



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

August 28, 2024
AGENDA ITEM #11

Discuss and consider approving a contract with Stantec Consulting Services, Inc. for traffic and revenue engineering services

Strategic Plan Relevance:	Stewardship
Department:	Finance
Contact:	José Hernández, Chief Financial Officer
Associated Costs:	Determined annually via work authorization
Funding Source:	Annual operating or construction fund budgets
Action Requested:	Consider and act on draft resolution.

Project Description/Background: The Central Texas Regional Mobility Authority (the Authority) has a continuing need to monitor traffic and revenue (T&R) for its existing toll projects and for new projects. The studies the Authority receives as a result of T&R consulting services contain a variety of elements related to our toll facility’s traffic and revenue including corridor travel demands, future growth characteristics, market capture and demand share. The Authority’s Debt Indenture also requires the retention of T&R services. These services are used throughout the life of projects from planning, feasibility, financing, construction, and monitoring. The resulting studies vary in confidence levels from sketch level to investment grade. Investment grade studies are required for project financing.

Previous Actions & Brief History of the Program/Project: A Request for Qualifications to identify and obtain the services of a qualified engineering firm(s) to provide traffic and revenue engineering services was released on May 15, 2024. Three firms submitted responses to the RFQ. On June 26, 2024, the Board authorized the Executive Director to negotiate separate contracts for traffic and revenue engineering services with all qualified firms that submitted responses to the RFQ: C&M Associates, Inc., CDM Smith, Inc., and Stantec.

Financing: Financing for the traffic and revenue consulting services will come from a variety of sources including the Operating Budget and Project Funding depending on the purpose of the T&R study.

Action requested/Staff Recommendation: Staff recommends approving a contract with Stantec for traffic and revenue engineering services for a term of five years with a not to exceed cumulative payment obligation (including obligation for Consultant's profit) in the amount established for these services in the Authority's annual operating budget. The contract also provides for two optional extensions, each for two years, at the end of the initial five year term

Backup provided: Draft Resolution
Draft Contract

**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 24-0XX

**APPROVING A CONTRACT WITH STANTEC CONSULTING SERVICES, INC. FOR
TRAFFIC AND REVENUE ENGINEERING SERVICES**

WHEREAS, the Central Texas Regional Mobility Authority (Mobility Authority) has an ongoing need for traffic and revenue engineering services on its existing toll projects and to develop new toll projects; and

WHEREAS, by Resolution No. 24-030, dated June 26, 2024, the Board of Directors awarded a contract to Stantec Consulting Services, Inc. (Stantec) for traffic and revenue engineering services and authorized the Executive Director to negotiate a contract with Stantec; and

WHEREAS, the Executive Director and Stantec have negotiated a proposed contract for traffic and revenue engineering services which is attached hereto as Exhibit A and sets forth the scope of services, compensation and other terms; and

WHEREAS, the Executive Director recommends that the Board approve the contract with Stantec for traffic and revenue engineering services in the form or substantially the same form attached hereto as Exhibit A.

NOW THEREFORE, BE IT RESOLVED that the Board of Directors hereby approves the contract with Stantec Consulting Services, Inc. for traffic and revenue engineering services; and

BE IT FURTHER RESOLVED that the Executive Director is hereby authorized to execute the contract with Stantec Consulting Services, Inc. on behalf of the Mobility Authority in the form or substantially the same form attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 28th day of August 2024.

Submitted and reviewed by:

Approved:

James M. Bass
Executive Director

Robert W. Jenkins, Jr.
Chairman, Board of Directors

Exhibit A

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY
AGREEMENT FOR
TRAFFIC AND REVENUE ENGINEERING SERVICES

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**CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY
AGREEMENT FOR
TRAFFIC AND REVENUE ENGINEERING SERVICES**

This Professional Services Agreement (the “Agreement”) is made and entered into by and between the Central Texas Regional Mobility Authority (the “Authority” or “CTRMA”), a regional mobility authority and a political subdivision of the State of Texas, and Stantec Consulting Services Inc. (the “Consultant”) to be effective as of the [] day of [] (the “Effective Date”) with respect to traffic and revenue engineering services to be performed by the Consultant, as an independent contractor, for the Authority.

WITNESSETH:

WHEREAS, pursuant to that certain Request for Qualifications dated May 15, 2024 (the “RFQ”), the Authority sought to identify and obtain the services of qualified engineering firm(s) to provide traffic and revenue engineering services for the Authority; and

WHEREAS, three (3) firms submitted responses setting forth their respective qualifications for the work; and

WHEREAS, on June 26, 2024, the CTRMA Board authorized the Executive Director to negotiate separate contracts for Traffic and Revenue engineering services with each of the three (3) qualified providers; and

WHEREAS, this Agreement has been negotiated and finalized between those parties whereby the services shall be provided by the Consultant to the Authority at a fair and reasonable price;

NOW, THEREFORE, in consideration of payments hereinafter stipulated to be made to the Consultant by the Authority, the parties do hereby agree as follows:

**ARTICLE 1
THE SERVICES**

The Authority agrees to and hereby retains the Consultant, as an independent contractor, and the Consultant agrees to provide services to the Authority upon the terms and conditions provided in this Agreement. The Authority is the sole and exclusive client of the Consultant for the purposes of this Agreement, and this Agreement is exclusively between the Authority and the Consultant. The scope of services (the “Services”), which is described in detail in Appendix A attached hereto and incorporated herein, shall include, but not be limited to, rate/revenue analysis, traffic modeling, technical assistance, problem resolution assistance, project management duties, and duties imposed on the Traffic Consultant by Authority trust agreements. As directed by the Authority by separate Work Authorization, the Consultant shall perform such Services in relation to all CTRMA turnpike projects and potential projects, which may include, but are not limited to (1) the 183-A Turnpike; (2) 290 East Toll; (3) SH 71 Toll; (4) SH 45 Southwest Toll (5) 183 South Toll; and (6) 183 North Toll; (7) MoPac Express; and (8) MoPac South Toll.

The Consultant, as part of the Services, also shall assist the Authority in achieving the goals established in the Authority’s Strategic Plan, as adopted pursuant to Texas Transportation Code § 370.261 and as it may be amended from time to time by the CTRMA Board of Directors. For specific aspects of the Services, to the extent required by any trust agreement, the Consultant shall be expected to operate independently from the Authority and without extensive oversight and direction. The Consultant shall commit the personnel and resources reasonably required to respond promptly and fully to the

responsibilities and tasks assigned by the Authority throughout the term of the Consultant's performance of the Services described in this Agreement.

By written notice or order, Authority may, from time to time, order work suspension and/or make changes in the general scope of this Agreement, including, but not limited to, the services furnished to Authority by Consultant as described in the Scope of Work contained in the Work Authorization. If any such work suspension or change causes an increase or decrease in the price of said Work Authorization, or in the time required for its performance, Consultant shall promptly notify Authority thereof and assert its claim for adjustment within ten (10) calendar days after the change or work suspension is ordered, and an equitable adjustment shall be negotiated.

ARTICLE 2
"TRAFFIC CONSULTANTS" UNDER TRUST AGREEMENTS

Without limiting the provision of Article 1 above, and subject to a Work Authorization and the Work Authorization requirements found in Article 3 herein, the Consultant shall perform the obligations of the "Traffic Consultants" under the Authority's current Master Trust Indenture, as amended, and, as agreed by the Parties, all supplemental, superceding, or additional trust agreements (collectively the "Trust Agreements"). The Authority has covenanted in Section 714 of the current Trust Agreement that, until the bonds issued in accordance with that Trust Agreement and the interest thereon shall have been paid or provision for such payment shall have been made, it will employ the Traffic Consultants for the purpose of performing and carrying out the duties imposed on it by the Trust Agreement. Those duties are summarized in the Scope of Services and provide a general, but not comprehensive, listing of the types of obligations the Consultant will be requested to perform under the Trust Agreements.

ARTICLE 3
COMPENSATION

Authorization for Consultant to perform the Services, compensation for Consultant's work, and other aspects of the mutual obligations concerning Consultant's work and payment therefore are as follows:

- a) Notwithstanding any provisions of this Agreement to the contrary, Authority and Consultant mutually agree that Authority's annual cumulative payment obligation (including obligation for Consultant's profit) shall not exceed the amount established for these services in the Authority's annual operating budget.
- b) **BASIS FOR COMPENSATION.** Subject to the terms of a Work Authorization issued pursuant to subsection 3.c. below, the Authority agrees to pay, and the Consultant agrees to accept as full and sufficient compensation and reimbursement for the performance of all Services as set forth in this Agreement, hourly rates for the staff working on the assignment computed as follows:

$$\text{Direct Labor Cost} \times (1.0 + \text{FAR}) \times 1.10$$

where Direct Labor Cost equals salary divided by 2080; FAR equals Consultant's most recent audited overhead rate under 48 C.F.R. Part 31, Federal Acquisition Regulations (FAR 31); and 1.10 reflects a 10 percent (10%) profit. Representative rates computed through this methodology as of the Effective Date of this Agreement are reflected in

Appendix B. Rates will be revised annually to reflect adjustments to the Direct Labor Costs and audited FAR rates; no adjustment shall be made to the specified profit percentage. The first adjustment shall be considered in January 2025. All adjustments shall be agreed to by the parties in writing prior to implementation, and the Authority shall have the right to review and/or audit Consultant's Direct Labor Costs and FAR rates upon written request and as provided in subsection 3.f. hereto. During the term of this Agreement, Consultant shall provide to the Authority, prior to requesting any adjustment to rates, a copy of the report establishing a new FAR rate for Consultant. The Consultant represents that neither the auditable overhead rate nor the profit percentage used under this Agreement shall exceed the auditable overhead rate or profit percentage utilized by the Consultant in its agreement(s) with, or subcontracts for, traffic and revenue engineering services (or comparable work) for the Texas Department of Transportation ("TxDOT"), any other regional mobility authority, or any similar transportation authority in the State of Texas.

The payment of the hourly rates and allowed costs shall constitute full payment for all Services, liaisons, products, materials, and equipment required to deliver the Services.

- c) **COMPENSATION FOR WORK AUTHORIZATIONS.** The Services to be performed by the Consultant pursuant to this Agreement shall be assigned by the Executive Director or designee and documented in a manner appropriate for the size and complexity of the specific tasks. Each activity, task, or project shall be performed pursuant to a separate Work Authorization, signed by the Executive Director or designee and the Consultant. Work shall be in accordance with the scope, schedule, and budget set forth in said Work Authorization. The standard form of Work Authorization is attached hereto and incorporated herein as Appendix C, which standard form may be modified during the term of this Agreement upon the reasonable request of the Executive Director or designee and agreement of the Consultant. Upon written directive from the Executive Director or designee (which may occur via electronic mail), the Consultant shall prepare the Work Authorization for the specific task, to be submitted for the Executive Director or designee's approval. No work shall begin on the activity until the Work Authorization is approved and fully executed. The basis for payment on each Work Authorization will be either (i) lump sum or (ii) hourly rate as computed pursuant to subsection 3.b. above, as stipulated in the Work Authorization. In neither case will the maximum amount specified in a Work Authorization be exceeded without prior written approval from the Authority. The costs associated with work performed on any Work Authorization will be tracked and reported to the Authority separately from other work performed by the Consultant. The monthly invoice to the Authority will include a progress summary of the work performed the previous month on each ongoing Work Authorization.
- d) **EXPENSES.** As indicated above, the compensation computed in accordance with subsections 3.b. and 3.c. is anticipated by the Authority and the Consultant to be full and sufficient compensation and reimbursement for the Services. Notwithstanding the foregoing, the Consultant shall be entitled to reimbursement for reasonable out-of-pocket expenses actually incurred by the Consultant that are necessary for the performance of its duties under this Agreement, said expenses being limited to travel costs incurred in conformance with the Authority's Travel Expense Policy set forth in Chapter 3, Subchapter D of the Authority's Policy Code, printing costs, automobile expenses being reimbursed at the federal mileage rates for travel originating from the office of the applicable Consultant employee or subconsultant, application fees, delivery charges, and other expenses directly approved, in advance, by the Authority. Except for automobile

expenses paid at the federal mileage rate and travel paid at state approved rates (if available), all such reimbursement shall be at one-hundred percent (100%) of the actual cost thereof paid by the Consultant to unaffiliated entities; provided, however, that all non-travel related amounts in excess of \$1,500 for which the Consultant intends to seek reimbursement pursuant to this subsection 3.d. must be approved in advance and in writing by the Authority, except when such advance approval is impractical due to a bona fide emergency situation. The Authority shall not reimburse the Consultant for travel, lodging, and similar expenses incurred by the Consultant to bring additional staff to its local office or to otherwise reassign personnel to provide basic engineering and technical support of the Consultant's performance of the Services. The Consultant shall take all reasonable steps to acquire all goods and services subject to reimbursement by the Authority under this Agreement on a tax-free basis pursuant to the Authority's tax-exempt status described in subsection 3.i.

- e) **NON-COMPENSABLE TIME.** Time spent by the Consultant's employees or subconsultants to perform Services or functions capable of being carried out by other, subordinate personnel with a lower hourly rate shall be billed at a rate equivalent to that of the applicable qualified subordinate personnel. Time spent by the Consultant's personnel or subconsultants in an administrative or supervisory capacity not related to the performance of the Services shall not be compensable. Time spent on work that is in excess of what would reasonably be considered appropriate for the performance of such Services shall not be compensable. No compensation shall be made for revisions to the Consultant's or subconsultants' Services or deliverables required due in any way to the error, omission, or fault of the Consultant, its employees, agents, subconsultants, or contractors.

- f) **INVOICES AND RECORDS.** The Consultant shall submit one (1) copy of its monthly invoices certifying the fees charged and expenses incurred in providing the Services under this Agreement during the previous month and shall also present a reconciliation of monthly invoices and the Work Authorization (and related estimates) to which the work relates. Each invoice shall be in such detail as is required by the Authority and, if the work is eligible for payment through a financial assistance agreement with TxDOT, in such detail as required by TxDOT, including a breakdown of Services provided on a project-by-project basis and/or pursuant to specified Work Authorizations, together with other Services requested by the Authority. Upon request of the Authority, the Consultant shall also submit certified time and expense records and copies of invoices that support the invoiced fees and expense figures. All invoices must be consistent with the rates represented in Appendix B, and direct labor costs for employees performing work for the Authority must be provided with any invoice reflecting such work. Unless waived in writing by the Executive Director or his designee, no invoice may contain, and the Authority will not be required to pay, any charge which is more than three (3) months old at the time of invoicing. All books and records relating to the Consultant's or subconsultants' time, out-of-pocket expenses, materials, or other services or deliverables invoiced to the Authority under this Agreement shall be made available during the Consultant's normal business hours to the Authority and its representatives for review, copying, and auditing throughout the term of this Agreement and, after completion of the work, for three (3) years, or such period as is required by Texas or Federal law, whichever is longer.

- g) **EFFECT OF PAYMENTS.** No payment by the Authority shall relieve the Consultant of its obligation to deliver timely the Services required under this Agreement. If after approving or paying for any Service, product or other deliverable, the Authority determines that said Service, product or deliverable does not satisfy the requirements of

this Agreement, the Authority may reject same and, if the Consultant fails to correct or cure same within a reasonable period of time and at no additional cost to the Authority, the Consultant shall return any compensation received, therefore. In addition to all other rights provided in this Agreement, the Authority shall have the right to set off any amounts owed by the Consultant pursuant to the terms of this Agreement upon providing the Consultant prior written notice thereof.

- h) PLACE OF PAYMENT. Payments owing under this Agreement will be made by the Authority within thirty (30) days after receipt of the monthly invoice therefore, together with suitable supporting information, provided that if the payment is one eligible for reimbursement to the Authority from TxDOT, payment will be made within fifteen (15) business days of receipt by the Authority of the TxDOT payment. In the event the Authority disputes payment, the Authority will pay the undisputed portion when due. Payment shall be forwarded to the address shown for the Consultant:

Stantec Consulting Services Inc.
13980 Collections Center Drive
Chicago, IL 60693

- i) TAXES. All payments to be made by the Authority to the Consultant pursuant to this Agreement are inclusive of federal, state, or other taxes, if any, however designated, levied, or based. The Authority acknowledges and represents that it is a tax-exempt entity under Sections 151.309, et seq., of the Texas Tax Code. Title to any consumable items purchased by the Consultant in performing this Agreement shall be deemed to have passed to the Authority at the time the Consultant takes possession or earlier, and such consumable items shall immediately be marked, labeled, or physically identified as the property of the Authority, to the extent practicable.
- j) AS-NEEDED BASIS. As provided for above, the Authority shall request that the Consultant perform specific Services on an as-needed basis and through the issuance of Work Authorizations. No representation or assurance has been made on behalf of the Authority to the Consultant as to the total compensation to be paid to the Consultant under this Agreement.
- k) COMPENSATION OF SUBCONSULTANTS. As noted in the Consultant's response to the RFQ, the Consultant will employ subconsultants providing Services under this Agreement. All subconsultants providing Services under this Agreement shall be subject to, and compensated or reimbursed in accordance with, all requirements of this Article 3, provided that each subconsultant shall utilize its own actual hourly rates (computed using its own multiplier based on actual audited FAR rates or audited overhead rates if FAR rates are not available) provided that no such rates shall exceed the corresponding rates paid by the Consultant for its personnel of comparable grade, category and experience, and further provided that no Subconsultant's FAR rate or audited overhead rate may exceed that of the Consultant without the prior written consent of the Authority. The Consultant agrees to pay its subconsultants for satisfactory performance of their contracts no later than thirty (30) days from its receipt of payment from the Authority. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Authority. This clause applies to payments to all subconsultants. Consultant is authorized to use those subconsultants identified in Appendix D attached hereto and incorporated herein, being those subconsultants identified in the response of

Consultant to the RFQ. Additional subconsultants may only be utilized with the prior written consent of the Executive Director of the Authority.

- 1) **MOST FAVORED CUSTOMER.** The Consultant shall voluntarily and promptly disclose to the Authority, and immediately provide the Authority with, the benefits of any discounted hourly fees and rates offered by the Consultant to any public entity customer in the State of Texas for comparable traffic and revenue studies. The Consultant hereby represents to the Authority, as of the effective date of this Agreement and throughout the term thereof, that except as previously disclosed in writing it has and will have no contract or arrangement with any public entity customer in the State of Texas for comparable traffic and revenue studies that provides such customer with fees, or rates that are more favorable than those afforded the Authority under this Agreement. The Consultant shall make available to the Authority for review, copying, and auditing throughout the term of this Agreement and for three (3) years or such period as is required by Texas or Federal law, whichever is longer, after the expiration thereof all such books and records as shall be necessary for the Authority or its representatives to determine compliance with this provision.

ARTICLE 4 TIME OF PERFORMANCE

It is understood and agreed that the initial term of this Agreement is for a period of five (5) years, commencing on the Effective Date, and concluding [_____], subject to the earlier termination of this Agreement pursuant to Articles 5 or 6 below or further extension upon agreement of both parties. The term of this Agreement may be renewed for up to two (2) additional two (2) year periods pursuant to the agreement of the parties and approval of the renewal by the CTRMA Board of Directors. In addition to any termination rights set forth in this Agreement, either party may elect not to extend the term of one or both of the renewal years by providing sixty (60) days written notice to the other prior to the end of the initial term of the first renewal term. Absent such notice or termination pursuant to other provisions of this Agreement, the renewal terms will automatically take effect. If at any time during the contract term the Consultant cannot provide the requested Services within the time required by the Authority or for any other reason, the Authority reserves the unilateral right to procure the Services from any other source it deems capable of providing those Services.

ARTICLE 5 TERMINATION FOR DEFAULT

Time is of the essence with respect to the performance and completion of all the Services to be furnished by the Consultant pursuant to Work Authorizations issued, and which specify an agreed-upon completion or delivery date. Without limiting the foregoing, the Consultant shall furnish all Services in such a manner and at such times as the development schedules of the Projects require so that no delay in the progression of the evaluation, funding, design, or construction of the Projects will be caused by or be in any way attributable to the Consultant. Should the Consultant at any time, in the reasonable opinion of the Authority, not carry out its obligations under this Agreement or not be progressing toward completion of the Services to be rendered hereunder in an expeditious manner, or if the Consultant shall fail in any manner to discharge any other of its obligations under this Agreement, the Authority may, upon providing the Consultant with thirty (30) days prior written notice pursuant to Article 5 hereof and opportunity to cure, terminate this Agreement effective on the date following said 30-day notice and cure period (the "Termination Date"). Such termination shall not constitute a waiver or release by the Authority of any claims for damages, claims for additional costs incurred by the Authority to complete and/or correct the work

described in this Agreement, or any other claims or actions arising under this Agreement or available at law or equity which it may have against the Consultant for its failure to perform satisfactorily any obligation hereunder, nor shall such termination pursuant to this Article 5 or Article 6 below abrogate or in any way affect the indemnification obligations of the Consultant set forth in Article 17 hereof.

If the Authority shall terminate this Agreement as, provided either in this Article 5 or Article 6, no fees of any type, other than fees due and payable pursuant to Article 3 hereof for work performed and acceptable to the Authority, as of the Termination Date or Optional Termination Date, as applicable, shall thereafter be paid to the Consultant, and the Authority shall have a right to set off or otherwise recover any damages incurred by reason of the Consultant's breach hereof, together with the right to set off amounts owed to the Consultant pursuant to the indemnity provisions. In determining the amount of any payments owed to the Consultant, the value of the work performed by the Consultant prior to termination shall be no greater than the value that would result by compensating the Consultant in accordance with Article 3 hereof for all Services performed and expenses reimbursable in accordance with this Agreement.

ARTICLE 6 OPTIONAL TERMINATION

In addition to the process for termination described above, this Agreement may also be terminated as follows:

- a) **GENERALLY.** The Authority has the right to terminate this Agreement at its sole option, at any time with or without cause, by providing thirty (30) days written notice of such intention to terminate pursuant to this subsection 6.a. hereof and by stating in said notice the "Optional Termination Date". Upon such termination, the Authority shall enter into a settlement with the Consultant upon an equitable basis as determined by the Authority, which shall fix the value of the work performed by the Consultant prior to the Optional Termination Date. In determining the value of the work performed, the Authority in all events shall compensate the Consultant for any reasonable costs or expenses attributable to the exercise of the Authority's optional termination, including reasonable costs related to developing a transition plan and providing data as provided for in Article 7, provided, however, that no consideration will be given to anticipated profit which the Consultant might possibly have made on the uncompleted portion of the Services.
- b) **NO FURTHER RIGHTS, ETC.** Termination of this Agreement and payment of an amount in settlement as described in this Article 6 shall extinguish all rights, duties, obligations, and liabilities of the Authority and the Consultant under this Agreement, and this Agreement shall be of no further force and effect, provided, however, such termination shall not act to release the Consultant from liability for any previous default either under this Agreement or under any standard of conduct set by common law or statute. Requirements that survive termination are outlined in Article 35.
- c) **NO FURTHER COMPENSATION.** If the Authority shall terminate this Agreement as provided in this Article 6, no fees of any type, other than fees due and payable as of the Optional Termination Date, shall thereafter be paid to the Consultant, provided that the Authority shall not waive any right to damages incurred by reason of the Consultant's breach thereof. The Consultant shall not receive any compensation for Services performed or expenses incurred by the Consultant after the Optional Termination Date, and any such Services performed, or expenses incurred shall be at the sole risk and expense of the Consultant.

ARTICLE 7
TERMINATION, GENERALLY

The Authority's rights and options to terminate this Agreement, as provided in any provision of this Agreement, shall be in addition to, and not in lieu of, any and all rights, actions, options, and privileges otherwise available under law or equity to the Authority by virtue of this Agreement or otherwise. Failure of the Authority to exercise any of its said rights, actions, options, and privileges to terminate this Agreement as provided in any provision of this Agreement or otherwise shall not be deemed a waiver of any of said rights, actions, options, or privileges or of any rights, actions, options, or privileges otherwise available under law or equity with respect to any continuing or subsequent breaches of this Agreement or of any other standard of conduct set by common law or statute.

Upon request by the Executive Director of the Authority, and subject to Article 13 hereto, The Consultant shall develop a transition plan to be implemented upon termination of this Agreement with the Consultant for any reason or upon the release of any subconsultant so as to ensure a smooth, efficient, and uninterrupted transition to any successor Consultant or subconsultant. The plan shall anticipate the steps necessary to transfer documents, computerized data, plans, work tasks, etc. in possession of or to be provided by the Consultant or its subconsultant(s), as the case may be, and include a schedule of events necessary to complete the transition. The plan should include, but not be limited to, a list of original documents/data being held on behalf of the Authority by the Consultant or its subconsultants; the manner and form in which information is being held; accessibility to the information; the Consultant's records retention policy and/or plan; and strategy to minimize disruption of Services in the event of the release of a subconsultant. A copy of the plan shall be given to the Executive Director for review and approval within thirty (30) days of receipt of the Executive Director's request and shall be updated as necessary to reflect any changes in Consultant activity.

ARTICLE 8
SUSPENSION OR MODIFICATION OF SERVICES; DELAYS AND DAMAGES

In addition to the foregoing rights and options to terminate this Agreement, the Authority may elect to suspend any portion of the Services of the Consultant hereunder, but not terminate this Agreement, by providing the Consultant with prior written notice to that effect. Thereafter, the suspended Services may be reinstated and resumed in full force and effect upon receipt from the Authority of thirty (30) days prior written notice requesting same. Similarly, the Authority may expand, limit, or cancel any portion of the Services previously assigned to the Consultant in accordance with this Agreement. The Consultant shall not be entitled to any damages or other compensation of any form in the event that the Authority exercises its rights to suspend or modify the Services pursuant to this Article 8, provided, however, that any time limits established by the parties in any Work Authorization or otherwise for the completion of specific portions of the Services suspended pursuant to this Article 8 shall be extended to allow for said suspension or modifications thereof. Without limiting the foregoing, the Consultant agrees that no claims for damages or other compensation shall be made by the Consultant for any delays or hindrances occurring during the progress of any portion of the Services specified in this Agreement as a result of any suspension or modification of the Services or otherwise. Such delays or hindrances, if any, shall be provided for by an extension of time for such reasonable periods as the Authority may decide. It is acknowledged, however, that permitting the Consultant to proceed to complete any Services or any part of them after the originally specified date for completion, or after the date to which the time for completion may have been extended, shall in no way operate as a waiver on the part of the Authority or any of its rights herein.

ARTICLE 9
PERSONNEL, EQUIPMENT AND MATERIAL, GENERALLY

Consultant shall provide personnel and equipment as follows:

- a) **ADEQUATE PERSONNEL, ETC.** The Consultant shall furnish and maintain, at its own expense, adequate and sufficient personnel (drawn from its own employees or from approved subconsultants) and equipment, in the reasonable opinion of the Authority, to perform the Services with due and reasonable diligence customary of an engineering firm enjoying a favorable national reputation, and in all events without delays attributable to the Consultant which have a reasonable likelihood of adversely affecting the progress of others involved with one or more of the Projects or the progress of the feasibility evaluation, design or construction of any such Project. All persons, whether employees of the Consultant or of an approved subconsultant, providing the Services shall be fully licensed to the extent required by their professional discipline associations' codes or otherwise by law.
- b) **REMOVAL OF PERSONNEL.** All persons providing the Services, whether employees of the Consultant or of an approved subconsultant, shall have such knowledge and experience as will enable them, in the Consultant's reasonable belief, to perform the duties assigned to them. Any such person who, in the opinion of the Authority, is incompetent or by his/her conduct becomes detrimental to the provision of the Services shall, upon request of the Authority, immediately be removed from the Services. The Consultant shall furnish the Authority with a fully qualified candidate for the removed person within ten (10) days thereafter, provided, however, said candidate shall not begin work under this Agreement unless and until approved by the Authority.
- c) **CONSULTANT FURNISHES EQUIPMENT, ETC.** Except as otherwise specified or agreed to by the Authority, the Consultant shall furnish all equipment, transportation, supplies, and materials required for its Services under this Agreement.

