# INTERAGENCY COOPERATION CONTRACT

CONTRACT NUMBER ____

**THE STATE OF TEXAS ****
**THE COUNTY OF TRAVIS ****

**THIS CONTRACT** is entered into by and between the State agencies shown below as Contracting Parties, pursuant to the authority granted and in compliance with the provisions of Section 29 of Acts 1991, 72nd Legislature, Chapter 641, "The Interagency Cooperation Act".

## I. CONTRACTING PARTIES:

The Receiving Agency: Texas Turnpike Authority ("TTA") VID17600042859000

The Performing Agency: Texas Department of Transportation ("TxDOT") VID36016016010000

## II. STATEMENT OF SERVICES TO BE PERFORMED:

TxDOT has entered into engineering services contract No. 14345P5001 with the consulting engineering firm of Carter & Burgess, Inc. ("C&B") to perform preliminary route and engineering studies, to issue a draft environmental impact statement, to develop estimated construction costs, and to publish an engineering summary report on SH130 between IH35 @ SH195 and US290, TxDOT Project No. 94-8283-03U.

At the request of the TTA, TxDOT will enter into Supplemental Agreement No. 1 to Contract No. 14345P5001, Appendix "A", with C&B to perform intermediate level turnpike feasibility studies on SH130 from IH35/SH195 on the north to a non-specific point along IH35 near FM1327 (Exhibit 1, as indicated in blue) in accordance with the Scope of Services attached to this Interagency Agreement as Appendix "B" to determine the potential financial viability of SH130 being constructed and operated as a Turnpike Project of the TTA and to identify the level of ISTEA assistance, if such is required, to achieve turnpike feasibility.

## III. BASIS FOR CALCULATING REIMBURSABLE COSTS:

See Appendix "C", Proposal of C&B and its subcontractors to TxDOT.

## IV. CONTRACT AMOUNT:

The total amount of Supplemental Agreement No. 1 to this contract shall not exceed: Three Hundred Twenty-Five Thousand Dollars ($325,000.00) (See C&B Summary in Appendix "C")

(words and figures)

## V. PAYMENT FOR SERVICES:

Receiving Agency shall pay for services received from appropriation items or accounts of the Receiving Agency from which like expenditures would normally be paid, based upon vouchers drawn by the Receiving Agency payable to Performing Agency.

Payments shall be billed: Monthly
(weekly, monthly, lump sum, etc.)

Payments received by the Performing Agency shall be credited to its current appropriation item(s) or account(s) from which the expenditures of that character were originally made.

## VI. TERM OF CONTRACT:

This contract is to begin upon the date of final execution, and shall terminate August 31, 1997 (Term of contract cannot transcend the biennium.)

**THE UNDERSIGNED AGREEING** parties do hereby certify that:

1. The services specified above are necessary and essential for activities that are properly within the statutory functions and programs of the effected agencies of State Government.

2. The proposed arrangements serve the interest of efficient and economical administration of the State Government.

3. The services, supplies, or materials agreed upon are not required by Section 21 of Article 16 of the Constitution of Texas to be supplied under contract given to the lowest responsible bidder.

**RECEIVING AGENCY** further certifies that it has the authority to request for the above services by authority granted in Article 6674v Vernon's Civil Statutes (Statute, Constitution, Special Provision of Appropriation Bill)

**PERFORMING AGENCY** further certifies that it has the authority to perform the services agreed upon above by authority granted in Article 6663 Vernon's Civil Statutes (Statute, Constitution, Special Provision of Appropriation Bill)

The undersigned parties bind themselves to the faithful performance of this contract.

**RECEIVING AGENCY**

Texas Turnpike Authority
Name of Agency

BY: James W. Griffin

Executive Director
Title

Date: May 24, 1995

**PERFORMING AGENCY**

Texas Department of Transportation
Name of Agency

BY:

Assistant Executive Director
Multimodal Transportation
Title

Date: December 1, 1995

THE STATE OF TEXAS *

THE COUNTY OF TRAVIS *

CONTRACT NO. 14345P5001

SUPPLEMENTAL AGREEMENT NO. 1

This supplemental agreement to contract for engineering services is made by and between the State of Texas acting through the Executive Director of the Texas Department of Transportation, hereinafter called the State, and Carter & Burgess, Inc. hereinafter called the Engineer.

**WHEREAS**, the State and the Engineer executed a contract on the 16th day of March, 1994 concerning SH 130 (MOKAN) in Travis and Williamson Counties from IH-35 at SH 195 to south of US 290 ; and,

**WHEREAS**, Article 2. Progress, requires the work to be complete in 1095 calendar days; and,

**WHEREAS**, Article 5. Compensation limits the maximum amount payable under the contract to $2,161,677; and,

**WHEREAS**, it has become necessary to amend the contract to increase the scope of services to be provided by the Engineer and thus increase the duration of the work and the maximum amount payable under this contract.

**NOW THEREFORE**, premises considered, the State and the Engineer agree that said contract is amended as follows:

The first paragraph of Article 2. Progress shall read, "After execution of this contract, the Engineer shall not proceed with the work outlined under 'Scope of Services' until advised in writing by the State to proceed. The work under this contract shall be completed within 1185 calendar days after authorized to proceed. Unless extended by supplemental agreement, this contract shall terminate at the expiration of the specified calendar days."

The second paragraph of Article 5. Compensation shall read, "The lump sum amount payable under this contract without modification of the contract is $2,469,433 . The lump sum amount payable may be revised in the event of change of scope, increased cost, complexity or character of work as authorized by the State."

