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Autonomous Vehicle Study Request for Proposals

DC Surface Transit, Inc. d/b/a DC Sustainable Transportation (DCST) is seeking a contractor or team of contractors to prepare a study which evaluates and makes recommendations around the impact of autonomous vehicles (AVs) on the District of Columbia and the Washington region.

About DCST

DCST is a 501(c)(6) nonprofit organization which works to make DC a global leader with frequent, rapid, safe, affordable, and reliable transportation to, from, and around DC job centers. DCST brings together business, advocacy, and government entities around shared priorities for DC transportation.

DCST believes in providing all residents and workers with options to travel by transit, walking, and biking; to mitigate congestion and better manage curb space; and to prepare for mobility changes in the future with advancing technology.

About this project

This project is being undertaken in partnership with the District Department of Transportation and other agencies with funding from the Government of the District of Columbia.

The primary goal of this project is to “evaluate[] and make[] recommendations regarding the effects of autonomous vehicles on the District [of Columbia].”¹ The project team’s goals for this study are

¹ Autonomous Vehicles Study Amendment Act of 2018, available at <http://lims.dccouncil.us/Download/39944/B22-0753-Enrollment.pdf>, pp. 104-105

to develop scenarios and perform analysis to understand current trends and inform the speculative conversation about the future of shared and private mobility as technology advances. We hope to identify short and long term actions the public sector should take to maximize the positive potential effects of AVs and minimize negative impacts.

This project has a fixed budget to consider the current dynamic and complex transportation ecosystem, and analyze a broad and emerging area of transportation which will have far-reaching effects and opportunities. Some items are prescribed to be studied by the authorizing legislation, but the analysis is not limited to those items, and those items themselves allow a range of potential analysis. Further, many of these impacts will be regional in nature, and changes in surrounding parts of the Washington region, such as the region's overall growth in buildings and infrastructure, will have effects on the District of Columbia as well.

Therefore, DCST is asking potential contractors or teams (below referred to as Contractor) to consider and discuss how they would approach the issues and tasks listed below to maximize the useful analysis created given the available funding.

Project requirements

Potential impacts

Contractor's analysis is required by the authorizing legislation to evaluate the following potential impacts and issues from the development and introduction of autonomous vehicles:

1. "The effect on the District's economy, including economic development and employment;
2. "The impact on the District government's revenue, including motor vehicle excise taxes, motor vehicle registration fees, motor vehicle fuel taxes, residential parking permit fees, parking meter revenue, fines and fees relating to moving infractions or parking, standing, stopping, and pedestrian infraction, commercial parking taxes, insurance taxes;
3. "The impact on the District's infrastructure, traffic control systems, road use, congestion, curbside management, and public space;
4. "The impact on the District's environment and public health;
5. "The impact on public safety in the District, including the safety of other road users such as pedestrians and bicyclists;
6. "The impact on the District's disability community;
7. "The impact on the various transportation modes in the District, including mass transit, shared-use vehicles, and public and private vehicles-for-hire; and
8. "The need for and use of autonomous vehicle data, including data from autonomous vehicle manufacturers and public and private vehicle-for-hire companies."

In addition to the required legislative items, to the extent feasible, Contractor shall analyze any other material effects of autonomous vehicles with significant implications to the District government, residents, or businesses.

The analysis should look at the effects of both passenger and freight autonomous vehicles.

Outcomes which the project team is focused on include:

1. Health and safety;
2. The rate of private car ownership;
3. Travel mode choice;
4. The role of high-capacity, fixed-guideway transit;
5. The occupancy level of vehicles;
6. The quantity of VMT and degree of congestion;
7. Cost of transportation and goods delivery for households;
8. Access to daily needs (including jobs, health care, services, and retail);
9. Availability and management of curb space;
10. Space and distribution of space dedicated to on- and off-street parking;
11. The level of exurban development in the region;
12. Demand for land in parts of the District not as well served by existing transit.

For all of these outcomes, the team is interested in overall effects and also in geographic, income, and racial disparities in those effects.

DCST will select and convene a stakeholder working group to meet monthly and review progress on the project. DCST will lead the stakeholder meetings but Contractor may present at or lead portions of the meetings. Contractor should discuss in the proposal what its involvement in the meetings will be.

Scenario development

Contractor will work with DCST and the working group to devise a set of scenarios based on assumptions and public policy levers which will have the greatest impact on the future development of autonomous vehicles. Contractor should discuss in the proposal how it would undertake this and what the necessary timeframe would be.

Possible variables for scenarios include:

1. Whether street space is priced and/or dedicated to high-occupancy use;
2. Whether and how transit agencies are able to embrace autonomous vehicles;
3. Whether and how much public space is repurposed to non-transportation use;
4. Whether changes are made to zoning rules;
5. What access to curbside and sidewalk space is available to passenger and delivery vehicles;
6. Any other variables that might be appropriate.

Contractor may choose a smaller set of variables either in the proposal or as part of the study process, in order to filter down to a reasonably sized set of scenarios.