ARTICLE 10
KEY PERSONNEL

The Consultant acknowledges and agrees that the individual(s) identified on Appendix E attached hereto and incorporated herein are key and integral to the satisfactory performance of the Consultant under this Agreement. Throughout the term of this agreement, the Consultant agrees that the identified individual(s), whether employee(s) of the Consultant or of an approved subconsultant, will remain in charge of the performance of the Services and shall devote substantial and sufficient time and attention thereto. The death or disability of any such individual, his/her disassociation from the Consultant or the approved subconsultant, or his/her failure or inability to devote sufficient time and attention to the Services shall require the Consultant promptly to replace said individual with a person suitably qualified and otherwise acceptable to the Authority. In no event shall the Consultant remove, transfer, or reassign any individual identified on Appendix E except as instructed by, or with the prior written consent of, the Authority, which consent shall not be reasonably withheld. The Consultant shall use its best efforts to enhance continuity in the key personnel, subconsultants, and other employees regularly performing the Services. Individuals may be added to Appendix E with the mutual consent of the Consultant and the Authority.

ARTICLE 11
BUSINESS OPPORTUNITY PROGRAM AND POLICY COMPLIANCE

It is the policy of the Authority's Board of Directors that disadvantaged and small business have the maximum practicable opportunity to participate in the awarding of Authority contracts and related subcontracts. To do so the Authority has developed a Business Opportunity Program and Policy ("BOPP"), which is incorporated herein by reference for all purposes. The Authority requires contractors to comply with the BOPP. The Consultant acknowledges that certain Services to be performed under this Agreement are subcontractable and will be subcontracted in accordance with the BOPP and as represented in Consultant's proposal in response to the RFQ. Consultant agrees to submit monthly subcontracting reports as part of its monthly invoices.

ARTICLE 12
PLANNING AND PERFORMANCE REVIEWS; INSPECTIONS

As directed by the Authority, key personnel shall meet with the Authority's Executive Director and/or his designee(s) upon request (a) to assess the Consultant's progress under this Agreement and performance of the Services; and (b) to plan staffing levels to be provided by the Consultant to the Authority for the upcoming calendar year. The Consultant shall permit inspections of its Services and work by the Authority or others, when requested by the Authority. Nothing contained in this Agreement shall prevent the Authority from scheduling such other planning and performance reviews with the Consultant or inspections as the Authority determines necessary.

ARTICLE 13
OWNERSHIP OF REPORTS

Ownership of reports and related materials prepared by Consultant (or any subconsultant) at the direction of the Authority shall be as follows:

- a) **GENERALLY.** All of the documents, reports, plans, surveys, estimates, computer records, discs and tapes, proposals, sketches, diagrams, charts, calculations, correspondence, memoranda, survey notes, opinions, maps, photographs, drawings, data, analyses and other data and materials, and any part thereof, created, compiled or to be compiled by or on behalf of the Consultant solely under this Agreement ("work product"), including all information prepared for or posted on the Authority's website and together with all materials and data furnished to it by the Authority, shall at all times be and remain the property of the Authority and, for a period of three (3) years from completion of the Services or such period as is required by law, whichever is longer, if at any time demand be made by the Authority for any of the above materials, records, and documents, whether after termination of this Agreement or otherwise, such shall be turned over to the Authority without delay. The Authority hereby grants the Consultant a revocable license to retain and utilize the foregoing materials, said license to terminate and expire upon the earlier to occur of (a) the completion of Services described in this Agreement or (b) the termination of this Agreement, at which time the Consultant shall deliver to the Authority all such materials and documents. If the Consultant or a subconsultant desires later to use any of the data generated or obtained by it in connection with the Projects or any other portion of the work product resulting from the Services, it shall secure the prior written approval of the Authority. Notwithstanding anything contained herein to the contrary, the

Consultant shall have the right to retain a copy of the above materials, records, and documents for its archives.

- b) **SEPARATE ASSIGNMENT.** If for any reason the agreement of the Authority and the Consultant set forth in subsection 13.a. above regarding the ownership of work product and other materials is determined to be unenforceable, either in whole or in part, the Consultant hereby assigns and agrees to assign to the Authority all right, title, and interest that Consultant may have or at any time acquire in said work product and other materials which are prepared solely for this Agreement, without royalty, fee or other consideration of any sort, and without regard to whether this Agreement has terminated or remains in force. The Authority hereby acknowledges, however, that all documents and other work product provided by the Consultant to the Authority and resulting from the Services performed under this Agreement are intended by the Consultant solely for the use for which they were originally prepared. Notwithstanding anything contained herein to the contrary, the Consultant shall have no liability for the use by the Authority of any work product generated by the Consultant under this Agreement on any project other than for the specific purpose and Project for which the work product was prepared. Any other reuse of such work product without the prior written consent of the Consultant shall be at the sole risk of the Authority.

- c) **USE OF CONSULTANT WORK PRODUCT.** Except for final versions of reports which are prepared in connection with project financings, the Authority will provide Consultant written advance notice prior to releasing Consultant's work product to any third party. Upon receipt of notice, Consultant will have a reasonable amount of time to review such disclosure and provide the Authority written notice of the completion of review prior to release. The Authority acknowledges that the Consultant's work product will be developed using data that is available at the time of the execution of a given work order and will not constitute any guarantee or other assurance of future events. The Consultant will prepare work product using practices that are standard procedures in the industry.

ARTICLE 14 SUBLETTING

The Consultant shall not sublet, assign, or transfer any part of the work or obligations included in this Agreement without the prior written approval of the Authority, which approval shall not be reasonably withheld. Responsibility for sublet, assigned, or transferred work shall remain with the Consultant.

ARTICLE 15 APPEARANCE AS WITNESS AND ATTENDANCE AT MEETINGS

Consultant shall cooperate with the Authority and requests for attendance at meetings and in various types of proceedings as follows:

- a) **WITNESS.** If requested by the Authority or on its behalf, the Consultant shall prepare such traffic engineering, feasibility, or other exhibits as may be requested for all hearings and trials related to any of the Projects, the Services, or the Authority's activities generally and, further, it shall prepare for and appear at conferences at the offices of legal counsel and shall furnish competent expert engineering witnesses to provide such oral testimony and to introduce such demonstrative evidence as may be needed throughout all trials and hearings with reference to any litigation relating to the Projects, the Services, or the Authority's activities.

- b) **MEETINGS.** At the request of the Authority, the Consultant shall provide appropriate personnel for conferences at its offices, or attend meetings and conferences at (a) the various offices of the Authority, (b) at the district headquarters or offices of TxDOT, (c) the offices of the Authority's legal counsel, bond counsel, and/or financial advisors, (d) at the site of any Project, or (e) any reasonably convenient location, including remote attendance. Without limiting the foregoing, the Consultant shall provide personnel for periodic meetings with underwriters, rating agencies, and other parties when requested by the Authority.
- c) **WORK AUTHORIZATION.** In the event that services under this section are not covered by an existing Work Authorization, the Authority will issue a Work Authorization, pursuant to Article 3 hereto, to cover such services.

**ARTICLE 16
COMPLIANCE WITH LAWS AND AUTHORITY POLICIES**

The Consultant shall comply with all applicable federal, state, and local laws, statutes, ordinances, rules, regulations, codes and with the orders and decrees of any courts or administrative bodies or tribunals in any matter affecting the performance under this Agreement, including, without limitation, workers' compensation laws, antidiscrimination laws, environmental laws, minimum and maximum salary and wage statutes and regulations, health and safety codes, licensing laws and regulations, the Authority's enabling legislation (Chapter 370 of the Texas Transportation Code), and all amendments and modifications to any of the foregoing, if any. The Consultant shall also comply with the Authority's policies and procedures related to operational and administrative matters, such as, but not limited to, security of and access to the Authority information and facilities. When requested the Consultant shall furnish the Authority with satisfactory proof of compliance with said laws, statutes, ordinances, rules, regulations, codes, orders, and decrees above specified.

**ARTICLE 17
AUTHORITY INDEMNIFIED**

THE CONSULTANT SHALL INDEMNIFY AND SAVE HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, EMPLOYEES, AND AGENTS (WHICH, FOR PURPOSES OF THIS AGREEMENT, SHALL INCLUDE THE AUTHORITY'S GENERAL COUNSEL, BOND COUNSEL, AND FINANCIAL ADVISOR (S)), FROM ANY CLAIMS, COSTS OR LIABILITIES OF ANY TYPE OR NATURE AND BY OR TO ANY PERSONS WHOMSOEVER, ARISING FROM THE CONSULTANT'S NEGLIGENT ACTS, ERRORS OR OMISSIONS WITH RESPECT TO THE CONSULTANT'S PERFORMANCE OF THE WORK TO BE ACCOMPLISHED UNDER THIS AGREEMENT, WHETHER SUCH CLAIM OR LIABILITY IS BASED IN CONTRACT, TORT OR STRICT LIABILITY. IN SUCH EVENT, THE CONSULTANT SHALL ALSO INDEMNIFY AND SAVE HARMLESS THE AUTHORITY, ITS OFFICERS, DIRECTORS, EMPLOYEES, AND AGENTS (WHICH, FOR PURPOSES OF THIS AGREEMENT, SHALL INCLUDE THE AUTHORITY'S GENERAL COUNSEL, BOND COUNSEL, AND FINANCIAL ADVISOR (S)) FROM ANY AND ALL EXPENSES, INCLUDING REASONABLE ATTORNEYS' FEES, INCURRED BY THE INDEMNIFIED ENTITY (S) IN LITIGATING OR OTHERWISE RESISTING SAID CLAIMS, COSTS OR LIABILITIES. IN THE EVENT THE AUTHORITY, ITS OFFICERS, DIRECTORS, EMPLOYEES, AND AGENTS (WHICH, FOR PURPOSES OF THIS AGREEMENT, SHALL INCLUDE THE AUTHORITY'S GENERAL COUNSEL, BOND COUNSEL, AND FINANCIAL ADVISOR(S)) IS/ARE FOUND TO BE PARTIALLY AT FAULT, THE CONSULTANT SHALL, NEVERTHELESS, INDEMNIFY THE INDEMNIFIED ENTITY (S) FROM AND AGAINST THE PERCENTAGE OF NEGLIGENCE ATTRIBUTABLE TO THE

CONSULTANT, ITS OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, SUBCONSULTANTS, AND CONTRACTORS OR TO THEIR CONDUCT.

NOTWITHSTANDING THE FOREGOING, THE CONSULTANT SHALL NOT BE RESPONSIBLE FOR (A) CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE PROJECT UNLESS DEVELOPMENT OR OVERSIGHT OF SUCH MATTERS IS SPECIFICALLY ASSIGNED TO THE CONSULTANT; (B) THE FAILURE OF ANY CONTRACTOR, SUBCONTRACTOR, VENDOR, OR OTHER PROJECT PARTICIPANT, NOT UNDER CONTRACT TO THE CONSULTANT, TO FULFILL CONTRACTUAL RESPONSIBILITIES TO THE AUTHORITY OR TO COMPLY WITH FEDERAL, STATE OR LOCAL LAWS, REGULATIONS AND CODES; OR (C) PROCURING PERMITS, CERTIFICATES AND LICENSES REQUIRED FOR ANY CONSTRUCTION UNLESS SUCH PROCUREMENT RESPONSIBILITIES ARE SPECIFICALLY ASSIGNED TO THE CONSULTANT IN ACCORDANCE WITH THIS AGREEMENT.

ARTICLE 18 CONFLICTS OF INTEREST

The Consultant represents and warrants to the Authority, as of the effective date of this Agreement and throughout the term hereof, that it, its employees and subconsultants (a) have no financial or other beneficial interest in any contractor, engineer, product or service evaluated or recommended by the Consultant, except as expressly disclosed in writing to the Authority, (b) shall discharge their consulting engineering responsibilities under this Agreement professionally, impartially and independently, and after considering all relevant information related thereto, and (c) are under no contractual or other restriction or obligation, the compliance with which is inconsistent with the execution of this Agreement or the performance of their respective obligations hereunder. In the event that a firm (individually or as a member of a consortium) submits a proposal to work for the Authority, Consultant shall comply with the Authority's conflict of interest policies and shall make disclosures as if it were one of the key personnel designated under such policies.

ARTICLE 19 INSURANCE

Prior to beginning the Services designated in this Agreement, the Consultant shall obtain and furnish certificates to the Authority for the following minimum amounts of insurance:

- a) **WORKERS' COMPENSATION INSURANCE.** In accordance with the laws of the State of Texas, and employer's liability coverage with a limit of not less than \$500,000. A "Waiver of Subrogation" in favor of the Authority shall be provided.
- b) **COMMERCIAL GENERAL LIABILITY INSURANCE.** With limits not less than \$1,000,000 for bodily injury, including those resulting in death, and property damage on account of any one occurrence, with an aggregate limit of \$1,000,000. A "Waiver of Subrogation" in favor of the Authority shall be provided.
- c) **BUSINESS AUTOMOBILE LIABILITY INSURANCE.** Applying to owned, non-owned, and hired automobiles in an amount not less than \$1,000,000 for bodily injury, including death, to any one person, and for property damage on account of any one occurrence. This

policy shall not contain any limitation with respect to a radius of operation for any vehicle covered and shall not exclude from the coverage of the policy any vehicle to be used in connection with the performance of the Consultant's obligations under this Agreement. A "Waiver of Subrogation" in favor of the Authority shall be provided.

- d) **ARCHITECTS AND/OR ENGINEERS PROFESSIONAL LIABILITY INSURANCE.** In the amounts normally carried for its own protection in the practice of providing general consulting services, but in no event less than \$3,000,000 per claim and aggregate. Coverage must be continuously maintained for a period of three (3) years beyond the Consultant's completion of the Services.
- e) **EXCESS UMBRELLA LIABILITY.** With minimum limits of \$1,000,000 per claim and in the aggregate, annually, as applicable excess of the underlying policies required at a.-d. above. The Umbrella Policy shall contain the provision that it will continue in force as an underlying insurance in the event of exhaustion of underlying aggregate policy limits.
- f) **GENERAL FOR ALL INSURANCE.** The Consultant shall promptly, upon execution of this Agreement, furnish certificates of insurance to the Authority indicating compliance with the above requirements. Certificates shall indicate the name of the insured, the name of the insurance company, the name of the agency/agent, the policy number, the term of coverage, and the limits of coverage.

All policies are to be written through companies (a) registered to do business in the State of Texas; (b) rated: (i), with respect to the companies providing the insurance under subsections 19.a. through d., above, by A. M. Best Company as "A-X" or better (or the equivalent rating by another nationally recognized rating service) and (ii) with respect to the company providing the insurance under subsections 19.d. and e., a rating by A. M. Best Company or similar rating service satisfactory to the Authority and/or its insurance consultant; and (c) otherwise acceptable to the Authority.

All policies are to be written through companies registered to do business in the State of Texas. Such insurance shall be maintained in full force and effect during the life of this Agreement or for a longer term as may be otherwise provided for hereunder. Insurance furnished under subsections 19.b., and c., above, shall name the Authority additional insureds and shall protect the Authority, the Consultant, their officers, employees, directors, agents, and representatives from claims for damages for bodily injury and death and for damages to property arising in any manner from the negligent or willful wrongful acts or failures to act by the Consultant, its officers, employees, directors, agents, and representatives in the performance of the Services rendered under this Agreement. Applicable Certificates shall also indicate that the contractual liability assumed in Article 17, above, is included.

The insurance carrier shall include in each of the insurance policies required under subsections 19.a., b., c., d., and e., the following statement: "This policy will not be canceled or non-renewed during the period of coverage without at least thirty (30) days prior written notice addressed to the Central Texas Regional Mobility Authority, 3300 N Interstate 35 Frontage Rd, Suite 300, Austin, TX 78705, Attention: Executive Director."

ARTICLE 20
COORDINATION OF CONTRACT DOCUMENTS

The Statement of Qualifications for Traffic and Revenue Engineering Services and Appendices thereto, dated June 12th, 2024, submitted by Stantec Consulting Services Inc. to the Authority (“Statement of Qualification”) is attached hereto and incorporated herein as Appendix F for all purposes, provided, however, that in the event of any conflict between said Statement of Qualifications and any other provision of, appendices or exhibits to this Agreement, the Statement of Qualifications shall be subordinate and the provision, appendices, or exhibits of this Agreement shall control.

ARTICLE 21
RELATIONSHIP BETWEEN THE PARTIES

Notwithstanding the anticipated collaboration between the parties hereto, or any other circumstances, the relationship between the Authority and the Consultant shall be one of an independent contractor. The Consultant acknowledges and agrees that neither it nor any of its employees, subconsultants, or subcontractors shall be considered an employee of the Authority for any purpose. The Consultant shall have no authority to enter into any contract binding upon the Authority, or to create any obligation on behalf of the Authority. As an independent contractor, neither the Consultant nor its employees shall be entitled to any insurance, pension, or other benefits customarily afforded to employees of the Authority. Under no circumstances shall the Consultant, or its employees, subconsultants, or subcontractors, represent to suppliers, contractors or any other parties that it is employed by the Authority or serves the Authority in any capacity other than as an independent contractor. The Consultant shall clearly inform all suppliers, contractors and others that it has no authority to bind the Authority. Nothing contained in this Agreement shall be deemed or construed to create a partnership or joint venture, to create the relationship of employee-employer or principal-agent, or to otherwise create any liability for the Authority whatsoever with respect to the liabilities, obligations or acts of the Consultant, its employees, subconsultants, or subcontractors, or any other person.

ARTICLE 22
DELIVERY OF NOTICES, ETC.

In each instance under this Agreement in which one party is required or permitted to give notice to the other, such notice shall be deemed given either (a) when delivered by hand; (b) one (1) business day after being deposited with a reputable overnight air courier service; or (c) three (3) business days after being mailed by United States mail, registered or certified mail, return receipt requested, and postage prepaid. Any notices provided under this Agreement must be sent or delivered to:

In the case of the Consultant:

Stantec Consulting Services Inc.
475 Fifth Avenue
12th Floor
New York, NY 10017

Attn: Richard Gobeille, Senior Principal

In the case of the CTRMA:

Central Texas Regional Mobility Authority
3300 N. IH 35
Suite 300
Austin, TX 78705

Attn: James Bass, Executive Director

Either party hereto may from time to time change its address for notification purposes by giving the other party prior written notice of the new address and the date upon which it will become effective.

ARTICLE 23 REPORTS OF ACCIDENTS, ETC.

Within twenty-four (24) hours after occurrence of any accident or other event which results in, or might result in, injury to the person or property of any third person (including an employee or subconsultant or employee of a subconsultant of the Consultant) which results from or involves any action or failure to act of the Consultant or any employee, subconsultant, employee of a subconsultant, or agent of the Consultant or which arises in any manner from the performance of this Agreement, the Consultant shall send a written report of such accident or other event to the Authority, setting forth a full and concise statement of the facts pertaining thereto. The Consultant also shall immediately send the Authority a copy of any summons, subpoena, notice, or other documents served upon the Consultant, its agents, employees, subconsultants, or representatives, or received by it or them, in connection with any matter before any court arising in any manner from the Consultant's performance of the Services under this Agreement.

ARTICLE 24 AUTHORITY'S ACTS

Anything to be done under this Agreement by the Authority may be done by such persons, corporations, firms, or other entities as the Authority may designate.

ARTICLE 25 LIMITATIONS

Notwithstanding anything herein to the contrary, all covenants and obligations of the Authority under this Agreement shall be deemed to be valid covenants and obligations only to the extent authorized by Chapter 370 of the Texas Transportation Code and permitted by the laws and the Constitution of the State of Texas, and no officer, director, or employee of the Authority shall have any personal obligations or liability thereunder.

The Consultant is obligated to comply with applicable standards of professional care in the performance of the Services. The Consultant makes no other representation or warranty, whether express or implied, and no warranty or guarantee is included or intended in this Agreement or in any "work product" or otherwise.

The Consultant shall be entitled to rely, without requirement of further investigation, on all information supplied to the Consultant by the Authority, together with any other materials, such as prior reports or analyses prepared by or on behalf of or for the benefit of Authority.

Neither Authority nor the Consultant shall in any event be liable for any consequential, incidental, indirect, punitive, exemplary or special damages including, without limitation; loss of profits, business or goodwill of any kind from any causes of action (whether arising in contract, tort or otherwise) unless caused by their willful misconduct, negligent act or omission, or other wrongful conduct. Each party to this Agreement is obligated to take commercially reasonable steps to mitigate any damages that it may incur. Nothing herein shall constitute a waiver of any other defenses that either party may have at law or in equity.

ARTICLE 26
CAPTIONS NOT A PART HEREOF

The captions or subtitles of the several articles, subsections, and divisions of this Agreement are inserted only as a matter of convenience and for reference, and in no way define, limit or describe the scope of this Agreement or the scope or content of any of its articles, subsections, divisions, or other provisions.

ARTICLE 27
CONTROLLING LAW, VENUE

This Agreement shall be governed and construed in accordance with the laws of the State of Texas. The parties hereto acknowledge that venue is proper in Travis County, Texas, for all disputes arising hereunder and waive the right to sue and be sued elsewhere.

ARTICLE 28
COMPLETE AGREEMENT

This Agreement sets forth the complete agreement between the parties with respect to the Services and, except as provided for in Article 20 above, expressly supersedes all other agreements (oral or written) with respect thereto. Any changes in the character, agreement, terms and/or responsibilities of the parties hereto must be enacted through a written amendment. No amendment to this Agreement shall be of any effect unless in writing and executed by the Authority and the Consultant. This Agreement may not be orally canceled, changed, modified or amended, and no cancellation, change, modification or amendment shall be effective or binding, unless in writing and signed by the parties to this Agreement. This provision cannot be waived orally by either party.

ARTICLE 29
TIME OF ESSENCE

As set forth in Article 5, with respect to any specific delivery or performance date or other deadline provided hereunder, time is of the essence in the performance of the provisions of this Agreement. The Consultant acknowledges the importance to the Authority of the project schedule and will perform its obligations under this Agreement with all due and reasonable care and in compliance with that schedule.

ARTICLE 30
SEVERABILITY

If any provision of this Agreement, or the application thereof to any person or circumstance, is rendered or declared illegal for any reason and shall be invalid or unenforceable, the remainder of this

Agreement and the application of such provision to other persons or circumstances shall not be affected thereby but shall be enforced to the greatest extent permitted by applicable law.

**ARTICLE 31
AUTHORIZATION**

Each party to this Agreement represents to the other that it is fully authorized to enter into this Agreement and to perform its obligations hereunder, and that no waiver, consent, approval, or authorization from any third party is required to be obtained or made in connection with the execution, delivery, or performance of this Agreement.

**ARTICLE 32
SUCCESSORS**

This Agreement shall be binding upon and inure to the benefit of the Authority, the Consultant, and their respective heirs, executors, administrators, successors, and permitted assigns.

**ARTICLE 33
INTERPRETATION**

No provision of this Agreement shall be construed against or interpreted to the disadvantage of any party by any court, other governmental or judicial authority, or arbiter by reason of such party having or being deemed to have drafted, prepared, structured, or dictated such provision.

**ARTICLE 34
BENEFITS INURED**

This Agreement is solely for the benefit of the parties hereto and their permitted successors and assigns. Nothing contained in this Agreement is intended to, nor shall be deemed or construed to, create or confer any rights, remedies, or causes of action in or to any other persons or entities, including the public in general.

**ARTICLE 35
SURVIVAL**

The parties hereby agree that each of the provisions in the Agreement are important and material and significantly affect the successful conduct of the business of the Authority, as well as its reputation and goodwill. Any breach of the terms of this Agreement, including but not limited to the provisions of Articles 13 and 18, is a material breach of this Agreement, from which the Consultant may be enjoined and for which the Consultant also shall pay to the Authority all damages which arise from said breach. The Consultant understands and acknowledges that the Consultant's responsibilities under Articles 13, 17, 18, and all other obligations of this Agreement related to maintaining records outlined in Article 3 shall continue in full force and effect after the Consultant's contractual relationship with the Authority ends for any reason.

**ARTICLE 36
FORCE MAJEURE**

Either party shall be excused from performing its obligations under this Agreement during the time and to the extent that it is prevented from performing by an unforeseeable cause beyond its control,

including but not limited to: any incidence of fire, flood; acts of God; commandeering of material, products, plants or facilities by the federal, state or local government; national fuel shortage; or a material act or omission by the other party; when satisfactory evidence of such cause is presented to the other party, and provided further that such nonperformance is unforeseeable, beyond the control and is not due to the fault or negligence of the party not performing.

IN WITNESS WHEREOF, the parties have executed this Agreement effective on the date and year first written above.

CENTRAL TEXAS REGIONAL MOBILITY
AUTHORITY

STANTEC CONSULTING
SERVICES INC.

Gobeille, Rick Digitally signed by Gobeille, Rick
Date: 2024.08.16 15:33:31 -04'00'

By: _____ By: _____

Name: _____ Name: _____

Title: _____ Title: _____

Date: _____ Date: _____

APPENDIX A
SCOPE OF SERVICES

I. Purpose

The Consultant shall be expected to support the Authority in its communications and interactions with the Authority's accountants, rating agencies, bond insurers and underwriters, governmental entities, and the public in accordance with the highest professional standards.

The Consultant shall provide qualified technical and professional personnel to perform the duties and responsibilities assigned under the terms of this Agreement. The Authority, at its option, may elect to expand, reduce, or delete the extent of each work element described in this Scope of Services document, provided such action does not alter the intent of this Agreement.

The Authority shall request Services on an as-needed basis. There is no guarantee that any or all of the Services described in this Agreement will be assigned during the term of this Agreement. Further, the Consultant is providing these Services on a nonexclusive basis. The Authority, at its option, may elect to have any of the Services set forth herein performed by other consultants or by the Authority's staff.

II. Services

The Consultant shall be responsible for conducting complex traffic modeling and forecasting, including forecasting of revenues for bond-financed toll projects, and rendering opinions and other analyses concerning traffic and revenue projections for current and future projects as required under the trust agreements governing CTRMA's revenue bond financing.

The Scope of Services to be provided by the Consultant may include, but not be limited to, the following:

- A. Perform all duties imposed on the Traffic Consultant by the Authority's current Trust Agreement, as amended, and all supplemental, superseding, or additional trust agreements, loan documents (including Transportation Infrastructure Finance and Innovation Act credit assistance), financial assistance agreements, development agreements, and other documents related to project financing, including providing certificates and opinions related to annual reviews, proposed changes in toll rate schedules or toll classifications, and periodic bond issuances.
- B. Develop traffic and revenue projections for the existing CTRMA projects annually and for proposed new projects as requested.
- C. Provide and maintain traffic modeling tools pertinent to the CTRMA's projects and potential projects, working closely with the Capital Metropolitan Planning Organization (CAMPO), TxDOT, and other local planning organizations as necessary, to update economic, demographic and land use data.
- D. Perform special studies or reports as requested, including peer review analyses, regarding traffic, toll revenues, mobility, toll collection methods and strategies, managed lane traffic analysis and pricing strategies, and related technology and industry trends.

