

RURAL ADDRESSING STANDARDS

Navajo Nation Enhanced 9-1-1

INTRODUCTION

The Navajo Nation has initiated a rural addressing initiative in support of moving to an enhanced 9-1-1 system Navajo Nation-wide. Rural Addressing is a prerequisite to enhanced 9-1-1 and the initial phase of the rural addressing initiative is expected to take several years to complete.

The primary goal of the Enhanced 9-1-1 rural addressing process is to link each telephone number to a permanent unique address that is E9-1-1-compliant and clearly identifies where a caller is physically located. This requires the creation of a physical address for any property that currently has a telephone, might have one installed or might be occupied by someone using a cellular phone.

The most important reason for creating physical addresses is to enhance the effective and rapid location of properties by public safety personnel, including law enforcement, fire, rescue, and emergency medical services personnel in the rural areas of the Navajo Nation. The Rural Addressing Standards are further designed to eliminate duplicate or phonetically similar street names, to provide for the uniform marking of streets and roadways, and to provide for the assignment of numbers for all properties and structures throughout the Navajo Nation.

NAVAJO NATION ADDRESSING AUTHORITY

Based on the research results from previous attempts at rural addressing and the criteria for success agreed to with the State of New Mexico, it was determined that the Navajo Nation must establish a permanent organization and institutionalize the necessary processes to maintain the integrity and accuracy of the GIS database, the MSAG, and the E9-1-1 databases.

Hence, the Navajo Nation Addressing Authority (NNAA) was established. A Plan of Operation was developed to establish the roles and responsibilities of the organization, position descriptions were developed, personnel budgets approved, and staffing of those positions commenced in July 2008. The NNAA organization is administratively overseen by a ~~Program & Projects Specialist~~. A Rural Addressing/GIS Coordinator will lead the rural addressing staff. When fully staffed, the organization will also include five (5) Rural Addressing/GIS Technicians, one for each agency and a MSAG Coordinator.

The NNAA was established to provide the overall program management and to develop consistency and continuity of processes for the rural addressing initiative Navajo Nation-wide in support of enhanced 9-1-1.

The NNAA is responsible for establishing the method of road naming and/or numbering and the standards for number assignment.

LOCAL RURAL ADDRESSING COMMITTEE

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Suggested members for a Local Rural Addressing Committee (LRAC or Committee) are included in a separate document -*Local Rural Addressing Roles & Responsibilities*.

The LRAC will be the driving force behind local addressing efforts. The Committee will, among other things, identify those roads to be included in the community's emergency road network and, based upon the Rural Addressing Standards, develop recommendations for the road naming and numbering. Depending on the amount of authority granted to the LRAC, it will make decisions on its own or with approval from its local legislative body.

The Committee must have a designated leader to insure that the community completes its addressing in a timely manner. Communities that have not started the addressing process or are working slowly often do not have a clear leader. Communities with well-organized leaders have generally worked efficiently through the addressing process. It is very important to have one person who can coordinate the process and insure that all the steps necessary for addressing are carefully completed. The LRAC leader generally serves as the community's designated contact person for addressing.

Following completion of the initial roll-out of rural addressing to a community of interest, the LRAC members should remain alert and help the NNAA identify any new dwelling, roads or other landmarks that might need to have a GPS position located and included in the regular maintenance of the rural addressing system updates by the NNAA.

U.S. POSTAL SERVICE

The Postal Service and the community should work closely to minimize the number of address changes postal customers must undergo. While the community is the ultimate authority on assigning physical addresses, it should work closely with the postmaster to insure that addresses being created for Enhanced 9-1-1 are also usable as postal delivery addresses.

ADDRESSING METHODS

The NNAA will be responsible for selecting which type of addressing methods to use for various areas of the Navajo Nation. The reservation is quite large and has a number of towns and villages that would benefit more from block addressing. On the other hand, the Nation also has communities that have less than 500 registered voters with no sub-divisions. These types of areas would benefit more from using Grid Addressing or Equal Interval Addressing methods. Listed below are the types of addressing methods along with their descriptions.

- *Block Addressing*: is most common in cities, towns and other municipalities. Even/odd and logical sequencing rules apply. Blocks increase by predetermined amount (100, 1000, etc.) at intervals and/or intersections. Parallel blocks may have the same addressing but this is not required.
- *Grid Addressing*: is most common in rural areas where roads follow section lines. A grid origin is determined, usually in one corner of the county. Addresses increase at a given interval per grid mile (not necessarily road mile). Addresses increase by predetermined amount (100, 1000, etc.)

