



# Memorandum

**TO:** HONORABLE MAYOR AND  
CITY COUNCIL

**FROM:** Katy Allen  
Stephen M. Haase

**SUBJECT: SECOND AMENDMENT TO  
AGREEMENT FOR SPATIAL  
ADJUSTMENT OF GIS LAYERS**

**DATE:** May 23, 2005

Approved

Date

6/1/05

Council District: Citywide  
SNI: All

## **RECOMMENDATION**

Approval of second amendment to an agreement with MRF Geosystems Corporation for a Spatial Adjustment of Street Centerline, Parcel and Related Geographic Information Systems Layers Project, increasing compensation by \$137,000, from \$991,400 to \$1,128,400, and extending the term of the agreement to March 31, 2006.

CEQA: Not a project.

## **BACKGROUND**

On June 17, 2003, the City Council approved an agreement with MRF Geosystems Corporation (MRF) to horizontally adjust street centerline, parcel, and related Geographic Information Systems (GIS) layers in the amount of \$660,000. All street centerline deliverables were completed in a timely manner by MRF. The consultant agreed to perform additional work on the street centerline layer to accommodate the special needs of the Computer Aided Dispatch (CAD) system. Staff is now reviewing the final deliverable for the parcel layer adjustment.

On June 15, 2004, the agreement was amended to include additional GIS layers (sanitary sewer, municipal water facilities, General Plan, and Zoning) addressed in the original Request For Proposal (RFP) and Council memo but not included in the original scope due to budgetary constraints and a need to further define the scope of work and identify funding sources. Work has already commenced on these additional GIS layers, and staff expects to begin receiving deliverables in the next several weeks.

This second amendment further expands the scope of work to include Planning GIS layers related to those included in the original and amended agreement. These layers include General Plan amendments, zoning changes, annexations, development permits (including conditional use

permits, planned development permits, site development permits, and special use permits), tentative maps, and variances, which layers contain a combined total of over 27,000 records. These Planning layers provide essential data on applications approved over the last several decades or more, whereas the annexations layer contains a complete history of San Jose's growth since its incorporation in 1850. Thus, for example, while the "City limits" layer (containing just one geometric shape) was included in the original agreement, this amendment is necessary to provide complimentary and detailed data on the several thousand annexations that cumulatively define the City's jurisdictional boundary. Finally, fire hydrants owned by San Jose Water Company and Great Oaks Water Company are being added to the Municipal Water system hydrant GIS layer to meet the specific needs of Public Safety staff responding to emergency calls.

Public Works developed the City's GIS basemap from a PG&E map obtained during the late 1970's. All other GIS layers have been created using this basemap. Map making technology and other software applications employed by the City during that time did not require the same precision as today's GIS. Through an accumulation of errors, which vary from point to point, the geographic coordinates of most features have been depicted anywhere from 50 to 800 feet from their true position. To improve positional accuracy, the graphical representation of each feature is being adjusted to match its corresponding position as shown on available digital orthophotos to attain a horizontal accuracy of plus or minus two feet on the valley floor and plus or minus five feet in hillside areas.

Planning, Building and Code Enforcement (PBCE) creates and maintains GIS data used for a variety of purposes, including support of the City's on-line permit system. The adjustment of additional layers contained in this second amendment are important for the provision of accurate land use and property development information to staff, applicants and other customers. Map lines and points must properly align with basemap features for search, display and automated entry into the on-line permit database.

After the adjustment, these GIS layers will become an integral tool for all City staff. The project supports enterprise (citywide) application needs and the proposed regional GIS implementation program being pursued by the City of San José, the County of Santa Clara and the Santa Clara Valley Water District. When completed, the City's basemap and layers will fit into a regional map that will facilitate data sharing and reduce duplication throughout the County.

## **ANALYSIS**

This second amendment to the agreement is being recommended to Council for approval in order to accommodate additional layers related to those described in the original memo as "Potential Future Tasks." Potential future tasks were to include the spatial adjustment of other critical GIS layers using ortho-rectified photos (and the adjusted street centerline and parcel layers). Examples of these layers would include sanitary, storm, water, streetlights, Zoning, and General Plan information.

As with the original agreement and first amendment, performance of this spatial adjustment work by City staff has been considered as an alternative to hiring a consultant. However, the size and complexity of these particular layers are such that it is not practical or cost-effective for the City to address these spatial adjustment needs, as existing GIS staff resources are already fully utilized. A new RFP for the work was considered impracticable. A continuation of the agreement with MRF is most advantageous for the City because MRF has already completed work on the street centerline and parcel layers in a timely manner and they are very familiar with the City's GIS data. Also, this additional work is an extension of the work included in the first amendment.

An extension to the term of the agreement is being recommended from December 30, 2005 to March 31, 2006 in acknowledgement of the consultant's willingness and efforts to perform this additional work and to modify the street centerline layer. It should be noted that the City reprioritized the consultant's work late last year, shifting focus from the parcel layer to the street centerline layer in order to support CAD during a critical phase of its implementation.

**OUTCOMES**

Approval of this second amendment to the agreement will allow effective use of GIS technology to provide mission-critical information to City staff, applicants and other customers.

**PUBLIC OUTREACH**

Not applicable.

**COORDINATION**

The second amendment to the agreement for this project has been coordinated with the Departments of Public Works, Fire, Planning, Building and Code Enforcement, Information Technology, City Manager's Budget Office, and City Attorney's Office. On January 20, 2005, a business case for this second amendment was approved by the Information Technology Planning Board (ITPB).

**COST IMPLICATIONS**

1. AMOUNT OF RECOMMENDATION:	\$137,000
2. COST OF AGREEMENT:	
Agreement – Street Centerline Task	\$235,000
Agreement – Parcel and Other Basemap Tasks	\$425,000
First Amendment to Agreement	\$331,400
Second Amendment to Agreement	<u>\$137,000</u>
Total	\$1,128,400

3. SOURCES OF FUNDING:

- Street Centerline Task-- 001--General Fund
- Parcel and Other Basemap Tasks-- 465--Construction Excise Tax Fund
- First Amendment to Agreement-- 545--Sewer Service and Use Charge Capital Improvement Fund
- 500--Water Utility Capital Fund
- 001--General Fund
- Second Amendment to Agreement-- 001--General Fund (Development Fee Reimbursed)
- 392--Public Safety Capital Fund

4. FISCAL IMPACT: This project is consistent with the Council-approved Budget Strategy General Principles section in that it will streamline operations and implement cost saving innovations while supporting vital public safety services. The proposed operating and maintenance costs of this project have been reviewed, and it has been determined that the project will have no significant adverse impact on the General Fund operating budget.

**BUDGET REFERENCE**

Fund #	Appn #	Appn Name	RC #	Total Appn	Amt. For Contract	Adopted Budget Page	Last Action (Date, Ord. No.)	Budget (Date, Ord. No.)
001	0582	PBCE Non-Personal	102	\$3,219,616	\$125,000	VIII-110	2/8/05, Ord. No. 27350	
392	5855	Fire Data Systems Maintenance	137129	\$50,000	\$ 12,000	2004-05 Adopted Capital Budget Page V-400	Not Applicable	
		<b>Total</b>			<b>\$137,000</b>			

**CEQA**

Not a project.

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