TO: JAMES L. APP, CITY MANAGER

FROM: DAVID MCCUE, INFORMATION SYSTEMS MANAGER
                DAN LAMBERT, GIS ANALYST

SUBJECT: GIS PARCEL & ROAD CENTERLINE MAPPING SERVICES
                AWARD OF CONTRACT

DATE: May 15, 2007

Needs: For the City Council to award a contract for the development of Geographic Information Systems (GIS) parcel and road centerline data.

Facts:

1. GIS is an implementation component of the adopted Information Systems Strategic Plan; a priority item in the City Council Goals 2007

2. City GIS infrastructure requires parcel and road centerline information to support detailed mapping.

3. Parcel data is a more accurate electronic version of San Luis Obispo County's assessor parcel map. Road centerline data are drawings based on the center of the road to show how the land parcels and road relate to each other.

4. Field service personnel require APN specific attributes for daily maintenance and planning.

5. City adopted 2005-2007 Budget provides funds for GIS mapping elements.

6. On March 14, 2007 the City issued a Request for Proposals (RFP) for the development of GIS parcel and road centerline data.

7. Wallace Group achieved the best rank score in the rating matrix.

Analysis & Conclusion: Proposals were evaluated based on a combination of factors representing the best overall value to the City for completing the work scope including: specific selection criteria (see rating matrix attached); results of background and reference checks; and proposed fees.

At the conclusion of the evaluation process, Wallace Group of San Luis Obispo received the highest ranking. Key decision factors included: a) Greatest value for scope of work; b) Experience with, and understanding of, the complexities of working with municipalities; c) Responsiveness to RFP specification; and d) Technique for creating and registering the new data.

The Wallace Group proposal includes Global Positioning System (GPS) ground control (survey landmarks) for greater accuracy in registration of the newly created data to the City's GIS. An optional element of the RFP is to include grouping of the lots by subdivision (recommended); Wallace Group will provide this information at a reasonable cost.

Policy
Reference: Information Systems Strategic Plan; City Council Goals 2007; 2005-2009 Budget/Financial Plan.

Fiscal
Impact: Sufficient funds are currently appropriated in the approved 2006-2007 Budget.

Options: <u>Option A.</u>
Award a contract to Wallace Group for GIS parcel and road centerline data in the amount of $38,500, as documented in their proposed scope of work for core elements including the optional element of subdivision lot mapping attached hereto and included herein by reference

<u>Option B</u>.

Amend, modify, or reject the above.

Attachments:

1) RFP issued by City
2) GIS Parcel RFP Criteria Rating Matrix
3) Wallace Group Proposal

CITY OF EL PASO DE ROBLES

"The Pass of the Oaks"

REQUEST FOR PROPOSALS

GIS PARCEL & ROAD CENTERLINE MAPPING SERVICES

A. Introduction

The City of Paso Robles is requesting proposals for GIS mapping of Assessor parcels and road centerlines.

B. Submittal Deadline

Three (3) copies of the Consultant's proposal must be submitted by no later than 5:00 PM on Friday, April 6, 2007.

Proposals must be marked "GIS Mapping Services RFP" and delivered or mailed to:

> City of Paso Robles
> Attn: City Clerk
> 1000 Spring Street
> Paso Robles, CA 93446

C. Purpose and Scope

The City is interested in acquiring professional GIS services for mapping Assessor parcels and road centerlines within the city limit and key surrounding areas, and to accurately register this new data to existing digital aerial ortho-photography captured at 6-inch pixel resolution. The City would also be interested in acquiring underlying subdivision lot boundaries as well as ArcIMS website hosting services as optional project enhancements.

Scope of Project
1. Mapping of approximately 12,500 assessor parcels covering the Paso Robles city limits, Sphere of Influence and other adjacent areas of importance, with APN attribution. The desired area of coverage is approximately 40.3 square miles (see Exhibit A).
2. Mapping of centerline road data for area of parcel coverage, with street name and geocode attribution. Existing centerline data may be available for use in this component.
3. Data to be generated utilizing available record and assessor map resources, accurately registered to current digital aerial ortho-photography and centerline road data.
4. Customized data model for maintaining, managing, integrating and distributing data efficiently.
5. Quarterly update and error correction maintenance program for parcel and centerline road data.

Optional Enhancements
1. Mapping of underlying subdivision lots with subdivision and lot number attribution.
2. ArcIMS website hosting for interactive web access to GIS data.

D. Project Specifications

Key Tasks

1. GIS parcel and road centerline data mapping
   a. The primary goal for this project is to acquire accurately mapped parcel boundaries, underlying subdivision lot boundaries (if included in proposal), and road centerlines based upon recorded map and/or assessor map information AND accurately registered to existing digital aerial ortho-photography. Parcel data shall include current Assessor Parcel Number attributes, subdivision data shall include lot and subdivision number attributes, and road centerline data shall include standard geo-coding attributes.
2. Registration of new data to aerial ortho-photography
   a. A key objective of this project is to achieve the best possible visual registration between vector and raster datasets <u>without</u> sacrificing the basic integrity (true arcs, straight boundary lines, etc.) of the vector data.
   b. NOTE: The City is NOT interested in acquiring parcel data which has been manually aligned, vertex-by-vertex, to visible features on the aerial photos as this will destroy the integrity of the vector data and subsequently its value for other uses.
3. Maintenance
   a. Another key component of this project is a quarterly maintenance program to address parcel boundary updates and error corrections as they become apparent. Quarterly parcel updates from the County Assessor will be forwarded to the selected PROPOSER along with any corrections as they are discovered.
4. Training and ongoing technical assistance
   a. The PROPOSER will be asked to recommend a schedule of initial training for designated City staff on appropriate maintenance techniques to be used. The PROPOSER will also be asked to identify the hourly cost and staff who would support designated City staff requiring assistance beyond conclusion of the project.