- E. Present reports and findings to the CTRMA Board of Directors, rating agencies and investors, local interested parties, or otherwise upon request.
- F. Work at the direction and supervision of the Authority's Executive Director and Chief Financial Officer. The firm will also be required to work cooperatively and collaboratively with other firms serving the authority, including but not limited to the authority's General Engineering Consultant, General Counsel, financial advisors, and Bond Counsel as well as with CTRMA department directors.
- G. Develop a process that both (1) provides, in a cost-effective manner, assessments of potential future traffic, revenue, and other information for corridors that may be studied for potential turnpike projects, and (2) provides a base for more detailed traffic modeling in the future as potential projects are selected for further advancement.
- H. Prepare evaluations, studies, and opinions as necessary to determine recommended toll rates and periodic toll rate adjustments for the Authority's turnpike projects.

III. Subcontracting

Services assigned to subconsultants must be approved in advance by the Authority. Notwithstanding said approval, all responsibility for subcontracted work shall remain strictly with the Consultant. The subconsultants must be qualified by the Authority to perform all work assigned to them.

In the event services of a subconsultant are authorized, the Consultant shall obtain a schedule of rate, and the Authority shall review and must approve, in its discretion, any rates, including overhead, to be paid to the subconsultant.

The Consultant shall be responsible for submitting monthly reports regarding its subcontracting activity including required BOPP reporting.

APPENDIX B
RATE SCHEDULE

Job Classification	2024 Hourly Rate
Principal	\$111.57
Project Manager	\$75.42
Senior Modeler	\$84.60
Planner	\$60.33
Senior Engineer	\$58.44
Junior Modeler	\$41.83
Junior Engineer	\$38.36

APPENDIX C

WORK AUTHORIZATION

(WORK AUTHORIZATION NO. _____)

This Work Authorization is made as of this _____ day of _____, _____, under the terms and conditions established in the AGREEMENT FOR TRAFFIC AND REVENUE ENGINEERING SERVICES, dated as of _____, _____ (the "Agreement"), between the Central Texas Regional Mobility Authority ("Authority"), represented by the Executive Director or designee, and Stantec Consulting Services Inc. ("Consultant"). This Work Authorization is made for the following purpose, consistent with the services defined in the Agreement:

[Brief description of the Project elements to which this Work Authorization applies]

Section A. – Scope of Services

A.1. Consultant shall perform the following Services:

Refer to attached scope letter.

A.2. The following Services are not included in this Work Authorization, but shall be provided as Additional Services if authorized or confirmed in writing by the Executive Director or designee.

A.3. In conjunction with the performance of the foregoing Services, Consultant shall provide the following submittals/deliverables (Documents) to the Executive Director or designee: To be determined.

Section B. – Schedule

Consultant shall perform the Services and deliver the related Documents (if any) according to the following schedule: *To be determined.*

Section C. – Compensation

C.1. In return for the performance of the foregoing obligations, the Authority shall pay to Consultant the amount not to exceed \$_____, based on the attached fee estimate. The attached fee estimate includes the name, title, and hourly rate for each employee performing the Services subject to this Work Authorization. Compensation shall be in accordance with the Agreement.

C.2. Compensation for Additional Services (if any) shall be paid by the Authority to Consultant according to the terms of a future Contract Amendment.

Section D. – Authority’s Responsibilities

The Authority shall perform and/or provide the following in a timely manner so as not to delay the Services of the Consultant. Unless otherwise provided in this Work Authorization, the Authority shall bear all costs incident to compliance with the following:

Section E. – Other Provisions

The parties agree to the following provisions with respect to this specific Work Authorization:

Except to the extent expressly modified herein, all terms and conditions of the Agreement shall continue in full force and effect.

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

By: _____

Name: _____

Title: _____

Date: _____

STANTEC CONSULTING SERVICES INC.

By: _____

Name: _____

Title: _____

Date: _____

APPENDIX D
SUBCONSULTANTS

Ally General Solutions, LLC:

*Roland Castaneda
5300 Hollister Rd, Ste 111
Houston, TX 77040
Ph: (281) 888-7682*

Bomba Consulting, LLC:

*Michael Bomba
3410 Far West Blvd, Ste 254
Austin, TX 78731
Ph: (512) 217-8411*

Novus Integrated Technology Solutions, LLC:

*Nishant Kukadia
3016 Polar Lane, Ste 301
Cedar Park, TX 78613
Ph: (512) 658-3119*

OTHON, Inc.:

*Srini Sangineni
4201B W Parmer Ln, Ste 230
Austin, TX 78727
Ph: (512) 940-8602*

CJ Hensch & Associates, Inc.:

*Roger Allen
5215 Sycamore Ave
Pasadena, TX 77503
Ph: (713) 376-1453*

APPENDIX E
KEY PERSONNEL

Title	Employee Name
Project Director	Bill Ihlo, PE
Project Manager	Tiffany Cummings, PE
Principal-in-Charge	Rick Gobeille, PE
Demographics	Haley Andrews, AICP
Travel Demand Modeling/Data Analytics	Jun Yao
Demographics	Michael Bomba, Ph.D.

APPENDIX F
CONSULTANT STATEMENT OF QUALIFICATIONS

[Attached]



Statement of Qualifications



TRAFFIC AND REVENUE ENGINEERING SERVICES

PREPARED FOR:
Central Texas Regional Mobility Authority



June 12, 2024

June 12, 2024

Attention: Finance Department

Central Texas Regional Mobility Authority

3300 N IH 35 Suite 300

Austin, Texas 78705

Reference: [Traffic and Revenue Engineering Services Request for Qualifications](#)

Dear CTRMA,

The Stantec Team is pleased to submit our qualifications to provide Traffic and Revenue Engineering On-Call Services to the Central Texas Regional Mobility Authority (CTRMA/Mobility Authority) as it moves forward with various toll facility projects now in operation or in the construction/ planning stages.

Stantec, a leader in Traffic and Revenue (T&R) analyses, has over 45 years of T&R experience, with 216 successful toll revenue bond financings totaling over \$70 billion. Stantec remains at the forefront of the toll road and express lanes industry, not only in the Austin area on your facilities, but also for toll facilities around the country including California, Washington, New York, Massachusetts, New Hampshire, Ohio, Virginia, North Carolina, South Carolina, Illinois, Georgia, and Florida. Since 2005, Stantec has worked directly with the Mobility Authority, successfully preparing reports and bring-down letters for over \$3.6 billion of toll revenue bond financing (and refinancing) for your toll facilities, as well as performing all duties imposed by the Authority's Master Trust Indenture Agreement. We are proud to have been involved with the growth of your System since the Authority's inception to the opening of 183A in 2007, to the current System of five toll roads and one express lane facility, and to the continued expansion of the System with 183A Phase III and 183N Express Lanes opening in the next year or so, developing T&R projections for all facilities in some capacity. Over the past 15+ years, Stantec has been adaptable to meet the Mobility Authority's traffic and revenue needs and would continue to be nimble in our approach to provide traffic and revenue support, including specialized studies to the Mobility Authority as your customer base grows, revenue collection challenges arise, or project priorities shift.

Our team is prepared to continue providing all of the services that you have listed in the scope of services, including toll rate evaluations and opinions for the Mobility Authority's current and future projects, maintenance of effective traffic modeling tools by using the latest transportation plans, and updating the demographic data. We are ready to provide collaborative coordination with the Mobility Authority's staff, finance team and general engineering consultants, and cost-efficient assessments of future traffic and revenues for the Mobility Authority to determine the feasibility of a potential project or initiative.

Our knowledge of your facilities and the breadth of our experience enables us to hit the ground running and to develop effective project approaches in a meaningful manner. Bill Ihlo, PE, would continue as Project Director and Tiffany Cummings, PE, would be your Project Manager. Together they would ensure that the appropriate staff will continue to be committed to your projects, assuring that the work is conducted efficiently and cost effectively. Bill and Tiffany are backed by a team of technical advisors and experts including Rick Gobeille, PE, who currently leads Stantec's Transportation and Toll Roads Group and would be the Principal-in-Charge. Bill, Tiffany and Rick are all passionate and dedicated to continuing to



provide you with our high-quality work. Together, we will provide the same meaningful, efficient and pragmatic approach you have become familiar with. This team brings over 75 years of combined experience in traffic and revenue forecasting.

Our team is strengthened further with the inclusion of Michael Bomba, Ph.D., who has developed SED forecasts which have been equaled or exceeded by actual conditions for all Austin regional toll road projects over the last 25 years. Texas-based firms, Novus and OTHON, would provide transportation plan support services as well as traffic engineering work, while CJ Hensch & Associates and AGS Engineering & Construction would provide data collection services. Our team provides a full set of skills and resources to help meet the needs of the Mobility Authority. All of the key personnel included in this proposal are well versed in Austin-area toll facility studies, have worked together in the past, and understand how to deliver successful projects for the Mobility Authority.

The Stantec Team is thrilled for the opportunity to support you in your future programs. Bill Ihlo, based in our principal New York City office, will serve as the primary contact for Stantec and has the authority to negotiate and execute the contractual terms. His contact information can be found at the end of this letter.

We look forward to the next step in your selection process, and to the potential of continuing to work with you. Please do contact us if you have any questions or require additional information.

Regards,

STANTEC CONSULTING SERVICES INC.

A handwritten signature in black ink, appearing to read "Richard J. Gobeille".

Rick Gobeille, PE
Senior Principal
475 Fifth Avenue, 12th Floor
New York, NY 10017
(212) 366-5625
rick.gobeille@stantec.com

A handwritten signature in black ink, appearing to read "William Ihlo".

William Ihlo, PE
Principal
475 Fifth Avenue, 12th Floor
New York, NY 10017
(917) 655-6463
william.ihlo@stantec.com

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I. The Firm

A. CAPABILITIES & RESOURCES OF PRINCIPAL OFFICE RESPONSIBLE FOR PERFORMING THIS WORK, REGIONAL TEXAS OFFICES & LISTING OF TEXAS OFFICE RESIDENT PERSONNEL BY DISCIPLINE WHO WOULD BE ASSIGNED TO THE CTRMA'S WORK

The Stantec community unites approximately 31,000 employees working in over 450 locations. We collaborate across disciplines and industries to bring infrastructure, buildings, and energy and resource projects to life.

Our work—professional consulting in planning, engineering, architecture, interior design, landscape architecture, surveying, environmental sciences, project management, and project economics—begins at the intersection of community, creativity, and client relationships.

Stantec will be the prime consultant, providing traffic modeling, toll revenue forecasting, feasibility assessment, and overall project management with over 45 employees included in its transportation planning and toll roads group. The principal office for performing this work is located in New York City with Bill Ihlo, PE (Project Director), Tiffany Cummings, PE (Project Manager), and Rick Gobeille, PE (Principal-in-Charge) based in that office supported by over 25 tolling staff. Traffic modeling efforts will be conducted primarily in our West Chester, PA, office, home to 6 of our modeling experts. The remaining Stantec tolling staff are located in offices around the United States with five key staff located in Texas: Haley Andrews, AICP (T&R Monitoring, Demographics, T&R Forecasting), Ami Parikh (Demographics), Marcelle Jones, JD (Indenture Compliance), and Ashish Anand, PE (Simulation Modeling) based in the Plano office, and Lutz Braeuer (Toll Systems and Technology) based in the Austin office. Haley has extensive experience working on Austin area projects, many of which were for CTRMA.

Joining our team is local Austinite Michael Bomba, Ph.D., of Bomba Consulting, LLC who will develop socioeconomic and land-use forecasts as he has for prior CTRMA studies. Novus, a transportation consulting firm based in Austin, will support Stantec with transportation plan reviews. We have also teamed with another Texas-based firm, Othon, Inc., Consulting Engineers (OTHON), to support transportation plan reviews as well as traffic engineering work. Both data collection firms

on our team, CJ Hensch & Associates, Inc. (CJH) and Ally General Solutions, LLC dba AGS Engineering & Construction (AGS), are based in Texas as well. Stantec has worked with Michael Bomba, CJH, and AGS on prior CTRMA and TxDOT studies, while Novus and OTHON staff have teamed with Stantec staff on tolling studies for other clients. Our entire team understands the projects, the Authority's needs, and each team member's needs. A table summarizing our team's staffing levels by location and discipline is on page 10.

B. FIRM'S EXPERIENCE PROVIDING COMPLEX TRAFFIC MODELING AND FORECASTING TOOLS, DEMONSTRATED SUCCESS IN FORECASTING TOLL REVENUE FOR BOND-FINANCED TRANSPORTATION PROJECTS, & EXPERIENCE IN RENDERING OPINIONS & OTHER ANALYSES CONCERNING T&R PROJECTIONS

Stantec has an over 45-year history of providing traffic and revenue (T&R) services on a variety of high profile, successful, and often complex tolling projects throughout the United States. Stantec is a nationally recognized leader in T&R analyses and traffic operations for toll facilities. Our reports have been the basis for 216 bond sales totaling over \$70 billion. Since 2019 alone, we have completed 50 bond sales for over \$19 billion for new, expanded or existing toll facilities. Our work has spanned 38 states, Canada and Mexico. In addition to the Mobility Authority, we are the on-call T&R consultant for multiple toll authorities, including but not limited to the Washington State DOT, the North Carolina Turnpike Authority, the State Road and Tollway Authority in Georgia, the Riverside County Transportation Commission, the New York State Thruway Authority, and the Texas DOT.

Working in the best interest of our public and private clients, the communities surrounding the roadways, and the wider regions, we bring our extensive knowledge of toll roads and systems to the challenge of developing credible toll facility feasibility studies. Our clients return to us repeatedly with requests to produce quick feasibility studies that answer the initial question "Does this project make sense?" as well as Investment Grade Studies that aid in their effort to obtain financing for their projects. Level I studies help clarify whether more analysis—and more money—should be expended on the project and, perhaps, provide a sense of staging. This is enormously helpful to clients and

communities as we assess the impact to the entire regional network of tolling an existing corridor with express lanes, building a new toll facility, or changing toll structures.

In addition to these early toll feasibility assessments, we also develop screening criteria for potential toll facilities, conduct traffic and revenue analyses, develop financing plans, analyze appropriate toll structures, and determine the extent to which a proposed toll facility could provide financing for itself and/or other highway projects. Our specialized Level 2 and Level 3 Investment Grade Studies provide detailed forecasts to our clients on facilities that are either under serious consideration or require bond financing and access to an investment grade rating. Whether we are working for public, quasi-public or private clients, we help them to identify the appropriate level of traffic and revenue study.

Stantec is uniquely qualified for these Traffic and Revenue Consulting Services. There is a long history and a synergy between the key tolling staff at Stantec and the CTRMA. The Stantec Team has a deep background in studying Austin's toll facilities. We have acquired knowledge and expertise from our work on CTRMA's existing and future toll facilities. We've studied US 183 as far north as Liberty Hill with our work for the 183A Phase III Project, and as far south as the Austin-Bergstrom International Airport with 183 South. We recognize the challenges surrounding the 183N Express Lanes Project, particularly as CTRMA prepares for the project to open and its critical connections to MoPac N Express Lanes. We are already assisting CTRMA navigate through these operational challenges by conducting tasks such as analyzing capacity constraints, re-evaluating opening day toll rates, and participating in discussions with CTRMA staff and its team of consultants including engineers and toll collection vendors. We know the 290E toll road inside and out and know that the next phase, extending the road to the east, is critical for Manor's mobility. We know the regional significance of 183S as a bypass around the increasingly congested IH-35. We even know the importance of small but key facilities like 71E and 45SW that provide fast and reliable connectivity to the region. Our team examines traffic from both a macro-level, analyzing how land use and regional transportation policies impact traffic, and a micro-level, recognizing how roadway geometry and signage can impact driver

behavior. Our team is always exploring opportunities to add value for our clients. We leverage the power of big data to understand traffic better and we commit funds to R&D to make our modeling tools better.

The following table presents the 50 bond sales totaling over \$19 billion that Stantec has supported since 2019:

Amount	Date	Authority
\$1,587,210,000	4/30/2019	New York State Thruway Authority
\$150,000,000	5/15/2019	Triborough Bridge and Tunnel Authority
\$125,000,000	7/17/2019	Foothill/Eastern Transportation Corridor Agency
\$137,135,000	9/10/2019	Delaware Transportation Authority
\$102,465,000	9/20/2019	Triborough Bridge and Tunnel Authority
\$464,650,000	10/2/2019	MassDOT Metropolitan Highway System
\$857,625,000	10/18/2019	New York State Thruway Authority
\$1,693,245,000	10/18/2019	New York State Thruway Authority
\$40,840,000	10/31/2019	New Hampshire DOT
\$48,805,000	11/20/2019	Rhode Island Turnpike and Bridge Authority
\$46,050,000	11/26/2019	Triborough Bridge and Tunnel Authority
\$200,000,000	11/26/2019	Triborough Bridge and Tunnel Authority
\$50,265,000	12/17/2019	Central Texas Regional Mobility Authority
\$897,055,000	12/17/2019	Foothill/Eastern Transportation Corridor Agency
\$102,070,000	1/23/2020	Triborough Bridge and Tunnel Authority
\$450,000,000	2/20/2020	New York State Thruway Authority
\$683,780,000	2/20/2020	Texas Transportation Commission
\$525,000,000	5/22/2020	Triborough Bridge and Tunnel Authority
\$295,260,000	8/25/2020	Central Texas Regional Mobility Authority
\$217,335,000	8/25/2020	Delaware Transportation Authority
\$222,300,000	9/10/2020	Tampa-Hillsborough Expressway Authority
\$339,605,000	10/27/2020	Central Texas Regional Mobility Authority
\$187,200,000	1/15/2021	Triborough Bridge and Tunnel Authority
\$135,010,000	1/26/2021	Ohio Turnpike and Infrastructure Commission
\$291,900,000	1/27/2021	Triborough Bridge and Tunnel Authority
\$104,700,000	1/27/2021	Triborough Bridge and Tunnel Authority
\$759,722,000	2/9/2021	Foothill/Eastern Transportation Corridor Agency
\$499,260,000	3/23/2021	Central Texas Regional Mobility Authority
\$400,000,000	3/26/2021	Triborough Bridge and Tunnel Authority
\$192,835,000	6/4/2021	Triborough Bridge and Tunnel Authority
\$73,300,000	7/29/2021	New York State Bridge Authority
\$40,935,000	7/29/2021	New York State Bridge Authority
\$549,480,000	9/23/2021	New York State Thruway Authority
\$615,059,000	10/5/2021	Riverside County Transportation Commission
\$98,985,000	9/25/2021	Triborough Bridge and Tunnel Authority
\$615,390,000	10/7/2021	Central Texas Regional Mobility Authority
\$164,180,000	10/22/2021	Triborough Bridge and Tunnel Authority
\$1,125,541,000	12/17/2021	San Joaquin Hills Transportation Corridor Agy
\$96,335,000	1/25/2022	Triborough Bridge and Tunnel Authority
\$754,830,000	2/16/2022	Metropolitan Washington Airports Authority
\$310,220,000	2/16/2022	Ohio Turnpike and Infrastructure Commission

\$90,295,000	4/13/2022	New Hampshire DOT
\$400,000,000	8/16/2022	Triborough Bridge and Tunnel Authority
\$128,910,000	8/23/2022	Delaware Transportation Authority
\$148,470,000	12/8/2022	Triborough Bridge and Tunnel Authority
\$828,225,000	1/27/2023	Triborough Bridge and Tunnel Authority
\$260,560,000	6/16/2023	Triborough Bridge and Tunnel Authority
\$370,030,000	8/9/2023	Triborough Bridge and Tunnel Authority
\$102,500,000	12/7/2023	Triborough Bridge and Tunnel Authority
\$1,024,320,000	1/31/2024	New York State Thruway Authority
\$19,603,887,000	TOTAL	

For each project, we developed the appropriate modeling tools to forecast T&R as well as defend the estimates to rating agencies, investors, underwriters, TIFIA, Trustees, and other stakeholders. For each of these sales, the required bond sale certificates were developed, trust and bond indentures followed, and appropriate level of support provided to complete a successful issue.

C. EXPERIENCE PERFORMING DUTIES IMPOSED ON TRAFFIC ENGINEERS UNDER REQUIREMENTS OF TRUST INDENTURES FOR BOND & LOAN FINANCING, INCLUDING PROVIDING CERTIFICATES & OPINIONS RELATED TO ANNUAL REVIEWS & PERIODIC BOND ISSUANCES

Stantec will continue to provide the CTRMA with expertise in all of the duties imposed on traffic engineers under the requirements of trust indentures for bond and loan financing of toll facilities. We understand these duties well from our experience on over \$70 billion of financings on toll roads and express lanes throughout the country. Our experience includes municipalities that had never run a toll facility before, to authorities that have been operating a mature system of roadways for decades, such as the New York State Thruway Authority for whom we have been working for 25 years. For each financing, the required bond sale certificates were developed, trust and bond indentures followed, and appropriate level of support provided to complete a successful issue. Our T&R staff work with our clients' financial advisors, lawyers, and bankers to ensure a successful bond sale. We have successfully performed these duties for the CTRMA on 13 bond sales totaling \$3.7 billion, the most recent in late 2021. Our experience with CTRMA's staff and the financial team leading the sales will be invaluable to the CTRMA's future financings. Beyond supporting these sales, Stantec's

T&R Team regularly makes annual assessments and reviews the actuals, forecasts, and coverage requirements within the terms of the trust indentures. Most recently, Stantec prepared monthly T&R forecasts for both the System and MoPac N Express Lanes for use in CTRMA's FY 2025 budget planning process.

Stantec has also helped prepare opinions for the Mobility Authority and other entities on toll escalation policies, veterans discounts, paypoint toll adjustments, new additions to the System, development of non-tolled roads parallel to the System, and phased openings. These evaluations were documented in written opinions presented to the Board of Directors and shared with the investment community.

D. EXPERIENCE PROVIDING AND MAINTAINING TRAFFIC MODELING TOOLS, INCLUDING DEVELOPMENT OF T&R PROJECTIONS FOR EXISTING AND PROPOSED TURNPIKE PROJECTS

Stantec regularly develops and maintains sophisticated traffic modeling tools for T&R studies, transportation planning studies, and environmental/air quality & noise studies throughout the country. Representative clients include the Washington State DOT, the New Jersey DOT, and State Road and Tollway Authority. Stantec uses a variety of modeling platforms for our traffic and revenue projects. Our basic travel demand platform for the Central Texas Region uses an integrated model combining the Capital Area Metropolitan Planning Organization (CAMPO) and Alamo Area Metropolitan Planning Organization (AAMPO) models. We have developed a process to weave these models together to provide more reliable estimates for travel in the region. The purpose of a joint model is to accurately represent long-distance trips in the Central Texas region (e.g. on IH-35 and SH 130 between Austin and San Antonio). This in turn allows us to better understand traffic on the CTRMA System. We start with the base MPO models and make adjustments to reflect the latest traffic and demographic activity for the base year.

These models are converted to a CUBE travel demand model that is then calibrated to existing conditions. The calibration process involves modifying the basic model inputs to approximate speed and volume at hundreds of key locations in and around the Project or System corridors. The calibrated models are used as the basis for future

projections. Adjustments are made to the model parameters to reflect the latest available forecasts for demographic growth and the timing and scope of infrastructure improvements in the region. These future conditions models are then used to determine future traffic and revenue projections.

The travel demand model is useful for estimating regional flows and link assignments; however, when there are operational constraints (e.g. in extremely congested areas or on managed lane projects where traffic moves between a managed lane facility, general purpose lanes and a frontage road), we also develop VISSIM microsimulation models. These models allow for the visualization and analysis of merge and weave areas, direct connectors, ramps, and other complicated flow conditions. Simulation models are used to check, for example, if the forecasted managed lane demand can actually enter and exit the facilities without creating local weaving or queuing constraints. This, in turn, may lead to adjustments to travel demand model parameters, and additional simulation model runs, in an iterative fashion, until there is general agreement between both sets of models.

E. LEGAL DISPUTES

Summary of all regulatory and legal proceedings initiated since January 1, 2019, in which the firm has been named as a claimant, plaintiff, respondent, or defendant, including the nature of the proceeding, the claims made, and resolution or current status thereof — Stantec is involved in thousands of projects annually over a vast geography. Stantec provides professional services and has been subject to inspections and investigations related to compliance with various regulatory matters, and has received warnings, citations and orders as a result. In the interest of transparency, we do advise that we have been subject to a few administrative penalties, some orders and warning letters relating to regulatory matters. In each instance, Stantec cooperated fully with the applicable regulatory agency towards a prompt resolution. Importantly, Stantec has not been convicted for any violation of any serious federal, provincial or territorial laws. As part of Stantec's continual improvement process, our functional and Risk Management teams take proactive steps to review and update practices and procedures to prevent incidents from occurring.

Importantly, there are no unsatisfied judgments or arbitration awards outstanding against Stantec. Stantec does have some legal proceedings, lawsuits, or claims pending. These are a normal part of professional services industries. All have been reported to Stantec's insurers who are in the process of adjusting/managing them. None will have a material effect on the financial position of the company or its ability to undertake this assignment. Perhaps of greater comfort to our clients is the fact that Stantec seeks to deal with client concerns and claims promptly and fairly through its Risk Management group. As a public company, Stantec has substantial assets and maintains a high professional liability insurance limit. Stantec's claims history has resulted in relatively low insurance premiums when compared with firms of similar size and character.

Summary of any protest filed by the firm related to procurement of services by any other entity since January 1, 2019, including the nature of the protest and the resolution or current status thereof — Stantec is awarded thousands of discrete projects annually. Stantec does not formally track protests against or by the company. However, in the interest of transparency, Stantec discloses knowledge of at least one protest of which it is aware.

Any early termination of the firm's work or contract for services by any authority or entity since January 1, 2019, including an explanation of the types of services and the reason for termination — Stantec performs work on thousands of discrete projects annually. All but a very few of these projects are completed successfully. Occasionally, issues arise on a project that prevents Stantec from completing an assignment. Such issues include failure of the client to secure or maintain financing; failure of the client to pay consultant invoices; and disagreements over scope of work. Stantec takes great pride in and places a high value on its long-term ongoing relationships with its clients. This is evident by the fact that the majority of our clients are repeat customers. Where issues arise on a project, Stantec makes every commercially reasonable effort to resolve matters in dispute amicably in the mutual interests of the client and Stantec. This serves both Stantec and our clients well. However, to the best of our knowledge after reasonable inquiry, except for the following matters, Stantec has not been terminated since the date of the inquiry:

In 2018, Stantec received a letter from its client, Hillsborough Area Regional Transit Authority (“HART”), terminating Stantec for cause on its project located in Tampa, FL. Stantec believes the termination was due to performance by a subconsultant of Stantec and not Stantec itself. Stantec disputed the allegation that cause existed to terminate the contract, but the matter was never formally appealed by Stantec beyond its administrative remedies.

On June 18, 2019, Stantec received a letter from its client, PLACE E-Generation One, LLC purporting to terminate for cause Stantec’s services on its project located in Minneapolis, MN. Stantec has contested the termination for cause and the matter is not currently resolved.

F. HOW THE FIRM CHARGES PROFESSIONAL FEES

Stantec charges for our efforts based on a number of factors— the direct technical labor costs, an overhead multiplier rate, and a percent fee. Costs for subconsultants and direct expenses are billed at cost, with no markup. This is consistent with the fee schedule we use for our traffic and revenue projects for TxDOT.

The overhead multiplier is audited by the State of Texas annually. The current audited rate as of June 2024 is 159.477%, and our fee is 10%. The following shows the fee accrual for an employee who spends 2 hours working on a project with an hourly rate of \$20: $2 \text{ hours} \times \$20/\text{hour} \times (100\% + 159.477\%) \times (100\% + 10\%) = \$ 114.17$

G. CONFLICTS OR POTENTIAL CONFLICTS OF INTEREST

Stantec confirms that it is not aware of any conflict of interest that may exist and be required to be reported at this time. Stantec shall endeavor not to enter into contracts with third parties or engage itself in any activities which may cause conflicts of interest. If a conflict of interest arises impacting the services, Stantec shall provide notification, and work to resolve or mitigate it as required.

