The Enhanced 9-1-1 Addressing Officer Manual

Seventh Edition – November 2015

Public Utilities Commission
Emergency Services Communication Bureau
18 State House Station
Augusta, Maine 04333-0018
www.maine911.com

The Enhanced 9-1-1 Addressing Officer Manual - Edition 5
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1.0 Introduction

1.1 Purpose of the Enhanced 9-1-1 System

Enhanced 9-1-1 (E9-1-1) is an emergency communication system that automatically displays the address of a caller at a 9-1-1 emergency center when called from a wireline telephone. If a caller is hysterical, becomes unconscious, or hangs up, the call taker will know where to send help. This is especially helpful if the caller does not speak English or may be unfamiliar with their location. Dialing 9-1-1 from a wireless phone displays an approximate location on a map based on latitude and longitude coordinates.

The Emergency Services Communication Bureau (ESCB) is responsible for the management and maintenance of statewide E9-1-1 service. The ESCB currently contracts with Fairpoint Communications for E9-1-1 equipment, software, database management and support. Therefore, when a document refers to the E9-1-1 Service Provider it is referring to Fairpoint Communications.

The Emergency Services Communication Bureau/GIS provides mapping and addressing support to towns and PSAPs.

1.2 Purpose of this Manual

This manual is a reference for Addressing Officers (AOs) to assist them in their duties of managing addresses, E9-1-1 roads, and other emergency service information for their city, town, community, or unorganized territory. Most communities have completed the initial E9-1-1 addressing efforts; i.e. the creation of locatable addresses which affords the Maine population the full benefits of an E9-1-1 system.To keep the system working properly the address information and emergency road network must be regularly maintained; this maintenance is the responsibility of the Addressing Officer (AO).

This manual does the following:
1. Identifies the responsibilities of the Addressing Officer;
2. Instructs the AO on how to maintain an address network;
3. Explains the methodology for providing road network and Master Street Address Guide (MSAG) changes to the E9-1-1 system; and
4. Describes the process of keeping the E9-1-1 database current.

1.2.1 Using the Manual

Instructions critical to this system are **bolded** and are to be followed by all AOs. The manual includes some forms; however, it is wise to visit the ESCB Web Site for the most up-to-date versions as these may change over time. For more information on the Enhanced 9-1-1 program, visit the ESCB website: www.maine911.com

You will also find a copy of the Addressing Guidebook online under “For Communities”. This is a primer for creating locatable addresses and is a useful tool for those who are in the initial addressing process. It may also be used as a reference to help Addressing Officers with tricky addressing situations.

1.3 Contact Names and Numbers

There are three groups who have a part in 9-1-1 addressing and emergency response information management for the ESCB. Below is a list of areas of responsibility for each group and their contact information. If you are not sure who the appropriate group would be to contact with your question, please call your ESCB/GIS Coordinator.

For questions on the following:

- Responsibilities of the AO.
- Designating an AO.
- Designating or Changing Emergency Service Zones and Emergency Responders.
- Telephone Company Coordination Issues.
- Database or error correction issues.

Emergency Services Communication Bureau
Phone: 207-287-3831
TTY Maine Relay: 7-1-1
Fax: 207-287-1039

For questions on the following:

- Changes or additions to the E9-1-1 Road Network (MSAG Changes)
- Completing the Maine E9-1-1 Road/MSAG Update Form (less prefered method)
- Using the online Change Request Process* (& training)
- Indicating road updates on maps
- Postal service issues
- Assigning new addresses
- Assistance with addressing or location information
- Issues and questions regarding mapping

Emergency Services Communication Bureau/GIS
175 SHS
Augusta, ME 04333-0175
Toll Free: 1-800-665-2830
Toll Free Fax: 1-866-710-7381
Email: PUC.GIS911@maine.gov
*Change Request Process: https://mangiscrp.ngesi.maine.gov/glserver/

For questions about the Enhanced 9-1-1 databases such as:

- Reporting address changes to the E9-1-1 database
- Requesting copies of an MSAG or telephone number list

FairPoint Database Management Center
Toll Free: 1-866-984-1610
Fax: 1-866-925-3488
Email: fpe911DBMC@fairpoint.com

Deb Wall is the manager of Fairpoint 911 Database Management Group. Her team is responsible for addresses for Fairpoint Communications (formerly Verizon) and, because Fairpoint is the State's E9-1-1 Service Provider, she is also responsible for the operation of the overall E9-1-1 Database.

1.4 Landline Telephone Company Database Contacts

The following table includes contact names for 9-1-1 support from telephone companies (carriers) operating in Maine. Use these contacts to verify, correct or change addresses for those residents where a road name change has occurred, etc. They may also contact you for verificaiton of an MSAG-valid address for their customers.

COID	Company	Phone	Fax	Email
BDF	Great Works Internet	1-800-829-1011 option 9	732-932-0187	Sphilpot@staff.gwi.net
FAIR	FairPoint** (former Verizon)	1-866-984-1610	1-866-925-3488	fpe911dbmc@fairpoint.com
CHINA, CST, MAINE, NM237, NM238, SID, STND	FairPoint** (formerly China, Community Service, Maine Tel, Northland, Sidney, and Standish) ***The 2 FairPoint are the same company but some functions, including database, are still operated separately*	(716)326-1241	(207) 377-1319	kwall@fairpoint.com
CMCST	COMCAST	720-267-1524	720-267-1026	e911_support@cable.comcast.com
CRCME	OTT Communications (formerly Pine Tree Networks or Country Roads Comm.)	(207) 688-8811 ext. 8802	(207) 688-8833	maggie.willette@ottcommunications.com
CTCG/HOC	Choice One/One Communications	585-530-2670	585-278-1751	e911team@onecommunications.com
MCI	Verizon Business			
MIDME	Mid Maine Communications	(207) 992-9959	(207) 992-9997	e911@midmaine.com
OXNET	Oxford Networks	(207) 333-6300 ext 3024	(207) 333-3489	jwilliams@oxfordnetworks.com
PUA	PAETEC Communications			e911@paetec.com
TDS	TDS Telecom	(765) 522-0211	(608) 830-5572	mary.rux@tdstelecom.com
TWT	Tidewater/Lincolnville Telephone Company	(207) 380-9927	(207) 563-9936	anne@lintelco.net
UNITY	Unitel, Inc.	(207) 948-3922	(207) 948-3021	unitel911@uninet.net
UNRV	Union River Telephone Company	(207) 584-9911	(207) 584-9997	pleighton@rivah.net

1.5 Glossary of Enhanced 9-1-1 Terms

Addressing Coordinator:

The Addressing Coordinator is a representative designated by the community to be the contact person for address-conversion efforts going on at the ESCB. This local contact person may or might not be the community AO. Typically, when a town completes an address-conversion, the responsibilities for managing E9-1-1 address information transfers from the Addressing Coordinator to the AO.

Addressing Officer (AO - Municipal or County):

The AO is a representative designated by the community to be responsible for all issues involving the development and maintenance of E9-1-1 address information for the town. In areas of the state where unorganized territories exist, Counties will designate a representative to manage township addresses.

ALI (Automatic Location Identification):

The ALI is a system-capability that enables an automatic display of information defining the geographical location (e.g., a street address, or lat/long for wireless calls) of a 9-1-1 caller. This feature is available in E9-1-1 systems. When the address in the ALI database does not match what a caller says is his address then a report called an ALI Discrepancy is created by the call-taker at the PSAP. The AO may be asked to help resolve these database discrepancies.

ANI (Automatic Number Identification):

The ANI is a system-capability that enables the automatic delivery of the ten-digit (call back) number of the 9-1-1 caller. This feature is available in E9-1-1 systems.

Community

A community equates to any municipality, plantation, or unorganized township in Maine.

Emergency Services Communication Bureau (ESCB or "the Bureau"):

The ESCB is a bureau within the Maine State Public Utilities Commission (PUC) and is responsible for provisioning and managing E9-1-1 in Maine. It is often referred to as the Maine 9-1-1 Bureau. www.maine911.com

Emergency Road Network (E9-1-1 Road Network)

The E9-1-1 Road Network includes all public and private roads that emergency vehicles might travel when responding to a call. The roads to be included in a community's emergency network are determined by the municipal AO. These roads will have address ranges assigned to them.

Enhanced 9-1-1 (E9-1-1):

E9-1-1 is an improved emergency communication system which automatically displays the location and phone number of a 9-1-1 caller at a call answering center, known as a Public Safety Answering Point (PSAP). E9-1-1 also automatically routes a 9-1-1 call to the appropriate PSAP based on the address of the caller or on the tower location for wireless calls. (see NextGen9-1-1)

Enhanced 9-1-1 (E9-1-1) **SERVICE PROVIDER:**

The E9-1-1 Service Provider for Maine is FairPoint Communications, Inc., by contract with the ESCB. The Service Provider supplies the E9-1-1 equipment, software, database management, system maintenance, and support.

ESZ (Emergency Service Zone):

An ESZ defines a geographical territory consisting of a unique combination of town, law enforcement, fire department, EMS, and ambulance or medical transport coverage areas. Each town in Maine has at least one ESZ (polygon). Some towns have more than one because different emergency service providers are needed to

respond to different parts of the town. An ESZ is identified by an Emergency Service Number (ESN). An ESN associated with each street address range is used to route a call to the appropriate PSAP and to populate “hot buttons” for the call-takers. These “buttons” are used to dispatch the correct responders to an area based on the caller’s needs and location.

Geographic Information System (GIS):

GIS is the graphical mapping system where road-data and ESNs are tied to an electronic map of Maine. The E9-1-1 Road Network is maintained by GIS at the ESCB. Aerial photos are also used in GIS to help locate roads and structure-based addresses. At the PSAP, a caller’s location is automatically mapped which in turn assists in directing emergency responders to the scene based on Emergency Service Zones (ESZs) of coverage (polygons in the GIS system).

Global Positioning System (GPS):

GPS is a constellation of 24 satellites orbiting the earth at 10,900 nautical miles. These satellites emit signals that are monitored by special receivers which are used to locate the geographical position of the receivers. GPS is sometimes used to provide the latitude and longitude of a wireless caller. However, since wireless companies use different technologies (like triangulation, for example), the accuracy of the caller’s location may be not be exact.

Landline (or Wireline):

Landline service equates to traditional telephone service (also known as wireline). With landline service, the address is associated to a telephone number which will display in the ALI window on the call-takers screen. The call will map using the physical address range from the Master Street Address Guide (MSAG) associated with that telephone number.

Master Street Address Guide (MSAG):

The MSAG is a computerized geographical file or database which consists of official street names, address ranges, and ESZs within Maine’s 9-1-1 system or area (statewide). The MSAG is utilized by landline and VoIP carriers to validate addresses provided by their customers and this database is key to the selective routing capability of the E9-1-1 system which requires constant updating to keep addresses valid. Municipal AOs mostly provide updates to the MSAG via the ESCB/GIS Change Request process online (preferred method). Please contact an ESCB/GIS Coordinator for help with the Change Request process especially if you haven’t been through their training program.

NextGen 9-1-1

First there was Basic 9-1-1, then E9-1-1, and now there’s NextGen911 (NG9-1-1). The NG9-1-1 system uses newer technologies such as closed IP networks to process 9-1-1 calls and, once fully matured, will deliver other types of 9-1-1 calls like text messages, images, and video. The NextGen system puts more emphasis on GIS and mapping to route calls to the appropriate PSAPs. NG9-1-1 currently

accepts text messaging for most carriers. However, some upgrades and standards in the telecommunications industry still need to be developed.

Public Safety Answering Point (PSAP):

A PSAP is a centralized office where 9-1-1 calls are initially answered. In Maine there are currently twenty-six (26) PSAPs statewide. They may be State (Dept. of Public Safety), Municipal (town police dept.), or County departments operating the 9-1-1 call-answering centers.

Selective Routing (SR)

Selective Routing is an E9-1-1 feature that allows for calls to be routed to the appropriate PSAP based on the address of the caller and utilizes ESZs. For wireless calls routing is based on the physical location of the carrier-cell-tower which the actual 9-1-1 call hit.

Voice Over Internet Protocol (VoIP):

VoIP is a type of telephone service that uses Internet Protocol (IP) to send and receive voice calls. VoIP 9-1-1 calls will display both an address and a latitude/longitude coordinate.

Wireless Telephone Service (cell phones):

Wireless telephone service uses cell-towers to send and receive calls. Wireless calls display an ALI with a latitude/longitude coordinate which is used to plot the call location on the map. The ALI displays the address of the cell tower used to deliver the call in a Phase 1 instance (also referred to as WPH1). Wireless Phase 2 calls (known as WPH2) will map at the caller's location. All cellular phone services in Maine are now capable of achieving Phase 2 locations (the location of the caller) but this may be affected by signal strength, building or structural interference, &/or the technology of the cell-phones themselves (GSM, CDMA, LTE, etc.)

2.0. The Addressing Officer

2.1 Responsibilities of the Addressing Officer

The Addressing Officer (AO) is responsible for creating and providing address information to ESCB/GIS and FairPoint and must have signature authority on behalf of the community for doing so. Therefore, each municipality and plantation must designate an official AO. County Commissioners with populated unorganized territories must also designate an AO to serve its unorganized townships.

The basis for this position and its responsibilities are found in the rules originally adopted by the ESCB in 1996, pursuant to 25 M.R.S.A. § 2926.

Typical responsibilities of the AO include:

1. **Assigning addresses and communicating new addresses to town residents.** For new dwellings, a physical address must be provided to the telephone carrier in order for the resident to procure landline or VoIP telephone service. The AO will assign addresses to residents and will notify them in writing of their new address. (See Section 3.1 for more details).

2. **Approving and providing correct road name and number range information.** For any new road, road name change, address range change, or road jurisdiction change (public or private, etc.), an MSAG Update form must be sent to ESCB/GIS immediately.

3. **Providing updates on changes to address ranges as they occur or providing verification at least annually.** Anytime a town adds a new road or changes an address range (i.e., a road is extended or closed), the AO must notify the ESCB/GIS immediately. Road updates are to be coordinated with the town Road Commissioner or Public Works Director so that the needed information may be supplied via the online Change Request Process.

4. **Verifying and/or correcting addresses with the local phone company or with ESCB.** This critical step helps to ensure that our database contains the correct name and location of an emergency caller. The ESCB may reach out to the AO when addresses supplied by customers or telephone service providers are in question and need to be verified, or when cell tower addresses are needed.

5. **Indicating the community's Emergency Service Zones (ESZs).** An ESZ is a geographic area in a community comprised of specific roads and ranges of addresses that are served by a unique combination of police, fire, EMS, and medical transport agencies. Most towns will have just one ESZ because the same police, fire, EMS, and ambulance agencies service the entire town. However, a town that is served by two ambulance services would have two ESZs. As an

example, a town with a lake in the middle of it may have one ambulance company respond to the east side of the lake while another ambulance service may respond to the rest of the town based on access roads. It is the AO's responsibility to notify the ESCB in writing when the town intends to make any changes in emergency response coverage.

6. **Resolving discrepancies that arise with any addressing information in the Enhanced 9-1-1 databases.** An AO may be asked to resolve problems with addressing information discovered by the E9-1-1 system. For example, if a caller's address on the 9-1-1 map does not match the address reported by the caller, or the address doesn't map or is missing, then the AO may be asked to help resolve the discrepancy, called an ALI DR (or discrepancy report).

7. **Acts as a local guide for collection of new or missing road data.** The ESCB periodically collects new or missing road data by using GPS technology. The AO may need to act as a local guide or make arrangements for another person to assist the Bureau in collecting this information for the road centerline maps.

8. **Other duties of an AO may include:**
   - Answering citizens questions about addressing.
   - Monitoring local development activities with the planning board, CEO, town planner, or city engineer for the creation of new roads and subdivisions, and to assign new addresses.
   - Calculating, measuring, and issuing property numbers.
   - Updating the community's address database as needed.
   - Communicating changes in road maintenance jurisdiction (see Road Update Form & the online Change Request Process).

   Many communities designate an AO who is able to routinely assign property addresses &/or issues building permits. In many cases, the AO is the tax assessor, code enforcement officer, public works director, or in some cases, the chair of the Board of Selectmen. These people have first-hand-knowledge of new developments within the community. Other communities install police, fire, or rescue chiefs as the AO because these people understand the importance of complete and accurate addressing information. However, if an emergency department head is assigned this task, then an internal process may need to be developed to keep this person informed of developments within the town.

2.2 Appointing or Changing An Addressing Officer

Anytime there is a change of AO a new form must be completed and returned to the ESCB. The current version of the "Addressing Officer Confirmation Form" may be found on the next page. The most current form is also available on the ESCB website at: www.maine911.com/communities/index.htm.

To find out who the current AO is for your community visit the ESCB website at: www.maine911.com/communities/911contacts.

When filling out the AO Appointment Form please indicate the municipality/town or county (in the case of unorganized territories) that the appointment represents. To avoid confusion between similarly named towns and counties, please indicate whether or not the appointment is at the county or town level by checking the appropriate box on the form.

Emergency Services Communication Bureau

ADDRESSING OFFICER CONFIRMATION FORM (or Alternate AO)

The following individual being designated as an Addressing Officer is authorized to approve and provide addressing information to the Emergency Services Communication Bureau for Enhanced 9-1-1 purposes.

Please Note: This form may also be used for an Alternate AO where more than one person is needed to cover a given territory. Please check the box indicating this on the form.

Municipality & / or County Represented NOTE: If this appointment is for a County AO (multiple towns/townships), then please indicate this by checking the Town or County box to the right. (please check the box)				
Municipality or County				☐ Town ☐ County
Addressing Officer Information			Is this for an Alternate AO? ☐ Y ☐ N	
First Name	MI	Last Name	Suffix	Title
Address				
City			State	Zip
Phone			Fax	
Email				
Authorization				
Signature of Authorizing Official*			Title	
Printed Name of Authorizing Official			Date	

* Authorizing Officials can either be the Chief Administrative Officer or Chief Elected Official.

Please sign and return to:

Emergency Services Communication Bureau
18SHS
Augusta, ME 04333-0018

Or email a copy of the completed form to jeanne.locke@maine.gov

ME PUC Fax #: 207-287-1039

2.3 Administrative Rules Relating to the AO (Municipal Coordinator)

The basis for AO responsibilities is found in Chapter 1 operating rules adopted by the ESCB in 1996 and pursuant to 25 M.R.S.A. § 2926[1]. The following sections detail the responsibilities for municipalities and AOs regarding the maintenance of E9-1-1 address databases.

§6. Procedures for Developing and Maintaining Address and Routing Databases.

1. Address and Routing Database Development.

A. Physical Addresses. *Each municipality participating in the Enhanced 9-1-1 system shall provide the Bureau with a list of accurate physical addresses for all published residential and business telephone subscribers and coin-telephones within its municipal boundaries. These addresses shall be linked with responding telephone numbers in telephone companies customer service databases.*

B. Master Street Address Guide. *Each municipality participating in the Enhanced 9-1-1 system shall provide the Bureau with accurate roadnames, number ranges, and emergency service zones (ESZ) for the purpose of creating the Master Street Address Guide (MSAG). The MSAG shall be used to route 9-1-1 calls to the proper PSAP and display the correct ANI/ALI information.*

2. Address and routing database maintenance.

A. ***Municipal Maintenance.*** *After establishment of the MSAG, each municipality participating in the Enhanced 9-1-1 system shall continue to verify the accuracy of the routing information contained in the MSAG and to advise the Bureau, on an as-occurred basis, of any changes in road names, the establishment of new roads, changes in address numbers used on existing roads, closing and abandonment of roads, changes in police, fire, emergency medical service or other appropriate agencies, jurisdiction over any address, annexations and other changes in municipal and county boundaries, incorporation of new communities or any other matter that will affect the routing of 9-1-1 calls to the proper PSAP.*

§7. Procedures for cooperation and coordination with telephone utilities and municipalities for implementation.

