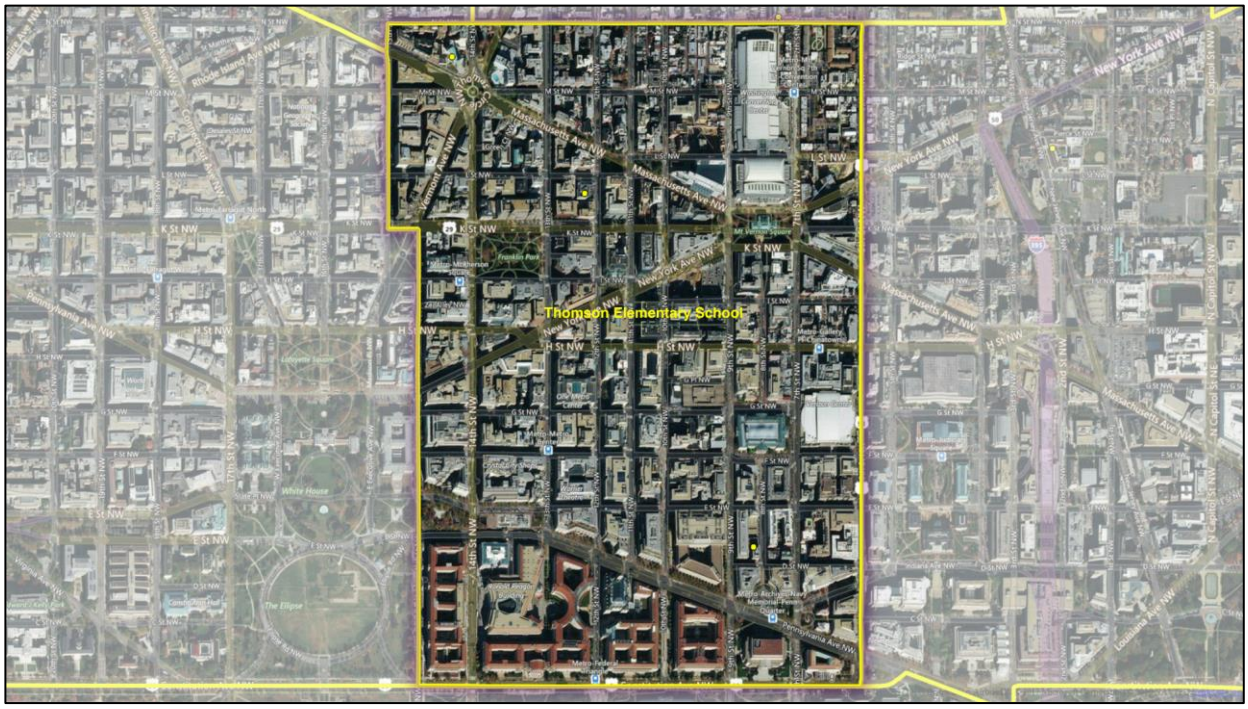
pitney bowes

Pitney Bowes® School Boundaries - USA



Product Documentation
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Further Information

Pitney Bowes Inc.,

35 Railroad Row
White River Junction,
Vermont, USA 05001

If you have any questions or concerns, you may contact our support team directly by calling **800.762.5158** or by emailing software.support@pb.com

To learn how Pitney Bowes Location Intelligence Data Products can support your business please visit: http://www.pitneybowes.com/us/location-intelligence/gis-data-sets.html

Providing Feedback

Pitney Bowes welcomes your feedback to help us continue to improve this product. As a licensee of Pitney Bowes data you are welcome to utilize the Pitney Bowes® Feedback Platform which will allow you to directly input updates, suggestions, and corrections. This input will be reviewed by our production teams and utilized as appropriate for the maintenance of the product, with the results communicated back to you.

Please register to use the Pitney Bowes® Feedback Platform by visiting http://feedback.maponics.com/

School Boundaries – USA

Product Guide

Product Description

School Boundaries is a comprehensive dataset of U.S. school points, school districts and school attendance zones. A dedicated team of editors work at the school district level to rooftop validate school points and create and update district and attendance zone polygons based on the latest definitions sourced at the local level. The School Boundaries product includes a number of useful school related attributes and reference ID's back to the NCES (National Center for Education Statistics) and GreatSchools® in order to join ratings information.

