

EXHIBIT A



SCOPE OF SERVICES

**SYSTEMS PLANNING
MODELING APPLICATIONS**

FPID NO: TBD

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SCOPE OF SERVICES

SYSTEMS PLANNING MODELING APPLICATIONS

Financial Project I.D.: 458178-1-12-01

I. PURPOSE

The Department requires the professional services of a Consultant to provide technical expertise in support of Systems Planning activities. The Consultant shall support Department initiatives related to travel demand forecasting, transportation planning analysis, modeling applications, and associated decision-support activities. Services may include, but are not limited to, travel demand modeling; freight model development and application; model training and user support; evaluations for the Strategic Intermodal System (SIS); Project Traffic Reports (PTRs); congestion management analyses; reviews of local government plans and development-related submittals; Geographic Information System (GIS) services; public involvement activities; and other related incidental tasks. Particular emphasis may include freight planning and modeling activities that consider the movement of goods to, from, and through District One, including connections among ports, airports, rail facilities, logistics hubs, warehouses, distribution centers, and major freight generators, and the differing characteristics and impacts of light-, medium-, heavy-, delivery-, and other truck movements.

This contract is intended to support the ongoing operation, stewardship, enhancement, and application of the District One Regional Planning Model (D1RPM) using the Department's adopted modeling platform(s), or any platform as directed by FDOT Central Office. The Consultant shall provide technical support, user assistance, and analytical services to ensure effective use of the model by Department staff, Metropolitan Planning Organizations (MPOs), Transportation Planning Organizations (TPOs), local agencies, and other partner agencies. Services will emphasize model maintenance and enhancement, freight modeling applications, and the evaluation and application of emerging technologies and innovative analytical methods. This scope of services is intended to support a new, on-call professional services contract and is not dependent on any prior agreements or previously executed contracts.

II. SERVICES

A. TRAVEL DEMAND MODELING ACTIVITIES

1. Model Development, Support, and User Assistance

The Consultant shall provide technical support and assistance related to the District One Regional Planning Model (D1RPM) using the Department's adopted modeling platform(s), or any platform as directed by FDOT Central Office. Services under this section are expected to primarily support freight model development, travel demand model application and support, training and knowledge transfer, and emerging analytical tools and technologies, while remaining flexible to address other Department modeling needs. This work may include evaluation of freight movements by vehicle type, industry sector, land use pattern, and intermodal connection, including movements associated with ports, airports, rail facilities, warehouses, distribution centers, logistics hubs, truck parking demand, and major freight-generating developments.

- Provide technical assistance to Department staff, MPOs, TPOs, local agencies, consultants, and other authorized users regarding the use, interpretation, and application of the D1RPM.
- Respond to user inquiries related to model inputs, outputs, assumptions, limitations, and appropriate applications.
- Assist users with troubleshooting model runs, resolving discrepancies, and addressing workflow, coding, or data issues.

- Support the development of user guidance materials, quick-reference documents, best-practice documentation, training materials, and related resources.
- Provide on-call technical support, as authorized by the Department, during active planning studies, project evaluations, and policy analyses.
- Perform quality assurance and quality control activities for the D1RPM and related MPO and TPO model applications, as authorized.
- Attend meetings, workshops, and technical discussions representing the Department, as requested.
- Perform travel demand modeling activities that may require development of specialized procedures, scripting, coding updates, model enhancements, and/or specialized networks.
- Implement, maintain, and support transit- and freight-related modeling functions and associated model applications as Department needs evolve.
- Conduct alternative analyses, future-year forecasting, project-level support analyses, and corridor or area-wide planning analyses.
- Develop, update, and apply corridor, districtwide, or special-purpose model analyses for planning, policy, and project support needs.
- Perform other transportation modeling and analytical tasks as assigned by the District Modeling Coordinator or FDOT Project Manager.

The following tasks supplement, and do not limit, the modeling support activities described above.

