State of Michigan
9-1-1 GIS Grant Project
Project Charter

A. General Information

Project ID/Acronym:	9-1-1 GIS Grant Project	*Date:*	4/12/2011
Controlling Agency:	MSP	*Modification Date:*	4/12/2011
Prepared by:	Laura Blastic	*Authorized by:*	Harriet Miller-Brown

B. Project Purpose

The Michigan State Police (MSP) 9-1-1 Administration Section received funding through a joint National Highway Traffic Safety Administration (NHTSA) and National Telecommunication and Information Administration (NTIA) Ensuring Needed Help Arrives Near Callers Employing 9-1-1 (ENHANCE 9-1-1) grant, in September of 2009, to develop a statewide geographic information system (GIS) database repository for the 9-1-1 community. This statewide integrated GIS data repository will be a system to provide the replication capabilities for Public Safety Answering Points (PSAPs) to provide GIS 9-1-1 datasets into architecture that will integrate the datasets statewide and also receive data updates on a regular basis.

The database will be usable for current wireless 9-1-1calls and for future IP-based Next Generation 9-1-1 (NG9-1-1) systems in Michigan. Once the entire data design, workflow and replications are setup from the local jurisdictions to the state 9-1-1 database, web services will be developed for these statewide layers to allow an entity to view the datasets or extract portions of the statewide datasets when needed. Programming will include design and implementation of all necessary security and data protection measures. The 9-1-1 GIS system will be built to allow for integration with industry standard PSAP 9-1-1 systems. The programming tasks include all necessary implementation costs to install servers, and software that will house the data repository and provide secure access to 9-1-1 entities.

In addition to implementing an overall system for a statewide 9-1-1 GIS repository, the project will provide an overall assessment of current 9-1-1 GIS datasets and development of a data improvement plans for participating PSAPs to increase GIS data accuracy for 9-1-1 call location. From a GIS dataset perspective, the goals of the project are to create a complete statewide PSAP boundary polygon layer and a standardized road centerline layer to be synchronized to the statewide 9-1-1 GIS repository. The improvement of the 9-1-1 GIS datasets statewide will increase the data quality and accuracy where data gaps exist. This will improve location information for today's wireless 9-1-1 calls and call routing in a NG 9-1-1 environment.

C. Project Objective

Agency Goals	Project Objectives
Data Assessment and Data Development Plan identifying potential source information to perform addressing updates	• Perform a data assessment and document results • Create a data development plan • Produce data development schedule
Design and Development of the Statewide 9-1-1 GIS system	• Preliminary Database Design for the GIS Repository • Final Database Design for the Statewide GIS Repository • Define ETL and other data interoperability processes

	• Identify system enhancements needed to current infrastructure • Create addressing and maintenance guides • Document policies for data maintenance and data replication
9-1-1 GIS Data Development of the PSAP boundary layer and updated street centerline file	• Creation of a data improvement grant program criteria and metrics • Initial quality assessment and final quality assurance of PSAP boundary layer • Development of PSAP boundary layer • Initial Data assessment statistical reports for 83 counties • Updating current street centerline files • Initial creation of a statewide point address layer • Final Data assessment statistical reports for 83 counties • Training - best practices, standards, and maintenance, and interfacing with the system
Community Outreach to inform and increase project participation	• Development of a communications plan • Conduct 911 regional workshops • Conduct GIS awareness meetings

D. Project Scope

Project Results.

The 9-1-1 project will result in a closed statewide 9-1-1 GIS database repository system. The system architecture will include:

- Data sharing agreement and other non-disclosure agreement documents
- Statewide database design standards
- GIS data replication processes for local counties and PSAPs to uploads datasets and data updates
- GIS data quality control processes to validate data being replicated to system
- Initial data validation of GIS datasets against MSAG to foster GIS centerline reconciliation with MSAG
- Complete statewide GIS PSAP boundary polygon layer
- Complete statewide GIS road centerline layer
- Initial statewide point address layer where data is collect for this project
- Best practices documents for 9-1-1 addressing, GIS database design, and data maintenance
- Establish policies for data maintenance and data replication
- Best practices for data replication to statewide system

Content of the Project.

As part of the project development and execution the project will include the following:

- Develop system design including database design and replication architecture
- Develop initial data validation reports providing local entities with baseline of data and targeted next steps to data development
- Develop sub-grant program criteria and budget
- Implement hardware and software requirements
- Development of quality assurance and quality control procedures for GIS data

- Implement data sharing agreements for participating entities
- Develop gap-fill data through CSSTP staff and sub-grant program
- Develop best practices for addressing guide
- Develop best practices for GIS data maintenance
- Development of statewide GIS PSAP boundary layer, road centerlines,
- address points, and other PSAP data as available

Exclusions.

