Proposal to Provide Demographic Services for Request for Proposal No. 21-016

GEOinovo Solutions Inc.

City of Carson

Table of Contents

1. Company Certification and Personnel Verification

April 22, 2021

Sander Huang
Purchasing Manager
City of Carson
701 East Carson Street
Carson, CA 90745

Re: Request for Proposals Number: RFP 21-016, Demographer Services

Dear Sander Huang,

GEOinovo Solutions Inc. (GEOinovo) is pleased to respond to the invitation for Request for Proposal Number: RFP 21-016, Demographer Services. We believe we provide the City of Carson (City) with a competitive and responsive offering. For this project, the GEOinovo Team will consist of GEOinovo and our subcontractor La Cresta Demographics.

As a GIS company, GEOinovo supports our clients with geospatial analysis, reports, dashboards, and mapping services. GEOinovo has a simple goal, to solve complex problems through the innovative use of Geographical Information Systems (GIS). Our comprehensive solutions and extensive staff experience will provide the City with first-class demographic services and demographic mapping.

GEOinovo is part of Esri, Inc.'s Partner Program allowing us greater access to Esri technology. GEOinovo is in good standing with the California Secretary of State. Please note, our work is dependent on the release of the U.S. Census Bureau decennial data. If the data is released later than expected this will impact the schedule of the project.

The GEOinovo team values close, interpersonal, and transparent relationships with project participants at every level. We are a leading provider of innovative geospatial solutions in the field with a known reputation for performance, quality, and reliability.

We believe that our solid reputation, extensive experience in the field, and selected staff provide the necessary services that will meet the City's requirements. We look forward to working with you to meet your redistricting needs.

Please contact me, as the CEO and owner of GEOinovo, regarding this proposal.

Sincerely,

Luciane Musa, GISP - CEO
39252 Winchester Rd. #107-125
Murrieta, California 92536

GEOinovo Solutions Inc.
Phone: 951-852-5205
Email: lmusa@geoinovo.com

1.1. GEOinovo Overview

GEOinovo Solutions Inc. (GEOinovo) was founded in 2014 and incorporated in January 2018. We are a woman-owned, minority-owned, and small business enterprise offering exceptional geospatial analysis, data analysis, GIS and software integration, and program design services to meet the unique needs of our clients. Our team brings over 80 years' experience and success to each project and is guided by our passion for delivering unmatched quality and unsurpassed services.

As a team comprised of talented individuals from diverse backgrounds such as GIS professionals, demographers, anthropological professionals, and former military personnel, we offer unique insight into each project. GEOinovo provides our partners with well-rounded knowledgeable staff, unique technical and project expertise, strong partnership and leadership skills, and most importantly meticulous and dedicated support. Our experience includes:

- Cartography (Mapping and Visualization)
- Data/Database Management
- Redistricting
- U.S. Census Bureau Data Knowledge
- GIS Architecture Design & Implementation
- Public Hearings and Public Outreach
- Map Production and Publication
- ArcGIS Dashboard Configuration
- Forecasting and Modeling Hypothetical Scenarios

California Small Business Designations:

- SB(Micro) #2009714
- WMBE #17001156
- DBE #45531
- SBE # 20159741

Unmatched in our field, GEOinovo is motivated and driven to provide unique geospatial solutions, open communications and accountability, exceptional relationships, and excellent customer service.

1.2. La Cresta Demographics Overview

Mr. Garcia founded La Cresta Demographics in 2020 to provide demographics analysis, community outreach, and redistricting services to government agencies throughout the United States. The La Cresta Demographics team leverages over 30 years of experience and expertise in voting rights, data analysis, community engagement, and much more. La Cresta Demographics staff has supported over 20 California Voting Rights Act cases, providing subject-matter expertise in demography, voting rights, and redistricting regulations. The exceptional

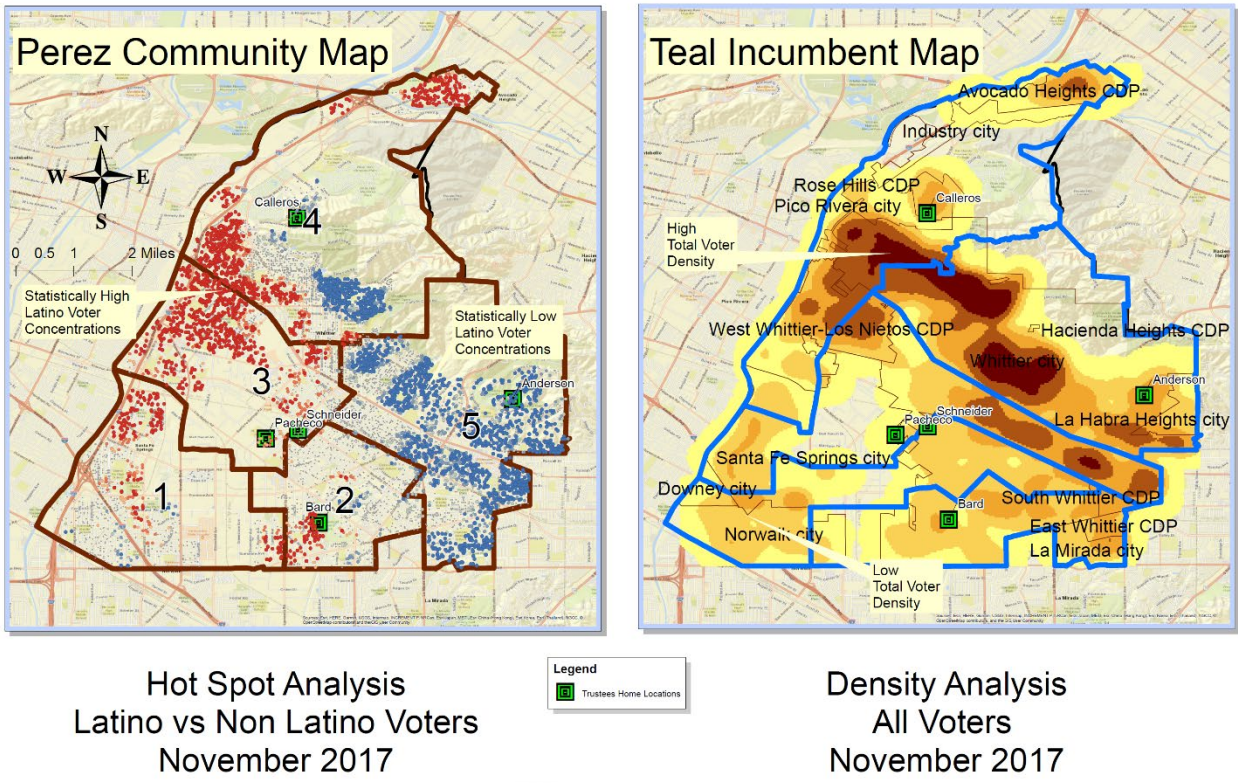
professional experience of La Cresta Demographics enables us to effectively communicate with policymakers and citizens every step of the way to ensure fair and equitable outcomes for all community stakeholders.

