



DATE: April 16, 2014

TO: Honorable Mayor and City Councilmembers

FROM: Development Services Department

SUBJECT: **PROFESSIONAL SERVICES AGREEMENT FOR THE CITYWIDE PAVEMENT AND RIGHT-OF-WAY ASSET MANAGEMENT PROGRAM**

SYNOPSIS

Staff recommends that the City Council approve a professional services agreement with IMS Infrastructure Management Services (IMS) of Tempe, Arizona, in the amount of \$285,000 for providing professional consulting services for the Citywide Pavement and Right-of-Way Asset Management Program; and authorize the City Manager to execute the agreement.

BACKGROUND

A Pavement Management System enables the City of Oceanside to document the cost effectiveness of its use of TransNet funds toward street maintenance. This information is important to the Independent Taxpayer Oversight Committee (ITOC), which is the oversight body established by the 2004 TransNet Ordinance. ITOC's FY 2012 TransNet Triennial Performance Audit report included a recommendation that cities submit pavement *"performance statistics currently available – such as ratio of miles surfaced to miles maintained, pavement condition indices over time, or others related to level of service ratings of roadway operating conditions."* An ad hoc working group of staff among San Diego County cities worked with ITOC and SANDAG staff to define specific performance measure and reporting forms, which ITOC approved on September 11, 2013. These performance measures include annual submittal of each city's pavement conditions beginning in 2014.

The City's road network is a significant asset and maintenance of the network is one of the stated priorities of City Council. In general, all pavement management programs develop maintenance and preservation strategies which optimize pavement conditions over the long term. The principle of optimized pavement maintenance is minimizing cost and maximizing benefit. Statistics developed by the American Society for Testing and Materials (ASTM) show that \$1 of preservation (spent at 25 percent into a pavement life cycle) will cost approximately \$4 to \$10, if those preservation activities are delayed until 60 percent of the pavement life cycle has elapsed. Therefore, a well-tuned pavement management program should repair more lane miles and minimize the need for complete pavement reconstruction.

The City's existing program currently uses a labor intensive data collection method which can produce varying results due to subjectivity of the human eye (lighting, weather, or distance to the observation point) and/or partiality due to the individual evaluator. To match the level of accuracy of modern methods, the current approach can take multiple years to finish a complete observation cycle covering the City's roadway system. Creating baseline comparisons for assets which do not have the same baseline and are in continual decline can become difficult. By the time a citywide street evaluation cycle is completed, the earliest evaluated streets may have experienced additional degradation and are no longer in the previously evaluated condition. In addition, the data is a collection of spot observations and is not extensive or continuous, which can also impact the analysis and resulting priority list.

The proposed modernization to City's pavement management program will enable staff to establish a comprehensive snap-shot of Oceanside's baseline pavement condition in 2014, evaluating approximately 540 centerline miles of streets and alleyways over a short time period. The newly obtained baseline data, combined with a new software module for pavement management, will enable a more accurate and balanced ranking of priorities. Furthermore, the updated approach will allow for a more efficient use of respective City staff hours, provide for better record keeping, and enhance information sharing between Public Works, Water Utilities, Risk Management, City Attorney, Development Services, Oceanside residents, and the development community.

ANALYSIS

A request for proposals (RFP) was advertised for the Pavement and Right-of-Way Asset Management Program in October 2013. Several firms expressed intent to submit proposals; however, only one firm submitted for this technically complex project. The proposal submitted by IMS was evaluated by staff. Based on the criteria of *technology, data collection, safety, and data analysis*; IMS was determined to be qualified for the project.

➤ Technology

A specialized laser Road Service Tester (RST) vehicle with advanced calibrated laser camera array technology and pavement deflection technology (Dynalect) will be deployed for the pavement analysis. Investigation using the Dynalect will determine subsurface distress, pavement strength, load transfer capabilities, and structural section properties of the roadway. This information will assist City staff to objectively prioritize full pavement restoration projects and assist with improved preliminary cost estimate accuracy, for both capital and private development projects.

➤ Data Collection

The RST will collect automated pavement condition measurements to an industry standard index. The vehicle is equipped with high resolution digital video cameras which will record real-time and detailed inventory of *right-of-way assets*, such as traffic signals and traffic signs. Information on these assets will be data coded for use by Public Works, Transportation, and Risk Management applications.

➤ Safety

Measurements are taken from the RST vehicle without a need to set up traffic control. The automated inspection is safer and eliminates the need for staff to venture into vehicular travel lanes to measure or review pavement distress.

