

Item 17



Travis County Commissioners Court Agenda Request

Meeting Date: May 14, 2013

Prepared By/Phone Number: John E. Pena 854-9515, Marvin Brice 854-9765

Elected/Appointed Official/Dept. Head: Cyd V. Grimes, C.P.M., CPPO, Purchasing Agent

Commissioners Court Sponsor: Judge Samuel T. Biscoe

Agenda Language: Approve Modification No. 2 to Contract No. 4400000818 (HTE Contract No. PS100298JE), HVJ Associates, Inc. for Design Services for the Capital Area Pavement Engineering Council (CAPEC).

- **Purchasing Recommendation and Comments:** Purchasing concurs with the department and recommends approval of requested action. This procurement action meets the compliance requirements as outlined by the statutes.
- The Capital Area Pavement Engineering Council (CAPEC) initiative is a multi-agency effort aimed at eliminating or minimizing historical problems associated with roadways constructed over the highly expansive soils located predominately east of IH-35. The initiative also strives to provide an added benefit of standardization of pavement designs.

On August 23, 2011, the court approved a Professional Services Agreement (PSA) in the amount of \$76,700.00 with the engineering firm HVJ Associates, Inc. for Phase 1 of this project which included collection of information; developing a work plan for Phase 2; and to produce an Interim Report. On November 12, 2012, Modification No. 1 was approved for \$7,733.40 to increase the number of Partnering Sessions and supplement stakeholders input with computerized surveys to better quantify and document issues and goals.

Phase 1 is complete; however, additional work has been requested to be amended into Phase 1 as subtasks as well as add the required work for Phase 2 and associated tasks and subtasks.

AGENDA REQUEST DEADLINE: All agenda requests and supporting materials must be submitted as a pdf to agenda@co.travis.tx.us by Tuesdays at 5:00 p.m. for the next week's meeting.

TNR has completed its negotiations, with the Purchasing Office assistance, for the scope and negotiated fee with the consultant and recommends approval of Modification No. 2 for Phase 2 in the amount of \$225,550.00. Approval for costs associated with Phase 3 will be submitted at a later date.

➤ **Contract Expenditures:** Within the last 12 months \$84,433.40 has been spent against this contract.

➤ **Contract-Related Information:**

Award Amount: \$76,700.00
 Contract Type: Professional Services
 Contract Period: 15 Months from the NTP.

➤ **Contract Modification Information:**

Modification Amount: \$225,550.00
 Modification Type: Professional Services
 Modification Period: 6 Months from the NTP date for Mod. 2.

➤ **Solicitation-Related Information:** N/A

Solicitations Sent: Responses Received:
 HUB Information: % HUB Subcontractor:

➤ **Special Contract Considerations:** N/A

- Award has been protested; interested parties have been notified.
- Award is not to the lowest bidder; interested parties have been notified.
- Comments:

➤ **Funding Information:**

FRD: 0300000403

	City of Austin	Travis County	Williamson County	City of Pflugerville	
Fund	0001	0145	0001	0001	
Fund Center	1490200001	1490200145	1490200001	1490200001	
G/L	511900	511900	511900	511900	
Amount	\$ 113,451.65	\$ 46,012.20	\$ 62,702.90	\$ 3,383.25	\$ 225,550.00

MODIFICATION OF CONTRACT NUMBER: 4400000818 (PS100298JE), DESIGN SERVICES FOR THE CAPITAL AREA PAVEMENT ENGINEERING COUNCIL (CAPEC)

ISSUED BY: Travis County Purchasing Office 700 Lavaca Street, Suite 800 Austin, Texas	PURCHASING AGENT ASST: John E. Pena, CTPM TEL. NO: (512) 854-9700 FAX NO: (512) 854-9185	DATE PREPARED: April 9, 2013
ISSUED TO: HVJ Associates, Inc. Attn.: R. F. Carmichael, III, P.E. 4201 Fredrich Lane, #110 Austin, Texas 78744	MODIFICATION NO.: Two (2)	EXECUTED DATE OF ORIGINAL CONTRACT: August 30, 2011

ORIGINAL CONTRACT TERM DATES:
September 6, 2011 - Through Completion

CURRENT CONTRACT TERM DATES:
September 6, 2011 - Through Completion

FOR TRAVIS COUNTY INTERNAL USE ONLY:

Original Contract Amount: \$76,700.00

Current Modified Amount \$309,983.40

DESCRIPTION OF CHANGES: The above referenced contract is modified to reflect the changes as set below:

- A. Reference Exhibit 1, Section 1 - Compensation for Basic Services, Section 1.1 (i). Phase 1 Total is changed from 72,280.40 (as amended by Modification No. 1, dated November 12, 2012) to 89,680.40, in increase of \$17,400.00.
- B. Reference Exhibit 1, Section 1 - Compensation for Basic Services, Section 1.1 (ii). Phase 2 was not originally funded when contract award was made on August 23, 2011. In March of 2013 funds were finally received from the City of Austin, City of Pflugerville and Williamson County for the total approved amount of \$178,900.00 for Phase 2.
- C. Reference Exhibit 1, Section 1 - Compensation for Basic Services, Section 1.1 (ii). Phase 2 Total is changed from \$178,900.00 (as noted by Item B, above) to \$208,150.00 which adds Subtasks 1, 2, 5, & 6 to the current tasks listed under Phase 2. This will increase Phase 2 by \$29,250.00.
- D. Reference Exhibit 1, Section 4 - Reimbursable Expenses, Section 4.1. Reimbursable amount of \$12,153.00 remains unchanged.
- E. Reference Section 5, - Total Agreement Sum, Section 5.1. The Total Professional Services Agreement Sum is changed from \$84,433.40 (consisting of Basic Services of \$72,280.40 plus the Not-to-Exceed Reimbursable Expenses of \$12,153.00) to the not-to-exceed amount of \$309,983.40, an increase of \$225,550.00.
- F. The following services are hereby added to the contract, detailed in Attachment 1 and Exhibit 1 of this modification. In summary, the additional services are as follows:
 1. Recognized funding has been received for Phase 2 in the amount of \$178,900.00.
 2. Increase Phase 2 by changed order in the amount of \$29,250.00
 3. Modify Phase 1 to increase amount by \$17,400.00

Except as provided herein, all terms, conditions, and provisions of the document referenced above as heretofore modified, remain unchanged and in full force and effect.

Note to Vendor/City:

[XX] Complete and execute (sign) your portion of the signature block section below for all copies and return all signed copies to Travis County.

[] DO NOT execute and return to Travis County. Retain for your records.

LEGAL BUSINESS NAME: HVJ ASSOCIATES, INC	<input type="checkbox"/> DBA
BY: R.F. Carmichael III PE SIGNATURE	<input type="checkbox"/> CORPORATION
BY: R.F. CARMICHAEL III PRINT NAME	<input type="checkbox"/> OTHER
TITLE: SR. PROJECT MANAGER ITS DULY AUTHORIZED AGENT	DATE: 4/22/2013
TRAVIS COUNTY, TEXAS BY: CYD V. GRIMES CYD V. GRIMES, C.P.M., CPPO, TRAVIS COUNTY PURCHASING AGENT	DATE: 4/30/13
TRAVIS COUNTY, TEXAS BY: SAMUEL T. BISCOE, TRAVIS COUNTY JUDGE	DATE:



TRANSPORTATION AND NATURAL RESOURCES

STEVEN M. MANILLA, P.E., COUNTY EXECUTIVE

700 Lavaca Street-5th Floor
 Travis County Administration Building
 PO Box 1748
 Austin, Texas 78767
 Phone: (512) 854-9383
 Fax: (512) 854-4697

March 28, 2013

MEMORANDUM

TO: Cyd Grimes, Purchasing Agent
Carol B. Joseph for

FROM: Steven M. Manilla P.E., County Executive TNR

SUBJECT: Change Order #2 – CAPEC Phase I and II
 Contract #PS100298JE/4400000818 PO # 479172/4100000330

TNR is requesting approval of change order number two to the HVJ Associates contract. This amendment will increase the not-to-exceed amount by \$225,550.00 from \$84,433.40 to \$309,983.40. The financial information is provided below.

FRD: 0300000403

	City of Austin	Travis County	Williamson County	City of Pflugerville	
Fund	0001	0145	0001	0001	
Fund Center	1490200001	1490200145	1490200001	1490200001	
G/L	511900	511900	511900	511900	
Amount	\$ 113,451.65	\$ 46,012.20	\$ 62,702.90	\$ 3,383.25	\$ 225,550.00

If you have any questions or require additional information please contact Tawana Gardner at extension 47676 or Scott Lambert at extension 47651.