1.3. GEOinovo Team Experience

1.3.1. Demographic Mapping

The GEOinovo Team brings many years of experience with demographic mapping to this project. This experience includes redistricting many of cities, school districts, and other local jurisdictions across the State of California. We use data from the U.S. Census Bureau, American Community Survey (ACS), and the California Statewide Database to populate our maps and shapefiles. Our experience includes the use of the industry recognized ESRI platform, including Esri Redistricting, Districting for ArcGIS, and ArcGIS Online. We provide maps in shapefiles, paper maps, or through the web.

Specifically, the GEOinovo Team uses the data from the Decennial Census to analyze population consistency and concentrations throughout the area of interest. This includes mapping the total population by race, ethnicity, population over the age of 18, and Citizen Voting Age Population by Race and Ethnicity (CVAP). We understand the importance of drawing districts that meet the requirements of the Voting Rights Act such as preserving communities of interest (COI) for fair representation.



Hot Spot Analysis
Latino vs Non Latino Voters
November 2017

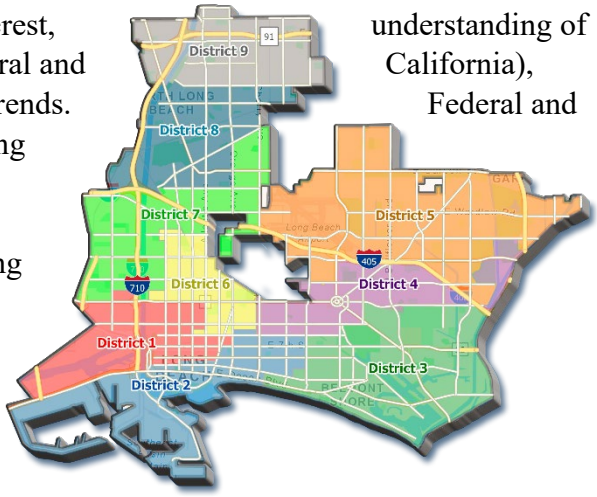
Density Analysis
All Voters
November 2017

Figure 1 The above maps show the work the GEOinovo Team completed to re-do the voting districts produced by a different firm (the Teal map on the right). The redistricting map to

the left – by the GEOinovo Team – accounts for voter location data as a core component for preserving communities of interest. Both maps represent the spatial concentration of geocoded individual registered Latino voters by competing proposed districts in Whittier High School District redistricting in 2018. As a result of the updated map, the community of Los Nietos Santa Fe Springs has achieved fair representation for the first time.

1.3.2. Voting Rights

Ensuring compliance with both Federal and California Voting Rights acts is critical for project success and avoiding litigation. The GEOinovo Team has supported projects to update school district boundaries to meet Voting Rights Act requirements. This work included a thorough demographic analysis of the area of interest, understanding of the requirements of the Voting Rights Acts (Federal and California), district geography, voter registration and voting trends. Federal and California Voting Rights laws apply to redistricting projects from counsel districts to school districts. The GEOinovo Team has experience using U.S. Census Bureau data and conducting Citizen Voting Age Population (CVAP) analysis' with consideration of the Federal Voting Rights Act requiring that a district be created that encompasses a population of 50 percent plus 1 racial/ethnic protected majority.



Federal Voting Rights

The GEOinovo Team has worked on many voting districts projects that required deep understanding of the Federal Voting Rights Act of 1965 and its application in redistricting. The Federal Voting Rights Act established, under law, the prohibition of discrimination on the basis of race, color, or membership in one of the language minority groups. Discrimination can include redistricting that create unusually large election districts among other elements of redrawing district lines. Violation of the 1965 Voting Rights Act can lead to legal issues and federal lawsuits. To avoid these negative consequences, the GEOinovo Team relies on our experienced staff and collaboration with legal teams, as necessary.

California Fair Maps Act Best Practices

Redistricting in California requires compliance with the California Fair Maps Act. The purpose of the Fair Maps Act is to ensure that redistricting creates maps that represent the demographic makeup of a community and prevent the dividing of communities of interest into separate districts. The GEOinovo Team is familiar with applying the many requirements and best practices of the Fair Maps Act to our redistricting projects.

The GEOinovo Team supported the redistricting of the Kern High School District while complying with the industry best practices of creating geographically contiguous districts, districts providing racial minorities with an equal opportunity to participate in the political process, without being diluted, and minimizing the division of communities of interest to the extent practicable.

Community engagement is critical to complying with the Fair Maps Act. The GEOinovo Team is familiar with online tools such as Districtr.org that allow people in the community to submit their own community of interest (COI) areas as shapefiles. Our Team has experience working with community organizers to actively engage with the community and encourage participation in the redistricting process.