The Scope of Services has been revised to include, ATTACHMENT "A," SUPPLEMENTAL AGREEMENT NO. 1, Services to be Provided by the State; ATTACHMENT "B," SUPPLEMENTAL AGREEMENT NO. 1, Services to be Provided by the Engineer; ATTACHMENT "C," SUPPLEMENTAL AGREEMENT NO. 1, Project Schedule; ATTACHMENT "D," SUPPLEMENTAL AGREEMENT NO. 1, Cost Proposal; and EXHIBIT "A," SUPPLEMENT AGREEMENT NO. 1, Work Outline.

**IN WITNESS WHEREOF**, the State and the Engineer have executed this supplemental agreement in duplicate.

**THE ENGINEER**

By: J Clifton Lewis

11-17-95

Date

**THE STATE OF TEXAS**

Executed for the State Executive Director and approved for the Texas Transportation Commission under the authority of Minute Order No. 100002 and Administrative Circular 15-93 for the purpose and effect of activating and/or carrying out the orders, established policies or work programs heretofore approved and authorized by the Texas Transportation Commission.

By: Robert J Nelson PE

12/22/95

Date

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Contract No. 14345P5001

**ATTACHMENT "A"**
**SUPPLEMENTAL AGREEMENT NO. 1**
**Services to be Provided by the State**

| | |
|---|---|
| Project: | SH 130 |
| From: | IH-35 at SH 195, south |
| To: | US 183, 8 miles south of SH 71 |
| Length: | 46 miles |
| | |
| Project: | SH 45 |
| From: | US 183, 8 miles south of SH 71, west |
| To: | IH-35 at FM 1327 |
| Length: | 8 miles |
| | |
| Counties: | Travis and Williamson |
| Total Project Length: | 54 miles |

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The Texas Department of Transportation (TxDOT) will furnish to the Engineer directly or through the Texas Turnpike Authority (TTA) the following items:

1. Provide the necessary coordination, consultation, and documentation to satisfy the requirements of 23CFR§450.318 regarding major investment analysis for the portion of the project that is located concurrently with SH 130. A major investment analysis is required, but will not be performed under this contract, for the intermediate grade toll road feasibility study for the portion of the project from US 183 to IH-35 south of Austin.

2. Travel Demand Modeling Data in a usable format by the Engineer as follows:

   - Highway Networks (1990/2, 2020)
   - Trip tables (1990/2, 2020)
   - Intrazonal Impedance Data
   - TRIPCAL5 output (zonal productions, attractions, and friction factors by trip purpose)
   - External trip data
   - Supporting documentation of the Trip Generation development
   - Trip length frequency distribution by trip purpose

3. Provide documentation presented by Austin Transportation Study (ATS) for the development of the trip generation data and travel demand modeling process.

4. Copies of Schematic designs and Environmental Studies conducted by TxDOT for SH 45 east and south of Austin, and SH 130 south of US 290 to US 183 when available.

5. Coordination of route location with TxDOT's consultant for the section of SH 130 south of US 290 to US 183.

6. Assist the Engineer in obtaining information from Capital Metro and the Austin Metropolitan Planning Organization (MPO) concerning the project.

7. Timely review and decisions related to the project to permit the Engineer to maintain an agreed upon project schedule.

8. TTA's financial advisor will conduct a Toll Road financial feasibility study. Development of the Toll Road financial feasibility study will include TTA providing the Engineer with the following:

    - Contact person with the TTA's financial advisor;
    - Memorandum detailing the information to be provided to TTA's financial advisor by the Engineer; and
    - Number of working days that TTA's financial advisor requires to complete the financial feasibility study.

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Contract No. 14345P5001

ATTACHMENT "B"
SUPPLEMENTAL AGREEMENT NO. 1
Services to be Provided by the Engineer

| | |
|---|---|
| Project: | SH 130 |
| From: | IH-35 at SH 195, south |
| To: | US 183, 8 miles south of SH 71 |
| Length: | 46 miles |
| | |
| Project: | SH 45 |
| From: | US 183, 8 miles south of SH 71, west |
| To: | IH-35 at FM 1327 |
| Length: | 8 miles |
| | |
| Counties: | Travis and Williamson |
| Total Project Length: | 54 miles |

The work to be performed by the Engineer under this supplemental agreement shall consist of providing engineering services required for route and location studies, an overview of environmental concerns, uncontrolled aerial mosaic at 1"=400', line diagram schematic, traffic analysis of project corridor, an intermediate grade analysis of toll road feasibility, determination of traffic on the toll road facility, and a toll collection plan within the project limits.

The Engineer shall furnish all equipment, materials, supplies, and incidentals as required to perform the above-mentioned engineering work except as otherwise specified in Attachment "A" which precedes this section.

All work on the project shall conform with the applicable requirements of the Texas Department of Transportation (TxDOT) manuals (updated or revised).

The scope of services for the present contract contains several items which have been completed and will be utilized in the portions of the Toll Feasibility Study from US 290 north to IH-35 at SH 195. These items include a study of numerous routes and the schematic design drawn in pencil on a 1" = 200' aerial mosaic for all routes selected in the route study phase. One route has been chosen for controlled aerial photography, but it is not necessarily the technically preferred alternative. A draft environmental impact statement (DEIS) is in progress and should be submitted to TxDOT in May 1995 for review. The project has been broken into eighteen construction projects with construction phases to produce a maximum cost benefit. Construction costs for each phase of construction has been calculated. A study of the compatibility of railroads and highways for the SH 130 has been submitted to TxDOT for review. An Engineering Summary Report has also been prepared. A decision matrix for SH 130 from US 290 to IH 35 at SH 195 has been prepared and will be submitted for TxDOT

review in April 1995. This decision matrix will be used to assist in the selection of the technically preferred alternative for the project. All work completed to date is presently under review by TxDOT.

