The State of Oklahoma Geographic Information NG911 and Addressing Standard

Oklahoma GI Council / Office of Geographic Information / Oklahoma 9-1-1 Authority

Oklahoma Geographic Information Council Adopted: *Pending*

Oklahoma 9-1-1 Management Authority Adopted: *Pending*

Version 2.2

Oklahoma Address Standards

Oklahoma Geographic Information Council – 9/4/2020

Article I.   Introduction

This document shall serve as the primary reference document for Next Generation 911 (NG911) Geographic Information System (GIS) Components and Address Standards in the State of Oklahoma regarding GIS based addressing. The standard set forth is to be maintained, utilized, and distributed under the authority of the Oklahoma 9-1-1 Management Authority, the Oklahoma Geographic Information Council and the Oklahoma Office of Geographic Information. This standard is mandatory for NG911 purposes in the State of Oklahoma. The following guidelines should be incorporated into all addressing applications, both geospatial and tabular, to ensure interdisciplinary compatibility.

Article II.   Background

Section 2.01   History

The Oklahoma Geographic Information Council (further known as GI Council) has continually adapted to the technological advancements within the GIS profession to provide the State of Oklahoma the best possible collective GIS resource since its inception in 1994. The current GI Council of 19 members and the Office of Geographic Information (OGI) represent a professionally diverse cross section of the existing GIS community in Oklahoma and operate under the following legislative authority.

The Oklahoma 9-1-1 Management Authority (further known as 911 Authority) was created on November 1st, 2016 and developed a technical subcommittee that would oversee the deployment of NG911 in the State. A partnership was formed between the 911 Authority and the GI Council with the goal of developing a Statewide GIS standard that will meet or exceed National Emergency Number Association (NENA) requirement for NG911 (NENA i3 standard).

Below are the legislative initiatives that support the overall goal of the GI Council and 911 Authority partnership:

- 1994   **SB 722** Created the State GIS Council of 11 members under the Conservation Commission serving as the Chair
- 1995   **HB 1964** Added 3 members to the State GIS Council
- 2001   Amendment adding 1 member to the State GIS Council
- 2003   **Interim Study H2003-105** considered a State-wide Coordinator, adding more members to the State GIS Council, & the authority to set policies / standards.
- 2004   **HB 2457** Changed the name of the State GIS Council to the State GI Council, added 4 new members, created the Office of Geographic Information (OGI) and corresponding positions in the OGI, along with specifying duties for the OGI and the GI Council

    NG911 Standard Update - Oklahoma 9-1-1- Management Authority History
- 2016   ***HB 3126** Created the Oklahoma 9-1-1- Management Authority and the position of State 9-1-1- Coordinator. Wireless 911 Bill passed to change funding and require the NENA Location Services Standard for all 911 centers to follow.

Section 2.02   Legislative Duties

As set forth in 2004 Regular Session of the Oklahoma State Legislature by **§82-1501-205.1** and **§82-1501-205.3 HB 2457** includes the following duties for the GI Council and the Office of Geographic Information. The GI Council developed this address standard under the following legislation. Below are the specific excerpts from existing State Statute.

- **§82-1501-205.1**

     A. The duties of the Council shall include overseeing the Office of Geographic Information concerning the following:
     1. Development, adoption, and recommendation of standards and procedures that may be applied to geographic information and Geographic Information Systems to promote consistency of data elements;

- **§82-1501-205.3**

     (A)   There is hereby established an Office of Geographic Information in the Oklahoma Conservation Commission.

     (D)   The Office shall:

          6.   Develop, maintain, update, and interpret Geographic Information System standards under the direction of the Council and working with state and local agencies;

     NG911 Standard Update- Oklahoma 9-1-1 Management Authority Legislative Duties
- ***§63-2864**
          The powers and duties of the Oklahoma 9-1-1 Management Authority created in
          Section 3 of this act shall be to:

     (4)   Direct the Oklahoma Tax Commission to escrow all or any portion of funds collected pursuant to the Oklahoma 9-1-1 Management Authority Act attributable to a public agency, if the public agency fails to:

     (b)   meet standards of the National Emergency Number Association (**NENA**) limited to call-taking and caller-location technology or comply with an improvement plan to meet such standards as directed by the Authority,

Section 2.03   Need for a Standard

Addresses today are the primary reference commonly accepted as the indexing system used to represent specific geospatial locations in an easily searchable tabular format. The increasing integration of geospatial information into every aspect of daily operations has led to the need for a statewide address standard. Throughout Oklahoma there are many authorities that assign addresses within their respective jurisdiction. The development of addressing systems throughout the state without an existing single point reference document has led to diversity in the datasets. In accomplishing the required tasks of the assigning agencies multiple methods have been employed to accommodate the unique functionality or overcome existing limitations. While many of the limitations that once constrained the development of addresses are no longer applicable today, there are several that are still very much a consideration for the assigning agency. The development of Oklahoma's address standard ensures the fundamental minimum requirements needed to accurately depict an address are met within any current accepted system today while preparing for future development. The development and integration of NG911 relies primarily on GIS data to accurately determine the location of the caller in order to route the call to the proper Public Safety Answering Point (PSAP) and dispatch the necessary emergency services. All GIS data that is utilized in NG911 applications must adhere to the requirements as set forth in this standard.

Section 2.04   Workgroup Formation

(a)   **Initial Workgroup** -In response to the increasing need for address standardization the GI Council formed the Address Standard Workgroup on **April 1, 2011** to research, develop, and submit an address standard for adoption by the GI Council. The primary focus of this group was to research what address standards were being utilized in Oklahoma currently and develop a simple custom set of fundamental address standards that adhered to current industry standards. A fundamental provision from the start of the workgroup was to consider existing formats that currently are operational. While an address assigning jurisdiction may add certain elements to their data the focus of this workgroup was to isolate on the commonalities across the jurisdictions that are required for addressing. After this assessment a fundamental schema and associated documentation was to be built that could either be utilized to create a new address dataset, incorporate an existing, or enhance an older dataset with added functionality.

(b)   NG911 Standard Workgroup – The additional requirement beyond the scope of the initial State of Oklahoma Geographic Information Address Standards constituted a need to form another workgroup between the GIS and 911 professionals. In an effort to meet the overall goal and enhance the end product the 911 Authority and the GI Council worked together through a joint GIS Technical Workgroup. This workgroup updated the existing State of Oklahoma Geographic Information Address Standards (Version 1.0 - September 5, 2014) to meet and exceed the required NENA standard for NG911.

Section 2.05   Address Data Formats

Addresses generally exist in one of three formats

(a)   A single address field or possibly set of fields in a tabular database

(b)   A specific address associated with a point feature

(c)   An address range associated with a linear feature such as a street or railroad centerline. *(This format generalizes the address along the length of the linear feature. It is generally more forgiving but not as precise due to numerous theoretical addresses that may not exist)*

Section 2.06   Essential Address Elements- USPS Publication 28

An address is comprised of several different attribute components, all of which are required to accurately define a specific address. When an address is matched against a Master Address File (MAF) it must be parsed (divided) into the individual components separated by a single space between the components. The minimum components required to accurately define the geospatial portion of an address with relation to this address standard are:

USPS Publication 28 Data Element	OK Address Standard Field Name	E911 Example Value
Street Number	Address	101
Predirectional	PreDir	N
Street Name	Street	Main
Street Suffix	StreetType	ST
Postdirectional	SufDir	NE
Secondary Unit Indicator	BldgUnit	APT
Secondary Number	BldgName	3
City	City	Guthrie
State	State	OK
Zipcode	Zipcode	73044

Mailing Standards of the United States Postal Service Publication 28 - Postal Addressing Standards

Oklahoma Geographic Information Council – 9/4/2020

While not all of the elements are required to be filled out for an address to be valid all of the placeholders need to be present in the attribute table to accurately represent the accepted United States Postal Service Standards. The Postal Service uses the following parsing logic to enter address information into their appropriate fields. When parsing an address into the individual components, start from the right-most element of the address and work toward the left. Then it places each element in the appropriate field until all address components are isolated. This process facilitates matching files and produces the correct format for standardized output as well as isolating the mismatches to the closest possible fit before failing. In accordance with USPS Publication 28 all punctuation, with exception of Zipcode4, should be omitted unless absolutely essential throughout all elements of an address. *(i.e. 101 1/2 MAIN ST, 101.5 MAIN ST)*

Section 2.07   Enhanced 911 (E911) vs Next Generation 911 (NG911) NENA Mapping Requirements

(a)   **Enhanced 911 (E911)**   - E911 utilizes landlines, wireless lines, and Voice VoIP through a combination of the MSAG and the ANI/ALI to pass locational data into the PSAP. The tabular data is then displayed on the mapping platform in the PSAP via positional information from coordinates or by point or street centerline geocoding functions on premises. Address elements used in geocoding functions within E911 generally adhere to USPS Publication 28 Postal Address Standards. The following layers are required for E911 to functionally map an emergency service request.
- ADDRESS_POINT
- ROAD_CENTERLINE
- ESZ_BOUNDARY

(b)   **Next Generation 911(NG911)** – NG911 is an Internet Protocol (IP)-based system that allows digital information (e.g., voice, photos, videos, text messages) to flow seamlessly from the public, through the 911 network to emergency responders. This process does not rely on the ANI/ALI – MSAG to pass tabular data to the PSAP. NG911 utilizes various functions within a server environment to determine the caller location based on GIS attributes and polygons. The following layers are necessary for NG911 to provide call routing to the proper PSAP.

- PSAP_BOUNDARY
- ESB_FIRE_BOUNDARY
- ESB_LAW_BOUNDARY
- ESB_EMS_BOUNDARY
- DISCREPANCYAGENCY_BOUNDARY

(c)   **ESN -ESZ/ESB Relationship**
- **ESN** – (Emergency Service Number) The three to 5 digit **Number** assigned to the unique combination of ESB that represent a ESZ polygon. *Required at a minimum as a legacy lookup table for the **MSAG**.*
- **ESZ** – (Emergency Service Zone) The **Polygon** that defines the unique geographic area of the combination of ESB (Fire, Law, & EMS Combined) *(Each polygon generally corresponds to a composite ESN)*
- **ESB** – (Emergency Service Boundary) The **Polygon** that defines the geographic area of a **SINGLE** emergency response service. (Fire or Law or EMS separately) *Required to be separate service layers for **NG911**.*
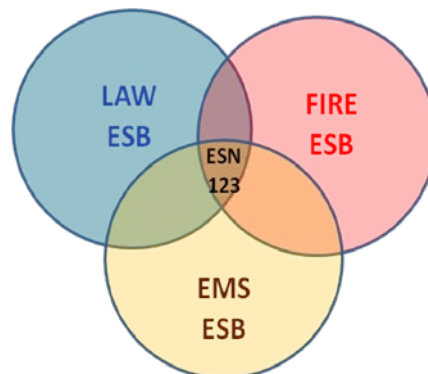
Section 2.08   Definition of the Standard

The following address standard defines the intended applications and usages associated with NG911 and the address standard along with the detailed components required for accurately representing caller location technology and addresses in a GIS. NG911 data as defined by this standard must meet or exceed the minimum standards outlined within this standard to be considered compliant with regards to Oklahoma NG911.

Section 2.09   Applicability and Intended Uses of the Standard

The intended use of this document is to provide emergency services with a mandatory standard for the implementation and maintenance of a NG911 system, specifically pertaining to the development and maintenance of the NG911 required GIS datasets. The standard also provides a simple basic address schema for anyone working with addresses in the State of Oklahoma. The associated documentation standardizes the basic structure of the tabular and attribute data required for geocoding using points, lines, and polygons. It is intended to be used by both the public and private sector**.**

Section 2.10   Spatial Components

For the purpose of this standard the spatial feature types referenced are points, lines, and polygons.

> (a)   **Points** may be used to represent the center of building footprints, access locations such as driveway, building entrances, or parcel centroids. The address point identifies a single address or at the very least the primary address of a location. (ie.. an apartment complexes main address) The individual point may not completely reflect the address of a parcel or structure considering some buildings or parcels have more than one address. In such a case it is generally advisable to place a single point per valid address to ensure a one to one match in geocoding.

> (b)   **Lines** are generally used for street centerlines in this standard but can represent any linear feature where addressing is based on a distance along the line. This address format requires address ranges along the linear feature providing an even / odd address parity instead of individual numbers. It is critical that topology and line directionality are strictly adhered to regarding lines to ensure a functional geocoding.

> (c)   **Polygons** represent areas and will be used to delineate areas of a Emergency Service Zone (ESZ), PSAP, Emergency Service Boundary (ESB), and Discrepancy Agency Boundary. NG911 will rely on these layers to determine the caller location and services for a particular area as well as maintain an accurate data stewardship to report discrepancy errors and corrections back to the local Agency.

Section 2.11   Attributes

Attributes are the tabular datasets represented by rows and columns of information associated with a geographic spatial feature. The following list represents the types of information that can be stored in attribute tables.

> (a)   Required attributes are the essential fields of data that are, at a minimum, required for correct geocoding and accurate address placement.

> (b)   Associated attributes pertain to the tabular and related data tied to an address. Examples of this could include a business name, incident number, structure type, etc. Many times associated data is stored in alias tables.

> (c)   Alias tables may also be associated with any type of attribute data to provide extra information or increase the accuracy of geocoding operations.

Section 2.12   Data Field Requirements and Types

It is completely acceptable for local datasets to contain extra data fields beyond the required attributes as defined by this standard. The data may be locally stored in whatever format the local Agency requires. Regardless of how the data is being maintained locally, data SHALL be provided in accordance with this standard when exported. Data Domains have been provided and must be utilized to ensure information is not lost when merging local data to a statewide dataset.

(a) Data Field Requirement attributes are tagged as **M**andatory (**M**), **C**onditional (**C**), **O**ptional (**O**) or **T**ransportation (**T**). Transportation fields have been included for use in other public safety applications.

- **Mandatory** means the data field must be populated
  *(i.e. The field "County" will **ALWAYS** have a value such as "**GARVIN COUNTY**")*

- **Conditional** means that **IF** an attribute value exists for a given feature, it **MUST** be populated. If no value exists for a given feature, the data field is left blank unless other guidance is given.
  *(i.e. The Street Prefix Direction "PreDir" **MAY** have a value such as "NORTH" in 100 **NORTH** MAIN)*

- **Optional** means the data field must be present but may or may not be populated

- **Transportation** denotes fields that are only essential to Transportation and Routing functionality, the data fields must be present but may or may not be populated.
  *(i.e. The Street Speed Limit "SpeedLimit" **MAY** have a value such as "25" if so then 25 will be included in the data field. Default speed limit **SHOULD** be set at "21" unless the limit is known).*

(b) Data Field Types

- ALPHANUMERIC –   Any combination of letters, numbers, & characters.

- DATETIME-   Specifically a Date/Time format
  (Since a shapefile only stores dates in a yyyy-mm-dd format a default time of 12am of the attributes stated date will be assigned to all Date/Time attributes not specified when necessary)

- NUMERIC -   Consisting of whole numbers only (No Decimals)
- DECIMAL -   Consisting of whole numbers including decimals

Section 2.13   Standard Addressing Practices

In order to provide for data consistency and interoperability this is the NG911 standard for the State of Oklahoma.

