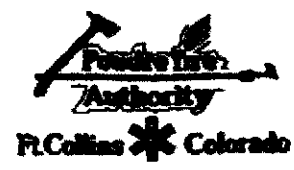


2:00pm
6/14/22

Proposal for Placement of Feature Linked Address Annotations

Proposal Number P-836

Prepared for:
The City of Fort Collins
And
Poudre Fire Authority
Fort Collins, CO



Prepared by:
Techni Graphic Systems, Inc.
Fort Collins, CO



Introduction and Executive Summary

Techni Graphic Systems, Inc. (TGS) is dedicated to providing quality products and services in the field we call *Visual Information Systems*. This field includes the entire spectrum of visual and graphical interfaces with digital databases, including Geographic Information Systems (GIS), custom software and applications development, digital imaging, and Internet applications.

TGS is pleased to respond to The City of Fort Collins' Request for Proposal (RFP) for the Placement of Feature Linked Address Annotations Project (Proposal Number P-836). TGS will work cooperatively with the City of Fort Collins GIS Department and The Poudre Fire Authority (PFA) to produce the highest quality, timeliest, and most cost-effective solution. TGS is ideally suited to support the City of Fort Collins GIS and PFA with data development services.

TGS would like to emphasize the following specific areas of expertise, which make TGS highly qualified to provide GIS data conversion services:

- TGS has over 19 years of experience providing GIS consulting and database services to government agencies, including Denver Water Board, Greater Peoria Sanitation District, Larimer County (Colorado), Wayne County (Ohio), National Imagery and Mapping Agency (NIMA), U.S. Geological Survey (USGS), U.S. Forest Service (USFS), National Oceanic and Atmospheric Administration (NOAA), and many others.
- TGS has worked with Arc/Info and other ESRI products and applications since 1989, and has previously teamed with ESRI as a data conversion subcontractor on NIMA projects.
- TGS is an ESRI Business Partner and Certified Developer.
- TGS is a Space Imaging Strategic Partner.
- TGS is a GE Smallworld World Class-Partner.
- TGS has made a strong commitment to implementing ESRI's Arc/Info 8 technology in our current production environment. TGS has implemented all aspects of Arc/Info 8 Desktop technology including personal Geodatabases, SDE Geodatabases, and ArcSDE for Oracle and SQL. TGS is poised to be a leader in the Object Oriented, Open Architecture evolution of Arc/Info 8.
- TGS utilizes 11 Arc/Info 7.2.1 licenses for increased production capacity for a total of 22 seats that are run non-stop for two shifts.
- TGS is second only to ESRI in its resources to convert data in an Arc/Info environment.
- TGS currently employs 11 full time programmers with expertise in VB, Avenue, AML, Java, C++, Magik, SQL, Oracle and other common high-level languages.
- TGS has built a solid reputation for data conversion in the Arc/Info environment. Our in-house programmers have developed innovative applications, that ensure accurate and efficient data capture and coding.
- TGS' in-house applications development staff has the expertise to create, improve, or troubleshoot sophisticated GIS automation and data conversion applications.

TGS intends to become a leader in the visual information environment with an emphasis on Geographic Information Systems, high quality Internet applications, data conversion, broad-spectrum software development, and comprehensive data management systems.

Principal Place of Business

Techni Graphic Systems, Inc. is an Ohio Corporation based in Wooster, Ohio, Federal Tax Identification number 34-1750263, with an office in Fort Collins, Colorado. The Fort Collins, Colorado office is the principal place of business with 57 employees and the facility where all data conversion activities take place. The Wooster, Ohio office currently employs 20 and it is the location of the majority of programming and business development activities.

Organizational Structure and Key Staff Members

TGS' long-term involvement in GIS development means that many of the key management personnel who will be involved in this project have considerable expertise in the important elements of this project. The production team at TGS has a proven record of continually evolving improvements to the processes used and to the quality of our final product. Our professional people take great pride in the extremely low error rates when their work is reviewed and TGS' outstanding accomplishments in first-time acceptance by our customers.

TGS dedicates a team of individuals for every project. A team consists of a Project Manager, GIS Technicians, and QA/QC specialists. Each team is supported by a GIS specialist, and programmers. This structure enables TGS to quickly ramp up and get a project into the production pipeline. In addition, our team structure enables TGS to streamline production, increase efficiencies and reduce errors. TGS will dedicate a team of staff members to this project who specialize in parcel-related projects.

