway	East End Tunnel
Location	Whittier, AK & Ketchikan, AK	Washington, DC	Miami, FL	San Francisco, CA	Louisville, KY
Number of Tunnels	4	16	2	4	2
Description	O&M for train and vehicle tunnels in Whittier and advisory O&M services for tunnels in Ketchikan	O&M for 16 tunnels on major traffic arteries in downtown Washington	Tunnel and bridge O&M connecting the Miami cruise and cargo terminal with I-95	Tunnels and roadway O&M connecting to US 101 at the south end of the Golden Gate Bridge	Tunnel and roadway O&M on I-265 connecting southern Indiana with Louisville
Providing O&M Services Since	2000	2007	2009	2013	2023
Services Provided					
Prime O&M Contractor	X	X	X	X	X
IR/ER Services	X	X	X	X	X
Control Room Operations	X	X	X	X	X
ITS Services	X	X	X	X	X
Fire Life Safety & Security	X	X	X	X	X
Pump Station & Drainage Systems	X	X	X	X	X
Lighting	X	X	X	X	X
Traffic Management	X	X	X	X	X
Guardrails & Barriers	X		X	X	X
Signage	X		X	X	X
24/7/365 Services		X	X	X	X
Toll Systems	X				

Figure 1. Additional information related to these tunnel projects is included on the following pages.



ANTON ANDERSON MEMORIAL TUNNEL

**CURRENT TERM
START DATE**
June 2000

**CURRENT
TERM**
5 years

**TOTAL SERVICE
YEARS**
24 years

BACKGROUND

Webber Infrastructure Management, Inc. (Webber) provides O&M services for all roadway tunnels in Alaska including full O&M services for the 2.6-mile Anton Anderson Memorial Tunnel (AAMT), a singlebore combination train and vehicle tunnel in Whittier. We have provided O&M services for the tunnel since it opened in June 2000, which sees approximately 285K vehicles annually. Other assets maintained at the site include the 439 ft Portage Tunnel and eight buildings including the Tunnel Control Center.

Our team performs a variety of services under this contract including controlling bidirectional train/vehicle passage, monitoring traffic with CCTV cameras, monitoring and maintaining air quality, snow and ice removal, incident and emergency response, toll collection, and administration. The AAMT team also maintains industrial mechanical and electrical equipment, such as tunnel ventilation equipment, dieselpowered emergency generators, and emergency response equipment.

The team developed a comprehensive Asset Management Plan for the tunnel based on NTI inspection data, resulting in a Capital Improvements Plan to identify renewal needs and approximate costs for the next 20 years.

As a requirement of the contract, Webber operates a private fire department, which is fully accredited by the State of Alaska, to provide initial emergency response for incidents in the tunnel. The majority of the team holds firefighter certifications, and 40% have advanced firefighter or emergency medical technician (EMT) certifications.

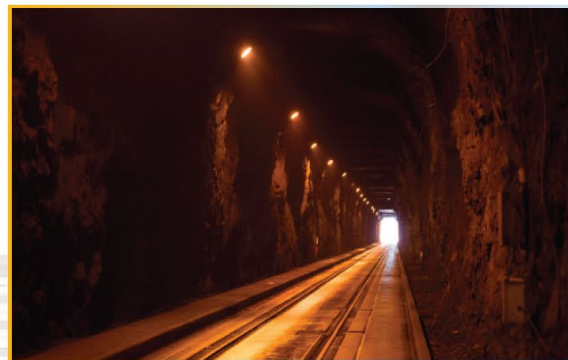
OWNER

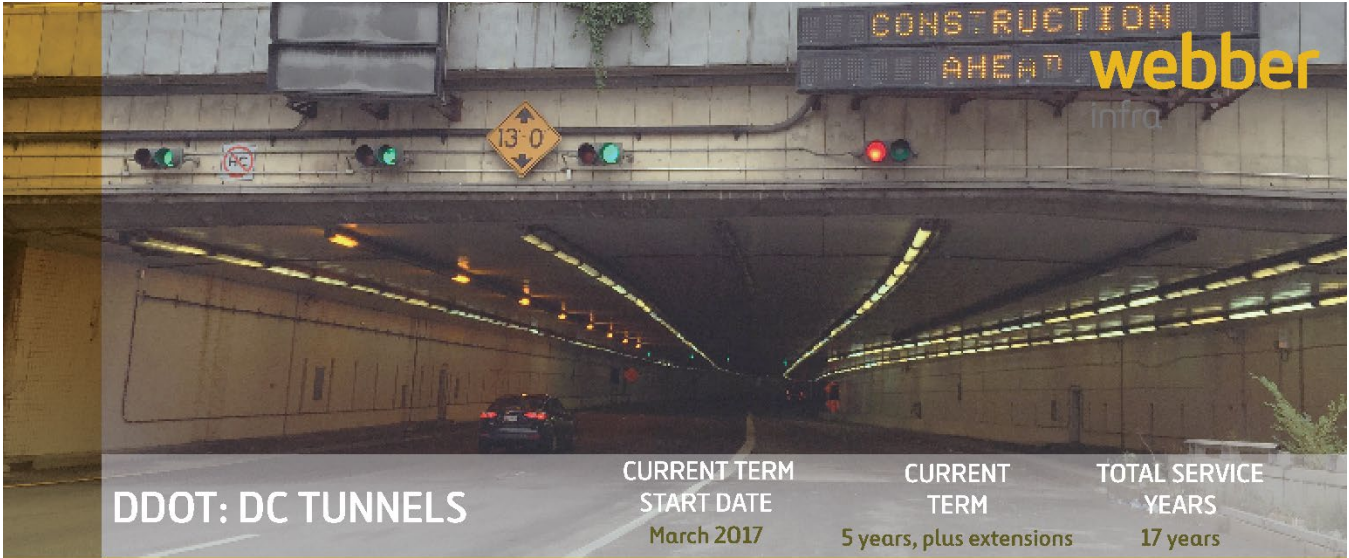
Alaska Department of Transportation and Public Facilities (AKDOT&PF)
5300 E. Tudor Road
Anchorage, AK 99507