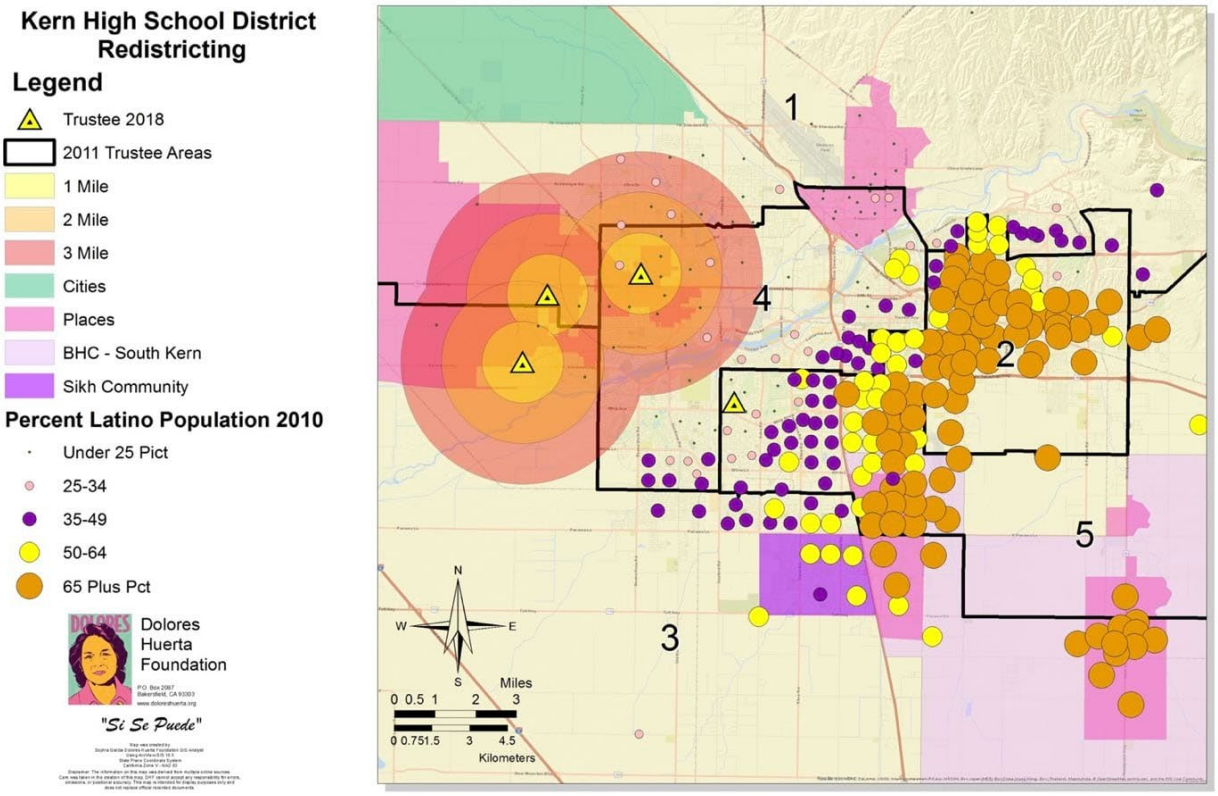


Figure 2 Using demographic analysis and GIS the above graphic shows the splitting of Kern County's largest Latino community between two school districts. These districts resulted in only one Latino representative in a community that was 50% Latino. Maps like this help visualize local issues with current districts and encourage community engagement.

1.3.3. Council District Mapping

The GEOinovo Team worked with a contract demography firm for the City to prepare draft council district boundaries for new voting districts. The demographer worked with the City's legal team to analyze local demographic data and ensure compliance with the Federal Voting Rights Act and California Voting Rights Act. Draft council district boundaries were submitted to GEOinovo GIS staff for QA/QC to ensure geographic requirements were met for voting districts. The review process included any necessary edits to ensure city council districts were contiguous, provided in the appropriate geographic projection, contained required attribute fields, and met geometry requirements for analysis and display in web maps and printed maps.

In this case, attention to detail was very important to ensure accurate and useful geometry for the approved council districts. The GIS staff utilized local knowledge and expertise to align approved district boundaries with street centerlines, parcel boundaries, and city limits. These

edits have proven to be very useful to elected officials verifying addresses and streets within individual districts and to the City Clerk staff responding to public requests for council district information via the Council District web map.

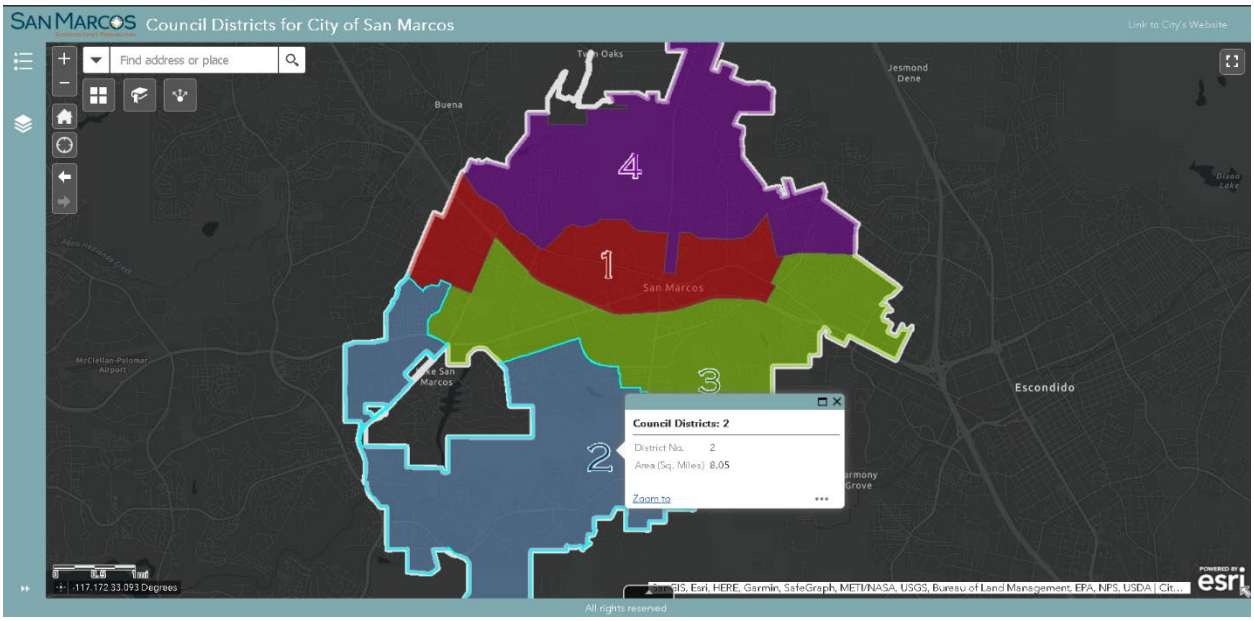


Figure 3 Interactive web map of City Council Districts in San Marcos, CA. The link to the interactive web map is located here.

1.3.4. Covid 19 Demographic Analysis

GEOinovo collaborated with Esri and City staff to gain access to data and tools for providing public information during the early stages of the Covid-19 global pandemic. The result was a Covid-19 dashboard and infographic to provide critical information to the public during the first round of stay-at-home orders. The dashboard contained information for local businesses providing take-out and grocery services and an interactive web map for citizens to view the locations from a browser or mobile device. The Covid-19 infographic provided information such as early case counts and demographic information that can be used by local government and citizens to monitor the spread of Covid-19 during the first wave of the pandemic.

A public-facing school lunch web map was deployed to provide location information for low-income families to access no-cost school lunches during the pandemic. GIS worked with the local school district to verify the sites and publish the information via ArcGIS Online.

