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December 20, 2017

Jeffrey T. Folden, P.E., DBIA
Chief, Innovative Contracting
MDOT State Highway Administration
Via email: I495_I270_P3@sha.state.md.us

**Subject: Fluor Response to MDOT's Request for Information (RFI) regarding
Congestion Relief Improvements for I-495/I-95 (Capital Beltway) and I-270**

Dear Mr. Folden:

Thank you for the opportunity to provide input and feedback to MDOT regarding congestion relief improvements on I-495/I-95 (Capital Beltway) from the American Legion Bridge to the Woodrow Wilson Bridge and on I-270 from I-495 to I-70.

As a potential proposer and P3 Concessionaire, Fluor is very interested in partnering with MDOT to expand freeway capacity in Maryland's Baltimore-Washington corridors by adding additional premium service lanes on I-495 and I-270 to reduce delay and improve predictability for vehicular trips.

In addition to our RFI response, we also request a one-on-one meeting with MDOT. As noted within our response, we look forward to the opportunity to further engage with MDOT representatives and exchange ideas on advancing the project and achieving MDOT's objectives.

Respondent Name and Address:

Fluor Enterprises, Inc.
100 Fluor Daniel Drive
Greenville, SC 29607

Sincerely,

Jim Kupferer
RFI Point of Contact

A. GENERAL

1. Please describe your firm, its experience in relation to public-private partnership (P3) projects, and its potential interest in relation to these potential congestion relief improvements.

Fluor has tremendous P3 experience in both roadway and railway projects and in the region. As a P3 Concessionaire member, Fluor is currently partnering with MDOT to deliver the \$5.6 billion Maryland Purple Line Light Rail Project. Similarly, as a P3 Concessionaire member, Fluor has also delivered two very successful P3 toll road projects (I-495 & I-95) in Northern Virginia.

Both I-495 Express Lanes and I-95 Express Lanes projects were delivered ahead of schedule and on budget. Each major toll road project began under an innovative contracting approach and comprehensive agreement to develop, design, finance, construct, operate, and maintain 43.4 miles of new I-495 and I-95 Express Lanes in a long-term concession arrangement and public-private partnership.

Fluor is very interested in continuing delivery of critical transportation infrastructure in the region to provide innovative congestion relief on I-495 and I-95 Capital Beltway and on I-270. Please find below an introduction to Fluor that describes our firm and experience.

FLUOR INTRODUCTION

Fluor is a global leader in engineering, procurement, construction, maintenance (EPCM), and project management. Active across six continents, we work with governments and multinational companies to design, build, and maintain many of the world's most complex and challenging capital projects.

Consistently rated as one of the world's safest full-service EPCM organizations, Fluor's primary objective is to develop, execute, and maintain projects on schedule, within budget, and with excellence. Our outstanding dependability, expertise, and safety performance distinguish Fluor as the preeminent global leader in the building services marketplace.

Founded in 1912 and headquartered in Irving, Texas, Fluor has grown into a FORTUNE 200 company with a workforce of over 60,000 employees, 2016 revenues of approximately \$19 billion, a backlog over \$45 billion, and a strong balance sheet. Standard & Poor's (S&P) has assigned Fluor an 'A-' corporate credit rating which is a high investment grade rating assigned only to a few of the financially strongest contractors in the world.



In 2007, Fluor celebrated our 50th Anniversary on the New York Stock Exchange (NYSE)

A RECOGNIZED INDUSTRY LEADER

Over the past century, Fluor, through its operating subsidiaries, has become a trusted global leader by providing exceptional services and technical knowledge. Clients rely on Fluor to deliver world-class solutions to optimize their assets, improve their competitive position, and increase their long-term success.

A few notable awards are shown in Figure 1.

Fluor has a long history of partnering with government departments of transportation and rail agencies to develop, finance, design, construct, operate and maintain complex transportation infrastructure systems and challenging capital projects.



Figure 1. Notable Awards. Fluor is acknowledged for industry leadership; project excellence; and health, safety, and environmental excellence.

