

VTrans Road Centerline Spatial Data User Guide

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Vermont Agency of Transportation

Mapping Section
Policy, Planning and Intermodal Development Division
1 National Life Drive
Montpelier, VT 05633-5001
Tel: 802-828-2600

http://vtrans.vermont.gov/planning/maps

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INTRODUCTION

The Vermont Agency of Transportation (VTrans) Road Centerline data layer (TransRoad_RDS) contains all town and state highways, as well as many private roads.

User Guide Background

This User Guide is a reincarnation of the "VGIS Handbook Part 2 – Standards Section G Road Centerline Spatial Data Standard" version 2005. Much of the introductory narrative of this version is heavily borrowed from the 2005 Standard which was initiated by the Vermont Center for Geographic Information (VCGI). The original purpose of the VCGI standard was to draft a document which would be used as a frame of reference for the coordinated maintenance of a single "master" road centerline data layer.

Background of the Road Centerline Data Set

The original road centerline data set was digitized by Greenhorne & O'Mara Inc. in 1991-1992. Many subsequent updates were made by Regional Planning Commissions (RPC's), their contractors, and VCGI who was the steward of the data layer between 1992 and 2004. They were responsible for coordinating update efforts and for quality control. In 2004, VTrans became the steward and has taken over the update and maintenance of the road centerline data layer.

Another statewide road centerline data layer was created in February 1996 when the Vermont E911 program enhanced the original road centerline data with road names and address range information.

Over the years, two "master" road centerline data layers have evolved, one especially designed for E911 functional needs and another one configured for Vermont Agency of Transportation (VTrans) needs.

For many years, the two organizations have been working toward returning to the concept of one single "master" road centerline data layer, but for practical, everyday needs, it continues to be more effective for each agency to maintain the separate layers with certain fields coordinated between the two.

The VTrans' data layer has been revised to match "Official" highway mileage. It is the most reliable source for official VTrans road class (AOTCLASS) information. However, this layer may not include every private road, and the road name information may not match perfectly with the E911 roads data layer. The E911 centerline layer maintained by VT's E911 Board includes all private roads and generally more reliable road name and address information.

In 2013, the two organizations synchronized the schema between the two data layers with some fields being primarily E911 fields and others being VTrans fields. The fields that are E911's have not been fully populated in the VTrans data releases since 2013. The agency maintaining each field is identified in the data dictionary section of the user guide and in appendices A and B.

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Units and Coordinate System

The data layer is in the Vermont State Plane Coordinate System based on the North American Datum (NAD) of 1983. The coordinates are stored in meters. This is the standard data coordinate system used by VCGI.

Details

NAD_1983_StatePlane_Vermont_FIPS_4400

WKID: 32145 Authority: EPSG

Projection: Transverse Mercator

False_Easting: 500000.0 False_Northing: 0.0 Central Meridian: -72.5

Scale Factor: 0.9999642857142858

Latitude_Of_Origin: 42.5 Linear Unit: Meter (1.0)

Geographic Coordinate System: GCS_North_American_1983

Angular Unit: Degree (0.0174532925199433)

Prime Meridian: Greenwich (0.0) Datum: D_North_American_1983

Spheroid: GRS_1980

Semimajor Axis: 6378137.0

Semiminor Axis: 6356752.314140356 Inverse Flattening: 298.257222101

According to Vermont statute, the Vermont Coordinate System 1983 will be the sole system for projects commenced after January 1, 2000.

Vermont Statutes Annotated, Title 1 General Provisions, Chapter 17 Vermont Coordinate System (http://legislature.vermont.gov/statutes/chapter/01/017).

Associating Information to the Data Layer

More detailed information about the specific fields referenced in this section can be found in the data dictionary section of the user guide.

Unique Feature Identifier:

Each road segment (arc) has a unique identifier, FAID (a concatenation of FIPS8 + ARCID). These ID's are primarily designed for feature tracking and quality control. However, users can potentially associate attribute information to specific arcs via this feature.

Pros:

User only needs FAID (or FIPS8 + ARCID) in their database Does not require address matching or linear referencing software

Cons:

The user must re-fresh their database as features are modified and retired Does not allow user to locate point events

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User can only associate information along the entire length of the road segment with the assigned ARCID.