{Remainder of page intentionally left blank.}

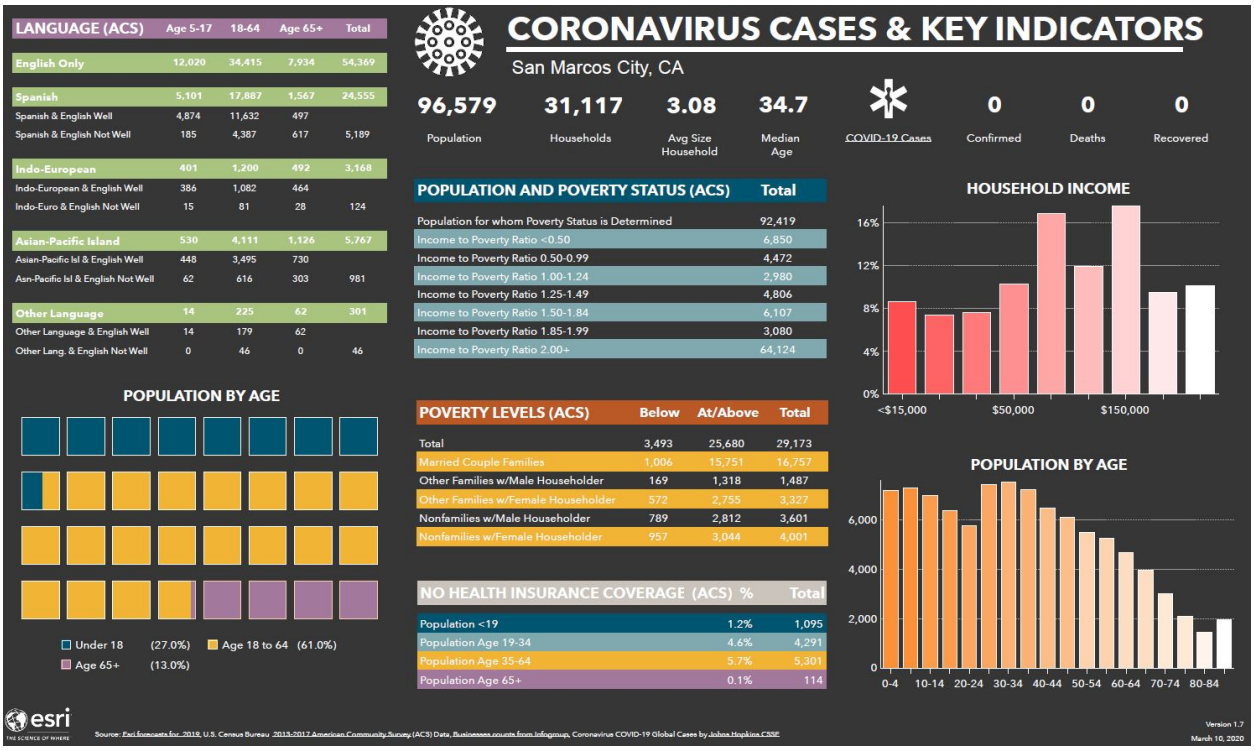


Figure 4 The above infographic shows early Covid 19 and demographic data for San Marcos, California.

1.3.5. Demographic Analysis

Demographic analysis is crucial for analyzing the impacts a new project will have on the surrounding communities. The GEOinovo Team used U.S. Census Bureau data to analyze the communities surrounding the proposed runway extensions of the Plattsburgh International Airport in both Erie, Pennsylvania and Plattsburg, New York. This project highlights our experience working with demographic data, community and demographic analysis, and map creation. The GEOinovo Team started by defining the area of influence of the runway extensions and used Federal and State definitions of low-income and minority populations. By accessing U.S. Census Bureau data, we were able to determine the lowest level of aggregation of each population type and determine the minority and low-income composition of the affected area by overlaying the project area with the census tracts and block groups/blocks. We created maps and reports of the area for each of the proposed alternatives.

{Remainder of page intentionally left blank.}

1.3.6. Geospatial Analysis and Map Production

Disaster preparedness is an important function of any government entity. This importance is magnified in Southern California with the high frequency of wildfires and the dangers those events pose to life and property. GEOinovo's GIS staff collaborated with first responders to update the local inventory of designated evacuation routes and evacuation sites.

Evacuation sites are critical infrastructure assets that can be used during an emergency event. Having an accurate inventory of emergency sites helps local government provide critical services such as animal care, emergency power for medical services, temporary shelter, and other local government functions. These resources are especially important for the elderly, low-income families, and other disadvantaged communities during emergency events.

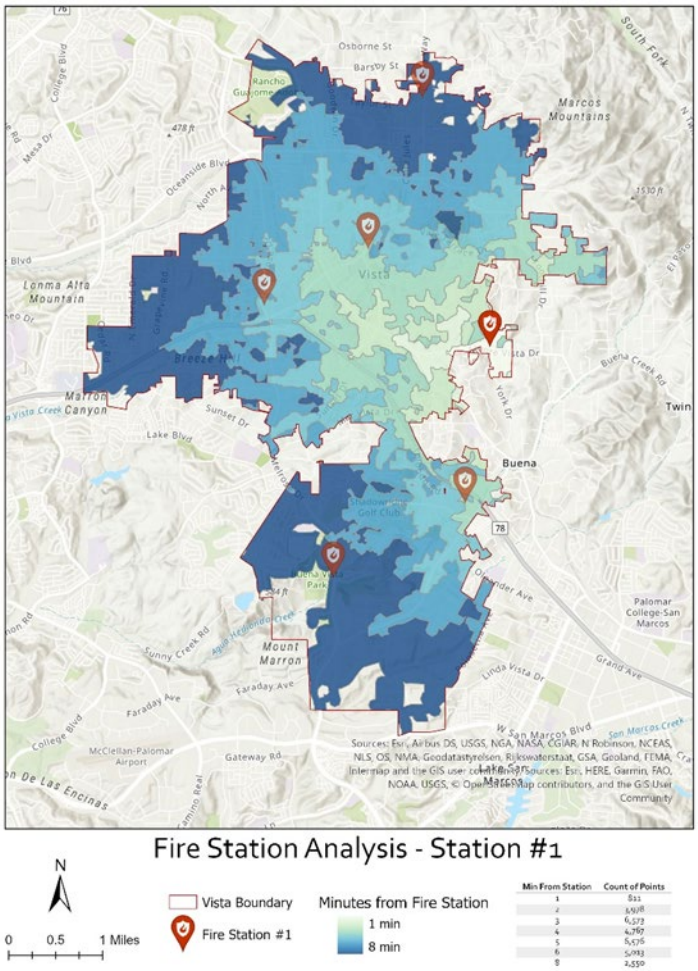


Figure 5 Utilizing network analysis, we performed a fire station coverage analysis throughout the City of Vista, California. This analysis was used to identify where a new fire station would be needed.

Evacuation routes are critical for providing public information in case of an emergency event. Local governments use this information to deploy Public Works personnel to appropriate locations for road closures, detours, and coordination with law enforcement agencies to enforce roadblocks during emergency events.

{Remainder of page intentionally left blank.}

1.4. Past Performance

1.4.1. San Diego Regional Public Safety GIS Program (RPSG)

SAN DIEGO REGIONAL PUBLIC SAFETY GIS PROGRAM (RPSG)

Period of Performance
2012-2020

Related Tasks

- Coordinated data collection and integration.
- Development of cartographic products such as map books, wall maps, digital maps, web-based map services
- Made recommendations regarding upgrades, considering the implications of new or revised GIS software, equipment, or applications.
- Third-party software integration with GIS
- Obtained U.S. Census Bureau data for Geospatial Analysis.
- Data exchanged with other government agencies.