The following key individuals have made great contributions to TGS' success with GIS and will continue to do so on the The City of Fort Collins and PFA GIS Mapping Project. Full Resumes are provided in Appendix A.

TGS will not subcontract any of the work to be performed.

Key Individuals

Jim Chappell – Project Manager

Mr. Chappell has experience at every level of GIS production at TGS. Most recently, he has been the project manager for over \$400,000 worth of data conversion work for Denver Water. He has successfully managed data conversion projects for a variety of clients offering innovative methodologies gleaned from his varied experiences. He has distinguished himself at TGS with detailed project tracking, his ability to handle multiple projects simultaneously, and his constant communications with clients. Mr. Chappell will be the main point of contact for technical issues for this contract.

Kenneth Krumm, GIS Specialist / AML Specialist

As the TGS technical support manager with the most experience with complex data conversion tasks, Mr. Krumm will be responsible for setting up new tasks, establishing

Standard Operating Procedures (SOP) for the project, and training GIS Data Technicians on the SOP for the parcel map and street line coverages. Mr. Krumm has senior-level technical expertise in GIS, ArcInfo, and data conversion at TGS, gained in his 15 years with the company.

Mr. Krumm will apply his experience with a wide variety of data conversion projects to enhance the high-quality production processes at TGS. His areas of expertise include project set-up, ArcInfo tools and applications for production or quality assurance processes, and complex data translation from one system or format to another. Mr. Krumm has managed and provided technical support on virtually every type of project TGS has done since 1986. He has attended ArcInfo training sessions at ESRI's Redlands, CA offices and ArcInfo User Conferences at various locations.

Meisha Glazer, Manager of Professional Services / Production Manager

Ms. Glazer has been the Director of Professional Services at TGS since April of 2001. She is responsible for managing sales and production effort for the Fort Collins division of Techni Graphic Systems, Inc. Her major functions include: 1) Managing Sales team and assisting with proposal creations, 2) Maintaining expenses at a budgeted level, 3) Discovering and pursuing new business partners and opportunities 4) Staffing projects once they are won, 5) Tracking all projects that are currently active and the labor efficiency of those working on them, and 6) Scheduling future projects and future TGS personnel needs.

Availability

TGS is willing to dedicate the necessary resources to this project immediately in order to meet all deadlines in the project timeline. TGS is aware that the Purchase Order will be issued May 24th and that the due date for the Pilot Project will be June 6th. TGS is also aware that the final delivery date is July 8th.

Methodology

After receipt of the addendum, it has been brought to the attention of TGS this project should be treated as though being comprised of two tasks.

The first task deals with creating annotation on all parcels of the COFCs parcel coverage utilizing an external address file. TGS has reviewed the address file and the parcel coverage along with the orientation requirements of the PFA and has come up with an automated solution to capturing the annotation within the ESRI Arc8.1 environment and adjusting the placement of that annotation according to the parcel's orientation.

The process TGS has derived is contingent upon the deliverable being the annotation subclass only. This was confirmed to be true through a telephone conversation with Tim Morales. The reason behind TGS needing the parcel coverage to not be a deliverable is the first step of our proposed methodology is converting the regions within the parcel coverage into polygons. These polygons or, more specifically, the arcs that create them, will become the means for orienting the annotation.

A link has been identified between the parcel coverage and the external address file, and that link is the parcel number. This link will be utilized to create the annotation. A tool has been created that will run through all of the polygons within the parcel coverage and find the

related address information from the external file. If the parcel number in the external address file has a corresponding address number, that number will be placed in the \$text field of the annotation. This is how the annotations will be derived. All of the parcel polygons will be gone through utilizing cursors.

Placement of the annotations will be contingent upon the angle of orientation of the arcs creating the parcel polygon. Given a single point position of an annotation, the repositioning to a two-point orientation is derived from x, y ratio of a selected arc's nodes coordinates. Offset from the single point position will be +/- 0.5 feet on both the x and y coordinates to create a two-point annotation centered on its origin and will be approximately a foot in length. This will create an angle for the annotation that is perpendicular to the nodes of the street side arc. This will allow for the placement of the annotation to replicate that outlined in the example shown in the RFP.

TGS has already experimented with the above methodology and has found that it works. All of the annotation is placed according to the angle of the parcel it resides within. However, given the PFA's specific quality guidelines, QC will be performed on the entire coverage. Each parcel will be reviewed for placement accuracy and changed accordingly if needed.

