0220-04669-0000

TRANSMITTAL

TO	DATE	COUNCIL FILE NO.
The City Council	JUL 29 2011	
FROM		**COUNCIL DISTRICT**
The Mayor		

Proposed Contract with ACS State & Local Solutions, Inc.
for Implementation of the *Express*Park™ Intelligent Parking Management Project

Transmitted for your consideration. See the
City Administrative Officer report attached.

for (Janelle Erickson)

MAYOR

MAS:JHC: 06120003

CAO 649-d

Report From
OFFICE OF THE CITY ADMINISTRATIVE OFFICER
Analysis of Proposed Contract
(\$25,000 or Greater and Longer than Three Months)

To: The Mayor	Date: 07-27-11	C.D. No.	CAO File No.: 0220-04669-0000
Contracting Department/Bureau: Department of Transportation		Contact: Dan Mitchell, (213) 473-8276	

Reference:
Memo from the Board of Transportation Commissioners dated June 13, 2011 and report from the Department of Transportation dated June 9, 2011; Referred for report by the Mayor's Office on June 14, 2011.

Purpose of Contract:
To provide and install the systems and equipment necessary to develop and implement *Express*Park™, an intelligent parking management system for the downtown area.

Type of Contract: (X) New contract ( ) Amendment	Contract Term Dates: Two years and two additional one-year options to extend the contract, for a potential total of four years.

Contract/Amendment Amount: \$30,500,000

Proposed amount \$ 30,500,000 + Prior award(s) \$ 0 = Total \$ 30,500,000

Source of funds: Special Parking Revenue Fund and Transportation Grant Fund

Name of Contractor: ACS State & Local Solutions Inc.

Address: 12410 Milestone Center Drive, Germantown, MD 20876

	Yes	No	N/A*	8. Contractor has complied with:	Yes	No	N/A*
1. Council has approved the purpose	X			a. Equal Employmt. Oppty./Affirm. Action	X		
2. Appropriated funds are available	X			b. Good Faith Effort Outreach**	X		
3. Charter Section 1022 findings completed	X			c. Equal Benefits Ordinance	X		
4. Proposals have been requested	X			d. Contractor Responsibility Ordinance	X		
5. Risk Management review completed	X			e. Slavery Disclosure Ordinance	X		
6. Standard Provisions for City Contracts included	X			f. Bidder Certification CEC Form 50	X		
7. Workforce that resides in the City: 50%	*N/A = not applicable ** Contracts over \$100,000						

COMMENTS

The Department of Transportation (DOT) requests approval to complete negotiations and execute a contract with ACS State & Local Solutions, Inc. (ACS) for the development and installation of the systems and equipment necessary to implement *Express*Park™, an intelligent parking management system for the downtown area. The proposed four-year contract is for a two-year period with two one-year options to extend the term, with total compensation not to exceed \$30.5 million. Funding for this purpose of \$18.5 million for the initial two-year period (installation, one-year demonstration, and evaluation) is available through the City's Special Parking Revenue Fund and Transportation Grant Fund. DOT also requests to modify the current parking meter rate approval structure in order to have flexibility in meeting the demand-based pricing requirements of the demonstration.

BACKGROUND

In December 2007, the City Council authorized the Department of Transportation (DOT) to partner with Metro and Caltrans to apply for a federal Congestion Mitigation and Air Quality Improvement

Janice Chang	Patricia J. Hunt	Miguel A. Santana
JHC / Analyst / 06120003	Assistant CAO	City Administrative Officer

CAO 661 Rev. 5/2007

(CMAQ) grant to receive funding for the Los Angeles Region Congestion Reduction Demonstration Initiative (CRD) (C.F. 07-3754). The application was successful, and in April 2009, the City Council approved DOT to receive $15 million from the CMAQ grant and match it with $3.5 million in Special Parking Revenue Fund (SPRF) monies to develop an intelligent parking management system for a one-year demonstration in the downtown Los Angeles area. The project has been renamed the *Express*Park™ project, and is a comprehensive strategy to reduce traffic demand, relieve traffic congestion, reduce air pollution, and improve parking availability in the downtown area by implementing demand-based pricing and parking guidance.

Scope of Work

*Express*Park™ will utilize vehicle sensors, enhanced meters, and a real-time parking guidance system in approximately 6,000 on-street metered parking spaces and 7,500 off-street parking spaces in seven City public parking facilities in the downtown area. Data from these technologically-equipped meters and facilities will guide DOT in setting parking policies and pricing to achieve 70 to 90 percent occupancy at on-street parking spaces per block. In addition, the parking guidance system and meter technology enhancements will provide motorists with ease in finding and paying for parking, with visual and mobile real-time guides and additional payment and time expiration notification options. A Central Management System will collect, process and analyze all data to make recommendations for pricing, time limits, and hours of operation for on- and off-street parking. Subsequent to the implementation period, the project will focus on an evaluation period to assess impact on traffic demand and congestion, travel time and efficiency, modal shifts in transportation, and revenue optimization for future considerations regarding transportation within the City.

The contractor will be responsible for selecting, installing and testing equipment with the required functionality and developing the Central Management System to integrate all systems and process and utilize all the data to achieve the goals of *Express*Park™. This includes the parking occupancy, parking guidance, meter revenue collection, meter enforcement, technical support and training systems and public outreach plans and modules. The contractor will also be responsible for qualifying and managing all subcontractors to meet the City's requirements under the contract.

The contractor will work closely with City staff to design and test the systems, coordinate meter and sign change outs, and integrate and evaluate the systems and project. Existing City staff resources will be used to support the project.

At the conclusion of the contract, the City has the ability to take ownership of the system to continue the *Express*Park™ program and possibly expand it throughout the City.

Attachment 1 shows a map of the downtown project area, including the participating Parking Meter Zones (PMZ) and City off-street parking facilities.

Two additional off-street facilities included in the map, LA Garage (545 S. Main Street) and Broadway Spring Center (333 S. Spring Street), are priced as options in the proposed contract and would be funded under a separate agreement with and by the Community Redevelopment Agency (CRA), to be reported on under separate cover. Should CRA contribution no longer be available, these two facilities would be excluded from the project and would not have an effect on the implementation or operations of the rest of the project.

Competitive Process

On November 3, 2010, DOT issued a Request for Proposals (RFP) for the *Express*Park™ project. A mandatory pre-proposal conference was held on November 12, 2010, in which 30 companies attended and seven declared themselves as potential primary contractors. By the close of the RFP period, on December 17, 2010, proposals had been submitted by two companies: ACS and Serco, Inc. (Serco). However, both companies' proposals were significantly more costly than the $18.5 million two-year budget.

The two proposals were reviewed without price schedules by a five member Evaluation Panel consisting of members of the DOT Meter Operations Group, the City of Beverly Hills Parking Operations, DOT Parking Enforcement Group, and a former Assistant City Attorney for DOT. Instead of beginning the RFP process again, DOT worked with both companies to explore options available to reduce the costs of their respective proposals, and the entire Evaluation Panel met to hear oral presentations of the companies' proposed modifications.

Subsequently, DOT revised the project scope of work (see Attachment 2) and on March 2, 2011 formally requested the two companies to resubmit proposals, with responses due March 16, 2011. Both new proposals were deemed responsive and fell within the $18.5 million budget. After reviewing the new proposals and interviewing each company a second time, the Evaluation Panel scored each proposal based on General Experience (20 points), Quality of the Technical Solution (20 points), Project Approach (15 points), Equipment Proposed (25 points), Project Plan (10 points), and Operations and Maintenance Plan (10 points). Based on the evaluation, ACS received the highest score. The attached DOT report (Attachment 4) provides greater detail of the competitive process.

ACS is in compliance with the City's contracting requirements.

Demand-Based Pricing

Successful demonstration of the *Express*Park™ project requires the ability to adjust parking meter rates in a timely manner in order to meet or drive demand. The current method of setting rates through City Council ordinance does not allow the flexibility for this demand-based pricing to occur. DOT anticipates that it will evaluate traffic behavior and impact for a period of four to eight weeks prior to each adjustment of parking meter rates. The Department requests that the General Manager be granted authority to increase or decrease parking meter rates in the project area by a maximum of 50 percent from current rates. Authority to utilize parking management tools not addressed by ordinance, such as the ability to clear time remaining on a parking meter after a vehicle vacates a space, is also requested.

Additionally, the department requests the authority to extend this pricing and policy flexibility to two Parking Meter Zones (PMZ) outside of the six PMZs included in the project area in order to manage parking impacts in the downtown area that are outside of the ExpressPark™ project area (PMZ No. 581 Alameda East) and at the request of Council District 6 (PMZ No. 501 Van Nuys).

Project Milestones and Contract Terms

The initial two-year contract period will consist of an installation and testing period, a one-year demonstration, and subsequent data evaluation period, roughly as follows:

Milestone	Time from Contract Award	Estimated Completion
• Contract approved		August 2011
• Installation/testing commence	2 months	October 2011
• Equipment installation complete	6 months	February 2012
• Parking guidance, management systems fully operational; demonstration period begins	8 months	April 2012
• Demonstration period complete; evaluation period begins	20 months	April 2013
• Final evaluation report complete	25 months	September 2013

Considerations for exercising the option to extend the contract beyond the initial two years will include continuing the *Express*Park™ demand-based pricing and policies beyond the demonstration phase, extending the boundaries to new project areas, and further developing reporting systems to achieve optimal and efficient management of the program. Each annual extension option is priced at a maximum of $6 million, with DOT estimating that continuing the program at the same operating level and scope of work would cost $4 million annually, while expanding the scope of work and increasing the program area would add up to an additional $2 million annually.

During the initial two-year contract term, the City, through the SPRF, is not expected to incur a significant increase in costs beyond the normal operating costs for the parking meters and off-street facilities being enhanced for the demonstration. These costs, estimated annually at $964,000, include meter credit card transaction fees, general meter reporting costs, and meter communication fees, and would be incurred regardless of the contract. The additional operating costs incurred due to the enhancements are covered within the budget of the contract.

Approval of this contract would not preclude the City from entering into any future agreements regarding the parking meters or off-street facilities at the conclusion of the contract term.

RECOMMENDATION

That the City Council, subject to the approval of the Mayor:

1. Authorize the General Manager of the Department of Transportation (DOT) to execute a contract with ACS State & Local Solutions, Inc. (ACS) for the provision and installation of the systems and equipment necessary to develop and implement the *Express*Park™ project, in conformance with the details described in the attached draft contract (Attachment 3), for a period of four years (two years with two one-year options to extend the term) and total compensation not to exceed $30.5 million over the term of the contract, subject to the approval of the City Attorney as to form;

2. Authorize the General Manager of DOT to pursue cost savings that could result in a decrease in the final contract amount without a reduction in project scope;

3. Approve an ordinance modifying Section 88 of Chapter VIII of the Los Angeles Municipal Code (LAMC), to be effective January 1, 2012, granting the DOT General Manager the authority to increase or decrease parking meter rates within Parking Meter Zone (PMZ) Numbers 501, 537, 553, 554, 555, 565, 580, and 581 by as much as 50 percent from their prescribed rates, with the goal of achieving 70 to 90 percent occupancy on each city block in the Parking Meter Zone during metered hours;

4. Authorize the DOT General Manager to utilize metered parking management tools, consistent with the amended LAMC, within PMZ Numbers 501, 537, 553, 554, 555, 565, 580, and 581, including modifying time-of-day rates, progressive rates, special event rates, and clearing the remaining paid time for a metered parking space after the vehicle vacates the space; and,

5. Instruct DOT to report back to the Council:

    a. On the progress of the project during the annual City budget process for consideration of funding for any contract extensions;
    b. Every six months during the initial demonstration and evaluation period to ensure the timely completion of project milestones as detailed above; and,
    c. On the results of the final evaluation at the completion of the project.

FISCAL IMPACT STATEMENT

Funding for the *Express*Park™ project is provided through a $15 million United States Department of Transportation Congestion Mitigation and Air Quality Improvement grant, administered through the City's Transportation Grant Fund, and a $3.5 million match from the Special Parking Revenue Fund (SPRF). This funding is sufficient to cover the initial two-year period of the contract. An annual cost of $4 million is the estimated minimum commitment required to continue the project operations beyond the initial contract period, and is an eligible expense of the SPRF. The funding required from SPRF in 2012-13 for the *Express*Park™ project area is estimated at $964,000, and has been budgeted in the Department of Transportation's SPRF Five-Year Operations and Maintenance Plan. Funding for the proposed future year options is subject to the availability of SPRF and any other eligible funds. There is no impact to the General Fund.

MAS:JHC:06120003

ATTACHMENTS

ExpressPark™ Project Areas

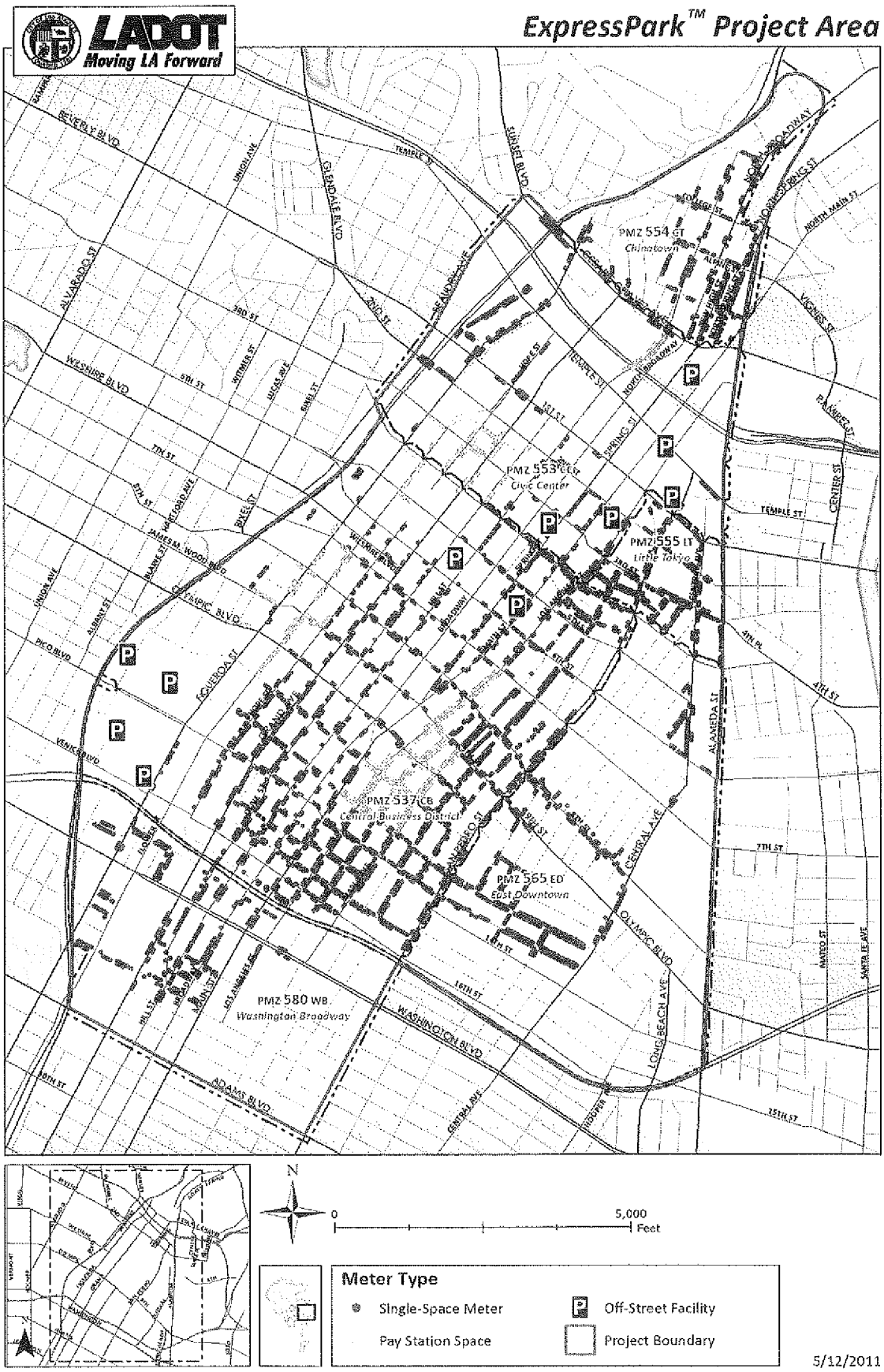
On-Street Parking Meter Zones (PMZ)

PMZ No. 537 – Central Business
PMZ No. 553 – Civic Center
PMZ No. 554 – Chinatown
PMZ No. 555 – Little Tokyo
PMZ No. 565 – East Downtown
PMZ No. 580 – Washington-Broadway

Off-Street Parking Facilities

Pershing Square (530 Olive St.)
LA Mall (225 N. Los Angeles St.)
El Pueblo (Lot 2, 615 N. Main St.)
Convention Center (1201 S. Figueroa St.)
Aiso Street Garage (101 Judge John Aiso St.)
Cathedral Parking (Lot 755, 257 S. Los Angeles St.)
LA Garage (545 S. Main St.) – CRA (separately funded)
Broadway Spring Center (333 South Spring St.) – CRA (separately funded)

ExpressPark™ Project Area Map



*Express*Park™ Project Scope of Work Major Revisions

Initial Request for Proposal	Revised Request for Proposal
Contractor to purchase new multi-space meters for all spaces in the project area	Option for contractor to modify existing pay stations to meet project requirements
Implementation of all components of parking management system no later than demonstration launch date	Option to phase in select components of parking management system no later than 6 months after demonstration launch date
Dynamic Message Signs (DMS): • DMS provided at every project area off-street facility • Approximately 50 signs placed in surrounding neighborhood	Dynamic Message Signs (DMS): • DMS provided at two off-street facilities • Approximately 12 signs placed in surrounding neighborhood
Wireless monitoring cameras to be placed at every DMS and entrances to project area off-street facilities	No wireless monitoring cameras required
System replication daily to an off-site disaster recovery infrastructure	No off-site system backup required, but on-site hourly replication is provided
Contract costs to include the systems source code for exclusive use in the City	Option for vendor to retain ownership of source code and provide systems for a fee
Vendor to warrant all equipment for a period of five years from the date of acceptance by the City	Vendor to warrant all equipment for a period of two years from the date of acceptance with options to extend warranties up to five years total.

ATTACHMENT 3

AGREEMENT BETWEEN
THE CITY OF LOS ANGELES AND
ACS STATE & LOCAL SOLUTIONS, INC.
TO PROVIDE AND OPERATE AN
INTELLIGENT PARKING MANAGEMENT SYSTEM
LA *EXPRESS* PARK ™

Version 6.5

This AGREEMENT is made and entered into this ___ day of _____, 2011 ("Effective Date"), by and between the City of Los Angeles, a municipal corporation ("CITY"), and ACS State & Local Solutions, Inc. ("ACS"), individually referred to as "party" and collectively as "parties,"

WHEREAS, The CITY has selected ACS to provide an Intelligent Parking Management System ("System") by way of a competitively bid procurement process.

WHEREAS, the parties desire to perform their obligations under this Agreement in accordance with the terms and conditions of this Agreement and its associated exhibits.

NOW, THEREFORE, ACS and CITY agree as follows:

1. APPLICABLE DOCUMENTS

The provisions of this Agreement along with its associated exhibits are hereinafter collectively referred to as the "Agreement." In the event of any conflict or inconsistency in the definition or interpretation of any word, responsibility, schedule, or the contents or description of any task, deliverable, goods, services or other work, or otherwise between and/or among the main body of this Agreement and it exhibits, such conflict or inconsistency shall be interpreted in accordance with the following order of precedence:

i. The Main Body of this Agreement
ii. Exhibit 1 – Scope of Services
iii. Exhibit 2 – Payment Schedule
iv. Exhibit 3 – Standard Provisions for City Contracts
v. Exhibit 4 – Performance Standards
vi. Exhibit 5 – ACS' Proposal & BAFO
vii. Exhibit 6 – CITY's RFP

2. ENTIRE AGREEMENT

The terms of this Agreement and the Exhibits thereto, shall constitute the complete and exclusive statement of understanding between the parties which supersedes all previous agreements, written or oral, and all communications between the parties relating to the subject matter of this Agreement.

3. TERM & TERMINATION

i. **Term** – The term of this Agreement will begin on the Effective Date and expire two years thereafter, unless earlier terminated or renewed in accordance with the provisions of this Agreement. The CITY shall have the right to exercise two additional one-year options.

ii. **Termination for Convenience** – In the event the CITY terminates this Agreement for convenience, the CITY agrees to pay ACS for all services performed in accordance with the terms of this Agreement up to the date of termination. The parties agree to meet and negotiate regarding whether the payment of any additional wind-down expenses are warranted and appropriate under the circumstances of the termination.

iii. **Termination for Breach** – Either party may terminate this Agreement in the event the other party is in breach of this Agreement, and such beach has not been cured in a timely manner by the party in breach. Notwithstanding any other provision in this Agreement to the contrary, the parties agree that in the event the CITY terminates this Agreement for breach, and ACS has not timely cured such breach, the CITY will be entitled to the rights described in Section 7(ii) of the Main Body of this Agreement with regards to ACS' MERGE™ solution.

4. SERVICES

Pursuant to the provisions of this Agreement, ACS shall fully provide, complete and deliver on time all the tasks, deliverables, goods, services, and other work as set forth in Exhibit 1 (Scope of Services). While ACS is committed to providing all services outlined in Exhibit 1, it is, however, in the best interests of the parties to create a structure to address any unforeseen but necessary scope increases. Any effort, which does not fall within Exhibit 1, will be subject to the change order process. ACS will be responsible for assisting the CITY in defining, documenting and quantifying the change order. A detailed change order proposal will be prepared by ACS and submitted to the CITY for its review and approval. The CITY will be responsible for timely turnaround of a decision on the approval of the change order request. All terms and conditions of the change order will be incorporated into an amendment to this Agreement in accordance with Section 13 of the Main Body of this Agreement. ACS will not be required to perform activities deemed out of scope without a fully executed amendment signed by both authorized representative of both parties.

5. COMPENSATION

Subject to the provisions of this Agreement, the CITY will pay ACS in accordance with Exhibit 2 (Payment Schedule), attached hereto and made a part hereof. Payment terms for materials and services will be as specified in Exhibit 2. Each invoice provided by ACS to the CITY will separately state all applicable charges, reimbursable expenses and taxes payable. Invoices delivered pursuant to Exhibit 2 will be due and payable within thirty (30) days after invoice issuance, unless other payment terms are mutually agreed to.

6. WARRANTIES

i. **Equipment Warranty** – With regards to any warranty for equipment provided by ACS under this Agreement, ACS agrees to provide such warranties for a period of five years following acceptance of such equipment by the CITY. Acceptance by

the CITY must occur prior to the CITY receiving beneficial use of such equipment. The parties agree that the term "beneficial use" means ACS has deployed the equipment and the equipment is generating revenue for the CITY.

ii. **Service Warranty** – ACS warrants that all services will be provided in a good and workmanlike manner, by qualified personnel, and in accordance with generally applicable industry standards.

iii. **Disclaimed Warranties** – Except as otherwise expressly set forth in this Agreement, all other warranties, whether express or implied, including the warranties of merchantability and fitness for a particular purpose, are hereby disclaimed.

iv. **IP Rights Warranty** – ACS represents and warrants that its performance of all obligations under this Agreement does not infringe in any way, directly or contributorily, upon any third party's intellectual property rights, including, without limitation, patents, copyrights, trademarks, trade dress, trade secrets, right of publicity and proprietary information ("IP" or "Intellectual Property"). This provision shall survive expiration or termination of this Agreement.

7. INTELLECTUAL PROPERTY RIGHTS & INDEMNIFICATION

i. **Pre-Existing Intellectual Property** – All pre-existing intellectual property, including but not limited to software, associated documentation, software upgrades, modifications and customizations, provided to the CITY ("Pre-Existing IP") will at all times remain the exclusive property of ACS and/or its vendors. In the event ACS provides the CITY with ACS Pre-Existing IP, the CITY will receive a license to use such ACS Pre-Existing IP in accordance with Section 7(ii) and 7(iii) of the Main Body of this Agreement. In the event ACS provides the CITY with Pre-Existing IP of a third party, the CITY will receive a limited license to use such third party Pre-Existing IP.

ii. With regards to ACS' proprietary software solution MERGE™, ACS will maintain ownership of the source code and provide the CITY a perpetual, non-assignable, non-transferable, and non-exclusive license to use the software only in the City of Los Angeles for a fee. ACS agrees to modify the MERGE™ source code at the CITY's request and cost. In the case of ACS' dissolution, or cessation of providing support of the software to the general public, the CITY will own a perpetual, royalty-free, non-assignable, non-transferable, and non-exclusive (outside the City of Los Angeles) license to use the MERGE™ source code exclusively in the City of Los Angeles, and to modify the MERGE™ source code only by CITY employees or by companies that do not provide parking related services.

iii. After the term of this Agreement, the CITY will have the option to obtain for a fee a perpetual, royalty–free, non-assignable, non-transferable, and non-exclusive

license to use the MERGE™ software exclusively in the City of Los Angeles, and to modify the MERGE™ source code for use only in the City of Los Angeles, and only by employees of the City of Los Angeles or by companies that do not provide parking related services. In the case of ACS' dissolution, or cessation of providing by ACS support of the MERGE™ software to the general public, the MERGE™ source code will become the property of the CITY.

iv. **Ownership of other work products & IP** – Unless otherwise provided for herein, all work product(s) originated or prepared by ACS or its subcontractors of any tier under this Agreement shall be and remain the property of the CITY for its use in any manner it deems appropriate. Work products are all works, tangible or not, created under this Agreement (excluding the items mentioned in Section 7(i), 7(ii) and 7(iii) above) including, without limitation, documents, materials, data, reports, manuals, specifications, artwork, drawings, sketches, computer programs and databases, schematics, photographs, video and audiovisual recordings, sound recordings, marks, logos, graphic designs, notes, websites, domain names, inventions, processes, formulas matters and combinations thereof, and all forms of intellectual property. ACS hereby assigns, and agrees to assign, all goodwill, copyright, trademarks, patents, trade secret and all other intellectual property rights worldwide in any such work products originated and prepared by ACS under this Agreement. ACS further agrees to execute any documents necessary for the CITY to perfect, memorialize, or record the CITY's ownership of rights provided herein. This provision shall survive expiration or termination of this Agreement. ACS shall not provide or disclose any such work product to any third party without prior written consent of the CITY.

Any subcontract entered into by ACS relating to this Agreement, to the extent allowed hereunder, shall include a provision similar to that of this Section 7(iv) for work to be performed under this Agreement to contractually bind or otherwise oblige its subcontractors performing work under this Agreement such that the CITY's ownership rights of all work products defined under this Section 7(iv) are preserved and protected as intended herein. Failure of ACS to comply with this requirement or to obtain the compliance of its subcontractors with such obligations shall subject ACS to damages paid to the CITY and the imposition of any and all sanctions allowed by law, including but not limited to termination of ACS' contract with the CITY.

v. **Intellectual Property Indemnification** – ACS, at its own expense, undertakes and agrees to defend, indemnify, and hold harmless the CITY, and any of its Boards, Officers, Agents, Employees, Assigns, and Successors in Interest from and against all suits and causes of action, claims, losses, demands and expenses, including, but not limited to, attorney's fees, experts' fees and cost of litigation, damage or liability of any nature whatsoever arising out of the infringement, actual or alleged, direct or contributory, of any Intellectual Property rights (1) on or in any design, medium, matter, article, process, method, application, equipment, device, instrumentation, software, hardware, or firmware used by

ACS in performing the work under this Agreement; or (2) as a result of the CITY's actual or intended use of any work product furnished by ACS under the Agreement. ACS defense of the CITY shall be consistent with Los Angeles CITY Charter Sections 271, 272 and 273. Rights and remedies available to the CITY hereinabove are cumulative of those provided for elsewhere in this Agreement and those allowed under the laws of the United States, the State of California, and the CITY of Los Angeles. This provision shall survive expiration or termination of this Agreement.

In addition to the foregoing, if ACS has information or reasonably believes that (1) any of the work product(s) provided by ACS under this Agreement allegedly or actually infringes or is likely to infringe upon any third-party Intellectual Property rights, or (2) any of the IP licenses procured on behalf of the CITY under this Agreement is to expire, to be terminated or enjoined, ACS shall immediately notify CITY of such alleged, actual or potential infringement or license status. Upon CITY's request, ACS shall, at ACS' own expense:

a. Procure for the CITY the right or license to continue using the Intellectual Property at issue; or

b. Replace the Intellectual Property at issue with a functionally equivalent, non-infringing product, if practicable.

Exercise of any of the above-mentioned options shall not cause undue business interruption to the CITY, or diminish the intended benefits and use of the work product(s) provided by ACS under this Agreement by the CITY under the specifications herein.

8. CUSTOMER SERVICE HOURS

ACS shall provide the CITY support via telephone Monday through Friday 7:00 AM to 4:00 PM Pacific Standard Time/Pacific Daylight Time except for official CITY holidays. ACS shall return a call from the CITY with 15 minutes during these hours. CITY reserves the rights to change the business hours to reflect changes in the meter hours and days of operations. CITY agrees to give ACS thirty (30) days advance written notice of such change. Any change in support hours that would continue for a period longer than thirty (30) days will require negotiation and agreement between the parties on the cost of the extended hours of support.

9. AUDITS & INDEMNIFICATION FOR TRADE SECRET PROTECTION

When and in the event the CITY has occasion to examine and audit ACS records related to this Agreement, the CITY agrees to treat as confidential those documents identified by ACS as proprietary, and will not share or disclose such records to the extent permitted by California law. ACS agrees to defend, indemnify and hold harmless the CITY from and against all suits, claims and causes of action brought against the CITY for the CITY's

refusal to disclose ACS' trade secrets or proprietary documents to any person making a request pursuant to the State of California Public Records Act (California Government Code Section 6250 et. seq.) ACS' obligations herein include, but are not limited to, all reasonable attorney's fees (both in house and outside counsel), reasonable costs of litigation incurred by the CITY or its attorneys (including all actual costs incurred by the CITY, not merely those costs recoverable by a prevailing party, and specifically including costs of experts and consultants), as well as all damages or liability of any nature whatsoever arising out of any such suits, claims and causes of action brought against the CITY, through and including any appellate proceedings. ACS' obligations to the CITY under this indemnification provision shall be due and payable on a monthly, on-going basis within thirty (30) days after each submission to ACS of the CITY's invoices for all fees and costs incurred by the CITY, as well as all damages or liability of any nature. ACS shall receive prompt notice from the CITY of (1) any communication to the CITY challenging the CITY's refusal to disclose ACS' information, and (2) any complaint or petition to the court challenging the CITY's refusal to disclose ACS' information. Further, should ACS choose to intervene in any court action relating to the CITY's refusal to disclose ACS information, the CITY shall not oppose ACS' motion to intervene.

10. MOST FAVORED PRICING GUARANTEE

In the event that the conditions set forth in Section PSC-25 of the Standard Provisions for City Contracts in Exhibit 5 (CITY's RFP) of this Agreement trigger an implementation of the required most-favored pricing terms, the parties agree to meet and negotiate the specific application of such provision to this Agreement.