Project Summary

GEOinovo provided staff for the RPSG project both for regular staff augmentation as well as additional project support. We staffed the project with three remote positions. The Regional Public Safety Geodatabase Program aims to create standardized data, products, and geospatial services for fire, medical, and law enforcement personnel within San Diego County. The talented team at GEOinovo provided services in modeling, designing, documenting, programming, maintaining, and testing Geographic Information Systems (GIS) applications, models, procedures, and software routines to automate geographic analysis and data processing. Our responsibilities include budget oversight duties, geodatabase design, administration, and automated processing tools, including GIS programming, managing the successful deployment and maintenance of many GIS deliverables.

While this project directly benefits the public safety agencies, the contributions and work performed by GEOinovo expanded and touched multiple aspects of the County, including transportation planning, traffic, construction, utility management, impact forecasting, community relations, and more. This project included significant effort and work across multiple sub-projects. For clarity we have provided a summary of the demographic services we performed.

Demography and Analysis

The role of demographics in Fire Safety is a crucial aspect of serving our communities better. In support of public safety, GEOinovo performed a demographic, geospatial analysis of the communities supported by RPSG. We obtained demographic data from the U.S. Census Bureau for the area each dispatch center supported. This data included population count, language spoken, race, age, and gender. Using the Census data, we determined which dispatch centers would need to improve their services to meet the needs of the predominate language spoken in that area.

With new developments throughout the county, a population growth study was needed to analyze what areas may need additional support.

More than two thousand preplan fire maps were created to identify buildings, types of occupancies, and assist firefighters with emergency route planning.

U.S. Census Bureau statistics data were used to quantify the number of homes without smoke alarms. This data was used by the California Fire Prevention Organization to install free smoke alarms.

Fire statistics were collected after wildland fires. These data included the number of burned acres of land, structures destroyed, the number of casualties, people evacuated, and evacuation shelters used.

GEOinovo developed an incident dashboard that provided fire incident statistics such as structure, vehicle, vegetation, trash, property, and unclassified fires.

GEOinovo created and updated various maps such as the Fire Protection District Boundaries, fire responsibilities areas, and Fire Station Locations.

Resource allocation is critical for emergency medical calls as increasing the number of paramedics per field unit can, in turn, decrease the average response time per incident. GEOinovo ran a statistical analysis of emergency medical calls to determine the impact of providing additional paramedics per field unit. This analysis and findings helped RPSG allocate resources more efficiently.

1.4.2. Heartland Communications

HEARTLAND COMMUNICATIONS

Period of Performance
2014-2019

Related Tasks

- Built GIS data from the ground up to bring accurate and useful location intelligence to the agency.
- Technical training and support
- Configuration of custom queries, dashboards, and reports for area agencies.
- Third-party software integration with GIS
- Deploy easy-to-use mobile apps for field data collection.
- Database management.

Project Summary

GEOinovo was responsible for planning, organizing, coordinating, and participating in developing and implementing the agency's geographic information systems and maintaining the GIS databases used in the Computer-Aided Dispatch (CAD) and Mobile Data Computers (MDC). The complex GIS data supports multiple agencies who use the Heartland Communications Center. We created and supported routable street networks and response areas to allow the fastest possible response time for first responders, saving time when it matters most. GEOinovo developed and implemented python scripts to automate the process to update the mobile computers used in every apparatus with imperative and new GIS data. These innovative solutions improved the Heartland Communications' quality of service, reduced costs and response times, and provided a foundation for the future deployment of NextGen 9-1-1 (NG911). We managed GIS updates for 13 agencies to complete multi-year map book updates within a very tight grant schedule. Map books were deployed to 100+ vehicles as a reference and back-up to existing digital systems.

Demography

GEOinovo used U.S. Census Bureau data to perform demographic analysis' of the area each Fire Station supported. By using population data, eligible parcels, and service/coverage area analysis with Network Analyst, GEOinovo was able to identify where a new Fire Station would be needed to support the growing community.

Redistricting

GEOinovo participated in the redistricting of fire protection districts in San Diego County. We performed a boundary comparison utilizing local agency and Local Agency Formation Commission (LAFCO) boundaries data to identify discrepancies and gaps between the districts, especially in unincorporated fire protection districts and Native American reservations. This analysis identified areas where up to two miles were unaccounted for within the previous fire protection districts. By performing this analysis, San Diego County was better equipped to allocate resources and coordinate between local and tribal jurisdictions.

GEOinovo created and updated various maps such as the Fire Protection District Boundaries, fire responsibilities areas, and Fire Station Locations.

1.4.3. City of San Diego

CITY OF SAN DIEGO

Period of Performance
2018-Present

Related Tasks

- Analyze and make recommendations concerning GIS technical matters.
- Organize and categorize GIS information.
- Create, design, and modify customized maps and map templates using cartographic and cadastral standards and elements, including scale, map units, and graticules.
- Design, create and maintain geographic data files, including geographic data models, polygons, lines, and points.

Project Summary

The City of San Diego hired GEOinovo to achieve complex GIS objectives supporting public safety, response times, first responder situational awareness, and much more. GEOinovo performed detailed GIS mapping and application development, and project management for the City of San Diego. Bringing expertise and knowledge of GIS concepts, operations, and products, our team developed, created, and maintained GIS data, databases, systems, and applications.

Our team led the design, development, and implementation of GIS and spatial data repositories, including developing data organization, data loading algorithms, user access, data integrity, automation, replication, and security. Additionally, we oversaw applications development using information technology standards and techniques to analyze technical requirements, make recommendations, and supervise complex development problems.

Geospatial Analysis and Demographics

Using Prefire plans, maps, and dashboards, GEOinovo provided the City of San Diego with actionable analytics on structure type, the number of low-rise vs. high-rise buildings, building occupancy, and on-site fire extinguishing equipment or the amount of available fire-related equipment.

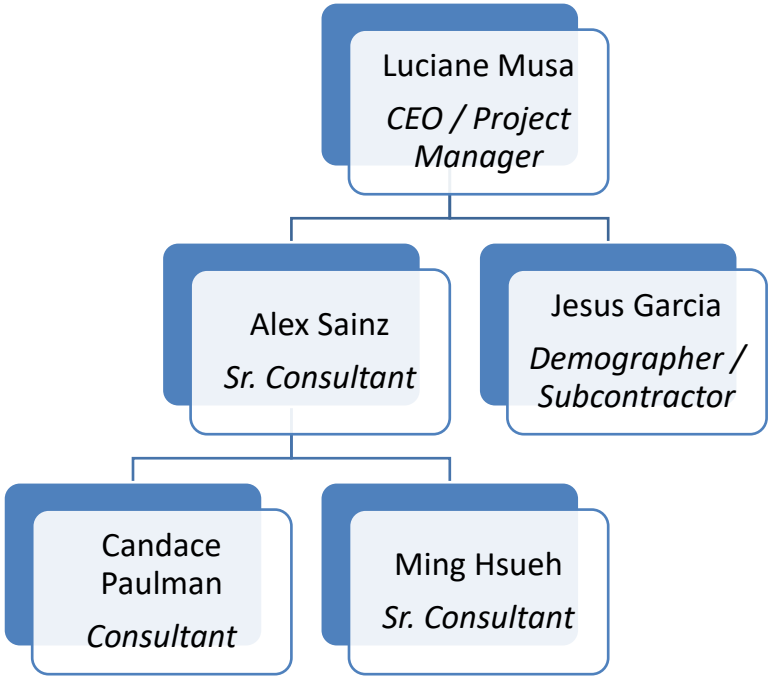
GEOinovo created and updated various maps such as the Fire Protection District Boundaries, fire responsibilities areas, and Fire Station Locations.

