

AN ORDINANCE 2007-01-04-0011

APPROPRIATING FUNDS, AND APPROVING A \$765,919 AMENDMENT TO A PROFESSIONAL ENGINEERING SERVICES AGREEMENT WITH HVJ ASSOCIATES, INC. TO COMPLETE THE SECOND AND THIRD YEARS OF A PLANNED THREE YEAR CITY-WIDE SURVEYING AND PAVEMENT CONDITION ASSESSMENT PROJECT, AND PROVIDING FOR A SURVEY OF SIDEWALKS, ALLEYS, PAVEMENT MARKINGS, AND SOFTWARE RELATED TO THE PROJECT, IN CONNECTION WITH THE CITY-WIDE PAVEMENT MANAGEMENT SYSTEM PROJECT.

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WHEREAS, a contract was authorized by Ordinance No. 101146 on July 14, 2005 with HVJ Associates, Inc. in the amount of \$229,000.00 for professional services to provide for the first year of the planned three year project by surveying and performing condition assessments of one-third, approximately 1,300 center line miles, of the City's pavement network; and

WHEREAS, this Ordinance appropriates funds for year two and accelerates year three in order to complete 100% of the survey in 2007 and to include additional engineering services to complete a functional condition assessment of existing sidewalk infrastructure, an inventory of existing pavement markings and alleyway data collection, and to perform software upgrades and enhancements to the existing Pavement Maintenance Management Program database; and

WHEREAS, of the planned three-year citywide Surveying and Pavement Condition Assessment Project the remaining two-thirds (approximately 2,693 miles) of the City's centerline miles of pavement will be completed at a cost of \$765,919; **NOW THEREFORE**,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SAN ANTONIO:

SECTION 1. The professional services agreement between the City of San Antonio and **HVJ Associates, Inc.** which was originally authorized by Ordinance 101146 dated July 14, 2005 is hereby amended to complete the second and third years of a planned three year city-wide Surveying and Pavement Condition Assessment Project to include survey of sidewalks, alleys, pavement markings, and software in connection with the City-Wide Pavement Management System Project. The City Manager or her designee is hereby authorized to execute said amendment, a copy of which is in substantially the form attached hereto and incorporated by reference herein for all purposes as **Attachment I**.

SECTION 2. The following financial adjustments are hereby approved:

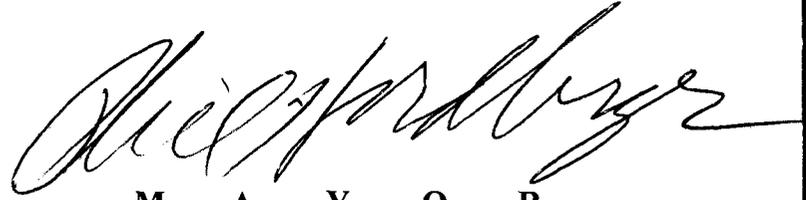
- a) Funding in the amount of \$169,779.50 is available in Fund 29050000 Streets/Drain Maintenance and Improvement, Cost Center 2303010001 Dispatch, General Ledger 5201040 Fees to Professional Contractors as part of the FY07 Operating Budget.
- b) Funds in the amount of \$315,415.50 are appropriated in Fund 29052000 Right of Way Management, Cost Center 2303040001 Right of Way, General Ledger 5201040 Fees to Professional Contractors and the FY07 Budget is amended to reflect same.
- c) The amount of \$140,362.00 is appropriated in fund 29084000, Advanced Transportation District, Internal Order #390000000434, GL account 6102100 – Interfund Transfer out entitled From 29084000 to 40099000. The amount of \$140,362.00 is authorized to be transferred to fund 40099000.
- d) The budget in fund 40099000, Project Definition 23-00076, ATD-Traffic & Pedestrian Mobility Improvements, shall be revised by increasing WBS element 23-00076-90-01 entitled Trf Fr I/O# 390000000434, GL account 6101100 – Interfund Transfer In, by the amount \$140,362.00.
- e) The amount of \$140,362.00 is appropriated in fund 29084000, Advanced Transportation District, Internal Order #390000000434, GL account 6102100 – Interfund Transfer out entitled From 29084000 to 40099000. The amount of \$140,362.00 is authorized to be transferred to fund 40099000.
- f) The budget in fund 40099000, Project Definition 23-00080, ATD-School Zone Pavement Marking Upgrade, shall be revised by increasing WBS element 23-00080-90-01 entitled Trf Fr I/O# 390000000434, GL account 6101100 – Interfund Transfer In, by the amount \$140,362.00.
- g) The amount of \$140,362.00 is appropriated in Fund 40099000, Other Capital Projects, Project Definition 23-00076, ATD-Traffic & Pedestrian Mobility Improvements, WBS element 23-00076-01-02 entitled Design Costs, G/L Account 5201040, and is authorized to be encumbered and made payable for professional engineering services.
- h) The amount of \$140,362.00 is appropriated in Fund 40099000, Other Capital Projects, Project Definition 23-00080, ATD-School Zone Pavement Marking Upgrade, WBS element 23-00080-01-02 entitled Design Costs, G/L Account 5201040, and is authorized to be encumbered and made payable for professional engineering services.
- i) Payment not to exceed \$765,919.00 from the funding sources listed above is authorized to **HVJ Associates, Inc.** and should be encumbered with a purchase order.

SECTION 3. The financial allocations in this Ordinance are subject to approval by the Director of Finance, City of San Antonio. The Director of Finance may, subject to concurrence by the City Manager or the City Manager’s designee, correct allocation to

specific SAP Fund Numbers, SAP Project Definitions, SAP WBS Elements, SAP Internal Orders, SAP Fund Centers, SAP Cost Centers, SAP Functional Areas, SAP Funds Reservation Document Numbers, and SAP GL Accounts as necessary to carry out the purpose of this Ordinance.

SECTION 4. This ordinance shall take effect on the 14th day of January, 2007.

PASSED AND APPROVED this 4th day of January, 2007.



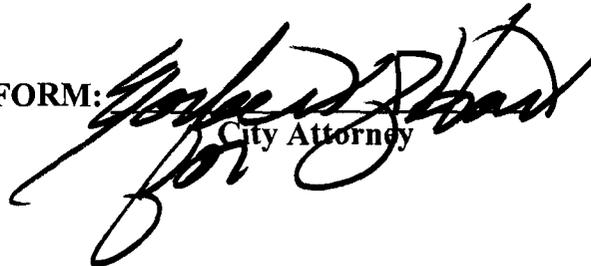
M A Y O R

PHIL HARDBERGER

ATTEST:


City Clerk

APPROVED AS TO FORM:


City Attorney



CMS or Ordinance Number: CN4600005506

TSLGRS File Code:1075-16

Document Title:

CONT - Cost Center 2303010001: Pavement Management System Project; A City-Wide
Surveying & Pavement Condition Assessment Project; 3 Year Project;

Commencement Date:

10/6/2005

Expiration Date:

10/5/2008

AMENDMENT #1 TO
PROFESSIONAL SERVICES AGREEMENT
ENGINEERING SERVICES
FOR

PAVEMENT MANAGEMENT SYSTEM

The City of San Antonio, a Texas Municipal Corporation, (hereinafter referred to as "CITY") presently contracts with HVJ Associates, Inc., (hereinafter referred to as "CONSULTANT"), for the Pavement Management System pursuant to a Professional Services Agreement (hereinafter referred to as the "Agreement") approved by City Council on January 4, 2007 through Ordinance No. 2007-01-04-0011. This amendment of the Professional Services Agreement (hereinafter referred to as "this Amendment") is entered into by and between the CITY acting by and through its designated representative pursuant to Ordinance No. 101146 passed and approved on July 14, 2005 and CONSULTANT acting by and through its designated representative. The undersigned hereby agree to amend said Agreement as herein set forth:

1. Article V. of the Agreement, entitled "COMPENSATION," is hereby amended to add the sum of \$765,919.00 to the fee for the CONSULTANT's additional work for a total contract amount of \$994,919.00.
2. Article III, "SCOPE OF SERVICES" is hereby amended to provide for the additional services described in the following attachments: Exhibit A-1) the completion of the remaining 2/3 centerline miles of road network, Exhibit A-2) software enhancements, and Exhibit A-3) sidewalk surveys and associated software, as summarized in Exhibit A.
3. This amendment to the Agreement shall not prejudice any present or future rights, remedies, benefits, or powers belonging or accruing to CITY under the terms of the Agreement herein amended.
3. Except as provided otherwise herein, the Agreement shall remain unaffected, unchanged, and unimpaired by reason of the foregoing amendments.

Amendment AGREED TO this the 1st day of FEBRUARY, 2007.

CITY OF SAN ANTONIO, A TEXAS
MUNICIPAL CORPORATION:

HVJAssociates, Inc.

By: [Signature]
City Manager
9.11.19.17

By: [Signature]
Title SR. PROJECT MANAGER

APPROVED:
[Signature]
City Attorney





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November 28, 2006

Mr. Paul Tenner, Special Projects Coordinator
City of San Antonio
Municipal Plaza Building
114 W. Commerce, 6th Floor
San Antonio, Texas 78205

Re: Summary of Engineering Proposals - Pavement Management Services
Owner: City of San Antonio
HVJ Proposal No. AP-05-10860

Dear Mr. Tenner;

Please find attached a summary table concerning the engineering services fee proposals submitted by HVJ Associates, Inc for providing Pavement Management Services to City of San Antonio. This table summarizes the three phases of work as detailed in previous submittals as follows:

1. Year 2 and Year 3 Pavement Condition Surveys – based on HVJ scope of work and fee proposal # AP-05-10860 Billing Group 3 (BG 3) dated October 27, 2006,
2. Year 2 Software Improvements – based on HVJ scope of work and fee proposal # AP-05-10860 Billing Group 4 (BG4) dated October 27, 2006, and
3. Sidewalks, Alleys, and Pavement Markings – based on HVJ scope of work and fee proposal # AP-05-10860 Billing Group 5 (BG5) dated October 27, 2006.

These work plans presents HVJ's proposed approach for completing road evaluations to meet the desired goals of City of San Antonio's ongoing street management efforts.

Sincerely,
HVJ ASSOCIATES, INC.

A handwritten signature in blue ink that reads 'R. F. Carmichael III' with a stylized flourish at the end.

R. F. (Frank) Carmichael III, P.E.
Sr. Project Engineer

Cc: Mr. Herbert V. Johnson, President, HVJ Associates, Inc
Mr. Bobby Atteberry, Vice President for Pavement Services, HVJ Associates, Inc

Attachment

Mr. Paul Tenner, Special Projects Coordinator
 HVJ Proposal No. AP-05-10860
 November 28, 2006

Phase Description	Year 2 & 3 Pavement Condition Surveys	Year 2 Software Improvements	Sidewalks, Pavement Markings, and Alleys			Total All Phases
HVJ Associates, Inc Proposal #	AP-05-10860 BG3	AP-05-10860 BG4	AP-05-10860 BG5			
Proposal Date	October 27, 2006	October 27, 2006	October 27, 2006			
			Sidewalks	Pavement Markings	Alleys	
Proposal Total	\$339,559	\$132,100	\$140,362	\$140,362	\$13,536	\$765,919
Percentage Per Phase	44.3%	17.2%	18.3%	18.3%	1.8%	100.0%



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October 27, 2006

Mr. Paul Tenner, Special Projects Coordinator
City of San Antonio
Municipal Plaza Building
114 W. Commerce, 6th Floor
San Antonio, Texas 78205

Re: Pavement Management Services – Year 2 and Year 3 Surveys
Owner: City of San Antonio
HVJ Proposal No. AP-05-10860 (BG3)

Dear Mr. Tenner;

HVJ Associates, Inc (HVJ) is pleased to submit the following fee proposal for providing Pavement Management Services for years 2 and 3 of our original agreement. This proposal presents HVJ's proposed work plan and cost estimate for accelerating the collection of condition surveys for the remaining two-thirds (2/3) of the road network so as to have a uniform set of data for ongoing street maintenance management efforts.

BACKGROUND AND SCOPE OF WORK

The existing pavement management system has been used for approximately 10 years. There are gaps in the data and some street sections are missing, since the original pavement management system was linked to an outdated GIS shape file. Also many data were over 5 years old. Sections with rehabilitation and overlay activities, which provided improvements in the pavement condition rating (PCR) score were not updated, and thus the data in the database was incorrect. A newer much more accurate GIS shape file is now available from the Right of Way Management Division and has been used for the surveys in 2005-2006 (year-1) for this project. With the survey of the first one-third (1/3) of the network now complete, there is a need to accelerate the completion of surveys for the remaining two-thirds (2/3) of the network so as to be able to take advantage of the modeling capabilities of the new Pavement Maintenance Management Program (PMMP) software that HVJ is installing for the City of San Antonio.

Project Objectives

Collection of pavement condition surveys of all the remaining City streets not surveyed during 2005-2006 (year-1) is the goal of this project. One-third (1/3) of the network is now completed and the remaining two-thirds (2/3) is calculated to be **2693 miles**. The objective of this proposed study is to provide the following services:

- Project kickoff meeting and road inventory preparation,
- Conduct condition surveys on 2693 centerline miles of City maintained streets,
- Upload data into the PMMP database and perform QA/QC checks, and
- Provide statistics and network analysis documents using PMMP software

Task 1. Kickoff Meeting and Road Inventory Preparation

Objectives

The objective of this task is to discuss the overall scope of work including updating the inventory, and establishing field data collection methods and schedules.

Work Plan

A meeting with the City staff will be held to evaluate and discuss the final condition survey scope and field data collection methodology. The rating procedure will be the same as used for the first year surveys.

HVJ will use the initial street inventory database provided by the City. The City database list will include but not be limited to: street name, from street, to street, length, width, past detailed survey data and calculated PCI scores for each street segment, with the Segment_ID variable for linkage to the GIS system.