The Engineer will meet with designated representatives of TxDOT and the Texas Turnpike Authority (TTA) on a regularly scheduled basis to report on the progress of work. Maps, drawings, bar graphs, and reports may be used to present the project progress. Upon completion of the meetings, a meeting summary will be furnished to document project progress. A brief progress report will be furnished each month with the submission of the project invoice. The progress report will be furnished to TxDOT and to TTA.

The Engineer will conduct Route Location Studies for the project. The technically preferred alternative route for SH 130 from IH-35 at SH 195, south to south of US 290 will be used on this portion of SH 130. Two alternate routes will be investigated along SH 130 and previously proposed SH 45 from south of US 290 to US 183, about eight miles south of SH 71 and from that point west along proposed SH 45 to IH-35 at FM 1327. After consultation with TxDOT and TTA, one route will be selected for the intermediate grade toll road analysis.

The Engineer will develop a line diagram schematic design on a 1"-400' uncontrolled aerial mosaic for the total length of the project from IH-35 at SH 195 north of Georgetown to IH-35 at FM 1327 south of Austin. The schematic design will be scaled and will indicate width of right-of-way, typical sections, number of lanes, horizontal alignment, vertical alignment, location of mainlanes, interchanges, grade separations, ramps, direct connections, frontage roads (one-way operation), access roads (two-way operation) and the location of all toll collection facilities.

The Engineer will prepare a separate Engineering Summary Report for the toll road feasibility study. The Engineering Summary Report will contain, at a minimum, a brief report on the history of SH 130 (MoKan); the design criteria for the project; typical sections; segmentation of the project for construction; construction, right-of-way, and major utility adjustment cost estimates for each segment of construction; approximate earthwork requirements for excavation and embankment; and a preliminary level of service analysis indicating mainlane level of service. The Engineering Summary Report will also contain a tentative project schedule for development of design, financing, right-of-way acquisition and construction. The schedule will relate the number of months required to accomplish each task. The Engineering Summary Report will be reviewed by TxDOT and TTA prior to final publication.

An in-depth traffic analysis will be conducted on the project by the Engineer and will utilize the firm of URS Consultants, One Penn Plaza, New York, New York, to assist in all tasks related to traffic analysis. The Engineer will review the TxDOT travel demand model and identify the relevant coding parameters necessary for representing toll facilities. The Engineer will identify necessary coding of network alternatives. The Engineer will insure that the network alternatives are coded for each stage of completion of SH 130. As part of this effort, TxDOT will provide the appropriate networks for the delineated model years. Furthermore, TxDOT will identify all other network improvement projects that are committed along with their years of completion. The Engineer will review each improvement project to determine

whether the facilities are complementary or competitive to SH 130. Furthermore, the Engineer will review the identified networks to determine if complementary and competitive facilities are adequately reflected in the respective networks. The Engineer will provide a list of transportation facilities that will compete with SH 130, including alternative modes (i.e. light rail). For purposes of conservativeness of financial feasibility studies, as one alternative the Engineer will identify those improvement projects which are competitive. The Engineer will provide a list of the changes necessary to code the Competitive Network. The Engineer will then ensure that the coding of a Competitive Network is performed. The Engineer will ensure that appropriate networks are prepared for each stage of completion which will include all necessary toll links.

The Engineer will review the base year, future year, and intermediate year demographic data sets for reasonableness. These analyses will include reviewing historic socioeconomic trends in the SH 130 corridor and the area immediately surrounding the SH 130 corridor. The Engineer, URS Consultants, Inc., and Hicks & Company will develop future year socioeconomic estimates for several horizon years. The number of horizon years will correspond to anticipated staging of the SH 130 project. The Engineer will collect current and previous year socioeconomic data developed by the Austin Transportation Study (ATS), Austin's Metropolitan Planning Organization (MPO), at the Traffic Serial Zone (TSZ) level from TxDOT. It is understood that this data has been previously adjusted by ATS to reflect the results of the 1990 Census. ATS, under direction of the Federal Highway Administration (FHWA) is performing a study to determine the impact of current compact city policies of ATS. The study includes review of socioeconomic and demographic allocations, and network comparison. If additional work on this project is required because of the ATS compact city policies, the work will be performed according to Article 4 of the contract, entitled Additional Work. The Engineer will also obtain the latest available forecasts developed by ATS for the appropriate horizon years from TxDOT. Zoning maps for the SH 130 corridor and the area immediately surrounding the SH 130 corridor will be collected from the appropriate agencies. Existing inventories of developable land and any infrastructure constraints (i.e. sewage and water supplies) that might influence where growth can occur in this area will be collected. Mapping which displays the limits of existing development, if available, will be collected to assist in the allocation of future development.

If, after analyzing the demographic information within and adjacent to the SH 130 corridor, it becomes evident that current demographic projections do not adequately reflect reasonable and prudent expectations of future socioeconomic conditions, the Engineer will recommend adjustments for the future year data sets. These recommended adjustments to the future years socioeconomic forecasts will be submitted to TxDOT and TTA for review. If socioeconomic forecasts are required beyond the limits of this project, this work will be performed according to Article 4 of the contract, entitled Additional Work.

Based on these data, URS will construct a general trend for the growth that has occurred in recent years (preferably between 1980 and 1990) for a district system within the corridor. This historic trend, based on past growth and current land development regulations and policies, will serve to guide the location of future development. URS will use, if appropriate, control totals approved by ATS for regional population and employment in the long-range horizon year. Using control totals and the historic growth trends, URS will allocate the growth

initially to the districts and lastly to individual TSZs in accordance with known constraints. It should be noted that this process will be performed in a qualitative manner. The Engineer will submit these forecasts to TxDOT and TTA for their review. URS will then use interpolation techniques to establish interim year estimates consistent with the completion years for the stages of the project.