1.5. Staff Overview

The GEOinovo Team has assembled a team of experienced staff to provide full Demographer, GIS, and Mapping services for this project. Combined, our Team has more than 100 years of experience with demographic analysis and GIS. Our demographic services include experience with the Redistricting Database for the State of California and experience communicating data summary results to public policy decision makers. We provide GIS services from GIS data cleanup to advanced GIS analysis and modeling. As a technologically forward-thinking Team we strive for process improvement and automation of GIS, database, and data management functions through software development, widget creation, and scripting. Our Team supports demographic projects with statistical analysis, reports, and understanding of voter requirements for both the U.S. Federal Government and the California State Government. We work collaboratively to bring these technical components together for products that are easy for policy makers to understand and share with the public. To support our technical staff and partners, we offer Project Management expertise in GIS and software development. The organizational chart below includes both the staff and subcontractors who would support the City.

1.6. Organization Chart

Below is the anticipated project organization.



1.7. Staff Resumes

{Remainder of page intentionally left blank.}

LUCIANE MUSA

Highlights

Years of Experience

20 years

Education

- B.A. Geography / Geographic Information Systems University of Alabama, Tuscaloosa, AL

Certifications

- Geographic Information System Professional (GISP) Certified
- Project Management Professional Academy Certification

Accomplishments

- Managed the San Diego GIS Public Safety (RPSG) Data Warehouse that supports over fifty local government agencies.
- Architected and implemented an Enterprise GIS System that included: Cloud Technology, ArcServer, Portal, GeoEvent, Image Server, ArcGIS Online, SQL & SDE Databases, establishing standards, best practices, and training.

Languages

- Arabic
- Protuguese
- Spanish

Summary

Ms. Musa is the CEO and Founder of GEOinovo, where she oversees strategic direction, company operations, and strategic relationships. Going beyond her duties as CEO, Ms. Musa is a certified GISP and acts as a Project Manager and Senior GIS Analyst on company projects. A pioneer in her field, Ms. Musa helped mold the Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE) requirements that govern the data standards per Department of Defense (DoD) policy. She established geospatial standards, implemented and maintained GIS system architectures, and created workflow processes. She heads projects across various fields, including environmental, public works, utilities, engineering, transportation, military training initiatives, real estate, and public safety.

Selected Experience

GIS System Administrator/Project Manager, San Diego Regional Public Safety (RPSG) GIS Program

Ms. Musa's responsibilities included preparing GIS data to be consumed by Tritech 911 CAD and Mobile MDCs and editing public safety data such as Address Points, Street Centerlines, Buildings, and Hydrants. She reconciled, validated, and ensured data accuracy in support of three 9-1-1 Dispatch Centers within San Diego County and managed the GIS Public Safety Repository Database for the entire county. She was responsible for the maintenance and administration of GIS software such as GIS SDE and SQL databases. She published and managed web services from ArcGIS Server, Portal, and ArcGIS Online. In addition, she designed, planned, and implemented an improved GIS architecture to support advanced GIS software and extensions, providing the ability to scale to meet future GIS needs. Her work ensured the County transitioned to NextGen 911 requirements to make sure data is compliant with NENA Standards.

Senior GIS Analyst, Heartland Communications

Ms. Musa created, updated, and edited emergency response GIS data, and processed GIS requests. Her responsibilities included processing data in the Tritech CAD system GISLink for 911 dispatchers and first responders. She validated and ensured data accuracy from field data and contractor's deliverables and generated Fire Map books to be utilized in the fire trucks. Map books deployed to 100+ vehicles as a reference and back-up to existing digital systems.

GIS Coordinator, N|V|5

Ms. Musa was the GIS Coordinator for NV5. She set up ArcGIS Server enabling the creation of web services to support real time field data collection. She was responsible for the ArcGIS Portal administration and provided GIS training. She migrated the database from PostgresSQL (open source) into SQL Server Enterprise database. Her work improved workflow productivity by 70%.

GIS Skills	Cartography, GIS Architecture Design & Implementation, Data Management, Enterprise GIS
GIS Technology	Esri Suite: ArcGIS Pro, ArcGIS Online, ArcGIS Exentions: Utility Network, ArcServer, GeoEvent and Image Server, Drone2Map, Pix4D, Lidar, 3D Analyst, Business Analyst, Dashboard, Image Analyst, Network Analyst, Spatial Analyst
Programming	Software Integration, Programming / Scripting, Python, SQL, Web app development for mobile field application,
Cloud Technology	Amazon Web Services, Microsoft Azure
Database	SDE, Enterprise SQL, Oracle, Access
Asset Management and Inventory	Maximo, DocScout, iNFADS
Data Collection	Trimble, Leica, Collector for ArcGIS, Survey 123

JESUS GARCIA

Highlights

Years of Experience

34 years

Education

- Bachelor of Arts in Political Science, University of California Santa Barbara (UCSB), Santa Barbara, CA
- Master of Arts in Urban Planning University of California Los Angeles (UCLA), Los Angeles, CA
- Certificate of Geographic Information Systems, California State University, Bakersfield, CA

Skills Highlights

- U.S. Census Data Analysis
- Boundary Redistricting
- California Voting Rights Act establishment of board member districts areas
- Outreach Representative

Accomplishments

- Demographer and GIS Analyst in over twenty California Voter Rights Act Lawsuits

Language

- Conversational Spanish

Summary

Mr. Garcia is a seasoned U.S. Census data demographer, voter redistricting researcher, and GIS analyst. His background and experience includes PL94-171 U.S. Census data, American Community Survey (ACS), the Redistricting Database for the State of California, K-12 education data, and SAS programming on large databases. Mr. Garcia's ability to communicate data summary results to policymakers and the public make him a valuable collaborator in strategic planning and community engagement efforts. He has demonstrated his abilities as a leader throughout his career, managing staff with diverse backgrounds and abilities.

Selected Experience

Demographic Statistician, U.S. Census Bureau Washinton, DC – Population Division, Economic Census Division, Data User Services Division

Mr. Garcia performed final review of the 1990 Census statistical variables for Hispanic Origin, Place of Birth, Year of Entry, Citizenship, and Ancestry. He analyzed Economic Census Surveys of Minority Owned Businesses (SMOBE) and Women Owned Businesses (WOB) P-20 Series Current Population Survey (CPS) reports on the U.S. Hispanic Origin Population. He was the Spokesperson for the TIGER Files census data collection geographic boundary layers.