INFRASTRUCTURE P3 EXPERIENCE

Fluor is the largest publicly traded engineering and construction company in the United States and a global leader in the development of transportation infrastructure using P3 approaches that match our client's needs.

With an increased global demand for major new transportation programs with project sizes of greater magnitude and more complex scope, Fluor can develop creative and innovative technical, operational, and finance solutions to meet Clients' financial objectives and construction challenges.

We provide high-value solutions for delivery of bridges, highways, railways, toll roads, and transit systems using innovating financing and alternative delivery methods and are at the forefront in private development of public infrastructure systems around the world. We have a proven track record of implementing complex transportation projects that offer faster schedules, lower life-cycle costs, and considerably less risk to the public sector.

Fluor has the capability, experience, and financial stability to deliver exceptionally large and complex transportation projects on schedule and within budget. Our integrated solutions for the transportation sector include project development, financing, program management, turnkey design and construction, and operations and maintenance. Fluor also provides strategic planning, environmental permitting, right-of-way (ROW) acquisition, quality inspection and testing, and community outreach.

FLUOR INFRASTRUCTURE PROJECTS

Since 1994, Fluor’s Infrastructure group has contracted with government departments of transportation and rail agencies to deliver more than \$30 billion in transportation infrastructure assets via design-build and P3 approaches, with more than \$20 billion in total project value that include a long-term maintenance scope. We bring expertise in a variety of P3 models, including, design-build-maintain (DBM), design-build-finance-maintain (DBFM), and design-build-finance-operate-maintain (DBFOM).

PROJECT NAME (ROAD LOCATION)	TYPE	SCOPE	PROJECT (\$M)	AWARD YEAR	CONSTRUCTION COMPLETE + O&M
Green Line Extension (GLX) – Light Rail Transit Boston, Massachusetts	Rail	DB	\$1,082	2017	2021
Southern Gateway (I-35E & US 67) Dallas, Texas	Road	DBM	\$625	2017	2020+15 yrs
Zuidasdok (A10 South Motorway & Tunnel) Zuidas District, Amsterdam, The Netherlands	Road	DBM	\$1,052	2017	2021+7 yrs
A27/A1 Motorways A27 – Utrecht to Hilversum, The Netherlands/ A1 – Utrecht to Bunschoten-Spakenburg	Road	DBFOM	\$250	2016	2019+25 yrs
Port Access Road (I-26) Charleston, South Carolina	Road	DB	\$221	2016	2019
Maryland Purple Line – Light Rail Transit Prince George’s and Montgomery Counties, Maryland	Rail	DBFOM	\$5,600	2016	2022+30 yrs
South Mountain Freeway(AZ Loop 202) Phoenix, Arizona	Road	DBM	\$1,100	2016	2020+30 yrs
Bergstrom Expressway (US Hwy 183-South) Austin, Texas	Road	DB	\$581	2015	2020
A9 Freeway North-Holland, The Netherlands	Road	DBFM	\$1,236	2014	2019+25 yrs
Tappan Zee Bridge (I-87/I-287/NY Thruway) Hudson River Crossing, Tarrytown, New York	Bridge	DB	\$3,100	2013	2018

PROJECT NAME (ROAD) LOCATION	TYPE	SCOPE	PROJECT (\$M)	AWARD YEAR	CONSTRUCTION COMPLETE + O&M
Dallas Horseshoe (I-30 and I-35E) Dallas, Texas	Road	DBM	\$798	2013	2017+15 yrs
95 Express Lanes (I-95) Fairfax and Stafford Counties, Virginia	Road	DBFOM	\$940	2012	2014+73 yr Concession*
Rt. Hon. Herb Gray Parkway (Hwy 401/Hwy 3) Windsor, Ontario, Canada	Road	DBFOM	\$1,244	2011	2015+30 yrs
I-15 Corridor Expansion (I-15 CORE) Utah County, Utah	Road	DB	\$1,100	2010	2013
Eagle P3 – Commuter Rail Line Denver, Colorado	Rail	DBFOM	\$3,000	2010	2016+29 yrs
State Highway 161 (SH-161) Dallas and Fort Worth, Texas	Road	DB	\$423	2009	2012
495 Express Lanes (I-495) Fairfax County, Virginia	Road	DBFOM	\$1,936	2007	2012+75 yr Concession*
A8 Autobahn Improvements Southern Germany	Road	DBFOM	\$338	2007	2010

