JK
4/10/14
Item #8

AN ORDINANCE 2014-04-10-0226

AUTHORIZING A CONTRACT WITH PRODUCTIVITY APEX, INC. TO PROVIDE A SOLUTION FOR CITY-HOSTED INSPECTOR ROUTE OPTIMIZATION FOR THE DEVELOPMENT SERVICES DEPARTMENT FOR AN ESTIMATED INITIAL COST OF $305,000.00 AND $52,200.00 ANNUALLY THEREAFTER FOR A PERIOD OF FOUR YEARS AND WITH THE DEVELOPMENT SERVICES FUND'S FUND BALANCE FOR $149,964.00, WHICH HAS DEDICATED FUND RESERVES FOR SOFTWARE REPLACEMENT.

* * * * *

WHEREAS, the City's Development Services Department (DSD) has 15 supervisors that manually schedule and assign inspections and other tasks for each of the department's 65+ inspectors; and

WHEREAS, DSD wishes to improve the inspection scheduling, routing and client communication process in order to deliver quality service meeting performance expectations, and

WHEREAS, the City issued a Request for Competitive Sealed Proposal (RFCSP) for "Inspector Route Optimization" (RFCSP 6100002909) on May 31, 2013, and selected Productivity Apex Inc., the respondent that submitted the highest ranked proposal for a City-hosted solution; **NOW THEREFORE,**

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

SECTION 1. An agreement with Productivity Apex, Inc., to provide the San Antonio Development Services Department with an Inspector Route Optimization System, for an estimated initial amount of $305,000.00 and $52,200.00 annually thereafter for a period of four years, is hereby approved. A copy of the Agreement is attached hereto and is incorporated by reference as **Attachment 1**.

SECTION 2. Funding in the amount of $207,236.00 for this ordinance is available for Fund 29097000, Cost Center 2909040001 and General Ledger 5201040, as part of the Fiscal Year 2014 Budget.

SECTION 3. The amount of $149,964.00 is appropriated for this ordinance in Fund 29097000, Cost Center 2909040001, General Ledger 5201040 and the Fiscal Year 2014 budget is amended to reflect this change.

SECTION 4. Future funding through the term of this contract is contingent upon City Council approval of subsequent fiscal year budgets.

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SECTION 5. Payment not to exceed the budgeted amount is authorized to Productivity Apex , Inc., and should be encumbered with a purchase order.

SECTION 6. 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 allocations 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 7. This ordinance shall be effective immediately upon passage by eight affirmative votes; otherwise it shall be effective on the tenth day after passage hereof.

PASSED and APPROVED this 10th day of April, 2014.

for **M A Y O R**
Julián Castro

ATTEST:

Leticia M. Vacek, City Clerk

APPROVED AS TO FORM:

By:

Robert F. Greenblum, City Attorney

Agenda Item:	**8 (in consent vote: 4, 5, 6, 7, 8, 9, 12, 15, 16, 18, 19, 20, 21, 22, 23, 24, 26, 27)**
Date:	04/10/2014
Time:	09:31:12 AM
Vote Type:	Motion to Approve
Description:	An Ordinance authorizing a contract with Productivity Apex, Inc. to provide a solution for City-hosted inspector route optimization for the Development Services Department for an estimated initial cost of $305,000.00 and $52,200.00 annually thereafter for a period of four years and with the Development Services Fund's fund balance for $149,964.00, which has dedicated fund reserves for software replacement. [Ben Gorzell, Chief Financial Officer; Troy Elliott, Director, Finance]
Result:	Passed

Voter	Group	Not Present	Yea	Nay	Abstain	Motion	Second
Julián Castro	Mayor	x					
Diego Bernal	District 1		x			x	
Ivy R. Taylor	District 2		x				
Rebecca Viagran	District 3		x				x
Rey Saldaña	District 4		x				
Shirley Gonzales	District 5		x				
Ray Lopez	District 6		x				
Cris Medina	District 7		x				
Ron Nirenberg	District 8		x				
Joe Krier	District 9		x				
Michael Gallagher	District 10		x				

Attachment I

INTEGRATION AGREEMENT FOR INSPECTOR ROUTE OPTIMIZATION

REQUEST FOR COMPETITIVE SEALED PROPOSAL ("RFCSP")
NO.: 6100002909

BETWEEN THE CITY OF SAN ANTONIO, TEXAS ("CITY")
AND
PRODUCTIVITY APEX, INC. (PAI)

STATE OF TEXAS §
§
COUNTY OF BEXAR §

This Agreement is entered into by and between the City of San Antonio, Texas, a home-rule municipal corporation (City), and PRODUCTIVITY APEX, INC. (APEX), a corporation chartered under the laws of the State of Florida, both of which may be referred to herein collectively as the "Parties".

WHEREAS, the City of San Antonio Development Services Department ("DSD") needs to implement a Route Planning and Optimization solution for their inspection staff that will take a list of scheduled inspections sent from the Hansen Permit system and provide an optimal vehicle route destination and navigation for inspectors to view and manage their daily inspections more efficiently; and

WHEREAS, after evaluating APEX's and other respondent's responses to the REQUEST FOR COMPETITIVE SEALED PROPOSAL ("RFCSP") NO.: 6100002909, the response submitted by APEX was selected by the City to provide a City-hosted solution to accomplish the requirements of the RFCSP; NOW THEREFORE:

FOR VALUABLE CONSIDERATION, the parties hereto severally and collectively agree, and by the execution hereof are bound, to the mutual obligations herein contained and to the performance and accomplishment of the tasks hereinafter described.

1.0 CONTRACT DOCUMENTS

1.1 The terms and conditions for performance and payment of compensation for this Agreement are set forth in the following contract documents, true and correct copies of which are attached hereto and fully incorporated herein for all purposes, and shall be interpreted in the order of priority as appears below:

a. This Integration Agreement, including;

b. City's Request for Competitive Sealed Proposal No.: 6100002909 (Exhibit A), including all attachments, addendums and clarification statements thereto;

c. APEX Price Schedule (Exhibit B); and

d. APEX Statement of Work (SOW) (Exhibit C).

e. APEX proposal submitted in response to City's RFCSP (Exhibit D).

2.0 ENTIRE AGREEMENT

This Agreement, together with its exhibits, if any, constitutes the final and entire agreement between the parties hereto and contains all of the terms and conditions agreed upon. No other agreements, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or to bind the parties hereto, unless the same are in writing, dated subsequent to the date hereto, and duly executed by the parties.

EXECUTED and **AGREED** to as of the dates indicated below. This Agreement may be executed in multiple copies, each of which shall constitute an original.

CITY OF SAN ANTONIO

Hugh Miller
Chief Technology Officer

Date: _____

Roderick Sanchez
Director, Development Serviced Department

Date: _____

Approved as to Form:

_____
Assistant City Attorney

PRODUCTIVITY APEX, INC.

Mansooreh Mollaghasemi
President and Chief Executive Officer

Date: 3/20/14

CITY OF SAN ANTONIO

PURCHASING DIVISION
FINANCE DEPARTMENT
ON BEHALF OF THE DEVELOPMENT SERVICES DEPARTMENT

REQUEST FOR COMPETITIVE SEALED PROPOSAL
("RFCSP")

for

INSPECTOR ROUTE OPTIMIZATION

6100002909

Release Date: MAY 31, 2013

Proposals Due: JULY 12, 2013

Exhibit A

002 TABLE OF CONTENTS

[No table of contents entries found.]

003 BACKGROUND

The City of San Antonio Development Services Department (Department) seeks proposals for professional services and software needed to implement a Route Planning and Optimization solution for their inspection staff.

Desired Future State

The Development Services Department seeks a route planning solution that will take a list of scheduled inspections sent from the Hansen Permit system and provide an optimal vehicle route destination and navigation for inspectors to view and manage their daily inspections more efficiently. Inspections will be batched and updated from the Hansen Permit system. Ad hoc inspection updates will be sent as needed from Hansen. The system should be able to notify customers their place in queue and track both the inspector and vehicle locations. Management should be provided with a visible way to review and monitor inspector and vehicle performance in the field. Once the inspector drives to the inspection destination and completes the scheduled inspection, the results of the inspection will be updated directly in the Hansen Permit system by the inspector.

The solution goals are to optimize inspector routes, provide an accurate location display for each inspector, save fuel and vehicle maintenance costs by minimizing vehicle run-time and miles driven, provide automated notification to customers of their place in queue and/or the estimated time of arrival for each inspector, and help ensure inspector and vehicle accountability through a GPS tracking mechanism.

Development Services Department (DSD)

The Development Services Department is responsible for assisting customers though the development process. These processes include reviewing, permitting, inspecting and granting authority to develop land and occupy buildings within the City. More specifically, the department is responsible for subdivision mapping / parcel addressing, zoning administration, subdivision administration, building code administration, landscaping, tree preservation, sign regulation, and traffic reviews.

Inspections

The Inspection Sections are the primary field enforcement agency for all permitted construction activity on private and public property for construction outside of the public right-of-way. Inspections are performed in response to requests for inspections related to required building permits. As part of the overall development process, inspections are performed on various aspects of the building process to include building, electrical, mechanical, plumbing, signs, construction and trees.

Inspection Section Staff

There are approximately 75 inspectors assigned to perform inspections; 15 of those inspectors are supervisors. There are, 3 managers, 2 Assistant Directors, the Department Director and 1 person providing administrative oversight for the program. Supervisors need to see the location and schedule of their assigned workforce. Managers and department

leadership require the ability to see the location and schedule for all inspectors. Two people will be assigned administrator rights to assign teams, make changes to tracking and notification attributes, and maintain oversight.

Inspection Volumes

The table below lists the total number of inspections performed by inspection trade for Fiscal Year 2011, 2012 and for the first seven months of Fiscal Year 2013 (1 Oct 2012 through 30 April 2013). Each inspector completes an average of 12 inspections per day; however the number of inspections per inspector will vary based on staffing, inspection types, and construction activity.

TRADE	FY2011	FY2012	FY2013
Building Inspections	22,865	21,675	12,477
Electrical Inspections	32,244	34,304	20,480
Mechanical Inspections	23,634	21,444	11,257
Plumbing Inspections	49,574	49,098	28,969
Sign Inspections	860	1,244	1,241
Construction Inspections*	15,305		
Tree Inspections	4,035	4,777	3,250
TOTAL	**128,317**		

*Two months of construction data were not available—average of 1,177 inspections per month for two months were added to the FY11 total.

004.1 SCOPE OF SERVICE

The City desires to implement a best-practice process and solution that meets the business and technical requirements as defined in this document and corresponding attachments. The scope of work includes software and professional services necessary to install, configure, implement and train the route optimization technical solution being proposed.

Services will include:

- Professional Services
- Software
- System configuration
- Testing
- Training
- Support and Maintenance

004.2 BUSINESS REQUIREMENTS

A. Requirements

1. The system must provide an integrated solution that supports the business processes associated with inspector route planning, route optimization, driver and customer notification.
2. Provides a route optimization logistics tool that builds inspection queues and vehicle routing plans to help maximize inspector resource utilization and efficiency
3. Provide automated notifications
4. Provides web-based inspector tracking
5. Supports external system integration for real-time inspection uploads to create or adjust optimized routes accordingly
6. Provides mapping of inspector routes and inspection attributes
7. Provides mobile applications integration that natively support IOS, Android and Microsoft devices including smart phones, tablets and laptops
8. Complies with the Detailed Requirements
9. Complies with the Information Technology Environment Description standards
10. Provides Cost Proposal information

B. Vendor Hosted vs. City Hosted Solution Costs

Provide costs estimates and options for hosted and non-hosted solutions.

Vendor Hosted Solution - If Vendor hosted solution, in which users log on to the vendor's website, provide detailed breakdown of fee schedule (monthly charges, yearly charges, extra charges, etc.) in Price Schedule, RFCSP Attachment G. System must be available on a 24/7 basis.

City Hosted Solution - If City hosted solution, in which City purchases the software and the solution runs on City hardware servers, provide detailed breakdown of recommended server size and storage requirements based on historical data. Provide a list of all software involved and extent of license rights as requested in RFCSP Attachment G.

The City prefers broad license rights for all software and other technology, including perpetual, fully-paid and royalty free use rights for commercial off the shelf software. The City also strongly prefers ownership of all custom software and interfaces. The City will require a source code escrow agreement where applicable.

C. Training and Costs

Provide training options and details of training plans and costs. Provide training costs on a per trainee basis. Training options should include web-based and classroom-based training.

D. Maintenance and Support

Respondent should specify the prime contractor and software vendor(s) plan to carry out post implementation and ongoing support, including:

1. Telephone support (include toll-free support, hours of operation, availability of - at a minimum - 12x5 hotline, etc.)
2. Delivery method for future upgrades and product enhancements including frequency of upgrades
3. Problem reporting and resolution procedures
4. Thresholds for support limitations
5. Bug fixes and patches
6. Performance tunings and incremental enhancement.
7. On-line support

Maintenance and support will begin after the expiration of a one-year warranty period and last for the remainder of the initial term and the optional extension terms. Warranty period shall begin upon final written acceptance of system by City.

E. Service Levels

Respondents must state their Service Level Agreements in the following areas; add any other SLAs that are included with your offering:

1. Site Availability (uptime with full functionality outside scheduled maintenance periods)
2. Maximum Scheduled Downtime (e.g. scheduled maintenance outages must not exceed 6 hours per quarter, and must not exceed 24 hours per year)
3. Page Load Time, excluding end user queries (e.g. page load time, for page requests that do not include end-user query conditions must be 5 seconds or less, 99.5% of the time.
4. Page Load Time, including end user queries (e.g. page load time, for page requests that include end-user query conditions must be 15 seconds or less, 99.5% of the time
5. Support Request Acknowledgement Time (time to acknowledge receipt of a support request)
6. Support Request Mean Time to Resolution

F. Third Party Products / Options Software

The Respondent must explicitly state the name of any third party products that Respondent would be providing as part of the proposed solution. Respondent must have, and must demonstrate upon request, that it has authorization to transfer any rights of use and warranties for third-party products to the City. The Respondent will be responsible for interacting with third party product providers on all third-party warranty claims. The chosen Respondent will ultimately be responsible for providing all services, rights of use, service levels and warranties on both components and the System as a whole regardless of whether subcontractors perform certain services or provide certain technologies.

G. Ability to Scale

In the future, the City may choose to expand, by amendment or other procurement process, the use of the Automated Route Planning and Optimization System to other City Departments that have field worker route planning functions. Scaling this system will include both customer-scheduled and system generated inspections across multiple City agencies and multiple technology systems. While the City is not seeking a proposal or cost schedules for a Citywide system from the Respondent, the City requires that respondents include a discussion of the scalability of their system to gain an understanding of the lift it would take to expand the infrastructure to incorporate a larger system across multiple departments and disciplines. The scalability of the System is therefore important to the City and will be evaluated as criteria for vendor selection.

For information purposes only, additional capabilities required under a City-wide solution might include, but are not limited to, the following:

1. Volume
    a. The City performs over 400,000 inspections annually
2. Multi-department Coordination.
    a. Multi-department/task force inspection route planning
    b. Solutions to multiple departments/units with different priorities
3. Integration to additional technology systems other than the Development Services Hansen Permit system
4. Conflict Resolution
    a. Advise when multiple inspection types are being scheduled for a single building to streamline to a single inspection appointment

By way of example only, City departments that could be incorporated under expansion include but are not limited to:

1. Metro Health
2. Solid Waste Management
3. Development Services- Code Compliance

Citywide expansion, if any, would require integration with a number of additional technology systems

004.3 TECHNICAL REQUIREMENTS

The proposed system solution should be able to integrate with the current Information Technology Environment Description Standards. ***Refer to RFCSP Exhibit 5.***

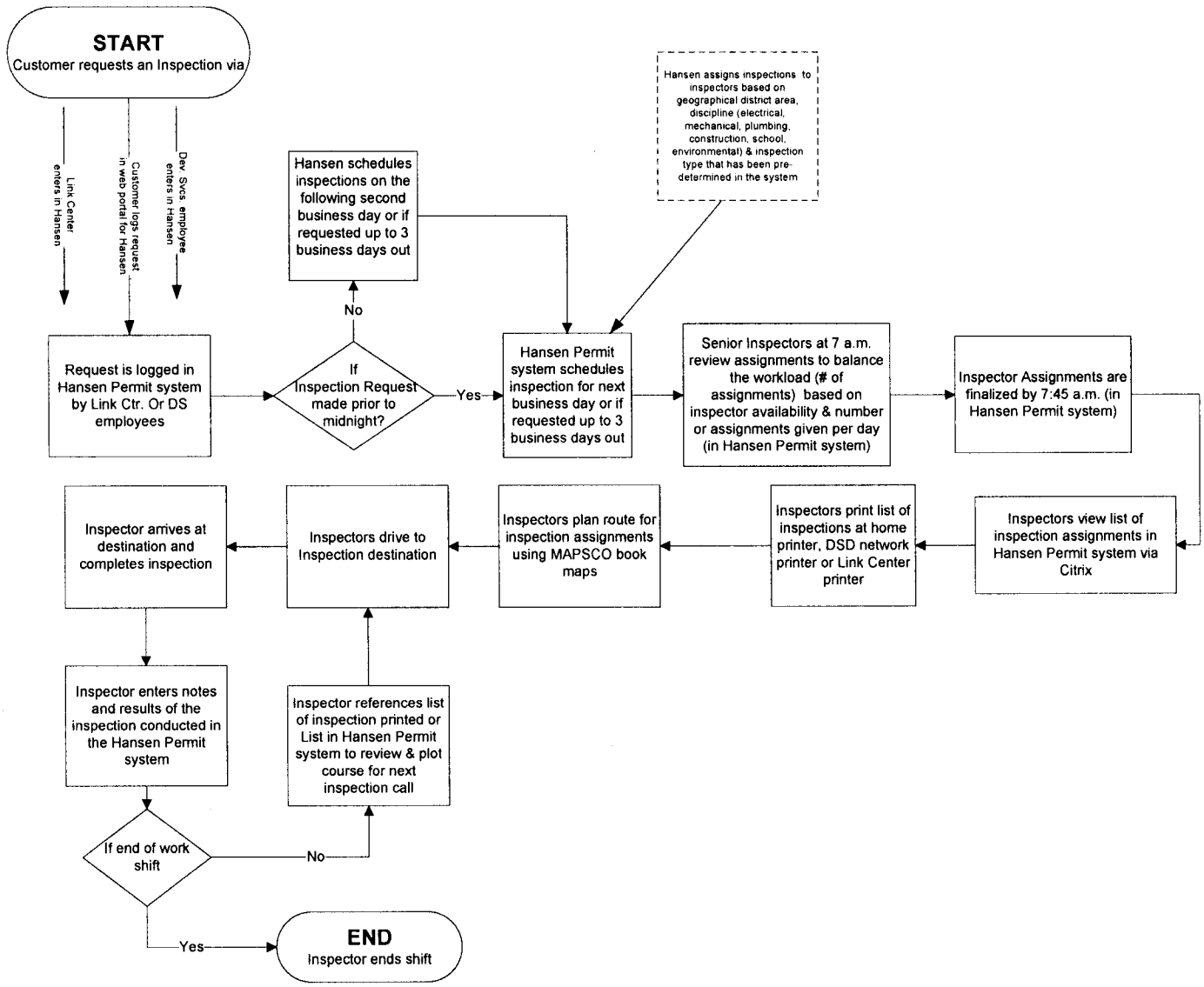
The City of San Antonio Information Technology Services Department (ITSD) will provide computing and infrastructure services for the selected hardware and software solution in one or both of two datacenters that are currently in operation. The two datacenters are interconnected by redundant high-speed Dense Wavelength Division Multiplexing (DWDM) links with servers and storage hosted in both environments.

ITSD will manage the Data Center Layer, Networking Layer, Device Layer, Operating System Layer, and Application Infrastructure Layer for the information technology components of the proposed System in accordance with a SLA to be jointly developed by ITSD, the system provider, and the business owner of the System. Management of the Application Layer (business logic) will be determined by SLA.

If any information technology equipment necessary to support the System must be deployed outside of the City's managed datacenter environment, the respondent must include in their response the scope necessary to provide appropriate environmental and compliance controls for the proposed System.

004.4 CURRENT PROCESS DIAGRAM AND DESCRIPTION

Inspection "As Is Process"



NOTE: If at the end of shift, Inspectors drive their vehicles to an approved parking location or to their residences.

Inspection Current Process Description

1. Customers can make an inspection request online using the City's web application (nearly 60% of inspections are scheduled via the web portal) or at the Development Services Department.
    a. Inspections are requested using the web application on the Development Services' website.
        i. The customer will log the inspection request in through the Dynamic Portal.
    b. Inspections are also requested by calling the Development Services Department (207-1111).
        i. City employees log inspection requests in the Hansen Permitting system.
    c. Inspection requests can be made in person at Development Services or Community Link Center
        i. City staff schedule inspections directly in the Hansen Permitting system.
    d. Customers can schedule inspections via a mobile web application on their smart device.
2. Once the request for an inspection is logged in the Hansen Permit system, the system will schedule the inspection for the next business day
3. If an inspection request is logged after midnight, it is not scheduled the next business day but on the following business day (e.g. second business day)
    a. For example: If a customer requests an inspection after midnight and it is Tuesday night, the inspection will be scheduled for Thursday.
    b. If an inspection is requested after midnight on a Friday night, the inspection will be scheduled for Tuesday on the following week.
    c. If an inspection is requested prior to midnight on a Friday night, it will be scheduled for the following Monday.
4. Inspections are assigned to inspectors in the Hansen Permit system.
    a. Inspections are assigned to inspectors based on geographical district area, discipline (electrical, mechanical, plumbing, construction, school, environmental) & inspection type based on the scope of the permit and construction activity reflected in the permitting system.
    b. Development Services currently has 74 field inspectors configured in the Hansen Permit System
5. Senior Inspectors review each inspector's daily inspection assignment workload and balance the workload
    a. Workload balance is based on the inspector's availability (whether the inspector is on duty or on leave) and the number of daily inspection calls assigned per inspector
    b. Workload balancing begins at 7:00 a.m. and is completed by 7:45 a.m. each morning
6. Inspector Assignments are finalized in the Hansen Permit system by 7:45 a.m.
7. Inspectors will clock in the TeleNav Track system each morning when they begin operation of the City owned vehicle
8. Inspectors can log into the Hansen Permit system or the List Inspections Tool through a Citrix client interface from their remote locations
9. Inspectors can print inspection list of assignments
    a. Inspectors can print a copy of the assigned inspection schedule either on their home printer, go to one of the City's Link Centers' printers or use one of the network printers at the Development Services Department.
10. Inspectors use the MAPSCO book to plan their routes for the day

11. If there is a change to inspection routes due to emergencies (fire, accidents, emergency demolition, etc.) inspectors are notified via cell phone by the Senior Inspector making the change or addition to the inspector schedule.
    a. The inspectors have Blackberry phones with the TeleNav Track application.
    b. The inspector vehicles do not have Automatic Vehicle Locator (AVL)
12. Supervisors and managers log into the Telenav Track web-based application to monitor their assigned teams, manage reports, and locate their team members.
13. Routes are not optimized in the current configuration of Telenav Track application
14. Inspectors can also review their inspection routes through the List Inspections application using Citrix
15. Inspectors will drive to inspection site and review the permitted work being performed to ensure it meets the required codes. Inspections will result in a pass, partial pass or failure.
16. Inspection notes, time and date of the inspection and the results of the inspection are entered in the Hansen Permit system
17. If it is the end of the work shift, the inspector drives to location where he must park the city vehicle (this can be at home, at a city designated parking lot or at the Development Services Department parking lot)
18. Inspectors will clock out of the Telenav Tracking system
19. If it is not the end of the work shift, the inspector will reference either the printed copy of inspections or their calls listed in the List Inspection application via Citrix
20. The inspector will plot their course for the next inspection and drive to the location site. (inspection process repeats)

005 ADDITIONAL REQUIREMENTS

Statutory Requirements. Exceptions to the following provisions and exhibits by Respondent and/or their agent will lead to automatic disqualification of Respondent's proposal from consideration.

