Systems Development Life Cycle (SDLC)

Enterprise Resource Planning (ERP) System Public Sector Specific

INFORMATION TECHNOLOGY DIVISION

EXHIBIT NO. 2

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SUMMARY

The Finance, City Treasurer, Human Resources, Information Technology Division and Public Works Department all collaborated in developing the Systems Development Life Cycle (SDLC) for the Enterprise Resource Planning (ERP) system. A SDLC is composed of a number of clearly defined and distinct work phases which are used by organizations to plan for developing and implementing a new system: requirement analysis, budgeting, procurement, implementation, testing, delivering the system for production and maintenance.
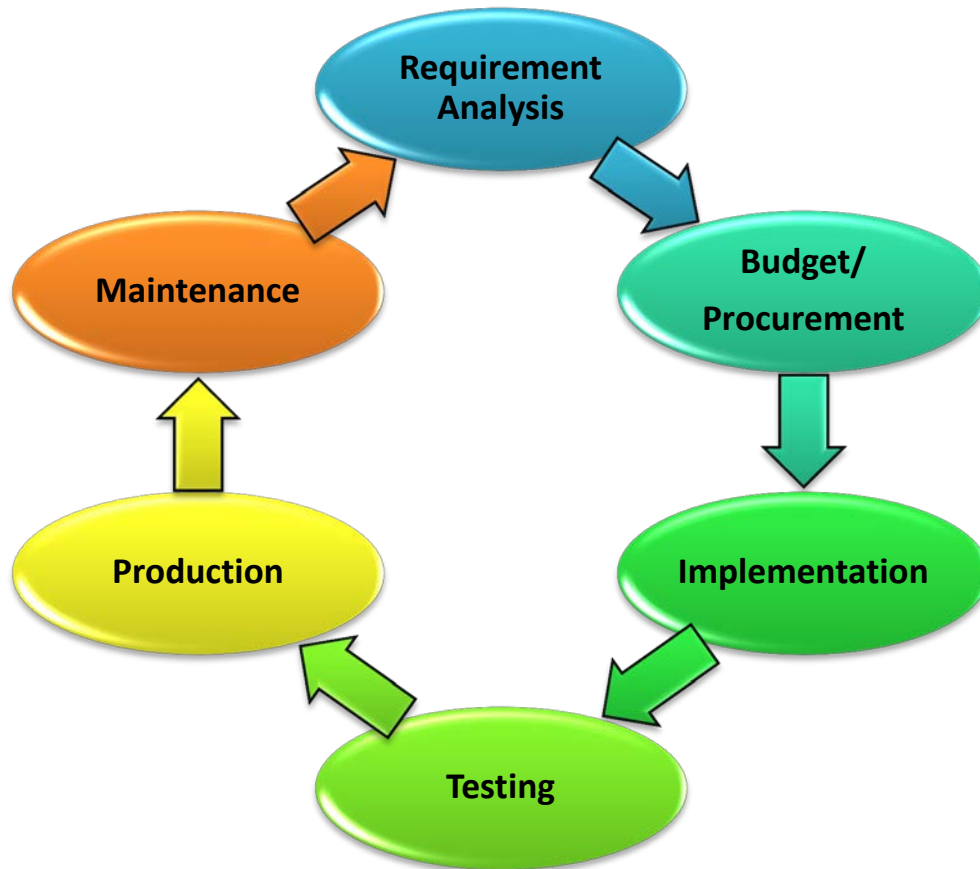
A. Analysis

This SDLC will ensure that this project supports the City's strategic business goals and objectives and resources are effectively implemented into our organization's enterprise architecture. The City's current financial system - Integrated Financial and Administrative Solution (IFAS7i) - from SunGard Public Sector Inc. is at End-Of-Life (EOL). Our objective is to replace it with a fully integrated, citywide Enterprise Resource Planning (ERP) system that is *Public Sector Specific* that will support best business practices, that can reduce the need for redundant input, data processes, increase efficiencies through the use of electronic workflow and improve access to business information and provide the City with easier access to information, improved reporting, provide an integrated workflow that will save time and streamline the city business operations.