Accuracy

The integrity of original linework (retention of true arcs, straight lines, etc.) should take precedence over "perfect" visual alignment with related features in aerial photography. Centerline road data should be visually centered within paved or graded features in aerial photography.

Specific horizontal accuracy for vector parcel and ROW (right-of-way) data is dependent on quality of source documentation and visibility of features on provided 6-inch pixel ortho-photos (see details below).

1. *Areas with Consistently Visible EOP/FOC features and Complete Source Documents:*

   For areas where EOP/FOC (edge of pavement/face of curb) features are clearly visible and complete and accurate source documents are available, estimated parcel registration methodology should result in the following spatial accuracy:

   a. +/- 2-feet for 90 - 95% of parcel features

2. *Areas with Inconsistently Visible EOP/FOC features and Complete Source Documents:*

   For areas where EOP/FOC (edge of pavement/face of curb) features are obscured (due to tree cover, shadows, or buildings) and where only inaccurate or incomplete source documents are available, estimated parcel registration methodology should result in the following spatial accuracy:

   a. For lots with a maximum dimension over 100 ft: +/- 5-feet

b. For lots with a maximum dimension under 100 ft: +/- 3-feet

c. ROW width: +/- 1-foot if reported on source documents for 90 - 95% of ROW features. Note: ROW Improvements may not coincide and improvements could fall outside reported ROW.

d. Parcels where physical features and good reconcilable dimensions are lacking, estimated error may fall beyond the maximum 5-foot tolerance specified. Where these cases occur they should be called out as exceptions and noted accordingly.

E. Services Provided by Consultant

Communication/Data Analysis
1. Kick-off meeting: Meet with City staff to review scope of work, confirm project schedules and milestones, introduce consulting team members and identify member roles, discuss technical approach, and to answer questions concerning procedure or consultant duties.
2. Data collection: Develop a list of data, available maps and other resources to be used as base data for the project.
3. Review and confirm accuracy and functionality of resource data. Provide recommendations for any additional resource data that might improve end result of project.
4. Confer as necessary to address any unforeseen issues that may arise during project.

Deliverables
1. Parcel data in polygon feature class format with current APN attribution.
2. Subdivision data (if included in proposal) in polygon feature class format with subdivision and lot number attribution.
3. Centerline road data in polyline feature class format with current street name and address geocode attribution.
4. Data accurately registered to current digital aerial ortho-photography, delivered in ESRI geodatabase feature dataset/feature class and AutoCAD DWG formats.
5. Data geo-referenced to California State Plane Zone 5 projected coordinate system, NAD 83 datum, Lambert Conformal Conic projection, units in US feet.
6. Data model for efficient data maintenance and validation, for developing enterprise approach to managing related GIS features, for integrating GIS with other IT systems, and for developing related web-based applications.
7. Mutually agreed-upon method for handling of anomalies found in resource data.
8. Written recommendations on maintenance techniques and onsite training at completion of project.

Schedule of Delivery
1. Initial sample dataset to be provided for evaluation and approval within 30 days of contract signing prior to continuation of project.
2. Subsequent data sets to be provided in monthly installments.
3. Final delivery of product to be within 90 days of contract signing.

F. **Background Information**

1. The City of Paso Robles has two parcel datasets that are currently in use. The most current dataset (ArcGIS shapefile format) is being maintained by a third party vendor and is registered to a geographic coordinate system, but is misaligned with our current digital aerial ortho-photography which is considered to be accurate. The older dataset (AutoCAD format) is distorted and is not registered to any known geographic coordinate system.
2. Many of the new GIS datasets and projects to be created for the City must be generated using parcel basemap data, however all resulting data will be similarly misaligned with our aerial photography.
3. Parcel data is frequently used independent of aerial photography, and therefore needs to retain its geometric integrity (true arcs and straight lines) to be useful for other tasks.
4. The City has obtained commercially available centerline road data through the purchase of a new Computer Aided Dispatch system, however the data is not positionally accurate in many locations.

G. **Available Resources**

Some of the following items (or samples of) may be helpful in the preparation of a response to this RFP.

1. 2005 digital color ortho-photography @ 0.5 foot pixel resolution
2. Assessor parcel maps for project area in TIF format
3. Recorded tract, parcel and survey maps for project area in TIF formats
4. Current parcel database in ESRI shapefile format (requires signed 3rd party agreement)
5. Existing centerline road data acquired for Computer Aided Dispatch system (may require signed 3rd party agreement)

H. **The Proposal**

Format and requirements: Although there is no maximum proposal length, proposals should be kept to the minimum length necessary to address the requirements of the RFP. Proposals shall be 8-1/2" x 11" with pages numbered sequentially. Padding the proposal with "boiler plate" material is discouraged.

Proposal contents:
1. Firm identification
   a. Firm name and address.
   b. Name and telephone number of contact person.
   c. A list of the firm's principals with experience, background, academic training and registration.
2. Provide the following information for each sub-consultant (if needed):
   a. Name, address and telephone number.
   b. Contemplated role of the firm in the project.
3. Location of office where the work would be performed.
4. List of personnel for all firms. Indicate experience, background, academic training and registration. Describe anticipated role in the project, and how the staff would be organized.
5. Description of similar projects that the firm, its personnel, subcontractors and associates have performed previously. For all projects listed please include location, description of work, client name, and project cost.
6. Project Understanding: Describe the project background and process as relating to requirements for consultant qualifications.

7. Work Program: Based on your understanding of the project, list all required tasks to complete the work including itemized person-hours, rates and costs for all required work tasks.
8. Information, experience, personnel, timing, availability of manpower to perform GIS mapping services for the project.
9. Provide a statement of credentials that particularly qualify your firm to perform this work.
10. Signature: Proposal shall be signed by an authorized corporate office whose signature is binding upon the firm.
11. Valid Period: Include a statement that proposal will remain valid for 60 days.
12. Conflict of Interest: Proposal shall include a statement that no conflicts of interest exist in the provisions of these services.
13. Appendix: Include supplemental information, if any, such as firm brochure, fees for additional services, etc., at the end of the proposal.

