AMENDMENT TO MEMORANDUM OF UNDERSTANDING
Between
STATE CARTOGRAPHER'S OFFICE, UNIVERSITY OF WISCONSIN-MADISON
And
THE DEPARTMENT OF ADMINISTRATION, DIVISION OF INTERGOVERNMENTAL RELATIONS
Regarding V3 & V4 Statewide Parcel Map Database Project
January 1, 2017 to December 31, 2018

1. **Purpose**

   The purpose of this document is to define the scope of work for the State Cartographer's Office (SCO) role in the "Version 3 & 4 Statewide Parcel Map Database Projects" (V3 & V4 Projects), and specifically to amend the scope of work for the V4 Project. The V3 & V4 Projects are a joint effort with the Wisconsin Department of Administration (DOA) Division of Intergovernmental Relations (DIR) to run between January 1, 2017 and December 31, 2018.

   This scope of work refers only to the V3 & V4 Projects, not to the larger Statewide Digital Parcel Map Initiative (Parcel Initiative) nor subsequent phases of the Parcel Initiative that may be covered by other scope of work documents.

2. **Background**

   Wisconsin Act 20, the biennial state budget for 2013-2015, created statutory directives for state and local governments to coordinate on the development of a statewide digital parcel map. As required by statute 59.72(2)(a), counties are now required to have certain parcel information online in a searchable format by June 30, 2017. These statutory directives can be grouped together as the Statewide Digital Parcel Map Initiative and will be in part fulfilled by the V3 &V4 projects.

   The V3 & V4 Projects follow successful collaboration between DOA and SCO on similar efforts. DOA and SCO have already partnered on a project to create statewide parcel and address point layers for the LinkWISCONSIN Address Point and Parcel Mapping Project, and the Version 1 (V1) and Version 2 (V2) Projects. The primary objective of the V1 Project was to create a statewide parcel database and map layer based on an aggregation of existing local parcel datasets, as well as recommend standards for parcel data to be aggregated in future version of the statewide parcel layer and benchmarks for county parcel data improvement, which were subsequently tied to 2016 and 2017 WLIP Strategic Initiative grant requirements. Achieving the searchable format standard for the statewide layer in a way that can be continuously maintained thereafter will take two additional iterations of the statewide parcel layer—V3 and V4—to run through 2018.

3. **Project Goals and Deliverables**

   The goals of the V3 & V4 Project encompass several themes:
   - **Tracking progress**. The statewide parcel layer is built in an iterative fashion. V3 and V4 will track progress made with investments to local governments, specifically on benchmarks for parcel dataset development instituted with the 2016 WLIP grant application.
   - **Four A's – Authoritative Automated Asynchronous Aggregation**. A long-term goal is to achieve these "four A's" so county data stewards can submit datasets at any time or interval by automatically merging the local data with the most current statewide database.
   - **Moving to a contributor model of aggregation**. A long-term goal is to move toward a more efficient, automated process for data aggregation (the end of a continuum where the locus of standardization labor is on the data contributors, known as a "contributor model"), rather than an aggregator model requires which requires more state resources be dedicated to the

aggregation process. The contributor model should require fewer staff resources and thereby reduce state costs for sustaining the statewide digital parcel map.

- **Outreach and technical assistance to counties**. This may take the form of further development of existing technical tools or the creation of new tools for counties and municipalities to use. It could also involve site visits and direct assistance.
- **Incremental improvement**. Improvement of the statewide parcel layer itself, as well as workflow and methods for each step in the aggregation process, with each new version of the layer. As with the database, the hosting and display should keep pace with current technology and be continually improved to meet users' needs. Intake and aggregation process should become more efficient with time, facilitating other improvements and/or opportunities for value-added products.
- **Lean government principles**. The V3 & V4 Projects should seek to create and realize efficiencies in general, and to integrate or collaborate with other state GIS services where possible, like the Legislative Technology Services Bureau.
- **Responsiveness to public needs and economic development goals**. Evaluate parcel layer user suggestions and implement improvements where feasible.

Specific V3 Project deliverables are:

- **A statewide parcel database and map layer** aggregated from existing county and municipal parcel datasets using a documented update process that at a minimum includes the parcel attributes required by s. 59.72(2)(a), those listed in the parcel schema and searchable format standard detailed by the *V1 Interim Report,* and those recommended in the *V2 Final Report*.
- **Statewide county-maintained zoning layers** aggregated from existing county datasets that at a minimum includes county-maintained zoning information required by s. 59.72(2)(a)
- **Display of V3 parcel and zoning layers**. Develop an online app to display the statewide parcel database and map layer, as well as the county-maintained zoning districts.
- **Download/export of data and data subset capabilities**, including a clip, zip, and ship or download by filter function. This may take various forms, such as use of ArcGIS Open Data, an ArcGIS Desktop a geoprocessing service hosted and assigned to a geoprocessing widget in the map application, or another more efficient, cost-effective solution.
- **Hosting solution for V3 parcel and zoning layers**. Employ a hosting solution for the statewide parcel database and map layer, with the potential for a third-party hosting solution.
- **Prototype solution for collection and display of public lands information maintained by the county**. The ideal scenario is to have county public lands information integrated into the statewide parcel layer, but complexities in local land information systems and variation in designation of public lands may inhibit the comprehensiveness of this solution in the given time frame.
  - In collaboration with DOA, public lands information should, at a minimum, be collected, inventoried, analyzed, organized, and included in the V3 parcel layer if it is possible to do so accurately, or otherwise be presented in the form of a prototype solution and recommendations for future efforts by local governments to track public lands data.
  - The public lands solution should include a classification typology extending from "public lands" (as defined by state statute 24.01) to lands with a public interest on them (easements, government leases) or to which public access is granted (e.g., lands purchased by a land trust), and those lands open to public hunting (private lands enrolled in the managed forest or forest crop program).

- The classification should include a comparison to DOA Division of State Facilities inventory of state-owned properties and integrate the most recent DOA Division of State Facilities data if possible.
- **A final project report,** written in collaboration with DOA. At a minimum, the report shall address:
  - Project background
  - Statewide schema evaluation – Assessment of the fitness of the V3 attribute schema against user needs, along with recommendations for potential changes to the schema
  - Benchmark progress assessment – Assessment of where each county is at in terms of meeting the four benchmarks listed by the *V1 Interim Report* and the requirement for counties to achieve by the V4 call for data deadline of March 31, 2018.
    - Benchmark 1 – Parcel and Zoning Data Submission
    - Benchmark 2 – Extended Parcel Attribute Set Submission
    - Benchmark 3 – Completion of County Parcel Fabric
    - Benchmark 4 – Completion and Integration of PLSS
  - Assessment and implementation outline for the four A's – A goal for future iterations of the statewide parcel layer is to achieve authoritative, automated, asynchronous aggregation, allowing county data stewards to submit datasets at any time or interval by automatically merging the local data with the most current statewide database. The report should evaluate progress made on this goal since V2, make recommendations, and outline steps that would facilitate future achievement of the four A's for all 72 counties.
  - Evaluation of V2 and V3 zoning layer utility – Evaluation of county zoning layers for utility by end users, with a recommendation of whether to also collect and display municipal zoning data.
  - Recommendations for V4

Specific V4 Project deliverables are:
- **A statewide parcel database and map layer**.
- ~~**Statewide county-maintained zoning layers**~~.
- **Display of V4 parcel ~~and zoning~~ layer~~s~~**.
- **Hosting solution for V4 parcel ~~and zoning~~ layer~~s~~**.
- ~~**Implement the Four A's solution**~~. ~~August–December 2018~~
- **Download/Export of data and data subset capabilities**, including a clip, zip, and ship, download by filter, or download subset function.
- **Tools for the automation of data standardization and submission**.
- **Benchmarking data**. Provide data evaluating counties against current benchmarks.
- **Collection and delivery of ancillary data layers to the UW-Madison Arthur H. Robinson Map Library**, including county-maintained zoning layers that are not collected and/or aggregated by another government entity.
- **Collection of PLSS corner data for V4**. Collection of PLSS corner data as part of V4 call for data, with the exception of datasets that have not changed since they were last submitted to PLSSFinder.
- **Version 0 Statewide PLSS database**. Create a Version 0 (V0) statewide PLSS database aggregated from current county datasets using a documented process that, at a minimum, has the following characteristics:
  - Includes corner point data (may exclude polygon geometry)
  - Select points attributed and indexed
  - Select points include the PLSS attributes required by the 2018 WLIP grant application:

- ▪ Accuracy class tag for new/updated corners: *survey-grade*, *sub-meter*, or *approximate*
  - ▪ Download only (no web app)
- **Draft of *Expanded Benchmark 4* for PLSS data submittal.** By June 30th, 2018, draft specifications for the submission of PLSS corner data for Benchmark 4, created with an eye toward standards for statewide aggregation of PLSS data.
- **A final project report** **for V4**, by November 15, 2018, written in collaboration with DOA. At a minimum, the report shall address:
  - ▪ Project background
  - ▪ Technical approach
  - ▪ Benchmark progress assessment – Assessment of where each county is at in terms of meeting the four benchmarks listed by the *V1 Interim Report* and the requirement for counties to achieve by the V4 call for data deadline of March 31, 2018.
    - ▪ Benchmark 1 – Parcel and Zoning Data Submission
    - ▪ Benchmark 2 – Extended Parcel Attribute Set Submission
    - ▪ Benchmark 3 – Completion of County Parcel Fabric
    - ▪ Benchmark 4 – Completion and Integration of PLSS
  - ▪ Final recommendations related to *Expanded Benchmark 4* for PLSS data submittal – Recommendations related to specifications for the submission of PLSS corner data for Benchmark 4 (to be included as part of V5 call for data)
  - ▪ Recommendations for V5
- ~~**Other V4 deliverables to be determined**. Additional specific deliverables for the V4 Project will be determined jointly by DOA and SCO, based on the goal of incremental improvement, the results of the V3 Project, and the recommendations of the *V3 Final Report*.~~

