

County of Albany

Mapping Services for the Majority Minority Subcommittee on Redistricting

RFP # 2022-011

Proposal submitted February 2, 2022 by:



Improving People with Spatial Solutions

Applied Geographics, Inc.
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Proposal Contact:

Priya Sankalia, Project Manager
psankalia@appgeo.com; 860-339-4254

AppGeo Proposal: 2022-0045p

Cover Letter

February 2, 2022

Karen A. Storm, Purchasing Agent
County of Albany
112 State Street, Room 1000
Albany, NY 12207

Dear Ms. Storm:

Applied Geographics, Inc. (AppGeo) is pleased to submit this response to your solicitation for Mapping Services for the Albany County Majority Minority Subcommittee on Redistricting. We are responding to this RFP after recently being awarded the solicitation for Mapping Services for the Albany County Commission on Redistricting. By engaging AppGeo on this project as well, the County will benefit from our ability to leverage the expertise of the same team, provide a significant cost savings through use of the same software and data package, and take advantage of the familiarity we will gain with the County's data and objectives.

We are a geospatial consulting firm with 30 years of experience in more than 40 states. For this project, we have assembled an exceptionally strong team that includes a PMP-certified project manager, several GIS specialists, and a highly experienced professional Demographer. Robert Scardamalia, with 40 years of experience, is the former New York State Demographer who lives in Albany County (Rensselaerville) and works with AppGeo as a subcontractor on many redistricting projects.

Our firm is dedicated to applying geospatial technology to address a wide range of purposes and we are fully prepared to bring all of our expertise to assist with your redistricting requirements. We understand the complexities and nuances of redistricting and its importance to many aspects of local government. We know how important it will be to do this work well and fairly, using the best data and methods to ensure the best results. We understand the purpose of this project as it pertains to Majority Minority districts and minority communities and the laser focus the county intends to bring to equal representation of minority communities.

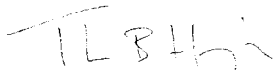
AppGeo has been working with the City of Albany for the past 4.5 years with our cloud-hosted online mapping platform, MapGeo, as well as our support services for local government. We are a known and trusted geospatial contractor with a record

of success in the Albany area, and we look forward to building on that success with your redistricting project.

AppGeo does not have any conflict of interest at any tier. We are ready, willing, and eager to be your trusted partner and look forward to working with you.

I confirm that I am authorized to legally bind the company. If you have questions about our proposal or need additional information, please feel free to contact our Project Manager at psankalia@appgeo.com or (617)447-2466.

Sincerely,



Tom Harrington, Jr. PhD
Chief Marketing Officer
33 Broad St, 4th Floor, Boston, MA 02109
617-447-2488

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SECTION II - Qualifications and Experience

Brief History of AppGeo. Applied Geographics, Inc. (AppGeo) (www.appgeo.com) was founded in 1991 as a full-service GIS and Geospatial IT consulting firm with a passion for and singular focus on geospatial technology. AppGeo customers represent all levels of government - city, county, regional, state, and federal-level clients - as well as the private sector and non-profits. In 30 years of business, we've completed over 1,000 projects and served over 700 clients in dozens of states, including New York.

AppGeo's staff of 40 full-time professionals includes a range of experts in Geospatial IT: developers and software engineers, systems architects, application designers, data analysts, data scientists, and strategic planners. These are career experts who actively participate in professional organizations and maintain a high level of expertise in Geospatial IT and emerging trends and technologies.

Number of Years in Business. AppGeo is currently in it's 31st year of business. The company is headed by a President and CEO who has been with the company for over 25 years, and a small leadership team who have been with the company for an average of 20 years.

Qualification to do Business in New York. AppGeo is registered to do business in the State of New York and has worked in New York for a number of years. Currently AppGeo is supporting the City of Albany, providing ongoing as-needed GIS support services. In addition, AppGeo built and continues to maintain the City's public-facing mapping platform <https://albanyny.mapgeo.io>.

AppGeo's partner on this project, Bob Scardamalia, is based in Albany County and was Chief Demographer for the State of New York for 20 years.

Work completed in the **State of New York** includes projects such as:

- AppGeo designed and implemented ShareGIS, the State of New York's enterprise-wide GIS services platform built to provide services to 4000 employees and 20 executive agencies
- AppGeo handled the maintenance of GIS datasets for the office of Cyber Security and Critical Infrastructure Coordination
- AppGeo developed the iMAP Invasives web mapping application for the State of New York's Natural Heritage Program

AppGeo has also worked extensively in **New York City**. For example:

- AppGeo developed high quality LiDAR and land cover data, and completed a tree canopy change analysis (<https://maps.nyc.gov/lidar/2017/>) for the City, and also developed a 3D building massing model involving over 1,000,000 buildings
- AppGeo built a web platform for the City called the Searchable Property Environmental E-Database (SPEED) for the Mayor's Office of Environmental Remediation
- AppGeo build an application that provides building-level detailed views of broadband connectivity across the City, for the Economic Development Corporation
- AppGeo has completed significant projects for the New York University's Stern School of Business as well as NYU's Furman Center

Location of Work Performance. This project will be managed and staffed from our Boston headquarters and coordinated with our local Albany County partner, Bob Scardamalia. It is routine for AppGeo to work with customers across the nation using remote technologies. We leverage video conferencing, Google chat, email, and file and document sharing systems to facilitate communications. We deploy web project portals to store and share documents, project calendars, minutes, etc. We schedule regular reviews, check ins, and project management meetings using remote technology. Every AppGeo project is successfully managed through these combinations of methods and tools in a manner that provides the highest and most cost-effective service to our clients. In addition to leveraging remote technologies, we also take time for onsite meetings as needed.

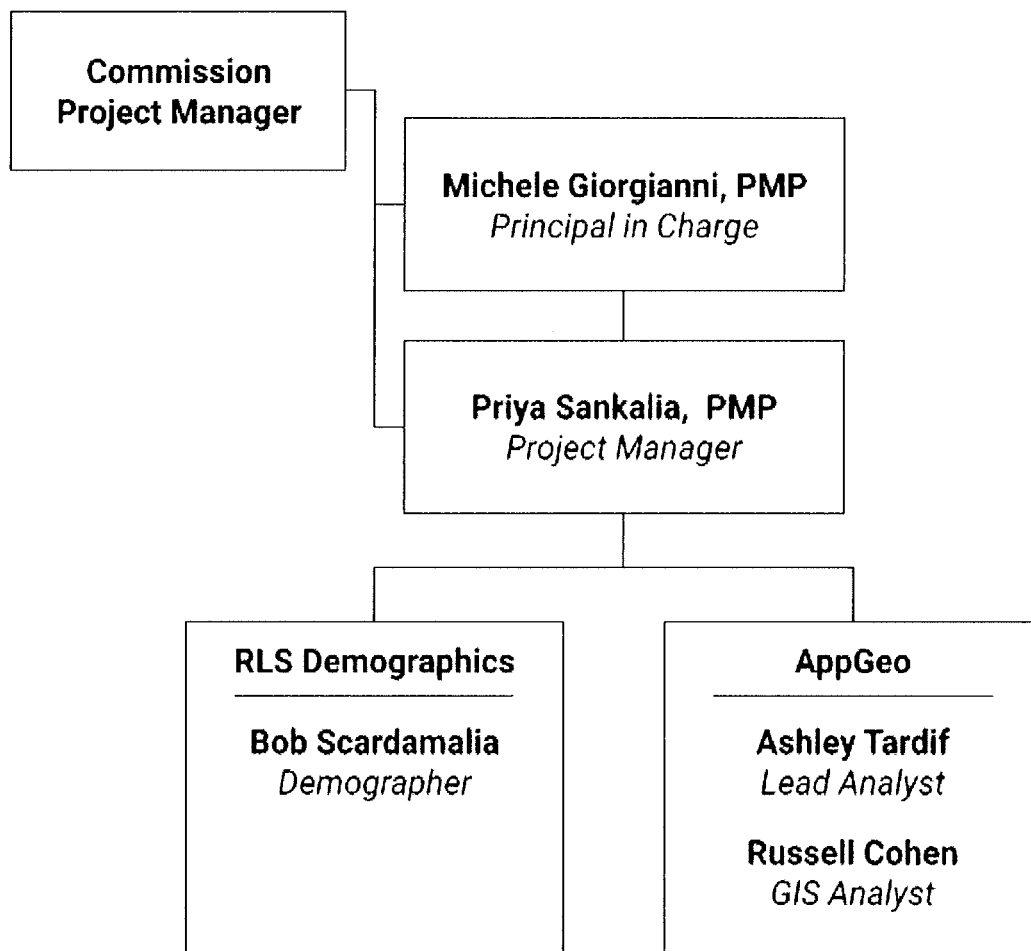
Due to current health concerns, AppGeo employees are mainly working remotely. To expeditiously address all elements of the project, AppGeo intends to keep the project communication simple and straightforward with regular direct communication between the project team and Albany County either through email, telephone, or virtual meetings. For short-duration tasking, AppGeo believes this is the best approach.

If a particular task is determined to take a significant amount of time or require a repeated exchange of data and information, AppGeo will employ a shared project website where tasks can be tracked and shared data made more accessible. This site could also be employed if there are multiple requests coming from several requestors. This would allow the project team to see all active requests and coordinate activities. Any project workflow application would have access strictly controlled through username/password authentication.

II.A Qualifications of AppGeo's Team

Our team will be led by Project Manager Priya Sankalia, and Principal in Charge Michele Giorgianni, both certified Project Management Professionals (PMPs) with a combined 38 years of experience in managing projects. We are joined on this project by Albany County resident Bob Scardamalia, founder of RLS Demographics, a firm specializing in the use and analysis of economic and demographic data for private and public applications. Bob has partnered with AppGeo on previous redistricting projects. He brings a robust set of skills to our team and deep experience in analyzing demographic data. His career includes over 20 years as Chief Demographer for the State of New York. Bob has been preparing or managing the production of local area population projections for more than three decades.

Our team organization chart is presented here, and below we describe the qualifications of each of our proposed staff and their roles on this project. We also present resumes at the end of this section which include details about the education and work experience of each team member.





Michele Giorgianni, GISP, PMP - Principal

Qualifications. Michele is an AppGeo Principal, Senior Project Manager, certified Project Management Professional (PMP), and a GIS Professional (GISP) with 20 years of experience in all aspects of GIS implementation for local, regional, and state governments. Michele has managed dozens of GIS consulting projects and has worked as a GIS professional in positions in both state and local government. She has managed a number of projects that involve redistricting. For example, she was the Project Manager of AppGeo's 2011 work with the CT General Assembly and the Towns of West Hartford, CT, Lincoln, RI, and Cumberland, RI.

Roles and Responsibilities. As Principal in Charge, Michele will provide high-level administration and oversight of AppGeo's services, and assume ultimate responsibility for the quality and timeliness of all services delivered. She will ensure the availability of AppGeo's team, and the necessary level of commitment of staff resources to competently meet the requirements of this project. Michele will also be available to the County as an alternate point of contact.



Priya Sankalia, PMP - Project Manager

Qualifications. Priya is a certified Project Management Professional (PMP) and a GIS professional with 18 years of experience in GIS analysis and project management covering a wide range of industries including local government, school districts, transportation, and environment. Her technical skills and areas of expertise include Esri software; GIS analysis; web application design, and project management. Priya is currently managing all of AppGeo's redistricting projects in addition to other analytics projects including one to delineate Medical Service Study Areas for California's Office of Statewide Health Planning and Development and an effort to delineate persistent poverty districts for the Economic Innovation Group. Priya will also be managing the Redistricting project for the Albany County Commission on Redistricting

Roles and Responsibilities. Priya will provide for all project management functions, staff direction, task definition and management, communications, and reporting.