I.   The Selection Process

The City will establish a screening committee to review all proposals received and to rank the proposals. The City may decide to interview consultants with the most competitive proposals. Key criteria to be used by the City in selecting a consultant or consultant team include the following:

1. Consultant's understanding of the City of Paso Robles' desires and general approach to the project as demonstrated in the Project Understanding and Work Program above.
2. Qualifications of the Consultants' staff being assigned to this project.
3. Demonstrated ability of the consultant to perform quality work, control costs, and meet time schedules.
4. Ability to work effectively with City staff.
5. Other important factors including price, quality and functionality of end product, product enhancements, etc.

The top ranked firm will be invited to refine its proposal and negotiate a consultant services agreement with the City. Enclosed is a sample of the City's standard Consultant Services Agreement.

The City reserves the right to reject any or all proposals and to negotiate modifications of acceptance of parts of a proposal. Other terms and conditions of the contract will be negotiated at the time of the consultant selection and will be subject to approval of the City Attorney.

J.   For More Information

Contact Daniel Lambert, GIS Analyst at:

Phone: (805) 237-4904
Fax: (805) 237-4901
E-mail: dlambert@prcity.com

GIS Parcel RFP Rating Matrix

FIRM	Wallace	Lynx	Farallon	Nobel	Psomas	Applied
Cost	1	2	3	2	4	5
Technique	2	2	3	3	3	1
Company Resouces	3	3	1	1	1	3
References	1	1	1	1	1	2
Core Items Included	1	1	3	4	3	5
Optional Items Included	1	1	3	3	3	5
Responsiveness to RFP	1	1	2	3	2	4
Access to Support	1	2	2	2	2	2
Exp/Familiarity w/ City	1	4	4	4	4	3
Turnaround	2	5	2	1	1	4

	Wallace	Lynx	Farallon	Nobel	Psomas	Applied
AVG. RATING (Low = better)	1.40	2.20	2.40	2.40	2.40	3.40
RANK	1	2	3	3	3	6
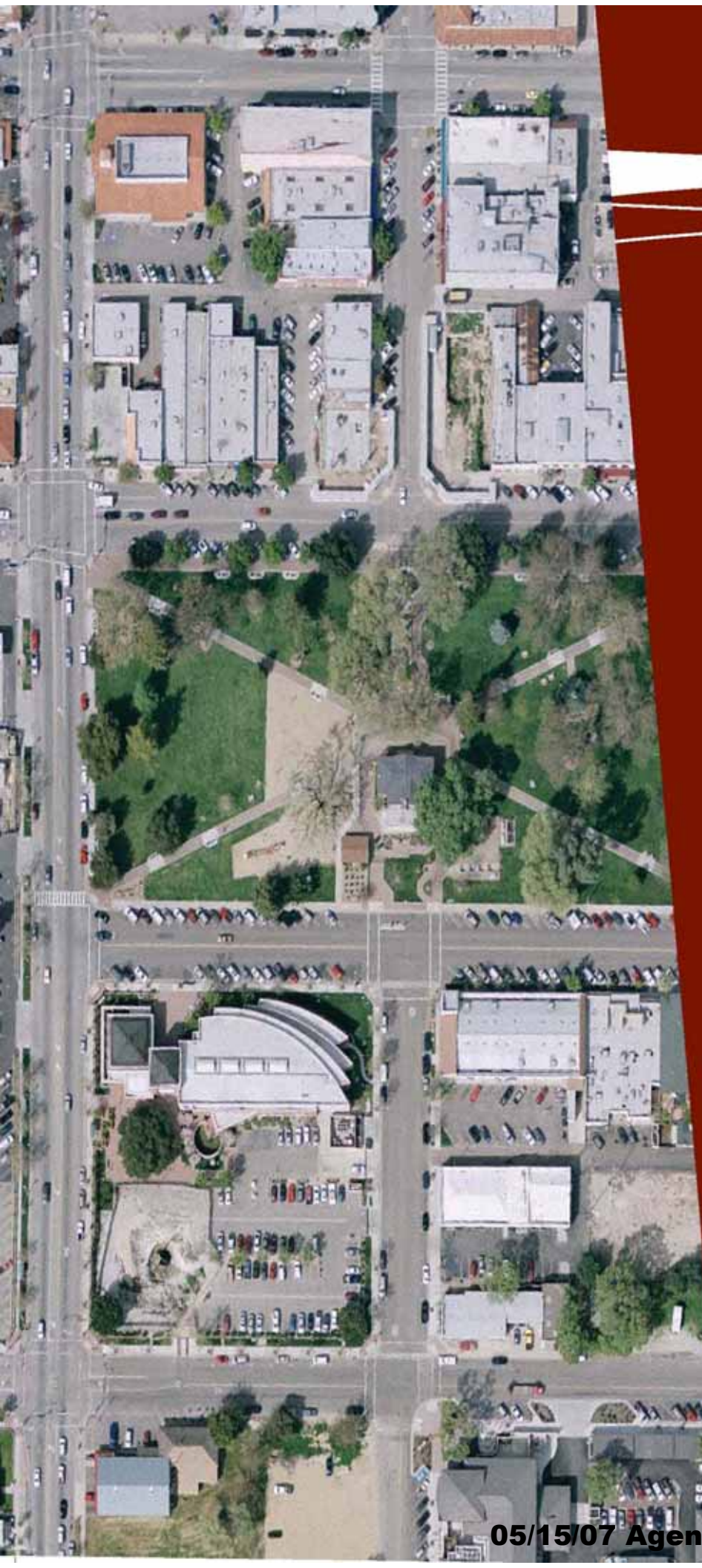
WALLACE GROUP

CITY OF EL PASO DE ROBLES

GIS Parcel and Road Centerline Mapping

April 6, 2007

PROJECT UNDERSTANDING

Wallace Group's number one priority, with any project we are involved in, is to understand the needs of the Client. To accomplish this task we will work closely with City staff and make ourselves available throughout the course of the project to answer any questions that may arise. It is our understanding that the City of El Paso De Robles would greatly benefit from the development of an accurate GIS Parcel and Road Centerline base map. With several existing parcel base maps, aerial photography and street centerline data available, but none that provide a spatially accurate base map, the City is on hold for building new GIS layers. The City has made great efforts to resolve this issue by acquiring accurate topographic mapping and orthometeric imagery for the entire City. Wallace Group proposes to build on those efforts by developing accurate parcel and road centerline data for this project. With a solid foundation of topographic, parcel and road centerline base mapping and orthometeric imagery in place, the City can start to develop GIS applications to aid City staff in their daily work activities.