Stantec’s multi-disciplinary team includes a Community Development practice in the Central Texas region. On some of our land development projects, we have engaged with entities in which some of the Board Members may have an interest. These efforts are independent of our traffic and revenue practice, and are typically done by Stantec staff who are not engaged in our traffic and revenue studies.

Stantec provides transportation planning, traffic engineering, and traffic and revenue forecasting services for other entities in the Austin area. Where a conflict may exist, we will review our anticipated scope of work with the Mobility Authority prior to entering into any new engagements with other entities, such as TxDOT, County or municipal agencies.

II. Firm Organization, Staffing and Procedures

A. ORGANIZATIONAL CHART & IDENTIFIED PERSONNEL’S TRAFFIC ENGINEERING AND REVENUE ENGINEERING FOR BOND-FINANCED TURNPIKE PROJECTS EXPERIENCE

Our organizational chart can be found on the following page. Team resumes are located in the Appendix.

Bill Ihlo, PE, Project Director: Bill has been working on T&R projects for over 40 years. He has helped support over \$12B in infrastructure financing projects, and is a trusted resource for his clients, with a strong understanding of the players in the Central Texas region. He has worked on toll facilities for clients throughout the country, but a substantial part of his career has been devoted to T&R studies in Texas. Bill was involved with the Texas Turnpike Authority doing initial roadside OD surveys for the first Austin toll roads starting in 1998. He has been working on projects for the CTRMA since 2002 and has helped develop forecasts for all of the current CTRMA system elements. Bill has accompanied Mobility Authority staff in meetings with TIFIA, the rating agencies, and the investment community. He will be the principal officer on this contract.

Bill has also participated in the team’s coordination efforts with other stakeholders in the Austin region, including discussions with TxDOT on the SH 130/290 Project and 183 North. In his time working with the Mobility Authority, Bill has worked closely with the Executive Director, Chief Financial Officer, Comptroller, Director of Engineering, and other key staff, in addition to the Authority’s General Engineering Consultants, General Counsel, Financial Advisors, Bond Counsel, and Toll Operations Division.

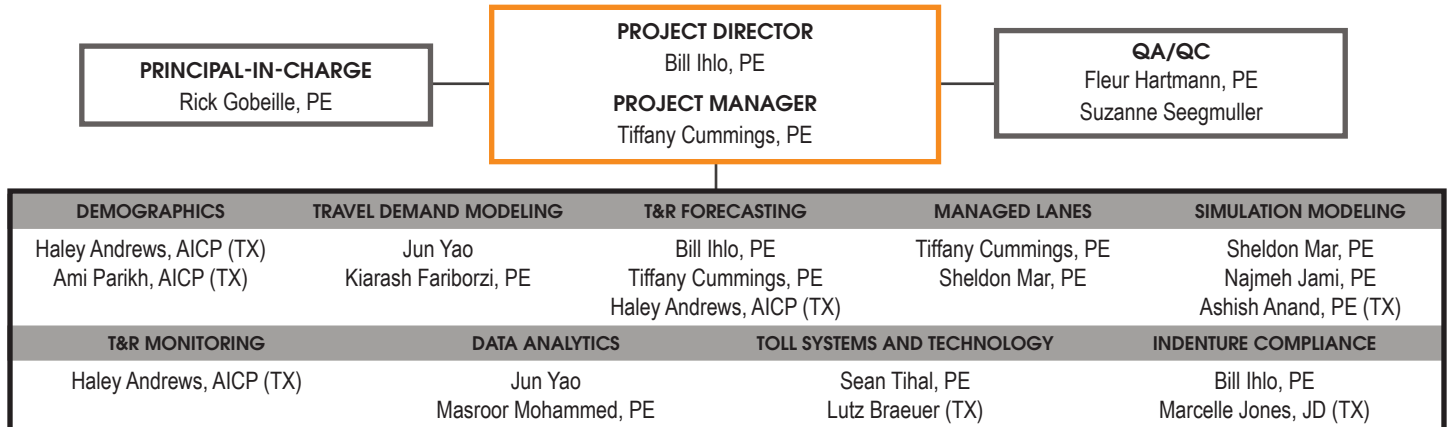
Tiffany Cummings, PE, Project Manager: As the Project Manager, the Mobility Authority’s studies have been and will continue to be Tiffany’s

Organizational Chart



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

PROJECT MANAGEMENT TEAM



SUBCONSULTANTS

DEMOGRAPHICS FORECASTS	TRANSPORTATION PLAN REVIEW	TRAFFIC ENGINEERING	DATA COLLECTION
BOMBA CONSULTING, LLC Michael Bomba, PhD (TX)	TRANSPORTATION PLAN REVIEW NOVUS* Nishant Kukadia, AICP, PMP, MBA (TX)	TRAFFIC ENGINEERING OTHON* Srini Sangineni, PE, PTP, PTOE (TX)	DATA COLLECTION CJ HENSCH* Roger Allen (TX)
	OTHON* Srini Sangineni, PE, PTP, PTOE (TX)		ALLY GENERAL SOLUTIONS* Rolando Castañeda, PE (TX)

PRINCIPAL OFFICE & OFFICER

475 Fifth Avenue, 12th Floor, New York, NY 10017
Bill Ihlo, PE, Project Director

*Texas HUB Firm and/or DBE

first priority. She has spent the majority of her 13-year career working on T&R forecasting studies for toll facilities in the Austin area for both the Mobility Authority and TxDOT. Because of her experience in the region, she is an expert in the traffic patterns, land development patterns, and rapidly developing highway network of the Austin region. Tiffany has an acute understanding of the CTRMA toll facilities through her daily and monthly monitoring of nearly every facility since their opening.

She has served as Project Manager for the last 5 investment-grade studies for the Mobility Authority, beginning with the 2019 T&R Study to refinance the CTRMA System after 45 SW was added to the System. Throughout 2020 and 2021, Tiffany prepared investment-grade forecasts to support the financings of the 183A Phase III and 183N Express Lane projects, which included support during TIFIA loan applications. For each of these T&R studies, as well as the 2018 investment-grade T&R study for the 290E Phase III Project and the 2015 investment-grade T&R study for the 183 South Project, Tiffany developed the data collection program, analyzed traffic data within the study area, oversaw the calibration of the travel demand model and microsimulation model,

prepared the traffic and revenue forecasts, and conducted sensitivity tests. Tiffany has regularly prepared T&R reports or memos that were included in Official Statements and bringdown letters during her work on the 2015, 2016, 2018, 2019, 2020, and 2021 CTRMA bond financings and refundings as well as the 2015 Central Texas Turnpike System (CTTS) bond financing for TxDOT.

Rick Gobeille, PE, Principal-in-Charge: Rick is a nationally recognized leader in toll systems technology, development and implementation, traffic and revenue forecasting, operating cost estimates, and toll facility operations. Over the course of his 40+ year career, he has prepared reports and studies, and made more than 100 presentations to ratings agencies, underwriters, and investors, in support of more than \$30B of Toll Revenue Bond Sales and Trust Agreement requirements. He has also prepared studies for the adoption of new technologies, starting with E-ZPass testing in the early 1990s. Rick provides access to approaches and solutions considered and adopted by other tolling agencies that may bring value to the Mobility Authority.

Fleur Hartmann, Technical Advisor, QA/QC: Fleur Hartmann has over

30 years of experience managing a variety of traffic and transportation projects including toll facility studies, traffic planning studies, and transit planning studies. Her toll experience includes completing toll facility feasibility and financing studies for public, private and partnered clients; HOV/HOT/managed lane studies; toll increase studies; and interchange studies for existing toll roads. She is well versed in developing diversified, interactive traffic and revenue models, researching socioeconomic databases, writing complex traffic and revenue reports for financing, and developing, setting up, and conducting origin-destination and other field surveys.

Suzanne Seegmuller, Technical Advisor, QA/QC: Suzanne Seegmuller brings more than 30 years of transportation experience with a focus in conducting financial impact analysis and T&R studies for existing and new toll road facilities. Her practical experience includes financial forecasting, market and policy analysis, cost/benefit analysis, organizational analysis and due diligence review. Additionally, she is well versed in assessing the impacts of toll increases, discount programs, plaza capacities, toll rate setting, and changes to vehicle classification systems for established toll facilities undergoing expansion or technology upgrades.

Jun Yao, Travel Demand Modeling & Data Analytics Lead: Jun has more than 15 years of experience preparing investment grade T&R forecasts. He has led the modeling efforts and developed T&R forecasts for conventional toll roads and managed lane facilities across the nation. Within Texas, the majority of his experience has been with toll roads in the Austin area including all of the CTRMA facilities and the Central Texas Turnpike System operated by TxDOT. For several managed lane facilities, Jun has also performed microsimulation analysis to evaluate the operational characteristics of the managed lanes at key access points. He has also performed extensive sensitivity analysis and risk analysis for rating agency presentations. He also leads efforts requiring big data analysis capability by developing customized programs using Python, VBA macro and SQL.

Haley Andrews, AICP, Demographics Lead, T&R Forecasting, T&R Monitoring: Haley has 11 years of experience, which includes 9 years of experience working on T&R studies for CTRMA projects. Her primary role in these projects is to research, analyze, and review the socioeconomic and network assumptions in the travel demand model

and make changes as necessary to reflect a reasonable outlook of future growth. Haley also leads all T&R monitoring efforts for CTRMA facilities, analyzing observed trends and summarizing them into monthly monitoring reports.

Through her work with CTRMA as well as on other toll roads and non-tolled corridors in Central Texas, Haley has developed an intimate knowledge of transportation and development plans in the region, and established connections with many local planning entities that provide valuable input used in model development. Even before her role at Stantec, Haley worked with cities, counties and MPOs in the Austin area to develop long range transportation plans. She worked extensively with the Laredo Urban Transportation Study to prepare the MPO for its first certification review by FHWA and FTA as a newly designated transportation management area.

Sheldon Mar, PE, Simulation Modeling Lead, Managed Lanes: Sheldon has 20 years of experience in simulation modeling, and T&R forecasting. Sheldon regularly serves as a technical advisor on simulation modeling studies and managed lane projects, including Stantec's work in the RM 620 corridor, a confidential Managed Lanes forecast for TxDOT, and our various studies of the 183N Express Lanes including the investment-grade T&R forecast. Sheldon regularly serves as the project manager or simulation modeling lead on Stantec's Managed Lanes T&R forecasts. He currently serves as Stantec's Project Manager for all T&R work for RCTC, including investment-grade T&R studies for the SR 91 Express Lanes and the I-15 Express Lanes in southern California.

Marcelle Jones, JD, Indenture Compliance: Marcelle is well-versed in transportation policy and related issues. She supports and directs clients in the evaluation and formulation of policy, procurement, and strategic business decisions by anticipating and assessing the impact of emerging trends, threats and opportunities. Marcelle led the toll industry in the first ever toll enforcement workshop and its first conversations on mileage-based user fees. Her experience and knowledge of industry practices and trends has helped agencies establish proactive business rules and organizational frameworks, minimize risks; and identify essential procurement and contractual provisions in public-public and

public-private agreements. She has authored and advised on legislation, statutes, administrative rules, and policies for various public agencies across 17 states. Marcelle also served as a project manager for the TxDOT design-build program where she managed an 11-member team to support TxDOT with the development of procurement documents and process for regionally significant projects.

Sean Tihal, PE, Toll Systems and Technology: With over 22 years of transportation consulting experience, Sean is well versed in roadside and back office toll systems and operations, toll strategic planning, toll feasibility studies, and toll operations analyses. He has conducted numerous studies related to capital and operating costs (CAPEX and OPEX), electronic tolling market share analyses, toll policy, tolling configurations, toll pricing and toll payment alternatives, and toll planning studies for over 29 transportation agencies across the US and Canada. As part of his toll strategic planning and system implementation work, Sean has supported his clients to assess and implement state of the practice and emerging technologies for roadside and back office electronic tolling applications including but not limited to vehicle identification and classification, payment methods, trip building, customer communications, customer account management, unpaid toll processing and invoicing, as well as networking, security and PCI compliance.

Michael Bomba, PhD, Demographic Forecasts (Bomba Consulting): Michael has more than 25 years of experience contributing to T&R studies in the Austin and San Antonio regions. He has assessed the reasonableness of the CAMPO and AAMPO's population and employment estimates and forecasts at the zonal level, adjusting them as necessary for T&R purposes. Michael has completed over 50 studies, and these model inputs have been used to successfully sell approximately \$9B of municipal bonds and federal loans (e.g., TIFIA, etc.) for green field projects, major facility upgrades, building connecting ramps, and refinancing existing municipal bonds. Toll road projects in the Austin region that have been financed and constructed using these studies include: SH 130 (Segments 1 through 4), SH 45 North, Loop 1, 183A, US 290 East, SH 45 Southeast, US 183 South, and US 183 North Managed Lanes (under construction). His efforts have included

participating in presentations to rating agencies in New York City and presentations to major institutional investors (e.g. BlackRock, PIMCO, Vanguard, etc.) in New York City, Philadelphia and Boston.

Nishant Kukadia, AICP, PMP, MBA, Transportation Plan Review (Novus): Nishant has two decades of experience in project development ranging from advanced planning to implementation of projects. He has worked on large infrastructure program contracts and managed four indefinite deliverable contracts ranging from \$10M to \$25M, with multiple task orders. His diverse professional background includes corridor planning, feasibility studies, procurement engineering, public private partnerships, ridership estimation, traffic and revenue (T&R) analysis, benefit cost analysis, economic impact analysis, risk analysis, big data analysis, safety studies and alternative financing (TIF, TRZ). Nishant has conducted activities such as legislative reviews, policy recommendations, funding analysis, as well as facilitation and coordination with external organizations and stakeholder groups.

Srini Sangineni, PE, PTP, PTOE, Traffic Engineering (OTHON): Srini has over 33 years of experience with a focus in traffic signal design including projects with railroad preemption, illumination, transportation planning and design, traffic operations, traffic signal timing, traffic safety and work zone traffic control. Srini served as a traffic engineer for engineering consulting firms, the City of Austin, and the Texas Transportation Institute (TTI). He provided project management and design services for TxDOT, NTTA, DFW International Airport, DART, NCTCOG, cities, counties, and other clients. Srini has successfully completed over 40 travel demand modeling, traffic forecasting, and traffic operational analysis tasks for schematic projects in the Dallas/Fort Worth area and Texas (statewide). For traffic analysis and traffic simulation, Srini and the OTHON team use VISSIM, Synchro, HCS and MicroStation. IHSDM, ISATe, or HSS are used for safety analysis.

Roger Allen, Data Collection (CJH): Roger has 23 years' experience in field traffic data collection project management as a subconsultant. He has directed traffic data collection efforts for T&R Studies since 2001 for the CTRMA, TxDOT, Harris County Toll Road Authority, NTTA, Fort Bend Toll Authority, Brazoria County Toll Road Authority, Alamo RMA, and the NET RMA. During this time, he has led data collection efforts

implementing the latest technologies being deployed in the field to provide the safest and most accurate studies available.

Rolando Castañeda, Data Collection (AGS): With over 24 years of experience in engineering projects throughout Texas, Rolando's role on this Team is to support data collection efforts.

B. FULL TIME KEY PERSONNEL EMPLOYEES WHO WOULD BE ASSIGNED PERMANENTLY TO CURRENT AND POTENTIAL CTRMA PROJECTS IN TEXAS & SUBCONSULTANT OFFICES

Bill Ihlo and Tiffany Cummings would continue to be permanently assigned to the project and would not be substituted with other personnel without the Authority's prior approval. As a team, they have been supporting the CTRMA for over 20 years. They would continue to be supported by key staff including Haley Andrews in Plano, TX and Jun Yao in West Chester, PA, and additionally by our subconsultant Michael Bomba, who is based in Austin and currently works on CTRMA projects. Both Haley and Jun are also permanently assigned to current and potential CTRMA projects. Rick Gobeille will be the Principal-in-Charge with over 40 years of experience for toll road agencies. Past and current CTRMA project experience for these key personnel is described

in Section II.A above as well as in the resumes attached.

C. NUMBER OF STAFF, BY SPECIALTY AND BY GEOGRAPHIC LOCATION, COMMITTED FOR AVAILABILITY TO SUPPORT THE TRAFFIC & REVENUE SERVICES BEING TENDERED BY CTRMA

Stantec's T&R Team consists of 48 full-time transportation professionals throughout the US. The number of staff, by specialty and location are listed in the adjacent table. We leverage their individual skills, from T&R forecasting, transportation planning, traffic engineering, travel demand modeling, simulation modeling, economic modeling, data analytics, traffic data collection, demographic forecasting, and toll systems, based on the mix of available projects. Our core T&R Team is supported by over 50 other professionals who have expertise in one or more of the above-mentioned areas. This provides Stantec and our clients with a deep roster of qualified professionals who can be utilized for multiple concurrent projects. As needed, we will collaborate with specialty consultants such as SkyComp, Streetlight Data and Airsage.

D. BUSINESS OPPORTUNITY PROGRAM ("BOP") & DISADVANTAGE BUSINESS ENTERPRISE ("DBE") PARTICIPATION

Stantec commits to comply with the proposed DBE/HUB goal for the

Staff Experience by Office Location

Office	Staff	T&R Forecasting	Transportation Planning	Traffic Engineering	Travel Demand Modeling	Simulation Modeling	Economic Modeling	Data Analytics	Traffic Data Collection	Demographic Forecasting	Toll Systems
New York, NY	28	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
West Chester, PA	6	✓	✓	✓	✓	✓		✓	✓	✓	
Dallas, TX	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Austin, TX	2	✓	✓				✓		✓		✓
Atlanta, GA	2	✓	✓	✓							✓
Chicago, IL	1										✓
Portland, OR	2	✓	✓		✓	✓	✓		✓		
Denver, CO	1	✓	✓	✓		✓			✓		
Louisville, KY	1										✓
Stantec Staff for Traffic and Revenue Studies	48										
Bomba Consulting, LLC - Austin, TX	2									✓	
Novus Integrated Technology Solutions, LLC – Austin, TX	2		✓								
OTHON, Inc. – Richardson, TX, Houston, TX, & Austin, TX	91	✓	✓	✓	✓	✓					
Ally General Solutions - Houston, TX	28								✓		
CJ Hensch & Associates, Inc. - Irving, TX & Pasadena, TX	16								✓		
Subconsultant Support Staff	139										

Agreement (see also signed Appendix C). As described below, our Team has a roster of several certified HUB firms that can provide a range of services to the Mobility Authority. The exact mix of firms will depend on the nature of task orders and associated opportunities.

The following DBE/HUB firms will be utilized to perform the services described below as needed throughout the on-call contract duration. We would work with the Mobility Authority to include these subconsultants to meet specified HUB and DBE participation goals.

- **AGS Engineering & Construction** is a certified HUB and DBE in the State of Texas. AGS has also worked with Stantec on extensive data collection efforts in the Central Texas region. They bring additional depth for large field data collection programs.
- **CJ Hensch & Associates, Inc.** is a certified DBE/WBE/HUB in the State of Texas. They have worked with Stantec on data collection and summarization, and field reconnaissance tasks in the Central Texas region.
- **Novus Integrated Technology Solutions LLC** is a small transportation consulting firm in Austin, Texas. The firm provides services in the areas of statewide corridor planning, systems planning, statewide long range transportation planning, traffic and revenue analysis, economic consulting, financial analysis, grant applications, environmental analysis, public-private partnerships, and implementation strategy development. Novus is a DBE and HUB certified firm in Texas.
- **OTHON, Inc.**, Consulting Engineers has provided multi-discipline engineering services for over 27 years with offices in Richardson Houston (HQ) and Austin, Texas. OTHON is a certified DBE, HUB, MBE, and SBE.

Evidence of Compliance with Assigned DBE/HUB Subcontracting Goals or Evidence of Good Faith Efforts

Although Stantec's current contract that began in October 2020 did not require a specific DBE/HUB participation rate, Stantec has achieved a DBE/HUB participate rate of 6% for the contract to date. Please see the "Supporting Evidence of Stantec's DBE Performance" section of the appendix for additional information on our past performance.

Innovative Approaches or Unique Outreach Used Successfully to Encourage DBE/HUB Participation

Stantec was able to utilize its vast network of transportation professionals to reach out to DBE/HUB firms qualified to support the tasks associated with this scope of work. Stantec's T&R team regularly participates in professional organizations such as IBTTA, TRB, WTS, and ITE, so the relationships we build with other qualified firms allows us to identify potential subconsultants on our projects.

III. Project Development Experience

A-E. RELEVANT INFRASTRUCTURE DEVELOPMENT PROJECTS SINCE JANUARY 1, 2019

Stantec has supported 50 bond sales totaling over \$19 billion since 2019. A summary of the 5 CTRMA bond sales since 2019 is shown in the table below. Descriptions of the other relevant projects for which Stantec has provided traffic and revenue services since 2019 are also included in the following pages.

CTRMA On-Call T&R Services | Texas | 5 CTRMA System bond sales since 2019 for a total of \$1.8 billion, most recent on 10/7/21 for \$615 million

Stantec has been providing T&R consulting services for the Mobility Authority since its inception in 2003. Our T&R forecasts have been the basis for CTRMA's 13 successful toll revenue bond and several TIFIA financings of \$3.6 billion. We regularly conduct assignments in connection with the Master Trust Indenture requirements; these include studies such as cash flow/ coverage analyses, monitoring transactions and revenues, providing annual updates for budgeting purposes, assessing changes in toll policies, reviewing and preparing sections of bond documents, issuing certificates as required, and providing input for TIFIA's annual status reports. In 2019, System T&R forecasts were used to refinance System debt with the recently added 45SW toll road. In 2020 and 2021, System T&R forecasts were used to finance the proposed 183A Phase III and 183N Express Lanes projects.

Recently, we've conducted special analyses for the Toll Operations department such as assessing the revenue impacts of bundling transactions into trips. We also prepared FY 2025 System and MoPac N

CTRMA Revenue Comparisons - Stantec Estimates vs Actuals

Date of CTRMA OS	12/17/2019	8/25/2020	10/27/2020	3/23/2021	10/7/2021
Project Name	CTRMA System T&R Study for 45SW (PRE_COVID)	CTRMA System T&R Study for System Refunding	CTRMA System T&R Study for 183A Phase III	CTRMA System T&R Study for 183N Express Lanes	CTRMA System T&R Study for System Refunding
2020 Estimated System Revenue (in \$000s)	\$129,697	\$96,441	\$97,267	\$99,036	\$99,036
2020 Actual System Revenue (in \$000s)	\$99,036	\$99,036	\$99,036	\$99,036	\$99,036
% Difference from Estimated	-23.6%	2.7%	1.8%	0.0%	0.0%
2021 Estimated System Revenue (in \$000s)	\$164,629	\$144,536	\$130,030	\$128,423	\$141,132
2021 Actual System Revenue (in \$000s)	\$141,204	\$141,204	\$141,204	\$141,204	\$141,204
% Difference from Estimated	-14.2%	-2.3%	8.6%	10.0%	0.1%
2022 Estimated System Revenue (in \$000s)	\$188,445	\$168,774	\$158,607	\$159,066	\$166,749
2022 Actual System Revenue (in \$000s)	\$185,209	\$185,209	\$185,209	\$185,209	\$185,209
% Difference from Estimated	-1.7%	9.7%	16.8%	16.4%	11.1%
2023 Estimated System Revenue (in \$000s)	\$211,607	\$196,205	\$185,515	\$186,761	\$190,287
2023 Actual System Revenue (in \$000s)	\$213,952	\$213,952	\$213,952	\$213,952	\$213,952
% Difference from Estimated	1.1%	9.0%	15.3%	14.6%	12.4%

Express Lanes forecasts for CTRMA's annual budget planning process.

A refresh of the travel demand model for post-Pandemic conditions is currently underway by Stantec to develop updated System forecasts.

The updated model is anticipated to be used for feasibility studies of future projects such as widening 183A, 290E Phase IV extension, and MoPac S Express Lanes as well as potential revisions to the System toll rates.

Jose Hernandez, CFO | 3300 N IH 35, Suite 300, Austin, Texas 78705 | (512) 636-4879

TxDOT On-Call T&R | Texas | Texas Transportation Commission bond sale on 2/20/20 for \$683.8 million

Stantec has been providing TxDOT forecasting services through a series of on-call T&R assignments since 1998. We have prepared all levels of T&R studies, ranging from Level 1 preliminary feasibility studies to Level 3 investment-grade studies that support financing. Stantec has provided T&R services for hundreds of toll feasibility studies made during the early planning stages for the growth and improvement of the greater Austin transportation roadway network. Following on those studies, we have prepared seven investment-grade T&R forecasts for toll facilities that led to more than \$5.7 billion in revenue bond financing. We have worked directly with several divisions within TxDOT on these studies, including the Toll Operations Division, Strategic Project Division, Debt Management Office, General Counsel, and Transportation Planning and Programming, as well as several district offices.

Representative T&R projects include several investment grade studies for the Central Texas Turnpike System (CTTS), and Level 2 Forecasts for Managed Lane projects on IH-35 and IH-10 in San Antonio, and SH 71 East in Austin. Stantec has also performed numerous Level 1 studies in Dallas, Austin, San Antonio, Laredo, El Paso, Sherman/Denison and Beaumont. We have also performed operational analyses and simulation studies for the CTTS facilities in support of ongoing expansions and planning studies.

Date of TxDOT OS	2/20/2020 (PRE-COVID)
2023 Estimated System Revenue (in \$000s)	\$258,008
2023 Actual System Revenue (in \$000s)	\$264,323
% Difference from Estimated	+2.4%

Lin Zhou, Strategic Project Division | 12719 Burnet Road Austin, Texas 78727 | (512) 826-0868

New York State Thruway Authority Finance & Operation On-Call | New York | 6 NYSTA bond sales since 2019 for a total of \$6.2 billion, most recent on 1/31/24 for \$1.0 billion

The 570-mile New York State Thruway is the longest toll facility in the US and Stantec has been the Thruway Authority's consulting engineer for more than 20 years. In this role, we periodically prepare revenue forecasts, analyze toll rates, work with the bond counsel and financial consultants on pending matters, prepare engineer's certificates for the trustee, recommend measures to relieve traffic congestion, and address other related issues as requested by the Authority's staff and

board members. Notable recent work has included preparing T&R and fee revenue estimates for portions of the Thruway system as they were converted to AET. Another aspect analyzed during this study included developing and revising existing policies and legislation that would support AET for consistency with existing state and federal laws and the Authority's bond resolutions. We also studied the financial implications of AET conversion in terms of net revenue changes and analysis of different toll schedules to establish revenue neutrality. We reviewed state and federal laws as they pertained to video tolling and the methods available for enforcing and collecting those tolls. More recently, we tracked COVID-related impacts on traffic and revenue and periodically updated future estimates of T&R, completed Environmental Assessments for proposed toll modifications, and produced a Cashless Tolling Performance Report for the Authority Board.

Date of Thruway OS	9/23/2021	1/31/2024
2023 Estimated System Revenue (in \$000s)	\$807,686	\$817,734
2023 Actual System Revenue (in \$000s)	\$825,459	\$825,459
% Difference from Estimated	+2.2%	+0.9%

David Malone, CFO, Finance and Accounts | 200 Southern Blvd. PO Box 189 Albany, New York 12201 | (518) 436-2820

MTA Independent Engineer for Triborough Bridge and Tunnel Authority (TBTA) Bond Issues | New York | 20 bond sales since 2019 for \$4.8 billion, most recent on 12/7/23 for \$102 million

Since 2012, Stantec has been the Independent Engineer to MTA's TBTA and has been responsible for preparing annual reports which project traffic, toll revenues and expenses for TBTA's seven toll bridge and two tunnel facilities. The report is one of several documents that are referenced as part of MTA's Continued Disclosure Filings. The MTA uses the report on an ongoing basis to assist with issuing debt securities through public credit markets and financing capital needs.

