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

RESOLUTION NO. 10-91

Authorizing Supplement No. 3 to Work Authorization No. 8
with URS Corporation for the Manor Expressway Toll Development Project
Investment Grade Traffic and Toll Revenue Engineering Services

WHEREAS, in Resolution No. 05-73, dated September 28, 2005, the CTRMA Board of Directors approved entry into a Traffic and Revenue Engineering Services Agreement with URS Corporation (the "T&R Agreement") for the provision of traffic and revenue engineering services for CTRMA projects and potential projects; and

WHEREAS, in Resolution No. 08-44, dated July 30, 2008, the CTRMA Board of Directors authorized the Executive Director to execute Work Authorization No. 8 with URS Corporation for the performance of traffic and revenue engineering studies related to the Manor Expressway Tollway Project (the "Project"); and

WHEREAS, in Resolution No. 09-70, dated October 28, 2009, the CTRMA Board of Directors authorized the Executive Director to execute a Supplement to Work Authorization No. 8 with URS Corporation for the performance of traffic and revenue engineering studies related to the Project; and

WHEREAS, in Resolution No. 10-39, dated April 28, 2010, the CTRMA Board of Directors authorized the Executive Director to execute a Supplement No. 2 to Work Authorization No. 8 with URS Corporation for the performance of traffic and revenue engineering studies related to the Project; and

WHEREAS, the CTRMA and URS Corporation have determined that a Supplement No. 3 to Work Authorization No. 8 is necessary to authorize URS Corporation to prepare an Investment Grade Traffic and Revenue Study for the Project.

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors authorizes the Executive Director to finalize and execute a Supplement No. 3 to Work Authorization No. 8 with URS Corporation in the form or substantially the same form set forth in Attachment "A" to this Resolution, provided that any work commenced under the Supplement No. 3 to Work Authorization No. 8 shall be subject to all terms and conditions of the T&R Agreement.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29th day of September, 2010.

Submitted and reviewed by:

Andrew Martin
General Counsel for the Central
Texas Regional Mobility Authority

Approved:

Ray A. Wilkerson
Chairman, Board of Directors
Resolution Number 10-91
Date Passed 09/29/10

ATTACHMENT "A"
TO
RESOLUTION 10-91
Supplement No. 3 to URS Work Authorization No. 8

ATTACHMENT C

C-2
SUPPLEMENTAL WORK AUTHORIZATION NO. 3
TO WORK AUTHORIZATION NO. 8
CONTRACT FOR ENGINEERING SERVICES

THIS SUPPLEMENTAL WORK AUTHORIZATION is made pursuant to the terms and conditions of Article 4 of the Contract for Engineering Services (the Contract) entered into by and between the **Central Texas Regional Mobility Authority** (the Authority) and **URS Corporation** (the Engineer) dated as of **October 1, 2005.**

The following terms and conditions of **Work Authorization No. 8 (Manor Expressway [US 290E] Toll Development Project Investment Grade Traffic and Toll Revenue Engineering Services**), original signed on July 31, 2008 and previously amended on October 28, 2009 and May 6, 2010, are hereby amended as follows:

The scope of services, schedule and estimated cost for this supplemental work authorization (SWA) are attached and made a part of this SWA.

The expiration date of Work Authorization Number 8 will extend from 31 December 2010 to 30 June 2011.

This Supplemental Work Authorization shall become effective on the date of final execution of the parties hereto. All other terms and conditions of Work Authorization No. 8 not hereby amended are to remain in full force and effect.

IN WITNESS WHEREOF, this Supplemental Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER

A.H. Arredondo III
(Signature)
Antonio H. Arredondo III
(Printed Name)
Vice President
(Title)
9-29-10
(Date)

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

Mike Heiligenstein
(Signature)
Mike Heiligenstein
Executive Director
9-29-10
(Date)

URS CORPORATION
SCOPE OF SERVICES FOR
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY (CTRMA)
September 22, 2010

SUPPLEMENTAL No. 3 to WORK AUTHORIZATION No. 8
MANOR EXPRESSWAY (US 290E) TOLL DEVELOPMENT PROJECT
INVESTMENT GRADE TRAFFIC AND TOLL REVENUE ENGINEERING SERVICES

The Traffic and Toll Revenue Engineering Services described herein are to be provided by URS Corporation (URS) to the Central Texas Regional Mobility Authority (CTRMA) to update the Manor Expressway (US 290E) Investment Grade Traffic and Toll Revenue (T&R) Study. The main purpose of this study update is to incorporate the recently adopted Capital Area Metropolitan Planning Organization (CAMPO) Mobility Plan 2035. This study also includes independent economic review, latest traffic counts, updated project configuration and assumptions, as well as, sensitivity and risk analysis of forecasted toll revenue for the proposed Manor Expressway Toll Road. In addition, URS staff will provide technical support to CTRMA in dealing with the Transportation Infrastructure Finance and Innovation Act (TIFIA) program, private sector financial organizations, and bond rating agencies to acquire financing for the proposed project.