Legend

DB	Design-Build	DBM	Design-Build-Maintain
DBF	Design-Build-Finance	DBFM	Design-Build-Finance-Maintain
		DBFOM	Design-Build-Finance-Operate-Maintain

Figure 2. Infrastructure Experience. *Our experience exhibits alternative delivery methods, allowing us to provide innovative and cost saving solutions.*

REGIONAL P3 TOLL ROAD PROJECT HIGHLIGHTS

Project Name	I-495 Express Lanes
Client Name	Virginia DOT
Location	Fairfax County, Virginia
Scope	Develop, finance, design, build, operate, and maintain
Start Date	December 2007
Completion Date	March 2013
Status	Project opened to traffic in November 2012



The Virginia Department of Transportation partnered with Fluor and its private partners to deliver the largest improvement to the Capital Beltway in a generation. The project consists of the development, design, finance, construction, maintenance, and operations of 14 miles of high occupancy vehicle (HOV)/high occupancy toll (HOT) lanes along I-495 in Northern Virginia, from the Springfield Interchange (south) to just north of the Dulles Toll Road. The total length of the concession is 80 years – 5 years of construction and 75 years of operation.

Opened to traffic on November 17, 2012, 495 Express Lanes provided necessary upgrades to the Capital Beltway by adding two new lanes to the previous four lanes in each direction, replacement of more than \$260 million of aging infrastructure, including more than 50 bridges and overpasses and construction of carpool ramps connecting I-95 with the Capital Beltway to create a seamless HOV network.

▶ The facility offers the traveling public:

- ◆ Four new lanes, two in each direction along 14-mile stretch of the Capital Beltway in Northern Virginia
- ◆ Carpool/HOV-3 lanes on Beltway and to Tysons Corner
- ◆ Congestion-free network for carpools, vanpools, transit buses, and toll-paying motorists
- ◆ Fully electronic and dynamic tolling for predictable travel time on congestion-free network
- ◆ Seamless HOV network connection with I-66, Dulles Toll Road, I-395/I-95

▶ Construction: Delivered On Time and On Budget

- ◆ Project Cost: \$2.068 billion (\$409 million state investment)
- ◆ Built four new lanes on 14 miles of the Capital Beltway
- ◆ Replaced more than 50 aging bridges and overpasses
- ◆ Tripled soundwall protection for adjacent communities
- ◆ Added pedestrian and bike access for all overpasses crossing the Beltway
- ◆ Relocated major utilities along entire alignment
- ◆ Completed in November 2012 ahead of schedule

▶ Innovations

- ◆ Dynamic tolling based on real-time traffic conditions

- ◆ First HOT lane implemented in the state of Virginia
- ◆ First time a Private Activity Bond was used for HOT lanes in the United States and the first time combined with TIFIA financing
- ▶ **Robust Public Engagement**
 - ◆ 1,000+ community events, public meetings, employer briefings
 - ◆ Made more than 225,000 calls via phone campaign
 - ◆ Sent over 300,000 email updates
 - ◆ Hand delivered more than 30,000 construction notices
 - ◆ Continue to distribute updates to email subscribers on a quarterly basis
- ▶ **Supported 31,000 Jobs, Pumped \$3.5 Billion into the Economy**
 - ◆ On-site construction jobs, transport of supplies and equipment, nondirect jobs supported by workers spending paychecks in local community
 - ◆ Accounted for as much as 20 percent of total economic growth for Fairfax County in 2009
- ▶ **Awarded \$490 Million to Small and Disadvantaged Businesses**
 - ◆ Largest contribution to DBEs and SWAMs in Virginia's history for a single transportation project
- ▶ **Sources**
 - ◆ <http://www.p3virginia.org/projects/i-495-express-lanes/>
 - ◆ https://www.fhwa.dot.gov/ipd/project_profiles/va_capital_beltway.aspx