2. Freight Model Development and Application

- Develop, maintain, and apply freight modeling components and related tools, including truck trip generation, trip distribution, truck assignment, commodity flow analysis, truck parking demand and utilization, scenario testing, and other freight-related analytical applications, consistent with current federal, state, and Department guidance. Freight model development may include differentiation among truck classes and operating types, such as light-duty delivery vehicles, medium trucks, heavy trucks, and drayage or other intermodal freight movements, as appropriate to the assignment.
- Develop and apply a freight model utilizing GeoTab or comparable commercial freight, probe, or mobility data sources, provided at no cost to the Department unless otherwise expressly authorized in writing by the Department.
- Assist the Department in applying freight model outputs to planning studies, SIS evaluations, corridor studies, goods movement analyses, truck parking assessments, and other freight-related policy, investment, and project support discussions, including analyses related to ports, airports, rail facilities, warehouses, distribution centers, and other major freight activity centers.
- Support the integration of freight data, probe data, land use and economic activity data, truck parking information, and related external datasets into model development and analytical workflows, as authorized by the Department.

3. Travel Demand Modeling Tasks

- Resolve discrepancies within District One between the D1RPM and applicable MPO and TPO Long-Range Transportation Plan (LRTP) models.
- Attend meetings and technical discussions representing the Department, as requested.
- Perform travel demand modeling activities that may require the development of specialized procedures, including open-source scripting modifications and/or development of specialized networks.
- Support the evaluation and application of new technologies and state-of-the-art analytical methods, as directed by the Department.
- Conduct alternative analyses using the D1RPM and applicable MPO and TPO LRTP models.
- Develop future transportation demand forecasts.

- Conduct analyses in support of Project Development and Environment (PD&E) studies, Project Traffic Reports, and planning-level corridor or area studies.
- Conduct alternative analyses and review development-related submittals, as assigned.
- Develop network-specific dynamic traffic assignment models, as assigned.
- Perform corridor-level analyses for purposes including, but not limited to, access management classification, context-sensitive design, level-of-service analysis, scenic highways, transportation enhancements, and emergency management activities.
- Perform other transportation modeling tasks as assigned by the District Modeling Coordinator or FDOT Project Manager.

While the primary software used in this effort will be the current software adopted or approved by the Department for statewide or districtwide use, some assigned tasks may require use of existing model information in other macro-, meso-, or micro-simulation software or associated analytical tools. In the event additional datasets are needed for a task, the Consultant may be required to perform planning-related data collection studies, including but not limited to origin-destination surveys, travel time and delay studies, trip generation, saturation flow, parking, truck parking availability and utilization, crash analysis, traffic conflicts, vehicle probe data, public transportation surveys, census data compilation, socioeconomic data development, warehouse and distribution center inventory development, intermodal facility and freight-generator data collection, and public or stakeholder interviews.

The Consultant shall maintain any subsequent software or analytical platform designated by FDOT Central Office for travel demand modeling or related applications. The Consultant shall maintain appropriate current versions of software, licenses, subscriptions, and maintenance agreements necessary to perform the work, unless otherwise expressly provided by the Department. The Consultant may be required to assist staff or take the lead on providing recommendations for implementing standards and practices required under the Department's adopted modeling platform(s).

The Consultant shall maintain computer systems used for model development that conform to current Department standards. Compatibility is critical to any product distributed by the Department, and the Consultant shall maintain systems and operating environments suitable for the tasks assigned and compatible, where required, with Department needs.

4. Model Validation and Development

- Update the travel demand model structure for the D1RPM and applicable MPO or TPO LRTP models to include components and procedures consistent with current and future state and Department guidance, including freight modeling components, network refinement, truck routes, intermodal connectors, and other freight-supportive network or operational attributes, as directed by the Department.
- Calibrate, validate, and maintain the adopted D1RPM, including, where appropriate data are available, validation of freight movements by truck class, corridor, intermodal connector, major freight generator, and other freight-sensitive measures identified by the Department.
- Calibrate, validate, and maintain adopted LRTP models, as assigned by the District Modeling Coordinator or FDOT Project Manager.
- Coordinate with MPOs, TPOs, and/or local staff to ensure consistency with local development plans and programs, such as LRTPs, Transportation Improvement Programs, Unified Planning Work Programs, and similar planning documents.
- Collect sufficient data and information needed to update and/or verify maps, files, and supporting datasets in urban, transitioning, and rural areas.
- Collect sufficient data and information needed to update and verify roadway and supporting inventory files and related model inputs.
- Provide analytical tools, workflows, maps, dashboards, and visualization products to assess existing, emerging, and future transportation policies and technologies, including visual tools that

illustrate truck volumes, truck classes, freight patterns, and goods movement distribution, as authorized by the Department.