Ashley Tardif, Geospatial Analyst

Qualifications. Ashley has 6 years of experience as a GIS Analyst and has a BS from the University of Massachusetts, Amherst. Her expertise in complex spatial data processing, data analysis, and data visualization is directly applicable to this project. In addition, she has worked on all our recent redistricting projects (both school and local redistricting) including Shrewsbury MA, Wellesley MA, and

Peabody MA to name a few.

These skills are also relevant to a variety of her recent projects that include analyzing congressional district and census data; and demographic analyses and customer profiling for a variety of use cases.

Roles and Responsibilities. Ashley will be primarily responsible for performing the redistricting tasks required for the successful completion of the project. Ashley's tasks on this project will include preparing and loading data (geographic and tabular); working with the Commission to build redistricting plans using Maptitude; preparing professional maps, charts, graphs, or tables to summarize and present results; and evaluating the public plan submissions.



Russell Cohen, Geospatial Analyst

Qualifications. Since joining AppGeo in 2020, Russell has been a key contributor to a number of AppGeo projects including both state-level and town-level redistricting projects. He provides GIS Analyst skills in data development and improvement, building data ETL (Extract, Transform, Load) routines, data analysis, web

cartography, and as-needed technical assistance to a number of Massachusetts towns and the State of North Dakota's statewide parcel data program, under annual support contracts.

Roles and Responsibilities. Russell will be teamed with Ashley, performing the data preparation tasks and evaluating the public plan submissions.



Bob Scardamalia, Census/Demographics

Qualifications. Bob is the founder of RLS Demographics and a professional demographer with more than 40 years of experience in the use of Census and related economic and demographic data for demographic analysis, public sector program management, forecasting, marketing, and business attraction. His career includes more than 20 years as Chief Demographer for the State of New York. He has served on numerous state and national advisory committees for the Census Bureau and other state and federal statistical agencies.

Roles and Responsibilities. Bob will advise, direct, and perform tasks focused on the manipulation, interpretation, and analysis of census data.

II.B AppGeo's Project Experience

AppGeo has worked with and is familiar with voting district data in the Northeast. We have developed and updated voting district data, produced official voting district maps, and configured and hosted voting information for public consumption on municipal websites. We regularly work with all types of district datasets (voting as well as historic, zoning, school, and other district-based geographic boundary data), performing maintenance and updates.

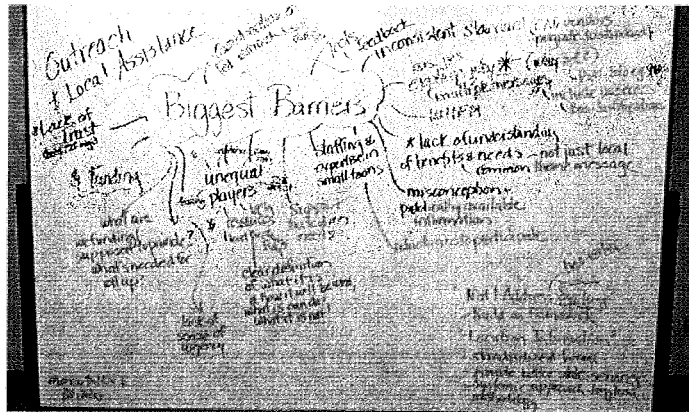
The Albany County Commission on Redistricting and AppGeo are currently embarking on the County's redistricting project where AppGeo is providing mapping, demographic and data analysis services related to the redistricting of the legislative districts of the County.

AppGeo has completed many types of redistricting projects. For example, for the State of Connecticut General Assembly we developed and aligned to the 2010 census geography many years worth of local voting district boundaries for all 169 towns in the state. Within the specialized realm of school redistricting, we have developed a niche set of services that support the school redistricting process going back to 2004.

AppGeo's team are skilled facilitators. Our past projects have involved public hearings, community engagement, and working sessions with redistricting teams. We structure the meetings, help to frame the questions, guide the discussion and keep the group focused. Most of the projects that we describe in our proposal involved this kind of collaboration and consensus building. We consider this one of our strengths. Our facilitation skills include:

- Employing assessment tools such as online surveys

- Conducting stakeholder meetings such as working group sessions and visioning workshops
- Facilitating breakout sessions in which small groups tackle sub-topics
- Making formal presentations for executive meetings and public forums
- Conducting stakeholder interviews as part of a larger needs assessment process



Whiteboard notes from an AppGeo visioning workshop.

The following section describes our participation on a sample of relevant projects:

- City of Albany, NY - GIS Implementation Support and MapGeo Platform
- Connecticut General Assembly (CGA) 2011 and 2021 Redistricting Support
- City of Peabody, MA - 2021 Reprecincting Support
- 2011 Voting and Council Districts Updates - Towns in CT and RI
- New Milford, CT - 2021 Reprecincting Support
- Town of Plymouth, MA - Public Schools Redistricting
- Town of Shrewsbury, MA - Public Schools Redistricting
- Town of Wellesley, MA - Public Schools Redistricting

City of Albany, NY - GIS Implementation Support and MapGeo Platform

AppGeo implemented the City of Albany's MapGeo web mapping platform in 2017 and it has since provided the City the ability to visualize and contextualize authoritative City data so that local businesses, residents, visitors, and City staff can make informed decisions, improve their quality of life, and work with greater efficiency. In 2020, the City hired AppGeo to provide additional geospatial consulting services on an as-needed basis.

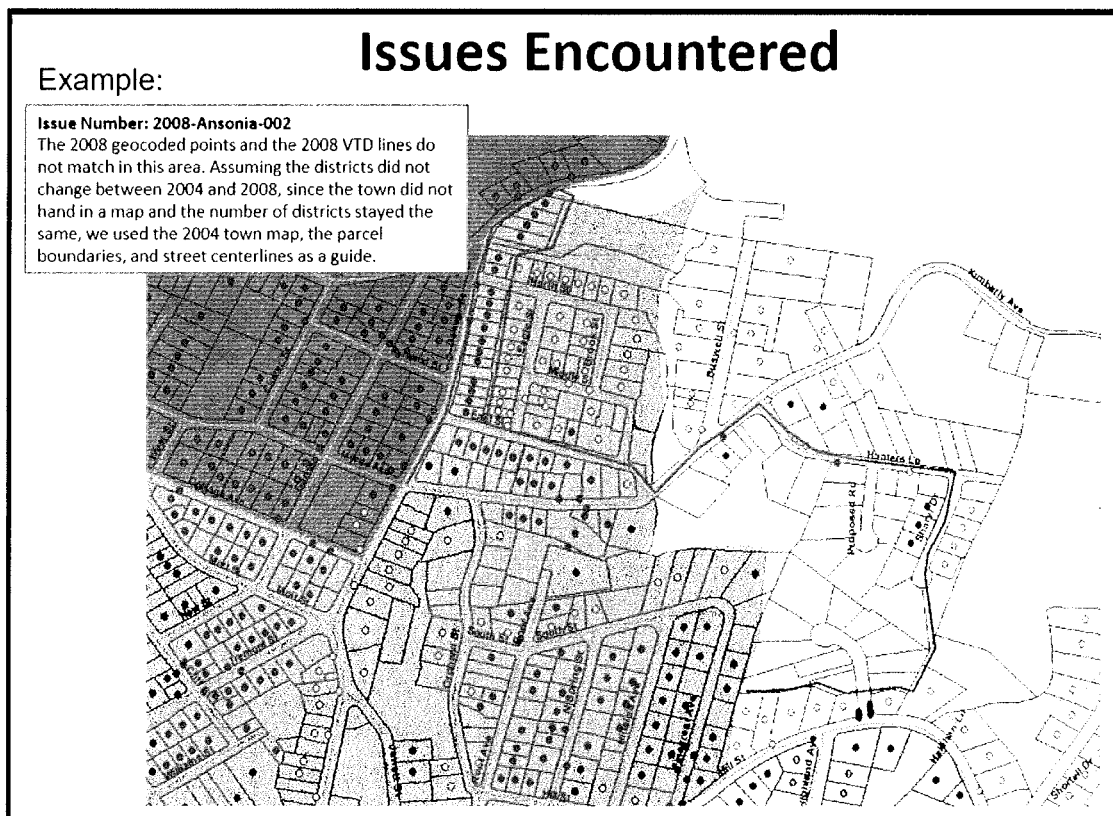


City of Albany NY provides its residents with detailed information about their neighborhood on MapGeo (albany.ny.mapgeo.io)

Connecticut General Assembly (CGA) 2011 and 2021 Redistricting Support

AppGeo supported CGA with the 2011 redistricting project involving development, and alignment to 2010 census geography, of many years of local voting district boundaries from all towns in the state. AppGeo also created a list of all streets within each new House and/or Senate District by Town which included the address range in the district, for example, the left and right, from and to, address ranges separated out by Town. Additionally, AppGeo provided support to CGA for developing custom reports, as well as census data analysis guidance and workflow documentation. Moreover, AppGeo's proposed Principal in Charge for this project, Michele Giorgianni, co-managed this 2011 redistricting work for the CGA.

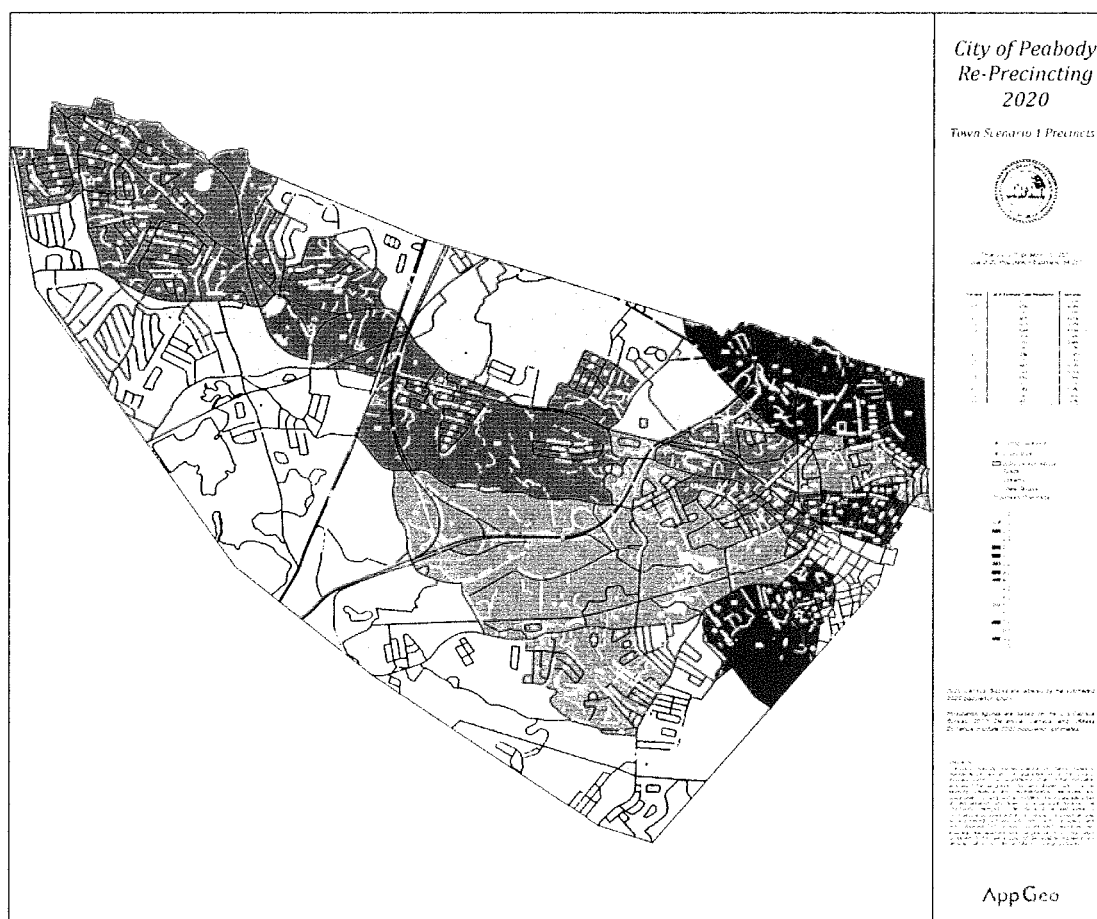
In 2021, CGA again hired AppGeo to support their statewide redistricting efforts. This work mainly involved processing, conflating, and performing spatial analyses on voter data across several years. This information was used to help CGA validate its redistricting plans.