Project Name	I-95 Express Lanes
Client Name	Virginia DOT
Location	Fairfax and Stafford Counties, Virginia
Scope	Finance, design-build, operate, and maintain
Start Date	August 2012
Completion Date	December 2014
Status	Project opened to traffic in December 2014



The I-95 Express Lanes was the second major step in creating a regional network of tolled managed lanes in Northern Virginia. The project consists of the development, design, finance, construction, maintenance, and operations of 29.4 miles of HOV/HOT Lanes along I-95 and I-395 in Northern Virginia, from Garrisonville Road in Stafford County to just north of Edsall Road on I-395 in Fairfax County over a 75-year concession period.

Opened to traffic on December 14, 2014, the I-95 Express Lanes provide a new option for motorists who choose to pay a toll to access congestion-free lanes with reliable travel times as well as expanded service for carpoolers, transit, motorcycles, and emergency responders who can use the lanes for free.

- ▶ The project is divided into four segments:
 - ◆ 8.3 miles of new construction – two-lane reversible (includes 7 new bridges)
 - ◆ 7.0 miles of two-lane HOV conversion – two-lane reversible
 - ◆ 11.9 miles of two-lane HOV conversion – three-lane reversible
 - ◆ 2.2 miles of two-lane HOV conversion – three-lane reversible (including connection to 495 Express Lanes at the Springfield Interchange)
- ▶ **The facility offers the traveling public:**
 - ◆ 29 miles of high occupancy toll lanes with new capacity and congestion pricing on the heavily traveled corridor
 - ◆ Fully electronic/dynamic tolling for predictable travel time on congestion-free network
- ▶ **Construction: Delivered On-time and On-budget**
 - ◆ Project Cost – \$925 million (\$71 million state investment)
 - ◆ Expand HOV nine miles to Stafford County
 - ◆ New entry and exit points
 - ◆ New sound wall protection for adjacent communities
 - ◆ Added capacity on existing HOV system
- ▶ **Innovations**
 - ◆ The Sponsors, together with VDOT, were also partners on the I-495 Express Lanes project. The 95 Express links directly into the 495 Express Lanes at the Springfield interchange. The two projects have common traffic and tolling management systems and shares the same operations center/operator.

▶ **Jobs/Economic Development**

- ◆ Supported 12,600 local jobs and \$1.54 billion in economic activity in the region
- ◆ Awarded over \$190 million to small and disadvantaged businesses

▶ **Adds capacity, relieves bottlenecks, provides more choices**

- ◆ Building a nine-mile extension of existing HOV lanes from Dumfries to Garrisonville Road in Stafford County to alleviate worst bottleneck in the region
- ◆ Expanding existing HOV lanes from two to three lanes for 14 miles between Prince William Parkway to the vicinity of Edsall Road on I-395
- ◆ Improving existing two HOV lanes for six miles from Rt. 234 to Prince William Parkway

▶ **Creates a regional HOV/transit network with a seamless connection to 495 Express Lanes, Tysons Corner, Dulles Airport**

- ◆ Adding new access points to connect HOV lanes to Virginia-based destinations and major military sites
- ◆ Adding two new HOV lanes from Dumfries to Route 610 in Garrisonville

▶ **Supports jobs, boosts local economy**

- ◆ Supports nearly 12,600 jobs and generates \$1.54 billion in economic activity
- ◆ Gets businesses moving again on I-95 by increasing flow of goods, employees and services
- ◆ Reduces time and money lost every year due to traffic congestion
- ◆ Helps address the impact of Defense Base Closure and Realignment (BRAC) Commission with a new and improved HOV network

▶ **Sources**

- ◆ <https://www.p3virginia.org/projects/95-express-lanes/>
- ◆ https://www.fhwa.dot.gov/ipd/project_profiles/va_i95.aspx

2. What would be the benefits and risks to MDOT entering a P3 agreement for congestion relief improvements? What risks do you believe would best be retained by MDOT and what risks would be best transferred to the private sector? Please explain your reasoning.