11. INSURANCE & LIABILITY

ACS must supply and maintain insurance for applicable claims arising out of the negligent acts or omissions hereunder by ACS. ACS shall require its subcontractors to also maintain similar insurance at subcontractors' expense.

ACS must furnish the CITY Certificates of Insurance for the following:

1. Commercial General Liability:	$1,000,000
2. Professional Liability:	$1,000,000
3. Business Automobile Liability:	$1,000,000
4. Workers' Compensation:	Statutory Requirements
5. Employer's Liability Insurance	$1,000,000.

The standard Certificates of Insurance shall include the City of Los Angles as an additional insured for commercial general liability and business automobile liability

insurance, and shall state that 'All coverage will be primary to any other insurance coverage held or provided by the City'.

All evidence of insurance must identify the nature of your business with the CITY. Clearly show any assigned number of a bid, contract, lease, permit, etc. or give the project name and the job site or street address to ensure that your submission will be properly credited. Provide the types of coverage and minimum dollar amounts specified on the Required Insurance and Minimum Limits sheet (Form Gen. 146).

Electronic submission is the preferred method of submitting documents. Track4LA™ is the CITY's online insurance compliance system and is designed to make the experience of submitting and retrieving insurance information quick and easy. The system is designed to be used primarily by insurance brokers and agents as they submit client insurance certificates directly to the CITY. It uses the standard insurance industry form known as the ACORD 25 Certificate of Liability Insurance in electronic format. Track4LA™ advantages include standardized, universally accepted forms, paperless approval transactions (24 hours, 7 days per week), and security checks and balances. The easiest and quickest way to obtain approval of your insurance is to have your insurance broker or agent access Track4LA™ at http://track4la.lacity.org and follow the instructions to register and submit the appropriate proof of insurance on your behalf.

Instructions and information on complying with the City of Los Angeles insurance requirements are available online on the Office of the City Administrative Officer, Risk Management website at http://cao.lacity.org/risk/index.htm.

Except for the fees and amounts expressly due and payable to ACS hereunder, in no event shall either party to this Agreement be liable to the other party hereunder for any claims, penalties or damages (including but not limited to incidental, consequential, indirect, punitive or special damages), whether in contract, tort, or by way of indemnification, in an amount exceeding the total value of this Agreement.

During the term of this Agreement and without limiting ACS' indemnification of the CITY, ACS shall provide and maintain at its own expense a program of insurance having the coverages and limits customarily carried and actually arranged by ACS, but not less than the amounts and types listed on the Required Insurance and Minimum Limits sheet (Form General 146 in Exhibit 1 referenced below), covering its operations hereunder. Such insurance shall conform to CITY requirements established by Charter, ordinance or policy, shall comply with the Insurance Contractual Requirements (Form General Gen 146IR in Exhibit 1 referenced below) and shall otherwise be evidenced in a form. ACS shall comply with all Insurance Contractual Requirements shown referenced below, which is hereby incorporated by reference and made a part of this Agreement.
Form 146IR

Exhibit 1 – Insurance Contractual Requirements:

Contract: For additional information about compliance with City Insurance and Bond requirements, contact the Office of the City Administrative Officer, Risk Management at (213) 978-RISK (7475) or go online at www.lacity.org/cao/risk. The City approved Bond Assistance Program is available for those Contractors who are unable to obtain the City-required performance bonds, if such performance bonds are required. A City approved insurance program may be available as a low cost alternative for contractors who are unable to obtain City-required insurance.

ACS agrees that:

1. **Additional Insured**: The CITY must be included as an Additional Insured in applicable liability policies to cover the CITY's liability arising out of the negligent acts or omissions of the named insured.
2. **Notice of Cancellation**: All required insurance will be maintained in full force the duration of its business with the CITY. By ordinance, all required insurance must provide at least thirty (30) days' prior written notice (ten (10) days for non-payment of premium) directly to the CITY if ACS' insurance company elects to cancel or materially change limits required prior to the policy expiration date, for any reason except impairment of an aggregate limit due to prior claims.
3. **Primary Coverage**: ACS will provide coverage that is primary with respect to any insurance or self-insurance of the CITY. The CITY's program shall be excess of this insurance and noncontributing.
4. **Failure to Procure Insurance**: All required insurance must be submitted by certificates of insurance or related documentation to the Office of the City Administrative Officer, Risk Management prior to the inception of any operations by ACS. ACS' failure to procure or maintain required insurance or a self-insurance program during the entire term of this Agreement shall constitute a material breach of this Agreement under which the CITY may immediately suspend or terminate this Agreement or, at its discretion, procure or renew such insurance to protect the CITY's interests and pay any and all premiums in connection therewith and recover all monies so paid from ACS.
5. **Workers' Compensation**: By signing this Agreement, ACS hereby certifies that it is aware of the provisions of Section 3700 et seq., of the California Labor Code which require every employer to be insured against liability for workers' Compensation or to undertake self-insurance in accordance with the provisions of that Code, and that it will comply with such provisions at all times during the performance of the work pursuant to this Agreement.
6. **California Licensee:** All insurance must be provided by an insurer admitted to do business in California or written through a California-licensed surplus lines broker or through an insurer otherwise acceptable to the CITY. Non-admitted coverage must contain a Service of Suit clause in which the underwriters agree to submit as necessary to the jurisdiction of a California court in the event of a coverage dispute. Service of process for this purpose must be allowed upon an agent in California designated by the insurer or upon the California Insurance Commissioner

7. **Aggregate Limits/Impairment**: If any of the required insurance coverages contain annual aggregate limits, ACS must give the CITY written notice of any pending claim or lawsuit which will materially diminish the aggregate within thirty (30) days of knowledge of same. ACS must take appropriate steps to restore the impaired aggregates or provide replacement insurance protection within thirty (30) days of knowledge of same. No substantial reductions in scope of coverage which may affect the CITY's protection are allowed without the CITY's prior written consent.
8. **Commencement of Work**: For purposes of insurance coverage only, this Agreement will be deemed to have been executed immediately upon any party hereto taking any steps that can be considered to be in furtherance of or towards performance of this Agreement. The requirements in this Section supersede all other sections and provisions of this Agreement, including, but not limited to PSC-4, to the extent that any other section or provisions conflicts with or impairs the provisions of this Section.

Form Gen. 146/IR

Insurance Requirements:

Name: Express Park Intelligent Parking Management Project RFP Date: 10/28/10

Agreement/Reference: Implementation of Parking Management Information System.

Evidence of coverages checked below which have as a minimum the limits shown must be submitted prior to occupancy/start of operations. Amounts shown are a Combined Single Limits ('CSL'). Split limits may be substituted if the total per occurrence equals or exceeds the CSL amount. The professional Liability may be written on a per claims made basis.

√	Workers' Compensation/Waiver of Subrogation:	$1,000,000
√	General Liability: Premises and Operations, Contractual Liability, Independent Contractors and Products /Completed Operations	$1,000,000
√	Automobile Liability: Hired automobiles, non owned automobiles and owned automobiles	$1,000,000
√	Professional Liability (Errors and Omissions) 12 months after completion of work or date of termination	$1,000,000 per claims made basis.
√	Surety Bond	

If awarded a contract, the respondent will furnish the City evidence of insurance Coverage as set forth in this Exhibit 1 of the Standard Provisions for City Contracts. City

may require the respondent to have a surety performance bond to ensure satisfactory performance during the term of the contract. Such requirements are also included in this Exhibit 1 of the aforementioned Standard Provisions for City Contracts.

ACS, upon notice of award may be required to furnish an annually renewable corporate surety performance bond in the amount of $2,000,000, or no less than the contractual amount, to guarantee the faithful performance of this Agreement by ACS, and ACS agrees that it will be fully responsible for all work performed by ACS' subcontractors. Such annually renewable performance bond shall follow the instructions on submitting bonds to the City of Los Angeles, which are online on the Office of the City Administrative Officer, Risk Management website at http://cao.lacity.org/risk/index.htm. Such applicable sample City bond form being used may be amended to reflect the annually renewable verbiage from ACS' Surety Bond Broker.

12. AMENDMENTS

No changes to this Agreement or the Exhibits thereto shall be valid or effective unless made in the form of a written amendment which is approved in writing and which is formally executed by authorized representatives of the CITY and ACS.

13. FORCE MAJEURE

i. Neither party will be liable for any failure or delay in the performance of its obligations under this Agreement, if any, to the extent such failure is caused, directly or indirectly, without fault by such party, by: fire, flood, earthquake, elements of nature or acts of God; labor disruptions or strikes; acts of war, terrorism, riots, civil disorders, rebellions or revolutions; quarantines, embargoes and other similar governmental action; or any other cause beyond the reasonable control of such party. Events meeting the criteria set forth above are referred to collectively as "Force Majeure Events."

ii. Upon the occurrence of a Force Majeure Event, the non-performing party will be excused from any further performance or observance of the affected obligation(s) for as long as such circumstances prevail and such party continues to attempt to recommence performance or observance whenever and to whatever extent possible without delay. Any party so delayed in its performance will immediately notify the other by telephone or by the most timely means otherwise available (to be confirmed in writing within five business days of the inception of such delay) and describe in reasonable detail the circumstances causing such delay.

14. SEVERABILITY

Any provision in this Agreement which is prohibited or unenforceable in any jurisdiction will, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions or affecting the validity or enforceability of such provision in any other jurisdiction.

15. NOTICES

Any notice, demand or other communication required or permitted to be given under this Agreement will be in writing and will be deemed delivered to a party (i) when delivered by hand or courier, (ii) when sent by confirmed facsimile with a copy sent by another means specified in this Section 15, or (iii) six (6) days after the date of mailing if mailed by United States certified mail, return receipt requested, postage prepaid, in each case to the address of such party set forth below (or at such other address as the party may from time to specify by notice delivered in the foregoing manner):

If to ACS, to: ACS State & Local Solutions, Inc.
12410 Milestone Center Dr.
Germantown, MD 20876
Attention: TSG Contracts

If to CITY, to:

16. AMBIGUITIES

Any ambiguous language in this Agreement shall be interpreted as to its fair meaning, and not strictly for or against either party.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date.

ACS State & Local Solutions, Inc.	**The City of Los Angeles**
By: _____	By: _____
Name: _____	Name: _____
Title: _____	Title: _____

EXHIBIT 1

*Express*Park™

Scope of Work

Los Angeles Department of Transportation

Scope of Work
LADOT *Express*Park™

1. PURPOSE OF THE DOCUMENT

This Scope of Work (SOW) defines the goals and objectives and establishes the baseline for the planning and execution activities, which includes establishing a baseline schedule, delivery, installation, testing and commissioning for the ExpressPark™ Intelligent Parking Management (IPM) Project for the City of Los Angeles Department of Transportation. Any changes made to this SOW, must be reflected in an updated SOW.

This scope of work addresses the following deliverables:

- 1.1. System Engineering Management Plan (SEMP)
- 1.2. Enhanced Parking Meters and Pay Stations
- 1.3. Cellular Payment Technology
- 1.4. On Street Wireless Vehicle Sensors
- 1.5. Off Street Occupancy Systems
- 1.6. Parking Guidance System (PGS)
- 1.7. PGS Applications and Interfaces
- 1.8. PGS Fixed On-Street Signs
    - 1.8..1. PGS – Local neighborhood Dynamic Message Signs
    - 1.8..2. PGS – Off Street Dynamic Message Signs (City Owned)
- 1.9. Parking Management System
- 1.10. Advanced Meter Revenue Collection System
- 1.11. Meter Enforcement
    - 1.11..1. Guided Enforcement Application
    - 1.11..2. Citation Enforcement Application
    - 1.11..3. Handheld and Printer Hardware
- 1.12. Laptop Computers For Enforcement Vehicles
- 1.13. Warranty Parts and Service
- 1.14. Technical Support and Training of Personnel
- 1.15. Public Outreach and Marketing

2. APPLICABLE DOCUMENTS

Refer to the following applicable documents for additional detail:

2.1. Request for Proposals (RFP) For City of Los Angeles Downtown ExpressPark™ Intelligent Parking Management (IPM) Project, (November 3, 2010), including revisions (March 2, 2011).
2.2. ACS Revised Proposal for the City of Los Angeles Downtown ExpressPark™ Intelligent Parking Management (IPM) Project, (March 16, 2011)
2.3. ExpressPark™ Concept of Operations
2.4. ExpressPark™ Project Requirements
2.5. ExpressPark™ Systems Engineering Base Document
2.6. ExpressPark™ Configuration Management Plan

3. PROJECT LOCATION

The *Express*Park™ project will be located in the downtown Los Angeles area. The project area is bounded by Adams Boulevard and the I10 (Santa Monica) Freeway on the south, the I110 (Harbor) Freeway on the northwest and Alameda/North Spring Street on the east.

4. PROJECT SCHEDULE

The contract will be in effect for a period of two (2) years. LADOT will have the right to exercise two (2) one-year options to extend the term, subject to the approval of Mayor and/or City Council. The total contract term will not exceed (4) years. A project plan (Timetable) detailing the first two years covering the implementation and evaluation period is provided as Attachment B.

5. TESTING REQUIREMENTS

5.1. The Contractor will be responsible for component verification testing under guidance from LADOT. The Contractor will include a test plan covering units, system, security, and auditing. This test plan will describe the proposed approach taken with each state of test, the processes involved, testing tools utilized, acceptance criteria, and sign-off procedures.
5.2. Acceptance Testing Methodology

Acceptance testing will be based on three levels of testing

5.3. Factory Acceptance Test (FAT)

5.3..1. Factory acceptance testing is intended to certify that equipment provided is fit for purpose and free from defects in design and manufacturing processes. The Contractor may provide documentation from equipment providers in lieu of formal testing in the case of off-the-shelf components.
5.3..2. A component that is considered off-the-shelf may be accepted as fit for purpose if the manufacturer can certify that the product has been

successfully installed for similar purposes and operated in an environment comparable to the ExpressPark™ project location.

5.3..3. Manufacturer's quality control reports and data may be submitted in lieu of performance testing for components deemed fit for purpose by LADOT.

5.3..4. Customized components or equipment specially modified for the ExpressPark™ project must undergo performance testing at the manufacturer's facility prior to shipment of any equipment to the project location. Manufacturers must demonstrate that equipment meets or exceeds all requirements applicable as stated in the Project Requirements and ExpressPark™ RFP.

5.4. Unit Testing (System Installation Check) – Each installation will be inspected to ensure the system was installed according to manufacturer's specifications. Signoff on this check provides documentation that the system in installed correctly and will operate to factory specifications on performance and reliability, and meets all ExpressPark™ program requirements.

5.5. Systems Acceptance Tests (SAT) - The SAT is a full end-to-end functional and non-functional test in the actual production environment in Los Angeles. The System Acceptance Test will demonstrate (under full system operation conditions):

5.5..1. Full subsystem functionality as defined in this Specification.

5.5..2. All components and subsystems operate properly according to the Project Requirements

5.5..3. Full system integration (i.e. all subsystem components and interfaces communicate properly)

5.5..4. All diagnostic procedures

5.5..5. User interface for obtaining fault reporting, audit data and system status reporting

5.5..6. Recovery systems to mitigate loss of data in the event of power or component failure

5.5..7. If any of the selected subcontractors later prove unable to pass acceptance testing, secondary selections may be made.

5.5..8. All software and equipment will be subject to Acceptance Testing and written acceptance by LADOT.

6. SUBCONTRACTOR AND VENDOR APPROVAL

6.1. The Contractor will prequalify all subcontractors to certify that all proposed hardware and software meets or exceeds all required specifications contained in the current Project Requirements document of the Systems Engineering

Management Plan (SEMP) and are compatible with the proposed systems and overall *Express*Park™ solution.

6.2. LADOT will work with the Contractor during contract negotiations to evaluate the tradeoffs involved, and LADOT will subsequently select the prequalified subcontractors to participate on the project team based on cost, capabilities, quality, and demonstrated performance. If any of the selected subcontractors later prove unable to pass acceptance testing, secondary selections may be made.

6.3. All subcontractors and vendors selected for provision of equipment and services are subject to approval by LADOT.

7. SOURCE AND OBJECT CODE ESCROW

The Contractor ACS) agrees to escrow the readable source code and object (executable) code for all modules licensed for use by the City. The City will have the right to use and modify the source code only under specific circumstances where ACS stops supporting the software or in the event of ACS' dissolution. Further, ACS agrees to modify the source code at the City's request and cost. In the event ACS ceases to support the software due to the termination or expiration of the contract, the source code will not become the property of the City. Instead, ACS will provide the City with a license to use the ACS software. The City will own that license to use the software for the City of Los Angeles. Such licensing terms will be mutually agreed to.

8. SYSTEM ENGINEERING MANAGEMENT PLAN (SEMP)

8.1. The Contractor will be responsible for completing the SEMP. LADOT has completed drafts of four sections of the Systems Engineering Management Plan (SEMP). Draft sections which will be revised and completed are:

- 8.1..1. Systems Engineering Base Document
- 8.1..2. Concept of Operations
- 8.1..3. Project Requirements
- 8.1..4. Configuration Management Plan

8.2. The Contractor will be responsible for completing the pertinent parts of the SEMP through Operations and Maintenance, using the CalTRANS "Vee Diagram" as a guide. This will include:

- 8.2..1. System Verification and Test Plan
- 8.2..2. Software Development Plan
- 8.2..3. Enforcement Plan
- 8.2..4. Work and Deployment Plan
- 8.2..5. Communications Plan
- 8.2..6. Operations and Maintenance Plan
- 8.2..7. Quality Management Plan

8.2..8. Data Security and Safety Plan

8.3. For all project components, the Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in the current Project Requirements document of the Systems Engineering Management Plan.

8.4. The SEMP must be approved by the Federal Highway Administration for this task to be considered complete.

9. ENHANCED PARKING METERS AND PAY STATIONS

9.1. The Contractor will develop a detailed Meter Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements document will include, but not be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Contractor will meet with potential vendors as required. The Meter Requirements Document will include a recommendation for both single space and multi-space equipment. Outputs will include a project level architecture, definition of all interfaces and data requirements, and verification plans (see Section 5.1, Acceptance Testing Methodology).

9.2. Upon LADOT approval of the Meter Requirements Document, the Contractor will coordinate provision and installation of approximately 5,321 single space meters and 148 multi-space paystations in compliance with the approved Project Plan.

9.3. Upon receipt of all required permits and approvals, installations will proceed at a rate of approximately 500 meters per week.

9.4. Contractor is responsible for obtaining and compliance with all permits.

9.5. Installation Location

The meter type (single space, multi-space) and locations will be in accordance with the following schedule:

PMZ	PMZ #	Enhanced Single Space	Total Single Space	Pay Stations	PS Stalls	Total Paid Spaces
CB	*537*	2839	2839	116	571	3410
CC	*553*	516	516	32	171	687
CT	*554*	476	476	0	0	476
LT	*555*	392	392	0	0	392
ED	*565*	594	594	0	0	594
WB	*580*	504	504	0	0	504
Totals		**5321**	**5321**	**148**	**742**	**6063**

9.6. Installation and Removal of Meters and Pay Stations

In coordination with the Contractor, LADOT staff will remove all existing pay stations and single-space meter mechanisms and domes. Contractor will be responsible for removing the existing single-space meter housings and installing the new meters and pay stations under LADOT supervision. To prevent any loss of meter revenue, installation will be coordinated such that the metering operation for each space is seamless, i.e. the new meters are installed and activated immediately upon the removal of the existing equipment from service. The only exception to this provision will be when a parking meter post must be replaced or repaired due to being missing, loose or damaged, in which case meter removal will be scheduled in advance with LADOT staff. Contractor is responsible for ensuring all meter posts are in good working order at the time of meter installation.

9.7. For pay station installations, Contractor will provide and install thermoplastic space numbers. LADOT crews will remove, replace, and/or install all necessary signage and curb and stall markings.

9.8. The Contractor will certify that all single space meters and multi-space paystations meet all functional and performance requirements as stated in Section II (A) of the RFP, Section 8.0.2 of the SEMP Concept of Operations document, and Section 2.1, 2.2 and 2.3 of the SEMP Project Requirements document (see Attachment A, Section I). All equipment is subject to the approval of LADOT (see Section 5, Testing Requirements).

10. CELLULAR PAYMENT TECHNOLOGY

10.1. The Contractor will provide cellular payment technology to integrate all meters and pay stations in the *Express*Park™ project area to provide customers with an additional payment options and provide a means of being notified of an approaching expiry time for their parking space.

10.2. The Contractor will develop a detailed Cellular Payment Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements document will include, but not be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Contractor will meet with potential vendors as required. The Cellular Payment Requirements Document will include a recommendation for a cellular payment service provider.

10.3. Upon approval of the Cellular Payment Requirements Document, the Contractor will develop a High Level Design document. Inputs for the High Level Design document will include the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Outputs will include a project level architecture, verification plans (see Section 5.1, Acceptance Testing Methodology), and definition of all interfaces, including:

- 10.3..1. All meters (single and multi-space) installed for the *Express*Park™ project
- 10.3..2. Existing IPS meters
- 10.3..3. Existing multi-space meters (Digital Technologies and Duncan Solutions)
- 10.3..4. Back end management systems
- 10.3..5. Data repositories
- 10.3..6. Web portals
- 10.3..7. Enforcement systems.

10.4. Contractor will coordinate with the selected service provider to implement cellular payment service within the ExpressPark™ project area

10.5. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.6 of the current Project Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section II).

11. ON STREET WIRELESS VEHICLE SENSORS

11.1. The Contractor will develop a detailed Vehicle Sensor Detection Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for

the requirements document will include, but not be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Contractor will meet with potential vendors as required. The Vehicle Sensor Detection Requirements Document will include a recommendation for a vehicle detection sensor vendor.

11.2. Upon approval of the vendor(s), Contractor will manage the installation process, including:

- 11.2..1. Procurement of equipment
- 11.2..2. Coordination of installation with LADOT
- 11.2..3. Scheduling of all work
- 11.2..4. Notification of local businesses of installation schedule
- 11.2..5. Direct supervision and management of the installation
- 11.2..6. Acceptance testing

11.3. Contractor will install approximately 7,000 on-street wireless vehicle sensors, and any additional equipment necessary (i.e. communications equipment) in or adjacent to each individual on street parking space in the *Express*Park™ project area, including metered, loading, special parking zones, and in some areas adjacent *Express*Park™ project area, in order to provide comprehensive insight into parking utilization.

11.4. Installed sensors must be capable of recognizing the arrival and departure of parking vehicles and generating and transmitting a real-time status of the parking space availability and utilization to the Parking Management System.

11.5. In the area bounded by, and inclusive of, Third Street on the north; Pico Boulevard on the south; Alameda Street on the east; and east of, but not including, Hill Street on the west; *Express*ParkTM Request for Proposals November 3, 2010 on-street vehicle sensors placed in the roadway must not rise higher than the surrounding street surface, in order to accommodate special street cleaning apparatus (approximately 2000 sensors). The remaining approximately 5000 sensors may be surface mounted.

11.6. All installation materials will be provided by the Contractor. If required, any additional networking components and services will be supplied, installed and operated by the Contractor at no additional cost to the City.

11.7. All permits and/or approvals required for installation of sensors and related services will be the responsibility of the Contractor. Any installation of equipment on utility poles will be in compliance with all California Public Utilities Commission regulations, including General Order 95, and duly permitted by the owner of the pole.

11.8. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.4 of the current Project

Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section III).

12. OFF STREET OCCUPANCY SYSTEMS

12.1. The Contractor will develop a detailed Off Street Occupancy System Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements document will include, but not be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Contractor will meet with potential vendors as required. The Vehicle Sensor Detection Requirements Document will include a recommendation for an off street occupancy system vendor.

12.2. Upon approval of the Off Street Occupancy System Requirements Document, the Contractor will develop a High Level Design document. Inputs for the High Level Design document will include the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Outputs will include a project level architecture, and definition of all interfaces and data requirements, and verification plans (see Section 5.1, Acceptance Testing Methodology).

12.3. Upon selection and approval of an off street occupancy system vendor, Contractor will work with the selected vendor to produce a Detailed Design document. Inputs for the Detailed Design document include: the High Level Design document, LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document and the High Level. Outputs will include: detailed definition of all interfaces, data requirements, data flows and data formats. Approval of the Detailed Design document by LADOT is required prior to installation of any equipment.

12.4. The Contractor will manage the selected vendor for installation of occupancy systems to collect parking utilization data for approximately 7,500 off-street spaces in City-owned lots throughout the *Express*Park™ project area.

12.5. City-owned Lots Include:

Facility	Address	Spaces
Pershing Square	530 Olive St	606
LA Mall	225 N Los Angeles St	250
El Pueblo	Lot 2 615 N Main St	250
Convention Center	1201 S Figueroa St	5,084
LAPD Aiso St Garage	101 Judge John Aiso St	300
Cathedral Parking Lot 755	257 Los Angeles St	63
	Total	7,553

12.6. The Contractor will provide occupancy sensors to determine garage level parking availability by placing sensors (induction loops) at garage exit and entrance points.

12.7. The Contractor will be responsible for scheduling, coordinating, and performing all installation and maintenance of the off-street parking occupancy systems in the *Express*Park™ facilities during the term of the contract. Maintenance will be assumed by the City or the contract parking facility operator at the conclusion of the contract.

12.8. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.7 of the current Project Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section IV).

13. PARKING GUIDANCE SYSTEM

13.1. Contractor will provide a real-time Parking Guidance System (PGS) to aid the public in locating available parking near their destination(s) and guide them to the most appropriate parking site(s). Real-time information, including location(s), price(s), and time policies will be delivered through the coordinated use of on-street sensors and the off-street occupancy reporting systems.

13.2. The Contractor will develop a detailed Parking Guidance System Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements document will include, but not be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document.. Contractor will meet with potential vendors as required.

13.3. Upon approval of the Parking Guidance System Requirements Document, the Contractor will develop a High Level Design document. Inputs for the High Level Design document will include all hardware specifications, the Parking Guidance System Requirements Document, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Outputs will include a project level architecture, data requirements and definition of all interfaces, including:

13.3..1. The Internet through the development of an ExpressPark™ website (desktop and mobile)

13.3..2. Smart phone applications for iPhone, BlackBerry and Android devices

13.3..3. Telephone using an interactive voice response (IVR) system through an interface with Metro's Go 511 system via an interface to the RITTS Network

13.3..4. In-vehicle navigation systems (both factory installed and portable aftermarket)

13.3..5. Fixed On-Street Signs

13.3..5.1. Large Dynamic Message Signs (DMS) Interface with LADOT's existing TransSuite DMS management software (NTCIP 2306 Center-to-Center (C2C) standard protocol)

13.3..5.2. Twelve (12) "Neighborhood" DMS in selected pilot areas, subject to LADOT approval

13.3..5.3. Five (5) DMS for entrances at Pershing Square and Aiso garages, subject to LADOT approval

The High Level Design will also include utility requirements (power and communications), mounting details and considerations for DMS's, and verification plans (see Section 5, Testing Requirements).

13.4. Upon approval of the Parking Guidance System High Level Design, the Contractor will develop a Parking Guidance System Detailed Design document. Inputs for the Detailed Design document include Parking Guidance System Requirements Document, High Level Design, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Outputs will include: a detailed project architecture and definition of all interfaces, data definitions and formats, and data flow diagrams.

13.5. The Contractor will produce a procedures manual which will define the conditions under which messages can be displayed on the DMS(s) based on the existing ATSAC DMS procedures. This manual will also address prioritization procedures and schedule conflict, in cases when both departments want to display a message on the sign for different reasons.

13.6. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.5 and 2.8 of the current Project Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section V).

14. PARKING MANAGEMENT SYSTEM

14.1. Contractor will develop and deliver a Parking Management System (PMS) that centralizes reporting and performance analysis, and provides a single point of integration and control for the Los Angeles ExpressPark™ Project.

14.2. The Parking Management System will utilize reports, tables, charts, dashboards, and maps, as appropriate, to develop a comprehensive tool to measure, analyze, and manage metered parking in the City of Los Angeles. It will also calculate and report performance measures and evaluate operational effectiveness and operational efficiency based on available staffing.

14.3. The Contractor will develop a detailed Parking Management System Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements document will include, but not be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. The Requirements Document will also include a verification and validation plan (see Section 5.1, Acceptance Testing Methodology).

14.4. Upon acceptance of the Parking Management System Requirements Document, the Contractor will develop a High Level Design document. Inputs for the High Level Design will include the Parking Management System Requirements Document, Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Output will include:

- 14.4..1. Overall PMS architecture
  - 14.4..1.1. Data Layer
    - 14.4..1.1.1. Data Repositories
    - 14.4..1.1.2. Data Exchange Services
  - 14.4..1.2. Guidance Layer
    - 14.4..1.2.1. Driver Parking Guidance
    - 14.4..1.2.2. Parking Enforcement
  - 14.4..1.3. Reporting and Performance Analysis
    - 14.4..1.3.1. Data At A Glance
    - 14.4..1.3.2. Operational Dashboards
    - 14.4..1.3.3. Analytical Dashboards
  - 14.4..1.4. *Express*Park™ Engine
- 14.4..2. Data requirements and all interfaces which will include:
  - 14.4..2.1. Web Interface
  - 14.4..2.2. Data Exchange Systems
    - 14.4..2.2.1. Off Street Management System
    - 14.4..2.2.2. On Street Management System
      - 14.4..2.2.2.1. Collections System
      - 14.4..2.2.2.2. Sensor Management System
      - 14.4..2.2.2.3. Meter Management System
      - 14.4..2.2.2.4. Pay by Cell System
    - 14.4..2.2.3. Parking Guidance
    - 14.4..2.2.4. Enforcement
    - 14.4..2.2.5. Violation Processing System

14.5. Upon acceptance by LADOT of the High Level Design, the Contractor will develop a Parking Management Detailed Design Document. Inputs for the Detailed Design document will include the Parking Management System

Requirements document, Concept of Operations, and High Level Design. Outs will include: detailed definition of all interfaces, detailed data requirements, data flows and data formats. Detailed Design document will also include proposed templates for reports, dashboards and maps.

14.6. The Contractor will develop interface standards for the transfer of meter-related data between other management systems. The Parking Management System will also include the *Express*Park™ Engine, which will analyze meter and sensor data to develop recommended parking pricing based on demand (dynamic pricing).

14.7. Functions of the Parking Management System will include, but not be limited to:

- 14.7..1. Accept all data from all sources and data types, including:
  - 14.7..1.1. Meter and pay station data
  - 14.7..1.2. On-street sensor data
  - 14.7..1.3. Parking garage occupancy data
  - 14.7..1.4. Parking enforcement officer data
  - 14.7..1.5. Meter collections and maintenance personnel
  - 14.7..1.6. Managers, analysts and operations staff
  - 14.7..1.7. Public
- 14.7..2. Integrate this data and serve as the system of record and central repository
- 14.7..3. Provide centralized dashboards and reports that will integrate maps, charts and tables with summary views, drilldowns and export capability
- 14.7..4. Provide performance analysis, decision support and analytics tools to support analysts and operational staff
- 14.7..5. Provide real-time occupancy and violation information to support:
  - 14.7..5.1. Directed enforcement capability so that parking enforcement officers will know where violations are occurring to enhance productivity
  - 14.7..5.2. Real-time vacancy information for parking guidance data via smart phones, Internet and other delivery methods
  - 14.7..5.3. Management, operations and LADOT staff with real-time views of parking congestion
- 14.7..6. Perform workforce management that includes such tasks as enforcement, collection and repair route optimization
- 14.7..7. Provide seamless integration to the City's citation processing system in supporting the adjudication function
- 14.7..8. Implement an open, plug and play architecture by developing application program interfaces (API's) to provide output data to other sources

14.7..9. Process sophisticated algorithms and analytics to perform complex analysis of multiple data inputs for the *Express*Park™ Engine that support parking demand management, pricing and policy decisions and to influence parking behavior.

