The State of Mississippi Geographic Information Systems NG9-1-1 and Point Addressing Standard

MCCRSGIS

Mississippi Geographic Information Systems Council Adopted: Date

Mississippi 9-1-1 Management Authority Adopted: August 2022

Version 1.4

Mississippi Address Standards

Article I. Introduction

This document has shall serve as the primary reference document for all GIS point addressing in Mississippi. It will be a guide for either Next Generation 911 (NG9-1-1) Geographic Information System (GIS) Components or general Point Addressing. NG9-1-1 Addressing authorities are to use ALL of the schema. Non-911 address creators will use only the first table of the schema. The NG standard was developed in full compliance with NENA standards. The standard set forth is to be maintained, utilized, and distributed through a partnership with local addressing authorities, the Mississippi 9-1-1 Management Authority, the GIS addressing community, and the Mississippi Coordination Council for Remote Sensing and Geographic Information Systems. The ongoing partnership will ensure that this address standard is always relevant and applicable.
This standard is a mandatory best practice for either NG9-1-1 or general GIS point addressing purposes in the State of Mississippi. 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 Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems and (further known as the GIS Council) was established by HB861 in 2003. By statute, the GIS Council has 16 voting members and two non-voting members. The GIS Council sets and assures enforcement of policies and standards to make it easier for remote sensing and GIS users around the state to share information and reduce the costs of acquiring remote sensing and GIS data. Coordination of GIS activities requires working with all levels of government as well as the educational, private, and non-profit sectors.

The Mississippi 9-1-1 Coordinator was designated as the Mississippi Emergency Management Agency by Governor Phil Bryant's Executive Order No. 1446 July 3, 2019. E.O. 1446 appoints the MEMA Executive Director as the person responsible for signing certifications for the 911 Coordinator.

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

- 1986 **§ 57-13-23. Mississippi Automated Resource Information System (MARIS) - Initially createdby E.O. No. 459 (1983) amended by E.O No. 562 1986 – Establishing MARIS as the mechanism within state government for the storing, processing, extracting, and disseminating of useful data and information relating to the state's resources.**
- 2002 **E.O. 857 (2002) Creation of the Governor's Advisory Commission on Remote Sensing Technologies – to develop recommendations for the formation of a uniform clearinghouse of public remote sensing data including a digital land base computer model of the State of Mississippi.**
- 2003 **§ 25-58-21. Mississippi Coordinating Council for Remote Sensing and GeographicInformation Systems established; duties and responsibilities; composition of membership; terms;compensation; funding; staff.**
- 2019 **EO 1446 Designated MEMA Executive Director as person responsible for signingcertifications for the MS 911 Coordinator**

Section 2.02 Legislative Duties - GIS and Addressing

As set forth in 1986 Regular Session of the Mississippi State Legislature by **§57-13-23 HB 956** includes the following duties for the Mississippi Automated resource Information System (MARIS).

- **§57-13-23**

(2) The goal of MARIS shall be to facilitate the achievement of state agencies' responsibilities as they relate to the development, management, conservation, protection, and utilization of the resources of Mississippi by making useable resource data and information more readily available and in a format that is consistent throughout state departments, agencies, and institutions, and to the extent possible, with federal and privately

generated resource data banks.

As set forth in 2003 Regular Session of the Mississippi State Legislature by **§25-58-21 HB 861** includes the followingduties for the GIS Council. The GIS Council developed this address standard under the following legislation. Beloware the specific excerpts from existing State Statute.

- **§25-58-21**

(1) There is established the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems, herein after referred to as the "council". The council shall set and assure enforcement of policies and standards that make it easier for remote sensing and geographic information systems users around the state to share information and to facilitate cost-sharing arrangements to reduce the costs of acquiring remote sensing and geographic information systems data. The council shall not oversee or regulate the activities of higher education entities where it relates to the fields of teaching or research: however, the council shall be informed of these activities with other public remote sensing and GIS initiatives to achieve the maximum benefit for the State of Mississippi and its taxpayers. The council's responsibilities include but are not limited to:

a. Coordination of remote sensing and geographic information systems activities within Mississippi.
b. Establishing policies and standards to guide Mississippi Department of Information Technology Services (MDITS) in the review and approval of state and local government procurement of both hardware and software development relating to remote sensing and geographic information systems.

These are the most relevant duties of the Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems to the creation of this standard. The enabling legislation is available at:

https://www.giscouncil.ms.gov/sites/default/files/Uploads/MSCodeSec25-58-21eff2009.pdf

- **§19-5-369**

(1) Each person who owns or rents a residence, building or structure shall obtain a 911 address.

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 Mississippi 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 a wide diversity of datasets. In accomplishing the required tasks of the assigning agencies, multiple methods have been employed over time to accommodate the unique functionality or overcome existing limitations. While many of the technological 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 Mississippi'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. This document provides for both the general GIS point address creator/user and/or the more complex requirements for the critical nature of 911. The development and integration of NG9-1-1 reliesprimarily on GIS data to accurately determine the location of the caller in order to route the call to the proper PublicSafety Answering Point (PSAP). All GIS data that is utilized in NG9-1-1 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 GIS Council formed the Address Standard Workgroup in July 2016 to research, develop, and submit an address standard for adoption by the GIS Council. The primary focus of this group was to research what address standards were being utilized in Mississippi 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) **NG9-1-1 Standard Workgroup –** The additional requirement beyond the scope of the initial State of Mississippi Geographic Information Address Standards constituted a need to form another workgroup between the GIS and 911 professionals. The 911 Authority, local address authorities, and the GIS Council are working together through a joint GIS Technical Workgroup to meet the overall goal and enhance the required end-product. This workgroup is cooperatively creating the first State of Mississippi Geographic Information Address Standards that meet and exceed the required National Emergency Number Association (NENA) and the U.S. Department of Transportation's National Address Database (NAD) standards for NG9-1-1.

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/handwritten 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	MS Address Standard Field Name	E-911 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	Walls
State	State	MS
Zipcode	Zipcode	38680

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

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 (E-911) vs Next Generation 911 (NG9-1-1) NENA Mapping Requirements

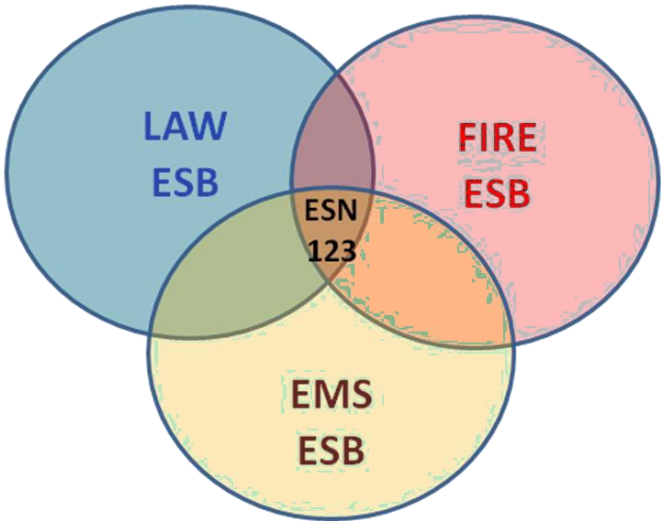
(a) **Enhanced 911 (E-911)** - E-911 utilizes landlines, wireless lines, and Voice VoIP (Voice Over Internet Protocol) through a combination of the MSAG (Master Street Address Guide) and the ANI/ALI to pass locational data into the PSAP. The tabular data is then displayed on the mapping platform in the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

- ADDRESS_POINT
- ROAD_CENTERLINE
- ESZ_BOUNDARY

Next Generation 911(NG9-1-1) – NG9-1-1 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. NG9-1-1 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
- PROVISIONING_BOUNDARY

DISCREPANCYAGENCY_BOUNDARY



Section 2.08 Definition of the Standard

The following address standard, along with the detailed components, fulfills the requirements of the intended applications and usages associated with either general point addressing or NG9-1-1 necessary for accurately representing caller location technology and

addresses in a GIS. NG9-1-1 data as defined by this standard must meet or exceed the minimum standards outlined within this standard to be considered compliant with regards to Mississippi NG9-1-1. Non-911 addresses creators do not have access or necessity of many of the critical attributes required for NG compliance.