Unique Road Name:

Many road segments (arcs) have a road name identifier. There are two fields in the data that hold this data, RDNAME and GEONAMEID. RDNAME is maintained by VTrans and generally is equal to E911's GEONAMEID field. VTrans generally defers to E911 in the identification of road names.

Two other fields are associated with road names, RDFLNAME (road full name) and PRIMARYNAME. Here is how the four name fields relate to each other:

number identifier: VTrans RDNAME = E911 GEONAMEID

text identifier: VTrans RDFLNAME = E911 PRIMARYNAME

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ATTRIBUTE CODING SCHEME

NOTE: The numeric indexing for each attribute corresponds to the order in which that field appears in the dataset's attribute table. Reference tables for the attributes appear in the appendices.

1 - OBJECTID

Maintained by: Esri Type: Object ID Required: True Editable: False

Description: Sequential unique whole numbers that are automatically generated.

2 - SEGMENTID

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: A unique numeric value assigned by the software for each feature.

3 - ARCID

Maintained by: VTrans

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: The ARCID is a unique arc identifier within each municipality (town, city, grant or gore). When combined with the FIPS8 code, this provides a unique arc identifier statewide. A redefined item, FAID contains both FIPS8 and ARCID within the road centerline dataset. The ARCID can be used for error reporting, and is used to aid in quality control of updated data.

- New arcs must be assigned ARCIDs unique to their towns.
- When an arc is split, both arcs will be assigned new ARCIDs.
- When two (or more) arcs are joined, the resulting arc will be assigned a new ARCID.
- If the FIPS8 code of an arc is changed (putting the arc into a new town), then the ARCID must be modified to make it unique with the arc's new town. Care must be taken to assure that unique ARCID codes are maintained when editing near a town boundary.

The ARCID is not changed when an arc is only moved or reshaped.

New ARCID codes should be added in sequential order, starting with the next available ARCID (1 more than the current maximum for the given town). ARCIDs will <u>never</u> be reused. In summary, any data updates must maintain unique ARCIDs within each municipality.

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04 - STREETID

Maintained by: E911

Type: Long
Required: False
Editable: True
Nullable: True
Default: N/A
Domain: N/A
Precision: 10

Description: A unique number previously used by E911 for each road segment. Matches the content of the

SEGMENTID field; incompletely populated in this release.

5 – PD

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 10

Description: Prefix road direction, previously named PRE.DIR; incompletely populated in this release.

Field values:

E = EastN = North

NE = Northeast

NW = Northwest

S = South

SE = Southeast

SW = Southwest

W = West

6 – PT

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 10

Description: Prefix type; incompletely populated in this release.

7 - SN

Maintained by: E911

Type: String
Required: False
Editable: True
Nullable: True
Default: N/A
Domain: N/A
Length: 80

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Description: Street name; incompletely populated in this release.

8 - ST

Maintained by: E911

Type: String
Required: False
Editable: True
Nullable: True
Default: N/A
Domain: N/A
Length: 10

Description: Street type; incompletely populated in this release.

9 - SD

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 10

Description: Street direction; incompletely populated in this release.

 $\begin{aligned} & Field \ values: \\ & E = East \\ & N = North \\ & S = South \\ & W = West \end{aligned}$

10 - GEONAMEID

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: Geo Name ID number; incompletely populated in this release.

11 – USEGEONAMESALIASES

Maintained by: E911

Type: Long
Required: False
Editable: True
Nullable: True
Default: 1
Domain: YesNo
Precision: 10

Description: Use Geonames aliases; incompletely populated in this release.

Field values:

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0 = No1 = Yes

12 – PRIMARYNAME

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 100

Description: Full primary road segment name; incompletely populated in this release.

13 – ALINAME

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 100

Description: Alternate name; incompletely populated in this release.

14 – ALIAS1

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 60

Description: Alternate road name 1; incompletely populated in this release.

15 – **ALIAS2**

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 60

Description: Alternate road name 2; incompletely populated in this release.