CONTRACT TERM

Original 2000 - 2 years
Renewed 2002 - 7 years
Renewed 2009 - 1 year
Renewed 2010 - 5 years
Renewed 2015 - 5 years
Current 2020 - 5 years

CASE STUDY





DDOT: DC TUNNELS

CURRENT TERM START DATE
March 2017

CURRENT TERM
5 years, plus extensions

TOTAL SERVICE YEARS
17 years

BACKGROUND

Webber Infrastructure Management, Inc. (Webber) maintains 16 tunnels on the National Highway System in Washington, D.C.

Our responsibilities include structural maintenance (ceiling panel and tile cleaning and repair; wall tile cleaning and repair; expansion joint repair/ replacement; and grouting); mechanical maintenance (pump systems, fan bearing, motor, and drive systems maintenance and repair; fire alarm testing/ maintenance; deluge system testing, operation, and repair; carbon monoxide system maintenance and repair; electrical maintenance (tunnel roadway lighting, relamping); support room lighting, including emergency lighting; maintenance and repair of the power system, control system, lane signals, CCTV camera system, emergency phones and variable message signs); and rehabilitation. Additionally, Webber provides emergency response services for structural, mechanical, and electrical systems, as well as daily monitoring of tunnel traffic during rush hours.

Under a previous contract from 2000 through 2007, Webber worked with DDOT and FHWA to operate and maintain the National Highway System roadways in Washington, D.C. The work included rehabilitation of nine tunnels and routine maintenance and restoration work.

SERVICES PROVIDED

- O&M Services
- Control Room Operations
- ITS Services
- Subcontractor Management
- Traffic Management
- 24x7x365 services

OWNER

District Department of Transportation
55 M Street, SE, Suite 400
Washington, DC 20003

CONTRACT TERM

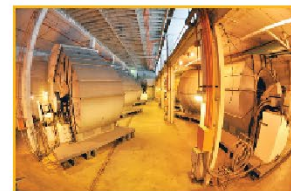
Original 2007 - 5 years, plus extensions
Renewed 2012 - 5 years, plus extensions
Renewed 2017 - 5 years, plus extensions

CONTRACT NAME

Asset Preservation & Preventive Maintenance of DC Tunnels

CONTRACT NUMBER

DCKA-2015-C-0080



CASE STUDY



PORT OF MIAMI TUNNEL

CONTRACT START DATE
2009

CONTRACT TERM
35 years

BACKGROUND

Webber Infrastructure Management, Inc. (Webber) provides operations and maintenance services for the Port of Miami Tunnel public-private partnership (P3) project. Prior to project commencement, Webber also performed maintainability analyses during the design and construction phases.

Tunnel construction began in 2010, and Webber took full responsibility for operation and maintenance in 2014. The Port of Miami Tunnel consists of two (2) parallel, 4,200 ft long undersea bores. Five (5) cross passages (CPs) are located strategically throughout the tunnel for use in an evacuation scenario. The tunnel runs beneath the main shipping channel in Biscayne Bay and provides a direct vehicular connection from Watson Island to Port Miami on Dodge Island. The approximate total length of the section maintained by Webber is two (2) miles, with each of the two (2) tunnels running just less than one (1) mile in length. The tunnel helps relieve congestion in downtown Miami by connecting Miami's cargo and cruise port with the interstate highway system. The Port is the second-largest economic generator for the City of Miami.

Webber is the Lead Operator for MAT Concessionaire for the entirety of the 35-year operations phase. We are responsible for providing 24x7x365 Operations, Maintenance, and Rehabilitation/Renewal services. Our personnel are perform all maintenance – routine, preventive, and corrective – and operations of the tunnel and approaches, including equipment, incident response, capital upgrades, and end-of-term handback requirements.