Sections:
Venue, Jurisdiction and Arbitration
Intellectual Property
Undisclosed Features
Ownership and Licenses
Certifications
Restrictions on Communication
Acceptance Criteria (if required)

Exhibits:
Insurance Requirements
Indemnification Requirements

Venue, Jurisdiction and Arbitration. For any dispute or claim arising under the award of a contract for this proposal, venue shall be in Bexar County, Texas, and the laws of the State of Texas shall apply. The City will not contractually agree to engage in binding arbitration and will not contractually agree to relinquish its right to a trial by jury.

Intellectual Property. If selected, Respondent agrees to abide by the following regarding intellectual property rights:

Respondent shall pay all royalties and licensing fees. Respondent shall hold the City harmless and indemnify the City from the payment of any royalties, damages, losses or expenses including attorney's fees for suits, claims or otherwise, growing out of infringement or alleged infringement of copyrights, patents, trademarks, trade secrets, materials and methods used in the project. It shall defend all suits for infringement of any Intellectual Property rights. Further, if Respondent has reason to believe that the design, service, process or product specified is an infringement of an Intellectual Property right, it shall promptly give such information to the City.

Upon receipt of notification that a third party claims that the program(s), hardware or both the program(s) and the hardware or any other intellectual property infringe upon any United States or International patent, copyright or trademark, Respondent will immediately:

Either:

Obtain, at Respondent's sole expense, the necessary license(s) or rights that would allow the City to continue using the programs, hardware, both the programs and hardware or any other intellectual property as the case may be, or,

Alter the programs, hardware, or both the programs and hardware so that the alleged infringement is eliminated, and

Reimburse the City for any expenses incurred by the City to implement emergency backup measures if the City is prevented from using the programs, hardware, or both the programs and hardware while the dispute is pending.

Respondent further agrees to:

Assume the defense of any claim, suit, or proceeding brought against the City for infringement of any United States patent, copyright, trademark or any other intellectual property rights arising from the use and/or sale of the equipment or software under this Agreement,

Assume the expense of such defense, including costs of investigations, reasonable attorneys' fees, expert witness fees, damages, and any other litigation-related expenses, and

Indemnify the City against any monetary damages and/or costs awarded in such suit;

Provided that:

Respondent is given sole and exclusive control of all negotiations relative to the settlement thereof, but that Respondent agrees to consult with the City Attorney of the City during such defense or negotiations and make good faith effort to avoid any position adverse to the interest of the City,

The Software or the equipment is used by the City in the form, state, or condition as delivered by Respondent or as modified without the permission of Respondent, so long as such modification is not the source of the infringement claim,

The liability claimed shall not have arisen out of the City's negligent act or omission, and

The City promptly provide Respondent with written notice within 15 days following the formal assertion of any claim with respect to which the City asserts that Respondent assumes responsibility under this section.

Undisclosed Features. CONTRACTOR warrants that the code and software provided to the City of San Antonio under this agreement does not contain any undisclosed features or functions that would impair or might impair the CITY'S use of the equipment, code or software. Specifically, but without limiting the previous representation, CONTRACTOR warrants there is no "Trojan Horse," lock, "time bomb," backdoor or similar routine. This Agreement shall not now nor will it hereafter be subject to the self-help provisions of the Uniform Computer Information Transactions Act or any other law. CONTRACTOR specifically disclaims any unilateral self-help remedies.

Ownership and Licenses.

In accordance with Texas law, Respondent acknowledges and agrees that all local government records created or received in the transaction of official business or the creation or maintenance of which were paid for with public funds are declared to be public property and subject to the provisions of Chapter 201 of the Texas Local Government Code and Subchapter J, Chapter 441 of the Texas Government Code. Thus, no such local government records produced by or on the behalf of Respondent pursuant to this Contract shall be the subject of any copyright or proprietary claim by Respondent.

The term "local government record" as used herein shall mean any document, paper, letter, book, map, photograph, sound or video recording, microfilm, magnetic tape, electronic medium, or other information recording medium, regardless of physical form or characteristic and regardless of whether public access to it is open or restricted under

the laws of the state, created or received by local government or any of its officials or employees pursuant to law including an ordinance, or in the transaction of official business.

Respondent acknowledges and agrees that all local government records, as described in herein, produced in the course of the work required by any contract awarded pursuant to this RFCSP, will belong to and be the property of City. Respondent, if awarded this contract, will be required to turn over to City, all such records as required by said contract. Respondent, if awarded this contract, shall not, under any circumstances, release any records created during the course of performance of the contract to any entity without City's written permission, unless required to do so by a Court of competent jurisdiction.

In accordance herewith, Respondent, if selected, agrees to comply with all applicable federal, state and local laws, rules and regulations governing documents and ownership, access and retention thereof.

Certifications. Respondent warrants and certifies that Respondent and any other person designated to provide services hereunder has the requisite training, license and/or certification to provide said services, and meets all competence standards promulgated by all other authoritative bodies, as applicable to the services provided herein.

006 TERM OF CONTRACT

A contract awarded in response to this RFCSP will be for an initial one (1) year period. The City shall have the option to renew for an additional four (4) years upon without further Council action.

007 PRE-SUBMITTAL CONFERENCE

A Pre-Submittal Conference will be held at Cliff Morton Development and Business Services Center 1901 S. Alamo, San Antonio, Texas 78204 at 9:30 a.m., Central Time, on June 17, 2013. Respondents are encouraged to prepare and submit their questions in writing 3 calendar days in advance of the Pre-Submittal Conference in order to expedite the proceedings. City's responses to questions received by this due date may be distributed at the Pre-Submittal Conference and posted with this solicitation. Attendance at the Pre-Submittal Conference is optional, but highly encouraged. For those interested in participating in the Pre-Submittal Conference via Teleconference, please call 1-877-226-9790, Pass-code: 6686403.

This meeting place is accessible to disabled persons. The Cliff Morton Development and Business Services Center 1901 S. Alamo, San Antonio, Texas 78204 is wheelchair accessible. The accessible entrance is located at the front of the building in the Cliff Morton Development and Business Services Center. Accessible parking spaces are located at 1901 S. S. Alamo Parking Lot. Auxiliary aids and services are available upon request. Interpreters for the Deaf must be requested at least 48 hours prior to the meeting. For assistance, call (210) 207-7245 Voice/TTY.

Any oral response given at the Pre-Submittal Conference that is not confirmed in writing and posted with this solicitation shall not be official or binding on the City. Only written responses shall be official and all other forms of communication with any officer, employee or agent of the City shall not be binding on the City. Respondents are encouraged to resubmit their questions in writing, to the City Staff person identified in the Restrictions on Communication section, after the conclusion of the Pre-Submittal Conference.

008 PROPOSAL REQUIREMENTS

Respondent's Proposal shall include the following items in the following sequence, noted with the appropriate heading as indicated below. If Respondent is proposing as a team or joint venture, provide the same information for each member of the team or joint venture.

Please submit a total of 11 hard copy proposals, one original, signed in ink, ten copies, and one copy of the proposal on compact disk (CD) containing an Adobe PDF version of the entire proposal. Each of the items listed below must be labeled with the heading indicated below as a separate file on the CD.

COVER LETTER (no more than one page)

Provide on letterhead stationary of the Respondent.

Include an explicit statement indicating that the Respondent, if selected, will be the prime contractor.

Include an explicit statement acknowledging receipt of all addenda.

An authorized official of the Respondent must sign the cover letter.

TABLE OF CONTENTS
Identify each section by page number.

EXECUTIVE SUMMARY (no more than five pages)
The Executive Summary shall be written in a non-technical style and shall contain sufficient information for reviewers with both technical and non-technical backgrounds to become familiar with the firm's proposal and capability to satisfy the technical requirements of the project.

The Executive Summary shall introduce the Respondent's company including history, location, qualifications, experience, main line of business, how business is organized (corporation, partnership, public, private, etc.), and notable achievements as may be applicable to City's project.

PROPOSED PLAN. Use the Form in this RFCSP as Attachment A.

PROPOSED SOLUTION. Use the Form in this RFCSP as Attachment B.

RESPONDENT QUESTIONNAIRE. Use the Form in this RFCSP as Attachment C.

BUSINESS FUNCTIONS' REQUIREMENT. Business Functional Requirements Matrix Complete and return as Attachment D. The CD should include a copy of Attachment D in its native format.

DISCRETIONARY CONTRACTS DISCLOSURE FORM. Use the Form in RFCSP Attachment E which is posted separately or Respondent may download a copy at:

https://www.sanantonio.gov/eforms/atty/DiscretionaryContractsDisclosure.pdf.

Instructions for completing the Discretionary Contracts Disclosure form:

Download form and complete all fields. All fields must be completed prior to submitting the form.

Click on the "Print" button and place the copy in your proposal as indicated in the Proposal Checklist.

LITIGATION DISCLOSURE FORM. Complete and submit the Litigation Disclosure Form, found in this RFCSP as Attachment F. If Respondent is proposing as a team or joint venture, then all persons or entities who will be parties to the contract (if awarded) shall complete and return this form.

PRICING SCHEDULE. Use the Pricing Schedule that is found in this RFCSP as Attachment G.

SIGNATURE PAGE. Respondent must complete, sign and submit the Signature Page found in this RFCSP as Attachment H. The Signature Page must be signed by a person, or persons, authorized to bind the entity, or entities, submitting the proposal. Proposals signed by a person other than an officer of a corporate respondent or partner of partnership respondent shall be accompanied by evidence of authority.

PROPOSAL CHECKLIST. Complete and submit the Proposal Checklist found in this RFCSP as Attachment I.

PROOF OF INSURABILITY. Submit a letter from insurance provider stating provider's commitment to insure the Respondent for the types of coverages and at the levels specified in this RFCSP if awarded a contract in response to this RFCSP. Respondent shall also submit a copy of their current insurance certificate.

FINANCIAL INFORMATION. "Submit a recent copy of a Dun and Bradstreet financial report, or other credit report, on Respondent and its partners, affiliates and subtenants, if any."

FAILURE TO COMPLETE AND PROVIDE ANY OF THESE PROPOSAL REQUIREMENTS MAY RESULT IN THE RESPONDENT'S PROPOSAL BEING DEEMED NON-RESPONSIVE AND THEREFORE DISQUALIFIED FROM CONSIDERATION.

009 CHANGES TO RFCSP

Changes to the RFCSP, made prior to the due date for proposals shall be made directly to the original RFCSP. Changes are captured by creating a replacement version each time the RFCSP is changed. It is Respondent's responsibility to check for new versions until the proposal due date. City will assume that all proposals received are based on the final version of the RFCSP as it exists on the day proposals are due.

No oral statement of any person shall modify or otherwise change or affect the terms, conditions or specifications stated in the RFCSP.

010 SUBMISSION OF PROPOSALS

Proposals may only be submitted in hard copy format.

Submission of Hard Copy Proposals.

Respondent shall submit one original, signed in ink, ten copies, and one copy of the proposal on compact disk (CD) containing an Adobe PDF version of the entire proposal in a sealed package clearly marked with the project name, "Inspection Route Optimization" on the front of the package.

Proposals must be received in the City Clerk's Office no later than 2 p.m., Central Time, on July 12, 2013 at the address below. Any proposal or modification received after this time shall not be considered, and will be returned, unopened to the Respondent. Respondents should note that delivery to the P.O. Box address in a timely manner does not guarantee its receipt in the City Clerk's Office by the deadline for submission. Therefore, Respondents should strive for early submission to avoid the possibility of rejection for late arrival.

Mailing Address:
City Clerk's Office
Attn: Purchasing Division, Finance Department
P.O. Box 839966
San Antonio, Texas 78283-3966

Physical Address:
City Clerk's Office
Attn: Purchasing Division, Finance Department
100 Military Plaza
2nd Floor, City Hall San Antonio, Texas 78205

Proposals sent by facsimile or email will not be accepted.

Proposal Format. Each proposal shall be typewritten, single spaced and submitted on 8 ½" x 11" white paper. If submitting a hard copy, place proposal inside a three ring binder or other securely bound fashion. The use of recycled paper and materials is encouraged. Unnecessarily elaborate brochures, artwork, bindings, visual aides, expensive paper or other materials beyond that sufficient to present a complete and effective submission are not required. Font size shall be no less than 12-point type. All pages shall be numbered and, in the case of hard copy submissions, printed two-sided. Margins shall be no less than 1" around the perimeter of each page. A proposal response to RFCSP Attachment A–B Proposed Plan & Proposed Solution may not exceed 150 pages in length. Websites, or URLs shall not be submitted in lieu of the printed proposal. Each proposal must include the sections and attachments in the sequence listed in the RFCSP Section 008, Proposal Requirements, and each section and attachment must be indexed and, for hard copy submissions, divided by tabs and indexed in a Table of Contents page. Failure to meet the above conditions may result in disqualification of the proposal or may negatively affect scoring.

Modified Proposals. Proposals may be modified provided such modifications are received prior to the due date for submission of proposals and submitted in the same manner as original proposal. For hard copy proposals, provide a cover letter with the proposal, indicating it is a modified proposal and that the Original proposal is being withdrawn.

Correct Legal Name.

Respondents who submit proposals to this RFCSP shall correctly state the true and correct name of the individual, proprietorship, corporation, and /or partnership (clearly identifying the responsible general partner and all other partners who would be associated with the contract, if any). No nicknames, abbreviations (unless part of the legal title), shortened or short-hand, or local "handles" will be accepted in lieu of the full, true and correct legal name of the entity. These names shall comport exactly with the corporate and franchise records of the Texas Secretary of State and Texas Comptroller of Public Accounts. Individuals and proprietorships, if operating under other than an individual name, shall match with exact Assumed Name filings. Corporate Respondents and limited liability company Respondents shall include the 11-digit Comptroller's Taxpayer Number on the Respondent Questionnaire form found in this RFCSP as Attachment C.

If an entity is found to have incorrectly or incompletely stated its name or failed to fully reveal its identity on the General Information form, the Director of Purchasing Division, Finance Department shall have the discretion, at any point in the contracting process, to suspend consideration of the proposal.

Firm Offer. All provisions in Respondent's proposal, including any estimated or projected costs, shall remain valid for one hundred twenty (120) days following the deadline date for submissions or, if a proposal is accepted, throughout the entire term of the contract.

Confidential or Proprietary Information. All proposals become the property of the City upon receipt and will not be returned. Any information deemed to be confidential by Respondent should be clearly noted; however, City cannot guarantee that it will not be compelled to disclose all or part of any public record under the Texas Public Information Act, since information deemed to be confidential by Respondent may not be considered confidential under Texas law, or pursuant to a Court order.

Cost of Proposal. Any cost or expense incurred by the Respondent that is associated with the preparation of the Proposal, the Pre-Submittal conference, if any, or during any phase of the selection process, shall be borne solely by Respondent.

011 RESTRICTIONS ON COMMUNICATION

Respondents are prohibited from communicating with: 1) elected City officials and their staff regarding the RFCSP or proposals from the time the RFCSP has been released until the contract is posted as a City Council agenda item; and 2) City employees from the time the RFCSP has been released until the contract is awarded. These restrictions extend to "thank you" letters, phone calls, emails and any contact that results in the direct or indirect discussion of the RFCSP and/or proposal submitted by Respondent. Violation of this provision by Respondent and/or its agent may lead to disqualification of Respondent's proposal from consideration.

Exceptions to the Restrictions on Communication with City employees include:

Respondents may ask verbal questions concerning this RFCSP at the Pre-Submittal Conference.

Respondents may submit written questions concerning this RFCSP to the Staff Contact Person listed below until **2 p.m., Local Time, on June 21, 2013**. Questions received after the stated deadline will not be answered. All questions shall be sent by e-mail or through the portal.

William Flint, Procurement Specialist III, ITSD
City of San Antonio, Purchasing Division, Finance Department
william.flint@sanantonio.gov

Questions submitted and the City's responses will be posted with this solicitation.

Exceptions to the Restrictions on Communication with City employees include:
Respondents and/or their agents are encouraged to contact the Small Business Office of the Economic Development Department for assistance or clarification with issues specifically related to the City's Small Business Economic Development Advocacy (SBEDA) Program policy and/or completion of the SBEDA form. The point of contact is Shuchi Nagpal. Ms. Nagpal may be reached by telephone at (210) 207-0071 or by e-mail at shuchi.nagpal@sanantonio.gov. This exception to the restriction on communication does not apply, and there is no contact permitted to the Small Business Office regarding this solicitation, after the solicitation closing date.

Respondents may provide responses to questions asked of them by the Staff Contact Person after responses are received and opened. During interviews, if any, verbal questions and explanations will be permitted. If interviews are

conducted, Respondents shall not bring lobbyists. The City reserves the right to exclude any persons from interviews as it deems in its best interests.

Upon completion of the evaluation process, Respondents shall receive a notification letter indicating the recommended firm and anticipated City Council agenda date. Respondents desiring a review of the solicitation process may submit a written request no later than seven (7) calendar days from the date letter was sent. The letter will indicate the name and address for submission of requests for review.

012 EVALUATION CRITERIA

The City will conduct a comprehensive, fair and impartial evaluation of all Proposals received in response to this RFCSP. The City may appoint a selection committee to perform the evaluation. Each Proposal will be analyzed to determine overall responsiveness and qualifications under the RFCSP. Criteria to be evaluated may include the items listed below. The selection committee may select all, some or none of the Respondents for interviews. If the City elects to conduct interviews, Respondents may be interviewed and re-scored based upon the same criteria. The City may also request additional information from Respondents at any time prior to final approval of a selected Respondent. The City reserves the right to select one, or more, or none of the Respondents to provide services. Final approval of a selected Respondent is subject to the action of the City of San Antonio City Council.

Evaluation criteria:

Proposed Plan & Solution (40 points)

Experience, Background, Qualifications (40 points)

Pricing (20 points)

013 AWARD OF CONTRACT AND RESERVATION OF RIGHTS

City reserves the right to award one, more than one or no contract(s) in response to this RFCSP.

The Contract, if awarded, will be awarded to the Respondent(s) whose Proposal(s) is deemed most advantageous to City, as determined by the selection committee, upon approval of the City Council.

City may accept any Proposal in whole or in part. If subsequent negotiations are conducted, they shall not constitute a rejection or alternate RFCSP on the part of City. However, final selection of a Respondent is subject to City Council approval.

City reserves the right to accept one or more proposals or reject any or all proposals received in response to this RFCSP, and to waive informalities and irregularities in the proposals received. City also reserves the right to terminate this RFCSP, and reissue a subsequent solicitation, and/or remedy technical errors in the RFCSP process.

City will require the selected Respondent(s) to execute a contract with the City, prior to City Council award. No work shall commence until City signs the contract document(s) and Respondent provides the necessary evidence of insurance as required in this RFCSP and the Contract. Contract documents are not binding on City until approved by the City Attorney. In the event the parties cannot negotiate and execute a contract within the time specified, City reserves the right to terminate negotiations with the selected Respondent and commence negotiations with another Respondent.

This RFCSP does not commit City to enter into a Contract, award any services related to this RFCSP, nor does it obligate City to pay any costs incurred in preparation or submission of a proposal or in anticipation of a contract.

If selected, Respondent will be required to comply with the Insurance and Indemnification Requirements established herein.

The successful Respondent must be able to formally invoice the City for services rendered, incorporating the SAP-generated contract and purchase order numbers that shall be provided by the City.

Conflicts of Interest. Respondent acknowledges that it is informed that the Charter of the City of San Antonio and its Ethics Code prohibit a City officer or employee, as those terms are defined in the Ethics Code, from having a financial

interest in any contract with City or any City agency such as City-owned utilities. An officer or employee has a "prohibited financial interest" in a contract with City or in the sale to City of land materials, supplies or service, if any of the following individual(s) or entities is a party to the contract or sale: the City officer or employee; his parent, child or spouse; a business entity in which he or his parent, child or spouse owns ten (10) percent or more of the voting stock or shares of the business entity, or ten (10) percent or more of the fair market value of the business entity; or a business entity in which any individual or entity above listed is a subcontractor on a City contract, a partner or a parent or subsidiary business entity.

Respondent is required to warrant and certify that it, its officers, employees and agents are neither officials nor employees of the City, as defined in Section 2-42 of the City's Ethics Code. (Discretionary Contracts Disclosure – form may be found online at https://www.sanantonio.gov/eforms/atty/DiscretionaryContractsDisclosure.pdf.)

Independent Contractor. Respondent agrees and understands that, if selected, it and all persons designated by it to provide services in connection with a contract, are and shall be deemed to be an independent contractors, responsible for their respective acts or omissions, and that City shall in no way be responsible for Respondent's actions, and that none of the parties hereto will have authority to bind the others or to hold out to third parties, that it has such authority.

Effective January 1, 2006, Chapter 176 of the Texas Local Government Code requires that persons, or their agents, who seek to contract for the sale or purchase of property, goods, or services with the City, shall file a completed conflict of interest questionnaire with the City Clerk not later than the 7th business day after the date the person: (1) begins contract discussions or negotiations with the City; or (2) submits to the City an application, response to a request for proposals or bids, correspondence, or another writing related to a potential agreement with the City. The conflict of interest questionnaire form is available from the Texas Ethics Commission at http://www.ethics.state.tx.us/forms/CIQ.pdf. Completed conflict of interest questionnaires may be mailed or delivered by hand to the Office of the City Clerk. If mailing a completed conflict of interest questionnaire, mail to: Office of the City Clerk, P.O. Box 839966, San Antonio, TX 78283-3966. If delivering a completed conflict of interest questionnaire, deliver to: Office of the City Clerk, City Hall, 2nd floor, 100 Military Plaza, San Antonio, TX 78205. Respondent should consult its own legal advisor for answers to questions regarding the statute or form.

014 BONDS

This section left blank intentionally.

015 SOFTWARE ESCROW REQUIREMENT

To ensure that the City will have access to the Contractor's source code in the event that the Contractor is unable to support the software, a copy of the Contractor's source code shall be kept by a trusted third party agreeable to the City. A Software Escrow Agreement, attached as RFCSP EXHIBIT 3 shall be submitted to evidence the deposit of the source code and the maintenance of the escrow account. The Contractor may submit its own Software Escrow Agreement, provided it is in substantially similar form to the attached RFCSP EXHIBIT 3, in the determination of the City.

016 ACCEPTANCE CRITERIA

All deliverables submitted to the City hereunder shall be submitted to a designated City employee for approval and that such deliverables comply in all material respects with the requirements as set forth in a Statement of Work.

The City will evaluate both Vendor-Hosted and City-Hosted solutions. Vendor will submit proposals for City-Hosted, Vendor-Hosted or both solutions. Each will be evaluated on its own merits. The City reserves the right to award based on a determination of what solution best meets the City's business need.

In the event of any nonconformity or nonfunctionality of deliverables, the City shall provide Respondent written notification within a reasonable period of time following delivery. This period of time will be negotiated after award. Upon receipt of such notice of nonconformity or nonfunctionality, Respondent shall have a reasonable period of time to cure the nonconformity or nonfunctionality. This period of time will be negotiated after award.

Upon delivery of the cure, the City will have a reasonable period of time (to be determined after award) to evaluate and determine if such cure is acceptable. In the event the Deliverable remains unacceptable, the City will provide a second notice of nonconformity or nonfunctionality of the system within a reasonable period of time (to be determined after

award) of delivery. Respondent shall have an additional reasonable period of time (to be determined after award) to cure the nonconformity or nonfunctionality.

Upon delivery of the cure, the City will have reasonable period of time (to be determined after award) to evaluate and determine if such cure is acceptable. In the event the Deliverable remains unacceptable the City will provide Respondent with a third notice of any nonconformity or nonfunctionality of the system and Respondent will forfeit 10% of retained balances on hold with the City at the time the third notice is provided to Respondent.

017 SCHEDULE OF EVENTS

Following is a list of **projected dates/times** with respect to this RFCSP:

RFCSP Release Date	May 31, 2013	RFCSP Release Date
Pre-Submittal Conference	June 17, 2013	Pre-Submittal Conference
Final Questions Accepted	June 21, 2013, 2 p.m.	Final Questions Accepted
Proposal Due	July 12, 2013, 2 p.m.	Proposal Due

018 RFCSP EXHIBITS

RFCSP EXHIBIT 1

INSURANCE REQUIREMENTS

If selected to provide the services described in this RFCSP, Respondent shall be required to comply with the insurance requirements set forth below:

INSURANCE

A) Prior to the commencement of any work under this Agreement, Respondent shall furnish copies of all required endorsements and completed Certificate(s) of Insurance to the City's Purchasing Division, Finance Department, which shall be clearly labeled "*Inspector Route Optimization*" in the Description of Operations block of the Certificate. The Certificate(s) shall be completed by an agent and signed by a person authorized by that insurer to bind coverage on its behalf. The City will not accept a Memorandum of Insurance or Binder as proof of insurance. The certificate(s) must have the agent's signature and phone number, and be mailed, with copies of all applicable endorsements, directly from the insurer's authorized representative to the City. The City shall have no duty to pay or perform under this Agreement until such certificate and endorsements have been received and approved by the City's Purchasing Division, Finance Department. No officer or employee, other than the City's Risk Manager, shall have authority to waive this requirement.