14.8. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.9 of the current Project Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section VI).

15. ADVANCED METER REVENUE COLLECTION SYSTEM

15.1. The Contractor will develop and implement an advanced meter collection system, to include:

15.1..1. Supply and install unique radio frequency identification (RFID) tags on each coin can or vault installed in the *Express*Park™ meters as the receptacle for coin payments.

15.1..2. Supply and install RFID tags on the 60 new collection canisters provided as part of this procurement

15.1..3. Equip these canisters with readers that can read the tags on the individual coin cans.

15.2. The Contractor will develop a detailed Advanced Meter Revenue Collection System Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements document will include, but not be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. The Requirements Document will provide a verification and validation plan (see Section 5.1, Acceptance Testing Methodology), and a recommended vendor.

15.3. Upon acceptance by LADOT of the Advanced Meter Revenue Collection System Requirements Document, the Contractor will develop a High Level Design for the Advanced Meter Revenue Collection System. Inputs will include: the approved Advanced Meter Revenue Collection System Requirements Document, the Requirements Document (SEMP), and the Concept of Operations (SEMP). Outputs will include data requirements, data flow and operational considerations.

15.4. Upon acceptance by LADOT of the High Level Design, the Contractor will work with the selected vendor to develop a Detailed Design document. Inputs for the Detailed Design document will include the High Level Design, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. The Detailed Design will include detailed data definitions and formats, data flows, and definition of all interfaces. The Detailed Design will also provide a comprehensive collections procedure detailing all operational considerations.

15.5. As part of the Advanced Meter Revenue Collection System, the Contractor will provide a Collections Analysis Module within the Parking Management System. At minimum, the Collections Analysis Module will:

15.5..1. Provide device tracking and reporting

15.5..2. Provide reconciliation capabilities for all payment types

15.5..3. Support collections route planning

15.5..4. Interface with the Medeco Electronic Key Program

15.6. The Contractor will install and provide maintenance for all components of the Meter Collection System that it provides to LADOT. These components include:

15.6..1. Coin Cans and Coin Vaults. This includes the individual coin cans in each single space meter and coin vaults in each pay station, along with their associated RFID tags.

15.6..2. Collections Canisters. This includes canisters used to securely collect coins from meters, the RFID tags on the canisters and the RFID readers integrated into the canisters.

15.6..3. RFID Readers. This includes the readers integrated into the collections canisters.

15.6..4. NexGen Locks and Coin Can Locks.

15.7. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.11 of the current Project Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section VII).

16. METER ENFORCEMENT

The Contractor will provide a meter enforcement system that will alert and route enforcement officers to potential violations, record enforcement actions, and track parked vehicle status (cited, exempt, disabled placard). It will also provide real-time paid space information for all currently-occupied metered spaces and serve as the primary means for enforcing pay station spaces.

16.1. Equipment

16.1..1. The Contractor will provide the following hardware:

16.1..1.1. 50 Motorola MC 9500 handhelds

16.1..1.2. 50 Zebra QL320 portable printers

16.1..1.3. 50 sets of Batteries

16.1..1.4. 50 Chargers and Cradles

16.1..1.5. 10 vehicle mounted laptops equipped with GPS and wireless capability.

16.2. The Contractor will provide an integrated meter enforcement software solution which will run on a single device (Motorola MC 9500). The solution will be compatible with current citation processing software (eTIMS®). The solution will consist of:

16.2..1. ACS PocketPEO™

16.2..2. A Mobile Directed Enforcement Application (TBD)

16.3. The Contractor will develop a detailed Meter Enforcement System Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements document will include, but not be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. The Requirements Document will provide a verification and validation plan (see Section 5.1, Acceptance Testing Methodology), and a recommended vendor.

16.4. Upon acceptance by LADOT of the Meter Enforcement System Requirements Document, the Contractor will develop a High Level Design for the Meter Enforcement System. Inputs will include: the approved Meter Enforcement System Requirements Document, the Requirements Document (SEMP), and the Concept of Operations (SEMP). Outputs will include data requirements, data flow and operational considerations.

16.5. Upon acceptance by LADOT of the High Level Design, the Contractor will work with the selected vendor to develop a Detailed Design document. Inputs for the Detailed Design document will include the High Level Design, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. The Detailed Design will include detailed data definitions and formats, data flows, and definition of all interfaces. The Detailed Design will also provide a comprehensive meter enforcement procedure detailing all operational considerations.

16.6. The Contractor will maintain all equipment in good working order and provide support and maintenance during normal business hours throughout the contract period.

16.7. The Contractor, in cooperation with LADOT will conduct a field trial of any proposed devices prior to final device selection.

16.8. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.10 of the current Project Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section VIII).

17. WARRANTY PARTS AND SERVICE

17.1. The Contractor will provide a five-year warranty (from date of acceptance) for all new payment equipment, street sensors, and parking guidance system components. Warranty replacement does not extend to vandalism, normal wear, consumables and batteries.

17.2. LADOT will house and manage an agreed upon list of meter replacement parts and spares.

17.3. Meter components will be modular and interchangeable.

17.4. All warranted parts will be replaced or returned to the City within five business days, and vendors will be responsible for all shipping costs.

18. TECHNICAL SUPPORT AND TRAINING OF PERSONNEL

18.1. Technical Support

The Contractor will provide technical support to include, but not be limited to:

18.1..1. Help Desk

The Contractor will provide a customer service help desk to monitor systems, answer questions and for reporting of problems. The help desk will monitor alarms in equipment and will be the first point of contact if an issue with the system is identified. The help desk will escalate problems according to the processes outline in the final business process approach including alerting maintenance or IT personnel to initiate repairs. The Help Desk will be staffed from 7:00 am until 4:00 pm PST/PDT.

18.1..2. Toll Free Number

As part of this project, ACS will provide a toll free number for the *Express*Park™ Project program where LADOT will be have an option to either talk to the ACS help desk (during business hours) or connect to any of the manufacturers supplying the equipment by choosing different options from the IVR menu, eliminating the need to keep track of phone numbers for different manufacturers.

18.1..3. Issue Tracking Software

The Contractor will provide a web-enabled tool (JIRA) to track issues on the project. All vendors will have access to this tool, and different work areas will be created for each vendor. This will allow LADOT to document and track progress on reported issues from one source.

18.1..4. On-Site Technical Support

18.1..4.1. The Contractor assumes full responsibility for coordinating technical support including oversight resolution for all

distributed hardware and software implemented by the sub-Contractors.

18.1..4.2. During all phases of the *Express*Park™ Project program implementation, the Contractor will provide on-site technical support to ensure successful implementation and provide service support for the life of the contract.

18.2. Training

The Contractor will provide a pre-delivery, operations preparation program encompassing complete training in all disciplines to familiarize all designated City staff with the system, and to assist in developing expertise in maintenance, repair and software application of the system.

18.2..1. Within 30 days of contract execution the Contractor, in cooperation with LADOT, will develop and submit for approval a comprehensive Training Plan.

18.2..2. The Contractor will provide training to LADOT personnel on the following topics:

18.2..2.1. Overview of Central Management System (CMS)
18.2..2.2. Meters and Meter Management Systems
18.2..2.3. Off-street Sensors
18.2..2.4. Collections Module
18.2..2.5. Enforcement Module
18.2..2.6. Cellular Payment
18.2..2.7. Pricing Engine
18.2..2.8. Parking Guidance Systems
18.2..2.9. DMS and Cameras
18.2..2.10. Off-Street Parking Guidance Systems

18.2..3. Training will be provided to LADOT Program Management staff, Meter Shop staff, Enforcement, Coin Collection staff, Adjudication staff, accounting staff, and Parking Violations Bureau (PVB) staff.

18.2..4. A training schedule will be submitted to LADOT for approval prior to the actual training startup. The actual number of training sessions, starting times, and class durations will vary depending upon the operational requirements and the number of participants to be trained.

18.2..5. Training will be held at a location convenient to the City staff.

18.2..6. The Contractor will provide additional or refresher training throughout the life of the contract to address system upgrades and/or expansion, as required.

19. PUBLIC OUTREACH AND MARKETING

The Contractor will prepare a marketing plan designed to reach all Downtown stakeholders, including policy makers, business associations, residents, customers, and visitors.

19.1. The public outreach and marketing campaign will focus on educating the consumer and the local businesses regarding the value of demand-based parking pricing, but it will also include an outreach effort to private parking operators for inclusion in the Parking Guidance System, including pursuing mutual advertising opportunities.

19.2. The public outreach and marketing program will include the following components at a minimum:

- 19.2..1. Logo/brand development and copyright
- 19.2..2. Sign and labeling design
- 19.2..3. Brochures
- 19.2..4. A public website
- 19.2..5. Web-based instructional videos
- 19.2..6. A Public Service Announcement
- 19.2..7. Attend public meetings
- 19.2..8. Assist in preparing press releases and media packages

20. LARGE DYNAMIC MESSAGE SIGNS.

20.1. Contractor will work with LADOT to upgrade the City's existing seven (7) large full-matrix DMS signs to bring them to NTCIP compliance, along with other changes as needed to support the *Express*Park™ project.

20.2. Contractor will work with the current vendor (Transcore) to upgrade the City's Transuite System to provide an enhanced C2C interface to the *Express*Park™ system.

Attachment A – Detailed Requirements

Section I - Meters

Single Space Meters

Requirement
2.1 Single-Space Parking Meter
Single-space parking meters control one parking space (between 18 and 22 linear curb feet). To meet the needs of the project, single-space meters must:
2.1.1 Functional Requirements
1) The Single-Space Parking Meter will display custom LADOT-defined operating status messages on a front display. This screen will also display the current meter enforcement hours, time limits, and rate information. The screen will be visible in all lighting conditions ranging from direct sunlight to pitch darkness (upon user action). [8.0.2.1.1, 8.0.2.1.2, 8.0.2.1.4]
2) The Single-Space Parking Meter will have front and rear indications that include flashing "High Brite" (also known as "Hi-Brite") LEDs rated at 5000 millicandelas or greater and a 30 degree or greater viewing angle. The rear display will include, at a minimum, two green LEDs to indicate paid status and two red LEDs to indicate expired status, while the front display will include just one LED of each color. Red and green LED s will only be illuminated during user-defined enforcement times. It is desired that at least one white LED be included as a fault indicator to illuminate when service is required. The meter will support user-defined lit durations and flash rates of LEDs. [8.0.2.1.11]
3) The Single-Space Parking Meter mechanism will be compatible with the Duncan Model 95 housing. [8.0.2.1.12]
4) The Single-Space Parking Meter Housing will meet or exceed the specifications of the Duncan Model 95.
5) The Single-Space Parking Meter will include an electro-mechanical vault door lock that is compatible with and operates with the City's existing Nexgen electronic keys (Medeco part number EV-5505R). The lock will only be powered by the electronic key and will be constructed with a stainless steel outer shell and face plate. The face plate will provide resistance to drilling and will break away and spin freely when exposed to a forced open attempt exceeding 80 inch-pounds of torque. The lock will record and store no less than the last 500 access events, including actual accesses and unauthorized attempted access.
6) The Single-Space Parking Meter will deposit coins directly into a secure, locked coin can, holding a minimum of 250 quarters, that will provide no access to contents throughout the collection process and will indicate evidence of tampering.
7) The Single-Space Parking Meter will include a vault door sensor to register when the vault door is opened and closed.

Requirement
8) The Single-Space Parking Meter will include a coin can sensor to register when the coin can is inserted and removed.
9) The Single-Space Parking Meter will communicate vault door opened and closed messages and coin can inserted and removed messages to the Meter Management System and will generate an alert when the vault door has been open and/or when the coin can has been removed for longer than a user-defined length of time from 1 to 30 minutes.
10) It is desired that the Single-Space Parking Meter recognizes and rep orts the unique coin can ID to the Meter Management System each time the coin can is inserted and removed (see Section 2.11.1)
11) The coin validator will include a removable stainless steel coin slot plate, strong enough to withstand vandalism and unauthorized entry.
12) The Parking Meter mechanism will communicate with a Radio Frequency Identification (RFID) tag mounted inside of the meter housing to automatically recognize its location and download its location-specific configuration from the Meter Management System.
2.1.2 Performance Requirements
1) The Single-Space Parking Meter will process coin transactions with no less than 99% accuracy per day
2) The Single-Space Parking Meter will be field serviceable for clearing coin jams and foreign objects, requiring no special tools, within three minutes from the time the repair person begins the removal process.

Multi-space Meters

Requirement
2.2 Multi-Space Parking Meter
Multi-space parking meters, or pay stations, control many parking spaces (between 18 and 22 linear curb feet each). To meet the needs of the project, multi-space meters must:
2.2.1 Functional Requirements
1) The Multi-Space Parking Meter will operate in a "pay-by-space" mode and be capable of managing at least twelve automobile parking spaces. [8.0.2.2.4, 8.0.2.2.7]
2) The Multi-Space Parking Meter will not include a bill acceptor or a printer. [8.0.2.2.3]
3) The Multi-Space Parking Meter will manage spaces with different rates, lengths of stay, and parking restrictions. [8.0.2.2.1, 8.0.2.2.4, 8.0.2.2.7]
4) The Multi-Space Parking Meter will accept payments for any pay station space in the area, provided that the meter has an active wireless connection to the communicate the payment to the Meter Management System.
5) The Multi-Space Parking Meter will allow patrons to add time to their parking stay from similar pay-by-space (PBS) meters in the general area (within walking distance) up to the maximum time limit and not accept payment during restricted parking periods, e.g., tow-away and street-cleaning zones. [8.0.2.2.2, 8.0.2.2.4]
6) The Multi-Space Parking Meter will have only electro-mechanical door locks that are compatible with and operate with the City's existing Nexgen electronic keys (Medeco part number EV-5505R). The lock will only be powered by the electronic key and will be constructed with a stainless steel outer shell and face plate. The face plate will provide resistance to drilling and will break away and spin freely when exposed to a forced open attempt exceeding 80 inch -pounds of torque. Lock will record and store no less than the last 500 access events, including actual accesses and unauthorized attempted access.
7) The Multi-Space Parking Meter will deposit coins directly into a secure, locked cash box, holding a minimum of 1,800 quarters, that will provide no access to contents throughout the collection process and will indicate evidence of tampering.
8) The Multi-Space Parking Meter will include door sensors to register when any locked door is opened and closed.
9) The Multi-Space Parking Meter will include a cash box sensor to register when the cash box is inserted and removed.
10) The Multi-Space Parking Meter will communicate door opened and closed messages and cash box inserted and removed messages to the Meter Management System and will generate an alert when a door has been open and/or when the cash box has been removed for longer than a user-defined length of time from 1 to 30 minutes.

Requirement
11) It is desired that the Multi-Space Parking Meter recognizes and reports the unique cash box ID to the Meter Management System each time the cash box is inserted and removed. Alternatively, the cash box may record the unique meter IDs of the meters in which it is inserted (see Section 2.11.1).
12) The Multi-Space Parking Meter will have configurable alerts to detect open doors after a specified period of time and transmit the status through the Meter Management System.
13) The Multi-Space Parking Meter will accept all other valid forms of payment except coins when the coin box is removed or full.
14) The Multi-Space Parking Meter will not accept any payments until a valid space is selected.
15) The Multi-Space Parking Meter will be designed to permit the cash box to be removed and replaced by a collector in less than 30 seconds without any special tools.
16) It is desired that the Multi-Space Parking Meter have an automatic shutter that rejects and returns all objects or materials not specifically recognized as valid currency for payment.
2.2.2 Performance Requirements
1) The Multi-Space Parking Meter will process coin transactions with no less than 95% accuracy per day.
2) The Multi-Space Parking Meter will be field serviceable for clearing coin jams and foreign objects, requiring no special tools, within five minutes from the time the repair person begins the removal process.

All Meters

Requirement
2.3 Parking Meter (General)
The following requirements apply to both Single-space and Multi-space Parking meters
2.3.1 Functional Requirements
1) The Parking Meter will perform reliably under the harsh environment of normal on- street conditions as described in Section 4.0. [8.0.2.1.1, 8.0.2.1.2, 8. 0.2.1.5]
2) The Parking Meter will be specifically designed to perform reliably in the rain, without any significant degradation in performance, by limiting water intrusion, directing internal water away from components, and draining internal water.
3) The Parking Meter will operate within a temperature range of 20 to 140 degrees Fahrenheit and under environmental conditions found in the City of Los Angeles, including but not limited to windblown grime, rain, fog, smog, air inversions, salt air, sun (including direct sunlight), and vibrations.
4) Electronic components, including the entire circuit board, will be weather-proofed with a protective coating or equivalent.
5) The Parking Meter housings will be graffiti resistant equivalent to industry standard polyester TGIC powder paint or better. [8.0.2.1.4, 8.0.2.2.4]
6) The Parking Meter must be "tamper-proof" when secured so that program settings cannot be manipulated by probing or by use of unauthorized equipment.
7) The Parking Meter will have a backlit graphic display panel that is large enough to legibly display all necessary operating status and rate structure messages to patrons and all diagnostic and maintenance information to technicians. The display must adapt to changes in illumination (shadows, sunlight, day/night lighting transition) and will be visible throughout a 45-degree viewing angle in all directions and will be visible in all lighting conditions, ranging from direct sunlight to pitch darkness (upon user action). [8.0.2.2.1, 8.0.2.2.2, 8.0.2.2.4]
8) The display will be designed to resist condensation that may occur when warmer weather follows cooler weather and or rain.
9) The Parking Meter will protect all display elements behind a UV-resistant (non- yellowing) Lexan® material that can be replaced in under five minutes without tools or with a single tool.
10) The Parking Meter s hall have secure wireless network capabilities enabling it to communicate to a central server and handheld meter maintenance and enforcement tools. Specific interface requirements are further defined in Section 3.0. [8.0.2.1.7, 8.1.3.1.1, 8.2.2.1.2, 8.3.1.1.2]
11) The Parking Meter will be fully programmable, including firmware and configuration, wirelessly over the air and through a manual method at the meter.

12) The Parking Meter, the associated communications system, and the backend server will all be compliant with the latest available security standards as defined by the Payment Card Industry Data Security Standard (PCI). [8.0.2.1.5, 8.0.2 .1.9]

13) The Parking Meter will detect events such as Coin Jams, Card Reader Blockages, Low Battery and other problems that affect its operation and transmit the status through the Meter Management System.

14) The Parking Meter will support multiple rate schemes, including hourly, progressive, and long-term (jump) rates. It will support up to five rate changes per day. These rates will be configurable via the wireless network. [8.3. 1.1.6, 8.0.2.1.1]

15) The Parking Meter will be able to accept pre-payments prior to start of regulated parking (e.g., pay at 6am for a session that begins at 7am) by showing the space as paid through the beginning of regulated parking. [8.0.2.1.1, 8.0.2.1.2]

16) The Parking Meter will be programmable with all applicable parking restrictions affecting payment ability, including peak hour no stopping, street cleaning no parking, passenger and commercial loading zones, and free parking periods. The Parking Meter will alert the customer and prevent payment approaching and during any restricted period as applicable, notwithstanding the option to require payment for commercial loading zones.

17) The Parking Meter will support part-time commercial loading zones with a 30- minute time limit and will provide the user-selectable option of requiring payment during the loading period(s) using the same or a different rate configuration.

18) The Parking Meter will remotely update and change rate schemes. LADOT must be able to vary the rate by day of week, time of day, block occupancy, holiday, and length of stay via the *ExpressPark* Management System and/or the Meter Management System(s). [8.3.1.1.6, 8.0.2.1.1]

19) In the event of a meter rate or system modification, each Parking Meter will provide confirmation back to the management system of the configuration up date.

20) The Parking Meter will accept time, for spaces under its control, loaded remotely via Meter Management System and in the field with a magnetic stripe maintenance card and/or through a maintenance menu. Parking Meter will record and transmit to the Meter Management System all transactions for which time is given. [8.2.1.1.2, 8.3.1.1.7]

21) The Parking Meter will allow for rate scheme updates for special events via the Meter Management System. [8.3.1.1.6]

22) The Parking Meter will allow customers to view the current paid time and to purchase additional time, based on the current restrictions, regardless of who paid the space previously.

23) The Parking Meter will allow an enforcement officer to visually verify the paid status of any space served by that meter, regardless of how the space was paid, without the need for external equipment.

24) The Parking Meter will be capable of interfacing with a parking occupancy sensor, and, if so programmed, prevent time from being paid above and beyond the posted time limit (e.g., "meter feeding"). [8.0.6.1.4, 8.0.2.1.7]

25) The Parking Meter will be capable of interfacing with a parking occupancy sensor, and, if so programmed, clear some or all of the remaining paid time down to a user- defined maximum time when a vehicle vacates the parking space. The maximum time remaining at the end of a parking session will be configurable. [8.0.2.1.4, 8.0.2.1.5, 8.0.2.1.7, 8.0.6.1.1, 8.0.6.1.4, 8.4.1.1.1]

26) The Parking Meter will have the capability, if enabled, to complete a credit card transaction at the end of a session by allowing a card user to re-insert the card used to initiate a session and be charged for only the amount of time used, and then subsequently clear the remaining time down to a user-defined maximum time ("grace period"). [8.0.2.1.4, 8.0.2.1.5, 8.0.2.1.7, 8.0.6.1.1, 8.0.6.1.4, 8.4.1.1.1

28) The Parking Meter will support coin, card, and cellular payments. It will support dollar coins, quarters, nickels, dimes, tokens, magnetic-stripe credit cards, magnetic-stripe parking cards, contact chip "smart" parking cards, and third-party payments (e.g., cellular payments) via wireless communication. [8.0.2.1.1, 8.0 .2.1.2, 8.0.2.1.3, 8.0.2.1.4, 8.0.2.2.2, 8.0.2.2.3, 8.0.2.2 .4, 8.0.2.1.9, 8.0.2.2.10, 8.0.3.1.2]

29) When one or more forms of payment are unavailable, the Parking Meter will continue to accept all other forms of payment. The Parking Meter will display which forms of payment are available and unavailable to the customer.

30) The Parking Meter will accept coins through a jam-resistant coin validator that detects both metallic and nonmetallic jams at key points in the coin path. It is desirable that the coin validator be made of clear plastic or be easily opened to clear jams and foreign objects. [8.0.2.1.4, 8.0.2.1.2]

31) The coin validator will include an anti-backup provision to prevent the retrieval of deposited coins (e.g., attached to strings, paddles, wires, etc.).

31) The Parking Meter will accept magnetic-stripe credit/debit cards and contact chip "smart" cards.

32) The Parking Meter's card reader will not retain cards and will always permit users to remove cards without damage, especially during a fault situation or power failure.

33) The Parking Meter's card reader will be equipped with a replaceable card wiper, or similar part, which keeps card contacts clean and prevents rain from entering the reader.

34) The Parking Meter will clearly display the proper card orientation for insertion by the customer and will be designed to minimize customer confusion to the extent possible.

35) If a card is inserted improperly, e.g., upside down or reversed, the card will be easily removed by the customer without the use of any tools.

36) All credit card pre-authorization amounts will be greater than $1.00.

37) The Parking Meter will process card transactions in real-time. The length of allowable processing time to complete the transaction on-line before approving it off-line will be user configurable. [8.0.2.1.2, 8.0.2.1.5]

38) When real-time authorization is temporarily unavailable or cannot be completed within the configured time, the Parking Meter will have off-line authorization capability that will verify that the card appears valid, is not on a local Blacklist. These transactions will be processed as soon as practical once real-time authorization is restored, but without affecting normal user operation. [8.0.2.1.5]

39) The Parking Meter will limit the amount of time that can be purchased by one card at the same meter to one time limit per day in off-line mode (to limit fraud exposure) or per a user-defined period when on-line authorization is available (to limit meter feeding).

40) The Parking Meter will store a Blacklist of credit cards that it should never accept. This list will be automatically generated and automatically updated at least nightly based on real-time transaction criteria. Moreover, City officials can add any account number to the Blacklist. A card will remain on the Blacklist for a user-defined period of time from 1 to 12 weeks, and the Parking Meter Blacklist storage capacity will be sized accordingly. [8.0.2.1.5, 8.4.1.1.1, 8.0.2.1.8]

41) The Parking Meter will support user-defined credit card amount settings, including minimum amount, maximum amount, default amount first displayed, and amount selection increment, and rounding increment. When charging credit card payments for the maximum permitted time, the Parking Meter will round the selection to the next highest selection amount according to the user-defined rounding increment. [8.3.1.1.6, 8.0.2.1.2]

42) Mechanism will record and store the number of coins validated and any card validation count.

43) The Parking Meter will detect and count unacceptable or invalid coins.

44) At the time of collection, the Parking Meter will report total revenue since the last collection, by coin denomination, credit card, and smart card, either automatically based on can replacement or by inserting a collection card.

45) Audit information will be sent wirelessly to the Management System but must also be available for retrieval through a connection to a standard PC running Windows XP.

46) The Parking Meter will have storage capability to retain all trans action data for a minimum of thirty (30) days.

47) Financial audit data will not be affected by the reading or retrieval of maintenance data, by resetting the meter, or by other such events.

48) The Parking Meter will support integration with cellular payment technologies. The cellular payment system will communicate with the meter to have the meter indicate that a payment was made via cellular payment technologies. [8.0 .3.1.1, 8.0.3.1.2, 8.0.3.1.3, 8.0.2.1.9]

49) All Parking Meter maintenance functions and diagnostics will be accessible through a series of maintenance menus available following the insertion of a magnetic-stripe "maintenance" card, which uniquely identifies the maintenance technician. The Parking Meter will support manually logging a minimum of 40 maintenance events using user-defined repair codes that can be updated remotely for all meters.

50) Parking Meter Power Source

a. The Parking Meter will be powered by battery and/or rechargeable solar-powered battery pack. [8.0.2.1.5]

b. All batteries will have a minimum shelf-life of two (2) years.

c. When battery voltage falls below a minimum threshold, the Parking Meter will generate an alert a minimum of three days prior to meter going out of service. [8.2.1.1.1]

d. Battery connections will be designed to resist corrosion and to sustain a minimum of five years of service.

e. Power source will sustain meter operation for a minimum of twelve (12) months.

f. Power source will be designed to be replaced without tools or with a single tool in under two minutes.

g. Current battery voltage will be available on the meter display and through the Meter Management System.

h. All locally-stored meter data will be retained during battery replacement and a battery failure of seven days or less.

51) Parking Meter Internal Clock and Time Management

a. The Parking Meter will have at least a 365-day calendar real-time clock that will either retain the time settings during battery replacements or servicing, or will accurately reset the time settings without losing prior programming; reset will occur within 3 seconds of battery replacement or servicing. If back-up power built into the meter is used for this function, this back-up power must allow at least 15 minutes for a given battery change without losing the clock setting s.

b. The clock will be programmable at least one year in advance for automatic daylight savings time changes; Vendor must program daylight savings for the first 2 years of the agreement.

c. The time-of-day clock will be accurate to within plus or minus two seconds per day (where a day is defined as any given 24-hour period).

d. The clock will sync with the time on the Meter Management System a minimum of once per day, but ideally every time it communicates with the Meter Management System. Any clock that is off by more than 2 seconds will generate an alarm. Said alarm will include the number of seconds, minutes, days, months or years the by which clock is off, e.g., if the time was 13:05:0 0 on January 2, 2009 and the meter's clock reported a time of 14:15:15 on February 2, 2009 the alarm would state that the meter is 1 hour, 10 minutes, 0 15 seconds, 31 days and 0 years off. There will be no upper limit or maximum deviation that would prevent the clock from syncing with the Meter Management System.

e. The clock will track the day of week, Monday through Sunday.

f. Time of day and day of week will be visible to maintenance staff on the front display screen.

2.3.2 Performance Requirements

1) Coin counts for each coin denomination deposited into the collection container (coin can or cash box) will be no less than 99% accurate per collection.

2) The Parking Meter will have a power supply capable of operating continuously for a minimum of 12 months, but preferably greater than two years on average.

3) The Parking Meter will complete any payment type transaction within 20 seconds from the last user input (e.g. hitting an 'ok' button) to approval and completion.

4) The Meter will report its change in status, e.g. paid/expired, outages, to server within two minutes no less than 95% of the time.

5) Once programmed into the central back end system, rates will update to the new rate within five minutes no less than 95% of the time.

6) The Parking Meter will post time loaded remotely within 20 seconds of completing the transaction no less than 95% of the time.

Attachment A – Detailed Requirements

Section II – Cellular Payment Technology

Requirement
2.6 Cellular Payment Technology
The cellular payment technology will enable users to pay for on-street parking from their personal cell phones. The cellular payment components that are "on the street" will be comprised of physical signs or labels clearly visible at parking spaces or meters and/or pay stations that indicate a unique parking space identifier and the necessary information for accessing the Cellular Payment System. The processing of payments will be handled by a vendor-managed system that will interface between meter devices, back end management systems, data repositories, web portals, and enforcement systems. To meet the goals of the project the system must:
2.6.1 Functional Requirements
1) The Cellular Payment System will operate with all cellular systems in use in the City of Los Angeles. [8.0.3.1.3]
2) The Cellular Payment System will allow payments to be made via touchtone, Interactive Voice Response (IVR), and at least one of the following methods: SMS message or smart phone applications for iPhone, BlackBerry, and Android.
3) The Cellular Payment System will support the existing alphanumeric meter numbering system in the format AAA####B, where AAA is a zone code of one to three letters, #### is a meter number from 1 to 4999, and B is a single letter or omitted.
4) The Cellular Payment System will support the existing pay station numbering system that consists of a four-digit pay station number and a three-digit space number. The first two digits (thousands and hundreds digits) of the pay station number, representing the zone, combined with the three-digit space number uniquely define the metered space.
5) The Cellular Payment System will communicate each payment to both the associated parking meter or pay station and independently to the enforcement system serving the enforcement handheld devices.
6) The Cellular Payment System will support all pricing and rate structures, hours of operation, time limits, and parking restrictions in use in the project area.
7) The price and rate structure, hours of operation, time limit, and parking restrictions in use by the Cellular Payment System will always match those currently in use (presented to the customer) by the meter equipment for each metered space in the project area. This information will be retrieved automatically by the Cellular Payment System from the Parking Management System and/or one of more of the Meter Management Systems.
8) The Cellular Payment System will provide registration services by both voice (live and/or Interactive Voice Response) and via a website using HTTPS protocol. [8.0.3.1.1, 8.0.3.1.2]

Requirement
9) The Cellular Payment System will provide reminder notifications to users via SMS messaging and/or e-mail, depending upon user preference, when the paid time for their space is nearing expiration. It is preferred that the sender phone number shown on all users' caller ID be consistently the same. All reminder notifications will be sent at least 10 minutes before the paid time expires.
10) If so specified in their account preferences, reminder notifications will be sent to users who have paid for their parking space using a registered credit card at the meter or pay station, using a registered cellular phone, or using an authenticated smart phone application.
11) Users will be able to respond directly to reminder notifications (by text or e-mail, as appropriate) and add time to their metered space if allowed (see next specification in this section). [8.0.3.1.2, 8.0.3.1.4]
12) The Cellular Payment System will be able to add additional time if additional time is allowed. Additional time will be limited or not permitted if the additional time would extend into a restricted period or exceed the total allowable purchased time (time limit) by that user. If additional time is not allowed or is limited, the payment will be prorated and limited to only the maximum allowable period and the user will be informed of the restriction using the same form of communication used to purchase the additional time. [8.0.3.1.1, 8.0.3.1.2, 8.0.6.1.1]
13) The Cellular Payment System will notify the customer of any payment that is not successfully processed, i.e. no time is provided for the space.
14) The cellular payment will be presented to parking enforcement personnel in the same manner as if the payment had been made at the parking meter or pay station, i.e. visually at the meter or on the enforcement handheld already used for enforcement.
15) The Cellular Payment System will integrate with the *Express*Park™ and/or Meter Management System to provide transactional data and retrieve all updates to rates and policy information for each space.
16) The Cellular Payment System will provide each customer a secure, password- protected, web-based account through which to provide at least one cellular phone number, at least one credit card number, and at least one e-mail address; review payments; print transaction receipts; and manage their account settings. The user may specify if and how (SM S, e-mail) they would like to be notified prior to the expiration of their paid time.
2.6.2 Performance Requirements
1) The Cellular Payment System will be operable 99% of the time between 6:00 AM – 11:59 PM seven days per week, excluding "noticed" maintenance periods agreed to in advance by LADOT
2) The Cellular Payment System will cause the payment to be made to the metered space within 20 seconds of the customer completing the payment, 98% of the time.
3) The Cellular Payment System will send all notifications within 20 seconds of the referenced time, 99% of the time.