TDG:SMM:tdg

cc: John Pena, Purchasing
 Scott Lambert, TNR
cp Tawana Gardner, TNR

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SAP Customer	Payee Name /Participating Entity-Voting Member	Vendor	Description	Total Amount	Percent
270000	City of Austin	HVJ	Contract Award	\$52,388.10	68.3%
FRD 300000403	Travis County	HVJ	Contract Award	\$24,313.90	31.7%
				\$76,700.00	
270000	City of Austin	HVJ Mod	Contract Mod 1	\$5,281.91	68.3%
FRD 300000403	Travis County	HVJ Mod	Contract Mod 1	\$2,451.49	31.7%
				\$7,733.40	
			Total Current Contract Amt	\$84,433.40	
270000	City of Austin	HVJ Mod	Pending Mod 2 Ph1&2 Portions	\$23,484.95	
270000	City of Austin	HVJ Mod	Phase 2 Original Amount	\$89,988.70	
			Contract Mod 2 - City Austin	\$113,451.65	50.3%
FRD 300000403	Travis County	HVJ Mod	Pending Mod 2 Ph1&2 Portions	\$9,518.80	
FRD 300000403	Travis County	HVJ Mod	Phase 2 Original Amount	\$36,495.80	
			Contract Mod 2 - Travis County	\$48,012.20	20.4%
270030	Williamson County	HVJ Mod	Pending Mod 2 Ph1&2 Portions	\$12,988.70	
270030	Williamson County	HVJ Mod	Phase 2 Original Amount	\$49,734.20	
			Contract Mod 2 - Williamson County	\$62,702.90	27.8%
270001	City of Pflugerville	HVJ Mod	Pending Mod 2 Ph1&2 Portions	\$699.75	
270001	City of Pflugerville	HVJ Mod	Phase 2 Original Amount	\$2,683.25	
			Contract Mod 2 City of Pflugerville	\$3,383.25	1.5%
			Contract Mod 2 Total	\$225,550.00	
			Revised Contract Total	\$309,983.40	

270000	City of Austin	HVJ Mod	Total Costs	\$171,119.66
FRD	Travis County	HVJ Mod	Total Costs	\$72,777.59
270001	City of Pflugerville	HVJ Mod	Total Costs	\$3,383.25
270030	Williamson County	HVJ Mod	Total Costs	\$62,702.90
				\$309,983.40

Current HVJ PO Total	\$84,433.40
Mod 2 Ph 1&2 Portions	\$48,850.00
Phase 2 Original Amt	\$178,900.00
PO Adjustments Mar 2013	\$225,550.00
PO Total After Adjustments	\$309,983.40