BENEFITS AND OPTIMAL RISK APPROPRIATION OF P3 AGREEMENTS

The benefits of P3 agreements for transportation infrastructure improvements are well documented. A few of those benefits are included below for reference.

- ▶ Better infrastructure solutions than an initiative that is wholly public or wholly private. Each participant does what it does best.
- ▶ The public agency retains some measure of control over the project.
- ▶ The public agency retains ownership of the project.
- ▶ P3s provide the ability to leverage private investment capital for accelerating delivery of major transportation improvements to provide congestion relief and needed infrastructure renewal.
- ▶ P3s shift costs and key project risks to the private sector and away from taxpayers.
- ▶ P3s typically deliver broad and complex projects on time and on budget.
- ▶ P3s allow for greater innovation in the design and construction process by accessing private-sector ideas, skills, and talent.
- ▶ P3s can shift both current and long-term operations and maintenance responsibilities, providing long-term certainty of asset performance.
- ▶ In the absence of currently available state or federal funding, P3s create jobs, boost the economy now, and deliver to the public necessary infrastructure improvements.

3. What, if any, advantages will MDOT potentially gain by entering an agreement in which operations and maintenance and lifecycle responsibility and/or traffic and revenue risk are transferred to the private section? How do you assess the likely magnitude of such advantages? What are the potential offsetting disadvantages?

Transferring O&M and lifecycle responsibility to the private sector in a P3 model yields significant benefits to owners like MDOT, including an optimized design that balances upfront capital infrastructure costs versus long-term operations and maintenance costs. The lump-sum fixed price coupled with measurable, comprehensive performance requirements guarantees the useful life of the asset beyond the contract term. Competitive P3 procurements have proven very successful in achieving very high value for money results.

Traffic and revenue risk considerations are addressed within Section D. Contract Structure.

4. Would it be advantageous for MDOT to transfer the operations and maintenance and lifecycle responsibility for the entire freeway or just the added congestion relief improvements? What would be the advantages and disadvantages of transferring the operations and maintenance and lifecycle responsibility for the entire freeway?

Yes, transferring O&M and lifecycle responsibility for the entire freeway has been shown to yield significant benefits versus just the improvements, including single-point of responsibility to Owner, significant synergies in cost to perform work, elimination of interface risks with other contractors, and optimized end-user experience.

5. Would it be feasible to have a single solicitation for both corridors? If not, would you recommend any specific phasing for the solicitations including the corridor(s) and limits and why? What would your recommendation be for staggering multiple solicitations and why?

We believe breaking up the overall corridor program into two or three major P3 projects would be ideal and would also facilitate an accelerated schedule on targeted segments. We look forward to discussing our thoughts with you during a one-on-one meeting.

B. PROJECT DEVELOPMENT

1. Do you believe your firm would be interested in submitting a detailed proposal for the development of any of the congestion relief improvements? Are there any particular concerns that may prevent your firm from getting engaged in the project development? How might these concerns be resolved?

Yes, Fluor is very interested in continuing delivery of critical transportation infrastructure in the region to provide congestion relief on I-495 and I-95 Capital Beltway and on I-270.

Fluor's concerns that may prevent our firm from getting engaged in the project development relate to political and public opposition on issues such as toll policy, right-of-way (ROW) acquisition, environmental review, and permitting processes.

Critical steps in the development process include early Project Scoping and Project Purpose and Need Reports as part of the NEPA process that lead to development of Preferred Alternatives generated from a highly collaborative public outreach effort that deliver realistic, buildable alternatives based on innovative solutions.

These concerns can be resolved by MDOT securing their Program GEC and all third-party legal and NEPA advisors, financial advisors, traffic & revenue consultants, and specialty firms as communicated, in order to comprehensively develop an overall approach to the program and planned stages of development activities.