Attachment A – Detailed Requirements

Section III – On-Street Wireless Vehicle Sensors

Requirement
2.4 On-Street Parking Occupancy Sensors
A parking or vehicle detection sensor detects the physical presence of a vehicle in each space. The sensors utilized by the system will measure true occupancy rates of on-street parking. They will also detect and record arrival and departure times for vehicles. To meet the goals of the project the sensors must:
2.4.1 Functional Requirements
1) The On-Street Parking Sensors will be fully electronic. [8.0.6.1.2]
2) If separately powered, the On-Street Parking Sensor battery will last no less than two years if replaceable in under five minutes while a vehicle is parked in the space, or otherwise no less than five years.
3) The On-Street Parking Sensors and related equipment will perform under street conditions, as described in Section 4.0. [8.0.6.1.2, 8.0.6.1.3]
4) The On-Street Parking Sensors will detect the presence of a vehicle in a designated space once stationary and will detect the absence of a vehicle in a designated space once vacant. [8.0.1.1.1, 8.0.1.2.2, 8.0.6.1.1]
5) The On-Street Parking Sensors will have wireless communication capabilities to communicate to a central server or to other devices either directly or via a parking meter or pay station. Specific interface requirements are further defined in Section 3.0. [8.0.6.1.2]
6) The On-Street Parking Sensors will not impede vehicular, bicycle, or pedestrian movement. [8.0.6.1.3]
7) The On-Street Parking Sensors will be capable of integrating, either directly or indirectly, with parking meters to allow the meters to determine occupancy length (to prevent time allowed above posted limit) and clearing of meter time at the end of parking session. [8.0.2.1.7, 8.0.2.2.8, 8.0.6.1.4]
8) Any communications equipment installed on street lights must be FCC and ANSI compliant, weigh no more than 12 pounds, have a surface area of no more than one square foot on each side, and have an exterior color matching the pole to which it is attached. If the equipment is powered via a connection to the street light photo cell, it will draw no more than 1.5 amps of operational current at 120 volts, and no more than 2.0 amps at start-up.
9) Sensor will operate accurately and continuously notwithstanding changes in illumination (shadows, sunlight, day/night lighting transition).
10) Sensor will be designed to be resistant to vandalism and intentional damage.
11) Sensor and related equipment must comply with all federal, state and local regulations pertaining to such devices.
2.4.2 Performance Requirements

Requirement
1) The On-Street Parking Sensors will accurately detect each parked vehicle arrival and departure at a rate of no less than 90% per day. A vehicle must be continuously stationary for at least 10 seconds to be considered "parked."
2) The On-Street Parking Sensors will accurately report the occupied status of parked vehicles in a designated space at a rate of no less than 90% per day.
3) The On-Street Parking Sensors will communicate parking events and change in status wirelessly to the server within three minutes at least 90% of the time per day.
4) It is desired that the On-Street Parking Sensors communicate to the local meter within 10 seconds at least 95% of the time per day.

Attachment A – Detailed Requirements

Section IV – Off-Street Occupancy Systems

Requirement
2.7 Off-Street Occupancy Systems
The off-street facilities in the *Express*Park™ area are primarily operated and managed by agencies other than LADOT, including the LA Department of General Services, LA Convention Center and LA Live. Additionally, two of these facilities are owned by El Pueblo and one by the LA Department of Parks and Recreation. Each of these facilities will communicate to the Parking Guidance System the number of unassigned, publicly-available parking spaces available in their facility to *Express*Park™ users. To meet the goals of the project, the Off-Street Occupancy Systems must:
2.7.1 Functional Requirements
1) The Off-Street Occupancy Systems will provide occupancy, arrival counts, and departure counts, for each monitoring area (lot, level, zone within a level) on a real- time basis. [8.0.7.1.1]
2) The Off-Street Occupancy Systems will report occupancy status and related statistics to the Parking Guidance System either continuously or at user-defined intervals. [8.0.7.1.1]
3) If independently powered, the battery for any sensor used as part of an Off-Street Occupancy System will last no less than two years if replaceable in under five minutes while a vehicle is parked in the space, or otherwise no less than five years.
4) Outdoor field equipment will perform under environmental conditions as described in Section 4.0. [8.0.6.1.2, 8.0.6.1.3]
5) Off-Street Occupancy System equipment will not impede vehicular or pedestrian movement. [8.0.6.1.3]
6) Off-Street Occupancy System equipment will be designed to be resistant to vandalism and intentional damage.
7) Off-Street Occupancy System equipment will operate accurately and continuously notwithstanding changes in illumination (shadows, sunlight, day/night lighting transition).
8) Off-Street Occupancy System equipment must comply with all federal, state and local regulations pertaining to such devices.
9) Where individual vehicle sensors are utilized, handicap spaces will be counted separately.
10) Only unassigned, publicly- available parking spaces will be monitored with individual vehicle sensors. For cordon-counting systems, these spaces may be excluded physically or logically, whichever is more cost effective.

Section V – Parking Guidance System

Requirement
2.5 Neighborhood Dynamic Message Signs
These signs will be used to guide motorists in high-demand areas of parking that may be located on adjacent block faces and/or nearby facilities. It is anticipated that they will contain both static and dynamic elements. This will require:
2.5.1 Functional Requirement
1) Display of current relevant parking information for the designated area or facility conveyed with clarity and conforming to MUTCD specifications where appropriate. [8.0.4.1.2, 8.0.9.1.1]
2.5.2 Performance Requirements
1) The Neighborhood DMS will update new messages within one minute of the message being sent by the Parking Guidance System, 95% of the time per day. [8.0.9.1.1]
2) The Neighborhood DMS will display the programmed message no less than 95% of the time per day. [8.0.9.1.1]

Requirement
2.8 Parking Guidance System
This technology will utilize users' personal resources (computers, cell phones, web-enabled phones, etc.) to request/receive information regarding parking availability and rates. Application(s), server, network, capacity, security, etc. will be designed dependent upon user and system needs. To meet the goals of the project the Parking Guidance System must:
2.8.1 Functional Requirements
1) The Parking Guidance System will provide available details on parking location, availability, detailed rate information, maximum stay (time limit), hours of operation, parking restrictions, and other relevant parking policies. [8.0.8.1.1]
2) The Parking Guidance System will provide parking information to motorists through smart phone applications for iPhone, BlackBerry, and Android devices. [8.0.8.1.1]
3) The Parking Guidance System will provide parking information to motorists through a public website, in both desktop and mobile versions, by list and map. It will accept user queries based on neighborhoods, intersections, or addresses. It will also provide future expected rate information to the extent feasible. [8.0.1.2.1, 8.0.1.2.2, 8.0.1.2.3, 8.0.1.2.4]
4) The Parking Guidance System will provide parking information to motorists using Metro's GO 511 System through an interface to the L.A. County RIITS Network. [8.0.8.1.1]

Requirement
a. At a minimum, the following parking information will be provided:
i. XY coordinates of parking lot location
ii. Time stamp of last update
iii. Name of parking lot
iv. Cross streets of parking lot location
v. Parking Inventory and number of parking spaces currently available
vi. Current price (per hour or flat rate)
b. The Parking Guidance System will provide an application programming interface (API) that will allow the regional 511 system to request parking availability and pricing information on demand.
c. The API will be developed in the form of an authenticated XML web service using a REST interface.
d. The API will allow the 511 system to request parking availability and pricing within a specified radius of any location within the project area using any of the following methods:
i. The name of an established LA City landmark;
ii. An intersection;
iii. An address;
iv. A geographic location as a latitude/longitude pair.
e. The API will allow the 511 system to request an inventory of all units within the project area including unit number, unit type, and unit location.
5) The Parking Guidance System will provide parking information to motorists through an interface with in-vehicle navigation systems (both manufacturer-installed and portable aftermarket systems). [8.0.8.1.1]
6) The Parking Guidance System will provide parking information to motorists through an interface with Neighborhood DMS. [8.0.8.1.1, 8.0.9.1.1]
7) The Parking Guidance System will assemble DMS messages by sign location to provide relevant details on current parking pricing and availability. [8.0.8.1.1]
8) The Parking Guidance System will provide current off-street parking pricing and availability to motorists through an interface with each off-street parking facility's "Lot" DMS. [8.0.8.1.1]
9) The Parking Guidance System will deliver DMS messages through a SOAP/XML interface with TransCore's TransSuite software using the NTCIP 2306 Center-to-Center (C2C) standard protocol. [8.0.8.1.1] The existing interface provides three methods for interacting with DMSs:
a. Share DMS Inventory – returns a list of the signs in the system and the size of each sign.
b. Share DMS Status Information – returns a list containing the status of each sign in the system (including the current message being displayed on the sign).
c. Share DMS Control – allows requesting a message to be posted on a DMS and validating that the requested message will fit on the sign.

Requirement
d. An additional method will be added to return the DMS fonts to allow the Parking Guidance System to format message requests properly.
10) The Parking Guidance System will provide current parking pricing and hours for all off-street parking facilities in the project area through (a) an interface with a web service and/or (b) providing the ability for parking operators to securely log in and update their operating information.
11) The Parking Guidance System will receive real-time parking availability from all Off-Street Occupancy Systems in the project area. [8.0.7.1.1]
12) The Parking Guidance System will provide operators of off-street parking facilities equipped with Off-Street Occupancy Systems a means to establish and update their availability, rates, and other operational parking information. They will also be provided on-site devices and/or a web-based interactive portal that displays the number of spaces being advertised as available in their facility versus actual availability. This will allow for garages to set aside capacity for special events, monthly pass holders, and other users as they see fit. The interface will also allow the operator to correct any discrepancy between the actual number o f vacancies and the reported number of vacancies. This software and associated equipment will be expandable to future locations. [8.0.7.1.1, 8.0.7.1.2]

Attachment A – Detailed Requirements

Section VI – Parking Management System

Requirement
2.9 *Express*Park™ Parking Management System
The *Express*Park™ Parking Management System will provide centralized reporting and performance analysis for the City's overall metered parking program. The system will interface with the existing and new vendor-managed Sensor and Meter Management Systems, the Cellular Payment System, the *Express*Park™ Parking Guidance System, the *Express*Park™ Guided Enforcement System, the *Express*Park™ Meter Collection System with Collections Analysis Module, and the current and future Citation Processing System. The *Express*Park™ Parking Management System will also incorporate the intelligent *Express*Park™ Engine to analyze and determine demand-based parking rates and operational parameters. To meet the goals of the project, the *Express*Park™ Parking Management System and vendor Meter Management Systems must:
2.9.1 Functional Requirements
1) The *Express*Park™ Parking Management System will provide centralized reporting and performance analysis for all of the City's metered assets, covering the following categories: financial, asset status, equipment outages, parking transactions, parking space occupancy, and equipment inventory tied to each parking space, and workforce management. [8.3.1.1.1, 8.3.1.1.2, 8.3.1.1.4]
2) The *Express*Park™ Parking Management System will calculate and report performance measures and evaluate operational effectiveness and operational efficiency based on available staffing. [8.3.1.1.1, 8.3.1.1.2, 8.3.1.1.4]
3) The *Express*Park™ Parking Management System will collect and store inputs from off-street facilities, all relevant vendor-managed systems (covering meters and parking sensors), maintenance, enforcement, and those inputs manually logged into system. [8.3.1.1.1]
4) The *Express*Park™ Parking Management System will include the *Express*Park™ Engine, which utilizes algorithms to determine optimal rates, time limits, and enforcement hours to achieve 70-90% occupancy on each block during meter enforcement hours. [8.3.1.1.5]
a. The system will iteratively analyze data from sensors, meters, and enforcement systems and evaluate the impact on parking behavior of previous adjustments. Further refinements will be recommended until the optimal balance is achieved.
b. The system will incorporate artificial intelligence that "learns" from the impacts of prior iterations to improve future recommendations.
c. Meter rate changes will be made under supervision of LADOT personnel, but the system will be capable of automated rate adjustments performed under set criteria.
d. The system will accommodate three successive phases of demand-based pricing development and implementation as follows:
i. Phase I – Base Hourly Rate. Using baseline data, iteratively set base hourly rates to influence demand toward goals.

Requirement
ii. Phase II – Time of Day. Building upon the demand balance achieved in Phase I, identify peak periods and set prices by time of day.
iii. Phase III – Adaptive. In select areas, adjust prices per b lock in real-time based on current demand.
5) The *Express*Park™ Parking Management System and/or Meter Management System(s) will, under LADOT's supervision, have the capability to remotely set rates, time limits, and enforcement hours for all Single- and Multi-Space Meters in the project area. These changes will be simultaneously set for the Cellular Payment System. Additionally, adjustments can be scheduled for future dates and/or times. [8.3.1.1.6]
6) The *Express*Park™ Parking Management System will provide a management-level dashboard system that will display overview data by category and geographical orientation. It will allow for drill-down where relevant. [8.3.1.1.4]
7) The *Express*Park™ Parking Management System and Meter Management Systems will be web-based and run from any standard web browser, and will meet state-of- the-art Internet standards for graphics and design and for speed, reliability, and security for dynamic content and user interaction. All systems will take less than 30 seconds to log in and be ready to use from the time a user hits the log in button. [8.3.1.1.4]
8) The *Express*Park™ Parking Management System will have the capability to create a number of re-occurring or ad-hoc reports as needed. These will be available for download in a format compatible with Microsoft Excel (.XLS file and comma separated value files .CSV), and other external databases as needed. The reports will cover, but are not limited to, the following areas [8.3.1.1.8]:
a. Revenue collection totals by meter, zone, area, route, etc.
b. Maintenance activity by area, location, meter model, frequency, etc.
c. Operational status by meter number and location identification
d. Daily collection report by meter, route, zone, etc.
e. Space occupancy levels and information (including duration and turnover) by block and zone, with "drill-down" ability for specific spaces at specific times.
f. Meter asset inventory
9) The *Express*Park™ Parking Management System and Vendor Management Systems will provide credit card processing details, including real-time, delayed, and declined, as well as the date and time of authorization.
10) The *Express*Park™ Parking Management System will have the capability to maintain an operational "inventory" of all units, by identification number and location, listing individual unit routes (collection and maintenance), rates, hours, and other relevant attributes. The inventory will support the current numbering system as follows:
a. alphanumeric meter number in the format AAA####B, where AAA is a zone code of one to three letters, #### is a meter number from 1 to 4999, and B is a single letter or omitted.
b. pay station number consisting of a four-digit pay station number and a three-digit space number. The first two digits (thousands and hundreds digits) of the pay station number, representing the zone, combined with the three-digit space number uniquely define the metered space.
11) The *Express*Park™ Parking Management System and Meter Management Systems will provide the end user the ability to assign meters to predetermined groupings, for example by collection routes, sub-routes, maintenance area, etc., and will support the management or configuration of those metered spaces by group or individually for scheduling assignments, monitoring, usage analysis, enforcement, viewing, and programming.

Requirement
12) The *Express*Park™ Parking Management System and/or Vendor Management System(s) will record all meter maintenance alarms and disseminate maintenance information via web portal, email, and text messaging, supporting a minimum of 30 maintenance technicians. [8.2.1.1.1]
13) The *Express*Park™ Parking Management System and/or Meter Management System(s) will include a maintenance work order management module using meter failure information provided from all sources, including enforcement officers and customer service representatives.
14) The *Express*Park™ Parking Management System and/or Meter Management System(s) will allow customer service, maintenance, or administration to remotely load time on any specific metered space to address equipment malfunctions and user errors and will allow time to be reduced on a metered space (with a proportional refund) for accidental credit card over payment. All such transactions will b e auditable and tracked by authorizing user. [8.3.1.1.7, 8.2.1.1.2]
15) The *Express*Park™ Parking Management System and/or Meter Management System(s) will have a module whereby a user can enter in a parking space number and date to get a list of the then currently applied rates (including any special event rates) and hours of operation.
16) The *Express*Park™ Parking Management System will include an adjudication assistance reporting tool allowing a hearing examiner to input the meter and/or space number, date, and time of a citation and then be provided a comprehensive report on transactions and paid status, outages and meter status, and maintenance activity near the time of the citation.
17) The *Express*Park™ Parking Management System and Meter Management Systems will represent the date in the general sequence: month, day, year, and will represent all times in the local time of Los Angeles.
18) The *Express*Park™ Parking Management System and all Meter Management Systems will provide on-line access to the current year plus, at a minimum, two previous years of all types of data retained in the system (including data from off-street facilities), and will provide archive capabilities thereafter.
19) All data will be replicated on one or more duplicate servers with hourly backups. Further redundancy will be provided by replicating the data daily on an off-site secure server located within the continental United States.
2.9.2 Performance Requirements
1) The *Express*Park™ Parking Management System and all Meter Management Systems will be fully operational no less than 99% of the time from 6:00 AM to 12:00 AM each day.

Attachment A – Detailed Requirements

Section **VII** – Advanced Meter Revenue Collections

Requirement
2.11 Collection System Requirements
To support the efficient collection and tracking of parking meter revenue as it varies with revised parking rates, an advanced revenue collection system will be provided as part of *Express*Park™. To meet the goals of the project, the Meter Collection System must:
2.11.1 Functional Requirements
1) All single-space meter coin cans will be equipped with a permanent sensor or label uniquely identifying each.
2) It is desired that the Single-Space Parking Meter recognizes and reports the unique coin can ID to the Meter Management System each time the coin can is inserted and removed (see Section 2.1.1)
3) Coin collection canisters will be equipped with a mobile reader that uniquely identifies each coin can that is emptied into the canister (collected). The mobile reader will retain and report the coin can collection records, including date and time of collection, to the Meter Collection System either in real-time through a secure cellular connection to the Internet or at the end of shift through a physical connection or a secure proximity wireless connection, e.g. Bluetooth. The mobile reader will update its date and time from the Internet or network at least once each business day.
4) The Meter Collection System will maintain a database associating coin can and meter IDs.
5) The Collection Analysis Module will be integrated with the Parking Management System.
6) The Collection Analysis Module will track all coin collections for single-space meters and pay stations, integrated with data from the Meter Management Systems and Electronic Lock Management System.
7) The Collection Analysis Module will reconcile daily meter revenue by collection canister (single-space meters) and pay station cash box, as reported by the respective meter management systems, the collection canister mobile readers (associating actual meters collected with canisters), and LADOT's existing database of actual daily collection canister and pay station cash box coin counts.
8) The Collection Analysis Module will analyze collection frequency by collection route and recommend optimal collection frequency and scheduling based on historical collection data, future rate changes, and a user-defined factor of safety.

Requirement
9) The Collection Analysis Module will analyze collection routes and recommend optimal collection routes by grouping single-space meters and pay stations (separately or together) with similar collection frequency needs based on historical collection data, future rate changes, and a user-defined factor of safety.
10) The Collection Analysis Module will prepare comprehensive collection schedules based on current and proposed collection routes and frequencies.
11) The Collection Analysis Module will generate collection key programming based on the selected collection schedule, integrated with and implemented through the City's existing Medeco Security Manager System for lock access management.
2.11.2 Performance Requirements
1) The collection canister mobile readers will correctly recognize the coin can ID number of no less than 99% of all coin cans collected per canister per day.

Attachment A – Detailed Requirements

Section **VIII** – Meter Enforcement System

Requirement
2.10 Enforcement Requirements
To monitor and ensure the effectiveness of on-street pricing in managing demand, a Guided Enforcement System will be provided as part of *Express*Park™. To meet the goals of the project the Guided Enforcement System must:
2.10.1 Functional Requirements
1) The Guided Enforcement System will alert and route enforcement officers to potential violations, record enforcement actions, and exclude handled potential violations. Enforcement actions will include, at a minimum, vehicle cited, vehicle exempt, vehicle displaying a valid disabled placard, space paid, space not occupied, and no action taken.
2) The Guided Enforcement System will provide real-time paid space information for all currently-occupied metered spaces and serve as the primary means for enforcing pay station spaces. [8.1.1.1.1, 8.1.1.1.2]
3) Parking spaces identified in the Guided Enforcement System as potentially in violation will be those parking spaces, identified as occupied by a parking sensor, for which parking is not currently permitted due to parking restrictions, overstay of limited time parking (including loading zones), and/or unpaid meter status, and for which no enforcement officer has taken an action during the occupancy of the current vehicle. The Guided Enforcement System will include a user setting to exclude overstay of limited time parking in the criteria separately for metered spaces and loading zones.
4) The Guided Enforcement System will identify on a map interface the enforcement officer location and, by block face, the total number of parking spaces potentially in violation and not yet handled by an officer.
5) The Guided Enforcement System will provide a map view, which displays, for each block face, the total number of unhandled parking spaces potentially in violation.
6) The Guided Enforcement System will provide a list view, which displays, for each block face, the location of unhandled parking spaces potentially in violation, identified by meter or space number and street address.
7) The Guided Enforcement System will allow each enforcement officer to track the number of citations issued and to record all enforcement actions.
8) Data will be updated in the Guided Enforcement System in re al-time as field conditions change: payments are received and occupancy changes.
9) Supervisors will have a unique user name and password login privilege to remotely supervise shifts and squads, deployed in one or multiple locations.
10) Supervisors will have the ability to log in to any enforcement officer user group to remotely view, in real time, field conditions (i.e., volume and location of unhandled potential violations).

Requirement
11) The Guided Enforcement System will include a web-based management tool to support enforcement officer management, evaluation of current enforcement routes and staffing, and development of future enforcement routes and staffing based upon measured demand, violation patterns, and proposed meter rate changes.
12) Enforcement handheld devices will display meter space time remaining (or expired status).
13) Enforcement handheld devices will communicate wirelessly to the Internet using the cellular system and will notify the enforcement officer if a connection is not available.
14) Enforcement handheld citation devices will integrate with LADOT's citation processing system.
15) Enforcement handheld citation devices will meet or exceed the specifications of the Duncan AutoCITE X3, which are currently in use, except that an integrated printer inside the device is not a requirement.
2.10.2 Performance Requirements
1) Potential violation spaces (occupied, unpaid/over limit, and unhandled spaces) will be accurately shown as such in the Guided Enforcement System no less than 90% of the time per day.
2) Potential violation spaces (occupied, unpaid/over limit, and unhandled spaces) will update in the handheld device within 10 seconds of refresh request, 95% of the time per day.
3) The delay in issuing a citation due to handheld device communication time will be less than 10 seconds for 95% of the citations issued per day.
4) Considering expired time citations issued to pay station spaces using a handheld citation device, citations issued to spaces that had been paid more than 60 seconds prior to citation issuance will total less than 0.5% of all such pay station citations issued per day.

Attachment B – Milestone Project Plan

ID	Task Name	Duration	Start	Finish
185	**Central Management System Development and Implementation**	400 days	Wed 4/13/11	Tue 10/23/12
1	**Project Initiation**	101 days	Fri 4/29/11	Fri 9/16/11
7	**Establish Project Office/Operations Facilities**	101 days	Fri 4/29/11	Fri 9/16/11
170	**Provide Enforcement Handhelds/Printers, Supervisors' Notebooks**	64 days	Mon 8/15/11	Thu 11/10/11
176	**Deployment**	7 days	Mon 8/15/11	Tue 8/23/11
397	**Technical Support and Training**	315 days	Mon 8/15/11	Fri 10/26/12
406	**Training**	315 days	Mon 8/15/11	Fri 10/26/12
412	**Conduct Training**	315 days	Mon 8/15/11	Fri 10/26/12
179	Enforcement System Accepted for Deployment	1 day	Tue 8/23/11	Tue 8/23/11
2	Contract Start	1 day	Thu 9/1/11	Thu 9/1/11
16	**ACS Establishes Internal Configuration Management Structure With Subs and Suppliers**	7 days	Fri 9/2/11	Mon 9/12/11
14	ACS ExpressPark Office Operational	10 days	Mon 9/5/11	Fri 9/16/11
23	**Systems Engineering Management Plan (SEMP)--Final FHWA Approval**	204 days	Wed 9/7/11	Mon 6/18/12
122	**On-Street Wireless Vehicle Sensors**	103 days	Wed 9/7/11	Fri 1/27/12
145	**Cellular Payment Technology**	85 days	Wed 9/7/11	Tue 1/3/12
158	**Meter Collection System Hardware**	128 days	Wed 9/7/11	Fri 3/2/12
244	**Configuration Management and Control (Centralized)**	126 days	Wed 9/7/11	Wed 2/29/12
260	**ExpressPark Engine (Analysis and Pricing)**	295 days	Wed 9/7/11	Tue 10/23/12
283	**Parking Guidance System Software**	126 days	Wed 9/7/11	Wed 2/29/12
316	**NAV Systems Interface**	126 days	Wed 9/7/11	Wed 2/29/12
324	**Customer Support (Includes Links/Interfaces to eTIMS for Citation Research)**	126 days	Wed 9/7/11	Wed 2/29/12
333	**Public Outreach and Marketing (LADOT Review and Approval At All Stages)**	431 days	Wed 9/7/11	Wed 5/1/13
21	LADOT Approves and Initiates Project-Wide CM Process	3 days	Thu 9/8/11	Mon 9/12/11
100	**Enhanced Parking Meters and Pay Stations**	76 days	Thu 9/8/11	Thu 12/22/11
101	**Replacement/Provision of Meters**	76 days	Thu 9/8/11	Thu 12/22/11
102	**Enhanced Single-Space Meters**	76 days	Thu 9/8/11	Thu 12/22/11
349	**Parking Guidance System**	253 days	Fri 9/30/11	Tue 9/18/12
378	**Off-Street Occupancy Systems**	111 days	Fri 9/30/11	Fri 3/2/12
109	Commence Installation of Single Space Meters in Revenue Operation (Supported by Legacy Colle	1 day	Thu 10/6/11	Thu 10/6/11
409	City Approval of Curriculum and Training Plan	5 days	Wed 10/12/11	Tue 10/18/11
335	Review and Approve Marketing Plan	5 days	Tue 11/8/11	Mon 11/14/11
114	All New Single-Space Meters Accepted in Revenue Operation	1 day	Thu 12/22/11	Thu 12/22/11
151	City Accepts Cellular Payment Capability As Operational For New Meters	1 day	Wed 12/28/11	Wed 12/28/11
156	City Accepts Cellular Payment Capability As Operational For Existing Meters	3 days	Fri 12/30/11	Tue 1/3/12
350	**Large Dynamic Message Signs (DMS)**	40 days	Mon 1/9/12	Fri 3/2/12
143	Sensor System Accepted as Operational	1 day	Fri 1/27/12	Fri 1/27/12
251	Review and Approval of System Test	3 days	Mon 2/27/12	Wed 2/29/12
323	Review and Approval of NAV Interface Test	3 days	Mon 2/27/12	Wed 2/29/12
331	Review and Approval of Customer Support System Test	3 days	Mon 2/27/12	Wed 2/29/12
395	Off-Street Occupancy and Guidance Systems Accepted in Operation	2 days	Thu 3/1/12	Fri 3/2/12
168	City Accepts Meter Collection System in Operation	1 day	Fri 3/2/12	Fri 3/2/12
358	DMS Signs Displaying ExpressPark Messages	1 day	Fri 3/2/12	Fri 3/2/12
463	Final City Certification of Training Completion	3 days	Mon 3/12/12	Wed 3/14/12

ID	Task Name	Duration	Start	Finish
48	LADOT Review/Approval of SEMP	10 days	Wed 3/28/12	Tue 4/10/12
465	Conduct End-to-End Test of all ExpressPark Components	3 days	Fri 4/6/12	Wed 4/11/12
466	Successfully Conduct Integrated ExpressPark Operational Test	3 days	Wed 4/11/12	Fri 4/13/12
467	City Accepts ExpressPark System for Live Operation; Authorizes "Launch"	2 days	Mon 4/16/12	Tue 4/17/12
468	Initial Launch (Phase 1)	0 days	Tue 4/17/12	Tue 4/17/12
50	Approval of SEMP by FHWA	44 days	Wed 4/18/12	Mon 6/18/12
360	**Local "Neighborhood" Dynamic Message Signs (NDMS) [Per RFP, 6 Month Lag from Launc**	**110 days**	**Wed 4/18/12**	**Tue 9/18/12**
470	Phase 2 (Time of Day) Operational	0 days	Fri 6/29/12	Fri 6/29/12
376	Local NDMS in Operation	1 day	Tue 9/18/12	Tue 9/18/12
471	Phase 3 (Adaptive, Demand-based) Operational	0 days	Tue 10/23/12	Tue 10/23/12
473	Pilot Evaluation Completed	0 days	Tue 4/16/13	Tue 4/16/13

EXHIBIT 2
PAYMENT SCHEDULE

PAYMENT MILESTONES

Contractor will invoice for meters according to the following schedule:

Meters

(1) Single Space Meters
  (a) 90% of equipment cost to be invoiced monthly based upon meters installed and successful unit acceptance testing
  (b) 10% upon completion of all installations and final end-to-end acceptance testing

(2) Upgrade of Existing Multi- Space Paystations
  (a) 90% of equipment cost to be invoiced monthly based upon installation and successful unit acceptance testing
  (b) 10% upon completion of all installations and final end-to-end acceptance testing

(3) On Street Occupancy Sensors
  (a) 70% to be invoiced monthly as sensors are installed, contingent upon successful unit acceptance testing.
  (b) 30% to be invoiced upon completion of all installations and final end-to-end acceptance testing

(4) Handhelds and Supervisor's Laptop Computers
  (a) 75% Invoiced at delivery of new Handhelds (including citation processing software), printers, and supervisor's laptops
  (b) 25% upon completion and delivery of Directed Enforcement and final acceptance test

(5) DMS
  (a) Invoiced monthly upon installation and unit acceptance testing.

(6) Off-Street Occupancy Signs and Sensors
  (a) 80%Invoiced monthly upon installation and unit acceptance testing.
  (b) 20% - Invoiced upon completion of all installations and acceptance testing.