The second task surrounds creating a secondary annotation subclass for building numbers for town home and condominium parcels. This information cannot be derived using any automated procedures due to the origin of the data. TGS understands the map book currently used by the PFA is the only source for this information. With the below methodology proposed, TGS recommends a new parcel shape file be turned into the COFC as a deliverable.

Each page will be reviewed and assessed for containing condominium or town home parcels. At the same time the page is being assessed, the parcel coverage with the page number grid will be available using ArcView. Whenever the map book and the parcel coverage match, meaning the parcels indicated in the map book are represented in the parcel coverage a unique number will be added to that parcel polygon. That unique number will then be replicated within the external address file along with the building number as it appears within the map book, parcel number, address number and any other information the PFA feels is necessary to duplicate. If the map page and corresponding parcel coverage do not match, no further actions will be taken to add building number information to either the parcel coverage or the external address file.

TGS estimates there are 540 pages to be reviewed contained within two map books. Once all of the pages have been reviewed and assessed and all data has been added to the external address file and the unique identifiers have been attributed to the parcel shape file, the parcel shape file will be converted into a coverage. A region to poly routine will be run on the coverage to create polygons out of the regions, and a routine will be run on the data similar to the routine mentioned above.

The difference between the above methodology and that needed for this new data will be the relate item. In this procedure the relate item will be the unique identifier. If a parcel within the external address file has a unique identifier that correlates to a unique identifier within the parcel coverage, the building will be added to a building annotation subclass and oriented according to the above methodology.

Ultimately the original parcel coverage will be altered to adhere to the addition of a new annotation subclass that will be related to a new item as suggested by the COFC.

Cost Estimate

The following cost estimate has been prepared specifically for The City of Fort Collins Proposal Number P-836. This cost estimate has been prepared in good faith with information provided by The City of Fort Collins. TGS will charge the amounts set forth in the cost estimate unless there is a change in scope.

Task 1	Cost
Placement of 58,000 parcel addresses linked to City's address database:	\$11,500
QA/QC of Address Annotation and Placement:	\$5000
Delivery of Addresses as ESRI ArcInfo annotation subclass:	N/C
Subtotal:	\$16,500 (13,500)
Task 2	
Review and assess 540 map book pages:	\$7,000
QA/QC of Building Annotation and Placement:	\$5,000*
Delivery of Address and Annotation ESRI ArcInfo annotation subclass:	N/C
Subtotal:	\$12,000 (7,000)
Total:	\$28,500
	(22,500)

* This line item could be done as a part of
TASK 1

Experience and Reference Summary

Client: Jefferson County, Colorado
Dates: 2/28/2001 - Present
Project: Parcel Annotation
Cost: \$301,000
Contact: Jefferson County Assessor's Office
100 Jefferson County Parkway
Golden, CO 80419-2500

Project Scope and Description:

TGS has been working with Jefferson County on this phased project that consists of data conversion for county wide cadastral maps, custom font set creation and application development.

Phase I

TGS was contracted by Jefferson County to update existing cadastral maps by capturing and coding annotation from hard copy source material. In order to duplicate the 'look' of the hard copy source material, TGS created a custom font set that included all symbols and font styles that were currently in use by Jefferson County's map division. TGS completed Phase I with a 99.6% accuracy rate.

Phase II

Following Jefferson County's assessment of the overall quality and accuracy of their mapping database, TGS has been tasked with updating Jefferson County's database in an effort to give the county's own GIS division a head start for future maintenance. In addition to completing map updates, TGS' application development team has been tasked with designing a mapping database management tool for use by Jefferson County's GIS division upon completion of Phase II.

Client: Larimer County, Colorado
Dates: March 1999 - Ongoing
Project: Parcel Conversion and GIS Support
Cost: \$50,000
Contact: Jeff Rulli, County GIS Coordinator
200 West Oak Street
Fort Collins, CO 80522
(970) 498-7732
rullij@co.larimer.co.us

Project Scope and Description:

TGS provides Larimer County GIS with on-going GIS support and data conversion services. Most projects involve the conversion of Larimer County's various cadastral data types to ArcInfo coverages.

Platted Subdivisions

Larimer County, Colorado sits along Colorado's front range. Over the past 10 years, this area has experienced rapid growth and development. As a result, new subdivisions are platted on an ever-increasing basis. TGS has helped Larimer County GIS keep pace with the rapid addition of new platted subdivisions.

