WLIA Standard

Parcel Geo-Locator Standard

December, 1995

WLIA Standard 1995 - 2

Frontispiece

This standard was developed by WLIA Task Force 91 - 2. The task force members were: Roxanne Brown, Lynn Martens, Sharon Patoka, Debra Phelps, Ronald Voight, James Wallen (chair), La Voun Wruck, Nancy von Meyer and Janet Obadal.

The Parcel Numbering Task Force's mission is to develop a standardized geographical locator for parcels of all types utilizing the Wisconsin Land Information Board recommended numbering scheme thereby facilitating data exchange.

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1. Purpose

The Parcel Numbering Task Force's mission is to develop a standardized geographical locator for parcels of all types utilizing the Wisconsin Land Information Board recommended numbering scheme thereby facilitating data exchange.

Because the WLIB documents lay out much of the actual coding, this standard describes how to use and apply the WLIB codes and what is meant by a parcel identifier. Other WLIA standards will define specific types of parcels.

2. Background

The original goal of the Parcel Numbering Task Force was to develop a standardized unique parcel identification system to facilitate data exchange among automated land records systems.

The task force concluded that a unique identifier for each parcel in the state has already been accomplished by each data base producer. Any attempt by this task force to renumber local systems would be non-productive and redundant. The Wisconsin Land Information Program does not provide specific design criteria and specifications for local systems. It does provide standards that facilitate data sharing and the distributed use of data so that duplicate data collection can be minimized.

There are two major considerations when numbering parcels. One is the need to implement standard codes as defined in WLIB documents so that the value of the data exchange format can be achieved by the State's land records community. The other is to realize that while the parcel number is producer oriented it must be user friendly.

Recognizing these things, the Parcel Numbering Task Force developed its mission as stated in Section 1 and repeated here.

> The Parcel Numbering Task Force's mission is to develop a standardized geographical locator for parcels of all types utilizing the Wisconsin Land Information Board recommended numbering scheme thereby facilitating data exchange.

The purpose of a standardized geographical parcel locator number or Parcel Geo-Code is to provide a means of entry level access to parcel data in an automated land records data base without automated graphics support.

The Parcel Geo-Code is targeted to the user. It is assumed, for the development of the code, that the user has only the most rudimentary knowledge of maps and parcel descriptions.

3. Definitions

The following terms and concepts are used in parcel numbering and in defining the concepts associated with parcels.

3.1 Parcel

There are many types of parcels. Figure 1 shows an example where one area of land has one deed parcel and three tax parcels. This standard does not define any one type of parcel. The definition of specific parcel types can be developed in other standards. The intent of this standard is to provide a uniform method for identifying the geographic location of any type of parcel.

Figure 1

3.2 Rectangular Survey System

The Public Land Survey System is defined in state statute and administrative codes. For the purposes of the Geo-Locator standard, the hierarchy of the public land survey system is:

Township - a nominal six mile by six mile area identified by principal meridian, township number, township direction, range number and range direction. In Wisconsin all township directions are North, so this is implied in all geo-locator codes.

Section - a nominal one mile by one mile area of land that is contained entirely within one township and is identified by a number.

Quarter section - a nominal quarter mile by quarter mile area of land that is formed by subdividing a section into quarter parts. The rules for how the quarter parts are obtained are defined by state statute.

Quarter-quarter section - a nominal sixteenth part of a section obtained by subdividing quarter sections into four parts. The rules for how the quarter parts are obtained are defined by state statute.

Government lot - an area of land contained entirely within one township and entirely within one section, if sections are present. They describe irregular areas of land, are shown on government survey plats, and are identified by number. In some areas of Wisconsin, townships are divided into government lots without sections.

3.3 Geo-Locator Code Resolution

The Parcel Geo-Code is geographical. The Parcel Geo-Code may pertain to one parcel or to a group of parcels. The Parcel Geo-Code locates the parcel to the lowest value listed in the geo-locator code. For example, the geo-code may list only to the section, the quarter section, the quarter-quarter section or the government lot. For resolution below the quarter-quarter section or government lot, the resident data base identifier is used.

3.4 Parcels and the Rectangular Survey System

The Parcel Geo-Code will be based on the actual or assumed (super imposed) lines of sections, quarter sections, quarter-quarter sections, and government lots. In some cases, the definitions of these areas are super imposed or extended from the official government survey. In instances where a parcel crosses section, quarter, quarter-quarter, or government lot lines, that parcel has more than one Parcel Geo-Code. Figure 2 shows one parcel with four quarter-quarter locators.