Partnership Specialist, U.S. Census Bureau, Los Angeles, CA Field Division

Mr. Garcia encouraged collaborations among community organizations, local governments, school districts, and local business to support Hard to Count (HTC) community outreach efforts for the 2020 Census.

Chair Data Technology Committee, Kern Census Complete Count Committee

Mr. Garcia provided data analysis and GIS support in preparation for contacting Hard to Count (HTC) communities during the 2020 Census.

Consultant, Dolores Huerta Foundation (DHF)

Mr. Garcia performed data analysis for various community and voter engagement projects. Established the GIS department and led the DHF effort in Kern County, California during the 2020 Census.

Reasearch Assistant, Los Angeles Community College District (LACCD)

As a Research Assistant, Mr. Garcia performed analysis and wrote his master's thesis based on the California Basic Educational Data Systems (CBEDS) data collection process and the R30 Language Census program implemented by the California Department of Education. Analysis tools included the Statistical Package for the Social Sciences (SPSS) and first-generation GIS software on a PC. These cutting-edge analysis tools were used to study need for bilingual education in LACCD institutions in response to Immigration Reform and Control Act of 1986.

GIS Skills	Cartography, Geodatabase Design, Data Management, GIS Analysis, Field Applications, Infographics
GIS Technology	ArcGIS Pro, ArcMap, ArcGIS Online, Business Analyst, Dashboard
Database	SQL, SDE, SAS
Data Collection	Collector for ArcGIS, Survey 123
Demographic Skills	Analysis, Cartography, Redistricting, California Voting Rights (CVR) Act, Hard to Count Communities (HTC), Community Outreach

ALEX SAINZ

Highlights

Years of Experience

12 years

Education

- Bachelor of Arts in Geography – Urban and Regional Analysis, San Diego State University, San Diego, CA

Accomplishments

- San Diego Regional GIS Council (SDRGC) Chairperson (previously Vice Chairperson and Secretary).
- Esri User Conference Presenter.
- Public/Private/Education Partnership for Unmanned Aerial Systems (UAS) with Palomar College.

Presentations

- San Diego Regional GIS Council, Enterprise GIS for City Operations.
- Palomar College, migrating from ArcMap to ArcGIS Pro Presentation/Training: Migrating from ArcMap to ArcGIS Pro.
- 2014 Esri User Conference

Summary

Mr. Sainz is a seasoned GIS professional who serves as a GIS Administrator and Senior GIS Analyst for GEOinovo. His skills and abilities include ArcGIS Enterprise services and applications, database management, on-premise and cloud-based solutions, web services, data integration, and much more. He has first hand experience working with local governments in Southern California. Mr. Sainz possesses the ability to communicate technical concepts to stakeholders at all organization levels, from the executive team to field staff. Beyond the creation and modernization of the GIS infrastructure, Mr. Sainz is an expert data manager, able to create compelling, relevant reports to ensure project adherence, as well as driving decision making through actionable data.

Selected Experience

GIS Administrator/Analyst, City of San Marcos

Mr. Sainz managed and prioritized wide-ranging projects and data requirements along with managing expectations throughout the organization. His position demanded sufficient technical, collaboration, and leadership abilities to operate as a one-person GIS operation. He was responsible for project and database management and lead an ArcGIS Enterprise deployment resulting in increased accessibility to data and apps throughout the organization. Mr. Sainz managed web services, database management, and ArcGIS integration with the City's asset management, land management, and records management systems.

As the City's GIS Administrator, Mr. Sainz oversaw editing and quality control operations for city council districts. The review process included any necessary edits to ensure city council districts were contiguous, contained required attributes, and met geometry and projection requirements for analysis and display in web and printed maps.

GIS Specialist/Coordinator, City of Chula Vista

Mr. Sainz collaborated with technical and operational personnel, communicated project updates to leadership, and represented the City at regional project meetings/committees. He tested and implemented GIS automation and workflow tools and leveraged innovative solutions such as Attribute Assistance for ArcMap. Mr. Sainz modernized nearly two decades of legacy data in under two years. The long-term results of his work have provided high-quality GIS data to first responders throughout San Diego County.

GIS Specialist, Heartland Communications

Mr. Sainz provided the professional GIS Services required to maintain mission-critical GIS data in a location-based 9-1-1 CAD system. Responsibilities included maintaining 9-1-1 routing, response areas, address data and representing member agencies in the Regional Public Safety Geodatabase (RPSG) program.

GIS Skills	Cartography, Geodatabase Design and Administration, Data Management, Enterprise GIS, Field Applications, Infographics
GIS Technology	ArcGIS Pro, ArcMap, Model Builder, Attribute Assistant, Attribute Rules, ArcGIS Online, ArcGIS Server, Business Analyst, Dashboard, Web AppBuilder, ArcGIS Exentions: Utility Network, Network Analyst, Spatial Analyst
Database	SQL, Enterprise Geodatabase
Application Integrations	Lucity, TRAKiT, Laserfiche, TriTech Software Systems
Data Collection	Trimble, Collector for ArcGIS, Survey 123

CANDACE PAULMAN

Highlights

Years of Experience

15 years

Education

- M.S. Environmental Science, emphasis in Mapping Science, State University of New York
- B.A. Computer Information System, University of Dayton Ohio

Certifications

- Geographic Information System Professional (GISP) Certified

Accomplishments

- Authored and presented over thirteen whitepapers at various GIS Conferences.
- Assisted development of the ArcGIS extension for the Defense and Intelligence communities.

Presentations

- 13th Annual SCGIS International Conference, Monterey, CA, July 8-11, 2010. Addressing Statewide Habitat Connectivity.

Summary

Ms. Paulman, GISP is a skilled GIS professional with over 15 years of experience with all things GIS. From her direct engineering experience with Esri to her robust involvement with projects ranging from public safety and defense to environmental and transportation, Ms. Paulman brings immense critical skills to every project. Her ability to work with complex geodatabases as well as conduct spatial analysis makes her an invaluable analyst. As a former Esri product engineer, Ms. Paulman also brings a unique and intimate knowledge of creating ArcGIS extensions for the defense and intelligence communities. Ms. Paulman is an expert in crafting business intelligence dashboards and reports. She excels in constructing critical preplans for first responders using real-time GIS data to ensure our clients have the most accurate and up to date information to make informed and intelligent decisions.

Selected Experience

Senior GIS Analyst, City of San Diego

As the Senior GIS Analyst, Ms. Paulman oversees the maintenance and creation of the department's Pre Fire plans. She has updated the program to use real-time data hosted online. Now, newly exported reports from ArcGIS Pro as well as the GIS service used in the field are coming from the same live data. Ms. Paulman also created three services on the City's internal GIS Server for the purpose of accessing and tracking the properties and assets associated with the Pre Fire plan program. She created a new database schema for the purpose of streamlining county-wide structure preplan data and having all municipalities on a common operating picture.