(a) **Unique Identification Code (Mandatory)** - A unique identifier is required for all databases, whether they are associated attributes or geospatial data sets. This unique identifier shall be used to link address attributes and indexes with other information. The unique identifier is defined in the NENA standard as the NENA Globally unique ID (**NGUID**). Solely this unique ID will enable tracking the address data element back to the original owner. Each **NGUID** shall be configured to the following format:

(LayerName)_(Local911UniqueID)@(Agency_ID)
Example: ROAD_CENTERLINE_24965@psap.5585.ok.gov

(b)   **Legacy E911 Data Fields** – Legacy E911 fields **(*LgcyPreDir, LgcyType, LgcySufDir*)** are to be used for the current and predominate street names in a Legacy E911 format. They shall **ALWAYS** use abbreviations as defined by the "**LGCYDIRECTION**" and "**LGCYSTREETTYPE**" domains. The actual street **(LgcyStreet)** names should **NEVER** be abbreviated because they are not a "Direction" or a "Street Type" but rather a "Proper" street name even if they contain a word listed in either "**LGCYDIRECTION**" and "**LGCYSTREETTYPE**" domains. Unless there are strong reasons for doing otherwise, it is recommended that the *Mailing Standards of the United States Postal Service Publication 28 - Postal Addressing Standards - Appendix B & C1 be used for legacy data fields*. Legacy data fields most likely will be utilized for map labeling & address locators required throughout various applications that require abbreviated street names. **Legacy data fields are NOT to be used as Historic or Alternate Street names.** Historic or Alternate Street names are to be stored in AltStName1, AltStName2, or AltStName3. If further Historic or Alternate Street names are necessary it is recommended to implement add more local fields to the dataset or an Alias table as mentioned in this standard & further defined in the *NENA Standard for NG9-1-1 GIS Data Model*.

(c)   **Alias Tables** – The usage of associated alias tables will greatly increase the accuracy of the automated geocoding. It allows the system to handle various spellings or misspellings (aliases). A series of alias tables create alternate spelling options for common discrepancies regarding addresses. Whenever an address is being processed by the system it needs to go through a process of standardization. A crucial part of this standardization is to look up each address component in the alias tables and replace alias values with the standard equivalents. Constructing such alias tables requires considerable judgment to avoid distortions and are typically built up over time as unmatchable addresses are reviewed. While some alias table information is fairly common many customizations are specific to a particular jurisdiction and cannot be universally adopted.

i.e. A single street with multiple legal names within a single jurisdiction:
14TH AVENUE NORTHEAST /   STATE HIGHWAY 199   /   SAM NOBLE PARKWAY

(d)   Abbreviations – NG911 Address elements do **NOT** recognize any abbreviations
EXCEPT IN THE FOLLOWING INSTANCES

- **Legacy E911 Data Fields** as previously defined.
- The Country & State name components of an address are **RECOMMENDED** to be abbreviated as defined in the **"COUNTRY"** and **"STATE"** domains.

(e)   **Street Naming** - A standard method of assigning numeric and character street names shall be developed and adopted for the whole jurisdiction. The primary objective is to establish a grid within each jurisdiction regardless of the detailed pattern of the individual grid.

(f)   **Vanity Street Names** - Vanity street names and addresses that related to a particular business, developer or property owner and should never be used in place of the primary street address. They may, however, be used as a supplemental address in compliance with the *Mailing Standards of the United States Postal Service Publication 28 - Postal Addressing Standards*

(g)   **Avoiding Obvious Conflicts** – For the sake of accuracy and clarity avoid obvious conflicting names and numbers.

Names with directions: *(i.e. SOUTH RIDGE)*
Names that include street types: *(i.e. SUNSET PLACE DRIVE)*
Names that sound alike: *(i.e. ROE and ROW)*
Easily misleading names: *(i.e. MAIN DRIVE and MAIN STREET)*
Multiple word names without hyphens :   *(i.e. HICKORY WOOD VIEW MANOR)*

(h)   **Street Segment Break & Naming Rules** – Individual street segments should break at an intersection whenever possible, and preferably at an intersection with a major cross street along with locations that attributes of a street segment change. *(City Limits, ESB, Jurisdictions, etc…)* Where it is not possible to make the break at an intersection, the break should occur at a point on the curve where the street orientation changes from primarily north-south to east-west, or vice-versa. Street name signs should be used at every street name break to clarify the change.

(i)   **Non-Grid Street Names** - Street names that are not in the street name grid should always be unique to the overall jurisdiction.

(j)   **Street Types** -Each street name should have a street type that is used consistently, or have a street type that is based on a logical pattern. The exception to this rule is where street type is needed to distinguish between two streets in the same area with the same name (e.g., Sunset Dr and Sunset Ct). The recommended standard for establishing the street type values in NG911 is set forth in the *NENA Civic Location Data Exchange Format (CLDXF).*

(k)   **Logical Address Consistency** – Addresses located across the street from each other shall be assigned so that they are nearly equal. Where there are more addresses on one side of the street, addresses assigned to the other side will be more widely spaced so that addressing consistency is maintained for addresses across from one another.

(l)   **Consistency with Distance-Based Address Grid** – Depending on the preference of the jurisdiction there must be a defined standard interval based grid system. Whether it is hundred blocks as in a city, a potential 1000 addresses per mile, (a possible address every 5.28 feet), or another variation the jurisdictions accepted standards should be adhered to as close as possible.   In rural areas addresses can be assigned based on the distance from the nearest section line. This standard is particularly useful in areas that are largely undeveloped (and thus don't have many cross streets) or in areas that have existing streets that are not in the standard street name grid. This standard should generally be considered to be less important, however, than staying consistent with the address designations of cross streets.

(m)   **Address Number Assignment** - Each jurisdiction shall adopt a standard method of assigning address numbers. A jurisdiction may elect to have address numbers increase from north to south and from east to west. The jurisdiction may also choose to assign odd address numbers on the south and east sides of the street and even numbers on the north and west sides of the street. Regardless of the method selected, it must remain consistent throughout the jurisdiction and should be coordinated with as many contiguous jurisdictions as possible.

(n)   **Address Sequential Direction** - Address ranges shall increase as you travel in the direction adopted by the jurisdiction. The direction of each line segment shall follow the sequence direction of the address ranges. Typically this is accomplished by controlling from-node and to-node topology. One-way streets are NOT an exception to this rule. Curvilinear streets may violate this standard for short stretches provided that they are in compliance with respect to the general direction of the full street segment. Where compliance with this standard is difficult or impossible, it may warrant considering a change in the street name at the point where it changes direction.

(o)   **Odd/Even Numbering (Address Parity)** – Parity shall remain consistent within the system adopted by the local jurisdiction. Address ranges are sets of numbers, usually comprised of four (4) distinct values, representing a range of addresses along the sides of the centerline of the road by addresses at either end of a street centerline segment. Two values of the range represent the lowest addresses, and the other two represent the highest. The values are further distinguished as being on either the left or the right side of the segment. In topological terms, the low values are associated with the FROM node of the segment, while the high values are associated with the TO node. Likewise, left and right are determined by

Oklahoma Geographic Information Council – 9/4/2020

the direction of the segment, as defined by the FROM and TO nodes. Topology is critical when a set of addressed centerlines is being developed. Implementation of the address parity (i.e., odd vs. even) is usually determined by the addressing software

Section 2.14   Geocoding

Geocoding is the process of finding associated geographic coordinates (often expressed as latitude and longitude) from other geographic data, such as street addresses, or ZIP codes (postal codes). This process can be accomplished through various methods. For the purpose of this standard the following three methods are preferred.

(a)   **Point based geocoding** provides for the most accurate one to one geocoding option. It utilizes a preset number of essential fields to parse an address and accurately correlate the parsed address to the tabular data associated with a specific geographic point representing an address. While this method is highly accurate it is generally not very tolerant of address discrepancies or errors unless alias tables are utilized. It is generally the preferred first method of geocoding and provides real addresses with absolute accuracy.

(b)   **Linear based geocoding** provides the most widely accepted and error tolerant geocoding option. It allows for any number of addresses within a preset range based on either a single high and low number or an even and odd high and low number parity along a linear feature. A geographic position is calculated along a line based on the measured distance and address interval. This method can be extremely accurate depending on the data ranges. While this method is very tolerant of address discrepancies and errors it can produce theoretical addresses where real addresses do not exist. It is generally preferred for complete coverage of a jurisdiction and provides relative accuracy of an address.

> *i.e. Linear Theoretical & Actual Address Ranges:*
> *Theoretical Address Range: 701-799; 700-798*
> *Actual address range: 701-725; 700-724*

(c)   **Composite Geocoding** is a dual stage geocoding option where generally a more accurate (generally point based) geocoding option is initially utilized to find a location. If a suitable match is not found the address is passed to the second (generally linear based) geocoding option for an attempted match based on more forgiving parameters. This dual pass geocoding provides very good absolute accuracy while retaining complete coverage of relative accuracy throughout a jurisdiction.

Section 2.15   Data Quality

Data quality is a cumulative relationship of data accuracy, consistency, currency, and completeness accurately representing reality within NG911. Every effort must be continually pursued to maintain every aspect of data quality as set forth in this standard. Failure to maintain any portion of the cumulative relationship of data quality for NG911 data compromises the entire integrity of the data and poses a serious risk of loss of life considering the sole intent of the data.

Section 2.16   Positional Accuracy Standards

The geospatial accuracy of an address location and the critical datasets required for NG911 should be pursued to achieve the highest feasible and attainable positional accuracy possible. While the positional accuracy of this data may vary greatly between agencies there must be a minimum statewide accuracy standard that ensures accurately and reliably locating individuals for emergency response. In 2016 NAIP Orthophotography accuracy specifications changed the true ground accuracy to 4 meters (13.1234 feet) at 95% confidence level. Considering many rural address point locations within Oklahoma have been and will be derived from this 1 meter or subsequently higher resolution NAIP Orthophotography or by GPS collection devices capable of differential correction to attain comparable accuracy the following minimum standards should be feasibly attainable in most addressing applications within Oklahoma. The equipment and methodology used to acquire and derive this data must be that of a grade capable of collecting data to within a horizontal accuracy of +/- 13.1234 feet at 95% confidence. Data collection at higher accuracy is obviously preferred as resources permit such acquisition.

Section 2.17   Spatial Reference

Local GIS data may be stored in any projection desired as long as the data projection is a clearly defined and is a regionally recognized projection. For NG911 purposes the NG911 data must be in the following projection prior to loading into the Emergency Call Routing Function (ECRF) or Location Validation Function (LVF).

EPSG: 4326 WGS 84 / Latlong
Projection: Geographic, Plate Carrée, Equidistant Cylindrical, Equirectangular
Latitude of the origin: 0°
Longitude of the origin: 0°
Scaling factor: 1
False eastings: 0°
False northings: 0°
Ellipsoid: WGS84
Horizontal Datum: WGS84
Vertical Datum: WGS84 Geoid, which is equivalent to Local Mean Sea Level (MSL)
Units: decimal degrees
Global extent: -180, -90, 180, 90

Section 2.18   Content Accuracy

Content accuracy is measured based on the overall functional correctness of the data to accurately represent reality. This accuracy can be measured by the following aspects.

(a)   The individual components of the data must be complete (filled in where appropriate) and contain the correct information.

(b)   The data must be correct for the location in question. Routing to someplace is important but locating that someplace is critical.

(c)   The data must be correct sequentially in terms of its relationship with the overall addressing schema.

(d)   The data must be both current and valid with regard to content in order to function correctly.

Oklahoma Geographic Information Council – 9/4/2020

Section 2.19   Approved Agencies

(a) **Agency** - An Agency as defined within this standard is an organization approved by the State of Oklahoma 911 Coordinator to edit and/or submit NG911 data to the State of Oklahoma NG911/GIS Repository for provisioning to the ESInet. A current table of these approved Agencies along with their assigned Agency IDs and corresponding Discrepancy Agency will be maintained by the State of Oklahoma 9-1-1 Coordinator. Below are the types of Agencies that can be approved as an Agency.

- Public Safety Answering Point
- Council of Government
- Vendor

(b) **Agency ID** - Every approved Agency will be assigned an Agency ID by the State of Oklahoma 9-1-1 Coordinator. This unique Agency ID will be utilized within all related tools & documentation to reference an agency in following format:

- PSAP   psap.XXXX.ok.gov   (XXXX is the Registered FCC ID #)
- COG   cog.cogname.ok.gov   (Abbreviated name of the COG)
- VENDOR   ven.companyname.ok.gov   (Company Name)

(c) **Discrepancy Agency** – Historically, the Discrepancy Agency has been referred to by many previous names for a variety of reasons. (Authoritative, Provisioning, Steward, Jurisdiction, and in some cases Source or Source Agency) As functionally defined within this standard the Discrepancy Agency is to serve as both the Agency that officially submits data to and receives a discrepancy report back from the State of Oklahoma NG911/GIS Repository as the data is checked before provisioning up to the ESInet. A Discrepancy Agency may submit data on behalf of another Agency as approved by the State of Oklahoma 9-1-1 Coordinator. The Discrepancy Agency *"MAY"* be responsible for actually correcting the data if it is the same Agency that locally maintains the data within their respective jurisdiction and also submits data to the State of Oklahoma NG911/GIS Repository. *(i.e. Single PSAP)* In the instance of a Discrepancy Agency submitting another Agencies data to the State of Oklahoma NG911/GIS Repository it "IS ALWAYS" the Discrepancy Agency's responsibility to ensure any discrepancies found get resolved back at the local level. *(i.e. multiple PSAPs, COG, or Vendor) Not every Agency is a Discrepancy Agency, but every Agency must have a Discrepancy Agency.*

Section 2.20   Data Stewardship

The local Agency is ultimately responsible for ensuring the NG911 data is maintained and submitted to the State of Oklahoma NG911/GIS Repository. This can be accomplished by directly working with the State of Oklahoma NG911/GIS Repository or by enter into agreements with other Agencies to allow data to be maintained and / or submitted to the State of Oklahoma NG911/GIS Repository on behalf of the local Agency.

When a single feature has more than one responsible agency, *(i.e. a road between two Agencies)* each Agency shall work in conjunction with its neighbor to resolve any conflicts locally for their respective portion of data associated with the feature. While there may be several acceptable methods used to handle this situation locally, these methods must work toward providing seamless statewide interoperability and avoid any obvious confusion. A clear reference must be maintained in the metadata and tabular data to the Agency regarding the development and maintenance of any dataset.

i.e. A specific method currently being utilized is two roads of identical geometry (vertices to vertices) that overlap the data of the two owners. The road name within one ownership with a boundary layer separating the road by PARITY (Odd, Even) could have a duplicate road with opposing parity which could be of a different name (Stacking). The direction or purpose of the Discrepancy Agency of the data, whether a multi-jurisdictional collection, COG or State GIS repository, will be to ensure the EDGE Matching of these single owners or stewards to allow for routing topology (intersection breaks, boundary breaks, etc.) between the individual owners.

Oklahoma Geographic Information Council – 9/4/2020

Section 2.21   Metadata

Metadata shall be created and maintained for all address data sets before the data is submitted to the State of Oklahoma NG911/GIS Repository. The metadata shall meet the standards as set forth in the *FGDC Content Standards for Geospatial Metadata (FGDC-STD-001-1998)* and shall be made available through accepted publishing methods.