16 – ALIAS3

Maintained by: E911

Type: String

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Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 60

Description: Alternate road name 3; incompletely populated in this release.

17 - ALIAS4

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 60

Description: Alternate road name 4; incompletely populated in this release.

18 - **ALIAS5**

Maintained by: E911

Type: String
Required: False
Editable: True
Nullable: True
Default: N/A
Domain: N/A
Length: 60

Description: Alternate road name 5; incompletely populated in this release.

19 – COMMENTS

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 255

Description: Free text field for miscellaneous comments; incompletely populated in this release.

20 - SURFACETYPE

Maintained by: VTrans

Type: Short Required: False Editable: True Nullable: True Default: N/A

Domain: SurfaceType Type: CodedValue

Merge policy: DefaultValue

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Split policy: Duplicate

Precision: 5

Description: The surface type of the road; previously named SURFACE.

Field values:

1 = Paved2 = Gravel

3 = Soil or graded and drained earth

5 = Unimproved/primitive

6 =Impassable or untraveled

9 = Unknown

21 - ONEWAY

Maintained by: VTrans

Type: String
Required: False
Editable: True
Nullable: True
Default: 'N'
Domain: Oneway
Length: 1

Description: One-way street; completely populated in this release.

Field values:

N = Not a one-way street.

X =One-way street in opposite direction of arc.

Y =One-way street in direction of arc.

22 – ADDRESSLOCK

Maintained by: E911

Type: Long
Required: False
Editable: True
Nullable: True
Default: 0
Domain: YesNo
Precision: 10

Description: Address lock; incompletely populated in this release.

Field values: 0 = No 1 = Yes

23 - NO_MSAG

Maintained by: E911

Type: Long
Required: False
Editable: True
Nullable: True
Default: N/A
Domain: N/A
Precision: 10

Description: No definition included; incompletely populated in this release.

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24 - C1 EXCEPTION

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: No definition included; incompletely populated in this release.

25 – MCODE

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: Municipal code; incompletely populated in this release.

26 – LESN

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: Left-side-of-road Emergency Service Number; incompletely populated in this release.

27 - **RESN**

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: Right-side-of-road Emergency Service Number; incompletely populated in this release.

28 - LTWN

Maintained by: E911

Type: String **Required:** False **Editable:** True **Nullable:** True **Default:** N/A

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Domain: N/A **Length:** 50

Description: The town to the left side of a road, based upon the road segment's stored direction;

incompletely populated in this release.

29 - RTWN

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 50

Description: The town to the right side of a road, based upon the road segment's stored direction;

incompletely populated in this release.

$30 - LLO_A$

Maintained by: E911

Type: Long
Required: False
Editable: True
Nullable: True
Default: 0
Domain: N/A
Precision: 10

Description: Low address value for the left side of the road for the road segment based on arc direction;

incompletely populated in this release.

31 - RLO_A

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: 0 Domain: N/A Precision: 10

Description: Low address value for the right side of the road for the road segment based on the arc

direction; incompletely populated in this release.

32 - LHI A

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: 0 Domain: N/A Precision: 10

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Description: High address value for the left side of the road for the road segment based on the arc direction; incompletely populated in this release.

33 - RHI_A

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: 0 Domain: N/A Precision: 10

Description: High address value for the right side of the road for the road segment based on arc direction;

incompletely populated in this release.

34 – LZIP

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 10

Description: ZIP code on the left side of the road using the stored line direction for placement;

incompletely populated in this release.

35 - RZIP

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 10

Description: ZIP code on the right side of the road using the stored line direction for placement;

incompletely populated in this release.

$36 - LLO_T$

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: Low address value for the left side of the road using the stored line direction for placement;

incompletely populated in this release.

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37 - RLO_T

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: Low address value for the right side of the road using the stored line direction for placement;

incompletely populated in this release.

38 - LHI_T

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: High address value for the left side of the road using the stored line direction for placement;

incompletely populated in this release.

39 - RHI T

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: High address value for the right side of the road using the stored line direction for placement;

incompletely populated in this release.

40 - ADDRESRANGEID

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: Address range ID number; incompletely populated in this release.

