Address Information

USPS Web Tools™

Application Programming Interface

User Guide

Version 6.0 (07/31/2020)

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1.0   Introduction

This document contains a Reference Guide to the Address Information Web Tools listed below. See the Developers Guide to learn the administrative process for gaining access to the Web Tools APIs as well as the basic mechanism for calling the APIs and processing the results. The Developer's Guide also contains information on testing and troubleshooting.

Note: The Request Parameter sections present the XML input tags for generating live requests along with the restrictions on the values allowed. An error message will be returned if an incorrect value is entered. Also, be aware of the maximum character amounts allowed for some tags. If the user enters more than those amounts, an error will not be generated. The Web Tool will simply pass in the characters up to the maximum amount allowed and disregard the rest. This is important since the resulting value could prevent a correct response.

When building the XML request, pay particular attention to the order and case for tags. An error message will be returned if an incorrect value is entered. Remember that all data and attribute values in this document are for illustration purposes and are to be replaced by your actual values. For instance, a line of sample code may be:

<State>MD</State>

In this instance, you will replace "MD" with the state abbreviation for the address location.

1.1   Before you get started:

For information on registering and getting started with Web Tools, please refer to the Step-By-Step guide found on the Web Tools Technical Documentation Page

1.2   Important Notice: User ID

The Web Tools User ID provided is for you and your company to use when requesting data via the Internet from the U.S. Postal Service API servers. As per the Terms and Conditions of Use Agreement you agreed to during the Web Tools registration process, you are responsible to maintain the confidentiality of your User ID as specified. You may not package any APIs with your User ID for resale or distribution to others. The U.S. Postal Service does not prohibit the reuse and/or distribution of the API documentation (User's Guide) with sample code in order to generate awareness, encourage use or provide ease-of-use to customers or affiliates.

Warning - If the U.S. Postal Service discovers use of the same User ID from more than one web site, all users will be subject to loss of access to the USPS production server and/or termination of the licenses granted under the Terms and Conditions of Use.

1.3   Important Notice: Address Information API

The Address Validation APIs can be used in conjunction with USPS SHIPPING OR MAILING SERVICES ONLY. The Address API must only be used on an individual transactional basis, i.e. not batch processing or cleansing of a database, but as a customer enters the information into a form on a website. Failure to comply with these terms and conditions can result in termination of USPS API access without prior notice.

2.0   Address Validation API

2.1   Overview

The Address/Standardization "Verify" API, which corrects errors in street addresses, including abbreviations and missing information, and supplies ZIP Codes and ZIP Codes + 4. The Verify API supports up to five lookups per transaction. By eliminating address errors, you will improve overall package delivery service.

2.1.1 API Signature

Scheme	Host	Path	API	XML
https://	secure.shippingapis.com	/ShippingAPI.dll?	API=Verify	&XML=(see below)

2.2 Request Descriptions

Tag Name	Occurs	Description	Type	Validation
AddressValidateRequest	Required	API = AddressValidateRequest	(Alias)	
AddressValidateRequest / UserID	Required	This attribute specifies your Web Tools ID. See the Developers Guide for information on obtaining your USERID. For Example: <USERID="XXXXXXXXXXXX">	NMTOKEN	
AddressValidateRequest / Revision	Required	Integer value used to return of all available response fields. Set this value to 1 to return all currently documented response fields. Example: Revision>1</Revision>	String	minLength=0 pattern=\d{1} pattern=
AddressValidateRequest / Address /	Required	Up to 5 address verifications can be included per transaction.	(group)	
AddressValidateRequest / Address / FirmName	Optional	Firm Name Example:<FirmName>XYZ Corp.</FirmName>	String	
AddressValidateRequest / Address / Address1	Optional	Delivery Address in the destination address. May contain secondary unit designator, such as APT or SUITE, for Accountable mail.)	String	
AddressValidateRequest / Address / Address2	Required	Delivery Address in the destination address. Required for all mail and packages, however 11-digit Destination Delivery Point ZIP+4 Code can be provided as an alternative in the Detail 1 Record.	String	
AddressValidateRequest / Address / City	Optional	City name of the destination address.	String	maxLength=15
AddressValidateRequest / Address / State	Optional	Two-character state code of the destination address.	String	maxLength=2
AddressValidateRequest / Address / Urbanization	Optional	Urbanization.	String	maxLength=28.