Article III.   Required Point, Line, & Polygon Schema

Section 3.01   Address Point – Point

Addresses can be accessed as or through geospatial points. Address points can be used for a variety of purposes, ranging from precise geocoding to assigning addresses in a reliable manner. This schema has the potential to serve as both an address repository while referencing a master street name list, providing an invaluable resource to a broad community of users. This dataset is to be maintained at the local Agency level and submitted to the State of Oklahoma NG911/GIS Repository.

Reference **OK_ADDRESS_SCHEMAS_22.XLS** – ADDRESS_POINT

Field Name	Field Description	Field Type	Field Width	Priority	Domain Table
DiscrpAgID	Discrepancy Agency ID (Agency that receives the Discrepancy Report)	ALPHANUMERIC	75	M	AGENCYID
NGUID_ADD	NENA Globally Unique ID : (LayerName)_(Local911UniqueID)@(Agency_ID)	ALPHANUMERIC	254	M	
Agency_ID	ID Assigned to each Agency by the State of Oklahoma 911 Coordinator	ALPHANUMERIC	100	M	AGENCYID
FullAddr	Full Address (ie.101 West Main Street)	ALPHANUMERIC	100	C	
FullName	Full Name of the Primary Street	ALPHANUMERIC	50	C	
Label	Map Label of the Address	ALPHANUMERIC	50	C	
AddPre	Extension that Precedes an Address Number (ie "A" 100 North Main Street)	ALPHANUMERIC	15	C	
Address	Address Number (ie "100" North Main Street)	NUMERIC	6	C	
AddSuf	House Number Suffix (ie 100 A)	ALPHANUMERIC	15	C	
PreMod	Primary Street Modifier (ie "Old" Church Street)	ALPHANUMERIC	15	C	
PreDir	Primary Street))Directional Prefix (ie "North" Main Street) (Unabbreviated DIRECTION Domain)	ALPHANUMERIC	9	C	DIRECTION
PreType	Primary Street Prefix Type (ie "Highway" 70 East)	ALPHANUMERIC	50	C	STREETTYPE
PreTypeSep	Primary Street Name Pre Type Separator (ie Circle "in the" Woods)	ALPHANUMERIC	20	C	SEPARATOR
Street	Primary Street Name (ie North "Main" Street)	ALPHANUMERIC	60	C	
StreetType	Primary Street Type (ie North Main "Street") (Unabbreviated STREETTYPE Domain)	ALPHANUMERIC	50	C	STREETTYPE
SufDir	Primary Street Directional Suffix (ie Highway 70 "East") (Unabbreviated DIRECTION Domain)	ALPHANUMERIC	9	C	DIRECTION
SufMod	Primary Street Name Suffix Modifier (ie North Main Street "Extension")	ALPHANUMERIC	25	C	
Country	Name of Country the Address Resides In (US) (Abbreviated COUNTRY Domain)	ALPHANUMERIC	2	M	COUNTRY
State	Name of the State the Address Resides In (OK) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
County	Name of the County the Address Resides In (Kay County)	ALPHANUMERIC	40	M	COUNTY
City	Name of the Municipality the Address Resides In	ALPHANUMERIC	100	M	
UnincComm	Name of the Unincorporated Community the Address Resides In	ALPHANUMERIC	100	O	
NbrhdComm	Name of Neighborhood, Subdivision, Community	ALPHANUMERIC	100	O	
ESN	Emergency Service Number	ALPHANUMERIC	5	C	
PSAP	Responding Public Service Access Point	ALPHANUMERIC	25	M	
MSAGComm	Master Street Address Guide Community	ALPHANUMERIC	30	C	
PostComm	Postal Community	ALPHANUMERIC	40	C	
Zipcode	Zipcode	ALPHANUMERIC	7	C	

Field Name	Field Description	Field Type	Field Width	Priority	Domain Table
Zipcode4	Zip Code +4 Extension	ALPHANUMERIC	4	O	
LandmkName	Business or Agency at the Address	ALPHANUMERIC	150	C	
AddtnlLoc	Additional Location Information (ie Loading Dock, Gate A1, West Wing)	ALPHANUMERIC	225	O	
BldgName	Building or Unit Name (ie Building A, Building 1)	ALPHANUMERIC	75	O	
Floor	Floor of the Building	ALPHANUMERIC	75	O	
BldgUnit	Building Unit Type (ie Suite B, Apartment 206)	ALPHANUMERIC	75	O	
Room	Room Number in the Building	ALPHANUMERIC	75	O	
Seat	Seat in the Room	ALPHANUMERIC	75	O	
GrpQuarter	Group Living Quarters	ALPHANUMERIC	1	O	YESNO
OccupTime	Times the Building is Occupied (8:00 a.m.- 5:00 p.m.)	ALPHANUMERIC	50	O	
StrmSheltr	Type of Storm Shelter	ALPHANUMERIC	25	O	STORMSHELTER
Basement	Existing Basement	ALPHANUMERIC	1	O	YESNO
PlaceType	Type of Feature Identified by an Address	ALPHANUMERIC	50	O	PLACETYPE
Placement	Methodology Used For Address Point Placement	ALPHANUMERIC	25	O	PLACEMENT
MilePost	Mile Post	ALPHANUMERIC	150	C	
Longitude	Longitude Coordinates of the Address Point in Decimal Degrees	DECIMAL	15	O	
Latitude	Latitude Coordinates of the Address Point in Decimal Degrees	DECIMAL	15	O	
Elevation	Elevation of the Address Point (Meter)	NUMERIC	6	O	
AddDataURI	Uniform Resource Identifier (URI) for Additional Associate Data (Floorplans, Photos, URL)	ALPHANUMERIC	254	C	
InitiSrce	Original source of the data	ALPHANUMERIC	75	M	
InitiDate	Initial Time-Stamp - (Creation Entry Date)	DATETIME	20	M	
RevEditor	Most recent editor of the data	ALPHANUMERIC	75	M	
RevDate	Modified Time-Stamp - (Modify Entry Date)	DATETIME	20	M	
EffectDate	Date & Time that the record is scheduled to take effect	DATETIME	20	O	
ExpireDate	Date & Time that the record is no longer valid	DATETIME	20	O	
Comment	Comments / Notes	ALPHANUMERIC	100	C	
LgcyAdd	Legacy Full Address with Abbreviations (ie.101 W Main St)	ALPHANUMERIC	100	O	
LgcyPreDir	Legacy Street Name Pre Directional (Abbreviated DIRECTION Domain)	ALPHANUMERIC	2	C	LGCYDIRECTION
LgcyStreet	Legacy Street Name	ALPHANUMERIC	75	C	
LgcyType	Legacy Street Name Type (Abbreviated STREETTYPE Domain)	ALPHANUMERIC	4	C	LGCYSTREETTYPE
LgcySufDir	Legacy Street Name Post Directional (Abbreviated DIRECTION Domain)	ALPHANUMERIC	2	C	LGCYDIRECTION
SUBMIT	Submit Feature to be Validated in OK NG911 GIS Toolkit	ALPHANUMERIC	1	M	YESNO
RCLMatch	NGUID_RDCL of the road segment the address point should match to as Validated in OK NG911 GIS Toolkit	ALPHANUMERIC	254	M	
RCLSide	Checks the Left or Right Side of the Address Point to be Validated in OK NG911 GIS Toolkit	ALPHANUMERIC	1	M	RCLSIDE

Section 3.02   Road Centerline - Line

The line in this instance is a linear geospatial feature that represents a street centerline. Other linear features that have incremental address ranges along their sides may also utilize this basic structure. Address ranges are typically established for individual centerline segments so address matching may be performed. Street names and address ranges shall conform to the actual addresses assigned to specific points as a practical rule. This dataset is to be maintained at the local Agency level and submitted to the State of Oklahoma NG911/GIS Repository.

Reference **OK_ADDRESS_SCHEMAS_22.XLS** - ROAD_CENTERLINE

Field Name	Field Description	Field Type	Field Width	Priority	Domain Table
DiscrpAgID	Discrepancy Agency ID (Agency that receives the Discrepancy Report)	ALPHANUMERIC	75	M	AGENCYID

NGUID_RDCL	NENA Globally Unique ID : (LayerName)_(Local911UniqueID)@(Agency_ID)	ALPHANUMERIC	254	M	
Agency_ID	ID Assigned to each Agency by the State of Oklahoma 911 Coordinator	ALPHANUMERIC	100	M	AGENCYID
FullName	Full Name of the Primary Road	ALPHANUMERIC	50	M	
Label	Map Label of the Road Segment	ALPHANUMERIC	50	O	
Add_L_Pre	Extension that Precedes an Address Number on the Left Side of the Road (ie "A" 100 North Main Street)	ALPHANUMERIC	15	C	
Add_R_Pre	Extension that Precedes an Address Number on the Right Side of the Road (ie "A" 100 North Main Street)	ALPHANUMERIC	15	C	
Add_L_From	Left From (Low) Address	NUMERIC	6	M	
Add_L_To	Left To (High) Address	NUMERIC	6	M	
Add_R_From	Right From (Low) Address	NUMERIC	6	M	
Add_R_To	Right To (High) Address	NUMERIC	6	M	
Parity_L	The Even or Odd Property of the Address Number Range on the Left Side of the Road Segment	ALPHANUMERIC	1	M	PARITY
Parity_R	The Even or Odd Property of the Address Number Range on the Right Side of the Road Segment	ALPHANUMERIC	1	M	PARITY
PreMod	Primary Street Modifier (ie "Old" Church Street)	ALPHANUMERIC	15	C	
PreDir	Primary Street Directional Prefix (ie "North" Main Street) (Unabbreviated DIRECTION Domain)	ALPHANUMERIC	9	C	DIRECTION
PreType	Primary Street Prefix Type (ie "Highway" 70 East) (Unabbreviated STREETTYPE Domain)	ALPHANUMERIC	50	C	STREETTYPE
PreTypeSep	Primary Street Name Pre Type Separator (ie Circle "in the" Woods)	ALPHANUMERIC	20	C	SEPARATOR
Street	Primary Street Name (ie North "Main" Street)	ALPHANUMERIC	60	M	
StreetType	Primary Street Type (ie North Main "Street") (Unabbreviated STREETTYPE Domain)	ALPHANUMERIC	50	C	STREETTYPE
SufDir	Primary Street Directional Suffix (ie Highway 70 "East") (Unabbreviated DIRECTION Domain)	ALPHANUMERIC	9	C	DIRECTION
SufMod	Primary Street Name Suffix Modifier (ie North Main Street "Extension")	ALPHANUMERIC	25	C	
Country_L	Name of Country on the Left Side of the Road (US) (Abbreviated COUNTRY Domain)	ALPHANUMERIC	2	M	COUNTRY
Country_R	Name of Country on the Right Side of the Road (US) (Abbreviated COUNTRY Domain)	ALPHANUMERIC	2	M	COUNTRY
State_L	Name of the State on the Left Side of the Road (OK) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
State_R	Name of the State on the Right Side of the Road (OK) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
County_L	Name of the County on the Left Side of the Road (Kay County)	ALPHANUMERIC	40	M	COUNTY
County_R	Name of the County on the Right Side of the Road (KayCounty)	ALPHANUMERIC	40	M	COUNTY
City_L	Name of the Municipality on the Left Side of the Road	ALPHANUMERIC	100	M	
City_R	Name of the Municipality on the Right Side of the Road	ALPHANUMERIC	100	M	
UnincCommL	Name of the Unincorporated Community on the Left Side of the Road	ALPHANUMERIC	100	O	
UnincCommR	Name of the Unincorporated Community on the Right Side of the Road	ALPHANUMERIC	100	O	
NbrhdCommL	Name of Neighborhood, Subdivision, Community on the Left Side of the Road	ALPHANUMERIC	100	O	
NbrhdCommR	Name of Neighborhood, Subdivision, Community on the Right Side of the Road	ALPHANUMERIC	100	O	
Esn_L	Emergency Service Number on the Left Side of the Road	ALPHANUMERIC	5	C	
Esn_R	Emergency Service Number on the Right Side of the Road	ALPHANUMERIC	5	C	
PSAP_L	Responding Public Service Access Point on the Left Side of the Road	ALPHANUMERIC	25	M	
PSAP_R	Responding Public Service Access Point on the Right Side of the Road	ALPHANUMERIC	25	M	

Field	Description	Type	Length	M/O/C/T	Domain
MSAGComm_L	MSAG Community on the Left Side of the Road	ALPHANUMERIC	30	C	
MSAGComm_R	MSAG Community on the Right Side of the Road	ALPHANUMERIC	30	C	
Zipcode_L	Zipcode on the Left Side of the Road	ALPHANUMERIC	7	C	
Zipcode_R	Zipcode on the Right Side of the Road	ALPHANUMERIC	7	C	
Zipcode4_L	Zipcode +4 Extension on the Left Side of the Road	ALPHANUMERIC	4	O	
Zipcode4_R	Zipcode +4 Extension on the Right Side of the Road	ALPHANUMERIC	4	O	
PostComm_L	Postal Community on the Left Side of the Road	ALPHANUMERIC	40	C	
PostComm_R	Postal Community on the Right Side of the Road	ALPHANUMERIC	40	C	
RoadClass	HPMS Functional Classification	ALPHANUMERIC	15	O	ROADCLASS
Oneway	Travel Direction of the Segment Related to Line Direction	ALPHANUMERIC	2	O	ONEWAY
SpeedLimit	Speed Limit of Street Centerline Segment	NUMERIC	3	O	
InitiSrce	Original source of the data	ALPHANUMERIC	75	M	
InitiDate	Initial Time-Stamp - (Creation Entry Date)	DATETIME	20	M	
RevEditor	Most recent editor of the data	ALPHANUMERIC	75	M	
RevDate	Modified Time-Stamp - (Modify Entry Date)	DATETIME	20	M	
EffectDate	Date & Time that the record is scheduled to take effect	DATETIME	20	O	
ExpireDate	Date & Time that the record is no longer valid	DATETIME	20	O	
Comment	Comments / Notes	ALPHANUMERIC	100	O	
AltStName1	1st Alternate Street Name	ALPHANUMERIC	50	O	
AltStName2	2nd Alternate Street Name	ALPHANUMERIC	50	O	
AltStName3	3rd Alternate Street Name	ALPHANUMERIC	50	O	
LgcyPreDir	Legacy Street Name Pre Directional (Abbreviated DIRECTION Domain)	ALPHANUMERIC	2	C	LGCYDIRECTION
LgcyStreet	Legacy Street Name	ALPHANUMERIC	75	C	
LgcyType	Legacy Street Name Type (Abbreviated STREETTYPE Domain)	ALPHANUMERIC	4	C	LGCYSTREETTYPE
LgcySufDir	Legacy Street Name Post Directional (Abbreviated DIRECTION Domain)	ALPHANUMERIC	2	C	LGCYDIRECTION
FromLevel	Level from Overpass / Underpass	ALPHANUMERIC	10	T	LEVEL
ToLevel	Level to Overpass / Underpass	ALPHANUMERIC	10	T	LEVEL
BoundLane	Direction of the Lane of Traffic if Dedicated Direction	ALPHANUMERIC	9	T	DIRECTION
RoadLength	Length of Street Segment	DECIMAL	15	T	
DriveTime	Drivetime of the Street Segment	DECIMAL	15	T	
DeadEnd	Dead End Street Segment	ALPHANUMERIC	1	T	YESNO
Surface	Paving Surface of the Street	ALPHANUMERIC	10	T	
Lanes	Number of Lanes Represented by the Street Segment	ALPHANUMERIC	5	T	NUMBER
Toll	Requires Toll to Access	ALPHANUMERIC	1	T	YESNO
LtdAccess	Limited Access to the General Public	ALPHANUMERIC	1	T	YESNO
Valid_L	Indicates if Address Range on the Left Side of the Segment Should be used for Civic Location	ALPHANUMERIC	1	O	YESNO
Valid_R	Indicates if Address Range on the Right Side of the Segment Should be used for Civic Location	ALPHANUMERIC	1	O	YESNO
SUBMIT	Submit Feature to be Validated in OK NG911 GIS Toolkit	ALPHANUMERIC	1	M	YESNO
TopoExcept	Topological Exceptions when Validated in OK NG911 GIS Toolkit	ALPHANUMERIC	20	M	TOPOEXCEPT
GeoMSAG_L	Toggle denoting whether the Left Side of the Road Centerline segment's address range will be included in the submitting agencies MSAG validation check.	ALPHANUMERIC	1	M	YESNO
GeoMSAG_R	Toggle denoting whether the Right Side of the Road Centerline segment's address range will be included in the submitting agencies MSAG validation check.	ALPHANUMERIC	1	M	YESNO