➤ Data Analysis

Specialized software will help staff with analyzing the data, identifying pavement maintenance strategies, and implementing those strategies for current and future fiscal years. The software can also be used to create graphic exhibits which depict the geographic locations of key maintenance zones, which can visually establish the relationship between priorities and locations.

Description of Consultant Services

- Pavement Distress Survey

A comprehensive analysis and report will be developed containing performance curves, maintenance and rehabilitation strategies, budget scenarios, condition analysis, and prioritization. The budget reports will be based on a minimum of five scenarios for maintaining the City's pavement condition score. This will drive the five-year rehabilitation and prioritized paving planning – based on need, available budget and level of service constraints.

- Pavement Structural Testing and Analysis (Deflection Testing)

The structural condition of each major roadway will be included as a weighted index in the calculation of a final condition score with a deflection testing. The condition readings will be used to determine the pavement strength, load transfer capabilities, and identify properties of the base and sub-grade. Pavement strength information will be valuable regarding deferral decisions: stronger pavements can be delayed while weaker pavements need more immediate attention. Also, this information can assist with early determination of road improvement requirements for development projects.

- Right-of-Way Asset Data Collection

The consultant will utilize digital camera views, aerial photography, and Geographic Information System (GIS) tools to develop right-of-way asset inventories. The database will have information including exact location, type, condition, and other attributes of street signs and traffic signals.

- Street Signs – There are approximately 20,000 existing street signs. The current electronic records contain information on about half of the signs. The proposed database update will complete the records, facilitate systematic maintenance by Public Works; plus identify the type, location, and condition of all the signs. This task item may also help with Risk Management claims.

- Traffic Signals – Create a complete traffic signal database. This component will aid Public Works with managing a systematic maintenance program.
- Data Management Software Purchase

The software provides a platform for management of pavement conditions and right-of-way asset data. The software modules are: Streets & Roads, Traffic Signals, Traffic Signs, and Pavement Analysis. These modules have been developed by Lucity which seamlessly interfaces with the Lucity software currently being used by the Water Utilities Department. Therefore, there will be integrated database management and sharing of data between Public Works, Water Utilities, and Engineering. Lucity will be a turn-key system, fully integrated with the City's existing GIS. Sharing the database program results in a cost savings for the City, the software maintenance license fee will be \$2,000 annually.
- Digital Mapping and Imagery

The pavement management information will be linked to the City's existing GIS mapping. The provided digital imagery will enable staff to verify and augment database information. IMS will provide a link between the City's GIS program and the pavement management data to enable the City to display and generate color coded maps based upon existing pavement conditions, street rehabilitation plans and other data in the pavement management program.
- Training and Technical Support

This is Lucity training and technical support in order to equip staff on how to use the pavement and right-of-way asset management software.
- Contingencies

The contract prices are based on the consultant's unit prices and test miles according to City's estimates. Contingencies are added in case the actual test miles exceed the estimated miles. If the actual miles do not exceed the estimated miles, this fee will not apply.

The proposed scope of services allows staff to better report pavement condition improvements for projects funded by TransNet. In effort to keep the pavement management program current and accurate, staff intends to update the road surface testing portion of the program once every five years.

FISCAL IMPACT

The estimated cost of the pavement and right-of-way asset management effort is as follows:

Pavement Distress Survey	\$104,441
Pavement Structural Testing and Analysis	\$46,545
Right-of-Way Asset Data Collection	\$70,085
Data Management Software	\$25,513
Digital Mapping and Imagery	\$18,040
Training and Technical Support	\$7,173
Contingency	\$13,203
Project Management and Administration Allocation (~5%)	\$15,000
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Total Cost	\$300,000

FY13-14 Street Restoration (902754200212) has an approximate balance of \$7,070,700. Therefore, sufficient funds are available in the current budget to complete the project.

INSURANCE REQUIREMENTS

The City's standard insurance requirements will be met.

COMMISSION OR COMMITTEE REPORT

Does not apply.

CITY ATTORNEY'S ANALYSIS

The referenced documents have been reviewed by the City Attorney and approved as to form.

RECOMMENDATION

Staff recommends that the City Council approve a professional services agreement with IMS Infrastructure Management Services (IMS) of Tempe, Arizona, in the amount of \$285,000 for providing professional consulting services for the Citywide Pavement and Right-of-Way Asset Management Program; and authorize the City Manager to execute the agreement.