Section 2.09 Applicability and Intended Uses of the Standard

The intended use of this document is to provide both GIS users with a *minimal* standard and emergency services with a *mandatory* standard for the implementationand maintenance of an NG9-1-1 system. The standard also provides a simple basic address schema for anyone workingwith addresses in the State of Mississippi. The associated documentation standardizes the basic structure of the tabularand attribute data required for geocoding using points, lines, and polygons. It is intended to be used by both the publicand 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, *e.g.*, 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 PSAP, Emergency Service Zone (ESZ), Emergency Service Boundary (ESB), and Provisioning Boundary. NG9-1-1 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 errors and corrections.

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

This standard is derived from and fully compliant with the NENA NG9-1-1 GIS Data Model. 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 Data Steward 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**), Point (**P**) or Transportation (**T**). Transportation fields have been included for use in other public safety applications.

- **Mandatory** means the data field must be populated.
  *e.g., 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. This applies to either the NG-911 and point options.
  *e.g., 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
- **Point** Denotes fields REQUIRED for compliance with the point addressing standard. Population of Conditional and Optional fields is *strongly encouraged*. **NOT sufficient for 911.**
- **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.
  *e.g., 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 attribute's 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 NG9-1-1 standard within the State of Mississippi.

(a) **Unique Identification Code (Mandatory)** – A unique identifier is required for all databases, whether they are associated attributes or geospatial datasets. 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 owner. The unique ID shall be configured in the following format:

(b) **(Layer_Name)_(Local911UniqueID)@(Agency_ID)_ Example: ROAD_CENTERLINE_45710948fk@psap.2885.ms.gov**

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 is set forth in the*. NENA Next Generation 9-1-1 United States Civic Location Data Exchange Format*

(CLDXF) Document Number NENA-STA-004.1.1-2014.

(c) **Legacy E-911 Data Fields** – Legacy E-911 fields **(*LgcyPreDir, LgcyType, LgcySufDir*)** are to be used for current street names in a Legacy E-911 format. They shall **ALWAYS** use abbreviations as defined by the "**LGCYDIRECTION**" and "**LGCYSTREETTYPE**" domains. Street **(LgcyStreet)** names should **NEVER** be abbreviated. 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 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. Legacy E-911 Data Fields – Legacy E-911 fields (LgcyPreDir, LgcyType, LgcySufDir) are to be used for the current and predominate street names in a Legacy E-911 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 and 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 add more local fields to the dataset or an Alias table as mentioned in this standard and further defined in the NENA Standard for NG9-1-1 GIS Data Model.

(d) **Abbreviations** – NG9-1-1 Address elements do **NOT** recognize any abbreviations **EXCEPT IN THE FOLLOWING INSTANCES**

- **Legacy E-911 Data Fields** as previously defined.
- The Country and 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) **Avoiding Obvious Conflicts** – For the sake of accuracy and clarity avoid obvious conflicting names and numbers.

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

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

(h) **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 NG9-1-1 is set forth in the NENA Civic Location Data Exchange Format (CLDXF).

(i) **Vanity Street Names** – Vanity street names and addresses that relate to a particular

business, developer, or property owner 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.*

(j) **Location of Street Name Break Points** – Street name breaks should occur 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. *i.e.,* 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.

(k) **Odd/Even Numbering (Address Parity)** – Parity shall remain consistent within the system adopted by the local jurisdiction. Address ranges are sets of numbers, usually composed 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 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.

(l) **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 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.

(m) **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 jurisdiction's 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 do not 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.

(n) **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.

(o) **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.

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

(p) **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.

(q) **Address Sequential Direction** – Addresses shall always be assigned so that they are in numeric sequence and shall increase as you travel in the direction adopted by the jurisdiction.

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** provides 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

Section 2.16 Positional Accuracy Standards – Considering the sole intent of the data is to save lives, the importance of data quality cannot be overemphasized. Data quality is a cumulative relationship of data accuracy, consistency, currency, and completeness accurately representing reality within NG9-1-1. 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 NG9-1-1 data compromises the entire integrity of the data and poses a serious risk of loss of life.

The geospatial accuracy of an address location should be pursued to achieve the highest feasible positional accuracy possible. While the required accuracy of the data may vary greatly between agencies there must be a minimum accuracy standard to allow for correct demarcation of a single address. Considering many rural address point locations are often derived from 1-meter resolution NAIP Orthophotography or various GPS collection devices the following minimum standards should be attainable in most addressing applications. The equipment and methodology used must be that of a grade capable of collecting data to within 10 feet RMSE as set forth in the *FGDC Geospatial Positioning Accuracy Standards Part 3, Appendix3-D (FDGC-STD-007.3-1998) The geospatial accuracy of an address location and the critical datasets required for NG9-1-1 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 addresses point locations within Mississippi 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 Mississippi. 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.*

- Class 1 Horizontal 1:5,000 (10 feet RMSE)

See also NENA GIS Data Collection and Maintenance Standards (NENA 02-014)

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 NG9-1-1 purposes the NG9-1-1 data must be in the following projection prior to loading into the Emergency Call Routing Function (ECRF) or Location Validation Function (LVF) as set forth in the *NENA Standard for NG9-1-1 GIS Data Model NENA-STA-006.1-2018*.

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

(b) **Accurate** – The data must be correct for the location in question. Routing to

someplace is important but locating that someplace is critical.

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

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

Section 2.19 Data Ownership vs. Data Stewardship

"A program of GIS Data Stewardship is not limited to the initial creation of data – it involves regular access to tabular inputs such as civic addresses and regular maintenance of spatial data such as emergency service boundaries and road centerlines. Ensuring that data used by the NG9-1-1 system are complete, accurate, and current may require cooperation between multiple data contributors and stakeholder agencies. A comprehensive data management approach includes not only continual data input and maintenance but also on-going communication between stakeholders, internal quality assurance, quality control, dealing with external data discrepancy reports, and archiving data." (NENA-INF-028.1 *executive overview)*

The agency that is responsible for the data within their respective jurisdiction is the owner of the data, and as such, the ultimate authority regarding the data and maintains the final authority over the development and maintenance of the information. The data steward can be responsible for identifying potential issues with QA/QC and notifying the data owner of issues and irregularities that the data owner then corrects. The data steward can also play a role in the aggregation of data for archiving and non-9-1-1 uses. When a feature has more than one responsible agency, 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. A clear reference must be maintained in the metadata and tabular data to the authoritative jurisdiction regarding the development and maintenance of any dataset. *(See Section 2.13.a of this standard)*

The local agency is ultimately responsible for ensuring the NG9-1-1 data is maintained and submitted to the State of Mississippi NG9-1-1/GIS Repository. This can be accomplished by directly working with the State NG911/GIS Repository or by entering into agreements with other agencies to allow data to be maintained and / or submitted to the State NG9-1-1/GIS Repository on behalf of the local agency.