1. The 9-1-1 GIS system will be built to allow for integration with industry standard PSAP 9-1-1 systems.

2. This project does not include the creation of a complete statewide address point layer. Address points will be created to assist in some of the necessary 'gap fill' areas and collected from available sources. The extent of the address point development will be dependent on overall budget of the project.

3. The statewide system will not be streamed directly by the PSAP 9-1-1 systems to be used during the call location process. It is a centralized data storage where data will be available for downloading into the PSAP centers to be used in their desktop 9-1-1 systems. It is the responsibility of the PSAP to work with their 9-1-1 system vendor to ensure the data interoperability between the statewide data standard and their 9-1-1 system standard.

4. The developed system will not be performing call routing or mapping of 9-1-1 calls within the statewide system. The 9-1-1 call taking process will remain part of the PSAP operations.

Key Stakeholders.

The current stakeholders are identified as the agencies, jurisdictions, residents and staff that may be impacted by the completion of this project. Stakeholders identified to date include:

- 9-1-1 Directors and Administrators within the state of Michigan
- Emergency responders within the state of Michigan
- Law Enforcement and Protection services within the state of Michigan
- GIS Coordinators within the state of Michigan
- IT Directors within the state of Michigan
- Addressing Authorities
- Michigan State Police
- Michigan Department of Technology, Management and Budget – Center for Shared Solutions and Technology Partnerships
- Residents of the State of Michigan

Assumptions.

1. Replication architecture will need to incorporate into design multiple data upload processes to handle existing GIS infrastructure at local level - i.e. enterprise replication, ftp data upload, web editing tools for data updates.
2. Participating entities will be able to work collaboratively with neighboring jurisdictions to review PSAP boundaries.
3. Some participants might not have staff resources for regular maintenance of data.
4. Some areas will not participate in this project and CSSTP will work to complete gap-fill data.

Constraints.

1. The grant budget will be focused on developing the system architecture and then performing data 'gap fills' in specific areas. The extent of the gap filling will be dependent on remaining budget of the project. These items could include the collection data sources needed to complete the gap fill data development, such as collection of high-res imagery.
2. Various current GIS data standards at the local level. Baseline of data design will need to be current NENA addressing standards, for example street pre-directional, street name, street suffix and street post directional are separate fields in database standards.
3. This is a grant project with a deadline of September 30, 2012. The budget does not include funds for on-going maintenance and support of the system outside of the grant period.

E. Project Critical Success Factors

Local participation in the 9-1-1 GIS Grant project
Development of a standardized statewide 9-1-1 GIS system
Deliver project according to scope, budget, and timeline

F. Initial High-Level Project Planning

Estimated Resource Requirements
TBD

Estimated Project Cost
$3.4 million

Estimated Benefits

Estimated Scheduling Dates

Start Date	12/15/2010
Target Completion Date	9/30/2012

G. Project Authority and Advisory Committees

Authorization.

This Project Charter has been initiated by Initiating Organization and authorizes the expenditure of Organization resources to complete a first checkpoint for the Project.
Harriet Miller-Brown, MSP, 911 State Administrator

Project Manager

Project Manager: Laura Blastic
Organization: DTMB, CSSTP

Advisory Committees

9-1-1 GIS Grant Project Technical Advisory Committee

Controls

- PM will provide monthly status and budget reports to the project sponsor and DTMB project sponsor
- CSSTP will provide monthly progress reports containing frequently asked questions, resolutions and items worked on during the time periods
- 9-1-1 Technical Advisory Committee has been established to provide input for data and systems development and ongoing deliverable issue resolution.
- Local and State Cross Boundary Technology Steering Committee will be informed and consulted regarding project status, issues and deliverables.