Section 3.03   Emergency Service Zone(ESZ) Boundary – Polygon

The Emergency Service Zone (ESZ) boundary is the geographical representation of the Emergency Service Number (ESN). The ESN is a 3 to 5 digit number representing a unique combination of emergency service agencies (Law, Fire, and EMS) designated to serve a specific range of addresses within a particular geographical area, or ESZ. The ESN facilitates selective routing and selective transfer, if required, to the appropriate PSAP and the dispatching of the proper service agencies through the MSAG. There can be no overlaps or gaps in this dataset. This dataset is to be maintained at the local Agency level and submitted to the State of Oklahoma NG911/GIS Repository.

Reference **OK_ADDRESS_SCHEMAS_22.XLS** – ESZ_BOUNDARY

Field Name	Field Description	Field Type	Field Width	Priority	Domain Table
DiscrpAgID	Discrepancy Agency ID (Agency that receives the Discrepancy Report)	ALPHANUMERIC	75	M	AGENCYID
NGUID_ESZ	NENA Globally Unique ID : (LayerName)_(Local911UniqueID)@(Agency_ID)	ALPHANUMERIC	254	M	
Agency	Name of the Service Provider within the Authoritative Service area	ALPHANUMERIC	60	M	
Agency_ID	ID Assigned to each Agency by the State of Oklahoma 911 Coordinator	ALPHANUMERIC	100	M	AGENCYID
Avcard_URI	The internet address of an XML data structure which contains contact information in the form of a vCard	ALPHANUMERIC	254	M	
ESN	The three to 5 digit Number assigned to the unique combination of ESB that represent a ESZ polygon.	ALPHANUMERIC	5	M	
ESZ	The Polygon that defines the unique geographic area of the combination of ESB	ALPHANUMERIC	5	M	
ServiceNum	A dialable number or dial string on a 12-digit keypad to reach the emergency service appropriate for the location	ALPHANUMERIC	15	O	
Country	Name of Country the Address Resides In (US) (Abbreviated COUNTRY Domain)	ALPHANUMERIC	2	M	COUNTRY
State	Name of the State the Address Resides In (OK) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
InitiSrce	Original source of the data	ALPHANUMERIC	75	M	
InitiDate	Initial Time-Stamp - (Creation Entry Date)	DATETIME	20	M	
RevEditor	Most recent editor of the data	ALPHANUMERIC	75	M	
RevDate	Modified Time-Stamp - (Modify Entry Date)	DATETIME	20	M	
EffectDate	Date & Time that the record is scheduled to take effect	DATETIME	20	O	
ExpireDate	Date & Time that the record is no longer valid	DATETIME	20	O	
Comment	Comments / Notes	ALPHANUMERIC	100	C	
SUBMIT	Submit Feature to be Validated in OK NG911 GIS Toolkit	ALPHANUMERIC	1	M	YESNO

Section 3.04   Public Safety Answer Point (PSAP) Boundary – Polygon

The PSAP boundary layer may contain one or many PSAP Boundaries. Each PSAP boundary defines the geographic area of a PSAP that has primary responsibilities for an emergency request. This boundary layer provides the primary call routing. This layer is used by the ECRF to perform the geographic query to determine which PSAP receives the emergency service request. There can be no overlaps or gaps in this dataset. This dataset is maintained as a statewide dataset housed in the State of Oklahoma NG911/GIS Repository. Any boundary disputes within this dataset will be resolved by the State of Oklahoma 911 Coordinator on an individual basis with input from all involved Agencies.

Reference **OK_ADDRESS_SCHEMAS_22.XLS** – PSAP_BOUNDARY

Field Name	Field Description	Field Type	Field Width	Priority	Domain Table
DiscrpAgID	Discrepancy Agency ID (Agency that receives the Discrepancy Report)	ALPHANUMERIC	75	M	AGENCYID
NGUID_PSAP	NENA Globally Unique ID : (LayerName)_(Local911UniqueID)@(Agency_ID)	ALPHANUMERIC	254	M	

Oklahoma Geographic Information Council – 9/4/2020

Field Name	Field Description	Field Type	Field Width	Priority	Domain Table
Agency	Name of the Service Provider within the Authoritative Service area	ALPHANUMERIC	60	M	
Agency_ID	ID Assigned to each Agency by the State of Oklahoma 911 Coordinator	ALPHANUMERIC	100	M	AGENCYID
Avcard_URI	The internet address of an XML data structure which contains contact information in the form of a vCard	ALPHANUMERIC	254	M	
ServiceURN	The ECRF is queried with a location and a service URN that returns the Service URI	ALPHANUMERIC	50	M	SERVICEURN
ServiceURI	URI for Call Routing contained in the ESB layer	ALPHANUMERIC	254	M	
ServiceNum	A dialable number or dial string on a 12-digit keypad to reach the emergency service appropriate for the location	ALPHANUMERIC	15	O	
Country	Name of Country the Address Resides In (US) (Abbreviated COUNTRY Domain)	ALPHANUMERIC	2	M	COUNTRY
State	Name of the State the Address Resides In (OK) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
InitiSrce	Original source of the data	ALPHANUMERIC	75	M	
InitiDate	Initial Time-Stamp - (Creation Entry Date)	DATETIME	20	M	
RevEditor	Most recent editor of the data	ALPHANUMERIC	75	M	
RevDate	Modified Time-Stamp - (Modify Entry Date)	DATETIME	20	M	
EffectDate	Date & Time that the record is scheduled to take effect	DATETIME	20	O	
ExpireDate	Date & Time that the record is no longer valid	DATETIME	20	O	
Comment	Comments / Notes	ALPHANUMERIC	100	C	
SUBMIT	Submit Feature to be Validated in OK NG911 GIS Toolkit	ALPHANUMERIC	1	M	YESNO

Section 3.05   Emergency Service Boundary – Polygons (FIRE, LAW, EMS)

The Emergency Service Boundaries (ESB) are the geographical representation of the primary responding FIRE, LAW and EMS agencies within the given area. This layer is used by the ECRF to perform the geographic query to determine which PSAP receives the emergency service request based on specific need or type of emergency. These boundary layers provides the secondary call routing. There can be no overlaps or gaps in the **THREE SEPARATE LAYERS**. *(There **MUST** be a separate ESB for each type of emergency responding service)* These datasets are to be maintained at the local Agency level and submitted to the State of Oklahoma NG911/GIS Repository.

Reference **OK_ADDRESS_SCHEMAS_22.XLS** – ESB_FIRE_BOUNDARY

Field Name	Field Description	Field Type	Field Width	Priority	Domain Table
DiscrpAgID	Discrepancy Agency ID (Agency that receives the Discrepancy Report)	ALPHANUMERIC	75	M	AGENCYID
NGUID_FIRE	NENA Globally Unique ID : (LayerName)_(Local911UniqueID)@(Agency_ID)	ALPHANUMERIC	254	M	
Agency	Name of the Service Provider within the Authoritative Service area	ALPHANUMERIC	60	M	
Agency_ID	ID Assigned to each Agency by the State of Oklahoma 911 Coordinator	ALPHANUMERIC	100	M	AGENCYID
Avcard_URI	The internet address of an XML data structure which contains contact information in the form of a vCard	ALPHANUMERIC	254	M	
ServiceURN	The ECRF is queried with a location and a service URN that returns the Service URI.	ALPHANUMERIC	50	M	SERVICEURN
ServiceURI	URI for Call Routing contained in the ESB layer	ALPHANUMERIC	254	M	
ServiceNum	A dialable number or dial string on a 12-digit keypad to reach the emergency service appropriate for the location	ALPHANUMERIC	15	O	
Country	Name of Country the Address Resides In (US) (Abbreviated COUNTRY Domain)	ALPHANUMERIC	2	M	COUNTRY
State	Name of the State the Address Resides In (OK) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
InitiSrce	Original source of the data	ALPHANUMERIC	75	M	
InitiDate	Initial Time-Stamp - (Creation Entry Date)	DATETIME	20	M	

Oklahoma Geographic Information Council – 9/4/2020

Field Name	Field Description	Field Type	Field Width	Priority	Domain Table
RevEditor	Most recent editor of the data	ALPHANUMERIC	75	M	
RevDate	Modified Time-Stamp - (Modify Entry Date)	DATETIME	20	M	
EffectDate	Date & Time that the record is scheduled to take effect	DATETIME	20	O	
ExpireDate	Date & Time that the record is no longer valid	DATETIME	20	O	
Comment	Comments / Notes	ALPHANUMERIC	100	C	
SUBMIT	Submit Feature to be Validated in OK NG911 GIS Toolkit	ALPHANUMERIC	1	M	YESNO

Reference **OK_ADDRESS_SCHEMAS_22.XLS** – ESB_LAW_BOUNDARY

Field Name	Field Description	Field Type	Field Width	Priority	Domain Table
DiscrpAgID	Discrepancy Agency ID (Agency that receives the Discrepancy Report)	ALPHANUMERIC	75	M	AGENCYID
NGUID_LAW	NENA Globally Unique ID : (LayerName)_(Local911UniqueID)@(Agency_ID)	ALPHANUMERIC	254	M	
Agency	Name of the Service Provider within the Authoritative Service area	ALPHANUMERIC	60	M	
Agency_ID	ID Assigned to each Agency by the State of Oklahoma 911 Coordinator	ALPHANUMERIC	100	M	AGENCYID
Avcard_URI	The internet address of an XML data structure which contains contact information in the form of a vCard	ALPHANUMERIC	254	M	
ServiceURN	The ECRF is queried with a location and a service URN that returns the Service URI.	ALPHANUMERIC	50	M	SERVICEURN
ServiceURI	URI for Call Routing contained in the ESB layer	ALPHANUMERIC	254	M	
ServiceNum	A dialable number or dial string on a 12-digit keypad to reach the emergency service appropriate for the location	ALPHANUMERIC	15	O	
Country	Name of Country the Address Resides In (US) (Abbreviated COUNTRY Domain)	ALPHANUMERIC	2	M	COUNTRY
State	Name of the State the Address Resides In (OK) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
InitiSrce	Original source of the data	ALPHANUMERIC	75	M	
InitiDate	Initial Time-Stamp - (Creation Entry Date)	DATETIME	20	M	
RevEditor	Most recent editor of the data	ALPHANUMERIC	75	M	
RevDate	Modified Time-Stamp - (Modify Entry Date)	DATETIME	20	M	
EffectDate	Date & Time that the record is scheduled to take effect	DATETIME	20	O	
ExpireDate	Date & Time that the record is no longer valid	DATETIME	20	O	
Comment	Comments / Notes	ALPHANUMERIC	100	C	
SUBMIT	Submit Feature to be Validated in OK NG911 GIS Toolkit	ALPHANUMERIC	1	M	YESNO

Reference **OK_ADDRESS_SCHEMAS_22.XLS** – ESB_EMS_BOUNDARY

Field Name	Field Description	Field Type	Field Width	Priority	Domain Table
DiscrpAgID	Discrepancy Agency ID (Agency that receives the Discrepancy Report)	ALPHANUMERIC	75	M	AGENCYID
NGUID_EMS	NENA Globally Unique ID : (LayerName)_(Local911UniqueID)@(Agency_ID)	ALPHANUMERIC	254	M	
Agency	Name of the Service Provider within the Authoritative Service area	ALPHANUMERIC	60	M	
Agency_ID	ID Assigned to each Agency by the State of Oklahoma 911 Coordinator	ALPHANUMERIC	100	M	AGENCYID
Avcard_URI	The internet address of an XML data structure which contains contact information in the form of a vCard	ALPHANUMERIC	254	M	
ServiceURN	The ECRF is queried with a location and a service URN that returns the Service URI.	ALPHANUMERIC	50	M	SERVICEURN
ServiceURI	URI for Call Routing contained in the ESB layer	ALPHANUMERIC	254	M	
ServiceNum	A dialable number or dial string on a 12-digit keypad to reach the emergency service appropriate for the location	ALPHANUMERIC	15	O	

Field Name	Field Description	Field Type	Field Width	Priority	Domain Table
Country	Name of Country the Address Resides In (US) (Abbreviated COUNTRY Domain)	ALPHANUMERIC	2	M	COUNTRY
State	Name of the State the Address Resides In (OK) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
InitiSrce	Original source of the data	ALPHANUMERIC	75	M	
InitiDate	Initial Time-Stamp - (Creation Entry Date)	DATETIME	20	M	
RevEditor	Most recent editor of the data	ALPHANUMERIC	75	M	
RevDate	Modified Time-Stamp - (Modify Entry Date)	DATETIME	20	M	
EffectDate	Date & Time that the record is scheduled to take effect	DATETIME	20	O	
ExpireDate	Date & Time that the record is no longer valid	DATETIME	20	O	
Comment	Comments / Notes	ALPHANUMERIC	100	C	
SUBMIT	Submit Feature to be Validated in OK NG911 GIS Toolkit	ALPHANUMERIC	1	M	YESNO

Section 3.06   Discrepancy Agency Boundary – Polygon

The Discrepancy Agency Boundary *(Formerly referred to as Authoritative and Provisioning Boundary)* is the geographical representation of the Agency that officially submits data to and receives a discrepancy report back from the State of Oklahoma NG911/GIS Repository as the data is checked before provisioning up to the ESInet. There can be no overlaps in this dataset. This dataset is maintained as a statewide dataset housed in the State of Oklahoma NG911/GIS Repository. Any boundary disputes within this dataset will be resolved by the State of Oklahoma 911 Coordinator on an individual basis with input from all involved Agencies.