Once fully assembled, MDOT's project team can begin collaboratively developing a comprehensive approach to overall development of the program. Specifically defining large

project segments, phasing and timelines for successfully progressing each segment through an environmental process and to achieve overall systems objectives.

2. At what stage of the NEPA and project development process would it be most beneficial to issue a RFQ: after establishment of the purpose and need, after determination of alternatives retained for detailed study, after selection of an MDOT preferred alternative, or after approval of the environmental document? At what stage would it be most beneficial to issue a RFP? Please discuss your reasoning.

From our view, it is very important to have a clear understanding of the project (size, scope, attributes, etc.) in order to assemble the most competitive team with the necessary expertise that aligns directly to the specific characteristics (number of bridges, miles of roadway, system to system interchanges, tunnel, etc.) of the project and scope of work (DBFOM) to be performed. Having this understanding enables robust teaming that is tailored to the project and enables effective development of our response to an RFQ to increase our chances for Shortlisting and to an RFP to increase our chance of winning.

If the scope of the project includes early development services, the earlier the better. If not, it is highly preferable for MDOT to have selected a preferred alternative and have it sufficiently advanced in the environmental process, ideally securing necessary approvals before release of a comprehensive DBFOM P3 RFQ. Prior to issuance of an RFP, it would be most beneficial for MDOT to have obtained the Record of Decision (ROD) from FHWA or at least to have it coincide with release of the Final RFP.

This preference is based on our experience, in that it allows MDOT to maintain concentrated focus on all project development activities that need to be completed, or nearly completed, during the development of the Draft RFP and Final RFP. In doing so, clarity of scope and contractual obligations can be incorporated into the Final RFP, to ensure adherence to schedule and enable a level playing field of competitive innovation and problem solving.

3. What are the critical path items for the solicitation for these improvements and why?

Critical path items for the successful solicitation of these improvements include:

- ▶ Well-developed project definition and comprehensive P3 agreement
- ▶ MDOT's incorporation of innovative solutions that are buildable and cost effective into representative build alternatives of the Draft Environmental Impact Statement
- ▶ MDOT's issuance of Final Environmental Impact Statement that incorporates necessary flexibility to make necessary modifications to the preferred alternative as designs advance and minimizes the need to reopen the entire ROD at risk of delaying the project
- ▶ FHWA's issuance of Record of Decision for advancement of the Project

- ▶ MDOT's finalization of agreements with all utilities, key project stakeholders, and third parties and incorporation of all contractual responsibilities into the final P3 agreement
- ▶ MDOT's acquisition of key ROW parcels and plan for acquisition of remaining parcels
- ▶ MDOT's issuance of a Draft RFP for industry review and regular interaction with Proposers during the procurement cycle to address commercial and technical items
- ▶ MDOT's development and issuance of technical due diligence investigations, evaluations, reports, and supporting documentation and models

4. What is the minimum amount of time that your firm would require to develop and submit a response after the issuance of a potential RFQ?

The amount of time to develop and submit a response to a RFQ is generally 10 to 12 weeks for a large, complex P3 project.

5. What is the minimum amount of time that your firm would require to develop and submit a detailed proposal after the issuance of a potential RFP?

The amount of time to develop and submit a detailed proposal is generally 9 to 12 months for a large, complex P3 project including a series of one-on-one meetings with MDOT.

6. What information would your firm need in order to prepare a response to a potential RFP? What information should MDOT, the offeror, or others provide?

In addition to a well-developed project definition and comprehensive P3 agreement for the project, please find below information that should be provided:

- ▶ Completion of the NEPA process and issuance of the Record of Decision (ROD).
- ▶ Clear understanding of the ROW limits of the Project, ROW parcels acquired and plan for acquisition of remaining parcels.
- ▶ MDOT's final agreements with utility owners, key project stakeholders, and third parties.
- ▶ All technical due diligence investigations, evaluations, reports and supporting documentation and models. Ability to rely on key reports including hazardous materials, subsurface geotechnical investigations, and utility locations.