Geographic Locator for Parcels

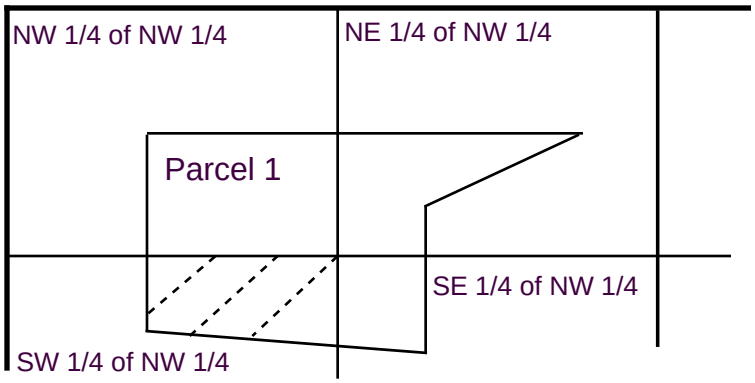


Figure Recreated for Web Site (Dec 2003)

Figure 2

3.5 Relationship to a Producer's Identifier

In all instances the Parcel Geo-Code must have a link to the unique resident data base identifier in the producer's data base. This will ensure that data exchange will be possible. The Parcel Geo-Code serves as a sorting device for the geo-location of the parcel as defined by the rectangular survey system.

3.6 Unique Identifier

Every parcel is already uniquely identified in its own system. And subsequently each system is unique to itself. Once the parcel or parcels are sorted to the quarter-quarter (assumed or real) by the Parcel Geo-Code, access to attributes of a single parcel must be done by using a guide to that particular system. The use of a live link to the unique identifier would accomplish this process.

4. The Code

The Parcel Geo-Code is organized to connotate quarter, quarter-quarter, government lots, and anomalies found in Wisconsin.

4.1 The Use of Zero

The use of zero (0) in any field will mean non-conformance or "does not fit" the usual function of those fields. Zero can also be used as a place holder.

4.2 Development of the Parcel Geo-Code

In cases where no sectionalized PLSS is present, an extended rectangular numbering scheme that is superimposed over the land is developed to allow geo-coding. This arbitrary land system is identified and numbered to distinguish it from real rectangular survey areas. For example, sections of land numbered starting with section number 51 corresponding with real section 1 and section number 86 corresponding with real section 36.

4.3 Tract Code Identification

A standard tract is established in the geo-locator identifier. This table will be used state-wide and will be developed from land information providers. This index will use 2 to 3 digits in the optional section of the parcel identifier. A table will provide uniform coding of land description types throughout Wisconsin.

Aliquot parts and government lots in sectionalized lands in the PLSS will be numbered using the geo-locator code. The tract code for sectionalized land is 01-04 to identify the quarter-quarter section of land and 05 for government lots.

Other areas of land that are anomalies to this will be numbered and identified using a state-wide standard code table, such as the one developed by the Department of Natural Resources.

Table 1 shows the developed the state-wide tract code table that is included in the final standard. This table can be appended.

Table 1 - Tract Code Identification Table

Tract Code	Description
05	Government Lot
06	Native American Claim
07	Mining Claim
08	Private Claim
09	Military Reserve
10	Named grants or tracts
11	Farm Lot
12	Upper Village Lot
13	Half Range
14	Island

4.4 Entity Designator

The next three digits would be used to identify the named or numbered units within the PLSS or anomaly codes, for example 12 for government lot 12 or 345 for farm lot 345. The entity designator will be the last digits of the Geo-code. The local or producer's unique parcel number may follow, if desired.

4.5 Complete Coding

A summary of the geo-locator code is shown in Table 2.

Table 2 - Complete Geo-Locator Code Summary

Code Portion	Code	Description
geo-political	CC	County two digit code as defined by Department of Revenue and the Wisconsin Land Information Board. (see Appendix A for county code number)
	MMM	Municipal Code as defined by the Department of Revenue and Wisconsin Land Information Board. (see Appendix B for municipal code number)
rectangular	D	East/West direction indicator for Range where

		2 is for West and 4 is for East.
	TT	Township number, with leading zeros
	RR	Range number, with leading zeros
	SS	Section number with leading zeros
quarter code	Q	The digit represents the quarter section code, one digit where: 1 NE 1/4 2 NW 1/4 3 SW 1/4 4 SE 1/4
quarter-quarter	QQ	The digits represents the quarter-quarter section code, two digits where: 01 NE 1/4 02 NW 1/4 03 SW 1/4 04 SE 1/4
tract code	TT	**Alternatively** to the QQ designations a two digit code from the standard table is used to indicate non-quarter-quarter identifiers for tracts such as those listed in section 4.3
entity label	EEE	A label identifying the entity in the tract code. For example, the tract code for government lot is 05, the entity label would express 012 for government lot 12. Thus 05012 equals government lot 12
		End of code

The task force recommends the above order when exchanging data, however the resident data base can be maintained in any order.