B) The City reserves the right to review the insurance requirements of this Article during the effective period of this Agreement and any extension or renewal hereof and to modify insurance coverages and their limits when deemed necessary and prudent by City's Risk Manager based upon changes in statutory law, court decisions, or circumstances surrounding this Agreement. In no instance will City allow modification whereby City may incur increased risk.

C) A Respondent's financial integrity is of interest to the City; therefore, subject to Respondent's right to maintain reasonable deductibles in such amounts as are approved by the City, Respondent shall obtain and maintain in full force and effect for the duration of this Agreement, and any extension hereof, at Respondent's sole expense, insurance coverage written on an occurrence basis, unless otherwise indicated, by companies authorized to do business in the State of Texas and with an A.M Best's rating of no less than A- (VII), in the following types and for an amount not less than the amount listed below:

TYPE	AMOUNTS
1. Workers' Compensation 2. Employers' Liability	Statutory $500,000/$500,000/$500,000
3. Broad form Commercial General Liability Insurance to include coverage for the following: a. Premises/Operations *b. Independent Contractors c. Products/Completed Operations d. Personal Injury e. Contractual Liability f. Damage to property rented by you	For Bodily Injury and Property Damage of $1,000,000 per occurrence; $2,000,000 General Aggregate, or its equivalent in Umbrella or Excess Liability Coverage f. $100,000
4. Business Automobile Liability a. Owned/leased vehicles b. Non-owned vehicles c. Hired Vehicles	Combined Single Limit for Bodily Injury and Property Damage of $1,000,000 per occurrence
5. Professional Liability/Technology E&O (Claims-made basis) To be maintained and in effect for no less than two years subsequent to the completion of the professional service.	$1,000,000 per claim, to pay on behalf of the insured all sums which the insured shall become legally obligated to pay as damages by reason of any act, malpractice, error, or omission in professional services.

D) Respondent agrees to require, by written contract, that all subcontractors providing goods or services hereunder obtain the same insurance coverages required of Respondent herein, and provide a certificate of insurance and endorsement that names the Respondent and the CITY as additional insureds. Respondent shall provide the CITY with said certificate and endorsement prior to the commencement of any work by the subcontractor. This provision may be modified by City's Risk Manager, without subsequent City Council approval, when deemed necessary and prudent, based upon changes in statutory law, court decisions, or circumstances surrounding this agreement. Such modification may be enacted by letter signed by City's Risk Manager, which shall become a part of the contract for all purposes.

E) As they apply to the limits required by the City, the City shall be entitled, upon request and without expense, to receive copies of the policies, declaration page, and all endorsements thereto and may require the deletion, revision, or modification of particular policy terms, conditions, limitations, or exclusions (except where policy provisions are established by law or regulation binding upon either of the parties hereto or the underwriter of any such policies). Respondent shall be required to comply with any such requests and shall submit a copy of the replacement certificate of insurance to City at the address provided below within 10 days of the requested change. Respondent shall pay any costs incurred resulting from said changes.

City of San Antonio
Attn: Purchasing Division, Finance Department
P.O. Box 839966
San Antonio, Texas 78283-3966

F) Respondent agrees that with respect to the above required insurance, all insurance policies are to contain or be endorsed to contain the following provisions:

- Name the City, its officers, officials, employees, volunteers, and elected representatives as additional insureds by endorsement, as respects operations and activities of, or on behalf of, the named insured performed under contract with the City, with the exception of the workers' compensation and professional liability policies;

- Provide for an endorsement that the "other insurance" clause shall not apply to the City of San Antonio where the City is an additional insured shown on the policy;

- Workers' compensation, employers' liability, general liability and automobile liability policies will provide a waiver of subrogation in favor of the City.

- Provide advance written notice directly to City of any suspension, cancellation, non-renewal or material change in coverage, and not less than ten (10) calendar days advance notice for nonpayment of premium.

G) Within five (5) calendar days of a suspension, cancellation or non-renewal of coverage, Respondent shall provide a replacement Certificate of Insurance and applicable endorsements to City. City shall have the option to suspend Respondent's performance should there be a lapse in coverage at any time during this contract. Failure to provide and to maintain the required insurance shall constitute a material breach of this Agreement.

H) .In addition to any other remedies the City may have upon Respondent's failure to provide and maintain any insurance or policy endorsements to the extent and within the time herein required, the City shall have the right to order Respondent to stop work hereunder, and/or withhold any payment(s) which become due to Respondent hereunder until Respondent demonstrates compliance with the requirements hereof.

I) Nothing herein contained shall be construed as limiting in any way the extent to which Respondent may be held responsible for payments of damages to persons or property resulting from Respondent's or its subcontractors' performance of the work covered under this Agreement.

J) It is agreed that Respondent's insurance shall be deemed primary and non-contributory with respect to any insurance or self insurance carried by the City of San Antonio for liability arising out of operations under this Agreement.

K) It is understood and agreed that the insurance required is in addition to and separate from any other obligation contained in this Agreement and that no claim or action by or on behalf of the City shall be limited to insurance coverage provided..

L) Respondent and any Subcontractors are responsible for all damage to their own equipment and/or property.

RFCSP EXHIBIT 2

INDEMNIFICATION REQUIREMENTS

If selected to provide the services described in this RFCSP, Respondent shall be required to comply with the indemnification requirements set forth below:

INDEMNIFICATION

RESPONDENT covenants and agrees to FULLY INDEMNIFY, DEFEND and HOLD HARMLESS, the CITY and the elected officials, employees, officers, directors, volunteers and representatives of the CITY, individually and collectively, from and against any and all costs, claims, liens, damages, losses, expenses, fees, fines, penalties, proceedings, actions, demands, causes of action, liability and suits of any kind and nature, including but not limited to, personal or bodily injury, death and property damage, made upon the CITY directly or indirectly arising out of, resulting from or related to RESPONDENT'S activities under this Agreement, including any acts or omissions of RESPONDENT, any agent, officer, director, representative, employee, consultant or subcontractor of RESPONDENT, and their respective officers, agents employees, directors and representatives while in the exercise of the rights or performance of the duties under this Agreement. The indemnity provided for in this paragraph shall not apply to any liability resulting from the negligence of CITY, its officers or employees, in instances where such negligence causes personal injury, death, or property damage. IN THE EVENT RESPONDENT AND CITY ARE FOUND JOINTLY LIABLE BY A COURT OF COMPETENT JURISDICTION, LIABILITY SHALL BE APPORTIONED COMPARATIVELY IN ACCORDANCE WITH THE LAWS FOR THE STATE OF TEXAS, WITHOUT, HOWEVER, WAIVING ANY GOVERNMENTAL IMMUNITY AVAILABLE TO THE CITY UNDER TEXAS LAW AND WITHOUT WAIVING ANY DEFENSES OF THE PARTIES UNDER TEXAS LAW.

The provisions of this INDEMNITY are solely for the benefit of the parties hereto and not intended to create or grant any rights, contractual or otherwise, to any other person or entity. RESPONDENT shall advise the CITY in writing within 24 hours of any claim or demand against the CITY or RESPONDENT known to RESPONDENT related to or arising out of RESPONDENT's activities under this AGREEMENT and shall see to the investigation and defense of such claim or demand at RESPONDENT's cost. The CITY shall have the right, at its option and at its own expense, to participate in such defense without relieving RESPONDENT of any of its obligations under this paragraph.

Defense Counsel - CITY shall have the right to select or to approve defense counsel to be retained by RESPONDENT in fulfilling its obligation hereunder to defend and indemnify CITY, unless such right is expressly waived by CITY in writing. RESPONDENT shall retain CITY approved defense counsel within seven (7) business days of CITY'S written notice that CITY is invoking its right to indemnification under this Contract. If RESPONDENT fails to retain Counsel within such time period, CITY shall have the right to retain defense counsel on its own behalf, and RESPONDENT shall be liable for all costs incurred by CITY. CITY shall also have the right, at its option, to be represented by advisory counsel of its own selection and at its own expense, without waiving the foregoing.

Employee Litigation - In any and all claims against any party indemnified hereunder by any employee of RESPONDENT, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation herein provided shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for RESPONDENT or any subcontractor under worker's compensation or other employee benefit acts.

RFCSP EXHIBIT 3

ESCROW AGREEMENT

This agreement ("Agreement") is effective _____, 20__ among _____ ("Custodian"), Respondent's Name ("Depositor") and the City of San Antonio ("Preferred Beneficiary"), who collectively may be referred to in this Agreement as the parties ("Parties").

A. Depositor and Preferred Beneficiary have entered or will enter into an Annual Contract for Name of Project between the City of San Antonio and Respondent's Name, regarding certain proprietary technology of Depositor (referred to in this Agreement as "the License Agreement").

B. Depositor desires to avoid disclosure of its proprietary technology except under certain limited circumstances.

C. The availability of the proprietary technology of Depositor is critical to Preferred Beneficiary in the conduct of its business and, therefore, Preferred Beneficiary needs access to the proprietary technology under certain limited circumstances.

D. Depositor and Preferred Beneficiary desire to establish an escrow with Custodian to provide for the retention, administration and controlled access of the proprietary technology materials of Depositor.

E. The parties desire this Agreement to be supplementary to the Annual Contract for Name of Project between the City of San Antonio and Respondent's Name, pursuant to 11 United States [Bankruptcy] Code, Section 365(n).

ARTICLE 1 -- **DEPOSITS**

1.1 Obligation to Make Deposit. Upon the signing of this Agreement by the parties, Depositor shall deliver to Custodian the proprietary technology and other materials ("Deposit Materials") required to be deposited by the License Agreement. Custodian shall have no obligation to either party with respect to the preparation, accuracy, execution or delivery of Deposit Materials.

1.2 Identification of Tangible Media. Prior to the delivery of the Deposit Materials to Custodian, Depositor shall conspicuously label for identification each document, magnetic tape, disk, or other tangible media upon which the Deposit Materials are written or stored. Additionally, Depositor shall complete a copy of Exhibit A to this Agreement by listing each such tangible media by the item label description, the type of media and the quantity. Each Exhibit A shall be signed by Depositor and delivered to Custodian with the Deposit Materials. Unless and until Depositor makes the initial deposit with Custodian, Custodian shall have no obligation with respect to this Agreement, except the obligation to notify the parties regarding the status of the account as required in Section 2.2 below.

1.3 Acceptance of Deposit. Custodian will conduct a deposit inspection upon receipt of any Deposit Material and associated Exhibit A by visually matching the labeling of the tangible media containing the Deposit Materials to the item descriptions and quantity listed on Exhibit A. Depositor shall provide notice by electronic mail, telephone, or regular mail to the Depositor and Beneficiary of all Deposit Material that is accepted and deposited into the escrow account under this Agreement. If Custodian determines that the Deposit Material does not match the description provided by Depositor represented in Exhibit A attached hereto, Custodian will provide Depositor with notice by electronic mail, telephone, or regular mail of such discrepancies. Custodian will work directly with the Depositor to resolve any such discrepancies prior to accepting Deposit Material. Other than Custodian's inspection of the Deposit Materials, Custodian shall have no obligation to the accuracy, completeness, functionality, performance or non-performance of the Deposit Materials.

1.4 Depositor's Representations. Depositor represents as follows:

a. Depositor lawfully possesses all of the Deposit Materials deposited with Custodian;

b. With respect to all of the Deposit Materials, Depositor has the right and authority to grant to Custodian and Preferred Beneficiary the rights as provided in this Agreement;

c. As of the effective date of this Agreement, the Deposit Materials are not the subject of a lien or encumbrance, however, any liens or encumbrances made after the execution of this Agreement will not prohibit, limit, or alter the rights and obligations of Custodian under this Agreement;

d. The Deposit Materials consist of the proprietary technology and other materials identified in the License Agreement; and

e. The Deposit Materials are readable and useable in the appropriate technical environment their current form or, if any portion of the Deposit Materials is encrypted, the decryption tools and decryption keys have also been deposited.

f. The Deposit Materials include the source code corresponding to the computer software licensed by Depositor to Preferred Beneficiary under the License Agreement, except for third-party software that Depositor has no right to provide to Custodian or to Preferred Beneficiary in source code form. Either the License Agreement or Exhibit A properly identifies all third-party software embedded in or associated with the computer software licensed by Depositor to Preferred Beneficiary under the License Agreement that is not included in the Deposit Materials. The Deposit Materials include any pertinent commentary or explanation that may be necessary to render the source code understandable and useable by a trained computer-programming expert who is generally familiar with Fire Incident Report Systems and program code. The Deposit Materials include system documentation, statements of principles of operation and schematics, all as necessary or useful for the effective understanding and use of the source code. Insofar as the "development environment" employed by Depositor for the development, maintenance, and implementation of the Source Code includes any device, programming, or documentation not commercially available to Preferred beneficiary on reasonable terms through readily known sources other than Depositor, the Deposit Materials shall include all such devices, programming, or documentation. The foregoing reference to such "development environment" is intended to apply to any programs, including compilers, "workbenches," tools, and higher-level (or "proprietary") languages, used by Depositor for the development, maintenance and implementation of the Source Code.

1.5 Deposit Updates. Unless otherwise provided by the License Agreement, Depositor shall update the Deposit Materials within sixty (60) days of each release of a new version, release, addition, modification or update of the licensed software, which is subject to the License Agreement; provided that Depositor shall not be required to make updates more often than once every four (4) months, nor less frequently than once per year. Such updates will be added to the existing deposit. All deposit updates shall be listed on a new Exhibit A and Depositor shall sign the new Exhibit A. Each Exhibit A will be held and maintained separately within the escrow account. An independent record will be created which will document the activity for each Exhibit A. The processing of all deposit updates shall be in accordance with Sections 1.2 and 1.3 above. All references in this Agreement to the Deposit Materials shall include the initial Deposit Materials and any updates.

For purposes of this Agreement, Depositor may accomplish such updates by having the new version of the product added to the existing deposit or, alternatively and upon written instruction to Custodian and Preferred Beneficiary, exchanging the new version of the product for the old version of the product within the existing deposit.

1.6 Removal of Deposit Materials. The Deposit Materials may be removed and/or exchanged only on written instructions signed by Depositor and Preferred Beneficiary, or as otherwise provided in this Agreement.

1.7 Verification. Preferred Beneficiary shall have the right, at Preferred Beneficiary's expense, to cause a verification of any Deposit Materials once within the first 90 days after execution of this Agreement by Preferred Beneficiary, and thereafter twice in any 12-month period. Preferred Beneficiary shall notify Depositor and Custodian of Preferred Beneficiary's request for verification. Depositor shall have the right to be present at the verification. A verification determines, in different levels of detail, the accuracy, completeness, sufficiency and quality of the Deposit Materials as well as to confirm that it compiles to the pertinent object code of the licensed software. If verification is elected after the Deposit Materials have been delivered to Custodian, then Custodian,

or at Preferred Beneficiary's election, an independent person or company selected by Preferred Beneficiary who is reasonably acceptable to Depositor will perform the verification. The Preferred Beneficiary shall be responsible for all costs of the verification, including, without limitation, Custodian's fees associated with the verification, the costs incurred by Depositor relating to such verification (including, without limitation, travel and living expenses for Depositor personnel required to assist with the verification and fees for the services of such personnel, at Depositor's standard daily rates, as applicable).

ARTICLE 2 -- **CONFIDENTIALITY AND RECORD KEEPING**

2.1 Confidentiality. Custodian shall have the obligation to reasonably protect the confidentiality of the Deposit Materials by maintaining the Deposit Materials in a secure, environmentally safe, locked facility which is accessible only to authorized representatives of Custodian. Except as provided in this Agreement or any subsequent agreement between the Parties, Custodian shall not disclose, transfer, make available to any party, or use the Deposit Materials. Custodian shall not disclose the terms of this Agreement to any third party. If Custodian receives a subpoena or any other order from a court or other judicial tribunal pertaining to the disclosure or release of the Deposit Materials, Custodian will immediately notify the parties to this Agreement of same in writing, unless prohibited by law. It shall be the responsibility of Depositor and/or Preferred Beneficiary to challenge any such order; provided, however, that Custodian does not waive its rights to present its position with respect to any such order. Custodian will not be required to disobey any order from a court or other judicial tribunal, including, but not limited to, notices delivered pursuant to Section 7.6 below. Custodian will not be required to disobey any order from a court or other judicial tribunal.

2.2 Status Reports. Custodian shall provide to Depositor and Preferred Beneficiary access to the Custodian's real-time, on-line portal to view data and documentation relative to this Agreement. Upon request, Custodian will provide ad hoc status reports to Depositor and Preferred Beneficiary.

2.3 Audit Rights. During the term of this Agreement, Depositor and Preferred Beneficiary shall each have the right to inspect the written records of Custodian pertaining to this Agreement. Any such inspection shall occur during normal business hours and following reasonable prior notice.

ARTICLE 3 -- **RIGHT TO MAKE COPIES**

Custodian may make copies of the Deposit Materials as necessary to meet its obligations under this Agreement, while retaining a copy to carry out its obligations for other licensees who may benefit from the same arrangement. Custodian shall include in any copies all copyright, non-disclosure and other proprietary notices and titles contained on the Deposit Materials. With all Deposit Materials submitted to Custodian, Depositor shall provide any and all instructions as may be necessary to duplicate the Deposit Materials, including, without limitation, instructions as to necessary hardware or software. In all other respects, Custodian shall not make copies of the Deposit Materials except to fulfill an order of a court of competent jurisdiction (see Section 2.1).

If for any reason Custodian should make any copy of the Deposit Materials, Custodian shall promptly give written notice to Depositor of such action and shall explain the reason for such copying in the notice.

ARTICLE 4 -- **RELEASE OF DEPOSIT**

4.1 Release Conditions. As used in this Agreement, "Release Condition" shall mean the occurrence and continuance of any of the following:

a. Entry of an order for relief regarding Depositor under Title 11 (bankruptcy) of the United States Code, the making by Depositor of a general assignment for the benefit of its creditors, the appointment of a general receiver or trustee in bankruptcy of Depositor's business or property, or the commencement of similar proceedings under the bankruptcy, insolvency, liquidation or reorganization laws of any state or any other country or province (except that were entry of an order, appointment of a receiver or trustee in bankruptcy, or

commencement of bankruptcy or insolvency proceedings is effected on an involuntary basis, then Depositor shall have 60 days to have such case or proceeding dismissed);

b. Depositor's failure to continue to do business in the ordinary course;

c. Any decision by Depositor to withdraw maintenance services in support of the Depositor software licensed by Depositor to Preferred Beneficiary under the License Agreement;

d. The occurrence of a breach as defined in the License Agreement;

e. The occurrence of any condition (whether or not qualifying as a breach) having a critical impact on necessary business functions (such as a continuing loss of service or data), which Depositor cannot or will not assure Preferred Beneficiary will be corrected so to restore necessary business functions using all reasonable means, and the release of the Deposit Materials is reasonably believed to enable Preferred Beneficiary to remedy such condition critically impacting Preferred Beneficiary's use of the licensed software to meet necessary business functions; and, for purposes of this Agreement, if a Release Condition is claimed by Preferred Beneficiary to exist on this basis, then, notwithstanding Sections 4.2 and 4.3 hereof, Custodian will, without delay, release the Deposit Materials to Preferred Beneficiary immediately upon Custodian's receipt of written notice of such Release Condition in which Preferred Beneficiary shall explain why it believes the Deposit Materials will enable Preferred Beneficiary to resolve such critical impact condition and why an immediate release is required, but Preferred Beneficiary shall commit to surrender the Deposit Materials to Custodian or Depositor promptly after the correction has occurred to restore necessary business functions.]

4.2 Filing For Release. If Preferred Beneficiary believes in good faith that a Release Condition has occurred and is continuing, then Preferred Beneficiary, at any time, may provide to Custodian written notice of the occurrence of the Release Condition and a request for the release of the Deposit Materials. Within five (5) business days of receipt of a written notice, Custodian shall provide a copy of the notice to Depositor. Custodian will promptly notify the Parties unless Custodian acknowledges or discovers independently, or through the Parties, its need for additional documentation or information in order to comply with this Section. Such need for additional documentation or information may extend the time period for Custodian's performance under this section.

4.3 Contrary Instructions. From the date Custodian mails the notice by overnight express mail requesting release of the Deposit Materials, Depositor shall have ten (10) business days to deliver to Custodian contrary instructions ("Contrary Instructions"). Contrary Instructions shall mean the written representation by Depositor that a Release Condition has not occurred or has been cured. Upon receipt of Contrary Instructions, Custodian shall send a copy of Contrary Instructions to Preferred Beneficiary by overnight commercial express mail. Additionally, Custodian shall notify both Depositor and Preferred Beneficiary that there is a dispute to be resolved pursuant to Section 7.4 of this Agreement. Subject to Section 5.2 and 4.1(e) of this Agreement, Custodian will continue to store the Deposit Materials without release pending (a) joint instructions from Depositor and Preferred Beneficiary; or (b) dispute resolution pursuant to Section 7.4; or (c) an order from a court of competent jurisdiction.

4.4 Release of Deposit. If Custodian does not receive Contrary Instructions from the Depositor, or if the Preferred Beneficiaries request to release is based on 4.1(e), Custodian is authorized to release the Deposit Materials to the Preferred Beneficiary. However, Custodian is entitled to receive any fees due Custodian before making the release. This Agreement will terminate upon the release of the Deposit Materials held by Custodian.

4.5 Right to Use Following Release. Unless otherwise provided in the License Agreement, upon release of the Deposit Materials in accordance with this Article 4, Preferred Beneficiary shall have the right to use the Deposit Materials for the sole purpose of continuing the benefits afforded to Preferred Beneficiary by the License Agreement. Preferred Beneficiary shall be obligated to maintain the confidentiality of the released Deposit Materials.

ARTICLE 5 -- **TERM AND TERMINATION**

5.1 Term of Agreement. The initial term of this Agreement is for a period of one year. Thereafter, this Agreement shall automatically renew from year-to-year unless (a) Depositor and Preferred Beneficiary jointly instruct Custodian in writing that the Agreement is terminated; (b) Custodian instructs Depositor and Preferred Beneficiary in writing ninety (90) days after its renewal date, that the Agreement is terminated for nonpayment in accordance with Section 5.2; or (c) Custodian reserves the right to terminate this Agreement, for any reason, other than for nonpayment, by providing Depositor and Preferred Beneficiary sixty (60) days written notice of its intent to terminate this Agreement. If the Deposit Materials are subject to another escrow agreement with Custodian, Custodian reserves the right, after the initial one year term, to adjust the anniversary date of this Agreement to match the then prevailing anniversary date of such other escrow arrangements.

5.2 Termination for Nonpayment. In the event of the nonpayment of fees owed to Custodian, Custodian shall provide written notice of delinquency to all parties to this Agreement. Any party to this Agreement shall have the right to make the payment to Custodian to cure the default. If the past due payment is not received in full by Custodian within one (1) month of the date of such notice, then Custodian shall have the right to terminate this Agreement at any time thereafter by sending written notice of termination to all parties. Custodian shall have no obligation to take any action under this Agreement so long as any payment due to Custodian remains unpaid.

5.3 Disposition of Deposit Materials Upon Termination. Subject to the foregoing termination provisions, and upon termination of this Agreement, Custodian shall destroy, return to Depositor, or otherwise deliver the Deposit Materials in accordance with Depositor's instructions. If there are no instructions, Custodian may, at its sole discretion, destroy the Deposit Materials or return them to Depositor. Custodian shall have no obligation to destroy or return the Deposit Materials if the Deposit Materials are subject to another escrow agreement with Custodian or have been totally released to the Preferred Beneficiary in accordance with Section 4.4.

5.4 Survival of Terms Following Termination. Upon termination of this Agreement, the following provisions of this Agreement shall survive:

a. Depositor's Representations (Section 1.4);

b. The obligations of confidentiality with respect to the Deposit Materials;

c. The obligation to pay Custodian any fees and expenses due;

d. The provisions of Article 7;

e. Section 4.5 to the extent applicable; and

f. Any provisions in this Agreement which specifically state they survive the termination of this Agreement.

