Oklahoma NG911/ GIS

Address Point / Road Centerline / ESN Consistency Error Issue

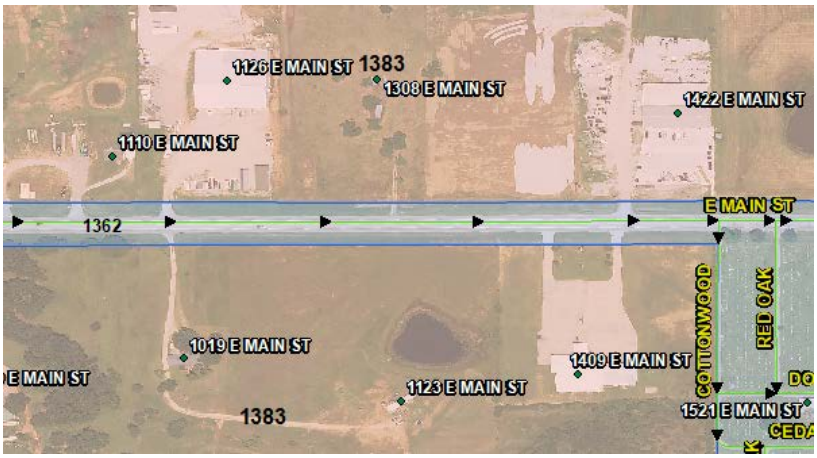
09-09-2026

Request:

Suggestion to change the ESN/Road consistency from an error to a warning. If not, recommendation is needed on how to handle situations where the city limits and law boundary cover the road and the right-of-way but nothing (or very little) beyond that? See example 1. If there's an accident on the road, local police respond, but say there is a domestic disturbance at a house, the sheriff would respond. I have seen this scenario in multiple datasets that we work with and am sure others have as well.

Currently we have always had the ESN match the ESN the addresses reside in. In the example below E Main street currently has ESN L & R as 1383. This obviously produces errors in the toolbox. But changing the ESN to 1362 will require an MSAG change. An MSAG change request is likely to produce a ESN/community compatibility error and require a backend change on the Public Safety Platform before a change request can even be processed. Additionally, if that change is made, then if 1123 E Main St calls for assistance, the wrong law response is going to show in dispatch—one system will say local police, but the map will say sheriff. Confused? I am.

Example 1:



Example 2: -- city law enforcement do respond to the city boundary (the hatched fill), but not outside the boundary where the majority of addresses are.

Basic Issues:

Issue 1 :

ROAD_CENTERLINE / ESZ_ BOUNDARY – Standard Version 3 enforces new topology & associated attribute rules beyond Standard Version 2.2.

Moving forward under Standard Version 3 all ROAD_CENTERLINE segments must fit one of the following scenarios :

- Be completely contained within & not touching any boundary of your ESZ.
- Be within your ESZ & only touch your ESZ boundary at an endpoint.
- Be completely colinear to your ESZ boundary for the entirety of the segment.
- Be completely outside your ESZ & not touch any boundary of an ESZ. (Only Applicable for external reference data & when SUBMIT=NO)
- Be completely outside your ESZ & only touch your ESZ boundary at an endpoint. (Only Applicable for external reference data & when SUBMIT=NO)
- *Every time this status changes it must be a new road centerline segment that reflects correct ESZ values in the ROAD_CENTERLINE - ESN_L & ESN_R fields.*

Failure to adhere to the previous rules will generate the following errors.

ERROR:ROAD_ESN:DEVIATION
Error FieldValuesCheckResults
A **ROAD_CENTERLINE** feature does one or more of the following in relation to **ESZ_BOUNDARY** features:

- Passes through an intersection of ESZ polygon borders
- Follows the border of an ESZ polygon for part, but not all, of the road's length

ERROR:ROAD_ESN:CROSSING
Error FieldValuesCheckResults
A **ROAD_CENTERLINE** feature crosses the border of one or more **ESZ_BOUNDARY** features. The road may have an *endpoint* on a border, but it may not cross a border.

ERROR:ROAD_ESN:OUT_OF_BOUNDS
Error FieldValuesCheckResults
At least part, if not all, of a **ROAD_CENTERLINE** feature is neither inside an **ESZ_BOUNDARY** feature nor along a border.