Our overall approach to the City's GIS Parcel and Road Centerline mapping project is as follows:

KICK-OFF MEETING

A kick-off meeting is a key element to any project, and we will begin the City's parcel and road centerline mapping project with a focused kick-off meeting. This will be an important meeting where all the key players are introduced and have the opportunity to interact and discuss specific issues relative to the development of the parcel and road centerline mapping. At this meeting, we will ensure that the expectations and goals for the project are emphasized as we review and discuss the project scope, schedule, deliverables and all other aspects of the parcel and road centerline project.

PROJECT UPDATES AND CLIENT COMMUNICATION

We know from our experience that successful projects require close communication with all team members. As part of our approach to the City's parcel and road centerline project, we will provide the City with monthly status reports on progress, schedule and budget, and will provide responsive communication with the City on a day-to-day basis.

PROJECT TEAM

Wallace Group and Applied Geographics, Inc. offer the City an integral project team of GIS and Surveying professionals with national and local knowledge for parcel and road centerline mapping projects. Whether we are collecting survey data in the field, reviewing record parcel data or developing an ArcIMS website, our project team members are dedicated and focused on providing the City with the best service possible.

TECHNICAL EXPERTISE

Our project team is comprised of the key personnel needed to provide you with the technical expertise and experience to fulfill your project needs.

QUALITY ASSURANCE AND QUALITY CONTROL

Every project that Wallace Group embarks upon includes ensuring that products delivered to our Clients are of the highest quality. To that end, Wallace Group has established procedures for peer-reviews, plan checks when applicable and detailed technical reviews. Our in-house procedures for quality assurance and quality control will ensure we deliver a high quality work product to the City.

This task includes day-to-day coordination of all project activities, including scheduling and budget controls, staffing needs and coordination, client coordination, and other related project management activities.

1.1   Project Kickoff Meeting and Data Inventory

The purpose of this meeting will be to establish contacts, clarify any ambiguities in the proposed work/schedule, have a pilot project discussion and begin the process of more fully defining the database design for the Parcel and Road Centerline mapping project. We will prepare a list of information to be provided by the City and will distribute this list to staff for discussion at the kickoff meeting. We will coordinate all data collection activities with City staff as needed. A preliminary list of information to be requested includes, but is not limited to, the following:

From the City:

- 2005 digital color orthophotography
- Assessor parcel maps for the Paso Robles area in TIF format
- Recorded tract, parcel and survey maps for the Paso Robles area in TIF format
- Current parcel dataset in ESRI shapefile format (for reference only)
- Existing road centerline data acquired for Computer Aided Dispatch system

From the County of San Luis Obispo Assessor:

- Assessor parcel maps for the Paso Robles area in AutoCAD format (if available)

If the optional ArcIMS web development task is selected by the City, Wallace Group will also discuss initial functionality and design requirement for the proposed website.

Wallace Group and Applied Geographics will develop accurate and current parcel and road centerline datasets by completing the following tasks:

2.1   Database Design

The database design process is essential for efficiently developing the parcel and road centerline datasets required for this mapping project and will require input from the City about the design. The database design will outline the attribute fields and values required for capturing and effectively deploying the parcel and road centerline information through the City's existing and future GIS software infrastructure. This GIS database will also contain additional fields that will allow the City to connect other information, such as external databases, imagery, and other parcel and road centerline data to the datasets at a later time. The parcel and road centerline datasets with contain the required attribute fields as defined by the City.

2.2   Pilot Project

Wallace Group will create two (2) pilot areas, for the Westside and Eastside of the City, to establish the appropriate steps for the compilation of the entire parcel and road centerline datasets. The following are the tasks required to complete the pilot project areas:

- Complete the database design for the parcel and road centerline datasets
- Select pilot areas in the Westside and Eastside of the City
- Identify, review, and/or create data sources to be utilized for the project (survey

05/15/07 Agenda Item No. 17 - Page 12 of 24

field data, ortho photography, record plans, etc)
- Creation of the sample parcel and road centerline datasets for the Westside and Eastside pilot areas
- Production of draft checkplots, showing the final pilot data, that the City will review to better understand how the mapping will be completed
- Pilot review meeting with the City to review the development of the pilot systems

These checkplots will allow the City to verify that the information is being captured and presented correctly. With completed pilot project areas Wallace Group will continue to develop the remaining areas of the City.

2.3   Registration of Parcel and Road Centerline Data

One of the key components for this parcel and road centerline mapping project is to accurately register the new parcel and road centerline data to the City's existing ortho-photography base map. While this data source is a solid foundation for registering the newly acquired datasets, Wallace Group has determined that there are some issues with solely using this data source to register the new datasets. One issue is that the existing APN maps only show the right-of-way (ROW) boundaries with no additional planimetric features; such as building footprints, edge-of-pavement (EOP), or face-of-curb (FOC). Since this is the case you can only approximate the location of the APN maps to the ortho-photography. Another issue with solely using the ortho-photography is that it is already two years old and may not show new developments that have been recorded with the County, that are shown on the APN maps. In this situation there may not be sufficient features on the ortho-photography to accurately register the parcel and road centerline data. With respect to the road centerline data you can only approximate the location of the centerline from the ortho-photography.