RCP 2013-01-24 COA, TC, Wm. Pflugerville, revised with concrete.xls

Original Study Proposal (based on 2000 Census Bureau populations & Tiger file roadway)										Phase 1			Phase 2			Phase 3			Grand Totals			Agency Contributions		
Agency	Funding	Pop2000	%	Length	%	PvmtArea	%	Average	Distribution Factor	Initial Study	Design Guide	Specifications	Grand Totals	Phase 1	Phase 2	Phase 3	Grand Totals	Agency Contributions						
Austin	Yes	656,562	88.1%	2,440	58.0%	7,395	58.7%	68.3%		\$76,700	\$178,900	\$42,200	\$297,800	\$76,700	\$178,900	\$42,200	\$297,800	\$215,000						
Travis Co	Yes	88,308	11.9%	1,770	42.0%	5,200	41.3%	31.7%		\$52,365	\$122,138	\$28,811	\$203,314	\$52,365	\$55,762	\$13,389	\$121,416	\$75,000						
Participating		744,870		4,210		12,595	100.0%	100.0%		\$76,700	\$178,900	\$42,200	\$297,800	\$76,700	\$178,900	\$42,200	\$297,800	\$290,000						
Phase 1 increased by \$7,733																								
Phase 1 increased by \$7,733 (based on 2000 Census Bureau populations & Tiger file roadway)										Phase 1			Phase 2			Phase 3			Grand Totals			Agency Contributions		
Agency	Funding	Pop2000	%	Length	%	PvmtArea	%	Average	Distribution Factor	Initial Study	Design Guide	Specifications	Grand Totals	Phase 1	Phase 2	Phase 3	Grand Totals	Agency Contributions						
Austin	Yes	656,562	88.1%	2,440	58.0%	7,395	58.7%	68.3%		\$57,644	\$122,138	\$28,811	\$208,593	\$84,433	\$178,900	\$42,200	\$305,533	\$215,000						
Travis Co	Yes	88,308	11.9%	1,770	42.0%	5,200	41.3%	31.7%		\$28,788	\$56,762	\$13,389	\$98,940	\$28,788	\$56,762	\$13,389	\$98,940	\$75,000						
Participating		744,870		4,210		12,595	100.0%	100.0%		\$84,433	\$178,900	\$42,200	\$305,533	\$84,433	\$178,900	\$42,200	\$305,533	\$290,000						
Modification to include study of concrete designs																								
Modification to include study of concrete designs (based on 2000 Census Bureau populations & Tiger file roadway)										Phase 1			Phase 2			Phase 3			Grand Totals			Agency Contributions		
Agency	Funding	Pop2000	%	Length	%	PvmtArea	%	Average	Distribution Factor	Initial Study	Design Guide	Specifications	Grand Totals	Phase 1	Phase 2	Phase 3	Grand Totals	Agency Contributions						
Austin	Yes	656,562	80.4%	2,440	34.7%	7,395	35.6%	50.3%		\$51,237	\$164,724	\$40,805	\$256,766	\$101,833	\$208,400	\$81,100	\$391,333	\$215,000						
Travis Co	Yes	88,308	10.8%	1,770	25.2%	5,200	25.1%	20.4%		\$20,766	\$44,413	\$16,537	\$81,616	\$20,766	\$44,413	\$16,537	\$81,616	\$75,000						
Williamson Co	Yes	55,093	6.7%	2,728	38.9%	7,834	37.9%	27.8%		\$28,343	\$59,934	\$22,572	\$110,849	\$28,343	\$59,934	\$22,572	\$110,849	\$96,000						
Pflugerville	Yes	16,335	2.0%	83	1.2%	249	1.2%	1.5%		\$7,489	\$3,041	\$1,186	\$11,616	\$7,489	\$3,041	\$1,186	\$11,616	\$5,112						
Participating		816,298		7,022		20,678	100.0%	100.0%		\$101,834	\$208,401	\$81,100	\$391,334	\$101,834	\$208,401	\$81,100	\$391,334	\$391,112						

Reviewed and approved by Travis County 1/24/2013
 Letter submitted for Travis County
 See 1/27/2013
 T-R for City of Pflugerville 1/24/2013



Houston	4201 Freidrich Lane, Ste. 110
Austin	Austin, TX 78744-1045
Dallas	512.447.9081 Ph
	512.443.3442 Fax
San Antonio	www.hvj.com

December 5, 2012 (December 12, 2012 Rev 1, February 20, 2013 Rev 2)

Capital Area Pavement Engineering Council
 c/o Mr. Scott Lambert, P.E., Pavement Management Engineer
 Traffic Section, Road and Bridge Division
 Transportation and Natural Resources
 Travis County
 411 W. 13th Street, 11th Floor
 Austin, TX 78701

Subject: Proposal for Additional Pavement Engineering
 Addition of PCC Pavement Design
 CAPEC – Development of Regional Pavement Design Methodology and
 Pavement Construction Specifications - Project No. Q100298-JE
 Owner: Travis County, City of Austin, & Williamson County
 HVJ Proposal No. AP1017201

Dear Mr. Lambert:

HVJ Associates, Inc. (HVJ) is pleased to submit this revised proposal for the development of additional project scope to include the consideration of Portland Cement Concrete (PCC) pavement design in this project. The cost was reduced to meet the CAPEC available funding by eliminating HVJ's historical data collection related to PCC pavement example sections in Central Texas. HVJ is requesting that the CAPEC member agencies identify historical PCC pavement performance examples and provide supporting data to HVJ rather than HVJ collecting the data. Additionally a spreadsheet has been added to include a summary of the additional costs.

Scope of Work for Technical Alternate – Addition of PCC Pavement to Scope

Since PCC pavements have been used in many areas of Texas successfully, especially in areas of poor soils, HVJ has prepared the following technical work plan as an additional alternative for the committee to consider. Since the project objectives long term are to include pavement type selection, life cycle costs, and PCC pavements, HVJ is providing the following work plan to be completed in parallel with the scope proposed in the RFQ and HVJ's work plan in the our original submittal. These are the PCC tasks to be completed during the three primary phases: Phase 1 Collect Information and Establish Partnering; Phase 2 Develop New Models for Pavement Design Method; and Phase 3 Develop Final Design Program and Specifications.