When a single feature has more than one responsible agency, *e.g*., 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 regarding each agency or agencies involved in the development and maintenance of any dataset.

e.g., 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 STEWARD 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.

Section 2.20 Metadata

Metadata shall be maintained for all address datasets. 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 Mississippi NG9-1-1/GIS Repository**. IMPORTANT! NG9-1-1 authorities must comply with the entire standard to be NENA compliant.** Casual address creators must fill out the green highlighted attributes [P] along with any other Conditional [C] fields.

Reference **MS_ADDRESS_SCHEMAS_21.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	AGENCY_ID
NGUID_ADD	NENA Globally Unique ID: (LayerName)_(Local911UniqueID)@(Agency_ID)	ALPHANUMERIC	254	M	
Agency_ID	ID Assigned to each Agency by the State of Mississippi 911 Coordinator	ALPHANUMERIC	100	M	AGENCY_ID
FullAddr	Full Address (ie.101 W Main St)	ALPHANUMERIC	100	C	
FullName	Full Name of the Primary Street	ALPHANUMERIC	50	C P	
Label	Map Label of the Address	ALPHANUMERIC	50	C	
AddPre	Extension that Precedes an Address Number (i.e., "A" 100 North Main Street)	ALPHANUMERIC	15	C	
Address	Address Number (i.e., "100" North Main Street)	NUMERIC	6	C	
AddSuf	House Number Suffix (i.e., 100 A)	ALPHANUMERIC	15	C	
PreMod	Primary Street Modifier (i.e., "Old" Church Street)	ALPHANUMERIC	15	C	
PreDir	Primary Street))Directional Prefix (i.e., "North" Main Street) (Unabbreviated DIRECTION Domain)	ALPHANUMERIC	9	C	DIRECTION
PreType	Primary Street Prefix Type (i.e., "Highway" 70 East)	ALPHANUMERIC	50	C	STREETTYPE
PreTypeSep	Primary Street Name Pre Type Separator (i.e., Circle "in the" Woods)	ALPHANUMERIC	20	C	SEPARATOR
Street	Primary Street Name (i.e., North "Main" Street)	ALPHANUMERIC	60	C	
StreetType	Primary Street Type (i.e., North Main "Street") (Unabbreviated STREETTYPE Domain)	ALPHANUMERIC	50	C	STREETTYPE
SufDir	Primary Street Directional Suffix (i.e., Highway 70 "East") (Unabbreviated DIRECTION Domain)	ALPHANUMERIC	9	C	DIRECTION
SufMod	Primary Street Name Suffix Modifier (i.e., 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 (MS) (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 P	
UnincComm	Name of the Unincorporated Community the Address Resides In	ALPHANUMERIC	100	O P	
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 P	
Zipcode4	Zip Code +4 Extension	ALPHANUMERIC	4	O	
LandmkName	Business or Agency at the Address	ALPHANUMERIC	150	C	
AddtnlLoc	Additional Location Information (i.e., Loading Dock, Gate A1, West Wing)	ALPHANUMERIC	225	O	

BldgName	Building or Unit Name (i.e., Building A, Building 1)	ALPHANUMERIC	75	C P	

BldgUnit	Building Unit Type (i.e., Suite B, Apartment 206)	ALPHANUMERIC	75	C P	
Floor	Floor of the Building	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	
StrmShelr	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 P	PLACEMENT
MilePost	Mile Post	ALPHANUMERIC	150	C	
Longitude	Longitude Coordinates of the Address Point in Decimal Degrees	DECIMAL	15	O P	
Latitude	Latitude Coordinates of the Address Point in Decimal Degrees	DECIMAL	15	O P	
natgrid_co	National Grid Coordinate of the Address Point	ALPHANUMERIC	50	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 (creator of data, entity or individual)	ALPHANUMERIC	75	M P	
InitiDate	Initial Time-Stamp - (Creation Entry Date)	DATETIME	20	M P	
RevEditor	Most recent editor of the data	ALPHANUMERIC	75	M P	
RevDate	Modified Time-Stamp - (Modify Entry Date)	DATETIME	20	M P	
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 Address	ALPHANUMERIC	100	C	
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
LgcySufMod	Legacy Street Name Post Modifier	ALPHANUMERIC	25	C	
ppin	Parcel Pin Identification Number from the Parcel Layer/Table	ALPHANUMERIC	25	M	
parcel_id	Parcel ID for the Address Point from the Parcel Layer/Table	ALPHANUMERIC	50	M	
SUBMIT	Submit Feature to be validated in MS NG911 Toolkit	ALPHANUMERIC	1	M	YESNO
RCLMatch	NGUID_RDCL of the road segment the address point should match to as Validated in MS NG911 GIS Toolkit	ALPHANUMERIC	254	M	
RCLSide	Checks the Left or Right Side of the Address Point to be Validated in MS 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 Mississippi NG9-1-1/GIS Repository.

Reference **MS_ADDRESS_SCHEMAS_21.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	AGENCY_ID
NGUID_RDCL	NENA Globally Unique ID: (LayerName)_(Local911UniqueID)@(AGENCY_ID)	ALPHANUMERIC	254	M	
Agency_ID	ID Assigned to each Agency by the State of Mississippi 911 Coordinator	ALPHANUMERIC	100	M	AGENCY_ID
FullName	Full Name of the Primary Street	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 (i.e., "A" 100 North Main Street)	ALPHANUMERIC	15	C	
Add_R_Pre	Extension that Precedes an Address Number on the Right Side of the Road (i.e., "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	
Low	Address Low Road Range	NUMERIC	6	O	
High	Address High Road Range	NUMERIC	6	O	
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 theRoad Segment	ALPHANUMERIC	1	M	PARITY
PreMod	Primary Street Modifier (i.e., "Old" Church Street)	ALPHANUMERIC	15	C	
PreDir	Primary Street Directional Prefix (i.e., "North" Main Street) (Unabbreviated DIRECTIONDomain)	ALPHANUMERIC	9	C	DIRECTION
PreType	Primary Street Prefix Type (i.e., "Highway" 70 East) (Unabbreviated STREETTYPE Domain)	ALPHANUMERIC	50	C	STREETTYPE
PreTypeSep	Primary Street Name Pre Type Separator (i.e., Circle "in the" Woods)	ALPHANUMERIC	20	C	SEPARATOR
Street	Primary Street Name (i.e., North "Main" Street)	ALPHANUMERIC	60	M	
StreetType	Primary Street Type (i.e., North Main "Street") (Unabbreviated STREETTYPE Domain)	ALPHANUMERIC	50	C	STREETTYPE
SufDir	Primary Street Directional Suffix (i.e., Highway 70 "East") (Unabbreviated DIRECTION Domain)	ALPHANUMERIC	9	C	DIRECTION
SufMod	Primary Street Name Suffix Modifier (i.e., North Main Street "Extension")	ALPHANUMERIC	25	C	
Country	Name of the Country the Road Resides In (US)	ALPHANUMERIC	2	M	COUNTRY
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	Name of the State the Road Resides In (MS)	ALPHANUMERIC	2	M	STATE
State_L	Name of the State on the Left Side of the Road (MS) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
State_R	Name of the State on the Right Side of the Road (MS) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
County	Name of the County the Road Resides In (Ex: Alcorn County)	ALPHANUMERIC	25	M	COUNTY
County_L	Name of the County on the Left Side of the Road (Ex: Alcorn County)	ALPHANUMERIC	40	M	COUNTY
County_R	Name of the County on the Right Side of the Road (Ex: Alcorn County)	ALPHANUMERIC	40	M	COUNTY
City	Name of the Primary Municipality the Road Resides In	ALPHANUMERIC	30	C	