SCOPE OF SERVICES

This Scope of Services is organized into seven (7) principal tasks that encompass the investment grade study update and provide project financing support for the proposed Manor Expressway Toll Road Expressway (US 290E) Toll Road. This analysis is for an update, compatible with the CAMPO Mobility Plan 2035, to the existing analysis completed in August 2010. Included in this comprehensive work program are the following tasks:

Task 1: Project Management/Quality Assurance (QA)
Task 2: CAMPO Mobility Plan 2035 Update
Task 3: Traffic and Toll Revenue Study Update
Task 4: Sensitivity Analysis Update
Task 5: Risk Analysis Update
Task 6: Documentation Update
Task 7: Project Financing Support

The services presented in this scope will be completed on a time and materials (T&M) basis including reimbursement for other direct costs incurred (travel, lodging, meals, etc.). The project schedule and budget that supports this scope of services are also attached.

Task 1: Project Management/Quality Assurance (QA)

The URS project manager will coordinate and oversee all activities associated with this scope of services. Specific activities include participation at project coordination meetings with CTRMA, PBS&J, and other project team members. URS will hold a project kick-off meeting and monthly progress meetings, coordination of individual work tasks, development of progress reports and invoices, and coordination and implementation of URS QA procedures to include internal independent technical reviews. In addition, the URS project manager will coordinate with subconsultants as needed throughout the project.

Task 2: CAMPO Mobility Plan 2035 Update

The 2035 Regional Transportation Plan (also known as "Mobility Plan 2035") was adopted with modifications by the CAMPO Transportation Policy Board on May 24, 2010. The model data were made available to the public in August 2010. The existing Manor Expressway T&R Study was based on the CAMPO Mobility Plan 2030. Therefore, a set of project data updates is needed in order to bring the T&R Study to date and be compatible with the Mobility Plan 2035, specifically with the economic growth patterns and future transportation system development.

Task 2 will include three subtasks as described below:

Task 2.1: Demographic Data Update

The previous Manor Expressway T&R Study included a comprehensive demographic data review for model development. In this study, the demographic data review will be updated and the base line data from the Mobility Plan 2035 will be used.

For this task, URS has retained the services of Alliance Transportation Group (ATG) to assess the Mobility Plan 2035 demographic forecasts and previously revised forecasts. ATG recently served as a consultant in this capacity for CTRMA on the 183A Phase II and Manor Expressway T&R Studies. The demographic forecasts data have been kept consistent between both studies. The socioeconomic review that occurred in the existing Investment Grade studies will be updated to reflect the Mobility Plan 2035 and the current understanding of the demographics in the area surrounding the proposed project corridor. ATG's scope and fee for this update are also attached. ATG will issue a technical memorandum which describes the work performed in Task 2.1 and documents the results.

URS will review the socioeconomic data in the study area and the region to verify the ATG results are reasonable. The verification will include a comparison to the latest forecast and other data sets developed by CAMPO, the US Census Bureau, and the Texas State Data Center. The verification process will include

the development of data comparison tables and thematic maps created using GIS software. The verification process will also allow for the identification of geographic areas where significant changes in growth have occurred for the last two (2) years.

The result of the demographic data update will be a population and employment forecast at the Traffic Analysis Zone (TAZ) level for entry into the regional travel demand model for the base year (2008) and several future years. The future years included in the forecast will be dependent upon the timing of transportation improvements in the region that may impact the proposed facility, but at a minimum will include 2010, 2015, 2025, and 2035. Forecasts for intervening years (2013, 2017, and 2018) will be interpolated from the model forecast periods.

Task 2.2: Model Network and TAZ Update

The CAMPO Mobility Plan 2035 extends its coverage from three counties (Travis, Williamson, and Hays) to five counties (added Bastrop and Caldwell). Since the influence of the two added counties is marginal, this T&R study update would not fully replace the current toll model data with the CAMPO five-county model data. Instead, URS will compare and make necessary modifications to the toll study model data while maintaining the consistency with the new CAMPO data. This subtask includes the following updates:

- Compare and update the current toll model roadway network according to Mobility Plan 2035;
- Compare current toll model TAZ data to Mobility Plan 2035's; and
- Develop equivalent tables between current TAZ data and Mobility Plan 2035 TAZs in Travis, Williamson, and Hays Counties.

Task 2.3: Traffic Data Collection and Update

The current Manor Expressway T&R Study is based on the toll model calibrated with 2008 data. To update the study and to meet CTRMA's bond sale schedule in spring 2011, a data collection effort is proposed for this study update. This data collection and comparison is to ensure the calibrated model can reasonably represent the latest traffic conditions around the study area and therefore is defensible in support of an Investment Grade Study. This is a limited data collection effort along the proposed corridor. URS will adjust the data collected based on TxDOT seasonal factors and traffic count experience of Austin area toll roads, including SH 130, SH 45N, Loop 1 North, and US 183A. Comparing the adjusted 2010 traffic counts to the traffic counts collected in 2008 will provide an indication of growth in traffic volumes since 2008. This information is the minimum required to review the previous traffic model calibration. The following describes the traffic data collection effort:

- Traffic counts will be collected at approximately 58 locations along 6 screenlines of the US 290E for a 3-day period; and
- Classification counts will be collected at approximately 8 locations along US 290E for a 7-day period.