ARTICLE 6 -- **CUSTODIAN'S FEES**

6.1 Fee Schedule. Custodian is entitled to be paid its agreed fees and expenses applicable to the services provided by Depositor. Custodian shall notify Depositor of Custodian's fees at least sixty (60) days prior to any increase in fees. For any service not listed on Custodian's standard fee schedule, Custodian will provide a quote prior to rendering the service, if requested.

6.2 Payment Terms. Custodian shall not be required to perform any service, including release of any Deposit Materials under Article 4, unless the payment for such service and any outstanding balances owed to Custodian are paid in full. Fees are due upon receipt of a signed contract or receipt of the Deposit Materials whichever is earliest. If invoiced fees are not paid, Custodian may terminate this Agreement in accordance with Section 5.2.

ARTICLE 7 -- **LIABILITY AND DISPUTES**

7.1 Right to Rely on Instructions. Custodian may act in reliance upon any instruction, instrument, or signature reasonably believed by Custodian to be genuine. Custodian may assume that any employee of a party to this Agreement who gives any written notice, request, or instruction has the authority to do so. Custodian will not be required to inquire into the truth or evaluate the merit of any statement or representation contained in any notice or document. Custodian shall not be responsible for failure to act as a result of causes beyond the reasonable control of Custodian.

7.2 Indemnification. Depositor agrees to indemnify, defend and hold harmless Custodian from any and all claims, actions, damages, arbitration fees and expenses, costs, reasonable attorney's fees and other liabilities ("Liabilities") incurred by Custodian directly resulting from this escrow arrangement, except where it is adjudged that Custodian acted with gross negligence or willful misconduct.

7.3 Limitation of Liability and Waiver of Consequential Damages.

(a) Notwithstanding anything else herein, all liability, if any, whether arising in contract, tort (including negligence) or otherwise, of Custodian under this Agreement shall be limited to the amount equal to ten times the then annual fees owed or paid to Custodian under this Agreement. If claim or loss is made in relation to a specific deposit or deposits, such liability shall be limited to the fees related specifically to such deposits. This limit shall not apply for: (I) any claims of infringement of any patent, copyright, trademark or other proprietary right; (II) liability for death or bodily injury; (III) damage to tangible property (excluding the Deposit Material); (IV) theft; or (V) proven gross negligence or willful misconduct.

(b) In no event will Custodian be liable for any incidental, indirect, special, exemplary, punitive or consequential damages, including, but not limited to, damages (including loss of data, revenue, and/or profits) costs or expenses (including legal fees and expenses), whether arising in contract, tort (including negligence) or otherwise even if the possibility thereof may be known in advance to one or more parties and whether foreseeable or unforeseeable, that may arise out of or in connection with this Agreement.

7.5 Controlling Law. This Agreement is to be governed and construed in accordance with the laws of the State of Texas, without regard to its conflict of law provisions.

7.6 Notice of Requested Order. If any party intends to obtain an order from the arbitrator or any court of competent jurisdiction, which may direct Custodian to take, or refrain from taking any action, that party shall:

a. Give notice to Custodian at least five (5) business days prior to the hearing; and

b. Include in any such order that, as a precondition to Custodian's obligation, Custodian be paid in full for any past due fees and be paid for the reasonable value of the services to be rendered pursuant to such order.

ARTICLE 8 -- **GENERAL PROVISIONS**

8.1 Entire Agreement. This Agreement, which includes Exhibits described herein, embodies the entire understanding among the parties with respect to its subject matter and supersedes all previous communications, representations or understandings, either oral or written. Custodian is not a party to the License Agreement between Depositor and Preferred Beneficiary and has no knowledge of any of the terms or provisions of any such License Agreement. Custodian's only obligations to Depositor or Preferred Beneficiary are as set forth in this Agreement. No amendment or modification of this Agreement shall be valid or binding unless signed by all the parties hereto, except that Exhibit A need not be signed by Preferred Beneficiary and Exhibit B need not be signed.

8.2 Notices. All notices, invoices, payments, deposits and other documents and communications shall be given to the parties at the addresses specified in the attached Exhibit B. It shall be the responsibility of the parties to notify each other as provided in this Section in the event of a change of address. The parties shall have the right to rely on the last known address of the other parties. Any correctly addressed notice or last known address of the other parties that is relied on herein that is refused, unclaimed, or undeliverable because of an act or omission of the party to be notified as provided herein shall be deemed effective as of the first date that said notice was refused, unclaimed, or deemed undeliverable by the postal authorities by registered mail, or through messenger or commercial express delivery services. Unless otherwise provided in this Agreement, all non-critical documents (such as invoices) and non-critical communications may be delivered by First Class mail.

8.3 Severability. In the event any provision of this Agreement is found to be invalid, voidable or unenforceable, the parties agree that unless it materially affects the entire intent and purpose of this Agreement, such invalidity, voidability or unenforceability shall affect neither the validity of this Agreement nor the remaining provisions herein, and the provision in question shall be deemed to be replaced with a valid and enforceable provision most closely reflecting the intent and purpose of the original provision.

8.4 Successors and Assigns. This Agreement shall be binding upon and shall inure to the benefit of the successors and assigns of the parties. However, Custodian shall have no obligation in performing this Agreement to recognize any successor or assign of Depositor or Preferred Beneficiary unless Custodian receives clear, authoritative and conclusive written evidence of the change of parties.

8.5 Waiver. Any term of this Agreement may be waived by the party entitled to the benefits thereof, provided that any such waiver must be in writing and signed by the party against whom the enforcement of the waiver is sought. No waiver of any condition, or breach of any provision of this Agreement, in any one or more instances, shall be deemed to be a further or continuing waiver of such condition or breach. Delay or failure to exercise any right or remedy shall not be deemed the waiver of that right or remedy.

8.6 Regulations. Depositor and Preferred Beneficiary are responsible for and warrant compliance with all applicable laws, rules and regulations, including but not limited to customs laws, import, export, and re-export laws and government regulations of any country from or to which the Deposit Materials may be delivered in accordance with the provisions of this Agreement.

8.7 Attorney's Fees. Each party shall be responsible for its own attorney fees to enforce this agreement.

8.8 No Third Party Rights. This Agreement is made solely for the benefit of the Parties to this Agreement and their respective permitted successors and assigns, and no other person or entity shall have or acquire any right by virtue of this Agreement unless otherwise agreed to by all the parties hereto.

8.9 Authority to Sign. Each of the Parties herein represents and warrants that the execution, delivery, and performance of this Agreement has been duly authorized and signed by a person who meets statutory or other binding approval to sign on behalf of its business organization as named in this Agreement.

8.10 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

Depositor	Preferred Beneficiary
By:	By:
Name:	Name:
Title:	Title:
Date:	Date:

Custodian

By: _____

Name: _____

Title: _____

Date: _____

ESCROW AGREEMENT

EXHIBIT 3-A

DESCRIPTION OF DEPOSIT MATERIALS

Depositor Company Name _____

Account Number _____

Product Name _____

DEPOSIT MATERIAL DESCRIPTION:

Quantity	Media Type & Size	Label Description of Each Separate Item
_____	Disk 3.5" or _____	
_____	DAT tape _____ mm	
_____	CD-ROM	
_____	Data cartridge tape _____	
_____	TK 70 or _____ tape	
_____	Magnetic tape _____	
_____	Documentation	
_____	Other _____	

PRODUCT DESCRIPTION:

Environment _____

DEPOSIT MATERIAL INFORMATION:

Is the media or are any of the files encrypted? If yes, please include any passwords and the decryption tools.

Encryption tool name_____ Version _____

Hardware required_____

Software required_____

Other required information_____

I certify for **Depositor** that the above described **Custodian** has accepted the above.	
Deposit Materials have been transmitted to Custodian: _____	
Materials	*(any exceptions are noted above)*:

Signature _____	Signature _____
Print Name _____	Print Name _____
Date _____	Date Accepted _____
	Exhibit A# _____

ESCROW AGREEMENT

EXHIBIT 3-B

DESIGNATED CONTACT

Account Number_____	
Notices, deposit material returns and communications to Depositor should be addressed:	**Notices and communications to Preferred Beneficiary should be addressed to:**
Company Name: _____	Company Name:
Address: _____	Address:
Designated Contact: _____	Designated Contact:
Telephone: _____	Telephone
Facsimile: _____	Facsimile:
E-mail: _____	E-mail:
Verification Contact:	Verification Contact:
Telephone/E-mail:	
Fees for this agreement will be paid by **Depositor.**	
Invoices to Depositor should be addressed to:	
Company Name: _____	Company Name:
Address: Attn:	
_____	Address: _____
_____	_____
_____	_____
Billing Contact: _____	Billing Contact: _____
Telephone: _____	Telephone: _____
Facsimile: _____	Facsimile: _____
E-mail: _____	E-mail: _____
P.O.# _____	P.O.#: _____

Requests from Depositor or Preferred Beneficiary to change the designated contact should be given in writing by the designated contact or an authorized employee of Depositor or Preferred Beneficiary.

Agreements, Deposit Materials and notices to Custodian should be addressed to:	***All invoice fee remittances to Custodian should be addressed to:***
Custodian	Custodian
_____	_____
_____	_____
Telephone:	
Facsimile:	Date: _____
E-mail:	

RFCSP EXHIBIT 4

INTERLOCAL PARTICIPATION

The City may, from time to time, enter into Interlocal Cooperation Purchasing Agreements with other governmental entities or governmental cooperatives (hereafter collectively referred to as "Entity" or "Entities") to enhance the City's purchasing power. At the City's sole discretion and option, City may inform other Entities that they may acquire items listed in this Request for Offer (hereafter "RFCSP"). Such acquisition(s) shall be at the prices stated herein, and shall be subject to vendor's acceptance. Entities desiring to acquire items listed in this RFCSP shall be listed on a rider attached hereto, if known at the time of issuance of the RFCSP. City may issue subsequent riders after contract award setting forth additional Entities desiring to utilize this contract. VENDOR shall sign and return any subsequently issued riders within ten calendar days of receipt.

In no event shall City be considered a dealer, remarketer, agent or other representative of Vendor or Entity. Further, City shall not be considered and is not an agent; partner or representative of the Entity making purchases hereunder, and shall not be obligated or liable for any such order.

Entity purchase orders shall be submitted to Vendor by the Entity.

Vendor authorizes City's use of Vendor's name, trademarks and Vendor provided materials in City's presentations and promotions regarding the availability of use of this contract. The City makes no representation or guarantee as to any minimum amount being purchased by City or Entities, or whether Entity will purchase utilizing City's contract.

CITY WILL NOT BE LIABLE OR RESPONSIBLE FOR ANY OBLIGATIONS, INCLUDING, BUT NOT LIMITED TO, PAYMENT, AND FOR ANY ITEM ORDERED BY AN ENTITY OTHER THAN CITY.

RFCSP EXHIBIT 5
IT ENVIRONMENT DESCRIPTION & INFRASTRUCTURE STANDARDS

Posted as a separate document

RFCSP ATTACHMENT A
PROPOSED PLAN

Introduction

This section focuses on the plan to deploy the solution being proposed including client specific resource requirements, asset procurement details, service levels and support details.

Vendor proposals must be formatted and labeled according to the layout of this document. The proposal section covering the information requested in this document must be titled "Proposed Plan". When responding to "1 – Project Management" Section 1.1. "Describe project management plan, sub-section 1.1.a – "Provide a sample plan...", the proposal should include this heading (1.1.a.) to clearly identify the response in the proposal with the RFCSP numbering schema below. Failure to follow this format may result in vital information not being considered when reviewing the proposal.

1 Project Management:

1.1 Describe project management plan.
- 1.1.1 Provide a sample plan for deployment of proposed solution to include:
  - 1.1.1.1.1 Milestones
  - 1.1.1.1.2 List of deliverables for each milestone
  - 1.1.1.1.3 Client resources required to complete milestone.
  - 1.1.1.1.4 % of Project Completion at the end of each milestone
  - 1.1.1.1.5 Vendor travel requirements
    - 1.1.1.1.5.1 If client hosted solution, System/Server installation
    - 1.1.1.1.5.2 Training
    - 1.1.1.1.5.3 Client Roll-Out (70 field devices)
- 1.1.2 Identify any known risks that have been experienced in previous similar deployments.
- 1.1.3 Identify active projects that are being worked on and or planned from the date proposals are due and for the following 6 months.

1.2 Provide sample contracts/documents for proposed solution, to include:
- 1.2.1 Software Licensing
- 1.2.2 Professional Services Agreement
- 1.2.3 Maintenance & Support
- 1.2.4 Technical Support Service Level Agreement
  - 1.2.4.1 Engineering Support
  - 1.2.4.2 System/Application Problem Resolution
- 1.2.5 Customer Support Service Level Agreement (Help Desk, Phone support)
- 1.2.6 Statement of Work (SOW)

1.3 Describe the warranty period post go-live
- 1.3.1 How many months does it cover
- 1.3.2 Provide severity levels of issues that may be encountered and response times
- 1.3.3 Describe the process client must follow to report issues/problems

2 Solution Information:

2.1 Identify any limitations that may exist related to volume of transactions, storage capacity, and active users. If limitations are financially based make sure to include these potential fees in the Total cost of Ownership section (Item 1).
- 2.1.1 If applicable, clarify if there are any solution components that may differ between Enterprise and/or Departmental solutions.

2.2 Describe any unique and/or innovative functionality and/or deployment methods that respondent may offer. Indicate whether these features are included as part of the proposal including cost.

3 Total Cost of Ownership:

3.1 Describe any fee increases that may be assessed due to growth in transactions, users, data storage, and volume of data transfer. Include price change limitations.

3.1.1 If vendor offers enterprise and/or departmental cost models, describe this pricing model along with the differences between them.

3.2 Describe history of maintenance and support fees, in regards to increase in cost and future price adjustments, limitations and notification plan to client of any potential price changes.

3.3 Describe fee structure for client requested changes to the configuration of the software.

3.4 Describe if there are any costs associated with customer enhancement requests that are submitted by multiple clients.

3.5 Describe costs that may be associated with terminating the software licensing contract including notification requirements.

3.6 Describe any additional fees for after hours, weekend and/or holiday support as it relates to:

3.6.1 System/Software Support.

3.6.2 Application Support

3.6.3 System Maintenance

3.7 Describe additional costs that may be imposed for exporting/extracting customer data. Include price change limitations.

3.8 Describe costs that may be associated with terminating the service contract including notification requirements.

3.9 Describe any additional fees for after hours, weekend and/or holiday support as it relates to hosting services.

4 Customer Support:

4.1 Describe Post-Production Warranty period

4.1.1 Duration after Go-Live Date

4.1.2 Customer Contact Process

4.1.3 After Hours support

4.2 Describe the various options available for customer and technical support.

4.2.1 Online Chat sessions

4.2.2 Phone support

4.1.3 Email support.

4.3 Describe Issue/Problem Severity levels and response times

4.4 What are the support hours of operation?

4.5 If proposed solution includes 3rd party utilities, software, services, etc., describe how customer support will be managed with these 3rd parties.

4.6 Describe how customer service incidents and/or technical issues are reported and managed.

4.6.1 What are the days/hours of operation?

4.6.2 Include any available documentation listed below as an appendix to the proposal and include a reference to these appendices here.

4.6.2.1 Process diagrams

4.6.2.2 Service Level Agreements (SLA's)

4.6.3 Application support.

4.6..4 System/Application Availability

4.7 Describe current and last year's support levels for software/system deployed at customer sites.

4.7.1 Calls per month

5 Maintenance/Upgrades:

5.1 Describe how customers' requests for enhancements are handled. Include practice on how enhancements requests are reviewed and chosen for product upgrades.

5.2 Describe the frequency of maintenance/upgrades to include any 3rd party components that may exist.

6 Additional Information:

6.1 Provide any additional plans and/or relevant information about Respondent's approach to providing the required solution/services for this RFCSP.

CITY HOSTED SOLUTION SPECIFIC

7. Installation:

7.1 Describe the software/system installation process.

7.1.1 Identify specific tasks that client must perform to support and/or perform system installation.

7.2 Identify software and hardware assets that client is responsible to purchase.

7.2.1 Indicate specific version, model, etc

7.2.2 Validate that customer can procure items listed here from any source other than respondent.

VENDOR HOSTED SOLUTION SPECIFIC

7 Service/System Availability:

7.1 Include Service Level Agreement (SLA) with the proposal as it pertains to hosting services.

7.1.1 If 3rd party solutions are part of the proposal, Describe SLA's from all applicable vendors /contractors /partners. Include SLA's as proposal attachments if available and reference them in this section.

7.2 Describe how planned and unplanned outages will be handled.

7.2.1 Include future dates of known scheduled/planned outages.

7.2.2 Describe how planned software maintenance/upgrade notifications to customers are handled. Include timing of notices.

7.2.3 Explain client notifications and what user experiences when they try to access a system that is unavailable due to a scheduled outage.

7.3 Provide statistics related to uptime (system availability) per month for the last year and since inception.

RFCSP ATTACHMENT B
PROPOSED SOLUTION

Introduction

The information to be included in this section is focused on the proposed solution. Specific details on infrastructure, system components, integration attributes are topics addressed in this section.

In addition to responding to specific topics within this Proposed Plan inquiry, respondents must complete the "Business Functional Requirements" electronic form

Vendor proposals must be formatted and labeled according to the layout of this document. The proposal Section must be labeled "Proposed Solution". When responding to "1 – Solution Information", Section 1.1, the proposal should include this heading (1.1) to clearly identify the response in the proposal with the RFCSP numbering schema below. Failure to follow this format may result in vital information not being considered when reviewing the proposal.

1 Solution Information:

1.1 Identify all software, 3rd party utilities, add-on's, that are incorporated into the overall proposed solution. Responses should include Vendor Name, utility/software/hardware version. Indicate whether items listed here require a one-time fee and/or re-occurring fees.

1.1.1 GIS
1.1.2 Turn-by-Turn navigation GIS system
1.1.3 Route optimization engine

1.2 Identify any limitations that may exist related to volume of transactions, storage capacity, and active users. If limitations are financially based make sure to include these potential fees in the Cost Proposal form (**Attachment G – Cost Proposal**).

1.2.1 If applicable, clarify if there are any solution components that may differ between Enterprise and/or Departmental solutions.

1.3 Describe any unique and/or innovative functionality and/or deployment methods that respondent may offer. Indicate whether these features are included as part of the proposal and if costs are included.

1.4 List standard reports, charts, graphs, etc. that is included in the proposed solution.

1.4.1 Include examples as attachments within the submitted proposal
1.4.1.1 Management Reports
1.4.1.2 Field Inspectors AVL tracking map
1.4.1.3 Route deviation alerts
1.4.1.4 Extended time at inspection site.
1.4.1.4.1How does management control time on site threshold?

1.4.2 Describe the process on how data is extracted from the proposed solution for consumption by City of San Antonio.

1.4.3 Identify any costs associated with customer database access and/or exporting data from the database. Clarify if costs are on a per access basis, volume, time period, etc. Include any related costs in **Attachment G "Cost Proposal".**

1.4.4 Identify costs associated for creation of custom reports in **Attachment G – Cost Proposal**.

2 Customer Notification Function:

2.1 Describe software components that are used to send notifications to customers. Notifications indicating customers position in the queue.

2.2 Describe what triggers a notification to be sent to the customer

2.2.1 Is it based on user entry, route point geofencing, combination of both

3 Route Optimization Function:

3.1 Describe the process in determining the most efficient route.

3.2 Describe how system will handle multiple route points. In other words, if the interface file includes address and X/Y coordinates, how does it handle one of the values being blank?

3.2.1 Describe how system will prioritize which value to use – Address vs x/y coordinate.

3.3 Provide some time estimates for processing routes. What is an estimated amount of time for processing 50 inspectors with 10 route points per inspector? Assume

3.3.1 That all records have correct required information

3.3.2 50% of the records have a valid address

3.3.3 50% of the records have an unidentifiable address, yet valid x/y coordinates

3.4 Describe how system handles priorities for inspection points.

4 External System Integration:

4.1 Describe external system interface to import inspection queues by inspectors.

4.1.1 Describe vendor responsibilities

4.1.2 Describe customer responsibilities

4.1.3 Provide specifications for interface file.

4.1.3.1 Does integration allow use of an ASCII Text File?

4.1.3.2 Does integration allow use of Standard XML file format?

4.1.3.3 Indicate whether integration file must be Fixed Length, Delimited or either.

4.1.3.3.1 List/identify valid delimiters that may be used

4.1.4 Describe any limitations to interface file

4.1.4.1 Limitations in length of file

4.1.4.2 Limitations on number of fields

4.1.4.3 Limitations on field length

4.2 Describe how changes to route optimization parameters are handled for conditions listed below. Including description of how field devices/inspectors are updated with changes. Do all field devices get updated or only those that have changed.

4.2.1 Cancelled route points (inspections)

4.2.2 Priority changes

4.2.3 Inspector inspection assignment changes

4.2.4 Change in route start point

4.3 Validate that integration solution is portable to another source system should the existing permitting and inspection system by replaced by another system.

5 Describe Backup and Restore Strategy.

5.1 Describe Backup and Restore strategy.

5.2 What is the estimated time for recovery should the system database become damaged., description of fault tolerance environment, etc.

CITY HOSTED SOLUTION SPECIFIC

6 System Architecture

6.1 Submit comprehensive System Architecture Diagram(s) - Production and Non-Production environments. Diagrams must include:

6.1.1 Hardware Requirements

6.1.2 Software Requirements

6.1.2.1 Server Operating System and version

6.1.2.2 Database and version

6.1.2.2.1 Storage Requirements
6.1.2.2.1.1 1st 6 months
6.1.2.2.1.2 2nd 6 months
6.1.2.3 Proposed solution software components with versions
6.1.2.3.1 Indicate whether component is vendor owned or 3rd Party (OEM)
6.1.3 Subscription Requirements
6.1.4 Connectivity Requirements
6.1.4.1 Firewall Rules
6.1.4.2 Identify where system communications are initiated and received.
6.1.5 External System interface
6.1.5.1 Interface file location – FTP, Shared Server Drive, Support Web Service or all?
6.1.6 Mobile Devices
6.1.6.1 List all potential Operating Systems / Devices that are supported

6.2 Verify if proposed solution is deployable in a virtual server environment.
6.2.1 Describe proposed deployment plan
6.2.1.1 Vendor deliver VM Image with system to be copied into client VM farm
6.2.1.2 Vendor to perform system installation on client provided VM instance
6.2.1.3 Supported VMWare version(s)

6.3 Identify licensing required by client for deployment of solution
6.3.1 OS License
6.3.2 Database License
6.3.3 Other

6.4 Validate that proposed solution includes plan and cost for the deployment on a non-production instance of the system.

6.5 Identify & describe any components that must be deployed outside of the City's managed datacenter environment.

7 Security & Privacy:

7.1 Validate that presentation & application services reside on separate server from the data servers.

8 Compliance

8.1 Identify any components within the proposed solution that does not meet CoSA Technology standards (Attachment 5)

VENDOR HOSTED SOLUTION SPECIFIC

6 System Architecture

6.1 Describe hardware/software requirements for inspector/vehicle AVL tracking solution for mobile devices. Proposal should include architecture diagrams showing connectivity between client mobile devices and vendor hosted infrastructure.
6.1.1 Hardware Requirements
6.1.2 Software Requirements
6.1.3 Subscription Requirements
6.1.4 Connectivity Requirements
6.1.4.1 Firewall Rules
6.1.4.2 Identify where system communications are initiated and received.
6.1.5 External System interface
6.1.5.1 Interface file location – FTP, Shared Drive, other?
6.1.6 Mobile Devices
6.1.6.1 List all potential Operating Systems / Devices that are supported

7 Security & Privacy:

7.1 Describe access management controls used by solution.

7.2 Describe secure communication for all access, integration, and data transfer including the level of security/monitoring that is in place for firewalls, intrusion detection, data encryption, SSL and application security, etc.

7.3 Describe and provide Privacy Policy to include handling of customer data to 3rd parties, usage by service provider and non-customer access to customer data.