Key School Boundary Product Characteristics

- *School Attendance Zone Boundaries* – locally-sourced boundaries within a school district to delineate where students in a district attend school
- *School District Boundaries* –a nationwide layer of school district boundaries that are continually enhanced with locally-sourced information
- *Public School Locations* presented with rooftop coordinates, contact and address data, and school type and education level
- *Core Attributes* – school profile information such as student enrollment and teacher counts unaltered from the National Center for Education Statistics (NCES)
- *School Choice Flag* - attribute for each school point indicating if the school participates in a school choice district
- *Alternate IDs* - GreatSchools® IDs and NCES IDs for linking Pitney Bowes School Boundaries data to GreatSchools® and NCES data at the school level
- *Change Table* – Indicates geometry and attribute adds, changes, and deletes by record ID from the previous version. (starting with Q1 2018 release)

Product Family

Offered along with the School Boundaries are other supplemental products that complement School boundaries, including:

- School Grounds*
- School Rankings
- Great Schools® School Ratings
- College Boundaries

* Note that School Grounds are contained in a separate product listed above. The School Grounds product depicts the school campus including sports fields and parking and is useful as a geo-fence in certain applications. The School Grounds contain NCES ID's which can be used to link to this product.

Release Highlights

- For this release 91 charter schools were removed due to school closings
- This release is the first release in the new standardized Pitney Bowes community boundary standard specification. This represents a significant change to the data dictionary and table structure, however the underlying content is not altered in any significant way.
- School choice information will now be included as an attribute and will be stored on the School Point, in the 'has_choice' attribute field as a Boolean value.
- One address field will be provided and will include the physical address whenever possible. The mailing address only when that is the only address available.
- Individual grades will be populated as true/false in 13 grade specific attribute fields in the school points primary attribute table. The education level attribute will be maintained as a separate field within the school points primary attribute table.
- The partial coverage field – an attribute associated with the district indicating where some education levels do not have an attendance zone will not be included going forward.
- Puerto Rico will no longer be included in the School Boundaries product due to a lack of available resources that meet our quality standards.
- MX ID's are no longer supported. An object ID correlation file will be made available to map the MX ID's (mx_id) in the previous product specification to the object ID's (obj_id) in the current product specification. This file will consist of two columns, mx_id and obj_id, and will be produced in text format. This file will be made available to all existing customers switching from the previous product to the new product specification.
- A change table will provide geometry and attribute adds, changes, and deletes by record ID from the previous version. This will be populated starting with the second (Q1 2018) release.

Next Release Targets

- Ongoing maintenance of existing features and their attributes.
- Change table is populated for the first time

Format Details

Pitney Bowes spatial boundary products are structured for use with in common Geographic Information Systems (GIS) and for loading into relational database systems.

Vendor Availability

GIS:	ESRI Shape, MapInfo TAB[1] (Extended)
Database- loadable:	PostGIS, MySQL, WKT
Non-spatial tables:	CSV, MySQL, DBF, and Postgres

Format Specifications

Geographic Availability:	US
Geographic Tiling:	Country and State
Updates Available:	Quarterly
Character Set:	UTF-8
Datum:	WGS84 [SRID=4326]

Data Tables Included

All product tables adhere to the following naming conventions.

[product_geography_table name_release date]

where,

[product]	-	ex. Shopping, Golf, Neighborhood, School Ground
[geography]	-	ex. USA, CAN, EUR, WRL
[table name]	-	ex. Census, Parent, Objects
[release date]	-	ex. 20161125

[1] MapInfo Extended TAB - not yet available

Rows shaded indicate the specific tables that will ship with product.
Note, there may be multiple auxiliary tables if there are multiple object tables.

	Product Table Type	Included	Table Name
1	Objects (School Points)	Yes	school_points_usa_objects_yyyymmdd[2]
2	Objects (School Districts)	Yes	school_districts_usa_objects_yyyymmdd
3	Objects (School Attendance Zones)	Yes	school_attendance_zones_usa_objects_yyyymmdd
4	Names	No	school_XXXX[3]_usa_names_yyyymmdd
5	Census - US	Yes	school_points_usa_census_yyyymmdd
6	Census - CAN	No	school_XXXX_can_census_yyyymmdd
7	Reference Geography	No	school_XXXX_usa_refgeo_yyyymmdd
8	Parents	No	school_XXXX_usa_parents_yyyymmdd
9	Classification	No	school_XXXX_usa_classification_yyyymmdd
10	Location Attribute	Yes	school_points_usa_location_yyyymmdd
11	Primary Attribute	Yes	school_XXXX_usa_attributes_yyyymmdd
12	Attribute ADD-ON	No	school_XXXX_usa_XXXX_attributes_yyyymmdd
13	Multi-Attribute	Yes	school_attendance_zones_usa_grade_attributes_yyyymmdd
14	Alternate Identifiers	No	school_XXXX_usa_altids_yyyymmdd
15	Change	Yes	school_XXXX_usa_change_table_yyyymmdd
16	Correspondence	Yes	mx_id_obj_id_correspondence_(object name)

[2] Example 20160817

[3] Where XXXX is a name unique to the specific product attribution contained within that table

Boundaries Record Layout

Objects Table

- Three object tables are provided for the **school points**, **district boundaries**, and **school attendance zones**.