(7) Parking Management System
  (a) Total costs for the Parking Management System will be allocated according to the following schedule:
    (i) Collection System – 10%
    (ii) Parking Guidance System – 5%
    (iii) Off Street Occupancy and DMS – 10%
    (iv) Dynamic Pricing Engine (Phase I) – 15%
    (v) Asset Management – 10%
    (vi) Workforce Management – 10%
    (vii) Dynamic Pricing Engine (Phase II) – 15%

(viii) Dynamic Pricing Engine (Phase III) – 15%

(ix) End-to-end system testing – 10%

(b) Progress payments based on component allocations (see Section 20.7.1) will be invoiced according to the following milestones:

(i) 20% at submission of draft requirements

(ii) 55% upon installation of each module on system

(iii)25% upon successful final acceptance testing of each module

b) Staff Cost

(a) To be invoiced monthly.

c) Systems Engineering Management Plan

(a) Billed upon completion and delivery of the following individual documents:

(i) Update Concept of Operations

(ii) Configuration Management Plan

(iii) Software Development Plan

(iv) Work Plan and Deployment Plan

(v) Operations and Maintenance Plan

(vi) Data Security and Safety Plan

(vii) Final Draft of SEMP

d) Public Outreach

(a) Billed monthly as a percentage of completion of the following tasks and deliverables:

(i) Task1 - Community Relations

1. Development and Implementation of Community Relation Plan
2. Website Activities (Webinars and associated educational activities)
3. Preparation of Graphic materials

(ii) Task 2 – Public Relations

1. Public Relations Plan Development and Implementation
2. Public Service Announcement and Demonstration Video Production
3. Graphics and Production of Public Relations Kit w/ExpressPark Brand
4. Internet Activities in Support of PR Plan

(iii)Task 3 – Local Match

1. Develop Local Match Sponsorship Program

(b) Task 4 – Cooperative Advertising

(i) Development of Cooperative Agreements and Recruitment of Partners

(ii) Grahics and Production for Signs, images for the digital advertising in elevators, lobbies and on websites

(c) Task 5 and 6 - Develop ExpressPark Sponsorship Program

(i) Development of Cooperative Agreements

(ii) Recruit Sponsorship Partners

(iii)Graphic and Website support for partner and sponsor linkage

Express Park

Payment Schedule - Summary

7/22/2011

Project Budget

	FY 2012				FY 2013				FY2014	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Total
Hardware Costs	-	4,548,190	1,610,956	1,102,052	940,080	-	-	-	-	$ 8,201,278
Parking Management System	-	289,581	1,302,895	542,140	455,398	303,599	-	-	-	$ 2,893,613
Sys. Eng. Mgmt. Plan	-	89,300	9,922	-	-	-	-	-	-	$ 99,223
Public Outreach	129,250	280,494	83,256	7,000	-	-	-	-	-	$ 500,000
Staff Costs	124,777	374,330	374,330	290,678	290,678	290,678	290,678	290,678	193,785	$ 2,520,612
Operating Costs	-	16,037	288,447	675,077	675,077	675,077	675,077	675,077	450,051	$ 4,129,918
Contingency	6,473	19,420	19,420	19,420	19,420	19,420	19,420	19,420	12,946	$ 155,356
Totals	**260,500**	**5,617,352**	**3,689,227**	**2,636,366**	**2,380,652**	**1,288,773**	**985,174**	**985,174**	**656,783**	**$ 18,500,000**

Meter Operating Costs - Normal operating costs budgeted and funded from SPRF

Operating Costs	-	179,101	240,942	240,942	240,942	240,942	240,942	240,942	160,628	$ 1,785,379

EXHIBIT 3

STANDARD PROVISIONS FOR CITY CONTRACTS

EXHIBIT 4
PERFORMANCE STANDARDS

1. **Performance Standards**

1.1. Timeliness of delivery, installation and operation.
1.2. Availability and access to data at all times, 365 days per year, excluding downtime for system maintenance.
1.3. Availability of local technical support M – F 7am to 4pm PST and/or "service desk" support 24/7.
1.4. Efficiency of data processing and transmittal components, report development and data accuracy.
1.5. Efficiency and compliance of credit/debit card and "smart" card transactions, 365 days per year, excluding downtime for system maintenance.
1.6. Efficiency of alarm reporting system- issued in real-time, 365 days per year, excluding downtime for system maintenance.
1.7. Report development may include the following reports:
1.7.1. Meter Inventory Summary by PMZ (Parking Meter Zone) – Monthly
1.7.2. Meter Maintenance Activity Report (Except Specified Outage Types, By Maintenance Route) –
1.7.3. Monthly Meter Maintenance Activity by Maintenance Route (All Outage Types)
1.7.4. Monthly Meter Inventory Summary by Maintenance Route –
1.7.5. Monthly Field Meter Inventory (by maintenance route)
1.7.6. Meter Outage Status Report – Monthly
1.7.7. Meter Open Outage Report (By Maintenance Route) – Daily
1.7.8. Meter Open Outage Report – Administrative Version (By Maintenance Route) – Daily
1.7.9. Meter Open Outage Report – Special Crew Version (By Maintenance Route) – Daily
1.7.10. Meter Open Outage Report – Open TU Outages – Daily
1.7.11. Meter Open Outage Report – Open TU and NX Outages – Daily
1.7.12. Meter Open Outage Report – Open NX Outages - Daily
1.7.13. Meter Open Outage Report – Technician Version (By Maintenance Route) – Daily
1.7.14. Meter Open Outage Report – Client Version - Daily
1.7.15. Meter Repair Activity By Type of Repair - Weekly
1.7.16. TA version has a unique summary page
1.7.17. Meter Repair Activity By Type of Repair - Weekly
1.7.18. TA version has a unique summary page
1.7.19. Meter Repair Activity By Type of Repair - Weekly
1.7.20. TA version has a unique summary page
1.7.21. Meter Outage Activity by Route Number - Monthly
1.7.22. Meter Repair Activity by Type of Repair - Monthly

1.7.23. Meter Maintenance Activity Report by PMZ - Monthly
1.7.24. Field Meter Inventory (By Meter Number)
1.7.25. Monthly Meter Revenue Report (By Collection Route)
1.7.26. Monthly Meter Revenue Summary Report (By Summary Level)
1.7.27. Meter Collected/Projected Revenue Report (By Collection Route) – Weekly, Monthly
1.7.28. version includes handheld audit data and is called Monthly/Weekly Meter Projected/Collected Revenue Report (By Collection Route)
1.7.29. Monthly Meter Collections Deposit Report (By Summary Level (WAMT version includes both collection and deposit dates)
1.7.30. Monthly Meter Collection Deposit Report (By Deposit Date)
1.7.31. Monthly Meter Revenue Summary Report (By District)
1.7.32. Meter Maintenance Global Update Report and Meter Maintenance Global Update Error Report - (generated as used)
1.7.33. Meter Inventory by Collection Route – Monthly
1.7.34. Meter Inventory by Collection Route – Weekly
1.7.35. Report of Meter Preventive Maintenance - Monthly
1.7.36. Meter Open Outage Report By Collection Route within Maintenance Route - Daily
1.7.37. Meter Open Outage Report By Collection Route within Maintenance Route – Security Version - Daily
1.7.38. Meter Batch Header Report
1.7.39. Meter Transaction Totals (By Transaction Type and By Batch Number)
1.7.40. Meter Error Recap
1.7.41. Meter Batch Update Totals
1.7.42. Incomplete Meter Report
1.7.43. Meter Exception Report
1.7.44. Meter Transaction Total
1.7.45. Meter Error Recap
1.7.46. Incomplete Meter Report
1.7.47. Meter Maintenance Collection Data Journal Report - Daily
1.7.48. Meter Maintenance Meter Delete Journal Report - (generated as used)
1.7.49. Repaired Meter Outages with City Reference Number
1.7.50. LA Monthly Collection Meter Report
1.7.51. LA Monthly Collection Meter Report Summary by Council District
1.7.52. LA Monthly Collection Meter Report Summary by PMZ
1.7.53. Meter Check Request and Response Report (By Reporting Department)
1.7.54. Collection Progress Summary Report – Weekly, Monthly
1.7.55. Meter Collection Repair Report
1.7.56. Maintenance Progress Summary Report- Weekly
1.7.57. Meter Repair Activity by Type of Repair for Ticket-Related Outages – Monthly
1.7.58. Meter Activity Report to Multiple Outages – Monthly
1.7.59. Maintenance Repair Activity by Crew Report – Daily
1.7.60. Maintenance Repair Activity by Crew Report – Daily
1.7.61. New Meter Outages Opened Report
1.7.62. Backdated Outage Transaction Report

1.7.63. Bad Date Report – Meter Action Report – Daily
1.7.64. Meter Outage Detail Report – Monthly
1.7.65. Report of New Meter Outages – Monthly
1.7.66. Meter Outage Report Tech Battery Status
1.7.67. Open Outage – Hot Report – Daily
1.7.68. Meter Batch Update Totals
1.7.69. Error Recap
1.7.70. Maintenance Repair Activity by Repair Code – Monthly
1.7.70.1. Closed Transaction Utility Report

2. Quality and Performance of Units

Quality and performance of units shall comply with contractual terms.

3. Component Verification Testing

As Prime Contractor, ACS will coordinate testing that demonstrates system performance in accordance with the specified requirements of Section 5 in the Scope of Work of the Agreement. ACS will develop a comprehensive System Verification and Test Plan subject to approval by LADOT to ensure that the delivered parking system operates in accordance with the Scope of Work in the Agreement.

4. Performance Standards for Future System Additions

As future system additions are added, ACS and the City will work to develop mutually agreed up performance standards for these systems.

5. Performance Standards for Equipment

5.1. All Meters

5.1.1. Coin counts for each coin denomination deposited into the collection container (coin can or cash box) will be no less than 99% accurate per collection.

5.1.2. The Parking Meter will have a power supply capable of operating continuously for a minimum of 12 months, but preferably greater than two years on average.

5.1.3. The Parking Meter will complete any payment type transaction within 20 seconds from the last user input (e.g. hitting an 'ok' button) to approval and completion.

5.1.4. The Meter will report its change in status, e.g. paid/expired, outages, to server within two minutes no less than 95% of the time.

5.1.5. Once programmed into the central back end system, rates will update to the new rate within five minutes no less than 95% of the time.

5.1.6. The Parking Meter will post time loaded remotely within 20 seconds of completing the transaction no less than 95% of the time.

5.2. Single Space Meters

5.2.1. The Single-Space Parking Meter will process coin transactions with no less than 99% accuracy per day.

5.2.2. The Single-Space Parking Meter will be field serviceable for clearing coin jams and foreign objects, requiring no special tools, within three minutes from the time the repair person begins the removal process.

5.3. Multi Space Meters

5.3.1. The Multi-Space Parking Meter will process coin transactions with no less than 95% accuracy per day.

5.3.2. The Multi-Space Parking Meter will be field serviceable for clearing coin jams and foreign objects, requiring no special tools, within five minutes from the time the repair person begins the removal process.

5.4. Cellular Payment Technology

5.4.1. The Cellular Payment System will be operable 99% of the time between 6:00 AM – 11:59 PM seven days per week, excluding "noticed" maintenance periods agreed to in advance by LADOT.

5.4.2. The Cellular Payment System will cause the payment to be made to the metered space within 20 seconds of the customer completing the payment, 98% of the time.

5.4.3. The Cellular Payment System will send all notifications within 20 seconds of the referenced time, 99% of the time.

5.5. On-Street Wireless Vehicle Sensors

5.5.1. The On-Street Parking Sensors will accurately detect each parked vehicle arrival and departure at a rate of no less than 90% per day. A vehicle must be continuously stationary for at least 10 seconds to be considered "parked."

5.5.2. The On-Street Parking Sensors will accurately report the occupied status of parked vehicles in a designated space at a rate of no less than 90% per day.

5.5.3. The On-Street Parking Sensors will communicate parking events and change in status wirelessly to the server within three minutes at least 90% of the time per day.

5.5.4. It is desired that the On-Street Parking Sensors communicate to the local meter within 10 seconds at least 95% of the time per day.

5.6. Parking Guidance System

5.6.1. Neighborhood Dynamic Message Signs

5.6.1.1. The Neighborhood DMS will update new messages within one minute of the message being sent by the Parking Guidance System, 95% of the time per day.

5.6.1.2. The Neighborhood DMS will display the programmed message no less than 95% of the time per day.

5.7. Parking Management System

5.7.1. The *Express*Park™ Parking Management System and all Meter Management Systems will be fully operational no less than 99% of the time from 6:00 AM to 12:00 AM each day.

5.8. Advanced Meter Revenue Collections

5.8.1. The collection canister mobile readers will correctly recognize the coin can ID number of no less than 99% of all coin cans collected per canister per day.

5.9. Meter Enforcement System

5.9.1. Potential violation spaces (occupied, unpaid/over limit, and unhandled spaces) will be accurately shown as such in the Guided Enforcement System no less than 90% of the time per day.

5.9.2. Potential violation spaces (occupied, unpaid/over limit, and unhandled spaces) will update in the handheld device within 10 seconds of refresh request, 95% of the time per day.

5.9.3. The delay in issuing a citation due to handheld device communication time will be less than 10 seconds for 95% of the citations issued per day.

5.9.4. Considering expired time citations issued to pay station spaces using a handheld citation device, citations issued to spaces that had been paid more than 60 seconds prior to citation issuance will total less than 0.5% of all such pay station citations issued per day.

6. Non-Performance Penalties and Liquidated Damages

Section 6 subject to final subcontract negotiations

6.1. Assessment of Liquidated Damages

Liquidated damages will be the responsibility of the contracting entity, and will be assessed as follows:

6.1.1. LADOT will monitor the agreed upon contractual performance standards and will routinely provide, and communicate to the contractor, information relative to potential issues.

6.1.2. If a failure in performance occurs, LADOT will notify the contractor of such failure, by immediately transmitting a Notice of Default by e-mail or facsimile and a follow up copy sent via certified US Postal Service; such notification shall include all supporting data.

6.1.3. The contractor shall respond to the City within one (1) business day of receiving the Notice of Default acknowledging receipt of the Notice of Default; failure to respond to the Notice will result in penalty of $500 per day.

6.1.4. Contractor shall submit a plan to correct the problem to the City within ten (10) business days of the receipt of the Notice of Default, and shall report to the

City every seven (7) days thereafter, the status of the problem and attempts to correct it; failure to submit the weekly status report will result in penalty of $500 per day.

6.1.5. Contractor shall have up to thirty (30) business days to cure items in default; this time may be extended upon mutual agreement. Should the default not be repaired within the 30 business day period, the contractor shall be liable to pay:

6.1.6. All LADOT labor costs associated with repair or replacement of parts or materials necessary to cure the default;

6.1.7. LADOT's costs of all parts and materials necessary to cure the default;

6.1.8. Any costs of disposal of equipment associated with the LADOT's repair of the default;

6.1.9. LADOT shall respond to the contractor within two (2) business days in response to written requests for information concerning alleged defaults; delay by LADOT shall result in a corresponding extension of time for the contactor to complete its response to the alleged default.

6.1.10. All performance guarantees and liquidated damages shall commence upon the LADOT's written acceptance to contractor of system equipment through the warranty period, including any extensions.

6.2. Liquidated Damages Amount

In any given month, in no event will liquidated damages apply to ACS in an aggregate amount in excess to 10% of such month's invoice. Any liquidated damages owed to LADOT will be paid end at the end of each calendar year in order to allow for ACS to recoup any liquidated damages by way of bonus payments described below.

6.3. Delay in Delivery and Development Schedule

A Delivery and Deployment Schedule shall be provided within ten (10) days of the effective date of the Agreement. Failure to submit such schedule shall result in liquid damages of $1,000 per day until submitted.

6.4. Delays beyond 5 days in the Delivery and Deployment Schedule

6.5. Stolen or Damaged Equipment

Should contractor supplied equipment be damaged or stolen during contractor-performed maintenance services, the contractor shall repair or replacement said equipment within ten (10) business days. If contractor fails to repair or replacement, LADOT shall have the option

to repair or replace at its cost, and subtracting these amounts from any monies owed to the contractor.

6.6. Failure to Provide Support as Per Warranty and Maintenance Agreement
Should contractor fail to provide maintenance or support within the timeframe provided in the Agreement, the LADOT shall notify the contractor of the default in writing. Liquidated damages of $1,000 per day shall be assessed for every day following such notice.

6.7. Failure to respond to Notice of Default
Should contractor fail to respond to a Notice of Default within one (1) business day, liquidated damages of $1,000 per day shall be assessed.

6.8. Contractor's Failure to Provide Plans for Corrective Action
Should contractor fail to provide plans for correcting action to a default to the LADOT on a weekly basis, liquidated damages of $500 per week shall be assessed thereafter on a weekly basis.

6.9. SEMP - $500/day for each day delivery of draft SEMP document is delayed beyond June 30, 2012.

6.10. Single Space Meters - $100/day (working)/meter for each day that completion of installation of meters goes beyond April 30, 2012.

6.11. Multispace Meters - $500/day (working)/meter for each day that completion of installation of meters goes beyond April 30, 2012.

6.12. Sensors - $100/ day for each day (working)/sensor that completion of installation of sensors goes beyond May 30, 2012.

6.13. Parking Management System:

- Phase I will be delivered no later than April 30, 2012. No penalties will be assessed for late delivery for the first 30 days. For each working day following the 30 day grace period, a penalty of $1,000/day will be assessed
- Phase II will be delivered no later than July 30, 2012. No penalties will be assessed for late delivery for the first 30 days. For each working day following the 30 day grace period, a penalty of $2,000/day will be assessed.
- Phase III will be delivered no later than November 30, 2012. No penalties will be assessed for late delivery for the first 30 days. For each working day following the 30 day grace period, a penalty of $3,000/day will be assessed.

6.14. Failure to respond to Telephone at Help Desk

For each event that a call is made for and the contractor fails to respond to telephone contact to its technical support help desk in the City of Los Angeles during normal business hours defined above within one hour, liquidated damages of $100 per hour of delay shall be assessed.

EXHIBIT 5

ACS' PROPOSAL & BAFO

Incorporated by reference

PROPOSAL BY ACS SUBMITTED ON DECEMBER 17, 2010

AND

FINAL BEST AND FINAL OFFER (BAFO) AND

REVISED PROPOSAL SUBMITTED ON MARCH 16, 2011

EXHIBIT 6

Incorporated by reference

RFP REQUEST FOR PROPOSALS (RFP) FOR CITY OF LOS ANGELES

DOWNTOWN *EXPRESS*PARK™ INTELLIGENT PARKING MANAGEMENT (IPM)

PROJECT

Issued November 3, 2010

And

REVISIONS REQUESTED FOR *EXPRESS*PARK™ PROPOSALS
ISSUED MARCH 2, 2011

ATTACHMENT 4

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

2011 JUN 14 PM 4:14
CITY ADMINISTRATIVE OFFICER

Date: June 13, 2011

To: Honorable Antonio R. Villaraigosa, Mayor of Los Angeles
Attention: Pamela Finley, Legislative Coordinator

From: Dorothy Tate, Acting Commission Executive Assistant
Board of Transportation Commissioners

Dorothy Tate

Subject: **APPROVAL OF RECOMMENDED CONTRACTOR TO IMPLEMENT THE DOWNTOWN *EXPRESS*PARK PROJECT**

At its regular meeting of June 9, 2011, the Board of Transportation Commissioners approved the above referenced report. After your review, please forward it to the City Clerk's office for Council consideration. A copy of the Board's action is attached for your information.

If you need further information, please contact Dan Mitchell Parking Meter Operations Division, at (213) 473-8276.

DT

Attachments

C: Dan Mitchell
Jasmin San Luis

BOARD REPORT
CITY OF LOS ANGELES
DEPARTMENT OF TRANSPORTATION

Date: June 9, 2011

To: Board of Transportation Commissioners

Subject: **APPROVAL OF RECOMMENDED CONTRACTOR TO IMPLEMENT THE DOWNTOWN *EXPRESS*PARK™ PROJECT**

SUMMARY

At its meeting of October 22, 2009, the Board of Transportation Commissioners authorized the DOT General Manager to finalize and release a Request for Proposals (RFP) for the selection of a contractor to provide and install the systems and equipment necessary to develop and implement *Express*Park™, an intelligent parking management system for the downtown area. The Board directed the General Manager to select the proposal that best met the needs of the City and the requirements articulated in the Requests for Proposals and to report back to the Board with the recommended contractor selected.

Since that time, DOT staff have completed the federally-required Systems Engineering Management Plan, obtained all required federal and state funding approvals, completed the RFP process, and selected a contractor, ACS State & Local Solutions, Inc. (ACS). There was initially a protest to the selection process, but it has since been withdrawn. The Department now requests the Board's approval of this contractor selection and the Board's recommendation to the Mayor and City Council to grant the DOT General Manager the authority to execute the final contract and to utilize the tools necessary to implement this parking management strategy. These tools include an ordinance granting the DOT General Manager the authority to adjust on-street parking rates in select areas as much as 50% up or down from the prescribed rates in the Los Angeles Municipal Code with the goal of achieving 70 to 90 percent occupancy on each city block during metered hours.

RECOMMENDATIONS:

That your Board:

1. **APPROVE** the selection of ACS State & Local Solutions, Inc. (ACS) to provide and install the systems and equipment necessary to develop and implement Downtown *Express*Park™, an intelligent parking management system (IPM).

2. **RECOMMEND** that the City Council, subject to the approval of the Mayor, **APPROVE AND AUTHORIZE** the DOT General Manager to negotiate and execute a contract, substantially in conformance with the details described in and attached to this report, with ACS State & Local Solutions, Inc. for a term of two (2) years with two (2) one-year options to extend the term.

3. **RECOMMEND** that the City Council, subject to the approval of the Mayor, **APPROVE** an ordinance modifying Section 88 of Chapter VIII of the Los Angeles Municipal Code (LAMC), to be effective January 1, 2012, granting the DOT General Manager the authority to increase or decrease parking meter rates within Parking Meter Zone (PMZ)

Nos. 501, 537, 553, 554, 555, 565, 580, and 581 by as much as 50 percent from their prescribed rates, with the goal of achieving 70 to 90 percent occupancy on each city block in the Parking Meter Zone during metered hours.

4. **REQUEST** that the City Council, subject to the approval of the Mayor, **AUTHORIZE** the DOT General Manager to utilize metered parking management tools, consistent with the amended Los Angeles Municipal Code, within Parking Meter Zone (PMZ) Nos. 501, 537, 553, 554, 555, 565, 580, and 581, including time-of-day rates, progressive rates, special event rates, and clearing the remaining paid time for a metered parking space after the vehicle vacates the space.

5. **DIRECT** the DOT General Manager to notify the Mayor and City Council on the actions taken by your Board.

THE RFP PROCESS

At its meeting of October 22, 2009, the Board of Transportation Commissioners authorized the DOT General Manager to finalize and release a Request for Proposals (RFP) for the Downtown *Express*Park™ Project. Following extensive development of project plans and specifications, on November 3, 2010, the General Manager gave notice that the Department was soliciting proposals the project. A mandatory pre-proposal conference was held November 12, 2010, with proposals due no later than December 17, 2010. Thirty companies attended the pre-proposal conference. Of these, seven declared themselves to be potential prime contractors. LADOT ultimately received proposals from two companies, ACS State & Local Solutions, Inc. (ACS) and Serco, Inc. (Serco).

At the pre-proposal conference, LADOT notified the proposers that the *Express*Park™ project would be reimbursed by Federal CMAQ funds up to $15 million with a $3.5 million match from the SPRF. Despite this budget guidance, both proposals were significantly over the $18.5 million budget.

SELECTION PROCESS

After receiving the proposals on December 17, 2010, LADOT distributed the proposals without the price schedules to the Evaluation Panel for their review. The five members of the Evaluation Panel were Dan Mitchell and Peer Ghent from LADOT Meter Operations; Chad Lynn, head of parking operations for the City of Beverly Hills; Deputy Chief Rudy Carrasco from LADOT Parking Enforcement, and Shelley Smith, former Assistant City Attorney for LADOT.

The Evaluation Panel met January 5, 2011, to discuss the merits of each proposal. Because neither proposal was responsive to the project's budget, it was decided that Dan Mitchell and Peer Ghent would meet with each proposer to explore what options were available to reduce the costs. They met with Serco on January 5, 2011, and with ACS on January 6, 2011. Then, in a parallel process, on January 12, 2011, the entire Evaluation Panel met to hear oral presentations from Serco and ACS.

Based upon the inputs received, LADOT then prepared a formal request for the proposers to revise and resubmit their proposals, based on a reduced scope of work and additional guidelines, in order to meet the budget requirements. This request was made March 2, 2011 with responses due March 16, 2011. The Evaluation Panel subsequently reviewed the revised

proposals and interviewed each proposer a second time on April 6, 2011. Following the meetings, the Panel scored the proposals using the criteria stated in the RFP. As a result, the Panel recommended ACS as the selected contractor for the project.

EVALUATION CRITERIA AND SCORING

The Evaluation Panel evaluated the proposals according to weighted criteria, as detailed in the RFP and provided in Attachment A of this report. The criteria is summarized in Figure 1 below.

Figure 1. *Express*Park™ – Proposal Evaluation Criteria

Item #	Evaluation Factors	Max. Points
1	General Experience – 20%	20
2	Quality of the Technical Solution – 20%	20
3	Project Approach – 15%	15
4	Equipment Proposed – 25%	25
5	Project Plan – 10%	10
6	Operations and Maintenance – 10%	10
	Maximum Possible Score	100

Figure 2 below represents the Evaluation Panel's overall final scores using this criteria.

Figure 2. RFP Final Scores

Proposer	Average	Rater #1	Rater #2	Rater #3	Rater #4	Rater #5
ACS	93.3	93	91	93	95.5	94
Serco	83.9	82.5	82	83.5	85.5	86

PROTEST PROCEDURES

Appendix B of the RFP, "Mandatory City Contract Requirements, General City Reservations, and Protest Procedures," provides for two types of protests: 1) protesting the content of the RFP and 2) protesting the contractor selection process. DOT received no protests of the content of the RFP; however, the Department did receive one protest of the selection process.

On April 6, 2011, Serco made a request under the California Public Records Act for a copy of the ACS original and revised *Express*Park™ proposals. On advice from the City Attorney, DOT denied this request on April 7, 2011, on the grounds that, at that stage of the RFP process, the requested documents were still exempt under Government Code section 6255.

On April 20, 2011, Serco's attorney challenged this denial and submitted initial formal protests of the RFP selection process on two grounds. On April 28, 2011, DOT responded by clarifying the legal precedent and stating, "The documents will be released before the negotiated contract is sent to the Board of Transportation Commissioners for approval."
Then, on May 10, 2011, LADOT released the requested documents stating, "While our City Attorney has advised that state law does not require that the *Express*Park™ RFP proposals be

released at this point in the process, after careful review, we have determined that, based on the proposals received in response to this RFP, the public interest would be best served by releasing the requested documents at this time." Serco was advised that they would have "ten (10) business days to review this material and, in light of the additional information, to retract, revise or amend the two grounds for protest...previously submitted."

After being provided the opportunity to review the requested proposals, on May 20, 2011, Serco notified the Department by letter that the company had ultimately decided to withdraw its protests.

CONTRACTOR SELECTION APPROVAL AND CONTRACT AUTHORIZATION

After the protest period expired, DOT began contract negotiations with ACS. As previously approved by the Board, the contract will have a term of two (2) years with two (2) one-year options to extend the term, in order to provide the flexibility to extend the project beyond the demonstration phase, pending further approval and funding. Contract negotiations are still on-going, but the final contract will include the final negotiated terms and conditions, the final scope of work, and the RFP and the contractor's revised proposal by reference. The final contract will be in substantial conformance to the project RFP as amended, the contractor's revised proposal, and the draft scope of work, which is attached to this report as Attachment B and summarized in the following section.

At this time, the Department requests the Board's approval of ACS as the selected contractor and the Board's recommendation to the Mayor and City Council to grant the DOT General Manager the authority to negotiate and execute the final contract for this project, substantially in conformance with the details described in and attached to this report.

SCOPE OF WORK

The contractor will be responsible for providing and installing the systems and equipment necessary to develop and implement the downtown *Express*Park™ project. The project and its major components are described in the draft scope of work, which is attached as Attachment B and is the principal element of the proposed contract. The following is a brief summary of the scope of work for this project:

PROJECT DESCRIPTION:

*Express*Park™, the Downtown Intelligent Parking Management (IPM) Project is proposed as a comprehensive strategy to relieve traffic congestion, reduce air pollution, and improve transit efficiency in Downtown Los Angeles through the implementation of demand-based parking pricing and operational policies. *Express*Park™ will utilize vehicle sensors and a real-time parking guidance system to optimize the utilization of public on- and off-street parking in the Downtown Los Angeles Area, thus reducing the significant traffic congestion and pollution associated with drivers searching for parking. Similar to congestion pricing, demand-based parking pricing will also encourage a modal shift to carpooling, bicycling, and public transportation. To support the new parking pricing and policies, new meter technology will be deployed to provide motorists with alternative payment options and improved convenience. A complementary parking guidance system will also be implemented to support efficient travel to the most appropriate available parking.

*Express*Park™ includes the following components:

1. **New Parking Meter Technology** - New parking meter technology will be deployed for approximately 6,000 on-street metered parking spaces in the project area. These new parking meters will be capable of charging motorists demand-based parking rates depending on the time of day and length of stay. They will also provide alternative payment options, allowing motorists to pay for parking using their credit card, smart card, or cell phone, and even receive a text message when their paid parking time is about to expire.

2. **Vehicle Sensors and Central Management System** – Wireless vehicle sensors will be placed in each of the project's on-street metered parking spaces to provide real-time occupancy and parking duration information. This information will be wirelessly transmitted to a central management system for data processing. The management system will then analyze the data to recommend revised rates, time limits, and hours of operation with a goal of achieving approximately 70-90% of the spaces on each block occupied during metered hours. After each adjustment is made, the system will analyze the parking sensor data to evaluate the resulting effects on parking behavior and recommend further refinements until optimal pricing and policies are achieved.

   In addition to the on-street sensors, occupancy reporting systems will be implemented for City-owned off-street parking facilities in the project area, serving approximately 7,500 spaces. These systems may utilize individual vehicles sensors, cordon counting systems, or advanced revenue control systems to collect parking data. The central management system will similarly analyze off-street data to recommend optimal coordinated pricing structures and operational policies, as well as to evaluate the impact of on-street operational changes on off-street demand.

3. **Real-Time Parking Guidance System** - To aid the public in quickly locating the most appropriate parking for their destination, the project will also include a real-time parking guidance system. Using the on-street vehicle sensors and off-street occupancy reporting systems, real-time parking information, including the location, price, and policies of available on- and off-street parking, will be provided to the public through the following methods:

   - Internet web site
   - standard mobile phones using Metro's 511 and voice recognition technology
   - web-enabled mobile devices, including Android, iPhone, and BlackBerry
   - in-vehicle navigation systems (pending industry support)
   - on-street dynamic message signs (at key decision points in select areas)

   This real-time information from approximately 13,000 public on- and off-street parking spaces will aid motorists in better understanding their parking options and will guide them directly to the most appropriate available parking for their destination, thus eliminating the motivation to "cruise" for parking.