Reference **OK_ADDRESS_SCHEMAS_22.XLS** – DISCREPANCYAGENCY_BOUNDARY

Field Name	Field Description	Field Type	Field Width	Priority	Domain Table
DiscrpAgID	Discrepancy Agency ID (Agency that receives the Discrepancy Report)	ALPHANUMERIC	75	M	AGENCYID
NGUID_DISC	NENA Globally Unique ID : (LayerName)_(Local911UniqueID)@(Agency_ID)	ALPHANUMERIC	254	M	
Agency	Name of the Service Provider within the Authoritative Service area	ALPHANUMERIC	60	M	
Agency_ID	ID Assigned to each Agency by the State of Oklahoma 911 Coordinator	ALPHANUMERIC	100	M	AGENCYID
Avcard_URI	The internet address of an XML data structure which contains contact information in the form of a vCard	ALPHANUMERIC	254	M	
ServiceURN	The ECRF is queried with a location and a service URN that returns the Service URI.	ALPHANUMERIC	50	M	SERVICEURN
ServiceURI	URI for Call Routing contained in the ESB layer	ALPHANUMERIC	254	M	
ServiceNum	A dialable number or dial string on a 12-digit keypad to reach the emergency service appropriate for the location	ALPHANUMERIC	15	O	
Country	Name of Country the Address Resides In (US) (Abbreviated COUNTRY Domain)	ALPHANUMERIC	2	M	COUNTRY
State	Name of the State the Address Resides In (OK) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
InitiSrce	Original source of the data	ALPHANUMERIC	75	M	
InitiDate	Initial Time-Stamp - (Creation Entry Date)	DATETIME	20	M	
RevEditor	Most recent editor of the data	ALPHANUMERIC	75	M	
RevDate	Modified Time-Stamp - (Modify Entry Date)	DATETIME	20	M	
EffectDate	Date & Time that the record is scheduled to take effect	DATETIME	20	O	
ExpireDate	Date & Time that the record is no longer valid	DATETIME	20	O	
Comment	Comments / Notes	ALPHANUMERIC	100	C	
SUBMIT	Submit Feature to be Validated in OK NG911 GIS Toolkit	ALPHANUMERIC	1	M	YESNO

Section 3.07   Other Recommended Layers Polygon

Oklahoma Geographic Information Council – 9/4/2020

Additional GIS Data layers may be extremely helpful in ultimately meeting your local purposes. The following layers may aid in the functionality of the ECRF and LVF and are strongly recommended for call taking and dispatch operations:

ECRF & LVF Recommended Layers
- Street Name Alias Table
- Landmark Name Part Table
- Complete Landmark as Table
- States
- Counties
- Incorporated Municipal Boundaries
- Unincorporated Community Boundaries
- Neighborhood Community Boundaries

- Other ESB (Poison Control, Forest Service, Animal Control)

Other Recommended Layers
- Railroad Centerline
- Hydrology Line
- Hydrology Polygon
- Cell Site Location
- Mile Marker Location

Section 3.08   Reference Domains

Reference domain values provide a pick list of preset values for various attributes in order to standardize data values both within an organization as well as across multiple jurisdictions. The following domain values are either preset static values or professionally authoritative standard values in order to provide consistency among various datasets.

*The domain tables shown below are current at the approval date of this standard however values may be updated as necessary between approved versions of this standard. For the most current domain values please reference the associated Excel file and File Geodatabase. **OK_ADDRESS_SCHEMAS_22.XLS***

Associated Reference Document: **OK_ADDRESS_SCHEMAS_22.XLS**

(a)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –AGENCYID

Code	Description	Data Source - Approved by State of Oklahoma 911 Coordinator
cog.acog.ok.gov	cog.acog.ok.gov	
cog.ascog.ok.gov	cog.ascog.ok.gov	
cog.coedd.ok.gov	cog.coedd.ok.gov	
cog.eodd.ok.gov	cog.eodd.ok.gov	
cog.ggeda.ok.gov	cog.ggeda.ok.gov	
cog.incog.ok.gov	cog.incog.ok.gov	
cog.keddo.ok.gov	cog.keddo.ok.gov	
cog.noda.ok.gov	cog.noda.ok.gov	
cog.oeda.ok.gov	cog.oeda.ok.gov	
cog.swoda.ok.gov	cog.swoda.ok.gov	
cog.soda.ok.gov	cog.soda.ok.gov	
psap.5578.ok.gov	psap.5578.ok.gov	
psap.5603.ok.gov	psap.5603.ok.gov	

Oklahoma Geographic Information Council – 9/4/2020

psap.5585.ok.gov	psap.5585.ok.gov
psap.5586.ok.gov	psap.5586.ok.gov
psap.5589.ok.gov	psap.5589.ok.gov
psap.5592.ok.gov	psap.5592.ok.gov
psap.5593.ok.gov	psap.5593.ok.gov
psap.5594.ok.gov	psap.5594.ok.gov
psap.Blanchard.ok.gov	psap.Blanchard.ok.gov
psap.5596.ok.gov	psap.5596.ok.gov
psap.5597.ok.gov	psap.5597.ok.gov
psap.5631.ok.gov	psap.5631.ok.gov
psap.8328.ok.gov	psap.8328.ok.gov
psap.8835.ok.gov	psap.8835.ok.gov
psap.5604.ok.gov	psap.5604.ok.gov
psap.5608.ok.gov	psap.5608.ok.gov
psap.ChoctawHugo.ok.gov	psap.ChoctawHugo.ok.gov
psap.5610.ok.gov	psap.5610.ok.gov
psap.5616.ok.gov	psap.5616.ok.gov
psap.5615.ok.gov	psap.5615.ok.gov
psap.5612.ok.gov	psap.5612.ok.gov
psap.5617.ok.gov	psap.5617.ok.gov
psap.5618.ok.gov	psap.5618.ok.gov
psap.5669.ok.gov	psap.5669.ok.gov
psap.5622.ok.gov	psap.5622.ok.gov
psap.5623.ok.gov	psap.5623.ok.gov
psap.5741.ok.gov	psap.5741.ok.gov
psap.5625.ok.gov	psap.5625.ok.gov
psap.5626.ok.gov	psap.5626.ok.gov
psap.5627.ok.gov	psap.5627.ok.gov
psap.5628.ok.gov	psap.5628.ok.gov
psap.5629.ok.gov	psap.5629.ok.gov
psap.8394.ok.gov	psap.8394.ok.gov
psap.5630.ok.gov	psap.5630.ok.gov
psap.5633.ok.gov	psap.5633.ok.gov
psap.5634.ok.gov	psap.5634.ok.gov
psap.8134.ok.gov	psap.8134.ok.gov
psap.Ellis.ok.gov	psap.Ellis.ok.gov
psap.5636.ok.gov	psap.5636.ok.gov
psap.Garfield.ok.gov	psap.Garfield.ok.gov
psap.8724.ok.gov	psap.8724.ok.gov
psap.5643.ok.gov	psap.5643.ok.gov
psap.5644.ok.gov	psap.5644.ok.gov

Oklahoma Geographic Information Council – 9/4/2020

psap.Grant.ok.gov	psap.Grant.ok.gov
psap.5646.ok.gov	psap.5646.ok.gov
psap.5647.ok.gov	psap.5647.ok.gov
psap.5648.ok.gov	psap.5648.ok.gov
psap.5650.ok.gov	psap.5650.ok.gov
psap.5406.ok.gov	psap.5406.ok.gov
psap.5652.ok.gov	psap.5652.ok.gov
psap.5653.ok.gov	psap.5653.ok.gov
psap.5655.ok.gov	psap.5655.ok.gov
psap.5654.ok.gov	psap.5654.ok.gov
psap.5679.ok.gov	psap.5679.ok.gov
psap.5659.ok.gov	psap.5659.ok.gov
psap.5661.ok.gov	psap.5661.ok.gov
psap.5662.ok.gov	psap.5662.ok.gov
psap.Kingfisher.ok.gov	psap.Kingfisher.ok.gov
psap.5667.ok.gov	psap.5667.ok.gov
psap.5670.ok.gov	psap.5670.ok.gov
psap.8215.ok.gov	psap.8215.ok.gov
psap.8331.ok.gov	psap.8331.ok.gov
psap.5673.ok.gov	psap.5673.ok.gov
psap.8288.ok.gov	psap.8288.ok.gov
psap.5674.ok.gov	psap.5674.ok.gov
psap.8180.ok.gov	psap.8180.ok.gov
psap.8097.ok.gov	psap.8097.ok.gov
psap.5613.ok.gov	psap.5613.ok.gov
psap.5334.ok.gov	psap.5334.ok.gov
psap.5679.ok.gov	psap.5679.ok.gov
psap.5680.ok.gov	psap.5680.ok.gov
psap.5682.ok.gov	psap.5682.ok.gov
psap.5684.ok.gov	psap.5684.ok.gov
psap.5685.ok.gov	psap.5685.ok.gov
psap.5686.ok.gov	psap.5686.ok.gov
psap.5687.ok.gov	psap.5687.ok.gov
psap.5689.ok.gov	psap.5689.ok.gov
psap.5688.ok.gov	psap.5688.ok.gov
psap.5690.ok.gov	psap.5690.ok.gov
psap.5691.ok.gov	psap.5691.ok.gov
psap.5692.ok.gov	psap.5692.ok.gov
psap.5693.ok.gov	psap.5693.ok.gov
psap.5694.ok.gov	psap.5694.ok.gov
psap.5698.ok.gov	psap.5698.ok.gov

psap.5700.ok.gov	psap.5700.ok.gov
psap.OSU.ok.gov	psap.OSU.ok.gov
psap.5678.ok.gov	psap.5678.ok.gov
psap.8397.ok.gov	psap.8397.ok.gov
psap.5705.ok.gov	psap.5705.ok.gov
psap.5708.ok.gov	psap.5708.ok.gov
psap.5710.ok.gov	psap.5710.ok.gov
psap.5676.ok.gov	psap.5676.ok.gov
psap.5713.ok.gov	psap.5713.ok.gov
psap.5714.ok.gov	psap.5714.ok.gov
psap.5577.ok.gov	psap.5577.ok.gov
psap.8183.ok.gov	psap.8183.ok.gov
psap.5719.ok.gov	psap.5719.ok.gov
psap.5720.ok.gov	psap.5720.ok.gov
psap.5721.ok.gov	psap.5721.ok.gov
psap.5722.ok.gov	psap.5722.ok.gov
psap.5725.ok.gov	psap.5725.ok.gov
psap.5726.ok.gov	psap.5726.ok.gov
psap.5727.ok.gov	psap.5727.ok.gov
psap.8145.ok.gov	psap.8145.ok.gov
psap.Sequoyah.ok.gov	psap.Sequoyah.ok.gov
psap.5730.ok.gov	psap.5730.ok.gov
psap.5727.ok.gov	psap.5727.ok.gov
psap.5733.ok.gov	psap.5733.ok.gov
psap.5734.ok.gov	psap.5734.ok.gov
psap.8614.ok.gov	psap.8614.ok.gov
psap.5736.ok.gov	psap.5736.ok.gov
psap.5640.ok.gov	psap.5640.ok.gov
psap.5737.ok.gov	psap.5737.ok.gov
psap.8550.ok.gov	psap.8550.ok.gov
psap.5738.ok.gov	psap.5738.ok.gov
psap.5739.ok.gov	psap.5739.ok.gov
psap.5740.ok.gov	psap.5740.ok.gov
psap.5742.ok.gov	psap.5742.ok.gov
psap.8404.ok.gov	psap.8404.ok.gov
psap.5743.ok.gov	psap.5743.ok.gov
psap.5588.ok.gov	psap.5588.ok.gov
psap.5621.ok.gov	psap.5621.ok.gov
psap.5595.ok.gov	psap.5595.ok.gov
psap.5744.ok.gov	psap.5744.ok.gov
psap.5581.ok.gov	psap.5581.ok.gov

psap.5746.ok.gov	psap.5746.ok.gov
psap.8529.ok.gov	psap.8529.ok.gov
psap.5749.ok.gov	psap.5749.ok.gov
ven.datamark.ok.gov	ven.datamark.ok.gov
ven.geocomm.ok.gov	ven.geocomm.ok.gov
ven.geotg.ok.gov	ven.geotg.ok.gov
ven.intrado.ok.gov	ven.intrado.ok.gov
ven.rsdigital.ok.gov	ven.rsdigital.ok.gov
ven.sdr.ok.gov	ven.sdr.ok.gov

(b)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –YESNO

Code	Description	Data Source - None
Y	Y	STATIC
N	N	

(c)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –NUMBER

Code	Description	Data Source -None
1	1	STATIC
2	2	
3	3	
4	4	
5	5	
6	6	
7	7	
8	8	
9	9	
10	10	

(d)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –LEVEL

Code	Description	Data Source - None
0	OVERPASS LEVEL 0	STATIC
1	OVERPASS LEVEL 1	
2	OVERPASS LEVEL 2	
3	OVERPASS LEVEL 3	
4	OVERPASS LEVEL 4	

(e)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –STORMSHELTER

Code	Description	Data Source - None
ABOVE GROUND IN STRUCTURE	ABOVE GROUND IN STRUCTURE	STATIC
ABOVE GROUND OUTSIDE	ABOVE GROUND OUTSIDE	
BELOW GROUND IN STRUCTURE	BELOW GROUND IN STRUCTURE	
BELOW GROUND OUTSIDE	BELOW GROUND OUTSIDE	

(f)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** - RDCLSIDE

Code	Description	Data Source - ODOT
L	L	STATIC
R	R	
N	N	

Code	Description	Data Source - ODOT
DANGLE_EXCEPTION	Feature is an exception to the "Must Not Have Dangles" topology rule	STATIC
INSIDE_EXCEPTION	Feature is an exception to the "Must be Inside Discrepancy Agency Boundary" topology rule	
BOTH_EXCEPTION	Feature is an exception to both topology rules	
NO_EXCEPTION	Feature is not an exception to the topology rules	

(h)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –PLACEMENT

Code	Description	Data Source - NENA Standard for NG9-1-1 GIS Data Model - NENA-STA-006.1-2018 - 4.91 -Page 67
GEOCODING	GEOCODING	https://www.nena.org/resource/resmgr/standards/nena-sta-006_ng9-1-1_gis_dat.pdf
PARCEL	PARCEL	
PROPERTY ACCESS	PROPERTY ACCESS	
STRUCTURE	STRUCTURE	
SITE	SITE	
UNKNOWN	UNKNOWN	

(i)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –PARITY

Code	Description	Data Source - NENA Standard for NG9-1-1 GIS Data Model - NENA-STA-006.1-2018 - 4.88-4.89 -Page 67
O	ODD	https://www.nena.org/resource/resmgr/standards/nena-sta-006_ng9-1-1_gis_dat.pdf
E	EVEN	
B	BOTH	
Z	ZERO	

(j)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –COUNTRY

Code	Description	Data Source - represented by 2 letter ISO 3166-1 Code -NENA-STA-004.1.1-2014_CLDXF - 3.2.2 - Page 26
US	UNITED STATES OF AMERICA	https://www.iso.org/obp/ui/#search