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SECTION 1- GENERAL INFORMATION

A. Background of the City

Carson is a 19-square mile City of 91,700 people located in the South Bay area of Los Angeles County, California. The City Hall is located at 701 East Carson Street, Carson, CA In addition to City Hall; the government complex consists of three major locations, 12 parks, and four pool/aquatic center. The major locations are: (l) the Community Center – across from City Hall, (2) Corporate Yard, located at 2400 East Dominguez Street, and (3) Veterans SportsComplex, located at 22400 Moneta Avenue.

B. Proposed Solution

The proposed ERP solution must be:
- public sector specific
- Contractor hosted with marked services
- intuitive and user friendly
- easy to setup and maintain, with minimal technical expertise
- supported from 7:00 a.m. to 6:00 p.m. (PST), with 24/7 emergency coverage availability
- run in a Virtual Machine (VM) environment

Proposed Solution will detail the City's requirements and represents a general framework of the City's expectations for selecting an ERP that is robust and flexible enough to support City operations for many years to come. The solution will not be defining an implementation plan, i.e. how much data to convert, whether to do a phased implementation, whether to use a train the trainer method, etc. Rather, it is expected that all responding Contractors will provide recommendations that, with the City as a partner, will result in a successful system implementation with minimal risk.

The goal of this project is to replace the current 20+ years old SunGard system with a fully integrated, Citywide, ERP system that will support best business practices, reduce the need for redundant data processes, increase efficiencies through the use of electronic workflow and self-service, and improve access to business information.

The City will be most interested in turn-key solutions from Contractors offering the best possible solution at a highly competitive price, with a project implementation methodology that effectively demonstrates minimal risk to the City.

C. Current Systems

Following is a listing of the current systems being used by the City which are to be replaced by the proposed solution:

Appendix A

Application	Vendor
General Ledger	SunGard (Informix Database)
Cash Receipts	Quadrant Systems (SQL)

Application	Vendor
Accounts Receivable	SunGard (Informix Database)
Accounts Payable	SunGard (Informix Database)
Purchasing	SunGard (Informix Database)
Human Resources	SunGard (Informix Database)
Time and Attendance	Custom (includes accrual calculations)
Payroll	SunGard (Informix Database)
Budgeting	SunGard (Informix Database)
Project Accounting	Microsoft Excel (non-consolidated, non-centralized)
Grant Accounting	Microsoft Excel (non-consolidated, non-centralized)
Fixed Asset Accounting	Microsoft Excel (non-consolidated, non-centralized
Business License/Tax	HdL (SQL)
False Alarm Tracking	HdL (SQL)
Employee Self Service	Does Not Exist
Electronic Workflow	Does Not Exist
Permitting/Inspections/Planning/ Code Enforcement	Accela Permits Plus (SQL)
Inventory Management	SunGard (Informix Database)

Following is a listing of the current systems being used by the City which are not required to be included in the proposed solution. These systems may require an interface as described in Appendix A. Also, should the Vendor have an adequate replacement, these systems could possibly be replaced as part of a future project.

Other City Applications:	
Document Management	Questys (SQL)
Recreation Class Scheduling/Payment	Safari RecWare for scheduling and cash receipts (SQL)
Fuel Maintenance	EJ Ward
Community Center Scheduling	Scheduler Plus (SQL)
Community Center Attendance System	Time Force (SQL)
Emergency System	Eteam (Lotus Domino)
Emergency mass Dialing System	Reverse 911 (SQL)

D. **Current Data Environment**

Following is a brief indication of the components of our current data environment:

Description	Detail
Connected Locations	City Hall; Corporate Yard; 13 Park Location ; Community Center (Fiber)
Connectivity	1T between locations. Ethernet Cat 5 to desktop
Speed	LAN speed is typically 1GB backbone