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- *Equal Interval Addressing:* is sometimes called the "mile marker" method. It is best suited to areas with an irregular road network that does not follow section lines. Every road begins with "1" and increments at a standard interval per mile of roadway. Even/odd and logical sequencing rules apply. The address number indicates the distance from the road's origin. For example, if the interval is 1000 addresses per mile, an address of 3250 County Road 10 would be located 3.25 miles from the origin of the road.
- *Special Addressing Situations:* refers to unidentified private lanes, trailer courts, marinas, lake or resort development, or other complexes.

Trailer Parks: Trailer parks with already-assigned lot or space number or designators can be given one complex address based on the primary entrance to the park. All lots will use this address along with a lot designator, such as 1054 CR 1430, Lot 7. Trailer parks without assigned lot or space number should be assigned lot or space numbers by trailer park management. Some trailer parks resemble subdivisions more than trailer parks. Block or interval addressing will be used in these cases.

Apartments/Condos: Apartment buildings or complexes should retain already-assigned unit or apartment numbers. The complex can be given one address OR one address for each building, if each building faces a named or numbered road. As in trailer parks, the address will consist of a complex or building address followed by a unit designator, such as 1555 Whispering Hills Dr Apt 4A

Senior Housing: All attempts will be made to retain existing addressing in Senior Citizen housing, while adhering to the rules for apartments described above.

Housing Development: Block or interval addressing is preferred in housing subdivisions or rural developments. Lot numbering should not be used as evens and odds appear on the same side of the road and there is no logical progression of addresses.

Addressing in Surrounding Communities & areas: Addressing on roads which enter Navajo Nation be retained, such that the neighboring county's address system, even if different from your system, should be extended into the county for the sake of consistency. For county line roads, addressing should match the addressing already in place on one side of the road.

Major Roads that Pass Through Communities: For example, communities often rename state or US roads within the city limits. State Hwy 75 may be "Main St" within a corporate limit. With interval addressing, account for the length of the road within the city, even if the road has a different name.

ROAD NAMING AND NUMBERING PROCEDURES

The following guidelines refer to USPS acceptable road names and community designations that are appropriate for Master Street Addressing Guides. Navajo Nation will use postal valid road naming and addressing protocol in their GIS databases. Ensuring postal compliance in MSAGs will help tie GIS data to MSAG data, keeping both in sync, and increasing the 9-1-1 call mapping accuracy in Navajo Nation Public Safety Answering Points (PSAP).

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Recommended Procedures:

- All roads that serve **four or more** addressable structures with different owners will be named regardless of whether the ownership is public or private.
- Each road shall have official correct name. A named road should be essentially **continuous**. A road name can be numbers in some counties.
- Road names can only be changed at a substantial intersection, an ESN, a railroad track or at municipal boundaries.
- No two roads will be given the same name in the same addressing grid. No duplicate road and/or numbers will be accepted, such as Pine Road and Pine Lane.
- No two roads should have similar-sounding names in the same addressing grid, such as Beach Street and Peach Street or Main St and Maine St.
- Translated Navajo name will be allowed with 28-character limit.
- Avoid special characters, such as hyphens, apostrophes, periods, or decimals, in road names.
- The following applies to new roads only:

Avenue: a roadway running principally in a north-south direction (or could be east-west depending on how "street" is defined)

Circle: short road that returns to itself; circular or semi-circular road.

Court: permanently closed road such as a cul-de-sac; dead-end or horseshoe-shaped road

Lane: private road or driveway

Loop: short drive that begins and ends on the same road

Road: all public roadways greater than 2 miles in length and that generally follow neither an east-west, nor north-south direction most common designation; generally, indicates a heavily traveled route

Street: usually found in cities or more congested areas; run principally in an east-west direction (or could be north-south depending on how "avenue" is defined)

Standardized Delivery Address

The Delivery Address line and the last line of addresses should be complete, standardized, and validated with the zip+4 file and city state file. A standardized address is one that is fully spelled out, abbreviated by using the postal service standard abbreviations.

Telecommunications & Utilities
2928 Morgan Blvd.
Window Rock, AZ 86515

Recipient Line
Delivery Address Line
Last Line

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Secondary Address Unit Designators

Secondary address unit designators, such as APARTMENT or SUITE, are preferred to be printed on the mail piece for address locations containing secondary unit designators. The preferred location is at the end of the Delivery Address Line. The pound sign (#) should not be used as a secondary unit designator if the correct designation, such as APT or STE, is known or is shown in the ZIP+4 File.

Examples:

102 MAIN ST APT 101
 1356 EXECUTIVE DR STE 202
 1600 CENTRAL PL BLDG 14
 55 SYLVAN BLVD RM 108

Common Designators: The most common unit designators are:

APARTMENT	APT	UNIT	UNIT
BUILDING	BLDG	ROOM	RM
FLOOR	FL	DEPARTMENT	DEPT
SUITE	STE	PLACE	PL

Directionals

This is a term the Postal Service uses to refer to the part of the address that gives directional information for delivery. There are 8 acceptable pre and post-directionals.