For this task, URS has retained the services of GRAM Traffic Counting, Inc. Their scope and fee is also attached. URS will direct GRAM's work and verify the traffic count data results are reasonable and consistent. Data collected will be summarized and correlated with the roadway network in the travel demand model to review and update model calibration.

In addition, the TxDOT 2009 Traffic Counts will be used to update the system-wide traffic model calibration.

Task 2.4: Traffic Model Calibration Update

Utilizing existing traffic count data and the additional data collected under Task 2.3, URS will update the 2008 model calibration of the toll diversion model. This calibration update will be based on existing data sources and results of traffic data collection effort. The objective of the calibration update in this task will be to ensure the traffic model replicates the current traffic flows specifically in the vicinity of the US 290E corridor. This model calibration update will also include specific analysis related to trips by vehicle type (passenger car and truck), as well as, specific travel patterns that would utilize the US 290E corridor. In addition, as part of this task URS will analyze initial estimates of toll constraint and elasticity of variables. The overall regional model calibration year will remain 2008 and the trip tables will be based on the 2008 population and employment estimates provided by ATG. However, the 2009 system-wide traffic data will be reviewed and compared to the model results. Within the corridor study area, URS will update the 2008 model validation with the 2010 traffic counts.

Task 3: Traffic and Toll Revenue Study Update

In this task, URS will review previous T&R study results and conduct an update which is compatible with the Mobility Plan 2035 and based on the updated model data from Task 2. Task 3 will include three subtasks as described below:

Task 3.1: Corridor Scenario Preparation

URS has developed a traffic and toll revenue forecasting model for the Manor Expressway project based on the latest configuration of Segments 1/1A, 2, and 3. In anticipation of new project scenarios with different cross-section designs and configurations, URS will prepare for a comparative analysis the modeling sets for up to three (3) project scenarios. URS will update the roadway network to reflect the proposed project configurations and confirm the design details and anticipated completion date of all relevant projects for the specific horizon years in the forecast period. The background network information and opening dates

will also be updated. The final list of relevant projects and "most probable" completion dates will be obtained from the TxDOT Austin District, CTRMA and Texas Turnpike Authority (TTA).

Task 3.2: Toll Rate Schedule and Revenue Estimation Assumption Update

The Manor Expressway toll rate schedule has been established from previous analysis. Based on the proposed scenarios, toll gantry's influence distances will be measured and the minimum toll charge of direct connectors and ramp gantries will be determined. The toll rate schedule will be developed on the current CTRMA toll policy in terms of rate per mile and escalation. In addition, the corresponding toll at each plaza will be presented by year to provide CTRMA and its stakeholders, a precise description of anticipated toll rates over forty (40) years from its anticipated opening year of 2013. The analysis will assume two (2) electronic toll collection (ETC) options would be available to motorists using the tolled facilities:

- ETC transponder; and
- Video tolling.

URS will obtain the anticipated toll plans and rates for all the relevant projects that are anticipated to operate as toll facilities.

Previous T&R studies by URS and other CTRMA consultants have implemented many different revenue estimation assumptions. For this update study, one important effort is to coordinate with CTRMA staff and other T&R consultants to maintain consistent assumptions with the recently completed 183A Phase II T&R study by Stantec, as appropriate. These assumptions include but are not limited to:

- ETC penetration and evasion rates;
- Video tolling surcharges;
- Ramp-up factors;
- Annualization factors;
- Long term traffic growth trends; and
- Truck axles and percentages.

A technical memorandum of the updated toll revenue estimation assumptions will be delivered.

Task 3.3: Traffic and Toll Revenue Estimation Update

URS will use the calibrated toll diversion model to estimate volumes for the Manor Expressway project for various scenarios for specific model years, incorporating the revised socioeconomic data and the updated roadway network reflecting information gained in Tasks 3.1 and 3.2. Traffic estimates will be

developed by toll gantry location. Toll revenue estimates will be developed from the traffic estimates based on appropriate divisions of vehicle class (passenger car and truck) and by payment type (ETC and Video). Traffic and Toll Revenue Estimates will be provided in tabular form for the proposed project scenarios defined during Task 3.1.

A technical memorandum providing the T&R estimates and a brief description of the modeling methodology and assumptions will be delivered. It is anticipated that the project staff will evaluate these project scenarios and determine one (1) final configuration as the base case. The final configuration will be included in the final report.

Task 4: Sensitivity Analysis Update

In this task, URS will conduct and update a comprehensive toll sensitivity analysis to evaluate the impact of key model variable changes to the revenue return of this project. Task 4 will include two subtasks as described below:

Task 4.1: Update and Run Travel Demand Model

URS will test the following variables to conduct the sensitivity analysis:

- Travel Demand Variables
  - Socioeconomic
    - Employment
    - Population
    - Household income
  - Economic
    - Value of time (base and escalation rate)
    - Truck demand
- Transportation Supply Side Variables
  - Network alternatives
  - Build new facilities
  - No-build of new facilities
  - Specific configurations
- Operational Factors
  - Toll rate and escalation
  - Violation and evasion
  - TxTag transponder penetration

URS will utilize the Investment Grade travel demand model, which is updated in Tasks 2 and 3. The model will also be updated to reflect the variables defined above. The model will be run for the anticipated opening year (2013) and horizon years (2015, 2025, and 2035). Results between model years will be developed using interpolation. Results beyond the horizon year (2035) will be

developed using extrapolation. The total number of forecasts will be for forty (40) years.