(k)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –STATE

Code	Description	Data Source - USPS Publication 28 - Appendix B - Two–Letter State and Possession Abbreviations - Page 55
OK	OKLAHOMA	http://pe.usps.com/text/pub28/28apb.htm
TX	TEXAS	
CO	COLORADO	
NM	NEW MEXICO	
AR	ARKANSAS	
KS	KANSAS	
MO	MISSOURI	

(l)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –COUNTY

Code	Description	Data Source - FIPS Codes for Counties and County Equivalent Entities	State
ADAIR COUNTY	ADAIR COUNTY	https://www.census.gov/geo/reference/codes/cou.html	OK
ALFALFA COUNTY	ALFALFA COUNTY		OK
ATOKA COUNTY	ATOKA COUNTY		OK
BEAVER COUNTY	BEAVER COUNTY		OK
BECKHAM COUNTY	BECKHAM COUNTY		OK
BLAINE COUNTY	BLAINE COUNTY		OK

BRYAN COUNTY	BRYAN COUNTY	OK
CADDO COUNTY	CADDO COUNTY	OK
CANADIAN COUNTY	CANADIAN COUNTY	OK
CARTER COUNTY	CARTER COUNTY	OK
CHEROKEE COUNTY	CHEROKEE COUNTY	OK
CHOCTAW COUNTY	CHOCTAW COUNTY	OK
CIMARRON COUNTY	CIMARRON COUNTY	OK
CLEVELAND COUNTY	CLEVELAND COUNTY	OK
COAL COUNTY	COAL COUNTY	OK
COMANCHE COUNTY	COMANCHE COUNTY	OK
COTTON COUNTY	COTTON COUNTY	OK
CRAIG COUNTY	CRAIG COUNTY	OK
CREEK COUNTY	CREEK COUNTY	OK
CUSTER COUNTY	CUSTER COUNTY	OK
DELAWARE COUNTY	DELAWARE COUNTY	OK
DEWEY COUNTY	DEWEY COUNTY	OK
ELLIS COUNTY	ELLIS COUNTY	OK
GARFIELD COUNTY	GARFIELD COUNTY	OK
GARVIN COUNTY	GARVIN COUNTY	OK
GRADY COUNTY	GRADY COUNTY	OK
GRANT COUNTY	GRANT COUNTY	OK
GREER COUNTY	GREER COUNTY	OK
HARMON COUNTY	HARMON COUNTY	OK
HARPER COUNTY	HARPER COUNTY	OK
HASKELL COUNTY	HASKELL COUNTY	OK
HUGHES COUNTY	HUGHES COUNTY	OK
JACKSON COUNTY	JACKSON COUNTY	OK
JEFFERSON COUNTY	JEFFERSON COUNTY	OK
JOHNSTON COUNTY	JOHNSTON COUNTY	OK
KAY COUNTY	KAY COUNTY	OK
KINGFISHER COUNTY	KINGFISHER COUNTY	OK
KIOWA COUNTY	KIOWA COUNTY	OK
LATIMER COUNTY	LATIMER COUNTY	OK
LE FLORE COUNTY	LE FLORE COUNTY	OK
LINCOLN COUNTY	LINCOLN COUNTY	OK
LOGAN COUNTY	LOGAN COUNTY	OK
LOVE COUNTY	LOVE COUNTY	OK
MAJOR COUNTY	MAJOR COUNTY	OK
MARSHALL COUNTY	MARSHALL COUNTY	OK
MAYES COUNTY	MAYES COUNTY	OK
MCCLAIN COUNTY	MCCLAIN COUNTY	OK
MCCURTAIN COUNTY	MCCURTAIN COUNTY	OK
MCINTOSH COUNTY	MCINTOSH COUNTY	OK
MURRAY COUNTY	MURRAY COUNTY	OK
MUSKOGEE COUNTY	MUSKOGEE COUNTY	OK
NOBLE COUNTY	NOBLE COUNTY	OK
NOWATA COUNTY	NOWATA COUNTY	OK
OKFUSKEE COUNTY	OKFUSKEE COUNTY	OK
OKLAHOMA COUNTY	OKLAHOMA COUNTY	OK
OKMULGEE COUNTY	OKMULGEE COUNTY	OK
OSAGE COUNTY	OSAGE COUNTY	OK
OTTAWA COUNTY	OTTAWA COUNTY	OK
PAWNEE COUNTY	PAWNEE COUNTY	OK
PAYNE COUNTY	PAYNE COUNTY	OK
PITTSBURG COUNTY	PITTSBURG COUNTY	OK
PONTOTOC COUNTY	PONTOTOC COUNTY	OK
POTTAWATOMIE COUNTY	POTTAWATOMIE COUNTY	OK

Oklahoma Geographic Information Council – 9/4/2020

PUSHMATAHA COUNTY	PUSHMATAHA COUNTY	OK
ROGER MILLS COUNTY	ROGER MILLS COUNTY	OK
ROGERS COUNTY	ROGERS COUNTY	OK
SEMINOLE COUNTY	SEMINOLE COUNTY	OK
SEQUOYAH COUNTY	SEQUOYAH COUNTY	OK
STEPHENS COUNTY	STEPHENS COUNTY	OK
TEXAS COUNTY	TEXAS COUNTY	OK
TILLMAN COUNTY	TILLMAN COUNTY	OK
TULSA COUNTY	TULSA COUNTY	OK
WAGONER COUNTY	WAGONER COUNTY	OK
WASHINGTON COUNTY	WASHINGTON COUNTY	OK
WASHITA COUNTY	WASHITA COUNTY	OK
WOODS COUNTY	WOODS COUNTY	OK
WOODWARD COUNTY	WOODWARD COUNTY	OK
DALLAM COUNTY	DALLAM COUNTY	TX
SHERMAN COUNTY	SHERMAN COUNTY	TX
HANSFORD COUNTY	HANSFORD COUNTY	TX
OCHILTREE COUNTY	OCHILTREE COUNTY	TX
LIPSCOMB COUNTY	LIPSCOMB COUNTY	TX
HEMPHILL COUNTY	HEMPHILL COUNTY	TX
WHEELER COUNTY	WHEELER COUNTY	TX
COLLINGSWORTH COUNTY	COLLINGSWORTH COUNTY	TX
CHILDRESS COUNTY	CHILDRESS COUNTY	TX
HARDEMAN COUNTY	HARDEMAN COUNTY	TX
WILBARGER COUNTY	WILBARGER COUNTY	TX
WICHITA COUNTY	WICHITA COUNTY	TX
CLAY COUNTY	CLAY COUNTY	TX
MONTAGUE COUNTY	MONTAGUE COUNTY	TX
COOKE COUNTY	COOKE COUNTY	TX
GRAYSON COUNTY	GRAYSON COUNTY	TX
FANNIN COUNTY	FANNIN COUNTY	TX
LAMAR COUNTY	LAMAR COUNTY	TX
RED RIVER COUNTY	RED RIVER COUNTY	TX
BOWIE COUNTY	BOWIE COUNTY	TX
MORTON COUNTY	MORTON COUNTY	KS
STEVENS COUNTY	STEVENS COUNTY	KS
SEWARD COUNTY	SEWARD COUNTY	KS
MEADE COUNTY	MEADE COUNTY	KS
CLARK COUNTY	CLARK COUNTY	KS
BARBER COUNTY	BARBER COUNTY	KS
SUMNER COUNTY	SUMNER COUNTY	KS
COWLEY COUNTY	COWLEY COUNTY	KS
CHAUTAUQUA COUNTY	CHAUTAUQUA COUNTY	KS
MONTGOMERY COUNTY	MONTGOMERY COUNTY	KS
LABETTE COUNTY	LABETTE COUNTY	KS
BACA COUNTY	BACA COUNTY	CO
LAS ANIMAS COUNTY	LAS ANIMAS COUNTY	CO
UNION COUNTY	UNION COUNTY	NM
BENTON COUNTY	BENTON COUNTY	AR
CRAWFORD COUNTY	CRAWFORD COUNTY	AR
SEBASTAIN COUNTY	SEBASTAIN COUNTY	AR
SCOTT COUNTY	SCOTT COUNTY	AR
POLK COUNTY	POLK COUNTY	AR
SEVIER COUNTY	SEVIER COUNTY	AR
LITTLE RIVER COUNTY	LITTLE RIVER COUNTY	AR
MCDONALD COUNTY	MCDONALD COUNTY	MO
NEWTON COUNTY	NEWTON COUNTY	MO

(m)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –PLACETYPE

Code	Description	Data Source - NENA-STA-004.1.1-2014_CLDXF.pdf - Page 104
AIRCRAFT	AIRCRAFT	https://tools.ietf.org/html/rfc4589
AIRPORT	AIRPORT	
ARENA	ARENA	
AUTOMOBILE	AUTOMOBILE	
BANK	BANK	
BAR	BAR	
BICYCLE	BICYCLE	
BUS	BUS	
BUS-STATION	BUS-STATION	
CAFE	CAFE	
CLASSROOM	CLASSROOM	
CLUB	CLUB	
CONSTRUCTION	CONSTRUCTION	
CONVENTION-CENTER	CONVENTION-CENTER	
GOVERNMENT	GOVERNMENT	
HOSPITAL	HOSPITAL	
HOTEL	HOTEL	
INDUSTRIAL	INDUSTRIAL	
LIBRARY	LIBRARY	
MOTORCYCLE	MOTORCYCLE	
OFFICE	OFFICE	
OTHER	OTHER	
OUTDOORS	OUTDOORS	
PARKING	PARKING	
PLACE-OF-WORSHIP	PLACE-OF-WORSHIP	
PRISON	PRISON	
PUBLIC	PUBLIC	
PUBLIC-TRANSPORT	PUBLIC-TRANSPORT	
RESIDENCE	RESIDENCE	
RESTAURANT	RESTAURANT	
SCHOOL	SCHOOL	
SHOPPING-AREA	SHOPPING-AREA	
STADIUM	STADIUM	
STORE	STORE	
STREET	STREET	
THEATER	THEATER	
TRAIN	TRAIN	
TRAIN-STATION	TRAIN-STATION	
TRUCK	TRUCK	
UNDERWAY	UNDERWAY	
UNKNOWN	UNKNOWN	
WAREHOUSE	WAREHOUSE	
WATER	WATER	
WATERCRAFT	WATERCRAFT	

(n)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –DIRECTION

Code	Description	Data Source - USPS Publication 28 - Appendix B - Two–Letter State and Possession Abbreviations - Page 56
NORTH	NORTH	http://pe.usps.com/text/pub28/28apb.htm
SOUTH	SOUTH	
EAST	EAST	**Abbreviation Usage Clarification:** Abbreviations are **ALWAYS** used in Legacy E911 required data fields & **NEVER** used in NG911 required data fields.
WEST	WEST	
NORTHEAST	NORTHEAST	
NORTHWEST	NORTHWEST	
SOUTHEAST	SOUTHEAST	
SOUTHWEST	SOUTHWEST	

(o)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –LCGYDIRECTION

Code	Description	Data Source - USPS Publication 28 - Appendix B - Two–Letter State and Possession Abbreviations - Page 56
N	NORTH	http://pe.usps.com/text/pub28/28apb.htm
S	SOUTH	
E	EAST	**Abbreviation Usage Clarification:** Abbreviations are **ALWAYS** used in Legacy E911 required data fields & **NEVER** used in NG911 required data fields.
W	WEST	
NE	NORTHEAST	
NW	NORTHWEST	
SE	SOUTHEAST	
SW	SOUTHWEST	

(p)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –STREETTYPE

Code	Description	Data Source - USPS Publication 28 - Appendix C1 - Street Suffix Abbreviations- Pages 59-71
ALLEY	ALLEY	http://pe.usps.com/text/pub28/28apc_002.htm
ANNEX	ANNEX	
ARCADE	ARCADE	**NENA REFERENCE - NENA_71-501-v1_Synchronizing_GIS_Databases_with_MSAG_and_ALI.pdf - Page 9**
AVENUE	AVENUE	http://www.nena.org/resource/collection/F2E0D66A-4824-418C-8670-3238D262B84A/NENA_71-501-v1_Synchronizing_GIS_Databases_with_MSAG_and_ALI.pdf
BAYOU	BAYOU	https://www.nena.org/page/NG911GISDataModel
BEACH	BEACH	**Abbreviation Usage Clarification:** Abbreviations are **ALWAYS** used in Legacy E911 required data fields & **NEVER** used in NG911 required data fields.
BEND	BEND	
BLUFF	BLUFF	
BLUFFS	BLUFFS	
BOTTOM	BOTTOM	
BOULEVARD	BOULEVARD	
BRANCH	BRANCH	
BRIDGE	BRIDGE	
BROOK	BROOK	
BROOKS	BROOKS	
BURG	BURG	
BURGS	BURGS	
BYPASS	BYPASS	
CAMP	CAMP	
CANYON	CANYON	
CAPE	CAPE	
CAUSEWAY	CAUSEWAY	
CENTER	CENTER	
CENTERS	CENTERS	
CIRCLE	CIRCLE	
CIRCLES	CIRCLES	

CLIFF	CLIFF
CLIFFS	CLIFFS
CLUB	CLUB
COMMON	COMMON
COMMONS	COMMONS
CORNER	CORNER
CORNERS	CORNERS
COURSE	COURSE
COURT	COURT
COURTS	COURTS
COVE	COVE
COVES	COVES
CREEK	CREEK
CRESCENT	CRESCENT
CREST	CREST
CROSSING	CROSSING
CROSSROAD	CROSSROAD
CROSSROADS	CROSSROADS
CURVE	CURVE
DALE	DALE
DAM	DAM
DIVIDE	DIVIDE
DRIVE	DRIVE
DRIVES	DRIVES
ESTATE	ESTATE
ESTATES	ESTATES
EXPRESSWAY	EXPRESSWAY
EXTENSION	EXTENSION
EXTENSIONS	EXTENSIONS
FALL	FALL
FALLS	FALLS
FERRY	FERRY
FIELD	FIELD
FIELDS	FIELDS
FLAT	FLAT
FLATS	FLATS
FORD	FORD
FORDS	FORDS
FOREST	FOREST
FORGE	FORGE
FORGES	FORGES
FORK	FORK
FORKS	FORKS
FORT	FORT
FREEWAY	FREEWAY
GARDEN	GARDEN
GARDENS	GARDENS
GATEWAY	GATEWAY
GLEN	GLEN
GLENS	GLENS
GREEN	GREEN
GREENS	GREENS
GROVE	GROVE
GROVES	GROVES
HARBOR	HARBOR
HARBORS	HARBORS
HAVEN	HAVEN