To complete each of the annual reports, we coordinated with TBTA to obtain current and historical traffic and revenue information for each of their facilities. This information was supplemented with current and historical traffic volume data for nearby non-tolled facilities along the East River, nearby non-tolled corridors, and nearby toll facilities such as the Port Authority of New York and New Jersey. Toll rates, toll revenues, and changes in toll schedules at the Port Authority facilities were also

analyzed. We developed a proprietary spreadsheet model to house all the current and historical traffic and revenue data and used that model as a basis for detailed traffic and revenue forecasting.

In addition to preparing annual reports, Stantec continuously monitors T&R at each of the TBTA facilities and prepares Bringdown letters and Certification letters and interim report updates (as necessary) to assist the MTA with their bond transactions and other obligations with bondholders. We've also supported MTA through participation in Due Diligence calls for bond transactions and responding to requests for additional information from public credit markets upon their review of the annual report or certification and bringdown letters.

Date of MTA TBTA OS	6/16/2023
2023 Estimated System Revenue (in \$000s)	\$2,487,000
2023 Actual System Revenue (in \$000s)	\$2,417,000
% Difference from Estimated	-2.8%

Marcia Tannian, Director of Finance and Investor Relations | 347 Madison Ave, New York, New York 10017 | (212) 878-7278

Delaware Transportation Authority | Delaware | 3 bond sales since 2019 for \$4.8 million, most recent on 8/23/2022 for \$129 million

The Delaware Department of Transportation (DelDOT) retained Stantec to forecast the Delaware Turnpike and Route 1 Toll Road's traffic and revenue. The 11-mile Delaware Turnpike is a key link in the Northeast Corridor's I-95 route from New England, New York, Philadelphia and Wilmington to Baltimore, Washington, and the South. The SR 1 Corridor extends 100 miles, nearly the full length of the state, from the I-95/ Delaware Turnpike southward to the Maryland state line on the approach to Ocean City. Stantec analyzed the toll facilities' actual traffic and earnings record from its opening in 1963 and studied traffic patterns and revenue trends over the course of the Turnpike's years of operation from 1963 through 2024. Future traffic and revenue estimates are based on the analysis of historical trends.

Date of DelDOT OS	8/25/2020
2022 Estimated System Revenue (in \$000s)	\$153,987
2022 Actual System Revenue (in \$000s)	\$184,067
% Difference from Estimated	19.5%

*More recent data not available for comparison

Dawn Haw-Young, Assistant Director of Finance | 800 Bay Road / Route 113, Dover, Delaware 19901 | (302) 760-2727

**Transportation Corridor Agencies (TCA) | California | 3 Foothill/
Eastern TCA bond sales & 1 San Joaquin Hills TCA bond sale since
2019 for a total of \$2.9 billion, most recent on 2/9/21 for \$759.7
million (F/E) and 12/17/21 for \$1.1 billion (SJH)**

Date of San Joaquin Hills TCA OS	12/17/2021
2023 Estimated System Revenue (in \$000s)	\$163,800
2023 Actual System Revenue (in \$000s)	\$147,000
% Difference from Estimated	-10.3%

Amy Potter, Deputy Chief Executive Officer | 125 Pacifica, Irvine,
California 92618 | (949) 754-3498

For almost 20 years, Stantec has supported the TCA in the sale and refinancing of its toll revenue bonds, establishing fiscal year budgets, exploring the feasibility of expansion projects, and completing regional analyses to support the agency's goals and objectives. Stantec has completed numerous T&R studies, including the investment grade studies in 2013 & 2014 and the bringdown forecasts for both the F/ETC and SJHTC in 2021 and 2022 which included the impacts of the COVID-19 pandemic.

Since 2012, Stantec completes annual T&R reviews, forecasts, and recommends toll rate schedules. We work with the TCA's staff to review facility performance and traffic response to tolling changes. We then develop T&R forecasts to then evaluate how traffic would respond to potential toll policy changes or toll increases. These estimates assist TCA with their annual budget planning and selection of tolls for the next fiscal year. Over the years, this has included analyzing and advising on discount programs, all electronic tolling conversion, and special considerations during the start of the COVID-19 pandemic.

TCA has considered various changes to their roadway system over the years and Stantec has analyzed the potential impacts to T&R and operations. We developed a microsimulation model of the TCA system to identify future operational concerns with growing traffic demand. This model enables TCA to make informed decisions on various projects to ensure acceptable Level of Service on the toll roads.

Stantec also analyzed and evaluated the operational and T&R impacts of the planned 241/91 Express Lanes Connector. This includes extensive analysis since it would join the TCA toll roads and the existing 91 Express Lanes. We have developed microsimulation and marketshare models to evaluate numerous network and toll policy alternatives.

Date of Foothill/Eastern TCA OS	2/9/2021
2023 Estimated System Revenue (in \$000s)	\$195,000
2023 Actual System Revenue (in \$000s)	\$185,000
% Difference from Estimated	-5.1%

**Ohio Turnpike and Infrastructure Commission (OTIC) | Ohio | 2
OTIC bond sales since 2019 for a total of \$445.2 million, most
recent on 2/16/22 (forward bond sale) for \$310 million**

Since 2005, Stantec tolling principals have supported the Ohio Turnpike and Infrastructure Commission (OTIC) to plan, develop and implement system-wide upgrades of their Toll Collection System (TCS) and Customer Service Center (CSC). Stantec's tolling principals also have provided T&R forecasting and planning services to the OTIC which included T&R and Operations and Maintenance (O&M) Forecasts that supported a \$1.1 billion Toll Revenue Bond Sale in 2013, a \$126.7M Refunding Bond Sale in 2017 and an \$499.8M Bond Sale in 2018. More recently, Stantec forecasts supported the January 2021 sale of \$135M in toll revenue bonds, as well as the February 2022 forward delivery of \$310M in toll revenue refunding bonds, inclusive of the proposed toll system modifications as well as changes to travel behavior resulting from the COVID-19 pandemic.

Date of OTIC Bringdown Letter	11/3/2022
2023 Estimated System Revenue (in \$000s)	\$350,400
2023 Actual System Revenue (in \$000s)	\$360,852
% Difference from Estimated	3.0%

Lisa Mejac, CPA, Chief Financial Officer | 682 Prospect St, Berea,
Ohio 44017 | (440) 971-2089

**Riverside County Transportation Commission | California | Bond
sale on 10/5/21 for \$615.1 million**

Stantec has been working continuously with the Riverside County Transportation Commission (RCTC) since 2005 to support the agency's efforts to deliver and operate express lanes along the SR 91 and I-15 freeways in Riverside County, which opened to traffic in 2017 and 2021, respectively. We have supported the RCTC by forecasting express lanes traffic and revenue, by advising on toll policy and toll rates, and by assessing the potential impact of roadway improvements.

Stantec performed the Level 1, 2, and Investment Grade T&R studies for both the 91 and 15 Express Lanes starting in the early 2000's. Our efforts have helped the RCTC right-size their facilities and obtain financing.

After their successful financing and opening, we have continued to forecast how various changes to toll policy, the economy, and changes to the roadway network would impact revenue. Our T&R forecasts have supported a refinancing of the 91 Express Lanes revenue bonds following the COVID-19 pandemic and have informed cooperative agreements with neighbor agencies. In addition to T&R forecasts, we brought our expertise in traffic operations and traffic modeling, in conjunction with our understanding of the express lanes to help the RCTC assess highway improvement projects. We have consulted on a wide range of improvements from general purpose lane widenings, to express lane direct connectors, and ramp metering impacts. We have also supported the RCTC with its continuing operations by reviewing and advising on toll policy and toll rate setting. We monitor traffic and toll rates and identify when toll rates could be optimized to better manage express lanes demand.

Date of RCTC OS	10/5/2021
2023 Estimated System Revenue (in \$000s)	\$52,800
2023 Actual System Revenue (in \$000s)	\$67,843
% Difference from Estimated	28.5%

Jennifer Crosson, Toll Operations Director (SR-91) and David Thomas, Toll Project Delivery Director (I-15) | 4080 Lemon Street, 3rd Floor, Riverside, California 92501 | (951) 787-7141

Following is a summary of multiple other bond sales showing a comparison of estimated and actual revenues:

Tampa-Hillsborough Expressway Authority | Florida | Bond sale on 9/10/20 for \$222.3 million

Date of THEA OS	8/27/2020
2023 Estimated System Revenue (in \$000s)	\$106,475
2023 Actual System Revenue (in \$000s)	\$116,862
% Difference from Estimated	9.8%

Robert Frey, AICP, Director of Planning and Innovation | 1104 East Twiggs Street, Tampa, Florida 33635 | (813) 272-6740

Metropolitan Washington Airports Authority | Washington | Bond sale on 2/16/22 for \$754.8 million

Date of MWA OS	1/30/2022
2023 Estimated System Revenue (in \$000s)	\$216,003
2023 Actual System Revenue (in \$000s)	\$205,853
% Difference from Estimated	-4.7%

Mary Helou, Debt Program Manager | 1 Aviation Circle, MA-26, Washington DC 20001 | (703) 417-8716

New York State Bridge Authority (NYSBA) | New York | Bond sale on 7/29/22 for \$114.2 million

Date of NYSBA OS	7/29/2021
2023 Estimated System Revenue (in \$000s)	\$71,600
2023 Actual System Revenue (in \$000s)	\$77,152
% Difference from Estimated	7.8%

Brian Bushek, Treasurer & CFO | P.O. Box 1010, Highland, New York 12528 | (845) 691-7245

Massachusetts Department of Transportation (MassDOT) Toll Consulting Support Services and T&R Forecasting Services | Massachusetts | MassDOT Metropolitan Highway System bond sale on 10/2/19 for \$464.7 million

Date of MassDOT OS	10/2/2019 (PRE-COVID)
2023 Estimated System Revenue (in \$000s)	\$211,523
2023 Actual System Revenue (in \$000s)	\$187,039
% Difference from Estimated	-11.6%

Steve Collins, Director of Tolling | 10 Park Plaza, Boston, Massachusetts 02116 | (617) 504-0124

New Hampshire Department of Transportation (NH DOT) | New Hampshire | \$40.8 million bond sale on 10/31/2019

Date of NH DOT OS	4/13/2022
2023 Estimated System Revenue (in \$000s)	\$129,145
2023 Est. Actual System Revenue (in \$000s)	\$123,920
% Difference from Estimated	-4.0%

John Corcoran, Administrator, Bureau of Turnpikes | 7 Hazen Drive, Concord, New Hampshire 03302 | (603) 485-3806

Rhode Island Turnpike and Bridge Authority (RITBA) | Rhode Island | \$48.8 million bond sale on 11/20/2019

Date of RITBA OS	11/20/2019
2020 Estimated System Revenue (in \$000s)	\$21,700
2020 Est. Actual System Revenue (in \$000s)	\$19,300 (COVID-AFFECTED)
% Difference from Estimated	-11.0%

More recent data not available for comparison

Jeff Goulart, CFO | RI-138, Jamestown, Rhode Island 02835 | (401) 423-0800

Subconsultant Experience

Ally General Solutions, LLC | Brazoria County Toll Road Authority

Level II T&R Study Data Collection | Texas: AGS helped Stantec collect traffic in the Houston area for a recent BCTRA T&R Study. This included 48-hour classification counts along a series of main lanes, frontage roads, arterials, direct connectors, and ramps.

Karen McKinnon, Assistant County Engineer | 451 N. Velasco, Suite 230, Angleton, Texas 77515 | (979) 864-1264

Bomba Consulting LLC | 2024 Central Texas Regional Mobility Authority Update (Level 2 Traffic & Revenue Study) | Texas:

Assessed the reasonableness of socioeconomic data in the Capital Area Metropolitan Planning Organization's (CAMPO) travel demand model at the zonal level, adjusting the data as necessary, for a Level 2 traffic & revenue study. The project study area incorporated almost the entirety of Travis County and the western portion of Williamson County. CAMPO's baseline county population and employment control totals were updated to 2022 and its forecast control totals were updated through 2045. All TAZs in the study area (which contained approximately 1,000 TAZs) were updated from 2020 Census counts to 2022 using digital aerial photography and other data sources. For the portions of the CTRMA project study area that overlapped with the Central Texas Turnpike System study area, baseline and forecast data from the 2022 CTTS study were used. Zonal level socioeconomic data forecasts in the study area were updated using data from local planning departments, secondary sources, and interviews with local planning officials. The revised forecasts were provided as spreadsheets for the travel demand model and the methodology and results of the adjustments were summarized as a chapter in the study's final report.

Jose Hernandez, Chief Financial Officer | 3300 N. IH-35, Suite 300, Austin, TX 78705 | (512) 636-4879

CJ Hensch & Associates, Inc. | MoPac North and 183 North Traffic Data Collection, 2023 CTRMA Data Collection | Texas: Conducted traffic counts and travel time runs in the MoPac North and 183 corridors,

in support of Stantec's traffic and revenue studies in these corridors for the Mobility Authority. CJ Hensch also performed a comprehensive traffic data collection count program, for Atkins under a separate CTRMA task, on MoPac, SH 71, US 290, US 183A, SH 45SW, and US183S. The data collection included peak hour turning movement counts, 48-hour main lane, direct connector, and ramp volume counts, 48-hour arterial counts, and 7-day pedestrian counts.

Carlos Sepulveda, AtkinsRéalis | 11801 Domain Blvd., Ste. 500, Austin, Texas 78758 | (512) 340-1108

Novus Integrated Technology Solutions LLC | Southern Gateway Traffic and Revenue Study | Dallas, TX: Managed the collection of socioeconomic data and development of population and employment forecasts as part of a Level 2 Traffic and Revenue Study to support

TxDOT with assessing the feasibility of constructing managed lanes within the existing US 67 and I-35 corridors in the Dallas metro area. Referred to as the Southern Gateway, these US 67 and I-35 both lead from the southern portion of the Dallas-Fort Worth Metroplex directly into Downtown Dallas.

Marcy Saenz, PE, Toll Operations Division | 12719 Burnet Road, Austin, TX 78727 | (512) 874-9708

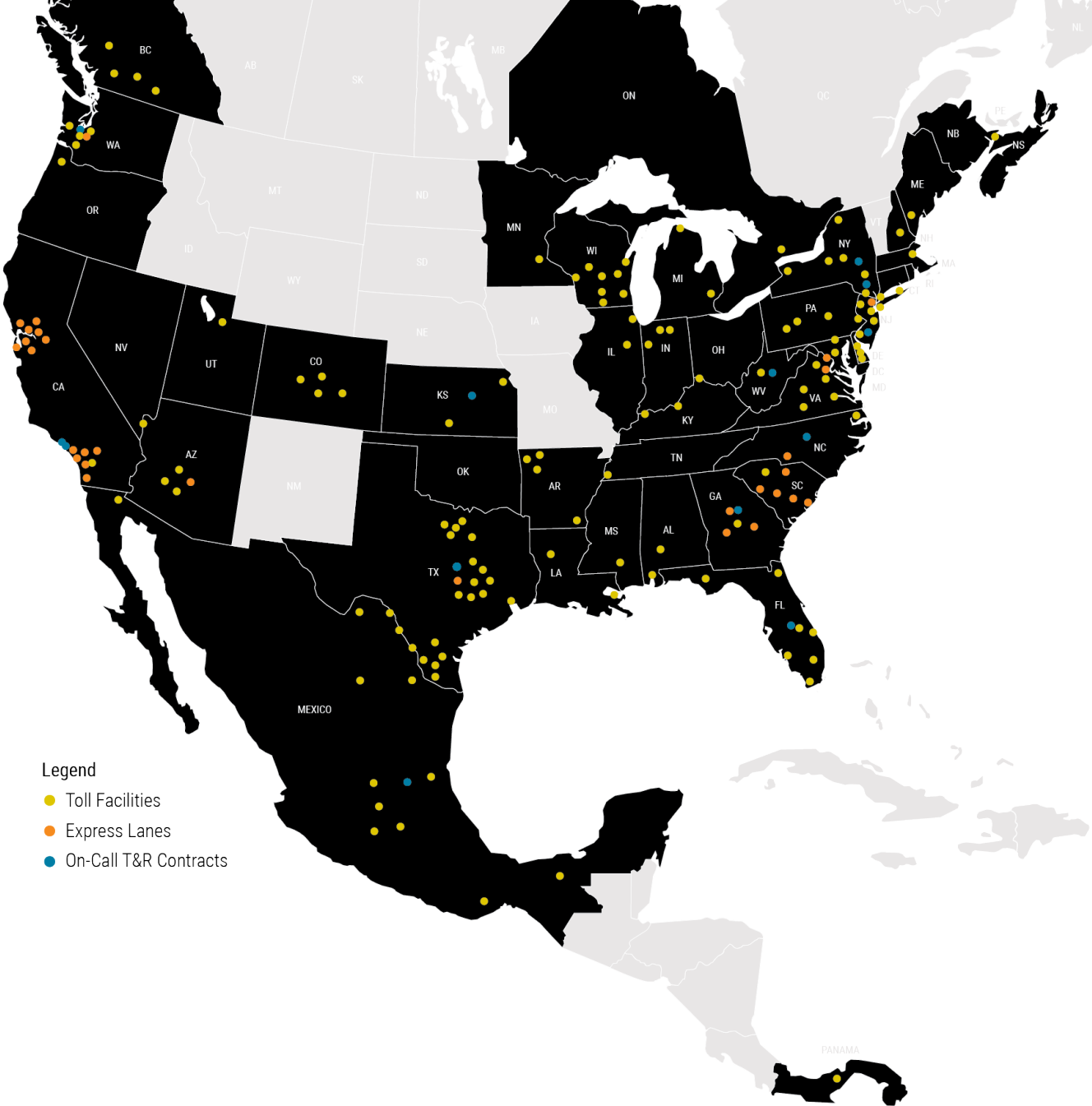
OTHON, Inc. | HCTRA Traffic Demand Modeling for Sam Houston Tollway (Beltway 8), Section 1 | Texas: OTHON led the corridor and regional travel demand modeling including traffic forecasting, origin-

destination analysis and system operation analysis. OTHON analyzed and recommended corridor and system improvements supporting the conversion of the heavily congested Sam Houston Tollway, Section 1 to All-Electronic Tolling (AET) from US 290 to Hardy Toll Road, a 13.9-mile segment. The alternatives were developed and analyzed using O-D data from H-GAC, existing and historical traffic data, corridor demand from the H-GAC TDM, HCTRA transaction data, existing and future land use data, and TranStar speed data. A VISSIM analysis and a benefit/cost analysis (BCA) was completed for five alternatives.

Adhara Castelblanco, PE, AET Program Manager | 7701 Wilshire Place Drive, Houston, TX 77040 | (713) 587-7114

Appendix

Stantec T&R Project Experience



Supporting Evidence of Stantec’s DBE Performance

Stantec is committed to doing business with companies of all sizes and backgrounds and emphasizes mentorship and assisting small, emerging, minority-owned and disadvantaged businesses partners realize their business and development goals through meaningful roles on our projects and programs. Stantec performs services for numerous federal, provincial/state, and municipal clients who, like us, are committed to providing opportunities to all businesses.

Our purpose and policy statement, which defines our social procurement policy, is to look for opportunities at every level to embed supply chain diversity and workforce development initiatives into what we do. We believe in full engagement. Our proven diversity programs support participation in program management, engineering, and construction.

If you look at Stantec projects across the country, you will find that diverse firms are a key component of most teams. Regardless of the client’s requirement, we adhere to our commitment to the principles of non-discrimination and equal opportunity within our company and in teaming with subconsultants. For us, participation is not a contractual obligation, but rather, an integral part of how we do business and give back to the communities where we work and live. We are only successful if our small business partners are successful.

For more than 50 years, we have proven our commitment to equal opportunity by pioneering several successful, proactive development programs for diverse business enterprises. Through our program we track the opportunities provided to small and diverse businesses for many of our government contracts. Below is a partial listing of projects, where Stantec has met and/or exceeded the client participation goals.

Record of Past DBE Performance					
Project Name & Location (City/State)	Completion Date	Total Contract Value (US Dollars)	DBE Participation Goal (%)	DBE Participation Achieved (%)	Contract Owner
CTA Red and Purple Modernization Project, Contract #C17FT10211817	5/2025	\$2.1B	20% (Design)	20.6%	JuanPablo Prieto, CTA Director Diversity Programs (312) 681.2600 JPrieto@transitchicago.com
LIRR Third Track Expansion Project, Contract # 6420	12/2024	\$2.6B	31%	35.1%	Dominick Toscano, MTA-DDCR (646)252-1339 dtoscano@mtahg.org
Honolulu Authority for Rapid Transportation, Honolulu Rail Transit Project – East Section CE&I II, Honolulu, HI	Ongoing	\$102M	13%	30.8%	John Moore (808) 343-5787 jmoore@honolulu.gov
I-526 Lowcountry Corridor West Environmental Justice, Charleston, South Carolina	Ongoing	\$23.8M	(Currently working with SCDOT to develop the pro-ject Small Business and Sup-plier diversity program)	23.8%	Joy Riley, South Carolina DOT
Houston Airport ITRP Program	2025	\$33M	35%	39.5%	City of Houston, Houston Airport 16930 John F Kennedy Blvd, Houston, TX 77032 e139666@houstonairportsystem.net Mario.Diaz@houstontx.gov (281) 233-1877
LA Metro CMSSC – Los Angeles, CA Westside Purple Line Extension Project, Section 1	10/2024	\$110M	28.250%	36.359%	Jim Cohen, Executive Officer, Project Management (323) 900-2114 cohenja@metro.net



Bill Ihlo PE

Project Director, T&R Forecasting, Indenture Compliance

REGISTRATIONS

Professional Engineer
#17437, CT

Professional Engineer
#072882, NY

EDUCATION

Master of Urban Planning,
New York University, 1979

Master of Science,
Transportation Planning
and Engineering,
Polytechnic Institute of
New York, 1979

Bachelor of Science,
Management, Rensselaer
Polytechnic Institute, 1971

MEMBERSHIPS

Member, International
Bridge, Tunnel and
Turnpike Association

As a traffic engineer for over 40 years, Mr. Ihlo's duties have encompassed all phases of transportation studies, including a particular focus on traffic and revenue feasibility studies. These studies range from preliminary Phase I to investment grade projects, including support with Rating Agencies, TIFIA and investors through the financing process. Mr. Ihlo is a Principal with the firm.

Select Project Experience

CTRMA Studies | Travis & Williamson Counties, Texas

Mr. Ihlo has been Project Manager or Project Director for nearly 20 years, responsible for conducting a wide variety of studies in support of a long-term role as the Mobility Authority's traffic consultant. Studies include preliminary feasibility, investment grade leading to financing, monitoring traffic and revenue performance, assessing changes in toll policy, preparing sections of bond documents, issuing certificates as required by trust indentures and providing input for annual reports to TIFIA. Major projects include the 11-mile 183A Turnpike Phases 1 and 2 projects, the 6-mile 290E project, the 8-mile 183S project, and the 183A Phase 3 as well as the 183N projects, both of which are now under construction.

Central Texas Turnpike System (CTTS) Traffic and Revenue Studies | Austin, Texas

Project Manager or Project Director in charge of conducting an investment grade level traffic and revenue study of proposed 70-miles of turnpike (SH45, Loop 1 and SH130) serving the rapidly growing suburbs of Austin. The original study was done in 2002 and resulted in a \$2.2B financing. These facilities opened for traffic in stages during 2006 and 2007 with significantly more traffic usage than expected. Updated investment grade studies were prepared in 2005, 2008, 2010, 2012, 2014, 2018, and most recently in 2019. The 2012 study was prepared in connection with expansion of the system and changes to the toll collection system including a toll increase, a cashless conversion and discounts for disabled veterans.

183A Turnpike | Austin, Texas

Project Manager responsible for conducting numerous intermediate level and investment grade traffic and revenue feasibility studies for a proposed 11-mile turnpike project serving the rapidly growing north suburbs of Austin. Phase 1 of this project opened in 2007 with significantly more traffic usage than forecasted. Phase 2 opened in 2012, some 5 years ahead of schedule and Phase 3 of this project is currently being constructed for a northerly extension.

Transportation Corridor Agencies and Traffic & Revenue Study | Orange County, California

Project Manager or Technical Advisor on a long term assignment for the Transportation Corridor Agencies' (TCA) toll roads which include the San Joaquin Hills (SJH) and the Foothill /Eastern (F/E) corridors. This 51-mile toll system was built in stages between 1993 and 1999 and processes over 300,000 average weekday toll transactions. The toll facilities serve major employment and shopping centers, provide congestion relief alternatives, and provide access to future development areas. Significant traffic and revenue studies were conducted in 2003, 2008 and 2012, with extensive changes to the travel demand model including recalibration to reflect changes in land use development trends, travel patterns and network infrastructure. Other assignments include annual forecasts for budget process, analysis of toll elasticity and rate adjustments, impact of conversion to cashless operations and routine monitoring of traffic, revenue and AVI usage.

Cashless Toll Studies | Texas and California

Project Manager or Technical Advisor for several toll feasibility studies to assess the impacts of eliminating cash payments on existing toll facilities. Projects include the 183A Turnpike in Austin, TX, the CTTS roadways in Austin, TX and the TCA roadways in Orange County, CA. The 183A Turnpike successfully eliminated cash in 2008, the CTTS roadways (SH 130, SH 45N & Loop 1) converted to cashless in January 2013 and the TCA system converted in the Fall of 2013.

Managed Lane Studies | Various Locations

Project Manager or Technical Advisor for several preliminary toll feasibility studies to assess the revenue potential of constructing express lanes with tolls that vary by time of day alongside general-purpose lanes. Corridors include I-35W in Denton, TX, Tappan Zee Bridge in Rockland County, NY, I-25 in Denver, CO, I-26 in South Carolina, MoPac (N & S) and 183N in Austin, TX, and Route 28 in Virginia.



Tiffany Cummings PE

Project Manager, T&R Forecasting, Managed Lanes

REGISTRATIONS

Professional Engineer
#132525, TX

Professional Engineer
#096707, NY

EDUCATION

Bachelor of Science, Civil
Engineering, Clemson
University, 2011

MEMBERSHIPS

Member of the WTS
Greater New York
Chapter's Business
Diversity Committee,
Women's Transportation
Seminar

Ms. Cummings has over 10 years of experience in a variety of transportation engineering and planning projects. Specifically, she has extensive experience in transportation planning for toll roads and managed lanes with expertise in traffic and revenue forecasting, strategic toll rate analyses, toll facility monitoring, and travel demand model development. Ms. Cummings has completed toll facility feasibility and investment-grade studies for toll roads and managed lanes and is well-versed in developing traffic and revenue models and writing complex traffic and revenue reports for financing.

Select Project Experience

183N Express Lanes T&R Studies, 2018-2021 | Austin, Texas

Ms. Cummings served as PM for the 2021 investment-grade study (IGS) to finance the construction of the 183N Express Lanes (183N). She was responsible for the data collection program, analyzing existing traffic data, overseeing calibration of the traffic models, and preparing the T&R forecasts. She wrote the T&R report for inclusion in the Official Statement and TIFIA Letter of Intent. These efforts led to a \$499M System-wide bond sale and \$250M TIFIA loan. Prior to the 2021 financing, Tiffany managed a series of Level 1 studies in 2018, testing various configurations and toll rates. By 2019, the project advanced to a Level 3 IGS in anticipation of a bond financing and TIFIA loan. This study used a "subarea" model which allows for efficient calibration of managed lane corridors in a more refined manner using hourly models. A microsimulation model was used to evaluate managed lane operations and validate the forecasted demand. In 2020, Stantec recognized the new challenges of the 183N project, particularly around the Pandemic's severe revenue impacts on managed lanes. Tiffany conducted toll sensitivities to develop a toll policy that optimized revenues by varying the minimum toll by time of day. This policy led to the successful 2021 project financing.