#	Field	Type	Description
1	OBJ_ID	Integer	Unique and permanent ID for object
2	OBJ_NAME	C*100	Name of object
3	OBJ_TYP	C*100	Object type[4]
4	OBJ_SUBTCD	C*3	Object subtype Code (1-3 char. code)
5	OBJ_SUBTYP	C*100	Object subtype description
6	COUNTRY	C*3	Country Code – ISO 3166-1 Alpha 3 (ex. USA, CAN, FRA)
7	METRO	C*100	Metro Name – English Spelling (ex. Boston, MA)
8	LAT	Float	Latitude of Polygon Centroid
9	LON	Float	Longitude of Polygon Centroid
10	RELDATE	C*8	Product Release Date (YYYYMMDD)
11	OBJ_AREA	Float	Object area (square meters)
12	WKT		Open Geospatial Consortium Well-Known Text representation of geometry
12	GEOM		Binary internal representation of geometry

Names Table

- Table structure is 1: many

#	Field	Type	Description
1	NAME_ID	Integer	Unique and permanent ID for Name Record
2	OBJ_ID	Integer	Unique ID for object
3	LID	C*3	Language Code – ISO 639-3 Abbreviation (ex. DEU, NLD) Reference NAME_N attribute field
4	NAME_TYP	C*1	Type of name (ex. [P]rimary, [A]lternate, A[B]breviation)
5	NAME_E	C*100	Name – English Spelling (ex. Olympic Park)
6	NAME_N	C*100	Name – Native Spelling (ex. 오륜동)
7	NAME_R	C*100	Name – Romanized (ex. O ryun dong)

[4] See Appendix A for Object Type and Object Subtype definitions

Census Table - USA

#	Field	Type	Description
1	OBJ_ID	Integer	Unique and permanent ID for object
2	STATE	C*2	State Abbreviation
3	STATEFIPS	C*2	State FIPS Code
4	CBSA	C*100	Core-Based Statistical Area (Metropolitan Statistical Area)
5	CBSAFIPS	C*5	CBSA FIPS Code
6	CBSATYP	C*5	(MICRO)politan or (METRO)politan Statistical Area Designation
7	COUNTY	C*100	County Name
8	COUNTYFIPS	C*5	County FIPS Code
9	MCD_CCD	C*100	Census MCD/CCD “township” name
10	MCDFIPS	C*5	Census MCD FIPS Code
11	PLACE	C*100	Census Incorporated Place (IP) or Census Designated Place (CDP)
12	PLACEFIPS	C*7	Census FIPS Code

Census Table - CAN

#	Field	Type	Description
1	OBJ_ID	Integer	Unique and permanent ID for object
2	PROV_E	C*100	Province name - English
3	PROV_ID	C*2	Province Identifier
4	CMA_E	C*100	Census Metropolitan Areas and Agglomerations
5	CMA_ID	C*5	CMA Identifier
6	CMATYP	C*3	Census Metropolitan Area (CMA) or Census Agglomeration (CA)
7	DIV_E	C*100	Census Division Name - English
8	DIV_ID	C*2	Census Division Identifier
9	SUBDIV_E	C*100	Census Subdivision Name - English
10	SUBDIV_ID	C*3	Census Subdivision Identifier
11	POPCEN_E	C*100	Population Center Name - English
12	POPCEN_ID	C*7	Population Center Identifier
13	PROV_F	C*100	Province name - French
14	CMA_F	C*100	Census Metropolitan Area - French
15	DIV_F	C*100	Census Division Name - French
16	SUBDIV_F	C*100	Census Subdivision name - French