An example of AppGeo's use of maps to track and resolve boundary issues during its voting district update work for CGA in 2011.

City of Peabody, MA - 2021 Reprecincting Support

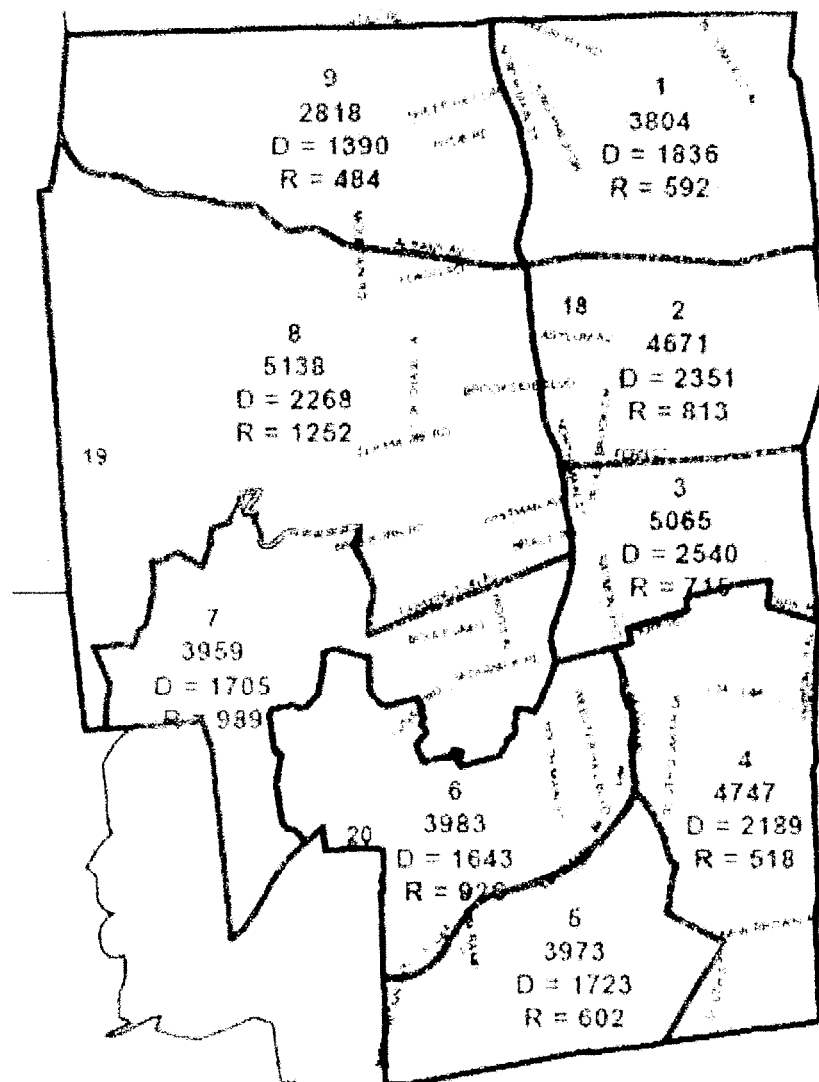
The City of Peabody, MA had seen some significant population changes in some parts of the City requiring a reprecincting effort. The State of MA provided the option to all municipalities to develop their own maps and submit them to the State for approval. The City contracted with AppGeo to support their reprecincting effort. Given that the census data for redistricting was going to be delayed in its release, the City wanted to use the Donahue Institute estimates to perform the redistricting tasks. AppGeo set up the data in ESRI's redistricting software and collaborated with the City's working group. AppGeo staff used a screen share approach to build the maps and review the numbers with the working group. Once the draft version of the map was created it was easy to create the final map when the final census data was released. Additional relevant maps identifying blocks that changed wards and the location of the environmental justice populations helped the working group create precincts that worked for the City. The final maps, which AppGeo created, were accepted by the State and voted on by the City Council, and passed.



One of several scenario maps developed by AppGeo for the City of Peabody's Reprecincting effort.

2011 Voting and Council Districts Updates - West Hartford CT, Cumberland RI, Lincoln RI

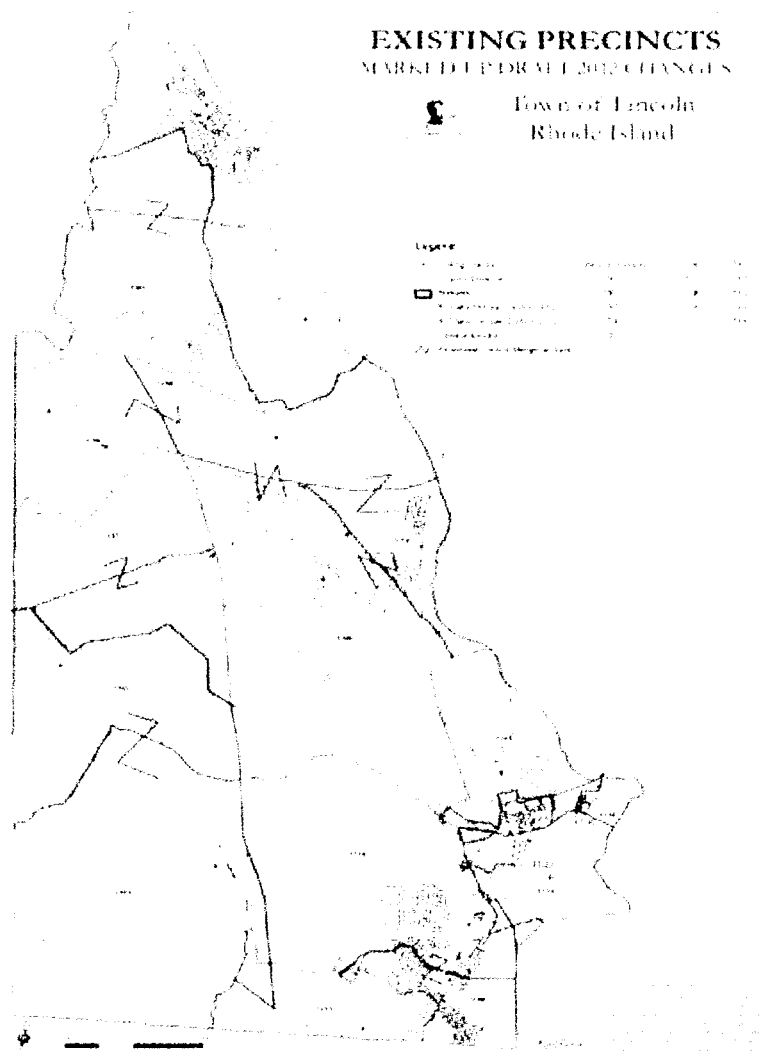
After the new State Legislative and US Congressional District boundaries were released, the Town needed to update their local voting districts. In the case of Cumberland, RI, existing voting district data needed to be created. This was done by converting from existing hand-drawn paper maps using the census blocks data. For all towns, the list of registered voters, polling locations, and commissioners/officials were obtained and geocoded. The geocoded voter points were then assigned precincts and summary statistics. Maps were created to present existing conditions for the Towns to work with.



AppGeo then collaborated with the Town to interactively mark up the existing precinct maps to develop proposed redistricting plans, paying particular attention to the new State boundaries, potential to merge districts, keeping a polling location in each district, keeping officials in their district, registered voter count and balanced population. New maps were generated with proposed districts and new counts for the proposed districts were calculated for the voters as well as the population.

Summary information provided in support of West Hartford's Reprecincting effort.

Additionally, new street list tables were generated as required by the State for import into their database. This included all potential addresses using address ranges on streets by district and was accomplished using the Census geography Faces and Edges via scripts created in Esri's Model Builder tool and python.



Existing District Map marked up in collaboration with the Town to develop a new plan, in support of Lincoln's reprecincting effort.

New Milford, CT - 2021 Reprecincting Support

AppGeo is currently supporting the Town of New Milford, CT with adjusting their precinct boundaries to align with the newly released State of Connecticut Legislative Districts. We have set up the census data along with the existing voting districts and the new legislative district data in the Maptitude software for performing the analysis. In collaboration with the Town Clerk we will be adjusting the voting district boundaries to align with the Legislative districts while balancing the population of the voting districts.

