## $\textbf{LACS}^{\text{Link} \mathbb{R}}$

# IMPROVING DELIVERABILITY THROUGH SECURE TECHNOLOGY

### **LACS**<sup>Link®</sup>

USER TECHNICAL REFERENCE
United States Postal Service®
National Customer Support Center
March 5, 2018
Version 5

# USPS® LACS<sup>Link®</sup> USER TECHNICAL REFERENCE Table of Contents

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#### Introduction

LACS<sup>Link®</sup> is a data only product that contains addresses that have been converted, modified or changed due to USPS changes or changes required for the 911 emergency system. The secure technology of this DATA ONLY PRODUCT eliminates the clear text representation of the data and the complexity of address matching routines. Once the software used to access this data is completed and a successful inquiry is achieved, the new converted, modified or changed address and/or return flags will be provided.

This product and technology is patented and licensed by the United States Postal Service<sup>®</sup> (USPS<sup>®</sup>). By virtue of reading this documentation, the company and or business entity, which includes employees, entered into a Non-Disclosure Agreement.

In the event of a conflict between this document and the standard LACS<sup>Link</sup> License Agreement, the terms of the LACS<sup>Link</sup> License Agreement prevail.

The information contained in this document has been extracted from other documents such as the LACS<sup>Link</sup> Software Developer Guide. This information is can be disclosed to the public.

#### Administration

The USPS provides support for this system through the National Customer Support Center (NCSC) in Memphis TN. For all administration and technical information regarding this product please contact the Move Update Support Department at 800-589-5766 or email at <a href="mailto:ncoalink@usps.gov">ncoalink@usps.gov</a>. Information regarding Licensing will be found at <a href="https://postalpro.usps.com/address-quality/lacslink">https://postalpro.usps.com/address-quality/lacslink</a>. Information regarding file formats and testing procedures will be found at <a href="https://postalpro.usps.com/CASS/CASSTECH\_N">https://postalpro.usps.com/CASS/CASSTECH\_N</a>.

#### **Disclaimer**

The USPS makes no warranty or representation either expressed or implied, with respect to the LACS<sup>Link</sup> technology and/or the computer system in which it is contained, including its correctness, quality, performance, merchantability, or fitness for any particular purpose.

The USPS will not be liable for direct, indirect, special, incidental, consequential, or other similar damages arising out of use of, or inability to use, the LACS<sup>Link</sup> technology and/or computer system, even if advised of the possibility of such damages.

#### **Developer Specification and Requirements**

For the purpose of clarity, developer is synonymous with vendor, or any other term that implies a creator of a software system developed for the purpose of communicating and interfacing with the USPS LACS<sup>Link</sup> system. The term licensee is defined as one who has been certified and licensed by the USPS to perform LACS<sup>Link</sup> processing.

The sole intent of the LACS<sup>Link</sup> system is to provide data back to the customer for the purpose of updating an address list that will be used for mailing purposes. Development of an interface system must incorporate USPS guidelines and specifications contained in the Software Developer Guide as well as any requirements contained in the USPS LACS<sup>Link</sup> License Agreement and Licensee Performance Requirements.

Any advertising or marketing promotions that mention and/or imply a relationship with the USPS NCOA technology must be approved in writing, prior to its use, by the USPS NCSC. The approval of this material is a requirement and is inclusive to all developers, vendors, licensees, sub-contractors and users that directly or indirectly utilize the USPS LACS LACS system.

It is **required and necessary** to incorporate the reading of the <u>LACS<sup>Link</sup> License Agreement</u> to obtain the requirements of a potential licensee and to ensure that the developed interface and/or licensee can meet these requirements. The completed LACS<sup>Link</sup> system will require specific specifications with regard to processing in addition to statistical and other reporting requirements that will be contained in the above document. <u>Please note that other USPS systems such as NCOA<sup>Link</sup> may require statistical information from LACS<sup>Link</sup>.</u>

#### **Computer Hardware Specifications**

The LACS<sup>Link®</sup> data product will be fulfilled via the USPS Electronic Product Fulfillment (EPF) website. The actual system requirements must be obtained from the Developer or Vendor of the LACS<sup>Link</sup> interface system.

#### **Getting Started**

The process to build and retrieve information for the LACS<sup>Link®</sup> product is fairly straightforward and can be integrated into any ZIP +  $4^{\$}$  products.