17	POPCEN_F	C*100	Population Center - French

Reference Geography Table

#	Field	Type	Description
1	OBJ_ID	Integer	Unique and permanent ID for object
2	COUNTRY_E	C*100	Country Name - English Spelling (ex. Korea)
3	COUNTRY_N	C*100	Country Name - Native Spelling (ex. 한국)
4	COUNTRY_R	C*100	Country Name - Roman Spelling (ex. Han-guk)
5	CNTRYSUB_E	C*100	Country Sub-Geography - English Spelling (ex. Seoul Capital Area)
6	CNTRYSUB_N	C*100	Country Sub-Geography - Native Spelling (ex. 수도권)
7	CNTRYSUB_R	C*100	Country Sub-Geography - Roman Spelling (ex. Su-do-gwon)
8	METRO_E	C*100	Metro Name - English Spelling (ex. Seoul, Korea)
9	METRO_N	C*100	Metro Name - Native Spelling (ex. 서울시한국)
10	METRO_R	C*100	Metro Name - Roman Spelling (ex. Seo-ul-si, Han-guk)
11	CITY_E	C*100	City Name - English Spelling (ex. Seoul)
12	CITY_N	C*100	City Name - Native Spelling (ex. 서울시)
13	CITY_R	C*100	City Name - Roman Spelling (ex. Seo-ul-si)

Parents Table

- Provides ID reference to the overlying - parent(s) - features
- Table structure is 1: many

#	Field	Type	Description
1	PAR_REL_ID	Integer	Primary key
2	OBJ_ID	Integer	Unique and permanent ID for object
3	PAR_ID	Integer	Obj_ID of immediate 'parent' object
4	PAR_TYP	C*100	Parent object type
5	PAR_SUBTYP	C*100	Parent object subtype description
6	PAR_SUBTCD	C*3	Parent object subtype code

Classification Table

- Provides product specific classification schemes that may commonly or commercially be used to reference a specific feature.
- Table structure is 1: many

#	OBJ_ID	Class text	Code

1	Unique and permanent ID for object	Ex. Neighborhood Classification Scheme category (Function)	30
2	Unique ID for object	Ex. Land use category	C-4
..			
n	Unique ID for object		

Where:

- Class text: is the classification scheme - product specific
- Code: is the classification value

Location Attribute Table

- Provides primary address and location reference information.
- Depending upon feature type and available information table may be incomplete.
- Table structure is 1: many

#	Field	Type	Description
1	LOC_ID	Integer	Unique and permanent ID for Location record
2	OBJ_ID	Integer	Permanent ID for object
3	LOC_TYP	C*1	Type of location (M)ailing, (P)hysical
4	ADDRESS	C*100	Main address
5	CITY	C*100	City name
6	STATE_PROV	C*2	State or Province abbreviation
7	POST_CODE	C*10	Postal code
8	PHONE	C*15	Main phone number (if available)
9	WEB	C*254	URL (if available)

Primary Attribute Table – School Points

- Table Structure is 1:1

#	Field	Type	Description
1	OBJ_ID	Integer	Unique and permanent ID for object
2	NCES_SCHID	C*12	NCES School ID
3	NCES_DISID	C*7	NCES District ID
4	GRTSCHL_ID	Integer	GreatSchools® ID
5	CHOICE	boolean	Indicates if school is involved in school choice district
6	COEXTENSIV	boolean	The schools at all grade ranges are the only options within the district. The attendance zone would equal the school district boundary.
7	STUDENTS	C*4	Student Population
8	TEACHERS	C*7	Teacher Population
9	PK	boolean	Grade level is taught at this school
10	KG	boolean	Grade level is taught at this school

11	FIRST	boolean	Grade level is taught at this school
12	SECOND	boolean	Grade level is taught at this school
13	THIRD	boolean	Grade level is taught at this school
14	FOURTH	boolean	Grade level is taught at this school
15	FITH	boolean	Grade level is taught at this school
16	SIXTH	boolean	Grade level is taught at this school
17	SEVENTH	boolean	Grade level is taught at this school
18	EIGHTH	boolean	Grade level is taught at this school
19	NINTH	boolean	Grade level is taught at this school
20	TENTH	boolean	Grade level is taught at this school
21	ELEVENTH	boolean	Grade level is taught at this school
22	TWELTH	boolean	Grade level is taught at this school
23	LOW_GRADE	C*2	Lowest Grade in School (#=Grade, N=Not Applicable, UG=Ungraded, M=Missing)
24	HIGH_GRADE	C*2	Highest Grade in School (#=Grade, N=Not Applicable, UG=Ungraded, M=Missing)
25	GENDER	C*1	Student Body Gender Delineation (C=Coed, F=All Female, M=All Male) This applies only to private schools
26	SCHOOL_TYP	C*1	Type of School (C=Charter, M=Magnet, A=Alternative, R=Regular, I=Indian, L=Military, P=Reportable Program, V=Vocational, U=Unknown, S=Special Education)
27	ED_LEVEL	C*3	Level of Instruction served by school (P=Primary(public), M=Middle(public), H=High(public), E=Elementary(private), S=Secondary(private), O=Other – mixed grades)