1. Municipal Coordinator (Addressing Officer). *Each municipality participating in the Enhanced 9-1-1 system shall designate an individual to serve as its Municipal Coordinator (Addressing Officer) for all issues involving the development and maintenance of address information for the Enhanced 9-1-1 addressing and routing databases.*

2. Database Maintenance. *Each Municipal Coordinator (Addressing Officer) shall notify the Bureau and Service Provider of any changes, deletions and additions to the MSAG on an as-occurred basis. The Service Provider shall update the MSAG within 24 hours of notification by a municipality. Each municipality shall review the MSAG yearly, at a minimum, to ensure accuracy of the data and the emergency service zones.*

[1] http://www.maine911.com/laws_rules/rules.htm

3.0 Maintaining an Addressing System

Below are instructions for maintaining an addressing system. Communities may need to tailor these recommendations to meet their needs.

Communities must develop a process for assigning addresses so that all internal departments and external agencies; i.e., ESCB/GIS, U.S. Postal Service, and telephone companies, are notified as needed.

3.1 Assigning a New Address

1. When a request is made for an address assignment, the property location should be obtained along with any identifying structures or landmarks that may help locate the new structure requiring the address.

   New addresses should always be verified in the field to be sure that addresses have been assigned sequentially and on the correct side of the road.

2. New address requests should be handled the same day they are received whenever possible as residents may be awaiting telephone service which is dependent upon an accurate address.

3. Creditable measuring devices, such as a “Ready Wheel” that measures road frontage, should be used to help assign addresses.

4. Use Appendix C, Road Measurements and Property Numbers tables, to calculate addresses (or house numbers).

5. Review your calculations to ensure that no other addresses have been impacted with the addition of this newly assigned address. You may need to check road-ranges and road-names or see if it is cause for a new road. The address-range should be checked between intersections as well as from the road’s origin to the road’s end. If it is a new road or a road’s address-range has been affected, you will need to notify ESCB/GIS immediately to get it rectified. Use the “Maine E9-1-1 Road/MSAG Update Form” or the online Change Request process to submit your edits (see Section4.3 – Road Change or Update Process).

   It is the responsibility of the ESCB/GIS to update the changes to the E9-1-1 Service provider within one business day of receiving the change forms needed to make the change. If you have a more immediate need then please indicate this on the form. Missing information can delay updates.

6. Assign the address and notify the customer in writing of their new address (see Appendix B for a sample address-notification letter.)

7. Send a copy of the notification-letter to the following agencies or departments

   - To the local postmaster by mail and on town letterhead.
   - The tax clerk or assessor.
   - The town/city clerk.
   - The registrar of voters.
   - Other appropriate local agencies or internal departments.

8. Immediately update the town's address map, tax database, and address database (if separate from the tax database).

3.2 Changing An Existing Address

Changing existing addresses should only be done on records where previously issued addresses are now causing problems for emergency responders, postal delivery, or where the building density has increased to the point where the initial addressing increments no longer work. Although a community has the authority to change a road name, it is not popular among residents or emergency responders. If you have a situation where existing residents' addresses need to be fixed, feel free to call the ESCB/GIS group for help.

- If a road name or address range of a road needs to be changed, you must notify the ESCB/GIS using the Road/MSAG Update Form or via the online Change Request process. Contact the ESCB/GIS for the person who deals with your area.

- If a road name or range is not affected by a change, and only individual addresses are affected, you need only to follow steps 6 though 8 above. However, if an address is reassigned, you will need to provide the ESCB/GIS unit of this change so that they may update the point (or structure) layer of the MSAG.

3.3 Confidentiality of 9-1-1 ALI (Automatic Location Identification) Data

The ALI database includes customer names, addresses, and telephone numbers for all landline subscribers in the state. This database is utilized by the E9-1-1 system to display addresses associated with telephone numbers at the PSAPs in the event of an actual 9-1-1 call.

25 MRSA §2929 defines confidential information to include, "names, addresses, and telephone numbers of persons listed in E9-1-1 databases."

While Fairpoint and the ESCB can provide this information to AOs, the information may only be used for address validation purposes and may not be shared by the AO for any other reason.

When an AO requests a copy of his/her community's ALI database, all telephone numbers that are coded as "unlisted" or "unpublished" need to be redacted from the list. Once the AO is finished with the list it should be destroyed to protect confidential information.

For more information on the confidentiality of 9-1-1 data see Appendix A.

4.0 Maintaining the Emergency Road Network

To ensure a properly working E9-1-1 system the road network, corresponding address-range information, and the Master Street Address Guide (MSAG) must be updated as changes occur. **Please notify the ESCB/GIS unit when any of the following occurs:**

- A new road is created.
- A road name is changed.
- A road is extended.
- A road is closed.
- An address-range change occurs.
- A road is wrongly located on a map.
- The jurisdiction of a road changes (public, private, summer-only, or year-round maintence.)

Whenever a new road and address-range is developed it's generally a good idea to have the United States Postal Service (USPS) review it, particularly if a Post Office serves more than one town. This may help to prevent mail delivery problems in cases where the same road name is used by two towns served by the same Post Office.

Town AOs may ask Fairpoint or the ESCB for their town data in order to review their town's MSAG, ALI database, and/or ESZs. If so, these may be provided to them without incident (refer to section 3.3 for confidentiality restrictions). Also, the ESCB may ask a town to verify their data. All of this is acceptable useage of this confidential database. (See Section 5 for more information on ESZs.)

4.1 Partnership Between ESCB and MaineDOT

In 2009, the ESCB joined with MaineDOT in the maintenance of a statewide road inventory. This partnership coordinated work between two separate state agencies in an effort to minimize duplication while improving accuracy. If your town changed the jurisdiction of a road (ex: "public" to "private" or "summer-only" to "year-round maintenance"), even if the road was not physically changed, that change should be reported to ESCB/GIS. Updating road information as changes occur will assist municipalities in receiving correct Urban Rural Initiative Program (URIP) payments which help towns maintain their roads since the payments are based on the number of lane-miles of public roads as tracked by MaineDOT.

To make this work, a single road update process was developed. This is why the road jurisdiction was added to the forms and to the change request process. **AOs must now coordinate with their Public Works/Road Commissioner to keep road jurisdiction updated.**

4.2 The MSAG

The Master Street Address Guide (MSAG) is a database that contains all valid community names, street names, address ranges, and ESNs statewide. It is used by telephone companies to validate addresses when assigning telephone service to their customers. It is currently maintained by ESCB/GIS.

The MSAG follows industry standards for database format and road naming and labelling conventions. A great example of this is the road-name suffix which follows the USPS standard of abbreviations. In the MSAG you will see “LN” for “lane”, and “RD” for “road”, etc., even though the street signs in town may have spelled them out. Standardization is needed because of the many possible variations which can make mapping difficult. The E9-1-1 system utilizes the MSAG for address validation. (See Appendix E).

4.3 Road Change or Update Process

Road network changes need to be sent to the ESCB immediately so that the MSAG may be corrected as soon as possible.

Changes must be reported on the Maine E9-1-1 Road Update/MSAG Form or online via the Change Request Process. When possible, a **map should be attached to the form (especially for physical changes to a road) and sent to the ESCB/GIS unit**. This form may be faxed, mailed, or emailed to the ESCB or completed online as part of the Change Request process. Paper forms must be signed. The form is also available electronically at http://www.maine911.com/communities/forms.htm.

Upon receipt of the change request ESCB/GIS will record the change with the E9-1-1 Service Provider within one business day. **Failure to provide the ESCB/GIS with this information may delay installation of phone service &/or negatively impact an actual 9-1-1 call.**

In some cases the AO may need to provide additional information such as a copy of the appropriate page from the town’s E9-1-1 map book with the sketched-in changes clearly indicated on the sheet.

Email, mail, or fax the completed Maine E9-1-1 Road/MSAG update forms to:

Emergency Services Communication Bureau/GIS:
175 SHS Augusta, ME 04333-0175
Community Addressing/GIS Phone: 1-800-665-2830
Community Addressing/GIS Fax: 1-866-710-7381
Email: PUC.GIS911@maine.gov

Maine Enhanced 9-1-1 & MaineDOT Road / MSAG Update Form

(use a separate form for each request & attach a copy of map, sketch, or plan)

SECTION 1: Contact Information	**Today's Date:**
Community:	**Effective Date:**
Daytime Phone:	**E-Mail:**
Printed name of Addressing Officer:	**Signature of Addressing Officer:**

SECTION 2: Complete the appropriate section for the change request

☐ **A. New Street** Is This Street Public: Y or N	
1. Street Name:	2. Length:
3. Intersected Street & Address:	
4. New Address Range- Low: High: Circle One: odd even both ESN:	
5. If Maintained by Town, Circle One: year round summer only winter only	

☐ **B. Street Extension** Is This Street Extension Public: Y or N	
1. Street Name:	2. Length Added:
3. Old Address Range- Low: High: Circle One: odd even both ESN:	
4. New Address Range- Low: High: Circle One: odd even both ESN:	

☐ **C. Street Name Change** Is This Street Public: Y or N	
1. Old Name:	2. New Name:

☐ **D. Delete Street** Was This Street Public: Y or N	
1. Street Name:	2. If Partial; List Length Removed:
3. Old Address Range- Low: High: Circle One: odd even both ESN:	
4. New Address Range- Low: High: Circle One: odd even both ESN:	

☐ **E. Address Range Change**	
1. Street Name:	
2. Old Address Range- Low: High: Circle One: odd even both ESN:	
3. New Address Range- Low: High: Circle One: odd even both ESN:	

☐ **F. Street Jurisdiction and/or Maintenance Change**	
1. Street Name:	2. If Partial; List Length Changed:
3. Old Jurisdiction: private public	4. New Jurisdiction: private public
5. Old Maintenance by Town: year round summer only winter only none	
6. New Maintenance by Town: year round summer only winter only none	

Remarks / Other:

☐ **MaineDOT Jurisdiction / Node Map** If you need this type of map, check off this section.

SEND TO: Emergency Services Communication Bureau/GIS,
175 SHS, Augusta, 04333-0175
FAX: 1-866-710-7381 (toll free) E-Mail: PUC.GIS911@maine.gov

Maine Enhanced 9-1-1 Road/MSAG Update Form Instructions

General Instructions:

1. Indicate only one road-change per form.
2. This form must be signed by the municipal AO. If emailing an electronic copy of the form the ESCB/GIS will accept an unsigned version of the form if the email address reflects the address in the Bureau's database. *If you are an agent acting on behalf of an AO, a letter stating the delegation of authority must accompany the changes. A municipality needs to advise the ESCB of any changes to the assignment of their AO. Call or complete the AO confirmation form contained in this manual.*
3. Complete the forms and provide additional information in the "Remarks" section, or you may add additional sheets of paper as needed.
4. **Provide a copy of the map-page with a sketch, or a plan to help explain road changes.**
5. Keep a copy of your completed forms for your records.
6. Email, fax, or mail the completed form(s) to the ESCB/GIS.

Section 1 -- Contact Information

Contact information must be provided by the designated AO and a daytime phone number should be used. If that is not possible, then indicate the hours the AO is available using this number. Please include a current email address as that is often the most expedient communication method available.

At times an AO may be aware of some up-and-coming changes and may wish to submit edits to the ESCB ahead of time. The forms have two dates to allow for an entry for a future effective date.

Section 2 -- Type of Road Change

In most cases a change may be recorded using just one section of the form (A through F). Read each section to determine which part is the most appropriate to communicate the road-change. Complete the appropriate section and use the "Remarks" section if a change does not fit anywhere else or if additional information is needed pertinent to the change.

A. **New Street** -- This section should be used if adding a new road to a municipal emergency road network, regardless of whether it is a public or private way**. It is of utmost importance to indicate whether the road is public or private**. If you do not know, consult with your Public Works/Road Commissioner.

1. **Street Name** – Be sure to include the Street suffix (St, Rd, Ln, etc.)
2. **Length** – Please include the unit of measurement used to determine road length; i.e., feet, miles, etc. and check the placement of decimal points.
3. An **Intersecting Street Address** – Is needed to map a new road because it designates the place along the <u>main</u> road where the new road is joined. If your town follows the ESCB road-numbering convention, then the addresses

will be even on the left side with odd numbers on the right side of the road, when traveling from the center of town outwards toward town boundaries.

4. **New Address Range** – Please provide the lowest-to-highest possible house numbers for any given road, then circle the range (odd, even, or both). Most roads will be both, but many roads (like those surrounding lakes) may have only odd or even numbers designated. A road that runs along a townline may have one side of the road addressed to the next town over. An ESN, which refers to an Emergency Service Number (see Section 5) is assigned to the town by ESCB/GIS. Most towns have one ESN for the entire municipality. Check with ESCB/GIS to make this determination.
5. **Jurisdiction/Maintenance** – Check with your Public Works office or your Road Commissioner to determine whether the road in question is maintained by the town or will be privately maintained.
6. A copy of a **map or sketch** of the new street should accompany each road Change Request.

B. **Street Extension** -- **I**f you are adding length to a road you will need to indicate the old address range and the new address range. Please include units of length in the length added field and only include the amount you are adding to the road. Again, please indicate whether this new section of road is public or private.

C. **Street Name Change** -- This section is used for all road name changes. A change in street suffix (ST, RD, or LN for example) or pre-directional (E, W, S, or NW, etc.) is considered to be a road name change. (Example: Smith LN to Smith ST or E Smith LN to Smith LN.)

D. **Delete Street** -- This section is used to remove a road or part of a road from the emergency road network. Sometimes a road is abandoned or closed permanently; this section is used to designate that type of change. Please verify that previous addresses (to be deleted) have been reassigned to other roads.

E. **Address Range Change** – If an address range change is needed for an existing road without changing the length of the road, use this section. An example of this might occur when the addressing increments (road footage) used to number structures no longer workds because the area is too densely populated to accommodate any new structures or driveways. The AO may need to re-address the structures along a road using the 25-foot increment as opposed to the 50-foot increment.

Also use section B when a new structure is built beyond the current range of the road. For example, if the current range is 3 to 75 and someone builds a home at the end of the road past #75, then the AO would need to complete this section to increase the road-range (from 3 to 75) to 3 to 77 or whatever.

F. **Street Jurisdiction and/or Maintenance Change** – Use this section to indicate jurisdiction and maintenance changes. An example of this would be when a road changes from private to public jurisdiction, or vice versa, affecting the

maintenance of the road. If the town used to maintain the road in “summer only” but now will be maintaining it “year-round”, use this section to make that change.

If the maintenance or jurisdiction is changing for only part of the road, then indicate the length of the part that is changing and include the unit-of-measure (feet, miles).

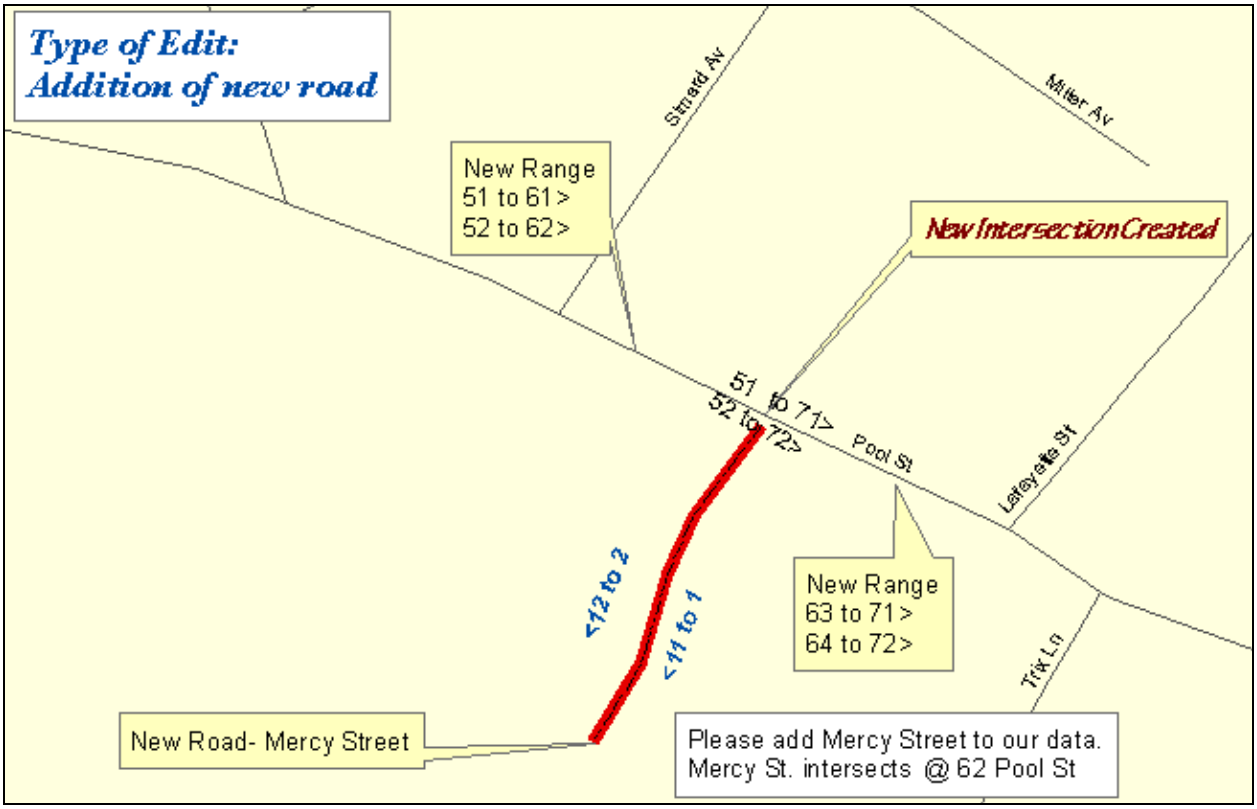
Remarks -- Use this area for additional information regarding the change or use it to assign individual addresses. Please include a copy of the notification letter received when asked to assign addresses. The ESCB/GIS will validate them against the MSAG to ensure that the addresses will map properly during an actual 9-1-1 call.

MaineDOT Jurisdiction/Node Map – Use the checkbox to request a map showing public road jurisdictions (State Hwy, State Aid, Townway) and DOT nodes (numbers at intersections).

Send the completed form and accompanying materials to ESCB/GIS or go online and use the Change Request process to complete your road edits.