7. What would you consider a reasonable stipend payment for unsuccessful proposers responding to a potential RFP? Please discuss how the stage of project development (purpose and need, alternatives retained for detailed study, preferred alternative, final environmental document, etc.) completed prior to RFP issuance would impact the stipend payment amount.

A minimum stipend payment for a well-developed P3 procurement with a ROD is \$2 million. This stipend figure increases with the size, complexity, and stage of project development and is typically in the range of 0.5 percent of project costs, which is offset by the intellectual capital that is obtained by the Owner at a fraction of the actual cost.

8. Would it be more beneficial for right-of-way acquisition activities to be transferred to the developer or should MDOT retain that risk? Please discuss your reasoning.

MDOT should retain the right-of-way acquisition, but could transfer the risk of acquisition services to the developer. The reasoning is for ROW to be acquired at actual cost.

C. TECHNICAL CHALLENGES

1. Based on your experience in the development of similar projects and characteristics of the I-495/I-95 and I-270 corridors, please explain the technical challenges, including minimization of right-of-way impacts, to providing congestion relief improvements. Please provide any recommendations for mitigating or overcoming those challenges that you would be willing to share.

We look forward to discussing these items at the upcoming one-on-one meetings.

2. Are there recommendations that you may be willing to share concerning the project scope or development strategies to reduce the upfront capital costs and/or the lifecycle costs of potential corridor congestion relief improvements?

We look forward to discussing these items at the upcoming one-on-one meetings.

3. Please explain any technical solutions that you may be willing to share that may enhance the development of the potential congestion relief improvements. Identify risks associated with the solutions and, if possible, discuss estimated cost of the solutions.

We look forward to discussing these items at the upcoming one-on-one meetings.

D. CONTRACT STRUCTURE

1. What is your recommended approach for financing the capital cost of potential congestion relief improvements?

While offering a toll concession to developers effectively outsources all of the financial risks of the project to the private sector, it does so at a relatively high cost to the driving public and to MDOT future revenue streams. Compared to an availability payment concession, a toll concession has materially higher cost of capital due to the following:

- ▶ A toll concession requires up to four times the ratio of equity to debt than an availability concession which maximizes the most expensive component of project financing.
- ▶ A toll concession requires a premium equity investment rate of return to compensate investors for the higher risk associated with unreliable toll revenue forecasts.
- ▶ Rating agencies materially discount toll revenue forecasts in response to the fact that the majority of toll projects in the United States have underperformed toll revenue forecasts, which diminishes the amount of financing that can be generated from a toll revenue stream.

Also, there is significant history of the traveling public in the United States objecting to procurements that require them to pay tolls to private companies (especially owned by foreign companies), resulting in politicizing projects and political candidates taking positions for or against projects in their election campaigns and such objectors joining environmental opponents to delay or prevent such projects.

An availability payment concession keeps the relationship of the driver and MDOT direct while insulating the public from financing, design, construction, start-up O&M, and rehab cost and performance risk.

We recommend that MDOT structure the financing for the project using the structure of the Purple Line Transit Project. MDOT should consider maximizing the funding available during the construction period to minimize the financing cost to MDOT while transferring the risk of cost, schedule, and O&M to the bidders. Once the amount available is determined, that information should be used to establish the amount of progress payments and completion payments due to the concessionaire.

Further, a revenue study should inform MDOT on the probable cash flow available from toll revenues and that information should be used to establish an escalating availability payment mechanism related to the escalating income received from operations. This would result in the lowest present value cost of providing congestion relief to the public consistent with funding available to MDOT in both its capital program and from toll income.

2. Should MDOT set a concession term or allow proposers to establish a concession term as part of the response to a potential RFP? If MDOT were to set the concession term, what is a reasonable concession term and why?