MoPac South Express Lanes Feasibility Studies, 2017-2023 | Austin, Texas

Ms. Cummings prepared Level I forecasts for the proposed MoPac S Express Lanes several times from 2017 to 2021 using the latest regional travel demand model developed by Stantec. As part of these efforts, she analyzed the results of the traffic models and post-processed the results in a spreadsheet forecasting model by evaluating the observed relationship between demand and toll rates on the existing MoPac N Express Lanes. For each Level I study, she used the spreadsheet model to develop T&R forecasts and conducted sensitivity tests for several potential design alternatives. Most recently in 2023, Ms. Cummings led a study that evaluated the project's travel time benefits through a Build vs No Build analysis. This included a peer review of the model results produced by the regional MPO model for the environmental assessment process.

CTRMA System 2019 T&R Study | Austin, Texas

Ms. Cummings served as Assistant PM for this investment-grade (IG) study to refinance the CTRMA System. Responsible for the data collection program, analyzing existing traffic data, overseeing calibration of the travel demand model and microsimulation model, and preparing the T&R forecasts for the System. The IG forecasts were used to finance the 183A Phase III and 183N Express Lane projects through a TIFIA loan and bond sale. She wrote the T&R report for inclusion in the Official Statement and TIFIA Letter of Intent. These efforts led to a 2019 bond sale of \$50.2B.

290E Phase III T&R Studies, 2016-2018 | Austin, Texas

Ms. Cummings served as Assistant PM for this investment-grade (IG) study to finance the construction of 290E Phase III direct connectors. She was responsible for the data collection program, analyzing existing traffic data, overseeing calibration of the travel demand model, and preparing T&R forecasts for the System. The IG forecasts were used to finance the project through a TIFIA loan and bond sale. She wrote the T&R report for inclusion in the Official Statement and prepared presentations for rating agency meetings and investor roadshows. Ms. Cummings conducted numerous sensitivity tests as a part of this financing effort. These efforts led to a 2018 bond sale of \$90.4M. Prior to the 2018 IGS, Ms. Cummings prepared a series of Level I T&R forecasts during 2016 and 2017 to help evaluate the feasibility of the project.

183A Phase III Extension T&R Studies, 2015-2020 | Austin, Texas

Ms. Cummings served as a Project Manager for the 2020 investment-grade (IG) study to finance the construction of the 183A Phase III extension. She was responsible for the data collection program, analyzing existing traffic data, overseeing calibration of the travel demand model, and preparing T&R forecasts for the System. The IG forecasts were used to finance the project through a TIFIA loan and bond sale. She helped author the T&R report for inclusion in the Official Statement and prepared presentations for rating agency meetings and investor roadshows. Ms. Cummings also conducted numerous sensitivity tests as a part of this financing. These efforts led to a 2020 bond sale of \$339.6 million. Prior to the 2020 IGS, Ms. Cummings prepared a series of Level I T&R forecasts from 2015 to 2017 to help evaluate the feasibility of this extension.



Rick Gobeille PE Principal-in-Charge

REGISTRATIONS

Professional Engineer
#PE050984E, PA

Professional Engineer
#21944, MD

Professional Engineer
#24GE03964100, NJ

Professional Engineer
#063235, NY

EDUCATION

Master of Engineering,
Mechanical Engineering,
Stevens Institute of
Technology, 1983

Bachelor of Engineering,
Civil Engineering, Stevens
Institute of Technology,
1980

Rick is a nationally recognized leader in toll systems technology, development and implementation, traffic and revenue forecasting, operating cost estimates, and toll facility operations. Over the course of his 40+ year career, he has prepared reports and studies, and made more than 100 presentations to ratings agencies, underwriters, and investors, in support of more than \$30B of Toll Revenue Bond Sales and Trust Agreement requirements. He has also prepared studies for the adoption of new technologies, starting with E-ZPass testing in the early 1990s.

Select Project Experience

WSDOT I-405 T&R Studies | Seattle, Washington

As Project Manager/Director for the ongoing Investment-grade I-405 SR and 167 Express Lanes study, Rick manages the quarterly and annual T&R updates for the Transportation Revenue Forecast Council and the monthly monitoring of five existing toll facilities. He provides the final review and approval for the T&R forecasts.

OCTA 91 Express Lanes T&R Studies | Orange County, California

Rick was Principal-in-Charge for the 91 Express Lanes T&R update. Rick's understanding of vehicle fleet turnover and electric vehicle adoption was instrumental in the development of an electric vehicle penetration and tolling model. Rick provided the final review and approval of the study's analysis, forecasting methodology, and the traffic and revenue forecast.

RCTC 91 Express Lanes T&R Studies | Riverside County, California

Rick was Principal-in-Charge for Stantec's 2021 effort to refresh the RCTC 91 ELs T&R forecast. He worked closely with the study's PM, Sheldon Mar, to develop a forecasting approach to reflect the impacts of the COVID-19 pandemic on the facility's T&R. He reviewed and provided final approval on the T&R forecast, Bringdown Letter, Additional Bonds Test, and Closing Certificates needed for the re-financing.

TCA 241/91 Express Lanes Connector Toll Rate and Traffic Studies | Orange County, California

Rick was Principal-in-Charge for this toll rate development and traffic operations study. He was responsible for reviewing and approving the project's technical approach, the results, and presentation materials. He worked closely with Stantec's PM and technical lead to complete various tasks. Rick participated in meetings with the executive staff of the OCTA, RCTC, TCA, and Caltrans with topics ranging from the impact of de-coupling toll rates, pricing policy, OD patterns, toll rate projections, and traffic operations impacts.

TCA F/ETC & SJHTC T&R Studies | Orange County, California

Since 2020, Rick has been serving as Stantec's Project Manager and Principal-in-Charge for studies of the TCA's F/ETC and SJHTC toll roads. In response to the COVID-19 pandemic, Rick managed the development of an approach to forecast traffic and revenue for the TCA's Toll Roads that was conscious of the COVID-19 pandemic's impacts on travel as well as the inherent uncertainty in how T&R would recover. He has led the development of toll rates for the various toll plazas in the system, and subsequent budget forecasts. Rick has presented findings to the TCA's executive staff. His work has been the basis for the TCA refinancing their revenue bonds.

Toll Technology Testing, Implementation, and Advisory Services | Various Locations

Rick was the Project Director/ Manager for many toll technology projects. Notable efforts include project manager for the high profile, most extensive testing program of Electronic Toll Collection equipment ever conducted for the New York, New Jersey and Pennsylvania Interagency E-ZPass Group (IAG). As program manager developed project needs, wrote specifications, procured and tested new electronic toll collections systems for the West Virginia Turnpike, Peace Bridge, New Hampshire DOT and the Ohio Turnpike. Directed independent certification testing of two major toll vendors products, Delaware Turnpike, New Jersey Turnpike, Garden State Parkway, SR-91, Highway 104 and the Fredericton to Moncton Highway. Currently represent two toll agencies as part of the E-ZPass Reciprocity Task Force.

Investment Grade Revenue Studies

Project Director/Manager/Staff for investment grade revenue estimates that resulted in some \$8 billion in bond financing. As part of those efforts Rick presented to S&P, Moody's, Fitch and TIFIA. Studies included "Greenfield" projects, refinancing, asset sales, public/private partnerships, non toll projects, and private placements. Clients included the New York State Thruway Authority, New Jersey Highway Authority, New Jersey Turnpike Authority, Maryland Transportation Authority, Delaware River and Bay Authority, IdleAire Technologies, Peace Bridge, Maritime Road Development Corporation, Ontario Road Development Corporation (Highway 407) and a Chicago Skyway bidder.

REGISTRATIONS

Professional Engineer
#036964, GA

Professional Engineer
#073566, NY

Professional Engineer
#050865, NC

EDUCATION

Master of Science, Civil
Engineering, The City
College of New York, 1995

Bachelor of Science, Civil
Engineering, The Cooper
Union for the Advancement
of Science and Art, 1988

Fleur's toll experience includes completing toll facility feasibility and financing studies for public, private and partnered clients; HOV/HOT/ managed lane studies; toll increase studies; and interchange studies for existing toll roads. She is well versed in developing diversified, interactive T&R models, researching socioeconomic databases, writing complex T&R reports for financing, and developing, setting up and conducting origin-destination and other field surveys.

Select Project Experience**TCA 241/91 ELC Tolls and Traffic | Orange County, California**

Fleur has been the lead QA/QC Manager for the technical work on several projects related to tolling alternatives and access alternatives for the 241/91 Express Lanes Connector (ELC). The technical work has included three separate modeling platforms, including the travel demand model, VISSIM models and Stantec's marketshare model. She has assisted in developing presentation materials that clearly and concisely present the complicated alternatives and results to multi-agency working groups.

RCTC 91 Express Toll Setting | Riverside County, California

Fleur has been the QA/QC engineer for the continuing toll rate work being completed for the 91 Express Lanes. Immediately after the onset of COVID-19, RCTC reduced toll rates in reaction to the low traffic volumes in the SR 91 corridor. As traffic has been growing, the agency is reviewing tolls on a scheduled basis to react to the increasing congestion as traffic returned to pre-pandemic levels. As part of this review, Stantec completes a review of the congestion, including demand volumes and queuing by day and by hour and recommends toll increases (and decreases) based on the RCTC toll policy.

I-75 South Metro Express Lanes Customer Analysis | Atlanta, Georgia

Fleur was the Project Manager for this study that evaluated usage patterns in the I-75 corridor south of Atlanta. The analysis included determining the origins and destinations of the existing trips by time of day and the frequencies of these trips. These data were then evaluated against price and speed data in the express lanes versus the speeds in the general purpose lanes to understand the factors that influenced the driver's decision to use the express lanes. Existing signage in the corridor was assessed and deficiencies were identified. The study resulted in a set of recommendations to potentially improve usage of the corridor.

SRTA I-75 South Express Lanes Truck Study | Atlanta, Georgia

Ms. Hartmann evaluated the roadway grades in the corridor and was responsible for determining the potential effects that allowing trucks would have on both the speeds and capacities in the Express Lanes. She also was involved in estimating the number of trucks that would use the Express Lanes considering their origins and destinations and their trip lengths.

Atlanta NW Corridor Managed Lane Investment Grade Study | Atlanta, Georgia

Ms. Hartmann was the Project Manager for this project to build a reversible managed lane facility in the I-75/I-575 corridor in the northwest Atlanta area. This detailed study included the use of a travel demand which was calibrated to behavior on the nearby I-85 Express Lanes. Included was a detailed review of the existing and future proposed land use and network assumptions in the corridor. The study resulted in a conservative base case set of forecasts that optimized revenue in the corridor, promoted use of the lanes, and also reflected the operational experience of the I-85 Express Lanes. The study was instrumental in securing TIFIA loans.

I-77 South Express Lanes Initial Alternatives Study | Charlotte, North Carolina

Fleur was the Project Manager for this study that provided Level 1 estimates of transactions and revenue for a set of 15 express lane alternatives in the I-77 South Corridor. The alternatives varied access locations and the number of general purpose lanes and express lanes. The project included a limited calibration of a toll diversion model of the study area that integrated locally revealed toll paying characteristics of customers on the I-77 North Express Lanes and the Monroe Expressway.

NCTA 2021 and 2024 Toll Project Screening Studies | Charlotte, North Carolina

Fleur served as Project Manager for these studies that provided sketch level traffic and revenue estimates for multiple toll projects across the state. She developed a procedure that would be used for all projects to ensure consistent analyses. Travel demand models for each local area were used to find future average daily toll-free traffic volumes. For traditional toll roads, reasonable tolls were applied and traffic was diverted from the facility based on expected trip types, and travel time and distance comparisons. For the express lane facilities, Stantec's marketshare model was used to estimate traffic in the express lanes based on total congestion in the corridor. These sketch level forecasts will be used by NCDOT to prioritize potential projects to be included in the STIP.



Suzanne Seegmuller

QA/QC & Technical Advisor

EDUCATION

Bachelor of Science, Civil Engineering, Rensselaer Polytechnic Institute, 1991

Suzanne Seegmuller brings more than 30 years of transportation experience with a focus in conducting financial impact analysis and traffic and revenue (T&R) studies for existing and new toll road facilities. Her practical experience includes financial forecasting, market and policy analysis, cost/benefit analysis, organizational analysis and due diligence review. Through this knowledge, Ms. Seegmuller has served as both a Project Manager and Traffic and Revenue Task Leader for numerous investment grade studies across the United States including the New York State Thruway, Rhode Island Turnpike and Bridge Authority, I-495 Express Lanes, New Hampshire Turnpike and Central Texas Turnpike. Additionally, Ms. Seegmuller is well versed in assessing the impacts of toll increases, discount programs, plaza capacities, and changes to vehicle classification systems for established toll facilities undergoing expansion or technology upgrades. She has developed forecasting models for variable-priced HOT lanes, and models to determine costs, fees, and revenues associated with video tolling on all-electronic toll (AET) facilities.

Select Project Experience

New York State Thruway Authority Finance and Operations Services | Statewide, New York

As Project Manager, Suzanne completed investment-grade traffic and revenue studies that supported revenue financing bond sales totaling \$9.1B in 2013 through 2021. She also developed models to determine toll rates necessary for net revenue neutrality with AETC including a risk analysis, impacts of potential discount programs, and impacts of two-way versus one-way tolling. In addition, she completed a Toll Modification Study in December 2019 proposing toll increases on the Governor Mario M. Cuomo Bridge and throughout the state as the full system is converted to AETC, followed by an Environmental Assessment of the impacts of toll diversion expected to result from the toll modification in December 2020. Her recent work includes testing potential impacts of a range of late fee/violation charges, a 2022 Toll Modification Study, and an EA for 2024-2027 proposed toll increases, and preparation of a Cashless Tolling Performance Report.

New Hampshire Department of Transportation, Bureau of Turnpikes On-Call Toll Systems and Related Services | Statewide, New Hampshire

Suzanne manages all traffic and revenue work for the series of on-call contracts to provide on-call, toll-related services and support, including T&R forecasting. She developed forecasting models and prepared the investment grade T&R reports to support six revenue bond financing sales by NHDOT in 2009 through 2022 totaling over \$972 million. Other project tasks include a vehicle reclassification analysis, AET feasibility, frequency discount studies, and effects of moving or removing certain toll locations. Her recent work included a white paper evaluating different AET fee/violation structures.

MassDOT Traffic and Revenue Consulting Services | Statewide, Massachusetts

As Project Manager, Suzanne completed a study to develop toll rates for all Turnpike System facilities as they were converted from conventional tolling to AET. This included the Western Turnpike, a ticket system replaced by mainline AET gantries. The study included analysis of revenue and toll collection cost implications of the conversion, which involved relocation of every tolling point, changes to the vehicle classification system, differential tolls for pay-by-plate and in-state versus out-of-state E-ZPass, and setting billing fees to cover collection costs. In October 2019 after joining Stantec, Suzanne completed a traffic and revenue study for a bond refunding for the MHS in the amount of \$465 million. She also conducted analyses of revenue effects of planned and potential construction such as closures along the MHS for new building construction, opening of a new casino, and potential addition of a new Western Turnpike interchange. Her recent work included analysis of COVID-19 impacts on toll and fee revenues for future budgeting purposes.

CTRMA US 183A Investment Grade Traffic and Revenue Study | Austin, Texas

As Transportation Engineer, Suzanne was responsible for determining traffic and revenue for a proposed toll road using TP+ models. Efforts on this project included roadside interviews to determine characteristics of potential users, and video license plate survey to determine average trip length along competing routes. The T&R study led to \$234 million in bond financing for this roadway, which was constructed several years later.



Haley Andrews AICP

Demographics, T&R Forecasting and Monitoring

REGISTRATIONS

Certified Planner,
American Institute of
Certified Planners

EDUCATION

Master of Science,
Community and Regional
Planning, University of
Texas, 2013

Bachelor of Arts,
Sociology, University of
Texas, 2009

MEMBERSHIPS

Member, American
Planning Association

Ms. Haley Andrews is a transportation planner with experience in traffic and revenue studies, long-range transportation planning, compliance with federal transportation planning regulations, public participation, geographic information systems (GIS), and travel demand modeling. Her responsibilities on these projects have included documentation of existing conditions, evaluation of socioeconomic forecasts, development of alternate land use and transportation scenarios, assessment of MPO plans, policies, and procedures, preparation and facilitation of public participation events, and preparation of reports, maps, and other graphic material. Ms. Andrews has analyzed and depicted data such as land use, sociodemographic, parking and traffic, and zonal and network characteristics of travel demand models using GIS. She is proficient in ArcGIS and Adobe Creative Suite. She also has experience using travel demand modeling software, including TransCAD and Cube Voyager.

Select Project Experience

I-75 South Express Lanes Customer Analysis | Metropolitan Area, Georgia

Stantec conducted a study of customers using the I-75 South Metro Express Lanes and their trip-making characteristics. Ms. Andrews performed an origin and destination analysis using StreetLight, analyzed customer and tag account location and frequency characteristics, and evaluated the approach signage in the corridor. Using ArcGIS, Ms. Andrews summarized StreetLight data showing eligible trips utilizing the managed lane facility based on current access points, the location of the most frequent home-based zip codes using the corridor, and an inventory of all approach signage along the facility.

Mid-Currituck Bridge Traffic and Revenue Study | North Carolina

To assist in the production of an investment-grade traffic and revenue study, Ms. Andrews reviewed land use and socioeconomic inputs to the travel demand model and proposed revisions to these inputs based on other sources of demographic data, including the U.S. Census Bureau, the U.S. Bureau of Labor Statistics, State Data Centers, and Woods & Poole, as well as information gathered from local stakeholders and existing and historical aerial imagery. Ms. Andrews also assisted in developing written material for the final report and relevant maps, including travel time/speed maps, traffic count maps, origin/destination maps, as well as land use and socioeconomic maps.

I-77 South Express Lanes Level 2 Study | North Carolina

Ms. Andrews summarized and analyzed traffic counts for use in model calibration, collected origin-destination data from StreetLight, developed optimized toll rates for various scenarios, oversaw the development of socioeconomic inputs to the travel demand model, and created traffic and revenue streams in support of the I-77 South Express Lanes project. Ms. Andrews led the socioeconomic component of the study, reviewing and adjusting existing travel demand model inputs to revised base year estimates and updating forecasts based on information gathered from various third-party sources, including a detailed review of current construction and development pipeline activity in Uptown Charlotte.

Central Texas Mobility Authority (CTRMA) | Texas

Ms. Andrews is responsible for ongoing monitoring of the CTRMA System with monthly reports to the Mobility Authority. Ms. Andrews has participated in numerous T&R studies, from feasibility level to Investment Grade studies since 2015. Most recently, Ms. Andrews was responsible for overseeing the development of socioeconomic forecasts by an independent demographer. She conducted interviews with local planning staff to identify future growth areas and development constraints. Ms. Andrews consulted various transportation plans in the region and interviewed area stakeholders to refine the network inputs to the travel demand model. Ms. Andrews reviewed model outputs from both the regional travel demand model and "subarea" hourly model for reasonableness, prepared the T&R forecasts for the System, and drafted the T&R report for inclusion in the Official Statement and TIFIA Letter of Intent. These efforts led to a \$499M System-wide bond sale and subsequent \$250M TIFIA loan in 2021.

Texas Department of Transportation (TxDOT) | Texas

Ms. Andrews has participated in two refinancing projects for the Central Texas Turnpike System. For both projects, Ms. Andrews assisted in the development of revised population and employment forecasts for use in the travel demand model. She reviewed regional and local transportation plans for funded improvements and coded the network in the travel demand model to reflect these background network changes. She helped author the T&R report and used ArcGIS to create graphics depicting network characteristics and forecasted socioeconomic growth.

Ami Parikh AICP

Demographics

REGISTRATIONS

Certified Planner,
American Institute of
Certified Planners

EDUCATION

Masters in Urban and
Regional Planning, State
University of New York at
Albany, 2009

Bachelor of Interior
Design, Institute of
Environmental Design,
Gujarat, India, 2002

MEMBERSHIPS

Member, American
Planning Association

Member, Institute of
Transportation Engineers

Member, Greater Dallas
Planning Council

Ami is a transportation planning professional with diverse experience in community and stakeholder engagement, long range planning, traffic and revenue studies, geographic information systems (GIS), and travel demand modeling. Ami has also worked on a variety of planning and mobility studies including multi-modal planning, traffic/safety analysis, transit planning and feasibility, bike and pedestrian safety programs as well as special events transportation and operations plan. She has experience using travel demand modeling software, including TransCAD and Cube Voyager, as well as ArcGIS and Adobe Creative Suite. Ami's experience includes the public sector, where she was the Transportation Planner for Capital Area MPO (CDTC) in Albany, New York as well as Transportation Analyst for NYSDOT (Region 1 Planning and Program Management group). While working with different stakeholders and communities, Ami understands the importance of clear communication and engagement to ensure projects are supported by communities and stakeholders.

Select Project Experience

Central Texas Mobility Authority (CTRMA) | Texas

Ms. Parikh summarized the socio-economic forecasts provided by an independent demographer. Ms. Parikh assisted in field work by creating maps for all the different areas to verify and confirm the demographic data. Ms. Parikh consulted various transportation plans in the region to refine the network inputs to the travel demand model. Further, Ms. Parikh verified and updated the travel demand model with the updated information on proposed projects in the area.

Brazoria County Toll Road Authority Level II Traffic and Revenue Study | Texas

Ms. Parikh assisted in summarizing the socio-economic data to understand the patterns for the area using various tabular and mapping methods. Ms. Parikh consulted various transportation plans in the region to refine the network inputs to the travel demand model. Further, Ms. Parikh verified and updated the travel demand model with the updated information on the proposed projects. Ms. Parikh compared the different future travel demand models provided by H-GAC to prepare an updated base network for the project. Ms. Parikh summarized the travel time data collected for various corridors in the H-GAC area.

Fort Bend County Toll Road Authority | Texas

Ms. Parikh assisted in summarizing the socio-economic data to understand the patterns for the area using various tabular and mapping methods. Ms. Parikh consulted various transportation plans in the region to refine the network inputs to the travel demand model. Further, Ms. Parikh verified and updated the travel demand model with the updated information on the proposed projects. Ms. Parikh compared the different future travel demand models provided by H-GAC to prepare an updated base network for the project. Ms. Parikh summarized the travel time data collected for various corridors in the H-GAC area.

SRTA Traffic and Revenue Sketch Level Analyses for Various New Express Lane Corridors | Georgia

Ms. Parikh assisted in analyzing and understanding the traffic forecasts for various new express lane corridors from the different future travel demand models. Ms. Parikh created mapping graphics representing the future traffic forecasts along those corridors. Ms. Parikh summarized the travel time data collected for various corridors in the H-GAC area.

The Colony Comprehensive Plan Update | Texas

Project Manager for the comprehensive plan update for The Colony, a northern suburb of Dallas in Denton County. The updated plan articulates a land development and mobility vision based on stakeholder-driven identification of key assets/strengths, weaknesses/challenges, and opportunities.

Jun Yao

Travel Demand Modeling, Data Analytics

EDUCATION
Master of Science,
Civil Engineering –
Transportation, University
of Virginia, 2005

Bachelor of Science,
Mathematics and
Statistics, Fudan
University, Shanghai,
China, 2002

Mr. Yao has 20 years of experience, with specialized skills in Cube Voyager, TransCAD, VISUM and VISSIM. He holds a masters degree in civil engineering, with an emphasis in travel demand forecasting and traffic operations. He was the Lead Analyst of many T&R studies (including Level I, Level II and Investment Grade studies) serving clients in CA, GA, TX, NC, and WA. He was the Lead Modeler responsible for demand estimation for more than ten Vissim simulation projects. He also leads efforts requiring big data analysis capability by developing customized programs using python, VBA macro and SQL. His hands-on experience also includes regional model development and calibration, special generator model development and calibration, mesoscopic and micro- simulation modeling, traffic operation analyses, risk analysis, and GIS applications.

Select Project Experience

Central Texas Regional Mobility Authority (CTRMA) 183N Managed Lane Investment Grade Study | Austin, Texas

Transportation Modeler responsible for refining and calibrating the model framework that was developed as a part of the Central Texas Turnpike projects. Also responsible for QA/QC the whole modeling process, including demographic updates, highway network updates, as well as new modeling targets. In addition to the traditional classification counts and speed runs, the team also utilized the Origin- destination data from SkyComp, speed data from Inrix and SigAlert. Jun led the calibration efforts on both regional and subarea level TDM model, ran future year TDM models; produced Traffic and Revenue forecast and prepared summary tables for the report.

CTRMA 183A T&R Update | Austin, Texas

Transportation Planner responsible for preparing the Toll Diversion Model and the inputs for various scenarios.

2010, 2012, 2014, 2018, 2022 Central Texas Turnpike System (CTTS) Update Project | Austin, Texas

Lead Modeler responsible for preparing and running two regional models and combining them into one integrated Toll Diversion Model. The two regional models, CAMPO-Austin Model and San Antonio Regional Model were developed within TRANSCAD environment. The integrated model was developed using Cube Voyager software package. Responsibilities included the preparation of the highway network, the transit network and the socioeconomic data; external traffic adjustments; the conversion of the highway network and trip tables between the TransCAD and CUBE formats, base year calibration; preparing and running future year TDM models; producing final Traffic and Revenue forecast and preparing summary tables for a final report. In the latest 2022 update, the model was calibrated a pre-COVID 2019 base year model, and a “new normal” adjustment was implemented to account for long-term post-COVID travel behavior shifts. Notably, the TDM calibration extended beyond traditional volume and congested speed targets, incorporating streetlight data for a more comprehensive understanding of traffic patterns.

TXDOT IH 35 Managed Lane Project | Austin, Texas

Lead Modeler responsible for developing estimates of traffic and revenue for the IH 35 Managed-Lanes Level 1 traffic and revenue analysis. The analysis was performed using the 2014 CTTS Update Model Platform. Several scenarios were analyzed to reflect different project views.

IH-10/IH-35 Managed Lanes Level-II Study | San Antonio, Texas

Lead Modeler responsible for running the Alamo MPO Regional TransCAD Model and converting the network and trip tables for a CUBE TDM Model, performing the calibration for the base year condition, and conducting the traffic and revenue analysis for the horizon years.

RCTC I-15 Express Lanes Investment Grade Study; OCTA I-405 Express Lanes Investment Grade Study; TCA 241/91 Express Connector Investment Grade Study | Various Locations, California

Lead Modeler responsible for the model calibration and preparation of future year model platform, which was used for T&R forecast and sensitivity analysis. A three-level modeling platform and calibration procedure was implemented to examine different aspects of the analysis. The top level was an integrated model by combining RCTC and SANDAG regional model and converting from TransCAD to Cube format. While maintaining the same framework, the middle and finer level toll diversion model was developed for each study corridors. The calibration and future forecasts were performed with focus on each specific corridor. As part of the data collection program, Python scripts were developed to collect traffic volume and real-time speed data from public websites.

State Road and Tollway Authority (SRTA) T&R On-Call | Atlanta, Georgia

Lead Modeler responsible for the model calibration, future year T&R forecast model platform, and sensitivity analysis for several Level-2 and Investment Grade projects, including NWC, I-85 extension, I-75 S, GA 400, and I-285 MMIP.