HEIGHTS	HEIGHTS
HIGHWAY	HIGHWAY
HILL	HILL
HILLS	HILLS
HOLLOW	HOLLOW
INLET	INLET
ISLAND	ISLAND
ISLANDS	ISLANDS
ISLE	ISLE
JUNCTION	JUNCTION
JUNCTIONS	JUNCTIONS
KEY	KEY
KEYS	KEYS
KNOLL	KNOLL
KNOLLS	KNOLLS
LAKE	LAKE
LAKES	LAKES
LAND	LAND
LANDING	LANDING
LANE	LANE
LIGHT	LIGHT
LIGHTS	LIGHTS
LOAF	LOAF
LOCK	LOCK
LOCKS	LOCKS
LODGE	LODGE
LOOP	LOOP
MALL	MALL
MANOR	MANOR
MANORS	MANORS
MEADOW	MEADOW
MEADOWS	MEADOWS
MEWS	MEWS
MILL	MILL
MILLS	MILLS
MISSION	MISSION
MOTORWAY	MOTORWAY
MOUNT	MOUNT
MOUNTAIN	MOUNTAIN
MOUNTAINS	MOUNTAINS
NECK	NECK
ORCHARD	ORCHARD
OVAL	OVAL
OVERPASS	OVERPASS
PARK	PARK(S)
PARKWAY	PARKWAY(S)
PASS	PASS
PASSAGE	PASSAGE
PATH	PATH
PIKE	PIKE
PINE	PINE
PINES	PINES
PLACE	PLACE
PLAIN	PLAIN
PLAINS	PLAINS
PLAZA	PLAZA
POINT	POINT

POINTS	POINTS
PORT	PORT
PORTS	PORTS
PRAIRIE	PRAIRIE
RADIAL	RADIAL
RAMP	RAMP
RANCH	RANCH
RAPID	RAPID
RAPIDS	RAPIDS
REST	REST
RIDGE	RIDGE
RIDGES	RIDGES
RIVER	RIVER
ROAD	ROAD
ROADS	ROADS
ROUTE	ROUTE
ROW	ROW
RUE	RUE
RUN	RUN
SHOAL	SHOAL
SHOALS	SHOALS
SHORE	SHORE
SHORES	SHORES
SKYWAY	SKYWAY
SPRING	SPRING
SPRINGS	SPRINGS
SPUR	<mark>SPUR(S)</mark>
SQUARE	SQUARE
SQUARES	SQUARES
STATION	STATION
STRAVENUE	STRAVENUE
STREAM	STREAM
STREET	STREET
STREETS	STREETS
SUMMIT	SUMMIT
TERRACE	TERRACE
THROUGHWAY	THROUGHWAY
TRACE	TRACE
TRACK	TRACK
TRAFFICWAY	TRAFFICWAY
TRAIL	TRAIL
TRAILER	TRAILER
TUNNEL	TUNNEL
TURNPIKE	TURNPIKE
UNDERPASS	UNDERPASS
UNION	UNION
UNIONS	UNIONS
VALLEY	VALLEY
VALLEYS	VALLEYS
VIADUCT	VIADUCT
VIEW	VIEW
VIEWS	VIEWS
VILLAGE	VILLAGE
VILLAGES	VILLAGES
VILLE	VILLE
VISTA	VISTA
WALK	<mark>WALK(S)</mark>

WALL	WALL
WAY	WAY
WAYS	WAYS
WELL	WELL
WELLS	WELLS

(q)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –LGCYSTREETTYPE

Code	Description	Data Source - USPS Publication 28 - Appendix C1 - Street Suffix Abbreviations- Pages 59-71
ALY	ALLEY	http://pe.usps.com/text/pub28/28apc_002.htm
ANNX	ANNEX	
ARC	ARCADE	**NENA REFERENCE - NENA_71-501-v1_Synchronizing_GIS_Databases_with_MSAG_and_ALI.pdf - Page 9**
AVE	AVENUE	http://www.nena.org/resource/collection/F2E0D66A-4824-418C-8670-3238D262B84A/NENA_71-501-v1_Synchronizing_GIS_Databases_with_MSAG_and_ALI.pdf
BYU	BAYOU	https://www.nena.org/page/NG911GISDataModel
BCH	BEACH	**Abbreviation Usage Clarification:** Abbreviations are **ALWAYS** used in Legacy E911 required data fields & **NEVER** used in NG911 required data fields.
BND	BEND	
BLF	BLUFF	
BLFS	BLUFFS	
BTM	BOTTOM	
BLVD	BOULEVARD	
BR	BRANCH	
BRG	BRIDGE	
BRK	BROOK	
BRKS	BROOKS	
BG	BURG	
BGS	BURGS	
BYP	BYPASS	
CP	CAMP	
CYN	CANYON	
CPE	CAPE	
CSWY	CAUSEWAY	
CTR	CENTER	
CTRS	CENTERS	
CIR	CIRCLE	
CIRS	CIRCLES	
CLF	CLIFF	
CLFS	CLIFFS	
CLB	CLUB	
CMN	COMMON	
CMNS	COMMONS	
COR	CORNER	
CORS	CORNERS	
CRSE	COURSE	
CT	COURT	
CTS	COURTS	
CV	COVE	
CVS	COVES	
CRK	CREEK	
CRES	CRESCENT	
CRST	CREST	
XING	CROSSING	
XRD	CROSSROAD	
XRDS	CROSSROADS	
CURV	CURVE	

Oklahoma Geographic Information Council – 9/4/2020

DL	DALE
DM	DAM
DV	DIVIDE
DR	DRIVE
DRS	DRIVES
EST	ESTATE
ESTS	ESTATES
EXPY	EXPRESSWAY
EXT	EXTENSION
EXTS	EXTENSIONS
FALL	FALL
FLS	FALLS
FRY	FERRY
FLD	FIELD
FLDS	FIELDS
FLT	FLAT
FLTS	FLATS
FRD	FORD
FRDS	FORDS
FRST	FOREST
FRG	FORGE
FRGS	FORGES
FRK	FORK
FRKS	FORKS
FT	FORT
FWY	FREEWAY
GDN	GARDEN
GDNS	GARDENS
GTWY	GATEWAY
GLN	GLEN
GLNS	GLENS
GRN	GREEN
GRNS	GREENS
GRV	GROVE
GRVS	GROVES
HBR	HARBOR
HBRS	HARBORS
HVN	HAVEN
HTS	HEIGHTS
HWY	HIGHWAY
HL	HILL
HLS	HILLS
HOLW	HOLLOW
INLT	INLET
IS	ISLAND
ISS	ISLANDS
ISLE	ISLE
JCT	JUNCTION
JCTS	JUNCTIONS
KY	KEY
KYS	KEYS
KNL	KNOLL
KNLS	KNOLLS
LK	LAKE
LKS	LAKES
LAND	LAND
LNDG	LANDING

LN	LANE
LGT	LIGHT
LGTS	LIGHTS
LF	LOAF
LCK	LOCK
LCKS	LOCKS
LDG	LODGE
LOOP	LOOP
MALL	MALL
MNR	MANOR
MNRS	MANORS
MDW	MEADOW
MDWS	MEADOWS
MEWS	MEWS
ML	MILL
MLS	MILLS
MSN	MISSION
MTWY	MOTORWAY
MT	MOUNT
MTN	MOUNTAIN
MTNS	MOUNTAINS
NCK	NECK
ORCH	ORCHARD
OVAL	OVAL
OPAS	OVERPASS
PARK	PARK(S)
PKWY	<mark>PARKWAY(S)</mark>
PASS	PASS
PSGE	PASSAGE
PATH	PATH
PIKE	PIKE
PNE	PINE
PNES	PINES
PL	PLACE
PLN	PLAIN
PLNS	PLAINS
PLZ	PLAZA
PT	POINT
PTS	POINTS
PRT	PORT
PRTS	PORTS
PR	PRAIRIE
RADL	RADIAL
RAMP	RAMP
RNCH	RANCH
RPD	RAPID
RPDS	RAPIDS
RST	REST
RDG	RIDGE
RDGS	RIDGES
RIV	RIVER
RD	ROAD
RDS	ROADS
RTE	ROUTE
ROW	ROW
RUE	RUE
RUN	RUN

SHL	SHOAL
SHLS	SHOALS
SHR	SHORE
SHRS	SHORES
SKWY	SKYWAY
SPG	SPRING
SPGS	SPRINGS
SPUR	SPUR(S)
SQ	SQUARE
SQS	SQUARES
STA	STATION
STRA	STRAVENUE
STRM	STREAM
ST	STREET
STS	STREETS
SMT	SUMMIT
TER	TERRACE
TRWY	THROUGHWAY
TRCE	TRACE
TRAK	TRACK
TRFY	TRAFFICWAY
TRL	TRAIL
TRLR	TRAILER
TUNL	TUNNEL
TPKE	TURNPIKE
UPAS	UNDERPASS
UN	UNION
UNS	UNIONS
VLY	VALLEY
VLYS	VALLEYS
VIA	VIADUCT
VW	VIEW
VWS	VIEWS
VLG	VILLAGE
VLGS	VILLAGES
VL	VILLE
VIS	VISTA
WALK	WALK(S)
WALL	WALL
WAY	WAY
WAYS	WAYS
WL	WELL
WLS	WELLS

(r)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –SEPARATOR

Code	Description	Data Source - NENA-STA-004.1.1-2014_CLDXF.pdf - Page 83
OF THE	OF THE	http://technet.nena.org/nrs/registry/StreetNamePreTypeSeparators.xml
AT	AT	
DE LAS	DE LAS	
DES	DES	
IN THE	IN THE	
TO THE	TO THE	
OF	OF	
ON THE	ON THE	
TO	TO	

(s)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –ONEWAY

Code	Description	Data Source - NENA_71-501-v1_Synchronizing_GIS_Databases_with_MSAG_and_ALI.pdf - Page 14
B	BOTH	http://www.nena.org/resource/collection/F2E0D66A-4824-418C-8670-3238D262B84A/NENA_71-501-v1_Synchronizing_GIS_Databases_with_MSAG_and_ALI.pdf
FT	FROM TO	
TF	TO FROM	
N	NONE	

(t)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** - ROADCLASS

Code	Description	Data Source -https://www.census.gov/
PRIMARY	PRIMARY	https://www.census.gov/rdo/pdf/AttD_MAF_TIGER_Feature_Classification_Codes.pdf
SECONDARY	SECONDARY	
LOCAL	LOCAL	
RAMP	RAMP	
SERVICE DRIVE	SERVICE DRIVE	
VEHICULAR TRAIL	VEHICULAR TRAIL	
WALKWAY	WALKWAY	
STAIRWAY	STAIRWAY	
ALLEY	ALLEY	
PRIVATE	PRIVATE	
PARKING LOT	PARKING LOT	
TRAIL	TRAIL	
BRIDLE PATH	BRIDLE PATH	
OTHER	OTHER	

(u)   Reference **OK_ADDRESS_SCHEMAS_22.XLS** –SERVICEURN

Code	Description		Data Source - https://www.census.gov/
urn:nena:service:additionalData	urn:nena:service:additionalData	Return a URI to an Additional Data structure as defined in NENA-STA-012.2.	https://www.nena.org/resource/resmgr/standards/nena-sta-006.1.1-2020_ng9-1-.pdf
urn:nena:service:responder.coast_guard	urn:nena:service:responder.coast_guard	Coast Guard Station	The URN used to select the service for which a route is desired.
urn:nena:service:responder.ems	urn:nena:service:responder.ems	Emergency Medical Service	
urn:nena:service:responder.federal_police.atf	urn:nena:service:responder.federal_police.atf	Bureau of Alcohol, Tobacco, Fire Arms and Explosives	
urn:nena:service:responder.federal_police.cbp	urn:nena:service:responder.federal_police.cbp	Customs and Border Protection	
urn:nena:service:responder.federal_police.dea	urn:nena:service:responder.federal_police.dea	Drug Enforcement Agency	
urn:nena:service:responder.federal_police.dss	urn:nena:service:responder.federal_police.dss	Diplomatic Security Service	
urn:nena:service:responder.federal_police.fbi	urn:nena:service:responder.federal_police.fbi	Federal Bureau of Investigation	
urn:nena:service:responder.federal_police.fps	urn:nena:service:responder.federal_police.fps	Federal Protective Service	
urn:nena:service:responder.federal_police.ice	urn:nena:service:responder.federal_police.ice	Immigration and Customs Enforcement	
urn:nena:service:responder.federal_police.marshal	urn:nena:service:responder.federal_police.marshal	Marshals Service	
urn:nena:service:responder.federal_police.pp	urn:nena:service:responder.federal_police.pp	U.S. Park Police	
urn:nena:service:responder.federal_police.rcmp	urn:nena:service:responder.federal_police.rcmp	Royal Canadian Mounted Police	

Oklahoma Geographic Information Council – 9/4/2020

urn:nena:service:responder.federal_police.usss	urn:nena:service:responder.federal_police.usss	U.S. Secret Service
urn:nena:service:responder.fire	urn:nena:service:responder.fire	Fire Department
urn:nena:service:responder.mountain_rescue	urn:nena:service:responder.mountain_rescue	Mountain Rescue Service
urn:nena:service:responder.poison_control	urn:nena:service:responder.poison_control	Poison Control Center
urn:nena:service:responder.police	urn:nena:service:responder.police	Police Agency
urn:nena:service:responder.psap	urn:nena:service:responder.psap	Other purposes beyond use for dispatch via ECRF
urn:nena:service:responder.sheriff	urn:nena:service:responder.sheriff	Sheriff's office, when both a police and Sheriff dispatch may be possible
urn:nena:service:responder.stateProvincial_police	urn:nena:service:responder.stateProvincial_police	State or provincial police office
urn:nena:service:sos.call_taker	urn:nena:service:sos.call_taker	Route calls to a call taker within a PSAP.
urn:nena:service:sos.level_2_esrp	urn:nena:service:sos.level_2_esrp	Route calls to a second level ESRP (for an example, a state ESRP routing towards a county ESRP).
urn:nena:service:sos.level_3_esrp	urn:nena:service:sos.level_3_esrp	Route calls to a third level ESRP (for example, a regional ESRP that received a call from a state ESRP and in turn routes towards a county ESRP).
urn:nena:service:sos.psap	urn:nena:service:sos.psap	Route calls to primary PSAP.
urn:service:sos	urn:service:sos	The generic 'sos' service reaches a public safety answering point (PSAP), which in turn dispatches aid appropriate to the emergency.
urn:service:sos.ambulance	urn:service:sos.ambulance	This service identifier reaches an ambulance service that provides emergency medical assistance and transportation.
urn:service:sos.animal-control	urn:service:sos.animal-control	Animal control typically enforces laws and ordinances pertaining to animal control and management, investigates cases of animal abuse, educates the community in responsible pet ownership and wildlife care, and provides for the housing and care of homeless animals, among other animal-related services.
urn:service:sos.fire	urn:service:sos.fire	The 'fire' service identifier summons the fire service, also known as the fire brigade or fire department.
urn:service:sos.gas	urn:service:sos.gas	The 'gas' service allows the reporting of natural gas (and other flammable gas) leaks or other natural gas emergencies.
urn:service:sos.marine	urn:service:sos.marine	The 'marine' service refers to maritime search and rescue services such as those offered by the coast guard, lifeboat, or surf lifesavers.
urn:service:sos.mountain	urn:service:sos.mountain	The 'mountain' service refers to mountain rescue services (i.e., search and rescue activities that occur in a mountainous environment), although the term is sometimes also used to apply to search and rescue in other wilderness environments.
urn:service:sos.physician	urn:service:sos.physician	The 'physician' emergency service connects the caller to a physician referral service.
urn:service:sos.poison	urn:service:sos.poison	The 'poison' service refers to special information centers set up to inform citizens about how to respond to potential poisoning.

urn:service:sos.police	urn:service:sos.police	The 'police' service refers to the police department or other law enforcement authorities.