MAJOR OBJECTIVES:

- Reduce traffic congestion and its resulting air pollution
- Improve travel efficiency through a real-time parking guidance system
- Improve travel times for transit and through traffic

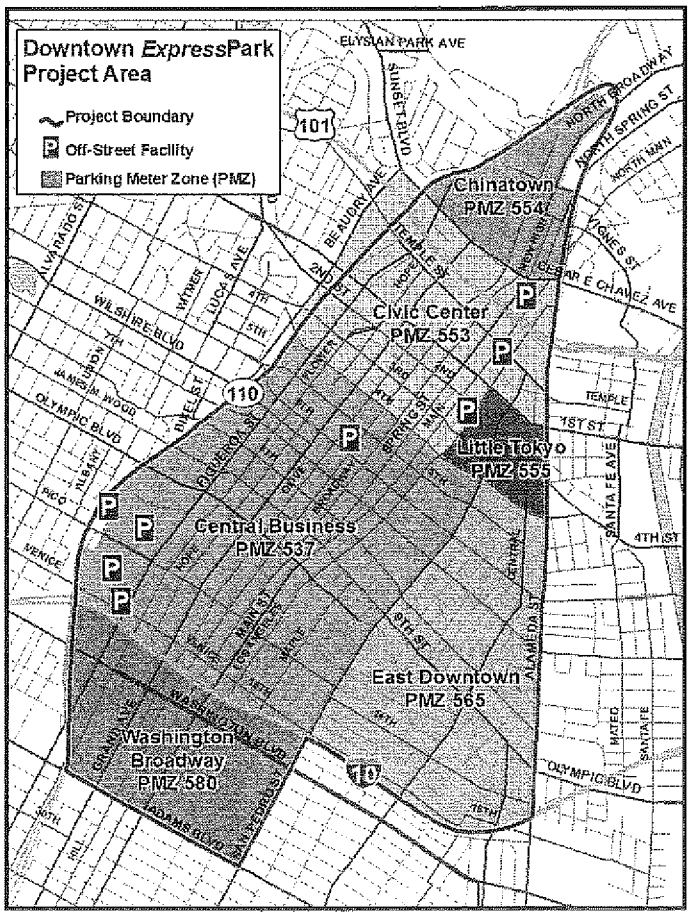
- Encourage a modal shift from single-occupancy vehicles to more efficient forms of transportation
- Optimize parking revenues to fund system expansion to other high-demand areas

PROJECT LOCATION:

The proposed project area, shown in Figure 3 below, encompasses nearly the entire Downtown area and is generally bounded by Adams Boulevard and the Santa Monica (10) Freeway on the south, the Harbor (110) Freeway on the northwest and Alameda/North Spring Streets on the east. This area includes approximately 6,000 on-street metered spaces in the following six Parking Meter Zones (PMZs):

- Central Business (PMZ 537)
- Chinatown (PMZ 554)
- Civic Center (PMZ 553)
- East Downtown (PMZ 565)
- Little Tokyo (PMZ 555)
- Washington-Broadway (PMZ 580)

Figure 3. Project Area



The project area includes approximately 15% of all the on-street metered parking in the City of Los Angeles and represents a very high demand parking area of the City. The parking meter rates in the area currently range from $1.00 to $4.00 per hour with typical hours of operation from 8:00 AM to 8:00 PM Monday through Saturday. Demand for parking in many areas extends well into the evening hours and on Sunday, including shopping, special event, and entertainment areas.

In addition to on-street parking, LADOT and other departments of the City of Los Angeles operate an additional 7,500 public parking spaces in the Downtown project area, including the Civic Center, El Pueblo, Pershing Square, and South Park. The Los Angeles Convention Center operates 5,100 of these spaces, which primarily serve event traffic - traffic that regularly and significantly impacts commuter congestion and travel times.

PRIMARY PROJECT COMPONENTS:

- Prepare system architecture and design documents
- Prepare performance specifications for field equipment
- Prepare functional requirements for the central management system
- Prepare the Request for Proposals
- Evaluate proposals and award contracts
- Public outreach
- Install and test new equipment
- Perform system integration
- System operation and monitoring of project elements
- Evaluate performance measures

The City intends to use a combination of City staff and private contractors to conduct the system design, testing, installation, integration and evaluation of the project.

PROJECT MILESTONES:

	Completion Date
• Letter of Agreement signed with Metro	Apr 2009
• Funding awarded	May 2009
• Systems Engineering Management Plan (SEMP) Approved	Jul 2009
• Request for Proposals released	Dec 2010
• Contract approved	Jul 2011
• Equipment installation complete	Feb 2012
• Parking guidance and management systems fully operational	Apr 2012
• Evaluation period complete	Mar 2013
• Final evaluation report complete	Sep 2013

DEMAND-BASED PRICING AND PARKING MANAGEMENT TOOLS

The ability to adjust parking meter rates in a timely manner is critical to the success of *Express*Park™. The current method of setting rates through City Council ordinance will not provide the necessary flexibility to comply with the USDOT grant requirements and achieve project goals during the one-year evaluation period. By granting limited authority to the LADOT General Manager to make rate adjustments, the City will learn how effective demand-based

pricing can be in assuring the availability of parking throughout the project area. Based upon the parking space occupancy data, parking meter rates will be adjusted periodically beginning in 2012, and the results will be continuously evaluated to determine the optimum rate structure for the parking demand throughout the project area.

The Department will consider varying the rates by day of week, time of day, and even length of stay to best manage demand and improve access to available parking. It is envisioned that each pricing strategy will be evaluated for approximately 4 to 8 weeks before the next iteration is implemented. All pricing will be clearly displayed on the parking meters. *Express*Park™ will include an extensive public outreach component to help both businesses and customers understand the benefits of easy-to-find and available parking, made possible through demand-based pricing and parking guidance.

At this time, DOT requests the Board's recommendation to the Mayor and City Council to approve an ordinance granting the DOT General Manager the authority to increase or decrease parking meter rates within the project's six Parking Meter Zones (PMZs) by as much as 50 percent from their prescribed rates, with the goal of achieving 70 to 90 percent occupancy on each city block in the Parking Meter Zone during metered hours. In March 2009, the Mayor and City Council previously approved the development of an ordinance for this purpose (CF 07-3754).

It is proposed that, in addition to the project's six PMZs, this authority be extended to the neighboring Alameda East PMZ No. 581 to provide the Department the flexibility to manage impacts to this adjacent area to the east of the project. Council District 6 has also requested that this same authority be extended to the Van Nuys PMZ No. 501 as part of a separate project with similar goals to improve parking availability in the Van Nuys core business district. These two PMZs will be managed manually to be consistent with the ExpressPark™ operating policies.

The technology and systems installed with *Express*Park™ provide other tools that will improve the City's parking management capabilities. For example, directed parking enforcement improves the efficiency of the City's parking enforcement program and helps to ensure the rate changes are effective. Responding to text messages from broken meters, directed meter maintenance is more efficient thus increasing meter up-time and improving effectiveness of the rate strategies.

Similarly, DOT is requesting the Board's recommendation to the City Council to formally authorize the DOT General Manager to utilize metered parking management tools, consistent with the amended Los Angeles Municipal Code within the above-mentioned PMZs. These tools include time-of-day rates, progressive rates, special event rates, and clearing the remaining paid time for a metered parking space after the vehicle vacates the space. The vehicle sensors in conjunction with the latest meter technology provide the opportunity to clear the remaining paid time after a vehicle leaves the space, which is expected to encourage turnover, consistent with the intent of the demand-based pricing.

PUBLIC OUTREACH AND MARKETING

The implementation of demand-based pricing and the other parking meter management policy changes will be coordinated closely with our public outreach program. Public acceptance of this new approach to parking management is critical to its success. LADOT has been actively engaged in public outreach since the inception of the program. We have made presentations to the Chamber of Commerce, the Central City Association, the Central City East Association, the

affected City Council offices, Metro's Corridor Advisory Groups, and other stakeholder groups. The Los Angeles Chamber of Commerce has provided a letter of support for the project, which is attached as Attachment C.

Recognizing that a significant public outreach and marketing effort to educate the public about the functionality and the benefits of demand-based parking pricing and the Parking Guidance System is a critical component of the *Express*Park™ project, we have currently budgeted $500,000 for this effort. This public outreach and marketing program will include the following components at a minimum:

- logo/brand development and copyright
- sign and labeling design
- brochures
- a public website
- web-based instructional videos
- a Public Service Announcement
- attend public meetings
- assist in preparing press releases and media packages
- development and placement of advertising
- customer service assistance phone service

The public outreach and marketing campaign will focus on educating the consumer and the local businesses regarding the value of demand-based parking pricing, but it will also include an outreach effort to private parking operators for inclusion in the Parking Guidance System, including pursuing mutual advertising opportunities.

FISCAL IMPACT STATEMENT

The recommended actions will have no negative impact on the General Fund. Costs for new parking management technology will be borne by the Special Parking Revenue Fund (SPRF). The *Express*Park™ project will be reimbursed by Federal CMAQ funds up to $15 million with a $3.5 million match from the SPRF.

Submitted by:

AMIR SEDADI
Interim General Manager
Department of Transportation

Date Signed 6/7/11

Attachments:
A. Evaluation Criteria
B. Draft Scope of Work
C. Letter of Support – LA Chamber of Commerce

Approved: June 9, 2011
Board of Transportation Commissioners
Commission Executive Assistant

BOARD REPORT ATTACHMENT A – *ExpressPark*™ Proposal Evaluation Criteria

Item #	Evaluation Factors	Max. Points
1	**General Experience – 20%**	**20**
	a. Project management qualifications including years of relevant recent experience, level of commitment to the project and demonstrated record of performance in the supply, delivery and installation of similar systems.	5
	b. The extent and depth of the Proposer's and its team members' experience in the design and installation of an intelligent parking management system and/or its major components.	5
	c. The extent and depth of the Proposer's and its team members' experience in the design, installation and operation of comparable systems.	5
	d. Qualifications of key personnel and associated entities or subcontractors; percentage of key personnel's time devoted to ExpressPark™; and proximity of Proposer's project management team to Los Angeles.	5
2	**Quality of the Technical Solution – 20%**	**20**
	a. The Proposer demonstrates a thorough understanding of the project: its goals and objectives; the systems integration requirements; the major risks; the need for public education and acceptance; and the importance of delivering the project capabilities on time and within budget.	4
	b. The Proposer has recognized the need for systems integration with the other systems currently being used to manage the City's parking meter operations. These include citation processing, adjudication, parking enforcement, coin collection, etc. The Proposer's system integration plan includes these ancillary systems.	4
	c. The Proposer's technical solution is cost effective. The staff resources are appropriate for the tasks. These include the required skill sets, the budgeted hours and the budgeted cost per hour.	10
	d. The extent to which the proposal will provide for features that are desired, but exceed the minimum requirements for the project.	2
3	**Project Approach – 15%**	**15**
	a. Clear, feasible, appropriate and thorough technical approach to the delivery of systems and services.	5
	b. Innovative approach to design, integration and use of software, hardware, equipment and communications.	5
	c. Project plan includes a well-defined, professional marketing and public relations plans to assist in program implementation and to advertise public parking program capabilities and changes to the public. Plans include the establishment of a user friendly website.	5

BOARD REPORT ATTACHMENT A – *ExpressPark*™ Proposal Evaluation Criteria

Item #	Evaluation Factors	Max. Points
4	**Equipment Proposed – 25%**	**25**
	a. The single space parking meters have a high probability of meeting the requirements as outlined in the RFP and the SEMP. The meter capabilities are validated by field experience in other installations.	4
	b. The multi-space pay stations have a high probability of meeting the project requirements. The pay station capabilities are validated by field experience in other installations.	4
	c. The equipment for the parking guidance system including that required for reporting occupancy data from the off-street parking facilities and the block level signs to guide motorists meet all relevant standards and specifications.	3
	d. The vehicle sensors and the supporting management system have a high probability of meeting the project requirements. The capabilities have been proven in other field installations.	4
	e. The planned equipment deployment is cost effective. The items to be evaluated include: the communication systems; the life cycle costs of all equipment and supporting systems.	10
5	**Project Plan – 10%**	**10**
	a. Completeness of Project Plan. Has Proposer identified all of the major tasks and their relationship to one another.	2
	b. Proposer's demonstrated ability to deliver projects on schedule.	3
	c. Proposer's demonstrated ability to deliver projects within budget.	3
	d. Proposer's demonstrated ability to deliver projects that meet performance requirements.	2
6	**Operations and Maintenance – 10%**	**10**
	a. Proposer's capability to provide reliable and quality daily operations of the system to meet overall system performance measures. These measures include system up-time, support of maintenance operations and parking enforcement.	5
	b. Plan for delivery, installation, commissioning and warranty support for all parking system components, including locations of warehouses, estimated delivery times of support and service desk availability.	3
	c. Specified warranties and expected performance standards for all components and meter and sensor hardware vis-à-vis normal operating conditions, vandalism, malfunction or destruction of equipment. Plan for parts supply and delivery during the warranty period and in future years.	2
	TOTAL	100

Scope of Work
LADOT *Express*Park™

1. PURPOSE OF THE DOCUMENT

This Scope of Work (SOW) defines the goals and objectives and establishes the baseline for the planning and execution activities, which includes establishing a baseline schedule, delivery, installation, testing and commissioning for the ExpressPark™ Intelligent Parking Management (IPM) Project for the City of Los Angeles Department of Transportation. Any changes made to this SOW, must be reflected in an updated SOW.

This scope of work addresses the following deliverables:

- 1.1. System Engineering Management Plan (SEMP)
- 1.2. Enhanced Parking Meters and Pay Stations
- 1.3. Cellular Payment Technology
- 1.4. On Street Wireless Vehicle Sensors
- 1.5. Off Street Occupancy Systems
- 1.6. Parking Guidance System (PGS)
- 1.7. PGS Applications and Interfaces
- 1.8. PGS Fixed On-Street Signs
  - 1.8..1. PGS – Local neighborhood Dynamic Message Signs
  - 1.8..2. PGS – Off Street Dynamic Message Signs (City Owned)
- 1.9. Parking Management System
- 1.10. Advanced Meter Revenue Collection System
- 1.11. Meter Enforcement
  - 1.11..1. Guided Enforcement Application
  - 1.11..2. Citation Enforcement Application
  - 1.11..3. Handheld and Printer Hardware
- 1.12. Laptop Computers For Enforcement Vehicles
- 1.13. Warranty Parts and Service
- 1.14. Technical Support and Training of Personnel
- 1.15. Public Outreach and Marketing

2. APPLICABLE DOCUMENTS

Refer to the following applicable documents for additional detail:

2.1. Request For Proposals (RFP) For City of Los Angeles Downtown ExpressPark™ Intelligent Parking Management (IPM) Project, (November 3,2010), including revisions (March 2, 2011).
2.2. ACS Revised Proposal for the City of Los Angeles Downtown ExpressPark™ Intelligent Parking Management (IPM) Project, (March 16, 2011)
2.3. ExpressPark™ Concept of Operations
2.4. ExpressPark™ Project Requirements
2.5. ExpressPark™ Systems Engineering Base Document
2.6. ExpressPark™ Configuration Management Plan

3. PROJECT LOCATION

The *Express*Park™ project will be located in the downtown Los Angeles area. The project area is bounded by Adams Boulevard and the 10 (Santa Monica) Freeway on the south, the 110 (Harbor) Freeway on the northwest and Alameda/North Spring Streets on the east.

4. PROJECT SCHEDULE

The contract will be in effect for a period of two (2) years. LADOT will have the right to exercise two (2) one-year options to extend the term, subject to the approval of Mayor and/or City Council. The total contract term will not exceed (4) years. A project plan (Timetable) detailing the first two years covering the implementation and evaluation period will be provided.

5. TESTING REQUIREMENTS

5.1. The Contractor will be responsible for component verification testing under guidance from LADOT. The Contractor will include a test plan covering units, system, security, and auditing. This test plan will describe the proposed approach taken with each state of test, the processes involved, testing tools utilized, acceptance criteria, and sign-off procedures.
5.2. Acceptance Testing Methodology

Acceptance testing will be based on three levels of testing

5.3. Factory Acceptance Test (FAT)

5.3..1. Factory acceptance testing is intended to certify that equipment provided is fit for purpose and free from defects in design and manufacturing processes. The Contractor may provide

documentation from equipment providers in lieu of formal testing in the case of off-the-shelf components.

5.3..2. A component that is considered off-the-shelf may be accepted as fit for purpose if the manufacturer can certify that the product has been successfully installed for similar purposes and operated in an environment comparable to the ExpressPark™ project location.

5.3..3. Manufacturer's quality control reports and data may be submitted in lieu of performance testing for components deemed fit for purpose by LADOT.

5.3..4. Customized components or equipment specially modified for the ExpressPark™ project must undergo performance testing at the manufacturer's facility prior to shipment of any equipment to the project location. Manufacturer's must demonstrate that equipment meets or exceeds all requirements applicable as stated in the Project Requirements and ExpressPark™ RFP.

5.4. Unit Testing (System Installation Check) – Each installation will be inspected to ensure the system was installed according to manufacturer's specifications. Signoff on this check provides documentation that the system in installed correctly and will operate to factory specifications on performance and reliability, and meets all ExpressPark™ program requirements.

5.5. Systems Acceptance Tests (SAT) - The SAT is a full end-to-end functional and non-functional test in the actual production environment in Los Angeles. The System Acceptance Test will demonstrate (under full system operation conditions):

5.5..1. Full subsystem functionality as defined in this Specification.

5.5..2. All components and subsystems operate properly according to the Project Requirements

5.5..3. Full system integration (i.e. all subsystem components and interfaces communicate properly)

5.5..4. All diagnostic procedures

5.5..5. User interface for obtaining fault reporting, audit data and system status reporting

5.5..6. Recovery systems to mitigate loss of data in the event of power or component failure

5.5..7. If any of the selected subContractors later prove unable to pass acceptance testing, secondary selections may be made.

5.5..8. All software and equipment will be subject to Acceptance Testing and written acceptance by LADOT.

6. SUBCONTRACTOR AND VENDOR APPROVAL

6.1. The Contractor will prequalify all subContractors to certify that all proposed hardware and software meets or exceeds all required specifications contained in the current Project Requirements document of the Systems Engineering Management Plan (SEMP) and are compatible with the proposed systems and overall *Express*Park™ solution.

6.2. LADOT will work with the Contractor during contract negotiations to evaluate the tradeoffs involved, and LADOT will subsequently select the prequalified subContractors to participate on the project team based on cost, capabilities, quality, and demonstrated performance. If any of the selected subContractors later prove unable to pass acceptance testing, secondary selections may be made.

6.3. All subContractors and vendors selected for provision of equipment and services are subject to approval by LADOT.

7. SOURCE AND OBJECT CODE ESCROW

The Contractor ACS) agrees to escrow the readable source code and object (executable) code for all modules licensed for use by the City. The City will have the right to use and modify the source code only under specific circumstances where ACS stops supporting the software or in the event of ACS' dissolution. Further, ACS agrees to modify the source code at the City's request and cost. In the event ACS ceases to support the software due to the termination or expiration of the contract, the source code will not become the property of the City. Instead, ACS will provide the City with a license to use the ACS software. The City will own that license to use the software for the City of Los Angeles. Such licensing terms will be mutually agreed to.

8. SYSTEM ENGINEERING MANAGEMENT PLAN (SEMP)

8.1. The Contractor will be responsible for completing the SEMP. LADOT has completed drafts of four sections of the Systems Engineering Management Plan (SEMP). Draft sections which will be revised and completed are:

- 8.1..1. Systems Engineering Base Document
- 8.1..2. Concept of Operations
- 8.1..3. Project Requirements
- 8.1..4. Configuration Management Plan

8.2. The Contractor will be responsible for completing the pertinent parts of the SEMP through Operations and Maintenance, using the CalTrans "Vee Diagram" as a guide. This will include:

- 8.2..1. System Verification and Test Plan
- 8.2..2. Software Development Plan
- 8.2..3. Enforcement Plan
- 8.2..4. Work and Deployment Plan
- 8.2..5. Communications Plan
- 8.2..6. Operations and Maintenance Plan
- 8.2..7. Quality Management Plan
- 8.2..8. Data Security and Safety Plan

8.3. For all project components, the Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in the current Project Requirements document of the Systems Engineering Management Plan.

8.4. The SEMP must be approved by the Federal Highway Administration for this task to be considered complete.

9. ENHANCED PARKING METERS AND PAY STATIONS

9.1. The Contractor will develop a detailed Meter Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements document will include, but not be be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Contractor will meet with potential vendors as required. The Meter Requirements Document will include a recommendation for both single space and multi-space equipment. Outputs will include a project level architecture, definition of all interfaces and data requirements, and verification plans (see Section 5.1, Acceptance Testing Methodology).

9.2. Upon LADOT approval of the Meter Requirements Document, the Contractor will coordinate provision and installation of approximately 5,321 single space meters and 148 multi-space paystations in compliance with the approved Project Plan.

9.3. Upon receipt of all required permits and approvals, installations will proceed at a rate of approximately 500 meters per week.

9.4. Contractor is responsible for obtaining and compliance will all permits.

9.5. Installation Location

The meter type (single space, multi-space) and locations will be in accordance with the following schedule:

PMZ	PMZ #	Enhanced Single Space	Total Single Space	Pay Stations	PS Stalls	Total Paid Spaces
CB	*537*	2839	2839	116	571	3410
CC	*553*	516	516	32	171	687
CT	*554*	476	476	0	0	476
LT	*555*	392	392	0	0	392
ED	*565*	594	594	0	0	594
WB	*580*	504	504	0	0	504
Totals		**5321**	**5321**	**148**	**742**	**6063**

9.6. Installation and Removal of Meters and Pay Stations

In coordination with the Contractor, LADOT staff will remove all existing pay stations and single-space meter mechanisms and domes. Contractor will be responsible for removing the existing single-space meter housings and installing the new meters and pay stations under LADOT supervision. To prevent any loss of meter revenue, installation will be coordinated such that the metering operation for each space is seamless, i.e. the new meters are installed and activated immediately upon the removal of the existing equipment from service. The only exception to this provision will be when a parking meter post must be replaced or repaired due to being missing, loose or damaged, in which case meter removal will be scheduled in advance with LADOT staff. Contractor is responsible for ensuring all meter posts are in good working order at the time of meter installation.

9.7. For pay station installations, Contractor will provide and install thermoplastic space numbers. LADOT crews will remove, replace, and/or install all necessary signage and curb and stall markings.

9.8. The Contractor will certify that all single space meters and multi-space paystations meet all functional and performance requirements as stated in Section II (A) of the RFP, Section 8.0.2 of the SEMP Concept of Operations document, and Section 2.1, 2.2 and 2.3 of the SEMP Project Requirements document (see Attachment A, Section I). All equipment is subject to the approval of LADOT (see Section 5, Testing Requirements).

10. CELLULAR PAYMENT TECHNOLOGY

10.1. The Contractor will provide cellular payment technology to integrate all meters and pay stations in the *Express*Park™ project area to provide

customers with an additional payment options and provide a means of being notified of an approaching expiry time for their parking space.

10.2. The Contractor will develop a detailed Cellular Payment Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements document will include, but not be be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Contractor will meet with potential vendors as required. The Cellular Payment Requirements Document will include a recommendation for a celluar payment service provider.

10.3. Upon approval of the Cellular Payment Requirements Document, the Contractor will develop a High Level Design document. Inputs for the High Level Design document will include the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Outputs will include a project level architecture, verification plans (see Section 5.1, Acceptance Testing Methodology), and definition of all interfaces, including:

10.3..1. All meters (single and multi-space) installed for the *Express*Park™ project

10.1..1. Existing IPS meters

10.1..2. Existing multi-space meters (Digital Technologies and Duncan Solutions)

10.1..3. Back end management systems

10.1..4. Data repositories

10.1..5. Web portals

10.1..6. Enforcement systems

10.2. Contractor will coordinate with the selected service provider to implement cellular payment service within the *Express*Park™ project area.

10.4. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.6 of the current Project Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section II).

11. ON STREET WIRELESS VEHICLE SENSORS

11.1. The Contractor will develop a detailed Vehicle Sensor Detection Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and

environmental conditions. Inputs for the requirements document will include, but not be be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Contractor will meet with potential vendors as required. The Vehilce Sensor Detection Requirements Document will include a recommendation for a vehicle detection sensor vendor.

11.2. Upon approval of the vendor(s), Contractor will manage the installation process, including:

- 11.2..1. Procurement of equipment
- 11.2..2. Coordination of installation with LADOT
- 11.2..3. Scheduling of all work
- 11.2..4. Notification of local businesses of installation schedule
- 11.2..5. Direct supervision and management of the installation
- 11.2..6. Acceptance testing

11.3. Contractor will install approximately 7,000 on-street wireless vehicle sensors, and any additional equipment necessary (i.e. communications equipment) in or adjacent to each individual onstreet parking space in the *Express*Park™ project area, including metered, loading, special parking zones, and in some areas adjacent *Express*Park™ project area, in order to provide comprehensive insight into parking utilization.

11.4. Installed sensors must be capable of recognizing the arrival and departure of parking vehicles and generating and transmitting a real-time status of the parking space availability and utilization to the Parking Management System.

11.5. In the area bounded by, and inclusive of, Third Street on the north; Pico Boulevard on the south; Alameda Street on the east; and east of, but not including, Hill Street on the west; *Express*ParkTM Request for Proposals November 3, 2010 on-street vehicle sensors placed in the roadway must not rise higher than the surrounding street surface, in order to accommodate special street cleaning apparatus (approximately 2000 sensors). The remaining approximately 5000 sensors may be surface mounted.

11.6. All installation materials will be provided by the Contractor. If required, any additional networking components and services will be supplied, installed and operated by the Contractor at no additional cost to the City.

11.7. All permits and/or approvals required for installation of sensors and related services will be the responsibility of the Contractor. Any installation of equipment on utility poles will be in compliance with all California Public Utilities Commission regulations, including General Order 95, and duly permitted by the owner of the pole.

11.8. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.4 of the current Project Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section III).

12. OFF STREET OCCUPANCY SYSTEMS

12.1. The Contractor will develop a detailed Off Street Occupancy System Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements document will include, but not be be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Contractor will meet with potential vendors as required. The Vehilce Sensor Detection Requirements Document will include a recommendation for an off street occupancy system vendor.

12.2. Upon approval of the Off Street Occupancy System Requirements Document, the Contractor will develop a High Level Design document. Inputs for the High Level Design document will include the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Outputs will include a project level architecture, and definition of all interfaces and data requirements, and verification plans (see Section 5.1, Acceptance Testing Methodology).

12.3. Upon selection and approval of an off street occupancy system vendor, Contractor will work with the selected vendor to produce a Detailed Design document. Inputs for the Detailed Design document include: the High Level Design document, LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document and the High Level. Outputs will include: detailed definition of all interfaces, data requirements, data flows and data formats. Approval of the Detailed Design document by LADOT is required prior to installation of any equipment.

12.4. The Contractor will manage the selected vendor for installation of occupancy systems to collect parking utilization data for approximately 7,500 off-street spaces in City-owned lots throughout the *Express*Park™ project area.

12.5. City-owned Lots Include:

Facility	Address	Spaces
Pershing Square	530 Olive St	606
LA Mall	225 N Los Angeles St	250
El Pueblo	Lot 2 615 N Main St	250
Convention Center	1201 S Figueroa St	5,084
LAPD Aiso St Garage	101 Judge John Aiso St	300
Cathedral Parking Lot 755	257 Los Angeles St	63
	Total	7,553

12.6. The Contractor will provide occupancy sensors to determine garage level parking availability by placing sensors (induction loops) at garage exit and entrance points.

12.7. The Contractor will be responsible for scheduling, coordinating, and performing all installation and maintenance of the off-street parking occupancy systems in the *Express*Park™ facilities during the term of the contract. Maintenance will be assumed by the City or the contract parking facility operator at the conclusion of the contract.

12.8. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.7 of the current Project Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section IV).

13. PARKING GUIDANCE SYSTEM

13.1. Contractor will provide a real-time Parking Guidance System (PGS) to aid the public in locating available parking near their destination(s) and guide them to the most appropriate parking site(s). Real-time information, including location(s), price(s), and time policies will be delivered through the coordinated use of on-street sensors and the off-street occupancy reporting systems.

13.2. The Contractor will develop a detailed Parking Guidance System Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements document will include, but not be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Contractor will meet with potential vendors as required.

13.3. Upon approval of the Parking Guidance System Requirements Document, the Contractor will develop a High Level Design document. Inputs for the High Level Design document will include all hardware specifications, the Parking Guidance System Requirements Document, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document.

Outputs will include a project level architecture, data requirements and definition of all interfaces, including:

13.3..1. The Internet through the development of an ExpressPark™ website (desktop and mobile)

13.3..2. Smart phone applications for iPhone, BlackBerry and Android devices

13.3..3. Telephone using an interactive voice response (IVR) system through an interface with Metro's Go 511 systemvia an interface to the RITTS Network

13.3..4. In-vehicle navigation systems (both factory installed and portable aftermarket)

13.3..5. Fixed On-Street Signs

13.3..5.1. Large Dynamic Message Signs (DMS) Interface with LADOT's existing TransSuite DMS management software (NTCIP 2306 Center-to-Center (C2C) standard protocol)

13.3..5.2. Twelve (12) "Neighborhood" DMS in selected pilot areas, subject to LADOT approval

13.3..5.3. Five (5) DMS for entrances at Pershing Square and Aiso garages, subject to LADOT approval

The High Level Design will also include utility requirements (power and communications), mounting details and considerations for DMS's, and verification plans (see Section 5, Testing Requirements).

13.4. Upon approval of the Parking Guidance System High Level Design, the Contractor will develop a Parking Guidance System Detailed Design document. Inputs for the Detailed Design document include Parking Guidance System Requirements Document, High Level Design, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Outputs will include: a detailed project architecture and definition of all interfaces, data definitions and formats, and data flow diagrams.

13.5. The Contractor will produce a procedures manual which will define the conditions under which messages can be displayed on the DMS(s) based on the existing ATSAC DMS procedures. This manual will also address prioritization procedures and schedule conflict, in cases when both departments want to display a message on the sign for different reasons.

13.6. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.5 and 2.8 of the current Project Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section V).

14. PARKING MANAGEMENT SYSTEM

14.1. Contractor will develop and deliver a Parking Management System (PMS) that centralizes reporting and performance analysis, and provides a single point of integration and control for the Los Angeles ExpressPark™ Project.

14.2. The Parking Management System will utilize reports, tables, charts, dashboards, and maps, as appropriate, to develop a comprehensive tool to measure, analyze, and manage metered parking in the City of Los Angeles. It will also calculate and report performance measures and evaluate operational effectiveness and operational efficiency based on available staffing.

14.3. The Contractor will develop a detailed Parking Management System Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements document will include, but not be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. The Requirements Document will also include a verification and validation plan (see Section 5.1, Acceptance Testing Methodology).