HVJ will review and cleanse the initial data base before going to the field. The March 2006 Progress Report listed a number of problems experienced in the first year surveys (e.g. Inconsistent "From" and "To" information due to previous vendors database, private gated communities, small GIS arcs (some less than 50'), multiple GIS link for one pavement management section, some roads not existing, etc.). Office work will be undertaken to cleanse and improve these files as much as possible prior to field surveys. These tasks will include:

- Print GIS maps so that all Segment_ID values are printed on the maps and organize these maps for the field condition survey teams,
- Attempt to replace all the old "From" and "To" designations with an automatic query of the GIS data base ,then populate those that will not populate automatically by manual data entry from maps (some verifications will still be necessary during the field surveys), and finally verify /edit "From" and "To" fields during the field data collection in Task 2
- Change the data collection software (See HVJ proposal AP-05-10860 BG4) so that the street name drop-down menu provided to HVJ by Mr. Mike Garza can be used to select street names. Prepare data sets for each Council District to be surveyed,

Deliverables

This task will result in a list of roads to be surveyed in 2006-2007 (year-2) in Task 2. A detailed time schedule for the surveys will be prepared.

Task 2. Field Data Collection

Objectives

The objective of this task is to complete the collection of pavement condition surveys for the remaining two-thirds (2/3) of the network or 2693 miles of City streets using the methodology developed in the first year and the lists and maps prepared in Task 1.

Work Plan

HVJ Associates, Inc and Vickery Associates, Inc staff will collect the 2693 miles using the hand-held laptops and the Pavement Rating Application (PRA) program developed in year 1. Data will be imported into the PMMP database. HVJ will perform QA/QC on the final data to be sure that no street sections have been missed. This will be done by printing colored maps showing each

centerline arc that was collected in color. Those segments which are not colored in the printed map were missed. HVJ will send a field data collection crew to investigate each missing section to a) determine if the section was actually missed (if so it will be surveyed), b) determine if the section is under construction and therefore could not be surveyed, c) determine if the section does not exist (possibly platted but not built) or d) has been abandoned/demolished. HVJ commits to collect all street segments that are COSA owned public roads, not in gated communities.

Deliverables

HVJ will provide electronic files of pavement distress data for 2693 miles of street for analysis in Task 3.

Task 3. Condition Assessment Reports

Objectives

The purpose of this task will be to generate PMMP reports, which can be used for long range planning of pavement maintenance, rehabilitation, and reconstruction (MR&R) actions. Current network conditions will be reported based on cleaning up the missing sections and a 100% complete network dataset.

Work Plan

A report will be prepared providing PMMP outputs. This report will provide the results of all field data collection PCR ratings and network level outputs from HVJ's PMMP software. Based on the information collected and analyzed, an estimate will be prepared showing roadway maintenance, rehabilitation and reconstruction (MR&R) needs for all sections in the network. The analyses will recommend the required maintenance and rehabilitation treatments and provide an estimate of the cost for these activities. This will require the City to provide the following data:

- Projected City overlay and reconstruction budgets for next 5 years,
- Any updates to the maintenance, rehabilitation and reconstruction treatment unit costs loaded into the PMMP software in Year 1, which were based on November 2005 list preparations, and
- Any changes to the overall City treatment policies which were loaded in the PMMP software in Year 1.

Deliverables

A final report and computer files documenting work conducted during the study will be delivered at the end of this task.

FEE AND ASSUMPTIONS

Based on the scope of work outlined, the estimated fee proposal is attached. The following assumptions were made during the development of this cost estimate:

- City of San Antonio will be responsible for providing electronic copies of existing GIS data and helping to cleanse the dataset and correct some of the issues encountered in the year 1 surveys to the extent possible.

- Key City of San Antonio staff will be assigned to provide input and cooperation with HVJ Associates Inc team members regarding existing City data systems, particularly for the GIS interface and MIS staff for system details.
- The engineering fee cost estimate assumes a time and materials contract with the ability to modify levels of effort between tasks and using different mixes of personnel types up to a maximum not to exceed contract amount.

ADDITIONAL SOFTWARE IMPROVEMENTS AND IMPLEMENTATION

The pavement management system software is extremely important to the overall pavement management process. HVJ has provided the City of San Antonio in year 1 the Pavement Management Maintenance Program (PMMP) software version 2.0, which HVJ implemented for the City of Houston. Some modifications have been made, but additional modifications are required to comply with the needs of the City of San Antonio. Some work items are specific programmatic changes and other work items are the development of input data and decision criteria to customize the program outputs to City of San Antonio conditions.

This scope of work does not include these additional software work items. An additional proposal is being prepared to address all the known software modifications (See HVJ proposal AP-05-10860 BG4). This proposal includes input from the following sources:

- Progress reports and minutes from year 1 meetings;
- GIS concept memorandum from PBS&J
- Items discovered by HVJ in the initial installation;
- The prototyping “white paper” memorandum prepared by HVJ, which is being updated based on City input regarding prioritization score calculations and weighting factors, PCR score increases as a result of MR&R actions, etc; and
- Implement procedure to update the PCR scores for all street segments overlaid or reconstructed since November 2005 (for the third of the street network which has already been surveyed by HVJ); and implement process whereby all future actions of this type are recorded in the PMMP software regularly. The City of San Antonio will need to provide lists of all street rehabilitation actions and limits for these maintenance programs since November 2005.

HVJ Associates, Inc. is pleased to be of service on this project. Please call us if you have any questions or require additional information.

Sincerely,

HVJ ASSOCIATES, INC.



R. F. (Frank) Carmichael III, P.E.
Sr. Project Engineer

Cc: Mr. Bobby Atteberry, Vice President for Pavement Services

Description	Unit	Rate	Task 1		Task 2		Task 3		Total	
			Units	Cost	Units	Cost	Units	Cost	Units	Cost
A. Labor										
Project Principal	hr	\$145.00	16	\$2,320	6	\$870	16	\$2,320	38	\$5,510
Sr. Pavement Engineer	hr	\$125.00	40	\$5,000	60	\$7,500	40	\$5,000	140	\$17,500
System Analyst	hr	\$120.00	60	\$7,200	16	\$2,000	24	\$3,000	100	\$12,200
Project Manager	hr	\$105.00	40	\$4,200	40	\$4,200	40	\$4,200	120	\$12,600
Graduate Engineer	hr	\$75.00	356	\$26,698	1126	\$84,482	60	\$4,500	1,542	\$115,681
Engineering Tech	hr	\$65.00	316	\$20,539	1066	\$69,318	0	\$0	1,382	\$89,856
Clerical Support	hr	\$35.00	16	\$560	16	\$560	24	\$840	56	\$1,960
Labor Total				\$66,517		\$168,930		\$19,860		\$255,307
B. Direct Costs										
Milage	mi	\$0.50	300	\$150	9000	\$4,500	300	\$150	10,200	\$5,100
Hotel	day	\$75.00	0	\$0	100	\$7,500	0	\$0	100	\$7,500
Per Diems	day	\$25.00	0	\$0	200	\$5,000	0	\$0	200	\$5,000
Notebook Rental	ea	\$800.00	0	\$0	2	\$1,600	0	\$0	2	\$1,600
PBS&J										
Principal	hr	\$180.00	4	\$720	4	\$720	0	\$0	8	\$1,440
Sr. Engineer II	hr	\$160.00	4	\$640	4	\$640	0	\$0	8	\$1,280
Sr. GIS Analyst	hr	\$95.00	40	\$3,800	10	\$950	0	\$0	50	\$4,750
GIS Analyst	hr	\$65.00	120	\$7,800	10	\$650	0	\$0	130	\$8,450
One Person Crew	hr	\$65.00	0	\$0	0	\$0	0	\$0	0	\$0
Vickery & Associates										
Project Manager	hr	\$145.00	0	\$0	8	\$1,160	0	\$0	8	\$1,160
Professional Engineer	hr	\$110.00	0	\$0	16	\$1,760	0	\$0	16	\$1,760
One Person Crew	hr	\$65.00	0	\$0	711	\$46,212	0	\$0	711	\$46,212
Direct Costs Total				\$13,110		\$70,692		\$150		\$84,252
Project Total				\$79,627		\$239,622		\$20,010		\$339,559