Phase 1 – Collect Information and Establish Partnering

The three objectives of Phase 1 were: 1) collect the available relevant information and data, which are applicable to the project and to develop a platform for ongoing partnering with paving contractors, materials suppliers, developers, and other stakeholders; 2) develop a work plan for Phase 2; and 3) produce an Interim Report. These tasks have been completed and a Final Report

Mr. Scott Lambert, P.E.

AP1017201

December 5, 2012 (December 12, 2012 Rev 1, February 20, 2013 Rev 2)

produced. The available computer models which were reviewed included models for PCC pavement design. This work will be useful for the addition of PCC pavement design to the project scope.

As requested by Williamson County, HVJ will update the study to provide an option for concrete pavement. Specifically, HVJ will explore how concrete pavement is implemented in the Dallas/Fort Worth Metroplex and in the Houston area. The final product would be new recommended concrete pavement design procedures for the Austin area.

Thus, as an addendum to Phase 1, HVJ will complete two subtasks as follows:

1. Review how PCC pavement is implemented in the Dallas/Fort Worth and Houston areas. HVJ staff routinely has designed PCC pavements in these areas of the state for TxDOT and local governments. This subtask will be to document practices in these areas of the state.
2. Review CAPEC agency provided examples of historical PCC pavement designs and study sections in Central Texas.

Subtask 1 Review Pavement Design Methodologies and Policies

Existing pavement design procedures will be reviewed. The current pavement standards, material test procedures and construction inspection requirements also need to be reviewed and summarized. The key question is: How well do the current standards, test procedures, and construction inspection requirements insure that the pavement cross section designed is constructed? This activity will identify gaps or disconnects between the pavement design and construction practices. Standards, material test requirements and inspection requirements from the following entities will be considered: Dallas/Fort Worth and Houston, as well as other entities identified during the data collection process.

Subtask 2 Review PCC Pavement Examples in Central Texas

A very important part of Subtask 2 is to review specific examples of PCC pavement performance in Central Texas, provided by CAPEC agencies including any documentation available related to the design, construction, and performance of these pavements. The City of Austin, Travis County, and Williamson County, have some PCC projects where the performance has been good and others where premature cracking has occurred.

Phase 2 Develop New Models for Pavement Design Method

There are additional tasks to accomplish in Phase 2, associated with the addition of PCC pavement design procedures and policies for CAPEC. These are associated with the already defined subtasks:

1. Development of soil subgrade model;
2. Development of soil testing correlations;
3. Development of traffic characterization and parameters;
4. Development of soil stabilization strategies;
5. Phase 3 Work Plan; and
6. Prepare Final Report.

Mr. Scott Lambert, P.E.

AP1017201

December 5, 2012 (December 12, 2012 Rev 1, February 20, 2013 Rev 2)

PCC pavement scope will be added to subtasks 1, 2, 5, and 6. The work to be accomplished in subtasks 3 and 4 will be the same as already planned. The additional work is itemized below. The same basic concepts presented in the original flexible pavement scope are the same. The following subtasks will incorporate PCC pavements.

Subtask 1 – Development of Soil Subgrade Model

The database should include to the extent possible the following minimum types of data and variables for concrete pavement examples chosen in Phase 1:

- Subgrade K values will be collected and reviewed with the idea of replacing K with resilient modulus.
- Performance data including any non-destructive testing, distress surveys, roughness testing including PCC failure calculations for concrete over the past 5 years by CAPEC;
- Traffic data including estimated design traffic and actual traffic counts for comparison;
- Pavement design reports; and
- Pavement inventory data including as-built cross section thicknesses and date opened to traffic.

Subgrade support characteristics are quantified by various types of strength tests. These test procedures have evolved over the last 50+ years from the Subgrade K value to more sophisticated triaxial and resilient modulus tests. Typical values for resilient modulus (M_r) and elastic modulus (E) for central Texas subgrade soils should be developed and related to historically used K values.

Subtask 2– Development of Soil Testing Correlations

Existing correlations between K value and other more conventional geotechnical tests and information will be reviewed to allow for representative characterization and reasonable cost, time, and effort to perform the testing required for design input. A method of estimating the K value will be recommended and checked using subtask 1 data.

Subtask 5– Work Plan

After the completion of Task 7, HVJ will develop a detailed plan for developing the PCC pavement design program and/or methodology and materials and construction specifications in Phase 3 using the results of Phases 1 and 2 as a basis.