Primary Attribute Table – School Districts

- Table Structure is 1:1

#	Field	Type	Description
1	OBJ_ID	Integer	Unique and permanent ID for object
2	NCES_DISID	C*7	NCES District ID
3	GRTSCHL_ID	Integer	GreatSchools® ID
4	SUPRV_ID	C*3	Supervisory Union ID (ex. 032)
5	DIST_SCHS	C*4	Number of Schools within District (see note below)
6	DIST_TYP	C*1	School District Type (U=Unified, E=Elementary, S=Secondary)
7	DIST_ENRL	C*9	School District Student Enrollment (see note below)
8	DIST_URL	C*254	School District Website URL

Note: District student enrollment and the number of schools in a district are unaltered NCES data.
Note: Not all districts will have a district website URL.

Primary Attribute Table – School Attendance Zones

- Table Structure is 1:1

#	Field	Type	Description
1	OBJ_ID	Integer	Unique and permanent ID for object
2	NCES_SCHID	C*12	NCES School ID
3	NCES_DISID	C*7	NCES District ID

Multi Attribute Table – School Attendance Zone Grade Levels (associates multiple school points with different grade levels to the same attendance zone polygon)

- Table structure is 1: many

#	Field	Type	Description
1	OBJ_ID_SAZ	Integer	School Attendance Zone Object ID
2	OBJ_ID_PNT	Integer	School Point Object ID
3	LOW_GRADE	C*2	Lowest Grade in School (#=Grade, N=Not Applicable, UG=Ungraded, M=Missing)
4	HIGH_GRADE	C*2	Highest Grade in School (#=Grade, N=Not Applicable, UG=Ungraded, M=Missing)

Alternate Identifiers Table

- Table provides alternative IDs that may commonly or commercially be used to reference a specific feature.
- Table structure is 1: many

ALTID_ID	OBJ_ID	ALTID	ALTID_TYP
xx	yy	zzzz	Ex. NCES ID
xx	yy	rrrr	Ex. Great® Schools ID

Change Table

- Table provides direct listing of all features that have undergone change since the previous product release.
- **A separate Change Table will be made for each object type (Points, Districts, and Attendance Zones)**
- **Note:** The change table reflects **all** change, no matter how small the geometry change may be. The **pct_a_chng** field may show a value of 0.000000 which indicates that a change has been made that is even smaller than what can be represented in the field.

#	Field	Type	Description

1	CHNG_ID	Integer	Primary key. Not persistent from release to release. Ids used will repeat over time.
2	PRIM_KEY	Integer	Primary key ID referencing the record that has changed.
3	KEY_NAME	C*10	Name of the primary key in the table referenced.
4	TABLE_TYP	C*50	Name of the table where change occurred.
5	FIELD_NAME	C*10	Name of the field where the change occurred.
6	CHNGE_TYP	C*1	Change type: A (add), C (change), D (delete)
7	VALUE_OLD	C*100	Attribute value in previous release. *Will not include geometry values.
8	VALUE_NEW	C*100	Attribute value in current release. *Will not include geometry values.
9	PCT_A_CHNG	Float	Percent area change when change is geometry based
10	RELDATE	C*8	Current product release date.
11	RELDATE_PR	C*8	Prior product release date

Correspondence Tables – School Attendance Zones, School Districts, and School Points

- Tables provide linkage between School Boundaries mx_id (available in the original school boundaries product) and the obj_id.

#	Field	Type	Description
1	OBJ_ID	Integer	Object ID
2	MX_ID	C*30	Maponics ID

Appendix A: Object Types and Subtypes

OBJ_TYP	OBJ_SUBTYP	OBJ_SUBTCD
School	School Attendance Zone	SAZ
School	School District	SD
School	Public School Point	PUB
School	Private School Point	PRI

Appendix B: Common Questions

1. How to find the state that an object falls within?
    a. Join the Census table to the Objects table (join on the obj_id field). This provides all the Census information for the objects such as the State or Place names the object falls within.
2. How to attach the 1:Many tables to the Objects table?
    a. For the available database formats mentioned above, an Inner Join operation would be used to relate all the records in the 1:Many table to the object with the matching obj_id. For the SHP format, a relate operation would be used in the GIS software that the data was loaded in.