PREPARED BY:



Gabor Pakozdi
Associate Engineer

SUBMITTED BY:



Steven R. Jepsen
City Manager

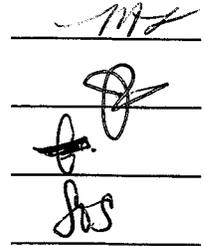
REVIEWED BY:

Michelle Skaggs Lawrence, Deputy City Manager

James R. Riley, Financial Services Director

George Buell, Development Services Director

Scott O. Smith, City Engineer



Attachment A – Professional Services Agreement

CITY OF OCEANSIDE

PROFESSIONAL SERVICES AGREEMENT

PROJECT: Pavement and Right-Of-Way Asset Management Program - 902754200212

THIS AGREEMENT, dated _____, 2014, for identification purposes, is made and entered into by and between the CITY OF OCEANSIDE, a municipal corporation, hereinafter designated as "CITY", and IMS Infrastructure Management Services, LLC, hereinafter designated as "CONSULTANT."

NOW THEREFORE, THE PARTIES MUTUALLY AGREE AS FOLLOWS:

1. **SCOPE OF WORK.** The project is more particularly described as follows:
 - Provide pavement testing, software, and consultant services to institute the City's Pavement Evaluation and Right-of-Way Asset Management Program.
 - Perform a City-wide pavement condition assessment of approximately 540 centerline and alley miles.
 - Provide accurate assessment of the condition of the City's street infrastructure system and appurtenant assets in the right-of-way.
 - Migrate existing data from Cartegraph to Lucity software and link the pavement and asset data to the City's GIS database.
 - Provide on-site training to City staff.
 - The Scope of Work is more particularly described in Exhibit A, a copy of which is incorporated herein by reference.

2. **INDEPENDENT CONTRACTOR.** CONSULTANT'S relationship to the CITY shall be that of an independent contractor. CONSULTANT shall have no authority, express or implied, to act on behalf of the CITY as an agent, or to bind the CITY to any obligation whatsoever, unless specifically authorized in writing by the City Engineer. The CONSULTANT shall not be authorized to communicate directly with, nor in any way direct the actions of, any bidder or the construction contractor for this project without the prior written authorization by the City Engineer. CONSULTANT shall be solely responsible for the performance of any of its employees, agents, or subcontractors under this Agreement. CONSULTANT shall report to the CITY any and all employees, agents, and consultants performing work in connection with this project, and all shall be subject to the approval of the CITY.

3. **WORKERS' COMPENSATION.** Pursuant to Labor Code section 1861, the CONSULTANT hereby certifies that the CONSULTANT is aware of the provisions of Section 3700 of the 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 the CONSULTANT will comply with such provisions, and provide certification of such compliance as a part of this Agreement.

Pavement and Right-Of-Way Asset Management Program - 902754200212

4. LIABILITY INSURANCE.

4.1. CONSULTANT shall, throughout the duration of this Agreement maintain comprehensive general liability and property damage insurance, or commercial general liability insurance, covering all operations of CONSULTANT, its agents and employees, performed in connection with this Agreement including but not limited to premises and automobile.

4.2 CONSULTANT shall maintain liability insurance in the following minimum limits:

Comprehensive General Liability Insurance
(bodily injury and property damage)

Combined Single Limit Per Occurrence	\$ 1,000,000
General Aggregate	\$ 2,000,000*

Commercial General Liability Insurance
(bodily injury and property damage)

General limit per occurrence	\$ 1,000,000
General limit project specific aggregate	\$ 2,000,000

<u>Automobile Liability Insurance</u>	\$ 1,000,000
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*General aggregate per year, or part thereof, with respect to losses or other acts or omissions of CONSULTANT under this Agreement.

4.3 If coverage is provided through a Commercial General Liability Insurance policy, a minimum of 50% of each of the aggregate limits shall remain available at all times. If over 50% of any aggregate limit has been paid or reserved, the CITY may require additional coverage to be purchased by the CONSULTANT to restore the required limits. The CONSULTANT shall also notify the CITY'S Project Manager promptly of all losses or claims over \$25,000 resulting from work performed under this contract, or any loss or claim against the CONSULTANT resulting from any of the CONSULTANT'S work.

4.4 All insurance companies affording coverage to the CONSULTANT for the purposes of this Section shall add the City of Oceanside as "additional insured" under the designated insurance policy for all work performed under this agreement. Insurance coverage provided to the City as additional insured shall be primary insurance and other insurance maintained by the City of Oceanside, its officers, agents, and employees shall be excess only and not contributing with insurance provided pursuant to this Section.