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October 27, 2006

Mr. Paul Tenner, Special Projects Coordinator
City of San Antonio
Municipal Plaza Building
114 W. Commerce, 6th Floor
San Antonio, Texas 78205

Re: Pavement Management Services – Year 2 Software Improvements
Owner: City of San Antonio
HVJ Proposal No: AP-05-10860 (BG4)

Dear Mr. Tenner,

HVJ Associates, Inc (HVJ) is pleased to submit the following fee proposal for providing Pavement Management Services for the Year 2 software enhancements for the Pavement Maintenance Management Program (PMMP). This proposal presents HVJ's proposed work plan and cost estimate for making software changes and enhancements to the PMMP system so that it will be ready to analyze the completed 100% survey data set at the end of next year's work.

BACKGROUND AND ASSUMPTIONS

The existing PMMP system software was installed on a City of San Antonio server in May 2006. There are a number of improvements and enhancements needed so that the software is ready to analyze the 100% condition survey data set which will be ready at the end of Year 2. Year 1 condition survey data have already been imported into the software at this time. While generically acceptable, the PMMP software requires a number of modifications to customize it for future use by the City of San Antonio. Many of the following enhancements have been discussed during the Year 1 project. However, specific input screen formats, final agreed upon analysis procedures, and output screen formats details are not finalized. HVJ prepared a "white paper" outline of the PMMP analysis process, which can serve as an initial design plan for the developments. The level of effort estimated herein should be adequate based on current understanding of the scope, however custom software development requires some flexibility. With this understanding the following assumptions are the basis for the development of the scope of work and cost estimate this proposal.

- City of San Antonio will be responsible for providing electronic copies of existing GIS data and helping to cleanse the dataset and correct some of the issues encountered in the Year 1 survey to the extent possible.
- Key City of San Antonio staff will be assigned to provide input and cooperation with HVJ team members regarding existing City data systems, particularly for the GIS

interface and MIS staff for system details, and other datasets as required for the analysis, such as the VIA bus route layer for the Mobility Factor in the prioritization process.

- The engineering fee cost estimate assumes a time and materials contract. The complete scoping of these individual software coding tasks are not completely defined and subject to change based on the results of Task 1, monthly progress meetings between HVJ and COSA continue and beta software code development, testing and review by COSA staff.
- Other currently undefined software tasks may be identified and supersede these tasks and/or become more important to the successful implementation of PMMP or other COSA related initiatives. Under these circumstances, all of the tasks may not be completed.
- Some developments may prove to be more complex and time consuming than envisioned in this proposal. If HVJ identifies a major problem or issue regarding the efficacy or level of effort to complete one of the tasks, COSA staff will be notified immediately and HVJ will provide and discuss available options and alternatives.
- Software must be compatible with Personal Geodatabase format as well as the ability to read and write to the SDE (Spatial Database Engine) layer. Once the Pavement Condition Rating (PCR) is run and calculated within the PMMP software, the program will write to the SDE layer and also post the results to the City of San Antonio “street cut” permitting system for a dynamic link connection. In other words, as soon as the PCI is updated the enterprise wide GIS street map will also be updated instantaneously on both the permitting website as well as the City’s ARCIMS site as adopted by ITSD. The ARCGIS 9.0 and ARCIMS 4.0 languages will be used.

Proposed Software Enhancements

Task 1 Finalize Software Improvement Design – This task involves updating the PMMP “white paper” design to include detailed designs. Key items to be detailed are the updating of the budget module to predict a longer time frame (10 years), the incorporation of the new COSA prioritization process, the dynamic GIS link interface through ArcSDE format as described above, and input and output screens and print outs of the other items described in the following tasks. The goal of this task is to complete and document the design before actual coding begins. This will provide an opportunity for COSA project staff and administrators to review the final concepts before they are implemented.

Task 2 - Impact on PCI as a Function of Fund Allocation Strategies – The Budget Calculation Module of the PMMP program needs to be modified to include the prioritization model proposed by the City of San Antonio. This was not completed in Year 1 and is a priority item for Year 2 coding work. The following subtasks are included:

1. **Weighted PCR Score** – The PMMP software shall calculate a length weighted “Project PCR Score” for multiple street sections on the same street or within the same subdivision. A tab will be developed that provides for the selection of multiple

pavement sections and the resulting weighted PCR score for the chosen sections will be displayed. This will help to develop “project level” recommendations from “segment” level recommendations. For Arterial and collector streets, this algorithm will evaluate adjacent sections to provide for longer road segments; based on a criteria mutually agreed to by COSA and HVJ. For Local streets this algorithm will group sections in subdivisions to provide for multiple short streets being combined into “neighborhood” projects. It is also recommended that each Council District be analyzed separately so that a list can be provided to each Council member for review. This process was used very successfully by Mr. Atterberry at the City of Houston. The development of these rules and criteria will help to have the computer streamline the process of developing lists of projects for consideration. This process was prototyped in November 2005 manually using color coded GIS maps at a meeting with COSA. Thus, the development of a “semi” automated process will require the development of selection rules and criteria. It should be recognized that the output is still a “network level” solution and that field checking will still be required to calibrate or modify the results to develop a “final plan”. The objective of this task will be develop and code as many simplifying criteria as possible, thus making a tool that will make the final project level development as automatic as possible, with the goal of minimizing the amount of final field work.

Discussions with the street department indicated that one recent SMP project was 10 miles long (the current typical COSA block length is 500', which means that the project included approximately 100 blocks). The goal of the analysis described above is to combine multiple segments into projects for prioritization. The Street Department has coded the prioritization model, which was developed in the last phase of the project, GIS query statements by. HVJ will use this as a guide to adding the prioritization model to the new software.

2. After Rehabilitation Treatment Completion PCR Value— The PMMP software shall increase the PCR score for groups of sections which receive the same rehabilitation treatment without having to re-rate all the individual blocks. This score will also be assigned the same value for all blocks. COSA has developed a definition for this improvement and HVJ agrees with the criteria.
3. Prioritization Procedure - Mr. Tenner and City staff have developed a multivariable method to prioritize between competing projects. These decision criteria have been reviewed by HVJ and HVJ agrees that the process shall be coded to replace the existing PMMP prioritization process. Mr. Gregory Ruiz has developed GIS scripts and is testing this project prioritization process in the development of the Street Maintenance Program (SMP). HVJ will obtain these scripts and convert them into SQL code so that the PMMP is working correctly. Mr. Tenner has provided the scoring process and the weighting factors. The process requires the COSA to provide some of the input variables to the PMMP database from other city database sources. These must be defined so that all variables are available for PMMP to use in the analysis.

