Data guide

United States

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Introduction

United States Address Data Information

This chapter provides an overview of the United States Address dataset and available Additional Datasets.

Dataset Code	USA
Approximate Data Size	Pro: 1.2GB * Pro Web: 1.2GB * * DPV data requires an additional 1-2GB Batch: 1.0GB Batch (CASS certified): 4.4GB
Data Source	United States Postal Service
Update Frequency	Monthly
Expiry	Data files will expire approximately 120 days after the release date. Ensure every data update is applied promptly, otherwise the data may expire and the product will become unusable

Additional Datasets For USA Address Data

You must have the USA Address Dataset installed to use any of the Additional Datasets.

In addition to the USA Address Data, there are two Additional Datasets available to enhance your data:

List Of Available Data Files

File Extension	File Type	Comment
.dat	Dataset	Main address data.
.dap	DataPlus Set	DataPlus data. See page 10 for more information about the available DataPlus sets.
.tpx	Typedown Index File	Indexing data for use with Typedown searching.
.zlx	Single Line Index File	Indexing data for use with Single Line searching.
.zlb	Single Line Index File for Batch	Indexing data for use by the Batch and verification engines.

List Of Available Data Files - Batch Specific

Additionally, these data files are used with Batch API:

File name/ID	Description	Availability
strname.txt firm.txt zByFin.dat zByFin.idx zToKey.idx keyToStreet[0-9].idx streetToZ4[0-9].idx z4[0-9].dat z4f.dat nskey.txt unique.txt	Zip+4 data files	World Wide
detail.dat findurbkey.dat findurbname.dat alias.dat aliasname.txt county.txt countyByState.txt ctystate.idx	City/State data files	World Wide
dph.hsa.z[00-99] dph.hsc dph.hsf dph.hsv dph.hsx dph.hsn dph.hsu dph.hst dph.hsy dph.hsz dph.hsr.zall lcdadd.dat lczip.idx	DPV data files	USA Only
llk.hs[1-6] llk.hsl llk_hint.txt llk_leftrite.dat llk_pno.dat llk_sno.dat llk_dsc.dat llk_nam.dat llk_strname.dat llk_suf.dat llk_crd.dat llk_lln.dat llk_rv9.esd	LACSLink data files	USA Only
slk.asc slknine.lst slknoise.lst slknormal.lst	SuiteLink data files	USA Only
zipmove.idx zipmove.txt	ZIPMove files	World Wide

About This Data

This chapter provides detailed information about the USA dataset.

Area Covered

The USA dataset covers all postal addresses in the United States and its territories, including US military posts abroad.

Address Elements

The following address elements are stored within the USA data files. State and county names do not form part of an official address.

Address Element	Example	Element Code
Building/firm name	The White House	O11
Urbanization#	Urb Fronteras	L41
Primary number*	1600	P11
Street	Pennsylvania Ave NW	S11
Rural route/highway contract*	RR 6	S12
Box number*	Box 2	P12
Secondary number*	Apt 34	P21
PO Box*	PO Box 165	B11
General delivery*	General delivery	B12
Private mail box**	PMB 1234	B13
City name	Bayamon	L31
County name***	Fairfax	L21
State code	PR	L11
State name***	Puerto Rico	L12
ZIP code	20500	C11
ZIP+4 code	1004	C21
Country name***	United States of America	X11
Two character ISO country code***	US	X12
Three character ISO country code***	USA	X13
Street (pre-directional)*	N	S111
Street name*	Delaware	S112
Street descriptor*	Ave	S113
Street (post-directional)*	SW	S114

Urbanization is extra locality information found in Puerto Rico (see page 5).

* Elements that cannot be explicitly set in CASS Certified mode, but can be set in QAS Compatibility Formatting mode. (See "Output Data Format" on page 42 for further information).

** Please note that this element is not present in Experian data, but can be used for formatting if provided.

*** Elements that only appear in the address if their position is fixed.

Address Element Definitions

Abbreviations

By default, three of the address elements are always abbreviated, namely: secondary number, street and rural route or highway contract. Some examples are shown in the table below:

Element	Abbreviated Form	Expanded Form
Secondary number	Apt 13	Apartment 13
	Ste 6	Suite 6
Street	Pennsylvania Ave NW	Pennsylvania Avenue Northwest
	N 1st St E	North 1st Street East
Rural route	RR 4	Rural Route 4
Highway contract	HC 20	Highway Contract 20

Both abbreviated and expanded versions are recognized during Single Line, Typedown and Verification searching. To determine whether each element appears in abbreviated or expanded form in the returned address in Pro or Pro Web, set the Format Options for your address layout using the Configuration Editor. For more information about address formatting with Batch see "Output Data Format" on page 46.

ZIP Code Structure

A ZIP code is a five-digit number that identifies areas within the US and its territories. The ZIP code has been expanded to include an additional four numbers. The additional four numbers are written after the ZIP code and separated from it by a hyphen. This combination is known as a ZIP+4 code.

A ZIP+4 denotes a delivery segment, which might be a floor of an office building, one side of a street between intersecting streets, specific departments within a firm/organization or a group of post office boxes.

Example ZIP code: 03215
Example ZIP+4 code: 03215-0243

ZIP code alignments do not necessarily adhere to boundaries of cities, counties or other geographical regions.

Default Address Format

A standard US address contains three lines:

- Recipient Line
- Delivery Line
- Last Line

The recipient line contains information about the firm or organization.

For a street address, the delivery line contains the primary number, the street and any secondary number/sub-premises information.

For a rural route or highway contract address, the delivery line consists of the rural route or highway contract code and number.

The last line consists of the city name, state code and the ZIP+4. The city and state are separated by a single space, whereas the state code and ZIP+4 are separated by two spaces. For example:

Experian
125 Summer St Ste 1910
Boston MA 02110-1615

By default, address elements are returned in mixed case. Lower case is acceptable to the USPS, providing the text meets postal guidelines for OCR (Optical Character Recognition) readability, as set out in USPS Publication 25.

The Configuration Editor enables you to determine whether each address element should be returned in mixed or purchase. Please refer to the documentation supplied with your product for further information.

Puerto Rican Format

Addresses in Puerto Rico are slightly different to those in the rest of the US:

- Some addresses contain Spanish elements such as 'Calle' instead of 'Street'.
- The street descriptor comes before the street name, for example: 401 Calle Constitucion.
- The address may contain an 'urbanization' or 'urb'. This denotes an area, sector or development, and is returned on the line above the street, for example: Urb El Senorial.

About DataPlus Information

You can configure your Experian Products to use the DataPlus sets that are available for USA data. Please refer to the relevant section of the product documentation for information on configuring Experian Products to return DataPlus information.

Each DataPlus set is divided into one or more items. Experian Products can be configured to return these items via the Configuration Editor (using the element name) or the configuration file (using the code name). This section details the DataPlus sets currently available for USA address data.

DataPlus Sets for USA Address Data

The following DataPlus sets are available with USA Address Data:

The following DataPlus sets are available for USA data with Batch only (as part of CASS certified cleaning):

If you use Batch Interactive to manually clean your USA data, Batch only DataPlus elements will not be returned.

USPS Intelligent Mail Barcode

Identifier: USAIMB

The USPS has implemented an IMB (Intelligent Mail Barcode).

With barcodes, you can define the class of mail, identify the services you wish to procure (e.g. tracking and address correction) and uniquely identify mail pieces.

Batch can paste barcodes into an underlying application. The barcode is passed as a number and is converted to the correct format in order to display as a barcode. To convert the number to the barcode format you need to install the USPS IMB Standard font. This font is supplied with your Experian Product (USPSIMBStandard.ttf). Ensure that the font
is copied to the appropriate font folder on each user's computer.

Element	Code	Description
Barcode	Barcode	The IMB

When you configure your DataPlus layout for Batch API, you must increase the standard line width of 60 characters, as the barcode is 65 characters long. For Batch Standalone and Batch API, you must also configure the IMB Barcode ID, IMB Service Type ID and IMB Mailer ID. For more information on these IDs, see "Configuration File Settings" on page 55.

USPS POSTNET Barcode

Identifier: USABAR

The USPS has implemented a DPBC (Delivery Point Barcode).

With barcodes, mail skips the initial OCR processing steps and goes straight to a barcode sorter, saving time and money. The DPBC consists of the ZIP+4, two digits identifying the individual delivery point, and a check digit (which is used to confirm the validity of the preceding digits).

Pro, Pro Web and Batch can paste barcodes into an underlying application. The barcode is passed as a number and is converted to the correct format in order to display as a barcode. To convert the number to the barcode format you need to install the USPS Barcode font. This font is supplied with your Experian Product (USPSBar.ttf). Ensure that the font is copied to the appropriate font folder on each user's computer.

Element	Code	Description
USABAR	USABAR	The complete DPBC
DPC	DPC	Two digits identifying the delivery point
Check Digit	CheckDigit	The single check digit

USPS Residential Delivery Indicator

Identifier: USARDI
Code: RDI
Description: USPS Residential Delivery Indicator

USPS has implemented RDI (Residential Delivery Indicator).

RDI (Residential Delivery Indicator) data is a dataset that indicates whether an address is a residence, business or mixed. It is able to identify address type without the name of the specific person who lives there or the business name, based on postal carrier feedback at the address level. RDI is sourced by the USPS.

Returned values:

Element	Code	Description	
Residential Delivery Indicator	RDI	Y	Residential
		N	Business
		M	Mixed
		<blank>	No information available

To return this additional element in your output you must set the following two variables in your qawserve.ini file:

- RDIDataLoc = <location of RDI data files>
- RDIApiLoc= <path to the RDI library> (full path including library name, e.g. C:/Data/USA/RDI/CorrectA64.dll)

USPS Enhanced Line of Travel (eLOT®)

Identifier: USAELT
Description: USPS Enhanced Line of Travel (eLOT®)

To aid in mail sortation, eLOT contains an eLOT sequence number field and an ascending/descending code. The eLOT sequence number indicates the first occurrence of delivery made to the add-on range within the carrier route, and the ascending/descending code indicates the approximate delivery order within the sequence number. eLOT processing may be used by mailers to qualify for enhanced carrier route presort discounts.

Note: The United States Postal Service® requires address lists to be processed through CASS Certified™ ZIP + 4® addressing-matching software before being processed against the eLOT product. Non ZIP + 4 coded records may not be used with this product.