Kiarash Fariborzi PE

Travel Demand Modeling

REGISTRATIONS

Professional Engineer
#0057770, MD

EDUCATION

Master of Science,
Transportation
Engineering, University of
Florida, 2016

Bachelor of Science,
Civil Engineering, Tehran
Polytechnic University,
Tehran, Iran, 2014

With 7 years of experience, Mr. Fariborzi has supported a variety of travel demand modeling and forecasting projects including toll road feasibility studies, corridor studies, transit studies, and various applications of regional travel demand models. He also has experience with micro-simulation modeling and transportation data analysis. Over the past two years, Mr. Fariborzi led the modeling effort of several toll and revenue studies in Charlotte area, North Carolina. He is specialized in Cube Voyager scripting, TransCAD GISDK scripting, GIS applications and developing customized programs in VBA macro and Python.

Select Project Experience

I-77 South Level 2 Toll and Revenue Study | Charlotte, North Carolina

The project analyzes the impacts of adding managed lanes to I-77 South corridor extending from South Carolina state line northwards to Uptown Charlotte to connect to I-77 North managed lanes. Mr. Fariborzi led the modeling effort for this project. A customized toll diversion model developed with Cube Voyager was used in this study. The input trip tables and highway network to the model were obtained from the MPO model (Metrolina Regional Model in TransCAD) and converted to Cube format. Mr. Fariborzi calibrated the model to the observed data including traffic volumes, speeds and origin-destination pattern data. The model was used to develop optimum toll rates at each pay point for various toll policy scenarios and to estimate the toll traffic and revenue in each scenario.

Morgantown Monongalia MPO Comprehensive Plans and Metropolitan Transportation Plan Update | Morgantown, West Virginia

Mr. Fariborzi led the travel demand modeling effort of this project. He recalibrated the regional model (MMMPO model) using new socio-economic data and traffic counts. This involved making updates to various model parameters such as trip generation rates as well as model inputs such as special generators to replicate the observed traffic patterns more accurately. Mr. Fariborzi added various reporting and mapping features to the model using GISDK scripting. In addition, he updated the model original GISDK script to implement several model enhancements such as new employment categories in trip generation, or K-factors in trip distribution process. Mr. Fariborzi then used the updated model to estimate the traffic for the horizon years and identified the roadway network deficiencies.

Jal NM-128 Relief Route Travel Demand Modeling | Jal, New Mexico

This project evaluates various alternatives to remedy the peak period congestion on a segment of NM-128 passing through City of Jal. Mr. Fariborzi developed a model from scratch for the study area using an OD Matrix Estimation approach in Cube Voyager and calibrated it to the StreetLight O-D pattern data, traffic count and travel speeds on NM-128. Mr. Fariborzi developed a framework to model the existing intersections in the corridor which are all stop controlled and are proposed to be replaced with traffic signals in future alternatives. The travel times along the corridor as well as system wide VMT and VHT were obtained from the model and compared across the alternatives.

Winnipeg Tour-Based Travel Demand Model Review | Winnipeg, Manitoba, Canada

To assess the suitability of the Winnipeg model as analysis tool for a proposed transit project for the City of Winnipeg, Mr. Fariborzi thoroughly reviewed all the components of this tour-based model in VISUM to assess their logic as well as the reasonableness of the results. He determined several major flaws that would preclude the model usage for the purpose of the study, such as use of fixed transit travel speed, unconstrained capacities at controlled junctions and inadequate representation of special trip generators. He then evaluated the potential solutions recommended by the team to the identified issues and prepared a memorandum to the client to outline the findings and recommendations for model improvement.



Sheldon Mar PE

Managed Lanes & Simulation Modeling

REGISTRATIONS

Professional Engineer
#087805, NY

EDUCATION

Master of Science,
Transportation Planning &
Engineering, Polytechnic
University, 2011

Bachelor of Science,
Operations Research &
Industrial Engineering,
College of Engineering,
Cornell University, 2004

Sheldon has extensive experience in toll road and managed lanes T&R studies, traffic simulation modeling, and traffic impact studies. He has been the lead engineer or project manager for numerous transportation projects, including investment grade traffic and revenue forecast studies, and traffic operations studies using VISSIM micro-simulation models. Express Lane T&R and operational studies are Sheldon's specialty. He has worked on express lane projects in Southern California, Washington, Texas, Georgia, the Carolinas, Florida, Virginia, and New York, and for various delivery mechanisms, from public options, to P3s. Sheldon has been serving in this role for nearly 20 years.

Select Project Experience

Central Texas Regional Mobility Authority (CTRMA) System (183A, 290E, 71E, SH 45 SW, 183S, and 183N Express Lanes) 2019 T&R Study | Austin, Texas

Sheldon was a technical advisor for the 183N Express Lanes T&R forecast and simulation modeling. He brought to this study his experience and knowledge of express lanes to advise on toll rates, capture rates, and annualization factors. He also advised on the micro-simulation model of the corridor.

Riverside County SR 91 Express Lanes Investment Grade Study | Riverside County, California

Sheldon was the Transportation Engineer responsible for forecasting traffic and revenue generated by the proposed extension of the existing SR 91 Express Lanes in Orange County into neighboring Riverside County. As part of this investment grade study, he developed a spreadsheet model that modeled hourly demand in the free lanes and tolled express lanes, toll-free HOV-3+, and the effect of variable toll rates. The model incorporated revealed preference market-share curves, based on the historical relationships between 91 Express Lanes traffic and revenue and corridor congestion. Sheldon also developed a micro-simulation model of the 25-mile corridor that was able to independently forecast express lane utilization. Since the project's opening in 2017, Sheldon led the effort to optimize corridor operations through a variety of traffic operations analyses, to optimize the 91 Express Lanes toll policy, and to refresh the T&R forecast. The T&R forecast refresh culminated in the project's bonds being upgraded by both Fitch Ratings and S&P Global.

SR 91/241 Express Direct Connector Simulation | Orange, California

Stantec simulated travel conditions on the heavily congested SR 91 and SR 241 between Orange and Riverside County and forecast utilization and toll rates for the 91 Express Lanes and 241/91 ELC. Sheldon was the PM for the effort to update Stantec's travel demand model and express lane market-share model to forecast likely peak period usage of the 91 EL's and 241/91 ELC. He also oversaw traffic simulation modeling of the corridor to demonstrate how traffic operations would change with the project, and under different toll policies. Sheldon has presented the study's findings to a wide array of audiences, including technical staff and executives from Caltrans, the TCA, the RCTC, and OCTA.

I-55 Corridor Study | Chicago, Illinois

Sheldon oversaw the development of a VISSIM model for twenty-five miles of the congested I-55 Freeway, west of Chicago. He worked closely with the project team's staff members in order to evaluate traffic model inputs, establish calibration benchmarks and develop a methodology to calibrate the simulation model into reality. Sheldon contributed his knowledge of freeway operations and VISSIM's car-following model parameters, and the result was a model that could be reliably used to evaluate the impacts of planned improvements to the I-55 Corridor.

I-77 Express Lanes Level 2 Traffic and Revenue Study | Mecklenburg and Iredell Counties, North Carolina

Sheldon was responsible for assessing the traffic and revenue potential of a proposed 25-mile express lane along I-77 serving Charlotte. For this Level 2 study, Sheldon designed and managed a significant data collection effort, and analyzed historical employment, population, and income data. Sheldon identified a set of optimal toll rates to charge on the future express lanes, varying by time of day. Sheldon presented findings to NCDOT executive staff, TIFIA's Build-America-Bureau, and to Fitch Ratings. The T&R forecast informed the NCTA's valuation of the I-77 related to leasing the rights to the road to a concessionaire. Following the successful concession agreement, Sheldon continued to work with the NCDOT to advise on how various changes to toll policy would impact traffic and revenue.



Najmeh Jami PE

Simulation Modeling

REGISTRATIONS

Professional Engineer
#0402057091, VA

Professional Engineer
#105563, NY

EDUCATION

Master of Science,
Civil Engineering-
Transportation, University
of Memphis, 2011

Bachelor of Science, Civil
Engineering-Surveying,
Amirkabir University of
Technology, Tehran, Iran,
2008

MEMBERSHIPS

Professional Member,
Institute of Transportation
Engineers (Canada & US)

Najmeh is a licensed professional engineer with 12 years of experience in traffic engineering and transportation planning. Najmeh has extensive experience in traffic simulation modeling, capacity analysis, and traffic impact studies for both private and public sectors. She has been a traffic engineering lead in conducting several urban multimodal studies, interchange feasibility and safety projects. She also has experience in developing cost benefit analysis for transportation projects and traffic and revenue forecast for toll facilities.

Select Project Experience

Central Texas Regional Mobility Authority (CTRMA) System (183A, 290E, 71E, SH 45 SW, 183S, and 183N Express Lanes) 2019 T&R Study | Austin, Texas

Najmeh led the traffic simulation work for 183A and frontage roads between RM 620 and FM 1431. She developed models for both the existing and future scenarios to evaluate the impacts of mainline widening and completion of frontage road projects on the traffic flow. The microsimulation analysis was employed to identify locations expected to be under capacity with future growth. These results were then used to recommend additional improvements within the study area to ensure sufficient capacity. Throughout the process, Najmeh and the team coordinated closely with TxDOT and other public agencies to incorporate the latest planned improvements in the models.

I-95 Planning & Environment Linkages (PEL) Study | Stamford, Connecticut

Najmeh leads traffic engineering team in the Planning and Environment Linkages (PEL) study for the I-95 reconstruction from Exits 7 to 9 in Stamford, focusing on current and future traffic model development. She oversees the team conducting detailed analyses to identify root causes of congestion and collaborated closely with design teams to integrate traffic solutions into overall project plans. Najmeh also presents traffic study findings at public meetings, effectively communicating traffic analysis findings to stakeholders and the community.

Design Services for Sunrise Highway (NY27) Oakdale Merge | Long Island, New York

As the lead traffic engineer, Najmeh directs a team specializing in travel demand modeling, microsimulation, and safety to develop a transportation network for the study area and evaluate the operational performance of various construction alternatives. She and her team collaborate closely with the design team to apply the insights from traffic analysis to mitigation alternatives and to determine the recommended improvements for the study segment. Throughout the process, Najmeh has overseen intensive data analysis and modeling efforts, and coordinated with subconsultants on safety analysis.

RM 620 Corridor Refinement Study | Austin, Texas

As a microsimulation modeling lead, Najmeh was responsible for developing a calibrated microsimulation VISSIM model to replicate the existing traffic conditions in the RM 620 corridor between the Mansfield Dam and US 183 in Austin, TX. Najmeh and other team's members developed models for base and two future years in a no build and three build scenarios to evaluate the impact of implementing the proposed limited access facility above a significant portion of the corridor.

NHDOT On-Call Turnpike System Services | New Hampshire

As a Task leader, Najmeh updated the Traffic & Revenue (T&R) forecasting model which was previously developed by Stantec to reflect the impact of COVID-19 on T&R projections. Najmeh analyzed the collected T&R data during the pandemic provided by the client to evaluate the impact of the COVID-19 on the study toll facilities.



Ashish Anand PE

Simulation Modeling

REGISTRATIONS

Professional Engineer #
145391 TX

EDUCATION

Master of Science,
Civil Engineering
with specialization
in Transportation
Infrastructure and System
Engineering, Virginia Tech,
2017

Bachelor of Technology,
NITK Surathkal,
Mangalore, Karnataka,
India, 2013

Mr. Anand has experience in Traffic Data Analysis and Traffic Impact Assessment study. He has got good level of experience with Database and Analytical Tools such as MySQL, Power BI, and R. He has also got experience with Traffic Simulation software such as VISSIM and Synchro. In addition, he has 3 years of experience in construction and planning field working with a Metro Rail Corporation in India. Mr. Anand is detail-oriented, organized and committed team player who thrives on work ethics, integrity and aims to make an impact on the society.

Select Project Experience

241/91 Express Direct Connector | Corona, California

Mr. Anand assisted the Stantec team in network coding in VISSIM software and calibrated the existing traffic condition. He assisted in developing typical weekday base year's models AM and PM peak period. He also helped to develop future year build and no-build network and analyze the traffic data obtained from the software. Mr. Anand developed Microsimulation Models for various Build Options in VISSIM of SR 91 corridor for a typical Friday and Monday during PM and AM peak periods, when traffic flow is most congested. These models aided the demand modeling team in identifying the toll rates in future years for the express lanes.

Connecticut CT I-95 (Stamford) Existing Traffic Operation Study | Stamford, Connecticut

Mr. Anand led a team to develop the base year's and future year's microsimulation DTA model of four miles corridor for AM and PM peak period. He led the team to develop base year and future year microsimulation model in VISSIM based on FHWA updated 2019 calibration criteria. He assisted in analyzing a typical day for traffic study using FHWA guidelines and developed the calibration criteria for simulating a typical day in VISSIM. He forecasted traffic in future year and has been leading the team to develop future year microsimulation models for no-build and build alternatives.

Microsimulation of Transit Improvement Options in the Vicinity of Main/Portage | Winnipeg, MB, Canada

Mr. Anand assisted the Stantec team to develop a Microsimulation Modeling of the downtown area of Winnipeg, MB in Canada to analyze traffic conditions under existing condition, no-build and three options of build condition with Bus Rapid Transit corridor. He analyzed the various alternatives in VISSIM and Synchro to optimize cycle length and signal timings for the corridor to minimize overall network delay. Mr. Anand also studied Vehicle Travel Time and delay, People Travel Time and Delay, overall corridor delay for both vehicles and people obtained from the simulation model in determining the best alternative for downtown Winnipeg.

CA-91 OCTA Express Lane Transaction Data Analysis | OCTA, California

Mr. Anand has analyzed Traffic and Revenue on OCTA 91 express lane facilities trend since 1996. The T&R data analysis assisted the Traffic and Revenue forecast team to project future year's transactions and revenue. Mr. Anand also analyzed the historic impacts of gas price on Traffic and Revenue on OCTA 91 facilities.

I-15 Investment Grade Study | Southern California

Mr. Anand develops spreadsheet-based Market share model to forecast traffic and revenue on 30 miles express lane corridor along I-15 in southern California. He oversees the traffic data summarization efforts. He analyzed the toll lane usage based on various factors and developed toll lane usage curves based on road's congestion, and toll price. Mr. Anand has been assisting the traffic demand model team with traffic flow data and leading the efforts to develop spreadsheet based market share models to project traffic and revenue in future years based on current traffic condition and expected future years traffic conditions.

Masroor Mohammed PE

Data Analytics

EDUCATION

Master of Science, Civil Engineering, New Jersey Institute of Technology, 2016

Bachelor of Science, Civil Engineering, National Institute of Technology – Warangal, Telangana, India, 2014

Masroor is a transportation planner with technical experience in traffic network modelling and microsimulation, roadway capacity and operational analyses, traffic and revenue studies, pedestrian operation analysis and traffic data collection. He has worked extensively on various data-centric transportation planning projects. Leveraging his data analytics experience to develop algorithms for ingesting large datasets and processing them into transportation planning insights, trends, and patterns through effective visualizations and interactive dashboards. He also has experience working with location-based data platforms, python, web-development, SQL Workbench, Looker Studio, Power BI and Tableau.

Select Project Experience

Central Texas Regional Mobility Authority (CTRMA) Monitoring Dashboard | Texas

As CTRMA's on-call T&R consultant, Stantec provides monitoring services of the existing CTRMA facilities on an on-going basis, Mr. Mohammed was the lead developer for transaction and revenue tracking dashboard and the traffic count program data warehouse. Mr. Mohammed developed the algorithm for processing data from various sources into a centralized data lake, he also developed a query engine and visualization dashboard using Power BI to help understand the trends, performance, growth and identify anomalies in the data more effectively. This system served as a critical input towards the travel demand monitoring and revenue forecast efforts.

Central Texas Regional Mobility Authority (CTRMA) Trip Bundling Analysis | Texas

Mr. Mohammed was one of the lead developers on the CTRMA trip bundling analysis. He developed the algorithm utilizing python to ingest multiple months of data, process them through various bundling scenarios, calculated the processing cost for each and delivered a comparative assessment of transaction processing cost saving for each scenario.

Brazoria County Toll Road Authority Level II Traffic and Revenue Study | Texas

Mr. Mohammed worked on developing algorithm to process data from multiple years of revenue settlement reports to provide insights on revenue collection trends. He also developed daily level transaction summaries by payment type and plaza to analyze trends since the Brazoria County Expressway opened. This information was useful in understanding the ETC penetration rate over time and the share of violations by plaza.

Dallas Fort Worth (DFW) Airport Toll Plaza Analysis | Texas

The study was initiated to understand the operation of the existing toll collection system, provide recommendations to optimize this process and forecast the revenue collected under various policies. Mr. Mohammed utilized Tableau to generate summaries from a transaction database of about 21 million records. The summaries were developed for both transaction and revenue by payment type, duration of vehicle stay, vehicle frequency distribution etc. These summaries assisted in validating and understanding the existing conditions and served as an input for the forecasting model. Mr. Mohammed developed the forecasting model and used it to analyze various scenarios and conducted various sensitivity tests.

Trans Mountain Pipeline Expansion Project, Construction Delay Monitoring | British Columbia, Canada

The Trans Mountain Expansion Project includes construction, lane closures, temporary workspaces, access points and pipeline reactivation activities that will affect vehicular traffic along specific locations along the 700 kilometers of primary highway. Some key challenges to collecting this data are the large scope area, determining the causes of travel time and delays, and large areas of cellular dead zones. Mr. Mohammed leveraged a combination of location-based data and Google Maps API to capture and estimate the delays that were occurring in the corridor. He also developed a web-based data visualization dashboard to assist the clients in understanding the trends more effectively and help them provide delay mitigating solutions more efficiently.

City of Manitou Springs Traffic Analytics | Manitou Springs, Colorado

Mr. Mohammed utilized location-based data platforms to develop a framework for Manitou Springs to query individual day data and review the mobility trends that would help inform the City on the best use of their transportation infrastructure. The querying engine was built using Power BI, this application provided the client a quick and interactive way of navigating through the large database.

Sean Tihal PE

Toll Systems and Technology

REGISTRATIONS

Professional Engineer
#084025, NY

EDUCATION

Master of Science,
Civil Engineering
(Transportation), University
of California at Berkeley,
1999

Bachelor of Science,
Civil Engineering, Illinois
Institute of Technology,
1998

MEMBERSHIPS

Member, International
Bridge, Tunnel and
Turnpike Association

CERTIFICATIONS

Young Executive
Development Program,
American Road and
Transportation Builders
Association, 2010

Sean has a passion for helping transportation agencies plan, procure, implement, and operate all forms of electronic tolling technologies for roadside toll collection systems. For over 23 years, he has delivered tolling projects for over 30 transportation agencies across the United States, Canada and Europe. Sean is also well versed in performing toll strategic planning studies, toll feasibility studies, toll capital and operating cost estimates (CAPEX and OPEX), toll operations analyses, toll policy studies, as well as toll pricing and toll payment analyses. Currently, he is providing program management services to the Illinois Tollway to introduce innovations in their back office and roadside electronic tolling systems, the Ohio Turnpike and Infrastructure Commission to modernize their roadside and back-office tolling systems, and the Rhode Island Turnpike and Bridge Authority to implement a new cashless tolling system for the Claiborne Pell Bridge.

Select Project Experience

Illinois Tollway Tolling Innovation and Business Strategy Services | Downers Grove, Illinois

As the Project Manager, Sean is currently supporting the Illinois Tollway to provide Tolling Innovation and Business Strategy Services (TIBSS) for the Tollway's Department of Business Systems. Specific work activities currently underway include support for overall Program Management and Coordination, Tolling Innovation, Data Analytics, Business Rules Review, Legislative and Administrative Rules Review, Back Office Risk Assessment, ANPR Innovation Research and ANPR RFP Preparation.

Oregon DOT General Toll Consultant | Portland, Oregon

As a Senior Toll Specialist, Sean is currently providing toll advisory services to the Oregon DOT to procure back office and roadside tolling systems to support multiple future toll projects.

Rhode Island Turnpike and Bridge Authority (RITBA), Newport Pell Bridge Toll Collection System (TCS) Upgrade | Jamestown, Rhode Island

As the Project Manager, Sean is currently leading the implementation of a new TCS to implement cashless tolling at RITBA's Newport Pell Bridge. Efforts previously performed include preparation of the TCS business rules, functional and technical requirements, the Request for Proposals document, managing the review and evaluation of vendor proposals, and contract negotiations.

Ohio Turnpike New Toll Collection System (TCS) Modernization Program Management | Statewide, Ohio

As the Project Manager, Sean is currently providing technical consulting services to the Ohio Turnpike and Infrastructure Commission for the implementation of a new TCS that introduced highway speed Open Road Tolling and low speed gateless E-ZPass Only travel on the Ohio Turnpike. Specific work activities include construction coordination support, oversight of the software design, development, integration, and testing activities as well as overall project management and coordination support.

Ohio Turnpike Customer Service Center (CSC) Modernization Program Management | Statewide, Ohio

As the Project Manager, Sean is currently providing technical consulting services to the Ohio Turnpike and Infrastructure Commission for the implementation of a new CSC to modernize their E-ZPass electronic tolling functionality and provide unpaid toll processing functionality. Specific work activities include oversight of the software design, development, integration, and testing activities as well as overall project management and coordination support.

Kane County DOT Longmeadow Parkway Toll Bridge Implementation | Kane County, Illinois

As the Project Manager, Sean is currently leading the implementation of a new roadside toll collection system (TCS) and a new back-office system (BOS) to support cashless tolling on the County's new Longmeadow Parkway Toll Bridge. Work efforts performed to date include the development of toll policies and business rules, a revised vehicle classification structure and toll rate structure, discount plan analyses, preparation of a County toll ordinance, preparation of Request for Proposals (RFPs) for the TCS and BOS including contract development and negotiations support, E-ZPass interoperability coordination, and an RFP for debt collections, administrative hearings, and payment plan administration services.

*denotes projects completed with other firms

EDUCATION

Bachelors in Business
Administration, Texas
Christian University, 2000

MEMBERSHIPS

Member, International
Bridge, Tunnel and
Turnpike Association

Lutz has more than 15 years of technical experience in the surface transportation industry. He is well versed in a wide variety of activities that cover the entire spectrum from transportation feasibility studies to operations support. In past engagements, Lutz supported TxDOT's Toll Operations Division where he was part of an integrated team that developed a comprehensive toll program from inception to most recently Ohio Turnpike's TCS and CSC modernization where he is supporting the phased implementation of a new back-office system. Lutz is keen on providing client-focused expertise in the areas of roadside and back-office system implementations, strategic business planning, emerging tolling trends and technologies, tolling innovation, data collection and analysis, and business intelligence design and implementation.

Select Project Experience

Ohio Turnpike and Infrastructure Commission, New Toll Collection System and E-ZPass Customer Service Center | Statewide, Ohio

Ongoing implementation support of the new modernized Toll Collection System (TCS) and Customer Service Center (CSC) systems. CSC Phase 1 (E-ZPass modernizations) launched in February 2021 and Phase 2 (Unpaid Tolls Processing) in April 2024. The modernized TCS is introducing highway-speed ORT and low-speed gateless tolling operations across the Ohio Turnpike.

Ohio Turnpike and Infrastructure Commission, TCS and CSC Strategic Plan* | Statewide, Ohio

Professional services for preparing a Toll Collection System and Customer Service Center Strategic Plan for the Ohio Turnpike. Tasks included assessments of the existing system, development of potential alternatives, operational analyses, risk analyses, cost/benefit analyses, and recommendation of a preferred alternative for implementation. Efforts included developing policies, business rules and legislation for handling unpaid tolls, feasibility of the preferred alternative, and assessments of the various procurement options for implementing the Strategic Plan.

Los Angeles County Metropolitan Authority, ExpressLanes Project Operations and Maintenance Oversight Support* | Los Angeles, California

Operational analysis and systems implementation support for LA Metro's ExpressLanes program including monitoring and reporting on the contractor's roadside and back office performance, analyzing operational data, recommending improvements to customer and violation policies, evaluating the ExpressLanes' performance, ensuring all trip data and revenue is reconciled and properly accounted for, supporting LA Metro's finance and audit departments, administering the vendor's contract, and evaluating emerging and applicable technologies. Oversight support of re-procured roadside and back office systems with a variety of tasks ranging from design, development, implementation, and post go-live operational assistance.

Texas Department of Transportation, Toll Operations Division, On-Call Toll Services * | Austin, Texas

Responsible for conducting traffic & revenue projections for DFW managed lane projects and assisting with toll feasibility analyses of potential new highway corridors throughout the state. Projects include analyzing numerous alternative tolling, interchange location and roadway configuration scenarios.

Georgia State Road and Tollway Authority, On-Call Toll Services * | Atlanta, Georgia

On-call toll feasibility and traffic and revenue consulting services to assess viability of toll/user-financed facilities and projects that would require innovative transportation financing. Efforts included developing a dynamic pricing spreadsheet model to support the investment-grade traffic & revenue study for the I-85 Express Lanes in Atlanta.

Tampa Hillsborough Expressway Authority, Traffic & Revenue Forecast Retainer* | Tampa, Florida

Ongoing engagement to provide traffic & revenue and transportation planning services for on-call T&R service retainer that supports a variety of the Authority's projects and studies.

*denotes projects completed with other firms



Marcelle Jones JD

Indenture Compliance

EDUCATION

Masters in Science, Urban and Regional Planning, University of Wisconsin, 1993

Juris Doctor, Law, University of Wisconsin, 1992

Bachelor of Arts, Journalism, University of Oklahoma, 1984

MEMBERSHIPS

NCHRP 20-6 Legal Research Committee, Transportation Research Board

Chair of the Standing Committee on General Law, Transportation Research Board

Member, State Bar of Texas

Foundation Member, International Bridge, Tunnel and Turnpike Association

Known for her forward-thinking and issue-spotting detection and resolutions, Ms. Jones leads her clients in the evaluation and formulation of policy, strategic business decisions, regulatory and contract compliance, and risk management. Her 29 years of experience and knowledge of industry practices and trends has helped agency's establish business, operational and organizational frameworks for toll operations and public-private partnerships; assess and minimize risks; and identify essential procurement and contractual provisions in public-public and public-private agreements. She has authored and advised on legislation, statutes, administrative rules, and policies for various public agencies across 17 states.

Ms. Jones served as the General Counsel and the Director of Legal Services to the North Texas Tollway Authority and as an Assistant City Attorney for the City of Arlington for the Planning and Land Development, Office of the Secretary, the Planning Commission and Zoning Board of Adjustment.

Select Project Experience

Oregon Department of Transportation Toll Program | Statewide, Oregon

Stantec Project Manager for the ODOT General Toll Consultant contract to stand up the operations of the DOT's first state-level toll program, which includes an interstate bridge between Oregon and Washington, and the first proposed project to convert all lanes of an existing interstate highway to congestion priced roads. Provided strategic advice on alternative approaches to developing a performance-based contract, phasing procurement for accelerated delivery, and toll systems and customer service services requirements, industry standards, practices and emerging opportunities. Providing as needed, risk assessments; legislation and administrative rules review. Managing the GTC team resources, project budget, and project work orders.

Ohio Turnpike and Infrastructure Commission * | Ohio

As Strategic Planning and Procurement Advisor worked closely with agency executives to develop its strategic plan to guide the future deployment and integration of new technologies and innovations for the modernization of its toll collection systems and customer service center. Evaluated and consulted on the commission's toll policies, statutes and master trust agreement and industry lesson learned. Drafted several white papers regarding differential tolls, border tolling, compliance with trust agreements, utilization of existing statutes to support its program and legislation needed. Support client with new system procurements, incorporation of small businesses, DMV holds, lessons learned, and contracting.