7.4 Clarify that customer will have read access to application database.

- 7.4.1 Describe the process to access database if real on-demand access is not an option
- 7.4.2 Indicate that customer can export data at will or if it must be requested
  - 7.4.2.1 If data extract must be requested, indicate turnaround time
- 7.4.3 Indicate if there are any limitations to customer data being accessible to customer
  - 7.4.3.1 Audit logs
  - 7.4.3.2 Current vs historical data

7.5 Provide information on accredited independent auditor assessment of vendor controls program (i.e. SSAE 16 SOC 1 Type II, SOC 2 Type II, ISO 27001 certification)

8 Hosting Site Information

8.1 Clarify if vendor proposing solution uses 3rd party hosting services or if vendor manages their own datacenters.

8.2 Describe the geographical layout of where data centers (primary & backup) are located, including network topology that connects multiple sites.

9 Backup & Disaster Recovery:

9.1 Describe your disaster recovery plan.

- 9.1.1 Indicate when the last time the plan was tested along with the results.

RFCSP ATTACHMENT C

RESPONDENT QUESTIONNAIRE

1. **Respondent Information:** Provide the following information regarding the Respondent.
(NOTE: Co-Respondents are two or more entities proposing as a team or joint venture with each signing the contract, if awarded. Sub-contractors are not Co-Respondents and should not be identified here. If this proposal includes Co-Respondents, provide the required information in this Item #1 for each Co-Respondent by copying and inserting an additional block(s) before Item #2.)

Respondent Name: _____
(NOTE: Give exact legal name as it will appear on the contract, if awarded.)

Principal Address: _____

City: _____ State: _____ Zip Code: _____

Telephone No. _____ Fax No: _____

Website address: _____

Year established: _____

Provide the number of years in business under present name: _____

Social Security Number or Federal Employer Identification Number: _____

Texas Comptroller's Taxpayer Number, if applicable: _____
(NOTE: This 11-digit number is sometimes referred to as the Comptroller's TIN or TID.)

DUNS NUMBER: _____

Business Structure: Check the box that indicates the business structure of the Respondent.

___Individual or Sole Proprietorship If checked, list Assumed Name, if any: _____
___ Partnership
___Corporation If checked, check one: ___For-Profit ___ Nonprofit
Also, check one: ___Domestic ___Foreign
___Other If checked, list business structure: _____

Printed Name of Contract Signatory: _____
Job Title: _____

(NOTE: This RFCSP solicits proposals to provide services under a contract which has been identified as "High Profile". Therefore, Respondent must provide the name of person that will sign the contract for the Respondent, if awarded.)

Provide any other names under which Respondent has operated within the last 10 years and length of time under for each:

_____
_____
_____

Provide address of office from which this project would be managed:
City: _____ State: _____ Zip Code: _____

Telephone No. _____ Fax No: _____

Annual Revenue: $_____

Total Number of Employees: _____

Total Number of Current Clients/Customers: _____

Briefly describe other lines of business that the company is directly or indirectly affiliated with:

_____

_____

_____

List Related Companies:

_____

_____

_____

2. **Contact Information:** List the one person who the City may contact concerning your proposal or setting dates for meetings.

Name: _____ Title: _____

Address: _____

City: _____State: _____Zip Code: _____

Telephone No._____ Fax No: _____

Email: _____

3. Does Respondent anticipate any mergers, transfer of organization ownership, management reorganization, or departure of key personnel within the next twelve (12) months?

Yes ___ No ___

4. Is Respondent authorized and/or licensed to do business in Texas?

Yes ___ No ___ If "Yes", list authorizations/licenses.

_____

_____

5. Where is the Respondent's corporate headquarters located? _____

6. **Local/County Operation**: Does the Respondent have an office located in San Antonio, Texas?

Yes ___ No ___ If "Yes", respond to a and b below:

a. How long has the Respondent conducted business from its San Antonio office?

Years _____ Months_____

b. State the number of full-time employees at the San Antonio office.

If "No", indicate if Respondent has an office located within Bexar County, Texas:

Yes ___ No ___ If "Yes", respond to c and d below:

c. How long has the Respondent conducted business from its Bexar County office?

Years _____ Months_____

d. State the number of full-time employees at the Bexar County office. _____

7. **Debarment/Suspension Information**: Has the Respondent or any of its principals been debarred or suspended from contracting with any public entity?

   Yes ___ No ___ If "Yes", identify the public entity and the name and current phone number of a representative of the public entity familiar with the debarment or suspension, and state the reason for or circumstances surrounding the debarment or suspension, including but not limited to the period of time for such debarment or suspension.

   _____

   _____

8. **Surety Information**: Has the Respondent ever had a bond or surety canceled or forfeited?

   Yes ___ No ___ If "Yes", state the name of the bonding company, date, amount of bond and reason for such cancellation or forfeiture.

   _____

   _____

9. **Bankruptcy Information**: Has the Respondent ever been declared bankrupt or filed for protection from creditors under state or federal proceedings?

   Yes ___ No ___ If "Yes", state the date, court, jurisdiction, cause number, amount of liabilities and amount of assets.

   _____

   _____

10. **Disciplinary Action:** Has the Respondent ever received any disciplinary action, or any pending disciplinary action, from any regulatory bodies or professional organizations? If "Yes", state the name of the regulatory body or professional organization, date and reason for disciplinary or impending disciplinary action.

    _____

    _____

11. **Previous Contracts:**

    a. Has the Respondent ever failed to complete any contract awarded?

       Yes ___ No ___ If "Yes", state the name of the organization contracted with, services contracted, date, contract amount and reason for failing to complete the contract.

       _____

       _____

    b. Has any officer or partner proposed for this assignment ever been an officer or partner of some other organization that failed to complete a contract?
       Yes ___ No ___ If "Yes", state the name of the individual, organization contracted with, services contracted, date, contract amount and reason for failing to complete the contract.

       _____

       _____

c. Has any officer or partner proposed for this assignment ever failed to complete a contract handled in his or her own name?

Yes ___ No ___ If "Yes", state the name of the individual, organization contracted with, services contracted, date, contract amount and reason for failing to complete the contract.

_____

_____

REFERENCES

Provide three (3) references, that Respondent has provided services to within the past three (3) years. The contact person named should be familiar with the day-to-day management of the contract and be willing to respond to questions regarding the type, level, and quality of service provided.

Reference No. 1:

Firm/Company Name _____

Contact Name: _____ Title: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone No. _____ Fax No: _____

Date and Type of Service(s) Provided: _____

_____

Reference No. 2:

Firm/Company Name _____

Contact Name: _____ Title: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone No. _____ Fax No: _____

Date and Type of Service(s) Provided: _____

_____

Reference No. 3:

Firm/Company Name _____

Contact Name: _____ Title: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone No. _____ Fax No: _____

Date and Type of Service(s) Provided: _____

_____

EXPERIENCE, BACKGROUND, QUALIFICATIONS

Prepare and submit narrative responses to address the following items. If Respondent is proposing as a team or joint venture, provide the same information for each member of the team or joint venture.

1. Describe Respondent's experience relevant to the Scope of Services requested by this RFCSP. List and describe three relevant projects of similar size and scope performed over the past four years. Identify associated results or impacts of the project/work performed.

2. Indicate the number of years Respondent has been in the business of providing *Inspector Route Optimization solutions*, respectively. Indicate if this is the Respondent's primary line of business. If not, state the Respondent's primary line of business.

3. List all *Route Optimization* projects that the Respondent has completed in the last four years.

4. List all *Route Optimization* projects that Respondent has in progress as of the proposal due date. For each project listed, give the target date of completion, and the contact name, phone number, and email address for the project manager.

5. Describe Respondent's specific experience with public entities clients, especially large municipalities or authorities. If Respondent has provided services for the City in the past, identify the name of the project and the department for which Respondent provided those services.

6. If Respondent is proposing as a team or joint venture or has included sub-contractors, describe the rationale for selecting the team and the extent to which the team, joint ventures and/or sub-contractors have worked together in the past.

7. Provide an organizational chart showing how the Respondent proposes to staff the project. For each position reflected on the organizational chart:

   a. Identify each individual's relationship with the respondents organization – employee, contractor, 3rd party service/software provider

   b. Identify the number and professional qualifications (to include licenses, certifications, associations)

   c. Identify relevant experience on projects of similar size and scope

   d. State the primary work assignment and the percentage of time to be devoted to the project.

   e. Identify the length of service individual has been employed by the respondent's organization

   f. Provide resumes as an appendix to submitted proposal

8. Describe the company's support organization and volume of support inquiries managed per month over the past 2 years.

9. List the number of customers currently using proposed solution. Include company name, type of business, city & state.

10. List at least 3 references for customers which respondent has recently been engaged with on similar projects. Include company name, type of business, city & state. Describe high level business function delivered as part of the project.

11. What percentage of existing customers are current with their annual support contract?

13. Indicate if respondent has had any experience with the Hansen permitting system.

RFCSP ATTACHMENT D
BUSINESS FUNCTIONS' REQUIREMENTS

Posted as a separate document

RFCSP ATTACHMENT E

DISCRETIONARY CONTRACTS DISCLOSURE FORM

Discretionary Contracts Disclosure Form may be downloaded at
https://www.sanantonio.gov/eforms/atty/DiscretionaryContractsDisclosure.pdf.

Instructions for completing the Discretionary Contracts Disclosure form are listed below:

1. Download form and complete all fields. Note: All fields must be completed prior to submitting the form.

2. Click on the "Print" button and place the copy in proposal response as indicated in the Proposal Checklist.

RFCSP ATTACHMENT F

LITIGATION DISCLOSURE FORM

Respond to each of the questions below by checking the appropriate box. Failure to fully and truthfully disclose the information required by this Litigation Disclosure form may result in the disqualification of your proposal from consideration or termination of the contract, once awarded.

Have you or any member of your Firm or Team to be assigned to this engagement ever been indicted or convicted of a felony or misdemeanor greater than a Class C in the last five (5) years?

Yes ___ No ___

Have you or any member of your Firm or Team to be assigned to this engagement been terminated (for cause or otherwise) from any work being performed for the City of San Antonio or any other Federal, State or Local Government, or Private Entity?

Yes ___ No ___

Have you or any member of your Firm or Team to be assigned to this engagement been involved in any claim or litigation with the City of San Antonio or any other Federal, State or Local Government, or Private Entity during the last ten (10) years?

Yes ___ No ___

If you have answered "Yes" to any of the above questions, please indicate the name(s) of the person(s), the nature, and the status and/or outcome of the information, indictment, conviction, termination, claim or litigation, as applicable. Any such information should be provided on a separate page, attached to this form and submitted with your proposal.

RFCSP ATTACHMENT G

PRICING SCHEDULE

Posted as a separate document

RFCSP ATTACHMENT H

SIGNATURE PAGE

Respondent, and co-respondent, if any, must complete City's Certified Vendor Registration (CVR) Form prior to the due date for submission of proposals. The CVR Form may be accessed at: http://www.sanantonio.gov/purchasing/.

By submitting a proposal, whether electronically or by paper, Respondent represents that:

If awarded a contract in response to this RFCSP, Respondent will be able and willing to execute a contract based upon the terms and conditions set forth in the RFCSP.

If Respondent is a corporation, Respondent will be required to provide a certified copy of the resolution evidencing authority to enter into the contract, if other than an officer will be signing the contract.

If awarded a contract in response to this RFCSP, Respondent will be able and willing to comply with the insurance and indemnification requirements set out in RFCSP Exhibits 1 & 2.

If awarded a contract in response to this RFCSP, Respondent will be able and willing to comply with all representations made by Respondent in Respondent's proposal and during Proposal process.

Respondent has fully and truthfully submitted a Litigation Disclosure form with the understanding that failure to disclose the required information may result in disqualification of proposal from consideration.

Respondent agrees to fully and truthfully submit the Respondent Questionnaire form and understands that failure to fully disclose requested information may result in disqualification of proposal from consideration or termination of contract, once awarded.

To comply with the City's Ethics Code, particularly Section 2-61 that prohibits a person or entity seeking a City contract - or any other person acting on behalf of such a person or entity - from contacting City officials or their staff prior to the time such contract is posted as a City Council agenda item.

(S)he is authorized to submit this proposal on behalf of the entity.

Complete the following and sign on the signature line below. Failure to sign and submit this Signature Page will result in rejection of your proposal.

_____
Respondent Entity Name

Signature: _____

Printed Name: _____

Title: _____

(NOTE: If proposal is submitted by Co-Respondents, an authorized signature from a representative of each Co-Respondent is required. Add additional signature blocks as required.)

_____
Co-Respondent Entity Name

Signature: _____

Printed Name: _____

Title: _____

RFCSP ATTACHMENT I

PROPOSAL CHECKLIST

Use this checklist to ensure that all required documents have been included in the proposal and appear in the correct order.

Document	Initial to Indicate Document is Attached to Proposal
Table of Contents	
Proposed Plan RFCSP Attachment A	
Proposed Solution RFCSP Attachment B	
Respondent Questionnaire RFCSP Attachment C	
Business Functions' Requirement RFCSP Attachment D	
Discretionary Contracts Disclosure form RFCSP Attachment E	
Litigation Disclosure RFCSP Attachment F	
Pricing Schedule RFCSP Attachment G	
*Signature Page RFCSP Attachment H	
Proposal Checklist RFCSP Attachment I	
Proof of Insurability (See RFCSP Exhibit 1) Insurance Provider's Letter Copy of Current Certificate of Insurance	
Financial Information	
One (1) Original, ten (10) copies and one (1) CD of entire proposal in PDF format if submitting in hard copy.	

*Documents marked with an asterisk on this checklist require a signature. Be sure they are signed prior to submittal of proposal.

This Exhibit marked confidential, printed copy must be included in final signed version.

Exhibit C

City of San Antonio
INSPECTOR ROUTE OPTIMIZATION

RFCSP NO. 6100002909

Version 1.2 – 2014-03-17

Statement of Work

Document Control Log

Date	Contributor	Description	Ver
2/6	APEX	1st Draft	0.1
2/6	Barrera	Distributed to team for review	0.1
2/10	Barrera	Redlined document w/track changes / distributed to team **Requests**: 1. Pelkmann – Architecture Diagram Template for APEX 2. Ostlund – Review & update Hansen Integration Specifications Document	0.2
2/10	Moore	Feedback based on Requirements Traceability matrix embedded as comments	0.3
2/10	Hettrick, Harris	Reference SOW Review Sec 2.1.1 – Updated COSA Resources	0.3
2/10	Ostlund	2.3.1: Flat File as opposed to API Comments embedded in document below	0.4
2/18	Barrera	Submitted to APEX for review	0.4
2/19	APEX	Reviewed SOW comments embedded as track changes	0.4
2/19	Barrera, APEX	Discussion – SOW comments embedded as track changes Distributed to SOW Review Team via link in SOW Development meetings	0.5
2/24	Business & Tech Review	Comments and updates embedded in document	0.6
2/25	Barrera	Redlined SOW sent to APEX and distributed to Review Team	0.6
2/25	Moore	Business Requirements Traceability matrix	
2/26	Apex	Reviewed SOW comments embedded as track changes	0.7
2/27	Apex	Reviewed SOW comments embedded as track changes	0.8
3/3	Apex	Reviewed SOW comments embedded as track changes	0.8.1
3/6	Apex	Reviewed SOW comments embedded as track changes	0.9
3/10	Barrera	Applied some formatting changes to SDLC section and distributed to Review Team for feedback	0.9
3/12	COSA Meeting	SOW & Supportive Documents Review (Reference Meeting Minutes)	0.9
3/13	Barrera	SOW Updates with Track Changes Distributed to Review Team for final review Pending Hansen Integration meeting Friday, March 15 – results to update Hansen Integration	1.0
3/14	Barrera / Estrada	Changed UAD's to UAP's (Prototype vs Demo) Added Appendix B & E, Glossary	1.1
3/17	Barrera	Accepted all tracked changes "DRAFT" Watermark removed	1.2
3/17	Ostlund, APEX, Barrera, Bustos	Updated Appendix D – Hansen Integration Specifications	1.2
3/17	Barrera	FINAL SOW distributed to Review Team & Legal for Contract inclusion	1.2

Review Team

COSA: Gilbert Barrera, Caesar Bustos, Michael Constantino, Jim Flood, Kevin Goodwin, Marshall Harris, James Hettrick, Kevin Holmes, Terry Kannawin, Jonathan Kaplan, Caryn Moore, Bart Mulcahy, Dee Ostlund, Klaus Pelkmann, Patrick Poloskey, Michael Shannon

APEX: Sam Fayez, Ahmed El-Nashar, Brittany Villalard

2/24 Business Review – Gilbert Barrera, Caryn Moore, James Flood, Patrick Poloskey, Michael Constantino

2/24 Technical Review – Kevin Holmes, Kevin Goodwin, Caryn Moore, Gilbert Barrera

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1 Definitions

Productivity Apex, Inc. (PAI) is uniquely positioned to undertake and successfully complete this project. PAI's core team possesses a large base of experience and knowledge in the theory and practice of the products and services requested, and has improved our clients operations and performance. Also, we contributed to the body of knowledge through publications and conference presentations. In particular, PAI team has extensive experience in all the areas required:

- Project Management
- Industrial Engineering
- Transportation
- Simulation Modeling and Analysis
- Operations Research
- Process and Operations Optimization
- Business Process Reengineering
- Data Mining and Artificial Intelligence
- Software Development
    - Desktop Applications
    - Web-based Applications
    - Mobile device Application

Founded in 2001, PAI is a United States technical research, development, and consulting firm dedicated to increasing productivity and efficiency. Our team offers a wide range of technical and consulting services in systems simulation modeling, analysis, optimization, and data mining. PAI's core team possesses a large base of knowledge in the theory and practice of each of our services, and has collectively contributed to the body of knowledge through publications and conference presentations. We use a disciplined and documented methodology that creates superior products, sound analysis, and customized solutions. We emphasize collaboration with our clients, placing a high premium on superior solutions, services, and deliverables. We are able to deliver a consistently high level of performance because our dedicated team of scientists, engineers, and business professionals adhere to a rigorous process of scientific discipline in our applied research and development efforts in addition to our high levels of service and customer satisfaction.

PAI has successfully completed numerous projects in modeling, optimization, simulation, and analysis for both public and private sector clients over a wide range of domains. Whether it is modeling space vehicle hardware processing flows, policies and procedures, optimizing freight flow, passenger flow through an airport terminal, patient flow through a hospital, a food processing line, product flow within a manufacturing plant, or guest experience through a theme park, our clients use our simulation modeling, analysis, and optimization expertise to improve their performance and level of service. Reference clients in this domain include NASA, Department of Defense, Department of Transportation, U.S. Federal Highway Administration, U.S. Federal Motor Carrier Safety Administration, Lockheed Martin Corporation, Greater Orlando Aviation Authority, The Boeing Company, Walt Disney Company, Universal Studios, and Marriott Vacation Club International.

We use a structured approach and project management best practices in all of our efforts to achieve project objectives. Our initial focus is to quickly gain a thorough understanding of our clients' domain, processes, organizational structure, and policies and procedures. During this phase, the team captures the current system processes, i.e. the "As-Is", through customer interviews, meetings, observation, document reviews, databases queries, etc. The result of this initial step is documented in a process and workflow map. We also capture comments and concerns from the customer's team regarding their processes and tasks. Our team then collects pertinent data and performs analysis of the current state using a suite of analysis techniques that is tailored to fit the system under study and the objectives of the project. Examples of these techniques include, but are not limited to, process modeling and simulation, lean principles, best practices comparisons and gap analysis, mathematical modeling, data mining, and statistical data analysis. These analysis methodologies enable our team to identify inefficiencies and their root causes and to propose opportunities for optimization through workflow modifications and reengineered processes that will lead to improved performance.

2 Project Management:

2.1 Software Development Life Cycle (SDLC) - Requirements and Responsibilities

The following identifies the platforms and responsibilities for the software development life cycle. This SDLC must be applied to each User Acceptance Prototype (UAP) and User Acceptance Test (UAT) defined in Section 2.2.2 Milestones.

Project Team Roles:

ADL: COSA IT GIS Application Lead; this includes Application Development as it applies to Hansen Integration
BA: COSA IT PMO Business Analyst
PM: COSA IT PMO Project Manager
SME: COSA DSD Business Subject Matter expert

1. **Requirements Analysis**
   1.1. Vendor responsible to create, review and finalize requirements documentation with SME's
      1.1.1. Deliverables:
         1.1.1.1. Detail Business Requirements Document

   1.2. BA responsible to review requirements and secure approvals
      1.2.1. Deliverables:
         1.2.1.1. Signed Detail Business Requirements Document in Project Library

2. **Application Design Documentation**
   2.1. Vendor Responsible to create application design specifications
      2.1.1. Application Development Specifications Documents
         - User Interface – Visual & Content Design
         - Functions
         - Security/Access Controls
         - Navigation

- Help Aides
- Data entry integrity controls (required, optional, dependencies, values control, look up validation, conditional entries, etc)

2.1.2. Application Architecture Diagram including systems requirements

2.1.3. Infrastructure Architecture Diagram in collaboration with IT Architect.
- As needed to account for any firewall rules and/or additional systems architecture components

2.1.4. System Security Plan (as applicable)
2.1.5. User Roles & Responsibilities

2.2. ADL responsible to review and secure IT approvals. Deliverable: Signed Detail Application Development Specifications Document in Project Library

3. Development (Development Environment)

3.1. Vendor responsible to develop software code.
3.1.1. Vendor responsible to include documentation of functions embedded in software code as agreed upon between vendor and ADL.
3.1.2. Deliverables - Signed Detail Application Development Specifications Document

3.2. Vendor responsible to document release deliverables and script for porting release to the QA environment.

3.3. Vendor responsible to develop systems/integration test scripts according to agreed upon standards between vendor and ADL.
3.3.1. Vendor responsible to incorporate previous release test scripts to assure quality regression testing.

3.4. ADL to review and secure IT approval for deliverables in items 3.1, 3.2 & 3.3

3.5. Vendor responsible to develop the following deliverables:
3.5.1. User Guide
3.5.2. Admin Guide

3.6. SME & ADL responsible for 3.5 deliverables review & Approval

4. Systems/Integration Testing (QA Environment)

4.1. ADL responsible to execute the script to port release deliverables into the QA environment.

4.2. Vendor responsible to execute systems/integration test and report results to ADL/PM/BA.
4.2.1. Test results report must include list of defects discovered during testing. Agreed upon Excel table.
4.2.2. Vendor is responsible to maintain defects list, status updates

4.3. **MILESTONE** - ADL responsible for Go/No-Go Decision - QA readiness for UAT
4.3.1. **GO Decision** – Proceed with Step 5 "QA-UAT"

4.3.2. **NO-GO** – Repeat Steps 3 – 4

5. **User Acceptance Prototype / Testing (QA Environment)**
   5.1. Vendor responsible to create UAP Affidavit / UAT scripts in collaboration with business SME's & BA
      5.1.1. Requirements Traceability Matrix (RTM)
      5.1.2. Regression Testing
      5.1.3. UAP Affidavit
      5.1.4. UAT Script (reference Appendix B for example of test script)

   5.2. Vendor responsible to develop new release training material and conduct training for business SME's.
      5.2.1. SME responsible to review/approve training content and schedule

   5.3. BA responsible to review UAP affidavit /UAT scripts, RTM and secure approvals
   5.4. BA responsible to schedule and conduct UAT, record results and publish defects to Project Team.
      5.4.1. SME's responsible to execute UAP Affidavit / UAT scripts

   5.5. Vendor responsible to review defects reported from UAT and produce resolution report.

   5.6. Milestone – SME's responsible for Go/No-Go Decision – PROD readiness
      5.6.1. BA conducts team review meeting immediately after UAT.
         5.6.1.1. Review recorded Defects
            5.6.1.1.1. Categorize & Prioritize
            5.6.1.1.2. Determine if any defects can be pushed to next release
         5.6.1.2. Secure Formal Business Acceptance
            5.6.1.2.1. **GO Decision** – Proceed with Step 5.7 "Training" & 6 "Production Deployment"
            5.6.1.2.2. **NO-GO** – Repeat Steps 3 – 5

   5.7. Vendor responsible to conduct training for SME's & Systems Admin
      5.7.1. BA responsible to reserve training facility, required equipment and schedule training
      5.7.2. SME responsible for providing mobile equipment necessary for training

6. **Production Deployment (PROD Environment)**
   6.1. Vendor responsible to develop production deployment plan.
   6.2. Vendor responsible to document deliverables and script for porting release to the production environment.
   6.3. Vendor responsible to document back out plan.
   6.4. Vendor responsible to create Production Validation Scenarios
      6.4.1. To include end-to-end application testing

   6.5. ADL responsible to review and secure approval for deliverables 6.1 thru 6.3
   6.6. BA responsible to review and secure approval for deliverable 6.4
   6.7. ADL responsible to port release to Production environment using release deliverables/script documentation

6.7.1. ADL validates with SME that training (Step 5.7) has been completed and that no issues were discovered prior to executing the Production deployment.