Returned values:

Element	Code	Description
eLOT Sequence Number	ELOTSequenceNumber	Reflects the correct eLOT sequence number assigned for the corresponding ZIP + 4 matched record. 4-digit numeric when populated, otherwise blank
eLOT Ascending/Descending Answer	ELOTAscDscAnswer	Contains the correct eLOT ascending/descending code assignment for the corresponding ZIP +4/CRRT matched record. A = Ascending D = Descending <blank>

USA 5-digit ZIP validation

Identifier: USAZIP
Description: USA 5 digit ZIP validation

The 5-Digit ZIP Validation flag indicates that output City, State and ZIP Code correspond. Also indicates that the 5-Digit ZIP is counted on the PS Form 3553.

Returned values:

Element	Code	Description
ZIP5 Valid Flag	ZIPValidFlag	Field specifies whether to increment the 5-digit coded total column on PS Form 3553. Y = Increment the total coded column for records 5-digit coded on PS Form 3553 N = Do not increment the total coded for records 5-digit coded on PS Form 3553

TIGER Co-ordinates

Identifier: USATRL

The TIGER DataPlus set returns a maximum of three elements. The elements returned from the DataPlus set are as follows:

Element	Code	Description
Latitude	Latitude	The latitude, given to an accuracy of six decimal places.
Longitude	Longitude	The longitude, given to an accuracy of six decimal places.
TIGER/Line Match Level	Match Level	The accuracy with which the address was matched against the TIGER data. There are two possible match levels that can be returned:
Premise	A specific address match has been achieved returning the interpolated Premise coordinates.	
ZIP	Premise match was not available and instead the returned coordinates are the average coordinates for the ZIP code.	

Calculation Of The Co-ordinates

The TIGER data consists of start and end points of lines (roads). It therefore contains a start co-ordinate and an end co- ordinate for each line.

The following is a description of how the co-ordinates returned by the TIGER DataPlus set are calculated. When an address is searched, for a given address, one of the following scenarios occurs:

- Premise Match
- ZIP Match
- No Match

Premise Match

A 'Premise' match occurs when an address is found in the TIGER data to the premise level. Coordinate extrapolation based on the TIGER start and end coordinates point for the street is performed, presuming that all discrete premises are actual addresses.

ZIP Match

When there are no TIGER records present for the address to the premise level, the DataPlus set will return average centroid coordinates for the ZIP, and the Match Level would be 'ZIP'. Average centroid coordinates are calculated from all of the address coordinates belonging to a ZIP code.

No Match

If there is no premise level data and no average centroid coordinates for the address ZIP, then no Tiger data is returned at all.

USA Census Tract

Identifier: USACNS

The USA Census Tract DataPlus set returns Census Tract values for US addresses. A Census Tract number is a numeric code (up to six digits) which represents a small, geographic subdivision of land within a selected county, with boundaries following identifiable features, such as roads.

This data is added to addresses at the ZIP+4 level.

Element	Code	Description
Census Tract	Census Tract Number	6 digit Census Tract number

USA County Code

The USA County Code DataPlus set is available for Experian V4.00 (or above) products only. Identifier: USACTY
The USA County Code DataPlus set returns the Federal Information Processing Standard (FIPS) code assigned to a given county or parish within a state. When combined with the state code, this produces a unique 5 character code for each county in the USA. For addresses in Alaska, the returned code identifies a region within the state.

County codes are not assigned to military or armed forces addresses.

Element	Code	Description
County Code	Code	3 digit county code

USA Record Type

In order to achieve an RR footnote for a Commercial Mailing Receiving Agency (CMRA), a valid Private Mailbox (PMB) must be present. This can only be achieved using the Verification scenario in Pro Web with extended retention active.

The USA Record Type DataPlus set is available for Pro V5.00 (or above), Pro Web V5.05 (or above) and Batch only.
Identifier: USARTP
The USA Record Type DataPlus set indicates the type of record that has been retrieved.

Element	Code	Description	
Record Type	RecType	A code representing the type of address record. It can take one of the following values:	
		F	Firm or business
		G	General delivery
		H	High-rise
		P	PO Box
		R	Rural route or highway contract route
		S	Street
		Null	No information is available

USA Carrier Route

The USA Carrier Route DataPlus set is available for Pro V4.00 (or later), Batch V4.01 (or later) and Pro Web V4.00 (or later) products only.

Identifier: USACRT

A carrier route is a group of addresses to which the USPS assigns the same code to facilitate mail delivery. If you send mail to at least 90% of the residential addresses within a postal carrier route, and prepare your mail according to USPS guidelines, you can expect to save between 50-60% on postage costs as this reduces the sorting and coding that is normally part of the mail delivery process. Similar savings can be obtained by doing a "high density" mailing, where you mail to at least 125 addresses in a carrier route.

The USA Carrier Route DataPlus set allows you to view carrier route codes and therefore enables you to pre-sort bulk mail.

Element	Code	Description
Carrier Route	Carrier	4 character alphanumeric code for the Carrier Route.

USA Delivery Point Validation

Identifier: USADPV

The USA Delivery Point Validation (DPV) DataPlus set returns information about the validity of the address record in accordance with the USPS guidelines. For more information about DPV, see page 20.

In addition to retrieving DPV information as standard DataPlus fields, basic DPV validation messages are also displayed in the status bar of Pro and the Pro Web Rapid Addressing popup.

Footnote	Code	Description
DPV Footnotes	DPVFootnotes	AA Input Address Matched to the ZIP + 4 file A1 Input Address Not Matched to the ZIP + 4 file BB Input Address Matched to DPV (all components) CC Input address primary number matched, secondary number not matched, secondary number not required F1 Input Address Matched to a Military Address G1 Input Address Matched to a General Delivery Address N1 Input address primary number matched to DPV but address missing Confirmed secondary number M1 Input Address Primary Number Missing M3 Input Address Primary Number Invalid P1 Input Address RR, or HC Box number Missing P3 Input Address PO, RR, or HC Box number Invalid PB Input Address Matched to a PBSA Record (Carrier Route C770 through C779) RR Input Address Matched to CMRA and PMB designator present (PMB 123 or #123) R1 Input Address Matched to CMRA but PMB designator not present (PMB 123 or #123) R7 Addresses that are assigned to a phantom route of R777 or R779 U1 Input Address Matched to a Unique ZIP Code TA Input address primary number matched by dropping trailing alpha IA* Informed address identified C1* Input address primary number matched, secondary number not matched; secondary number required
DPV Confirmation Indicator	DPVConfInd	Indicates whether the selected address is DPV confirmed. There are four possible return values: Y Address is DPV validated N Address is Not DPV validated S Match to Primary; Secondary not validated D Match to high rise default Blank Not present in DPV data

* Returnable in Batch only

Element	Code	Description
CMRA Confirmation Indicator	CMRAConfInd	Indicates whether the selected address is a Commercial Mail Receiving Agency. There are three possible return values: Y - Address found in the CMRA table N - Address not found in the CMRA table Blank - CMRA lookup not performed
Seed Address Indicator	DPVSeedInd	Indicates if the address selected is a seed address (see page 20 for more information). There are three possible return values: Y - Address was a seed address and DPV is now locked N - Address was not a seed address Blank - Address was not presented to the false positive table. This happens if the address was DPV confirmed.
Vacant Address Indicator	DPVVacantInd	Indicates if the address selected is known to be vacant and not receiving mail deliveries. There are three possible return values: Y - Location has been vacant for 90 or more days N - Location is not a vacant address Blank - Not matched to DPV
No-Stat Indicator	DPVNoStatInd	Indicates known addresses not receiving mail deliveries, for example an address for a house still under construction. There are three possible return values: Y - Confirmed N - Not confirmed Blank - Not matched to DPV
PBSA Indicator	PBSAInd	Indicates addresses known to be Post Office Box Street Addresses (PBSA). There are three possible return values: Y - PBSA N -Not a PBSA Blank - Not matched to DPV
EWS Indicator	EWSInd	Indicates an address has been found in the EWS. Y- Address present in the EWS Blank - Not present in the EWS
No Stat Reason Code	DPVNoStatReason	Provides details as to why records are flagged as No-Stats. 1 IDA (Internal Drop Address) – Addresses that do not receive mail directly from the USPS, but are delivered to a drop address that services them. 2 CDS No-Stat – Addresses that have not yet become deliverable. For example, a new subdivision where lots and primary numbers have been determined, but no structure exists yet for occupancy. 3 Collision – Addresses that do not actually DPV confirm. In this case, the 'Y' should be set to 'N' on the DPV 'A' table and all other table values should be blank. 4 CMZ (College, Military and Other Types) – ZIP + 4 records USPS has incorporated into the data. 5 Regular No-Stat – Indicates addresses not receiving delivery and the addresses are not counted as possible deliveries. 6 Secondary Required - The address requires secondary information."

Element	Code	Description
Drop Indicator	DPVDropInd	Indicates mail is delivered to a single receptable at a site: Y - Address was found in the table N - Address was not found in the table Blank - Address was not presented to the table
Throwback Indicator	DPVThrowbackInd	Indicates mail is not delivered to the street address: Y - Address was found in the table N - Address was not found in the table Blank - Address was not presented to the table
Non Delivery Day Indicator	DPVNonDeliveryDayInd	Indicates mail delivery is not performed every day of the week Y - Address was found in the table N - Address was not found in the table Blank - Address was not presented to the table
Non Delivery Day Values	DPVNonDeliveryDayVal	Indicates which days mail is not delivered to the address.
No Secure Location Indicator	DPVNoSecureLocationInd	Indicates door is accessible, but package will not be left due to security concerns Y - Address was found in the table N - Address was not found in the table Blank - Address was not presented to the table
Door Not Accessible Indicator	DPVDoorNotAccessibleInd	Indicates addresses where USPS cannot knock on a door to deliver mail Y - Address was found in the table N - Address was not found in the table Blank - Address was not presented to the table
Enhanced Return Code	DPVEnhancedReturnCode	Y - Address was DPV confirmed for primary/secondary components necessary to determine a valid delivery point. 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, the secondary number information was present but not confirmed or a single trailing alpha on a primary number was dropped to make a DPV match and secondary information required. N - Primary number failed to DPV confirm. R - Address confirmed but assigned to phantom route R777 or R779 and USPS delivery is not provided. Blank - Address not presented to hash table.
EWS Indicator	EWSInd	Indicates a match has been made to the Early Warning System file: Y - Address was found in the table N - Address was not found in the table Blank - Address was not presented to the table

USA PO Box Only Delivery Zone

Identifier: USAPOB

Utilizes “P” as the Copyright Detail Code in the P. O. Box Only portion of the city/state file. The PO Box delivery Zones indicates there is only one ZIP Code for a given facility and the facility has no other form of postal delivery other than a PO Box

Returned values:

Element	Code	Description
P.O. Box Only Zone	POBOnlyZone	Y = ZIP Code Classification code “P” identified in the PO Box Only N or Blank = ZIP Code not found in PO Box Only portion of the City/State file.