Parcel Layer Creation

TGS is in the process of helping Larimer County create a new, fully-annotated parcel layer for the entire county. This project consists of splitting parcel data out of an AutoCAD .dxf layer into ArcInfo coverages. The parcel data must be cleaned, rebuilt, snapped to an existing quarter section coverage and edge-matched.

Voter Precinct Redistricting

TGS has enabled Larimer County to efficiently meet the requirements of the Federally mandated redistricting of its voter precincts. This was accomplished through a two-part process. In the first phase, TGS created a parcel address point coverage by linking the parcel number to the address in the Assessor's database. Voter addresses from the Elections database were then geocoded to the corresponding parcel address. This provided the county with a point coverage of the total number of voters that reside in each parcel. During the second phase of the project, TGS technicians worked side-by-side with elections staff members to re-draw precinct boundaries based on the voter points coverage. TGS programmers created ArcView extensions to easily calculate the total number of voters in a proposed precinct and assign the new precinct number to each voter in the precinct.

Client: Denver Water Board
Dates: August 1999 – March 2001
Project: GIS Consulting Services
Cost: \$499,000
Contact: Mr. Dan Genrich, Applications Development Manager
1600 West 12th Ave.
Denver, CO. 80524
303-628-6253
dhg@water.denver.co.gov

Project Scope and Description:

TGS was contracted by Denver Water to update their GIS through entry of 2 years worth of facilities as-built drawings and landbase parcel and easement information. TGS created a custom Arc/Info application to run on a Unix and NT platform that replicated Denver Water's custom BaySys application that ran Arc/Info 7.2.1 on an OpenVMS platform and stored the GIS data as a Map Library. The application also connected to and updated a related Oracle database that held the attribute information and generated unique feature identifiers. Custom tools and routines were added to this application to further automate capture and coding tasks and thus make production more efficient.

This project was the first use by Denver Water of an outside consultant to update their GIS. TGS and Denver Water uncovered numerous data quality issues during the initial Project Planning Meetings and Project Initiation Phase. A recent migration to Oracle left about 7% of the features without unique identifiers. Additionally, no Arc/Info tools had been written to perform QA/QC on coverages before they were reinserted into the Library. AML routines were written to create tables in Oracle to track the manipulation of graphic features so that the synchronicity between the graphic features and the records in the Oracle database could be maintained and quality checked. Several other data integrity issues were also identified involving data corruption and application errors

TGS was able to incorporate an existing Data Dictionary that defined all of the Arc/Info feature classes, the related Oracle tables, and all of the valid values for attributing each feature, into the custom application. This approach to application design, which coded QA procedures into the forms and routines, allowed TGS to take a proactive approach to minimizing technician error and to eliminating non-valid attribution of features. Project documentation was produced that outlined the conversion methodology and set guidance for feature extraction. The Project Manager set project milestones, tracked the project progress through all project steps.

The first project contract was worth \$324,000. Based on TGS' performance of the first contract, a second contract for \$175,000 was awarded to enter 751 additional as-built drawings into the GIS. The methodology used to capture and code features was identical to that of the first contract. However, the methodology for extracting data from the Library and the associated QC steps were changed dramatically for the second contract to address changes in operations policy at Denver Water.

Specifically, continuous update of the Library with the new as-built drawings from the Engineering Department was required. This was accomplished through extraction of subsets of data from the Library for update by TGS, which allowed work to be performed on different portions of the Library simultaneously. In addition, third-party QA/QC software was purchased that set a standard for acceptable work. Work continues on the second contract. So far, every project milestone has been met and TGS is on track to meet the final deadline date.

Client: Merrick and Company (Long-term reference)
Dates: October 1997 – Ongoing
Project: Various
Costs: Past 3 years invoicing: **1999:** \$200,000; **2000:** \$130,000; **2001:** \$50,000
Contacts: Mr. Jerry Boyd, Manager, GIS Applications Development
2450 S. Peoria Street
Aurora, CO 80222
(303) 751-0714

Project Scope and Description:

TGS has worked with Merrick and Company as a subcontractor performing GIS design analysis and data conversion in Arc/Info and ArcView for the past 4 years. TGS has worked with Merrick to help their clients to define their functional requirements, set project scopes of work, and to design and implement data models. TGS has also performed all of the data capture tasks for these projects. All of its work with Merrick has been completed on time and on budget.