6.7.2. ADL responsible to track gaps on Production deployment scripts and update documentation.

6.8. BA responsible to schedule and conduct Production Validation Scenarios, record results and publish defects to Project Team.

6.8.1. SME's responsible to execute Production Validation Script

6.9. Vendor responsible to review defects reported from Production Validation Scenarios and produce resolution report.

6.10. Milestone – SME's responsible for Go/No-Go Decision

6.10.1. BA conducts team review meeting immediately after Production Validation Scenarios.

6.10.1.1. Review recorded Defects

6.10.1.1.1. Categorize & Prioritize

6.10.1.1.2. Determine if any defects can be pushed to next release

6.10.1.2. Secure Formal Business Acceptance

6.10.1.2.1. **GO Decision** – Proceed with Step 7 "Warranty Period"

6.10.1.2.2. **NO-GO** – Repeat Steps 3 – 6

7. Warranty Period

7.1. Project team responsible to comply with approved Post-Production SLA

8. Maintenance & Support

8.1. Project Team responsible to comply with approved Maintenance & Support SLA

2.2 Project Management Plan

The project management plan presented herein by PAI provides a broad view of the tasks that will be performed during the execution of the project. However, once the project starts, our team will conduct a detailed review and update of the plan, in order to execute, monitor, control, and close the project. The objective of the project management plan is to document the steps necessary to integrate and coordinate all subsidiary plans in one comprehensive document, serving as the primary source of data and information about the project.

The Work Breakdown Structure (WBS) presented in this proposal overviews the project effort and deliverables in smaller, more manageable, tasks and activities. Prior to starting the project APEX and COSA will collaborate on WBS and schedule to assure resource allocations are solidified to execute the plan. Once the project starts, the proposed WBS will be updated and reviewed together with the project schedule, although dates and period of performance are not expected to change drastically.

Please see Appendix A for detailed project schedule. Upon contract execution, project schedule will be revisited to fine tune sub-deliverables and named resource assignments.

2.2.1 Project Required Resources

The following table presents the team members for this project. References to "TBD by Resource Manager" will be solidified by Council approved contract date.

APEX

Name	Role
Mansooreh Mollaghasemi	Program Manager
Sam Fayez	Project Manager/Senior Industrial Engineer
Ahmed El-Nashar	Operations Research Scientist
Fabio Zavagnini	Operations Research Analyst
Alex Hijab	Lead Software Developer
Bryan Rosander	Software Developer
Brittany Villalard	Technical Outreach & Quality Control

COSA

Name	Role
Kevin Goodwin	Technology Strategy
Gilbert Barrera	Project Manager
Caryn Moore	Business Analyst
Kevin Holmes	GIS Sr. Manager
TBD by Resource Manager	GIS Analyst
Dee Ostlund	Sr. IT Manager, Enterprise Applications
Kelly Hargis	Hansen Technical Specialist
Caesar Bustos	Applications Solutions Supervisor
TBD by Resource Manager	Applications Development Specialist
TBD by Resource Manager	Systems Architect
TBD by Resource Manager	Computing Systems Analyst
TBD by Resource Manager	Network Analyst
TBD by Resource Manager	Database Analyst
TBD by Resource Manager	Customer Service

BUSINESS

Name	Role
Patrick Poloskey	Field Services Manager
Michael Constantino	Field Services Manager
Kathy Quinones	Communications
James Flood	Business Technology Oversight
Michael Shannon	Product Acceptance Sign-Off
TBD by Resource Manager	UAP/UAT Field Inspector
TBD by Resource Manager	UAP/UAT Field Inspector
TBD by Resource Manager	UAP/UAT Field Inspector
TBD by Resource Manager	UAP/UAT Field Inspector
TBD by Resource Manager	UAP/UAT Field Inspector
TBD by Resource Manager	UAP/UAT Supervisor
TBD by Resource Manager	UAP/UAT Supervisor

2.2.2 Project Milestones

The following table presents the expected milestones for this project, their required resources and the project's percentage of planned completion dates based on Contract Signed Date (CSD).

WBS	Task Name	CSD + weeks	Resource Role -APEX	Resource Role - COSA
2.3	Submit Updated Project Management Plan	2	Project Manager/Senior Industrial Engineer, Operations Research Analyst	Project manager
3.7.3	Deliver Final business process diagram to stakeholders	6	Operations Research Analyst	DSD SME
4.1.5	Deliver approved Analysis Requirements Document to stakeholders	9	Lead Software Developer, Operations Research Analyst	DSD SME; ITSD ADL; ITSD BA
4.2.4	Deliver Final Updated System Architecture to stakeholders	11	Lead Software Developer, Operations Research Analyst	ITSD Architect
5.1.6	Conduct UAP for system Interface Prototype	23	Project Manager/Senior Industrial Engineer, Operations Research Analyst	DSD SME's; ITSD ADL; ITSD BA
5.2.4	Conduct UAP for integrating system interface with the optimization algorithm	31	Project Manager/Senior Industrial Engineer, Operations Research Analyst	DSD SME's; ITSD ADL; ITSD BA
5.3.6	Conduct UAP for Mobile Application Prototype	27	Project Manager/Senior Industrial Engineer, Operations Research Analyst	DSD SME's; ITSD ADL; ITSD BA
6.3.3	Conduct UAT for Final System Application to stakeholders	36	Operations Research Analyst, Lead Software Developer	DSD SME's; ITSD ADL; ITSD BA
6.3.4.1	Train Supervisors and Managers on System capabilities	37	Operations Research Analyst	DSD SME's; ITSD ADL; ITSD BA
6.3.4.2	Train Inspectors on System capabilities	37	Operations Research Analyst	DSD SME's
6.3.4.3	Train System Administrators	37	Lead Software Developer	DSD SME; ITSD ADL
6.4	Deliver Executable for Final Application (integrated with current system) to stakeholders	37	Lead Software Developer	ITSD ADL
6.5	Deliver Source Code of Final Application to stakeholders	37	Lead Software Developer, Software Developer	ITSD ADL
7.2	System Roll-Out	38	Lead Software Developer	DSD SME's; ITSD ADL; ITSD BA

COSA resources to be assigned by contract date
ITSD SME, ITSD ADL resource roles may include 1 to many resources

2.2.3 Project Deliverables

The following table presents the list of deliverables for this project.

WBS	Task Name	CSD + weeks
2.3	Submit Updated Project Management Plan	2
3.7.3	Deliver Final business process diagram to stakeholders	6
4.1.5	Deliver approved Analysis Requirements Document to stakeholders	9
4.2.4	Deliver Final Updated System Architecture to stakeholders	11
5.1.6	Conduct UAP for system Interface Prototype	23
5.2.4	Conduct UAP for integrating system interface with the optimization algorithm	31
5.3.6	Conduct UAP for Mobile Application Prototype	27
6.3.3	Conduct UAT for Final System Application to stakeholders	36
6.3.4.1	Train Supervisors and Managers on System capabilities	37
6.3.4.2	Train Inspectors on System capabilities	37
6.3.4.3	Train System Administrators	37
6.4	Deliver Executable for Final Application (integrated with current system) to stakeholders	37
6.5	Deliver Source Code of Final Application to stakeholders	37
6.6	Deliver Installation Documentation and User Guide to Stakeholders	38

2.2.4 Travel Requirements

Travel will be scheduled according to the client's availability and project requirements. All trips are intended to be scheduled according to the project plan; however, confirmation will be provided no later than two weeks prior to travel. Any travel arrangements or preparations will be conveyed accordingly, if deemed required. All travel expenses are inclusive in proposed project cost submitted in response to RFCSP solicitation.

2.2.4.1 Training

The team will travel to the client's location to provide training and support. The team anticipates providing training to all personnel involved in the use of the proposed system, including managers, supervisors, inspectors, and on-site system and application administrators. Training will be scheduled at times most convenient to the client in order to minimize disruption of regular operational activities. Please refer to Proposed Project Management Plan section for schedule of training events. In order for Apex to complete training sessions successfully, the following requirements are needed.

- Presentation room with large screen with ability to present from HDMI output
- (16) mobile devices (14 for trainees + 2 for instructors)
    - 10 training sessions, each has 7 inspectors + 1 instructors (8 mobile devices)
    - Running 2 parallel sessions at a time
- (5) terminals with internet connection and internet web browser
    - 3 training sessions, each session has 5 supervisors
    - Running one session at a time

2.2.4.2 Client Roll-Out (70 field devices)

The team will travel to the client's location for the installation, deployment and final demonstration of the developed solution. To successfully roll-out the system the Apex team will make sure to:

- Plan with COSA for integrating and deploying the optimization system
- Communicate the deployment plan and changes to the current process to the stakeholders
- Provide appropriate training to inspectors, supervisors, and system administrators.
- Monitor how inspectors, supervisors, and system administrators use the system

The team will deploy the system during the off-hours and will ensure that all installations have been completed properly and all systems are up and running. Once all personnel are trained and prepared to operate the system, the team will coordinate and schedule with DSD supervisors the appropriate date for Roll-Out or Go Live.

The optimization system runs completely independent and it will not require any configuration changes on the City's servers or legacy systems, aside from Hansen integration output. In case of failure to deploy the system, Apex team will remove all installed components required to run the optimization system and any file system partitions that have been allocated for the optimization system.

2.3 Visits & Meetings

The PAI team will conduct a series of meetings and visits with the stakeholders to capture the current processes in regards to the handling of daily inspections. PAI will systematically analyze the full-lifecycle of the inspection process, from the moment of receiving inspection requests, to the assignment of these requests and the planning inspectors' routes, and ending by completing the inspection. A list of visits and meetings that are expected to be held during the course of the project are listed below. In addition to these meetings the project will have bi-weekly re-occurring meetings to review status and track progress.

1. Kick-Off Meeting (Teleconference)
    a. Update project tasks
2. Meeting with city's Key Stakeholders (On-site – 4 days)
    a. Identify key business processes
    b. Review existing technologies
    c. Identify current system(s) integration requirements
3. Review System Requirements (Teleconference)
    a. Review updated system requirements with stakeholders
4. Review System Architecture (Teleconference)
    a. Review updated system architecture with stakeholders
5. UAP for system Interface Design (Teleconference) (WBS 5.1.6)
    a. Demo system interface design wireframe & mockups
    b. Get feedback from stakeholders
6. UAP for Hansen/Route optimization Interface Prototype (Teleconference) (WBS 5.2.4)
    a. Demo of System Interface Prototype to stakeholders
    b. Get feedback from stakeholders
7. UAT for System Interface & Optimization Algorithm Integration (On-site – 3 days) (WBS 5.2.x)
    a. Perform integration testing between system interface and the optimization algorithm to stakeholders
    b. Get feedback from stakeholders
8. UAP for Mobile Application design (Teleconference) (WBS 5.3.x)
    a. Demo the mobile app wireframe & mockups
    b. Get feedback from stakeholders
9. UAP for Mobile Application Prototype (Teleconference) (WBS 5.3.6)
    a. Live demo of Prototype System to stakeholders
    b. Get feedback from stakeholders
10. UAT for Final Application & Users Training (On-site – 5-10 days) (WBS 6.3.3)
    a. Install Developed Application in City of San Antonio Infrastructure (2-3 days)
    b. Perform End-to-End UAT (2-3 days)
    c. Train Supervisors and Managers on System capabilities(2-4 days)
    d. Train Inspectors on System capabilities(2-4 days)
    e. Train System Administrators(2-3 days)

2.4 Assumptions and Requirements

In order to effectively develop and deploy the proposed solution to the city of San Antonio, it is requested by PAI that the following assumptions and requirements be satisfied:

1. The City of San Antonio will provide PAI with Flat File or comparable method to gain access to the daily inspection details in an appropriate format (including all inspection information required to run the proposed tool). Reference Appendix D for Hansen Integration specifications. These specifications provide initial details in integration parameters which will require revisions upon collaboration between APEX and COSA to generate a final technology specification that meets the business needs.
2. Virtualized and physical server environments are both supported by our software solution. Virtualized server environments, running Windows Server operating systems, are recommended due to their ability to easily be scaled both horizontally and vertically, as well as the inherent backup and disaster-recovery protections offered by this technology.
3. All server instances should have at least 8 GB of RAM (16 GB recommended), support multiple CPU cores, and have RAID protected storage.
4. It is recommended that multiple hosts be configured to offer fault-tolerant failover protection in the event of an outage due to hardware / software failure (with each host having both a database server and web server instance).
5. A firewall and load balancer, such as Citrix NetScaler, should be present within the environment.
6. Offsite backups should be utilized for server snapshots / disk images, database backups / transaction logs and /file system backups.
7. Users have to re-run the proposed tool to re-build the solution whenever information is updated in the City's system
8. A customized mobile application will be developed to provide the capabilities of:
    a. Communicating with the inspector
    b. Sending inspection assignments to the inspector
    c. Real-time tracking of inspectors
    d. Facilitating inspector status updates
9. Clarification for the level of integration with the LDAP application protocol is needed.
    a. Will LDAP authentication only be used for managers/administrators to access the tool / web dashboard?
    b. Is Microsoft Active Directory present within the environment, and is it intended to be utilized for authentication?
    c. Are inspectors required to uses LDAP for authentication via their mobile device?
10. Appendix E is an architecture diagram which presents the minimum architecture requirements required for production use of the route optimization application/system deployment.

2.5 Risk Management Plan

PAI will be responsible to update and maintain the project Risk & Issues Registry.

The approach for managing risks for the project will include a methodical process by which the project team identifies, scores, and ranks the various risks. Every effort will be made to proactively identify risks in order to implement a mitigation strategy from the project's onset. The most likely and highest impact risks will be added to the project schedule to ensure that the assigned risk managers take the necessary steps to implement the mitigation response at the appropriate time during the schedule.

Potential risks will be listed and registered, with each risk item being carefully analyzed. The analysis of risk items will result in identifying the impact on projects tasks, schedules, and deliverables. The project team will prioritize each risk item based on anticipated impact on deliverables and/or schedule. A mitigation and response plan will be developed for each potential risk item identified with the objective of minimizing the impact of the risk (if encountered) on the project objectives and outcome. For each risk item the following will be defined in the risk registry:

- Risk Identification
  - Risk ID
  - Risk Category
  - Trigger Point
  - Potential Outcome
  - Raised By
  - Date Raised
  - Source
- Risk Analysis
  - WBS Impacted
  - Impact
  - Probability
  - Matrix Score
- Mitigation Planning
  - Handling Strategy
  - Report to
  - Mitigation Plan
  - Expected Mitigation Outcome
- Risk Monitoring and Control
  - Status
  - Trigger Date
  - Notes

A sample of the risks that were experienced and logged in previous similar projects is presented in the following table:

Risk Identification					Risk Analysis			Response/Mitigation Planning	
Risk ID	Risk Category	Trigger Point	Potential Outcome	Source	Impact	Probability	Matrix Score (Priority)	Handling Strategy	Mitigation Plan
25	User - Input/Commitment	Delay in customer feedback	* Increase in development time * Rework	Formal Risk Review	0.2	0.3	0.06	Transfer	* Contact customer with anticipation and address this concern to avoid it from happening
31	Ext - Subcontractors & Suppliers	Delay in equipment acquisition and installation	* Delay in the schedule	Formal Risk Review	0.1	0.1	0.01	Mitigate	* Schedule installation date with vendor/customer and confirm appointment
36	Tech - Complexity	Incompatibility between math model and data formats	* Affect scope of project * Non-compliance with project objectives	Formal Risk Review	0.2	0.7	0.14	Mitigate	* Find ways to transform available data into compatible data. * Develop algorithm based on available data formats
40	Tech - Complexity	Debugging time takes longer than expected	* Delay in the schedule	Formal Risk Review	0.4	0.3	0.12	Mitigate	* Review project plan and reschedule accordingly.
44	User - Skills	Truck Drivers do not know how to properly operate Navigation Device	* Delay in the Schedule * Innacurate Data	Status Meeting	0.2	0.7	0.14	Mitigate	* Provide further trainning and technical support to Truck Drivers and users of the system
46	User - Input/Commitment	High Turnover on company drivers/owner operators	* Delay in the schedule * Innacurate Data * Potential Reinstallation Issues	Status Meeting	0.4	0.3	0.12	Accept	* Based the results of the test on the number of total drivers available for that particular phase

2.6 Change Management

Any party introducing a variance to contract/SOW constraints must follow the Change Control Process described in the following seven (7) steps and illustrated in Figure 1:

#	Process	Definition	Role
1	Record/Classify	The client initiates change by making a formal request for something to be changed, to which the project team then records and categorizes (e.g., importance, impact, complexity) that request.	COSA
2	Assess	Impact assessment (cost, resource, schedule) and risk analysis is completed, focusing on the risk to both the offeror and to the process, in order to judge who should carry out the change. Everyone with a stake in the change must then meet to determine whether there is a business or technical justification for the change prior to the planning step.	COSA & APEX

3	Approval	Change Order form must be submitted for review/approval by the Project Sponsor	COSA
4	Plan	Program/Project Management will assign the change to the team member(s) with the specific role of carrying out this particular type of change. The team member(s) will then plan the change in detail, in addition to developing a contingency plan in case the change needs to be backed out.	APEX
5	Build/Test	If all stakeholders agree with the plan, the team member(s) will construct the solution, which will then be tested. Team member(s) will then seek approval from management and request a time and date for implementation.	COSA & APEX
6	Implement	All stakeholders must agree to a time, date and cost of implementation. A post-implementation review, which would take place during a separate stakeholder meeting, will typically follow the implementation of the change.	COSA & APEX
7	Close/Gain Acceptance	When the client agrees that the change was implemented correctly, the change can be closed.	COSA

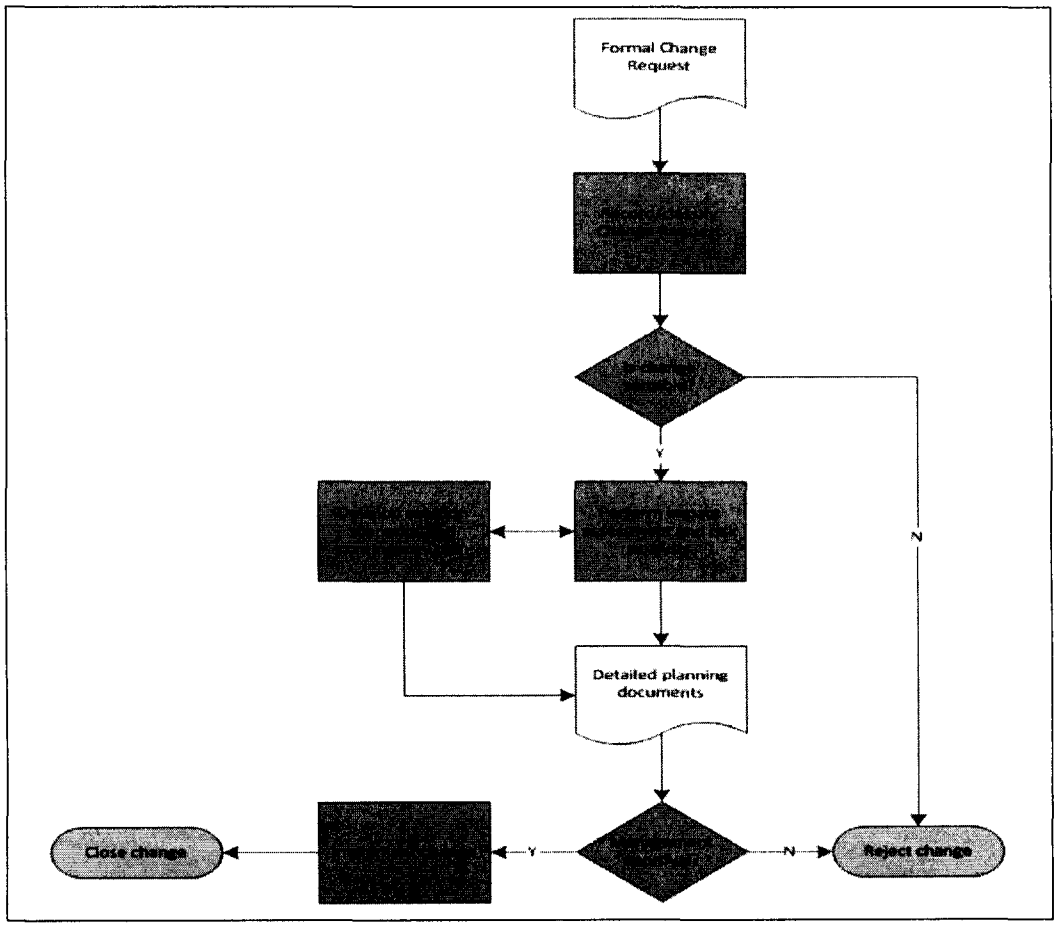

Figure 1. Change Control Process

Please see Appendix C for change request form.

2.7 Communication Plan

Team communications will be managed by categorizing and tracking the different types of team communications that can occur during the life cycle of the project in a Project Communication Plan (Table 1). The Communication Plan details the communication messages and content to be disseminated to team members and project stakeholders prior to initiating the project, and incorporates key details that will be relayed to entire project team to foster cooperation and understanding of the initiatives.

Table 1. Communication Plan

	CoSA Inspector Route Optimization					
	Project Team Communication Plan					
	Deliverable	**Description**	**Delivery Method**	**Frequency**	**APEX Owner**	**COSA Audience**
Reports	Project status report	Regular update on critical project issues	E-mail	Weekly	Project Manager	Project Manager
	Quality assurance report	Regular update on software development process / performance	Meeting	Weekly	Lead Software Developer	Project Manager Project Team
Presentations	Project review	Project status update	Meeting / Telecon	Monthly	Project Manager	Project Sponsor Project Team Program Manager
	UAP's & UAT's	System prototypes, System Modules Validation, User Acceptance Testing	Meeting	As defined in Section 2 – Project Manageme nt Plan	Project Manager	As defined in Section 2 - Project Management Plan
Project Announcements	Task reminders	Task owner schedule reminders	E-mail	Daily	Project Coordinator	Project Manager Project Team member's as assigned
	Critical developments	Update on high priority project developments	Meeting	Weekly	Project Manager	Project Manager
Reviews and Meetings	Team meeting	Meeting to review project status	Meeting	Weekly	Project Coordinator	Project Manager Project Team
	End user training	Training meetings for all personnel required for system use	Meeting	Once	OR Analyst	As defined in Section 2 - Project Management Plan
	Pre-Roll-Out meeting	Preparation for System Go Live date	Meeting	Once	Project Manager	Project Sponsor Project Team Program Manager
	Go / No-Go Milestones	Product Readiness Meetings	UAP / UAT Results Reports; Meeting	As Defined in Section 2 - Project manageme nt Plan & SDLC	Project Manager	Project Sponsor Project Team Program Manager

2.8 Invoicing

Invoices for all presented deliverables shall be submitted at the same time, after which the City must review and notify Team of acceptance/rejection no later than 10 business days after having received the product, service, and/or cost item. Payment terms are net 30 days after submission, including City review period. Table 1 on the following page highlights the base year anticipated invoice periods, associated deliverables, and percentage of project award.

Table 2. Project Invoice Schedule

Invoice #	Date *CSD + Weeks*	Deliverables Submitted	Amount (%) Invoiced	Amount of each invoice
001	2	Updated Project Management Plan	10%	$30,500
002	4-5	Final Bus Process Diagram	10%	$30,500
003	2	Final Updated System Arch.	10%	$30,500
004	3	Final Analysis Requirement Document	10%	$30,500
005	9	System Interface Prototype	20%	$61,000
006	6	GUI & Optimization Prototype	20%	$61,000
007	4	Mobile Application Prototype	10%	$30,500
008	4	Executable for Final App	5%	$15,250
009	4	Installation Doc & User Guide	5%	$15,250
Total	**7 months**	**9 deliverables**	**100%**	**$305,000**[1]
		OPTIONAL EXPENDITURES		
Solution Maintenance & Support (Option Years 1-4)				$52,200/year
Additional device OS				$15,000/platform
Additional Maintenance & Support (licenses, hardware, and/or optional features)				$2,700/year

* Concurrent tasks

The amount invoiced shall include labor charges for actual hours worked and other actual expenses based upon contract rates and conditions, not to exceed the limits specified in the award and that have been accepted by the City. These charges shall not exceed limits specified in the award.