N	(north)	NE	(northeast)
S	(south)	NW	(northwest)
E	(east)	SE	(southeast)
W	(west)	SW	(southwest)

They are limited to two character positions and should not be separated with a space. If a directional word is part of a road name, it should be spelled out such as "North St". If a road that contains a directional word as part of the name also has a pre or post directional, be sure to abbreviate the pre or post directional as in:

W North St	NE Main St
North St E	N South Oak St

Suffixes/Street Types

Every official road name should have a corresponding standard suffix that complies with NENA standards. Common Errors with suffixes in street names:

<u>AVENUE:</u> Correct: AVE is valid Incorrect: AV is not valid	<u>WAY:</u> Correct: WAY is valid Incorrect: WY is not valid
<u>TRAIL:</u>	<u>LOOP:</u>

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Correct: TRL is valid Correct: LOOP is valid
Incorrect: TR is not valid Incorrect: LP is not valid

Recommended road suffix abbreviations

Alley	ALY	Fork	FRK	Pier	PR
Annex	ANX	Fort	FT	Pike	PKE
Avenue	AVE	Freeway	FRWY	Pines	PNES
Beach	BCH	Garden(s)	GDNS	Place	PL
Bend	BND	Glen(s)	GLN(S)	Plaza	PLZ
Bluff	BLF	Green(s)	GRN(S)	Point	PT
Boulevard	BLVD	Grove(s)	GRV(S)	Promenade	PROM
Branch	BR	Harbor	HBR	Rest	RST
Brook	BRK	Haven	HVN	Ridge	RDO
Bypass	BYP	Heights	IITS	Road	RD
Cape	CPE	Highway	HWY	Roadway	RDWY
Causeway	CSWY	Hill(s)	HL(S)	Route	RT
Center	CTR	Hollow	HOLW	Row	ROW
Circle	CIR	Inlet	INLT	Run	RUN
Concourse	CONC	Junction	JCTN	Shore(s)	SHRS
Corner	COR	Knoll	KNL	Springs(s)	SPGS
Court	CT	Landing	LNOO	Square	SQ
Crossing	CRSO	Lane	LN	Station	STA
Cove	CV	Lock(s)	LCKS	Stream	STRM
Creek	CRK	Lodge	LOO	Street	ST
Crest	CRST	Loop	LOOP	Summit	SMT
Crescent	CRES	Mall	MALL	Terrace	TERR
Crossing	XING	Manor(s)	MNR(S)	Thruway	THRW
Dale	DL	Meadows	MOWS	Trace	TRCE
Depot	DEP	Mills	MLS	Trail	TRL
Divide	DV	Mountain	MTN	Turnpike	TRNP
Drive	DR	Neck	NCK	Valley	VLY
Esplanade	ESPLND	Orchard	ORCH	View	VW
Estates	ESTS	Oval	OVAL	Village	VLG
Expressway	EXPWY	Park	PARK	Ville	VL
Falls	FLS	Parkway	PKY	Vista	VIS

Suffixes in "Road Name"

In general, it is recommended that all roads have a suffix, except highways and numbered roads. Suffixes come after a road name body. A road may have only one suffix abbreviation. If a suffix name appears in the body of a road name, it must be spelled out, as in the following examples:

Correct: County Road 422
Incorrect: County Rd 422

Correct: NM Highway 55
Incorrect: NM Hwy 55

Correct: Avenue A
Incorrect: Ave A

Correct: Trail West St.
Incorrect: Trl West St.

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Numbering

Numbers cannot start a road name, unless they are ordinals such as 1st, 2nd, 3rd. Spell out an ordinal (First, Second) only to distinguish it from a "1st" or "2nd" in the name zip code. This will occur where a post office in a larger city delivers to a smaller town with similarly-named streets. The smaller town will use the zip code of the larger city for mail purposes. This rule helps the post office's automatic sorting equipment determine where the house address ends and the road name begins.

Correct: County Road 422 or San Juan 422 Correct: 8th St
Incorrect: 422 Road or 422 Rd Incorrect: 8 St, 8

Punctuations

Punctuation in the entire "Address 1 Line" of a piece of mail is limited to Periods, Slashes and Hyphens. This includes punctuation in address number such as 102 ½ Poplar St. Punctuation in road names should, in general, be discouraged as it plays havoc with auto-locate features for dispatch call mapping. Periods in Road Numbers are postal valid, as in County Road 33.4 but should be discouraged for previously stated reasons.