Boulder Easements, \$104,000, Complete:

TGS is working with Merrick to help the City of Boulder, Colorado to design an effective and efficient way to store easement information in their Arc/Info Map Librarian GIS. TGS helped to define a data model, which would store all of the appropriate attribute information about the easements in two regional subclasses. After the data model and valid attributes were defined, TGS captured and coded all easements from the 128 quarter section maps of the City. Additionally, TGS reviewed 128 AutoCad drawings for additional easement information, which was then conflated with the Arc/Info coverage. The City was divided into six areas based on the number of easements. All quarter section coverages for an area were edgematched and appended and a single, seamless regional coverage was then created and delivered. At the end of the project all areas will be edgematched and appended into a single, seamless Arc/Info regional coverage.

TGS created several AML programs to automate redundant tasks, assist with region creation, and to guide the user through the project workflow. Quality assurance procedures were built into the application to minimize user error, non-valid attribute values, and standardize symbology. The TGS Project Manager and Team Leader defined the project methodology, client requirements, and project schedule. These documents were then distributed to all team members and updated as the project evolved.

Client: U.S. Geologic Survey
Dates: August 1999 – May 2001
Project: National Geologic Map Database
Cost: \$99,500
Contacts: Ron Wahl
US Geological Survey, Geologic Div.
P.O. Box 25046, M.S. 913
Denver, CO 80225
(303) 236-1320

TGS' involvement with the USGS National Geologic Map Database (NGMDB) began with the award of three geologic maps from the Greater Yellowstone Region of Montana to digitize in Arc/Info. As TGS worked with Ron Wahl of USGS to complete the data conversion project in a fashion compliant with the USGS data model, Mr. Wahl shared some of the problems his team was having with finding the right software platform to implement the object-based data model for the NGMDB. Critical elements of the USGS requirements included a fully implemented object-relational database system, a version-managed multi-user environment, the capability to support a distributed, seamless database, and ability to access the data through multiple front-end systems including ArcInfo, AutoCAD, Microstation and others.

TGS submitted a proposal to demonstrate a pilot project for a geologic map database implementing the USGS data model in a version-managed, object-relational database management system developed by Smallworld Systems, Inc. (now GE-Smallworld). TGS successfully demonstrated the pilot project implementing an early version of the North American Data Model for the first three Yellowstone maps at the USGS National Center in September 1999 and at the Geological Society of America Conference in Boulder.

TGS is currently working on the next phase "Collaborative Benchmarking Prototype" for the NGMDB, a significant step beyond the pilot project. The Development Team consisting of TGS and GE-Smallworld is collaborating with USGS, the Kentucky Geological Survey, and the North American Data Model Committee. Goals of the Prototype project include:

- implementing a physical data model that takes advantage of the capabilities of the GE-Smallworld software while also incorporating the concepts of the newest logical data model created by the North American Data Model Committee;
- developing a seamless database of geologic maps from the USGS and Kentucky Geological Survey;
- demonstrating the possibilities for providing standard and custom subsets of the data to users in formats such as Shapefiles;
- linking the National Database to external databases; and
- providing access to the database via standard browsers through Internet or intranet connection.

To date all work on both phases of the National Geologic Map Database has been performed within cost and schedule constraints.

Client: AVP Catastrophe Services, Property Loss Research Bureau
Dates: July 2001
Project: ArcImS Disaster Website
Cost: \$39,450
Contact: Hugh Strawn
AVP Catastrophe Services
Property Loss Research Bureau
3025 Highland Parkway, Suite 800
Downers Grove, IL 60515-1291
630-724-2230

Project Scope and Summary:

AVP Catastrophe Services has a business need to disseminate to its members (large insurance companies) information regarding possible claims activities resulting from natural disasters. It can be several days before claims adjusters are allowed into a damaged area and precious time is often lost that could be spent assessing total number and location of potential claims, prioritizing customer needs, locating claim agents, and preventing fraud.

TGS provided a solution to address these business needs and work within this business model. TGS leveraged its relationship with Space Imaging to get priority scheduling for images from their 1-meter resolution IKONOS satellite. Upon occurrence of a disaster, IKONOS images of the affected area are loaded onto a TGS web server running ArcIMS. Using this imagery, TGS technicians delineate the extent and severity of damage as shapefiles. The imagery, disaster-extent shapefiles, and geocoded street addresses are then made available to ArcIMS through an SDE gateway served by TGS over the Internet to member companies for use by claims personnel. This web-hosting and remote sensing application is funded through the end September 2001.