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	
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	Zipcode	ALPHANUMERIC	5	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	Zipcode +4 Extension	ALPHANUMERIC	4	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	Postal Community	ALPHANUMERIC	30	C	
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
Signid	Highway Shield Map Label	ALPHANUMERIC	10	C	
Shieldcode	Highway Shield Type/Width	ALPHANUMERIC	10	C	
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 (creator of data, entity or individual)	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

LgcySufMod	Legacy Street Name Post Modifier	ALPHANUMERIC	25	C	
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	2	T	LGCYDIRECTION
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
SUMBIT	Submit Feature to be Validated in MS NG911 GIS Toolkit	ALPHANUMERIC	1	M	YESNO
TopoExcept	Topological Exceptions when Validated in MS NG911 GIS Toolkit	ALPHANUMERIC	20	M	TopoExcept
Geo_MSAG_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
Geo_MSAG_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 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 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 to be maintained at the local agency level and submitted to the State of Mississippi NG9-1-1/GIS Repository.

Reference **MS_ADDRESS_SCHEMAS_21.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	AGENCY_ID
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	The REGISTERED Domain Name System (DNS) of the Agency	ALPHANUMERIC	100	M	AGENCY_ID
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	
ServiceURN	The ECRF is queried with a location and a service URN that returns the Service URI.	ALPHANUMERIC	50	M	SERVICE URN
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 (MS) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
InitiSrce	Original source of the data (creator of data, entity or individual)	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 MS NG911 GIS Toolkit	APLHANUMERIC	1	M	YESNO

Section 3.04 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 3–5-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 Mississippi NG9-1-1/GIS Repository.

Reference **MS_ADDRESS_SCHEMAS_21.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	AGENCY_ID
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 Mississippi 911 Coordinator	ALPHANUMERIC	100	M	AGENCY_ID
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	
ServiceURI	URI for Call Routing contained in the ESB layer	ALPHANUMERIC	254	M	
ESN	The three-to-5-digit Number assigned to the unique combination of ESB that represents 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 (MS) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
InitiSrce	Original source of the data (creator of data, entity or individual)	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 MS 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. 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)*

Reference **MS_ADDRESS_SCHEMAS_21.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	AGENCY_ID
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 Mississippi 911 Coordinator	ALPHANUMERIC	100	M	AGENCY_ID
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	SERVICE URN
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 (MS) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
InitiSrce	Original source of the data (creator of data, entity or individual)	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 MS NG911 GIS Toolkit	ALPHANUMERIC	1	M	YESNO

Reference **MS_ADDRESS_SCHEMAS_21.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	AGENCY_ID
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 Mississippi 911 Coordinator.	ALPHANUMERIC	100	M	AGENCY_ID
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	SERVICE URN
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 (MS) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
InitiSrce	Original source of the data (creator of data, entity or individual)	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	
SUMBIT	Submit Feature to be Validated in MS NG911 GIS Toolkit	ALPHNUMERIC	1	M	YESNO

Reference **MS_ADDRESS_SCHEMAS_21.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	AGENCY_ID
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 Mississippi 911 Coordinator	ALPHANUMERIC	100	M	AGENCY_ID
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	SERVICE URN
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 (MS) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
InitiSrce	Original source of the data (creator of data, entity or individual)	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 MS 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 Mississippi NG9-1-1/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 Mississippi NG9-1-1/GIS Repository. Any boundary disputes within this dataset will be resolved by the State of Mississippi 9-1-1 Coordinator on an individual basis with input from all involved agencies.

Reference **MS_ADDRESS_SCHEMAS_21.XLS** – DISCREPANCY AGENCY_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	AGENCY_ID
NGUID_PROV	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 Mississippi 911 Coordinator	ALPHANUMERIC	100	M	AGENCY_ID
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	SERVICE URN
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 (MS) (Abbreviated STATE Domain)	ALPHANUMERIC	2	M	STATE
InitiSrce	Original source of the data (creator of data, entity or individual)	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 the MS NG911 GIS Toolkit	ALPHANUMERIC	1	M	YESNO

Section 3.07 Other Recommended Layers – Polygon

Additional GIS data layers may be extremely helpful in ultimately meeting 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 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, reference the associated Excel file and File Geodatabase. MS_ADDRESS_SCHEMAS_21.XLS

Associated Reference Document: **MS_ADDRESS_SCHEMAS_21.XLS**

(a) Reference **MS_ADDRESS_SCHEMAS_21.XLS** –AGENCYID

Code	Description	Data Source – Approved by State of Mississippi 9-1-1 Coordinator
Unique PSAP URL/URN	*Unique PSAP URL/URN*	

(b) Reference **MS_ADDRESS_SCHEMAS_21.XLS** –YESNO

Code	Description	Data Source - None
Y	Y	STATIC
N	N	

(c) Reference **MS_ADDRESS_SCHEMAS_21.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 **MS_ADDRESS_SCHEMAS_21.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 **MS_ADDRESS_SCHEMAS_21.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 **MS_ADDRESS_SCHEMAS_21.XLS** –RDCLSIDE

Code	Description	Data Source - None
L	L	STATIC
R	R	
N	N	
BELOW GROUND OUTSIDE	BELOW GROUND OUTSIDE	

(g) Reference **MS_ADDRESS_SCHEMAS_21.XLS** –TOPOEXCEPT

Code	Description	Data Source - None
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 **MS_ADDRESS_SCHEMAS_21.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://cdn.ymaws.com/www.nena.org/resource/resmgr/Standards/NENA-INF-014.1-2015_SSAP_INF.pdf
PARCEL	PARCEL	
PROPERTY ACCESS	PROPERTY ACCESS	
STRUCTURE	STRUCTURE	
SITE	SITE	
UNKNOWN	UNKNOWN	

(i) Reference **MS_ADDRESS_SCHEMAS_21.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://cdn.ymaws.com/www.nena.org/resource/resmgr/standards/nena-sta-006.1.1-2020_ng9-1-.pdf
E	EVEN	
B	BOTH	
Z	ZERO	

(j) Reference **MS_ADDRESS_SCHEMAS_21.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 **MS_ADDRESS_SCHEMAS_21.XLS** –STATE

Code	Description	Data Source - USPS Publication 28 - Appendix B - Two–Letter State and Possession Abbreviations - Page 55
MS	MISSISSIPPI	http://pe.usps.com/text/pub28/28apb.htm
TN	TENNESSEE	
AL	ALABAMA	
LA	LOUSIANA	
AR	ARKANSAS	