Subtask 6– Final Report

A Final Report will be prepared by the HVJ team that will include documentation of the results found for PCC pavement design in Phase 1 and Phase 2 in Adobe Acrobat format and provide it to CAPEC members to review.

Mr. Scott Lambert, P.E.

AP1017201

December 5, 2012 (December 12, 2012 Rev 1, February 20, 2013 Rev 2)

Phase 3 Develop Final PCC Design Program and Specifications

There are additional tasks to accomplish in Phase 3, associated with the addition of PCC pavement design procedures and policies for CAPEC. These are associated with the already defined subtasks:

1. Develop pavement material specifications;
2. Develop construction specifications;
3. Issue final report – manual of recommended design and construction practices for rigid pavements (including recommended pavement design software/methodology); and
4. Life cycle cost analysis methods.

PCC pavement scope will be added to subtasks 1, 2, 3 and 4. The additional work is itemized below.

Subtask 1 Develop Pavement Material Specifications

Pavement materials specifications must be correlated to the design strength values assigned for the various PCC materials used in the construction. HVJ will evaluate the TxDOT material specifications and revisions currently in progress to identify any applicable aspects that may be incorporated.

Subtask 2 Develop Construction Specifications

Construction specifications must also be developed which are appropriate and tied to the new PCC pavement materials. HVJ will evaluate the TxDOT standard specifications and revisions currently in progress to identify any applicable aspects that may be incorporated.

Subtask 3 Issue Final Report – Manual of Recommended Design and Construction Practices for Rigid Pavements

Subtask 3 is the final documentation which provides for the adoption of existing or new PCC software and the integration of the models developed in this project to “calibrate” the use of the existing model into use in central Texas for CAPEC members.

Subtask 4 Life Cycle Cost Analysis Methods

The life cycle cost analysis method will generally be the same for both flexible and rigid pavements. With the addition of rigid pavements however, HVJ will need to address life cycle strategies for rigid pavements which are different than those of flexible pavements. It is expected that the life cycle strategies will be dictated by the agency practices so HVJ will add concrete pavement considerations and examples to the methodology based on data gathered from Dallas/Fort Worth, Houston, as well as Austin data and HVJ’s experience. This can be used by the agencies as guidelines or overridden based on agency practices already in place.

Schedule

The additional tasks to incorporate PCC will increase the original schedule. The Phase 1 activities may be performed concurrent to the Phase 2 activities. The proposed schedule that incorporates the PCC tasks is outlined below. Phase 2 has been increased from 215 days (43 weeks) in the original contract to 225 days (45 weeks) or an additional 2 weeks to allow for the additional work associated with PCC pavement subgrade foundation modeling. Phase 3 schedule has been increased from 85

Mr. Scott Lambert, P.E.

AP1017201

December 5, 2012 (December 12, 2012 Rev 1, February 20, 2013 Rev 2)

days (17 weeks) in the original contract to 110 days (22 weeks) or an additional 5 weeks to incorporate PCC design and specifications.

Phases	Estimated Duration
Phase 1 Collect Information and Establish Partnering (PCC)	5 weeks
Phase 2 Develop New Models for Pavement Design Method	50 weeks
Phase 3 Develop Final Design Program and Specifications	17 weeks

Fees

Based on the scope of work outlined, the estimated fee and schedule for these additional services is \$85,550 total for all three phases. The breakdown of fees estimated for the three phases of work for which PCC tasks have been added are:

Phases	Cost
Phase 1 Collect Information and Establish Partnering	\$17,400
Phase 2 Develop New Models for Pavement Design Method	\$29,250
Phase 3 Develop Final Design Program and Specifications	\$38,900
Total	\$85,550

A summary of these costs as related to the original contract costs is provided below.

Task Description	Original Contract	Approved Modification 1	Approved Modification 2	Total Contract Plus Modifications
Phase 1:	\$ 76,700.00	\$ 7,733.40	\$ 17,400.00	\$ 101,833.40
Phase 2:	\$ 178,900.00	\$ -	\$ 29,250.00	\$ 208,150.00
Phase 3:	\$ 42,200.00	\$ -	\$ 38,900.00	\$ 81,100.00
Total	\$ 297,800.00	\$ 7,733.40	\$ 85,550.00	\$ 391,083.40

Insurance

Insurance certificates verifying HVJ's general liability, auto, workers' compensation, and errors and omissions insurance coverage, listing Travis County as a certificate holder, can be provided with the executed contract if requested.