To resolve these issues, Wallace Group proposes to locate, in the field using GPS, a sufficient amount of centerline, ROW, and property corner monumentation throughout the City. These survey points will be used to build a ROW boundary network that the newly acquired parcel and road centerline data can be registered to. This method will allow Wallace Group to position the ROW boundaries shown on the APN maps to survey boundaries located on the ground. This ROW boundary network will also be used to adjust the City existing road centerline data to the true centerline of the ROW.

2.4   GIS Parcel and Road Centerline Data Mapping

Wallace Group will create the framework for the City's ROW, but will utilize Applied Geographics, Inc. to complete the creation of the new parcel layer and adjustment to the City's existing road centerline data. Applied Geographics, Inc. will manage and quality control the parcel automation that will be performed by Genesys International.

The following is the process that will be used to create the parcel layer of this mapping project:

- Applied Geographics will receive the following data for the registration and automation of the Paso Robles parcel dataset:
  - Existing 2005 high resolution orthophotography already in California State Plane Zone 5 NAD 83.
  - Scanned map sheets in TIFF format
  - Current parcel database in shapefile format (for reference only)
  - Surveyed ROW boundary network produced by Wallace Group

- These data sets will be loaded into AutoCAD/GIS production system. And the following tasks will be performed:
  - The individual scanned APN sheets will be registered as a best-fit to the orthophotos and the surveyed ROW boundary network.
  - The parcels will be vector automated in AutoCAD using heads-up digitizing to accurately capture the parcel boundaries from the registered APN map scans. Straight lines will be maintained as straight line and true curves as curves.
  - Each parcel will be coded with Map, Block, Lot, APN as four different attributes fields. The existing, spatially inaccurate, parcel shapefile will be used as a guide to (along with the georeferenced sheets) to ensure accurate parcel naming/numbering.

The following is the process that will be used to update the existing road centerline data for this mapping project:

- Applied Geographics will receive the following data for the registration and automation of the Paso Robles road centerline dataset:
  - Existing 2005 high resolution ortho-photography already in California State Plane Zone 5 NAD 83.
  - Existing road centerline data provided by the City of Paso Robles
  - Surveyed ROW boundary network produced by Wallace Group
- These data sets will be loaded into AutoCAD/GIS production system. And the following tasks will be performed:
  - The individual centerline segments will be adjusted to the centerline features generated via Wallace Group's field survey and ROW boundary creation.

As part of this project, Wallace Group will provide the City with a quarterly maintenance program for the first year following the conclusion of the initial project. This program will consist of updating the City's newly created datasets with updates received from the County Assessor. Parcel lines and attribute data will be updated as part of this process along with adjustments to the newly adjusted road centerline within the City limits. Wallace Group will also develop a documented maintenance procedure that will allow City staff to maintain these datasets internally at a later time. If additional time will be required, Wallace Group can extend the contract and will provide services on a time and materials basis, based on the hourly rates as shown on our Schedule of Fees for the required staff.

3.0 DATA MAINTENANCE METHODOLOGY

At the conclusion of the project, Wallace Group's Survey and GIS staff will be available to provide the City with on-going training and technical assistance. The primary support staff for the City will consist of Ed Reading, PLS and Robert Lepore. This support staff will be available via email, phone, and on-site visits to the City. As part of the project cost, Wallace Group has allotted a limited amount of technical support time to aid the City in the use and operation of the newly developed datasets. If additional support will be required by the City, Wallace Group can extend the contract and will provide services on a time and materials basis, based on the hourly rates as shown on our Schedule of Fees for the required staff.

4.0 TRAINING AND ONGOING TECHNICAL ASSISTANCE

At the completion of the GIS Parcel and Road Centerline Mapping project, Wallace Group will meet with the City to review the overall outcome of the project and to discuss any further data integration, data automation or data maintenance assistance for future GIS application development.

5.0 PROJECT REVIEW AND FUTURE PLANNING MEETING

05/15/07 Agenda Item No. 17 - Page 14 of 24

GIS Parcel and Road
Centerline Mapping

1. Wallace Group will not be performing a city-wide boundary survey of City parcels. The ROW framework that will be created for this project will be used as a tool to more accurately register the parcel and road centerline to true space then solely using the ortho-photography.

2. Wallace Group will not be providing boundary resolution services for this project and will be mapping parcel information as depicted on record information.

The following are the required and optional deliverables that Wallace Group and Applied Geographics proposes to provide to the City as a result of this project:

Required

1. Database design for parcel and road centerline geodatabase for efficient data maintenance and future enterprise deployment.

2. Parcel data in a polygon feature class with current APN attribution stored in a central ESRI ArcGIS geodatabase and AutoCAD drawing formats.

3. Road centerline data in a polyline feature class with current street name and address geocode attribution stored in a central ESRI ArcGIS geodatabase and AutoCAD drawing formats.

4. Parcel and road centerline data to be accurately registered to current City digital ortho-photography and ground survey data captured and developed by Wallace Group for this project.

5. Parcel and road centerline data to be projected to California State Plane Zone 5 US feet coordinate system.

6. Methodology for documenting and handling anomalies found with source data.

7. Written recommendations on maintenance techniques and on-site training at completion of project.

Optional

1. Subdivision data in a polygon feature class with current subdivision and lot number attribution stored in a central ESRI ArcGIS geodatabase and AutoCAD drawing formats.

2. ArcIMS website design and 1-year of hosting services provided by Applied Geographics

1.0   Mapping of Underlying Subdivision Lots

If this optional task is selected by the City, Wallace Group will follow the methodology for creation of this dataset as defined in sections 2.1-2.4. The City will receive a separate dataset to manage these underlying subdivision lots.

2.0   ArcIMS Website Development and Hosting

This section illustrates and gives an overview of a basic yet highly scalable, interactive ArcIMS website that can serve as a model for what Applied Geographics can deliver to the City of Paso Robles. The standard organizing principle of this web-based parcel mapping application is a set of tabs that would appear across the top of the web browser screen. Each tab represents a specific level of map interactivity or functionality, e.g., interactive mapping or abutters identification and mapping would each be a separate tab. The user would simply select the tab associated with the desired functionality. The overall design and each tab will be therefore inherently simple and easy to use.