(l) Reference **MS_ADDRESS_SCHEMAS_21.XLS** –COUNTY

Code	Description	Code	Description	Data Source - FIPS Codes for Counties and County Equivalent Entities
ADAMS COUNTY	ADAMS COUNTY	LEFLORE COUNTY	LEFLORE COUNTY	https://www.census.gov/geographies/reference-files/2016/demo/popest/2016-fips.html
ALCORN COUNTY	ALCORN COUNTY	LINCOLN COUNTY	LINCOLN COUNTY	
AMITE COUNTY	AMITE COUNTY	LOWNDES COUNTY	LOWNDES COUNTY	
ATTALA COUNTY	ATTALA COUNTY	MADISON COUNTY	MADISON COUNTY	
BENTON COUNTY	BENTON COUNTY	MARION COUNTY	MARION COUNTY	
BOLIVAR COUNTY	BOLIVAR COUNTY	MARSHALL COUNTY	MARSHALL COUNTY	
CALHOUN COUNTY	CALHOUN COUNTY	MONROE COUNTY	MONROE COUNTY	
CARROLL COUNTY	CARROLL COUNTY	MONTGOMERY COUNTY	MONTGOMERY COUNTY	
CHICKASAW COUNTY	CHICKASAW COUNTY	NESHOBA COUNTY	NESHOBA COUNTY	
CHOCTAW COUNTY	CHOCTAW COUNTY	NEWTON COUNTY	NEWTON COUNTY	
CLAIBORNE COUNTY	CLAIBORNE COUNTY	NOXUBEE COUNTY	NOXUBEE COUNTY	
CLARKE COUNTY	CLARKE COUNTY	OKTIBBEHA COUNTY	OKTIBBEHA COUNTY	
CLAY COUNTY	CLAY COUNTY	PANOLA COUNTY	PANOLA COUNTY	
COAHOMA COUNTY	COAHOMA COUNTY	PEARL RIVER COUNTY	PEARL RIVER COUNTY	
COPIAH COUNTY	COPIAH COUNTY	PERRY COUNTY	PERRY COUNTY	
COVINGTON COUNTY	COVINGTON COUNTY	PIKE COUNTY	PIKE COUNTY	
DESOTO COUNTY	DESOTO COUNTY	PONTOTOC COUNTY	PONTOTOC COUNTY	
FORREST COUNTY	FORREST COUNTY	PRENTISS COUNTY	PRENTISS COUNTY	
FRANKLIN COUNTY	FRANKLIN COUNTY	QUITMAN COUNTY	QUITMAN COUNTY	
GEORGE COUNTY	GEORGE COUNTY	RANKIN COUNTY	RANKIN COUNTY	
GREENE COUNTY	GREENE COUNTY	SCOTT COUNTY	SCOTT COUNTY	
GRENADA COUNTY	GRENADA COUNTY	SHARKEY COUNTY	SHARKEY COUNTY	
HANCOCK COUNTY	HANCOCK COUNTY	SIMPSON COUNTY	SIMPSON COUNTY	
HARRISON COUNTY	HARRISON COUNTY	SMITH COUNTY	SMITH COUNTY	
HINDS COUNTY	HINDS COUNTY	STONE COUNTY	STONE COUNTY	
HOLMES COUNTY	HOLMES COUNTY	SUNFLOWER COUNTY	SUNFLOWER COUNTY	
HUMPHREYS COUNTY	HUMPHREYS COUNTY	TALLAHATCHIE COUNTY	TALLAHATCHIE COUNTY	
ISSAQUENA COUNTY	ISSAQUENA COUNTY	TATE COUNTY	TATE COUNTY	
ITAWAMBA COUNTY	ITAWAMBA COUNTY	TIPPAH COUNTY	TIPPAH COUNTY	
JACKSON COUNTY	JACKSON COUNTY	TISHOMINGO COUNTY	TISHOMINGO COUNTY	
JASPER COUNTY	JASPER COUNTY	TUNICA COUNTY	TUNICA COUNTY	
JEFFERSON COUNTY	JEFFERSON COUNTY	UNION COUNTY	UNION COUNTY	
JEFFERSON DAVIS COUNTY	JEFFERSON DAVIS COUNTY	WALTHALL COUNTY	WALTHALL COUNTY	
JONES COUNTY	JONES COUNTY	WARREN COUNTY	WARREN COUNTY	
KEMPER COUNTY	KEMPER COUNTY	WASHINGTON COUNTY	WASHINGTON COUNTY	
LAFAYETTE COUNTY	LAFAYETTE COUNTY	WAYNE COUNTY`	WAYNE COUNTY	
LAMAR COUNTY	LAMAR COUNTY	WEBSTER COUNTY	WEBSTER COUNTY	
LAUDERDALE COUNTY	LAUDERDALE COUNTY	WILKINSON COUNTY	WILKINSON COUNTY	
LAWRENCE COUNTY	LAWRENCE COUNTY	WINSTON COUNTY	WINSTON COUNTY	
LEAKE COUNTY	LEAKE COUNTY	YALOBUSHA COUNTY	YALOBUSHA COUNTY	
LEE COUNTY	LEE COUNTY	YAZOO COUNTY	YAZOO COUNTY	

(m) Reference **MS_ADDRESS_SCHEMAS_21.XLS** –PLACETYPE

Mississippi has some common PLACETYPES not found in other states. A limited number of such common PLACETYPES have been added to existing standardized lists. Special care must be taken to avoid confusion or an excess number of such example places. Special coordination between the GIS community and 911 practitioners will be required to further modify the list.

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	
BARN	BARN	
BICYCLE	BICYCLE	
BOAT RAMP	BOAT RAMP	
BRIDGE	BRIDGE	
BUS	BUS	
BUS STATION	BUS STATION	
CAFE	CAFE	
CAMP CABIN	CAMP CABIN	
CLASSROOM	CLASSROOM	
CLUB	CLUB	
CONSTRUCTION	CONSTRUCTION	
CONVENTION CENTER	CONVENTION CENTER	
COTTON GIN	COTTON GIN	
DOCK MARINA	DOCK MARINA	
GOVERNMENT	GOVERNMENT	
GRAIN ELEVATOR	GRAIN ELEVATOR	
GRAVEL PIT MINE	GRAVEL PIT MINE	
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	
PUMP HOUSE	PUMP HOUSE	
RAILROAD CROSSING	RAILROAD CROSSING	
RESIDENCE	RESIDENCE	
RESTAURANT	RESTAURANT	
SCHOOL	SCHOOL	
SHOPPING-AREA	SHOPPING-AREA	
STADIUM	STADIUM	
STORE	STORE	
STREET	STREET	
THEATER	THEATER	
TOWER	TOWER	
TRAIN	TRAIN	

TRAIN-STATION	TRAIN-STATION
TRUCK	TRUCK
UNDERWAY	UNDERWAY
UNKNOWN	UNKNOWN
WAREHOUSE	WAREHOUSE
WATER	WATER
WATERCRAFT	WATERCRAFT
WORKSHOP	WORKSHOP

(n) Reference **MS_ADDRESS_SCHEMAS_21.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	**Abbreviation Usage Clarification:** Abbreviations are **ALWAYS** used in Legacy E-911 required data fields & **NEVER** used in NG9-1-1 required data fields.
EAST	EAST	
WEST	WEST	
NORTHEAST	NORTHEAST	
NORTHWEST	NORTHWEST	
SOUTHEAST	SOUTHEAST	
SOUTHWEST	SOUTHWEST	