PROJECT HIGHLIGHTS

- On a busy day, the tunnel carries approximately 9,000 automobiles and 4,000 trucks.
- Project to date – we have successfully managed nearly 3,291 on-scene incidents.

OWNER

MAT Concessionaire LLC
1 World Financial Center
200 Liberty Street, 25th Floor
New York, NY 10281

CONTRACT TERM

2009 - 2044

CONTRACT NUMBER

0204405



CASE STUDY



BACKGROUND

The historic south access road to the iconic Golden Gate Bridge, known as Doyle Drive, has been re-envisioned as the Presidio Parkway – a roadway tucked into the natural contours of the Presidio of San Francisco and the Golden Gate National Recreation Area. The Presidio Parkway consists of a 3.2-mile 6-lane parkway and southbound auxiliary lane, four (4) cut-and-cover tunnels, two (2) high viaducts, a low causeway, and landscaped medians located in a highly congested area of San Francisco.

The Presidio Parkway Project Phase II is the first transportation project in California to be delivered through a public-private partnership (P3). The new design and construction, consisting of a six-lane roadway and southbound auxiliary lane improve the roadway’s seismic, structural, and traffic safety while preserving the historic Presidio’s environmental balance.

The California Department of Transportation was responsible for Phase I Construction. Under the P3 agreement, Golden Link Concessionaire will design and build Phase II and will be responsible for the maintenance and operation of Phase I and Phase II roadway for 30 years.

Following the completion of Phase I, Webber Infrastructure Management (Webber) took full responsibility for Presidio Parkway operations and maintenance in August 2015. Since beginning O&M services, we have provided 24/7 operations with a staff of 13 to manage all operations, including moving a mobile barrier twice daily to establish a detour for the approximately 100,000 vehicles traveling the corridor daily. In addition, Webber is responsible for maintenance during construction and routine maintenance and renewal work after construction, including bridge inspections and maintenance with collision damage repair and rehabilitation repair; structures inspection and maintenance, including drainage and retaining walls; ITS Systems Maintenance; tunnel systems maintenance; and traffic incident management.

OWNER

California Department of Transportation (Caltrans)
1120 N Street
Sacramento, CA 95814

DEVELOPER

Golden Link Concessionaire
1230 Ralston Avenue
San Francisco, CA 94129

CONTRACT TERM

2015 - 2045

CONTRACT NAME

Presidio Parkway Project

CONTRACT NUMBER

04-1637U4



CASE STUDY



EAST END CROSSING TUNNEL

CONTRACT START DATE
2023

CONTRACT TERM
7 years

BACKGROUND

Webber Infrastructure Management, Inc. (Webber) maintains the East End Crossing Tunnel along with an adjacent operations building control room, a nearby communications shed in the west quadrant of the I-71 and I-265 Interchange, and included roadway, bridge, and drainage assets. This is the Kentucky Transportation Cabinet’s first bundled operations and maintenance contract.

Webber’s responsibilities include operating and maintaining tunnel elements and systems such as the control room, CCTV, lighting, ventilation, and so on. Additional responsibilities include crack-sealing, litter and debris removal, 24/7 on-call services, walk through inspections of all interior and exterior elements of the control room, mechanical and electrical system maintenance, inspection, and repair, and landscaping. Webber is also responsible for managing all tunnel-related emergencies from the control room and on-site, and any included roadway, bridge, and drainage assets within the limits of the contract.

OWNER

Kentucky Transportation Cabinet
200 Mero Street
Frankfurt, Kentucky 40601

CONTRACT TERM

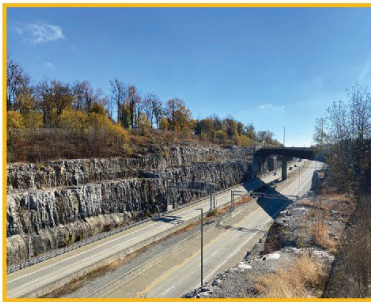
2023 - 2030

CONTRACT NAME

East End Crossing Tunnel Operations and Maintenance

CONTRACT NUMBER

22-9001



CASE STUDY

SERVICES PROVIDED

- O&M Services
- Control Room Operations
- ITS Services
- Subcontractor Management
- Traffic Control
- 24x7x365 services

SCADA System Upgrade Expertise. As part of the O&M responsibilities for our existing tunnel contracts, we have been closely involved with the installation, upgrade, and monitoring of Supervisory Control and Data Acquisition (SCADA) systems. We do not offer a proprietary SCADA system. Instead, we offer experience working with customer-selected systems and sourcing systems based on customer requirements. Proprietary systems are problematic and not recommended for ODOT. Proprietary systems are often dependent upon a single provider, who may not be available when problems or upgrades are required. A commercially available software platform is a preferable solution as it can be upgraded on a regular basis to remain functional when operating system updates occur. Examples of SCADA system upgrades that we have managed include:

- Anton Anderson Memorial Tunnel (AAMT): The AAMT’s legacy SCADA system was non-standard, as well as designed and built by a vendor who unfortunately is no longer in business. The software (and hardware) eventually became obsolete and could not be upgraded to integrate with MS Windows updates (echoing our advice against the use of proprietary systems). As the primary end-user of the SCADA system, Webber worked closely with a new SCADA contractor to support the installation and programming of a replacement system.