Article IV. Citations of Existing Standards, Sources, and Reference Material

Section 4.01 Existing Neighbor State Standards

The Oklahoma Address Standard utilized, in part the research and knowledge acquired from the following states published standards and documentation.

(a) **Kansas** - Kansas Geospatial Data Addressing Standard Final Edition – October 29, 1999

(b) **Arkansas** – Proposed Arkansas Centerline File Standard – June 18, 2002

(c) **Missouri** – Missouri Addressing Standard – January 26, 2005

(d) **Texas** – ESRI Address Geodatabase Schema – September 15, 2005

(e) **Nebraska** – Nebraska Street Centerline Address Database Schema – Draft- September 23, 2013

NG911 Standard Update- Existing State Standards Reviewed

(f) **Kansas** – Kansas NG9-1-1 GIS Data Model (Version 1.1) - April 14, 2015

(g) **Iowa** – Iowa Next Generation 9-1-1 GIS Standards

(h) **Texas** – Commission on State Emergency Communications (CSEC NG9-1-1 GIS DATA Standard)

Section 4.02 Existing Professional Standards Documentation & Legislation

The Oklahoma Address Standard directly referenced various pertaining portions of the following documents to ensure industry standards are adhered to.

(a) **Federal Geographic Data Committee (FGDC)**
- FDGC Standards Page
- FGDC Content Standard for Geospatial Metadata –(FGDC-STD-001-1998)
- FGDC Standards Reference Model – (March 1996)
- Postal Addressing Profile of the Federal Geographic Data Committee United States Thoroughfare, Landmark, and Postal Address Standard (December 16, 2010 FGDC Standards WG meeting)
- FGDC Endorsed Address Standard – (FGDC-STD-016-2011)
- Geospatial Positioning Accuracy Standards Part 3: National Standard for Spatial Data Accuracy (FGDC-STD-007.3-1998)

(b) **National Emergency Number Association (NENA)**
- NENA Standards Page
- NENA Standard Data Formats For 9-1-1 Data Exchange & GIS Mapping – (NENA-02-010)
- NENA Information Documentation for Synchronizing GIS Databases with MSAG & ALI – (NENA-71-501)

- GIS Data Collection and Maintenance – (NENA-02-014)
- NENA Next Generation 9-1-1 (NG9-1-1) United States Civic Location Data Exchange Format (CLDXF) Standard (NENA-STA-004.1.1-2014)
- Recommended Standard For Street Thoroughfare Abbreviations - Arkansas reference – (NENA-02-002)
- Service URI for call routing. Contained in the Emergency Service Boundary layer and will define the Service URI of the service.
- NENA Standard for NG9-1-1 GIS Data Model – (NENA-STA-006.1-2018) / (NENA-STA-006.1.1-2020)
- NENA Standards for the Provisioning and Maintenance of GIS data to ECRF and LVFs (NENA‑STA‑005.1‑2017)
- Detailed Functional and Interface Standards for the NENA i3 Solution (NENA-STA-010.2-2016 (originally 08-03))
- Development of Site/Structure Address Point GIS Data for 9-1-1(NENA-INF-014.1-2015)
- NENA Information Document for GIS Data Stewardship for Next Generation 9-1-1 (NENA-INF-028.1-201Y) Public Review / (NENA-INF-028.1-2020)

(c)   International Standards Organization (ISO)
- International Standards Organization - Country 2 letter codes

(d)   United States Postal Service (USPS)
- Mailing Standards of the United States Postal Service Publication 28 - Postal Addressing Standards

(e)   American Society for Photogrammetry and Remote Sensing (ASPRS)
- ASPRS Accuracy Standards for Digital Geospatial Data – (Draft March 2014) / (Edition 1, Version 1- November 2014)
- ASPRS Accuracy Standards for Large-Scale Maps(1990_jul_1068-1070)

(f)   United States Census Bureau (Census)
- FIPS Codes for Counties and County Equivalent Entities

(g)   United States Department of Agriculture (NAIP)
- NAIP Information Sheet – April 2016

(h)   State of Oklahoma Legislative Actions
- Oklahoma Senate. 1994 Regular Session, SB722
- Oklahoma House of Representatives. 1995 Regular Session, HB1964
- Oklahoma House of Representatives. Interim Study H2003-105
- Oklahoma House of Representatives. 2004 Regular Session, HB2457
- Oklahoma House of Representatives. 2016 Regular Session, HB3126

Section 4.03   Workgroup Acknowledgements

Oklahoma's GIS Community contributed directly to the development of the address standard. This standard was developed under the authority and guidance of the GI Council, the Oklahoma Office of Geographic Information, and the volunteered efforts of the following individuals who participated on the Address Standards Workgroup as listed below along with the input from the Oklahoma GIS Community.

- Mike Sharp   OGI
- Shellie Willoughby   OGI
- Troy Frazier   Oklahoma Tax Commission
- Kathy Hines   Center for Spatial Analysis
- Sohail Hasanjee   OneOK
- Craig Moody   ODOT

- John Sharp   ACOG
- Wade Patterson   Garfield County Assessor
- Brenda Fennel   Choctaw Nation
- Joel Foster   ACOG
- Charles Brady III   City of Ardmore

NG911 Standard Update 2.0 – GIS Technical Workgroup
- Lance Terry   Oklahoma 9-1-1 Coordinator Management Authority
- Kristal Kuhn   Oklahoma 9-1-1 Coordinator Management Authority
- Stacy Root   Oklahoma 9-1-1 Coordinator Management Authority
- Mike Sharp   OGI
- Shellie Willoughby   OGI
- Jeremy Planteen   ODOT
- Jana Harris   SWODA
- Terry O'Malley   City of Tulsa
- Mike Davis   ACOG
- Kurt Bickle   INCOG
- Andrew Sears   INCOG
- Shelly Stahlbusch   Carter County E911
- James Allen   Carter County E911
- Russell Anderson   City of Norman
- Charles Brady III   City of Ardmore

NG911 Standard Update 2.1 – GIS Technical Workgroup
- Lance Terry   Oklahoma 9-1-1 Coordinator Management Authority
- Stacy Root   Oklahoma 9-1-1 Coordinator Management Authority
- Mike Sharp   OGI
- Shellie Willoughby   OGI
- Jeremy Planteen   ODOT
- Mary Harris   SWODA
- Mike Davis   ACOG
- Russell Anderson   City of Norman
- Charles Brady III   City of Ardmore
-

NG911 Standard Update 2.2 – GIS Technical Workgroup
- Lance Terry   Oklahoma 9-1-1 Coordinator Management Authority
- Stacy Root   Oklahoma 9-1-1 Coordinator Management Authority
- Karen Douglas   Oklahoma 9-1-1 Coordinator Management Authority
- Mike Sharp   OGI
- Shellie Willoughby   OGI
- Mary Harris   SWODA
- Jeremy Planteen   ODOT
- Emma Baker   ODOT
- Riley Baird   ODOT
- Gwen Johnson   ODOT
- Mike Davis   ACOG
- Tanner Jones   ACOG
- Barbara Gibson   INCOG
- Wendy Kramer   INCOG
- Russell Anderson   City of Norman
- Charles Brady III   City of Ardmore

* A special THANK YOU to the individuals, while not directly cited in this standard, that have contributed immeasurable insight, perspective, and clarity over the years throughout the development of this standard.*

Oklahoma Geographic Information Council – 9/4/2020

Section 4.04   Maintenance of the Standard

This standard will be maintained through a partnership between the 911 Authority and the GI Council. This partnership ensures that this address standard is relevant and applicable to the professions it represents and moreover the citizens it protects.

<u>**Oklahoma Geographic Information Council**</u>

- **Version 1.0**
    - o Draft Submitted for Public Review : May 2, 2014 – September 4, 2014
    - o Adopted : September 5, 2014

- **Version 2.0**
    - o Draft Submitted for Public Review : November 3, 2017 – January 5, 2018
    - o Adopted : April 6, 2018

- **Version 2.1**
    - o Adopted : February 1, 2019

- **Version 2.2**
    - o Adopted : TBA

<u>**Oklahoma 9-1-1 Management Authority**</u>

- **Version 2.0**
    - o Draft Submitted for Public Review : November 3, 2017 – January 5, 2018
    - o Adopted : May 3, 2018

- **Version 2.1**
    - o Adopted : February 7, 2019

- **Version 2.2**
    - o Adopted : TBA

Section 4.05   Technical Glossary

(a)   **Accuracy**

<u>Absolute</u> - A measure of the location of features on a map compared to their true position on the face of the earth.

<u>Relative</u> - A measure of the accuracy of individual features on a map when compared to other features on the same map.

(b)   **Address**

Oklahoma Geographic Information Council – 9/4/2020

Actual or Real - The simple, everyday element that designates a specific, situs location, such as a house number or an office suite.

Range - Numbers associated with segments of a digital street centerline file that represent the actual high and low addresses at either end of each segment.

Theoretical - A location that can be interpolated along a street centerline file through geocoding software.

Vanity - A special address that is inconsistent with or an exception to the standard addressing schema.

(c) **Address matching** – See **Geocoding.**

(d) **ALI** – (Automatic Location Identification) The automatic display at the PSAP of the caller's telephone number, the address/location of the telephone, and supplementary emergency services information of the location from which a call originates.

(e) **ANI** – (Automatic Number Identification) The 10-digit Telephone Number associated with a device originating a 9-1-1 call.

(f) **Attribute** - the properties and characteristics of entities.

(g) **CAD** – (Computer Aided Dispatch) Information about features or elements contained in GIS data is usually stored in a related table.

(h) **CLDFX** - (Civic Location Data Exchange Format) A set of data elements that describe detailed street address information.

(i) **E911** – (Enhanced 911) A telephone system which includes network switching, database, and Public Safety Answering Point premise elements capable of providing Automatic Location Identification (ALI) data, selective routing, selective transfer, fixed transfer, and a call back number. The term also includes any enhanced 9-1-1 service so designated by the Federal Communications Commission in its Report and Order in WC Docket Nos. 04-36 and 05-196, or any successor proceeding.

(j) **ECRF** - (Emergency Call Routing Function) A functional element in an ESInet which is a Location-to-Service Translation (LoST) protocol server where location information (either civic address or geo-coordinates) and a Service Uniform Resource Name (URN) serve as input to a mapping function that returns a Uniform Resource Identifier (URI) used to route an emergency call toward the appropriate PSAP for the caller's location or towards a responder agency.

(k) **EMS** -(Emergency Medical Service) Fire, hospital, poison control, etc., response centers.

(l) **Entity** - A data entity is any object about which an organization chooses to collect data.

(m) **ESB** – (Emergency Service Boundary) The Polygon that defines the geographic area of a single emergency response service. (Fire or Law or EMS separately) *Required to be separate service layers for NG911.*

(n) **ESInet** - (Emergency Services Internet protocol network) An ESInet is a managed IP network that is used for emergency services communications, and which can be shared by all public safety agencies. It provides the IP transport infrastructure upon which independent application platforms and core functional processes can be deployed, including, but not restricted to, those necessary for providing NG9-1-1

services. ESInets may be constructed from a mix of dedicated and shared facilities. ESInets may be interconnected at local, regional, state, federal, national, and international levels to form an IPbased inter-network (network of networks).

(o) **ESN** – (Emergency Service Number) The three to 5 digit <u>Number</u> assigned to the unique combination of ESB that represent a ESZ polygon. *Required at a minimum as a legacy lookup table for the MSAG.*

(p) **ESZ** – (Emergency Service Zone) The **Polygon** that defines the unique geographic area of the combination of ESB (Fire, Law, & EMS Combined)

(q) **Geocoding** -A mechanism for building a database relationship between addresses and geospatial features. When an address is matched to the geospatial features, geographic coordinates are assigned to the address resulting in a single geographic point for a specific address.

(r) **Geospatial feature** - A point, line or polygon stored within geospatial software.

(s) **Geospatial software** - Mapping software with analytical capabilities.

(t) **Line** -A linear feature built of straight line segments made up of two or more coordinates.

(u) **LVF** – (Location Validation Function) A functional element in a Next Generation 9-1-1 Core Services (NGCS) that is a Location-to-Service Translation (LoST) protocol server where civic location information is validated against the authoritative GIS database information. A civic address is considered valid if it can be located within the database uniquely, is suitable to provide an accurate route for an emergency call, and adequate and specific enough to direct responders to the right location.

(v) **MCS** – (MSAG Conversion Service) A web service providing conversion between PIDF-LO and MSAG data.

(w) **MSAG** – (Master Street Address Guide) A database of street names and house number ranges within their associated communities defining Emergency Service Zones (ESZs) and their associated Emergency Service Numbers (ESNs) to enable proper routing of 9-1-1 calls.

(x) **NENA** - The National Emergency Number Association is a not-for profit corporation established in 1982 to further the goal of "One Nation-One Number." NENA is a networking source and promotes research, planning, and training. NENA strives to educate, set standards, and provide certification programs, legislative representation, and technical assistance for implementing and managing 9-1-1 systems.

(y) **NG911** - (Next Generation 9-1-1) NG9-1-1 is an Internet Protocol (IP) based system comprised of managed Emergency Services IP networks (ESInets), functional elements (applications), and databases that replicate traditional E9-1-1 features and functions and provides additional capabilities. NG9-1-1 is designed to provide access to emergency services from all connected communications sources, and provide multimedia data capabilities for Public Safety Answering Points (PSAPs) and other emergency service organizations.

www.nena.org/resource/resmgr/ng9-1- 1_project/whatisng911.pdf

(z) **NGUID** -(NENA Globally Unique ID) NENA Globally Unique IDs must exist for each feature within the GIS data layer such that the ID is unique within a set of aggregated data for each layer.

(aa)   **Parity** -A characteristic of a set of addresses or address ranges in which the numbers are either odd or even.

(bb)   **PIDF-LO** - Provides a flexible and versatile means to represent location information in a Session Initiation Protocol (SIP) header using an XML schema.

(cc)   **Point** - A geospatial feature that is stored as a single XY coordinate.

(dd)   **PSAP** - (Public Safety Answering Point) An entity responsible for receiving 9-1-1 calls and processing those calls according to a specific operational policy.

(ee)   **Road Centerline** – A linear representation of a road that contains the associated attributes required for geocoding. A road centerline can represent a single lane or multiple lanes depending on the required functionality.

(ff)   **SI** – (Spatial Interface) A standardized interface between the GIS and the functional elements that consume GIS data, such as the ECRF and the LVF.

(gg)   **URI** - (Uniform Resource Identifier) A predictable formatting of text used to identify a resource on a network (usually the Internet) *OR* A string of characters that must follow prescribed syntaxes such as URL, URN. Note: Version 1.1 of the XML namespaces recommendation uses IRIs (Internationalized Resource Identifiers) instead of URIs. However, because version 1.1 is not yet a full recommendation [February 2003] and because the IRI RFC is not yet complete, this document continues to refer to URIs instead of IRIs.

(hh)   **URN** – (Uniform Resource Name) Uniform Resource Identifiers (URIs) that use the URN scheme, and are intended to serve as persistent, location independent resource names.

(ii)   **VoIP** – (Voice Over Internet Protocol) A technology that allows you to make voice calls using a broadband Internet connection instead of a regular (or analog) phone line.