14.4. Upon acceptance of the Parking Management System Requirements Document, the Contractor will develop a High Level Design document. Inputs for the High Level Design will include the Parking Management System Requirements Document, Concept of Operations (SEMP), and the Project Requirements (SEMP) document. Output will include:

- 14.4..1. Overall PMS architecture
  - 14.4..1.1. Data Layer
    - 14.4..1.1.1. Data Repositories
    - 14.4..1.1.2. Data Exchange Services
  - 14.4..1.2. Guidance Layer
    - 14.4..1.2.1. Driver Parking Guidance
    - 14.4..1.2.2. Parking Enforcement
  - 14.4..1.3. Reporting and Performance Analysis
    - 14.4..1.3.1. Data At A Glance
    - 14.4..1.3.2. Operational Dashboards
    - 14.4..1.3.3. Analytical Dashboards
  - 14.4..1.4. *Express*Park™ Engine
- 14.4..2. Data requirements and all interfaces which will include:
  - 14.4..2.1. Web Interface
  - 14.4..2.2. Data Exchance Systems
    - 14.4..2.2.1. Off Street Management System

14.4..2.2.2. On Street Management System
14.4..2.2.2.1. Collections System
14.4..2.2.2.2. Sensor Management System
14.4..2.2.2.3. Meter Management System
14.4..2.2.2.4. Pay by Cell System
14.4..2.2.3. Parking Guidance
14.4..2.2.4. Enforcement
14.4..2.2.5. Violation Processing System

14.5. Upon acceptance by LADOT of the High Level Design, the Contractor will develop a Parking Management Detailed Design Document. Inputs for the Detailed Desing document will include the Parking Management System Requirements document, Concept of Operations, and High Level Design. Outs will include: detailed definition of all interfaces, detailed data requirements, data flows and data formats. Detailed Design document will also include proposed templates for reports, dashboards and maps.

14.6. The Contractor will develop interface standards for the transfer of meter-related data between other management systems. The Parking Management System will also include the *Express*Park™ Engine, which will analyze meter and sensor data to develop recommended parking pricing based on demand (dynamic pricing).

14.7. Functions of the Parking Management System will include, but not be limited to:

14.7..1. Accept all data from all sources and data types, including:
14.7..1.1. Meter and pay station data
14.7..1.2. On-street sensor data
14.7..1.3. Parking garage occupancy data
14.7..1.4. Parking enforcement officer data
14.7..1.5. Meter collections and maintenance personnel
14.7..1.6. Managers, analysts and operations staff
14.7..1.7. Public

14.7..2. Integrate this data and serve as the system of record and central repository

14.7..3. Provide centralized dashboards and reports that will integrate maps, charts and tables with summary views, drilldowns and export capability

14.7..4. Provide performance analysis, decision support and analytics tools to support analysts and operational staff

14.7..5. Provide real-time occupancy and violation information to support:

14.7..5.1. Directed enforcement capability so that parking enforcement officers will know where violations are occurring to enhance productivity

14.7..5.2. Real-time vacancy information for parking guidance data via smart phones, Internet and other delivery methods

14.7..5.3. Management, operations and LADOT staff with real-time views of parking congestion

14.7..6. Perform workforce management that includes such tasks as enforcement, collection and repair route optimization

14.7..7. Provide seamless integration to the City's citation processing system in supporting the adjudication function

14.7..8. Implement an open, plug and play architecture by developing application program interfaces (API's) to provide output data to other sources

14.7..9. Process sophisticated algorithms and analytics to perform complex analysis of multiple data inputs for the *Express*Park™ Engine that support parking demand management, pricing and policy decisions and to influence parking behavior.

14.8. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.9 of the current Project Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section VI).

15. ADVANCED METER REVENUE COLLECTION SYSTEM

15.1. The Contractor will develop and implement an advanced meter collection system, to include:

15.1..1. Supply and install unique radio frequency identification (RFID) tags on each coin can or vault installed in the *Express*Park™ meters as the receptacle for coin payments.

15.1..2. Supply and install RFID tags on the 60 new collection canisters provided as part of this procurement

15.1..3. Equip these canisters with readers that can read the tags on the individual coin cans.

15.2. The Contractor will develop a detailed Advanced Meter Revenue Collection System Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements

document will include, but not be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. The Requirements Document will provide a verification and validation plan (see Section 5.1, Acceptance Testing Methodology), and a recommended vendor.

15.3. Upon acceptance by LADOT of the Advanced Meter Revenue Collection System Requirements Document, the Contractor will develop a High Level Design for the Advanced Meter Revenue Collection System. Inputs will include: the approved Advanced Meter Revenue Collection System Requirements Document, the Requirements Document (SEMP), and the Concept of Operations (SEMP). Outputs will include data requirements, data flow and operational considerations.

15.4. Upon acceptance by LADOT of the High Level Design, the Contractor will work with the selected vendor to develop a Detailed Design document. Inputs for the Detailed Design document will include the High Level Design, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. The Detailed Design will include detailed data definitions and formats, data flows, and definition of all interfaces. The Detailed Design will also provide a comprehensive collections procedure detailing all operational considerations.

15.5. As part of the Advanced Meter Revenue Collection System, the Contractor will provide a Collections Analysis Module within the Parking Management System. At minimum, the Collections Analysis Module will:

- 15.5..1. Provide device tracking and reporting
- 15.5..2. Provide reconciliation capabilities for all payment types
- 15.5..3. Support collections route planning
- 15.5..4. Interface with the Medeco Electronic Key Program

15.6. The Contractor will install and provide maintenance for all components of the Meter Collection System that it provides to LADOT. These components include:

- 15.6..1. Coin Cans and Coin Vaults. This includes the individual coin cans in each single space meter and coin vaults in each pay station, along with their associated RFID tags.
- 15.6..2. Collections Canisters. This includes canisters used to securely collect coins from meters, the RFID tags on the canisters and the RFID readers integrated into the canisters.
- 15.6..3. RFID Readers. This includes the readers integrated into the collections canisters.
- 15.6..4. NexGen Locks and Coin Can Locks.

15.7. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.11 of the current Project Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section VII).

16. METER ENFORCEMENT

The Contractor will provide a meter enforcement system that will alert and route enforcement officers to potential violations, record enforcement actions, and track parked vehicle status (cited, exempt, disabled placard). It will also provide real-time paid space information for all currently-occupied metered spaces and serve as the primary means for enforcing pay station spaces.

16.1. Equipment

16.1..1. The Contractor will provide the following hardware:

16.1..1.1. 50 Motorola MC 9500 handhelds

16.1..1.2. 50 Zebra QL320 protable printers

16.1..1.3. 50 sets of Batteries

16.1..1.4. 50 Chargers and Cradles

16.1..1.5. 10 vehicle mounted laptops equipped with GPS and wireless capability.

16.2. The Contractor will provide an integrated meter enforcement software solution which will run on a single device (Motorola MC 9500). The solution will be compatible with current citation processing software (eTIMS®). The solution will consist of:

16.2..1. ACS PocketPEO™

16.2..2. A Mobile Directed Enforcement Application (TBD)

16.3. The Contractor will develop a detailed Meter Enforcement System Requirements Document for approval by LADOT. The Requirements Document will identify all functions, performance parameters and environmental conditions. Inputs for the requirements document will include, but not be limited to: input from LADOT, the RFP, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. The Requirements Document will provide a verification and validation plan (see Section 5.1, Acceptance Testing Methodology), and a recommended vendor.

16.4. Upon acceptance by LADOT of the Meter Enforcement System Requirements Document, the Contractor will develop a High Level Design for the Meter Enforcement System. Inputs will include: the approved Meter Enforcement System Requirements Document, the Requirements

Document (SEMP), and the Concept of Operations (SEMP). Outputs will include data requirements, data flow and operational considerations.

16.5. Upon acceptance by LADOT of the High Level Design, the Contractor will work with the selected vendor to develop a Detailed Design document. Inputs for the Detailed Design document will include the High Level Design, the Concept of Operations (SEMP), and the Project Requirements (SEMP) document. The Detailed Design will include detailed data definitions and formats, data flows, and definition of all interfaces. The Detailed Design will also provide a comprehensive meter enforcement procedure detailing all operational considerations.

16.6. The Contractor will maintain all equipment in good working order and provide support and maintenance during normal business hours throughout the contract period.

16.7. The Contractor, in cooperation with LADOT will conduct a field trial of any proposed devices prior to final device selection.

16.8. The Contractor will certify that all proposed hardware and software meets or exceeds all required specifications contained in Section 2.10 of the current Project Requirements document of the Systems Engineering Management Plan (SEMP) (see Attachment A, Section VIII).

17. WARRANTY PARTS AND SERVICE

17.1. The Contractor will provide a five-year warranty (from date of acceptance) for all new payment equipment, street sensors, and parking guidance system components. Warranty replacement does not extend to vandalism, normal wear, consumables and batteries.

17.2. LADOT will house and manage an agreed upon list of meter replacement parts and spares.

17.3. Meter components will be modular and interchangeable.

17.4. All warranted parts will be replaced or returned to the City within five business days, and vendors will be responsible for all shipping costs.

18. TECHNICAL SUPPORT AND TRAINING OF PERSONNEL

18.1. Technical Support

The Contractor will provide technical support to include, but not be limited to:

18.1..1. Help Desk

The Contractor will provide a customer service help desk to monitor systems, answer questions and for reporting of problems. The help desk will monitor alarms in equipment and will be the first point of

contact if an issue with the system is identified. The help desk will escalate problems according to the processes outline in the final business process approach including alerting maintenance or IT personnel to initiate repairs. The Help Desk will be staffed from 7:00 am until 4:00 pm PST/PDT.

18.1..2. Toll Free Number

As part of this project, ACS will provide a toll free number for the *Express*Park™ Project program where LADOT will be have an option to either talk to the ACS help desk (during business hours) or connect to any of the manufacturers supplying the equipment by choosing different options from the IVR menu, eliminating the need to keep track of phone numbers for different manufacturers.

18.1..3. Issue Tracking Software

The Contractor will provide a web-enabled tool (JIRA) to track issues on the project. All vendors will have access to this tool, and different work areas will be created for each vendor. This will allow LADOT to document and track progress on reported issues from one source.

18.1..4. On-Site Technical Support

18.1..4.1. The Contractor assumes full responsibility for coordinating technical support including oversight resolution for all distributed hardware and software implemented by the sub-Contractors.

18.1..4.2. During all phases of the *Express*Park™ Project program implementation, the Contractor will provide on-site technical support to ensure successful implementation and provide service support for the life of the contract.

18.2. Training

The Contractor will provide a pre-delivery, operations preparation program encompassing complete training in all disciplines to familiarize all designated City staff with the system, and to assist in developing expertise in maintenance, repair and software application of the system.

18.2..1. Within 30 days of contract execution the Contractor, in cooperation with LADOT, will develop and submit for approval a comprehensive Training Plan.

18.2..2. The Contractor will provide training to LADOT personnel on the following topics:

18.2..2.1. Overview of Central Management System (CMS)

18.2..2.2. Meters and Meter Management Systems
18.2..2.3. Off-street Sensors
18.2..2.4. Collections Module
18.2..2.5. Enforcement Module
18.2..2.6. Cellular Payment
18.2..2.7. Pricing Engine
18.2..2.8. Parking Guidance Systems
18.2..2.9. DMS and Cameras
18.2..2.10. Off-Street Parking Guidance Systems

18.2..3. Training will be provided to LADOT Program Management staff, Meter Shop staff, Enforcement, Coin Collection staff, Adjudication staff, Accounting staff, and Parking Violations Bureau (PVB) staff.

18.2..4. A training schedule will be submitted to LADOT for approval prior to the actual training startup. The actual number of training sessions, starting times, and class durations will vary depending upon the operational requirements and the number of participants to be trained.

18.2..5. Training will be held at a location convenient to the City staff.

18.2..6. The Contracor will provide additional or refresher training throughout the life of the contract to address system upgrades and/or expansion, as required.

19. PUBLIC OUTREACH AND MARKETING

The Contractor will prepare a marketing plan designed to reach all Downtown stakeholders, including policy makers, business associations, residents, customers, and visitors.

19.1. The public outreach and marketing campaign will focus on educating the consumer and the local businesses regarding the value of demand-based parking pricing, but it will also include an outreach effort to private parking operators for inclusion in the Parking Guidance System, including pursuing mutual advertising opportunities.

19.2. The public outreach and marketing program will include the following components at a minimum:

19.2..1. Logo/brand development and copyright
19.2..2. Sign and labeling design
19.2..3. Brochures
19.2..4. A public website
19.2..5. Web-based instructional videos
19.2..6. A Public Service Announcement
19.2..7. Attend public meetings

19.2..8. Assist in preparing press releases and media packages

20. PAYMENT MILESTONES

Contractor will invoice for meters according to the following schedule:

20.1. Meters
- 20.1..1. Single Space Meters
  - 20.1..1.1. 30% of equipment cost upon Notice to Proceed
  - 20.1..1.2. 60% of equipment cost upon successful acceptance testing
  - 20.1..1.3. 10% upon completion of all installations and acceptance testing
- 20.1..2. New Multi-Space Paystations
  - 20.1..2.1. 30% of equipment cost upon Notice to Proceed
  - 20.1..2.2. 60% of equipment cost upon successful acceptance testing
  - 20.1..2.3. 10% upon completion of all installations and acceptance testing
- 20.1..3. Upgrade of Existing Muti- Space Paystations
  - 20.1..3.1. 90% up completion of upgrade and successful acceptance testing
  - 20.1..3.2. 10% upon completion of all installations and acceptance testing

20.2. On Street Occupancy Sensors
- 20.2..1. 20% upon mobilization (NTP)
- 20.2..2. 50% payment upon completion of acceptance testing
  - 20.2..2.1. 30% upon completion of all installations and acceptance testing

20.3. HandHelds
- 20.3..1. 20% upon mobilization (NTP)
- 20.3..2. 30% upon delivery of handheld citation processing software
- 20.3..3. 50% upon completion of Directed Enforcement delivery and acceptance test

20.4. DMS
- 20.4..1. 20% upon mobilization (NTP)
- 20.4..2. 80% to be billed as monthly progress payment based on successful acceptance testing

20.5. Off-Street Occupancy Signs and Sensors
- 20.5..1. 20% upon mobilization (NTP)

20.5..2. 80% to be billed as monthly progress payment based on successful acceptance testing

20.6. Supervisor Computers

20.6..1. 20% upon mobilization (NTP)

20.6..2. 80% to be billed as monthly progress payment based on successful acceptance testing

20.7. Parking Management System

20.7..1. Total costs for the Parking Management System will be allocated according to the following schedule

20.7..1.1. Collection System – 10%

20.7..1.2. Parking Guidance System – 20%

20.7..1.3. Off Street Occupancy and DMS – 10%

20.7..1.4. Dynamic Pricing Engine (Phase I) – 10%

20.7..1.5. Asset Management – 10%

20.7..1.6. Workforce Management – 10%

20.7..1.7. Dynamic Pricing Engine (Phase II) – 10%

20.7..1.8. Dynamic Pricing Engine (Phase III) – 10%

20.7..1.9. End-to-end system testing – 10%

20.7..2. Progress payments based on component allocations (see Section 20.7.1) will be invoiced according to the following milestones:

20.7..2.1. 20% at submission of draft requirements

20.7..2.2. 30% invoiced monthly base on percentage completion

20.7..2.3. 30% upon installation of each module on system

20.7..2.4. 20% upon successful acceptance testing of each module

20.8. Staff Cost

To be invoiced monthly in seven (7) equal installments

20.9. SEMP

Billed monthly as a percentage of completion.

20.10. Public Outreach

Billed monthly as a percentage of completion.

Attachment A – Detailed Requirements

Section I - Meters

Single-Space Meters

Requirement
2.1 Single-Space Parking Meter
Single-space parking meters control one parking space (between 18 and 22 linear curb feet). To meet the needs of the project, single-space meters must:
2.1.1 Functional Requirements
1) The Single-Space Parking Meter will display custom LADOT-defined operating status messages on a front display. This screen will also display the current meter enforcement hours, time limits, and rate information. The screen will be visible in all lighting conditions ranging from direct sunlight to pitch darkness (upon user action). [8.0.2.1.1, 8.0.2.1.2, 8.0.2.1.4]
2) The Single-Space Parking Meter will have front and rear indications that include flashing "High Brite" (also known as "Hi-Brite") LEDs rated at 5000 millicandelas or greater and a 30 degree or greater viewing angle. The rear display will include, at a minimum, two green LEDs to indicate paid status and two red LEDs to indicate expired status, while the front display will include just one LED of each color. Red and green LED s will only be illuminated during user-defined enforcement times. It is desired that at least one white LED be included as a fault indicator to illuminate when service is required. The meter will support user-defined lit durations and flash rates of LEDs. [8.0.2.1.11]
3) The Single-Space Parking Meter mechanism will be compatible with the Duncan Model 95 housing. [8.0.2.1.12]
4) The Single-Space Parking Meter Housing will meet or exceed the specifications of the Duncan Model 95.
5) The Single-Space Parking Meter will include an electro-mechanical vault door lock that is compatible with and operates with the City's existing Nexgen electronic keys (Medeco part number EV-5505R). The lock will only be powered by the electronic key and will be constructed with a stainless steel outer shell and face plate. The face plate will provide resistance to drilling and will break away and spin freely when exposed to a forced open attempt exceeding 80 inch-pounds of torque. The lock will record and store no less than the last 500 access events, including actual accesses and unauthorized attempted access.
6) The Single-Space Parking Meter will deposit coins directly into a secure, locked coin can, holding a minimum of 250 quarters, that will provide no access to contents throughout the collection process and will indicate evidence of tampering.
7) The Single-Space Parking Meter will include a vault door sensor to register when the vault door is opened and closed.
8) The Single-Space Parking Meter will include a coin can sensor to register when the coin can is inserted and removed.
9) The Single-Space Parking Meter will communicate vault door opened and closed messages and coin can inserted and removed messages to the Meter Management System and will generate an alert when the vault door has been open and/or when the coin can has been removed for longer than a user-defined length of time from 1 to 30 minutes.

Requirement
10) It is desired that the Single-Space Parking Meter recognizes and rep orts the unique coin can ID to the Meter Management System each time the coin can is inserted and removed (see Section 2.11.1)
11) The coin validator will include a removable stainless steel coin slot plate, strong enough to withstand vandalism and unauthorized entry.
12) The Parking Meter mechanism will communicate with a Radio Frequency Identification (RFID) tag mounted inside of the meter housing to automatically recognize its location and download its location-specific configuration from the Meter Management System.
2.1.2 Performance Requirements
1) The Single-Space Parking Meter will process coin transactions with no less than 99% accuracy per day
2) The Single-Space Parking Meter will be field serviceable for clearing coin jams and foreign objects, requiring no special tools, within three minutes from the time the repair person begins the removal process.

Multi-Space Meters

Requirement
2.2 Multi-Space Parking Meter
Multi-space parking meters, or pay stations, control many parking spaces (between 18 and 22 linear curb feet each). To meet the needs of the project, multi-space meters must:
2.2.1 Functional Requirements
1) The Multi-Space Parking Meter will operate in a "pay-by-space" mode and be capable of managing at least twelve automobile parking spaces. [8.0.2.2.4, 8.0.2.2.7]
2) The Multi-Space Parking Meter will not include a bill acceptor or a printer. [8.0.2.2.3]
3) The Multi-Space Parking Meter will manage spaces with different rates, lengths of stay, and parking restrictions. [8.0.2.2.1, 8.0.2.2.4, 8.0.2.2.7]
4) The Multi-Space Parking Meter will accept payments for any pay station space in the area, provided that the meter has an active wireless connection to the communicate the payment to the Meter Management System.
5) The Multi-Space Parking Meter will allow patrons to add time to their parking stay from similar pay-by-space (PBS) meters in the general area (within walking distance) up to the maximum time limit and not accept payment during restricted parking periods, e.g., tow-away and street-cleaning zones. [8.0.2.2.2, 8.0.2.2.4]
6) The Multi-Space Parking Meter will have only electro-mechanical door locks that are compatible with and operate with the City's existing Nexgen electronic keys (Medeco part number EV-5505R). The lock will only be powered by the electronic key and will be constructed with a stainless steel outer shell and face plate. The face plate will provide resistance to drilling and will break away and spin freely when exposed to a forced open attempt exceeding 80 inch -pounds of torque. Lock will record and store no less than the last 500 access events, including actual accesses and unauthorized attempted access.
7) The Multi-Space Parking Meter will deposit coins directly into a secure, locked cash box, holding a minimum of 1,800 quarters, that will provide no access to contents throughout the collection process and will indicate evidence of tampering.
8) The Multi-Space Parking Meter will include door sensors to register when any locked door is opened and closed.
9) The Multi-Space Parking Meter will include a cash box sensor to register when the cash box is inserted and removed.
10) The Multi-Space Parking Meter will communicate door opened and closed messages and cash box inserted and removed messages to the Meter Management System and will generate an alert when a door has been open and/or when the cash box has been removed for longer than a user-defined length of time from 1 to 30 minutes.
11) It is desired that the Multi-Space Parking Meter recognizes and reports the unique cash box ID to the Meter Management System each time the cash box is inserted and removed. Alternatively, the cash box may record the unique meter IDs of the meters in which it is inserted (see Section 2.11.1).
12) The Multi-Space Parking Meter will have configurable alerts to detect open doors after a specified period of time and transmit the status through the Meter Management System.
13) The Multi-Space Parking Meter will accept all other valid forms of payment except coins when the coin box is removed or full.
14) The Multi-Space Parking Meter will not accept any payments until a valid space is selected.

Requirement
15) The Multi-Space Parking Meter will be designed to permit the cash box to be removed and replaced by a collector in less than 30 seconds without any special tools.
16) It is desired that the Multi-Space Parking Meter have an automatic shutter that rejects and returns all objects or materials not specifically recognized as valid currency for payment.
2.2.2 Performance Requirements
1) The Multi-Space Parking Meter will process coin transactions with no less than 95% accuracy per day.
2) The Multi-Space Parking Meter will be field serviceable for clearing coin jams and foreign objects, requiring no special tools, within five minutes from the time the repair person begins the removal process.

All Meters

Requirement
2.3 Parking Meter (General)
The following requirements apply to both Single-space and Multi-space Parking meters
2.3.1 Functional Requirements
1) The Parking Meter will perform reliably under the harsh environment of normal on- street conditions as described in Section 4.0. [8.0.2.1.1, 8.0.2.1.2, 8. 0.2.1.5]
2) The Parking Meter will be specifically designed to perform reliably in the rain, without any significant degradation in performance, by limiting water intrusion, directing internal water away from components, and draining internal water.
3) The Parking Meter will operate within a temperature range of 20 to 140 degrees Fahrenheit and under environmental conditions found in the City of Los Angeles, including but not limited to wind blown grime, rain, fog, smog, air inversions, salt air, sun (including direct sunlight), and vibrations.
4) Electronic components, including the entire circuit board, will be weather-proofed with a protective coating or equivalent.
5) The Parking Meter housings will be graffiti resistant equivalent to industry standard polyester TGIC powder paint or better. [8.0.2.1.4, 8.0.2.2.4]
6) The Parking Meter must be "tamper-proof" when secured so that program settings cannot be manipulated by probing or by use of unauthorized equipment.
7) The Parking Meter will have a backlit graphic display panel that is large enough to legibly display all necessary operating status and rate structure messages to patrons and all diagnostic and maintenance information to technicians. The display must adapt to changes in illumination (shadows, sunlight, day/night lighting transition) and will be visible throughout a 45-degree viewing angle in all directions and will be visible in all lighting conditions, ranging from direct sunlight to pitch darkness (upon user action). [8.0.2.2.1, 8.0.2.2.2, 8.0.2.2.4]
8) The display will be designed to resist condensation that may occur when warmer weather follows cooler weather and or rain.
9) The Parking Meter will protect all display elements behind a UV-resistant (non- yellowing) Lexan® material that can be replaced in under five minutes without tools or with a single tool.
10) The Parking Meter s hall have secure wireless network capabilities enabling it to communicate to a central server and handheld meter maintenance and enforcement tools. Specific interface requirements are further defined in Section 3.0. [8.0.2.1.7, 8.1.3.1.1, 8.2.2.1.2, 8.3.1.1.2]
11) The Parking Meter will be fully programmable, including firmware and configuration, wirelessly over the air and through a manual method at the meter.
12) The Parking Meter, the associated communications system, and the backend server will all be compliant with the latest available security standards as defined by the Payment Card Industry Data Security Standard (PCI). [8.0.2.1.5, 8.0.2 .1.9]
13) The Parking Meter will detect events such as Coin Jams, Card Reader Blockages, Low Battery and other problems that affect its operation and transmit the status through the Meter Management System.

14) The Parking Meter will support multiple rate schemes, including hourly, progressive, and long-term (jump) rates. It will support up to five rate changes per day. These rates will be configurable via the wireless network. [8.3.1.1.6, 8.0.2.1.1]

15) The Parking Meter will be able to accept pre-payments prior to start of regulated parking (e.g., pay at 6am for a session that begins at 7am) by showing the space as paid through the beginning of regulated parking. [8.0.2.1.1, 8.0.2.1.2]

16) The Parking Meter will be programmable with all applicable parking restrictions affecting payment ability, including peak hour no stopping, street cleaning no parking, passenger and commercial loading zones, and free parking periods. The Parking Meter will alert the customer and prevent payment approaching and during any restricted period as applicable, notwithstanding the option to require payment for commercial loading zones.

17) The Parking Meter will support part-time commercial loading zones with a 30- minute time limit and will provide the user-selectable option of requiring payment during the loading period(s) using the same or a different rate configuration.

18) The Parking Meter will remotely update and change rate schemes. LADOT must be able to vary the rate by day of week, time of day, block occupancy, holiday, and length of stay via the *ExpressPark* Management System and/or the Meter Management System(s). [8.3.1.1.6, 8.0.2.1.1]

19) In the event of a meter rate or system modification, each Parking Meter will provide confirmation back to the management system of the configuration up date.

20) The Parking Meter will accept time, for spaces under its control, loaded remotely via Meter Management System and in the field with a magnetic stripe maintenance card and/or through a maintenance menu. Parking Meter will record and transmit to the Meter Management System all transactions for which time is given. [8.2.1.1.2, 8.3.1.1.7]

21) The Parking Meter will allow for rate scheme updates for special events via the Meter Management System. [8.3.1.1.6]

22) The Parking Meter will allow customers to view the current paid time and to purchase additional time, based on the current restrictions, regardless of who paid the space previously.

23) The Parking Meter will allow an enforcement officer to visually verify the paid status of any space served by that meter, regardless of how the space was paid, without the need for external equipment.

24) The Parking Meter will be capable of interfacing with a parking occupancy sensor, and, if so programmed, prevent time from being paid above and beyond the posted time limit (e.g., "meter feeding"). [8.0.6.1.4, 8.0.2.1.7]

25) The Parking Meter will be capable of interfacing with a parking occupancy sensor, and, if so programmed, clear some or all of the remaining paid time down to a user- defined maximum time when a vehicle vacates the parking space. The maximum time remaining at the end of a parking session will be configurable. [8.0.2.1.4, 8.0.2.1.5, 8.0.2.1.7, 8.0.6.1.1, 8.0.6.1.4, 8.4.1.1.1]

26) The Parking Meter will have the capability, if enabled, to complete a credit card transaction at the end of a session by allowing a card user to re-insert the card used to initiate a session and be charged for only the amount of time used, and then subsequently clear the remaining time down to a user-defined maximum time ("grace period"). [8.0.2.1.4, 8.0.2.1.5, 8.0.2.1.7, 8.0.6.1.1, 8.0.6.1.4, 8.4.1.1.1

28) The Parking Meter will support coin, card, and cellular payments. It will support dollar coins, quarters, nickels, dimes, tokens, magnetic-stripe credit cards, magnetic-stripe parking cards, contact chip "smart" parking cards, and third-party payments (e.g., cellular payments) via wireless communication. [8.0.2.1.1, 8.0 .2.1.2, 8.0.2.1.3, 8.0.2.1.4, 8.0.2.2.2, 8.0.2.2.3, 8.0.2.2 .4, 8.0.2.1.9, 8.0.2.2.10, 8.0.3.1.2]

29) When one or more forms of payment are unavailable, the Parking Meter will continue to accept all other forms of payment. The Parking Meter will display which forms of payment are available and unavailable to the customer.

30) The Parking Meter will accept coins through a jam-resistant coin validator that detects both metallic and nonmetallic jams at key points in the coin path. It is desirable that the coin validator be made of clear plastic or be easily opened to clear jams and foreign objects. [8.0.2.1.4, 8.0.2.1.2]

31) The coin validator will include an anti-backup provision to prevent the retrieval of deposited coins (e.g., attached to strings, paddles, wires, etc.).

31) The Parking Meter will accept magnetic-stripe credit/debit cards and contact chip "smart" cards.

32) The Parking Meter's card reader will not retain cards and will always permit users to remove cards without damage, especially during a fault situation or power failure.

33) The Parking Meter's card reader will be equipped with a replaceable card wiper, or similar part, which keeps card contacts clean and prevents rain from entering the reader.

34) The Parking Meter will clearly display the proper card orientation for insertion by the customer and will be designed to minimize customer confusion to the extent possible.

35) If a card is inserted improperly, e.g., upside down or reversed, the card will be easily removed by the customer without the use of any tools.

36) All credit card pre-authorization amounts will be greater than $1.00.

37) The Parking Meter will process card transactions in real-time. The length of allowable processing time to complete the transaction on-line before approving it off-line will be user configurable. [8.0.2.1.2, 8.0.2.1.5]

38) When real-time authorization is temporarily unavailable or cannot be completed within the configured time, the Parking Meter will have off-line authorization capability that will verify that the card appears valid, is not on a local Blacklist. These transactions will be processed as soon as practical once real-time authorization is restored, but without affecting normal user operation. [8.0.2.1.5]

39) The Parking Meter will limit the amount of time that can be purchased by one card at the same meter to one time limit per day in off-line mode (to limit fraud exposure) or per a user-defined period when on-line authorization is available (to limit meter feeding).

40) The Parking Meter will store a Blacklist of credit cards that it should never accept. This list will be automatically generated and automatically updated at least nightly based on real-time transaction criteria. Moreover, City officials can add any account number to the Blacklist. A card will remain on the Blacklist for a user-defined period of time from 1 to 12 weeks, and the Parking Meter Blacklist storage capacity will be sized accordingly. [8.0.2.1.5, 8.4.1.1.1, 8.0.2.1.8]

41) The Parking Meter will support user-defined credit card amount settings, including minimum amount, maximum amount, default amount first displayed, and amount selection increment, and rounding increment. When charging credit card payments for the maximum permitted time, the Parking Meter will round the selection to the next highest selection amount according to the user-defined rounding increment. [8.3.1.1.6, 8.0.2.1.2]

42) Mechanism will record and store the number of coins validated and any card validation count.

43) The Parking Meter will detect and count unacceptable or invalid coins.

44) At the time of collection, the Parking Meter will report total revenue since the last collection, by coin denomination, credit card, and smart card, either automatically based on can replacement or by inserting a collection card.

45) Audit information will be sent wirelessly to the Management System but must also be available for retrieval through a connection to a standard PC running Windows XP.

46) The Parking Meter will have storage capability to retain all trans action data for a minimum of thirty (30) days.

47) Financial audit data will not be affected by the reading or retrieval of maintenance data, by resetting the meter, or by other such events.