Installation included the operation of both the new and legacy systems in parallel to ensure the new SCADA system was stable and fully functional before taking the legacy system permanently offline. The new system includes the primary SCADA workstation with a redundant primary server, a remote workstation (also with redundant server), and 11 programmable logic controllers (PLCs) distributed throughout the 2.5-mile tunnel as well as in our Tunnel Control Center. The new system controls traffic signals, traffic gates, streetlights, tunnel lights, portal doors, portal fans, jet fans, PA system, and safehouse ventilation. Additionally, the system receives wind direction/speed information from anemometers, as well as CO levels from detectors. It is also integrated with fire alarm control panels, providing a significant improvement to monitoring capabilities and overall reliability.



Figure 2: Webber-operated Control Room at the AAMT.

- Presidio Parkway: Presidio’s previous workstation PCs and software had reached the end of their useful life. The SCADA system upgrade project included upgrades to software (WonderWare from Aveva) and hardware comprising four servers and two historical loggers, and the licenses for ten operator workstations. Webber’s role was to manage the upgrade process, subcontracting, and testing the system after upgrades were complete. Operator workstations were replaced, with new displays stationed at the primary O&M Control Center and at our secondary (remote) control station. The secondary control station provides SCADA redundancy should the primary control center become unavailable due to a fire, earthquake or other unforeseen situation. The SCADA system also includes spare client servers running online as backups or as access points for owner workstations.
- Port of Miami Tunnel (POMT): The POMT previously ran on SICE’s SIDERA SCADA system. Inadequate support from the vendor was impacting the ability to meet contractual timeliness requirements. Additionally, since this software was proprietary, all changes to the system had to be coordinated through SICE, again, reinforcing our stance against the use of proprietary systems. As part of our Renewal Works Plan, Webber let a contract with

Rockwell to migrate the SCADA from the SIDERA platform to Rockwell’s Factory Talk platform.

One significant modification was the addition of a popup to confirm activation of a deluge zone by the tunnel operator in order to prevent inadvertent activation (a previous system issue). This process required close coordination with the SCADA contractor to develop the scope of work and contract requirements. The upgraded system now provides “monitor and control” functionality for ventilation systems, tunnel pump station and drainage systems, safety systems, power distribution systems, CCTV network, dynamic message boards and signage, and traffic gates. It also provides “monitoring” functionality for intrusion detection, secondary power distribution and UPS, and overheight vehicle detection.

We look forward to sharing the experience, knowledge, and best practices gained through the successful completion of these projects with ODOT, in support of the Department’s upgrade of the Lytle Tunnel’s SCADA system.

Question 1:

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

The Lytle Tunnel is a critical element of Cincinnati’s highway infrastructure. Outsourcing comprehensive monitoring, operations, and maintenance of the tunnel to a specialty contractor with the experience and expertise to manage it responsibly, like Webber, would result in a variety of benefits for the Department, some of which include cost savings through the maximization of service life of the asset and its components, fixed long term pricing, risk reduction, reduced contract administration, and improved asset reliability and longevity.

While potentially a new concept to ODOT, performance based (PB) O&M contracting is the optimal choice for complex outsourced infrastructure maintenance projects. Seeking to confirm this premise, the Florida Department of Transportation (FDOT) commissioned a study in 2016 to evaluate whether their PB contracts performed better or worse than the traditional non-PB contracts.¹ The findings showed that the PB contracts consistently produced better results compared to the non-PB O&M contracts. Additionally, FDOT’s study found that the non-PB contracts performed increasingly worse over time, attributing their underperformance to the fact that, as more contracts converted to PB contracts, the dollar value of the traditional non-PB contracts remained approximately stagnant.

Recognizing the potential benefits of PB O&M contracting, the Kentucky Transportation Cabinet (KYTC) recently undertook a similar approach to the one that ODOT is considering for the Lytle Tunnel. They chose to outsource tunnel O&M for the East End Crossing Tunnel, which connects southern Indiana to Louisville, Kentucky. The process included the following steps:

- An initial Request for Qualification (RFQ) from the client which resulted in a short-list of three firms
- One-on-one discussions with the short-listed firms
- Release of a draft Request for Proposals (RFP) soliciting feedback
- Final RFP to which shortlisted firms submitted competitive bids

At the end of this process, KYTC selected Webber as the successful bidder.