Congressional District Number

Identifier: USACDN

The USA Congressional District Number DataPlus set returns the number assigned to a given congressional district within a state. When combined with the state code, this produces a unique character code for each congressional district in the USA. For example, the address 101 Sombrero Drive, Del Rio is in the 23rd congressional district of Texas. The unique congressional code for this address is therefore TX-23.

The quantity and boundaries of congressional districts are determined after each census (every ten years). However, congressional district numbers and the boundaries between them can occasionally change more regularly.

For addresses in Alaska, the congressional district is always AL (At-large).

Element	Code	Description
Congressional District	Congressional District No	2 digit congressional district number

LACSLink

The LACSLink DataPlus set is available for Batch only. Identifier: USALAC
The LACSLink DataPlus set returns information about changes made to an address following comparison with the USPS LACSLink data. LACSLink processing is enabled when Batch is used in CASS Certified Mode (see page 42).

Element	Code	Description
LACS Indicator	LACSIndicator	The LACS indicator identified addresses that matched to a ZIP+4 record with a LACS indicator. These address conversions are city-style addresses so that emergency vehicles (e.g. ambulances, police cars etc.) can more easily find these locations. There are two possible return values: L The input was matched to a ZIP+4 address with LACS indicator field set. Blank The input either did not match to a ZIP+4 address, or matched to an address without LACS indicator set.
LACS Link Indicator	LACSLinkIndicator	Indicates if the address has been modified by LACSLink. There are five possible return values: Y Address converted by LACSLink N Address not converted by LACSLink F False positive S Address converted, but secondary information dropped Blank Address not presented to LACSLink

Element	Code	Description
LACS Link Return Code	LACSLinkReturnCode	Returns more detailed information about LACSLink processing. There are six possible return values: A Address converted by LACSLink 00 No LACSLink record match (not converted) 14 LACSLink record match, but could not convert the data to deliverable address (not converted) 92 LACSLink record match, but secondary number dropped from input address (converted) Blank Address not presented to LACSLink

SuiteLink

The SuiteLink DataPlus set is available for Batch only. Identifier: USASTE
The SuiteLink DataPlus set returns information about changes made to an address following comparison with the USPS SuiteLink data. SuiteLink processing is available when Batch is used in CASS Certified Mode. For more information
about Batch processing options with the USA dataset, see page 41.

Element	Code	Description
SuiteLink Indicator	SuiteLinkIndicator	Indicates if the address has been updated by SuiteLink. There are three possible return values: Y Address updated by SuiteLink N Address not updated by SuiteLink Blank Address not presented to SuiteLink
SuiteLink Return Code	SuiteLinkReturnCode	Provides the SuiteLink return code. There are three possible return values: A Address updated by SuiteLink 00 Address not updated by SuiteLink Blank Address not presented to SuiteLink

Verified Match Information

The Verified Match Information DataPlus set is available with Pro and Pro Web only. Indentifier: USAVMA
This DataPlus set can return a variety of different flags that provide additional information on how the final address has been matched. Verified Match Information is only available when using Verification searching.

For more information, including full descriptions of all available flags, see "Matching Flags" on page 31.

About Delivery Point Validation

Delivery Point Validation (DPV) is an extension to the Experian Address Matching Engine which allows Pro, Pro Web and Batch to determine whether premises exist all the way down to apartment or suite level information.

DPV information can be returned in all products using the DPV DataPlus elements (see page 5). In addition, Pro and the Pro Web Rapid Addressing popup will display basic DPV messages in the status bar:

DPV Seed Addresses

The DPV system has in-built protection against the illegal creation of verified address lists. This is achieved with the concept of 'seed' addresses. These are non-existent addresses that if searched upon, will deactivate the DPV functionality within your Experian Product.

When a seed address is encountered, the DPV system is disabled and an alphanumeric lock code is reported, together with instructions on the re-enabling process. The disabling of DPV will not affect any other functionality within your Experian Product.

Re-enabling DPV

For more information on re-enabling DPV and using the unlock utility (dpv.exe) to unlock your DPV functionality after hitting a seed address, refer to your product documentation.

USPS reserves the right to require Experian to suspend a user's ability to perform DPV processing when multiple incidents of artificial seed address detection occur.

Using This Data

This chapter provides search tips and other product-specific information when using Pro, Pro Web, or Batch. Refer to the relevant product manuals for more detailed information on using Experian Products.

You can also find out more information by viewing the contact details of your regional Support team at:

https://www.edq.com/documentation/contact-support/

These searches are accurate at the time of data release. However, search results may differ depending on the data release you are using.

With Pro and Pro Web

Search Examples: Typedown

The following table provides a list of these example search types:

- Full address known;
- Full sub-premises address known;
- ZIP code unknown;
- Rural Route box address known.

Search Type	Example
Full address known	1. Enter the ZIP code 33445 and press Enter. 2. Enter the first three letters of the street name, con, to display a picklist of streets beginning with 'con'. Note that Pro and Pro Web are able to handle pre- and post- directional such as south and north and can therefore return these in the picklist and final address. 3. Select S Congress Ave from the picklist and press Enter. 4. Enter the premises number 1612 and press Enter. 5. The correct address is returned: 1612 S Congress Ave Delray Beach FL 33445-6328 With Pro version 6.40 and later, you can combine the premises number and street name in the same stage of the search. In this example, typing 1612 con at step 2 would be enough to uniquely identify "1612 S Congress Ave", and pressing Enter would return the correct address.

Search Type	Example
Full sub-premises address known	To search for addresses that contain sub-premises information: 1. Enter the ZIP code 02118 and press Enter. 2. Enter the first three letters of the street name, tre, and press Enter. In this example, tre is enough to uniquely identify the location Tremont Street. 3. Enter the premises number 678 and press Enter. A picklist of sub-premises is displayed. 4. Enter the sub-premises number 3 and press Enter. 5. The correct address is returned: 678 Tremont St Apt 3 Boston MA 02118-3173
ZIP code unknown	1. Enter the first three letters of the location, zeb, and press Enter. In this example, zeb is enough to uniquely identify the location Zebulon because there are no other places in the USA that start with zeb. 2. Enter the first three letters of the street name, dak, and press Enter. 3. Enter the premises number 20 and press Enter. 4. The correct address is returned: 20 Dakota Dr Zebulon NC 27597-6670
Rural Route box address known	1. Enter the ZIP code 65791 and press Enter. 2. Enter rr 2 to identify the rural route number, and press Enter. 3. Enter the box number, 2188, and press Enter. 4. The correct address is returned: RR 2 Box 2188 Thayer MO 65791-9639 With Pro version 6.40 and later, you can combine the route number and box number in the same stage of the search. In this example, typing rr 2 box 2188 at step 2 and pressing Enter would return the correct address.

Search Examples: Single Line

The following table provides a list of these example search types:

- Full address known;
- ZIP code unknown;
- Character missing from address;
- Only partial address information known;
- Address contains spelling mistake;
- Address element-specific search.

Search Type	Explanation
Full address known	Enter the following premises number, street name and ZIP code and press Enter: 1 alpine ave,10301 The correct address, including the ZIP+4 code, is returned: 1 Alpine Ave Staten Island NY 10301-4001
ZIP code unknown	Enter premises number and street name followed by the place name and press Enter. 400 n rodeo dr,beverly hills The correct address is displayed: 400 N Rodeo Dr Beverly Hills CA 90210-4502
Character missing from address	If one character is missing from the address the unknown character can be replaced with a question mark. Enter 12 e del?ware pl and press Enter. The correct address is returned: 12 E Delaware Pl Chicago IL 60611-1402
Only partial address information known	If you only have partial address information, you can replace the remainder of an address element with an asterisk. Entering wash*,woburn will display a picklist of streets beginning with 'wash' in Woburn.
Address contains spelling mistake	Entering an address that contains one or more spelling errors can still return the correct address. Entering 62201 dayid rd, 65018 will still return the correct address: 62201 David Rd California MO 65018-3114
Address element-specific search	Sometimes it is advisable to tag a part of the search string to let Pro know which part of the address it is. For example, the davidson@t tag tells Pro to look for cities called Davidson. Tags: @c - State code, state name or county name @l - State code, state name, city name, county name, urbanization @o - Building/firm name @p - Primary, secondary, and box @s - Street and rural route/highway contract @t - City name @x, @z - ZIP Code +4

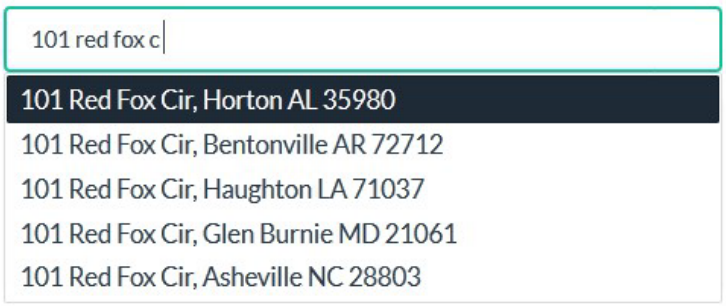
Search Constraints

The following search constraints can be used to restrict searches when using the Single Line search engine in Pro, or Batch Interactive. Search constraints cannot be used with Pro Web.

Constraint	Elements Restricted to	Example
@C	State code, state name and county name	delaware@c restricts search results to states and counties containing 'delaware'.
@L	State code, state name, city name, county name and urbanization	kansas@l restricts search results to states, counties, cities, towns etc containing 'kansas'.
@O	Building/firm name	bayview@o restricts search results to organizations and building names containing 'bayview'.
@P	Primary, box and secondary numbers; and building/firm name	101@p restricts search results to organizations, building names, PO box and primary or secondary premises numbers containing '101'.
@S	Street and rural route/ highway contract	french*@s,tx restricts search results to thoroughfares beginning with 'french' in Texas.
@T	City name	davidson@t restricts search results to cities containing 'davidson'.
@X, @Z	ZIP Code +4	1234*@x restricts search results to ZIP codes beginning with '1234'.