4. Impacts of Different Funding Levels by Treatment Type on Overall Score Distribution – This analysis capability is an important function that is summarized in the Year 1 statement of work and needs to be coded prior to the availability of the 100% database. It involves the use of deterioration equations to predict the deterioration rates of the pavement sections. The current deterioration equations were developed by HVJ based on our experience and work in other Texas cities, however they need to be checked and possibly modified to fit COSA conditions.
5. Five Year Plan – The current PMMP program generates a rolling 5 year plan. A list of prioritized projects are developed based on different levels of available funding (for Reconstruction and Overlay). An estimate the overall impact of the rehabilitation work on the overall network PCR value is currently predicted by the PMMP model (a typical output in pdf format is forwarded with this revised proposal). It has been HVJ's experience that this 5 year plan is a document that needs to be updated annually. Some sections that were predicted to deteriorate do not and other sections deteriorate at a faster rate. The HVJ system must also receive data from the SMP and CIP programs when "projects" are completed so that the PCR value can be increased to reflect the completion of the pavement rehabilitation. Discussions with Mr. Ben Mora indicate that COSA will be adopting Primavera Project Management Release 5.0 (SP1 Build #:10000002) in a server version. Each project is currently tracked in MicroSoft Project and when the project closes out the appropriate Segment IDs in the COSA GIS system are updated to show that the project is complete. This has been discussed with Mr. Michael Garza and the PMMP can poll this GIS layer nightly to see which segments have been completed so that the PCR score can be increased as planned.
6. Deterioration Predictions – The PMMP software has deterioration equations for different types of pavement under different levels of traffic. Sections that are not selected for rehabilitation are deteriorated annually and a "projected PCR value" is calculated. For example when a 5 year plan is developed, if a section is not selected during any of the 5 years it is deteriorated. If as part of periodic surveys in year 2, its score is determined to be greatly decreased, than a rerun of the 5 year plan in year 2 may move that section up from year 5 to year 3. Conversely some streets on the list may be moved to later years if other sections are found to have deteriorated more rapidly. The program will be modified to predict the "projected score" for each section as a result of the rehabilitation plan or it status in the "do nothing" category. The 5 year plan is based on using the latest individual distresses for each individual segment. The 10 year plan is based on using the PCR values and deterioration equations. The "projected score" will be included in the condition survey tab in PMMP.

There should be several advantages to using the PMMP software including but not limited to the following: a) speed the project selection process by producing a "preliminary list" of projects much quicker and without the possibility of leaving out a) a particular stretch of arterial/collector street or b) a neighborhood, b) providing updated data regarding not only the weighted condition rating

score, but the types of individual distresses which make up the score, thereby allowing the selection of rehabilitation treatment to be fairly accurate "without" having to visit each street segment, c) providing a preliminary list of streets for each year's plan so that only those streets selected for the final list need to be visited to verify the treatment and limits thus reducing field inspection time and d) the software will make an estimate of the financial impacts of the chosen set of "projects" and budgets for each of the treatment categories.

Task 3 – Improvements to Pavement Rating Application – This task includes modifications to the Pavement Rating Application (PRA) that was completed in Year 1 software coding and which was used to collect and import the Year 1 condition survey data into the PMMP database. There were some items that were noted in Year 1 field use as desirable additional features and enhancements that are proposed for Year 2 software work. It is preferable that these enhancements be made before the start of the combined Year 2 and Year 3 field pavement condition rating surveys. The following subtasks are included:

1. **Rating Procedure Application - From and To Street Editing** – Based on the above summarized issues with the From and To Street names there is a need to be able to update the rating application so that street From and To names can be selected from pull down GIS menus. Mr. Garza indicates that COSA has given HVJ files that can be used to develop this feature in a pull down menu, which will negate any spelling errors and always place the correct street name in the Name, From, or To fields.
2. **Ability to Copy Condition Rating** – Many times in a subdivision, streets are essentially the same. The ability to copy the last section rating to the current section being rated will save significant data entry time.
3. **Ability to Search By Street Name or Segment ID** – In the field the scrolling method of selecting the next segment for survey is slow, and a search would speed finding the correct record.
4. **Lengthen Comment Box** - The field is too short for many uses.

Task 4 - GIS Interface – HVJ demonstrated that the data from the condition surveys as well as other section theme data can be displayed using the City of San Antonio provided GIS shape files. The GIS maps in Arcview display the five themes normally displayed in the PMMP software; 1) latest Pavement Condition Rating (PCR) score, 2) recommended rehabilitation treatment, 3) functional class, 4) pavement type, and 5) priority score. HVJ's subcontractor PBS&J is developing a design memo outlining how the GIS link will be achieved and maintained in the future through an automated updating and export of an ArcSDE file. A key work item for Year 2 is the coding of this link.

The Street Department will be tracking street SMP projects in Primavera. HVJ needs to have each project defined in Primavera by all the individual segments within the final "project limits" so that the status and chosen treatment strategies can be displayed on the GIS layer graphically. The project completion data (status) in SQL as displayed by the COSA GIS system will be polled regularly to update the pavement condition score. HVJ's PMMP software will increase the rating score for all the segments that have been repaired thus keeping the network conditions current. A serious

problem in the past has been that there has been no feedback loop to accomplish this task and the data in the pavement management system were many times incorrect or outdated, thus making financial modeling and including deterioration estimates inaccurate.

The model must not only select and prioritize projects, it must predict the consequences of various levels of available funding within a rehabilitation category and/or different levels of funding between the various categories of work. Different mixes of treatment types will allow different amounts of pavement to be rehabilitated and thus provide a different overall predicted (projected) section and thus network level condition in 5 years.

Task 5 – Software Support and Maintenance Service – Included in this proposal is an annual software service and maintenance agreement for Year 2. This can be extended annually at a mutually agreed to amount. This will allow for new versions or upgrades released in the calendar year to be provided to COSA at no additional cost. Also any patches that are developed to address software corrections will also be provided. In terms of support this task provides for telephone and online service of the software by HVJ. HVJ must be provided access to the COSA server upon which the PMMP data base resides. This has been requested in the past, but this link had not yet been established. Upon notification of a software problem/issue, HVJ will be given at least one (1) business day to analyze and determine the nature of the problem/issue and no more than two (2) additional business days to resolve the problem/issue.

Task 6 – Orientation and Training - HVJ will provide included within this level of effort two 2 hour orientation sessions that can be for the benefit of utility companies and 3 one day training sessions for City staff a) 2 days on the use of the software and b) one day for field condition survey training as needed by City staff.

FEE ESTIMATE

The attached fee estimate provides a breakdown of the estimated level of effort for each of these tasks. HVJ Associates, Inc. is pleased to be of service on this project. Please call us if you have any questions or require additional information.

Sincerely,

HVJ ASSOCIATES, INC.