In addition to the above information, the invoice shall include the following minimum identifiers:

- City Project Number and Title
- Period of Performance (months deliverable(s) completed for fixed price task orders)
- Invoice Number
- Client name and address

[1] Award amount includes Base Year solution development and custom mobile application development for Android platform

Invoices for final payment will be so identified and submitted when tasks have been completed and no further charges are to be incurred. These close-out invoices, or a written notification that final invoicing has been completed, will be submitted within 30 days of final deliverable completion. A copy of the City's written acceptance of project completion will be attached to the final invoice.

3 Proposed Tool

Leveraging the latest standards in software and web infrastructure development, our solution has been built from the ground-up to be flexible, dynamic and scalable. PAI proudly offers advanced deployment, maintenance, health-check and fault tolerance solutions that can seamlessly and transparently be implemented, ensuring maximum service reliability and uptime.

3.1 System Description

Figure 3 schematically illustrates the proposed inspection process. The shaded parts in this figure represent the required new components to deploy the proposed inspection process, the rest of the process remain the same as in the current one.

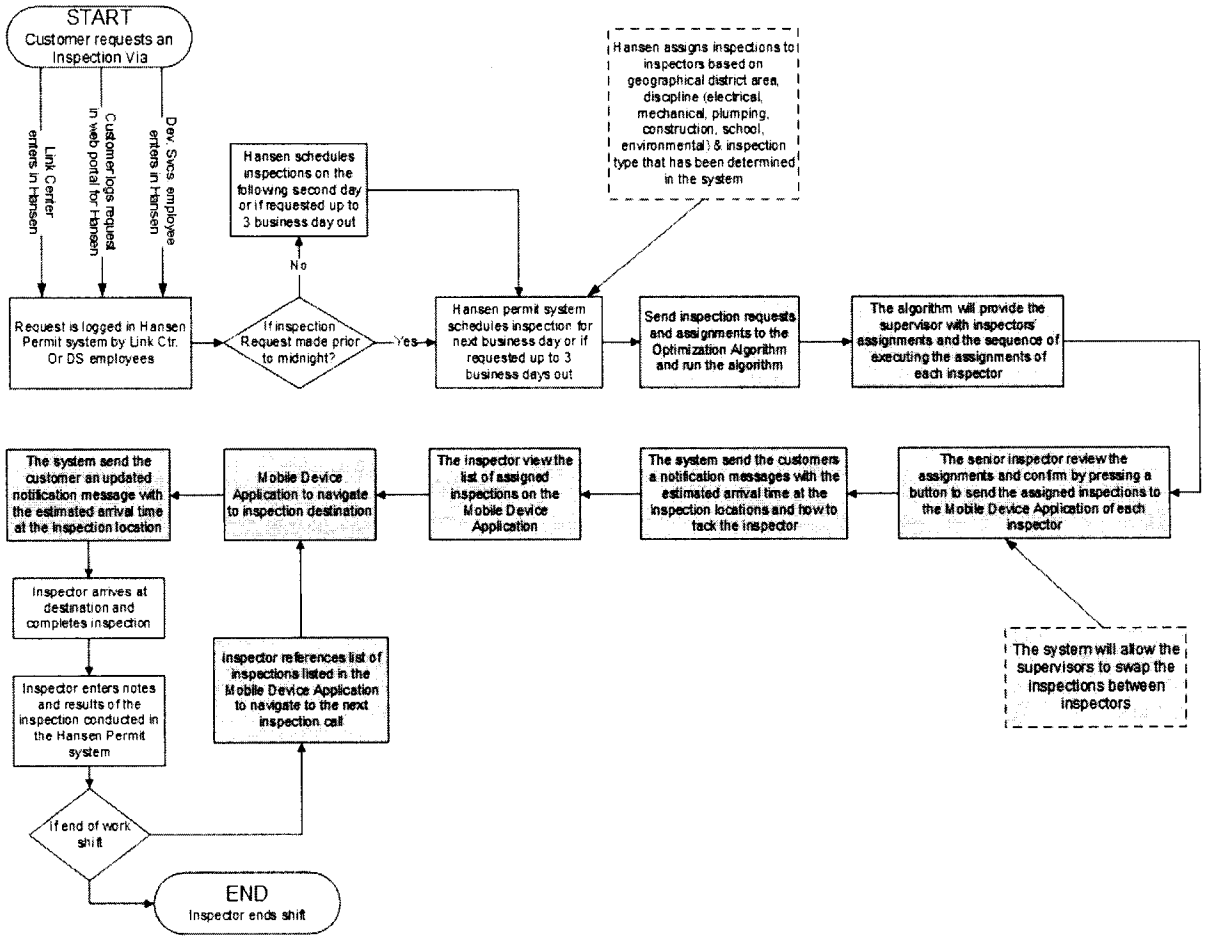

Figure 2. Proposed Inspection Process Description

The proposed tool will retrieve the daily inspection requests assigned to each inspector from the Hansen system before starting the optimization process. The optimization algorithm will process the inspections queues retrieved from Hansen, process route optimization and send inspections with optimized route to inspector's mobile device(s). DSD supervisors will also be able to view all or selected inspectors routes from the online graphical dashboard with ability to drill into inspection information passed from Hansen.

The tool will allow DSD Supervisors to do the following:

1. Review the inspections execution plan to each inspector
2. Swap or move inspections between inspectors are to be performed in Hansen and then process via On-Demand Hansen/ Route Optimization Interface.
3. Once the supervisor sends assignments to the inspectors, a notification with the estimated inspection time will be sent to customers along with their order in inspectors' assignments.
    a. The tool will be able to notify the customers of the estimated arrival time or place in queue (based on system defined parameter) either by e-mail or text message (based on system defined parameter).

Inspectors will receive inspection assignments and execution order on the mobile device application.

1. Inspectors will select inspections by order and navigate to inspection locations using a mobile device application
2. Once the inspectors start navigating to the inspection location, the system will notify the customer that the inspector is en-route and/or estimated arrival time, depending on notification switch set by the user configured system parameter.
3. When the inspector completes his/her current inspection, he/she can refer to the remaining assigned inspections on the mobile device application to navigate to the next assignment

3.2 Technical Specifications

3.2.1 Route Planning and Routing Parameters

The proposed tool utilizes an optimization algorithm that is based on one of the most advanced and sophisticated evolutionary heuristics in which a probabilistic guided search technique is used to determine the most efficient solution. The algorithm inputs information about customers' inspection requests, available inspectors, and operational constraints and provides the user with an optimal solution while considering all defined operational constraints. The algorithm inputs information from the City's Permitting and Inspection System on:

1. Customer inspection request
    a. Location of the inspection request
2. Latitude/longitude or
3. Complete address
4. Available inspectors
    a. Inspectors Starting Point
    b. Inspectors Start & Stop Work Times

c.

5. Operational constraints
    a. Priority level
        i. routing constraint to be toggled on/off by supervisor
            1. Toggle Off used only as display
            2. Toggle On used to plan route and display
    b. Inspection date
    c. Inspection expected time

The algorithm will use the above information as inputs to produce the execution sequence of assigned inspection requests / service calls for each inspector while satisfying all defined operational constraints. The tool will allow the DSD supervisor to predefine the optimization criteria in system preferences either by using shortest distance or least traveling time in order to generate vehicle routing plans that maximize resource utilization and efficiency. The tool will allow supervisors to turn on/off the expected inspection time reporting as well as the notifications for (1) expected arrival time and/or (2) sequence in the queue.

3.2.1.1 Location address information and validation

The proposed tool can use either address information or X/Y coordinates. The algorithm favors using the X/Y coordinates of inspection locations to find the optimal solution. Alternatively, the algorithm can use address information to determine the equivalent X/Y coordinates for that location if they are not available.

If any of the locations does not have a valid address or X/Y coordinates information, the tool will exclude it from the route planning process and continue running the optimization process, generating a customizable invalid location online report

3.2.1.2 Inspection priority

The proposed tool will allow the user to prioritize inspection requests. The system will also allow the user to send emergency inspections to inspectors. In case of an emergency request, the system will display the current location and the status of each inspector and will recommend the best inspector to execute this emergency inspection according to the inspection specialty, inspectors' location, and their status. However, the system will give the supervisor the flexibility to select a particular inspector to whom this priority job will be assigned.

3.2.1.3 Inspection status/information change

Navigation plans will be rebuilt as frequently as inspection information is updated in the City's Permitting and Inspection System, revising the sequence of inspections in near real-time.

In case of cancelled route points, the algorithm will rerun the assignments of the affected inspector, reevaluating the sequence of stops based upon their present location. An updated notification containing an updated schedule will be sent to the customer(s).

In the case of priority change to a job, the algorithm will rerun the assignments of the affected inspector, reevaluating the sequence of stops based upon their present location and availability (remaining hours of duty), and giving urgency to the higher priority job. An updated notification containing a current schedule will be sent to the customer(s).

In case of changes to the route starting point of the inspectors, the algorithm will use the new starting point to deduce the best sequence for executing these requests for each inspector.

3.2.1.4 Inspection assignment modification

Supervisors will be allowed to manually modify the route planes generated by the optimization algorithm to handle factors such as cancellations, emergencies, resource outages or critical inspections. In such cases, the route sequence is re-optimized for all impacted inspectors and new schedules are resent to their mobile devices. This provides a mechanism for inspectors to receive updates from the City's Permitting and Inspection Management system.

3.2.1.5 Solution display

The proposed tool will display the generated optimal routes on a map, graphically showing the sequence of executing the assigned inspections for each inspector, priority inspection requests will be visually identified by highlighting them with colors according to their priority level. Also, the tool will show detailed information for each route and inspection locations associated with the expected time to arrive to each location. Route construction process will consider real travel time from one location to another, expected inspection time at each location (i.e., service time), and expected delays due to traffic (e.g., factors such as street closures, traffic patterns, etc.).

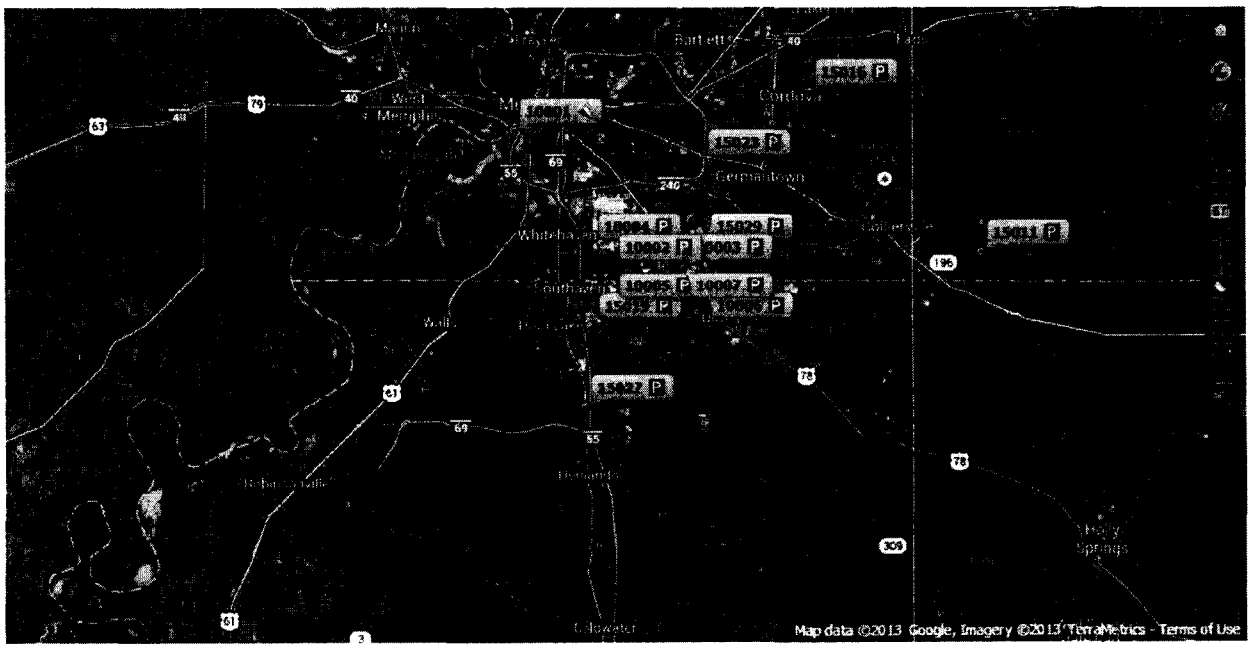

Figure 3. Example of Field Inspectors' AVL tracking maps

3.2.2 Real-Time Tracking

Figure 5 shows the architecture of the proposed tool illustrating the connectivity between client mobile devices and the hosting infrastructure. APEX will work with COSA architects to complete and maintain architecture diagrams for all platforms.

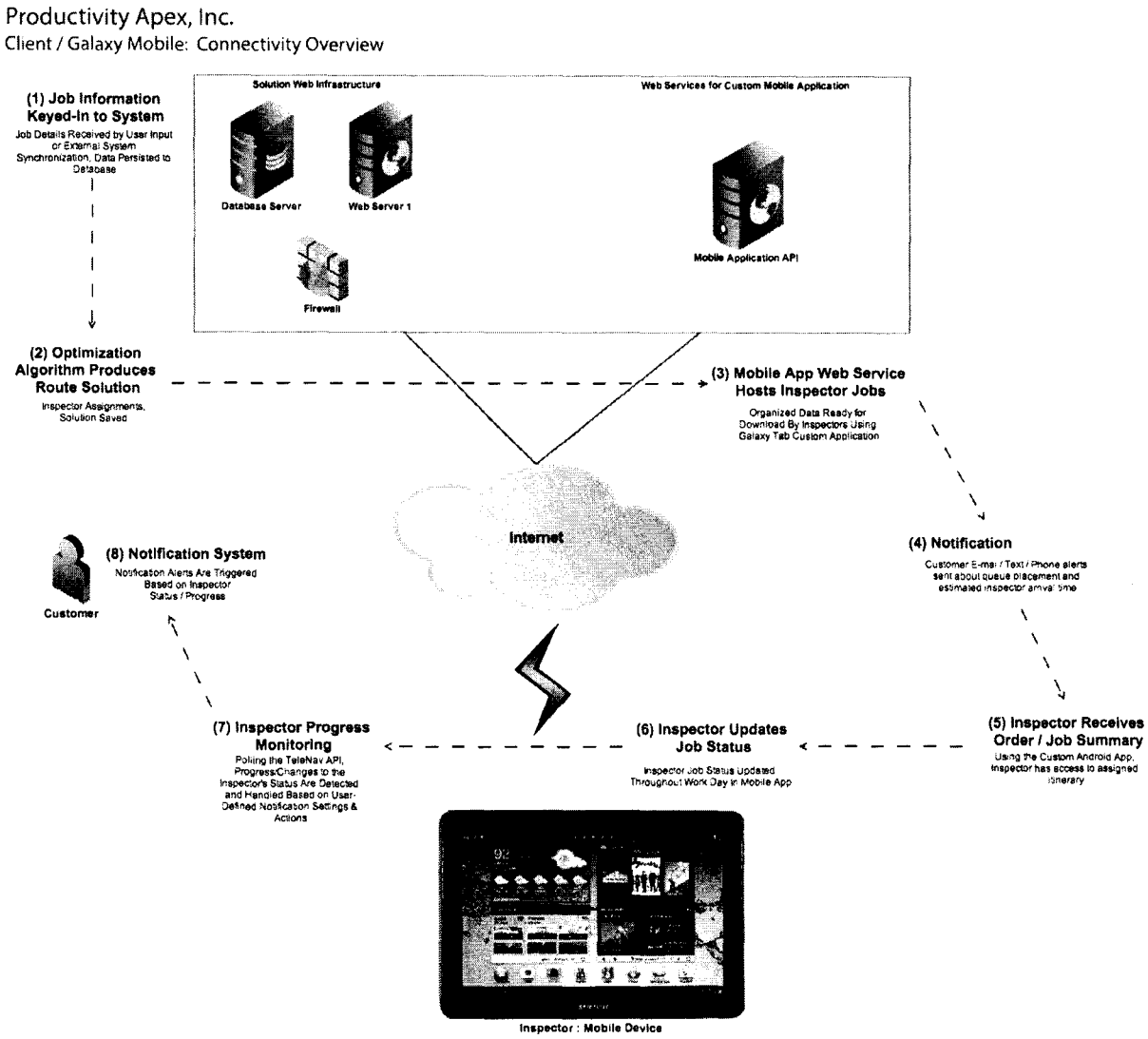

Figure 4: Proposed System Architecture

A custom mobile application will be developed and installed on the mobile devices used by the inspectors as a communication channel between the inspector and the supervisors in the back office. This application will be completely integrated with the optimization tool. Using this application, the supervisors will be able to:

- Send inspection assignments directly to the inspectors
- Send special instructions to the inspectors through the application
- Track inspector location (GPS) in real time

- Monitor inspector progression
- Provide the supervisors with event trigger alert capability if feasible

The tool will be supported by a real-time tracking module that will provide the users with the capability to track the inspectors using their mobile devices. Real-time inspector positioning can be plotted on a map so the users will be able to locate the position of each inspector. AVL data will be used in the event that we have to consume assets in the field for real-time assignment.

3.2.3 Operations Analysis and Reports

The proposed tool will offer users the capability to choose and customize reports on demand. Users will be able to generate reports for a specific date or a period of time, as well as per inspector or group of inspectors. Some of these include:

Name	Category	Frequency
Trip Reports	Trip report	On demand
Inspections/Job Overview Reports	Job status report	On demand
Working Time Report by Inspector or Crew	Working time report	On demand
Daily Summary Reports	Trip report	Daily
Notifications Reports	Administrative	On demand
Current Position Reports	Location report	On demand
Inspection Status Reports	Job status report	On demand

In addition, utilizing the capabilities of Microsoft SQL Management Studio will provide the user / system administrator with an advanced mechanism to extract data in a format suitable to the City's reporting needs.

3.2.4 Data Archiving / Extraction

The process of extracting data from the solution for consumption by the City of San Antonio is direct integration with the city's existing navigational / mobile devices utilized. There will be no cost for import/export operations that do not impact overall system reliability or performance.

3.2.5 Security

Secure / encrypted communication will be supported for all access, integration, and data transfer requirements. The solution will support identity and access management integration with the City's LDAP-compliant directory as well as City-defined account management parameters, including invalid logon attempts, user idle timeout, password complexity, and password change frequency. It will support self-service password resets and the principle of least privilege for access management. User access will be managed through role-based access controls – inspector, inspection team, manager, and executive – and will include the ability to control management user groups from being able to view versus edit inspector routes.

3.2.6 Customer Notification Parameters & Management Reporting

A background service will be implemented that monitors recently completed work, and performs analysis and operations based on the results. Notifications can be sent to the customer by virtually any

means desired, including telephone, SMS, and e-mail. The criteria to trigger the alert can be a customizable, user-defined value. This notification can be triggered by inspector progress, location, or other user-defined parameters. Based on inspection status update, a background service will be created that monitors all desired factors and metrics in order to determine if / when notifications should be sent. The planned notification systems have the capabilities of being bi-directional, allowing customers to respond to the notification service and to have that information be leveraged by the system.

3.2.7 Mapping

The PAI system supports integration with all of the leading mapping providers, including Google, Bing and Apple. While Bing is the mapping service that we use by default, this can be changed based upon project requirements. Inspection routes as well as inspection points and their attributes will be displayed on a map.

3.2.8 Environments

PAI will support multiple environments to include the following:

1. Development – Vendor controlled environment where vendor will develop code for product creation
2. Quality Assurance – COSA controlled environment for UAP & UAT as well as application porting validation
3. Production – COSA controlled environment for production use

COSA will provide access to PAI authorized staff for debugging, testing and COSA monitored technical assistance with issues which may arise on deployment of product to QA & Production environments.

4 Mobile Application

The delivered tool will be supported by a special application that will be developed and installed on the mobile devices used by the inspectors to allow supervisors to communicate efficiently with them. The device will interact with the server using an encrypted, secure connection using HTML/JSON/XML/REST/SOAP communications. The application will allow the supervisors to send the route plan details to the inspectors with complete information for each inspection, including:

- Permit #
- Permit Name
- Customer Name
- Customer Phone #
- Address
- Location Description
- Permit Type
- Inspection Type
- Type of Work
- Department of Commerce
- Email

- Schedule date

Inspectors will also be notified of route changes through mobile alerts triggered by the application. The mobile application will simultaneously serve as a tracking device, capturing events such as arrivals, departures, and delays. This will provide the supervisors with real-time information regarding the current location of the inspectors, providing the user with information about inspector progression in executing the assigned orders.

5 Glossary

Term	Description
ADL	Application Development Liaison. This is a representative of the core technology development group within COSA who is accountable for assigned deliverables within the specified technology development group.
BA	Business Analyst
COSA	City of San Antonio
CSD	Contract Start Date
DEV	Development. Used as acronym to identify Development Technology Environment
DSD	Development Services Department
GIS	Graphical Information System
GPS	Global Positioning System
Hansen	Permitting & Inspections Management System used by Development Services to service customers.
ITSD	Information Technology Services Department
OS	Operating System
PAI	Productivity Apex, Inc
PM	Project Manager
PROD	Production. Used to identify Production Technology Environment
Proposed Tool	Route Optimization system
QA	Quality Assurance. Used to identify Quality Assurance Technology Environment
RTM	Requirements Traceability Matrix
SDLC	Software Development Life Cycle
SLA	Service Level Agreement
SME	Subject Matter Expert
SOW	Statement of Work
UAP	User Acceptance Prototype. Process which vendor demonstrates various stages of application development providing the customer the opportunity to provide feedback and acceptance of modular components.
UAT	User Acceptance Testing. Process which customer is engaged by hands-on testing of the application. This exercise includes detailed testing scripts.
WBS	Work Breakdown Structure. Within SOW is used to represent project Milestones tied directly to the Project schedule/Timeline.