Description	Detail
	and risers. 10/100MB to desktop
Voice Communication	Nortel Option 11
Server Operating System	Microsoft Windows Server 2003 and 2008. Server 2008 is the current standard.
Desktop Workstations	Gateways & HPs; Microsoft Windows XP & 7 Professional SP3, transitioning to Windows 7
Office Applications	Microsoft Office Pro 2007, transitioning to 2010 Pro
Email Server	Microsoft Exchange 2010 Enterprise
Email Client	Microsoft Outlook 2003, 2007 & 2010
Web Browser	Microsoft Internet Explorer 9.0
Database	Informix (SunGard), Microsoft SQL Server 2005, 2008 (current standard)
Network Security	Endpoint Network Security / Microsoft System Center
Workstation Virus Scanning	Symantec Endpoint Protection
GIS	ESRI ArcGIS 9.2, transitioning to ArcGIS 10.0

E. Estimated Number of Users For New System

Application	# of Users	# of Inquiry Users	# of Self Service Users
Required Applications:			
General Ledger	9	13	
Cash Receipts	5	5	
Cash Management	8	18	
Accounts Receivable	4	13	
Accounts Payable	13	13	
Purchase Requisitions	12	50	
Purchase Orders	12	50	
Human Resources/Benefits	18	4	50
Time Entry		50-60	
Payroll	4	13	
Budgeting	4	50	
Project Accounting	5	13	
Grant Accounting	5	13	
Fixed Asset Accounting	5	13	
Other City Applications:			
Business Registration/Tax	6	4	
Fleet	5	15	
Document Management	13	13	
Permits/Inspections/Planning	15	50	
Code Enforcement	12	50	
False Alarms	6	6	

Application	# of Users	# of Inquiry Users	# of Self Service Users
Recreation Classes/Payment	13	20	
Inventory Management	6	13	

F. Application Statistics

Description	Approx. Count
Required Applications	
General Ledger:	
Funds	175
Business Units	740
Accounts	4,700
Journal Entries Per Year	1,700
Journal Entry Lines Per Year	37,000
Cash Receipts – POS:	
Cash Receipts Per Year	37,000
Cash Receipts Lines Per Year	74,500
Accounts Receivable:	
Active Customers	1,409
Invoices Per Year	2,770
Invoice Lines Per Year	2,770
Accounts Payable	
Active Vendors	3,500
Vouchers Per Year	28,500
Voucher Lines Per Year	36,600
Checks Per Year	12,700
ACH Per Year	4,000
Wires Per Year	50
1099's Per Year	500
Purchase Requisitions	
Requisitions Per Year	14,500
Requisition Lines Per Year	24,500
Purchase Orders	
Purchase Orders Per Year	15,500
Human Resources	
Active Employees	700
Benefit Groups	13
Job Classifications	205
Medical Plans	7
Dental Plans	3
Vision Plans	1
Time Entry	
Pay Periods Per Year	26
Timecards Per Year	19,300
Timecard Lines Per Year	63,500

Description	Approx. Count
Payroll	
Checks Per Year	3,000
Direct Deposits Per Year	20,100
W2's Per Year	1,000
Budgeting	
Budget Line Items Per Year	2,250
Fixed Asset Accounting	
Fixed Assets	25,000
OTHER CITY APPLICATIONS	
Business Registration/Tax	
Business Registrations – current year	6,000
Business Registrations – prior two years	13,000
Investment Management	
Investments	200
Document Management	
Accounts Payable Images Per Year	100,000
Journal Entry Images Per Year	40,000
Cash Receipts Images Per Year	65,000
Business Registration Images Per Year	90,000
Permitting/Inspections	
Permits Issued Per Year	4,500
False Alarms	
False Alarms Per Year	2,500
False Alarm Billings Per Year	400
Recreation Classes/Payment	
Payments per Year	30,000
Inventory Management	
Number of Inventory Items in Stock	30,000