Search Examples: Intuitive

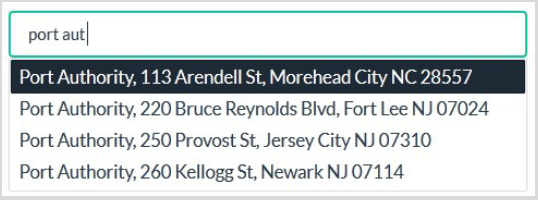
The Intuitive Search has been designed to be as simple as possible for an untrained user to enter an address. The matches will be displayed as you type:

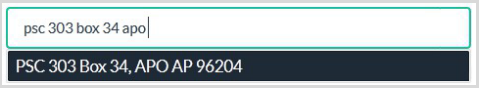


The Intuitive Search will return different matches based on the search terms used.

The matches may not be final addresses and require further refinement via the verification engine. See Pro Web Integration Guide (web.pdf), the Intuitive Search Workflow section for details.

The table below provides details of expected operations with specific USA addresses.

Address Type	Description
Organizations	To find organizations, search by organization name. For example, if you enter: port aut the following matches will be returned: 
Apartment and 'care of'	You can retain specific unmatched pre and post street line detail in the form of leading 'care of' text and trailing sub-premise information. Retained text will be displayed in both the picklist and the final address. For example, if you enter: Attn Mr E White, 12 cockscr The 'Attn' text is retained within the Intuitive match. Selecting the picklist address and clicking Format will return the retained text within the final address. The retained 'Care Of' text is not part of the QAS Standard Layout. Users have to configure a layout to contain the leading retained text using the Configuration Editor. For example, if you enter: 12 Cocks Crow Apt 100 The search matches to 12 Cocks Crow, Staunton IL. The sub-premise detail 'Apt 100' is not within the reference data but will be retained within the Intuitive search due to Extended Retention.

Address Type	Description
Military addresses	An overseas city code (APO, FPO, DPO) or ZIP has to be entered for matches to be returned. For example, if you enter: psc 303 box 34 apo the Pacific Armed Forces Postal Office will be returned: 

Search Examples: Verification

As well as supporting the Single Line and Typedown search engines, Pro and Pro Web also incorporate a Verification engine that does not require Coding Accuracy Support System (CASS) accreditation for the USA. This enables users to:

- use delivery methods for sending mail other than via the United States Postal Service (USPS).
- match addresses according to wider criteria than those available with the CASS Verification engine.

The following table provides a list of example searches and the Verify level they return.

Verify level	Example
Verified	12 Dakota Drive Zebulon NC 27597-6670 This search brings back a verified address with the verify level of "Verified". In Pro the final address screen will be displayed for you to confirm the matched address.
Multiple	200 Rodeo Drive Beverly Hills CA This search brings back a verify level of "Multiple" and offers a picklist of possible addresses. This is because the full street name has not been supplied, which results in a match to multiple streets: North Rodeo Drive and South Rodeo Drive.
None	Rodeo Drive CA This search brings back a verify level of "None" as not enough information was provided in the search.
StreetPartial	Rosemont Road North Jackson OH 44451-9631 This search brings back a verify level of "StreetPartial" as the search did not define a property number for the street location "Rosemont Road". In Pro you will be prompted to enter a street number from the range displayed.
InteractionRequired	1664 Fyler Rd Lot 1 NY This search brings back a verify level of "InteractionRequired" as no city or ZIP information was included in the original search. Therefore, the address requires verification from the user.
PremisesPartial	1825 South Main Street Walnut Creek CA 94595 This search brings back a verify level of "PremisesPartial" as there is more than one apartment at the address. In Pro you will be prompted to enter a premises number from the range displayed.

Using Verification you can also find addresses that are not included in the current release of the data files (but are due to be added in the future update) by using the Early Warning System (EWS).

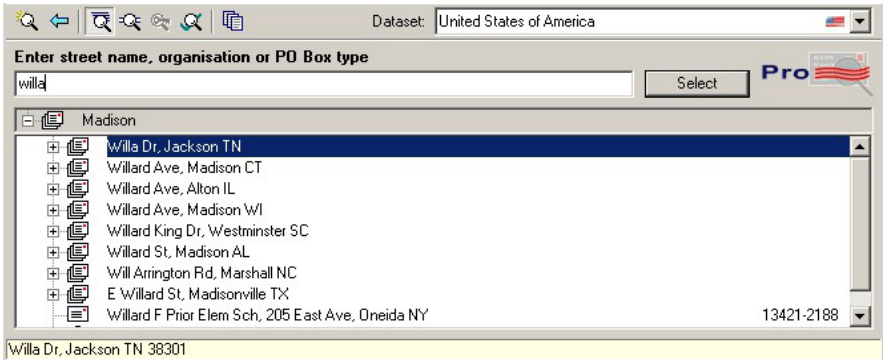
For more information about the Verification engine, refer to the Address Verification section of the Pro Web Integration Guide, or the Verification Searching section of the Pro Getting Started Guide.

Additional Features Of Pro and Pro Web

* This feature is relevant to Pro Web only

Picklists

County Names and Aliases
Cities, city aliases and county names often overlap in the USA, so Pro and Pro Web return matches for all of them. Enter a Typedown search on the word 'Madison', step into the place name, then type the letters willa. This will give the following picklist:

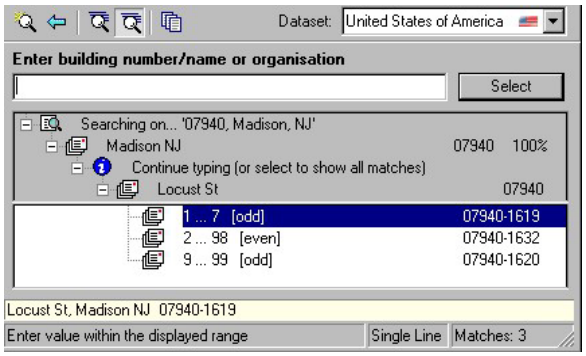


As you can see, many of the picklist items are not associated with a town called Madison (since it does not appear next to the street name in the picklist). In these cases Madison is either the county name or an alias to the city name.

Premises Ranges

The USPS data does not contain explicit information about every premises in the USA. There are some situations where Pro and Pro Web will display a range of premises numbers only. This is known as an unresolvable range (See page 36 for more information).

For example, enter a Single Line search on "07940, Madison, NJ" and then step into the picklist entry marked "Locust Street".



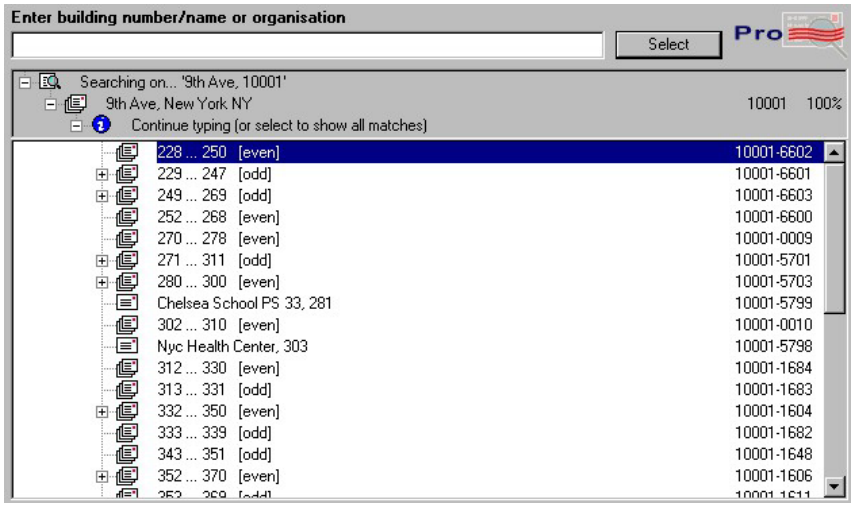
Pro and Pro Web will allow any premises number from the range to be matched. If you are aware of further sub-premises information, you can type it into the search box after the premises number and press Ctrl+Enter to force the address to be accepted.

If you are using the Text Protocol Server, type ! and press Enter to force an address to be accepted.

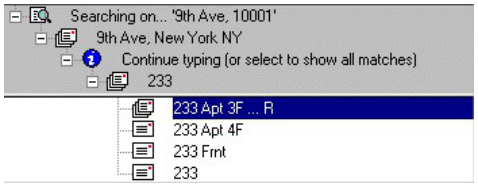
Sub-Premises Removed from Premises-Level Picklists

The USA contains many streets that have a large number of premises. Therefore, it is desirable to limit the information displayed in the premises level picklist. This generally means that sub-premises are not displayed until you have selected a particular primary point (a holding premises which is a valid delivery point on its own).

For example, if you do a Single Line search on "9th Ave, 10001", the returned picklist is mostly in the form of ranges of primary points.



Enter a premise and press Enter to refine the picklist and view the sub-premises information.

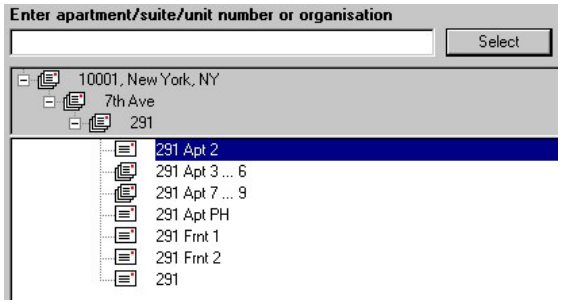


See the `PremiseUnderUnexpandableRange` setting on page 36 for more information about how to change the way that premises are grouped and displayed.

Primary Point Position within Picklists

The primary point in the USA is generally located at the foot of its own sub-premises picklist. This is because it is relatively rare for such a primary point to exist as a deliverable address in its own right in the USA.

For example, if you do a Typedown search on "10001", then type 7th Ave and then enter 291 - the address "291, 7th Avenue, 10001" can be stepped into. The primary point 291 is placed last in the list.