Task 4.2: Develop Toll Sensitivity Curves

Based on the traffic and toll revenue results generated in Task 3, URS will develop and graphically depict the toll sensitivity curves for each tested variable. These curves will synthesize the performance response of each variable and facilitate selection of parameter values for any future analysis.

Task 5: Risk Analysis Update

The toll sensitivity analysis conducted in Task 4 provides an indication of the sensitivity of toll revenue to select variables assuming an undefined level of risk. The purpose of the risk analysis is to identify the probability that the forecasted toll revenues will be realized. This analysis will be achieved using Monte Carlo simulation analysis, which allows for the simultaneous simulation of risk and uncertainty from a variety of sources and correlation across inputs. The output of the Monte Carlo simulation analysis will be a probability histogram for each variable analyzed in Task 4. The histograms will identify the upper and lower bound probability points for each variable.

Task 6: Documentation Update

URS will prepare a draft technical memorandum that includes a brief summary of the updated T&R study results, sensitivity and risk analysis methodologies, an analysis of findings, and supporting documentation. URS shall submit the draft technical memorandum to CTRMA for review and comment.

A final investment grade traffic and toll revenue report will be developed based on comments received from CTRMA.

In summary, URS will prepare other technical memorandums, as described in Tasks 2.1, 3.2, 3.3, and 7.2.

Task 7: Project Financing Support

In this task, URS will provide sufficient support, in its T&R consultant capacity, to help CTRMA fund the Manor Expressway toll project. Task 7 will include four subtasks as described below:

Task 7.1: Joint Report for Official Statement with Stantec

URS will coordinate with CTRMA and Stantec for a joint report of the traffic and toll revenue forecasts to be included in the official statement (OS) of the bond sale. This joint report will be based on the latest T&R reports for Manor Expressway (URS) and 183A Phase II (Stantec).

Task 7.2: Additional Sensitivity Analysis

The sensitivity and risk analysis conducted in Tasks 4 and 5 address inherent uncertainties in the travel demand model input variables. The output of these two (2) tasks is a broad range of toll revenue outcomes for the proposed project with assigned probability or confidence intervals that provides a general overview of the risk of the project. The rating agencies, TIFIA and other entities involved with the financing of the proposed Manor Expressway toll road may request CTRMA to conduct additional sensitivity analysis to provide toll revenue estimates that are embedded in the range of results reflected in the risk analysis output. Examples of these analyses include lower economic growth, alternate toll escalation rates, and changes in the transportation network due to alternative improvement plans. URS will conduct up to four (4) additional runs of the travel demand model to respond to requests for additional sensitivity analysis.

URS shall submit a technical memorandum summarizing the additional sensitivity analysis to CTRMA.

Task 7.3: Support for Meetings with Financial Community

URS will provide support during CTRMA's acquisition of project financing by providing technical support at meetings with rating agencies, bond insurance companies, TIFIA, and other financing entities. This support will include presentations of the Investment Grade Study and preparation of presentation materials (presentation boards, PowerPoint slides, handouts, etc.).

Activities to be completed as part of subtask 7.3 include:

- Attendance at a total of five (5) meetings (anticipated two (2) in Austin, two (2) in New York City, and one (1) in Washington, DC) for up to four (4) URS staff. URS will scope and budget these additional meetings and presentations, should they be required;
- Certification of information in the disclosure documents related to the URS Traffic and Toll Revenue Investment Grade Study report, including the underlying assumptions;
- Review of financing document sections related to T&R study (estimated 20 hours); and
- Review of disclosure documents (estimated 8 hours).

Task 7.4: Project Close-Out

In the project close-out stage, URS will address any outstanding project related issues and archive project documentation and data. This task will also include finalizing the project invoice and completing project feedback surveys. It is anticipated that the project will be closed out by June 30, 2011.

Project Schedule

Manor Expressway Investment Grade T&R Study Update

Task #	Description	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11
1	Project Management/Quality Assurance											
2	CAMPO Mobility Plan 2035 Update											
	2.1 Demographic Data Update											
	2.2 Model Network and TAZ Update											
	2.3 Traffic Data Collection and Update											
	2.4 Traffic Model Calibration Update											
3	Traffic and Toll Revenue Study Update											
	3.1 Corridor Scenario Preparation											
	3.2 Toll Rate Schedule and Revenue Estimation Assumption Update											
	3.3 Traffic and Toll Revenue Estimation Update											
4	Sensitivity Analysis Update											
	4.1 Update and Run Travel Demand Model											
	4.2 Develop Sensitivity Curves											
5	Risk Analysis Update											
6	Documentation Update											
7	Project Financing Support											
	7.1 Joint Report for Official Statement with Stantec											
	7.2 Additional Sensitivity Analysis											
	7.3 Meeting Support											
	7.4 Project Close-Out											

Note: CTRMA Notice to Proceed for preliminary tasks was issued on September 9, 2010.

