

The CONSULTANT will evaluate a broad range of systems as it relates to the PD&E study, such as Connected Vehicle, Autonomous Vehicle, traffic signal system, communication system, travel time systems, Transit Signal Priority (TSP), Adaptive Signal Control Technologies (ASCT), Signal Controller Technology, Integrated Corridor Management, and other Advanced Traveler Information Systems and Advance Traveler Management Systems. The CONSULTANT shall utilize the TSMO Strategy Guide¹ for preliminary screening. The CONSULTANT will review existing master plans from the MPO, FDOT, and municipality (where applicable) to determine existing and planned Intelligent Transportation Systems (ITS) infrastructure. Engineering judgment and corridor knowledge shall be applied to develop a recommended list of TSMO strategies to complement, postpone, or replace roadway improvements. Subsequently, the CONSULTANT shall meet with FDOT TSMO for review and concurrence. Alternatives will then be coordinated with the County Traffic Engineer and the City Transportation Engineer concerning existing and proposed ITS and Advanced Traffic Management System (ATMS) infrastructure. Roles and responsibilities shall be determined during this coordination and shall be documented within the Concept of Operations (ConOps).

The CONSULTANT shall complete the Systems Engineering documentation in accordance with Code of Federal Regulations Rule (CFR) 940² and Department Systems Engineering Management Plan (SEMP) guidance.³ As part of the Systems Engineering process, the CONSULTANT will assess the risk for proposed strategies, using the Project Risk Assessment and Regulatory Compliance Checklist (Form 750-040-05).⁴ For low-risk elements, the completed Project Risk Assessment document will satisfy the systems engineering documentation requirement. For high-risk elements, the Systems Engineering Project Checklist (Form 750-040-06)⁵ shall be completed, including a Project Systems Engineering Management Plan (PSEMP) along with the ConOps and Architecture updates, to satisfy CFR Rule 940 requirements. Architecture updates shall be completed by the CONSULTANT on the District's then-current software.

The CONSULTANT will evaluate the need for improvements or modifications to the existing TSMO system in relation to the alternatives being considered. This includes reviewing TSMO alternatives in combination with capacity improvements. The CONSULTANT will develop a high-level cost estimate for the changes necessary to the infrastructure in order to meet project TSMO needs and goals. Cost shall include operations and maintenance phases. These items will be documented in the ConOps.

¹ TSM&O Strategy Guide located at http://www.cfsmartroads.com/projects/technical_docs.html

² CFR Rule 940 guidance located at <http://www.cfsmartroads.com/projects/local/docs/Implementation%20of%20Rule%20940%20in%20Florida.pdf>

³ SEMP Guidance located at http://www.fdot.gov/traffic/ITS/Projects_Deploy/SEMP.shtm

⁴ Project Risk Assessment Checklist located at <http://www.cfsmartroads.com/projects/local/docs/Project%20Risk%20Assessment%20and%20Regulatory%20Compliance%20Checklist.docx>

⁵ Systems Engineering Project Checklist located at <http://www.cfsmartroads.com/projects/local/docs/Systems%20Engineering%20Project%20Checklist.docx>