4. **Responsibilities and Logistics**

   Responsibilities of the SCO and DIR will be essentially the same as with the V1 and V2 Projects. SCO will be responsible for the following logistics:
   - **Data development**. The SCO will perform all data development for the V3 & V4 Projects including database design, interpretation, ingest, ETL, editing, attribute mapping, spatial manipulation, data assembly, and integration, and QA/QC.
   - **Project management**. Project management and administration will reside primarily in the SCO for the V3 & V4 Projects. This includes hiring and managing GIS staff and students.
   - **Public access to data**. SCO will be responsible for working to locate and configure an appropriate solution and technology for visualization of the final parcel map database, as well as access to the statewide parcel map database. Features such as data hosting, tiered governmental and public access, and other features beyond simple display, search and query functions are beyond the scope of the SCO's responsibilities.
   - **Standards**. Identification of specific standards to improve the efficiency of data integration.
   - **Benchmarking data**. SCO to generate benchmark data by county, to be provided to counties within six weeks after data submission date.
   - **Final deliverables**. The SCO will deliver the final V3 database and map layer by August 31, 2017; ~~and~~ the final project report by December 31, 2017; the draft of *Expanded Benchmark 4* for PLSS data submittal by June 30, 2018, ~~and~~ the final V4 database and map layer by July 31, 2018; the V0 PLSS database by October 15, 2018; and the final project report by November 15, 2018.
   - **Technical assistance for statewide parcel map layer hosting and display**. The SCO will provide technical assistance for maintaining a functional statewide parcel layer application online.

DIR will be responsible for the following logistics:

- **Data acquisition**. The DIR will be responsible for making formal data requests to county and/or municipal GIS offices, including follow-up steps such as open records requests.
- **Data sharing**. The DIR will review and implement licensing agreements as needed and document data sharing issues.
- **Software**. Provide access to commercially-licensed desktop GIS software. DOA will provide access to three basic desktop ArcGIS licenses for the SCO use on the project as well all necessary credits for ArcGIS online.
- **Funding and purchase orders for hosting/display**. DIR will be responsible for providing access to ArcGIS Online, if utilized, and ArcGIS Online credits.

Both the SCO and DIR will participate in community outreach efforts. In consultation with the DIR, the SCO will conduct outreach and publicize project goals and status. Both the SCO and DIR will provide project liaisons to facilitate collaboration.

5. **Project Timeline**

Date	Milestone
January 1, 2017	V3 Project start
March 31, 2017	V3 Data submissions due
August 31, 2017	V3 Parcel map available online
December 31, 2017	V3 Final report due
January 1, 2018	V4 Project start
March 31, 2018	V4 Data submissions due, including PLSS corner data
June 30, 2018	Draft *Expanded Benchmark 4* for PLSS data submittals, to be included in V5 call for data
July 31, 2018	V4 Parcel map available online
October 15, 2018	V0 PLSS database
November 15, 2018	V4 Final report due, with recommended specs for *Expanded Benchmark 4*

6. **Payments to SCO**

SCO shall receive, during the term of this scope of work, reimbursement of expenses up to the amount of $234,244 for staff time, materials and incidental expenses in executing the V3 & V4 Projects. SCO shall submit invoices to the DOA on a quarterly basis. Such invoices will include major budget category detail, i.e., salary, fringe, supplies, travel, etc. The final invoice shall be submitted to the DOA within 60 days of contract end date.
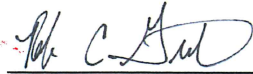
7. **Project Budget**

Item	Description	Amount
Staff salary and fringe	Primarily Codie See (50%), David Vogel (100%), and Howard Veregin (3.5%)	$ 177,761
Student hourly	1500 hours	$ 17,930
Supplies	Computer hardware, data storage, etc.	$ 4,000
Travel	Conferences, outreach, county visits for technical assistance	$ 4,000
Indirect	15%	$ 30,554
TOTAL		**$ 234,244**

8. Primary Project Contacts

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1/9/2018
Date

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Division of Intergovernmental Relations

Division of Intergovernmental Relations

1/16/2018
Date