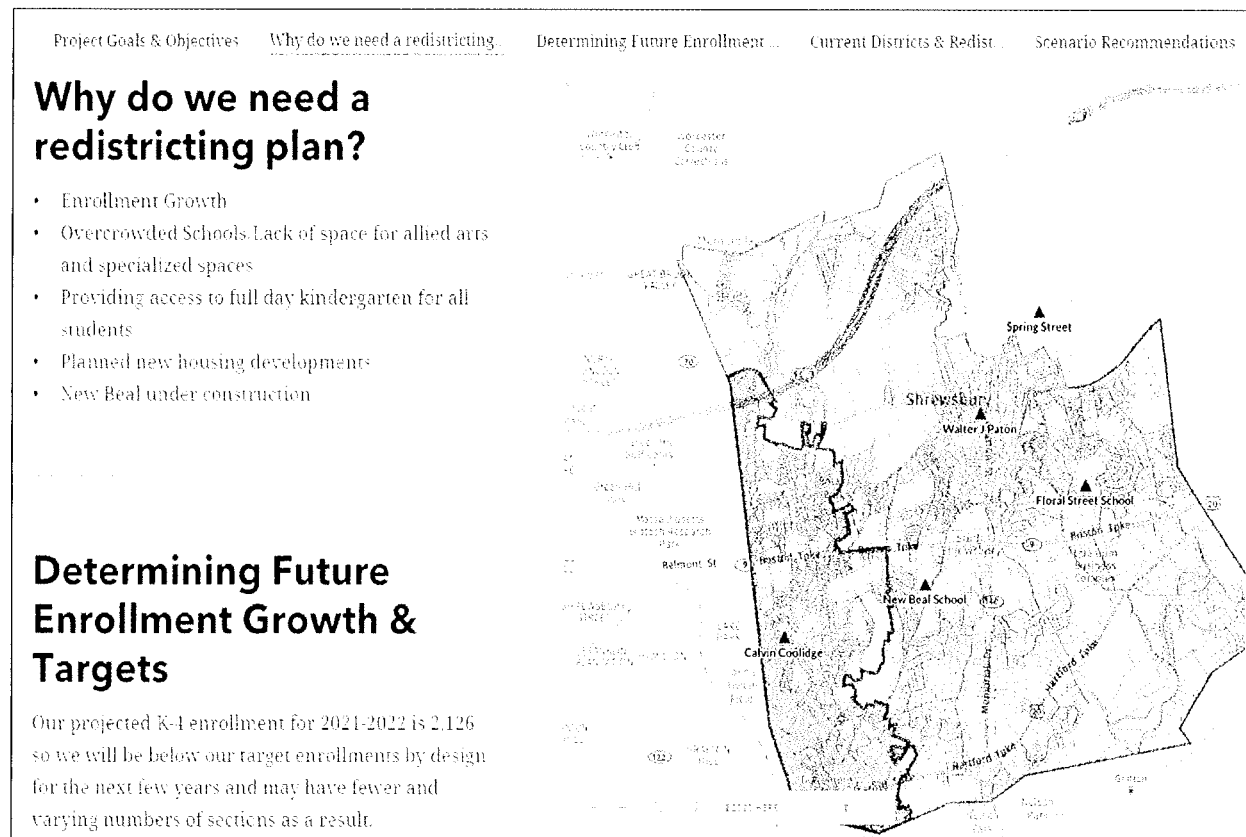
Town of Plymouth, MA - Public Schools

We are currently working on a student enrollment forecasting and elementary school redistricting project for the Town of Plymouth. The Town has seen some demographic changes and are looking to balance enrollment across their schools while maintaining the feeder patterns going into the middle and high schools. We are in the process of working with the School Redistricting Committee building scenarios to present to the community for feedback. Our partner, **Bob Scardemalia**, has worked on a very detailed enrollment forecasting study including an analysis of the extensive new development expected to come into the town. Since this is a pandemic time project all communication and meetings have been held remotely and the district has created a dedicated webpage for the project - <https://bit.ly/3nZVPGI> on their website.

Town of Shrewsbury, MA - Public Schools

Earlier this year we successfully completed a student enrollment forecasting and elementary school redistricting project for the Town of Shrewsbury. Shrewsbury Public Schools (SPS) are going through significant changes including grade reconfiguration, relieving pressure at elementary schools, and the opening of a new and larger school. All these changes required SPS to redistrict and re-align the elementary schools. With the help of our partner, **Bob Scardemalia**, we performed a detailed enrollment forecasting study in conjunction with our geospatial technical approach to develop a new district map for SPS which was voted on and adopted by the Shrewsbury School Committee in Feb 2021. We kicked off this project right before the start of the pandemic and after several months of a pause, working in a compressed schedule, entirely remotely, we successfully completed the project.

Since all community engagement was done via zoom, **AppGeo created an interactive website which can be explored at this link** - <https://bit.ly/3vdrJAB>. This website shares information with the community to keep them updated throughout the process for complete transparency:



Images from the interactive website set up by AppGeo to keep the public informed about the redistricting process - <https://bit.ly/3vdrJAB>

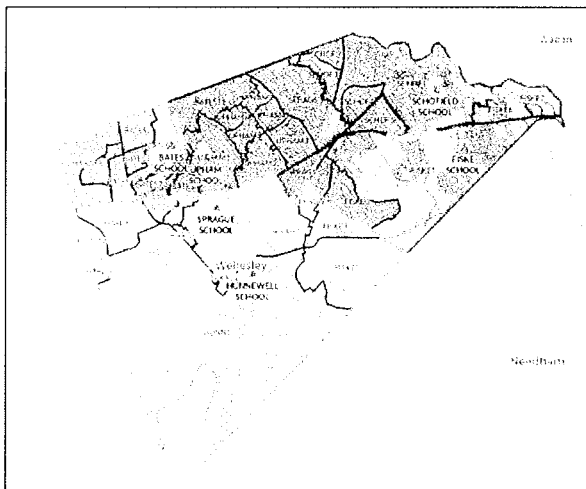
Town of Wellesley, MA - Public Schools Redistricting

In early 2020, AppGeo completed a demographics and redistricting project for the Town of Wellesley. AppGeo worked closely with the Superintendent and the Assistant Superintendent of Finance and Operations at the Wellesley Public Schools on their school redistricting project. Wellesley is experiencing a decline in enrollment and is planning for multiple building projects expected to go online by 2024. The redistricting project was part of the larger School Building Committee project wherein Wellesley is to replace and expand one school and replace and expand one of two additional schools. A feasibility study was underway to determine which of the two schools would be rebuilt and the redistricting plan was to be a key component in the study. Given that the redistricting plan would not go into effect until 2024, using future enrollment projections was critical in this process.

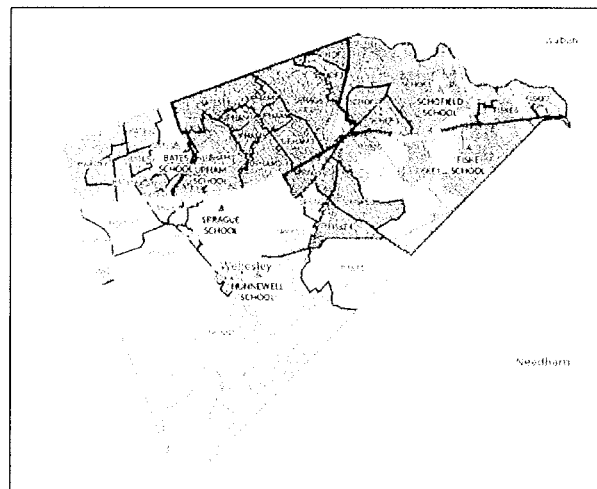
AppGeo worked closely with the Wellesley Superintendent's Advisory Committee and partnered with **Bob Scardamalia** for demographics support to develop map options for each of the building scenarios which were presented and voted on by the School Committee.

In a follow-up to our initial project, we are currently working with the district to evaluate the feasibility of phasing in the redistricting map earlier than originally planned.

Upham Map 1



Upham Map 2



Two scenario map options presented for an Upham School scenario, presented to the School Committee and the public for feedback.

II.C Resumes

MICHELE GIORGIANNI, Principal, and Senior Project Manager, (GISP), (PMP)

Ms. Giorgianni has 20 years of experience in the GIS field, including 14 at AppGeo, in which she has managed dozens of GIS consulting projects. Ms. Giorgianni manages AppGeo's managed services program, Spatial IQ. Her areas of expertise are GIS consulting, project management, local and state government GIS implementations, spatial data analysis, remote sensing applied to geosciences and geospatial projects, and field data collection. Her experience includes needs assessments, implementation and strategic planning, data development, quality control and integration, geographic analysis, imagery and LiDAR acquisition projects, CADD conversion, and managing the development of significant web applications. She has worked as a GIS professional in positions in state and municipal government. Ms. Giorgianni is currently Chair of the RIGIS Executive Committee and member of the RIGIS Outreach Working Group, Data Management Working Group, and Co-Chair of the Technical Standards Task Force.

EDUCATION AND CERTIFICATIONS

- Project Management Institute, certified Project Management Professional (PMP), 2018
- GIS Certification Institute, Geographic Information Systems Professional (GISP), 2006
- University of Rhode Island, MS in Environmental Science and Management (Concentration in GIS / RS), 2007
- New Mexico State University, BS in Geography, 2001

WORK HISTORY

- **2020 - present:** Applied Geographics, Inc., Principal / Senior Project Manager
- **2007 to 2019:** Applied Geographics, Inc., Senior Project Manager
- **2006 to 2007:** RI Department of Environmental Management (RIDEM), GIS Intern
- **2005 to 2006:** Town of Cumberland, RI, GIS Consultant
- **2002 to 2005:** Coast Realty LLC, GIS Specialist (East Providence, RI)
- **2001 to 2002:** US Fish and Wildlife Service, GIS/GPS and Fisheries Intern

SELECTED & RELEVANT PROJECT EXPERIENCE

State General Assembly - Voter Redistricting (2021) - Principal in Charge of a project to provide GIS support to a confidential state in their redistricting effort, including geocoding 5 years of voter rolls (using Maptitude) with a significant amount of parsing and cleaning of the data, establishing a repeatable process (using FME Workbench) to identify unique addresses, perform spatial analysis, and summarizing data by blocks using a variety of criteria.

City of Albany, NY - GIS Services (2021) - Principal in Charge, overseeing AppGeo's delivery of as-needed GIS support services and enhancements to the City's MapGeo platform.

State of Connecticut General Assembly (CGA) – Managed support to CGA with 2011 redistricting project involving development, and alignment to 2010 census geography of many

years' of local voting district boundaries from all towns in the state, development of statewide address locator and geocoding of registered voters, analysis and improvements to geocoding results, provided various other as-needed analysis and mapping support requests.

New York University Stern School of Business - PACE Finance Mapping Tool (2020 - 2021) - Project Manager for initial application development in support of NYU Stern's objective help connect funding institutions and building owners to drive investment in concrete carbon emissions reduction projects under Local Law 97 which is part of the Climate Mobilization Act.

New York University, Furman Center (2020, 2021) - Project Manager for web application enhancements to the AppGeo-built system, CoreData, an interactive citywide web portal presenting maps, charts, tables and information on subsidized housing and neighborhood information at the city, borough, and neighborhood level. In addition, oversee ongoing application support services.

Indiana Geographic Information Office - Statewide GIS Strategic Plan (2021) - Project Manager and strategic planner in the development of a comprehensive geospatial Strategic Plan and Business Plan for the State of Indiana.

State of North Dakota Statewide Parcel Dataset (2020 – 2021) – Project Manager for development of a statewide parcel dataset.

WestCOG (Western Connecticut Council of Governments (2019 - 2020) - Project Manager for implementation of a region-wide public-facing GIS platform, MapGeo, including data development, data standardization, guidance and strategy for long-term success of the program

Town of West Hartford, CT (2019, 2020, 2021) - Project Manager for annual GIS implementation support contract, through AppGeo's Spatial IQ for MapGeo Managed Services Program, providing technical services and support on a broad range of Town initiatives.
(2011-2019) – Project Manager for over 18 projects supporting the Town's enterprise GIS program across a broad range of needs.

New York City Mayor's Office of Environmental Remediation (2017- 2019; 2020) - Project Manager for the next generation SPEED (Searchable Property Environmental E-Database) Portal designed to facilitate research and analysis of historical environmental information on thousands of vacant commercial and industrial properties in New York City.

State of Vermont, Agency of Transportation (VTRANS) (2016 - 2017) - Provided overall project management to the State in planning and developing a statewide parcel database.

Connecticut Economic Resource Center (CERC) (2012 - 2020) – Manage and often perform as-needed mapping requests to support CERC's daily operations and support to their clients.

PRIYA SANKALIA, PMP, PROJECT MANAGER

Ms. Sankalia is a certified Project Management Professional (PMP) and a GIS professional with 18 years of experience in GIS analysis and project management covering a wide range of industries including local government, school districts, transportation, and environment. Her technical skills and areas of expertise include: Esri software; GIS analysis; web application design, and project management.

EDUCATION AND CERTIFICATIONS

- Project Management Institute, certified Project Management Professional (PMP), 2019
- MA in Anthropology, University of Illinois at Urbana Champaign, 1998
- MA in Ancient Indian History, Culture and Archaeology from Deccan College Post Graduate Research Institute, Pune, India, 1994
- BA in Ancient Indian Culture, St. Xavier's College, University of Bombay, India, 1992

WORK HISTORY

- **2006 - present:** Project Manager/GIS Analyst at Applied Geographics, Boston, MA
- **2003 to 2006:** GIS Specialist and Web Manager, Stony Brook-Millstone Watershed Association (SBMWA), Pennington, NJ.