The initial web application will have a welcome page and the following three tabs:

*   Parcel Viewer
*   Interactive Mapping
*   Parcel Abutters

The following sections describe the web-site functionality for each page and tab.
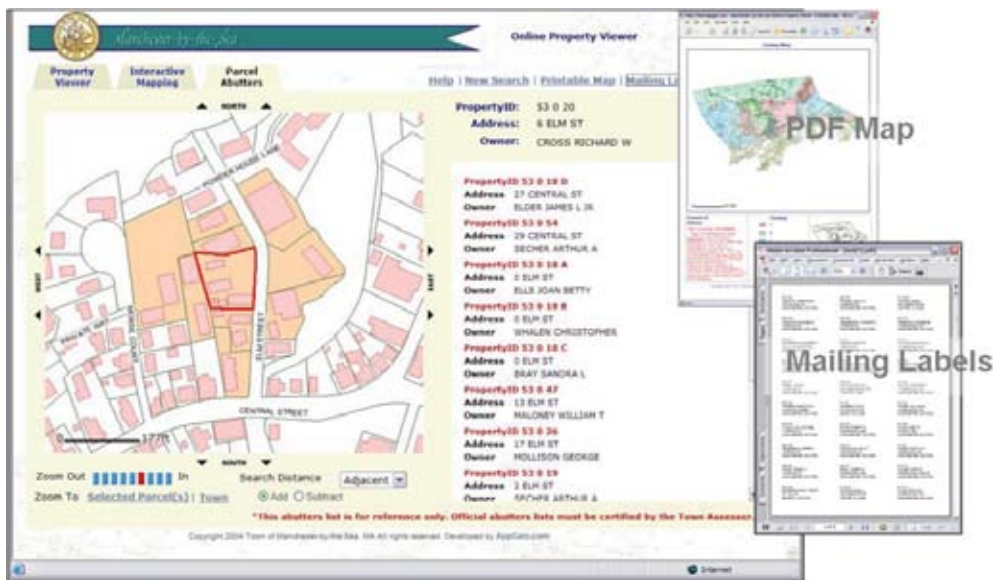
Example of Easy-to-Use Tab-based Structure and Various Outputs

2.1   Welcome and Property Search

This will be the entrance page for the web-site and it will include the search capabilities along with any instructions, disclaimers or general info specified by the Town. AppGeo will create a user interface that will allow users to search properties based on any of the following criteria:

- Owner's Name
- Parcel Identification Number
- Address

For any of the searches, the user simply needs to enter a portion of the name, street, parcel ID, etc. When the search yields more than one result, the system will return a list of closest matches. The user can then select the record of interest from the list of closest matches. If there is only one potential match for any search criteria, the user will be taken directly to the map of that property.

Also included will be a "Go Directly to Map" link which will take the user directly to a map of the entire Town for a visual property search employing the zoom and pan controls which allows them to zero in on an area for parcel level queries. The image below provides an example of what the search screen will look like.

Sample Welcome Page and Property Search

2.2 Property Viewer Tab

The Property Viewer Tab is the most basic view of the geographic data and the default map view when a property is selected. The Property Viewer Tab typically has the following features:

- Display a basic set of layers on map (parcels, parcel labels, street names, orthophotography), but allow orthophotography to be toggled On/Off .
- Display basic attributes from CAMA database. The Town may choose which fields to display.
- Printable 8.5"x11" map layout that will be provided to the user in PDF format and will contain preformatted map elements such as Town Seal, disclaimer, locus map, date, etc.
- Integrated graphic scale bar both on-screen and on printable map
- Interactive measuring tools to allow users to draw a line or polygon to graphically measure the distance or area on screen
- Allow the user to manually set the scale of map display, e..g., the user can use a text input box to express the map scale as 1"= _____ ft.
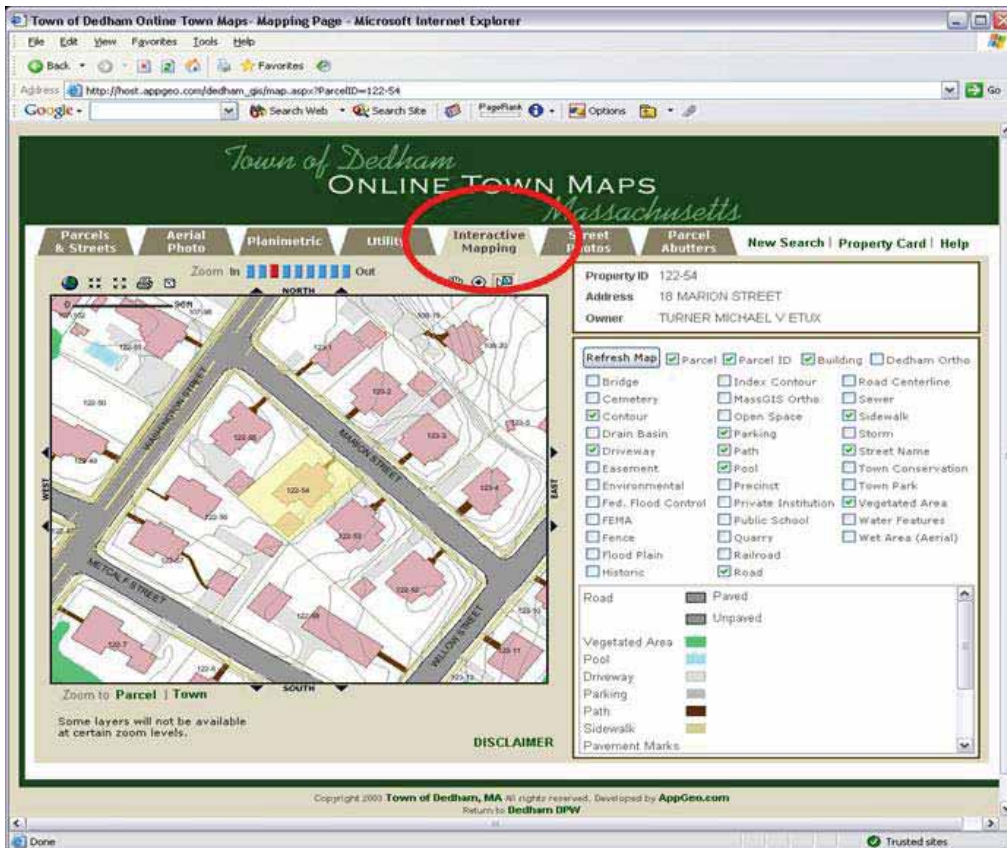