Samples of various edits along with corresponding completed forms may be found on the following pages. For more information visit the ESCB/GIS website at: http://www.maine911.com/communities/addressing.htm

4.4 Examples of Using the MSAG/ROAD Update Form to Indicate Road Changes



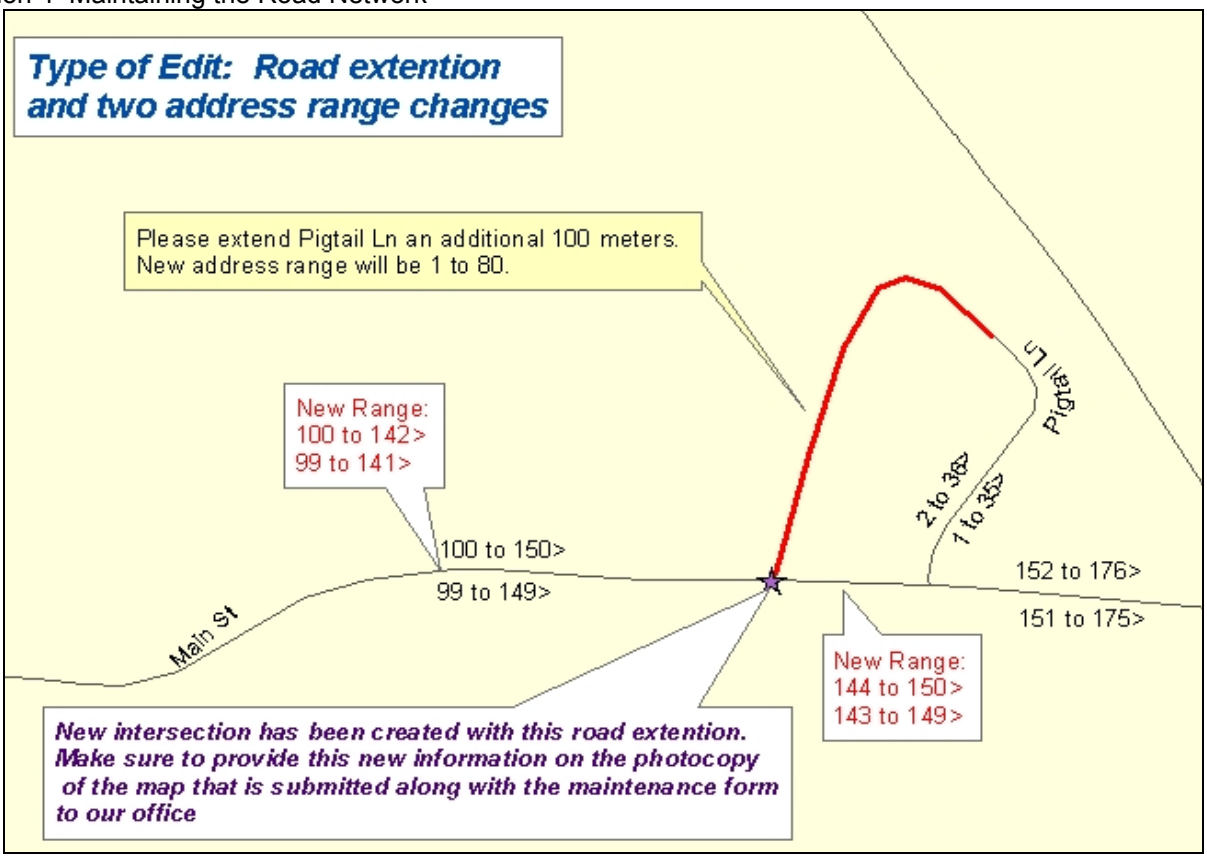
A. Adding a Road/Street:

Map Edits:

- Carefully draw the road on a map or use a copy of an updated tax map.
- Indicate the name of the new road.
- Print the address range for each new street segment (intersection to intersection) for both left and right sides of the new road.
- Print the address for the intersection location (#62 in the example).
- Update the address ranges on the intersecting road (Pool St)

Maine Road/MSAG Update Form:

☐ **A. New Street** Is This Street Public: (Y) or N	
1. Street Name: *Mercy Street*	2. Length: *600 ft*
3. Intersected Street & Address: *62 Pool St*	
4. New Address Range- Low: *1* High: *12* Circle One: odd even (both) ESN: *52*	
5. If Maintained by Town, Circle One: year round (summer only) winter only	



B. Road Extension with Address Range Changes

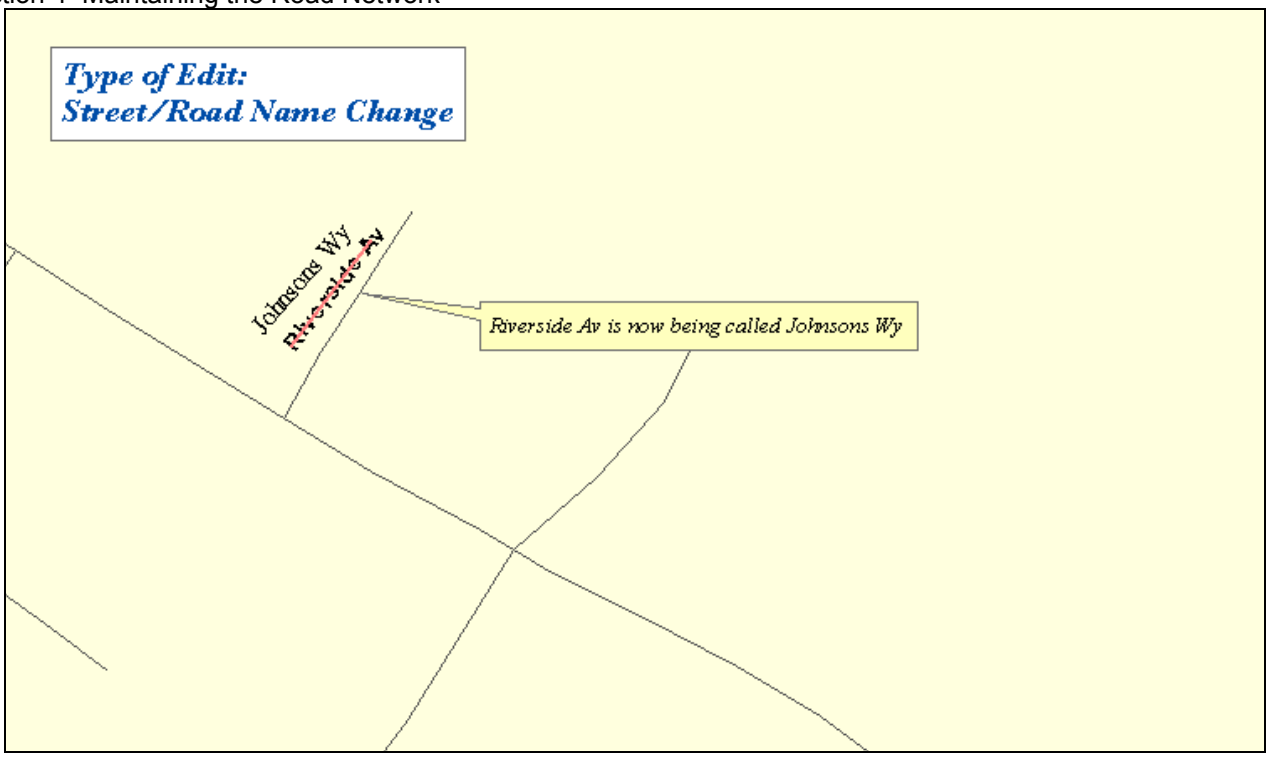
Map Edits:

1. Carefully draw the road extension on a copy of the map. Indicate the new address range for the road (Pigtail Ln)
2. Note the address of the newly created intersection (144 Main)
3. Note the new address range breaks caused by new interesection (Main St)

Maine Road/MSAG Update Form:

☐ **B. Street Extension** Is This Street Extension Public: (Y) or N	
1. Street Name: *Pigtail Lane*	2. Length Added: *100 meters*
3. Old Address Range- Low: 1 High: 36 Circle One: odd even (both) ESN: *42*	
4. New Address Range- Low: 1 High: 80 Circle One: odd even (both) ESN: *42*	

Remarks:
The extension of Pigtail forms a new intersection at 144 Main St



C. Street Name Change:

Map Edits

- Cross out the part of the road name that is incorrect.
- Write the correct information next to the printed name.
- Use hatch marks to show extent of road if it might otherwise be confusing.

Maine Road/MSAG Update Form:

☐ **C. Street Name Change** Is This Street Public: Y or N	
1. Old Name: *Riverside Avenue*	2. New Name: *Johnson Way*

Remarks:
Town changed road name to eliminate similar sounding/duplicate road name within the town.

D. Deleting a Road:

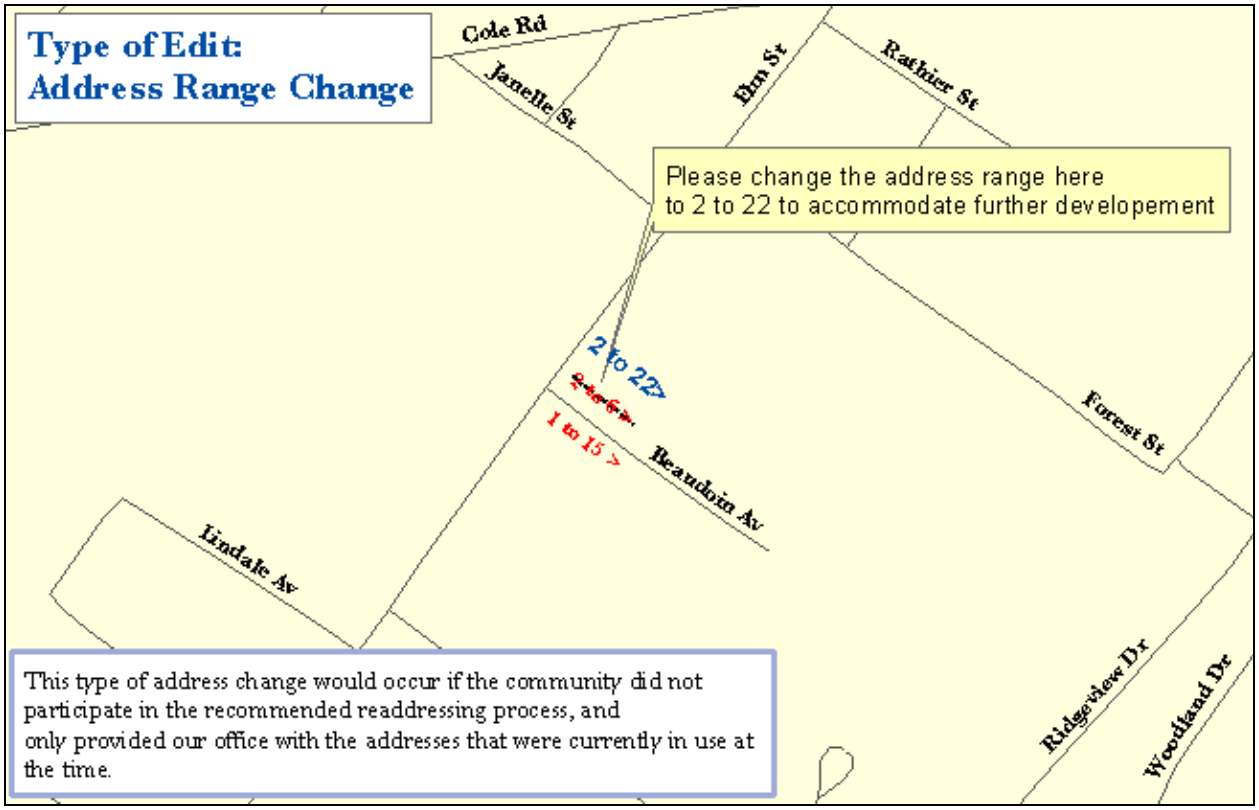
Map Edits:

- Delete the road by "x"ing out what needs to be removed or where the road ends.
- Mark the extent of the delete with double hatch marks.
- Place a terminus mark where a road section ends.
- Adjust the address-range on the intersecting road to reflect removal of an intersection or address-range break.

Maine Road/MSAG Update Form:

☐ **D. Delete Street** Was This Street Public: Y or N	
1. Street Name: *Iris Avenue*	2. If partial, list length removed: *delete all*
3. Old Address Range- Low: High: Circle One: odd even both ESN:*115*	
4. New Address Range- Low: 0 High: 0 Circle One: odd even both ESN:	

Remarks: *Iris Avenue is no longer a thru road. Combine address ranges of main road on either side of Iris Av.*



E. Changing an Address Range:

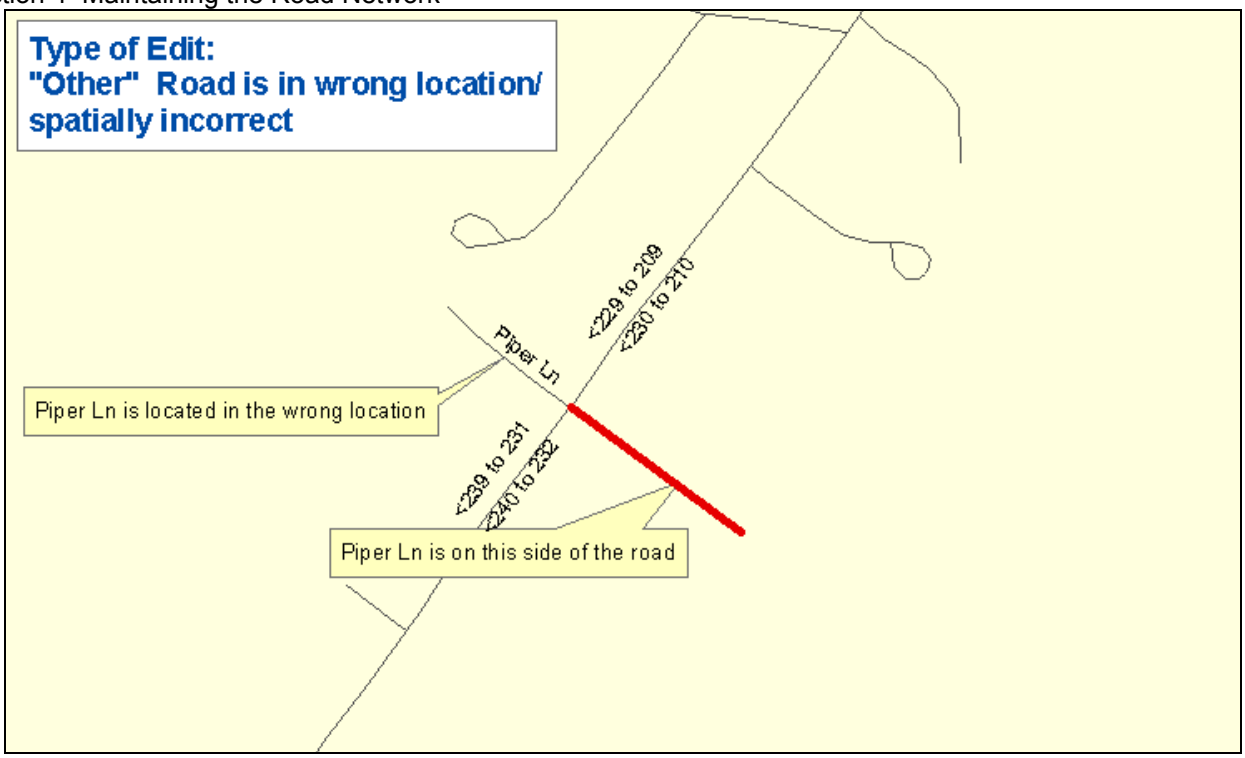
Map Edits:

- Cross out the incorrect part of the address range.
- Write the correct information next to printed text or numbers.

Maine Road/MSAG Update Form:

☐ **E. Address Range Change**								
1. Street Name: *Beaudoin Avenue*								
2. Old Address Range-	Low: *1*	High: *15*	Circle One:	odd	even	both	ESN: *230*	
3. New Address Range-	Low: *1*	High: *22*	Circle One:	odd	even	both	ESN: *230*	

Remarks:
Range in subdivision is being extended for new buildings.



Remarks /Other: Map is spatially incorrect

Map Edits:

- Mark up map to reflect the correct location of the road

Maine Road/MSAG Update Form:

Remarks: *Piper Ln is on the wrong side of the road. All the data pertaining to this road is still correct (i.e., road name and address range data). The address ranges before and after the intersection with Piper Ln with Main St are still the same.*

5.0 Emergency Service Zones (ESZs)

An Emergency Service Zone (ESZ) is a geographical area made up of a unique combination of police, fire, rescue, and ambulance services assigned to respond to emergencies within that zone or community. In most towns there is only one zone but in some towns, due to the proximity of rivers, lakes, streams, hills or mountains bisecting the community there may be two or more zones. A town could have two ESZs even when the police &/or fire responders are the same but the ambulance coverage is maintained by two separate companies sharing the load. An ESZ may contain many roads or a single residence based on access to the homes and businesses. A road may also be split into more than one ESZs based on address-ranges which are served by multiple responders.

Addressing Officers must consider each unique combination of emergency response agencies within the borders of their town when addressing parcels. In cases where multiple responders exist for a given town, then a map depicting these unique coverage areas or a list by street and address-ranges become useful tools in maintaining town records. An AO should consult with their police and fire departments and ambulance officials to assist with the development of these tools because this information is provided to dispatchers in the event of actual 9-1-1 calls. “Hot keys” at the PSAPs are programatically populated with the responder agency information that you provide, making it necessary to be 100% accurate.

An ESZ is identified by an ESN (Emergency Service Number) which is required when submitting any changes using the MSAG/Road Update form.If you have any questions or need help with something, then please don’t hesitate to call the ESCB.

The ESCB recommends that the AO use the EMS or First Responder section for towns *with licensed first responders* and enter the ambulance or transport service in the Ambulance or Medical Transport Section. If a community or ESZ does not have licensed first responders, then typically an ambulance company will handle this service. In some cases the fire department may have qualified personnel trained as first responders; so there may be times when a fire department may be entered into the EMS section. Again, if you have questions concerning these designations, then please call the ESCB.

5.1 Sample Emergency Service Zones

Example 1: The same combination of police, fire, & rescue services cover the entire town of **Winthrop**. In this situation, there is only one ESZ and they are all dispatched by the local Police Dept.		
Emergency Service Zone Number (5-digits)	Name of Service by Type	Name of Dispatch Agency For Service
00255	*Police*	
	Winthrop PD	Winthrop PD
	Fire	
	Winthrop FD	Winthrop PD
	EMS or First Responder:	
	Winthrop Ambulance	Winthrop PD
	Ambulance or Medical Transport:	
	Winthrop Ambulance	Winthrop PD

Example 2: In **Glenburn**, there are two different ambulance services, but the same sheriff and fire departments serve the entire town dispatched by the same PSAP; so **Glenburn** has two different ESZs.		
Emergency Service Zone Number (5-digits)	Name of Service by Type	Name of Dispatch Agency For Service
00774	*Police:*	
	Penobscot SD	Penobscot RCC
	Fire:	
	Glenburn FD	Penobscot RCC
	EMS or First Responder:	
	Old Town Rescue	Penobscot RCC
	Ambulance or Medical Transport:	
	Old Town Rescue	Penobscot RCC
00399	*Police:*	
	Penobscot SD	Penobscot RCC
	Fire:	
	Glenburn FD	Penobscot RCC
	EMS or First Responder:	
	G H Ambulance	Penobscot RCC
	Ambulance or Medical Transport:	
	G H Ambulance	Penobscot RCC

Example 3: In the Moosehead Lake area **Piscataquis County Islands** do not have a police dept. so they rely on the Sheriff Dept (SD) to cover police calls & use the Maine Forest Service for fire coverage.		
Emergency Service Zone Number (5-digits)	Name of Service by Type	Name of Dispatch Agency For Service
00815	*Police*	
	Piscataquis SD	Piscataquis RCC
	Fire	
	Maine Forest Service	Maine Forest Service
	EMS or First Responder:	
	Rockwood Fire Rescue	Somerset RCC
	Ambulance or Medical Transport:	
	Rockwood Fire Rescue	Somerset RCC

Example 4: The town of **Scarborough** has a campground in a remote section of town that is actually in Gorham but is accessed by **Scarborough** roads. Therefore, there are two ESZs/ESNs for this town. Note the differences in service providers & dispatching coverage between these two zones below.		
Emergency Service Zone Number (5-digits)	Name of Service by Type	Name of Dispatch Agency For Service
00069	*Police:*	
	Scarborough PD	Scarborough PD
	Fire:	
	Scarborough FD	Scarborough PD
	EMS or First Responder:	
	Scarborough Rescue	Scarborough PD
	Ambulance or Medical Transport:	
	Scarborough FD	Scarborough PD
00727	*Police:*	
	Gorham PD	Cumberland RCC
	Fire:	
	Gorham FD	Cumberland RCC
	EMS or First Responder:	
	Gorham FD	Cumberland RCC
	Ambulance or Medical Transport:	
	Gorham FD	Cumberland RCC

The importance of having correct ESZ information is critical to 9-1-1 operations. Therefore, the ESCB requests that AOs verify ESZ information annually and notify the Bureau whenever there is a change in emergency service providers, the dispatching of services, or to an emergency service zone coverage area. The form on page 35 may be used for this purpose.

5.2 Changing an ESZ

On occasion changes to service provider coverage occurs due to contractual agreements that typically expire annually. Whenever that occurs (often by July 1st) then a copy of the contract should be sent to the ESCB along with a letter stating the change(s). The letter should be received by the ESCB well in advance of any changes, preferably two weeks prior to the effective date. The communication should include:

- Which services are affected by the change (Police/Fire/EMS or First Responders/Ambulance or Transport services),
- The name of the new service,
- The roads affected (if not the entire town), and
- The effective date of the change.

These types of changes require modifications to switching equipment and routing software which takes time to implement and test before going live.

If you are making a change for a town with multiple ESZs and need to modify the roads that are assigned to each ESZ, then please be sure to submit a list &/or map of the

affected roads along with address ranges for each ESZ. This documentation should accompany the form on page 35.