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41 – ROUTEINCLUDE

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: 1 Domain: YesNo Precision: 10

Description: Incompletely populated in this release.

Field values: 0 = No1 = Yes

42 – RTNAME

Maintained by: VTrans

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 12

Description: The RTNAME town highway number/name corresponds to the official number on the VTrans highway maps with an added prefix (ex: "I-89", "VT-12A", "TH-3", "US-4", etc.). State and federal numbers will be unique for that highway for the entire state, while town-numbered highways will only be unique for that town. RTNAME = '-' is used for a blank (no data) value. The RTNAME field must not be empty. Where a route has two route numbers (as shown on road signs), the more local number (and prefix) is used - for example, a route having both a State route number and a town route number is assigned the town route number (as shown on the VTrans highway maps). The RTNAME field is not the same as RDNAME or ETE_LR. The RDNAME field refers to the road's common name (defined by the E911 GEONAMEID field) - for example, Main Street may be considered Town Highway 5 (TH-5) by VTrans. In this situation the RTNAME would be "TH-5" and the RDNAME value would be 12519 (which is "Main Street" in the E911 data set). However, the same road could also be classified as "Vermont Route 12" (VT-12). In this case, the ETE LR field would be populated with "V012".

Field values:

BR I- = Interstate Business Route BR US- = US Business Route BSp I- = Interstate Business Spur BSp US- = US Business Spur Hist US- = Historic US Route Hist VT- = Vermont Numbered Route - Historic Route I- = Interstate NF- = National Forest Highway NSH- = Named State Highway Old U.S.- = Old US Route Old VT- = Vermont Numbered Route – Old Route S- = Other State Highway special case SF- = Department of Forests, Parks, and Recreation Highway

TH- = Town Highway

US = US Route

VT- = Vermont Numbered Route

Alt US- = US Alternate Route

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43 – RTNUMBER

Maintained by: VTrans

Type: String
Required: False
Editable: True
Nullable: True
Default: N/A
Domain: N/A
Length: 4

Description: This field is related to the RTNAME field. Everything after the dash "-" in the RTNAME field is transferred to this field. It should always match RTNAME. Previously known as RTNO.

44 - HWYSIGN

Maintained by: VTrans

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 12

Description: The HWYSIGN corresponds to how the road is signed in the field by VTrans, with an added prefix (ex: "I-89", "VT-12A", "TH-3", "US-4", etc.). State and federal numbers will be unique for that highway for the entire state, while town-numbered highways will only be unique for that town. HWYSIGN = '-' is used for a blank (no data) value. The HWYSIGN field must not be empty. The HWYSIGN field is not the same as RTNAME. HWYSIGN should be consistent with how the road is signed by VTrans in the field. RTNAME should be consistent with how the road is marked on the official VTrans Town Highway Maps. These don't always match.

Field values:

Alt US- = US Alternate Route BR I- = Interstate Business Route BR US- = US Business Route BSp I- = Interstate Business Spur BSp US- = US Business Spur Hist US- = Historic US Route

Hist VT- = Vermont Numbered Route - Historic Route

I- = Interstate

NF- = National Forest Highway NSH- = Named State Highway Old US- = Old US Route

Old VT- = Vermont Numbered Route - Old Route

S-= Other State Highway special case

SF- = Dept. of Forests, Parks and Recreation Highway

TH- = Town Highway US- = US Route

VT- = Vermont Numbered Route

45 – RPCCLASS

Maintained by: VTrans

Type: Short Required: False Editable: True Nullable: True

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Default: N/A **Domain:** N/A **Precision:** 5

Description: The RPCCLASS item indicates the road class, generally as shown on official VTrans highway maps. However, updates to the roads data have changed some road RPCCLASS codes based on local and/or regional review; therefore, in some cases the RPCCLASS values may not agree with current VTrans highway maps.