- Submit complete and timely documentation, including technical memoranda, regarding changes or modifications made to travel demand models and related assignments.
- Develop and maintain special-purpose models, as assigned.
- Update and check the validity of existing travel demand models to ensure they remain within accepted tolerances, and/or review future-year models modified to examine the impacts of proposed projects, development, or projected future conditions.

5. Model Updates and Data Collection

The Consultant may be required to provide and develop data input files for travel demand models, which may involve the development of interim and future-year datasets consistent with Department direction and adopted planning horizons, considering population changes, shifts in development areas, warehouses, distribution centers, logistics hubs, intermodal facilities, truck parking activity, and other large-scale projects with regional transportation impacts.

The Consultant may be required to coordinate with local staff, acting as a Department representative, in obtaining and validating such data, as authorized by the Department.

6. Maintenance of Models

The Consultant may be required to update and maintain travel demand models to future forecast years for assessing existing, new, or proposed elements of the State Highway System (SHS). Such alternatives may include, but are not limited to, tolls, freight-supportive multimodal elements, and other alternatives as directed by the District Modeling Coordinator or FDOT Project Manager, including where applicable connections to ports, airports, rail facilities, intermodal hubs, and truck parking considerations. The Consultant shall provide complete documentation of all changes or modifications made to model datasets in performing this task.

The Consultant may be required to ensure that current models perform properly in future versions of travel demand modeling software or successor tools. The Consultant may be required to make necessary file, structure, or data changes to ensure compatibility with future transportation modeling software, updates to current software, and related analytical tools, and shall provide complete documentation as assigned by the District Modeling Coordinator or FDOT Project Manager.

7. Training, Outreach, and Knowledge Transfer

The Consultant may be required to assist the Department in training various agencies such as, but not limited to, MPOs, TPOs, Counties, Cities, and / or other local agencies with the efforts / activities specifically related to the tasks previously outlined. Tasks for this effort may include, but not be limited to, the following:

- Prepare and deliver presentation materials, workshops, user group meetings, office hours, short instructional videos, and ad-hoc technical assistance to support the consistent and effective use of the Department's current adopted regional travel demand model and related workflows by Department staff and partner agencies.
- Prepare newsletters, guidance materials, articles, or other knowledge transfer materials, if deemed necessary by the Department.
- Attend and/or make presentations related to the tasks outlined above at workshops, training sessions, agency meetings, and group meetings.

8. File Hosting / Distribution

Because the transfer of travel demand model datasets and other related files may exceed the practical limits of routine email exchange, the Consultant may be required to operate and maintain a secure electronic file transfer method with sufficient storage and transfer capacity to facilitate timely exchange of large files between the Consultant, the Department, and authorized users. Access shall be

restricted to authorized users as specified by the District Modeling Coordinator or FDOT Project Manager. The Consultant may also be required to support controlled distribution of Department-approved files to authorized users outside the Department.

9. Emerging Technologies and Analytical Innovation

The Consultant may support the Department, when authorized, in the evaluation, piloting, and application of emerging analytical methods related to travel demand modeling and planning analyses. These activities shall be carried out in a manner consistent with current Department policies, including applicable artificial intelligence, data governance, cybersecurity, and information technology requirements. These activities may include, but are not limited to:

- Automation, scripting, data integration, artificial intelligence (AI), machine learning, advanced analytics, and visualization techniques as outlined in the FDOT AI policy.
- Evaluation of the feasibility, limitations, and appropriate use of innovative tools to improve efficiency, quality control, scenario evaluation, and decision support.
- Integration of external datasets, including probe, freight, land use, and related data sources, into established workflows where appropriate.
- Documentation of methods and knowledge transfer to Department staff and partner agencies.

No emerging technology, tool, or analytical method shall be implemented for operational use without prior written authorization by the Department.

B. EVALUATIONS FOR THE STRATEGIC INTERMODAL SYSTEM

1. Interchange Access Request Documents

The Consultant shall ensure that documents prepared under this section are developed in accordance with current Department policies, procedures, manuals, and guidance related to interstate access, SIS evaluations, and related planning requirements.

Tasks may include preparation and/or review of methodology letters, technical memoranda, supporting documentation, existing data, interchange-related analyses, SIS prioritization support, cost estimation, and updates to SIS needs and cost-feasible plans, as directed by the Department.