SELECTED & RELEVANT PROJECT EXPERIENCE

State General Assembly - Voter Redistricting (2021) - Project Manager providing GIS support to a confidential state in their redistricting effort, including geocoding 5 years of voter rolls (using Maptitude) with a significant amount of parsing and cleaning of the data, establishing a repeatable process (using FME Workbench) to identify unique addresses, perform spatial analysis, and summarizing data by blocks using a variety of criteria.

Town of Plymouth, MA - School Redistricting and Demographics (2021 - 2022) - Project Manager for currently ongoing, redistricting and demographic analysis project. Working collaboratively with Bob Scarmadalia of RLS Demographics on demographic study and enrollment projections while managing the AppGeo tasks of GIS scenario building.

AppGeo COVID-19 Services - BringFood Initiative (2020 - 2021) - Project Manager for an internal company initiative to support the COVID-19 pandemic response - the development and outreach of a web app which provides route optimization services to food banks/food pantries.

State of New York, Cyber Security and Critical Infrastructure Coordination – Provided ongoing quality control support for maintenance of GIS spatial street address databases for a statewide vector-based street data set and a point-based address dataset as part of a public-private sector partnership in 2008 for data maintenance involving NAVTEQ.

Utah Telehealth Network - Telehealth Services Locator (2021) - Project Manager on a project to build a web application designed for the public to locate Telehealth services in 7 Northwest states.

Town of Watertown, MA - GIS Smart City (2021) - Project Manager managing a local government implementation of GIS technologies including a parcel viewer (MapGeo); integrations with business systems, GIS needs assessment, and the implementation of GIS projects in different departments of the Town.

Town of Shrewsbury, MA - School Redistricting and Demographics (2020 - 2021) - Project Manager for school redistricting and demographic analysis project. Working collaboratively with Bob Scarmadalia of RLS Demographics on demographic study and enrollment projections while managing the AppGeo team performing tasks of GIS scenario building.

Town of Wellesley, MA - School Redistricting and Demographics (2019-2020) - Project Manager for a redistricting project to adjust for decline in enrollment, and replacement and expansion of various schools, and demographic analysis to develop enrollment projections.

Town of Lexington, MA - School Redistricting (2016 and 2019) - Project Manager for school redistricting project, to change district boundaries due to increased enrollment.

Town of Marlborough, MA - Public Schools Redistricting (2019 - 2020) - Project Manager for school redistricting project where the town needs to change school district boundaries due to new school being added to the town.

Town of Billerica, MA - School Redistricting (2018) - Project Manager for support of the town's review of its school district boundaries, and planning and analysis to accommodate students from a closed school, refine the district boundaries and balance enrollment.

Town of Weymouth, MA - School Redistricting (2017) - School redistricting project, developing and presenting scenarios for shifting school populations based on student travel time and various other school district parameters.

Town of Lexington, MA, School Redistricting (2016) - Managed and coordinated townwide redistricting in close collaboration with Superintendent, staff and community representatives. Innovative tools and methods presented and analyzed alternative redistricting scenarios.

Town of West Hartford, CT (2015, 2016, 2017) - Publishing, setup and security for web services using Esri AGOL technology; processing a broad range of municipal data and configuring a website for Town mapping application; stormwater utility data development project.

City of Newton, MA, School Redistricting (2015) - Project manager and technical analyst for School Assignment and Redistricting Analysis and Support, resulting in a city-wide district map. Support for City's working group sessions and public meetings

ASHLEY TARDIF, Geospatial Analyst

Ms. Tardif is a Geospatial Analyst lending technical expertise to both public and private sector projects. She performs complex spatial data processing, data analysis, and data visualization leveraging proprietary and open source platforms.

EDUCATION

- University of Massachusetts, Amherst; BS in Natural Resources Conservation and Wildlife Ecology, 2016.

WORK HISTORY

- Sept. 2017 to present: Applied Geographics, Inc., Geospatial Analyst & Assistant Product Manager
- Feb. 2017 - Sept. 2017: Open Source Geospatial Foundation, Operations Coordinator for FOSS4G Boston 2017
- Jan. 2015- May 2016: University of Massachusetts, Amherst, Teaching Assistant for Introduction to Geographic Information Systems

TECHNICAL SKILLS

- Spatial Analysis
- ESRI ArcGIS
- QGIS
- CARTO - Editor / Builder
- PostgreSQL, PGAdmin, & PostGIS
- Geoserver
- SQL
- Basic JavaScript
- Python
- HTML, CSS
- Linux Command Line
- FME - Feature Manipulation Engine
- Alteryx

SELECTED & RELEVANT PROJECT EXPERIENCE

Town of Plymouth, MA - School Redistricting and Demographics (2021 - 2022) - Geospatial analytics for current school redistricting and demographic analysis project. Working collaboratively with Bob Scarmadalia of RLS Demographics on demographic study and enrollment projections while working on AppGeo tasks of GIS data management and scenario building

State General Assembly - Voter Redistricting (2021) - GIS analysis for a confidential state in its redistricting effort, including geocoding 5 years of voter rolls (using Maptitude) with a significant amount of parsing and cleaning of the data, establishing a repeatable process (using

FME Workbench) to identify unique addresses, performing spatial analysis, and summarizing data by blocks using a variety of criteria.

State of California Office of Statewide Health Planning and Development (2021) -

Geospatial analytics in support of OSHPD's Medical Service Study Areas (MSSA) Project. This project requires GIS analysis and technical support to ensure that the statewide MSSAs reflect geographically discrete communities, taking into consideration geographic and demographic factors for rural and urban areas, as a subcontractor to Equanim Technologies.

Town of Shrewsbury, MA - School Redistricting and Demographics (2020 - 2021) -

Geospatial analytics for redistricting and demographic analysis project. Working collaboratively with Bob Scarmadalia of RLS Demographics on demographic study and enrollment projections while working on tasks of GIS data management and scenario building.

Town of Wellesley, MA - School Redistricting and Demographics (2019) - Geospatial analysis for a redistricting project to adjust for decline in enrollment, and replacement and expansion of various schools, and demographic analysis to develop future enrollment projections.

Town of Marlborough, MA - Public Schools Redistricting (2019 - 2020) - Spatial and demographic analysis, data processing, and scenario map development for a school redistricting project where the town needs to edit their school district boundaries because of the addition of a new school.

Western Connecticut Council of Governments (WestCOG) (2019 - 2021) - Region-Wide

Public-Facing GIS Platform (2019) - Development of a repeatable process to convert multi-town property and parcel data into a single schema format and dataset for the use in the MapGeo platform. This also includes generating a mismatch report between parcel and property data, resolution to those mismatches, as well as the conversion and creation of master land use and open space data layers. Implementation of regional parcel viewer (MapGeo). Responsibilities include governance support for regional agency for communication with towns and managing ETL processes for ingest of data from 18 towns.

Town of West Hartford, CT (2019 - 2021) - Technical support to the Town's enterprise GIS program, under annual managed services support contract, including the generation of the Fire department run book and utility data maintenance.

Town of Lexington, MA - School Redistricting (2019) - Geospatial analytics and visualization in support of the realignment of school district boundaries; student demographic analysis and geocoding; scenario building and analysis to alleviate crowding and balance enrollment.

Town of Billerica, MA - School Redistricting (2018) - Student geocoding, scenario building, analysis, and visualization for the town's review of its school district boundaries, and planning and analysis to alleviate crowding, refine the district boundaries and balance enrollment.

RUSSELL COHEN, Geospatial Analyst

Since joining AppGeo, Russell has been a key contributor to a number of AppGeo projects, providing GIS Analyst skills in data development and improvement, building data ETL (Extract, Transform, Load) routines, data analysis, web cartography, and as-needed technical assistance to a number of local government clients under annual support contracts.

EDUCATION

- University of Vermont, B.A. in Geography, minors in Political Science and Geospatial Technologies, May 2020
- Gamma Theta Upsilon, Eta Alpha Chapter – International Geographic Honor Society – Inducted in 2018

WORK HISTORY

- **June 2020 - present:** Applied Geographics, GIS Analyst
- **2019 - 2020** - University of Vermont Spatial Analysis Lab (UVM SAL). GIS Technician - Interpretation of satellite and aerial imagery, data creation and editing, and collaboration with a team of GIS and technology professionals.
- **2019** - University of Vermont. Teaching assistant for Introduction to Geographic Information Systems

SKILLS

- ArcGIS
- FME
- Alteryx
- ENVI
- Python
- R
- Russian Language

SELECTED & RELEVANT PROJECT EXPERIENCE

Town of Plymouth, MA - School Redistricting and Demographics (2021 - 2022) - GIS Analyst performing boundary analysis for redistricting and demographic analysis project.

State General Assembly - Redistricting Support (2021) - Provided GIS support to a confidential state in their redistricting effort, including geocoding 5 years of voter rolls (using Maptitude) with a significant amount of parsing and cleaning of the data, establishing a repeatable process (using FME Workbench) to identify unique addresses, perform spatial analysis, and summarize data by blocks using a variety of criteria.

Town of Shrewsbury, MA - School Redistricting and Demographics (2020 - 2021) - GIS
Analyst performing boundary analysis for redistricting and demographic analysis project.

Town of West Hartford, CT (2020 - 2021) - Annual enterprise GIS support providing as-needed maintenance or improvements on data layers such as sidewalk centerlines.

State of Iowa - Broadband Mapping (2021) - Developed an automated process to assess broadband coverage across the State of Iowa, as part of a large team of data analysts and QA/QC experts processing hundreds of broadband provider coverage datasets into a single standardized statewide data product that identifies areas in need of improved broadband infrastructure. The data will be used at the state-level to determine broadband infrastructure buildout funding eligibility.

Rutgers University, Office of Planning, Development, and Design - Campus Map Reliability Enhancements (2021) - Ongoing improvements of an AppGeo-built campus map web application. GIS Analyst performing regression testing on the Rutgers campus map web application, and troubleshooting issues with back-end data.

City of Cincinnati, Urban Tree Canopy Analysis (2020 - 2021) - Urban Tree Canopy Analysis Project including Lidar data acquisition and development, Urban Tree Canopy and PM 2.5 Analysis, Development of Priority Planting Plans, Landcover development, and the development of an impervious surface dataset for parking lots within Hamilton County, Ohio. Analyst performing QA/QC for Cincinnati tree canopy dataset using image interpretation of true color and color infrared imagery, as well as Lidar products.

Arizona Department of Transportation - Roadway Characteristics Inventory (2020 - 2021) - GIS Analyst performing data extraction and validation of roadway characteristics based on ortho imagery and Google Street View; workflow documentation; and QA/QC for statewide data improvement project focused on the expansion and creation of linear and point based roadway characteristics for a geospatial network of over 9,344 miles of public roadway.

State of North Dakota - Statewide Parcel Data Development, Phase 1 and Phase 2 (2020 - 2021) - GIS Analyst building ETL routines for converting local county parcel data to a statewide standardized format for the development of a statewide parcel database.

Rutgers University - Utility Data Conversion (2020 - ongoing) - Data Analyst for the GIS conversion of comprehensive CADD utility data for all campuses. Built models for creating tile layers from utility network and planimetric GIS data. Performed styling for GIS data based on cartographic best practices and client feedback. Project also includes quality control of orthophotography, LiDAR, 3D buildings, contours, and planimetric data.