Based on our experience, we believe a contract that bundling O&M activities, including structural elements (tunnel portals, walls, tiles, signage, lighting, paving, etc.) as well as the operating systems (e.g., ventilation, fire suppression, etc.) and

¹ “Analysis, Comparison, and Contrast of Two Primary Maintenance Contracting Techniques used by the Florida Department of Transportation,” University of North Florida, August 2016.

their monitoring and communications infrastructure (SCADA), would be the most effective means to maintain the entire tunnel asset holistically.

Webber's Relevant Capabilities. As mentioned in the introduction, Webber has extensive experience managing tunnel assets throughout North America. As no two tunnel systems are the same, each O&M contract varies by asset and customer needs. We offer a variety of solutions and levels of service to meet our clients' needs ranging from an all-inclusive turn-key maintenance approach where we handle all aspects of the tunnel O&M, to more limited scopes of services under which we share responsibilities with the owner and/or other contractors. Services we currently provide include:

- Tunnel civil structural elements
 - Tunnel portals
 - Tunnel walls, ceiling, and plenum
 - Roadway surface and pavement markings
 - Drainage system
- Tunnel systems
 - SCADA
 - Fire monitoring
 - Fire suppression
 - Ventilation
 - Tunnel Air Quality
 - Lighting
 - CCTV system
 - Traffic and Lane Use signals
 - Pump station
 - Switch Gear
 - UPS and back-up generator(s)
- Tunnel approaches
 - Roadway surface and pavement markings
 - Lighting, signage (fixed and variable message boards), guardrails and other ancillary fixtures
 - Mowing and vegetation control
 - Snow and ice control
 - Drainage
 - Bridge/culvert maintenance
- Other services
 - Control Center operations
 - Sweeping and litter control
 - Incident and emergency response
 - Traffic management
 - Route patrolling and motorist response
 - Paying utility bills for network assets
 - Third-party damage management, including billing and collection

Turnkey Approach. In order to operate and maintain the tunnel in the most efficient way, the optimal contracting approach is to include the entire tunnel – the civil-structural elements as well as systems, hardware, and related

components – in a single PB O&M contract. A comprehensive PB O&M contract would include responsibility for most of the assets and services in the lists above and could include 24/7/365 systems monitoring by dedicated operators, should it be of interest to the Department. This comprehensive approach fosters unity of command in managing the tunnel and all of its assets while providing ODOT a single point of contact should any issues arise. This would greatly reduce ODOT’s administrative burden, as there are not only fewer contracts to manage, but also places the management of the entire asset in the hands of a highly experienced provider. This allows the O&M contractor to plan, coordinate, and execute both operations and maintenance of the contract, including in-house and subcontractor functions, promoting synergies and efficiencies in the development and execution of work plans.

A progressive design-build model for the SCADA would be best supported by this approach. It leaves ODOT flexibility on what contracting instrument to use. The Department could either contract directly for the SCADA upgrades or, in a virtual P3 arrangement, have the O&M contractor subcontract it to the SCADA design-build provider according to specifications established by ODOT (Webber has worked with both alternatives for SCADA upgrades). Either model would effectively integrate the SCADA design, functionality, user familiarization, beta-testing, and hand-off with the tunnel operator. Furthermore, we believe integrating the FWW pump station into the Lytle Tunnel SCADA system would prove beneficial, providing automated monitoring of the water level in the settling basin and wet well, with both automated and manual activation of the submersible pumps. Other capabilities that could be provided by SCADA integration would include hydrocarbon and water quality sensors as well as remote monitoring and control of the generator and monitoring of generator fuel levels.

Flexible Solutions. If a comprehensive O&M contract is too ambitious, we have the flexibility to scale the scope of services based on ODOT’s preferences. Various levels of involvement might include management of SCADA upgrades, remote rather than onsite tunnel systems monitoring, maintenance services whether civil/structural or systems based, or, even at a bare minimum, tunnel washing services. We provide tunnel washing services for our clients and have specialized tunnel washing equipment located within 90-minutes of the Lytle Tunnel which could be used for biannual or quarterly cleaning. Our tunnel washing machine greatly reduces the time that the tunnel must be closed for cleaning, effectively minimizing disruptions to traffic.

The right service mix will be based on ODOT’s needs and comfort level, keeping in mind the larger the contract, the more appetizing it will be for qualified industry providers to bid the work. Given our recent positive experience with KYTC in providing a feedback loop prior to their release of the RFP for O&M of East End Crossing Tunnel, we would be happy to work with ODOT to help determine an appropriate service mix.

Additional Considerations for Structural Maintenance. Should ODOT choose to implement a PB O&M contract that includes structural elements, we have included the below topics for consideration when building the contract scope.