MDOT should establish the concession term by taking into account MDOT funding available for the project and the amount of time that it should take for the concessionaire to repay debt and earn a reasonable return on equity. Generally speaking a toll revenue concession needs to be longer than an availability concession to give the concessionaire access to a revenue stream to repay lenders in the event that projected revenues do not materialize. For toll revenue concessions it is typical to allow longer than the 30 years post completion that is common in availability concessions. For example, I-495 Express Lanes has an 85-year concession term, and I-95 Express Lanes has a 75-year concession term. But in a managed lane project, there comes a time when traffic saturation in the corridor will likely occur. In that case, trips are held constant by continual increases in toll rates generating a windfall profit for the concessionaire. Since traffic and revenue projections have been historically inaccurate, they are highly discounted by credit rating agencies resulting in the need for long concession periods to meet loan life coverage requirements.

One potential approach would be to structure the concession period to be **no longer than** a relatively long period with a contractual termination upon the achievement of a threshold financial return or with a revenue sharing provision that caps the equity return at a reasonable level.

3. Are there any contract terms you would recommend, such as Alternative Technical Concepts, Alternative Financial Concepts, contract balancing, pre-development agreements or progressive agreements, etc., to minimize risk to proposers, maximize opportunities for innovation, maximize a concession payment to MDOT, or are key to obtaining competition? Please discuss the benefit and risks of the recommended contract terms.

Use of **pre-development agreements** has proven to be a very successful approach to project delivery and in generating innovative solutions to complex challenges, including financing, designing, construction, operating, and maintaining new projects.

Using 495 Express Lanes as an example, VDOT began advancing plans for a traditional highway expansion to help address growing congestion on the Capital Beltway in Virginia. The plan faced significant opposition from the community. It was unaffordable, required the destruction of more than 350 homes and businesses, and did not provide the transit options needed to support a growing Tysons business district. To address these challenges, VDOT partnered with the private sector in an alternative approach to deliver improvements quicker, with fewer tax dollars, and to provide new travel choices and reduce impacts on the community and the environment.

Under an FHWA-approved Special Experimental Program 14 for Innovative Contracting (SEP-14), VDOT entered into a comprehensive agreement that set forth general terms and

conditions of the public-private venture with a prospective concessionaire to develop, design, finance, construct, maintain, and operate the new project. This proved to be very successful resulting in numerous awards and many accomplishments, including reduced home impacts from 350 to just 8 and construction delivery on budget and ahead of schedule to provide the much needed congestion relief.

Alternative Technical Concepts should be used to encourage innovation to minimize impacts (right-of-way, environment, maintenance of traffic, etc.) and maximize technical and life-cycle benefits.

Alternative Financial Concepts should include the flexibility to propose innovative risk sharing approaches, alternative concession maturities, structured payment approaches, funded early works, innovative utility relocation contracting and project phasing among others. The benefit to this flexibility is it incentivizes the best and brightest minds in the infrastructure world to develop innovative solutions to mobility in a competitive mode to offer the best proposal to deliver the project. MDOT may want to reconsider maximizing a concession payment as an objective of the procurement as this would only result from setting concession terms beyond those needed to finance the project and therefore pushes out the time when the project will be handed back over to MDOT after the concession investment is amortized. Given the low cost of capital to the public sector and the high cost of capital to the private sector, one could argue that an optimal structure minimizes the public subsidy required from MDOT, but not to the point of selling the out years of a project for a concession payment. This is particularly relevant when the procurement is for a managed lanes project which is expected to have revenue escalating at a multiple of inflation due to the fact that pricing will have to increase dramatically when traffic saturates the corridor and toll rates have to be increased to discourage travel rather than just impact route selection.

E. MISCELLANEOUS

1. Are there any particular concerns with the information provided in this RFI? Please explain any concerns and provide any proposed solutions or mitigation to address those concerns.

None

2. Please provide any suggestion or comments on how MDOT can encourage participation by Minority Business Enterprise and Disadvantaged Business Enterprise firms and local workforce in the development of the congestion relief improvements.

We would be happy to discuss our experience and ideas at the upcoming one-on-one meetings.

3. What opportunities would you like to see for industry outreach related to these potential P3 opportunities?

One-on-one meetings with MDOT to engage in open dialog and allow for an exchange of ideas to help advance planning, segmenting, and phasing of the project.

4. Please provide any additional comments or questions you may have related to the information in this RFI.

N/A