The input to a LACS<sup>Link</sup> lookup is a single 50 character field containing the address (not parsed), and a five (5) digit ZIP Code<sup>™</sup>. The address must be in standardized format, but not necessarily ZIP + 4 coded. In other words, no Plus 4 add-on identifier is required.

When both a unit designator and a secondary value are present, a pound sign (#) must be used to replace the designator. For example, 123 MAIN ST APT 7 becomes 123 MAIN ST # 7 and 123 MAIN ST REAR remains unaltered.

Leading zeros must be stripped from primary numbers, route numbers, and secondary numbers and extraneous spaces must be removed.

Rural Route, Highway Contract and Post Office Box must be standardized according to United States Postal Service® Publication 28 (Ex. Rural Route 1 Box 15 = RR 1 Box 15).

Extraneous non-address information must be removed also. For example, 1234 HILLCREST PIKE BEHIND THE CHURCH becomes 1234 HILLCREST PIKE. Keep in mind that a change in one letter or space creates a different SHA value.

By standardizing the method of coding (the SHA-1 of the ZIP™ and address), a common SHA will produce a common result. To aid in the standardizing of street style addresses, a table will be provided that will include a 5-digit ZIP Code and the Pre Directional, Street Name, Suffix, and Post Directional as it appears in the USPS® LACS database. This table also contains RR, HC and PO Box.

The process to retrieve information from LACS<sup>Link</sup> is as follows. First query the ZIP + 4 file.

- ➤ If the input address matches a regular ZIP + 4 record (Non-LACS indicated), there is no need to perform a LACS<sup>Link</sup> lookup.
- If the input address matches to a Rural Route or Highway Contract default record, query the street name table. If the RR or HC type street name appears in the table, proceed with the LACS<sup>Link</sup> lookup.
- ▶ If the input address matches to a record that has an "L" in the LACS Status Indicator in the ZIP + 4 file, compute the SHA of the 5-digit ZIP and fifty (50) characters address and proceed with the LACS<sup>Link</sup> lookup.
- > If the input address **does not** match a record in the ZIP + 4 file, query the street name table.
  - If the input street (including RR, HC or PO Box) is in the street name table, compute the SHA of the 5-digit ZIP and fifty (50) characters address and proceed with the LACS<sup>Link</sup> lookup.
  - o If the input street name is **not** present in the street name table, do a fuzzy name comparison to determine if the street name presented matches one or more of the street names in the table.
    - If a match is made from the fuzzy name comparison, the matched street name should be used to perform the lookup.
    - If no match is made from the fuzzy name comparison, there is no need to perform a LACS<sup>Link®</sup> lookup.

However, if the input street name is a *RR or HC type street name or PO Box* and is *not present* in the street name table, *do not* do a fuzzy name comparison and there is no need to
 perform a LACS<sup>Link</sup> lookup.

#### **LACS**<sup>Link®</sup> Return Code Description

Code = Return Code Description = Explanation of Return Code

How = "D" = Derived by data – returned in lieu of 11-digit
"S" = Derived by software Address = "Y" = New Address

"N" = New Address not provided

\*Return Code should only be returned if you actually go to the llk.hsl hash table.

Code	Description	Address	How
Α	<b>LACS Record Match</b> – The input record matched to a record in the master file.	Y	D
	A new address could be furnished.		
00	No Match – The input record COULD NOT BE matched to a record in the	N	D
	master file. A new address could not be furnished.		
14	LACS Record Match: New Address Would Not Convert at Run Time – The	N	S
	input record matched to a record in the master file. The new address could not		
	be converted to a deliverable address.		
92	LACS Record Match: Secondary Number Dropped from Input Address –	Υ	S
	The input record matched to a master file record, but the input address had a		
	secondary number and the master file record did not. The record is a ZIP + 4		
	street level or highrise match.		

#### **Revisions**

#### Version 5

#### March 5, 2018

Replaced RIBBS links with PostalPro links.

#### Version 4

October 9, 2014

#### **Updated the Computer Hardware Specifications section to state the following:**

The LACS<sup>Link</sup> data product will be fulfilled via the USPS Electronic Product Fulfillment (EPF) website.

#### **Getting Started**

In the first paragraph, removed the term 'stand alone' since the LACS<sup>Link</sup> Product cannot be ran in a standalone process.

Removed 'Option B: Non-ZIP + 4 Query' since the LACS<sup>Link</sup> Product cannot be ran in a standalone process.