R. F. (Frank) Carmichael III, P.E.
Sr. Project Engineer

Cc: Mr. Bobby Atteberry, Vice President for Pavement Services
Mr. Michael Hasen, Executive Vice President

				PMMP Software Enhancements and Coding		Total	
				Units	Cost	Units	Cost
A. Labor							
Project Principal	hr	\$ 145.00		80	\$11,600	80	\$11,600
Sr. Pavement Engineer	hr	\$ 125.00		200	\$25,000	200	\$25,000
System Analyst	hr	\$ 120.00		240	\$28,800	240	\$28,800
Project Manager	hr	\$ 105.00		80	\$8,400	80	\$8,400
Graduate Engineer	hr	\$ 75.00		320	\$24,000	320	\$24,000
Engineering Tech	hr	\$ 65.00		0	\$0	0	\$0
Clerical Support	hr	\$ 35.00		0	\$0	0	\$0
Labor Total					\$97,800	\$97,800	
B. Direct Costs							
Annual Software Support	ea	\$ 2,500.00		1	\$2,500	1	\$2,500
PBS&J							
Principal	hr	\$ 180.00		20	\$3,600	20	\$3,600
Sr. Engineer II	hr	\$ 160.00		40	\$6,400	40	\$6,400
Sr. GIS Analyst	hr	\$ 95.00		120	\$11,400	120	\$11,400
GIS Analyst	hr	\$ 65.00		160	\$10,400	160	\$10,400
One Person Crew	hr	\$ 65.00		0	\$0	0	\$0
Direct Costs Total					\$34,300	\$34,300	
Project Total					\$132,100	\$132,100	



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Austin | Austin, TX 78744-1045
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San Antonio | 512.443.3442 Fax
www.hvj.com

October 27, 2006

Mr. Paul Tenner, Special Projects Coordinator
City of San Antonio
Municipal Plaza Building
114 W. Commerce, 6th Floor
San Antonio, Texas 78205

Re: Pavement Management Services – Sidewalk Surveys and Associated Software
Owner: City of San Antonio
HVJ Proposal No: AP-05-10860 (BG5)

Dear Mr. Tenner;

HVJ Associates, Inc (HVJ) is pleased to submit the following fee proposal for providing Year 2 and 3 Sidewalk Survey Field Data Collection and additional Software modifications to capture and report the data. In addition, we have included the cost to bring the Year 1 sidewalk survey data up to date by adding 1) adding additional detail to data already collected and 2) collecting the data for those sections that were not collected in Year 1 due to schedule. In addition, HVJ has been requested to collect information regarding alleys and pavement markings. This proposal presents HVJ's proposed work plan and cost estimate for 1) collecting all the field data, 2) making the software changes and enhancements to the PMMP system so that the sidewalk data is stored and reported on a block by block basis as coordinated with the PMMP section definitions and the City of San Antonio GIS system., and 3) collecting data from the ongoing MPO and HNTB sidewalk related survey data that is available.

BACKGROUND AND ASSUMPTIONS

The existing PMMP system software was installed on a City of San Antonio server in May 2006. Sidewalk data were collected on approximately 50% of Districts 8, 9, and 10 during the first year. The remaining sidewalks were not collected due to schedule and funding constraints. There is a need for additional detail to be able to verify gaps in the sidewalk system (as determined from HNTB digitizing of aerial photographs) and to add condition data to the sidewalk information collected by both HNTB and the San Antonio MPO.

The level of effort estimated herein should be adequate based on current understanding of the scope, however new data collection procedures usually need to be checked for QA/QC and modified before full scale data collection occurs. With this understanding the following basic assumptions are the basis for the development of the scope of work and cost estimate provided in this proposal.

- San Antonio MPO will provide its sidewalk survey data and descriptions so that these data can be used to support the HVJ data collection efforts (San Antonio MPO staff have already forwarded their database to HVJ)
- City of San Antonio will provide the field formats required by the HNTB “gap analysis” software so that HVJ can check to see that the information being collected will be useful in verifying the “gaps” identified by the aerial photography digitizing.
- Key City of San Antonio staff will be assigned to provide input and cooperation with HVJ team members regarding other existing City of San Antonio sidewalk data files or systems that may exist and be useful to the data collection efforts, particularly for the GIS interface and MIS staff for system details.
- The engineering fee cost estimate assumes a time and materials contract. The complete scoping of these individual software coding tasks are not completely defined and subject to change based on the results of Task 1, monthly progress meetings between HVJ and COSA, continuing beta software code development, and software testing and review by COSA staff.
- Initial field surveys may identify previously unforeseen complications and some procedures may need to be refined. HVJ intends to beta test the procedure before commencing a full scale survey. If HVJ identifies a major problem or issue regarding the efficacy or level of effort to collect one of the proposed sidewalk variables or identifies the need for an additional variable, COSA staff will be notified immediately and HVJ will provide and discuss available options and alternatives.

PROPOSED WORK PLAN FOR SIDEWALK DATA COLLECTION

Task 1 Develop and Test Sidewalk Data Collection Survey Process – This task involves developing and pilot testing an enhanced sidewalk condition survey procedure as shown in draft in the table below. The sidewalk quality ratings will be based on the definitions as provided by Mr. Michael Ereti of COSA. The primary goal is to determine which segments of sidewalk should be given high priority for reconstruction and to identify gaps in the system that are important for closing with new construction of sidewalk. The main object of the surveys is to determine functionality. HVJ will finalize this design, document each data collection variable, and develop a sidewalk data rating collection process. This will provide an opportunity for COSA project staff and administrators to review the final concepts before they are implemented.

1. A separate sidewalk condition evaluation rating based on visual distress parameters rated from 1 to 5 based on a visual system (1 very poor and 5 excellent; 0 is non-existent). Mr. Ereti has prepared initial definitions for the 5 sidewalk condition categories.
2. An estimate of the length of existing sidewalk on each side of the street
3. A count of the number of ADA curb ramps by side of the street
4. A pavement marking identification and rating. Pavement markings will also be identified by material type (paint, thermo plastic, buttons, etc.). There is also the need to include two additional data items as follows
 - a. Number of lanes - 2 lanes (one through lane in each direction, 3 lanes (two through lanes and TWLTL), 4 lanes (two through lanes in each direction), 5 lanes (two through lanes in each direction and TWLTL), 6 lanes (three through lanes in each

- direction), 7 lanes (three through lanes in each direction and TWLTL), or 8 lanes (4 through lanes in each direction). There is no need to be concerned about intersection configuration, the only interest is the number of roadway through lanes.
- b. Median Type - 1 - Divided (raised or depressed median), 2 – TWLTL, or 3 - Undivided (striped center line)
5. An inventory of alleys to include alley surface type (Hard Surface; Soft, but Improved surface; or Earthen. A combination of surface types is not expected to be found, but may need to be addressed in the event such a condition is found.