H. Roles and Responsibilities

Project Organization Overview

Role	Name
Project Sponsors (PS)	***Harriet Miller-Brown;*** *MSP, 911 State Administrator*
DTMB Project Staff (CSSTP)	***Eric Swanson;*** *CSSTP, Project Sponsor, Director* ***Laura Blastic;*** *CSSTP, Project Manager, Geo-Framework Services Manager* ***Paul Harmon;*** *CSSTP, Communications Liaison, Dept. Analyst* ***Mathi Ramachandran;*** *CSSTP Data Architect, IT Specialist* ***John Clark;*** *CSSTP, GIS Solutions Architect IT Specialist* ***Mark Holmes;*** *LR Kimball*
Technical Advisory Committee (TAC)	***Mike Szor*** *– Alpena County 911* ***Phyllis Fuller*** *– Barry County 911* ***Mike Muskovin*** *– Ottawa County 911* ***Eric Swanson,*** *Director – Center for Shared Solutions and Technology Partnerships* ***Nathan Fazer,*** *GIS Coordinator - Eastern UP Planning Region* ***Chris Cantrell,*** *GIS Coordinator – Midland County* ***Scott Ambs,*** *GIS Manager – Jackson County* ***Ron Plamondon,*** *IT Director – Leelanau County* ***Tom Shewchuk,*** *Management Information Services Director – Ingham County* ***Dawn Siegel,*** *IT Chief – Oakland County*

Local and State Cross Boundary Technology Steering Committee (XBDY)	***Arnold Weinfeld**, President – MML* ***Bill Rowe**, GIS Coordinator – Marquette County* ***Bob Daddow**, Deputy Oakland County Executive – Oakland County* ***Catherine Mullhaupt**, Information Liaison – MTA* ***Craig Paull**, IT Director – Kent County* ***Dan Putman**, IS Director – City of Livonia* ***Dan Rainey**, IT Director – City of Ann Arbor* ***Eric Swanson**, Director – Center for Shared Solutions and Technology Partnerships* ***George Boersma**, DTMB Director of Technology Partnerships – Center for Shared Solutions and Technology Partnerships* ***Jeroen Wagendorp**, Chair, Department Geography and Planning – GVSU* ***Jessica Moy**, Director Remote Sensing & GIS Research and Outreach Services - MSU* ***Mark Dobek**, Director of Judicial Information Systems – State of Michigan* ***Matt VanDyken**, GIS / IT – City of Holland* ***Kristin Judge**, Washtenaw County Commissioner – Washtenaw County / SEMCOG* ***Ben Bodkin**, Director of Legislative Affairs – MAC* ***Valdis Kalnins**, Director Land Information Services – Allegan County*

I. Management Checkpoints

Checkpoint	Evaluation Criteria
Data Development Plan	The Data Development Schedule must outline the timeline to meet the project deadlines for all 83 counties within the state of Michigan.
Data Assessment Document	A report that lists the potential sources of addressing information at the state, regional and local levels that can be used to assist with the addressing processes throughout the project. A report that describes the extent and value of each type of source information for addressing purposes to assist in the assignment of existing addressing to road and address points.
9-1-1 and GIS Community Outreach and Education Plan	Attendance must be verified per session, not the sets as a whole. RSVPs for each session should be recorded. Regional community outreach reports will be produced.
Preliminary Database Design	The preliminary Database Design must include review of the current Michigan Geographic Framework Database model with recommended changes and enhancements, as well as required GIS data layers and standards with explanation of recommendations.
Final Database Design	The final Database Design must include a review of the current Michigan Geographic Framework Database model with recommended changes and enhancements, as

	well as the required GIS data layers and standards with explanation of recommendations.
Recommendation for hardware and software	The recommendation of hardware and software must include database sizing, storage, security / permissions, ETL processes as well as a review of the CSSTP's current ELT infrastructure with recommended changes and enhancements.
Recommendation for data replication methods for local entities	The recommendation for data replication must outline methods for groups of like local entities and will not make 83 county recommendations. The recommendations will include explanation of recommendations and what type of entity would fall into each method.
Develop Statewide PSAP Boundary Layer	Quality assurance error discovery reports must identify possible errors and outline the process to resolve the errors. The final boundary quality acceptance document will certify the quality and accuracy levels as well as outline the process for maintaining the levels.
Develop Complete Statewide GIS Road Centerline Layer	The grant program must include a final document that outlines grant program goals, program administration, funding eligibility, funding application processes, funding application review, funding awards criteria, grant program metrics, grant program acceptance criteria, roles and responsibilities, as well as draft MOU for long term maintenance of the point address data layer.
Maintenance Plan and Workflows Implementation	The addressing guide and maintenance plan must outline the workflow processes and policies for address maintenance to ensure the GIS datasets maintain their final accuracy levels.

J. Signatures

Name / Title	Signature	Date
Harriet Miller-Brown	Harriet Miller-Brown	6-7-11
Eric Swanson	Eric Swanson	6/3/11
Laura Blastic	Laura Blastic	6/3/11