Draft T&R Report

Joint T&R Report with Stantec

CTRMA Traffic and Revenue Consultancy

Work Authorization No #8 Sup #3: Manor Expressway(US 290E) Investment Grade Study Update, Demographic Review, Toll Sensitivity and Risk Analysis Update, and Financing Support

Budget

	Task	Principal	Project Manager	Technical Advisor	Task Mgr T&R Forecasting	Senor Modeler	Senior Planner	Modeler II	Modeler I	CADD Tech	Admin	Total Hours	Total Costs
Task 1	Project Management/Quality Assurance	8	32	8	24						20	92	$ 15,200
Task 2	CAMPO Mobility Plan 2035 Update												$ -
	2.1 Demographic Data Update	4	8	4	16	8		16	16	40		112	$ 11,756
	2.2 Model Network and TAZ Update				8	4		32	40			84	$ 7,340
	2.3 Traffic Data Collection and Update				8	4		24	24			60	$ 5,398
	2.4 Traffic Model Calibration Update				32	24		40	64			160	$ 15,503
Task 3	Traffic and Toll Revenue Study Update												$ -
	3.1 Corridor Scenario Preparation				8	8		32	40			88	$ 7,773
	3.2 Toll Rate Schedule and Revenue Estimation Assumption Update				16	8		24	24			72	$ 6,962
	3.3 Traffic and Toll Revenue Estimation Update		8		32	24		80	64			208	$ 20,211
Task 4	Sensitivity Analysis Update												$ -
	4.1 Update and Run Travel Demand Model				16	8		24	24			72	$ 6,962
	4.2 Develop Sensitivity Curves			8	16	4		8	8			44	$ 5,664
Task 5	Risk Analysis Update				24	8		8	16	8		64	$ 6,705
Task 6	Documentation Update	16	16	8	36	16	16	24	24	32		188	$ 24,273
Task 7	Project Financing Support												$ -
	7.1 Joint Report for Official Statement with Stantec	16	8	16	16	8	8	8		16		96	$ 15,229
	7.2 Additional Sensitivity Analysis			4	20	8		16	16			64	$ 7,095
	7.3 Meeting Support	16	24	16	32	16						104	$ 18,828
	7.4 Project Close-Out		16		8				8		4	36	$ 5,352
	Hours Subtotal	60	112	64	312	148	24	336	368	96	24	1544	
	Direct Labor Cost	$ 106.28	$ 81.12	$ 83.84	$ 56.12	$ 42.92	$ 58.40	$ 32.92	$ 30.48	$ 25.00	$ 28.40		
	Multiplier	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52		
	Average Billing Rate	$ 267.83	$ 204.42	$ 211.28	$ 141.42	$ 108.16	$ 147.17	$ 76.81	$ 82.96	$ 63.00	$ 71.57		
	Loaded Cost	$ 16,069.54	$ 22,895.31	$ 13,521.72	$ 44,123.79	$ 16,007.44	$ 3,532.03	$ 25,808.03	$ 30,528.69	$ 6,048.00	$ 1,717.63	$ 180,252.17	$ 180,252.17
	Labor Subtotal (rounded)											**$ 180,000**	
	Other Direct Costs (ODC)												
	Airfare - $600 per trip												
	Austin (2 trips x 2 people)											$ 2,400	
	NY (2 trips x 4 people)											$ 4,800	
	DC (1 trip x 4 people)											$ 2,400	
	Meals - $75 per day												
	Austin (2 trips x 2 days x 2 people)											$ 600	
	NY (2 trips x 2 day x 4 people)											$ 1,200	
	DC (1 trips x 2 day x 4 people)											$ 600	
	Hotel												
	Austin Hotel ($125/night x 2 nights x 2 people)											$ 500	
	NY Hotel (200/night x 2 nights x 4 people)											$ 1,600	
	DC Hotel (200/night x 1 nights x 4 people)											$ 800	
	Car Rental (5 trips x 2 days x $75/day)											$ 750	
	Gasoline (5 trips x 2 days x $25/day)											$ 250	
	Travel Expense subtotal											$ 15,900	
	Reproduction											$ 700	
	Other (FedEx, conference call)											$ 350	
	Direct Expense subtotal											**$ 16,950**	
	Total URS Costs											**$ 196,950**	
	Sub-Contractor												
	Gram Traffic Counting, Inc.											**$ 26,450**	
	Alliance Transportation Group Inc.											**$ 71,600**	
	Total WA No. # 8 Sup#3 Costs											**$ 295,000**	

Appendix

Subcontractors' Scope of Work and Fee Estimation

SCOPE OF WORK
MANOR EXPRESSWAY (US 290E) INVESTMENT GRADE STUDY
ASSESSMENT AND ADJUSTMENT OF POPULATION AND EMPLOYMENT FORECASTS FOR STUDY AREA TRAFFIC SERIAL ZONES

Alliance Transportation Group, Inc.