Tag Name	Occurs	Description	Type	Validation
		For Puerto Rico addresses only.		
AddressValidateRequest / Address / Zip5	Optional	Destination 5-digit ZIP Code. Numeric values (0-9) only. If International, all zeroes.	String	Must be 5-digits.
AddressValidateRequest / Address / Zip4	Optional	Destination ZIP+4 Numeric values (0-9) only. If International, all zeroes. Default to spaces if not available.	String	
AddressValidateRequest	Required		(Alias)	

2.2.1 Sample Request

Request: Verify
```
<AddressValidateRequest USERID="XXXXXXXXXXXX">
<Revision>1</Revision>
<Address ID="0">
<Address1>SUITE K</Address1>
<Address2>29851 Aventura</Address2>
<City/>
<State>CA</State>
<Zip5>92688</Zip5>
<Zip4/>
</Address>
</AddressValidateRequest>
```

2.3   Response Descriptions

Tag Name	Occurs	Description	Type	Validation
AddressValidateResponse / Address	Required		(Alias)	
AddressValidateResponse / Address / FirmName	Optional		String	
AddressValidateResponse / Address / Address1	Optional		String	
AddressValidateResponse / Address / Address2	Required		String	
AddressValidateResponse / Address / Address2Abbreviation	Optional	Address line 2 abbreviation. To return abbreviations you must set <Revision>=1	String	
AddressValidateResponse / Address / City	Optional	City name of the destination address.	String	
AddressValidateResponse / Address / CityAbbreviation	Optional	Abbreviated city name of the destination address. To return abbreviations you must set <Revision>=1	String	

Tag Name	Occurs	Description	Type	Validation
AddressValidateResponse / Address / State	Optional	Two-character state code of the destination address.	String	
AddressValidateResponse / Address / Urbanization	Optional		String	
AddressValidateResponse / Address / Zip5	Optional	Destination 5-digit ZIP Code.	String	
AddressValidateResponse / Address / Zip4	Optional	Destination ZIP+4	String	
AddressValidateResponse / Address / DeliveryPoint	Optional		String	
AddressValidateResponse / Address / CarrierRoute	Optional	Carrier Route code.	String	Default is spaces. Alphanumeric(5)
AddressValidateResponse / Address / Footnotes	Optional	(see enumeration table below)		Enumerations= • A • B • C • D • E • F • G • H • I • J • K • L • Ll • M • N • O • P • Q • R • S • T • U • V • W • X • Y • Z

Enumeration	Definition
A	Zip Code Corrected
B	City / State Spelling Corrected
C	Invalid City / State / Zip
D	NO ZIP+4 Assigned
E	Zip Code Assigned for Multiple Response
F	Address could not be found in the National Directory File Database
G	Information in Firm Line used for matching
H	Missing Secondary Number
I	Insufficient / Incorrect Address Data
J	Dual Address

Tag Name	Occurs	Description		Type	Validation
		K	Multiple Response due to Cardinal Rule		
		L	Address component changed		
		LI	Match has been converted via LACS		
		M	Street Name changed		
		N	Address Standardized		
		O	Lowest +4 Tie-Breaker		
		P	Better address exists		
		Q	Unique Zip Code match		
		R	No match due to EWS		
		S	Incorrect Secondary Address		
		T	Multiple response due to Magnet Street Syndrome		
		U	Unofficial Post Office name		
		V	Unverifiable City / State		
		W	Invalid Delivery Address		
		X	No match due to out of range alias		
		Y	Military match		

Tag Name	Occurs	Description		Type	Validation
		Z	Match made using the ZIPMOVE product data		
AddressValidateResponse / Address / DPVConfirmation	Optional	The DPV Confirmation Indicator is the primary method used by the USPS to determine whether an address was considered deliverable or undeliverable.		String	Enumerations= - Y - D - S - N
		Enumeration	**Definition**		
		Y	Address was DPV confirmed for both primary and (if present) secondary numbers.		
		D	Address was DPV confirmed for the primary number only, and the secondary number information was missing.		
		S	Address was DPV confirmed for the primary number only, and the secondary number information was present by not confirmed.		
		N	Both primary and (if present) secondary number information		