(o) Reference **MS_ADDRESS_SCHEMAS_21.XLS** –LCGYDIRECTION

Code	Description	Data Source - USPS Publication 28 - 233 Directionals
N	NORTH	https://pe.usps.com/text/pub28/28c2_014.htm
S	SOUTH	**Abbreviation Usage Clarification:** Abbreviations are **ALWAYS** used in Legacy E-911 required data fields & **NEVER** used in NG9-1-1 required data fields.
E	EAST	
W	WEST	
NE	NORTHEAST	
NW	NORTHWEST	
SE	SOUTHEAST	
SW	SOUTHWEST	

(p) Reference **MS_ADDRESS_SCHEMAS_21.XLS** –STREETTYPE

Data Source - USPS Publication 28 - Appendix C1 - Street Suffix Abbreviations- Pages 59-71
http://pe.usps.com/text/pub28/28apc_002.htm
NENA REFERENCE - NENA_71-501-v1_Synchronizing_GIS_Databases_with_MSAG_and_ALI.pdf - Page 9
https://cdn.ymaws.com/www.nena.org/resource/collection/F2E0D66A-4824-418C-8670-3238D262B84A/NENA_71-501-v1_Synchronizing_GIS_Databases_with_MSAG_and_ALI.pdf

Abbreviation Usage Clarification: Abbreviations are **ALWAYS** used in Legacy E-911 required data fields & **NEVER** used in NG9-1-1 required data fields.

Code	Description	Code	Description	Code	Description	Code	Description	Code	Description

ALLEY	ALLEY	DRIVES	DRIVES	LAKE	LAKE	RAMP	RAMP	VILLAGES	VILLAGES
ANNEX	ANNEX	ESTATE	ESTATE	LAKES	LAKES	RANCH	RANCH	VILLE	VILLE
ARCADE	ARCADE	ESTATES	ESTATES	LAND	LAND	RAPID	RAPID	VISTA	VISTA
AVENUE	AVENUE	EXPRESSWAY	EXPRESSWAY	LANDING	LANDING	RAPIDS	RAPIDS	WALK	WALK
BAYOU	BAYOU	EXTENSION	EXTENSION	LANE	LANE	REST	REST	WALKS	WALKS
BEACH	BEACH	EXTENSIONS	EXTENSIONS	LIGHT	LIGHT	RIDGE	RIDGE	WALL	WALL
BEND	BEND	FALL	FALL	LIGHTS	LIGHTS	RIDGES	RIDGES	WAY	WAY
BLUFF	BLUFF	FALLS	FALLS	LOAF	LOAF	RIVER	RIVER	WAYS	WAYS
BLUFFS	BLUFFS	FERRY	FERRY	LOCK	LOCK	ROAD	ROAD	WELL	WELL
BOTTOM	BOTTOM	FIELD	FIELD	LOCKS	LOCKS	ROADS	ROADS	WELLS	WELLS
BOULEVARD	BOULEVARD	FIELDS	FIELDS	LODGE	LODGE	ROUTE	ROUTE		
BRANCH	BRANCH	FLAT	FLAT	LOOP	LOOP	ROW	ROW		
BRIDGE	BRIDGE	FLATS	FLATS	MALL	MALL	RUE	RUE		
BROOK	BROOK	FORD	FORD	MANOR	MANOR	RUN	RUN		
BROOKS	BROOKS	FORDS	FORDS	MANORS	MANORS	SHOAL	SHOAL		
BURG	BURG	FOREST	FOREST	MEADOW	MEADOW	SHOALS	SHOALS		
BURGS	BURGS	FORGE	FORGE	MEADOWS	MEADOWS	SHORE	SHORE		
BYPASS	BYPASS	FORGES	FORGES	MEWS	MEWS	SHORES	SHORES		
CAMP	CAMP	FORK	FORK	MILL	MILL	SKYWAY	SKYWAY		
CANYON	CANYON	FORKS	FORKS	MILLS	MILLS	SPRING	SPRING		
CAPE	CAPE	FORT	FORT	MISSION	MISSION	SPRINGS	SPRINGS		
CAUSEWAY	CAUSEWAY	FREEWAY	FREEWAY	MOTORWAY	MOTORWAY	SPUR	SPUR		
CENTER	CENTER	GARDEN	GARDEN	MOUNT	MOUNT	SPURS	SPURS		
CENTERS	CENTERS	GARDENS	GARDENS	MOUNTAIN	MOUNTAIN	SQUARE	SQUARE		
CIRCLE	CIRCLE	GATEWAY	GATEWAY	MOUNTAINS	MOUNTAINS	SQUARES	SQUARES		
CIRCLES	CIRCLES	GLEN	GLEN	NECK	NECK	STATION	STATION		
CLIFF	CLIFF	GLENS	GLENS	ORCHARD	ORCHARD	STRAVENUE	STRAVENUE		
CLIFFS	CLIFFS	GREEN	GREEN	OVAL	OVAL	STREAM	STREAM		
CLUB	CLUB	GREENS	GREENS	OVERPASS	OVERPASS	STREET	STREET		
COMMON	COMMON	GROVE	GROVE	PARK	PARK	STREETS	STREETS		
COMMONS	COMMONS	GROVES	GROVES	PARKS	PARKS	SUMMIT	SUMMIT		
CORNER	CORNER	HARBOR	HARBOR	PARKWAY	PARKWAY	TERRACE	TERRACE		
CORNERS	CORNERS	HARBORS	HARBORS	PARKWAYS	PARKWAYS	THROUGHWAY	THROUGHWAY		
COURSE	COURSE	HAVEN	HAVEN	PASS	PASS	TRACE	TRACE		
COURT	COURT	HEIGHTS	HEIGHTS	PASSAGE	PASSAGE	TRACK	TRACK		
COURTS	COURTS	HIGHWAY	HIGHWAY	PATH	PATH	TRAFFICWAY	TRAFFICWAY		
COVE	COVE	HILL	HILL	PIKE	PIKE	TRAIL	TRAIL		
COVES	COVES	HILLS	HILLS	PINE	PINE	TRAILER	TRAILER		
CREEK	CREEK	HOLLOW	HOLLOW	PINES	PINES	TUNNEL	TUNNEL		
CRESCENT	CRESCENT	INLET	INLET	PLACE	PLACE	TURNPIKE	TURNPIKE		
CREST	CREST	ISLAND	ISLAND	PLAIN	PLAIN	UNDERPASS	UNDERPASS		
CROSSING	CROSSING	ISLANDS	ISLANDS	PLAINS	PLAINS	UNION	UNION		
CROSSROAD	CROSSROAD	ISLE	ISLE	PLAZA	PLAZA	UNIONS	UNIONS		
CROSSROADS	CROSSROADS	JUNCTION	JUNCTION	POINT	POINT	VALLEY	VALLEY		
CURVE	CURVE	JUNCTIONS	JUNCTIONS	POINTS	POINTS	VALLEYS	VALLEYS		
DALE	DALE	KEY	KEY	PORT	PORT	VIADUCT	VIADUCT		
DAM	DAM	KEYS	KEYS	PORTS	PORTS	VIEW	VIEW		
DIVIDE	DIVIDE	KNOLL	KNOLL	PRAIRIE	PRAIRIE	VIEWS	VIEWS		
DRIVE	DRIVE	KNOLLS	KNOLLS	RADIAL	RADIAL	VILLAGE	VILLAGE		

(q) Reference **MS_ADDRESS_SCHEMAS_21.XLS** –LGCYSTREETTYPE

Data Source - USPS Publication 28 - Appendix C1 - Street Suffix Abbreviations- Pages 59-71
http://pe.usps.com/text/pub28/28apc_002.htm

NENA REFERENCE - NENA_71-501-v1_Synchronizing_GIS_Databases_with_MSAG_and_ALI.pdf - Page 9

http://www.nena.org/resource/collection/F2E0D66A-4824-418C-8670-3238D262B84A/NENA_71-501-v1_Synchronizing_GIS_Databases_with_MSAG_and_ALI.pdf

Abbreviation Usage Clarification: Abbreviations are **ALWAYS** used in Legacy E-911 required data fields & **NEVER** used in NG9-1-1 required data fields.