Pavement and Right-Of-Way Asset Management Program - 902754200212

- 4.5 All insurance companies affording coverage to the CONSULTANT pursuant to this agreement shall be insurance organizations admitted by the Insurance Commissioner of the State of California to transact business of insurance in the state or be rated as A-X or higher by A.M. Best.
- 4.6 CONSULTANT shall provide thirty (30) days written notice to the CITY should any policy required by this Agreement be cancelled before the expiration date. For the purposes of this notice requirement, any material change in the policy prior to the expiration shall be considered a cancellation.
- 4.7 CONSULTANT shall provide evidence of compliance with the insurance requirements listed above by providing, at minimum, a Certificate of Insurance and applicable endorsements, in a form satisfactory to the City Attorney, concurrently with the submittal of this Agreement.
- 4.8 CONSULTANT shall provide a substitute Certificate of Insurance no later than thirty (30) days prior to the policy expiration date. Failure by the CONSULTANT to provide such a substitution and extend the policy expiration date shall be considered a default by CONSULTANT and may subject the CONSULTANT to a suspension or termination of work under the Agreement.
- 4.9 Maintenance of insurance by the CONSULTANT as specified in this Agreement shall in no way be interpreted as relieving the CONSULTANT of any responsibility whatsoever and the CONSULTANT may carry, at its own expense, such additional insurance as it deems necessary.
5. **PROFESSIONAL ERRORS AND OMISSIONS INSURANCE.** Throughout the duration of this Agreement and four (4) years thereafter, the CONSULTANT shall maintain professional errors and omissions insurance for work performed in connection with this Agreement in the minimum amount of One Million Dollars (\$1,000,000.00).

CONSULTANT shall provide evidence of compliance with these insurance requirements by providing a Certificate of Insurance.

6. **CONSULTANT'S INDEMNIFICATION OF CITY.** To the greatest extent allowed by law, CONSULTANT shall indemnify and hold harmless the CITY and its officers, agents and employees against all claims for damages to persons or property arising out of CONSULTANT'S work, including the negligent acts, errors or omissions or wrongful acts or conduct of the CONSULTANT, or its employees, agents, subcontractors, or others in connection with the execution of the work covered by this Agreement, except for those claims arising from the willful misconduct, sole negligence or active negligence of the CITY, its officers, agents, or employees. CONSULTANT'S indemnification shall include any and all costs, expenses, attorneys' fees, expert fees and liability assessed against or incurred by the

Pavement and Right-Of-Way Asset Management Program - 902754200212

CITY, its officers, agents, or employees in defending against such claims or lawsuits, whether the same proceed to judgment or not. Further, CONSULTANT at its own expense shall, upon written request by the CITY, defend any such suit or action brought against the CITY, its officers, agents, or employees founded upon, resulting or arising from the conduct, tortious acts or omissions of the CONSULTANT.

CONSULTANT'S indemnification of CITY shall not be limited by any prior or subsequent declaration by the CONSULTANT.

7. **OWNERSHIP OF DOCUMENTS.** All plans and specifications, including details, computations and other documents, prepared or provided by the CONSULTANT under this Agreement shall be the property of the CITY. The CITY agrees to hold the CONSULTANT free and harmless from any claim arising from any use, other than the purpose intended, of the plans and specifications and all preliminary sketches, schematics, preliminary plans, architectural perspective renderings, working drawings, including details, computation and other documents, prepared or provided by the CONSULTANT. CONSULTANT may retain a copy of all material produced under this Agreement for the purpose of documenting CONSULTANT's participation in this project.
8. **COMPENSATION.** CONSULTANT'S compensation for all work performed in accordance with this Agreement, shall not exceed the total contract price of \$285,000.

The project's budget is more particularly described in Exhibit A.

No work shall be performed by CONSULTANT in excess of the total contract price without prior written approval of the City Engineer. CONSULTANT shall obtain approval by the City Engineer prior to performing any work that results in incidental expenses to CITY.

9. **TIMING REQUIREMENTS.** Time is of the essence in the performance of work under this Agreement and the timing requirements shall be strictly adhered to unless otherwise modified in writing. All work shall be completed in every detail to the satisfaction of the Engineer by no later than September 12, 2014.
10. **ENTIRE AGREEMENT.** This Agreement comprises the entire integrated understanding between CITY and CONSULTANT concerning the work to be performed for this project and supersedes all prior negotiations, representations, or agreements.
11. **INTERPRETATION OF THE AGREEMENT.** The interpretation, validity and enforcement of the Agreement shall be governed by and construed under the laws of the State of California. The Agreement does not limit any other rights or remedies available to CITY.

Pavement and Right-Of-Way Asset Management Program - 902754200212

The CONSULTANT shall be responsible for complying with all local, state, and federal laws whether or not said laws are expressly stated or referred to herein.