Tag Name	Occurs	Description	Type	Validation
		failed to DPV confirm. Blank Address not presented to the hash table.		
AddressValidateResponse / Address / DPVCMRA	Optional	CMRA Indicates a private business that acts as a mail-receiving agent for specific clients. "Y" Address was found in the CMRA table. "N" Address was not found in the CMRA table. Blank Address not presented to the hash table.	String	Enumerations= • Y • N
AddressValidateResponse / Address / DPVFootnotes	Optional	DPV® Standardized Footnotes - EZ24x7Plus and Mail*STAR are required to express DPV results using USPS standard two character footnotes. Example: **AABB** **Footnotes Reporting CASS™ ZIP+4™ Certification** AA – Input address matched to the ZIP+4 file. A1 – Input address not matched to the ZIP+4 file. **Footnotes Reporting DPV Validation Observations** BB - Matched to DPV (all components). CC - Secondary number not matched (present but invalid). N1 - High-rise address missing secondary number. M1 - Primary number missing. M3 - Primary number invalid. P1 - Input Address RR or HC Box number Missing. P3 - Input Address PO, RR, or HC Box number Invalid. F1 - Input Address Matched to a Military Address. G1 - Input Address Matched to a General Delivery Address.	String	Enumerations= • AA • A1 • BB • CC • N1 • M1 • P1 • P3 • F1 • G1 • U1

Tag Name	Occurs	Description	Type	Validation
		U1- Input Address Matched to a Unique ZIP Code™.		
AddressValidateResponse / Address / Business	Optional	Indicates whether address is a business or not	String	Enumerations= • Y • N
AddressValidateResponse / Address / CentralDeliveryPoint	Optional	Central Delivery is for all business office buildings, office complexes, and/or industrial/professional parks. This may include call windows, horizontal locked mail receptacles, cluster box units.	String	Enumerations= • Y • N
AddressValidateResponse / Address / Vacant	Optional	Is the location not occupied.	string	Enumerations= • Y • N
AddressValidateResponse	Required		(Alias)	

2.3.1 Sample Response

```
Response: Verify
<AddressValidateResponse>
<Address ID="0">
<Address1> STE K</Address1>
<Address2>29851 AVENTURA</Address2>
<City>RANCHO SANTA MARGARITA</City>
<CityAbbreviation>RCHO STA MARG</CityAbbreviation>
<State>CA</State>
<Zip5>92688</Zip5>
<Zip4>2014</Zip4>
<DeliveryPoint>83</DeliveryPoint>
<CarrierRoute>C057</CarrierRoute>
<Footnotes>N</Footnotes>
<DPVConfirmation>Y</DPVConfirmation>
<DPVCMRA>N</DPVCMRA>
<DPVFootnotes>AABB</DPVFootnotes>
<Business>Y</Business>
<CentralDeliveryPoint>N</CentralDeliveryPoint>
<Vacant>N</Vacant>
</Address>
</AddressValidateResponse>
```

3.0 ZIP Code Lookup API

3.1 Overview

The ZipCodeLookup API, which returns the ZIP Code and ZIP Code + 4 corresponding to the given address, city, and state (use USPS state abbreviations). The ZipCodeLookup API processes up to five lookups per request.

3.1.1 API Signature

Scheme	Host	Path	API	XML
https://	secure.shippingapis.com	/ShippingAPI.dll?	API= ZipCodeLookup	&XML=(see below)

3.2   Request Descriptions

Tag Name	Occurs	Description	Type	Validation
ZipCodeLookupRequest	Required	API = ZipCodeLookupRequest	(Alias)	
ZipCodeLookupRequest / UserID	Required Once		NMTOKEN	
ZipCodeLookupRequest / Address	Optional		(Group)	
ZipCodeLookupRequest / Address / FirmName	Optional	Up to 5 address verifications can be included per transaction.	String	Default is spaces.
ZipCodeLookupRequest / Address / Address1	Optional	Delivery Address in the destination address. May contain secondary unit designator, such as APT or SUITE, for Accountable mail.)	String	
ZipCodeLookupRequest / Address / Address2	Required	Delivery Address in the destination address. Required for all mail and packages, however 11-digit Destination Delivery Point ZIP+4 Code can be provided as an alternative in the Detail 1 Record.	String	
ZipCodeLookupRequest / Address / City	Optional	City name of the destination address. Field is required, unless a verified 11-digit DPV is provided for the mail piece.	String	
ZipCodeLookupRequest / Address / State	Optional	Two-character state code of the destination address.	String	Default is spaces for International mail.
ZipCodeLookupRequest / Address / Zip5	Optional	Destination 5-digit ZIP Code. Must be 5-digits. Numeric values (0-9) only. If International, all zeroes.	String	
ZipCodeLookupRequest / Address / Zip4	Optional	Destination ZIP+4. Numeric values (0-9) only. If International, all zeroes. Default to spaces if not available.	String	
ZipCodeLookupRequest	Required		(Alias)	