Analysis

For each of the impacts identified, Contractor shall create a quantitative and/or qualitative assessment of the impact of all scenarios on that element. This analysis shall include, to the extent feasible, evaluation of existing research specific to the District, the Washington region, and/or of national scope; and/or additional analysis by Contractor such as creating, updating, and running simulation models or other means of prediction. The product of the analysis shall include a combination of quantitative data and visual imagery.

The analysis shall estimate the outcomes and effects on the District in 5-year increments over 20 years, with explanation for how various elements will shift in time based on technological advancement milestones such as the introduction of Level 4 and/or 5 automated vehicles for individual ownership or lease, the introduction of taxi/TNC services in urban environments with no human on board, etc.

To the extent feasible, Contractor shall also estimate the effects on other parts of the Washington region and/or the Washington region as a whole, including the level of increase in development at the edges of the region, increase in the number of very long distance commute trips to and from the District, etc.

Recommendations

In collaboration with the working group, Contractor shall devise recommendations concerning actions to be taken by the District government, including individual agencies and the DC Council. Contractor may also include actions to be taken by regional entities such as the Council of Governments (COG) or WMATA, or public-private efforts that could bring together DCST, other stakeholders, and some of the above entities.

These actions can include further studies, legislation, revenue policies, traffic congestion policies, data sharing, or other actions.

Project deliverables and timeline

This project will commence on or after October 15, 2018 pending completion of an MOU between DCST and the District Department of Transportation (currently under review).

Final report

The project is required to deliver a completed report, approved by DCST and DDOT, by July 1, 2019. This report shall be in the form of a single electronic document, with any additional supplemental materials in electronic form (electronic documents and/or online resources).

Intermediate reports

The project shall have intermediate milestone dates on January 15, 2019 and April 1, 2019. Contractor shall prepare interim reports by those dates (or earlier dates). Proposals shall discuss what can be provided by those milestones.

In particular, DCST is interested in opportunities for interim reports to make recommendations for future studies or other work that could be funded by the District government in Fiscal Year 2020, as the Mayor prepares a budget largely during the first quarter of the year and the Council performs most of its review and amendment during the second quarter.

Collaboration

Contractor shall participate in weekly conference calls with DCST staff to review project progress, monthly working group meetings as outlined above, and any other conversations as requested by DCST staff.

Ownership of data

Any electronic and other materials created as part of this study, including but not limited to raw data, visualizations, and text, will be provided to DCST and DDOT by Contractor and become the property of the District of Columbia.

Fee

The fee for this work will be up to but not greater than \$212,500.

How to apply

Interested firms or teams of firms should send a proposal by September 24, 2018 including the following information:

- A statement indicating the name of the firm or list of firms involved in the bid, with information on the firm or firms' qualifications and experience to perform the work;
- A contact person, address, phone, and email address;
- A detailed summary of the work proposed to be performed, including how scenarios will be created, what quantitative and visual analyses will be created, and other work which addresses all of the subsections of the Project Requirements;
- A proposed process and detailed timeline for deliverables, including when the team is available to begin work and what would be delivered by the January 15, April 1, and July 1 milestone dates;
- A detailed budget outlining how the fee will be spent on various elements of the project, including how time will be allocated among various tasks;

- A project team organization chart (including how the work would be divided among firms in the case of a team bid), names, and resumes (3 pages maximum per person) of key team members;
- Links to other publicly available related work performed by the firm(s); and
- Names and contact information for at least three references who can speak to the firm's past performance on similar projects. If multiple firms are involved, references should be included for each constituent firm.

Proposals should be in the form of a single searchable PDF document, limited to no more than 20 pages, not counting resumes. The PDF may include URLs/hyperlinks to supplemental materials available publicly on the web if appropriate.

Firms may submit questions for clarification of elements of this RFP by email. Questions may be submitted at any time after this RFP is issued but no later than September 10, 2018. Responses will be posted on a rolling basis by September 14. All questions and responses will be posted publicly on an FAQ page linked to from <http://dcstcoalition.org/avstudy2018>.

Participating firms may join a public Google group to receive updates, question responses, or other notices pertaining to this RFP at:

<https://groups.google.com/a/dcstcoalition.org/forum/#!forum/avstudyrfp>

A small number of finalists will be selected for interviews between September 25 and October 5, with negotiation of a final scope of work to follow with a target signing date of October 11.

Timeline summary

Item	Date
Deadline to submit questions	September 10, 2018
Responses posted	September 14, 2018
Proposals due	September 24, 2018
Finalist interviews	September 25-October 5, 2018
Target to sign contract	October 11, 2018
Work begins	October 15, 2018 or later
Interim report 1	January 15, 2019
Interim report 2	April 1, 2019
Final report	July 1, 2019

Contact information

Please email all questions, submissions, and other inquiries to David Alpert, DCST Executive Director, at alpert@dcstcoalition.org. Please include “DCST AV RFP” along with a descriptive subject in the email subject line.