48) The Parking Meter will support integration with cellular payment technologies. The cellular payment system will communicate with the meter to have the meter indicate that a payment was made via cellular payment technologies. [8.0 .3.1.1, 8.0.3.1.2, 8.0.3.1.3, 8.0.2.1.9]

49) All Parking Meter maintenance functions and diagnostics will be accessible through a series of maintenance menus available following the insertion of a magnetic-stripe "maintenance" card, which uniquely identifies the maintenance technician. The Parking Meter will support manually logging a minimum of 40 maintenance events using user-defined repair codes that can be updated remotely for all meters.

50) Parking Meter Power Source

a. The Parking Meter will be powered by battery and/or rechargeable solar-powered battery pack. [8.0.2.1.5]

b. All batteries will have a minimum shelf-life of two (2) years.

c. When battery voltage falls below a minimum threshold, the Parking Meter will generate an alert a minimum of three days prior to meter going out of service. [8.2.1.1.1]

d. Battery connections will be designed to resist corrosion and to sustain a minimum of five years of service.

e. Power source will sustain meter operation for a minimum of twelve (12) months.

f. Power source will be designed to be replaced without tools or with a single tool in under two minutes.

g. Current battery voltage will be available on the meter display and through the Meter Management System.

h. All locally-stored meter data will be retained during battery replacement and a battery failure of seven days or less.

51) Parking Meter Internal Clock and Time Management

a. The Parking Meter will have at least a 365-day calendar real-time clock that will either retain the time settings during battery replacements or servicing, or will accurately reset the time settings without losing prior programming; reset will occur within 3 seconds of battery replacement or servicing. If back-up power built into the meter is used for this function, this back-up power must allow at least 15 minutes for a given battery change without losing the clock setting s.

b. The clock will be programmable at least one year in advance for automatic daylight savings time changes; Vendor must program daylight savings for the first 2 years of the agreement.

c. The time-of-day clock will be accurate to within plus or minus two seconds per day (where a day is defined as any given 24-hour period).

d. The clock will sync with the time on the Meter Management System a minimum of once per day, but ideally every time it communicates with the Meter Management System. Any clock that is off by more than 2 seconds will generate an alarm. Said alarm will include the number of seconds, minutes, days, months or years the by which clock is off, e.g., if the time was 13:05:0 0 on January 2, 2009 and the meter's clock reported a time of 14:15:15 on February 2, 2009 the alarm would state that the meter is 1 hour, 10 minutes, 0 15 seconds, 31 days and 0 years off. There will be no upper limit or maximum deviation that would prevent the clock from syncing with the Meter Management System.

e. The clock will track the day of week, Monday through Sunday.

f. Time of day and day of week will be visible to maintenance staff on the front display screen.

2.3.2 Performance Requirements

1) Coin counts for each coin denomination deposited into the collection container (coin can or cash box) will be no less than 99% accurate per collection.

2) The Parking Meter will have a power supply capable of operating continuously for a minimum of 12 months, but preferably greater than two years on average.

3) The Parking Meter will complete any payment type transaction within 20 seconds from the last user input (e.g. hitting an 'ok' button) to approval and completion.

4) The Meter will report its change in status, e.g. paid/expired, outages, to server within two minutes no less than 95% of the time.

5) Once programmed into the central back end system, rates will update to the new rate within five minutes no less than 95% of the time.

6) The Parking Meter will post time loaded remotely within 20 seconds of completing the transaction no less than 95% of the time.

Attachment A – Detailed Requirements

Section II – Cellular Payment Technology

Requirement
2.6 Cellular Payment Technology
The cellular payment technology will enable users to pay for on-street parking from their personal cell phones. The cellular payment components that are "on the street" will be comprised of physical signs or labels clearly visible at parking spaces or meters and/or pay stations that indicate a unique parking space identifier and the necessary information for accessing the Cellular Payment System. The processing of payments will be handled by a vendor-managed system that will interface between meter devices, back end management systems, data repositories, web portals, and enforcement systems. To meet the goals of the project the system must:
2.6.1 Functional Requirements
1) The Cellular Payment System will operate with all cellular systems in use in the City of Los Angeles. [8.0.3.1.3]
2) The Cellular Payment System will allow payments to be made via touchtone, Interactive Voice Response (IVR), and at least one of the following methods: SMS message or smart phone applications for iPhone, BlackBerry, and Android.
3) The Cellular Payment System will support the existing alphanumeric meter numbering system in the format AAA####B, where AAA is a zone code of one to three letters, #### is a meter number from 1 to 4999, and B is a single letter or omitted.
4) The Cellular Payment System will support the existing pay station numbering system that consists of a four-digit pay station number and a three-digit space number. The first two digits (thousands and hundreds digits) of the pay station number, representing the zone, combined with the three-digit space number uniquely define the metered space.
5) The Cellular Payment System will communicate each payment to both the associated parking meter or pay station and independently to the enforcement system serving the enforcement handheld devices.
6) The Cellular Payment System will support all pricing and rate structures, hours of operation, time limits, and parking restrictions in use in the project area.
7) The price and rate structure, hours of operation, time limit, and parking restrictions in use by the Cellular Payment System will always match those currently in use (presented to the customer) by the meter equipment for each metered space in the project area. This information will be retrieved automatically by the Cellular Payment System from the Parking Management System and/or one of more of the Meter Management Systems.
8) The Cellular Payment System will provide registration services by both voice (live and/or Interactive Voice Response) and via a website using HTTPS protocol. [8.0.3.1.1, 8.0.3.1.2]
9) The Cellular Payment System will provide reminder notifications to users via SMS messaging and/or e-mail, depending upon user preference, when the paid time for their space is nearing expiration. It is preferred that the sender phone number shown on all users' caller ID be consistently the same. All reminder notifications will be sent at least 10 minutes before the paid time expires.
10) If so specified in their account preferences, reminder notifications will be sent to users who have paid for their parking space using a registered credit card at the meter or pay station, using a registered cellular phone, or using an authenticated smart phone application.

Requirement
11) Users will be able to respond directly to reminder notifications (by text or e-mail, as appropriate) and add time to their metered space if allowed (see next specification in this section). [8.0.3.1.2, 8.0.3.1.4]
12) The Cellular Payment System will be able to add additional time if additional time is allowed. Additional time will be limited or not permitted if the additional time would extend into a restricted period or exceed the total allowable purchased time (time limit) by that user. If additional time is not allowed or is limited, the payment will be prorated and limited to only the maximum allowable period and the user will be informed of the restriction using the same form of communication used to purchase the additional time. [8.0.3.1.1, 8.0.3.1.2, 8.0.6.1.1]
13) The Cellular Payment System will notify the customer of any payment that is not successfully processed, i.e. no time is provided for the space.
14) The cellular payment will be presented to parking enforcement personnel in the same manner as if the payment had been made at the parking meter or pay station, i.e. visually at the meter or on the enforcement handheld already used for enforcement.
15) The Cellular Payment System will integrate with the *ExpressPark*™ and/or Meter Management System to provide transactional data and retrieve all updates to rates and policy information for each space.
16) The Cellular Payment System will provide each customer a secure, password- protected, web-based account through which to provide at least one cellular phone number, at least one credit card number, and at least one e-mail address; review payments; print transaction receipts; and manage their account settings. The user may specify if and how (SM S, e-mail) they would like to be notified prior to the expiration of their paid time.
2.6.2 Performance Requirements
1) The Cellular Payment System will be operable 99% of the time between 6:00 AM – 11:59 PM seven days per week, excluding "noticed" maintenance periods agreed to in advance by LADOT
2) The Cellular Payment System will cause the payment to be made to the metered space within 20 seconds of the customer completing the payment, 98% of the time.
3) The Cellular Payment System will send all notifications within 20 seconds of the referenced time, 99% of the time.

Attachment A – Detailed Requirements

Section III – On-Street Wireless Vehicle Sensors

Requirement
2.4 On-Street Parking Occupancy Sensors
A parking or vehicle detection sensor detects the physical presence of a vehicle in each space. The sensors utilized by the system will measure true occupancy rates of on-street parking. They will also detect and record arrival and departure times for vehicles. To meet the goals of the project the sensors must:
2.4.1 Functional Requirements
1) The On-Street Parking Sensors will be fully electronic. [8.0.6.1.2]
2) If separately powered, the On-Street Parking Sensor battery will last no less than two years if replaceable in under five minutes while a vehicle is parked in the space, or otherwise no less than five years.
3) The On-Street Parking Sensors and related equipment will perform under street conditions, as described in Section 4.0. [8.0.6.1.2, 8.0.6.1.3]
4) The On-Street Parking Sensors will detect the presence of a vehicle in a designated space once stationary and will detect the absence of a vehicle in a designated space once vacant. [8.0.1.1.1, 8.0.1.2.2, 8.0.6.1.1]
5) The On-Street Parking Sensors will have wireless communication capabilities to communicate to a central server or to other devices either directly or via a parking meter or pay station. Specific interface requirements are further defined in Section 3.0. [8.0.6.1.2]
6) The On-Street Parking Sensors will not impede vehicular, bicycle, or pedestrian movement. [8.0.6.1.3]
7) The On-Street Parking Sensors will be capable of integrating, either directly or indirectly, with parking meters to allow the meters to determine occupancy length (to prevent time allowed above posted limit) and clearing of meter time at the end of parking session. [8.0.2.1.7, 8.0.2.2.8, 8.0.6.1.4]
8) Any communications equipment installed on street lights must be FCC and ANSI compliant, weigh no more than 12 pounds, have a surface area of no more than one square foot on each side, and have an exterior color matching the pole to which it is attached. If the equipment is powered via a connection to the street light photo cell, it will draw no more than 1.5 amps of operational current at 120 volts, and no more than 2.0 amps at start-up.
9) Sensor will operate accurately and continuously notwithstanding changes in illumination (shadows, sunlight, day/night lighting transition).
10) Sensor will be designed to be resistant to vandalism and intentional damage.
11) Sensor and related equipment must comply with all federal, state and local regulations pertaining to such devices.
2.4.2 Performance Requirements
1) The On-Street Parking Sensors will accurately detect each parked vehicle arrival and departure at a rate of no less than 90% per day. A vehicle must be continuously stationary for at least 10 seconds to be considered "parked."
2) The On-Street Parking Sensors will accurately report the occupied status of parked vehicles in a designated space at a rate of no less than 90% per day.

Requirement
3) The On-Street Parking Sensors will communicate parking events and change in status wirelessly to the server within three minutes at least 90% of the time per day.
4) It is desired that the On-Street Parking Sensors communicate to the local meter within 10 seconds at least 95% of the time per day.

Attachment A – Detailed Requirements

Section IV – Off-Street Occupancy Systems

Requirement
2.7 Off-Street Occupancy Systems
The off-street facilities in the *Express*Park™ area are primarily operated and managed by agencies other than LADOT, including the LA Department of General Services, LA Convention Center and LA Live. Additionally, two of these facilities are owned by El Pueblo and one by the LA Department of Parks and Recreation. Each of these facilities will communicate to the Parking Guidance System the number of unassigned, publicly-available parking spaces available in their facility to *Express*Park™ users. To meet the goals of the project, the Off-Street Occupancy Systems must:
2.7.1 Functional Requirements
1) The Off-Street Occupancy Systems will provide occupancy, arrival counts, and departure counts, for each monitoring area (lot, level, zone within a level) on a real- time basis. [8.0.7.1.1]
2) The Off-Street Occupancy Systems will report occupancy status and related statistics to the Parking Guidance System either continuously or at user-defined intervals. [8.0.7.1.1]
3) If independently powered, the battery for any sensor used as part of an Off-Street Occupancy System will last no less than two years if replaceable in under five minutes while a vehicle is parked in the space, or otherwise no less than five years.
4) Outdoor field equipment will perform under environmental conditions as described in Section 4.0. [8.0.6.1.2, 8.0.6.1.3]
5) Off-Street Occupancy System equipment will not impede vehicular or pedestrian movement. [8.0.6.1.3]
6) Off-Street Occupancy System equipment will be designed to be resistant to vandalism and intentional damage.
7) Off-Street Occupancy System equipment will operate accurately and continuously notwithstanding changes in illumination (shadows, sunlight, day/night lighting transition).
8) Off-Street Occupancy System equipment must comply with all federal, state and local regulations pertaining to such devices.
9) Where individual vehicle sensors are utilized, handicap spaces will be counted separately.
10) Only unassigned, publicly- available parking spaces will be monitored with individual vehicle sensors. For cordon-counting systems, these spaces may be excluded physically or logically, whichever is more cost effective.

Attachment A – Detailed Requirements

Section V – Parking Guidance System

Requirement
2.5 Neighborhood Dynamic Message Signs
These signs will be used to guide motorists in high-demand areas of parking that may be located on adjacent block faces and/or nearby facilities. It is anticipated that they will contain both static and dynamic elements. This will require:
2.5.1 Functional Requirement
1) Display of current relevant parking information for the designated area or facility conveyed with clarity and conforming to MUTCD specifications where appropriate. [8.0.4.1.2, 8.0.9.1.1]
2.5.2 Performance Requirements
1) The Neighborhood DMS will update new messages within one minute of the message being sent by the Parking Guidance System, 95% of the time per day. [8.0.9.1.1]
2) The Neighborhood DMS will display the programmed message no less than 95% of the time per day. [8.0.9.1.1]

Requirement
2.8 Parking Guidance System
This technology will utilize users' personal resources (computers, cell phones, web-enabled phones, etc.) to request/receive information regarding parking availability and rates. Application(s), server, network, capacity, security, etc. will be designed dependent upon user and system needs. To meet the goals of the project the Parking Guidance System must:
2.8.1 Functional Requirements
1) The Parking Guidance System will provide available details on parking location, availability, detailed rate information, maximum stay (time limit), hours of operation, parking restrictions, and other relevant parking policies. [8.0.8.1.1]
2) The Parking Guidance System will provide parking information to motorists through smart phone applications for iPhone, BlackBerry, and Android devices. [8.0.8.1.1]
3) The Parking Guidance System will provide parking information to motorists through a public website, in both desktop and mobile versions, by list and map. It will accept user queries based on neighborhoods, intersections, or addresses. It will also provide future expected rate information to the extent feasible. [8.0.1.2.1, 8.0.1.2.2, 8.0.1.2.3, 8.0.1.2.4]
4) The Parking Guidance System will provide parking information to motorists using Metro's GO 511 System through an interface to the L.A. County RIITS Network. [8.0.8.1.1]
a. At a minimum, the following parking information will be provided:
i. XY coordinates of parking lot location
ii. Time stamp of last update
iii. Name of parking lot

Requirement
iv. Cross streets of parking lot location
v. Parking Inventory and number of parking spaces currently available
vi. Current price (per hour or flat rate)
b. The Parking Guidance System will provide an application programming interface (API) that will allow the regional 511 system to request parking availability and pricing information on demand.
c. The API will be developed in the form of an authenticated XML web service using a REST interface.
d. The API will allow the 511 system to request parking availability and pricing within a specified radius of any location within the project area using any of the following methods:
i. The name of an established LA City landmark;
ii. An intersection;
iii. An address;
iv. A geographic location as a latitude/longitude pair.
e. The API will allow the 511 system to request an inventory of all units within the project area including unit number, unit type, and unit location.
5) The Parking Guidance System will provide parking information to motorists through an interface with in-vehicle navigation systems (both manufacturer-installed and portable aftermarket systems). [8.0.8.1.1]
6) The Parking Guidance System will provide parking information to motorists through an interface with Neighborhood DMS. [8.0.8.1.1, 8.0.9.1.1]
7) The Parking Guidance System will assemble DMS messages by sign location to provide relevant details on current parking pricing and availability. [8.0.8.1.1]
8) The Parking Guidance System will provide current off-street parking pricing and availability to motorists through an interface with each off-street parking facility's "Lot" DMS. [8.0.8.1.1]
9) The Parking Guidance System will deliver DMS messages through a SOAP/XML interface with TransCore's TransSuite software using the NTCIP 2306 Center-to-Center (C2C) standard protocol. [8.0.8.1.1] The existing interface provides three methods for interacting with DMSs:
a. ShareDMSInventory – returns a list of the signs in the system and the size of each sign.
b. ShareDMSStatusInformation – returns a list containing the status of each sign in the system (including the current message being displayed on the sign).
c. ShareDMSControl – allows requesting a message to be posted on a DMS and validating that the requested message will fit on the sign.
d. An additional method will be added to return the DMS fonts to allow the Parking Guidance System to format message requests properly.
10) The Parking Guidance System will provide current parking pricing and hours for all off-street parking facilities in the project area through (a) an interface with a web service and/or (b) providing the ability for parking operators to securely log in and update their operating information.
11) The Parking Guidance System will receive real-time parking availability from all Off-Street Occupancy Systems in the project area. [8.0.7.1.1]

Requirement
12) The Parking Guidance System will provide operators of off-street parking facilities equipped with Off-Street Occupancy Systems a means to establish and update their availability, rates, and other operational parking information. They will also be provided on-site devices and/or a web-based interactive portal that displays the number of spaces being advertised as available in their facility versus actual availability. This will allow for garages to set aside capacity for special events, monthly pass holders, and other users as they see fit. The interface will also allow the operator to correct any discrepancy between the actual number o f vacancies and the reported number of vacancies. This software and associated equipment will be expandable to future locations. [8.0.7.1.1, 8.0.7.1.2]

Attachment A – Detailed Requirements

Section VI – Parking Management System

Requirement
2.9 *Express*Park™ Parking Management System
The *Express*Park™ Parking Management System will provide centralized reporting and performance analysis for the City's overall metered parking program. The system will interface with the existing and new vendor-managed Sensor and Meter Management Systems, the Cellular Payment System, the *Express*Park™ Parking Guidance System, the *Express*Park™ Guided Enforcement System, the *Express*Park™ Meter Collection System with Collections Analysis Module, and the current and future Citation Processing System. The *Express*Park™ Parking Management System will also incorporate the intelligent *Express*Park™ Engine to analyze and determine demand-based parking rates and operational parameters. To meet the goals of the project, the *Express*Park™ Parking Management System and vendor Meter Management Systems must:
2.9.1 Functional Requirements
1) The *Express*Park™ Parking Management System will provide centralized reporting and performance analysis for all of the City's metered assets, covering the following categories: financial, asset status, equipment outages, parking transactions, parking space occupancy, equipment inventory tied to each parking space, and workforce management. [8.3.1.1.1, 8.3.1.1.2, 8.3.1.1.4]
2) The *Express*Park™ Parking Management System will calculate and report performance measures and evaluate operational effectiveness and operational efficiency based on available staffing. [8.3.1.1.1, 8.3.1.1.2, 8.3.1.1.4]
3) The *Express*Park™ Parking Management System will collect and store inputs from off-street facilities, all relevant vendor-managed systems (covering meters and parking sensors), maintenance, enforcement, and those inputs manually logged into system. [8.3.1.1.1]
4) The *Express*Park™ Parking Management System will include the *Express*Park™ Engine, which utilizes algorithms to determine optimal rates, time limits, and enforcement hours to achieve 70-90% occupancy on each block during meter enforcement hours. [8.3.1.1.5]
a. The system will iteratively analyze data from sensors, meters, and enforcement systems and evaluate the impact on parking behavior of previous adjustments. Further refinements will be recommended until the optimal balance is achieved.
b. The system will incorporate artificial intelligence that "learns" from the impacts of prior iterations to improve future recommendations.
c. Meter rate changes will be made under supervision of LADOT personnel, but the system will be capable of automated rate adjustments performed under set criteria.
d. The system will accommodate three successive phases of demand-based pricing development and implementation as follows:
i. Phase I – Base Hourly Rate. Using baseline data, iteratively set base hourly rates to influence demand toward goal s.
ii. Phase II – Time of Day. Building upon the demand balance achieved in Phase I, identify peak periods and set prices by time of day.
iii. Phase III – Adaptive. In select areas, adjust prices per b lock in real-time based on current demand.

Requirement
5) The *Express*Park™ Parking Management System and/or Meter Management System(s) will, under LADOT's supervision, have the capability to remotely set rates, time limits, and enforcement hours for all Single- and Multi-Space Meters in the project area. These changes will be simultaneously set for the Cellular Payment System. Additionally, adjustments can be scheduled for future dates and/or times. [8.3.1.1.6]
6) The *Express*Park™ Parking Management System will provide a management-level dashboard system that will display overview data by category and geographical orientation. It will allow for drill-down where relevant. [8.3.1.1.4]
7) The *Express*Park™ Parking Management System and Meter Management Systems will be web-based and run from any standard web browser, and will meet state-of- the-art Internet standards for graphics and design and for speed, reliability, and security for dynamic content and user interaction. All systems will take less than 30 seconds to log in and be ready to use from the time a user hits the log in button. [8.3.1.1.4]
8) The *Express*Park™ Parking Management System will have the capability to create a number of re-occurring or ad-hoc reports as needed. These will be available for download in a format compatible with Microsoft Excel (.XLS file and comma separated value files .CSV), and other external databases as needed. The reports will cover, but are not limited to, the following areas [8.3.1.1.8]:
a. Revenue collection totals by meter, zone, area, route, etc.
b. Maintenance activity by area, location, meter model, frequency, etc.
c. Operational status by meter number and location identification
d. Daily collection report by meter, route, zone, etc.
e. Space occupancy levels and information (including duration and turnover) by block and zone, with "drill-down" ability for specific spaces at specific times.
f. Meter asset inventory
9) The *Express*Park™ Parking Management System and Vendor Management Systems will provide credit card processing details, including real-time, delayed, and declined, as well as the date and time of authorization.
10) The *Express*Park™ Parking Management System will have the capability to maintain an operational "inventory" of all units, by identification number and location, listing individual unit routes (collection and maintenance), rates, hours, and other relevant attributes. The inventory will support the current numbering system as follows:
a. alphanumeric meter number in the format AAA####B, where AAA is a zone code of one to three letters, #### is a meter number from 1 to 4999, and B is a single letter or omitted.
b. pay station number consisting of a four-digit pay station number and a three-digit space number. The first two digits (thousands and hundreds digits) of the pay station number, representing the zone, combined with the three-digit space number uniquely define the metered space.
11) The *Express*Park™ Parking Management System and Meter Management Systems will provide the end user the ability to assign meters to predetermined groupings, for example by collection routes, sub-routes, maintenance area, etc., and will support the management or configuration of those metered spaces by group or individually for scheduling assignments, monitoring, usage analysis, enforcement, viewing, and programming.
12) The *Express*Park™ Parking Management System and/or Vendor Management System(s) will record all meter maintenance alarms and disseminate maintenance information via web portal, email, and text messaging, supporting a minimum of 30 maintenance technicians. [8.2.1.1.1]
13) The *Express*Park™ Parking Management System and/or Meter Management System(s) will include a maintenance work order management module using meter failure information provided from all sources, including enforcement officers and customer service representatives.

Requirement
14) The *Express*Park™ Parking Management System and/or Meter Management System(s) will allow customer service, maintenance, or administration to remotely load time on any specific metered space to address equipment malfunctions and user errors and will allow time to be reduced on a metered space (with a proportional refund) for accidental credit card over payment. All such transactions will b e auditable and tracked by authorizing user. [8.3.1.1.7, 8.2.1.1.2]
15) The *Express*Park™ Parking Management System and/or Meter Management System(s) will have a module whereby a user can enter in a parking space number and date to get a list of the then currently applied rates (including any special event rates) and hours of operation.
16) The *Express*Park™ Parking Management System will include an adjudication assistance reporting tool allowing a hearing examiner to input the meter and/or space number, date, and time of a citation and then be provided a comprehensive report on transactions and paid status, outages and meter status, and maintenance activity near the time of the citation.
17) The *Express*Park™ Parking Management System and Meter Management Systems will represent the date in the general sequence: month, day, year, and will represent all times in the local time of Los Angeles.
18) The *Express*Park™ Parking Management System and all Meter Management Systems will provide on-line access to the current year plus, at a minimum, two previous years of all types of data retained in the system (including data from off-street facilities), and will provide archive capabilities thereafter.
19) All data will be replicated on one or more duplicate servers with hourly backups. Further redundancy will be provided by replicating the data daily on an off-site secure server located within the continental United States.
2.9.2 Performance Requirements
1) The *Express*Park™ Parking Management System and all Meter Management Systems will be fully operational no less than 99% of the time from 6:00 AM to 12:00 AM each day.

Attachment A – Detailed Requirements

Section VII – Advanced Meter Revenue Collections

Requirement
2.11 Collection System Requirements
To support the efficient collection and tracking of parking meter revenue as it varies with revised parking rates, an advanced revenue collection system will be provided as part of *Express*Park™. To meet the goals of the project, the Meter Collection System must:
2.11.1 Functional Requirements
1) All single-space meter coin cans will be equipped with a permanent sensor or label uniquely identifying each.
2) It is desired that the Single-Space Parking Meter recognizes and reports the unique coin can ID to the Meter Management System each time the coin can is inserted and removed (see Section 2.1.1)
3) Coin collection canisters will be equipped with a mobile reader that uniquely identifies each coin can that is emptied into the canister (collected). The mobile reader will retain and report the coin can collection records, including date and time of collection, to the Meter Collection System either in real-time through a secure cellular connection to the Internet or at the end of shift through a physical connection or a secure proximity wireless connection, e.g. Bluetooth. The mobile reader will update its date and time from the Internet or network at least once each business day.
4) The Meter Collection System will maintain a database associating coin can and meter IDs.
5) The Collection Analysis Module will be integrated with the Parking Management System.
6) The Collection Analysis Module will track all coin collections for single-space meters and pay stations, integrated with data from the Meter Management Systems and Electronic Lock Management System.
7) The Collection Analysis Module will reconcile daily meter revenue by collection canister (single-space meters) and pay station cash box, as reported by the respective meter management systems, the collection canister mobile readers (associating actual meters collected with canisters), and LADOT's existing database of actual daily collection canister and pay station cash box coin counts.
8) The Collection Analysis Module will analyze collection frequency by collection route and recommend optimal collection frequency and scheduling based on historical collection data, future rate changes, and a user-defined factor of safety.
9) The Collection Analysis Module will analyze collection routes and recommend optimal collection routes by grouping single-space meters and pay stations (separately or together) with similar collection frequency needs based on historical collection data, future rate changes, and a user-defined factor of safety.
10) The Collection Analysis Module will prepare comprehensive collection schedules based on current and proposed collection routes and frequencies.
11) The Collection Analysis Module will generate collection key programming based on the selected collection schedule, integrated with and implemented through the City's existing Medeco Security Manager System for lock access management.
2.11.2 Performance Requirements
1) The collection canister mobile readers will correctly recognize the coin can ID number of no less than 99% of all coin cans collected per canister per day.

Attachment A – Detailed Requirements

Section VIII – Meter Enforcement System

Requirement
2.10 Enforcement Requirements
To monitor and ensure the effectiveness of on-street pricing in managing demand, a Guided Enforcement System will be provided as part of *Express*Park™. To meet the goals of the project the Guided Enforcement System must:
2.10.1 Functional Requirements
1) The Guided Enforcement System will alert and route enforcement officers to potential violations, record enforcement actions, and exclude handled potential violations. Enforcement actions will include, at a minimum, vehicle cited, vehicle exempt, vehicle displaying a valid disabled placard, space paid, space not occupied, and no action taken.
2) The Guided Enforcement System will provide real-time paid space information for all currently-occupied metered spaces and serve as the primary means for enforcing pay station spaces. [8.1.1.1.1, 8.1.1.1.2]
3) Parking spaces identified in the Guided Enforcement System as potentially in violation will be those parking spaces, identified as occupied by a parking sensor, for which parking is not currently permitted due to parking restrictions, overstay of limited time parking (including loading zones), and/or unpaid meter status, and for which no enforcement officer has taken an action during the occupancy of the current vehicle. The Guided Enforcement System will include a user setting to exclude overstay of limited time parking in the criteria separately for metered spaces and loading zones.
4) The Guided Enforcement System will identify on a map interface the enforcement officer location and, by block face, the total number of parking spaces potentially in violation and not yet handled by an officer.
5) The Guided Enforcement System will provide a map view, which displays, for each block face, the total number of unhandled parking spaces potentially in violation.
6) The Guided Enforcement System will provide a list view, which displays, for each block face, the location of unhandled parking spaces potentially in violation, identified by meter or space number and street address.
7) The Guided Enforcement System will allow each enforcement officer to track the number of citations issued and to record all enforcement actions.
8) Data will be updated in the Guided Enforcement System in re al-time as field conditions change: payments are received and occupancy changes.
9) Supervisors will have a unique user name and password login privilege to remotely supervise shifts and squads, deployed in one or multiple locations.
10) Supervisors will have the ability to log in to any enforcement officer user group to remotely view, in real time, field conditions (i.e., volume and location of unhandled potential violations).
11) The Guided Enforcement System will include a web-based management tool to support enforcement officer management, evaluation of current enforcement routes and staffing, and development of future enforcement routes and staffing based upon measured demand, violation patterns, and proposed meter rate changes.
12) Enforcement handheld devices will display meter space time remaining (or expired status).
13) Enforcement handheld devices will communicate wirelessly to the Internet using the cellular system and will notify the enforcement officer if a connection is not available.

Requirement
14) Enforcement handheld citation devices will integrate with LADOT's citation processing system.
15) Enforcement handheld citation devices will meet or exceed the specifications of the Duncan AutoCITE X3, which are currently in use, except that an integrated printer inside the device is not a requirement.
2.10.2 Performance Requirements
1) Potential violation spaces (occupied, unpaid/over limit, and unhandled spaces) will be accurately shown as such in the Guided Enforcement System no less than 90% of the time per day.
2) Potential violation spaces (occupied, unpaid/over limit, and unhandled spaces) will update in the handheld device within 10 seconds of refresh request, 95% of the time per day.
3) The delay in issuing a citation due to handheld device communication time will be less than 10 seconds for 95% of the citations issued per day.
4) Considering expired time citations issued to pay station spaces using a handheld citation device, citations issued to spaces that had been paid more than 60 seconds prior to citation issuance will total less than 0.5% of all such pay station citations issued per day.

Los Angeles Area
Chamber of Commerce

November 2, 2010

Amir Sedadi, Assistant General Manager
Parking Management and Regulations
City of Los Angeles Department of Transportation
100 S. Main St., 10th Floor
Los Angeles, CA 90012

RE: The Los Angeles Department of Transportation Downtown Express Park Project

Dear Mr. Sedadi:

On behalf of the Los Angeles Area Chamber of Commerce, I would like to voice our support for the Los Angeles Department of Transportation's (LADOT) Downtown Express Park Project and our commitment to aid LADOT in outreach to the business community. This project will revamp the city's parking operations, which will help improve traffic flow for drivers and the efficiency of public transit system in Los Angeles.

The Downtown Express Park project will utilize technology as part of the parking management strategy to test the ways in which real-time data and pricing adjustments can help the city realize its goals of increasing parking spaces, reducing traffic congestion and air pollution, as well as encouraging the use of alternatives modes of transportation. As a business organization, we recognize the importance of transportation efficiency for all LA City residents. Our goal is to promote a high level of mobility throughout the county, thereby allowing employees and customers to efficiently commute to and from work and travel to conduct business.

The Los Angeles Department of Transportation Downtown Express Park Project's use of innovative technology applications is a step towards the City's goal of increasing mobility. We look forward to a continued collaboration on working to find solutions to address traffic congestion downtown and throughout the region. If you have any questions, please contact Jessica Duboff at jduboff@lachamber.com or 213.580.7558.

Sincerely,

Gary Toebben

Gary Toebben
President & CEO