Robert L. Scardamalia

P.O. Box 160
306 County Rt. 6
Berne, NY 12023
(518) 797-3163

RLS Demographics, Inc.
President

September 2010 - present

RLS Demographics provides analysis, data processing, and mapping services to clients requiring the integration of economic and demographic data. Specialty services include demographic forecasting and analysis, community profile and analysis, aging trends, Census data processing and consumer marketing services for small businesses.

Relevant forecasting projects

- Subcontract to AppGeo, Inc. – subcontractor responsible for development of demographic and school enrollment projections for Shrewsbury, MA public school district.
- Subcontractor to Statistical Forecasting, LLC – prepared demographic analysis of migration and fertility as input for population forecasts by age and sex to 2040 for the Arlington County Government (2016). Forecasts provided input to Statistical Forecasting school enrollment model. Forecasts were recently updated to reflect most current birth data and changes in fertility rates by age of mother (October 2019). Subcontractor responsible for review and evaluation of Prince William County, VA demographic projections.
- Subcontractor to the Center for Governmental Research – prepared demographic and household forecasts for the Southern Jersey Transportation Planning Organization covering their four county region. Provided forecasts of seasonal and off-season population and households as well as weekend and weekday analysis. (2015-2016)
- Consultant to the New Hampshire Regional Planning Councils – prepared demographic analysis of migration and fertility as input for population forecasts for the 10 New Hampshire counties by age and sex to 2040 (2016).
- Consultant, New York Metropolitan Transportation Council – facilitated local input to the Socioeconomic and Demographic Forecasts 2050 development process (2014-2015).

U.S. Census Bureau
Partnership Specialist

June 2019 – July 2020

Responsible for developing relationships with local governments, businesses, community organizations, schools and a wide range of additional community stakeholders. The purpose of the partnership program is to educate and motivate the community to encourage full participation in the Census enumeration. Involves planning, development and organizing outreach programs and making presentations on the importance of responding to the Census.

State University of New York at Albany
Adjunct Faculty

January 2011 – present

Social and Demographic Change is a Department of Sociology course in the use and understanding of Census and other state and federal data sources for community analysis. Students use the Decennial Census and annual American Community Survey, as well as, other state and federal agency sources to examine economic and demographic data to prepare a comprehensive community profile and analysis of population change.

New York State Department of Economic Development

Director, Center for Research and Information Analysis July 2007 – September 2010

The Center included the New York State Data Center providing analysis and dissemination of economic and demographic data in support of agency programs and policy development. Responsibilities included monitoring regional economic, demographic and labor trends. The Center was a central repository of economic and demographic information, business statistics, foreign trade data, and related State and Federal resources serving state agencies, businesses, not-for-profit organizations, academic institutions, and local governments.

Responsibilities included:

- budget preparation, definition of goals and objectives, and program reporting,
- contract management for annual population estimates and projections and Census promotion,
- analysis of demographic issues and policy implications,
- coordination of information services to State agencies, public and private organizations, and a network of local Affiliate Data Centers,
- supervising the maintenance and updating of economic and demographic indicators,
- supervising Department geographic information systems responsibility,
- primary liaison to the U.S. Bureau of the Census for coordination of Census program planning, promotion, and dissemination activities in New York.

Chief Demographer and State Data Center Director April 1988 – September 2010

The Data Center provides information services for business marketing, research, analysis, and public data dissemination and is responsible for New York State's 2010 Census planning program, address review, and promotion. As a clearinghouse for the dissemination of Census economic and demographic information, the Data Center maintains a broad array of state and federal information sources.

As Chief Demographer, responsible for contract management for population estimates and projections and related demographic analysis. Provided data, analysis, and interpretation to Department executive and public affairs staff for any issue involving

population analysis. Responsible for coordination of all state level Census related planning, operations, promotion, and training for decennial and survey activities.

Associate Demographer

September 1978 – April 1988

Served as the primary source for demographic and economic information in the State through the State Data Center program. This involves providing technical consultation to information users in regard to machine readable file structures, software, and data uses and limitations.

New York State Economic Development Board - Albany, NY

Associate Demographer

October 1977 – September 1978

Responsible for data tabulation and compilation for the production of population estimates. Assisted in the preparation of official population projections for counties in New York State. The functions of the Board were transferred to the Commerce Department by Executive Order in September of 1978.

Mathematica Policy Research, Inc. - Washington, D.C.

Research Assistant

September 1974 – October 1977

Responsible for the collection and tabulation of Census and related data pertaining to welfare policy analysis. Involved computer programming and required a working knowledge of statistical techniques.

Business Initiative

RLS Information Services

May 1991 – October 1997

As a sole proprietor, I specialized in demographic research and consulting, processing of Census data and geographic files, and information systems development. The company marketed TIGER geographic files for users of AutoCAD and other mapping software. Systems development has included two generations of PC based population projections software and database systems for management of construction data for the natural gas pipeline industry and genealogical data.

Education

MA Demography, Georgetown University, Washington, D.C., 12/77 Thesis title: "An Assessment of the Conceptual Biases in the Official Estimates of Economic Well-Being, Using Data from the Seattle and Denver Income Maintenance Experiments".

BA Sociology, Pennsylvania State University, University Park, Pa., 6/73. Concentration of coursework in demography, research methods and statistics.

Professional Activities

- Consultant, New York Metropolitan Transportation Council, Socioeconomic and Demographic Forecasts 2050.
- Former President of the Association of Public Data Users and current member of the Board.
- Various presentations and workshops on aging trends focused on the not-for-profit sector.
- Serve on U.S. Census Bureau, American Community Survey, multi-year estimates research panel.
- Past member of the National State Data Center Steering Committee
 - past Chair (2004-2006)
 - past Vice Chair
 - member of the sub-committee on the year 2000 Census
 - co-chair of the sub-committee on 2000 data products
- Past member of the New York GIS Coordinating Body workgroup on Data Coordination (1996 to present).
- Past member of the Steering Committee of the Federal-State Cooperative Program for Population Estimates, and past chairman.
- Developed and conducted numerous information and training workshops on the use and availability of Census data, the processing of machine readable data, and the techniques of demographic analysis.
- Guest lecturer for SUNY Albany, School of Information Science.
- Greenville Central Schools, Board of Education 1989 to 1995. Served as President from 1991 to 1995.

Publications

"Millennials in America", 4th edition, Berman Press, forthcoming.

"Life in Rural America: A Statistical Portrait", Berman Press March 2021.

"Aging in America", 4th edition, Berman Press, October 2020.

"Millennials in America", 3rd edition, Berman Press, August 2019.

"Aging in America", 3rd edition, Berman Press, October 2018.

"Millennials in America", 2nd edition, Berman Press, October 2017.

"Aging in America", 2nd edition, Berman Press, October 2016.

"Millennials in America", Berman Press, 2016.

"America's Top Metros: Who's Leading the Recovery, and Why", Civic Report No. 86 June 2014, Center for State and Local Leadership, The Manhattan Institute.

SECTION III - References

The following references can attest to our team's work on the projects that have been described in detail in the Qualification and Experience section above:

1. Jeff Greenfield, Legislative Process Manager, State of Connecticut
Jeff.Greenfield@CGA.ct.gov, 860-240-8693
2. Allyson M. Danforth, City Clerk, City of Peabody MA
Allyson.danforth@peabody-ma.gov, 978-538-5750
3. Patrick Collins, Assistant Superintendent, Shrewsbury Schools
pccollins@shrewsbury.k12.ma.us, 508-841-8405
4. David Lussier, Superintendent, Wellesley MA Public Schools
lussierd@wellesleyps.org, 781-446-6210X5605
5. Christopher S. Campbell, Superintendent, Plymouth MA Public Schools
ccampbell@plymouth.k12.ma.us, 508-224-5035

SECTION IV - Plan Implementation

In this section, we present our response to all of the specifications of the RFP. We describe our technical approach to completing the scope of work, with detailed explanations of how we will complete each phase of the project.

IV.A Project Management

AppGeo will employ a range of project management tools and strategies that have worked successfully on projects of similar type and scope. In particular, we will draw from our experience in managing redistricting projects in which it is necessary to communicate regular status and to instill a steady pace of review and feedback on the part of our customers.

Project Management Best Practices. AppGeo depends on professional best practices which are built into our company culture and are intended to help with continual management of company-wide delivery schedules. These best practices include:

- Assigning a Project Manager to each project, who is responsible for the project plan, resource planning, and project completion schedule
- Working with our customers from the outset of each project to carefully define the project expectations, including the project schedule and the nature and content of deliverables, communications, and roles and responsibilities
- Maintaining regular communications on the progress of project activity, including milestones, issues, resolution, change management, and work completed
- Using our business systems for full accountability and transparency throughout the project life cycle

Status Updates. In addition to our company-wide best practices listed above, our management approach to this project will include biweekly regularly scheduled status calls. These can be remotely conducted meetings, and they could occur on a biweekly basis and result in written notes as a deliverable from each meeting. Establishing this schedule of project check-ins will be a primary goal of our Project Manager's kickoff meeting at the outset of the project. In addition, AppGeo is proficient in using web-based communication tools for sharing detailed project and task information and collaboration, such as Google Sites, Google Drive (Docs, Sheets, etc.), Smartsheets, Teams, as well as Asana (<https://asana.com/?noredirect>). These tools, and if or how they may be effectively used with the County staff involved, will be discussed at the project kick-off meeting.

Review and Feedback. AppGeo has used a number of effective techniques for providing map reviews and soliciting client feedback on projects such as this one. We have a range of options

to suggest, and which we have used on previous projects. We will discuss with the project team at the start of the project and settle on an efficient means of exchanging technical questions and resolutions, which will be essential for meeting the project deadline.

IV.B Project Schedule

AppGeo will work closely with the MMD Subcommittee to accomplish the tasks outlined in the RFP's Scope of Work. Based on the scope, AppGeo has developed a detailed project work plan showing all project tasks and milestones. The work plan will ensure effective communication, efficient processes, and effective methods for analyzing the census data and developing redistricting plans.

AppGeo proposes to complete the project in the timeline specified by the MMD Subcommittee with the project wrapping up by June 8, 2022. AppGeo will maintain the live project schedule throughout the project to reflect project activity, completed deliverables, and overall progress. An initial proposed project schedule that aligns the MMD Subcommittee's time frame with AppGeo's proposed approach is presented in our project work plan Gantt chart. This link provides the Smartsheet project plan in digital format: <https://bit.ly/3o7ABX1>.

IV.C General Project Work Plan

Phase 1: Project Kickoff

AppGeo will conduct a kickoff meeting with the MMD Subcommittee as soon as we have the authorization to begin work. This will be an administrative meeting between AppGeo team members and the Subcommittee and will cover high-level administrative details. The goals of this meeting are to establish a shared understanding of desired project outcomes and overall work process, to refine the project schedule of actions and deliverables, and to set expectations for the Subcommittee and AppGeo interaction. We will have received existing district data in GIS format from the County and additional data from the software which we will use for the project.

Phase 1 Deliverables:

- Detailed Project Work Plan with dates and project milestones
- Kickoff Meeting Presentation
- Kickoff Meeting Notes
- Recurring Status Meeting Schedule

Phase 2: Prepare Draft Redistricting Maps

Project Set Up: Once the kickoff meeting is complete AppGeo will use the databases developed in the project for the County and set up a separate project to hold the output of the work done for the Subcommittee. This will include making sure the software and the online mapping tool are configured for this project prior to the first live collaboration with the Subcommittee.