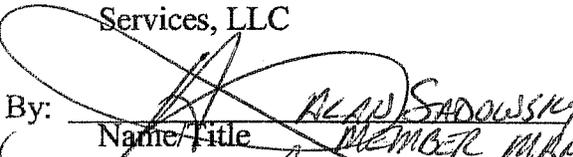
Should any provision herein be found or deemed to be invalid, the Agreement shall be construed as not containing such provision, and all other provisions, which are otherwise lawful, shall remain in full force and effect, and to this end the provisions of this Agreement are severable.

12. **AGREEMENT MODIFICATION.** This Agreement may not be modified orally or in any manner other than by an agreement in writing signed by the parties hereto.
13. **TERMINATION OF AGREEMENT.** Either party may terminate this Agreement by providing thirty (30) days written notice to the other party. If any portion of the work is terminated or abandoned by the CITY, then the CITY shall pay CONSULTANT for any work completed up to and including the date of termination or abandonment of this Agreement. The CITY shall be required to compensate CONSULTANT only for work performed in accordance with the Agreement up to and including the date of termination.
14. **SIGNATURES.** The individuals executing this Agreement represent and warrant that they have the right, power, legal capacity and authority to enter into and to execute this Agreement on behalf of the respective legal entities of the CONSULTANT and the CITY.

IN WITNESS WHEREOF, the parties hereto for themselves, their heirs, executors, administrators, successors, and assigns do hereby agree to the full performance of the covenants herein contained and have caused this Professional Services Agreement to be executed by setting hereunto their signatures on the dates set forth below.

IMS Infrastructure Management
Services, LLC

CITY OF OCEANSIDE

By: 
Name/Title ALAN SADOWSKY
MEMBER MANAGER

By: _____
City Manager

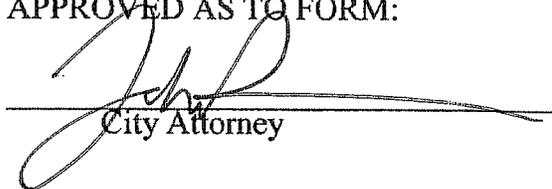
Date: March 6, 2014

Date: _____

By: 
Name/Title Stephen Smith
Member/Manager

APPROVED AS TO FORM:

Date: March 6, 2014


City Attorney

Employer ID No.

NOTARY ACKNOWLEDGMENTS OF CONSULTANT MUST BE ATTACHED.

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State of Arizona)

)

County of Maricopa)

The foregoing professional services agreement was acknowledged before me this

6th day of March, 20 14, by Stephen Smith,

and Alan Sadowsky, as Member/Manager and Member/Manager respectively of

IMS Infrastructure Management Services, LLC, an Arizona limited liability company.

D M White

Notary Public in and for

the County of Maricopa

State of Arizona

My Commission Expires:

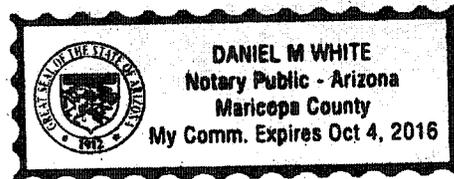


EXHIBIT A

Scope, Budget, & Schedule Memorandum



IMS Infrastructure Management Services
 1820 W. Drake Dr. Suite 108. Tempe, AZ 85283
 Phone: (480) 839-4347 Fax: (480) 839-4348
 www.ims-rst.com

To: Gábor Pákozdi, Project Engineering

Date: February 18, 2014

From: Jim Tourek, Manager of Client Services

Project: City of Oceanside

DETAILED PROJECT SCOPE:

Task	Description	Activities	Deliverables
<u>Project Initiation Phase</u>			
1.	Project Initiation Meeting & Planning	<ul style="list-style-type: none"> Conduct kick off meeting confirming scope, extent and content of surveys, set milestones and deliverables. Confirm key contacts, roles and responsibilities, and project documentation. Identify location of key data elements such as traffic data, GIS, existing roadway inventories, historical data, and pavement management data. Identify deficient data and the means to obtain it. Provide data QA plan to City. Confirm phases of the work and invoicing methodology. 	Technical memo detailing scope of work, budget and deliverables.
2.	Network Referencing & Survey Map Preparation	<ul style="list-style-type: none"> Complete a brief review of the City's current GIS environment and assess suitability for pavement management purposes. Using the City's existing GIS centerline topology, update existing street inventory and create a fixed link between the inventory and GIS using a unique identifier. Include street number and block order in referencing. Harmonize street names between GIS and City's Lucity (previously Cartegraph. Note: GIS wins any differences). Link each segment to its parent GIS section. Obtain roadway attributes from GIS for functional class, traffic, width, length, pavement type, curb type, etc. If not available, devise plan to obtain them. Create survey maps for use by the RST and client review. 	Survey maps and inventory for use on the project.
<u>Field Surveys Phase</u>			
3.	RST Mobilization & Calibration	<ul style="list-style-type: none"> Mobilize surface distress, roughness, and rutting testing equipment to project. Crew to review the survey maps with the City. Demonstrate the equipment to the City. Calibrate equipment. 	Equipment calibration results
4.	Surface Distress Condition Surveys	<ul style="list-style-type: none"> Complete single pass testing on local roads and 2-lane majors; collect ASTM distresses and attributes at 100-foot intervals on a block by block basis. IMS will survey approximately 480 centerline miles (600 test miles) of roadway. Expansion of distresses to a modified ASTM D6433 protocol. Distresses to include longitudinal, transverse, alligator, and block cracking, raveling, bleeding, patches/potholes, rutting, roughness, and distortions. Laser based RST will incorporate the use of 11 lasers and rate gyroscopes, digital images, touch screen event board, and GPS acquisition. Dual wheel path testing collecting International Roughness Index (IRI) data. 	Complete 2-passes on major roadways; single on locals. Approximately 600 test miles.

**City of Oceanside
Scope, Budget, and Schedule - Pavement & Asset Management System**

Task	Description	Activities	Deliverables
5.	Crossfall, Radius of Curvature, & Grade	<ul style="list-style-type: none"> Cross slope, radius of curvature and grade are measured with a patented road geometric pack that is integrated with the RST system. 	Incorporate results into analysis.
6.	Right of Way Asset Data Collection (GPS & Video Acquisition)	<ul style="list-style-type: none"> On all roadways (as noted), collect GPS coordinates and video for asset database development. Develop a Master Asset List to include all street sign attributes to be inventoried. Prep video library used in the asset inventory development 	
7.	Dynaffect Mobilization	<ul style="list-style-type: none"> Mobilize a Dynaffect for subsurface testing. Calibrate equipment prior to beginning data collection. 	Equipment calibration results
8.	Deflection Testing	<ul style="list-style-type: none"> On all arterials & collectors, use multi-sensor deflection data at an average of 10 tests/ mile using a Dynaffect. 	Structural index for arterial & collector roadway section. 2-pass for approx. 240 T-Mi.
9.	Deflection Traffic control by 3 rd party	<ul style="list-style-type: none"> Deflection testing requires a shadow vehicle for traffic control purposes as testing is a stop and go process that will impede traffic. Testing will take approximately 13 days and we have accounted for 8 hour days. 3rd party entity will supply a professionally trained traffic controller and traffic control vehicle w/mounted arrow-board (or FAS). 	Traffic control services for 11-12 days.
<u>Data Management Phase</u>			
10.	Pavement Condition Data Processing, QA/QC, Formatting, & GIS Linkage	<ul style="list-style-type: none"> For each data stream (surface distress, roughness, GPS, deflection), aggregate and process the data at 100-foot intervals. Develop individual index scores for surface distress and roughness as appropriate. Develop structural index for each roadway segment. Develop a pavement condition score for each section. Process the same data to the segment level. Shapefiles of the processed data. Develop exceptions report for lengths not matching GIS. Complete QA of data. 	Excel spreadsheet of the 100 foot, sectional data, and index values containing all assigned GIS ID's. Shapefiles of the condition data at the 100 foot and segment levels.
11.	Pavement Data Load to Lucyly	<ul style="list-style-type: none"> Assemble and load the pavement inventory data into the City's Lucyly software. The data will be delivered in Excel or Access with an appropriate geodatabase. 	Pavement inventory and attributes delivered in Excel or Access with a personal geodatabase.
12,12a.	Provision of Digital Images @ 25-foot Intervals	<ul style="list-style-type: none"> On all Network roadways, perform GPS and LF & RF forward-view digital images data collection. Arterial & Collector roadways will receive a 2-pass and Local roadways will receive a single pass. In addition, Local roadways will also receive a Driver's side rearview facing camera utilized to capture images at 25-foot intervals for future asset acquisition. 	Forward-view digital Images at 25-foot intervals, compatible with ESRI's ArcServer 10.1 for loading into IMS's Image-viewer.
13.	Database Conversions – Asset: Traffic Signals	<ul style="list-style-type: none"> Convert City's existing Cartegraph Navigator traffic signals database. Format and prep database for Lucyly loading. 	Populate the Lucyly modules with the ROW asset inventories.
14, 16.	Asset Data Load – Traffic Signals & Signs	<ul style="list-style-type: none"> Load right of way asset inventories to appropriate Lucyly modules: Traffic Signals, Traffic Signs, ROW and Streets & Roads. Ensure linkage is correct and software is operating. 	Populate the Lucyly modules with the ROW asset inventories.