Invoice

HVJ accounting procedures call for the submittal of invoices monthly in proportion to services performed within each phase of services. Each invoice will include the form supplied by the OWNER, copies of invoices, and back up documentation as needed. HVJ understands payments will be received within thirty (30) calendar days, after receipt of acceptable invoice.

Mr. Scott Lambert, P.E.

AP1017201

December 5, 2012 (December 12, 2012 Rev 1, February 20, 2013 Rev 2)

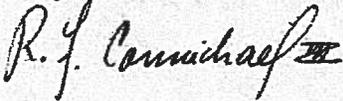
Conditions

This proposal provides details concerning HVJ's understanding of the proposed scope of work and assumptions and conditions assumed regarding the scope of work and thus the estimated level of effort estimate. Please review these to make sure that scope which is necessary for completion of the project has not been omitted nor scope added, which is unnecessary from the owner's perspective and understanding of the project.

HVJ looks forward to completing the negotiations and receiving a notice to proceed to meet the schedule based on CAPEC available funding.

Sincerely,

HVJ ASSOCIATES, INC.



Robert F. (Frank) Carmichael III, PE
Sr. Project Manager

Cc: Mr. Edward A. Poppitt III, PE, City of Austin
Ms. Patricia A. Davis, PE, City of Pflugerville
Mr. Joe England, PE, Williamson County

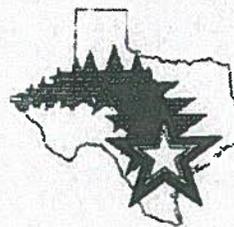
CAPEC

Capital Area Pavement Engineers Council

Edward Poppitt, P.E., CAPEC Chairman
City of Austin, Public Works, Street & Bridge Operations
4411-A Meinardus Dr, Austin, Texas 78744

Scott Lambert, P.E., CAPEC Secretary & Acting Vice Chairman
Travis County, Transportation & Natural Resources, Road & Bridge Division
411 West 13th Street, 11th floor, Austin, Texas 78701

★ Austin ★ Travis County ★



CAPITAL AREA PAVEMENT ENGINEERS COUNCIL MEETING MINUTES

January 24, 2013

Scott Lambert, Acting Vice-Chairman

Attending:

- Dan RichwineTXI
- Darrén DuncanCity of Austin
- Don WardHVJ
- Frank CarmichaelHVJ
- Gerald D. LankesTCPA
- Kelvin ReinhardtHVJ
- Joe EnglandWilliamson County
- Linda BarlowHVJ
- Rich RogersCCT
- Patricia DavisHVJ
- Scott LambertTravis County

1:30 PM Beginning of Meeting

Frank C – described how the CAPEC Phase 1 identified the issues to be studied and how several different design programs were evaluated. He watched a recent presentation by Dr. Lytton about the WINPRESS program that can be used for both flexible and rigid pavement designs. This was a top-down approach to design, whereas on the goals of CAPEC is to come up with a bottom up design methodology (based on subgrade support strength). Frank will see about getting Jorge Zornberg to do presentation about the new technology for testing the swelling properties of clays. The CAPEC Phase 2 will be doing field sampling and will have good factorial sample of the road designs being used. The soil suction tests that Dr Lytton uses with a centrifuge machine will be compared to Dr. Gilbert’s similar testing methods using an air-dried test. Phase 2 will also look at how Portland cement designs can be used. Frank has already sent out a survey to HVJ Partners in other cities. The K-value calculations for concrete pavements will be looked at, since the plate loading test methods are not always repeatable.

Scott L – asked if we have enough geotechnical reports to get started with. Frank C said he does have enough to start with and will prepare a map of the road locations that already have data available.

A group discussion was held about slurry walls and ways to construct them beneath the surface so they act as vertical moisture barriers. In San Antonio on US 281 are some vertical moisture barrier test sections. There should be some research reports available online for the US 281 moisture barrier study.

Frank C – In phase 2, also want to look at standardizing the asphalt mix designs, so there are not so many different alternatives out there. This could bring down the cost of asphalt mixes, if the asphalt plants don't have to mix up a lot of variations. Kelvin R said the Super-Pave mixes are really good to use. The previous asphalt mix designs were found to be more dry & brittle than the newer Super-Pave mixes.