Software & Training: AppGeo will be using the Maptitude for Redistricting software which comes with extensive documentation and tutorials online. Links to the tutorials will be shared with the MMD Subcommittee to familiarize them with the tool before the first meeting. The meeting will serve as an additional training opportunity where any questions that the members of the MMD Subcommittee might have will be answered. During the meeting AppGeo staff will share with the MMD Subcommittee members the Maptitude for Redistricting online interface, set up with Albany data. After the meeting members of the MMD Subcommittee will be able to prepare their own maps and submit them.

Preparing draft redistricting maps: AppGeo staff will review submissions and compile the options for review with MMD Subcommittee members. Draft maps will be developed taking into consideration all relevant demographic data provided in the software. Drafts maps and presentations will be developed providing all relevant information in the form of tables and reports to clearly explain the impact of redistricting.

Phase 2 Deliverables:

- Access to online mapping tool
- Training materials for MMD Subcommittee members
- Draft maps and materials for community engagement

Phase 3: Community Engagement

Prepare Materials for Community Engagement: Since AppGeo will already be working with the Commission on Redistricting on the instructions for online engagement we will share these with the MMD Subcommittee to review and propose changes or edits. These instructions will be for the public on how to use the mapping tools and how to submit a plan. Additionally any presentation materials required for hearings or meetings will also be prepared in collaboration with the MMD Subcommittee.

Review Public Submissions: Once the community has had the opportunity to review the map and create their own plans, AppGeo will review the submissions. Common themes will be compiled and feedback will be presented to the MMD Subcommittee for review. Community

recommendations will be evaluated based on criteria established by the State and the MMD Subcommittee. Feasible plans will be incorporated into the draft plans to create a final map.

Attendance at Public Hearings: AppGeo staff will be available to attend virtual public hearings and meetings as needed and support the MMD Subcommittee with materials and presentation content.

Phase 3 (Final) Deliverables:

- Instruction document for public to create own plans
- Final redistricting map including GIS data

IV.D Additional Information

The following supporting evidence highlights some of AppGeo's skills and experience of proven value for a successful redistricting project.

- AppGeo is currently working with the Albany County Commission on Redistricting and therefore, as noted above, we will be able to apply a certain level of effort and cost-savings to the MMD Subcommittee on tasks and software which can be leveraged by both projects. Additionally, we will be familiar with the existing districts boundaries, county demographic data, and any concerns with district boundaries that the County will bring to the project.
- Currently AppGeo is supporting the City of Albany, providing ongoing as-needed GIS support services.
- AppGeo built and continues to maintain the City of Albany's public-facing mapping platform <https://albanyny.mapgeo.io>.
- AppGeo works extensively for New York City on various projects.
- AppGeo is highly experienced in collaborating and facilitating public meetings for redistricting mapping.
- AppGeo is adept at leveraging the use of remote technology for project management meetings.
- AppGeo has partnered with Bob Scarmadalia of RLS Demographics, the former Chief Demographer for the State of New York with over 20 years of experience.

SECTION V - Cost Proposal

AppGeo will provide the described scope of services in the Plan Implementation Section of our proposal for a lump sum of \$35,000.00 which includes our consulting services as shown in the below breakdown. By choosing AppGeo for this project, the County will **achieve a significant cost-savings** for the Maptitude for Redistricting Online software and data as AppGeo will be using the same software and data for the Commission on Redistricting's current project and is able to leverage that purchase for this project.

AppGeo assumes all meetings will be conducted virtually. In-person meeting costs are not included in this price proposal. The price proposal includes preparation for and attendance at 2 public hearings.

Item	Fee
Phase 1: Project Kickoff	\$4,000.00
Phase 2: Prepare Draft Redistricting Maps	\$13,500.00
Phase 3: Community Engagement	\$17,500.00
Total	\$35,000.00

AppGeo agrees that the County shall be billed monthly for services and disbursements with such billing to be submitted no later than 30 days after the end of the month in which services were performed or disbursements incurred. Payment will be due within 30 days of receipt of an invoice.

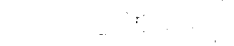
COUNTY OF ALBANY

COST PROPOSAL FORM

PROPOSAL IDENTIFICATION:

Title: Mapping Services for the Albany County Majority Minority Subcommittee on Redistricting
RFP Number: 2022-011

Submit a cost proposals for the described services in Section 4 Scope of Services.

COMPANY:	<u>Applied Geographics, Inc. (AppGeo)</u>
ADDRESS:	<u>33 Broad Street, 4th Floor</u>
CITY, STATE, ZIP:	<u>Boston, MA 02109</u>
TEL. NO.:	<u>(617) 447-2400</u>
FAX NO.:	<u>N/A</u>
FEDERAL TAX ID NO.:	<u>04-3124927</u>
REPRESENTATIVE:	<u>Thomas Harrington, Jr., PhD.</u>
E-MAIL:	<u>tharrington@appgeo.com</u>
SIGNATURE AND TITLE:	<u> Chief Marketing Officer</u>
DATE:	<u>January 26, 2022</u>

CP3

SECTION VI - Mandatory Documentation

In this section we provide the following required documents. Note that the Cost Proposal Form is included above in SECTION V.

- Proposal Form
- Attachment "A" Non-Collusive Bidding Certificate
- Attachment "B" Acknowledgment by Proposer
- Attachment "C" Vendor Responsibility Questionnaire
- Attachment "D" Certification Pursuant to Section 103-g of the New York State General Municipal Law

COUNTY OF ALBANY

PROPOSAL FORM

PROPOSAL IDENTIFICATION:

Title: Mapping Services for the Albany County Majority Minority Subcommittee on Redistricting

RFP Number: 2022-011

THIS PROPOSAL IS SUBMITTED TO:

Karen A. Storm, Purchasing Agent
Albany County Department of General Services
Purchasing Division
112 State Street, Room 1000
Albany, NY 12207

1. The undersigned Proposer proposes and agrees, if this Proposal is accepted, to enter into a Contract with the owner in the form included in the Contract Documents to complete all Work as specified or indicated in the Contract Documents for the Contract Price and within the Contract Time indicated in this Proposal and in accordance with the Contract Documents.
2. Proposer accepts all of the terms and conditions of the Instructions to Proposers, including without limitation those dealing with the Disposition of Proposal Security. This Proposal may remain open for ninety (90) days after the day of Proposal opening. Proposer will sign the Contract and submit the Contract Security and other documents required by the Contract Documents within fifteen days after the date of County's Notice of Award.
3. In submitting this Proposal, Proposer represents, as more fully set forth in this Contract, that:

- (a) Proposer has examined copies of all the Contract Documents and of the following addenda: (If none, so state)

Date	Number
1/21/2022	Addendum #1
1/24/2022	Addendum #2
1/26/2022	Addendum #3

(receipt of all of which is hereby acknowledges) and also copies of the Notice to Proposers and the Instructions to Proposers;

- (b) Proposer has examined the site and locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules and regulations) and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as Proposer deems necessary;

- (c) This Proposal is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Proposer has not directly or indirectly induced or solicited any other Proposer to submit a false or sham Proposal; PROPOSER has not solicited or induced any person, firm or a corporation to refrain from Proposing; and Proposer has not sought by collusion to obtain for himself any advantage over any other Proposer or over the owner.
4. Proposer will complete the Work for the following prices(s): (Attach Proposal)
5. Proposer agrees to commence the Work within the number of calendar days or by the specific date indicated in the Contract. Proposer agrees that the Work will be completed within the number of Calendar days or by the specific date indicated in the contract.
6. The following documents are attached to and made a condition of this Proposal:
- (a) Non-Collusive Bidding Certificate (Attachment "A")
 - (b) Acknowledgment by Bidder (Attachment "B")
 - (c) Vendor Responsibility Questionnaire (Attachment "C")
 - (d) Iranian Energy Divestment Certification (Attachment "D")
7. Communication concerning this Proposal shall be addressed to:
- Priya Sankalia, Project Manager
-
- psankalia@appgeo.com
-
- 33 Broad Street, 4th Floor, Boston, MA 02109
-
- Phone: (617) 447-2400
-
8. Terms used in this Proposal have the meanings assigned to them in the Contract and General Provisions.

ATTACHMENT "A"
NON-COLLUSIVE BIDDING CERTIFICATE PURSUANT TO
SECTION 103-D OF THE NEW YORK STATE GENERAL MUNICIPAL LAW

A. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid, each party thereto certifies as to its own organizations, under penalty of perjury, that to the best of knowledge and belief:

(1) The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor.

(2) Unless otherwise required by law, the prices which have been quoted in this bid have not knowingly been disclosed by the bidder and will not knowingly be disclosed by the bidder, directly or indirectly, prior to opening, to any bidder or to any competitor.

(3) No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

A bid shall not be considered for award nor shall any award be made where (1), (2), and (3) above have not been complied with; provided, however, that in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons thereof. Where (1), (2), and (3) above have not been complied with, the bid shall not be considered for any award nor shall any award be made unless the head of the Purchasing Unit to the political subdivision, public department, agency or official thereof to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

The fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customer of proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of paragraph "A" above.

B. Any bid hereafter made to any political subdivision of the state or any public department, agency or official thereof by a corporate bidder for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule, regulation, local law, and where such bid contains the certification referred to in paragraph "A" of this section, shall be deemed to have been authorized by the Board of Directors of the bidder, and such authorization shall be deemed to include the submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation



Signature

Chief Marketing Officer

Title

1/24/2022

Date

Applied Geographics, Inc. (AppGeo)

Company Name

ATTACHMENT "B"
ACKNOWLEDGMENT BY PROPOSER

If Individual or Individuals:

STATE OF _____)
COUNTY OF _____) SS.:

On this _____ day of _____, 20____, before me personally appeared _____ to me known and known to me to be the same person(s) described in and who executed the within instrument, and he (or they severally) acknowledged to me that he (or they) executed the same.

Notary Public, State of _____

Qualified in _____

Commission Expires _____

If Corporation:

STATE OF Massachusetts)
COUNTY OF Suffolk) SS.:

On this 24 day of JANUARY, 2022, before me personally appeared Thomas Harrington, Jr., PhD. to me known, who, being by me sworn, did say that he resides at (give address) 11 PARK STREET, LEXINGTON, MA 02421; that he is the (give title) Chief Marketing Officer of the (name of corporation) Applied Geographics, Inc. (AppGeo), the corporation described in and which executed the above instrument; that he knows the seal of the corporation, and that the seal affixed to the instrument is such corporate seal; that it was so affixed by order of the board of directors of the corporation, and that he signed his name thereto by like order.

TLB
Thomas B Harrington Jr.

Kristopher L. Beck
Notary Public, State of Massachusetts

Qualified in Hiddleston

Commission Expires 01/17/2025

If Partnership:

STATE OF _____)
COUNTY OF _____) SS.:



KRISTOPHER L. BECK
NOTARY PUBLIC
Commonwealth of Massachusetts
My Commission Expires
January 17, 2025

On the _____ day of _____, 20____, before me personally came _____, to me known to be the individual who executed the foregoing, and who, being duly sworn, did depose and say that he / she is a partner of the firm of _____ and that he / she has the authority to sign the same, and acknowledged that he / she executed the same as the act and deed of said partnership.