C. CONGESTION MANAGEMENT SYSTEM (CMS) AND PROJECT TRAFFIC REPORTS (PTR)

The Consultant may be required to review and analyze projects identified within the MPO's or TPO's Congestion Management Plans, District One's Automated Congestion Management Process (auto CMP) or develop Project Traffic Reports for the State Highway System within District One.

Additional analysis may also be required in the rural areas of projects identified by the local Community Traffic Safety Teams. All services to be provided under this contract are to be accomplished in accordance with applicable guidelines, policies, procedures, State and Federal laws. The following types of work elements may be assigned under the terms of this Agreement:

1. Collection of Existing Data

Collection and review of traffic counts, turning movement counts, roadway characteristics, traffic characteristics, crash data, right of way information, signal characteristics, environmental constraints, utilities, and related planning studies.

2. Project Analysis

Evaluation of existing and future conditions, recommended improvements, additional suggested improvements, phasing, and related analysis required to document operational, safety, or congestion conditions.

3. Cost Estimate Analysis

Preparation of construction cost estimates and associated project cost information using current Department-approved methods and available local or regional cost data.

4. Funding Options

Identification and evaluation of potential Department and partner funding options, as applicable.

5. Study Documentation

Preparation of draft and final reports, including graphics, tables, and maps, as required by the Department.

6. Project Coordination

Coordination with Department staff, local agencies, MPOs, TPOs, technical committees, and other stakeholders, as assigned.

D. ENHANCEMENT PROGRAM DEVELOPMENT

The Consultant may be required to assist the Department in evaluating enhancement projects to determine feasibility, production status, implementation schedule, and cost. Services may include field review, coordination with the Department and local governments, development of evaluation worksheets, schedules, cost estimates, and documentation of findings.

E. DISTRICT REVIEW OF LOCAL GOVERNMENT COMPREHENSIVE PLANS AND PLAN AMENDMENTS

1. Plans Review

The Consultant may be required to perform reviews of local government comprehensive plans and plan amendments in accordance with applicable federal and state laws, current Department guidance, and applicable local and regional planning requirements.

Each task may consist of reviewing plan submittals and preparing a report containing objections, if warranted, with recommended remedial actions, comments, and/or technical assistance comments related to topics such as level of service, safety and operations, access management, right of way protection, transportation improvement funding, context-sensitive design, multimodal systems, SIS and Interstate protection, and internal consistency among plan elements.

2. Prepare Technical Memorandum

The Consultant may be required to prepare a technical memorandum summarizing the review and transmit that memorandum electronically to the District Modeling Coordinator or FDOT Project Manager within the timeframes established by the Department. As authorized, the Consultant may also assist the Department in developing or supporting online tracking tools, databases, dashboards, or similar systems to help organize, monitor, and evaluate plan amendments, development patterns, and related review activities.

F. DISTRICT REVIEW OF DEVELOPMENT-RELATED SUBMITTALS

1. Existing Development Review

The Consultant may be required to perform reviews of developments and development-related submittals in accordance with applicable federal and state laws, current Department guidance, and the applicable approvals, orders, or supporting documents in effect at the time of review. As authorized, the Consultant may also assist the Department in developing or supporting online tracking tools, databases, dashboards, or similar systems to help organize, monitor, and evaluate plan amendments, development patterns, and related review activities.

2. Substantial Deviation Review

The Consultant may be required to review revised development proposals or changes that may affect previously identified impacts and may require reevaluation of conditions.

3. Notice of Proposed Change Review

The Consultant may be required to review minor development plan changes that may require Department review.

4. Proportionate Share / Proportionate Fair Share Agreements

The Consultant may be required to assist in the review and/or development of agreements related to new or modified developments to help protect the integrity of the State Highway System and SIS facilities in accordance with applicable laws, rules, regulations, and Department guidance.

G. GEOGRAPHIC INFORMATION SYSTEMS (GIS)

The Consultant may be required to provide various maps, tables, spatial analyses, dashboards, applications, online systems, databases, and related GIS services in support of the tasks outlined in this scope. All GIS components shall be spatially referenced and prepared at an appropriate scale for the intended use. The Consultant may also be required to support tracking of development patterns, freight generators, land use changes, and other systems planning information through GIS-based or database-driven tools. The Consultant shall use the Department's existing GIS environments for the development and maintenance of GIS products.