The Engineer will perform a validation of the travel demand models on the alternative platform selected to execute the travel demand models. Traffic counts will be conducted for various cross streets along the SH 130 alignment. Additional traffic counts are not anticipated to validate the travel demand models at this time. Extensive traffic count data has been accumulated in the Austin area by TxDOT in the past few years and it is anticipated that this data can be used in the Toll Road Feasibility Study. If additional traffic counts are found to be necessary, the work will be performed according to Article 4 of the contract, entitled Additional Work.

Value of time data from similar Texas cities will be used to establish travel time/distance trade offs for toll analyses. The Engineer will perform the required travel demand model runs and provide the results to TxDOT and TTA for review. Furthermore, the Engineer will review previous work performed jointly by TxDOT and TTA on the effects of the North American Free Trade Agreement (NAFTA), and if appropriate, incorporate the identified impacts. A toll collection plan will be developed by the Engineer and URS Consultants. The Engineer and URS Consultants will review all previous reports on the SH 130 project and prepare a toll collection plan that accounts for all previous thinking, staging of the project, and a passenger car toll within the range of 10-12 cents per mile (that is consistent with urban toll projects financed in recent years). Discussions will be held with TTA staff to obtain their views. If practical, a series of toll levels shall be considered to test toll sensitivity. TTA's Tool Tag or similarly ETC device will be considered.

Toll revenues will then be calculated from the traffic and tolls forecasts.

URS Consultants will obtain historical traffic and Maintenance and Operating (M&O) expense data from TTA, and on a "top-down (macroscopic)" basis (relating expenses to traffic over time), prepare a preliminary M&O expense forecast for the SH 130 project taking into account the toll collection plan. The M&O forecast will then be deducted from the toll revenues to calculate net revenues.

The Engineer and its subcontractors will provide information to TTA's financial advisor necessary to complete an economic feasibility analysis. The economic feasibility analysis will include the toll revenue forecast and M&O costs prepared by URS, a summary of engineering and project costs by segment and/or phase, and reasonable financing assumptions. The information provided by the Engineer and its subcontractors for this initial economic feasibility analysis will be prepared in cooperation with TTA staff and its financial advisor.

Upon completion of a majority of the work, the Engineer and URS Consultants will review the preliminary construction costs in the Engineering Summary Report to determine the optimum sequence of construction and project limits. They will also review the net revenue calculations and the Financial Plan. After optimization of the toll road feasibility financial plan,

a final report will be prepared. A summary of the final report will also be prepared. The Engineer will prepare the required exhibits along with the final report summary and make a presentation to the Texas Turnpike Authority Board of Directors at one of their regularly scheduled meetings. If additional presentations are required, the work will be performed according to Article 4 of the contract, entitled Additional Work.

An Environmental Overview will be prepared to assess the social, economic, and environmental aspects of the project. The Environmental Overview will be prepared utilizing data previously developed for SH 130 and proposed SH 45. The document will briefly address all concerns usually addressed in an Environmental Assessment and will assess the need for a Draft Environmental Impact Statement (DEIS). The Environmental Overview will address at a minimum, but not be limited to, Project Description, Purpose and Need, Environmental Issues Analysis considering socioeconomic data, land use, geology and groundwater, noise and vibration, air quality, surface water hydrology, cultural resources, ecological resources and vegetation, wetlands, endangered species, relocation, prime farmlands, hazardous waste, mitigation, and summary and conclusions. Upon completion, the Environmental Overview will be submitted to TxDOT and TTA for review. A final Environmental Overview will be published upon completion of review and comments.

The cost of environmental mitigation will also be estimated so that the associated costs may be included in the overall cost of the project.

Public Involvement for the Toll Road Feasibility Study is not anticipated and is not a part of this Supplemental Agreement. If Public Involvement and meetings with elected officials or their representatives are required to present the Toll Feasibility Study, the work will be performed according to Article 4 of the contract, entitled Additional Work.

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ATTACHMENT "D" Contract No. 14345P5001
PROJECT: SH 130 AND SH 45 COST PROPOSAL PAGE 1 OF 10
FROM: IH 35 AT SH 195 SOUTHEAST AND WEST
TO: IH 35 AT FM 1327 **SUPPLEMENTAL AGREEMENT NO. 1**
PROJECT LENGTH: 54 MILES **SH 130 AND SH45 TOLL ROAD STUDY**

WORK BY: CARTER & BURGESS, INC. (C & B INC.)

ROUTE AND DESIGN STUDIES (Function Code 110)

I. PROJECT MANAGEMENT

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 128 | $40.00 | $5,120 |
| Asst. Project Manager | 88 | $35.00 | $3,080 |
| Design Engineer | 48 | $26.00 | $1,248 |
| Asst. Design Engineer | 0 | $23.00 | $0 |
| Technician | 0 | $20.00 | $0 |
| CADD Drafter | 0 | $20.00 | $0 |
| Clerical | 40 | $12.00 | $480 |
| SUBTOTAL: | 304 | | $9,928 |

II. ROUTE AND DESIGN STUDIES
A. REVIEW ALTERNATE ROUTES
B. SCHEMATIC DESIGN
C. ENGINEERING SUMMARY

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 76 | $40.00 | $3,040 |
| Asst. Project Manager | 110 | $35.00 | $3,850 |
| Design Engineer | 246 | $26.00 | $6,396 |
| Asst. Design Engineer | 340 | $23.00 | $7,820 |
| Technician | 0 | $20.00 | $0 |
| CADD Drafter | 184 | $20.00 | $3,680 |
| Clerical | 42 | $12.00 | $504 |
| SUBTOTAL: | 998 | | $25,290 |