Network Boundaries for Structural Maintenance. The tunnel itself is relatively short and would benefit from being integrated with the tunnel approaches in the provision of maintenance services. Services may include maintenance of pavement, striping, signs, lighting, drainage, etc. One solution would be to include the tunnel approaches comprising the sections of I-71 between the tunnel south portal and the I-71/I-75 interchange (approx. 1.1 mi), between the tunnel north portal and the I-71/I-471 interchange (approx. 0.5 mi), and the Third Street exit ramp to the Broadway intersection (approx. 665 ft) as part of the overall tunnel system. Delegating the day-to-day maintenance responsibilities for both the tunnels and their approaches provides a holistic approach to operating the roadway system – of which the tunnel is only one component – and is consistent with Webber’s management of other tunnel assets. This solution would relieve ODOT of the day-to-day responsibilities for maintaining the assets on these short sections of roadway separated by the tunnel and allow the tunnel O&M provider to schedule and coordinate maintenance work on these short sections of roadway in alignment with tunnel maintenance schedules.

Third-party Claims. As was noted during our site visit and mentioned during our discussions, traffic accidents are a regular occurrence both within the tunnel and on its adjoining roadways. In contracts where we are not reimbursed the direct costs for repair of third-party damages, we are instead assigned the rights by the asset owner to recover third-party damages ourselves. In this arrangement, we are assigned the rights to collect damages to the Department's assets (signs, guardrails, lighting, etc.) and bill the party responsible for the damage for repair or replacement costs. If ODOT determines that a comprehensive PB O&M contract is the appropriate contracting model for the Lytle Tunnel, we encourage the Department to consider including third-party claims for damages that are directly attributable to motorists, or for which the O&M contractor is responsible, as part of the scope. This is frequently a time-consuming administrative burden, but ODOT would be freed of the responsibility. Recoupment of the cost of damaged or destroyed assets also reduces the overall cost of maintenance as bid to ODOT.

As one example of many client-specific third-party claims mechanisms used across our portfolio, our East End Crossing Tunnel O&M Contract for KYTC includes the following language: *The Contractor shall be entitled to request a Change Order for costs exceeding \$50,000 in any reporting year that the Contractor incurred repair of Road User Damages. In developing the Change Order, eligible costs shall include documented direct costs plus a mark-up of 10% for the first \$50,000 of recoverable costs and a mark-up of 15% for recoverable costs exceeding \$50,000.* We are able to provide additional examples of third-party recovery mechanisms as well, should ODOT request them.

CCTV Surveillance. If the tunnel O&M is expanded to include the approaches, ODOT should consider installation of additional CCTV cameras covering the approaches to the tunnel in order to increase situational awareness of the tunnel facilities and accelerate incident response throughout this section of roadway. This will also incidentally facilitate collection of third-party damages, thereby reducing the cost of repairing or replacing damaged assets.

Renewal Works. Have the O&M contractor develop a Renewal Works plan based on National Tunnel Inspection Standards (NTIS) inspection results, with a long-term plan to renew or replace assets in a more orderly process. With ODOT's approval, work would be performed according to the plan via change orders to the base contract. Implementation of the Renewal Works allows for planned obsolescence and orderly replacement of tunnel system's aging components rather than injecting disruptions to traffic and incurring additional costs replacing components on an emergency basis.

Question 2:

Is any information in the response considered a "trade secret"? (Yes/No)

No.

Question 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.

This approach allows a feedback loop between the owner and subject matter experts (SMEs), including the O&M contractor. Having the O&M entity deeply involved with the process through design, construction, installation, and testing, as well as the development of the subsequent PB O&M criteria associated with the system will ensure optimal constructability, maintainability, and longevity.

Given our prior experience with SCADA system upgrades for other tunnel contracts, we believe that this collaborative approach is the most efficient option and will likely result in optimal outcomes for all stakeholders. In two instances, we have worked with the DOT agency to help formulate the scope and/or worked with the SCADA primary contractor to ensure that the system requirements meet the actual operational needs of our O&M project team. In another case, the owner delegated responsibility for contracting the SCADA upgrades to us within our overall responsibility to maintain all

the assets in the project. In either variation, we were able to work collaboratively with both the asset owner and the SCADA team to maximize the functionality of the SCADA system during the design and development process with little or no disruption to monitoring and control functions for the operations team once the SCADA system came online.

We have provided additional details on this process in our response to *Question 8*.

Question 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 do not recommend this approach. While it would still allow for some collaboration between the asset owner and SMEs during the design process, the reliance on a separate low-bid construction project may result in poor comprehension of why the SCADA is designed the way it is and a less analytical approach to installation, with little allowance to adjust for changing conditions.

Additionally, basing selection of the monitoring, operations, and maintenance of the asset solely on a low-cost award is fraught with risk to ODOT. This method of selection ignores the unique nature of tunnel O&M contracting and may result in award of the contract to a vendor who does not possess the necessary expertise, experience, or qualifications to properly manage a complex transportation infrastructure asset.