The data collected below would be developed by engineering estimate as follows:

Sidewalk Rating Item	Odd Address Side	Even Address Side
Type – Detached, Attached, or None		
Length - Estimated percent of block length with sidewalk		
Distress Rating - 1 to 5 Based on Mr. Ereti's Definitions		
Ramps - Number of Ramps in the block		
Pavement Markings - Material Type		
- Number of lanes		
- Median type		
Local Alleys – With Material Type Designation		

This process will be developed and a Sidewalk Rating Application (SRA) electronic field data collection form developed. This form will be pre-populated with the section identification information as used for the PMMP pavement surveys. We propose to test pilot survey methodology as part of the completion of District 7. This is the same District where we planned to start the Year 2 & 3 surveys and is also the District which HNTB digitized as part of their “gap analysis” study. Thus, this pilot testing of the method in this District will determine if the survey method produces the type of data that can be used in the HNTB cost analysis model.

After surveying 100 blocks the results will be examined and determination made as the accuracy and correctness of the process and usefulness of the variables and rating obtained. Based on a meeting with COSA staff, HVJ will correct the procedure as required and prepared to survey the remainder of the network. Based on this two week field test it may be determined that pavement markings and alley data collection should be collected with the pavement survey rather than with the sidewalk survey. We have added alley data collection and pavement marking to this survey at no additional cost since simplifications have been made to the sidewalk survey process based on the procedure/definitions developed by Mr. Ereti. One question which still remains to be addressed as a result of this field test is how to prevent from double rating alleys, since they intersect two different street segments. This probably means that each alley must be driven to provide the “overall assessment, since one end may be earth and the other end improved with gravel.

Although the initial year's experience showed a 25% difference in the data collection rate based on the exclusion or inclusion of appurtenance data these statistics are based on data for a number of

different appurtenances. The previous cost estimate for the pavement condition surveys assumed that the data would be the same as collected in Year 1 and would include all the appurtenance ratings.

The proposed new sidewalk ratings are much more detailed sidewalk data and provide information as related to both sides of the street (odd and even address) and well as a count of ADA ramps. The number of variables that the rater must remember to review and to collect is deemed to be too high to provide for high data quality and still maintain a reasonable rate of survey data collection. Thus, it is HVJ's opinion that the surveys will be more efficient and the data quality much higher if the sidewalk surveys are completed by a separate rating crew working concurrently with the pavement rating crew.

Since the first year's streets must also be re-rated to collect the enhanced sidewalk data, the actual cost of collecting this level of sidewalk data will be higher than the collection of the remaining two-thirds of the street pavement data.

Task 2 Collect Field Data Districts 1- 10 - The objective of this task is to collect enhanced sidewalk condition data for a) the remaining two-thirds (2/3) of the network or 2693 miles of City San Antonio streets not rated in Year 1 and b) the first one-third (1/3) of the network or 1300 miles rated in Year 1. This will be accomplished using the new methodology developed and tested in Task 1. HVJ Associates, Inc and Vickery Associates, Inc staff will collect the data using hand-held laptops and a Sidewalk Rating Application (SRA) program developed in Task 1. Data will be imported into the PMMP database. The survey will be done with a separate one-man survey crew. It is assumed to be a windshield survey with both sides of the street rated. No GPS or quantity information will be collected, but rather an estimate of the percentage of each side of the street that has sidewalks.

FEE ESTIMATE

The attached fee estimate provides a breakdown of the estimated level of effort for each of these tasks. HVJ Associates, Inc. is pleased to be of service on this project. Please call us if you have any questions or require additional information.

Sincerely,

HVJ ASSOCIATES, INC.



R. F. (Frank) Carmichael III, P.E.
Sr. Project Engineer

Cc: Mr. Bobby Atteberry, Vice President for Pavement Services
Mr. Michael Hasen, Executive Vice President

Description	Unit	Rate	Task 1		Task 2		Total	
			Units	Cost	Units	Cost	Units	Cost
A. Labor								
Project Principal	hr	\$145.00	8	\$1,160	16	\$2,320	24	\$3,480
Sr. Pavement Engineer	hr	\$125.00	40	\$5,000	60	\$7,500	100	\$12,500
System Analyst	hr	\$145.00	100	\$14,500	16	\$2,000	116	\$16,500
Project Manager	hr	\$105.00	0	\$0	0	\$0	0	\$0
Graduate Engineer	hr	\$75.00	16	\$1,200	150	\$11,250	166	\$12,450
Engineering Tech	hr	\$65.00	40	\$2,600	2200	\$143,000	2,240	\$145,600
Clerical Support	hr	\$35.00	0	\$0	16	\$560	16	\$560
Labor Total			204	\$24,460	2,458	\$166,630		\$191,090
B. Direct Costs								
Mileage	mi	\$0.50	300	\$150	9000	\$4,500	9,900	\$4,950
Hotel	day	\$75.00	0	\$0	100	\$7,500	100	\$7,500
Per Diems	day	\$25.00	0	\$0	200	\$5,000	200	\$5,000
Notebook Rental	ea	\$800.00	0	\$0	2	\$1,600	2	\$1,600
PBS&J								
Principal	hr	\$180.00	0	\$0	0	\$0	0	\$0
Sr. Engineer II	hr	\$160.00	0	\$0	0	\$0	0	\$0
Sr. GIS Analyst	hr	\$95.00	0	\$0	0	\$0	0	\$0
GIS Analyst	hr	\$65.00	0	\$0	0	\$0	0	\$0
One Person Crew	hr	\$65.00	0	\$0	0	\$0	0	\$0
Vickery & Associates								
Project Manager	hr	\$145.00	8	\$1,160	8	\$1,160	16	\$2,320
Professional Engineer	hr	\$110.00	20	\$2,200	50	\$5,500	70	\$7,700
One Person Crew	hr	\$65.00	40	\$2,600	1100	\$71,500	1,140	\$74,100
Direct Costs Total			68	\$6,110	1,158	\$96,760		\$103,170
Project Total			272	\$30,570	3616	\$263,390		\$294,260



CITY OF SAN ANTONIO

P.O. BOX 839966
SAN ANTONIO, TEXAS 78283-3966

February 5, 2007

Mr. R. F. Carmichael III
HVJ Associates
4201 Freidrich Lane, Suite #110
Austin, Texas 78744-1045

RE: Pavement Management System

Dear Mr. Carmichael:

Enclosed is an approved and fully executed original of Amendment # 1 to the Professional Services Agreement for Engineering Services, and a copy of the City of San Antonio Ordinance passed and approved on January 4, 2007 in reference to the Pavement Management System.

An original amendment will be kept on file with the City Clerk's Office and a copy will be retained in our files. If you have any questions, feel free to call me at (210) 207-2046.

Sincerely,

Debbie Sittre
Fiscal Planning Manager
Public Works Department
Contract Services Section

" AN EQUAL OPPORTUNITY EMPLOYER "

" AN EQUAL OPPORTUNITY EMPLOYER "



CMS or Ordinance Number: OR00000200701040011

TSLGRS File Code: 1000-05

Document Title:

ORD - Cost Center 2303010001: Pavement Management System Project; A City-Wide
Surveying & Pavement Condition Assessment Project; 3 Year Project;

Ordinance Date:

1/4/2007



CITY OF SAN ANTONIO
Request for Council Action

Agenda Item # 15
Council Meeting Date: 1/4/2007
RFCA Tracking No: R-715

DEPARTMENT: Public Works

DEPARTMENT HEAD: Tom Wendorf

COUNCIL DISTRICT(S) IMPACTED:
City Wide

SUBJECT:
Pavement Management System (PMS)

SUMMARY:

An ordinance approving the second and third years of a planned three year citywide surveying and pavement condition assessment project and providing a survey of sidewalks, alleys and pavement markings, and to provide for software related to the project, and adding \$765,919.00 to the professional services agreement with HVJ Associates, Inc.; in connection with the Pavement Management System project; and appropriating funds.