5.3 Public Safety Answering Points (PSAP)

Communities are associated with certain 9-1-1 Call Centers or Public Safety Answering Points (PSAPs). Actual 9-1-1 calls are automatically routed to the PSAP serving that community via an ESZ (or geospatial polygon) and each PSAP has a primary and secondary backup PSAP to ensure that all 9-1-1 calls get answered in a timely manner. PSAPs are typically municipal (town police depts.), regional (county sheriff offices) or state (state police depts.)

5.3.1 Changing PSAPs

Communities contract with their assigned PSAP for call answering services and sometimes change PSAPs, but only with approval from the Public Utilities Commission (PUC). This is a formal process which requires some rather major changes to the system maintained by the ESCB. If your community wishes to change PSAPs, please notify the ESCB at least two months prior to the expected effective date. The ESCB will instruct you on how to file a request with the PUC.

5.4. Dispatching Changes

Service provider agencies (Ambulance, Fire, Police, or First Responders) may also change dispatchers. Since these updates require modifications to the switching equipment &/or software it is important that the ESCB be notified well in advance of the desired effective date. Dispatch changes do not require PUC approval and as an AO you may not always be privvy to these requests. However, the ESCB may contact you for documentation or request an official letter from the town that you manage in order to corroborate such a change.

EMERGENCY SERVICE ZONE DESIGNATION FORM

Instructions: For each ESZ, please note the name of the emergency service provider by type, and name the agency that dispatches the service. Each unique geographically split combination of police, fire, and rescue should represent a separate zone. See attached examples. Feel free to reproduce the form as necessary.

If multiple ESZs are indicated, attach a list of streets and address ranges in your town and the appropriate ESN (ESZ number) for each. Roads may be split between ESZs by also splitting the address ranges. Mapping assistance is available from Emergency Services Communication Bureau/GIS if needed PUC.GIS911@Maine.gov or by calling 1-800-665-2830.

Municipality: _____
Effective Date: _____
Name & Title of Person Completing Form: _____

Signature: _____

Emergency Service Zone Number (5 digits)	**Name of Service by Type**	**Name of Dispatch Agency for Service**
(Ex: 00284)	*Police:*	
	Fire:	
	EMS or First Responder:	
	Ambulance or Medical Transport:	
	Police:	
	Fire	
	EMS or First Responder:	
	Ambulance or Medical Transport:	
	Police:	
	Fire	
	EMS or First Responder:	
	Ambulance or Medical Transport:	

Return to: Jeanne Locke, ESCB, 18 SHS, Augusta, ME 04330-0018. Fax: 207-287-1039. Email: jeanne.locke@maine.gov

6.0 Keeping the 9-1-1 Database Current

Maine's 9-1-1 Automatic Location Information (ALI) Database contains addresses and ANIs (Automatic Number Identification) or telephone numbers of all landline subscribers within the state. On a daily basis, local telephone companies feed their service order activity into this database. See Section 3 for information on the process surrounding address changes made by communities.

6.1 The Telephone Service-Order Process

AOs do not need to keep track of resident's phone numbers relative to property-transfers or rental-moves. People requesting telephone service are asked by the telephone company to provide address and location information where service is needed. The service order clerk validates the addresses against the MSAG.

If a person ordering service is unable to give the telephone company an MSAG-valid address, then the Telephone Company will contact the AO for this information or the resident may be asked to contact the town for an address. Until a valid 9-1-1 address is provided, the customer will not have telephone service, nor will the address be in included in the ALI database; both are reasons to accomplish this task in a timely manner.

On occasion telephone company personnel may contact an AO because they are unable to validate an address against the MSAG, especially in cases where a house number is out-of-range or a street name does not appear in the MSAG. The AO is expected to either complete an Enhanced 9-1-1 MSAG Road Update Form (and forwarding it to the ESCB) or go online using the electronic version of the Change Request Process: https://mangiscrp.ngesi.maine.gov/glserver/ to update the MSAG. If you wish to use the online version and you do not have a login, please contact PUC.GIS911@Maine.gov for more information. See Section 4.2 on how to complete the paper form.

The ESCB prefers that you use the online Change Request Process as it provides more accurate updates in a timely manner.

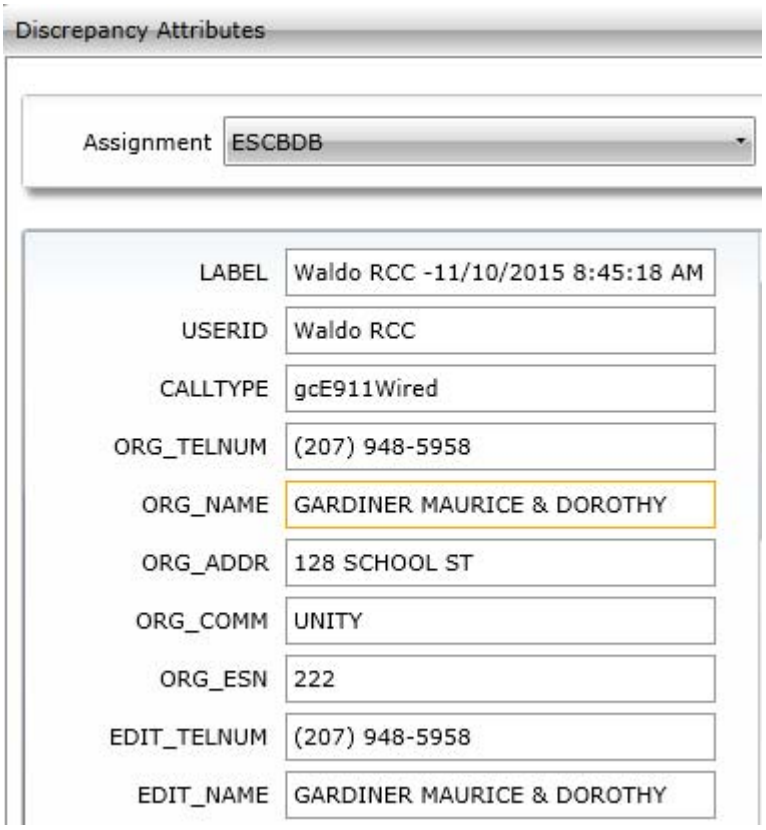
6.2 Incorrect ANI/ALI Error Reports or ALI Discrepancies

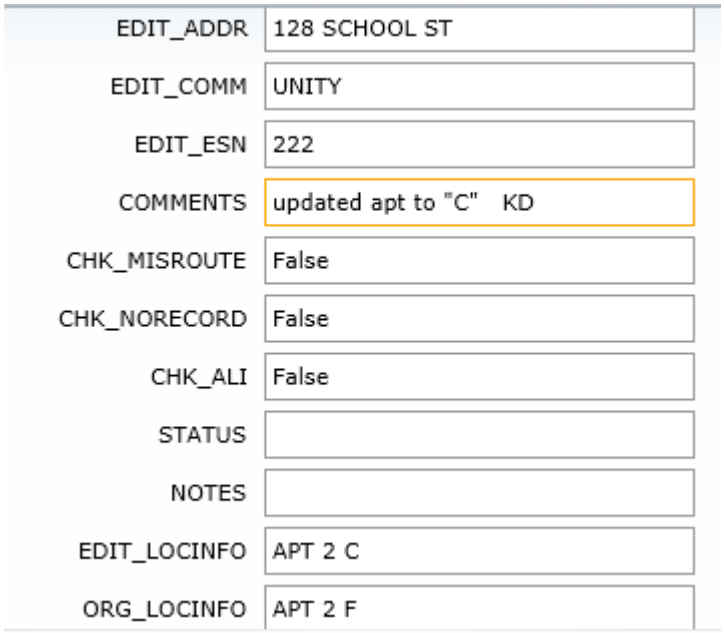
Whenever someone dials 9-1-1, the caller is asked the location of their emergency. If the address reported by the caller appears different from the address displayed on the 9-1-1 system, then an Incorrect ANI/ALI Error Report is generated by the 9-1-1 call-taker. A sample is provided in Section 6.3 below .

An Administrative Rule requires that these discrepancies are handled within three business days.

6. 3 Sample Incorrect ANI/ALI Error Report

In the following example you will see that the Apt. number is being corrected from “2F” to “2C” and once this record is processed the ALI Database will reflect the new Apt. #.





7.0 Publicizing 9-1-1

7.1 Maine Statutes Designating 9-1-1 as the Emergency Telephone Number

The following is an excerpt from Maine Statutes regarding publicizing 9-1-1 as the primary emergency service number for all communities in Maine.

25 MRSA §2932. Designated emergency telephone number

1. Designated emergency telephone number. *The primary telephone number to be used in a telephone exchange to request emergency services following the activation of E-9-1-1 services for that exchange, including the number for telecommunications devices for communication for the deaf, hard-of-hearing and speech-impaired, is 9-1-1.*

2. Publishing of 9-1-1. *A publisher of a directory of Maine telephone numbers for use by telephone subscribers in Maine must include in a conspicuous portion of the directory:*

A. For any area within the directory in which E-9-1-1 has not been activated, the emergency numbers of the State Police and any sheriffs' departments that serve the area; and

B. For any area within the directory in which E-9-1-1 has been activated, the number 9-1-1 is the primary telephone number to request emergency services. The number "9-1-1" must be accompanied by words indicating it is accessible by teletypewriter device, or TTY, such as "TTY/Voice." A publisher is not required to update a directory following an activation of E-9-1-1 within the directory area until the next regular printing of the directory.

3. Commercial use of the number 9-1-1. *The number 9-1-1 may not be used for commercial purposes in a manner that is deceptive or likely to produce confusion with respect to its use as the primary emergency telephone number to request emergency services.*

4. Display of 9-1-1. *When displayed on signs and in other formats designed to advertise the number and its use to the public printed after the effective date of this subsection or on emergency vehicles, 9-1-1 must be:*

A. Printed in plain block numerals with a dash between the numerals;

B. Accompanied by the word "emergency"; and

C. Except in the case of emergency vehicles, accompanied by words indicating accessibility by teletypewriter device, such as "TTY/Voice."

7.2 Telephone Book Listings

Following the activation of Enhanced 9-1-1, towns should make the following adjustments to the white page municipal or county listings as applicable:

a. If a town had a 7 or 10 digit emergency number listed for police, fire, or EMS, they need to be removed in accordance with Maine State Law (25 MRSA §2932).

b. The town should list 9-1-1 as its emergency number. Consult with your local telephone company about any associated charges.

c. Towns electing to list non-emergency numbers for police, fire, and rescue should include them with other town (or county) business listings identified as "non-emergency" or "business".

Example: Doeville, Town of:

Emergency	9-1-1
Assessor's Office	xxx-xxxx
City Clerk	xxx-xxxx
Fire Dept (non-emergency)	xxx-xxxx
Police Dept (non-emergency)	xxx-xxxx
School Dept	xxx-xxxx

It is the responsibility of each municipality or county to ensure that the telephone company business office makes the changes described above. Telephone company business directories may be found in the front of your local telephone book.

Muncipal PSAPs have slightly different requirements. Contact the ESCB for more information.

7.3 Emergency Vehicles and Printed Materials

Many towns have elected to advertise 9-1-1 as the emergency number to call, on emergency vehicles. Maine State Law requires the use of plain block letters with dashes between the numerals accompanied by the word “EMERGENCY.”

Example A: Display of 9-1-1 on Emergency Vehicles

Telephone stickers or other materials advertising 9-1-1 as the emergency number must also have dashes printed between the numberals accompanied by the word “EMERGENCY”. In addition, it must indicate accessability by teletypewriter devices such as “TTY/Voice.”

EMERGENCY CALL
9-1-1
TTY/Voice

Example B: Sample telephone sticker.

7.4 The ESCB Website

For current information about Enhanced 9-1-1, visit the ESCB website at www.maine911.com. Features include:

- Community information
- Forms and Guidebooks
- Public Information
- Kids 9-1-1 interactive educational pages
- Statutes and pending legislation
- Administrative Rules
- Telephone company information
- PSAP resources

www.maine911.com

www.maine911.com/kids

8.0 A Glimpse of the Future of 9-1-1

8.1 NextGen 9-1-1

The emergence of new communications devices and smart phones that allow text messages, photos, video, and other information types to be transmitted have caused current 9-1-1 systems to become outdated because the old system can only handle voice calls generated by telephone systems. These new devices prompted emergency service organizations to review the current E9-1-1 system designs and start preparing for the delivery and receipt of these new types of information. The new design is called NextGen 9-1-1 and uses digital internet protocol (IP) networks to process 911 calls. While some new NextGen 9-1-1 standards are still being developed and tested across the country, the planning and design of Maine's NextGen 9-1-1 system began with installations as early as 2013 with the first PSAP cutover in March of 2014. This new design includes the ability to process older analog calls as well as other communication media (like texting to 9-1-1) that are technically able to "call" 9-1-1.

In NextGen9-1-1, Geographic Information Systems (GIS) play a major role in routing calls to the appropriate PSAP. This reliance on mapped data has increased the system's dependence on prompt and accurate information from the AOs and on accurate MSAG and ALI databases.

APPENDIX A
Frequently Asked Questions by AOs

This list attempts to include questions you may have had yourself or questions you may have been asked by your constituents. More information may be found at: http://www.maine911.com/faq/index.shtml

Addressing Questions

Is Enhanced 9-1-1 available in towns with "RR Box" addresses?

People without an MSAG valid street address may still call 9-1-1 for emergencies; however, they will not benefit from the system's automatic location identification until their town completes the enhanced 9-1-1 addressing task. Only by having an MSAG valid street name and house number will they realize the automated benefits of 9-1-1.

Why is addressing a critical part of Enhanced 9-1-1?

A 9-1-1 caller with an MSAG-valid address (created as part of the Enhanced 9-1-1 system) gets his/her call routed directly to the correct PSAP so that emergency services may be dispatched immediately. With older 9-1-1 systems, calls routed using telephone exchanges and therefore, did not always reach the correct (or closest) PSAP. Knowing the emergency caller's address helps dispatchers send the correct emergency services quickly to the person in need.

Do communities have the authority to create physical addresses?

Yes. Every Maine community has the legal authority to create physical addresses under Municipal Home Rule Powers, Article VIII, Part 2, §1 of the Constitution of the State of Maine and Title 30-A M.R.S.A §3001. In the unorganized territories, the County has the authority to create addresses.

What happens if a 9-1-1 caller's address is not correct?

There are procedures in place at the 9-1-1 call centers (PSAPs) which call-takers must follow to report address discrepancies. Once a call-taker is made aware of an error, the error is reported to the ESCB where these issues are researched and corrected. An AO may be contacted to help with these errors.

Why am I getting more calls from residents for an address assignment?

More and more banks, utilities, insurance companies, etc. are requiring physical addresses. An MSAG-valid address assigned by an AO becomes the official address for a residence. Furthermore, these addresses follow the U.S. Postal Service addressing standards.

What happens if a person moves?

The telephone company (or service provider) will need to be notified of the new address. They will update their system database which will cause an automatic update to the ALI database. **However, VoIP service providers (VSP) often**

leave this step up to the customer to either call their VSP or go online (internet) to update their information on a website. This is the most common cause of the great volume of VoIP ALI errors.

Street signs keep disappearing in my town, what can I do?

Theft of street signs is against the law and is a problem in many communities. Since signage is vital to responders in locating emergencies, please report incidents of vandalism to the local police by dialing 9-1-1.

29-A MRS §2107 ***Tampering with signs***

Why does my address not show in my GPS unit, in my navigation device, or on sites like Google Earth?

GPS companies usually get data from national or global commercial data providers who may not have the most up to date files. These companies may update their data routinely or not. The ESCB has no control over that but the Bureau/GIS does provide updated MSAG-valid streets and address-range data on our websites where commercial companies may go get updates. However, it appears that many of these companies ignore this resource. Also, some GPS companies have features on their web site where you may inform them of map-issues you have run across.

If my address is not in my GPS, will it show up if I dial 9-1-1?

The data maintained by ESCB/GIS is the MSAG-valid database for the enitre state of Maine 9-1-1 system. Regardless of whether or not your address may be found using your GPS, if your address is in the MSAG then it will show up at the PSAP when you dial 9-1-1. If you have a landline, your address is already a part of the ALI database and will also be displayed when you dial 9-1-1. Please contact ESCB/GIS to verify an address in question.

Wireless/Cellular Questions

Does 9-1-1 work from my cell phone?

Yes, all cell phone companies doing business in Maine have activated 9-1-1 dialing.

When I call 9-1-1 from my cell phone will the dispatchers know where I am?

Cell phones will not display your address like traditional landlines but a latitude/longitude is provided. Try to have your address ready, or use landmarks, mile markers, and road signs to describe where you are.

What is Phase II 9-1-1 service?

Phase II is a requirement of wireless phone companies by the Federal Communications Commission (FCC) to provide an approximation of the 9-1-1 caller's location information in the form of latitude and longitude. All wireless phone companies operating in Maine currently have this capability.

Your website says my cell phone company finished Phase II. Will dispatchers know where I am now?

At least to a point. The accuracy of the latitude/longitude can vary depending on the signal strength of your phone in relation to the tower which transmits your call. At the very least the call-taker will know which sector of the cell-tower your cell-phone signal hit and more than likely the lat/long will be within a couple hundred feet of your actual location. However, the more information you can provide the dispatcher about your exact location, the better.

What shows up at the PSAP when I make a 911 call from a wireless device?

The caller's name and address are not available at the call center on wireless calls to 9-1-1 but the address of the cell tower used to make the call is identified by a latitude/longitude location and that location is displayed at the PSAP. The lat/long will be mapped to the closest point or derived, where applicable, using reverse geocodes.

VoIP Questions

Can I dial 9-1-1 from my VoIP phone?

You can reach emergency assistance by dialing 9-1-1 on most VoIP phones. However, there are important differences between VoIP 9-1-1 emergency dialing and traditional 9-1-1 service from a standard landline. If not enough location information is available to route the call, your call may arrive at private or default relay center, which will attempt to send the call to the correct PSAP using information provided by the ESCB annually.

How do I know what level of 9-1-1 service I have with my VoIP phone?

The best way to find out is to ask your VSP or research it online. Search for "emergency calling" on your VSP's website. Once you understand the VoIP features, you should notify all potential phone users, including frequent visitors and babysitters, in case of an emergency.

How is a VoIP 9-1-1 call routed to the correct 9-1-1 center?

When you sign up for VoIP service, you are asked to register your location. This registered location is used to route your 9-1-1 call to the right PSAP so your official physical address should be used. You cannot use a PO Box or Rural Route address as these are not specific enough for emergency call routing.

What if my 9-1-1 call is misrouted to the wrong 9-1-1 center?

If your VoIP call is misrouted to the wrong PSAP or 9-1-1 center, you should tell the call-taker the city, county, and state where your emergency is. The call taker will then transfer you to the right PSAP; but it is always a good idea to have the phone numbers of the police, fire, and rescue on hand for easy reference.

Does 9-1-1 know where I am when calling from my VoIP phone?

In most cases, yes. The first thing a call-taker asks is for you to verify your location, calling number, and name, especially if this information is not automatically displayed at the PSAP. Your call is then routed to wherever it needs to go based on the information that you provide.

Can I call 9-1-1 from my VoIP phone when I'm traveling?

Some VoIP providers offer the ability to travel with your phone (called nomadic VoIPs). If so, your VSP may provide an online (internet) solution where you may update your registered address. Unfortunately the time it takes to update this information may vary greatly. So the safest thing to do is if you travel with your VoIP phone on a temporary basis, use another phone to dial 9-1-1.

Do service outages affect my ability to call 9-1-1?

They might. Just as a cordless phone may not work without power, your VoIP phone probably won't work without power either. As a result, during an electrical outage, you may be unable to make any calls, including those to 9-1-1. Similarly, if your cable or broadband service is interrupted, it may keep you from being able to make outbound calls.

If I use an OnStar or ATS service in my car, will my location be displayed?

OnStar and ATS services relay calls to the right PSAP based on the lat/long of the vehicle, similar to a wireless call; these are called telematics and are becoming more prevalent in the 9-1-1 world.