TGS also developed, hosts and provides technical support for an ArcIMS web site for the Insurance Services Trade Show convention. The site is www.tgstech.com/plrb. Potential vendors can choose the booth they wish to occupy and pay for that booth through our site. This project was completed between in the months of November and December of 2001 and we are continuing to support the site for through July 2002.

Client: National Imagery and Mapping Agency (Long-term reference)
Dates: May, 1994 - Ongoing
Project: Vector Smart Map Level 1
Cost: \$1,639,000
Contact: George Hoff
National Imagery and Mapping Agency
4600 Sangamore Rd. M.S. D-5
Bethesda, MD 20816-5003
(314) 263-4325

Project Scope and Summary:

In 1998, the National Imagery and Mapping Agency (NIMA) solicited proposals with the intention of moving from contracting based primarily on competitive bidding to contracting based on qualifications and performance, for a broad range of geospatial information services. Those services fell under the broad categories of surveying, mapping and charting, and photogrammetry and imagery analysis.

TGS chose to offer GIS services under the "Mapping and Charting" sub-heading as a member of a team of vendors with Space Imaging, of Thornton, Colorado, as the prime contractor. In December 1998, the Space Imaging team was awarded an Omnibus Contract based on qualifications and the excellent record of TGS on VMAP tasks under the previous Basic Ordering Agreement (BOA).

Since that time, NIMA has continued to recognize the quality and timeliness of TGS' performance by awarding the Space Imaging team task orders for DNC, VMAP, and the new Tactical Operational Data (TOD) product. Space Imaging has passed nearly all of those task orders on to TGS in preference to other subcontractors. In 1999, TGS performed \$637,000 of work under this contract and will complete approximately \$1,800,000 in 2000.

TGS' large VMAP libraries (each with data from 30 to 80 planning maps have been delivered as much as five months ahead of the contractual due date, requiring only minor corrections. The initial collection of VMAP Level 1 (1:250,000 scale sources) is nearly complete at this time,

TGS was the only contractor selected by NIMA to produce TOD Level 0 libraries, which are designed to supplement DNC data collected from standard nautical navigation charts with information from military operational area charts. TGS used its excellent cooperative relationship with NIMA Contract Production Team personnel to produce outstanding results for a new product with a completely new specification. Of the 55 TOD libraries reviewed by NIMA to-date, 47 have been accepted on first submission in VPF.

Client: National Imagery and Mapping Agency (Long-term reference)
Dates: March, 1993 - Ongoing
Project: Digital Nautical Charts
Cost: \$1,681,000
Contact: Rodney VanderPol
National Imagery and Mapping Agency
4600 Sangamore Rd. M.S. D-5
Bethesda, MD 20816-5003
(301) 227-5490

Project Scope and Summary:

TGS was one of the first contractors selected to work on the DNC project in 1993. From the start of the project, data collection and QC have been conducted entirely within an Arc/Info environment, with final conversion to Vector Product Format (VPF) performed only before delivery to NIMA. TGS GIS programmers have worked continuously to develop AML applications and tools to improve the efficiency and accuracy of all steps in the data conversion process. The quality of TGS' DNC product has also benefited from an excellent cooperative relationship with personnel. TGS has been steadily decreasing the number of errors and discrepancies in its DNC deliveries by using the annotated chart copies provided by the review section, by regularly communicating with NIMA, and through on-site reviews of interim (Arc/Info) data by NIMA Contract Production Team members. This process culminated in NIMA's acceptance of a 32-chart coastal library created by TGS *on first submission* in August 1997. In July and August 1998, TGS participated in a very challenging proof-of-concept project to produce updated DNC data by performing "maintenance" on an existing library, while also producing graphic files and negative transparencies to print hard copy charts. TGS successfully completed this proof-of-concept, and its effort received praise from NIMA Production Management personnel. TGS performed \$1,681,000 of work on this project in 1999 and expects to complete an additional \$1,800,000 in 2000.

Concluding Statement

TGS has proven it can deliver world class Geographic Information Systems Services *on time and at very competitive prices*. TGS has earned a reputation for straightforward cooperation and communication with its clients. The City of Fort Collins and PFA can trust and rely on TGS for outstanding service, products, and delivery. TGS is eager to serve you.