This agreement was approved by City Council on July 14, 2005 through Ordinance No. 101146 and authorized a contract amount of \$229,000.00 for professional services to provide for the first year of the planned three year project by surveying and performing condition assessments of one-third, approximately 1,300 center line miles, of the City's pavement network. This ordinance will increase the total agreement amount to \$994,919.00 which is the total estimated cost of the project.

BACKGROUND INFORMATION:

This completes the planned three-year citywide surveying and pavement condition assessment project which includes the surveying and condition assessment of the remaining two-thirds (2/3), approximately 2693 miles, of the City's centerline miles of pavement. The survey will involve the inventory and collection of new/previously uncollected pavement inventory data necessary to close data gaps. The condition assessment will identify the presence or absence of pavement distresses for each block-to-block segment surveyed, which will be inputted into a computer model that assigns a score of between 0 (low) to 100 (high). These results and the condition and attribute data will be maintained in an electronic database.

This ordinance authorizes payment in the amount of \$765,919.00 to HVJ Associates, Inc. for professional engineering services. These services include completing the surveying and condition assessment of the remaining two-thirds (2/3) of the City's centerline miles of pavement; the condition assessment of existing sidewalk infrastructure, an inventory of existing pavement markings, and alleyway data collection; and software upgrades and enhancements to the existing Pavement Maintenance Management Program (PMMP).

The professional services agreement for this project was approved by City Council on July 14,

2005 through Ordinance No. 101146 and authorized \$229,000.00 for professional services in connection with the surveying of (1/3) of the Pavement network for year one of a three year surveying cycle. The survey for first (1/3) of the pavement network has been completed. This ordinance appropriates funds for year two and accelerates year three in order to complete 100% of the survey in 2007. The project will also include additional engineering services to complete a functional condition assessment of existing sidewalk infrastructure, an inventory of existing pavement markings and alleyway data collection, and to perform software upgrades and enhancements to the existing Pavement Maintenance Management Program (PMMP) database increasing the total agreement to a total revised amount of \$994,919.00.

ISSUE:

This ordinance authorizes payment to HVJ Associates, Inc. in the amount of \$765,919.00 for additional professional services in connection with the Pavement Management System project.

ALTERNATIVES:

Public Works, in review of available options, has determined that continuing the project with HVJ, Inc. is the most cost efficient way to achieve the desired results.

FISCAL IMPACT:

This is a one- time expense in the amount of \$765,919.00. Funds in the amount of \$315,415.50 are available from the Right-of-Way Fund, \$280,724.00 are available from Advanced Transportation District (ATD) Funds and \$169,779.50 are available from the Street Maintenance Fund. These funds are authorized to be appropriated and payable as follows:

\$ 765,919.00 payable to HVJ Associates, Inc. for professional engineering services

RECOMMENDATION:

Staff recommends approval of this agreement.

ATTACHMENT(S):

File Description	File Name
Pavement Management- Discretionary Contracts Disclosure Form	Pavement Management - DCDF.pdf
Ordinance/Supplemental Documents	200701040011.pdf

DEPARTMENT HEAD AUTHORIZATIONS:

Tom Wendorf Director Public Works

APPROVED FOR COUNCIL CONSIDERATION:

Jelynne Burley Deputy City Manager



CITY OF SAN ANTONIO
Request for Council Action

Agenda Item # 15
Council Meeting Date: 1/4/2007
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DEPARTMENT: Public Works

DEPARTMENT HEAD: Tom Wendorf

COUNCIL DISTRICT(S) IMPACTED:
City Wide

SUBJECT:
Pavement Management System (PMS)

SUMMARY:

An ordinance approving the second and third years of a planned three year citywide surveying and pavement condition assessment project and providing a survey of sidewalks, alleys and pavement markings, and to provide for software related to the project, and adding \$765,919.00 to the professional services agreement with HVJ Associates, Inc.; in connection with the Pavement Management System project; and appropriating funds.

This agreement was approved by City Council on July 14, 2005 through Ordinance No. 101146 and authorized a contract amount of \$229,000.00 for professional services to provide for the first year of the planned three year project by surveying and performing condition assessments of one-third, approximately 1,300 center line miles, of the City's pavement network. This ordinance will increase the total agreement amount to \$994,919.00 which is the total estimated cost of the project.

BACKGROUND INFORMATION:

This completes the planned three-year citywide surveying and pavement condition assessment project which includes the surveying and condition assessment of the remaining two-thirds (2/3), approximately 2693 miles, of the City's centerline miles of pavement. The survey will involve the inventory and collection of new/previously uncollected pavement inventory data necessary to close data gaps. The condition assessment will identify the presence or absence of pavement distresses for each block-to-block segment surveyed, which will be inputted into a computer model that assigns a score of between 0 (low) to 100 (high). These results and the condition and attribute data will be maintained in an electronic database.

This ordinance authorizes payment in the amount of \$765,919.00 to HVJ Associates, Inc. for professional engineering services. These services include completing the surveying and condition assessment of the remaining two-thirds (2/3) of the City's centerline miles of pavement; the condition assessment of existing sidewalk infrastructure, an inventory of existing pavement markings, and alleyway data collection; and software upgrades and enhancements to the existing

Pavement Maintenance Management Program (PMMP).

The professional services agreement for this project was approved by City Council on July 14, 2005 through Ordinance No. 101146 and authorized \$229,000.00 for professional services in connection with the surveying of (1/3) of the Pavement network for year one of a three year surveying cycle. The survey for first (1/3) of the pavement network has been completed. This ordinance appropriates funds for year two and accelerates year three in order to complete 100% of the survey in 2007. The project will also include additional engineering services to complete a functional condition assessment of existing sidewalk infrastructure, an inventory of existing pavement markings and alleyway data collection, and to perform software upgrades and enhancements to the existing Pavement Maintenance Management Program (PMMP) database increasing the total agreement to a total revised amount of \$994,919.00.

ISSUE:

This ordinance authorizes payment to HVJ Associates, Inc. in the amount of \$765,919.00 for additional professional services in connection with the Pavement Management System project.

ALTERNATIVES:

Public Works, in review of available options, has determined that continuing the project with HVJ, Inc. is the most cost efficient way to achieve the desired results.

FISCAL IMPACT:

This is a one- time expense in the amount of \$765,919.00. Funds in the amount of \$315,415.50 are available from the Right-of-Way Fund, \$280,724.00 are available from Advanced Transportation District (ATD) Funds and \$169,779.50 are available from the Street Maintenance Fund. These funds are authorized to be appropriated and payable as follows:

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Staff recommends approval of this agreement.

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Ordinance/Supplemental Documents	200701040011.pdf

DEPARTMENT HEAD AUTHORIZATIONS:

Tom Wendorf Director Public Works

APPROVED FOR COUNCIL CONSIDERATION:

Jelynn Burley Deputy City Manager