Code	Description	Code	Description	Code	Description	Code	Description	Code	Description
ALY	ALLEY	DRS	DRIVES	LK	LAKE	RAMP	RAMP	VLGS	VILLAGES
ANNX	ANNEX	EST	ESTATE	LKS	LAKES	RNCH	RANCH	VL	VILLE
ARC	ARCADE	ESTS	ESTATES	LAND	LAND	RPD	RAPID	VIS	VISTA
AVE	AVENUE	EXPY	EXPRESSWAY	LNDG	LANDING	RPDS	RAPIDS	WALK	WALK
BYU	BAYOU	EXT	EXTENSION	LN	LANE	RST	REST	WALK	WALKS
BCH	BEACH	EXTS	EXTENSIONS	LGT	LIGHT	RDG	RIDGE	WALL	WALL
BND	BEND	FALL	FALL	LGTS	LIGHTS	RDGS	RIDGES	WAY	WAY
BLF	BLUFF	FLS	FALLS	LF	LOAF	RIV	RIVER	WAYS	WAYS
BLFS	BLUFFS	FRY	FERRY	LCK	LOCK	RD	ROAD	WL	WELL
BTM	BOTTOM	FLD	FIELD	LCKS	LOCKS	RDS	ROADS	WLS	WELLS
BLVD	BOULEVARD	FLDS	FIELDS	LDG	LODGE	RTE	ROUTE		
BR	BRANCH	FLT	FLAT	LOOP	LOOP	ROW	ROW		
BRG	BRIDGE	FLTS	FLATS	MALL	MALL	RUE	RUE		
BRK	BROOK	FRD	FORD	MNR	MANOR	RUN	RUN		
BRKS	BROOKS	FRDS	FORDS	MNRS	MANORS	SHL	SHOAL		
BG	BURG	FRST	FOREST	MDW	MEADOW	SHLS	SHOALS		
BGS	BURGS	FRG	FORGE	MDWS	MEADOWS	SHR	SHORE		
BYP	BYPASS	FRGS	FORGES	MEWS	MEWS	SHRS	SHORES		
CP	CAMP	FRK	FORK	ML	MILL	SKWY	SKYWAY		
CYN	CANYON	FRKS	FORKS	MLS	MILLS	SPG	SPRING		
CPE	CAPE	FT	FORT	MSN	MISSION	SPGS	SPRINGS		
CSWY	CAUSEWAY	FWY	FREEWAY	MTWY	MOTORWAY	SPUR	SPUR		
CTR	CENTER	GDN	GARDEN	MT	MOUNT	SPUR	SPURS		
CTRS	CENTERS	GDNS	GARDENS	MTN	MOUNTAIN	SQ	SQUARE		
CIR	CIRCLE	GTWY	GATEWAY	MTNS	MOUNTAINS	SQS	SQUARES		
CIRS	CIRCLES	GLN	GLEN	NCK	NECK	STA	STATION		
CLF	CLIFF	GLNS	GLENS	ORCH	ORCHARD	STRA	STRAVENUE		
CLFS	CLIFFS	GRN	GREEN	OVAL	OVAL	STRM	STREAM		
CLB	CLUB	GRNS	GREENS	OPAS	OVERPASS	ST	STREET		
CMN	COMMON	GRV	GROVE	PARK	PARK	STS	STREETS		
CMNS	COMMONS	GRVS	GROVES	PARK	PARKS	SMT	SUMMIT		
COR	CORNER	HBR	HARBOR	PKWY	PARKWAY	TER	TERRACE		
CORS	CORNERS	HBRS	HARBORS	PKWY	PARKWAYS	TRWY	THROUGHWAY		
CRSE	COURSE	HVN	HAVEN	PASS	PASS	TRCE	TRACE		
CT	COURT	HTS	HEIGHTS	PSGE	PASSAGE	TRAK	TRACK		
CTS	COURTS	HWY	HIGHWAY	PATH	PATH	TRFY	TRAFFICWAY		
CV	COVE	HL	HILL	PIKE	PIKE	TRL	TRAIL		
CVS	COVES	HLS	HILLS	PNE	PINE	TRLR	TRAILER		
CRK	CREEK	HOLW	HOLLOW	PNES	PINES	TUNL	TUNNEL		
CRES	CRESCENT	INLT	INLET	PL	PLACE	TPKE	TURNPIKE		
CRST	CREST	IS	ISLAND	PLN	PLAIN	UPAS	UNDERPASS		
XING	CROSSING	ISS	ISLANDS	PLNS	PLAINS	UN	UNION		
XRD	CROSSROAD	ISLE	ISLE	PLZ	PLAZA	UNS	UNIONS		
XRDS	CROSSROADS	JCT	JUNCTION	PT	POINT	VLY	VALLEY		
CURV	CURVE	JCTS	JUNCTIONS	PTS	POINTS	VLYS	VALLEYS		
DL	DALE	KY	KEY	PRT	PORT	VIA	VIADUCT		
DM	DAM	KYS	KEYS	PRTS	PORTS	VW	VIEW		
DV	DIVIDE	KNL	KNOLL	PR	PRAIRIE	VWS	VIEWS		
DR	DRIVE	KNLS	KNOLLS	RADL	RADIAL	VLG	VILLAGE		

(r) Reference **MS_ADDRESS_SCHEMAS_21.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 **MS_ADDRESS_SCHEMAS_21.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 **MS_ADDRESS_SCHEMAS_21.XLS** –ROADCLASS

Code	Description	Data Source -https://www.census.gov/
PRIMARY	PRIMARY	https://www2.census.gov/programs-surveys/decennial/rdo/about/2010-census-programs/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	
CROSSOVER	CROSSOVER	
NATIONAL PARKWAY	NATIONAL PARKWAY	
ROUNDABOUT	ROUNDABOUT	

(u) Reference **MS_ADDRESS_SCHEMAS_21.XLS** –SERVICEURN

Code	Description	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-STA012.2.	https://cdn.ymaws.com/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	
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.police	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.psap	urn:nena:service:sos.psap	Route calls to a call taker within a 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.animalcontrol	urn:service:sos.animalcontrol	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 Mississippi Address Standard utilized, in part the research and knowledge acquired from the following states published standards and documentation.