NOTE: This field is for the convenience of end-users only. Changes made to this field by end-users are unofficial and may not be maintained in the roads data layer. RPCCLASS may be reset to equal AOTCLASS whenever AOTCLASS is updated. Two attributes for road class are therefore used: the RPCCLASS code, which can be modified as needed for regional/local mapping, and the AOTCLASS code, which maintains agreement with the VTrans town highway maps. Comparison of the RPCCLASS and AOTCLASS attributes will help to identify roads needing class updates by VTrans. All arcs must be assigned RPCCLASS and AOTCLASS codes. In addition to the road class, the RPCCLASS field is used to indicate the road 'type' (as for codes 11 to 19). Although this road type is not technically the road class, it is convenient to embed the 'type' information in the RPCCLASS code for generating maps with lookup tables. These 'type' codes are needed for state routes and class 1 and 2 town highways, as well as for interstates and US routes. (See also AOTCLASS for specific code descriptions.)

46 - AOTCLASS

Maintained by: VTrans

Type: Short Required: False Editable: True Nullable: True Default: 9

Domain: AOTClass Type: CodedValue

Merge policy: DefaultValue Split policy: Duplicate

Precision: 5

Description: This item will hold the official VTrans road class from the VTrans highway maps (see also the description for RPCCLASS). All arcs must be assigned an AOTCLASS code. AOTCLASS generally uses the same codes as the RPCCLASS field, except for codes 8 and 9 - some RPCs use 8 to identify private roads not generally used by the public and 9 to identify private roads in general use by the public, while VTrans uses 8 to identify private roads not shown on the Town Highway Maps (most private roads) and 9 to identify private roads shown on the Town Highway Maps. These are usually short connectors between public highways or roads such as the Mount Mansfield Toll Road. VTrans follows a statutory process to define and reclassify town highways based on information provided from each town on their annual Mileage Certificate. This certificate is a record of total mileage in each classification of highway. Any changes require proper documentation and following of the statutory process. VTrans will make corrections based on the formal documentation, but cannot alter classification without justification. Act 178 of 2006 formally added class 4 and legal trail mileage to the Mileage Certificates, prompting the need to distinguish between formally approved legal trails. VTrans has added the class of 70 for legal trails that have yet to be approved, and leaving class 7 for those legal trails that have been approved by Selectboards.

Field values:

1 = Town Highway Class 1 – undivided

2 = Town Highway Class 2 – undivided

3 = Town Highway Class 3 – undivided

4 = Town Highway Class 4 – undivided

5 = State Forest Highway

6 = National Forest Highway

7 = Legal trail

8 = Private road - no-show

9 = Private road

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```
10 = Driveway (put in driveway)
11 = Town Highway Class 1 – northbound
12 = Town Highway Class 1 – southbound
13 = \text{Town Highway Class } 1 - \text{eastbound}
14 = Town Highway Class 1 – westbound
15 = Town Highway Class 1 - on/off-ramp
16 = Town Highway Class 1 – emergency U-turn
17 = Town Highway Class 1 – rest area
19 = Town Highway Class 1 – other
20 = County Highway – undivided
21 = Town Highway Class 2 – northbound
22 = Town Highway Class 2 – southbound
23 = Town Highway Class 2 – eastbound
24 = Town Highway Class 2 – westbound
25 = Town Highway Class 2 – on/off-ramp
26 = Town Highway Class 2 – emergency U-turn
27 = Town Highway Class 2 – rest area
29 = Town Highway Class 2 – other
30 = State Highway – undivided
31 = State Highway – northbound
32 = State Highway - southbound
33 = State Highway - eastbound
34 = State Highway – westbound
35 = \text{State Highway} - \text{on/off-ramp}
36 = State Highway – emergency U-turn
37 = State Highway – rest area
39 = State Highway - other
40 = US Highway - undivided
41 = US Highway - northbound
42 = US Highway - southbound
43 = US Highway - eastbound
44 = US Highway – westbound
45 = US Highway - on/off-ramp
46 = US Highway – emergency U-turn
47 = US Highway – rest area
49 = US Highway - other
50 = Interstate Highway – undivided (not currently used)
51 = Interstate Highway – northbound
52 = Interstate Highway – southbound
53 = Interstate Highway – eastbound
54 = Interstate Highway – westbound
55 = Interstate Highway – on/off-ramp
56 = Interstate Highway – emergency U-turn
57 = Interstate Highway – rest area
59 = Interstate Highway – other
60 = US Government Highway
65 = Ferry
70 = Unconfirmed legal trail
71 = Unidentified corridor
80 = Proposed Highway – unknown class
81 = Proposed Town Highway Class 1
82 = Proposed Town Highway Class 2
83 = Proposed Town Highway Class 3
84 = Proposed State Highway
85 = Proposed US Highway
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86 = Proposed Interstate Highway