Question 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 also do not recommend this approach. This approach reduces the interactive dialogue between the asset owner and SMEs during the initial phase of the process and may delay the discovery of roadblocks until after the RFP has been posted or even during the execution phase of the upgrades. This could lead to delays and possibly even withdrawal of the RFP until such issues have been resolved. However, in contrast with Example 2, this approach does provide the safeguard of requiring technical proposals in order to evaluate vendor qualifications for the O&M phase of the project.

Question 6:

What is your preferred approach?

Of the three approach options provided in the RFI, the progressive design build approach is the most logical selection, however, our preferred approach aligns with the alternative, comprehensive solution described in our response to Question 1.

Approaching the SCADA upgrade as a progressive design build project under a larger O&M contract will enhance the common understanding of requirements and risk and permits buy-in from all parties in seeing to the successful execution and completion of the project. We already have experience using this approach for SCADA system upgrades for tunnels under our O&M contracts in Alaska, California, and Florida, with successful results for both the contractor and tunnel owners.

Based on our experiences with SCADA system replacement/upgrade projects, we believe the O&M management team and the design build team should closely coordinate during the design phase, whether under a single contract or contracted separately, so that the O&M team is able to provide input to ensure that operational aspects of the design and long term maintenance solutions are met. If separate entities, this coordination would continue during the installation

phase in order to identify and correct any unforeseen issues and also ensure the functionality of the systems remain intact without interruption during installation.

As was observed during the site visit, there are already multiple parties involved in the design and operation of the current SCADA system and the installed systems it connects. We believe the progressive design build approach will also allow better integration of these disparate design, equipment vendor, and system maintainer elements into a more cohesive team with a single project manager/systems integrator responsible for managing and maintaining all systems.

Question 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?

A performance based contract model is ideal for sharing risk between the asset owner and the contractor. The owner is able to unload risk primarily with two tools at its disposal: enforcement of performance expectations through well-defined requirements that include deductions for underperformance or timeliness issues; and fostering selection of the best qualified vendor through a strategically constructed RFP.

Performance Standards. ODOT can reduce risk and promote operational excellence by setting clear performance and timeliness standards with corresponding monetary deductions for underperformance. Thus, the contractor is incentivized to meet contractual requirements and expectations in order to maintain an uninterrupted revenue stream. Underperformance, whether by failure to correct deficiencies in a timely manner or by letting them continue over time, affects the contractor's bottom line and focuses the attention of contract leadership to correct deficiencies. Persistent underperformance can be grounds for contract termination or refusal to extend the base contract.

Strategic RFP Design. Another method of effectively mitigating risk is by constructing the RFP to include weighting of criteria based upon relative priority to ODOT, and awarding the contract based on a best value model. For infrastructure O&M contracts, weighting of 70%/Technical Proposal and 30%/Pricing Proposal is widely used in the industry. Technical/price best-value-based awards provides the Department with a level of confidence that the winning contractor has met the expectations and requirements by possessing the technical expertise and background, financial stability, and the management vision and experience to professionally execute the contract at the price offered.

Key components of this procurement model may include:

- Instituting a 70/30 technical/price best value award (or similar)
- Technical proposals not meeting a certain scoring threshold will disqualify the bidder
- Key topics to be covered in the technical proposal may include:
 - Previous and current corporate experience in managing tunnel O&M, citing details of relevant examples of projects managed and experience gained
 - Team organizational structure and experience
 - Mobilization strategy
 - Draft annual O&M plan, including planning, recordkeeping, and meeting performance standards
 - Subcontracting
 - Draft Quality Management Plan
 - Draft Incident Management Plan
 - Safety training and processes
 - Environmental monitoring and compliance
 - Third-party coordination and public contact procedures
 - Renewal Works

- Other areas of interest to the Department

The use of a 70/30 split between the technical proposal and price proposal provides an emphasis on experience and approach over pricing. As mentioned, this weighting is common among our clients, including both the Florida and Tennessee Departments of Transportation, and improves the probability that the best qualified and most reliable operator is selected for the contract award.

Question 8:

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

We believe the best concept to upgrade the SCADA system is one similar to the upgrades performed on our other tunnel contracts. These upgrades were very effective in providing monitor and control capabilities of the tunnel systems by our tunnel operators and management as well as the owners. Each of these upgrades was a variation of the progressive design build approach and ultimately resulted in a highly regarded end-product by the asset owners.