Daren D – The PCA-Pave analysis program is showing some good analysis techniques. Some of the previous programs were showing that the modulus (strength) of the roadbase materials was about ½ that of the asphalt layers, but PCA-Pave gives the roadbase a much weaker rating, which seems to be what experience tells us.

Kelvin R – described a road section he looked at recently that didn't have any shrinkage cracking, even though the PI of the soil was in the 25 to 42 range. Further review of the section showed it had a 6 inch thick asphalt surface, which is much thicker than typically found. Kelvin R also described another subdivision where the roads were performing very good, probably due to the adjacent front yards that were being watered very well (maintains a uniform moisture level).

Frank C – said we would be sending out lists and maps of roads to be studied and then get to the field and evaluate the locations. Scott L suggested that we might need to do some more current road ratings of the test sections. Frank said the City of Austin had provided fairly recent road ratings and that Travis County had sent road ratings too.

Kelvin R – suggested it would be good to get PH level measurements on some existing projects. If the subgrade has been stabilized properly, the PH should be over 10, even if the road has been completed for quite a long time. For new construction, the PH of the subgrade should be 12.5 or greater.

Kelvin R – suggested that getting the contractors involved would be good as what the contractors are most concerned with, is having a range of test results they can achieve during construction.

Gerald L – said the FHWA is coming out with a new Cost Comparison Method that will allow several different pavement designs to be compared over the life-cycle cost of the design. This should help in the comparisons we want to do in the CAPEC study areas.

Scott L – made a motion to include the City of Pflugerville and Williamson County as voting members because they have now contributed funds for the CAPEC study. Daren Duncan seconded the motion. A vote was taken and all voting members were in favor.

Scott L – made a motion to modify Phase 1 and Phase 2 to include the study of PCC Pavement Designs as described in HVJ's proposal that was distributed at the meeting. Also to approve proceeding with Phase 2 at the new distribution factors that will include the City of Pflugerville's and Williamson County's participation. Daren Duncan seconded the motion. A vote was taken and all 4 voting members were in favor.

All 4 voting members signed a summary of the Agency Distribution Factors that are based on the population, road length, and pavement area, as follows:
Austin's distribution factor = 50.3%
Travis County's distribution factor = 20.4%
Williamson County's distribution factor = 27.8%
Pflugerville's distribution factor = 1.5%

~3:30 PM MEETING ADJOURNED

Certified By

Scott Lambert P.E.
Scott Lambert, P.E., CAPEC Acting Vice Chairman

1-24-2013
Date

Funds Reservation 300000403

General Data			
Document type	NE	Document type	030
Company code	1000	Document date	10/25/2012
FM area	1000	Posting date	10/25/2012
Controlling area	1000	Currency	USD/ 1.00000
Statistics			
Entered by	GARDNET	Created on	10/25/2012
Last changed by	HUFFH	Last changed	03/21/2013
More Data			
Text	MOD #1 CAPEC - HVJ ASSOCIATES		
Reference			
Overall Amount	227,772.41 USD		

Document Item 001			
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Cost center	1490200001	Due on	Customer
Vendor			
Amount	0.00 USD		

Document Item 002			
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Vendor			
Amount	0.00 USD		

Document Item 003			
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Cost center	1490200145	Due on	Customer
Vendor			
Amount	2,222.41 USD		

Document Item 004			

Funds Reservation 300000403

General Data			
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Controlling area	1000	Currency	USD/ 1.00000
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Last changed by	HUFFH	Last changed	03/21/2013
More Data			
Text	MOD #1 CAPEC - HVJ ASSOCIATES		
Reference			
Overall Amount	227,772.41 USD		

Text	TC CAPEC MOD 2 PH1&PS2 COST		
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Vendor			
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Cost center	1490200001	Due on	Customer
Vendor			
Amount	37,133.40 USD		

Document Item 006			
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Cost center	1490200145	Due on	Customer
Vendor			
Amount	36,495.60 USD		

Document Item 007			

Funds Reservation 300000403

General Data			
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Controlling area	1000	Currency	USD/ 1.00000
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Last changed by	HUFFH	Last changed	03/21/2013
More Data			
Text	MOD #1 CAPEC - HVJ ASSOCIATES		
Reference			
Overall Amount	227,772.41 USD		

Text	COA,PFLUGERVILLE, WILLIAMSON CTY PH 2		
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Vendor		Customer	
Amount	142,404.40 USD		