Resolution 1 : All ROAD_CENTERLINE features must adhere to the rules outlined above to successfully submit local data to the State NG911/GIS Repository.

Issue 2 :

The requirement of the ESN attributes to match the corresponding feature topology between feature classes is causing some PSAPs data to produce warnings, errors, & functional issues.

ADDRESS_POINT – The value in the ESN field for an individual address point must match the value of the ESN field in the ESZ_BOUNDARY it topologically resides within. Any other value creates the following error.

ERROR:CONSISTENCY:ADDRESS_ESN
Error FieldValuesCheckResults

The **ADDRESS_POINT** feature is located in an **ESZ_BOUNDARY** feature with a different **ESN** attribute.

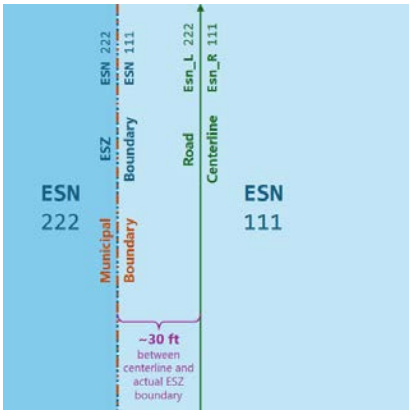
ROAD_CENTERLINE – The values in the ESN_L & ESN_R fields for an individual road segment must match the value of the ESN field in the ESZ_BOUNDARY it topologically resides within respectively. Any other values create the following error.

ERROR:CONSISTENCY:ROAD_ESN

Error FieldValuesCheckResults

The **ROAD_CENTERLINE** feature's **Esn_L** does not match the **ESN** attribute of the **ESZ_BOUNDARY** feature on the road's left side, or the **ROAD_CENTERLINE** feature's **Esn_R** does not match the **ESN** attribute of the **ESZ_BOUNDARY** feature on the road's right side.

In the example below this would result in an ERROR:CONSISTENCY:ROAD_ESN since the ROAD_CENTERLINE feature has an ESN_L = 222 & ESN_R=111 because both sides of the road centerline topologically are within ESN 111.



All ADDRESS_POINT features should have a corresponding ROAD_CENTERLINE feature that the address point can be matched to. Any ADDRESS_POINT features that do not have a corresponding ROAD_CENTERLINE feature will result in the following warning. *Warnings do not prevent successful validations of data*.

WARNING:GEOCODE:NO_MATCH – *Warnings do not prevent successful validation & submission*

Warning FieldValuesCheckResults

An **ADDRESS_POINT** feature has **RCLMatch = NO MATCH** and/or **RCLSide = NO MATCH**, indicating that the address point did not match exactly one side of exactly one road centerline.

Resolution 2 : In the transition time between legacy & NG911 the data errors will remain errors to preserve the overall intent & integrity of the NG911/GIS data moving forward for future uses. The attributes of the ESZ must reflect the actual ESZ they topologically represented in the GIS data. In many cases this may create a RCLMatch = NO MATCH Warning in the ADDRESS_POINT feature class. This will not prevent validation. Regarding the MSAG issues, There is not a single process that can be universally applied to each of the cases presented to always correct the issue because the reason each issue exists is different. Some possible solutions are as follows depending on the local flexibility of what data can be adjusted. Most times this cannot be resolved by simple data manipulation. It requires involvement & definite decisions from the local responding agencies & PSAP Coordinators based on real world modifications to procedures in order to become compliant.

- *Locally verify that the responding agencies actually are the responding agencies.*
- *ESZ_BOUNDARY features do not always have to exactly follow jurisdictional boundaries. Many times, they can be modified to reflect the intent of the responding agencies.*
- *Possibly adjust the ESZ_BOUNDARY & / or ROAD_CENTERLINE to reflect the correct ESZ_BOUNDARY per ROAD_CENTERLINE side.*
- *Compare the MSAG records with the TN records to see actually how many MSAG records may not reference any TN records moving forward.*
- *Errors in the MSAG Comparison are errors but do not prevent a successful validation within the toolkit.*