Signage Questions

What can be done to improve house number signage?

This is a very common concern in areas where mailboxes appear infrequently along rural roads. Towns have encouraged residents to post their own house numbers in prominent places alongside the road or they may have an Addressing Ordinance in place which describes the desired signage for residents. A few towns have also enacted an enforcement ordinance which requires residents to erect appropriate signs and may charge a nominal fine for non-compliance. Other towns have purchased signs and given them to homeowners to install.

How do I know what types of signs are appropriate?

The following bullet points are general guidelines for house-number signs:

- Number the Structure or Residence… where the residence or structure is within 50 (fifty) feet of the edge of the road right-of-way, the assigned number shall be displayed on the front of the residence or structure in the vicinity of the front door or entryway.

- Number at the Road Line… where the residence or structure is greater than 50 (fifty) feet from the edge of the road right-of-way, the assigned

number shall be prominently displayed on a post, fence, wall, mail box, or other structure at the property line adjacent to the walkway or driveway access to the residence or structure.

- Size, Color, and Location of Number... the characters (house numbers) shall be of a color that contrasts with the background color and shall be a minimum of four (4) inches in height. Numbers shall be situated such that they are visible from the road year-round.

- Proper Numbers… persons whose duty it is to erect or display the assigned house numbers shall remove any conflicting or confusing numbers or identifiers which might be mistaken for, or confused with the number assigned in conformance with this ordinance.

- Interior Location… residents or occupants are requested to post their assigned house number and road name (full physical address) adjacent to their telephone in case of an emergency.

9-1-1 Data Confidentiality Questions

Where does the ESCB get its Authority?

Maine Revised Statute (MRSA) **25 MRS 352 §2926 ESCB** establishes the Bureau to implement and manage E9-1-1 which includes the requirement to set the "standards and procedures for developing and maintain the system databases and for ensuring the confidentiality of those databases pursuant to Section 2929." Subsection 2926 also includes the requirement to set "Procedures for developing and maintaining address and routing information."

Is the E-9-1-1 database confidential?

Yes. 25 MRSA Chapter 352 §2929 defines confidential information to include, "the names, addresses and telephone numbers of persons listed in E9-1-1 databases."

Who owns the databases?

The Bureau owns the database system. "The system databases, wherever located or stored, are the property of the ESCB and their confidentiality is governed by 25 MRSA Chapter 352 §2929."

Can the E-9-1-1 data be used for commercial purposes?

No. E9-1-1 confidential information may *not* be utilized for commercial purposes.

Can the Bureau provide a complete listing of street names and address ranges for a town?

Yes, the Bureau may provide town officials with a complete list of street names and address ranges for their town as the MSAG (master street address guide) is not confidential. The Bureau may also provide a *confidential* list of names, addresses and *published* landline telephone numbers for residents of a town. However, this *confidential* list may *only* be used by the AO for address validation.

What can the E-9-1-1 data be used for?

The E-9-1-1 data may be used by the designated AO to validate addresses in the town for use in the E9-1-1 (or NextGen9-1-1) system.

What does an AO do?

The Addressing Officer adds, updates, and maintains local road data which is managed in the MSAG database. The AO determines road names, locations, lengths or distances of new roads, road changes or deletions, and determines the range of house numbers along each road. The AO also creates addresses in accordance with the procedures set by the Bureau as described in "The Enhanced 9-1-1 Addressing Officer Manual". The AO provides this information to the ESCB/GIS, the phone companies, the US Post Office and other town departments such as the Code Enforcement &/or Tax Assessor offices.

Do Municipalities issue property numbers?

Yes. Only a designated AO is authorized in the State of Maine to create address-ranges and property numbers for a given town. In the case of Unorganized Territories it is the County AO who holds this authority.

Can the Post Office assign addresses?

No. Only a designated AO may assign physical addresses to structures. The U.S. Post Office may assign *mailing* addresses; however, it is important to note that E9-1-1 addresses adhere to the U.S. Postal Service Standards for the addressing of structures. So it is desirable that the town-assigned physical address also serve as the mailing address to avoid confusion in an emergency situation.

Should the AO work with the Post Office when creating new addresses?

Yes. To best meet the needs of the customer and the goal of having a single physical address serve as both mailing & emergency services, an AO should meet with a postal service representative before finalizing a new street name and address range for a community or structure. This will alleviate future mail-delivery issues &/or responder problems. Conflicting street names often occur in areas where the postal service delivers mail to towns who share a zip code, as one example.

When does an AO work with a phone company?

The ESCB requires phone companies to validate addresses assigned to phone services in the event of emergencies so that when someone dials 9-1-1, the correct police, fire, or ambulance service may find the caller quickly and efficiently. Sometimes an address given by a customer cannot be validated against the MSAG database, so a phone company representative will contact an AO for help. For example, if an address was omitted from the MSAG database, the AO would need to work quickly to resolve the issue and correct the database.

Does the Bureau or the AO manage or maintain phone numbers?

No. Only the phone company manages and maintains landline telephone numbers.

For more information, please visit our website at www.Maine911.com and click on the "For Communities" bullet.

The State Statutes, regulations and manuals cited in this memorandum are available on our website. Should you require any further assistance, please call the Bureau at 287-6084.

APPENDIX B

SAMPLE ADDRESS ASSIGNMENT NOTIFICATION LETTER

TOWN LETTERHEAD

Notice of New Address

Date:
Property owner
Mailing Address
Re: Assessor Map/Lot _____

Dear Owners Name:

Insert Town Name adopted the State of Maine E-911 addressing standards as a part of our municipal ordinance in YYYY. In order to answer 911 calls properly and to provide emergency services as fast as possible; we are required to maintain accurate road and addressing information.

You have either submitted a building permit for a new habitable structure, or you need a new address due to the creation of a new road, or some issue has arisen which requires clarification of your address. The address shown below is your correct address effective MM/DD/YYYY Please retain this letter as a permanent record of your address.

OLD ADDRESS:

NEW ADDRESS:

For Fire and Rescue purposes, please place and display the number(s) assigned to your property(s) prominently on or near your front door, visible from the street. The height of each number should be at least 4 inches and made of reflective material. If your house or building is located more than 75 (or not visible) from the road, please place the numbers at the beginning of your driveway. These simple requirements will assist emergency responders in locating you, as well as assisting utilities, delivery services and others who may need to find you.

Thank you for your assistance and cooperation. Should you require any additional information or assistance please call me at 207-NNN-NNNN.

Sincerely,

E-911 Addressing Officer

Copies to:
Post Office
Emergency Services Communication Bureau/GIS
Town Dept.
Police Dept.
Fire Dept.or First Responders
Ambulance or Transport Service

APPENDIX C

Using Road Measurement and Property Number Tables to Assign New Addresses

Communities may use 25', 50', or 100' numbering intervals to assign property numbers. Please refer to the attached numbering tables and follow the steps below as a guide to assigning correct addresses for new structures:

1. Measure the distance from the beginning of the road to an imaginary line running perpendicularly from the front entrance of the new structure to the road. Use an accurate measuring device such as a measuring wheel. If such a measuring device is unavailable, determine the distance as accurately as possible with a measuring tape or by pacing off the distance.

2. If the front door of a structure cannot be seen from the road, measure to a point where the middle of the driveway meets the road. In either case, note which side of the road the structure is on.

3. Identify the correct measuring interval for assigning property numbers in the town (25, 50, or 100 feet). This interval may be documented in a town ordinance or ask the engineering department. Identify the odd and even sides of the road (typically radiating out from the center of town).

4. Using the correct "interval" table, find the footage range between which your measurement falls.

5. Select the correct odd or even property numbers from the table, depending on which side of the road the structure is located.

Appendix C:
Road Measurements and Property Numbers Based on 25' Numbering Interval

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
0	25	1	2	1,200	1,225	97	98	2,400	2,425	193	194
25	50	3	4	1,225	1,250	99	100	2,425	2,450	195	196
50	75	5	6	1,250	1,275	101	102	2,450	2,475	197	198
75	100	7	8	1,275	1,300	103	104	2,475	2,500	199	200
100	125	9	10	1,300	1,325	105	106	2,500	2,525	201	202
125	150	11	12	1,325	1,350	107	108	2,525	2,550	203	204
150	175	13	14	1,350	1,375	109	110	2,550	2,575	205	206
175	200	15	16	1,375	1,400	111	112	2,575	2,600	207	208
200	225	17	18	1,400	1,425	113	114	2,600	2,625	209	210
225	250	19	20	1,425	1,450	115	116	2,625	2,650	211	212
250	275	21	22	1,450	1,475	117	118	2,650	2,675	213	214
275	300	23	24	1,475	1,500	119	120	2,675	2,700	215	216
300	325	25	26	1,500	1,525	121	122	2,700	2,725	217	218
325	350	27	28	1,525	1,550	123	124	2,725	2,750	219	220
350	375	29	30	1,550	1,575	125	126	2,750	2,775	221	222
375	400	31	32	1,575	1,600	127	128	2,775	2,800	223	224
400	425	33	34	1,600	1,625	129	130	2,800	2,825	225	226
425	450	35	36	1,625	1,650	131	132	2,825	2,850	227	228
450	475	37	38	1,650	1,675	133	134	2,850	2,875	229	230
475	500	39	40	1,675	1,700	135	136	2,875	2,900	231	232
500	525	41	42	1,700	1,725	137	138	2,900	2,925	233	234
525	550	43	44	1,725	1,750	139	140	2,925	2,950	235	236
550	575	45	46	1,750	1,775	141	142	2,950	2,975	237	238
575	600	47	48	1,775	1,800	143	144	2,975	3,000	239	240
600	625	49	50	1,800	1,825	145	146	3,000	3,025	241	242
625	650	51	52	1,825	1,850	147	148	3,025	3,050	243	244
650	675	53	54	1,850	1,875	149	150	3,050	3,075	245	246
675	700	55	56	1,875	1,900	151	152	3,075	3,100	247	248
700	725	57	58	1,900	1,925	153	154	3,100	3,125	249	250
725	750	59	60	1,925	1,950	155	156	3,125	3,150	251	252
750	775	61	62	1,950	1,975	157	158	3,150	3,175	253	254
775	800	63	64	1,975	2,000	159	160	3,175	3,200	255	256
800	825	65	66	2,000	2,025	161	162	3,200	3,225	257	258
825	850	67	68	2,025	2,050	163	164	3,225	3,250	259	260
850	875	69	70	2,050	2,075	165	166	3,250	3,275	261	262
875	900	71	72	2,075	2,100	167	168	3,275	3,300	263	264
900	925	73	74	2,100	2,125	169	170	3,300	3,325	265	266
925	950	75	76	2,125	2,150	171	172	3,325	3,350	267	268
950	975	77	78	2,150	2,175	173	174	3,350	3,375	269	270
975	1,000	79	80	2,175	2,200	175	176	3,375	3,400	271	272
1,000	1,025	81	82	2,200	2,225	177	178	3,400	3,425	273	274
1,025	1,050	83	84	2,225	2,250	179	180	3,425	3,450	275	276
1,050	1,075	85	86	2,250	2,275	181	182	3,450	3,475	277	278
1,075	1,100	87	88	2,275	2,300	183	184	3,475	3,500	279	280
1,100	1,125	89	90	2,300	2,325	185	186	3,500	3,525	281	282
1,125	1,150	91	92	2,325	2,350	187	188	3,525	3,550	283	284
1,150	1,175	93	94	2,350	2,375	189	190	3,550	3,575	285	286
1,175	1,200	95	96	2,375	2,400	191	192	3,575	3,600	287	288

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
3,600	3,625	***289***	***290***	4,800	4,825	***385***	***386***	6,000	6,025	***481***	***482***
3,625	3,650	***291***	***292***	4,825	4,850	***387***	***388***	6,025	6,050	***483***	***484***
3,650	3,675	***293***	***294***	4,850	4,875	***389***	***390***	6,050	6,075	***485***	***486***
3,675	3,700	***295***	***296***	4,875	4,900	***391***	***392***	6,075	6,100	***487***	***488***
3,700	3,725	***297***	***298***	4,900	4,925	***393***	***394***	6,100	6,125	***489***	***490***
3,725	3,750	***299***	***300***	4,925	4,950	***395***	***396***	6,125	6,150	***491***	***492***
3,750	3,775	***301***	***302***	4,950	4,975	***397***	***398***	6,150	6,175	***493***	***494***
3,775	3,800	***303***	***304***	4,975	5,000	***399***	***400***	6,175	6,200	***495***	***496***
3,800	3,825	***305***	***306***	5,000	5,025	***401***	***402***	6,200	6,225	***497***	***498***
3,825	3,850	***307***	***308***	5,025	5,050	***403***	***404***	6,225	6,250	***499***	***500***
3,850	3,875	***309***	***310***	5,050	5,075	***405***	***406***	6,250	6,275	***501***	***502***
3,875	3,900	***311***	***312***	5,075	5,100	***407***	***408***	6,275	6,300	***503***	***504***
3,900	3,925	***313***	***314***	5,100	5,125	***409***	***410***	6,300	6,325	***505***	***506***
3,925	3,950	***315***	***316***	5,125	5,150	***411***	***412***	6,325	6,350	***507***	***508***
3,950	3,975	***317***	***318***	5,150	5,175	***413***	***414***	6,350	6,375	***509***	***510***
3,975	4,000	***319***	***320***	5,175	5,200	***415***	***416***	6,375	6,400	***511***	***512***
4,000	4,025	***321***	***322***	5,200	5,225	***417***	***418***	6,400	6,425	***513***	***514***
4,025	4,050	***323***	***324***	5,225	5,250	***419***	***420***	6,425	6,450	***515***	***516***
4,050	4,075	***325***	***326***	5,250	5,275	***421***	***422***	6,450	6,475	***517***	***518***
4,075	4,100	***327***	***328***	5,275	5,300	***423***	***424***	6,475	6,500	***519***	***520***
4,100	4,125	***329***	***330***	5,300	5,325	***425***	***426***	6,500	6,525	***521***	***522***
4,125	4,150	***331***	***332***	5,325	5,350	***427***	***428***	6,525	6,550	***523***	***524***
4,150	4,175	***333***	***334***	5,350	5,375	***429***	***430***	6,550	6,575	***525***	***526***
4,175	4,200	***335***	***336***	5,375	5,400	***431***	***432***	6,575	6,600	***527***	***528***
4,200	4,225	***337***	***338***	5,400	5,425	***433***	***434***	6,600	6,625	***529***	***530***
4,225	4,250	***339***	***340***	5,425	5,450	***435***	***436***	6,625	6,650	***531***	***532***
4,250	4,275	***341***	***342***	5,450	5,475	***437***	***438***	6,650	6,675	***533***	***534***
4,275	4,300	***343***	***344***	5,475	5,500	***439***	***440***	6,675	6,700	***535***	***536***
4,300	4,325	***345***	***346***	5,500	5,525	***441***	***442***	6,700	6,725	***537***	***538***
4,325	4,350	***347***	***348***	5,525	5,550	***443***	***444***	6,725	6,750	***539***	***540***
4,350	4,375	***349***	***350***	5,550	5,575	***445***	***446***	6,750	6,775	***541***	***542***
4,375	4,400	***351***	***352***	5,575	5,600	***447***	***448***	6,775	6,800	***543***	***544***
4,400	4,425	***353***	***354***	5,600	5,625	***449***	***450***	6,800	6,825	***545***	***546***
4,425	4,450	***355***	***356***	5,625	5,650	***451***	***452***	6,825	6,850	***547***	***548***
4,450	4,475	***357***	***358***	5,650	5,675	***453***	***454***	6,850	6,875	***549***	***550***
4,475	4,500	***359***	***360***	5,675	5,700	***455***	***456***	6,875	6,900	***551***	***552***
4,500	4,525	***361***	***362***	5,700	5,725	***457***	***458***	6,900	6,925	***553***	***554***
4,525	4,550	***363***	***364***	5,725	5,750	***459***	***460***	6,925	6,950	***555***	***556***
4,550	4,575	***365***	***366***	5,750	5,775	***461***	***462***	6,950	6,975	***557***	***558***
4,575	4,600	***367***	***368***	5,775	5,800	***463***	***464***	6,975	7,000	***559***	***560***
4,600	4,625	***369***	***370***	5,800	5,825	***465***	***466***	7,000	7,025	***561***	***562***
4,625	4,650	***371***	***372***	5,825	5,850	***467***	***468***	7,025	7,050	***563***	***564***
4,650	4,675	***373***	***374***	5,850	5,875	***469***	***470***	7,050	7,075	***565***	***566***
4,675	4,700	***375***	***376***	5,875	5,900	***471***	***472***	7,075	7,100	***567***	***568***
4,700	4,725	***377***	***378***	5,900	5,925	***473***	***474***	7,100	7,125	***569***	***570***
4,725	4,750	***379***	***380***	5,925	5,950	***475***	***476***	7,125	7,150	***571***	***572***
4,750	4,775	***381***	***382***	5,950	5,975	***477***	***478***	7,150	7,175	***573***	***574***
4,775	4,800	***383***	***384***	5,975	6,000	***479***	***480***	7,175	7,200	***575***	***576***

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
7,200	7,225	***577***	***578***	8,400	8,425	***673***	***674***	9,600	9,625	***769***	***770***
7,225	7,250	***579***	***580***	8,425	8,450	***675***	***676***	9,625	9,650	***771***	***772***
7,250	7,275	***581***	***582***	8,450	8,475	***677***	***678***	9,650	9,675	***773***	***774***
7,275	7,300	***583***	***584***	8,475	8,500	***679***	***680***	9,675	9,700	***775***	***776***
7,300	7,325	***585***	***586***	8,500	8,525	***681***	***682***	9,700	9,725	***777***	***778***
7,325	7,350	***587***	***588***	8,525	8,550	***683***	***684***	9,725	9,750	***779***	***780***
7,350	7,375	***589***	***590***	8,550	8,575	***685***	***686***	9,750	9,775	***781***	***782***
7,375	7,400	***591***	***592***	8,575	8,600	***687***	***688***	9,775	9,800	***783***	***784***
7,400	7,425	***593***	***594***	8,600	8,625	***689***	***690***	9,800	9,825	***785***	***786***
7,425	7,450	***595***	***596***	8,625	8,650	***691***	***692***	9,825	9,850	***787***	***788***
7,450	7,475	***597***	***598***	8,650	8,675	***693***	***694***	9,850	9,875	***789***	***790***
7,475	7,500	***599***	***600***	8,675	8,700	***695***	***696***	9,875	9,900	***791***	***792***
7,500	7,525	***601***	***602***	8,700	8,725	***697***	***698***	9,900	9,925	***793***	***794***
7,525	7,550	***603***	***604***	8,725	8,750	***699***	***700***	9,925	9,950	***795***	***796***
7,550	7,575	***605***	***606***	8,750	8,775	***701***	***702***	9,950	9,975	***797***	***798***
7,575	7,600	***607***	***608***	8,775	8,800	***703***	***704***	9,975	10,000	***799***	***800***
7,600	7,625	***609***	***610***	8,800	8,825	***705***	***706***	10,000	10,025	***801***	***802***
7,625	7,650	***611***	***612***	8,825	8,850	***707***	***708***	10,025	10,050	***803***	***804***
7,650	7,675	***613***	***614***	8,850	8,875	***709***	***710***	10,050	10,075	***805***	***806***
7,675	7,700	***615***	***616***	8,875	8,900	***711***	***712***	10,075	10,100	***807***	***808***
7,700	7,725	***617***	***618***	8,900	8,925	***713***	***714***	10,100	10,125	***809***	***810***
7,725	7,750	***619***	***620***	8,925	8,950	***715***	***716***	10,125	10,150	***811***	***812***
7,750	7,775	***621***	***622***	8,950	8,975	***717***	***718***	10,150	10,175	***813***	***814***
7,775	7,800	***623***	***624***	8,975	9,000	***719***	***720***	10,175	10,200	***815***	***816***
7,800	7,825	***625***	***626***	9,000	9,025	***721***	***722***	10,200	10,225	***817***	***818***
7,825	7,850	***627***	***628***	9,025	9,050	***723***	***724***	10,225	10,250	***819***	***820***
7,850	7,875	***629***	***630***	9,050	9,075	***725***	***726***	10,250	10,275	***821***	***822***
7,875	7,900	***631***	***632***	9,075	9,100	***727***	***728***	10,275	10,300	***823***	***824***
7,900	7,925	***633***	***634***	9,100	9,125	***729***	***730***	10,300	10,325	***825***	***826***
7,925	7,950	***635***	***636***	9,125	9,150	***731***	***732***	10,325	10,350	***827***	***828***
7,950	7,975	***637***	***638***	9,150	9,175	***733***	***734***	10,350	10,375	***829***	***830***
7,975	8,000	***639***	***640***	9,175	9,200	***735***	***736***	10,375	10,400	***831***	***832***
8,000	8,025	***641***	***642***	9,200	9,225	***737***	***738***	10,400	10,425	***833***	***834***
8,025	8,050	***643***	***644***	9,225	9,250	***739***	***740***	10,425	10,450	***835***	***836***
8,050	8,075	***645***	***646***	9,250	9,275	***741***	***742***	10,450	10,475	***837***	***838***
8,075	8,100	***647***	***648***	9,275	9,300	***743***	***744***	10,475	10,500	***839***	***840***
8,100	8,125	***649***	***650***	9,300	9,325	***745***	***746***	10,500	10,525	***841***	***842***
8,125	8,150	***651***	***652***	9,325	9,350	***747***	***748***	10,525	10,550	***843***	***844***
8,150	8,175	***653***	***654***	9,350	9,375	***749***	***750***	10,550	10,575	***845***	***846***
8,175	8,200	***655***	***656***	9,375	9,400	***751***	***752***	10,575	10,600	***847***	***848***
8,200	8,225	***657***	***658***	9,400	9,425	***753***	***754***	10,600	10,625	***849***	***850***
8,225	8,250	***659***	***660***	9,425	9,450	***755***	***756***	10,625	10,650	***851***	***852***
8,250	8,275	***661***	***662***	9,450	9,475	***757***	***758***	10,650	10,675	***853***	***854***
8,275	8,300	***663***	***664***	9,475	9,500	***759***	***760***	10,675	10,700	***855***	***856***
8,300	8,325	***665***	***666***	9,500	9,525	***761***	***762***	10,700	10,725	***857***	***858***
8,325	8,350	***667***	***668***	9,525	9,550	***763***	***764***	10,725	10,750	***859***	***860***
8,350	8,375	***669***	***670***	9,550	9,575	***765***	***766***	10,750	10,775	***861***	***862***
8,375	8,400	***671***	***672***	9,575	9,600	***767***	***768***	10,775	10,800	***863***	***864***