SECTION 2 - GENERAL REQUIREMENTS FOR ERP

A. **Scope of Services**

AN ENTERPRISE RESOURCE PLANNING (ERP) SYSTEM PUBLIC SECTOR SPECIFIC AND CONTAINS THE FOLLOWING REQUIRED APPLICATIONS:

1. General Ledger
2. Cash Receipts- Cash Management/Bank Reconciliation
3. Accounts Receivable
4. Accounts Payable
5. Purchasing
6. Human Resources
7. Time and Attendance
8. Inventory
9. Payroll
10. Budgeting
11. Salary and Benefits Projection and Analysis
12. Project Accounting
13. Grant Accounting
14. Fixed Asset Accounting
15. Self Service - Employee, Contractor, and Customer
16. Electronic Workflow
17. Business License
18. Forecasting and Analysis
19. GAAFR/GASB34 Report Writer
20. Web-based access
21. Planning, Permits & Code Enforcement
22. Fleet/Public Works Maintenance and Management (include Work Orders)
23. Person Entity Data Base
24. Ad-HOC Report Writer
25. Encumbrances
26. General City Service Request

B. **System Requirements**

- The proposed system MUST be:
  o public sector specific
  o Contractor hosted with managed services
  o intuitive and user friendly
  o easy to setup and maintain, with minimal technical expertise
  o supported from 7:00 am to 6:00 pm (PST), with 24/7 emergency coverage availability
  o run in a Virtual Machine environment

- The proposed system must enable the City to:
  o adopt best business practices
  o reduce the need for redundant data processes
  o increase efficiencies through the use of electronic workflow and self service
  o improve access to business information

- The proposed system should have reporting tools that:
  - allow end users to create ad hoc reports quickly, with minimal technical knowledge
  - allow end users to save ad hoc report templates so the report can be run again with new data in the future
  - prevent end users from changing standard reports
  - allow end users to export report data to Excel, Adobe/.pdf
  - allow end users to export report data in XML format
  - allow end users to email reports to other users who would be able to drill down to the detail from the report based upon system permissions
  - allow end users to email reports to non-users who would not be able to drill down to the detail from the report

C. __Compliance__

The proposed system must be compliant with the Government Accounting, Auditing and Financial (GAAFR) reporting standards, including the National Council on Governmental Accounting (NCGA) and Government Accounting Standards Board (GASB) statements.

D. __Required Processing Environment__

The proposed system should provide end-users with the ability to enter and manipulate data in an on-line, interactive mode. It should also permit simultaneous access to files. Both hardware and software must have the capability to be interconnected through the existing network infrastructure, preferably including the intranet and/or internet. When software updates are applied they should be available throughout the entire system with very minimal, if any, production downtime.

There should be three distinctly segregated environments: production, testing, and training. Both the testing and the training environments must have the capability to be refreshed with production data upon request.

E. __System Administrative Tools__

The proposed system must provide:

- Information for system audits to determine who has permission to use the system, what permission level they have been granted, when they have last used the system, and what they have done in the system;
- Audit trail information to identify what changes have been made to the data, when the changes have been made and who made the changes;
- Audit trail information to identify when user id's have been added to the system, what permissions they have been given, who added the users id's, and who changed the user id's;
- Statistics on database access rates by program, workstation, and time of day.

F. __Modularity__

The proposed system must be modular in design to allow for a possible phased in implementation. Once fully implemented, the system must be able to easily expand to

include new capabilities without negatively impacting previously implemented functionality.

Contractor-developed interfaces between the proposed solution and City systems that will not be replaced must be supported by the Contractor during future upgrades to the proposed solution.

G. **Process Controls**

The system should provide edit controls to prevent incomplete or incorrect data from being processed. It should also provide programmatic control of the process flow to prevent information from being processed in the wrong sequence.