Correct: Swingers Ln Preferred: Smith Hayden Tri
Incorrect: Swinger's Ln Acceptable: Smith-Hayden Tri

Correct: Majors Rd
Incorrect: Majors Rd/County (The ESN will tell the dispatcher if the road is in the city or the county)

Correct: Amarillo Rd
Incorrect: Amarillo Rd.

Navajo Language Words

There will be no road names with the Navajo Language. The call taker (responder) or the 911 caller might have some difficulties with translating a Navajo street names thus delaying emergency response time. (example: Bi'dahoochii')

Correct: Cudei Rd Correct: Oak St
Incorrect: Ghadii ahi Rd Incorrect: Tse Chil St

Foreign Language Words

Do not use a suffix with a road name where the Spanish suffix is included in the road name.

Correct: Camino del Norte Correct: Calle Maria
Incorrect: Camino del Norte St Incorrect: Calle Maria Rd

Road Name Duplication

For Postal Purposes, road names cannot be duplicated within a single zip code. Road names are considered duplicated if the same road name or same-sounding road name appears with the same or overlapping range in a single zip code.

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Avoid, if possible, using directionals and suffixes to distinguish one road from another. Not only do residents and others frequently drop directionals and suffixes, they often do not appear on Street Signs either.

Duplicates: Gray Rd and Grey Rd (spelled differently but sound the same)
Do they pass Postal Validity?
Probably Should you use them? No

Duplicates: Mary Sue St and Marisue St

Not Duplicates but Avoid: Broadway St and Broadway Ave
N Elm St and Elm Ave
Broad Way and Broadway St

Addressing/Road Naming Standardization

The Post Office has set standard naming protocol for highways in county, state and federal jurisdiction. These are explained more fully in the USPS Publication 28.

Possible Variants	Correct Usage
NM Hwy 55	NM Highway 55 Highway 55 State Route 55 State Road 55

Road Name Length

Different entities have their own rules. Intrado reports a 48-character maximum but 28-26 is more the rule. The longer the road, the more difficult it will be to remember and spell. Keep road name lengths manageable.

LOCATION NUMBERING

All newly addressed locations and newly built structures must be numbered according to the selected addressing grid. Existing sub-developments may continue to use the house numbering pattern established when the sub-development was first addressed. House numbers will be assigned using the following pattern:

1. All house numbers will be 2 to 5 digit numbers.
2. All addresses will be determined from the access road to the property which is most used or most accessible. In areas where there is expected expansion or where the access road serves more than one location, the address may be determined from the occupied or principal structure.
3. Lots or locations on the North and East sides of the road will be given even numbers starting from the north edge of the section and on the South and West side of the road will be given odd

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numbers starting on the west edge of the section.

RURAL ADDRESSING STRUCTURE SIGN

1. Rural Addressing Structure sign numbers shall be displayed so as to be conspicuously visible on the street/road from the direction of the responding emergency vehicle. If the sign on a structure is 150 feet or more away from the street/road or is not clearly visible due to natural features, a driveway sign must be posted on delineator post 3.5 feet to 4 feet above the ground. Driveway sign will be posted on the left side of the driveway entrance. However, sign can be posted on the right driveway entrance if street/road configuration or natural feature causes poor sign visibility. Driveway sign posting is automatic if structure is not visible from the street/road.
2. Any incorrect Rural Addressing Structure sign address shall be removed and replaced with the correct number by the NNAA office within 6 months of notification of the correct address. It shall be the duty of the owner of a structure to post the correct address number of that structure in accordance with the street name sign standards after the initial installation.
3. NENA standards are red background and white reflective address numbers. Each number will be 3.5 inch by 3.5-inch shear cut to size. White reflective numbers will be 3 inches in height.

ROAD SIGNAGE PROGRAM

1. The NNAA upon adoption of these addressing standards, shall institute a program for the installation and maintenance of street name signs with the assistance of Navajo Department Division of Transportation (NDOT).
2. Lettering on street name signs must be at least 6" for upper case and 4.5" for lower case. The signs shall be a minimum of 10" by 24" and a maximum of 20" by 54". Abbreviated lettering to indicate the type of street may be smaller lettering, at least 3" high based on of NDOT standards.
3. Lettering must be of a color contrasting with a reflective background. It is also recommended to use white letters on green background.
4. Capture GPS point location by NDOT for all street/road sign locations.
5. Take photographs of all street/road signs in JPEG.

MAINTAINING THE ADDRESSING SYSTEM

1. Keep addressing records as current as possible .
2. Cross reference spatial data and databases with other entities to compile data associated with new addresses and update their records.

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3. Keep addresses posted in the field.
4. Capture GPS point locations for all new addresses and add it to the GIS and MSAG databases.
5. Add new districts as they become available.