III. TRAFFIC EVALUATION AND PROJECTIONS
A. REVIEW TRAFFIC DEMAND MODELS
B. CODE TRAFFIC NETWORK ALTERNATIVES
C. DEVELOP INTERIM DEMOGRAPHICS
D. FORECAST TRAFFIC DEMAND

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 52 | $40.00 | $2,080 |
| Asst. Project Manager | 12 | $35.00 | $420 |
| Design Engineer | 284 | $26.00 | $7,384 |
| Asst. Design Engineer | 40 | $23.00 | $920 |
| Technician | 0 | $20.00 | $0 |
| CADD Drafter | 0 | $20.00 | $0 |
| Clerical | 12 | $12.00 | $144 |
| SUBTOTAL: | 400 | | $10,948 |

**Limits:**
SH 130
From: IH 35 at SH 195 southeast
To: US 183, 8 miles south of US 71
Length: 46 miles

SH 45
From: US 183, 8 miles south of US 71, west
To: IH 35 at FM 1327
Length: 8 miles

# Project Schedule
## SH 130 and SH 45
Travis and Williamson Counties
Total Project Length: 54 miles

**Attachment "C"**
Contract No. 14345 P5001
Control 0440-05 & 06

Supplemental Agreement No. 1

| Function Code | Task and Description | Year 1* J | J | A | S | O | N | D | J | F | M | A | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110 | **I. Project management** | | | | | | | | | | | | |
| 110 | **II. Route location studies** | | | | | | | | | | | | |
| | A. Review alternative routes | | | | | | | | | | | | |
| | B. Schematic design | | | | | | | | | | | | |
| | C. Engineering Summary Report | | | | | | | | | | | | |
| 110 | D. Review/evaluation | | | | | | | | | | | | |
| | **III. Traffic evaluation** | | | | | | | | | | | | |
| | A. Review and code traffic model | | | | | | | | | | | | |
| | B. Develop interim demographics | | | | | | | | | | | | |
| | C. Forecast traffic demand | | | | | | | | | | | | |
| | D. Review/evaluation | | | | | | | | | | | | |
| 110 | **IV. Toll collection plan** | | | | | | | | | | | | |
| | A. Develop toll collection plan | | | | | | | | | | | | |
| | B. Estimate toll revenues | | | | | | | | | | | | |
| | C. Maintenance and operations expenses | | | | | | | | | | | | |
| | D. Net revenue calculations | | | | | | | | | | | | |
| | E. Toll Collection Plan Report | | | | | | | | | | | | |
| | F. Review and evaluation | | | | | | | | | | | | |
| 110 | **V. Financial Plan** | | | | | | | | | | | | |
| 110 | **VI. Preparation of Final Report** | | | | | | | | | | | | |
| 120 | **VII. Social, economic and environmental study** | | | | | | | | | | | | |
| | A. Environmental overview | | | | | | | | | | | | |
| | B. Review/evaluation by TxDOT & TTA | | | | | | | | | | | | |

Work Time  TxDOT & TTA Review Time

Appendix "C"

PROJECT: SH 130 AND SH 45

SUPPLEMENTAL AGREEMENT NO. 1
SH 130 AND SH45 TOLL ROAD STUDY

WORK BY: CARTER & BURGESS, INC. (C & B INC.)

ROUTE AND DESIGN STUDIES (Function Code 110) (Continued)

IV. TOLL COLLECTION
A. DEVELOP TOLL COLLECTION PLAN
B. ESTIMATE TOLL REVENUES
C. FORECAST MAINTENANCE AND OPERATIONS EXPENSES
D. CALCULATE NET REVENUE
E. PREPARE TOLL COLLECTION PLAN REPORT

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 6 | $40.00 | $240 |
| Asst. Project Manager | 0 | $35.00 | $0 |
| Design Engineer | 40 | $26.00 | $1,040 |
| Asst. Design Engineer | 18 | $23.00 | $414 |
| Technician | 0 | $20.00 | $0 |
| CADD Drafter | 0 | $20.00 | $0 |
| Clerical | 4 | $12.00 | $48 |
| SUBTOTAL: | 68 | | $1,742 |

V. FINANCIAL FEASIBILITY STUDY

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 4 | $40.00 | $160 |
| Asst. Project Manager | 8 | $35.00 | $280 |
| Design Engineer | 8 | $26.00 | $208 |
| Asst. Design Engineer | 0 | $23.00 | $0 |
| Technician | 0 | $20.00 | $0 |
| CADD Drafter | 0 | $20.00 | $0 |
| Clerical | 0 | $12.00 | $0 |
| SUBTOTAL: | 20 | | $648 |

VI. FINAL REPORT
A. PREPARE DRAFT ENGINEERING REPORT
B. PRESENTATION TO TEXAS TURNPIKE AUTHORITY

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 32 | $40.00 | $1,280 |
| Asst. Project Manager | 32 | $35.00 | $1,120 |
| Design Engineer | 56 | $26.00 | $1,456 |
| Asst. Design Engineer | 32 | $23.00 | $736 |
| Technician | 0 | $20.00 | $0 |
| CADD Drafter | 16 | $20.00 | $320 |
| Clerical | 20 | $12.00 | $240 |
| SUBTOTAL: | 188 | | $5,152 |

| | | | |
|---|---|---|---|
| TOTAL ROUTE AND DESIGN STUDIES<br>FUNCTION CODE 110<br>CARTER & BURGESS, INC. | 1,978 | | $53,708 |

PROJECT: SH 130 AND SH 45

**SUPPLEMENTAL AGREEMENT NO. 1**
**SH 130 AND SH45 TOLL ROAD STUDY**

WORK BY: CARTER & BURGESS, INC. (C & B INC.)