City of Oceanside

Scope, Budget, and Schedule – Pavement & Asset Management System

Task	Description	Activities	Deliverables
15.	Sign Inventory & Database Development	<ul style="list-style-type: none"> Utilizing the right of way digital images and GPS data, develop a detailed sign inventory for the arterial, collector & local roadway network. Collect X and Y for each sign. Note sign condition using G/F/P notations. Develop a Master Asset List used to define attributes. Utilize RST imagery, aerial photos and in-house GIS tools to place signs in a positional-correct manner. 	Personal geodatabase with asset inventory.
17.	Pavement Analysis, Operating Parameters, & Reporting	<p>Following the field surveys and data processing, complete the following analysis:</p> <ul style="list-style-type: none"> Assemble the analysis results into a spreadsheet for review by City staff and IMS. Include pavement condition, PCI distribution curves, budget scenarios, needs analysis, and target PCI driven results. Update the operating parameters of the software. The operating parameters can be defined as the prioritization, unit rates, and strategies. Deliver status and PCI report in Excel format c/w PCI charts and backlog. Fix all needs analysis and budget. Budget driven analysis (\$/yr estimate). Integrate City capital plans and "must do's" (\$ to hit set PCI and backlog target). Include the deterioration curves utilized, treatments, unit rates, and their impact on the analysis results. Discuss burdened/unburdened rates to determine appropriate configuration of the analysis. Present solution to City and identify any deficiencies in the analysis. Make any necessary edits or revisions. After reviewing the analysis and finalizing the results, begin assembling a comprehensive report. The report shall include a summary of the network value, the IMS approach, pavement condition, rehabilitation & maintenance treatments, budget scenarios, a review of PCI definitions, the operating parameters utilized, and the results of the survey. Final report and make 2-copies of report plus electronic files. Create shape files of results 	Supply of the analysis results in a spreadsheet format for review by City staff and IMS. Delivery of draft pavement management report. Deliver 2 hard copies of the final report and an electronic copy on a flash drive. Shape and KML files.
18.	Project Management	<ul style="list-style-type: none"> Provide client with periodic e-mail updates and reports. Meetings to be completed on-site and by conference calls. Complete project administration and invoicing. 	Status reports and invoices
19.	Web-Based Image Data Viewer	<ul style="list-style-type: none"> IMSVue is a browser-based GIS image and data viewing tool hosted by the City*. The City will be able to easily identify specific locations and assets. The City will need a web server and a GIS server to accommodate. 	IMS will populate the City's images, pavement data, and ROW assets. To be hosted on City servers (* see att. add for IMS-hosted).
20.	Implement Lucity Software, Training Modules: Streets & Roads, Traffic Signs/ ROW and Pavement Analysis	<ul style="list-style-type: none"> Confirm software modules and number of seats to be purchased in the City's name. Supply and install module on the City's network. 2 days onsite & 12-hours of remote Lucity software assistance will be provided by a Lucity expert (see below). Additional days & hours can be added depending upon the City's needs & familiarity with the software (see below). 	Coordination of software supply, install, and training

City of Oceanside
Scope, Budget, and Schedule – Pavement & Asset Management System

Task	Description	Activities	Deliverables
21.	Management Reserve	<ul style="list-style-type: none"> A City requested line item for potential contingency work; as a need may arise during the project's stated scope of work. 	Only as directed by City.
22.	Lucity Onsite Software Training	<ul style="list-style-type: none"> 2-days of onsite Lucity software training will be provided by Lucity staff. Additional days can be added depending upon the City's skill set and familiarity with the software. 	Onsite training by a Lucity expert.
23.	Lucity Offsite Software Training	<ul style="list-style-type: none"> 8-hours of offsite Lucity software remote assistance will be provided by Lucity staff. Additional hours can be added depending upon the City's skill set and familiarity with the software. 	Offsite remote assistance by a Lucity expert.

SERVICES TO BE PROVIDED BY THE CITY:

In accordance with the RFP, the IMS work plan and fee schedule are based on the City providing the following information and services:

- Provision of GIS topology & current inventory covering the survey area
- Participation in the review of traffic volumes, unit rates and strategies.
- Participation in the interim and draft reports.
- Access to the client sites and Cartegraph and/ or Lucity information.
- Provision of street width information functional classification and ownership, as required.
- Participation in software implementation and training.
- The City will need a web server and a GIS server to accommodate the web-based image viewer.