3.2.1 Sample Request

Request: ZipCodeLookup
```
<ZipCodeLookupRequest USERID="XXXXXXXXXXXX">
<Address ID="1">
<Address1></Address1>
<Address2>8 Wildwood Drive</Address2>
<City>Old Lyme</City>
<State>CT</State>
<Zip5>06371</Zip5>
<Zip4></Zip4>
</Address>
</ZipCodeLookupRequest>
```

3.2   Response Descriptions

Tag Name	Occurs	Description	Type	Validation
ZipCodeLookupResponse	Required		(Alias)	
ZipCodeLookupResponse / Address	Optional		(Group)	
ZipCodeLookupResponse / Address / FirmName	Optional	Firm name provided in request	String	Default is spaces.
ZipCodeLookupResponse / Address / Address1	Optional	Delivery Address in the destination address. May contain secondary unit designator, such as APT or SUITE, for Accountable mail.)	String	
ZipCodeLookupResponse / Address / Address2	Required	Delivery Address in the destination address. Required for all mail and packages, however 11-digit Destination Delivery Point ZIP+4 Code can be provided as an alternative in	String	
ZipCodeLookupResponse / Address / City	Optional	City name of the destination address. Field is required, unless a verified 11 digit DPV is provided for the mailpiece.	String	
ZipCodeLookupResponse / Address / State	Optional	Two-character state code of the destination address.	String	Default is spaces for International mail.
ZipCodeLookupResponse / Address / Urbanization	Optional		String	
ZipCodeLookupResponse / Address / Zip5	Optional	Destination 5-digit ZIP Code. Must be 5-digits. Numeric values (0-9) only. If international, all zeroes.	Integer	
ZipCodeLookupResponse / Address / Zip4	Optional	Destination ZIP+4. Numeric values (0-9) only. If International, all zeroes.	Integer	Default to spaces if not available.

3.3.1   Sample Response

Response: ZipCodeLookup

```
<ZipCodeLookupResponse>
<Address ID="1">
<FirmName>XXXY COMP</FirmName>
<Address2>8 WILDWOOD DR</Address2>
<City>OLD LYME</City>
<State>CT</State>
<Urbanization>YES</Urbanization>
<Zip5>06371</Zip5>
<Zip4>1844</Zip4>
</Address>
</ZipCodeLookupResponse>
```

4.0 CityStateLookup API

4.1 Overview

City/State Lookup API returns the city and state corresponding to the given ZIP Code. The CityStateLookup API processes up to five lookups per request.

4.1.1 API Signature

Scheme	Host	Path	API	XML
https://	secure.shippingapis.com	/ShippingAPI.dll?	API= CityStateLookup	&XML=(see below)

4.2 Request Descriptions

Tag Name	Occurs	Description	Type	Validation
CityStateLookupRequest	Required	API= CityStateLookupRequest	(Alias)	
CityStateLookupRequest / UserID	Required		String	
CityStateLookupRequest / ZipCode	Required		(Group)	
CityStateLookupRequest / ZipCode / Zip5	Required		Integer	
CityStateLookupRequest / ZipCode	Required	Max 5 Zips	(Group)	
CityStateLookupRequest	Required		(Alias)	

4.2.1 Sample Request

Request: CityStateLookup
```
<CityStateLookupRequest USERID="XXXXXXXXXXXX">
<ZipCode ID='0'>
<Zip5>20024</Zip5>
</ZipCode>
</CityStateLookupRequest>
```

4.3 Response Descriptions

Tag Name	Occurs	Description	Type	Validation
CityStateLookupResponse	Required	API = CityStateLookupResponse	(Alias)	

CityStateLookupResponse / ZipCode	Required		(Group)	
CityStateLookupResponse / Zip5	Required	Zip code provided in the request.	Integer	
CityStateLookupResponse / City	Required	City returned for the given zip code.	String	
CityStateLookupResponse / State	Required	State returned for the given zip code. A two letter enumeration will return for the given state. **Example:** <State>MD</State>	String	
CityStateLookupResponse / ZipCode	Required		(Group)	
CityStateLookupResponse	Required		(Alias)	

4.3.1 Sample Response

Response: CityStateLookup
```
 <CityStateLookupResponse>
<ZipCode ID="0">
<Zip5>20024</Zip5>
<City>WASHINGTON</City>
<State>DC</State>
</ZipCode>
</CityStateLookupResponse>
```