SOCIAL, ECONOMIC AND ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT (Function Code 120)

VII. ENVIRONMENTAL OVERVIEW
- A. PROJECT DESCRIPTION
- B. PURPOSE AND NEED
- C. ENVIRONMENTAL ISSUES ANALYSIS
- D. MITIGATION AND MITIGATION COST
- E. SUMMARY AND CONCLUSIONS
- F. ASSEMBLE AND SUBMIT DOCUMENT

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 9 | $40.00 | $360 |
| Asst. Project Manager | 12 | $35.00 | $420 |
| Design Engineer | 12 | $26.00 | $312 |
| Asst. Design Engineer | 12 | $23.00 | $276 |
| Technician | 28 | $20.00 | $560 |
| CADD Drafter | 0 | $20.00 | $0 |
| Clerical | 10 | $12.00 | $120 |
| SUBTOTAL: | 83 | | $2,048 |
| TOTAL SOCIAL, ECONOMIC AND ENVIRONMENTAL STUDIES AND (FUNCTION CODE 120) CARTER & BURGESS, INC. | 83 | | $2,048 |

ATTACHMENT "D"
COST PROPOSAL
(CONTINUED)

Contract No. 14345P5001
PAGE 4 OF 10

PROJECT: SH 130 AND SH 45

**SUPPLEMENTAL AGREEMENT NO. 1**
**SH 130 AND SH45 TOLL ROAD STUDY**

WORK BY: CARTER & BURGESS, INC (C & B INC )

SUMMARY OF CARTER & BURGESS, INC

COST BY FUNCTION CODE AND DIRECT COST:

| FUNCTION CODE | MANHOURS | DIRECT LABOR | OVERHEAD 149.93% | FIXED FEE | TOTAL |
|---|---|---|---|---|---|
| ROUTE AND DESIGN STUDIES (FUNCTION CODE 110) | 1,978 | $53,708 | $80,524 | $20,135 | $154,367 |
| SOC., ECON. & ENV. STUDIES (FUNCTION CODE 120) | 83 | $2,048 | $3,071 | $768 | $5,886 |
| SUBTOTAL LABOR CARTER & BURGESS, INC. | 2,061 | $55,756 | $83,595 | $20,903 | $160,254 |

CARTER & BURGESS, INC. - DIRECT COST:

| ITEM | UNIT | QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|
| Blueline Reproductions | Sq. Feet | 4,560 | $0.15 | $684 |
| Document Printing | Sheets | 1,000 | $0.10 | $100 |
| Express Deliveries | Deliveries | 8 | $15.00 | $120 |
| Auto Mileage | Miles | 500 | $0.28 | $138 |
| Air Travel | Flights | 0 | $1,155.00 | $0 |
| Lodging | Nights | 0 | $50.00 | $0 |
| Per Diem | Days | 0 | $35.00 | $0 |
| Auto Rental | Days | 0 | $45.00 | $0 |
| Maps and Reproduction of Maps | Each | 20 | $10.00 | $200 |
| SUBTOTAL DIRECT COST | | | | $1,242 |
| TOTAL WORK BY CARTER & BURGESS, INC. | | | | $161,495 |

WORK BY: HICKS & COMPANY

ROUTE AND DESIGN STUDIES (Function Code 110)

I. PROJECT MANAGEMENT

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 0 | $40.00 | $0 |
| Senior Environmental Scientist | 18 | $34.00 | $612 |
| Senior Environmental Professional | 0 | $29.00 | $0 |
| Senior Environmental Planner | 0 | $25.75 | $0 |
| Environmental Specialist | 8 | $20.50 | $164 |
| Professional Staff Cartographer | 4 | $15.25 | $61 |
| Technical/Clerical | 12 | $12.00 | $144 |
| SUBTOTAL: | 42 | | $981 |

III. TRAFFIC EVALUATION AND PROJECTIONS
A. REVIEW TRAFFIC DEMAND MODELS
B. CODE TRAFFIC NETWORK ALTERNATIVES
C. DEVELOP INTERIM DEMOGRAPHICS
D. FORECAST TRAFFIC DEMAND

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 0 | $40.00 | $0 |
| Asst. Project Manager | 16 | $34.00 | $544 |
| Design Engineer | 32 | $29.00 | $928 |
| Asst. Design Engineer | 138 | $25.75 | $3,554 |
| Technician | 0 | $20.50 | $0 |
| CADD Drafter | 0 | $15.25 | $0 |
| Clerical | 0 | $12.00 | $0 |
| SUBTOTAL: | 186 | | $5,026 |

| | | |
|---|---|---|
| TOTAL ROUTE AND DESIGN STUDIES | 228 | $6,007 |
| FUNCTION CODE 110 | | |
| HICKS & COMPANY | | |

PROJECT: SH 130 AND SH 45

**SUPPLEMENTAL AGREEMENT NO. 1**
**SH 130 AND SH45 TOLL ROAD STUDY**

WORK BY: HICKS & COMPANY

SOCIAL, ECONOMIC AND ENVIRONMENTAL STUDIES AND PUBLIC INV. (Function Code 120)