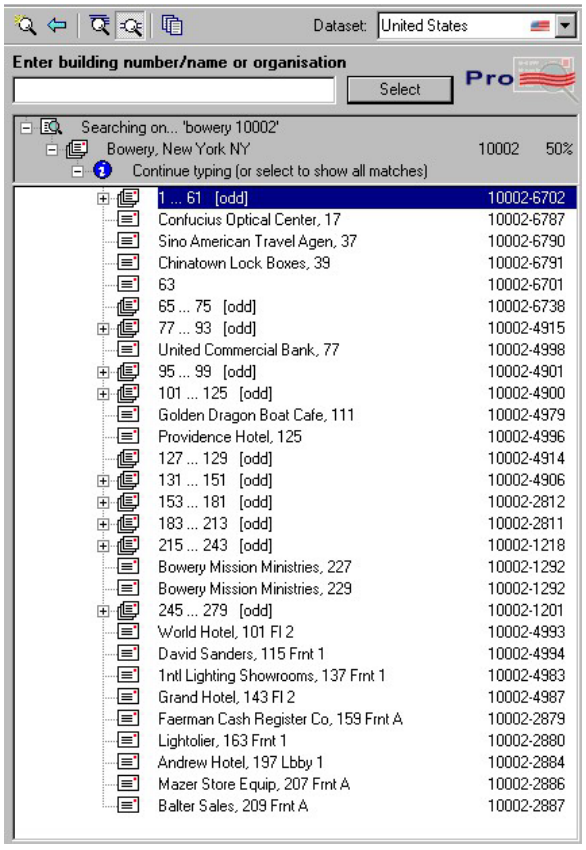


Organizations at Sub-Premises

In a situation where you have typed-down on a street, it is quite usual for organizations to co-exist with residential addresses in that street. However, in the USA, organizations are very often associated with a sub-premises, and sub-premises cannot be typed-down on in a premises level picklist.

Because it is desirable to see both the organization and the sub-premises associated with it at this stage, Pro and Pro Web group them together. Picklists are sorted by premises number first, and both organization names and premises numbers can be typed-down against. However, sub-premises cannot be typed down against until a premises or premises range has been stepped into.

For example, the picklist returned after searching on "Bowery, 10002" displays a variety of organizational information.



If we wanted to return the full address of the final entry in this picklist, we could do so by typing-down on the organization name (Balter Sales), or by typing-down on the premises number (209) followed by a typedown on the sub-premises (209 Frnt A). However, at this stage we could not typedown on the sub-premises directly.

Retention Of Unmatched Text

In USA data, unmatched text is retained and reported to the user in the following additional address elements:

		Verification	Intuitive
U11	Retained sub-premise This element code is used to retain any unmatched information relating to sub-premises. This includes some apartments and suites which may not appear in the PAF, but which may be needed for successful mail delivery.	√	√
U21	Retained 'care of' form This element code is used to retain any unmatched 'care of' information. For example, an address may feature a phrase such as 'care of Mr. Holiday'. In such cases the text 'care of' is retained in this element code, as is any unmatched text that follows it.	√	√
U31	Retained pre-street info This element code is used to retain any other unmatched information that is found before the first matched text. This element code allows the capture of such phrases as 'round the back' - which could be important for successful delivery of mail.	√	
U41	Retained post-street info This element code is used to retain any unmatched information that is found after the Street element (provided it does not match certain excluded strings).	√	

To return these additional elements in your output you must either:

- Use the Configuration Editor to ensure the Enable extended retention box is checked in the Format Options pane for your USA layout;

- Or, use the `UseExtendedRetention` setting in your USA layout in the qawserve.ini file (see page 37), in conjunction with `SplitExtendedRetentionItems` if required (see page 38).

These elements can be fixed to address layouts like other additional elements. For more information about layouts and elements, see the Configuration Editor Help.

Prompt Sets

Optimal and alternative prompt sets have been defined to facilitate searching on a street address entry. The Street Address field allows you to enter some, or all, of the delivery line (the primary number, the street and any secondary number/sub-premises information).

The Alternative prompt set allows the delivery line to be split over the first two fields. When the address is searched on, the information in these two Street Address fields is joined together and passed into the search engine as a single field.

It is recommended that building/firm name and urbanization data are captured in separate fields outside of the prompt sets provided, and are not passed to Pro or Pro Web to search on. You can retain the data you enter in both the Building/firm field and the Urbanization field, and add it to the returned address if required.

There are three possible outcomes when you are searching for a building/firm, or urbanization address:

1. The returned address contains data which matches the information that you entered in the Building/firm, or Urbanization fields.

In these cases, you should use the returned address.

2. The returned address contains no business, organizational, building name, or urbanization information.

In these cases the information retained in the Building/firm or Urbanization fields should be added to the returned address.

3. The returned address contains data which does not match the information you entered in the Building/firm field or Urbanization field.

In these cases you should overwrite the business, organization, building name or urbanization data which has been returned and replace it with the information retained in the Building/firm or Urbanization fields.

Matching Flags

There are a number of matching flags associated with the USA verification engine. These are returned by the DoSearch action as part of the QASearchResult XML. Matching flags can be returned as DataPlus information using the Verified Match Information Data Plus set. The DataPlus line should be added to the relevant address layout using the Configuration Editor. For more information, see the Configuration Editor Help program.
Pro Web users can also use the getVerificationFlags method of the SearchResult class to return matching flags. The flags are returned with the following values:

0	False
1	True

The following matching flags are available with the USA verification engine: Building / Firm name has been added or changed
This flag indicates that a Building or Firm name has been added or changed during the matching process.

Example 1:

Input address:	Output address:
Broadway Tower 1998 Broadway San Francisco CA 94109	Broadway Towers 1998 Broadway San Francisco CA 94109-2281

Example 2:

Input address:	Output address:
1998 Broadway San Francisco CA 94109	Broadway Towers 1998 Broadway San Francisco CA 94109-2281

Urbanization has been added or changed

This flag indicates that an urbanization for a Puerto Rican address has been added or changed during the matching process.

Example 1:

Input address:	Output address:
Urb Dorad del Mr NN99 Calle Nacar Dorado PR 00646	Urb Dorado del Mar NN99 Calle Nacar Dorado PR 00646-2325

Example 2:

Input address:	Output address:
500 Calle Olimpic San Juan PR 00920	Urb Summit Hills 500 Calle Olimpic San Juan PR 00920-4379

Primary Number has been added or changed

This flag indicates that a Primary Number has been added or changed during the matching process.

Example:

Input address:	Output address:
Columbian School W Macon St Carthage MO, 64836	Columbian School 1015 W Macon St Carthage MO, 64836-2999

Street has been (non-trivially) corrected

This flag indicates that non-formatting changes have been made for a matched address. The table below demonstrates example changes and whether they would trigger the flag or not:

Input Street	Output Street	Flag Set
1 Main Street	1 Main St	0
1 North Main St	1 N Main S	0
1 Maine St	1 Main St	1
1 Main Rd	1 Main St	1

Rural Route / Highway Contract has been matched

This flag indicates that a matched address was either a Rural Route or a Highway Contract address. Example:

Input address:	Output address:
RR 12 Box 99A Oakley CA 94561	RR 12 Box 99A Oakley CA 94561-9601

City name has been added or changed

This flag indicates that a city name was added or changed during the matching process.

Example:

Input address:	Output address:
1 Main St Kulispell MT 59901-4449	1 Main St Kalispell MT 59901-4449

City name has been alias matched

This flag indicates that an alias city name was used during the matching process.
Example:

Input address:	Output address:
1 N Quincy Pl Boston MA 02129	1 N Quincy Pl Charlestown MA 02129-1410

State has been added or changed

This flag indicates that a state name or code was added or changed during the matching process.
Example:

Input address:	Output address:
5600 Isherwood Rd Plover WA 54467	5600 Isherwood Rd Plover WI 54467-8904

5-digit ZIP code has been added or corrected
This flag indicates that a 5-digit ZIP code was added or changed during the matching process.

Example 1:

Input address:	Output address:
63 Plains Rd Cambridge NY 12817	63 Plains Rd Cambridge NY 12816-2928

Example 2:

Input address:	Output address:
99 Revelation Pl Edgewood NM	99 Revelation Pl Edgewood NM 87015-6862

+4 code has been added to ZIP or corrected
This flag indicates that a +4 code was added or changed during the matching process.

Example 1:

Input address:	Output address:
63 Plains Rd Cambridge NY 12816	63 Plains Rd Cambridge NY 12816-2928

Example 2:

Input address:	Output address:
99 Revelation Pl Edgewood NM 87015-6861	99 Revelation Pl Edgewood NM 87015-6862

Secondary number has been retained

This flag indicates that the matched output address contains secondary number information such as an apartment, unit or suite that is unrecognized by the USPS.

Example:

Input address:	Output address:
1 River Rd apt 1 Schenectady NY 12345	1 River Rd Apt 1 Schenectady NY 12345-6000

Identifiable pre-street information has been retained

This flag indicates that the matched output address contains standard information before the street such as a 'Care of' or 'Attn:' that is unrecognized by the USPS.

Example:

Input address:	Output address:
1 C/O Jeff Klipson 483 7th Ave San Francisco CA 94118 River Rd apt 1 Schenectady NY 12345	C/O Jeff Klipson 483 7th Ave San Francisco CA 94118-3012

General pre-street information has been retained

This flag indicates that the matched output address contains non-standard information before the street that is also unrecognized by the USPS.

Example:

Input address:	Output address:
Erasmus 1889 Broadway Apt 306 San Francisco CA 94109	Erasmus 1889 Broadway Apt 306 San Francisco CA 94109-2291

Post-street information has been retained

This flag indicates that the matched output address contains information after the street that is unrecognized by the USPS.

Example:

Input address:	Output address:
5 Arlington St Apt 5 SAL Cambridge MA 02140	5 Arlington St Apt 5 SAL Cambridge MA 02140-2753

For more information, refer to the Address Verification section of the Pro Web documentation.

Input Data Format

The more input fields that you specify, the better Batch will potentially match addresses. See "Dataset-Specific Input Field Types" on page 46 for more information on configuring input fields.

Where no specific input field types are set for all address input (i.e. for Standalone, "<Address>" is configured for all address lines; and for API, no / blank `InputLine` API settings are set), Batch assumes that the first field contains delivery address information, such as the primary number or the street. Batch also assumes that firm and urbanization information is absent from the address, as this is the most likely scenario.