The Central Texas Regional Mobility Authority (CTRMA) is presently considering the addition of tolled express lanes within the existing right-of-way of Manor Expressway (US 290E). As part of this effort, the CTRMA has requested that the URS Corporation (CLIENT) prepare a scope of work for completing an Investment Grade Study of the proposed toll lanes. Investment Grade Studies determine the financial feasibility of toll roads by forecasting future traffic levels and estimating potential revenues. Traffic engineers forecast these revenues using sophisticated models that require estimates of current population and employment, as well as forecasts of future growth. Rather than producing these forecasts themselves, traffic engineers often rely upon figures created by local Metropolitan Planning Organizations (MPOs). These forecasts, however, often need assessment and adjustment so that they more accurately reflect anticipated population and employment growth. In the case of the Austin, Texas metropolitan area, the Capital Area Metropolitan Planning Organization (CAMPO) produces the region's population and employment forecasts at the Traffic Serial Zone (TSZ) level. Alliance Transportation Group, Inc. (CONSULTANT) has been requested to prepare a scope of work to assess the reasonableness of CAMPO's Mobility Plan 2035 population and employment forecasts at the TSZ level for the Manor Expressway study area and, if the forecasts are judged to be unreasonable, to adjust them to more appropriate figures.

Proposed Work

To assess and adjust the TSZ forecasts in the Manor Expressway (US 290E) study area, the proposed work plan would consist of the eight tasks outlined below:

Task 1 Data Assembly

The CONSULTANT will obtain the adopted CAMPO Mobility Plan 2035 TSZ demographic base year and forecast year data for use in this effort. In addition the CONSULTANT will assemble, as needed to support the demographic review, additional available data and review recent literature that summarizes demographic and economic changes to Travis County, the Austin metropolitan area, and, in particular, changes within the Manor Expressway study area. The data will be used to identify recent population and employment development trends and prospects for future growth. This data will be collected from the following sources:

- U.S. Census Bureau
- Texas State Data Center
- Texas Workforce Commission
- Texas Water Development Board
- Texas Comptroller of Public Accounts office
- Capital Area Metropolitan Planning Organization
- City of Austin
- City of Manor

- City of Pflugerville
- Travis County
- *Austin-American Statesman*
- *Austin Business Journal*
- Any other relevant source.

The CONSULANT will also collect maps from the various municipalities in the study area showing zoning, water and wastewater infrastructure, sensitive environmental features, etc. The CONSULTANT will acquire recent digital orthoimagery of the study area.

Task 2 Field Surveys

The CONSULTANT will conduct limited field surveys of the entire Manor Expressway study area to supplement recent work in order to discern recent development patterns. Areas of growth and change will be mapped for use during the study area assessment.

Task 3 Interview Local Officials

The CONSULTANT will conduct limited interviews of local officials who represent local public entities, such as planning or permitting departments, with jurisdictions in the Manor Expressway study area to update recently completed work. Public entities that will be contacted include: City of Austin; City of Manor; City of Pflugerville; Travis County; and others, as determined appropriate.

Task 4 Review and Adjust Baseline Population and Employment at the TSZ level

The CONSULTANT will reassess the county and regional control totals for the Austin area for the baseline year analysis. The CONSULTANT will review the adopted CAMPO Mobility Plan 2035 TSZ base year demographic data and, if necessary, adjust the baseline population and employment estimates at the county and TSZ level to a new baseline year for use in analysis of the Manor Expressway corridor.

Task 5 Assess and Rescale TSZ Population and Employment Forecasts

The CONSULTANT will review and reassess the county and regional control totals for the Austin area for the forecast year analysis. The CONSULTANT will conduct a limited assessment of the recently developed population and employment forecasts in the Manor Expressway toll road study area at the county and TSZ levels for up to three forecast years. To determine if the recently completed forecasts are consistent with the new baseline. The CONSULTANT will then rescale the forecasts based on the adjustments made to control totals and baseline demographic and employment data. If intermediate forecasts periods are required, these figures will be developed by interpolating between the existing forecast periods.

Task 6 Prepare Final Report Documenting the Manor Expressway TSZ Assessment and Adjustment

The CONSULTANT will prepare a report, in the form of a technical memorandum, which reviews recent and anticipated growth trends and patterns for the Austin metropolitan area. The report will also document the methodology used for assessing and adjusting the forecasts at the

TSZ level and the results of this effort. Final population and employment forecasts will be provided as an electronic spreadsheet file.

Task 7 Quality Assurance / Quality Control

CONSULTANT senior managers will conduct QA/QC review of all interim and final products.

Task 8 Project Management and Administration

The CONSULTANT will manage and coordinate all tasks related to this project and will coordinate activities with the CLIENT. CONSULTANT will prepare and submit monthly progress reports and invoices.

Assumptions

- The proposed Investment Grade Study for Manor Expressway will be based upon the CAMPO Mobility Plan 2035 demographic and employment estimates and forecasts.
- The scope of work does not include a detailed assessment of population and employment estimates or forecasts outside of the project study area. However, the study will incorporate past adjustments to TSZs outside of the study area that were made during other recent traffic and revenue studies.
- The proposed budget does not include the cost of splitting any TSZs within the study area. Any additional splitting of zones will require a supplemental agreement.
- The study will not employ econometric or demographic models to create new forecasts or to adjust the existing forecast.
- Although the CONSULTANT will work with CLIENT to maintain a reasonable project schedule, CLIENT recognizes the need for and agrees to provide an adequate amount of time for the CONSULTANT to conduct the review and analysis.
- The work to be performed by the CONSULTANT will not exceed the scope and budget provided in this proposal. If additional services are required, the scope and budget of the additional work will be agreed upon between the CONSULTANT and the CLIENT prior to performing the services.