H. PUBLIC INVOLVEMENT ACTIVITIES

The Consultant may be required to assist the Department in public involvement efforts related to the tasks outlined in this scope. The Consultant shall support public involvement activities in accordance with current federal and state requirements and Department policies, procedures, and guidance applicable to the type of study or project being advanced.

Tasks may include preparation of presentation materials; brochures, fact sheets, newsletters, or other outreach materials; attendance at and/or presentations during public meetings; preparation and maintenance of public comment files; and incorporation of Department-approved public disclosure language into public-facing materials where required.

I. INCIDENTAL TASKS

The Consultant may be required to review planning-related documents, reports, studies, procedures, and related materials and prepare technical comments, analyses, or supporting documentation pertaining to the tasks outlined in this scope.

J. SOFTWARE REQUIREMENTS

The Consultant shall maintain the hardware, software, licenses, subscriptions, data access, and technical capabilities necessary to perform the services described in this scope. This may include modeling software, traffic operations software, GIS software, database tools, analytics platforms, visualization tools, and standard business software. The specific tools used shall be appropriate to the task and compatible with Department requirements, where applicable.

The Department is not obligated to provide or license any specific software, subscription, or third-party dataset unless expressly stated in an individual Task Work Order. All software, licenses, subscriptions, and third-party data not explicitly provided by the Department shall be the responsibility of the Consultant.

The Consultant shall have the capability to communicate and submit deliverables to the Department through normal business channels, including but not limited to email, virtual meetings, and appropriate electronic file transfer methods. Computations based on computer programs other than Department-approved programs, where applicable, shall conform to Department format and deliverable requirements.

K. OTHER SUPPORT

The Consultant may provide additional technical support in the development or review of transit projects, corridor studies, planning analyses, report preparation, and coordination with local and regional partners, as requested by the Department.

Other tasks may include assisting the Department in the collection and analysis of data; preparing reports identifying potential future improvements to regional transit systems; developing or updating planning-level cost estimates; preparing presentation graphics and supporting documentation; assisting in the review and preparation of reports; assisting local jurisdictions regarding transit, development, or related planning policies; coordinating with local transportation initiatives; and preparing style guides, methodology guides, calendars, and other organizational materials needed to coordinate multiple related efforts.

III. RESPONSIBILITIES OF THE DEPARTMENT

The Department will furnish, without charge, the following services and data to the Consultant for the performance of services: provide a Project Manager; provide available criteria and information regarding Department requirements; furnish available procedures, standards, and policies; furnish available drawings, specifications, schedules, reports, studies, and other pertinent information; furnish available traffic and planning data; and furnish limited system or data access, if needed and authorized, for the services to be provided.

IV. RESPONSIBILITIES OF THE CONSULTANT

A. Project Management

The Consultant shall provide an overall Project Manager who will serve as the Consultant's primary point of contact for scope, schedule, staffing coordination, negotiation of task hours, and completion of all TWOs. The Consultant Project Manager shall meet with the District Modeling Coordinator or FDOT Project Manager on a regular or scheduled basis, provide a project schedule, and submit progress reports for all active TWOs in a format acceptable to the Department.

B. Staffing

The Consultant shall provide and maintain a list of staff classifications available to support specific TWOs. Staff may include, but are not limited to, project managers, engineers, engineering interns, planners, engineering technicians, GIS specialists, analysts, programmers, data specialists, visualization specialists, and administrative support staff, as appropriate to the assigned tasks.

C. Qualifications and Performance

The Consultant shall provide sufficiently qualified staff in a timely manner within TWO schedules. Key personnel shall possess strong verbal and written communication skills, be able to translate complex technical analysis findings into understandable language, and be capable of presenting results and conclusions in a concise and practical manner. If the Department determines that the number or expertise of staff assigned to a specific task is inadequate, the Department may require the Consultant to promptly remedy the situation to ensure timely completion of the assignment.

V. SUBCONTRACTING

Services assigned to subconsultants must be approved by the Department in accordance with this Agreement. Any subconsultant must be qualified to perform the work assigned.

Additional subconsultants may be required by the Department or proposed by the Consultant to complete specific Task Work Orders. Upon written approval by the Department and prior to performance of work, the Consultant may subcontract for required services as authorized under this Agreement.