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
10,800	10,825	***865***	***866***	12,000	12,025	***961***	***962***	13,200	13,225	***1057***	***1058***
10,825	10,850	***867***	***868***	12,025	12,050	***963***	***964***	13,225	13,250	***1059***	***1060***
10,850	10,875	***869***	***870***	12,050	12,075	***965***	***966***	13,250	13,275	***1061***	***1062***
10,875	10,900	***871***	***872***	12,075	12,100	***967***	***968***	13,275	13,300	***1063***	***1064***
10,900	10,925	***873***	***874***	12,100	12,125	***969***	***970***	13,300	13,325	***1065***	***1066***
10,925	10,950	***875***	***876***	12,125	12,150	***971***	***972***	13,325	13,350	***1067***	***1068***
10,950	10,975	***877***	***878***	12,150	12,175	***973***	***974***	13,350	13,375	***1069***	***1070***
10,975	11,000	***879***	***880***	12,175	12,200	***975***	***976***	13,375	13,400	***1071***	***1072***
11,000	11,025	***881***	***882***	12,200	12,225	***977***	***978***	13,400	13,425	***1073***	***1074***
11,025	11,050	***883***	***884***	12,225	12,250	***979***	***980***	13,425	13,450	***1075***	***1076***
11,050	11,075	***885***	***886***	12,250	12,275	***981***	***982***	13,450	13,475	***1077***	***1078***
11,075	11,100	***887***	***888***	12,275	12,300	***983***	***984***	13,475	13,500	***1079***	***1080***
11,100	11,125	***889***	***890***	12,300	12,325	***985***	***986***	13,500	13,525	***1081***	***1082***
11,125	11,150	***891***	***892***	12,325	12,350	***987***	***988***	13,525	13,550	***1083***	***1084***
11,150	11,175	***893***	***894***	12,350	12,375	***989***	***990***	13,550	13,575	***1085***	***1086***
11,175	11,200	***895***	***896***	12,375	12,400	***991***	***992***	13,575	13,600	***1087***	***1088***
11,200	11,225	***897***	***898***	12,400	12,425	***993***	***994***	13,600	13,625	***1089***	***1090***
11,225	11,250	***899***	***900***	12,425	12,450	***995***	***996***	13,625	13,650	***1091***	***1092***
11,250	11,275	***901***	***902***	12,450	12,475	***997***	***998***	13,650	13,675	***1093***	***1094***
11,275	11,300	***903***	***904***	12,475	12,500	***999***	***1000***	13,675	13,700	***1095***	***1096***
11,300	11,325	***905***	***906***	12,500	12,525	***1001***	***1002***	13,700	13,725	***1097***	***1098***
11,325	11,350	***907***	***908***	12,525	12,550	***1003***	***1004***	13,725	13,750	***1099***	***1100***
11,350	11,375	***909***	***910***	12,550	12,575	***1005***	***1006***	13,750	13,775	***1101***	***1102***
11,375	11,400	***911***	***912***	12,575	12,600	***1007***	***1008***	13,775	13,800	***1103***	***1104***
11,400	11,425	***913***	***914***	12,600	12,625	***1009***	***1010***	13,800	13,825	***1105***	***1106***
11,425	11,450	***915***	***916***	12,625	12,650	***1011***	***1012***	13,825	13,850	***1107***	***1108***
11,450	11,475	***917***	***918***	12,650	12,675	***1013***	***1014***	13,850	13,875	***1109***	***1110***
11,475	11,500	***919***	***920***	12,675	12,700	***1015***	***1016***	13,875	13,900	***1111***	***1112***
11,500	11,525	***921***	***922***	12,700	12,725	***1017***	***1018***	13,900	13,925	***1113***	***1114***
11,525	11,550	***923***	***924***	12,725	12,750	***1019***	***1020***	13,925	13,950	***1115***	***1116***
11,550	11,575	***925***	***926***	12,750	12,775	***1021***	***1022***	13,950	13,975	***1117***	***1118***
11,575	11,600	***927***	***928***	12,775	12,800	***1023***	***1024***	13,975	14,000	***1119***	***1120***
11,600	11,625	***929***	***930***	12,800	12,825	***1025***	***1026***	14,000	14,025	***1121***	***1122***
11,625	11,650	***931***	***932***	12,825	12,850	***1027***	***1028***	14,025	14,050	***1123***	***1124***
11,650	11,675	***933***	***934***	12,850	12,875	***1029***	***1030***	14,050	14,075	***1125***	***1126***
11,675	11,700	***935***	***936***	12,875	12,900	***1031***	***1032***	14,075	14,100	***1127***	***1128***
11,700	11,725	***937***	***938***	12,900	12,925	***1033***	***1034***	14,100	14,125	***1129***	***1130***
11,725	11,750	***939***	***940***	12,925	12,950	***1035***	***1036***	14,125	14,150	***1131***	***1132***
11,750	11,775	***941***	***942***	12,950	12,975	***1037***	***1038***	14,150	14,175	***1133***	***1134***
11,775	11,800	***943***	***944***	12,975	13,000	***1039***	***1040***	14,175	14,200	***1135***	***1136***
11,800	11,825	***945***	***946***	13,000	13,025	***1041***	***1042***	14,200	14,225	***1137***	***1138***
11,825	11,850	***947***	***948***	13,025	13,050	***1043***	***1044***	14,225	14,250	***1139***	***1140***
11,850	11,875	***949***	***950***	13,050	13,075	***1045***	***1046***	14,250	14,275	***1141***	***1142***
11,875	11,900	***951***	***952***	13,075	13,100	***1047***	***1048***	14,275	14,300	***1143***	***1144***
11,900	11,925	***953***	***954***	13,100	13,125	***1049***	***1050***	14,300	14,325	***1145***	***1146***
11,925	11,950	***955***	***956***	13,125	13,150	***1051***	***1052***	14,325	14,350	***1147***	***1148***
11,950	11,975	***957***	***958***	13,150	13,175	***1053***	***1054***	14,350	14,375	***1149***	***1150***
11,975	12,000	***959***	***960***	13,175	13,200	***1055***	***1056***	14,375	14,400	***1151***	***1152***

Appendix C:
Road Measurements and Property Numbers Based on 50' Numbering Interval

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
0	50	***1***	***2***	2,400	2,450	***97***	***98***	4,800	4,850	***193***	***194***
50	100	***3***	***4***	2,450	2,500	***99***	***100***	4,850	4,900	***195***	***196***
100	150	***5***	***6***	2,500	2,550	***101***	***102***	4,900	4,950	***197***	***198***
150	200	***7***	***8***	2,550	2,600	***103***	***104***	4,950	5,000	***199***	***200***
200	250	***9***	***10***	2,600	2,650	***105***	***106***	5,000	5,050	***201***	***202***
250	300	***11***	***12***	2,650	2,700	***107***	***108***	5,050	5,100	***203***	***204***
300	350	***13***	***14***	2,700	2,750	***109***	***110***	5,100	5,150	***205***	***206***
350	400	***15***	***16***	2,750	2,800	***111***	***112***	5,150	5,200	***207***	***208***
400	450	***17***	***18***	2,800	2,850	***113***	***114***	5,200	5,250	***209***	***210***
450	500	***19***	***20***	2,850	2,900	***115***	***116***	5,250	5,300	***211***	***212***
500	550	***21***	***22***	2,900	2,950	***117***	***118***	5,300	5,350	***213***	***214***
550	600	***23***	***24***	2,950	3,000	***119***	***120***	5,350	5,400	***215***	***216***
600	650	***25***	***26***	3,000	3,050	***121***	***122***	5,400	5,450	***217***	***218***
650	700	***27***	***28***	3,050	3,100	***123***	***124***	5,450	5,500	***219***	***220***
700	750	***29***	***30***	3,100	3,150	***125***	***126***	5,500	5,550	***221***	***222***
750	800	***31***	***32***	3,150	3,200	***127***	***128***	5,550	5,600	***223***	***224***
800	850	***33***	***34***	3,200	3,250	***129***	***130***	5,600	5,650	***225***	***226***
850	900	***35***	***36***	3,250	3,300	***131***	***132***	5,650	5,700	***227***	***228***
900	950	***37***	***38***	3,300	3,350	***133***	***134***	5,700	5,750	***229***	***230***
950	1,000	***39***	***40***	3,350	3,400	***135***	***136***	5,750	5,800	***231***	***232***
1,000	1,050	***41***	***42***	3,400	3,450	***137***	***138***	5,800	5,850	***233***	***234***
1,050	1,100	***43***	***44***	3,450	3,500	***139***	***140***	5,850	5,900	***235***	***236***
1,100	1,150	***45***	***46***	3,500	3,550	***141***	***142***	5,900	5,950	***237***	***238***
1,150	1,200	***47***	***48***	3,550	3,600	***143***	***144***	5,950	6,000	***239***	***240***
1,200	1,250	***49***	***50***	3,600	3,650	***145***	***146***	6,000	6,050	***241***	***242***
1,250	1,300	***51***	***52***	3,650	3,700	***147***	***148***	6,050	6,100	***243***	***244***
1,300	1,350	***53***	***54***	3,700	3,750	***149***	***150***	6,100	6,150	***245***	***246***
1,350	1,400	***55***	***56***	3,750	3,800	***151***	***152***	6,150	6,200	***247***	***248***
1,400	1,450	***57***	***58***	3,800	3,850	***153***	***154***	6,200	6,250	***249***	***250***
1,450	1,500	***59***	***60***	3,850	3,900	***155***	***156***	6,250	6,300	***251***	***252***
1,500	1,550	***61***	***62***	3,900	3,950	***157***	***158***	6,300	6,350	***253***	***254***
1,550	1,600	***63***	***64***	3,950	4,000	***159***	***160***	6,350	6,400	***255***	***256***
1,600	1,650	***65***	***66***	4,000	4,050	***161***	***162***	6,400	6,450	***257***	***258***
1,650	1,700	***67***	***68***	4,050	4,100	***163***	***164***	6,450	6,500	***259***	***260***
1,700	1,750	***69***	***70***	4,100	4,150	***165***	***166***	6,500	6,550	***261***	***262***
1,750	1,800	***71***	***72***	4,150	4,200	***167***	***168***	6,550	6,600	***263***	***264***
1,800	1,850	***73***	***74***	4,200	4,250	***169***	***170***	6,600	6,650	***265***	***266***
1,850	1,900	***75***	***76***	4,250	4,300	***171***	***172***	6,650	6,700	***267***	***268***
1,900	1,950	***77***	***78***	4,300	4,350	***173***	***174***	6,700	6,750	***269***	***270***
1,950	2,000	***79***	***80***	4,350	4,400	***175***	***176***	6,750	6,800	***271***	***272***
2,000	2,050	***81***	***82***	4,400	4,450	***177***	***178***	6,800	6,850	***273***	***274***
2,050	2,100	***83***	***84***	4,450	4,500	***179***	***180***	6,850	6,900	***275***	***276***
2,100	2,150	***85***	***86***	4,500	4,550	***181***	***182***	6,900	6,950	***277***	***278***
2,150	2,200	***87***	***88***	4,550	4,600	***183***	***184***	6,950	7,000	***279***	***280***
2,200	2,250	***89***	***90***	4,600	4,650	***185***	***186***	7,000	7,050	***281***	***282***
2,250	2,300	***91***	***92***	4,650	4,700	***187***	***188***	7,050	7,100	***283***	***284***
2,300	2,350	***93***	***94***	4,700	4,750	***189***	***190***	7,100	7,150	***285***	***286***
2,350	2,400	***95***	***96***	4,750	4,800	***191***	***192***	7,150	7,200	***287***	***288***

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
7,200	7,250	***289***	***290***	9,600	9,650	***385***	***386***	12,000	12,050	***481***	***482***
7,250	7,300	***291***	***292***	9,650	9,700	***387***	***388***	12,050	12,100	***483***	***484***
7,300	7,350	***293***	***294***	9,700	9,750	***389***	***390***	12,100	12,150	***485***	***486***
7,350	7,400	***295***	***296***	9,750	9,800	***391***	***392***	12,150	12,200	***487***	***488***
7,400	7,450	***297***	***298***	9,800	9,850	***393***	***394***	12,200	12,250	***489***	***490***
7,450	7,500	***299***	***300***	9,850	9,900	***395***	***396***	12,250	12,300	***491***	***492***
7,500	7,550	***301***	***302***	9,900	9,950	***397***	***398***	12,300	12,350	***493***	***494***
7,550	7,600	***303***	***304***	9,950	10,000	***399***	***400***	12,350	12,400	***495***	***496***
7,600	7,650	***305***	***306***	10,000	10,050	***401***	***402***	12,400	12,450	***497***	***498***
7,650	7,700	***307***	***308***	10,050	10,100	***403***	***404***	12,450	12,500	***499***	***500***
7,700	7,750	***309***	***310***	10,100	10,150	***405***	***406***	12,500	12,550	***501***	***502***
7,750	7,800	***311***	***312***	10,150	10,200	***407***	***408***	12,550	12,600	***503***	***504***
7,800	7,850	***313***	***314***	10,200	10,250	***409***	***410***	12,600	12,650	***505***	***506***
7,850	7,900	***315***	***316***	10,250	10,300	***411***	***412***	12,650	12,700	***507***	***508***
7,900	7,950	***317***	***318***	10,300	10,350	***413***	***414***	12,700	12,750	***509***	***510***
7,950	8,000	***319***	***320***	10,350	10,400	***415***	***416***	12,750	12,800	***511***	***512***
8,000	8,050	***321***	***322***	10,400	10,450	***417***	***418***	12,800	12,850	***513***	***514***
8,050	8,100	***323***	***324***	10,450	10,500	***419***	***420***	12,850	12,900	***515***	***516***
8,100	8,150	***325***	***326***	10,500	10,550	***421***	***422***	12,900	12,950	***517***	***518***
8,150	8,200	***327***	***328***	10,550	10,600	***423***	***424***	12,950	13,000	***519***	***520***
8,200	8,250	***329***	***330***	10,600	10,650	***425***	***426***	13,000	13,050	***521***	***522***
8,250	8,300	***331***	***332***	10,650	10,700	***427***	***428***	13,050	13,100	***523***	***524***
8,300	8,350	***333***	***334***	10,700	10,750	***429***	***430***	13,100	13,150	***525***	***526***
8,350	8,400	***335***	***336***	10,750	10,800	***431***	***432***	13,150	13,200	***527***	***528***
8,400	8,450	***337***	***338***	10,800	10,850	***433***	***434***	13,200	13,250	***529***	***530***
8,450	8,500	***339***	***340***	10,850	10,900	***435***	***436***	13,250	13,300	***531***	***532***
8,500	8,550	***341***	***342***	10,900	10,950	***437***	***438***	13,300	13,350	***533***	***534***
8,550	8,600	***343***	***344***	10,950	11,000	***439***	***440***	13,350	13,400	***535***	***536***
8,600	8,650	***345***	***346***	11,000	11,050	***441***	***442***	13,400	13,450	***537***	***538***
8,650	8,700	***347***	***348***	11,050	11,100	***443***	***444***	13,450	13,500	***539***	***540***
8,700	8,750	***349***	***350***	11,100	11,150	***445***	***446***	13,500	13,550	***541***	***542***
8,750	8,800	***351***	***352***	11,150	11,200	***447***	***448***	13,550	13,600	***543***	***544***
8,800	8,850	***353***	***354***	11,200	11,250	***449***	***450***	13,600	13,650	***545***	***546***
8,850	8,900	***355***	***356***	11,250	11,300	***451***	***452***	13,650	13,700	***547***	***548***
8,900	8,950	***357***	***358***	11,300	11,350	***453***	***454***	13,700	13,750	***549***	***550***
8,950	9,000	***359***	***360***	11,350	11,400	***455***	***456***	13,750	13,800	***551***	***552***
9,000	9,050	***361***	***362***	11,400	11,450	***457***	***458***	13,800	13,850	***553***	***554***
9,050	9,100	***363***	***364***	11,450	11,500	***459***	***460***	13,850	13,900	***555***	***556***
9,100	9,150	***365***	***366***	11,500	11,550	***461***	***462***	13,900	13,950	***557***	***558***
9,150	9,200	***367***	***368***	11,550	11,600	***463***	***464***	13,950	14,000	***559***	***560***
9,200	9,250	***369***	***370***	11,600	11,650	***465***	***466***	14,000	14,050	***561***	***562***
9,250	9,300	***371***	***372***	11,650	11,700	***467***	***468***	14,050	14,100	***563***	***564***
9,300	9,350	***373***	***374***	11,700	11,750	***469***	***470***	14,100	14,150	***565***	***566***
9,350	9,400	***375***	***376***	11,750	11,800	***471***	***472***	14,150	14,200	***567***	***568***
9,400	9,450	***377***	***378***	11,800	11,850	***473***	***474***	14,200	14,250	***569***	***570***
9,450	9,500	***379***	***380***	11,850	11,900	***475***	***476***	14,250	14,300	***571***	***572***
9,500	9,550	***381***	***382***	11,900	11,950	***477***	***478***	14,300	14,350	***573***	***574***
9,550	9,600	***383***	***384***	11,950	12,000	***479***	***480***	14,350	14,400	***575***	***576***