Exhibit B

US 290E 2010 Demographic Update

Fee Summary

Personnel		Alliance 2010 Rates and OH Hours	Base Rate	Direct Labor		
J. Michael Heath, P.E.	Senior Engineer	16	$ 67.32	$ 1,077		
Michael Bomba, PhD.	Senior Planner	276	$ 48.39	$ 13,356		
James Harvey, AICP	Planning Director	60	$ 53.45	$ 3,207		
Gayle L. Heath	Project Administration	24	$ 26.00	$ 624		
Jack Jones	Senior Planner	4	$ 37.12	$ 148		
Daniel Rios	Engineering Technician	4	$ 29.61	$ 118		
Lisa Weston	Senior Planner	48	$ 40.14	$ 1,927		
Debra Harvey	Senior Planner	88	$ 26.48	$ 2,330		
Scott Grantham	Planner	92	$ 17.87	$ 1,644		
	Total Hours	**612**		$ 24,432		
	Direct Labor				$	24,432
	Overhead	159.1%			$	38,871
	Fee	12.0%			$	7,596
	Subtotal Burdened Labor				$	70,899
	Direct Expenses					
	Travel		$ 375			
	Car Rental		$ -			
	Per Diem		$ -			
	Hotel		$ -			
	Shipping		$ -			
	Reproduction		$ 300			
	Maps, Data and Aerial Photography		$ -			
	Subtotal (Direct)				$	675
	Total				**$**	**71,574**

GRAM
affic Counting, Inc.
Field Data Collection

Corporate Office
21220 Jakeshill Rd., Bldg. 1
Hutto, TX 78634-5475
info@gramtraffic.com
Ofc: 512-832-8650
Fax: 512-833-6471
Toll Free: 888-315-6141

Houston Office
1506 Festival
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vance@gramtraffic.com
Cell: 832-752-3303

San Antonio Office
6323 Sovereign Drive,
Suite 178
San Antonio, TX 78229
frank@gramtraffic.com
Ofc: 210-348-6067
Fax: 512-833-6471

www.gramtraffic.com

August 27, 2010

John Song, PhD, PE, PTOE
URS Corporation
9400 Amberglen Boulevard
Austin, TX 78729
Email: john_song@urscorp.com
Phone: 512.419.5233 Fax: 512.454.8807

GRAM Traffic Counting Inc. will conduct the following data collection in Austin, TX

Corridor 1

3 day Volume counts – 11 locations

Each location $350.00 = $3,850.00

Corridor 2

3 day Volume counts – 14 locations

Each locations $350.00 = $4,900.00

Corridor 3

3 day Volume counts – 11 locations

Each location $350.00 = $3,850.00

7 day Classification counts – 2 Locations

Each location $750.00 = $1,500.00

Corridor 4

3 day Volume counts – 5 locations

Each location $350.00 = $1,750.00

7 day Classification counts – 2 Locations

Each location $750.00 = $1,500.00

Corridor 5

3 day Volume counts – 5 locations

Each location $350.00 = $1,750.00

7 day Classification counts – 2 Locations

Each location $750.00 = $1,500.00

Corridor 6

3 day Volume counts – 5 locations

Each location $350.00 = $1,750.00

7 day Classification counts – 2 Locations

Each location $750.00 = $1,500.00

Individual locations

3 day Volume counts – 7 locations

Each location $350.00 = $2,450.00

Mileage =300 Miles @ .50/mile = $150.00

Project Total = $26,450.00

SEE ATTACHMENT FOR ALL LOCATIONS

NOTICE: Please provide a fee schedule and/or a copy of your contract that sets out the terms and conditions as it applies to the work GRAM is contracted to complete, if any. If this information is not provided by the agency or firm authorizing the work requested and no other price changes have been authorized by GRAM prior to the signing of this Work Authorization Agreement, said agency or firm agrees to pay the price as quoted and agreed to in this Work Authorization Agreement.

By Authorized Representative:

_____ _____

Printed Name **Date**

_____

Signature

2010 TRAFFIC COUNT LOCATIONS - ADT

Loc ID 2010	Major Road	Location	Traffic Count Type
SL #1			
TC 1.1	Dessau Road	south of Sprinkle Cut-off Rd, north of June Dr./Payton Fall Dr. (1500 feet north of E Braker Ln)	3-day ADT
TC 1.2	Parmer Lane	east of Samsung Blvd., west of Yager Ln.	3-day ADT
TC 1.3	Cameron Road	south of Gregg Lane, north of Parmer Lane	3-day ADT
TC 1.4	Gregg Manor Road	west of SH 130 entrance ramp and Hill Lane	3-day ADT
TC 1.5	Fuchs Grove Road	north of Gregg Manor Road, north of Rector Loop	3-day ADT
TC 1.6	Gregg Lane	east of Fuchs Grove, west of FM 973 N	3-day ADT
TC 1.7	FM 973	north of Gregg Lane, south of Schmidt Lane / Sparks Road	3-day ADT
TC 1.8	FM 1100	north of Giese Lane, south of Manda Road	3-day ADT
TC 1.9	County Line Road	north of US 290 E, south of FM 1100	3-day ADT
TC 1.10	IH 35	north of Braker Lane, south of the NB exit ramp (both mainlanes and frontage)	3-day ADT
SL #2			
TC 2.1	51st Street	east of Berkman Dr., west of Old Manor Road	3-day ADT
TC 2.2	Manor Road	north of Old Manor Rd. / Westmister Dr., south of Rogge Lane	3-day ADT
TC 2.3	Springdale Road	north of Rogge Lane, south of Hycreek Dr.	3-day ADT
TC 2.4	Loyola Lane	east of Bridgewater Dr., west of US 183	3-day ADT
TC 2.5	US 183 Mainlane	north of Loyola Lane, south of US 183 entrance / exit ramps	3-day ADT
TC 2.6	Johnny Morris Road	north of Point N Dr., south of Breezy Hill Dr.	3-day ADT
TC 2.7	FM 3177	north of Valleyfield Dr., south of Daffin Lane	3-day ADT
TC 2.8	Bloor Road	east of Blue Bluff Road, west of SH 130	3-day ADT
TC 2.9	FM 973	south of Murchison Street, north of SH 130	3-day ADT
TC 2.10	Blake Manor Road	south of Braker Hills Dr, north of Briacreek Loop	3-day ADT
TC 2.11	Bitting School Road	south of Littig Road, north of Hog Eye Road	3-day ADT
TC 2.12	IH 35	south of 51st Street (both mainlanes and frontage)	3-day ADT
SL #3			
TC 3.1	Ferguson Lane	east of Wall St., west of Sprinkle Road	3-day ADT
TC 3.2	US 290E	east of Cross Park Dr., west of Tuscany Way	7-day ADT
TC 3.3	US 183 (mainlane and frontage)	north of Manor Road, south of US 183 NB entrance ramp to US 290 E	3-day ADT
TC 3.4	Manor Road	east of Northeast Dr., west of Springdale Road	3-day ADT
TC 3.5	51st Street	east of Old Manor Road, west of Manor Road	3-day ADT
TC 3.6	Manor Road	north of Creekwood Rd and south of E 51st Street	3-day ADT
TC 3.7	FM 969 (MLK)	east of E.M. Franklin Ave., west of Deloney St.	3-day ADT
TC 3.8	Airport Boulevard	between north of 12th Street and approximately south of E 16th Street	3-day ADT
TC 3.9	12th Street	east of Hargrave St, west of Harvey St.	3-day ADT
SL #4			
TC 4.1	FM 734 (Parmer Lane)	east of Harris Ranch Parkway, west of Boyce Lane	3-day ADT
TC 4.2	Blue Goose Road	east of Cameron Road, west of Giles lane	3-day ADT
TC 4.3	US 290E	east of Chimney Hill Blvd., west of Johhny Morris Road / Giles Lane	7-day ADT
TC 4.4	Old Manor Road	east of Daffan Lane	3-day ADT
TC 4.5	Loyola Lane	east of Crystalbrook Dr., west of Johnny Morris Road	3-day ADT
TC 4.6	FM 969	east of McBee Dr, west of Johnny Morris Road	3-day ADT
SL #5			
TC 5.1	Gregg Lane / Manor Road	north of Hill Lane / US 290, south of Fuchs Grove Rd	3-day ADT
TC 5.2	US 290E	east of FM 734 / Parmer Lane, west of Gregg Manor Road	7-day ADT
TC 5.3	Old US 20 / W Parsons St	east of Blue Bluff Road, west of Bastrop Street	3-day ADT
TC 5.4	FM 973	north of Decker Lake Road, South of Hog Eye Rd	3-day ADT
TC 5.5	Decker Lake Road	east of Blue Bluff Road, west of FM 973	3-day ADT
TC 5.6	FM 969	east of Blue Bluff Road, west of FM 973	3-day ADT
SL #6			
TC 6.1	FM 1100	east of Giese Lane / (Wells Rd), west of Klaus Lane	3-day ADT
TC 6.2	US 290E	east of Abrahamson Road, west of BallerStreetedt Road	7-day ADT
TC 6.3	Littig Road	east of Parsons Road, west of Jones Road	3-day ADT
TC 6.4	Lockwood Road / Hog Eye Road	east of Parsons Road, west of Jones Road	3-day ADT
TC 6.5	Blake Manor Road	south of Hog Eye Road, north of Burleson Manor Road	3-day ADT
TC 6.6	FM 969	east of Taylor Lane, west of Bulerson Manor Road	3-day ADT
Individudals			
TC 7.1	Springdale Road	north of Commercial Park Dr., south of US 290 E	3-day ADT
TC 7.2	US 290 E Ramp	US 290 E eastbound entrance ramp to SH 130 northbound	3-day ADT
TC 7.3	US 183	south of Cameron Road (both mainlane and frontage)	3-day ADT
TC 7.4	US 290	at Northeast Drive, west of US 183 (both mainlanes and frontage)	3-day ADT
TC 7.5	Parmer Lane	immediately north of US 290	3-day ADT