# NG911 Geodatabase 2.0 to 2.1 Conversion Instructions

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### Good Stuff to Know:

* Link to YouTube video demonstration of conversion- <https://youtu.be/hoRuPMH-Eek>
* **NOTE-** **if you are on Esri version 10.3 or 10.3.1**, use the toolbox titled “Kansas NG911 GIS Tools 10.3”. For all other version s (10.4, 10.4.1, 10.5, or 10.5.1), use the toolbox titled “Kansas NG911 GIS Tools”.
* The conversion tools are NOT compatible with ArcPro due to lack of metadata conversion capabilities.
* You can download copies of the templates [here](http://www.kansasgis.org/initiatives/NG911/index.cfm) under the “Standards, Tools & Policies” tab and the “NG911 GIS Data Model Templates” heading. Don’t know if your county is State Plane North or South? [Here’s a](https://alidade.wikispaces.com/Kansas+SPCS+Zones) good web map of that.

### Conversion Process Expectations:

* Copy over required feature classes & road alias table
* Not copy over added feature classes & tables
* Copy over user-added fields in required feature classes
* Copy over existing metadata, changing any template references in the metadata from "1.1" or "2.0" to "2.1"
* Not change the last-date-edited fields
* Populate most values for new fields
* Edit topology to account for multiple ESB layers

### Conversion Prep on 2.0 geodatabase:

1. Run your 2.0 geodatabase through Validation Tools > 9 Optional Check All Required
2. Fix all errors reported in FieldValuesCheckResults
3. Fix as many notices reported in FieldValuesCheckResults as possible
4. Download the 2.1 template in the projection you need (Kansas State Plane North or Kansas State Plane South)
5. Create a copy of your 2.0 geodatabase. It’s better to run the conversion on a copy of your geodatabase just in case.
6. Create a copy of the 2.1 template you just downloaded. It’s nice to have a clean spare around in case something happens during the conversion process.

### Conversion of 2.0 geodatabase to 2.1 geodatabase:

1. Run Conversion\_GDB20to21 tool
   1. In the 2.0 geodatabase option, put in full file path to the geodatabase copy you made in Conversion Prep Step 5.
   2. In the 2.1 template option, put in full file path to the geodatabase copy you made in Conversion Prep Step 6.
   3. Run the tool. The tool will copy over data in required layers and copy any additional fields you have added to standard NG911 Data Model layers.
   4. Copy over any additional feature classes your PSAP uses that are not part of the official NG911 Data Model (like Police Beats, waterways, MSAG tables, etc.).
   5. Review the populated 2.1 geodatabase for any data inconsistencies. One good way to check this is to compare feature counts between your 2.0 and 2.1 geodatabases.
2. Run Conversion\_PopulateRoad\_AUTH\_X
   1. Add the full path of your newly populated 2.1 geodatabase and run the tool.
   2. This tool will fill in most values for the new AUTH\_L and AUTH\_R fields in the road centerline file. For a given road segment, if COUNTY\_L or COUNTY\_R is equal to your county’s name, AUTH\_L or AUTH\_R (respectively) will be given a “Y” value to signify your county’s authority on that side of the road segment.
   3. You will need to manually fill in any AUTH\_L or AUTH\_R “N” values or change any “Y” values to “N” to indicate where your county does not have authority over any sides of road segments. Make sure to pay close attention to areas you know might have issues.
3. Run Conversion\_PopulateRoad\_GEOMSAGX
   1. Add the full path of your newly populated 2.1 geodatabase and run the tool.
   2. This tool will fill in values for GEOMSAGL and GEOMSAGR in the road centerline file. If the PARITY\_L or PARITY\_R is marked as 0-0 or AUTH\_L or AUTH\_R is marked as “N”, the GEOMSAGL or GEOMSAGR (respectively) will be marked as “N” to indicate that the address ranges of that side of the road should not be turned into a valid GEOMSAG range. All other records will be marked as “Y” to indicate that they should be turned into a valid GEOMSAG range.
   3. Manually double-check GEOMSAGL and GEOMSAGR fields, particularly in any areas you know might have issues.
4. Run Conversion\_PopulateAP\_RCLMATCH
   1. Add the full path of your newly populated 2.1 geodatabase and run the tool.
   2. As fair warning, this tool will take a while to run, several minutes up to several hours depending on the size of the county.
   3. This tool is running “Geocompare Address Points” to match up the address points with their corresponding road centerline segment based on MSAGCO. If matched, the RCLMATCH field will contain the NGSEGID of the road segment the address point fits inside.
   4. The following fields are used in comparing address points to road centerlines
      1. HNO: L\_F\_ADD and L\_T\_ADD if HNO in PARITY\_L or R\_F\_ADD and R\_T\_ADD if HNO in PARITY\_R
      2. MSAGCO: MSAGCO\_L or MSAGCO\_R depending on if HNO is in PARITY\_L or PARITY\_R
      3. Street names for both: combination of PRD, STP, RD, STS, POD, and POM
   5. After the tool finishes, look through Address\_Pt\_GC\_Results to find address points that didn’t match up to or tied with road centerline records. Address\_Pt\_GC\_Results is a copy of your AddressPoints with several fields attached to the end. You can examine the MATCH field to find unmatched “U” records or tied “T” records. Otherwise, you can look at the RCLMATCH field of AddressPoints. Any records that are blank are either unmatched or tied.
   6. After editing any records, you can run this tool again (and again, however many times is necessary) to populate any blank RCLMATCH fields. The tool will only look at null or blank RCLMATCH fields, so once it is populated with an NGSEGID, subsequent runs of the tool will ignore those records to save time.
5. Run Populate RCLMATCH NO\_MATCH
   1. Add the full path of your newly populated 2.1 geodatabase and run the tool.
   2. This tool will fill in any blank or null RCLMATCH records with the value “NO\_MATCH” to indicate that the address point does not match up to a road centerline segment.
   3. Manually review the results, particularly in areas you know have issues.
6. Run Conversion\_PopulateAP\_GEOMSAG
   1. Add the full path of your newly populated 2.1 geodatabase and run the tool.
   2. This tool is populating the GEOMSAG field based on the results from the RCLMATCH population. If RCLMATCH is a road centerline NGSEGID, GEOMSAG will be populated with “N” to indicate that this address point does not need to become a valid GEOMSAG range. If RCLMATCH is “NO\_MATCH”, GEOMSAG will be populated with “Y” to indicate that this address point does need to become a valid GEOMSAG range.
   3. Manually review any GEOMSAG fields that may be marked incorrectly, particularly in areas you know have issues.
7. Run the 2.1 geodatabase through Validation Tools > 9 Optional Check All Required again.
8. Fix any errors or issues that are reported.

Support Contact:

For issues or questions, please contact Kristen Jordan Koenig with the Kansas Data Access and Support Center. Email Kristen at [Kristen.kgs@ku.edu](mailto:Kristen.kgs@ku.edu) and please include in the email which script you were running, any error messages, and a zipped copy of your geodatabase (change the file extension from zip to piz so it gets through the email server).

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