Sample Parcel Viewer Tab Web-interface

2.3   Interactive Mapping Tab

The Interactive Mapping Tab provides the user greater control over the map view, including the ability to select and toggle layers on or off. Layer control can treat layers individually, or group them thematically, e.g., streams and water bodies could be grouped as water. Layers will be further controlled by scale trapping, such that detailed layer only appear at higher resolution (zoomed in or large scale views). The layers will include:

- Parcels
- Zoning
- Water Bodies
- Streams
- Contours (RIGIS)
- Streets (RIGIS)
- Town-Owned Properties
- Drainage System
- Orthophotography

The Interactive Mapping Tab displays a graphic legend on-screen and will include the basic map navigation tools and allow the user to print versions of the map created on screen in PDF format. A separate printable legend will be available to users displaying all layers and associated symbology.


Sample Interactive Mapping Tab Web-interfface

2.5   Parcel Abutter Tab

The ability to select, display and generate lists of abutters to a particular property is a common and inherently useful feature of parcel mapping systems. Basic functions of the abutters capability include:

- Display basic layers on map (parcels, parcel labels, street names)
- Predefined Search Distances: tab will present up to 5 specified distances and the pull down list will also include text describing which statutes require specific distances (e.g. "300 ft – ZBA, Wetlands")
- Add Parcel/Subtract Parcel abutters interactively to map and list will automatically update
- Printable mailing labels in PDF format (Avery label size as specified by Town)
- Printable Map with abutters list
- The web page will also include any ancillary and descriptive text (or links to more detailed text) provided by Coventry that explains the process and limits of the on-line system (e.g. the users responsibility to potentially need to manually add some parcels).
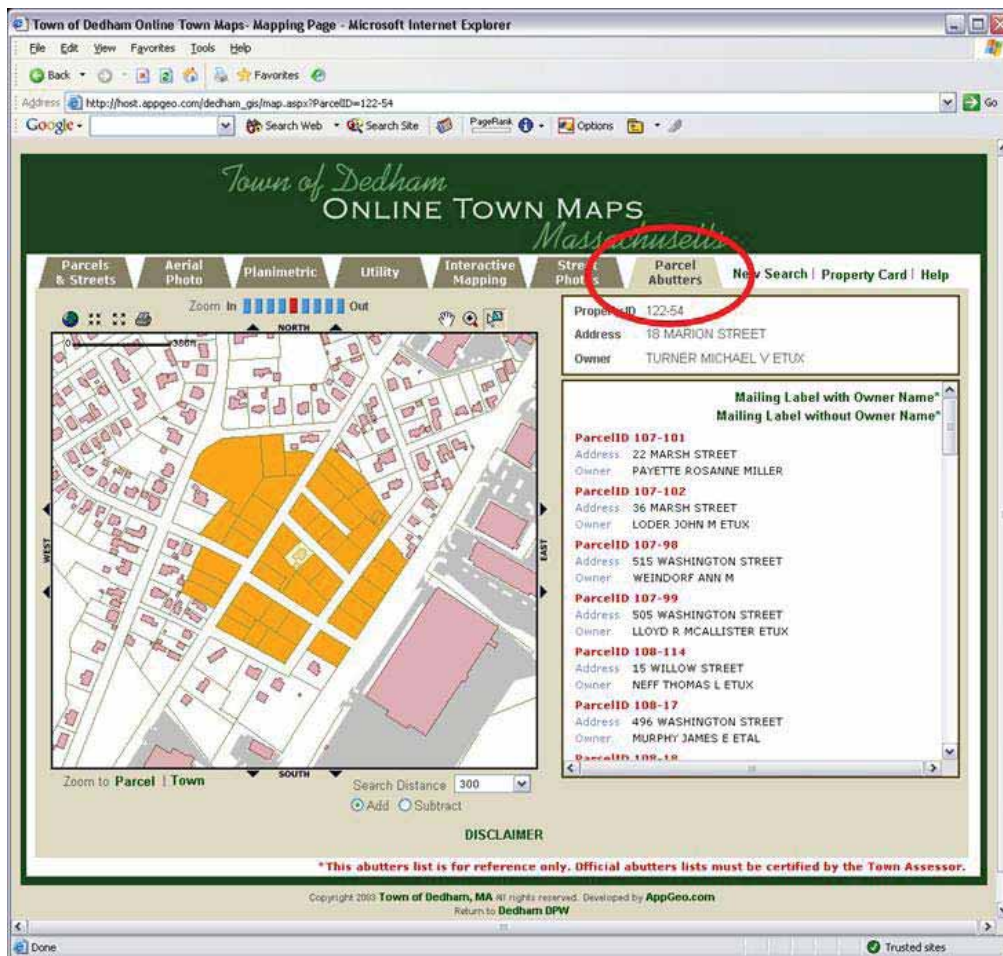
Sample Parcel Abutters Web-interface

2.6   Assumptions Covering the ARCIMS Website Development

AppGeo makes the following data and technical assumptions:

- Data are submitted in ESRI format (.shp, coverage or geodatabase) and will be displayed "as is" except for edits/formatting performed under task 4)
- Data Integrity is such that Assessor Owner Database linking works and attributes are accurate
- All Parcels have a APN
- Assessor Owner Database values are formatted as they should be displayed
- One-to-many condos relationships are properly handled in the submitted data
- Client will provide all color and symbology specifications at the outset of the project (or will defer all decision making to AppGeo).
- If client will host the application, all necessary technology must be installed, functional and available prior to the installation site visit (i.e. Web server, SQL Server, etc.)
- Browser (size, settings) will be 1024 x 768 (or larger)
- Browser Software will be modern by current standards (e.g. Internet Explorer version 6 or higher)
- AppGeo will include a disclaimer stating which browser system(s) and versions the application should be "best viewed" with
- AppGeo will develop in VisualStudio.NET and ArcIMS (i.e. the .NET framework must be resident on any server that is hosting an AppGeo developed application).
- AppGeo Hosted Websites will use ArcSDE and SQL Server (greater capabilities and performance)
- Clients must understand that the GIS layers will be put into SDE

Applied Geographics initial website development cost includes one-year of hosting at their secure in-house hosting facility. Following the first year the City can continue hosting services for $3,000 a year or have Applied Geographic aid in developing a strategy to allow the City to host the website internally.

ESTIMATED COST BREAKDOWN OF TOTAL FEE
GIS SERVICES FOR PARCEL AND ROAD CENTERLINE MAPPING
CITY OF EL PASO DE ROBLES

Task No.	Description	Work-hours by Classification					Fees		Total Cost
		Senior Land Surveyor $126	1-Man GPS $149	PM/ GIS Specialist $100	Survey/ GIS Tech. $66	Total Hrs.	Labor	Reimbursables	
	PROJECT TASKS								
1.0	Project Management/Coordination	10	0	16	0	26	$2,860	$50	$2,910
1.1	Project Kickoff Meeting & Data Inventory	4	0	8	0	12	$1,304	$25	$1,329
	SUBTOTAL TASK 1								**$4,239**
2.1	Database Design	0	0	8	0	8	$800	$0	$800
2.2	Pilot Project	8	0	8	0	16	$1,808	$0	$1,808
2.3	Registration of Parcel and Road Centerline Data	16	80	8	16	120	$15,792	$50	$15,842
2.4	Mapping of Parcel Data (AppGeo)	0	0	0	0	0	$6,200	$0	$6,200
2.4	Mapping of Road Centerline Data (AppGeo)	0	0	0	0	0	$1,200	$0	$1,200
	SUBTOTAL TASK 2								**$25,850**
3.0	Data Maintenance Methodology (1-yr)	0	0	16	30	46	$3,580	$50	$3,630
	SUBTOTAL TASK 3								**$3,630**
4.0	Training and Ongoing Technical Assistance	8	0	8	0	16	$1,808	$25	$1,833
	SUBTOTAL TASK 4								**$1,833**
5.0	Project Review and Future Planning Meeting	4	0	4	0	8	$904	$25	$929
	SUBTOTAL TASK 5								**$929**
	TOTAL LABOR HOURS	50	80	76	46	252			
	TOTAL ESTIMATED FEES								**$36,481**
	OPTIONAL PROJECT ENHANCEMENTS								
1.0	Underlying Subdivision Lots (AppGeo)						$2,000		$2,000
2.0	ArcIMS Website Design & 1-yr hosting (AppGeo)						$14,000		$14,000
	Webiste hosting following 1-yr @ $3,000/per year								
	TOTAL WITH OPTIONAL FEES								**$52,481**

Task	Description	Week
Schedule for Completion of Parcel and Road Centerline Mapping Project Estimated Contract Award/Notice to Proceed: May-June 2007	
1.1	Project Kickoff Meeting & Data Inventory	1
2.1	Database Design	1
2.2	Pilot Project	2,3
2.3	Registration of Parcel and Road Centerline Data	4,5,6,7
2.4	Mapping of Parcel Data (AppGeo)	8,9,10,11
2.4	Mapping of Road Centerline Data (AppGeo)	12,13,14
	Final Delivery Preparation	15
3.0	Data Maintenance Methodology (1-yr) (Occurs after project completion)	Varies
4.0	Training and Ongoing Technical Assistance (Initial and ongoing)	16
5.0	Project Review and Future Planning Meeting	16
	ESTIMATED TOTAL PROJECT TIME (months)	**4.0**
OPTIONAL TASKS		
1.0	Underlying Subdivision Lots (AppGeo)	8,9,10,11
2.0	ArcIMS Website Design (AppGeo) (3-month development beta to final)	5 to 16
	ESTIMATED TOTAL PROJECT TIME WITH OPTIONS (months)	**4.0**

RESOLUTION NO. 07-XXX

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASO ROBLES
AUTHORIZING THE CITY MANAGER TO ENTER INTO A CONTRACT WITH WALLACE
GROUP FOR GIS PARCEL & ROAD CENTERLINE MAPPING SERVICES

_____

WHEREAS, GIS is an implementation component of the adopted Information Systems Strategic Plan; a priority item in the City Council Goals 2007; and

WHEREAS, City GIS infrastructure requires parcel and road centerline information to support detailed mapping. Field service personnel require APN specific attributes for daily maintenance and planning; and

WHEREAS, City adopted 2005-2007 Budget provides funds for GIS mapping elements; and

WHEREAS, On March 14, 2007 the City issued a Request for Proposals (RFP) for the development of GIS parcel and road centerline data; and

WHEREAS, Wallace Group achieved the best rank score in the rating matrix

THEREFORE, BE IT RESOLVED AS FOLLOWS:

The City Council of the City of Paso Robles does hereby award a contract to Wallace Group of San Luis Obispo for GIS parcel & road centerline mapping services as documented in their proposal.

PASSED AND ADOPTED by the City Council of the City of Paso Robles this 15st day of May 2007 by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

                                                    _____
                                                    Frank R. Mecham, Mayor
ATTEST:

_____
Cathy M. David, Deputy City Clerk