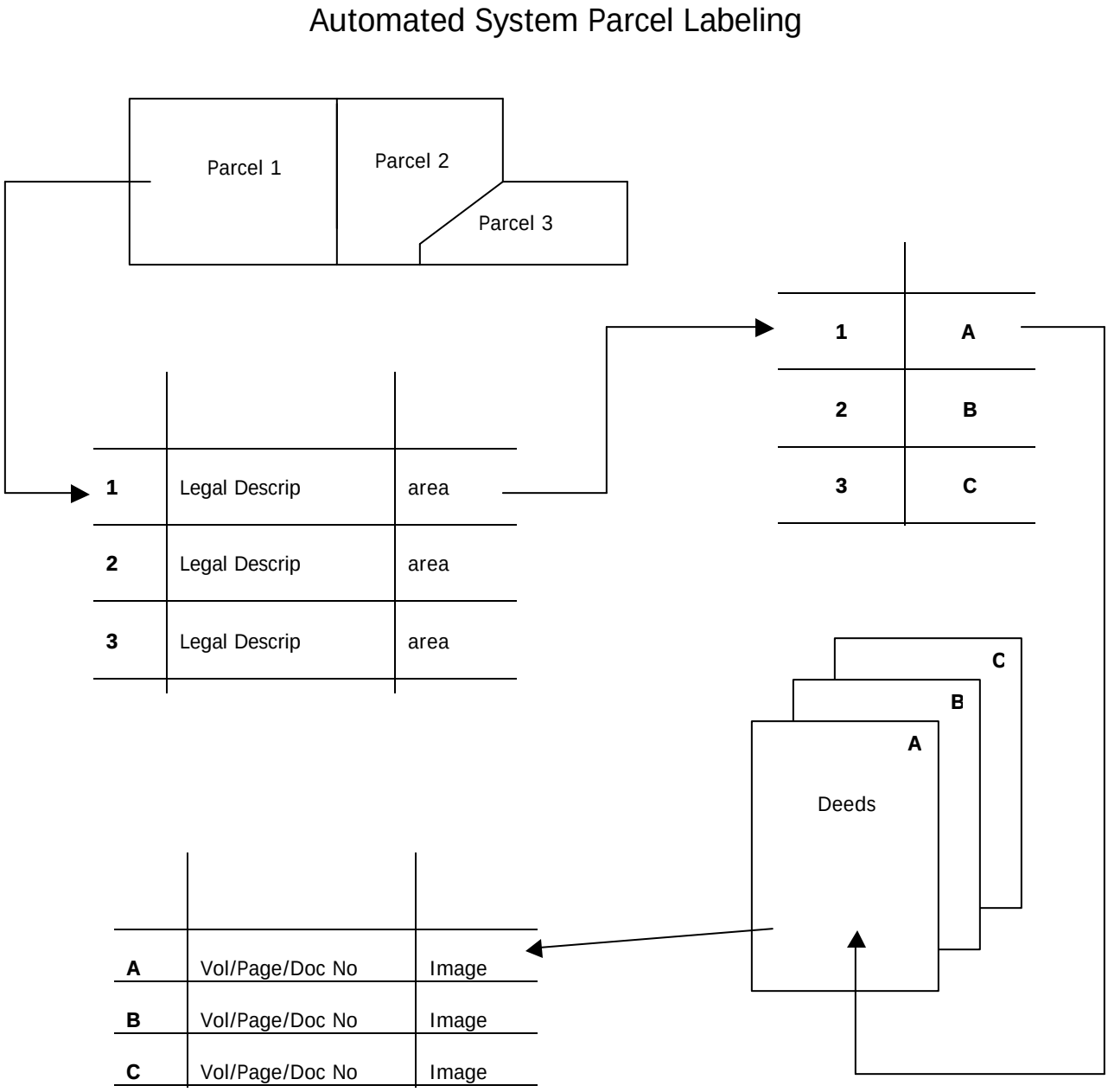
5. Further Discussion

The intent of the geo-locator code is to support growth in land records modernization, by providing a means to identify parcels or areas of land geographically, so they can be sorted, indexed, transferred, or queried by geographic location through a non-graphic system. The geo-locator code also strives to preserve the investment in existing resident data base identifiers. It takes a significant investment for a jurisdiction to re-number all of their parcels. This identifier provides a means for jurisdictions to add information to existing systems for the purpose of data transfer or data exchange, without having to re-number all of their parcels.