H. **Disaster Recovery**

The Contractor must have an official disaster recovery plan that complies with generally accepted business practices for financial system backups, offsite storage, and data recovery. The plan should mandate that periodic testing be performed to ensure that a working system will be available within a designated timeframe after a disaster occurs.

I. **Work Hours**

City Hall is on a 4/10 work schedule, being closed every Friday. Standard work hours are 7:00 a.m. to 6:00 p.m., Monday through Thursday.

J. **Fiscal Year**

The City is on a July 1st through June 30th fiscal year.

SECTION 3 – TECHNICAL REQUIRMENTS

A. **Proposed System**

- Provide an explanation as to how the proposed system meets the general requirements described in Section.
- Provide your recommended implementation method (e.g. Phased implementation versus a big bang implementation). Explain the reasons for your recommendation.
- Provide your recommendation for a cutover date for the following modules which have seasonal activities. Explain the reasons for your recommendation.
  - o Payroll and Human Resources
  - o CalPERS Reporting
  - o AP and Year-end process (i.e. W-2, 1099)
- Provide your recommendation for project staffing; including the percentage of participation you believe is necessary from the City. Indicate whether you recommend backfilling positions or utilizing staff members who continue performing their current roles. Describe the pros and cons of backfilling.

B. **Technology**

- Describe the current technologies utilized in the proposed system.
- Describe the process followed to keep the technology current.
- Describe any anticipated risk in keeping the technology current.

C. **Servers, Operating System, Internet, Intranet, Desktop and Software Requirements**

- Provide detailed requirements for servers, operating system, internet, intranet, desktops and other software that will be necessary to utilize the proposed system.
- Provide a schematic/topology diagram that reflects the security required to support the communication connection for the hosted environment.

D. **Reporting**

- Describe the reporting capabilities of the proposed system. Include the level of user expertise necessary to independently create standard reports and ad-hoc reports without support from Information Technology staff.
- Identify whether reports are run using built-in reporting tools or using external reporting software/tools. If external reporting software/tools are used, list the reporting software/tool and indicate if it requires additional licensing.
- Describe the process for Electronic Data Discovery (EDD) from the host server. Discuss how an end user can view/print a document, form or report in its original format at a future date.
- If data archiving is performed, describe the process for Electronic Data Discovery (EDD) from the server. Discuss how an end user can retrieve an archived document, form or report in its original format at a future date. Discuss how an end user can create an ad-hoc report that combines current and archived data within one report. Discuss how system audit information for archived records can be retrieved by an authorized user.
- Explain the level of report writer support that is provided as part of the annual support fee.

E. Electronic Workflow

- Describe the electronic workflow capabilities of the proposed system.
- Describe the level of user expertise necessary for Finance department staff to independently set up workf1ows without support from Information Technology staff or from the Contractor.

F. Dashboard

Describe the dashboard capabilities of the proposed system. Include the level of user expertise necessary for application administrators in the Finance and Human Resources departments to independently set up dashboard templates without support from Information Technology staff or from the Contractor.

G. Security

- Provide a detailed description of the proposed system's security model, including details of the system's intrusion monitoring that is used to limit possible threats and unauthorized access to the database.
- Describe the encryption used for transmission of data across the web.
- Provide a detailed description of the security utilized to ensure the confidentiality of data, such as social security numbers, home addresses and phone numbers, etc.
- Describe how the system limits access to software screens and specific data on the screens, such as social security numbers.
- Identify the level of user expertise necessary for Administrative Services department staff to independently set up and modify security for Finance-related application without support from Information Technology staff

H. Internal Controls

Describe internal controls and security procedures for your on-site and remote staff that will be handling City data.

I. Database Conversion

- Describe how you participate in the database conversion.
- Describe how you perceive the City's role in the database conversion.
- Describe your process for determining how much historical data to convert for each application.
- Explain the criteria you will use to determine whether to manually convert data or programmatically convert data.
- Describe your process for validating converted data.
- Describe your pricing model for database conversions.