If, however, you set delivery address information to the third field or beyond, and leave the first two fields blank, Batch will assume that the first two fields contain firm and urbanization information respectively.

Similarly, if you set the delivery address information to the second field, Batch will assume that the first field contains a firm name.

Batch has the ability to spot a ZIP/ZIP+4 anywhere in an address, regardless of whether input field types are configured. If no ZIP/ZIP+4 is found, and no place element type is configured in the last three lines, Batch will assume that they contain the city, state and ZIP elements.

In-between fields, Batch intelligently classifies element types: explicitly set field types are acted upon; otherwise the type is determined by the surrounding field types.

Configuration File Settings

The server side INI file (qawserve.ini) for Pro and Pro Web will support the following additional settings for USA data:

- PremiseUnderUnexpandableRange (page 36)
- UseExtendedRetention (page 37)
- SplitExtendedRetentionItems (page 38)
- AbbreviateAddr (- page 38)
- UnmatchedTextFormat (Pro Web only - page 39)
- DisplayRetentionItemsInPicklist (see page 40)

PremiseUnderUnexpandableRange

Format:
`[identifier]PremiseUnderUnexpandableRange={boolean}`

Default:
FALSE

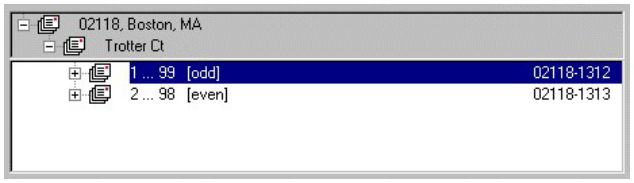
Purpose:
The USA data contains many streets that have a large number of premises. Using this setting, you can control how premises are displayed in Pro and Pro Web; they may be displayed individually or grouped into ranges.

The majority of premise information in the USA data is held within unresolvable ranges. An unresolvable range of premises contains no information to verify which premises exist and which do not between the range end points.

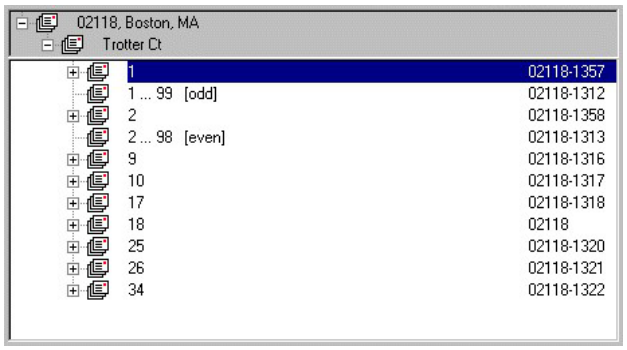
There are three reasons why a single premises may exist within an unresolvable range of premises:

- For high-rise buildings, sub-premises, particularly apartment numbers, are located beneath premises;
- If organization data is linked to premises data, organization details will be located beneath the premises.

When this setting is set to TRUE, and the picklist contains unresolved ranges, Pro and Pro Web group single premises within the unresolved ranges, as shown in the following screenshot:



If this setting is FALSE, the picklist will appear as shown in the screenshot below:



Setting this to TRUE therefore has the effect of reducing picklist sizes and so improving the usability of the product, without reducing any functionality. Experian recommends that this should be set to TRUE.

Example:

```
USAPremiseUnderUnexpandableRange=TRUE
```

UseExtendedRetention

Format:

```
[identifier]UseExtendedRetention={Boolean}
```

Default:
TRUE

Purpose:
This keyword allows you to retain unmatched input text in your output addresses. For more information about unmatched input text see page 30.

Some forms of retained input text are best represented on multiple address lines. To configure this, see `SplitExtendedRetentionItems` on page 38.

Example:

```
USAUseExtendedRetention=FALSE
```

This setting would prevent any unmatched address text (for example, a sub-premises entered by the user which could not be verified) being returned in your USA output addresses.

SplitExtendedRetentionItems

Format:
`[identifier]SplitExtendedRetentionItems={element codes}`

Default:

Blank, but is usually set in the ini file depending on the dataset.

Purpose:
This keyword allows you to specify the lines which retained input text can split across. The first element code is always one of the following:

- U11 (retained sub-premise)
- U21 (retained 'care of' form)
- U31 (retained pre-street info)
- U41 (retained post-street info)

Additional element codes are always consecutive. For example, U21 should always be followed by U22, and so on. Note that you must have enough address lines configured in the layout for these settings to work successfully. For more information on configuring address lines, see your product documentation.

For more information about unmatched input text and associated element codes, see page 30.

Example:
```
USASplitExtendedRetentionItems=U31
+U32+U33
```

This setting would allow retained pre-street information to split across three lines in USA output addresses. If this setting was not used, any retained pre-street information would be returned in one line.

These settings can be enabled or disabled with the keyword `UseExtendedRetention` (see page 37).

AbbreviateAddr

Format:

AbbreviateAddr={Boolean}

Default:
FALSE

Purpose:
If a line within a returned address exceeds the set maximum line width it will normally be truncated, and a warning flag will be displayed. `AbbreviateAddr` attempts to prevent this happening by replacing street names with shorter aliases. If the abbreviated line is still too long to fit within the maximum line width, a truncated version is returned with a warning flag.

The `AbbreviateAddr` setting should be added to individual USA address layouts as required.

Example:
```
AbbreviateAddr=TRUE
```

This setting will enable abbreviated addresses for the USA layout to which it is added. You can see the effect that this has by applying the setting to the following address layout:

```
[Abbreviated Layout]
AbbreviateAddr=TRUE
USAAddressLine1=W30,O11,L41
USAAddressLine2=W30,P11,...
USAAddressLine3=W30,L31,L11,C11,C21
```

Searching for 1400 Midland Gratiot County Line Rd, 48615, will now return the following abbreviated address:

1400 Mid Gratiot Cty Line Rd
Breckenridge MI 48615-9601

UnmatchedTextFormat

This setting is only used by the Web: Address Capture scenario in Pro Web.

Format:

```
UnmatchedTextFormat={text string}
```

Default:
Blank

Note that Pro Web is distributed with the setting: `UnmatchedTextFormat=#PICKLIST# ('#UNMATCHED#' was not found at this address)`

Purpose:

This setting is used to format and return a warning message for users as part of the picklist when information not in the postal address file is used to make up the returned address. This is currently only used where the data may not cover all apartments that actually exist.

If this setting is not present, or if {text string} is blank, then picklist items which include unmatched text will not be returned. To return the extra picklist items, edit {text string} to match the warning message you require, using the sequence `#PICKLIST#` where you want the picklist entry to appear, and the sequence `#UNMATCHED#` where you want the unmatched text to be displayed.

Example:

```
UnmatchedTextFormat=#PICKLIST# ('#UNMATCHED#' was not found at this address)
```

Using this setting would cause two picklist entries to be returned if the user searched on 920 Tremont St, Apt 30 and the zip code 02118:

"920 Tremont St Apt 30 Boston MA 02118-1055 ('Apt 30' was not found at this address)"

"920 Tremont St Boston MA 02118-1055"

The first entry uses the unmatched text formatting, and the second entry is the best exact match to the postal address file, which does not include the extra text.

DisplayRetentionItemsInPicklist

This setting only applies to searches carried out using the Verification engine

Format:
[identifier]DisplayRetentionItemsInPicklist={boolean}

Default:
False

Purpose:

Retention items are elements of an address search that do not exist in the official address record. These can include house names or descriptive information about an address. By default, Pro and Pro Web do not return retention items. This setting allows you to specify that retention items should be displayed in picklists.

The `UseExtendedRetention` keyword must be set as `True` in order for retention items to be displayed in picklists. In Pro, `DisplayRetentionItemsInPicklist` can only be applied as a general setting and will affect all Verification searches. In Pro Web, it can also be applied to individual address layouts.

Example:

```
USADisplayRetentioItemsInPicklist=true
```

If the example above is added to the qawserve.ini file, carrying out a verification search using the United Stated dataset for the following address:

1711 northbrook trl, back door, chagrin falls, 44023

will return a picklist of potential results with the retention item ("back door") included.

With Batch

Batch Standalone and Batch API have received Coding Accuracy Support System (CASS) accreditation for the USA, which is a prerequisite to being able to sell address management products intended to reap United States Postal Service (USPS) mailing discounts.

CASS is a software certification program designed to improve the accuracy of address data, including the ZIP and ZIP+4 codes, on mail pieces. CASS certification is controlled by the USPS and further information about CASS can be found on the USPS website (www.usps.com).

Delivery Point Validation (DPV) is an extension to the USPS address matching technology, which allows Batch to determine whether premises exist all the way down to apartment or suite-level information. Therefore, if the address has sub-premises information, DPV is used by Batch to return a single full match with a high level of confidence. For more information about DPV, see "About Delivery Point Validation" on page 18.

One of the requirements of CASS accreditation is that DPV functionality is active. USPS requires all CASS-certified software to return a +4 code only when the address has been DPV-confirmed. If an address is not DPV confirmed, a +4 code will not be returned, and by extension, any DataPlus items you have configured as part of the address output format may not be returned either. See page 5 for more information about DataPlus.

See page 6 for a complete list of the Batch-specific data files installed from your data disk.

More DataPlus elements will be returned when using QAS Compatibility Formatting mode (see page 43) because an additional matching routine is attempted for addresses that do not DPV-confirm.

If you use Batch Interactive to manually clean your USA data, Batch only DataPlus elements will not be returned.

Dataset-Specific Reports

In addition to the standard Batch reports that are discussed in the main user documentation supplied with Batch, a CASS Summary Report is also available. This report contains information about the condition of the original addresses and how the addresses have changed since cleaning. It is required where USPS mailing discounts are sought.

Such reports may only be available if your data is less than 105 days old.

Performance

There are a number of measures you can take to improve the performance of Batch Standalone or Batch API when using the USA dataset.

System Considerations

The specification of the system you use to run Batch will affect its performance:

- A multi-core CPU will benefit from Batch's multithreading capability.
- Batch will perform better the more RAM you make available to it. If you have sufficient RAM, you can use the data caching options to reduce the need to load data from disk. See "Dataset-Specific Options" on page 42.

