FIRST OF THREE-PHASED STATEWIDE GIS PROJECT COMPLETED

"GeoComm has been a valued partner in the completion of this important project," said Mike Lynk, Director of State Radio. "The completion of the base map will enhance our emergency response and will drastically improve our geographic information system capabilities as we move to Next Generation 9-1-1."

In 2012, North Dakota's Department of Emergency Services (DES) began a Statewide Seamless Base Map Project which required that a road centerline and address point layer be built for each of the counties in the state. The State of North Dakota DES split the project into three different phases and selected GeoComm to assist them in each phase. Phase One, which was completed in May 2013, consisted of developing the two required layers for 22 counties in the state and implementing GeoComm's public safety Geographic Information System (GIS) data management system. Phases Two and Three, which are currently in progress, consists of developing the same two layers for 17 counties in eastern North Dakota and 14 counties in western North Dakota.

To begin Phase One of the project, the State and GeoComm collaborated to develop a project plan that ensured the completed GIS data would meet public safety industry accuracy standards, yet would be completed in a cost effective manner which would not exceed the state's available funding. To aid in meeting this cost effective goal, GeoComm and the State agreed that the plan would include using aerial imagery and an initial road centerline provided by the North Dakota Department of Transportation (DOT) in addition to a pre-existing address point layer provided by the State. Also, because this project had a short timeline (completing data development for 22 counties in 12 months) GeoComm worked with the North Dakota state team to split the 22 counties into five different groups.

As the aerial imagery, initial road centerlines, and address points were provided by the State, GeoComm began developing the road centerline and address points layers for each of the five groups. To accommodate the development of this large GIS data set in a short timeframe, the project required that GeoComm assign a team to work on data at the same time. To ensure consistency in the final GIS data, GeoComm created internal data development workflows and fieldwork workflows that each team member followed to allow them to create a uniform, highly accurate statewide base map. Data development consisted of the team members verifying that initial road centerlines were aligned to the aerial imagery, adding roads names and address ranges to the road centerline, and placing address points on structure tops visible on the aerial imagery. They then proceeded to run extensive quality control checks on both layers. Any address points or roads that did not pass these extensive checks were flagged for field verification. GeoComm staff then proceeded to conduct on the ground field verification to ensure the final GIS data was as accurate as possible. As the GIS data was completed for each of the five groups, GeoComm delivered the preliminary data to the State of North Dakota for review.

In April 2013, GeoComm delivered the final GIS data for the 22 counties to the State of North Dakota for preliminary review and approval. Now that the GIS data for the first 22 counties is approved, the State will begin utilizing it in their day-to-day operations. The data set will be used in 9-1-1 systems throughout the State to support: accurately identifying emergency call locations, tracking mobile resources, displaying the location of Computer Aided Dispatch (CAD) calls for service, providing navigation to responders, mapping crime statistics, and much more.

To ensure ongoing accuracy of their GIS data, GeoComm's public safety GIS data management system, GeoLynx Server Web DMS and GIS Change Requests, was implemented for use in the State's overall GIS data maintenance workflow. This software, powered by Esri ArcGIS for Server technology, enables authorized users throughout the State to contribute online any validated changes to the statewide data set. In addition, to ensure data consistency, the data edits will be centrally managed by the State GIS office using GeoComm's Esri-based desktop GIS data management system, GeoLynx DMS.

GeoComm is currently working with the State on the planning tasks for Phases Two and Three of this project which consists of creating road centerlines and address points for the remaining 31 counties in the state. Upon completion, which is expected for early 2015, the State of North Dakota DES will have a statewide seamless base map for the entire state that meets public safety industry standards. These seamless base maps will improve interoperability across the state's Public Safety Answering Points (PSAPs), allowing them to more easily act as backup centers for one another, when needed, and with the emergence of Next Generation 9-1-1(NG9-1-1), the state will also benefit by having the statewide data set available for use in the future to route calls using geodetic and civic locations.