Once a jurisdiction implements a graphic land records modernization system, the function of the geo-locator code could be replaced and improved upon by the graphic software. The task force concluded that with an automated land records system geo-codes or parts of geo-codes may become attributes. An unintelligent identifier could be assigned to each record in the automated system to handle all relationships that are needed.

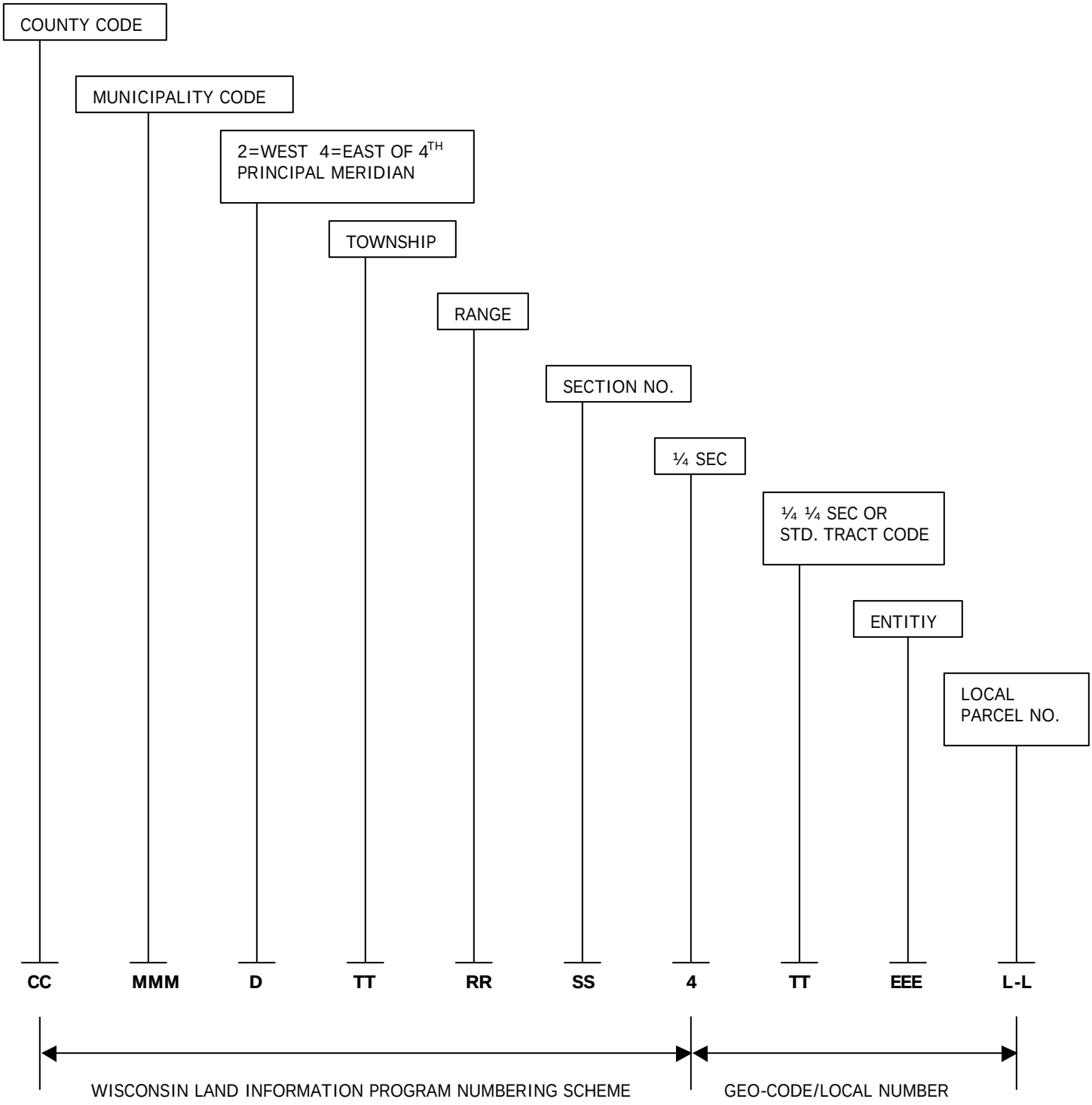
Figure 3 shows how the unintelligent key within the automated system is used to tie parcels to data about parcels without a geo-locator identifier. The geo-code information is included in the spatial information that produces the parcel graphic.

Figure 3



Note: This is a reproduction of Figure 3 prepared for the Geo Parcel Standard as printed in the WLIA Annual Conference Report, March 21-23, 1994.

THE GEO-CODE



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