Windows users may need to change the Windows startup options to allow Batch (or other software) to use more than 2GB of RAM.

UNIX users may need to increase the resource usage limits using the `ulimit` command (or the system's equivalent).

Preparing Your Data

You can improve the performance of Batch by preparing your input database before you run Batch.

Batch will process your database faster the more input fields you are able to specify. This may also improve the matching results. See "Input Data Format" on page 36.

Dataset-Specific Options

The following USA-specific options can be used with Batch. In Batch Standalone these can be found on the USA tab on the Session Options dialog. To open this dialog select Session > Options from the main Batch dialog. For the equivalent configuration settings in Batch API, see page 41.

Some options are only available with Batch v6.4 or later.

- Enable QAS Compatibility Formatting

This option enables output in QAS Compatibility Formatting mode. Selecting this option will disable the other options on this tab since QAS Compatibility Formatting mode is not CASS-accredited. For more information see page 42.

- Enable 30 Character Address Line

This option limits the first address line to a maximum of 30 characters. It works with QAS Compatibility Formatting Mode and CASS Certified Mode. However, this option has no effect if you use Batch Interactive to search for addresses.

- Enable CASS Certified Mode

This option enables CASS-accredited output, which requires that Delivery Point Validation (DPV) is active. For more information see page 42. USPS SuiteLink is a standard part of the CASS certified cleaning mode.

- Cache Mode

Caching the USPS data files can improve the performance of Batch. There are three settings for the USA cache mode:

- All: Batch will attempt to cache all the data required for your current mode. You must ensure you have sufficient RAM available (at least 1.2GB for non-CASS mode and 2.0GB for CASS mode) otherwise you will receive an out of memory error.
- Auto: Batch will determine how much data to cache.
- None: Batch will not cache any of the data required.

Output Data Format

CASS Certified Mode

This returns the street information in a single field, which is not separated into the different components that make up the street element.

The single street address element (S11) contains the following address elements:

- Primary number, secondary number, box number, PO Box, general delivery, rural route/highway contract, street pre- directional, street name, street descriptor, street post-directional.

Therefore, if you want to return any of these address elements in your output address, you must ensure that you either use the standard layout provided by Batch, or create a new layout that explicitly uses the street element.

See "Address Elements" on page 3 for a list of the element codes that relate to the address elements listed above.

QAS Compatibility Formatting Mode

QAS Compatibility Formatting is not CASS-accredited. Delivery Point Validation (DPV) information is therefore not returned when using this mode of cleaning. In addition, mailing discounts are not available to addresses returned using QAS Compatibility Formatting.

CASS Certified mode cleaning is unsuitable for some datasets as address elements in the street line cannot be explicitly formatted. QAS Compatibility Formatting provides more configuration options for a returned address as street information can be split into separate address fields in the output address. Benefits include:

- Increased flexibility of address layout

QAS Compatibility Formatting can be used to output primary or secondary address elements in separate fields. This may be useful if you want to export addresses to software that has insufficient line width for a CASS accredited address.

If your dataset already contains separate primary and secondary address information, using QAS Compatibility Formatting will maximize address matching performance.

If you are using Batch Standalone, addresses with split address elements may be cleaned in CASS Certified mode using the <link to above> element descriptor. No similar feature is available in Batch API.

- Abbreviate and Capitalize Address Elements

QAS Compatibility Formatting offers greater support for address element abbreviation and capitalization. All elements listed in "Address Elements" on page 3 can be explicitly configured and capitalized when using QAS Compatibility Formatting. In addition, abbreviations are available for the following address elements:

- Street (including street pre-directional, street name, street descriptor, street post-directional)
- Rural Route / Highway Contract
- Secondary

See the documentation supplied with Batch for information on how to abbreviate and capitalize address elements.

Dataset-Specific Information Bits

USA-Specific Information Bits

When using USA data a selection of dataset-specific information bits can be returned.

- For Standalone users, USA-specific information bits are returned as the first 8 digits of the 16-digit extended match result as displayed in Interactive.

- For API users, these information bits are returned by the following functions:

Function	Parameter Returned
QABatchWV_GetMatchInfo	rlCountryInfo1
QABatchWV_Clean	rsReturnCode (from the 13th to 20th characters)

The following table provides a full list of USA-specific information bits that can be returned.

Information Bit	Description
10000000	ZIP+4 has been assigned
20000000	DPBC has been assigned
40000000	5-digit ZIP has been assigned
80000000	Address is a High Rise Default
01000000	Address is a High Rise Exact
02000000	Address is a Rural Route Default
04000000	Address is a Rural Route Exact
08000000	Address converted using LACS
00100000	USPS footnote A: 5-digit ZIP Code has been corrected
00200000	USPS footnote B: City/State spelling has been corrected
00400000	USPS footnote C: City/State/ZIP are invalid
00800000	USPS footnote D: No ZIP+4 has been assigned
00010000	USPS footnote E: ZIP Code has been assigned for multiple response
00020000	USPS footnote F: Address not found in the dataset with City/State/ZIP provided
00040000	USPS footnote G: Part of the firm was moved to address
00080000	USPS footnote H: Secondary number was missing for this address
00001000	USPS footnote I: Insufficient/incorrect address data supplied
00002000	USPS footnote J: PO Box address used for dual address
00004000	USPS footnote K: Non-PO Box address used for dual address
00008000	USPS footnote L: Delivery address component has been changed
00000100	USPS footnote M: Street name has been changed
00000200	USPS footnote N: Delivery address has been standardized
00000400	USPS footnote P: Delivery address is known by a preferred name
00000800	USPS footnote R: Address is not in current data, but will be added in the future**
00000010	USPS footnote S: Secondary number does not match
00000020	USPS footnote T: Address has magnet street syndrome (multiple)
00000040	USPS footnote U: City or PO name supplied was not an official last line name
00000080	USPS footnote V: City or state could not be verified as corresponding to the ZIP code
00000001	USPS footnote W: Address was identified as a small town default
00000002	USPS footnote X: Address has a unique ZIP code default
00000004	USPS footnote Z: Match made using ZIPMOVE data
00000008	USPS footnote Q: Match has been made to a unique ZIP*

* Only available with Batch API Version 4.55 or later.

** Only available with EWS data. (See "Getting Data Updates" on page 1.)

Extended Dataset-Specific Information Bits

An additional set of dataset-specific information bits are used to return more match information, including DPV and QAS Compatibility Formatting processing.

- For Standalone users, USA-specific information bits are returned as the second 8 digits of the 16-digit extended match result as displayed in Interactive.
- For API users, these information bits are returned by the following functions:

Function	Parameter Returned
QABatchWV_GetMatchInfo	rlCountryInfo2
QABatchWV_Clean	rsReturnCode (from the 21st to 28th characters)

The following tables provide a full list of extended USA-specific information bits that can be returned.

Information Bit	Description
00100000	USPS footnote Y: Input address matched a military record
00004000	Business address improved using SuiteLink data

DPV Flags

Information Bit	DPV Flags
00200000	The address was DPV confirmed (for the purposes of CASS mailing discounts)
00400000	The address was DPV confirmed as a high-rise default, but secondary information was not matched
00800000	The address was DPV confirmed, but secondary number provided was not matched
00010000	USPS footnote F1: matched ZIP+4 Military record
00020000	USPS footnote G1: matched ZIP+4 General Delivery record
00040000	USPS footnote U1: matched ZIP+4 unique zipcode record
00080000	USPS footnote P3: invalid PO, RR, or HC box number
00001000	USPS footnote AA: input address matched to ZIP+4 file
00002000	USPS footnote A1: input address not matched to ZIP+4 file
00000100	USPS footnote BB: input address fully matched (all components)
00000200	USPS footnote CC: primary number match but secondary number not matched (present but invalid)
00000400	USPS footnote N1: primary number match to high-rise or box type address, but secondary information missing
00000800	USPS footnote M1: primary number missing from input address
00000010	USPS footnote M3: supplied primary number invalid - could not confirm address
00000020	USPS footnote P1: box type address (i.e. PO/RR/HC) missing box number
00000040	USPS footnote RR: CMRA (Commercial Mail Receiving Agent) address match
00000080	USPS footnote R1: CMRA (Commercial Mail Receiving Agent) address match, but secondary number not present
00000001	DPV system is enabled at the point after the search

Information Bit	DPV Flags
00000002	DPV system has been disabled. This will not be set if the DPV system has been switched off via configuration settings
00000004	DPV search was a seed address, disabling the system from this point onwards until it is successfully unlocked

QAS Compatibility Formatting

Information Bit	QAS Compatibility Formatting Flags
10000000	Primary information in the input address was unmatched but has been included in the output address
20000000	Secondary information in the input address was unmatched but has been included in the output address
40000000	Unmatched additional secondary information in the input address has been included in the output address
80000000	The address matched an alternative firm/organization, but the input organization was used in the output address
01000000	The input street address matched a PO Box record in a unique ZIP code area. Confidence has been reduced to low
02000000	The input PO Box matched a street record in a unique ZIP code area. Confidence has been reduced to low
04000000	A street level match without primary information has been found in a unique ZIP code area. Confidence has been reduced to low
08000000	Unidentified additional numeric information in the input address has been omitted from the output address

Dataset-Specific Input Field Types

When you are configuring a Batch session, you can specify the address elements which are contained in your input fields. This can speed up the cleaning process as Batch does not have to work out which address element is contained within a field.

The following table describes the input fields that you can specify for USA data, and the address elements Batch will expect for each. The field types are available from the Set Field Type drop-down menu in the Select Input Fields dialog of the Batch Configuration Wizard.

Input Field Type	Expected Address Element
Building/firm name	Firm or building name
Urbanization	Puerto Rican urbanization
Street line/RR/HC/PO Box	Premises, street or postal delivery address lines
Street line/RR/HC	Premises or street address
Premises only	Primary/Secondary/Box number
PO Box	Postal delivery address
Last line	City, state or ZIP code

Input Field Type	Expected Address Element
City	
State	
ZIP/ZIP+4	ZIP code (including +4 extended code)
Country	Country/Identifier

If your input field contains more than one address element, you can specify these from the Multiple Elements sub-menu. For example, you can specify that the State and ZIP code elements are stored in the same field in your input database. The dataset-specific input field types available for USA data are:

Input Field Type	Expected Address Element
Building/firm name	Building name or firm
Urbanization	Puerto Rican urbanization
Primary number	Primary number
Street/RR/HC	Premises or street address
Secondary number	Secondary number
Box number	Box number
PO Box/General Delivery	Postal delivery
City	
County	
State	
ZIP	code (including +4 extended code)
+4	+4 extended code
Country	Country/Identifier

Search Examples: Batch Interactive

For information about the best methods for searching on United States addresses using Batch Interactive please refer to
Typedown search examples on page 19 and Verification search examples on page 26.