J. Phased Implementation Plan (complete this item if you recommend this approach in the proposed system. If not, why.)

- Identify the order that applications or groups of applications will be phased and why they will be done in that order.
- Explain how interfacing between current City applications and the proposed system will be handled during the implementation.

- Describe how you will synchronize data, validate data, and maintain data integrity between current City applications and the proposed system applications during the implementation.

K. Data Import/Export

- Describe how the proposed hosted solution will synchronize and validate data being received from external systems via proposed interface programs.
- Explain the capabilities the proposed hosted solution provides for importing and exporting to/from Excel, Word and Adobe Acrobat.

L. Testing

- Describe your methodology for:
  o Unit testing applications in the new solution.
  o Integration testing of all applications.
  o User acceptance testing of the new system.
  o The criteria and timeframe for final system acceptance after the system has gone live.
- Describe the parallel testing process and mention which module would suffice to parallel testing.

M. Training and Documentation

- Describe the training program for system users and administrators.
- Describe the training programs and/or tools that are available for training new hires.
- Describe training programs and/or tools available for advanced training or retraining of existing user.
- List the types of documentation available for use with the proposed system.
- Indicate the reference/user manuals that will be provided

N. Hosting, Managed Services, Maintenance, and Support Services

- Describe your hosting environment and locations of hosting sites and data.
- Provide information for the following:
  o Staffing description (quantity, title, etc.)
  o Hours of operation
  o Hosting in-house or business partner provided
  o Security of City of Carson data
  o Server speed
  o Server redundancy
  o Scheduled down time
  o Any other items of importance related to your hosting environment
- Describe how the City will access the hosting solution, print to City printers, and send internal and external email from within an application.
- Describe what services are provided through the managed technical services function
- Describe the City's role during a software update of the Contractor Hosted/Managed Services system.
- Describe items that are covered under a standard maintenance agreement.
- Describe items covered. (i.e., if there is a major technological upgrade, would there be an additional charge? Or, if a customization is based upon a City request and ultimately rolled into your base package for use by other clients, would there be an additional charge?, etc.)

- Provide an organization chart, including physical locations, for your support services group.
- Describe the support team for the City after implementation.
- Describe your support service process, from logging a ticket through closing a ticket. and include the path of human contact (i.e.: For any issue, the City calls phone number (999) 999-9999 or emails abc@Contractor.com; A Contractor support representative picks up the request via phone or email; If the support representative cannot resolve request within X number of days, it is passed to an application specialist; If the application specialist cannot resolve the request in X number of days, it is escalated to a senior manager; etc.)
- Describe your service level agreement (SLA) for software support and include a sample.
- What are the standard office hours for support services and describe how after hour emergency support is handled.

O. Roles and Responsibilities

Provide your recommendation for the roles and responsibilities of your team and the City's team.

P. Project Methodology/Planning

- Describe your project management methodology and communication plan.
- Discuss your issue resolution process.
- Describe your project risk management/mitigation process and organizational change management methodology.
- Provide a sample project plm1from another public agency similar in scope.

Q. Resumes

Include resumes for all probable project managers and examples of their project status reports for three different clients.

R. Proposed Subcontractors

- Provide a list of all subcontractors to be utilized for the project
- Explain why the subcontractors are required and define their role.
- Provide three (3). The reference should be the project manager or a person with broad knowledge of the project, include the following:
  - o Client name and location
  - o Contact name, title, phone number, and email address
  - o Indicate whether the client has received m1y benefits, products, discounts, or other in-kind services/products in exchange for fulfilling the role of providing a customer reference.

S. Third Party Project Manager

Describe how you would handle a third party Project Manager, should the City of Carson hire one.

T. <u>**Insurance Coverage Requirements**</u>

A certified statement that the Contractor will be able to comply with the City's insurance coverage requirements.

U. <u>**Exceptions**</u>

List and explain any RFP requirements that you take exception to. The City, at its sole discretion, may reject any or all exceptions.