Texas Department of Transportation* | Texas

As Project Manager, Senior Program and Policy Advisor managed the procurement team assisting the TxDOT with procurement document development, policies and procedures, and legislative matters related to its alternative delivery program for public-private partnerships and mega design-build projects. Provided technical support and feasibility analysis on both solicited and unsolicited proposals to support project throughout Texas. As a Senior Program and Policy Advisor provided policy and legislative support including bill analysis, research and reports on federal and state laws and industry activity regarding highway and rail infrastructure and operations. Initiated efforts to streamline and develop programmatic P3 procurement documents. Worked directly with the Strategic Project Division Director to engage and partner with the Associated General Contractors of Texas and identify and address contractor concerns and develop solutions, including issues related to sureties, alternative technical concepts, disclosures and contractor evaluations. Developed interlocal agreements, project development agreements between TxDOT and regional and county tolling agencies, project term sheets, policies and procedures for procurements, and Commission minute orders and executive summaries.

Also served as part of an integrated team that worked with TxDOT to develop a comprehensive toll program to identify and expedited project delivery solutions from the inception and planning of a toll road project to the customer service interface. Advised on impacts of state, federal and administrative laws to achieve agency goals on such matters as the use of construction-manager-at-risk, design-build, and toll policies. Identified enforcement and collection mechanisms and recommended solutions to support the State's introduction of new technology to enable video tolling/ORT facilities. Issues pertained to license plate lookups, the protection of personal information, and application of debt collection laws. Assisted in evaluating projects for toll viability/feasibility, developing toll collection schemes, procuring a toll collection system provider and providing implementation plans and oversight to move projects forward.

*denotes projects completed with other firms

Michael S. Bomba, Ph.D.

Bomba Consulting, LLC

Professional Experience

- Bomba Consulting, LLC. Managing Member. 2013-Present.
- Research Professor, Department of Logistics & Operations Management, G. Brint Ryan College of Business, University of North Texas, 2016-Present
- Research Scientist and Associate Director, Center for Economic Development and Research, University of North Texas, 2013-2016
- Alliance Transportation Group, Inc., Senior Associate, 2007-2013
- Bomba & Associates, Inc., Principal, 2004-2007
- Research Associate, Center for Transportation Research, University of Texas at Austin, 2003-2005
- Independent Consultant, 1998-2004
- Applied Economics Consulting Group, Inc., Data Analyst, 1999-2000
- Hicks & Company, Environmental Planner, 1994-1998

Education

- Ph.D., University of Texas at Austin, Public Policy
- M.S., University of Texas at Austin, Community and Regional Planning
- B.A., University of Texas at Austin, Economics and Government

Professional Organizations

- Transportation Research Forum. 2023-Present.
- Transportation Research Board – National Research Council, National Academies of Science, Engineering & Medicine – 1999-Present.

BACKGROUND AND EXPERIENCE

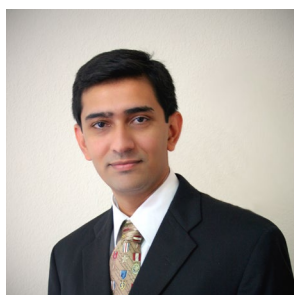
Dr. Michael S. Bomba has more than 25 years of professional experience, which has been a blend of practice and research. During his career, he has led or contributed to approximately 165 professional projects and research studies in the areas of regional transportation planning, applied demography, freight transportation, economic development, socioeconomic impacts analysis, and environmental planning.

A significant component of Dr. Bomba's practitioner work has been to assess the reasonableness of metropolitan planning organization's (MPO's) socioeconomic data at the zonal level for various traffic & revenue and toll road planning studies, adjusting the data as necessary. In a support role to the project engineers, he has worked on more than 50 toll road studies over the past 25 years. To date, these inputs have been used to successfully sell or obtain approximately \$9.0 billion of municipal bonds and federal loans (e.g., TIFIA, etc.) for green field projects, major facility upgrades, or to refinance existing municipal bonds. These efforts have included participation in presentations to rating agencies (Moody's, S&P, and Fitch) in New York City and presentations to major institutional investors (e.g., BlackRock, PIMCO, Vanguard, etc.) in New York City, Philadelphia, and Boston. The tolled projects financed and constructed using Dr. Bomba's socioeconomic forecasts include SH 130 (Segments 1 through 4); SH 45 North, Loop 1, US 183-A, US 290 East, US 183 South, SH 45 Southeast, and the US 183 North Managed Lanes (currently under construction). Dr. Bomba was also a contributor to the traffic and revenue analysis for the concession team that has been selected to rebuild the -10 Bridge in Lake Charles, Louisiana.

Recent Demographic Updates for Traffic & Revenue Studies

- 2023 Brazoria Expressway Extension Traffic & Revenue Study. 2023. Brazoria County (Texas) Toll Road Authority.
- 2023 Central Texas Regional Mobility Authority Demographic Update. 2023. Central Texas Regional Mobility Authority.
- 2022 Central Texas Turnpike Project Update. 2021-2022. Texas Department of Transportation.
- Calcasieu Parish I-10 Bridge Study. 2022-2023. Louisiana Department of Transportation (under contract with a consortium led by Acciona).
- 2020 Central Texas Regional Mobility Authority Demographic Update. 2019-2020. Central Texas Regional Mobility Authority.
- Loop 1 North/Loop 1 South Managed Lanes. 2018-2019. Central Texas Regional Mobility Authority.
- Cibolo Parkway Project Investment Grade Study. 2017-2019. Cibolo Turnpike LP.
- U.S. 183 North Managed Lanes Investment Grade Study. 2018. Central Texas Regional Mobility Authority.
- 2017 Central Texas Turnpike Project Update (Level II study). 2017. Texas Department of Transportation.

Nishant N. Kukadia, AICP, PMP, MBA



Nishant has two decades of experience in project development ranging from advanced planning to implementation of projects. He has worked on large infrastructure program contracts and managed four indefinite deliverable contracts ranging from \$10M to \$25M, with multiple task orders. His diverse professional background includes corridor planning, feasibility studies, procurement engineering, public private partnerships, ridership estimation, traffic and revenue (T&R) analysis, benefit cost analysis, economic impact analysis, risk analysis, big data analysis, safety studies and alternative financing (TIF, TRZ). Nishant has conducted activities such as legislative reviews, policy recommendations, funding analysis, as well as facilitation and coordination with external organizations and stakeholder groups. Representative projects include:

EDUCATION

Master of Business Administration, The University of Texas at Austin, 2011

Master of Urban Planning, Texas A&M University, 2004

Bachelor of Architecture, Maharaja Sayajirao University of Baroda, 2002

CERTIFICATIONS

American Institute of Certified Planners (AICP), 2007, #021822

Project Management Professional (PMP), 2013, #1654786

MEMBERSHIPS AND AFFILIATIONS

American Planning Association

Transportation Research Board

Project Management Institute

CONTINUING EDUCATION

Post Graduate Program - Artificial Intelligence for Leaders, The University of Texas at Austin, 2021

Southern Gateway Traffic and Revenue Study, Dallas, TX

Client: Texas Department of Transportation

Role: Planning Task Lead

Timeframe: 2014 - 2015

Scope: Level 2 T&R Study for Southern Gateway Project

Responsibilities: Managed the collection of socioeconomic data and development of population and employment forecasts as part of a Level 2 Traffic and Revenue Study to support TxDOT with assessing the feasibility of constructing managed lanes within the existing US 67 and I-35 corridors in the Dallas metro area. Referred to as the Southern Gateway, these US 67 and I-35 both lead from the southern portion of the Dallas-Fort Worth Metroplex directly into Downtown Dallas.

Camino Colombia Toll Road Study, Laredo, TX

Client: Texas Department of Transportation

Role: Transportation Planner

Timeframe: 2004 - 2005

Scope: Toll system enhancements for Camino Colombia

Responsibilities: Coordinated with economic development agencies on the potential warehouse and industrial development likely to occur within the traffic shed for the Camino Colombia Toll Road. Quantified traffic forecasts and provided recommendations for toll improvement strategies. Identified and evaluated three different toll collection improvements using traffic forecasts developed by the team. Determined recommendations to relocate and modernize the existing toll collection plaza to produce the most revenue while minimizing operations and maintenance costs.

EDUCATION

Master of Science, Civil Engineering
Texas A&M University, TX, 1992

Bachelor of Science, Civil Engineering
Osmania University, India, 1988

EXPERTISE

- Traffic Signal Design
- Traffic Signal Timing
- Traffic Analysis & Simulation
- ITS
- Illumination
- IAJR
- Forecasting/ TDM

TxDOT PRECERTS

1.3.1	1.4.1	1.5.1	1.7.1
3.2.1	3.7.1	4.2.1	4.7.1
7.1.1	7.3.1	7.4.1	7.5.1
8.1.1	8.2.1	8.3.1	8.4.1
8.6.1	11.1.1	23.4.4	

REGISTRATION

- PE TX # 85575

CERTIFICATIONS

- Professional Traffic Operations Engineer (PTOE) No. 2999
- Professional Transportation Planner (PTP) No. 263



TxDOT EMPLOYEE SEQUENCE NUMBER: 3085

Srinivas Sangineni, PE, PTP, PTOE, has over 33 years of experience in Intelligent Transportation Systems (ITS) with a focus in traffic signal design including projects with railroad preemption, illumination, transportation planning and design, traffic operations, traffic signal timing, traffic safety and work zone traffic control. Srini served as a traffic engineer for engineering consulting firms, the City of Austin, and the Texas Transportation Institute (TTI). He provided project management and design services for TxDOT, NTTA, DFW International Airport, DART, NCTCOG, cities, counties, and other clients.

Srini has successfully completed over 40 travel demand modeling, traffic forecasting, and traffic operational analysis tasks for schematic projects in the Dallas/Fort Worth area and Statewide. For traffic analysis and traffic simulation, Srini and the OTHON team use VISSIM, Synchro, HCS and MicroStation. IHSDM, ISATe, or HSS are used for safety analysis.

PROJECT EXPERIENCE

HCTRA Traffic Modeling for Sam Houston Tollway (Beltway 8), Section 1 (2022-2023), Harris County, TX. Senior Project Engineer.

OTHON provided engineering and planning services for corridor and area-wide travel demand modeling including traffic forecasting, origin-destination analysis and system operation analysis, and to recommend corridor and system improvements supporting the conversion of the Sam Houston Tollway, Section 1 to All-Electronic Tolling (AET) from US 290 to Hardy Toll Road, a 13.9-mile segment in Harris County, Texas. The design studies include on-call VISSIM traffic modeling in support of alternative analyses within the planning, design, and construction phases of the AET overall program. Ultimately eight (8) scenarios were for up to three (3) different analysis years. The recommendations were organized into short-, mid-, and long-term solutions to support HCTRA's goal of LOS B. The short-term recommendations included removing toll gantries, implantation of Active Traffic Management System (ATMS) or lane control signals, potentially on existing overhead sign bridges or existing bridges. Mid-term recommendations include addition of a 5th lane, C-D road for the northbound approach to SH 249, and an auxiliary lane addition between Antoine Drive and Veterans Memorial Drive. Long-term recommendations included 2-lane HOV Toll Lanes and providing a 2-lane direct connector from northbound Sam Houston Tollway (Beltway 8) to SH 249. In addition to the improvements to reach LOS B, the following improvements were recommended including intersection safety strategies to benefit pedestrian and bicyclist including adding crosswalks and pedestrian signals, installation of stop bars, re-design right turn lanes, and driveway consolidations. In addition, the Orbit Trail providing a network spine for trails, bikeways, and mixed-use paths near Sam Houston Tollway (Beltway 8) to support multi-modal goals. The alternatives were developed using O-D data from H-GAC, existing and historical traffic data, volumes from the H-GAC TDM, HCTRA data, existing and future land use maps, and TranStar speed data. A VISSIM analysis was completed and a benefit/cost analysis of the five C-D options. Construction Cost: \$962M.

North Texas Tollway Authority (NTTA) Maintenance Management Consultant (MMC) Contract projects (2013-2021):

- **President George Bush Turnpike – Western Extension (PGBT-WE) and Chisholm Trail Parkway (CTP) Socioeconomic Analysis (2013); Tarrant & Johnson Counties, TX.** Senior Project Manager. Updated the socioeconomic and demographic data associated with the “Chisholm Trail Parkway Investment Grade Traffic & Toll Revenue Study” and the “President George Bush Turnpike-Western Extension Investment Grade Traffic & Toll Revenue Study”. OTHON updated and analyzed the population, employment, median household income, consumer price index, and building permits data. OTHON coordinated with several public agencies to obtain the current and historical data and provided reports with the summary and analysis. Deliverables included analysis summary and GIS maps.
- **Sam Rayburn Tollway (SRT)/I-35E Interchange VISSIM Traffic Study (2014); Lewisville, TX; NTTA.** Senior Project Manager. Performed a traffic operational analysis for the Sam Rayburn Tollway (SRT) – I-35E freeway interchange. Analyzed existing weekday AM peak period traffic operations at this interchange through microscopic modeling and identified improvements to relieve congestion along westbound SRT main lanes in the vicinity of exit ramps to I-35E. Developed VISSIM models for existing and recommended scenarios. VISSIM models included EB/WB SRT to SB I-35E direct connector ramps and the signalized SRT – I-35E frontage road interchange. The Measures of Effectiveness (MOE) included travel time, delay, speed and queue. Proposed recommendations showed improvements in existing traffic operations along WB SRT main lanes and exit ramps to I-35E with approximately 39% reduction in overall travel time and approximately 82% reduction in overall vehicular delay (analytically).

Roger Allen

Education University of Houston Clear Lake, Houston, Texas
Bachelor of Science in Accounting
December, 2002

'91-'94 San Jacinto College, Pasadena, Texas
Associate of Arts in Mathematics, Pre-Engineering

Experience

'01-Present Vice President, C J Hensch & Associates, Incorporated, Pasadena, Texas

- Project Manager
- Implement and monitor Total Quality Management System
- Ensure accuracy of Traffic Data Deliverables
- Develop and Train Staff
- New Technologies Advisor/Developer

Roger Allen has 23 years' experience in field traffic data collection project management for Traffic and Revenue Studies as a subconsultant. Roger has directed traffic data collection efforts for Toll and Revenue Studies since 2001 for the CTRMA, TxDOT, Harris County Toll Road Authority, NTTA, Fort Bend Toll Authority, Brazoria County Toll Road Authority, Alamo RMA, and the NET RMA. During this time he has led data collection efforts implementing the latest technologies being deployed in the field to provide the safest and most accurate studies available. This long term experience allows Mr. Allen to deliver innovative/cost effective solutions to complex problems that may arise. Mr. Allen has been a guest speaker on the subject of Innovative solutions at the Texas Institute of Traffic Engineers City of Richardson Conference and for Texas Southern Universities' Transportation Program. C J Hensch & Associates has other projects that have been presented at professional organization such as Texas-Intelligent Transportation Systems including the City of College Station's Game Day Traffic Study - Texas A&M/Alabama Football Game and Txdot's Houston Regional Rider 42 Study.

He has completed and directed numerous projects in all areas of data collection while working in the industry for over 23 years. Mr. Allen holds a BS from the University of Houston, Clear Lake and has extensive experience in project management and quality control. Roger worked for the City of Pasadena's Engineering Department for 3 years in the field and worked 7 years for Ethyl Corporation as an Operations Coordinator/Project Manager for 5 process units. During this time Mr. Allen was part of the Ethyl's corporate best practices/Six Sigma quality management team and worked as an ISO 9000 Internal Lead Auditor. As a Six Sigma project manager/ team leader, Mr. Allen has taken his previous petrochemical industry experience and has worked closely with traffic industry software and hardware developers to test and improve reliability and accuracy of various types of traffic data collection technologies including Thru Traffic, Miovision, Jamar Technologies, Post Oak Traffic's Bluetooth AWAM, and MicroTraffic. He has also worked with Harris County's Engineering Group to develop and implement a progressive software output to accommodate planning, signalization, and quantitative MOEs on major arterials. Roger also implemented a total quality management system which includes proactive testing and maintenance of traffic data collection equipment to minimize equipment failure during projects. He also developed all safety and installation methods for C J Hensch and Associates' data collection efforts. His goal is to perform a project right the first time. As the team's key person for technical development/ project management, and technical support, Mr. Allen will ensure that the CJH Team will deliver the highest quality traffic data.

Traffic Data Collection Traffic and Revenue Projects

- Data Collection Project Manager (CJH)- Loop 1 Express Lanes Preliminary (Level 2) T&R Study, CTRMA, Austin, Texas.
- Project Manager (Data Collection), Grand Parkway Segments H and I Level 2 T&R Study, Houston
- Project Manager (Data Collection), Investment Grade T&R Study, NTTA, Texas
- Project Manager (Data Collection, Toll 49 Comprehensive (Level 3) Traffic and Toll Revenue Study
- NET RMA, Tyler, Texas
- Project Manager (Data Collection) Grand Parkway SH 99 Segments E, F and G Investment Grade T&R Study, Houston, Texas.
- Project Manager (Data Collection) IH 35E Managed Lanes Comprehensive (Level 3) T&R Study, Texas
- Project Manager (Data Collection) MoPac North Express Lanes Comprehensive
- T&R Study, CTMRA Austin, Texas.
- Project Manager (Data Collection), Loop 1604 Managed Lanes Level-2 Study, Alamo
- RMA & TxDOT, San Antonio, Texas.
- Project Manager (Data Collection), Midtown Express (SH 183, SH 114, and Loop 12 Managed Lanes)
- Project Manager (Data Collection) Sketch Level, Sketch-Level Plus, Level-2 and Level-3 T&R Studies, TxDOT Dallas
- Project Manager (Data Collection) Harris County Toll Road Authority System Counts
- Project Manager (Data Collection) Harris County Toll Road Authority- Hardy Toll Road

ROLANDO CASTAÑEDA, PE

PRESIDENT

Mr. Castañeda has over 24 years of experience and serves as President for Ally General Solutions (AGS) and is responsible for plan preparation and necessary calculations related to the design of traffic and roadway improvements.

Professional Credentials

Bachelor of Science in Civil Engineering, Texas A&M University-Kingsville, 2001
Registered Professional Engineer: Texas (No. 98276), 2006
Member, American Society of Civil Engineers
Member, Texas Institute of Transportation Engineers
Professional Affiliate, Houston Hispanic Architects and Engineers, Board Member (3rd Term)

Experience

Traffic Signal Design at the Intersections of Tanner Road at Cunningham Road and at Tanner Road at Brittmore Park Drive, Harris County Precinct 3, Houston, Texas--Project Engineer. Assisted with the design of two new signals on Tanner Road.

METRO Regional Computerized Traffic Signal System, City of Houston, Houston, Texas--Project Engineer. Responsibilities included assisting with intersection and traffic signal upgrades for intersections inside the inner loop of Interstate Highway 610. Also provided technical support in the development of Traffic Signal Books.

METRO Regional Computerized Traffic Signal System, City of Houston, Houston, Texas--Project Engineer. Responsibilities included field surveying the project area for existing utilities and traffic-related equipment. Other responsibilities were to assist with design of aerial traffic signal interconnect (fiber optic) cable in Northwest and Southwest Houston.

METRO Regional Computerized Traffic Signal System, City of Houston, Houston, Texas--Project Engineer. Responsibilities included field verifying existing conditions for approximately 750 intersections and changing graphics for the implementation of ICONS graphic program. Assisted with end-to-end testing of about 300 intersections from TRANSTAR.

METRO Regional Computerized Traffic Signal System, City of Houston, Houston, Texas--Project Engineer. Responsibilities included assisting with intersection and traffic signal upgrades for intersections outside the loop of Beltway 8. Other responsibilities included changing and updating signal timings for 17 intersections along Bay Area Boulevard and Briar Forest in Houston.

Traffic Signal Design at the Intersection of State Highway 6 and Life Time Fitness Entrance, Texas Department of Transportation, Houston, Texas and City of Sugar Land, Texas--Project Engineer. Responsibilities included design of a split-phased intersection in Sugar Land and preparing plans, estimate, and specifications for bid. Other responsibilities included minor roadway design, signal timings, and synchronization along State Highway 6, along with construction management.

Traffic Signal Improvements at the Intersections of State Highway 6 and Aetna Entrance and Kensington Boulevard, Texas Department of Transportation, Houston, Texas and City of Sugar Land, Texas--Project Engineer. Responsibilities included design and improvements to both intersections along with preparing plans, estimate, and specifications for bid. Other responsibilities included minor roadway design, signal timings, and synchronization along State Highway 6, along with construction management.

Traffic Signal Design at the Intersection of Town Center Boulevard North and Mall Ring Road (First Colony Mall), City of Sugar Land, Texas--Project Engineer. Responsibilities included the design of "T" intersection with Wi-Fi communication. Also in the design were countdown pedestrian signal heads. Signal design will be used as city of Sugar Land's Standard for Signal Design. Prepared plans, estimate, and specifications for bid. Prepared signal timings for this signal with Sychro. Performed construction management and inspections for the project.

Design/Modified School Zones along Dell Dale Street and Additional Side Streets, Harris County, Texas--Project Engineer. This area consisted of four schools, three along Dell Dale Street. The design along Dell Dale Street included three school zones and additional school zones on all access streets. The design also included signing, pavement markings and installing ADA-approved wheelchair ramps. Paging's flashing beacons solar were used in the design.

Fiber Optic Communications Design HCPID, Harris County, Texas--Project Engineer. Responsibilities included preparing the design plans for fiber optic communications cable along Telge Road and West Little York Road in Harris County, Precinct 3. The 4.1-mile section of Telge Road runs from West Road to Jarvis Road and the 4.4 mile section of West Little York Road is from State Highway 6 to Fry Road. The communications cable will be for traffic signal coordination and management.

Interstate Highway 610/US 290 Interchange Reconstruction, Texas Department of Transportation, Houston District, Houston, Texas--Project Engineer. The overall project includes reconstruction of an existing three-level, fully directional interchange to a complete four-level, fully directional interchange. The project consists of the design of all main lanes, frontage roads, direct connectors, ramps and express lanes along Interstate Highway 610 from T.C. Jester to the interchange and along US 290 from West 34th Street to the interchange. Responsibilities included signing and pavement markings and the design of six traffic signals along US 290 and US 610 project limits. Provided Design and Construction services. 1/2012-1/2015

Fort Hood Advanced Traffic Management System, USACE, Fort Hood, Texas--Transportation Engineering. The project consists of a design-build team to design and implement an advanced traffic management system (ATMS) for the military base, Fort Hood. The ATMS will be designed to control 27-58 signalized intersections and CCTV using wireless communications and a traffic-responsive, central control system. All intersections are located on the military base.

**APPENDIX C
HISTORICALLY UNDERUTILIZED BUSINESS (HUB) /
DISADVANTAGED BUSINESS ENTERPRISE (DBE) CERTIFICATION**

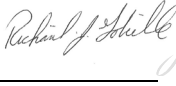
HUB/DBE REQUIREMENTS

The goals for participation by HUB/DBEs has been established by the Mobility Authority for future projects to be assigned:

Project	Professional Services HUB or DBE Goal
Project to be assigned	15%

DBE Certification

By signing the SOQ, the Proposer certifies that the above HUB/DBE goal will be met in the Agreement by obtaining commitments equal to or exceeding the HUB/DBE percentage or that the Proposer will provide a good faith effort to substantiate the attempt to meet the goal.

Rick Gobeille _____ Name	 Digitally signed by Rick Gobeille Date: 2024.06.06 11:09:08 -04'00'
Senior Principal _____ Title	
Stantec Consulting Services Inc. _____ Company	
6/6/2024 _____ Date	

**APPENDIX E
CONFLICT OF INTEREST DISCLOSURE STATEMENT**

This Disclosure Statement identifies potential conflicts of interest that may exist because of a previous (within the last 12 months) or current business relationship (a “business relationship”) between:

- (1) the undersigned Respondent (including each individual, firm, or other business entity that is a member of a Respondent team) to the proposal for a contract to provide general engineering consultant (GEC) services, and
- (2) a person or firm listed on “Key Personnel and Firms” of the Mobility Authority, available at the Mobility Authority website (<https://www.mobilityauthority.com/about/policy-disclaimers/keyfirms>)

Section I of this Disclosure Statement Form describes a business relationship which could result in a conflict of interest. Section II of this Disclosure Statement Form describes the undersigned’s proposed management plan for dealing with any potential conflict of interest identified by Section I of this form. Additional pages may be attached to this form if needed to complete Sections I and II.


This Disclosure Statement is submitted to comply with the Central Texas Regional Mobility Authority’s Conflict of Interest Policy for Consultants. The undersigned acknowledges that approval of the proposed management plan is within the sole discretion of the Central Texas Regional Mobility Authority.

SECTION I. Description of Potential Conflicts of Interest.

For each business relationship state: (A) the Respondent (and if the Respondent is a team, the name of any individual, firm, or business entity that is a part of Respondent’s team) and the person or firm listed as “Key Personnel and Firms” of the Mobility Authority with whom there is a business relationship; and (B) the nature of that business relationship; its current status; and the date of termination or expected termination of the business relationship.

SECTION II. Management Plan for Dealing with Potential Conflicts of Interest.

For each potential conflict of interest listed in Section I, please propose a management plan to address any potential conflict of interest.

SIGNED:  Digitally signed by Rick Gobeille
Date: 2024.06.06 11:15:16 -04'00' DATE: 6/6/2024

NAME AND TITLE: Rick Gobeille, Senior Principal

REPRESENTING: Stantec Consulting Services Inc.

APPROVED BY THE CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY:

SIGNED: _____ DATE: _____

NAME AND TITLE: _____

DISCLOSURE STATEMENT FORM

This Disclosure Statement outlines potential conflicts of interest as a result of a previous or current business relationship between the undersigned individual (and/or firm the firm for which the individual works) and an individual or firm submitting a proposal or otherwise under consideration for a contract associated with Traffic and Revenue Engineering Services

Section I of this Disclosure Statement Form describes the potential conflicts of interest. Section II of this Disclosure Statement Form describes the proposer's management plan for dealing with the potential conflicts of interest as described in Section I of this form. This Disclosure Statement is being submitted in compliance with the Central Texas Regional Mobility Authority's Conflict of Interest Policy for Consultant's. The undersigned acknowledges that approval of the proposed management plan is within sole discretion of the Central Texas Regional Mobility Authority.

SECTION I. Description of Potential Conflicts of Interests.

Please refer to section 1G of the proposal.

SECTION II. Management Plan for Dealing with Potential Conflicts of Interest.

Please refer to section 1G of the proposal.

SIGNED:  Digitally signed by Rick Gobeille
Date: 2024.06.06 11:16:23 -04'00' DATE: 6/6/2024

NAME AND TITLE: Rick Gobeille, Senior Principal

REPRESENTING: Stantec Consulting Services Inc.

APPROVED BY THE CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY:

SIGNED: _____ DATE: _____

NAME AND TITLE: _____

Form of Contract

We have reviewed your proposed RFQ and believe that should we be selected for this assignment, we will be able to conclude a mutually satisfactory contract with you. As the RFQ did not refer to contract terms for engagement, we would propose discussions based on our standard Professional Services Agreement.

Contact Information:

William Ihlo, PE

Principal

475 Fifth Avenue, 12th Floor

New York, NY 10017

(203) 417-6780

william.ihlo@stantec.com

Rick Gobeille, PE

Senior Principal

475 Fifth Avenue, 12th Floor

New York, NY 10017

(212) 366-5625

rick.gobeille@stantec.com