Match Types

The following match types are used within Batch to classify matches against US addresses:

Match Type	For more information, see...
Verified	page 48
Good Full	page 48
Tentative Full	page 48
Multiple	page 49
Unmatched	page 49
Foreign	page 49
Blank	page 49

Verified

19This match type occurs when the input address is matched exactly to the USPS data. To return a "Verified" match, all address elements must be verified as correct, with the possible exception of minor formatting changes. The address can therefore be accepted as it is.

The example below shows no changes between input and output:

Input address	Output address
433 Columbus Ave Boston MA 02116-5921	433 Columbus Ave Boston MA 02116-5921

Good Full

This match type occurs when the input address is matched to the USPS data. Some formatting changes are permitted; for example, spelling changes to a single element, a change or correction to the ZIP code or the addition of a +4 code. Following such changes, the address is fully verified and can be accepted.

The example below shows that the street descriptor has been standardized, and the zip code has been corrected with the addition of a +4 code:

Input address	Output address
433 Columbus avenue Boston MA 02118	433 Columbus avenue Boston MA 02116-5921

Tentative Full

This match type occurs when the input address is matched to the USPS data but there is a lack of confidence that either the result is correct, or the address is complete. This typically occurs when an address contains both a street and a PO Box, multiple element changes or when there is a lack of secondary information. In such cases, the output address should be reviewed before it is accepted.

The example below contains an incomplete address, as the apartment number is missing:

Input address	Output address
1889 Broadway San Francisco CA 94109	1889 Broadway San Francisco CA 94109-2276

The example below contains a dual address, where the output matches only one part of the input:

Input address	Output address
10 Main St PO Box 123 Addison IL 60101	PO Box 123 Addison IL 60101-0123

Multiple

This match type occurs when multiple addresses in the USPS data match the input address. This occurs when information is missing from the input address; for example, the street descriptor, street directional or ZIP code. The output address should be reviewed before it is accepted.

The input address in the example below is missing a street directional - North and South Main Street exist in that city / state / ZIP code:

Input address	Output address
101 Main St Boston GA 31626	101 Main St Boston GA 31626

Unmatched

This match type occurs when the input address could not be matched to any addresses in the USPS data. No output address can therefore be returned.

For Batch API, USA searches resulting in unmatched or multiple matches may still return output. Therefore, it is important that any API integration interprets the match code returned by Batch before attempting to use output address data.

Foreign

The input address has been marked as foreign, either due to the country field that has been supplied or to place level address elements (for example a ZIP code) which indicate that the address is not a US one. No output address can therefore be returned.

Blank

The input address fields are blank. This does not necessarily mean that the address record is blank, but that the fields supplied to the search engine do not contain any data. No output address can therefore be returned.

Additional Match Types

If an address record causes an unknown USPS engine error, Batch will skip this record and assign it a match type 'A' to indicate that no processing has taken place. This match type will also be returned for all USA addresses if the DPV system is disabled (see "About Delivery Point Validation" on page 18).

Configuration File Settings

The Batch Configuration File will support the following additional settings:

- Certification (page 50)
- AbbreviateAddr (page 50)
- CompatibilityFormatting (page 51)
- CorrectACacheLevel (page 51)
- CorrectAApiLoc (page 51)
- CorrectADataLocUSA (page 52)
- IMbBarcodeID (page 52)
- IMbServiceTypeID (page 52)
- IMbMailerID (page 52)

Certification

Format:
`Certification={Boolean}`

Default:

Yes

Purpose:
This setting determines whether Batch should run in Certified mode. Certified mode ensures that the results conform to the CASS rules, including the mandatory use of Delivery Point Validation (DPV).

In certified mode, Batch API will return a +4 code only when the address has been DPV-confirmed. If an address is not DPV confirmed, a +4 code will not be returned, and by extension, any DataPlus items you have configured as part of the address output format may not be returned either. See page 5 for more information about DataPlus.

The certified cleaning mode includes USPS SuiteLink as a standard part of the CASS certified cleaning process. This uses USPS SuiteLink data to enhance your organization addresses where possible.

AbbreviateAddr

Format:
`AbbreviateAddr={Boolean}`

Default:

No

Purpose:
This setting allows you to limit the first line of output addresses to a maximum of 30 characters. This setting works with

QAS Compatibility Formatting mode and in CASS Certified Mode. For more information about these modes see page 42.

CompatibilityFormatting

Format:
`CompatibilityFormatting={Boolean}`

Default:
No

Purpose:
This setting determines whether Batch should run in QAS Compatibility Formatting mode. Compatibility Formatting mode is not certified, and will not use Delivery Point Validation, but does offer increased flexibility in matching and output address formatting. For more information see page 51.

CorrectACacheLevel

Format:
`CorrectACacheLevel={String}`

Default:
NONE

Purpose:
This setting determines the level of data caching for USPS data files. This setting will have no effect if Batch is not being run in Certified mode. {String} can take one of the following values:

- ALL (Batch will attempt to cache all the data required for your current mode);
- NONE (Batch will not cache any of the data required);
- AUTO (Batch will determine how much of the data to cache).

If you use the ALL setting, you must ensure you have sufficient RAM available (at least 1.2GB for non-CASS mode and
2.0GB for CASS mode) otherwise you will receive an out of memory error. You should also ensure that sufficient memory has been specified by the `CacheMemory` setting (see the Batch API Guide) to cache the data. Any other datasets, including USA data, will be cached in the remaining memory. For information about ways to improve the performance of Batch, see page 41.

A warning is logged if you choose to decrease the setting.

CorrectAApiLoc

Format:

`CorrectAApiLoc={path}`
Default:

Must be explicitly set.

Purpose:
This setting is required if you are using the USA or CAN data. The setting specifies the location of the certified address matching engine supplied on the supplementary USA or CAN Batch data disk (Windows) or separately (UNIX). You must ensure that {path} is the location of the directory containing "CorrectA.dll" (Windows) or the "libCorrectA " shared object file (UNIX).

You do not need to use this setting if the CorrectA library is in the same location as your core Batch API libraries.
Example:
If the certified address matching engine was copied to the /Data/USA directory, you would use the following setting:
CorrectAApiLoc=/Data/USA

CorrectADataLocUSA

Format: `CorrectADataLocUSA={path}`

Default:

Must be explicitly set.

Purpose:
This setting is only required if you are using the USA data. The setting specifies the location of the supplementary USA Batch data files. The setting will be set by the installation program on the USA Batch data disk. If you are a UNIX user or copy the data files manually, you must ensure that {path} specifies the location of the parent directory containing the data files.

Example:

If the supplementary USA Batch data was copied to the /Data/USA directory, you would use the following setting:
CorrectADataLocUSA=/Data/USA

IMbBarcodeID

Format:
`IMbBarcodeID={nn}`

Default:

00

Purpose:

This setting allows you to define the class of mail. Example:
IMbBarcodeID=12

IMbServiceTypeID

Format:
`IMbServiceTypeID={nnn}`

Default:

Must be explicitly set.

Purpose:
This setting is required to generate an Intelligent Mail Barcode. It allows you to identify the services you wish to procure, e.g. tracking and address correction.

Example: IMbServiceTypeID=123

IMbMailerID

Format:

IMbServiceTypeID={nnnnnn}

Default:

Must be explicitly set.

Purpose:
This setting is required to generate an Intelligent Mail Barcode. It allows you to identify mailpieces. Example:
IMbServiceTypeID=123456

With the Early Warning System (EWS)

The EWS allows you to find addresses that are not yet included in the current release of data but will be available in a future release. You can therefore get an early warning on any addresses that are due to be added in the next update.

The EWS file is an optional and additional text file supplied weekly by USPS. The EWS data is not shipped by Experian but can be used alongside Pro Web and Batch if required.

You can download the data from the CASS area of the USPS website:

https://ribbs.usps.gov/cassmass/documents/tech_guides/

Depending on the product you're using, refer to "EWS with Pro Web" on page 53 and "EWS with Batch" on page 54 for details.

EWS with Pro Web

EWS is available with the Verification engine only.

To configure Pro Web:

1. Download the EWS data from the CASS area of the USPS website. Click on the Early Warning System File link and save the zip file.

2. Open the zip file and right-click on the 'OUT' file to extract it.

3. Navigate to your Pro Web installation (e.g. C:\User\Pro Web) and click 'Unzip'.

If you copy the files to any other location, ensure you specify it in qawserve.ini by using EwsDirectory= setting under the [QADefault] section.

4. Rename the file to [name].ews (e.g. SeptWeek2.ews)

Pro Web will automatically pick up the EWS file which contains street and ZIP code information.

EWS file changes will be applied immediately if you restart Pro Web or picked up automatically the next day.

The search result will be returned as 'Interaction Required' with the EWS DataPlus indicator set.

EWS with Batch

Please note that the EWS.ZIP file download from the above site should be synchronized with the corresponding release of the data files, as currently supplied by Experian on a bi-monthly basis.

Download the file as described in "With the Early Warning System (EWS)" on page 53, and save into the "str" directory included in the bi-monthly data files supplied by Experian. The file should be unzipped and saved as ews.txt.

In order for the Early Warning System to operate as intended, the EWS file must be of the same vintage as your Experian address data. If this optional functionality is required, Experian recommend that the EWS file is downloaded upon receipt of data update CDs.

To confirm that Batch is pointing to the correct data files, locate the configuration file qawserve.ini and ensure the setting `CorrectAApiLoc` points to the correct directory path (e.g. `CorrectAApiLoc=C:\Program Files\QAS\Batch API\Usa` or `CorrectAApiLoc=C:\Program Files\Experian\Batch API\Usa`).

Batch will automatically pick up the ews.txt data file, and no other action is required to utilize the data.

If an address is matched to data in the EWS file, the dataset-specific information bit 00000800 will be returned with the new address. For more information see "Dataset-Specific Information Bits" on page 43.