- 87 = Proposed Interstate Highway ramp
- 88 = Proposed non-Interstate Highway ramp
- 89 = Proposed private road
- 91 = New class unknown
- 92 = Military no public access
- 93 = Public class unknown
- 95 = Class under review
- 96 = Discontinued road
- 97 = Discontinued now private
- 98 = Not a road
- 99 = Unknown

47 – NUTS

Maintained by: VTrans

Type: String
Required: False
Editable: True
Nullable: True
Default: 'N'
Domain: N/A
Length: 1

Description: Sections of highway deemed "Not Up To Standard"; in short, sections of highway that do not meet Class 3 standards at the time of inventory and are functionally classified as Class 4, but legally still Class 3. Contact VTrans for more information.

Field values:

N = The highway is not "Not Up To Standard" (The highway meets Class 3 or better standards).

Y = The highway is "Not Up To Standard" (The highway does NOT meet Class 3 standards).

48 - NHS

Maintained by: VTrans

Type: Short
Required: False
Editable: True
Nullable: True
Default: 0
Domain: N/A
Precision: 5

Description: National Highway System designation, as defined by FHWA.

NOTE: The Intermodal Connector is a new addition. Several of this type of highway exist within

Vermont, primarily connections of the NHS to bus stations, airports and railroad stations.

Field values:

- 0 = Not on NHS
- 1 = NHS Interstate
- 2 = ISTEA High-Priority Corridor
- 3 = Non-Interstate STRAHNET
- 4 = STRAHNET Connector
- 5 = ISTEA High-Priority Corridor/Non-Interstate STRAHNET
- 6 = ISTEA High-Priority/STRAHNET Connector
- 7 = NHS Principal Arterial
- 8 = NHS Intermodal Connector
- 10 = NHS MAP-21 Principal Connector

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49 – FUNCL

Maintained by: VTrans

Type: Short
Required: False
Editable: True
Nullable: True
Default: N/A
Domain: N/A
Precision: 5

Description: Functional Class Code. Functional classification codes are based on a federal classification system in use by VTrans. In earlier releases of TransRoad_RDS, functional classes were distinguished between rural and transportation-defined urban areas (8 in Vermont). This required road arcs to be split at the rural/urban boundaries. The current functional classification codes eliminated separate urban and rural classifications (please note the rural, small urban, and urbanized area designation is kept as a separate item, see the attribute Urban_Code). The Urban Collectors default to Major Collectors. In Vermont, there has previously not been a road functionally classified as both "urban" and "minor collector." In the upcoming functional classification review prompted by the coding changes, VTrans will evaluate roadways based on the 2013 edition of the Federal Highway Administration's "Highway Functional Classification Concepts, Criteria, and Procedures," likely resulting in roadways functionally classified as minor collectors within the identified urban areas.

The boundaries of the Urbanized Area and the Small Urban Areas (Census Urban Clusters with population >5,000 as specified by the Federal Highway Administration) were adjusted for transportation planning purposes in a collaborative process between VTrans and the appropriate regional planning partners. The adjusted urban area encompasses the entire urban area (of population >5,000) defined by the Census Bureau, in a single, contiguous entity, and is designed to include areas outside municipal boundaries that have urban characteristics with residential, commercial, industrial or national defense land uses consistent with or related to the development patterns of the Census-defined boundary. The adjusted urban area is also inclusive of large traffic generators near the urban area, and is designed so that its physical location can be easily discerned in the field based on physical characteristics such as roads, railroads, utility lines and water features. Lastly, the adjusted urban area was then evaluated for feature irregularities to minimize confusion. Information from the VTrans Highway Safety Data Unit has been incorporated into this dataset.

NOTE: There have been several new additions and alterations which have been made to the functionally classed highways that were not reflected in the previous series of Federal Urban Area Maps or the Functional Class Map of the State of Vermont. These maps were updated in 2016 using the updated Functional Class road centerline data.