The process involved a phased approach comprising meetings between our team and the asset owners to achieve design milestones. These included:

- Determining the scope of work of the project, including the details of which systems would be integrated into the SCADA and what functionality would be required
- Determining potential vendors which would meet the required capabilities; this phase would also provide a feedback loop for these vendors to suggest improvements or alternatives not previously considered
- Selection of preferred vendors, refinement of the scope, and initial cost estimates covering software, hardware, and labor for the upgrade
- Final revisions to the scope and SCADA design along with formal quotes from vendors, followed by contract award
- Design lock from the owner and approval for work to be carried out
- Regular in-progress reviews (IPRs) to review work versus scheduling and to address issues as they arise
- Integrating the design team with the O&M team during the development and testing phases for a specified period to identify any potential flaws with the new system
- Collaboratively developing a plan for the cutover to the new system while the old system is taken offline and removed from service

Question 9:

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

If letting a comprehensive PB O&M contract, Webber strongly believes that longer contract lengths benefit both ODOT and the contractor. A contract length of 7 years, with option(s) for renewal, provides the best opportunity to implement a proper asset management philosophy that incorporates a proactive maintenance strategy while also supporting a long term perspective on failure analysis and operational trends. This allows the contractor to build a better database of the mean time between failures of critical components of the tunnel's systems and formulate a better plan for Renewal Works, as well as provide a predictive maintenance model that allows for scheduled maintenance and/or replacement of critical components before the end of their useful service life, rather than a reactive maintenance model that must respond to unanticipated failures. This holistic approach of synthesizing ongoing maintenance operations with long-term predictive maintenance planning will maximize the longevity of the tunnel and its installed systems.

Additionally, a longer term contract allows for a rational amortization of capital expenditures for necessary maintenance equipment, many of which will have an expected service life of 7 years or more. Failure to consider this necessary adjustment for private sector cost accounting needlessly injects additional expense into the contract.

Additional benefits of longer contracts include:

- Development of stronger subcontractor relationships, which will in turn provide improved performance/availability of tunnel assets
- Foster greater staff longevity and improved institutional knowledge for the O&M contractor

A 5-year contract may be marginally acceptable, more so if it has one or more options for extensions, as investments must be made in personnel and equipment which, as explained above, do not achieve any significant cost benefits until well into the contract term. In this same light, the upfront investment for a 2-year contract is very difficult to justify for a PB O&M contract and, frankly, not worth ODOT's effort to solicit and evaluate bids. We believe neither side would be satisfied with the effort required to manage such a short term contract, nor the outcome.

ODOT may also want to consider an even longer contract term, of up to 10 years. This length of term allows the contractor to incorporate Renewal Works into their offering. While we acknowledge that ODOT carried out upgrades to Lytle Tunnel and its mechanical systems in 2017, we also realize the tunnel was constructed in the 1970s and is more than 50 years old. A longer term contract would allow the contractor to thoroughly evaluate the tunnel's civil and structural elements, electrical and mechanical systems, and associated infrastructure to develop a robust Renewal Works plan that will extend the useful service life of the tunnel. For example, Webber has done this for AKDOT, developing a 20 year Renewal Works plan that will extend the life of the tunnel well beyond its previously anticipated service life. We have also integrated Renewal Works as part of our ongoing long term planning in Miami and the Presidio, though these tunnels were new when we began managing them.

For example, the Lytle Tunnel's lighting systems provide an opportunity for a renewal option. The current lighting appears to be based on tungsten halogen technology. While a step forward from previous incandescent or high pressure sodium lamps, halogen lighting is less efficient and more expensive to operate than LED light fixtures. We believe the cost of an LED upgrade under a 10-year contract would effectively be absorbed as part of the operating costs, as the payback period compared to maintaining the halogen lighting is approximately the same length as the contract term. Additional savings will accrue to ODOT after the initial contract though the remaining useful life of the LED lights (at least 10-15 additional years).

Question 10:

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

ODOT's due diligence in exploring the benefits of a monitoring, operations, and maintenance contract for the Lytle Tunnel is admirable. We encourage the Department to consider the wide array of services available in development of the scope of services for a PB O&M contract. As the only tunnel in the state, it presents unique operational and maintenance challenges for the Department to manage it effectively. Even if a PB O&M contract for the Lytle Tunnel is a first for ODOT, it is a fitting and responsible solution to delegate day-to-day O&M of the tunnel, as well as longer term maintenance planning, to an experienced contractor who is able to draw on best practices to ensure the best care of the Lytle Tunnel and its systems.

We have demonstrated experience managing tunnel O&M on behalf of DOT clients and believe the most efficient and appropriate scope for a PB O&M contract for the Lytle Tunnel include structural elements as well as the operating systems and their monitoring and communications infrastructure.

Benefits of operating and maintaining the tunnel holistically include:

- Reduced need for DOT oversight and administrative burden associated with managing multiple contracts
- A single point of contact for all system needs
- Access to tunnel O&M experts and best practices
- Mitigation of risk and risk-sharing with an experienced contractor
- Implementation of proven maintenance practices resulting in prolonged asset life and reduced costs
- Development of Renewal Works to proactively plan, assist the DOT in budgeting, and schedule replacement of obsolescent or end-of-service-life systems in a proactive rather than reactive manner.

By choosing Webber as an O&M partner, ODOT will have access to our team’s expertise and best practices developed over years of successful O&M delivery on critical infrastructure assets. Our experience in tunnel projects, proven management systems, and continued commitment to innovation will translate to higher asset availability and reduced risk to the Department, Ohio residents, and visitors alike.