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
14,400	14,450	***577***	***578***	16,800	16,850	***673***	***674***	19,200	19,250	***769***	***770***
14,450	14,500	***579***	***580***	16,850	16,900	***675***	***676***	19,250	19,300	***771***	***772***
14,500	14,550	***581***	***582***	16,900	16,950	***677***	***678***	19,300	19,350	***773***	***774***
14,550	14,600	***583***	***584***	16,950	17,000	***679***	***680***	19,350	19,400	***775***	***776***
14,600	14,650	***585***	***586***	17,000	17,050	***681***	***682***	19,400	19,450	***777***	***778***
14,650	14,700	***587***	***588***	17,050	17,100	***683***	***684***	19,450	19,500	***779***	***780***
14,700	14,750	***589***	***590***	17,100	17,150	***685***	***686***	19,500	19,550	***781***	***782***
14,750	14,800	***591***	***592***	17,150	17,200	***687***	***688***	19,550	19,600	***783***	***784***
14,800	14,850	***593***	***594***	17,200	17,250	***689***	***690***	19,600	19,650	***785***	***786***
14,850	14,900	***595***	***596***	17,250	17,300	***691***	***692***	19,650	19,700	***787***	***788***
14,900	14,950	***597***	***598***	17,300	17,350	***693***	***694***	19,700	19,750	***789***	***790***
14,950	15,000	***599***	***600***	17,350	17,400	***695***	***696***	19,750	19,800	***791***	***792***
15,000	15,050	***601***	***602***	17,400	17,450	***697***	***698***	19,800	19,850	***793***	***794***
15,050	15,100	***603***	***604***	17,450	17,500	***699***	***700***	19,850	19,900	***795***	***796***
15,100	15,150	***605***	***606***	17,500	17,550	***701***	***702***	19,900	19,950	***797***	***798***
15,150	15,200	***607***	***608***	17,550	17,600	***703***	***704***	19,950	20,000	***799***	***800***
15,200	15,250	***609***	***610***	17,600	17,650	***705***	***706***	20,000	20,050	***801***	***802***
15,250	15,300	***611***	***612***	17,650	17,700	***707***	***708***	20,050	20,100	***803***	***804***
15,300	15,350	***613***	***614***	17,700	17,750	***709***	***710***	20,100	20,150	***805***	***806***
15,350	15,400	***615***	***616***	17,750	17,800	***711***	***712***	20,150	20,200	***807***	***808***
15,400	15,450	***617***	***618***	17,800	17,850	***713***	***714***	20,200	20,250	***809***	***810***
15,450	15,500	***619***	***620***	17,850	17,900	***715***	***716***	20,250	20,300	***811***	***812***
15,500	15,550	***621***	***622***	17,900	17,950	***717***	***718***	20,300	20,350	***813***	***814***
15,550	15,600	***623***	***624***	17,950	18,000	***719***	***720***	20,350	20,400	***815***	***816***
15,600	15,650	***625***	***626***	18,000	18,050	***721***	***722***	20,400	20,450	***817***	***818***
15,650	15,700	***627***	***628***	18,050	18,100	***723***	***724***	20,450	20,500	***819***	***820***
15,700	15,750	***629***	***630***	18,100	18,150	***725***	***726***	20,500	20,550	***821***	***822***
15,750	15,800	***631***	***632***	18,150	18,200	***727***	***728***	20,550	20,600	***823***	***824***
15,800	15,850	***633***	***634***	18,200	18,250	***729***	***730***	20,600	20,650	***825***	***826***
15,850	15,900	***635***	***636***	18,250	18,300	***731***	***732***	20,650	20,700	***827***	***828***
15,900	15,950	***637***	***638***	18,300	18,350	***733***	***734***	20,700	20,750	***829***	***830***
15,950	16,000	***639***	***640***	18,350	18,400	***735***	***736***	20,750	20,800	***831***	***832***
16,000	16,050	***641***	***642***	18,400	18,450	***737***	***738***	20,800	20,850	***833***	***834***
16,050	16,100	***643***	***644***	18,450	18,500	***739***	***740***	20,850	20,900	***835***	***836***
16,100	16,150	***645***	***646***	18,500	18,550	***741***	***742***	20,900	20,950	***837***	***838***
16,150	16,200	***647***	***648***	18,550	18,600	***743***	***744***	20,950	21,000	***839***	***840***
16,200	16,250	***649***	***650***	18,600	18,650	***745***	***746***	21,000	21,050	***841***	***842***
16,250	16,300	***651***	***652***	18,650	18,700	***747***	***748***	21,050	21,100	***843***	***844***
16,300	16,350	***653***	***654***	18,700	18,750	***749***	***750***	21,100	21,150	***845***	***846***
16,350	16,400	***655***	***656***	18,750	18,800	***751***	***752***	21,150	21,200	***847***	***848***
16,400	16,450	***657***	***658***	18,800	18,850	***753***	***754***	21,200	21,250	***849***	***850***
16,450	16,500	***659***	***660***	18,850	18,900	***755***	***756***	21,250	21,300	***851***	***852***
16,500	16,550	***661***	***662***	18,900	18,950	***757***	***758***	21,300	21,350	***853***	***854***
16,550	16,600	***663***	***664***	18,950	19,000	***759***	***760***	21,350	21,400	***855***	***856***
16,600	16,650	***665***	***666***	19,000	19,050	***761***	***762***	21,400	21,450	***857***	***858***
16,650	16,700	***667***	***668***	19,050	19,100	***763***	***764***	21,450	21,500	***859***	***860***
16,700	16,750	***669***	***670***	19,100	19,150	***765***	***766***	21,500	21,550	***861***	***862***
16,750	16,800	***671***	***672***	19,150	19,200	***767***	***768***	21,550	21,600	***863***	***864***

Appendix C:
Road Measurements and Property Numbers Based on 50' Numbering Interval

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
21,600	21,650	***865***	***866***	24,000	24,050	***961***	***962***	26,400	26,450	***1057***	***1058***
21,650	21,700	***867***	***868***	24,050	24,100	***963***	***964***	26,450	26,500	***1059***	***1060***
21,700	21,750	***869***	***870***	24,100	24,150	***965***	***966***	26,500	26,550	***1061***	***1062***
21,750	21,800	***871***	***872***	24,150	24,200	***967***	***968***	26,550	26,600	***1063***	***1064***
21,800	21,850	***873***	***874***	24,200	24,250	***969***	***970***	26,600	26,650	***1065***	***1066***
21,850	21,900	***875***	***876***	24,250	24,300	***971***	***972***	26,650	26,700	***1067***	***1068***
21,900	21,950	***877***	***878***	24,300	24,350	***973***	***974***	26,700	26,750	***1069***	***1070***
21,950	22,000	***879***	***880***	24,350	24,400	***975***	***976***	26,750	26,800	***1071***	***1072***
22,000	22,050	***881***	***882***	24,400	24,450	***977***	***978***	26,800	26,850	***1073***	***1074***
22,050	22,100	***883***	***884***	24,450	24,500	***979***	***980***	26,850	26,900	***1075***	***1076***
22,100	22,150	***885***	***886***	24,500	24,550	***981***	***982***	26,900	26,950	***1077***	***1078***
22,150	22,200	***887***	***888***	24,550	24,600	***983***	***984***	26,950	27,000	***1079***	***1080***
22,200	22,250	***889***	***890***	24,600	24,650	***985***	***986***	27,000	27,050	***1081***	***1082***
22,250	22,300	***891***	***892***	24,650	24,700	***987***	***988***	27,050	27,100	***1083***	***1084***
22,300	22,350	***893***	***894***	24,700	24,750	***989***	***990***	27,100	27,150	***1085***	***1086***
22,350	22,400	***895***	***896***	24,750	24,800	***991***	***992***	27,150	27,200	***1087***	***1088***
22,400	22,450	***897***	***898***	24,800	24,850	***993***	***994***	27,200	27,250	***1089***	***1090***
22,450	22,500	***899***	***900***	24,850	24,900	***995***	***996***	27,250	27,300	***1091***	***1092***
22,500	22,550	***901***	***902***	24,900	24,950	***997***	***998***	27,300	27,350	***1093***	***1094***
22,550	22,600	***903***	***904***	24,950	25,000	***999***	***1000***	27,350	27,400	***1095***	***1096***
22,600	22,650	***905***	***906***	25,000	25,050	***1001***	***1002***	27,400	27,450	***1097***	***1098***
22,650	22,700	***907***	***908***	25,050	25,100	***1003***	***1004***	27,450	27,500	***1099***	***1100***
22,700	22,750	***909***	***910***	25,100	25,150	***1005***	***1006***	27,500	27,550	***1101***	***1102***
22,750	22,800	***911***	***912***	25,150	25,200	***1007***	***1008***	27,550	27,600	***1103***	***1104***
22,800	22,850	***913***	***914***	25,200	25,250	***1009***	***1010***	27,600	27,650	***1105***	***1106***
22,850	22,900	***915***	***916***	25,250	25,300	***1011***	***1012***	27,650	27,700	***1107***	***1108***
22,900	22,950	***917***	***918***	25,300	25,350	***1013***	***1014***	27,700	27,750	***1109***	***1110***
22,950	23,000	***919***	***920***	25,350	25,400	***1015***	***1016***	27,750	27,800	***1111***	***1112***
23,000	23,050	***921***	***922***	25,400	25,450	***1017***	***1018***	27,800	27,850	***1113***	***1114***
23,050	23,100	***923***	***924***	25,450	25,500	***1019***	***1020***	27,850	27,900	***1115***	***1116***
23,100	23,150	***925***	***926***	25,500	25,550	***1021***	***1022***	27,900	27,950	***1117***	***1118***
23,150	23,200	***927***	***928***	25,550	25,600	***1023***	***1024***	27,950	28,000	***1119***	***1120***
23,200	23,250	***929***	***930***	25,600	25,650	***1025***	***1026***	28,000	28,050	***1121***	***1122***
23,250	23,300	***931***	***932***	25,650	25,700	***1027***	***1028***	28,050	28,100	***1123***	***1124***
23,300	23,350	***933***	***934***	25,700	25,750	***1029***	***1030***	28,100	28,150	***1125***	***1126***
23,350	23,400	***935***	***936***	25,750	25,800	***1031***	***1032***	28,150	28,200	***1127***	***1128***
23,400	23,450	***937***	***938***	25,800	25,850	***1033***	***1034***	28,200	28,250	***1129***	***1130***
23,450	23,500	***939***	***940***	25,850	25,900	***1035***	***1036***	28,250	28,300	***1131***	***1132***
23,500	23,550	***941***	***942***	25,900	25,950	***1037***	***1038***	28,300	28,350	***1133***	***1134***
23,550	23,600	***943***	***944***	25,950	26,000	***1039***	***1040***	28,350	28,400	***1135***	***1136***
23,600	23,650	***945***	***946***	26,000	26,050	***1041***	***1042***	28,400	28,450	***1137***	***1138***
23,650	23,700	***947***	***948***	26,050	26,100	***1043***	***1044***	28,450	28,500	***1139***	***1140***
23,700	23,750	***949***	***950***	26,100	26,150	***1045***	***1046***	28,500	28,550	***1141***	***1142***
23,750	23,800	***951***	***952***	26,150	26,200	***1047***	***1048***	28,550	28,600	***1143***	***1144***
23,800	23,850	***953***	***954***	26,200	26,250	***1049***	***1050***	28,600	28,650	***1145***	***1146***
23,850	23,900	***955***	***956***	26,250	26,300	***1051***	***1052***	28,650	28,700	***1147***	***1148***
23,900	23,950	***957***	***958***	26,300	26,350	***1053***	***1054***	28,700	28,750	***1149***	***1150***
23,950	24,000	***959***	***960***	26,350	26,400	***1055***	***1056***	28,750	28,800	***1151***	***1152***

Appendix C:
Road Measurements and Property Numbers Based on 100' Numbering Interval

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
0	100	***1***	***2***	4,800	4,900	***97***	***98***	9,600	9,700	***193***	***194***
100	200	***3***	***4***	4,900	5,000	***99***	***100***	9,700	9,800	***195***	***196***
200	300	***5***	***6***	5,000	5,100	***101***	***102***	9,800	9,900	***197***	***198***
300	400	***7***	***8***	5,100	5,200	***103***	***104***	9,900	10,000	***199***	***200***
400	500	***9***	***10***	5,200	5,300	***105***	***106***	10,000	10,100	***201***	***202***
500	600	***11***	***12***	5,300	5,400	***107***	***108***	10,100	10,200	***203***	***204***
600	700	***13***	***14***	5,400	5,500	***109***	***110***	10,200	10,300	***205***	***206***
700	800	***15***	***16***	5,500	5,600	***111***	***112***	10,300	10,400	***207***	***208***
800	900	***17***	***18***	5,600	5,700	***113***	***114***	10,400	10,500	***209***	***210***
900	1,000	***19***	***20***	5,700	5,800	***115***	***116***	10,500	10,600	***211***	***212***
1,000	1,100	***21***	***22***	5,800	5,900	***117***	***118***	10,600	10,700	***213***	***214***
1,100	1,200	***23***	***24***	5,900	6,000	***119***	***120***	10,700	10,800	***215***	***216***
1,200	1,300	***25***	***26***	6,000	6,100	***121***	***122***	10,800	10,900	***217***	***218***
1,300	1,400	***27***	***28***	6,100	6,200	***123***	***124***	10,900	11,000	***219***	***220***
1,400	1,500	***29***	***30***	6,200	6,300	***125***	***126***	11,000	11,100	***221***	***222***
1,500	1,600	***31***	***32***	6,300	6,400	***127***	***128***	11,100	11,200	***223***	***224***
1,600	1,700	***33***	***34***	6,400	6,500	***129***	***130***	11,200	11,300	***225***	***226***
1,700	1,800	***35***	***36***	6,500	6,600	***131***	***132***	11,300	11,400	***227***	***228***
1,800	1,900	***37***	***38***	6,600	6,700	***133***	***134***	11,400	11,500	***229***	***230***
1,900	2,000	***39***	***40***	6,700	6,800	***135***	***136***	11,500	11,600	***231***	***232***
2,000	2,100	***41***	***42***	6,800	6,900	***137***	***138***	11,600	11,700	***233***	***234***
2,100	2,200	***43***	***44***	6,900	7,000	***139***	***140***	11,700	11,800	***235***	***236***
2,200	2,300	***45***	***46***	7,000	7,100	***141***	***142***	11,800	11,900	***237***	***238***
2,300	2,400	***47***	***48***	7,100	7,200	***143***	***144***	11,900	12,000	***239***	***240***
2,400	2,500	***49***	***50***	7,200	7,300	***145***	***146***	12,000	12,100	***241***	***242***
2,500	2,600	***51***	***52***	7,300	7,400	***147***	***148***	12,100	12,200	***243***	***244***
2,600	2,700	***53***	***54***	7,400	7,500	***149***	***150***	12,200	12,300	***245***	***246***
2,700	2,800	***55***	***56***	7,500	7,600	***151***	***152***	12,300	12,400	***247***	***248***
2,800	2,900	***57***	***58***	7,600	7,700	***153***	***154***	12,400	12,500	***249***	***250***
2,900	3,000	***59***	***60***	7,700	7,800	***155***	***156***	12,500	12,600	***251***	***252***
3,000	3,100	***61***	***62***	7,800	7,900	***157***	***158***	12,600	12,700	***253***	***254***
3,100	3,200	***63***	***64***	7,900	8,000	***159***	***160***	12,700	12,800	***255***	***256***
3,200	3,300	***65***	***66***	8,000	8,100	***161***	***162***	12,800	12,900	***257***	***258***
3,300	3,400	***67***	***68***	8,100	8,200	***163***	***164***	12,900	13,000	***259***	***260***
3,400	3,500	***69***	***70***	8,200	8,300	***165***	***166***	13,000	13,100	***261***	***262***
3,500	3,600	***71***	***72***	8,300	8,400	***167***	***168***	13,100	13,200	***263***	***264***
3,600	3,700	***73***	***74***	8,400	8,500	***169***	***170***	13,200	13,300	***265***	***266***
3,700	3,800	***75***	***76***	8,500	8,600	***171***	***172***	13,300	13,400	***267***	***268***
3,800	3,900	***77***	***78***	8,600	8,700	***173***	***174***	13,400	13,500	***269***	***270***
3,900	4,000	***79***	***80***	8,700	8,800	***175***	***176***	13,500	13,600	***271***	***272***
4,000	4,100	***81***	***82***	8,800	8,900	***177***	***178***	13,600	13,700	***273***	***274***
4,100	4,200	***83***	***84***	8,900	9,000	***179***	***180***	13,700	13,800	***275***	***276***
4,200	4,300	***85***	***86***	9,000	9,100	***181***	***182***	13,800	13,900	***277***	***278***
4,300	4,400	***87***	***88***	9,100	9,200	***183***	***184***	13,900	14,000	***279***	***280***
4,400	4,500	***89***	***90***	9,200	9,300	***185***	***186***	14,000	14,100	***281***	***282***
4,500	4,600	***91***	***92***	9,300	9,400	***187***	***188***	14,100	14,200	***283***	***284***
4,600	4,700	***93***	***94***	9,400	9,500	***189***	***190***	14,200	14,300	***285***	***286***
4,700	4,800	***95***	***96***	9,500	9,600	***191***	***192***	14,300	14,400	***287***	***288***

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
14,400	14,500	***289***	***290***	19,200	19,300	***385***	***386***	24,000	24,100	***481***	***482***
14,500	14,600	***291***	***292***	19,300	19,400	***387***	***388***	24,100	24,200	***483***	***484***
14,600	14,700	***293***	***294***	19,400	19,500	***389***	***390***	24,200	24,300	***485***	***486***
14,700	14,800	***295***	***296***	19,500	19,600	***391***	***392***	24,300	24,400	***487***	***488***
14,800	14,900	***297***	***298***	19,600	19,700	***393***	***394***	24,400	24,500	***489***	***490***
14,900	15,000	***299***	***300***	19,700	19,800	***395***	***396***	24,500	24,600	***491***	***492***
15,000	15,100	***301***	***302***	19,800	19,900	***397***	***398***	24,600	24,700	***493***	***494***
15,100	15,200	***303***	***304***	19,900	20,000	***399***	***400***	24,700	24,800	***495***	***496***
15,200	15,300	***305***	***306***	20,000	20,100	***401***	***402***	24,800	24,900	***497***	***498***
15,300	15,400	***307***	***308***	20,100	20,200	***403***	***404***	24,900	25,000	***499***	***500***
15,400	15,500	***309***	***310***	20,200	20,300	***405***	***406***	25,000	25,100	***501***	***502***
15,500	15,600	***311***	***312***	20,300	20,400	***407***	***408***	25,100	25,200	***503***	***504***
15,600	15,700	***313***	***314***	20,400	20,500	***409***	***410***	25,200	25,300	***505***	***506***
15,700	15,800	***315***	***316***	20,500	20,600	***411***	***412***	25,300	25,400	***507***	***508***
15,800	15,900	***317***	***318***	20,600	20,700	***413***	***414***	25,400	25,500	***509***	***510***
15,900	16,000	***319***	***320***	20,700	20,800	***415***	***416***	25,500	25,600	***511***	***512***
16,000	16,100	***321***	***322***	20,800	20,900	***417***	***418***	25,600	25,700	***513***	***514***
16,100	16,200	***323***	***324***	20,900	21,000	***419***	***420***	25,700	25,800	***515***	***516***
16,200	16,300	***325***	***326***	21,000	21,100	***421***	***422***	25,800	25,900	***517***	***518***
16,300	16,400	***327***	***328***	21,100	21,200	***423***	***424***	25,900	26,000	***519***	***520***
16,400	16,500	***329***	***330***	21,200	21,300	***425***	***426***	26,000	26,100	***521***	***522***
16,500	16,600	***331***	***332***	21,300	21,400	***427***	***428***	26,100	26,200	***523***	***524***
16,600	16,700	***333***	***334***	21,400	21,500	***429***	***430***	26,200	26,300	***525***	***526***
16,700	16,800	***335***	***336***	21,500	21,600	***431***	***432***	26,300	26,400	***527***	***528***
16,800	16,900	***337***	***338***	21,600	21,700	***433***	***434***	26,400	26,500	***529***	***530***
16,900	17,000	***339***	***340***	21,700	21,800	***435***	***436***	26,500	26,600	***531***	***532***
17,000	17,100	***341***	***342***	21,800	21,900	***437***	***438***	26,600	26,700	***533***	***534***
17,100	17,200	***343***	***344***	21,900	22,000	***439***	***440***	26,700	26,800	***535***	***536***
17,200	17,300	***345***	***346***	22,000	22,100	***441***	***442***	26,800	26,900	***537***	***538***
17,300	17,400	***347***	***348***	22,100	22,200	***443***	***444***	26,900	27,000	***539***	***540***
17,400	17,500	***349***	***350***	22,200	22,300	***445***	***446***	27,000	27,100	***541***	***542***
17,500	17,600	***351***	***352***	22,300	22,400	***447***	***448***	27,100	27,200	***543***	***544***
17,600	17,700	***353***	***354***	22,400	22,500	***449***	***450***	27,200	27,300	***545***	***546***
17,700	17,800	***355***	***356***	22,500	22,600	***451***	***452***	27,300	27,400	***547***	***548***
17,800	17,900	***357***	***358***	22,600	22,700	***453***	***454***	27,400	27,500	***549***	***550***
17,900	18,000	***359***	***360***	22,700	22,800	***455***	***456***	27,500	27,600	***551***	***552***
18,000	18,100	***361***	***362***	22,800	22,900	***457***	***458***	27,600	27,700	***553***	***554***
18,100	18,200	***363***	***364***	22,900	23,000	***459***	***460***	27,700	27,800	***555***	***556***
18,200	18,300	***365***	***366***	23,000	23,100	***461***	***462***	27,800	27,900	***557***	***558***
18,300	18,400	***367***	***368***	23,100	23,200	***463***	***464***	27,900	28,000	***559***	***560***
18,400	18,500	***369***	***370***	23,200	23,300	***465***	***466***	28,000	28,100	***561***	***562***
18,500	18,600	***371***	***372***	23,300	23,400	***467***	***468***	28,100	28,200	***563***	***564***
18,600	18,700	***373***	***374***	23,400	23,500	***469***	***470***	28,200	28,300	***565***	***566***
18,700	18,800	***375***	***376***	23,500	23,600	***471***	***472***	28,300	28,400	***567***	***568***
18,800	18,900	***377***	***378***	23,600	23,700	***473***	***474***	28,400	28,500	***569***	***570***
18,900	19,000	***379***	***380***	23,700	23,800	***475***	***476***	28,500	28,600	***571***	***572***
19,000	19,100	***381***	***382***	23,800	23,900	***477***	***478***	28,600	28,700	***573***	***574***
19,100	19,200	***383***	***384***	23,900	24,000	***479***	***480***	28,700	28,800	***575***	***576***

APPENDIX D

This document is included as a reference for AOs to increase their understanding of how street names are represented in the MSAG and displayed at the PSAPs.