(a) **Arkansas** – Arkansas Centerline File Standard – June 18, 2002 http://gis.arkansas.gov/docs/law/20180606_ACF_Standard_Final.pdf

(b) **Louisiana** – The LA Address Maintenance Plan – A business plan for Statewide Address Management (046-11-4-LA-Bus_Plan_AddressPoints_05122013)

(c) Alabama - *Pending*

(d) **Tennessee** – GIS Data Standards for NG9-1-1 (Version 7.3.3) September 15, 2020 https://www.tn.gov/content/dam/tn/commerce/documents/e911/posts/GIS%20Data%20Standards%20for%20NG9-1-1%20v7.3.3.pdf

NG9-1-1 Standard Update- Existing State Standards Reviewed

(e) **Oklahoma** – Oklahoma Address Standards (Version 2.2) – September 4, 2020 http://www.okmaps.onenet.net/meetings/OK_ADDRESS_STANDARDS_22_InProgress.pdf

(f) **Kansas** – Kansas NG9-1-1 GIS Data Model (Version 2.1) - November 8, 2017 https://www.kansas911.org/wp-content/uploads/2017/11/kansas_ng911_gis_data_model_v2_1_final.pdf

(g) **Iowa** – Iowa Next Generation 9-1-1 GIS Standards – August 2020 https://homelandsecurity.iowa.gov/wp-content/uploads/2020/08/911_IowaNG911Standards.pdf

(h) **Texas** – Commission on State Emergency Communications (CSEC NG9-1-1 GIS DATA Standard) https://csec.my.salesforce.com/sfc/p/#o0000000IPUL/a/1N000000bpOp/AvQWhQomKnq6jTn5.XrDkZdjlW_34LUP5T8rPIcXV78

Section 4.02 Existing Professional Standards Documentation & Legislation

The Mississippi 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) Recommended Standard For Street Thoroughfare Abbreviations – Arkansas reference (NENA-02-002)
- 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 (NENASTA-010.2-2016 (originally 08-03))
- Development of Site/Structure Address Point GIS Data for 9-1-1(NENA-INF014.1-2015)
- 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-006.1.1-2020)
- NENA GIS Data Stewardship for NG9-1-1 – (NENA-INF-028.1-2020) Public Review

(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 2016** - *Supplemental data source only*

(h) **State of Mississippi Legislative Actions**

- Mississippi Senate. 1994 Regular Session, SB722
- Mississippi House of Representatives. 1995 Regular Session, HB1964
- Mississippi House of Representatives. Interim Study, H2003-105
- Mississippi House of Representatives. 2004 Regular Session, HB2457
- Mississippi House of Representatives. 2016 Regular Session, HB3126

Section 4.03 Workgroup Acknowledgements

Mississippi's GIS Community contributed directly to the development of the address standard. This standard was

developed under the authority and guidance of the GIS Council and the volunteered efforts of the following individuals who participated on the Address Standards Workgroup as listed below along with the input from the Mississippi 9-1-1 Addressing Community.

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Kim McCreless	Alcorn County E-911
Annalese Burns	Alcorn County E-911
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Mike Miller	City of Gulfport
Paul Barnes	Harrison County
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Preston White	MEMA
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Jonathan Simon	CMPDD
Tony Wonch	CMPDD
Toby Sanford	GTPDD
Dave Alexander	GTPDD
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David Rankin	GeoSitus
Mark Sanders	Entergy
Jim Steil	MARIS/GIS Council
Mike Cresap	MDOT/GIS Council

9-1-1 Organizations Leadership

Kristen Campanella	Mississippi 9-1-1 Coordinators Association
Paul Harkins	Mississippi 9-1-1 Coordinators Association

2022 GIS Council Members

• Steve Gray	MS Association of Supervisors
• Jim Steil	MS Institutions of Higher Learning - MARIS
• Gary Leblanc	MS Department of Information Technology Services
• David Dockery	MS Department of Environmental Quality - Geology
• Evan Wright	MS Department of Transportation
• Bill Cheney	MS Secretary of State
• Richard Tolbert	MS Development Authority
• Kristyn Gunter	MS Planning and Development Districts
• Blake Pickering	MS Tax Assessors and Collectors Association
• Benjamin Request	MS Municipal League City of Oxford
• Kelle Barfield	Supervisor District 5 Warren County
• Robert Miles	Mayor, Town of Polkville
• Russell Bozeman	MS Forestry Commission
• Stephen McCraney	MS Emergency Management Agency
• Russel Bozeman	MS Forestry Commission
• Laura Hipp	MS Development Authority
• Zachary Musselman	MS Board of Registered Professional Geologists
• Unnamed Senator	MS State Senate
• Unnamed Representative	MS House of Representatives

Mississippi Geographic Information Council

- **Version 1.4 –** Adopted:
  - Version 1.0 Draft Submitted for Public Review: December 2019
  - Version 1.1 based on comments: May 2020
  - Version 1.2 April 2021
  - Version 1.3 based on comments: June 2021
  - Version 1.4 August 2022

Mississippi 9-1-1 Coordinators Association

- **Version 1.4 –** Adopted:
  - Version 1.0 Submitted for Public Review: December 2019
  - Revised Version 1.1 submitted December 2020
  - Version 1.4

Mississippi 9-1-1 Management Authority

- **Version 1.4 –** Adopted:

Section 4.04 Maintenance of the Standard

This standard will be maintained through a partnership between the 9-1-1 Authority and the GIS Council. The partnership will ensure that this address standard is relevant and applicable to the industry.

Article V. Technical Glossary

(a) **Accuracy**

Absolute Accuracy - A measure of the location of features on a map compared to their true position on the face of the earth.

Relative Accuracy - A measure of the accuracy of individual features on a map when compared to other features on the same map.

(b) **Address**

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) **Authoritative Data** - Data created and/or certified by an authoritative/ governmental source.

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

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

(j) **Data Owner** - The authoritative source of the data.

(k) **Data Steward** - The data Steward is recognized by the authoritative source as the official publisher of the data.

(l) **E-911-** (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.

(m) **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.

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

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

(p) **ESB** - (Emergency Service Boundary) The polygon that defines the geographic area of a single emergency response service. (Fire or Law or EMS separately) *Requiredto be separate service layers for NG9-1-1.*

(q) **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).

(r) **ESN** - (Emergency Service Number) The three to five-digit Number assigned to the unique combination of ESB that represent an ESZ polygon. *Required at a minimum as a legacy lookup table for the MSAG.*

(s) **ESZ** - (Emergency Service Zone) The polygon that defines the unique geographic area of the combination of ESB (Fire, Law, & EMS Combined)

(t) **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.

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

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

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

(x) **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.

(y) **MARIS** – (Mississippi Automated Resource Information System) The state of Mississippi GIS clearinghouse of authoritative GIS data.

(z) **MCDEMA** – (Mississippi Civil Defense Emergency Management Association)

(aa) **MCCRSGIS** – Mississippi Coordinating Council for Remote Sensing and Geographic Information Systems (Mississippi GIS Council)

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

(cc) **MEMA** – (Mississippi Emergency Management Agency)

(dd) **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.

(ee) **NENA** – (National Emergency Number Association) 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.

(ff) **NG9-1-1** - (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.

(gg) **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.

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

(ii) **PIDF-LO** - (Presence Information Data Format Location Object) Provides a flexible

and versatile means to represent location information in a Session Initiation Protocol (SIP) header using an XML schema.

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

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

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

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

(nn) **Schema** – Detailed report of a database structure, attributions, and functional relations.

(oo) **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.

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

(qq) **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.