City of Oceanside
Scope, Budget, and Schedule - Pavement & Asset Management System

PROPOSED BUDGET:

City of Oceanside - Pavement and Asset Management System

Task	Activity	Quant	Units	Unit Rate	Total
Project Initiation					
1	Project Initiation Meeting and Planning	1	LS	\$2,000.00	\$2,000.00
2	Network Referencing & Survey Map Preparation	600	T-Mi	\$12.00	\$7,200.00
Field Surveys					
3	RST Mobilization & Calibration	1	LS	\$3,000.00	\$3,000.00
4	Surface Distress Condition Surveys	600	T-Mi	\$100.00	\$60,000.00
5	Crossfall, Radius of Curvature, & Grade	600	T-Mi	\$10.00	\$6,000.00
6	Right of Way Asset Data Collection (GPS & Video Acquisition)	600	T-Mi	\$10.00	\$6,000.00
7	Dynaflect Mobilization	1	LS	\$2,500.00	\$2,500.00
8	Deflection Testing & Analysis	240	T-Mi	\$120.00	\$28,800.00
9	Traffic Control/Deflection Testing (IMS contract w/Oceanside PD)	100	HR	\$122.00	\$12,200.00
Data Management					
10	Pavement Condition Data Processing, QA/QC, Formatting, & GIS Linkage	600	T-Mi	\$15.00	\$9,000.00
11	Pavement Data Load to Lucity	1	LS	\$2,500.00	\$2,500.00
12	Provision of Digital Images @ 25-foot intervals (LF & RF Views)	600	T-Mi	\$16.00	\$9,600.00
12a.	Provision of Digital Images @ 25' Interv.(Rear View; Locals only)	360	T-Mi	\$4.00	\$1,440.00
13	Asset Database Conversions - Traffic Signals	1	EA	\$2,000.00	\$2,000.00
14	Asset Data Load to Lucity - Traffic Signals	1	EA	\$2,500.00	\$2,500.00
15	Asset Inventory & Database Development - Signs	600	T-Mi	\$87.50	\$52,500.00
16	Asset Data Load to Lucity - Signs	1	EA	\$2,500.00	\$2,500.00
17	Pavement Analysis, Operating Parameters, & Reporting	1	LS	\$8,000.00	\$8,000.00
18	Project Management	1	LS	\$15,144.00	\$15,144.00
19	IMSVue Image Data Viewer	1	LS	\$7,000.00	\$7,000.00
20	* Lucity Software Implementation, Training (2 days Onsite for staff), & Support (12 hours remote). Modules: Streets & Roads, Traffic Signals, Traffic Signal ROW and Pavement Analysis; (City Depts. already have Lucity GIS; so not included)	1	LS	\$25,513.00	\$25,513.00
21	Management Reserve (for Contingency Work; City requested)	1	LS	\$13,203.00	\$13,203.00
22	Lucity Software Onsite Training (additional days)	2	EA	\$2,500.00	\$5,000.00
23	Lucity Software Offsite Training (additional hours)	8	HR	\$175.00	\$1,400.00

* Software Annual Maintenance thru year 2 included; then \$2k handled by Lucity to City directly.

Project Total:	\$285,000.00
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Optional Service Items and Activities

24	Nighttime Retro-reflectivity - All Signs	600	T-Mi	\$99.00	\$59,400.00
25	IMSVue Web-hosted Annual Fee (includes Tech Support)	1	YR	\$2,000.00	\$2,000.00
26	PowerPoint Only for City Council Presentation	1	LS	\$1,750.00	\$1,750.00
27	Asset Inventory & Database Development - Traffic Signals	600	T-Mi	\$30.00	\$18,000.00
28	Asset Inventory & Database Development - Trees	600	T-Mi	\$45.00	\$27,000.00
29	Asset Inventory & Database Development - ADA Ramps	600	T-Mi	\$40.00	\$24,000.00
30	Asset Inventory & Database Development - Sidewalks	600	T-Mi	\$50.00	\$30,000.00
31	Asset Inventory & Database Development - Curbs	600	T-Mi	\$50.00	\$30,000.00
32	Asset Inventory & Database Development - Markings & Striping	600	T-Mi	\$100.00	\$60,000.00
33	Asset Inventory & Database Development - Benches	600	T-Mi	\$30.00	\$18,000.00
34	Asset Data Load to Lucity	1	EA	\$2,500.00	\$2,500.00

** Note: Each selected Optional Asset for Development will need to be Loaded.