Criteria for Representing Road Names in the Maine 9-1-1 MSAG System

1.0 Introduction

This document, from the Maine ESCB is intended to provide criteria and guidance to telephone company carriers and AOs regarding how road names are represented in Maine's E9-1-1 ALI and MSAG databases. Town designated AOs (for municipalities) and county designated AOs (for unorganized territories) are the only legal authorities to name roads and number structures for the 9-1-1 system. It is important that structure numbering and road naming conventions adhere to the U.S. Postal Service Standards (Publication 28) and to the NENA (National Emergency Number Association) standards which govern how streets and roads are represented across all 9-1-1 platforms.

2.0 Maine Address Standard Criteria

When entering road names into the MSAG and ALI databases, the following criteria is to be used to represent road name. We have included a discussion of Pre- and Post- directional fields for clarification.

The last word in a legal road name, unless it is a directional (east, west, northeast, southwest, etc.) should be treated as a suffix and will be abbreviated according to the NENA standard which can be found at http://pe.usps.gov/cpim/ftp/pubs/Pub28/pub28.pdf. The list of standard suffixes and their standard abbreviations is included in this manual in Section 2.5 beginning on page 62.

2.1 Post and Pre Directionals

If the *last* word in a road name is a directional word then this should be abbreviated in a Post-Directional field. If the *first* word in a road name is a directional word it should be put into the Pre-Directional field. (**See note below for exceptions to the Pre-Directional format.) An example of Post-Directional is:

55 Maine Avenue North or Northwest will become

HOUSE NUM	PRE DIR	STREET	SUFFIX	POST DIR	COMMUNITY
55		MAINE	AVE	N	FARMINGDALE
55		MAINE	AVE	NW	FARMINGDALE

An example of Pre-Directional is:
55 North (or South)Maine Avenue which will become

HOUSE NUM	PRE DIR	STREET	SUFFIX	POST DIR	COMMUNITY
55	N	MAINE	AVE		FARMINGDALE
55	S	MAINE	AVE		FARMINGDALE

**Exceptions to the Pre-Directional convention is when a road name has *only* a directional word such as North Road or West Street. These would be represented as:

HOUSE NUM	PRE DIR	STREET	SUFFIX	POST DIR	COMMUNITY
55		NORTH	RD		FARMINGDALE
55		WEST	ST		FARMINGDALE

For those carrier database systems that do not break out the Pre or Post Directional fields, the directional should still be entered into the system in the abbreviated format, either before or after the rest of the road name, such as MAINE AVE NW or W MAINE AVE.

2.2 Suffix Convention

For any “last word” in a legal road name that is in the USPS Standard Suffix List, the word should be abbreviated. The current list of USPS Suffixes (as of 12/2/10) is included in this document in Section 2.5 of this appendix for your convenience, but always refer to the USPS Standard, Pub. 28 document for the definitive list of standard suffixes.

For those carrier systems that separate out the road name and the suffix, then this abbreviated word would be put into the Suffix Field. For those systems that do not store suffix in a separate field, the word should still be abbreviated according to the USPS Postal Service Standard.

2.3 When not in the Suffix List

For those “last words” that are not listed in the Standard Suffix List, these will not be abbreviated and will not be inserted into the Suffix Field. The following table is a list of road names (last word in the name), that are currently in use in Maine but are not in the Postal Standard Suffix List. These will be spelled out in the Street Name Field. If new road names are created where the last word does not exist in the Standard, either as a Post Directional or a Suffix, then it will be spelled out in the Street Name Field.

Access	Cross	Intervale	Retreat
Acres	Cutoff	Keep	Rips
Arm	Den	Knob	Rock
Arterial	Driveway	Ledges	Rocks
Bank	Eddy	Loch	Side
Battery	Edge	Lookout	Siding
Bog	Elbow	Marsh	Sounds
Breeze	Entry	Mist	Straits
Byway	Escape	Notch	Stretch
Call	Exit	Overlook	Strip
Campground	Farm	Pasture	Throw
Circuit	Fireroad	Patch	Thrush
Circus	Gate	Pier	Turn
Close	Glade	Pit	Villas
Colony	Gulch	Pocket	Wharf
Commonwealth	Haze	Pool	Woods
Connection	Head	Promenade	
Connector	Hideaway	Rangeway	
Cross	Highlands	Reach	

2.4 Highways and routes with numbers

A similar database standardization has also been applied to roads with route numbers such as State Highway 3 and U.S. Route 202. These types of road names are standardized in the MSAG database as Route 3 and Route 202. There is no distinction bettween the type of route in the MSAG at this time. With new NG9-1-1 standards, currently in development at NENA, this may change.

EXCERPT from USPS Postal Addressing Standards - Appendix C; Dated April 2010

C1 Street Suffix Abbreviations The following table lists examples of suffix forms that are primary street suffix names, common street suffixes or suffix abbreviations, and recommended official Postal Service standard suffix abbreviations.

Primary Street Suffix Name	Commonly Used Street Suffix or Abbreviation	Postal Service Standard Suffix Abbreviation
ALLEY	ALLEE	ALY
	ALLEY	
	ALLY	
	ALY	
ANEX	ANEX	ANX
	ANNEX	
	ANNX	
	ANX	
ARCADE	ARC	ARC
	ARCADE	
AVENUE	AV	AVE
	AVE	
	AVEN	
	AVENU	
	AVENUE	
	AVN	
	AVNUE	
BAYOU	BAYOO	BYU
	BAYOU	
BEACH	BCH	BCH
	BEACH	
BEND	BEND	BND
	BND	
BLUFF	BLF	BLF
	BLUF	
	BLUFF	
BLUFFS	BLUFFS	BLFS
BOTTOM	BOT	BTM
	BTM	
	BOTTM	
	BOTTOM	
BOULEVARD	BLVD	BLVD
	BOUL	
	BOULEVARD	
	BOULV	
BRANCH	BR	BR
	BRNCH	
	BRANCH	
BRIDGE	BRDGE	BRG
	BRG	
	BRIDGE	
BROOK	BRK	BRK
	BROOK	
BROOKS	BROOKS	BRKS
BURG	BURG	BG
BURGS	BURGS	BGS
BYPASS	BYP	BYP
	BYPA	
	BYPAS	
	BYPASS	
	BYPS	
CAMP	CAMP	CP
	CP	
	CMP	
CANYON	CANYN	CYN
	CANYON	
	CNYN	
CAPE	CAPE	CPE
	CPE	
CAUSEWAY	CAUSEWAY	CSWY
	CAUSWA	
	CSWY	
CENTER	CEN	CTR
	CENT	
	CENTER	
	CENTR	
	CENTRE	
	CNTER	
	CNTR	
	CTR	
CENTERS	CENTERS	CTRS
CIRCLE	CIR	CIR
	CIRC	
	CIRCL	
	CIRCLE	
	CRCL	
	CRCLE	
CIRCLES	CIRCLES	CIRS
CLIFF	CLF	CLF
	CLIFF	
CLIFFS	CLFS	CLFS
	CLIFFS	
CLUB	CLB	CLB
	CLUB	
COMMON	COMMON	CMN
COMMONS	COMMONS	CMNS

CORNER	COR	COR
	CORNER	
CORNERS	CORNERS	CORS
	CORS	
COURSE	COURSE	CRSE
	CRSE	
COURT	COURT	CT
	CT	
COURTS	COURTS	CTS
	CTS	
COVE	COVE	CV
	CV	
COVES	COVES	CVS
CREEK	CREEK	CRK
	CRK	
CRESCENT	CRESCENT	CRES
	CRES	
	CRSENT	
	CRSNT	
CREST	CREST	CRST
CROSSING	CROSSING	XING
	CSRD	
	CROSSING	
	CRSSNG	
	XING	
CROSSROAD	CROSSROAD	XRD
CROSSROADS	CROSSROADS	XRDS
CURVE	CURVE	CURV
DALE	DALE	DL
	DL	
DAM	DAM	DM
	DM	
DIVIDE	DUV	DV
	DIVIDE	
	DV	
	DVD	
DRIVE	DR	DR
	DRIV	
	DRIVE	
	DRV	
DRIVES	DRIVES	DRS
ESTATE	EST	EST
	ESTATE	
ESTATES	ESTATES	ESTS
	ESTS	
EXPRESSWAY	EXP	EXPY
	EXPR	
	EXPRESS	
	EXPRESSWAY	
	EXPW	
	EXPY	

EXTENSION	EXT	EXT
	EXTENSION	
	EXTN	
	EXTNSN	
EXTENSIONS	EXTS	EXTS
FALL	FALL	FALL
FALLS	FALLS	FLS
	FLS	
FERRY	FERRY	FRY
	FRRY	
	FRY	
FIELD	FIELD	FLD
	FLD	
FIELDS	FIELDS	FLDS
	FLDS	
FLAT	FLATS	FLT
	FLT	
FLATS	FLATS	FLTS
	FLTS	
FORD	FORD	FRD
	FRD	
FORDS	FORDS	FRDS
FOREST	FOREST	FRST
	FORESTS	
	FRST	
FORGE	FORG	FRG
	FORGE	
	FRG	
FORGES	FORGES	FRGS
FORK	FORK	FRK
	FRK	
FORKS	FORKS	FRKS
	FRKS	
FORT	FORT	FT
	FRT	
	FT	
FREEWAY	FREEWAY	FWY
	FREEWY	
	FRWAY	
	FRWY	
	FWY	
GARDEN	GARDEN	GDN
	GARDN	
	GRDEN	
	GRDN	
GARDENS	GARDENS	GDNS
	GDNS	
	GRDNS	
GATEWAY	GATEWAY	GTWY
	GATEWY	
	GATWAY	

	GTWAY	
	GTWY	
GLEN	GLENS	GLN
	GLN	
GLENS	GLENS	GLNS
GREEN	GREEN	GRN
	GRN	
GREENS		GRNS
GROVE	GROV	GRV
	GROVE	
	GRV	
GROVES		GRVS
HARBOR	HARB	HBR
	HARBOR	
	HARBR	
	HBR	
	HRBOR	
HARBORS	HARBORS	HBRS
HAVEN	HAVEN	HVN
	HVN	
HEIGHTS	HT	HTS
	HTS	
HIGHWAY	HIGHWAY	HWY
	HIGHWY	
	HIWAY	
	HIWY	
	HWAY	
	HWY	
HILL	HILL	HL
	HL	
HILLS	HILLS	HLS
	HLS	
HOLLOW	HLLW	HOLW
	HOLLOW	
	HOLLOWS	
	HOLW	
	HOLWS	
INLET	INLT	INLT
ISLAND	IS	IS
	ISLAND	
	ISLND	
ISLANDS	ISLANDS	ISS
	ISLNDS	
	ISS	
ISLE	ISLE	ISLE
	ISLES	
JUNCTION	JCT	JCT
	JCTION	
	JCTN	
	JUNCTION	
	JUNCTN	
	JUNCTON	
JUNCTIONS	JCTNS	JCTS
	JCTS	
	JUNCTIONS	
KEY	KEY	KY
	KY	
KEYS	KEYS	KYS
	KYS	
KNOLL	KNL	KNL
	KNOL	
	KNOLL	
KNOLLS	KNLS	KNLS
	KNOLLS	
LAKE	LK	LK
	LAKE	
LAKES	LKS	LKS
	LAKES	
LAND	LAND	LAND
LANDING	LANDING	LNDG
	LNDG	
	LNDNG	
LANE	LANE	LN
	LN	
LIGHT	LGT	LGT
	LIGHT	
LIGHTS	LIGHTS	LGTS
LOAF	LF	LF
	LOAF	
LOCK	LCK	LCK
	LOCK	
LOCKS	LCKS	LCKS
	LOCKS	
LODGE	LDGE	LDG
	LDGE	
	LODG	
	LODGE	
LOOP	LOOP	LOOP
	LOOPS	
MALL	MALL	MALL
MANOR	MNR	MNR
	MANOR	
MANORS	MANORS	MNRS
	MNRS	
MEADOW	MEADOW	MDW
MEADOWS	MDW	MDWS
	MDWS	
	MEADOWS	
	MEDOWS	
MEWS	MEWS	MEWS
MILL	MILL	ML
MILLS	MILLS	MLS

MISSION	MISSN	MSN
	MSSN	
MOTORWAY	MOTORWAY	MTWY
MOUNT	MNTN	MT
	MT	
	MOUNT	
MOUNTAIN	MNTAIN	MTN
	MNTN	
	MOUNTAIN	
	MOUNTIN	
	MTIN	
	MTN	
MOUNTAINS	MNTNS	MTNS
	MOUNTAINS	
	NECK NCK NCK	
	NECK	
ORCHARD	ORCH	ORCH
	ORCHARD	
	ORCHRD	
OVAL	OVAL	OVAL
	OVL	
OVERPASS	OVERPASS	OPAS
PARK	PARK	PARK
	PRK	
PARKS	PARKS	PARK
PARKWAY	PARKWAY	PKWY
	PARKWY	
	PKWAY	
	PKWY	
	PKY	
PARKWAYS	PARKWAYS	PKWY
	PKWYS	
PASS	PASS	PASS
PASSAGE	PASSAGE	PSGE
PATH	PATH	PATH
	PATHS	
PIKE	PIKE	PIKE
	PIKES	
PINE	PINE	PNE
PINES	PINES	PNES
	PNES	
PLACE	PL	PL
PLAIN	PLAIN	PLN
	PLN	
PLAINS	PLAINS	PLNS
	PLNS	
PLAZA	PLAZA	PLZ
	PLZ	
	PLZA	
POINT	POINT	PT
	PT	
POINTS	POINTS	PTS
	PTS	
PORT	PORT	PRT
	PRT	
PORTS	PORTS	PRTS
	PRTS	
PRAIRIE	PR	PR
	PRAIRIE	
	PRR	
RADIAL	RAD	RADL
	RADIAL	
	RADIEL	
	RADL	
RAMP	RAMP	RAMP
RANCH	RANCH	RNCH
	RANCHES	
	RNCH	
	RNCHS	
RAPID	RAPID	RPD
	RPD	
RAPIDS	RAPIDS	RPDS
	RPDS	
REST	REST	RST
	RST	
RIDGE	RDGE	RDG
	RDGE	
	RIDGE	
RIDGES	RDGS	RDGS
	RIDGES	
RIVER	RIV	RIV
	RIVER	
	RVR	
	RIVR	
ROAD	RD	RD
	ROAD	
ROADS	ROADS	RDS
	RDS	
ROUTE	ROUTE	RTE
ROW	ROW	ROW
RUE	RUE	RUE
RUN	RUN	RUN
SHOAL	SHL	SHL
	SHOAL	
SHOALS	SHLS	SHLS
	SHOALS	
SHORE	SHOAR	SHR
	SHORE	
	SHR	
SHORES	SHOARS	SHRS
	SHORES	
	SHRS	

SKYWAY	SKYWAY	SKWY
SPRING	SPG	SPG
	SPNG	
	SPRING	
	SPRNG	
SPRINGS	SPGS	SPGS
	SPNGS	
	SPRINGS	
	SPRNGS	
SPUR	SPUR	SPUR
SPURS	SPURS	SPUR
SQUARE	SQ	SQ
	SQR	
	SQRE	
	SQU	
	SQUARE	
SQUARES	SQRS	SQS
	SQUARES	
STATION	STA	STA
	STATION	
	STATN	
	STN	
STRAVENUE	STRA	STRA
	STRAV	
	STRAVEN	
	STRAVENUE	
	STRAVN	
	STRVN	
	STRVNUE	
STREAM	STREAM	STRM
	STREME	
	STRM	
STREET	STREET	ST
	STRT	
	ST	
	STR	
STREETS	STREETS	STS
SUMMIT	SMT	SMT
	SUMIT	
	SUMITT	
	SUMMIT	
TERRACE	TER	TER
	TERR	
	TERRACE	
THROUGHWAY	THROUGHWAY	TRWY
TRACE	TRACE	TRCE
	TRACES	
	TRCE	
TRACK	TRACK	TRAK
	TRACKS	
	TRAK	
	TRK	
	TRKS	
TRAFFICWAY	TRAFFICWAY	TRFY
TRAIL	TRAIL	TRL
	TRAILS	
	TRL	
	TRLS	
TRAILER	TRAILER	TRLR
	TRLR	
	TRLRS	
TUNNEL	TUNEL	TUNL
	TUNL	
	TUNLS	
	TUNNEL	
	TUNNELS	
	TUNNL	
TURNPIKE	TRNPK	TPKE
	TURNPIKE	
	TURNPK	
UNDERPASS	UNDERPASS	UPAS
UNION	UN	UN
	UNION	
UNIONS	UNIONS	UNS
VALLEY	VALLEY	VLY
	VALLY	
	VLLY	
	VLY	
VALLEYS	VALLEYS	VLYS
	VLYS	
VIADUCT	VDCT	VIA
	VIA	
	VIADCT	
	VIADUCT	
VIEW	VIEW	VW
	VW	
VIEWS	VIEWS	VWS
	VWS	
VILLAGE	VILL	VLG
	VILLAG	
	VILLAGE	
	VILLG	
	VILLIAGE	
	VLG	
VILLAGES	VILLAGES	VLGS
	VLGS	
VILLE	VILLE	VL
	VL	
VISTA	VIS	VIS
	VIST	
	VISTA	
	VST	

	VSTA	
WALK	WALK	WALK
WALKS	WALKS	WALK
WALL	WALL	WALL
WAY	WY	WAY
	WAY	
WAYS	WAYS	WAYS
WELL	WELL	WL
WELLS	WELLS	WLS
	WLS	