Notary Public, State of _____

Qualified in _____

Commission Expires _____

ATTACHMENT "C"
ALBANY COUNTY
VENDOR RESPONSIBILITY QUESTIONNAIRE

1. VENDOR IS: ☒ PRIME CONTRACTOR			
2. VENDOR'S LEGAL BUSINESS NAME Applied Geographics, Inc.		3. IDENTIFICATION NUMBERS a) FEIN # 04-3124927 b) DUNS #	
4. D/B/A -- Doing Business As (if applicable) & COUNTY FIELD:		5. WEBSITE ADDRESS (if applicable) www.appgeo.com	
6. ADDRESS OF PRIMARY PLACE OF BUSINESS-EXECUTIVE OFFICE 33 Broad Street, 4th Floor, Boston, MA 02109		7. TELEPHONE NUMBER (617) 447-2400	8. FAX NUMBER N/A
9. ADDRESS OF PRIMARY PLACE OF BUSINESS-EXECUTIVE OFFICE <i>IN NEW YORK STATE, if different from above</i> N/A		10. TELEPHONE NUMBER	11. FAX NUMBER
12. AUTHORIZED CONTACT FOR THIS QUESTIONNAIRE Name Thomas Harrington, Jr., PhD. Title Chief Marketing Officer Telephone Number (617) 447-2400 Fax Number N/A e-mail tharrington@appgeo.com			
13. LIST ALL OF THE VENDOR'S PRINCIPAL OWNERS.			
a) NAME Richard Grady	TITLE President, CEO	b) NAME Kate Hickey	TITLE Chief Operating Officer
c) NAME Peter Girard	TITLE Chief Technology Officer	d) NAME Thomas Harrington	TITLE Chief Marketing Officer
A DETAILED EXPLANATION IS REQUIRED FOR EACH QUESTION ANSWERED WITH A "YES," AND MUST BE PROVIDED AS AN ATTACHMENT TO THE COMPLETED QUESTIONNAIRE. YOU MUST PROVIDE ADEQUATE DETAILS OR DOCUMENTS TO AID THE COUNTY IN MAKING A DETERMINATION OF VENDOR RESPONSIBILITY. PLEASE NUMBER EACH RESPONSE TO MATCH THE QUESTION NUMBER.			
14. DOES THE VENDOR USE, OR HAS IT USED IN THE PAST FIVE (5) YEARS, ANY OTHER BUSINESS NAME, FEIN, or D/B/A OTHER THAN THOSE LISTED IN ITEMS 2-4 ABOVE? List all other business name(s), Federal Employer Identification Number(s) or any D/B/A names and the dates that these names or numbers were/are in use. Explain the relationship to the vendor.		☐ Yes ☒ No	
15. ARE THERE ANY INDIVIDUALS NOW SERVING IN A MANAGERIAL OR CONSULTING CAPACITY TO THE VENDOR, INCLUDING PRICIPAL OWNERS AND OFFICERS, WHO NOW SERVE OR IN THE PAST ONE (1) YEARS HAVE SERVED AS:			
a) An elected or appointed public official or officer? <i>List each individual's name, business title, the name of the organization and position elected or appointed to, and dates of service</i>		☐ Yes ☒ No	
b) An officer of any political party organization in Albany County, whether paid or unpaid? <i>List each individuals name, business title or consulting capacity and the official political position held with applicable service dates.</i>		☐ Yes ☒ No	

16.	WITHIN THE PAST (5) YEARS, HAS THE VENDOR, ANY INDIVIDUALS SERVING IN MANAGERIAL OR CONSULTING CAPACITY, PRINCIPAL OWNERS, OFFICERS, MAJOR STOCKHOLDER(S) (10% OR MORE OF THE VOTING SHARES FOR PUBLICLY TRADED COMPANIES, 25% OR MORE OF THE SHARES FOR ALL OTHER COMPANIES), AFFILIATE OR ANY PERSON INVOLVED IN THE BIDDING OR CONTRACTING PROCESS: a) 1. been suspended, debarred or terminated by a local, state or federal authority in connection with a contract or contracting process; 2. been disqualified for cause as a bidder on any permit, license, concession franchise or lease; 3. entered into an agreement to a voluntary exclusion from bidding/contracting; 4. had a bid rejected on an Albany County contract for failure to comply with the MacBride Fair Employment Principles; 5. had a low bid rejected on a local, state or federal contract for failure to meet statutory affirmative action or M/WBE requirements on a previously held contract; 6. had status as a Women's Business Enterprise, Minority Business Enterprise or Disadvantaged Business Enterprise, de-certified, revoked or forfeited; 7. been subject to an administrative proceeding or civil action seeking specific performance or restitution in connection with any local, state or federal government contract; 8. been denied an award of a local, state or federal government contract, had a contract suspended or had a contract terminated for non-responsibility; or 9. had a local, state or federal government contract suspended or terminated for cause prior to the completion of the term of the contract. b) been indicted, convicted, received a judgment against them or a grant of immunity for any business-related conduct constituting a crime under local, state or federal law including but not limited to, fraud extortion, bribery, racketeering, price-fixing, bid collusion or any crime related to truthfulness and/or business conduct? c) been issued a citation, notice, violation order, or are pending an administrative hearing or proceeding or determination of violations of: 1. federal, state or local health laws, rules or regulations.	☐ Yes ☒ No ☐ Yes ☒ No ☐ Yes ☒ No
17.	IN THE PAST THREE (3) YEARS, HAS THE VENDOR OR ITS AFFILIATES 1 HAD ANY CLAIMS, JUDGMENTS, INJUNCTIONS, LIENS, FINES OR PENALTIES SECURED BY ANY GOVERNMENTAL AGENCY? Indicate if this is applicable to the submitting vendor or affiliate. State whether the situation(s) was a claim, judgment, injunction, lien or other with an explanation. Provide the name(s) and address(es) of the agency, the amount of the original obligation and outstanding balance. If any of these items are open, unsatisfied, indicate the status of each item as "open" or "unsatisfied."	☐ Yes ☒ No
18.	DURING THE PAST THREE (3) YEARS, HAS THE VENDOR FAILED TO: a) file returns or pay any applicable federal, state or city taxes? <i>Identify the taxing jurisdiction, type of tax, liability year(s), and tax liability amount the vendor failed to file/pay and the current status of the liability.</i> b) file returns or pay New York State unemployment insurance? <i>Indicate the years the vendor failed to file/pay the insurance and the current status of the liability.</i> c) Property Tax <i>Indicate the years the vendor failed to file.</i>	☐ Yes ☒ No ☐ Yes ☒ No ☐ Yes ☒ No
19.	HAVE ANY BANKRUPTCY PROCEEDINGS BEEN INITIATED BY OR AGAINST THE VENDOR OR ITS AFFILIATES 1 WITHIN THE PAST SEVEN (7) YEARS (WHETHER OR NOT CLOSED) OR IS ANY BANKRUPTCY PROCEEDING PENDING BY OR AGAINST THE VENDOR OR ITS AFFILIATES REGARDLESS OF THE DATE OF FILING? Indicate if this is applicable to the submitting vendor or affiliate. If it is an affiliate, include the affiliate's name and FEIN. Provide the court name, address and docket number. Indicate if the proceedings have been initiated, remain pending or have been closed. If closed, provide the date closed.	☐ Yes ☒ No
20.	IS THE VENDOR CURRENTLY INSOLVENT, OR DOES VENDOR CURRENTLY HAVE REASON TO BELIEVE THAT AN INVOLUNTARY BANKRUPTCY PROCEEDING MAY BE BROUGHT AGAINST IT? Provide financial information to support the vendor's current position, for example, Current Ration, Debt Ration, Age of Accounts Payable, Cash Flow and any documents that will provide the agency with an understanding of the vendor's situation.	☐ Yes ☒ No

21.	IN THE PAST FIVE (5) YEARS, HAS THE VENDOR OR ANY AFFILIATES ¹ :	☐ Yes	☒ No
	a) defaulted or been terminated on, or had its surety called upon to complete, any contract (public or private) awarded;		
Indicate if this is applicable to the submitting vendor or affiliate. Detail the situation(s) that gave rise to the negative action, any corrective action taken by the vendor and the name of the contracting agency.			

¹ “Affiliate” meaning: (a) any entity in which the vendor owns more than 50% of the voting stock; (b) any individual, entity or group of principal owners or officers who own more than 50% of the voting stock of the vendor; or (c) any entity whose voting stock is more than 50% owned by the same individual, entity or group described in clause (b). In addition, if a vendor owns less than 50% of the voting stock of another entity, but directs or has the right to direct such entity’s daily operations, that entity will be an “affiliate” for purposes of this questionnaire.

FEIN # 04-3124927

State of: Massachusetts)) ss:
County of: Suffolk)

CERTIFICATION:

The undersigned: recognizes that this questionnaire is submitted for the express purpose of assisting the County of Albany in making a determination regarding an award of contract or approval of a subcontract; acknowledges that the County may in its discretion, by means which it may choose, verify the truth and accuracy of all statements made herein; acknowledges that intentional submission of false or misleading information may constitute a felony under Penal Law Section 210.40 or a misdemeanor under Penal Law Section 210.35 or Section 210.45, and may also be punishable by a fine and/or imprisonment of up to five years under 18 USC Section 1001 and may result in contract termination; and states that the information submitted in this questionnaire and any attached pages is true, accurate and complete.

The undersigned certifies that he/she:

- Has not altered the content of the questions in the questionnaire in any manner;
- Has read and understands all of the items contained in the questionnaire and any pages attached by the submitting vendor;
- Has supplied full and complete responses to each item therein to the best of his/her knowledge, information ad belief;
- Is knowledgeable about the submitting vendor's business and operations;
- Understands that Albany County will rely on the information supplied in the questionnaire when entering into a contract with the vendor;
- Is under duty to notify the Albany County Purchasing Division of any material changes to the vendor's responses.

Name of Business Applied Geographics, Inc. Signature of Owner

Signature of Owner

Address 33 Broad Street, 4th Floor

Printed Name of Signatory Thomas Harrington, Jr., PhD.

City, State, Zip Boston, MA 02109

Title Chief Marketing Officer

Sworn before me this 24th day of January, 2020:
[Signature]
 Notary Public



KRISTOPHER L. BECK
NOTARY PUBLIC
Commonwealth of Massachusetts
My Commission Expires
January 17, 2025

Printed Name Kristopher L. Boett

Printed Name _____

Signature _____

Date _____

Attachment "D"
Certification Pursuant to Section 103-g
Of the New York State
General Municipal Law

- A. By submission of this bid/proposal, each bidder/proposer and each person signing on behalf of any bidder/proposer certifies, and in the case of a joint bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not on the list created pursuant to paragraph (b) of subdivision 3 of Section 165-a of the New York State Finance Law.
- B. A Bid/Proposal shall not be considered for award, nor shall any award be made where the condition set forth in Paragraph A above has not been complied with; provided, however, that in any case the bidder/proposer cannot make the foregoing certification set forth in Paragraph A above, the bidder/proposer shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefor. Where Paragraph A above cannot be complied with, the Purchasing Unit to the political subdivision, public department, agency or official thereof to which the bid/proposal is made, or his designee, may award a bid/proposal, on a case by case business under the following circumstances:
1. The investment activities in Iran were made before April 12, 2012, the investment activities in Iran have not been expanded or renewed after April 12, 2012, and the Bidder/Proposer has adopted, publicized and is implementing a formal plan to cease the investment activities in Iran and to refrain from engaging in any new investments in Iran; or
 2. The political subdivision makes a determination that the goods or services are necessary for the political subdivision to perform its functions and that, absent such an exemption, the political subdivision would be unable to obtain the goods or services for which the contract is offered. Such determination shall be made in writing and shall be a public document.



Signature

Chief Marketing Officer

Title

1/24/2022

Date

Applied Geographics, Inc. (AppGeo)

Company Name