VI. ENVIRONMENTAL OVERVIEW
A. PROJECT DESCRIPTION
B. PURPOSE AND NEED
C. ENVIRONMENTAL ISSUES ANALYSIS
D. MITIGATION AND MITIGATION COST
E. SUMMARY AND CONCLUSIONS
F. ASSEMBLE AND SUBMIT DOCUMENT

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 0 | $40.00 | $0 |
| Senior Environmental Scientist | 86 | $34.00 | $2,924 |
| Senior Environmental Professional | 0 | $29.00 | $0 |
| Senior Environmental Planner | 44 | $25.75 | $1,133 |
| Environmental Specialist | 147 | $20.50 | $3,014 |
| Professional Staff Cartographer | 114 | $15.25 | $1,739 |
| Technical/Clerical | 74 | $12.00 | $888 |
| SUBTOTAL: | 465 | | $9,697 |
| TOTAL SOCIAL, ECONOMIC AND ENVIRONMENTAL STUDIES AND (FUNCTION CODE 120) | 465 | | $9,697 |

SUMMARY OF HICKS & COMPANY

COST BY FUNCTION CODE AND DIRECT COST:

| FUNCTION CODE | MANHOURS | DIRECT LABOR | OVERHEAD 155.00% | FIXED FEE | TOTAL |
|---|---|---|---|---|---|
| ROUTE AND DESIGN STUDIES (FUNCTION CODE 110) | 228 | $6,007 | $9,310 | $2,297 | $17,614 |
| SOC., ECON. & ENV. STUDIES (FUNCTION CODE 120) | 465 | $9,697 | $15,030 | $3,709 | $28,436 |
| SUBTOTAL LABOR HICKS & COMPANY | 693 | $15,704 | $24,340 | $6,007 | $46,051 |

HICKS & COMPANY. - DIRECT COST:

| ITEM | UNIT | QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|
| Blueline Reproductions | Sq. Feet | 0 | $0.15 | $0 |
| Document Printing | Sheets | 1,000 | $0.10 | $100 |
| Express Deliveries | Deliveries | 0 | $15.00 | $0 |
| Auto Mileage | Miles | 500 | $0.28 | $138 |
| Air Travel | Flights | 0 | $1,155.00 | $0 |
| Lodging | Nights | 0 | $50.00 | $0 |
| Per Diem | Days | 0 | $35.00 | $0 |
| Auto Rental | Days | 0 | $45.00 | $0 |
| Maps and Reproduction of Maps | Each | 6 | $10.00 | $60 |
| SUBTOTAL DIRECT COST: | | | | $298 |

TOTAL WORK BY HICKS & COMPANY $46,348

ATTACHMENT "D" Contract No. 14345P5001
PROJECT: SH 130 AND SH 45 COST PROPOSAL PAGE 7 OF 10
FROM: IH 35 AT SH 195 SOUTHEAST AND WEST
TO: IH 35 AT FM 1327 **SUPPLEMENTAL AGREEMENT NO. 1**
PROJECT LENGTH: 54 MILES **SH 130 AND SH45 TOLL ROAD STUDY**

WORK BY: URS CONSULTANTS

ROUTE AND DESIGN STUDIES (Function Code 110)

I. PROJECT MANAGEMENT

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 0 | $40.00 | $0 |
| Principal | 24 | $50.58 | $1,214 |
| Senior Professional | 24 | $42.07 | $1,010 |
| Professional | 40 | $32.46 | $1,298 |
| | 0 | $0.00 | $0 |
| | 0 | $0.00 | $0 |
| Clerical | 8 | $22.31 | $178 |
| SUBTOTAL: | 96 | | $3,700 |

II. ROUTE AND DESIGN STUDIES
A. REVIEW ALTERNATE ROUTES
B. SCHEMATIC DESIGN
C. ENGINEERING SUMMARY

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 0 | $40.00 | $0 |
| Principal | 4 | $50.58 | $202 |
| Senior Professional | 8 | $42.07 | $337 |
| Professional | 0 | $32.46 | $0 |
| | 0 | $0.00 | $0 |
| | 0 | $0.00 | $0 |
| Clerical | 0 | $22.31 | $0 |
| SUBTOTAL: | 12 | | $539 |

III. TRAFFIC EVALUATION AND PROJECTIONS
A. REVIEW TRAFFIC DEMAND MODELS
B. CODE TRAFFIC NETWORK ALTERNATIVES
C. DEVELOP INTERIM DEMOGRAPHICS
D. FORECAST TRAFFIC DEMAND

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 0 | $40.00 | $0 |
| Principal | 8 | $50.58 | $405 |
| Senior Professional | 168 | $42.07 | $7,068 |
| Professional | 304 | $32.46 | $9,868 |
| | 0 | $0.00 | $0 |
| | 0 | $0.00 | $0 |
| Clerical | 0 | $22.31 | $0 |
| SUBTOTAL: | 480 | | $17,340 |

PROJECT: SH 130 AND SH 45

WORK BY: URS CONSULTANTS

**SUPPLEMENTAL AGREEMENT NO. 1**
**SH 130 AND SH45 TOLL ROAD STUDY**

ROUTE AND DESIGN STUDIES (Function Code 110) (Continued)

IV. TOLL COLLECTION
A. DEVELOPE TOLL COLLECTION PLAN
B. ESTIMATE TOLL REVENUES
C. FORCAST MAINTENANCE AND OPERATIONS EXPENSES
D. CALCULATE NET REVENUE
E. PREPARE TOLL COLLECTION PLAN REPORT

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 0 | $40.00 | $0 |
| Principal | 28 | $50.58 | $1,416 |
| Senior Professional | 44 | $42.07 | $1,851 |
| Professional | 32 | $32.46 | $1,039 |
| | 0 | $0.00 | $0 |
| | 0 | $0.00 | $0 |
| Clerical | 8 | $22.31 | $178 |
| SUBTOTAL: | 112 | | $4,485 |