GIS Services Contractor, Groundpoint Technologies

As the GIS Services Contractor, Ms. Paulman verified, corrected, and digitized hydrography layers using NHD datasets, satellite imagery, and Lidar data in an ArcGIS spatial database.

Quality Assurance Manager, SAP, Roambi

In her role as the Quality Assurance Manager, Ms. Paulman participated in and led quality assurance activities for major releases of Roambi Analytics and Roambi Flow. The releases encompassed both on-premise Enterprise and cloud-based SaaS server offerings and their corresponding mobile clients. Ms. Paulman created custom Business Intelligence reports to verify customer issues using Microsoft SQL Server Reporting Services, IBM Cognos, and SAP Business Objects.

GIS Skills	Cartography, Geodatabase Architecture Design & Implementation, Data Management, Enterprise GIS, Data collection / digitizing
GIS Technology	Esri Suite: ArcGIS Pro, ArcGIS Online, ArcGIS Server, ArcGIS Exentions: Spatial Analyst, 3D Analyst, Model Building GPS Lidar – Analysis with lidar derrived data
Programming	Software Integration, Python scripting
Cloud Technology	Amazon Web Services
Database	Microsoft SQL Server (basic level)
Asset Management and Inventory	Assist county with reconciling fire hydrant data using existing datasets and aerial imagery.
Data Collection	Trimble, Collector for ArcGIS, Survey 123

MING HSUEH

Highlights

Years of Experience

25 years

Education

- M.S. Mechanical Engineering/Control Systems, California State University, Fullerton, CA
- B.S. Mechanical Engineering/Control Systems, University of California, Los Angeles, CA

Certifications

- Certification Project Management Professional Academy

Accomplishments

- Developed a process to update hundreds of GIS public safety mobile computers resulting in a 90%-time savings.
- Implemented an MS SQL system to create multiple backups and restore files reducing the backup and restore times by up to 40%.
- Tuned SQL queries to work with sets and improved processing times from 7-8 hours to process now take less than 10 minutes.

Language

- Conversational Mandarin Chinese

Summary

Mr. Hsueh is a talented and experienced Developer, Programmer, and DBA with an innate ability to understand all things within information technology, streamline and automate processes, and create and develop applications. His contributions to clients increase productivity by modernizing and automating manual processes to save time and reduce errors. His extensive professional history includes in-depth work with relational databases and program development focused on SQL Server, Microsoft Stack, and .Net Framework/.Net core.

Selected Experience

Sr. GIS Analyst/Developer, Heartland Communications

Mr. Hsueh assisted in the development of the data score card and developed applications to consume SABER and WAZE API data. He analyzed database structures and rewrote data analytics to accelerate the data calculation process from a task that previously took over 1 hour to less than 30 seconds.

GIS Analyst/Developer, Heartland Communications

Mr. Hsueh served as the GIS Analyst/Developer of Heartland Communications. In this role he georeferenced new communities and updated and enhanced Heartland Communications routing layers. Mr. Hsueh developed a one-click deployment application utilizing Visual Studio Dot Net to simplify the MDC update process for the fire agencies when the new monthly routing was to be deployed.

IT Development Lead, City of San Diego

Mr. Hsueh developed and implemented various REST and SOAP APIs for multiple process improvements and enhancements, including the sales of GIS tracking module by the entire Sales Team. He implemented a Financial Calculation improvement that took a 7-day process down to 20 minutes.

Senior SQL Developer/Programmer/DBA, Buffini & Company

As the Senior SQL Developer, Mr. Hsueh migrated over 50 reports from Crystal Reports to Microsoft SQL SSRS. He analyzed, redesigned, and simplified the sales commission's application to allow the accounting department to handle 99% of the commissionable sales without the IT department's assistance.

Senior Business Analyst, Abbott Vascular

Mr. Hsueh was the technical lead for the team that developed Abbott Vascular's Business Process Scorecard (BPS) used to analyze and present the various departments' performance at Abbott Vascular.

GIS Skills	Cartography, GIS Architecture Design & Implementation, Data Management, Enterprise GIS
GIS Technology	Esri Suite: ArcGIS Pro, ArcGIS Online, ArcGIS Exentions: Utility, ArcServer, GeoEvent and Image Server
Programming	Visual Studio, Entity Framework, C#, C++, Visual Basic, Language Integrated Query (LINQ), Software Integration, GitHub, TFS, VBA, Windows Communication Foundation (WCF), REST APIs, SOAP APIs, JSON, XML, ASP.NET, Model-View-Controller (MVC), Windows Forms, Windows Presentation Foundation (WPF)
Cloud Technology	Amazon Web Services, Azure Cloud Services
Database	Microsoft SQL Server, T-SQL, Stored Procedures, Triggers, Service Broker, SSIS, SSRS, MS Access, MS FoxPro

2. Subcontractor List

GEOinovo will use La Cresta Demographics as a subcontractor. La Cresta Demographics will be responsible for performing the demographic analysis and proposing district boundaries.

3. Cost Proposal

GEOinovo proposes a lump sum cost of $47,000.

Rates for additional services:

Labor Categories	Hourly Rate (USD)
Demographer	$310
Senior Consultant	$250
Consultant	$200
Project Manager	$180
Technical Writer	$150
Analyst	$75
Clerical	$50

4. Client Reference List

Uploaded to the City's Planet Bids portal.

5. Modification, Changes, or Exceptions to the City's Contract

GEOinovo would like to add the following to the Contract:

The project schedule and deliverables are dependent on the release of the U.S. Census Bureau data from the decennial, American Community Survey. Should the release of this data be delayed by the U.S. Census Bureau, GEOinovo anticipates a delay in project schedule and deliverables.

GEOinovo recommends the following modifications to EXHIBIT "A" SCOPE OF SERVICES:

"All work product is subject to review and acceptance by the City, and ~~must~~ will be revised by the Consultant without additional charge up to five (5) revisions upon starting the task order ~~to the City until found satisfactory and accepted by City~~."

GEOinovo recommends the following change to the project scope and specifications section II. Database and Map Update, B. Development of Updated District Maps, number 6:

Consultant will support no more than three (3) additional public hearings.

6. Affidavit of Non-Collusion and Non-Discrimination

Uploaded to the City's Planet Bids portal.

7. Federal Lobbyist Requirements

Uploaded to the City's Planet Bids portal.

8. Debarment and Suspension Certificate

Uploaded to the City's Planet Bids portal.

9. W-9 Request for Taxpayer Identification Number and Certification

Uploaded to the City's Planet Bids portal.

10. Certificate of Compliance with Labor Code Section 3700

Not applicable.

11. Bid Security

Not applicable.