Appendix A – Project Schedule

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ID		WBS	Task Name	Duration	Predecessors	Start	Finish
1		1	Kick-Off Meeting	1 day		Tue 4/1/14	Tue 4/1/14
2		2	**Review and Update Project Management Plan**	**9 days**	**1**	**Wed 4/2/14**	**Mon 4/14/14**
3		2.1	**Review Project Schedule**	**3 days**	**1**	**Wed 4/2/14**	**Fri 4/4/14**
4		2.1.1	Update start dates on project schedule based on contract award date	3 days	1	Wed 4/2/14	Fri 4/4/14
5		2.1.2	Update project tasks based on Kick-Off Meeting	3 days	1	Wed 4/2/14	Fri 4/4/14
6		2.2	**Review and Submit Project Risk Registry**	**5 days**	**5,4**	**Mon 4/7/14**	**Fri 4/11/14**
7		2.2.1	Build Detailed Risk Registry	5 days	5,4	Mon 4/7/14	Fri 4/11/14
8		2.3	Submit Updated Project Management Plan	1 day?	7	Mon 4/14/14	Mon 4/14/14
9		3	**Study and Review current Business Processes**	**19 days**	**8**	**Tue 4/15/14**	**Fri 5/9/14**
10		3.1	Identify Key Stakeholders	1 day	1,8	Tue 4/15/14	Tue 4/15/14
11		3.2	Develop and Send Pre-Visit list of Questions	5 days	1,8	Tue 4/15/14	Mon 4/21/14
12		3.3	Receive Pre-Visit List of Questions	5 days	11	Tue 4/22/14	Mon 4/28/14
13		3.4	Schedule Meetings with Key Stakeholders from City of San Antonio	5 days	10	Wed 4/16/14	Tue 4/22/14
14		3.5	**Conduct Live Meetings with stakeholders from City of San Antonio including inspectiors, supervisors, Managers, etc**	**5 days**	**13**	**Wed 4/23/14**	**Tue 4/29/14**
15		3.5.1	Travel to San Antonio, Texas	1 day	13	Wed 4/23/14	Wed 4/23/14
16		3.5.2	Identify Key Business Processes	4 days	15	Thu 4/24/14	Tue 4/29/14
17		3.5.3	**Review Existing Technology**	**4 days**	**15**	**Thu 4/24/14**	**Tue 4/29/14**
18		3.5.3.1	Identify current system(s) integration requirements	4 days	15	Thu 4/24/14	Tue 4/29/14
19		3.6	**Review integration requirements**	**8 days**	**18**	**Wed 4/30/14**	**Fri 5/9/14**
20		3.6.1	Review with stakeholders current system(s) integration requirements	5 days	18	Wed 4/30/14	Tue 5/6/14
21		3.6.2	Define current system(s) integration requirements	8 days	18	Wed 4/30/14	Fri 5/9/14
22		3.7	**Capture detailed As-Is business process and workflow**	**7 days**	**16**	**Wed 4/30/14**	**Thu 5/8/14**
23		3.7.1	Update business process diagram (if necessary)	5 days	16	Wed 4/30/14	Tue 5/6/14
24		3.7.2	Review updated business process diagram with stakeholders	1 day	23	Wed 5/7/14	Wed 5/7/14
25		3.7.3	Deliver Final business process diagram to stakeholders	1 day	24	Thu 5/8/14	Thu 5/8/14
26		4	**Review and UpdateSystem Architecture and Requirements**	**28 days?**	**25**	**Fri 5/9/14**	**Tue 6/17/14**
27		4.1	**System Requirements**	**18 days?**	**25**	**Fri 5/9/14**	**Tue 6/3/14**
28		4.1.1	Compile System Requirements in an Analysis Requirements Document	8 days	25	Fri 5/9/14	Tue 5/20/14
29		4.1.2	Review Updated System Requirements with stakeholders	1 day	28	Wed 5/21/14	Wed 5/21/14
30		4.1.3	Update System Requirements (if necessary)	5 days	29	Thu 5/22/14	Wed 5/28/14
31		4.1.4	Approve Final Analysis Requirements Document by stakeholders	3 days	30	Thu 5/29/14	Mon 6/2/14
32		4.1.5	Deliver approved Analysis Requirements Document to stakeholders	1 day?	31	Tue 6/3/14	Tue 6/3/14
33		4.2	**System Architecture**	**10 days**		**Wed 6/4/14**	**Tue 6/17/14**
34		4.2.1	Update existing System Architecture (if necessary)	5 days	32	Wed 6/4/14	Tue 6/10/14
35		4.2.2	Review Updated System Architecture with stakeholders	1 day	34	Wed 6/11/14	Wed 6/11/14
36		4.2.3	Incorporate Changes to System Architecture (if required)	3 days	35	Thu 6/12/14	Mon 6/16/14
37		4.2.4	Deliver Final Updated System Architecture to stakeholders	1 day	36	Tue 6/17/14	Tue 6/17/14
38		5	**Develop a Prototype (Beta Version) of the System**	**101 days**	**37**	**Wed 6/18/14**	**Wed 11/5/14**
39		5.1	**Develop System Interface Prototype**	**62 days**	**37**	**Wed 6/18/14**	**Thu 9/11/14**
40		5.1.1	Design System Interface wireframe & mockups	10 days	37	Wed 6/18/14	Tue 7/1/14
41		5.1.2	Conduct UAT for system Interface Design	1 day	40	Wed 7/2/14	Wed 7/2/14

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ID		WBS	Task Name	Duration	Predecessors	Start	Finish
42		5.1.3	Compile stakeholders feedback and changes	5 days	41	Thu 7/3/14	Wed 7/9/14
43		5.1.4	Build System Interface Prototype	30 days	42	Thu 7/10/14	Wed 8/20/14
44		5.1.5	Evaluate and Test System Interface Prototype	10 days	43	Thu 8/21/14	Wed 9/3/14
45		5.1.6	Conduct UAT for system Interface Prototype	1 day	44	Thu 9/4/14	Thu 9/4/14
46		5.1.7	Compile stakeholders feedback and changes	5 days	45	Fri 9/5/14	Thu 9/11/14
47		**5.2**	**Prototype System Interface & Optimization Algorithm Integration**	**39 days**	**46**	**Fri 9/12/14**	**Wed 11/5/14**
48		5.2.1	Integrate System Interface with Optimization Algorithm	20 days		Fri 9/12/14	Thu 10/9/14
49		5.2.2	Evaluate & Test the integration between the system interface & the optimization algorithm	10 days	48	Fri 10/10/14	Thu 10/23/14
50		5.2.3	Travel To city of San Antonio, Texas	1 day	49	Fri 10/24/14	Fri 10/24/14
51		5.2.4	Conduct UAT for integrating system interface with the optimization algorithm	3 days	50	Mon 10/27/14	Wed 10/29/14
52		5.2.5	Compile stakeholders feedback and changes	5 days	51	Thu 10/30/14	Wed 11/5/14
53		**5.3**	**Develop Mobile Application Prototype**	**84 days**	**37**	**Wed 6/18/14**	**Mon 10/13/14**
54		5.3.1	Design Mobile Application wireframe & mockups	5 days	32	Wed 6/18/14	Tue 6/24/14
55		5.3.2	Conduct UAT for Mobile Application Design	1 day	54	Wed 6/25/14	Wed 6/25/14
56		5.3.3	Compile stakeholders feedback and changes	2 days	55	Thu 6/26/14	Fri 6/27/14
57		5.3.4	Build Mobile Application Prototype	60 days	56	Mon 6/30/14	Fri 9/19/14
58		5.3.5	Evaluate and Test Mobile Application Prototype	10 days	57	Mon 9/22/14	Fri 10/3/14
59		5.3.6	Conduct UAT for Mobile Application Prototype	1 day	58	Mon 10/6/14	Mon 10/6/14
60		5.3.7	Compile stakeholders feedback and changes	5 days	59	Tue 10/7/14	Mon 10/13/14
61		**6**	**Develop and Install Final Application**	**27 days**	**52,60**	**Thu 11/6/14**	**Fri 12/12/14**
62		6.1	Incorporate changes and Develop Final System Application	10 days	52,60	Thu 11/6/14	Wed 11/19/14
63		6.2	Integrate Final Application with existing System(s)	10 days	62	Thu 11/20/14	Wed 12/3/14
64		**6.3**	**Conduct Live Demo and Trainning of Final Application to stakeholders**	**6 days**	**63**	**Thu 12/4/14**	**Thu 12/11/14**
65		6.3.1	Travel to San Antonio, Texas	1 day	63	Thu 12/4/14	Thu 12/4/14
66		6.3.2	Install Developed Application in City of San Antonio Infrastructure	1 day	65	Fri 12/5/14	Fri 12/5/14
67		6.3.3	Conduct UAT for Final System Application to stakeholders	1 day	66	Fri 12/5/14	Fri 12/5/14
68		**6.3.4**	**Trainning**	**4 days**	**67**	**Mon 12/8/14**	**Thu 12/11/14**
69		6.3.4.1	Train Supervisors and Managers on System capabilities	4 days	67	Mon 12/8/14	Thu 12/11/14
70		6.3.4.2	Train Inspectors on System capabilities	4 days	67	Mon 12/8/14	Thu 12/11/14
71		6.3.4.3	Train System Administrators	4 days	67	Mon 12/8/14	Thu 12/11/14
72		6.4	Deliver Executable for Final Application to stakeholders	1 day	67,71	Fri 12/12/14	Fri 12/12/14
73		6.5	Deliver Source Code of Final Application to stakeholders	1 day	67,71	Fri 12/12/14	Fri 12/12/14
74		6.6	Deliver Instalation Documentation and User Guide to Stakeholders	1 day	67,71	Fri 12/12/14	Fri 12/12/14
75		**7**	**System Roll-Out**	**3 days**	**70**	**Mon 12/15/14**	**Wed 12/17/14**
76		7.1	Preparation meeting with all stakeholders for system Roll-Out	2 days	67,68,72,73,74	Mon 12/15/14	Tue 12/16/14
77		7.2	System Roll-Out	1 day	76	Wed 12/17/14	Wed 12/17/14

Appendix B – Sample UAT Test Script

UAT Sample Template is provided in electronic format.

DSD UAT Test Scripts Template.doc

Appendix C – Change Request Form

Change Request Form

SUBMITTER - GENERAL INFORMATION

CR# *[CR001]*
Type of CR ☐ Enhancement ☐ Defect
Project/Program/Initiative
Submitter Name *[John Doe]*
Brief Description of Request *[Enter a detailed description of the change being requested]*
Date Submitted *[mm/dd/yyyy]*
Date Required *[mm/dd/yyyy]*
Priority ☐ Low ☐ Medium ☐ High ☐ Mandatory
Reason for Change *[Enter a detailed description of why the change is being requested]*
Other Artifacts Impacted *[List other artifacts affected by this change]*
Assumptions and Notes *[Document assumptions or comments regarding the requested change]*
Comments *[Enter additional comments]*
Attachments or References ☐ Yes ☐ No
Link:
Approval Signature *[Approval Signature]* **Date Signed** *[mm/dd/yyyy]*

PROJECT MANAGER - INITIAL ANALYSIS

Hour Impact *[#hrs] [Enter the hour impact of the requested change]*
Duration Impact *[#dys] [Enter the duration impact of the requested change]*
Schedule Impact *[WBS] [Detail the impact this change may have on schedules]*
Cost Impact *[Cost] [Detail the impact this change may have on cost]*
Comments *[Enter additional comments]*
Recommendations *[Enter recommendations regarding the requested change]*
Approval Signature *[Approval Signature]* **Date Signed** *[mm/dd/yyyy]*

CHANGE CONTROL BOARD – DECISION

Decision ☐ Approved ☐ Approved with Conditions ☐ Rejected ☐ More Info
Decision Date *[mm/dd/yyyy]*
Decision Explanation *[Document the CCB's decision]*
Conditions *[Document and conditions imposed by the CCB]*
Approval Signature *[Approval Signature]* **Date Signed** *[mm/dd/yyyy]*

Appendix D – Hansen Integration Specifications

The following Hansen Integration specifications is initial due diligence between APEX and COSA. This represents a baseline for the interface necessary between Hansen system and Route Optimization tool. These specifications will require revisions to address more detail and clarification of requirements for the development of the Hansen and routing tool integration. Vendor will be responsible to deliver final technical specifications document and process diagram(s).

A. Standard Daily Process:

1. Scheduled Hansen data extract batch process must start after midnight.
2. Route Optimization process must be completed and inspectors routes distributed to all inspectors devices by 6:30am.
3. **On Demand Updates** - Changes to scheduled inspections and/or new inspections for current day will be processed On Demand.
    a. **7:00am – 7:45am:** Daily timeframe when Inspectors load balancing occurs for current day inspections.
    b. Scheduled Inspections are changed in Hansen.
    c. On Demand updates may be triggered anytime/any day

B. Hansen Data Extraction Interface Program Specifications

COSA ITSD will develop service to extract/produce data from COSA systems for consumption by the Route Optimization system.

1. File Format = Fixed length with non-keyboard type delimiter.
2. Interface file will be stored on a shared drive on server where Route Optimization system exists.
3. Interface program will maintain an Audit log with the following information:
    a. Date / Time interface program Started & Ended
    b. Total count of Inspectors processed
    c. Total count of inspections processed
    d. Total count of records processed without
        i. email address
    e. Total count of records not processed due to
        i. No X/Y coordinates and/or Incomplete Address
        ii. Non-Assigned Inspector or Work Zone
    f. Refer to Error Handling section for more details on process variances and handling
4. Report must be generated to provide user with information from the audit log (item 3)
5. Interface program will be monitored for success.
    a. If any error is encountered during data extract processing, see Error Handling section

C. Scheduled Inspections Selection Criteria

1. Daily scheduled Hansen data extraction routine must only process inspections that meet the following criteria.
    a. <Completed Date> = blank
    b. <Status> = "No Action"
    c. <Scheduled Date> is <= Current Date

2. If On Demand update, then only process those scheduled inspections that have been changed since the last Daily Hansen Data Extract process.
    a. Need handling rules to capture scheduled inspection that was changed after the last interface process.
        i. Changes that would trigger the inspection to be reprocessed include
            1. Schedule date change to future date (same as delete(2))
            2. Deleted/cancelled Inspection request
            3. Inspector change
            4. Priority change
    b. <Change Code> = "C"- Cancel; "P"- Priority Change; "I"- Inspector Change; "N"- New Inspection; "A"-Address Change
        i. Attribute may be created during the Route Optimization Intake process. To be determined during Interface Specifications Requirements detail planning phase.

D. Interface Data

Following list of fields are to be passed to Route Optimization system for route scheduling. Items 1-18 & Item 21 should also be available to inspectors on their remote devices for reference while they are in the field.

A. Hansen Information:
1. **<Assigned To>** - Inspector Login-ID
2. **<AP #>** - Permit #
3. **<AP Name>** - Permit Name
4. **<Customer Name>** - Contact Name
5. **<Customer Phone>** - Contact Phone number
6. **<Customer E-mail>** - Contact email address (*required for customer notification*)
7. **<Address>** - AP Address
8. **<City Name>**
9. **<State Code>**
10. **<Zip Code>**
11. **<Location>** - Free Form Text Box
12. **<X Coordinate>**
13. **<Y Coordinate>**
14. **<Permit Type>**
15. **<INSPTYPE>** - Inspection Type (ref Appendix D – List A for list of inspection Types)
    i. Business user to provide descriptions for each inspection type.
16. **<Type of Work>** (Values: New, Existing)
17. **<Dept of Commerce>** (Values: Residential, Commercial)
18. **<Scheduled Date>** - Inspection Original Scheduled Date
19. **<Inspector Starting Point>** - starting location

B. **The following fields are to be generated as part of the data extract interface program and passed to the Route Optimization system. Priority information is not to be used for route planning. This information is to be used to highlight prioritized tasks on inspector's mobile device displaying inspection points and information on those inspection points.**

20. **<Updated Schedule Date>** - Current date in 'YYYY-MM-DD' format. The date the interface file is processed.
21. **<Priority>** - Inspection priority based on the following criteria:
    a. **<INSPTYPE>** includes COO. <Priority> = '1'
    b. **<Scheduled Date>** is 3+ days old. <Priority> = '2'
    c. **<Scheduled Date>** is 2 days old. <Priority> = '3'
    d. **<Scheduled Date>** is 1 day old. <Priority> = '4'

C. **The following fields need to be configured in Hansen.**

- *Requires research and development planning between APEX, ITSD Hansen Development Team and Business to finalize Hansen and/or Route Optimization requirements for this functionality.*
- *For **<Service Type/Time>**, initial deployment will only contain a single value defined by business management. Route Optimization system to include a toggle switch to allow for this functionality to be turned on/off during route optimization.*

22. **<Service Time>** - estimated time service will consume
    a. i.e. Default = '30 minutes'
    b. Management of time to be allowed by Application Administrator

D. Field Characteristics

These are initial set of field characteristics to clarify constraints on some fields. This table will be completed during the technology specifications development phase.

Interface Field Name	Hansen Field Name	Characteristic
Assigned To	ASSIGNTO	VARCHAR2(12)
Priority	PRIORITY	NUMBER(2)
Inspector Number	INSPNR	NUMBER(9)
INSPTYPE	INSPTYPE	VARCHAR2(10)
Scheduled Date	SCHEDDTTM	DATE/TIME
Location	LOC_DESC	VARCHAR2(254)
AP #	APNO	VARCHAR2(9)
AP Name	APNAME	VARCHAR2(30)
Permit Type	APTYPE	VARCHAR2(10)
Type of Work	WORKTYPE	VARCHAR2(6)
Dpt of Commerce	DEPTCM	VARCHAR2(6)
Address	IFACE.GET_ADDRESS_STRING(A.ADD	VARCHAR2(200)
X Coordinate	X_COORDINATE	NUMBER(7)
Y Coordinate	Y_COORDINATE	NUMBER(8)
Service Type	SVCTYPE	VARCHAR2(10)
Service Time	SVCTIMEMIN	NUMBER(4)
Updated Schedule Date	Last modified date within Hansen?	TBD
Additional fields to be finalized during interface process technology specifications development phase.		

E. Error Handling

1. Route Optimization Intake Process Failure
    a. Hansen Interface File not found (File System Watcher)
        i. Process parameters Configuration File change capabilities for tracking and reporting parameters
            1. Nightly Re-Occurring Process
            2. On-Demand Process

    b. Missing Routing attributes
        i. X/Y coordinates
        ii. Address
        iii. Inspector
        iv. Inspection Type
        v. Start/Stop Times
        vi. Inspectors Starting Location

2. Extract and/or routing not complete by designated time

3. Failure Log
    a. To be maintained based on Interface Process Configuration File parameters
    b. Database accessible for ad-hoc reporting by end-user
    c. To include defined severity levels

4. Failure Alerts
    a. Based on Severity Levels
    b. Alerts sent to Designated Application Administrators and/or System Administrators based on error severity.
    c. Web Service to be called for opening tickets in Incident Management system (Remedy)
        i. Based on severity level

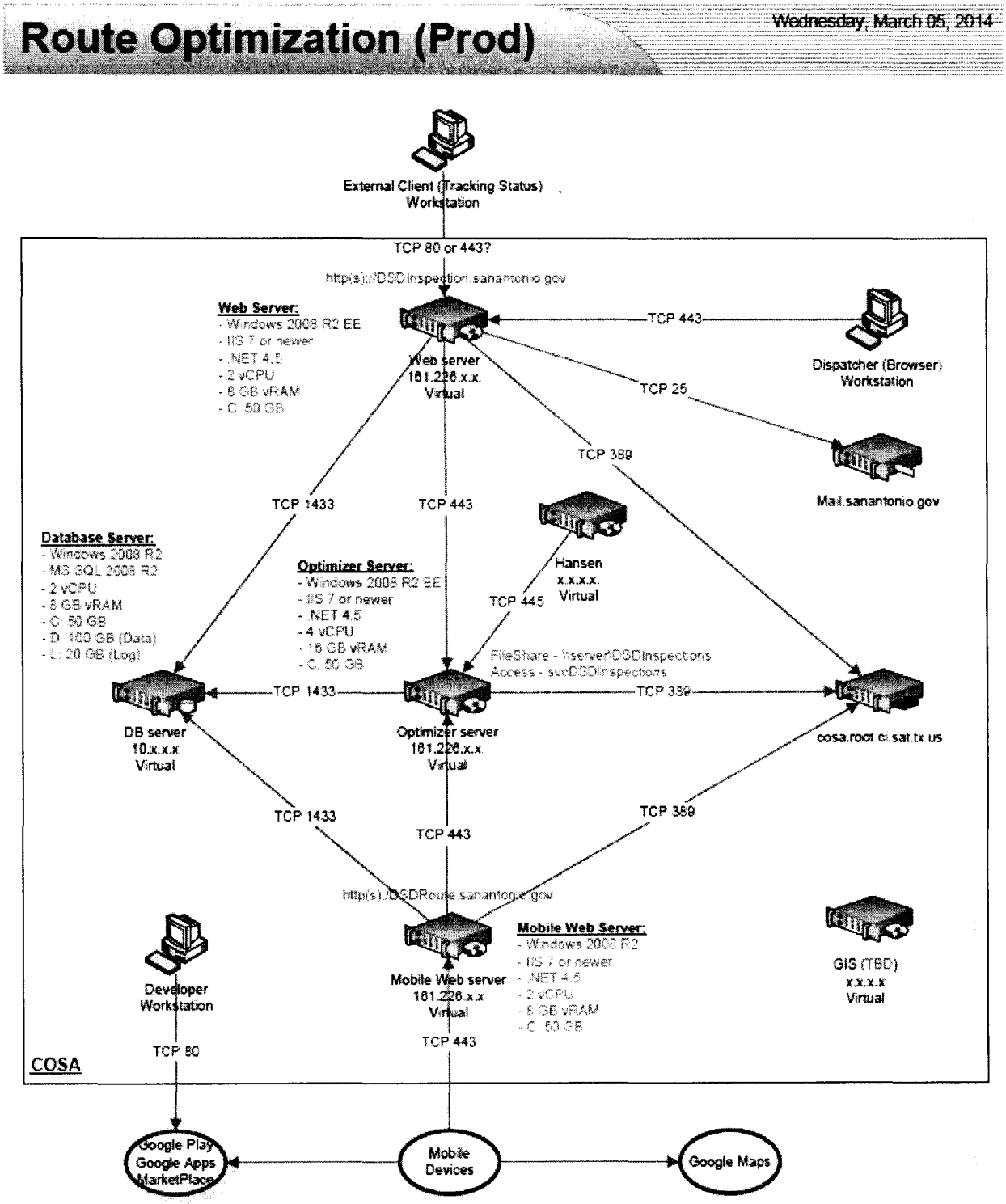
Notes:

1. Inspection Results (Pass, Fail and notes) are entered directly into Hansen system by inspector.
2. Initial Implementation will use a user defined standard time for each service ticket. System will not have any Service Types to determine estimated time for each service.
3. Inspectors will monitor their assignments for any services where <Inspection Type> = anything that ends with '...COO'. Inspector will veer outside of planned route towards the end of the day to assure that all '...COO' services are completed. This may result with incomplete service tickets.
4. For the most part in speaking to the seniors, they are touching approximately 90% of their staff in some minor/major reshuffling every day.
5. X/Y look up Map will have to return work zones.
6. Interface File Delimiter to be defined by COSA
    a. ASCII code not available on keyboard

Appendix D - List A
Hansen System – List of Inspection Types

BANNER
BCKFLOWFIN
BILLBOARD
BILLBRDANN
BQCR
BUILDCOO
BUILDDEMO
BUILDFIN
BUILDFOUN
BUILDFRAM
BUILDGENIN
BUILDINSU
CERTIFICAT
CODEINV
CONSULT
CPS
DBLDGFIRE
DBLDGSTCD
DGFIN
DGRIN
DISABILITY
DRAINAGE
DUCTTEST
ELECCOO
ELECFIN
ELECGENIN
ELECPRE
ELECR
ENVELPEINS
ENVIRONCOO
EQCR
FBLSTRSHOT
FBONFIRE
FBOOTH
FCOURTESY
FDINV
FDLSCODE
FDROUTINE
FDSCHOOL
FGSSFINAL
FINALFA
FINALFS
FINIBLAST
FIREALARM
FIRECOO
FIREFILL
FIREFINAL
FIREFUEL
FIREINSTAL
FIRELANE
FIREMAIN
FIRENOX
FIREPRESS
FIREREMOVE
FIRESPKLR
FIREWKANNL
FLOATFOOD
FLOOD
FPSTEST
FSITE
FSITEPRTHT
FSPRAYBTH
FWPYREVENT
GASFIN
GASR
HEALTHCOO
HEALTHENVR
HEALTHFIN
HEALTHFOOD
HEALTHPF
HISTGENIN
HSMOVE
INFLATABLE
INSPTYPE
INVESTIGAT
IRRCOMFIN
IRRRESFIN
LANDFEN
LANDSCOO
LANDSFIN
LANDSPRE
MECHCOO
MECHFIN
MECHGENIN
MECHR
MEDGASFIN
MEDGASR
MQCR
NCDFIN
NCDGENIN
NIGHTCLUB
NONCONF
OAKWILT
OFFDIGIANN
OFFPREM
OFFPREMDIG
PEDESTRIAN
PLUMBCOO
PLUMBFIN
PLUMBGENIN
PLUMBR
PLUMBTOP
PQCR
RECWATRF
RECWATRR
RETWALL
RIOGENIN
SAWSBASIN
SAWSCOO
SAWSWPAP
SEWERFIN
SIDEWLKF
SIDEWLKPF
SIGNCOO
SIGNFIN
SIGNGENIN
SIR
SOUNDCERT
SPECELECA
SPECEVENT
SPECFIREP
SPECFIRER
SPECFOUND
SPECHVAC
SPECRPT
SPECSEPT
SPECSMOKE
SPECSTRUC
SQCR
STREETFIN
STREETPRE
STSCAPE
TRAFFICCOO
TRAFFICF
TRAFFICP
TREEFEN
TREEFENFUP
TREEFIN
TREEGENIN
TREEMITIGA
TREEPRE
UDFIN
UDR
UNDERGRND
WATERPIPE
ZNMGRSITE

Appendix E – Architecture Diagram (Production Environment)



This Exhibit marked confidential, printed copy must be included in final signed version.