V. FINANCIAL FEASIBILITY STUDY

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 0 | $40.00 | $0 |
| Principal | 16 | $50.58 | $809 |
| Senior Professional | 0 | $42.07 | $0 |
| Professional | 0 | $32.46 | $0 |
| | 0 | $0.00 | $0 |
| | 0 | $0.00 | $0 |
| Clerical | 0 | $22.31 | $0 |
| SUBTOTAL: | 16 | | $809 |

VI. FINAL REPORT
A. PREPARE DRAFT ENGINEERING REPORT
B. PRESENTATION TO TEXAS TURNPIKE AUTHORITY

| CLASSIFICATION | MANHOURS | RATE | COST |
|---|---|---|---|
| Project Manager | 0 | $40.00 | $0 |
| Principal | 32 | $50.58 | $1,619 |
| Senior Professional | 32 | $42.07 | $1,346 |
| Professional | 40 | $32.46 | $1,298 |
| | 0 | $0.00 | $0 |
| | 0 | $0.00 | $0 |
| Clerical | 16 | $22.31 | $357 |
| SUBTOTAL: | 120 | | $4,620 |

| | | |
|---|---|---|
| TOTAL ROUTE AND DESIGN STUDIES | 836 | $31,494 |
| FUNCTION CODE 110 | | |
| URS CONSULTANTS | | |

PROJECT: SH 130 AND SH 45

WORK BY: URS CONSULTANTS

SUMMARY OF URS CONSULTANTS

COST BY FUNCTION CODE AND DIRECT COST:

| FUNCTION CODE | MANHOURS | DIRECT LABOR | OVERHEAD 131.00% | FIXED FEE | TOTAL |
|---|---|---|---|---|---|
| ROUTE AND DESIGN STUDIES (FUNCTION CODE 110) | 836 | $31,494 | $41,257 | $10,913 | $83,663 |
| SUBTOTAL LABOR URS CONSULTANTS | 836 | $31,494 | $41,257 | $10,913 | $83,663 |

URS CONSULTANTS. - DIRECT COST:

| ITEM | UNIT | QUANTITY | UNIT COST | TOTAL |
|---|---|---|---|---|
| Blueline Reproductions | Sq. Feet | 0 | $0.15 | $0 |
| Document Printing | Sheets | 1,000 | $0.10 | $100 |
| Express Deliveries | Deliveries | 8 | $15.00 | $120 |
| Auto Mileage | Miles | 0 | $0.28 | $0 |
| Air Travel | Flights | 5 | $1,155.00 | $5,775 |
| Lodging | Nights | 5 | $50.00 | $250 |
| Per Diem | Days | 5 | $35.00 | $175 |
| Auto Rental | Days | 5 | $45.00 | $225 |
| Maps and Reproduction of Maps | Each | 0 | $10.00 | $0 |
| SUBTOTAL DIRECT COST: | | | | $6,645 |

TOTAL WORK BY URS CONSULTANTS $90,308

ATTACHMENT "D"
COST PROPOSAL
(CONTINUED)



PROJECT: SH 130 AND SH 45
FROM: IH 35 AT SH 195 SOUTHEAST AND WEST
TO: IH 35 AT FM 1327
PROJECT LENGTH: 54 MILES

**SUPPLEMENTAL AGREEMENT NO. 1**
**SH 130 AND SH45 TOLL ROAD STUDY**

WORK BY: CARTER & BURGESS, INC., HICKS & COMPANY AND URS CONSULTANTS

SUMMARY OF TOTAL CONTRACT BY FUNCTION CODE

| | MANHOURS | DIRECT LABOR | OVERHEAD | FIXED FEE | MAX. AMOUNT PAYABLE |
|---|---|---|---|---|---|
| FUNCTION CODE 110 | 3,042 | $91,208 | $131,091 | $33,345 | $255,644 |
| FUNCTION CODE 120 | 548 | $11,745 | $18,101 | $4,477 | $34,323 |
| TOTAL CONTRACT: | 3,590 | $102,953 | $149,192 | $37,822 | $289,967 |
| TOTAL CONTRACT DIRECT COST: | | | | | $17,789 |
| TOTAL CONTRACT COST: | | | | | $307,756 |

SUMMARY OF TOTAL CONTRACT

| | FIXED FEE | MAX. AMOUNT PAYABLE |
|---|---|---|
| CARTER & BURGESS, INC. | $20,903 | $161,495 |
| HICKS & COMPANY | | $46,348 |
| URS CONSULTANTS | | $90,308 |
| UNITED AERIAL MAPPING, INC. | | $9,605 |
| TOTAL CONTRACT COST: | $20,903 | $307,756 |

PERCENT DISADVANTAGED BUSINESS ENTERPRISE. 15 06%

Contract No. 14345P5001

**ATTACHMENT "D"**
**COST PROPOSAL (SUPPLEMENT)**
**SUPPLEMENTAL AGREEMENT NO. 1**

ESTIMATE OF PROJECT DOCUMENTS TO BE PREPARED BY THE ENGINEER
SH 130

| Description | Estimated Quantity |
|---|---|
| Project Design Criteria | 1 each |
| Route Location (US 290 to IH-35) (1"-400') | 9 sheets |
| Schematic Design (Scaled at 1"-400') | 19 sheets |
| Engineering Summary Report | 1 each |
| Toll Collection Plan | 1 each |
| Financial Feasibility Plan | 1 each |
| Environmental Overview | 1 each |

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