Field values:

- 0 = Not part of Functional Classification System
- 1 = Interstate
- 2 = Principal Arterial other freeways and expressways
- 3 = Principal Arterial other
- 4 = Minor Arterial
- 5 = Major Collector
- 6 = Minor Collector
- 7 = Local

50 – TWN LR

Maintained by: VTrans

Type: String **Required:** False **Editable:** True **Nullable:** True **Default:** N/A

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Domain: N/A **Length:** 15

Description: Town-based linear reference code used to generate the town-based Linear Reference System data layer. The TWN_LR is related to the ETE_LR field but also includes the CTCODE. For example, the TWN_LR value for VT Route 12 in Montpelier is V012-1211 (ETE_LR = V012, CTCODE = 1211).

51 – ETE LR

Maintained by: VTrans

Type: String
Required: False
Editable: True
Nullable: True
Default: N/A
Domain: N/A
Length: 11

Description: Previously known as LR_ETE. It is used to identify "routed" roads, and is assigned by VTrans. This item contains an "end-to-end" LRS identifier used to identify routed roads. The ETE_LR can be broken down into the following components (or redefined items):

- Route Type

Field values:

A = Alternate Route

B = Business Route

I = Interstate

N = Named State Highway

S = Special Route: a town highway that is a major or minor collector, or is an urban route

U = US Route

V = VT Signed Route

- Route Number

The numeric portion of the highway number (three digits), right-justified in characters 2-4. For Named State Highways, Major Collectors, and Urban Collectors, four-digit codes are used (in characters 2-5).

- Route # Modifier

Used for a letter or special modifier, if needed. Named State Highways, Major Collectors, and Urban Collectors retain their full four-digit codes in common usage. For these, the Highway Number and Modifier are combined to form a four-digit highway number. For the three separate sections of Alternate US 5, the modifiers (1 to 3) are:

A0051 = Alternate US 5, St. Johnsbury

A0052 = Alternate US 5, Newport

A0053 = Alternate US 5, Derby

Valid Highway # Modifier characters include:

[letter] = highway letter (e.g., the 'A' in Highway 2A)

[digit] = special cases (e.g., Alternate US 5); digit for a Named State Highway, Major, or Urban Collector

[blank] = cases where no modifier is needed and no subsequent components are needed for the ETE $\,LR$

[dash] = cases where no modifier is needed but other ETE LR components follow

- Direction

The direction character is included only if the highway is divided. However, it is NOT used for northbound or eastbound mainline routes. The direction character is used only with northbound or eastbound approaches, connectors, jughandles, ramps, and spurs.

Field values:

' ' = [blank] = undivided route with no subsequent ETE LR components

E = eastbound (for divided routes)

N = northbound (for divided routes)

S =southbound (for divided routes)

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```
W = westbound (for divided routes)

Examples:

I089 = I-89, northbound lane
I089-S = I-89, southbound lane
U002 = US-2, undivided portions
U002-W = US-2, westbound portions (where divided)
V003-NA020 = VT 3, approach 20 (approaches generally use the same direction as the parent road)
```

- Subtype

This field describes sections of road that are not on the main line, yet have defined lengths recognized by the Agency.

Field values:

'' = [blank] = no subtype

 $\boldsymbol{A} = approach \\$

C = connector

F = facilities/rest areas, turnouts, access roads

J = jughandle

R = ramp

S = spur

- Numeric ID

The ID number represents different things according to the subtype. Approaches and jughandles are numbered (initially) in ascending order from the start of the parent route in the primary direction. Numbers will increment by multiples of ten (ex: 10, 20, 30, 40, etc.). Gaps are left between numbers for future construction. For ramps and spurs, the number refers to the exit number for the parent route. A few ramps exit at locations that have no exit number; these have zeros in this field. Where no ID is required in this field, blanks are used.

- Alpha ID

This letter identifies ramps and spurs, as taken from the route logs (except for two ramps at I-91's Exit 2, which were named A/B and C/D on the route logs. These have been renamed 'E' and 'F', respectively.) Where no ID is required in this field, a blank space is used.

Examples:

U004 = US-4 eastbound, divided highway U004-W = US-4 westbound, divided highway V100-NA002 = VT-100, Approach #2 B004-WJ001 = Business Route US-4 westbound, Jughandle #1 I089-SR009A = I-89 southbound, Exit 9 ramp

52 – CTCODE

Maintained by: VTrans

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 4

Description: County-Town code based on values defined by the Vermont Agency of Transportation, VTrans. The CTCODE is comprised of the first two digits representing the County and the last two digits representing the Town in alphabetical order within the County. The counties are numbered sequentially starting with Addison County (01) and ending with Windsor County (14). Each town is then numbered sequentially within each county, producing a unique CTCODE. The county-town code identifies the municipality in which each road falls. The CTCODE is evident on reference markers in the field, which include the CTCODE, route identifier and mile marker.

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NOTE: The order of towns like Saint Albans (aka St. Albans) and Saint Johnsbury (aka St. Johnsbury) is based on the unabbreviated names - for example, in Caledonia County the CTCODE order for Saint Johnsbury places it between Ryegate and Sheffield (0310 Ryegate, 0311 Saint Johnsbury, 0312 Sheffield).

NOTE: The CTCODE system was implemented before the Town of Sherburne changed its name to Killington - the name was changed, but the CTCODE was not (its CTCODE remained 1121, between 1120 Rutland Town and 1122 Shrewsbury).

See Appendix C for CTCODE list.

53 – UA

Maintained by: VTrans

Type: Short
Required: False
Editable: True
Nullable: True
Default: 0
Domain: N/A
Precision: 5

Description: VTrans Urban Area Code. The Urban Area code identifies villages and other urbanized areas within the Minor Civil Divisions specified by the FIPS8 codes. The codes include 'urban compacts' having separate VTrans Town Highway Maps. The one-digit code is used in conjunction with the FIPS8 code to uniquely identify each urban area.

NOTE: Several villages have been merged with towns and the villages no longer exist. For mapping purposes, these villages may have become 'urban compacts'.

See Appendix D for the codes.

54 – CTUA

Maintained by: VTrans

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 6

Description: CTCODE with UA Code, unique to all towns and Urban Areas in Vermont.

55 – CERTCODE

Maintained by: VTrans

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 6

Description: Similar to CTUA, but unique only to the Mileage Certificates and towns that are autonomous for Highways. Urban Compacts and Villages not incorporated for highways carry the Town code.

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56 – ARCMILES

Maintained by: VTrans

Type: Double Required: False Editable: True Nullable: True Default: N/A Precision: 38 Scale: 8

Description: Calculated mileage based on Arc attribute [Shape.STLength()] * 0.0006214). The ARCMILES item indicates the mileage on each segment of road. ARCMILES is the primary basis for the RDNAME route system measurements. The ARCMILES item is necessary for rebuilding or remeasuring the RDNAME route system. The ARCMILES field is simply the product of the LENGTH * .0006214. It is not intended to reflect or duplicate actual or official VTrans mileage.

57 – AOTMILES

Maintained by: VTrans

Type: Double Required: False Editable: True Nullable: True Default: N/A Precision: 38 Scale: 8

Description: The AOTMILES field indicates the "official" VTrans mileage on each segment of public highway. This includes all sections that are noted with mileage annotation on the Town Highway Map series. The AOTMILES are only for State Routes and Town Highways that are Class 1, 2, 3 or 4, and Legal Trails. If there is a mileage on the Town Highway Map, AOTMILES should be coded. The VTrans Mapping Unit uses AOTMILES to generate the mileage summaries and listings that are shown on the Town Highway Maps, prompting the need for accurate and complete mileage information. AOTMILES are rounded to the nearest 100th of a mile on Town Highways and 1000th of a mile on State Highways.

58 – AOTMILES_CALC

Maintained by: VTrans

Type: Double Required: False Editable: True Nullable: True Default: N/A Precision: 38 Scale: 8

Description: Used internally by VTrans to prorate AOTMILES across specific road segments while

editing. Not for use outside of the Highway Mapping System.

59 - UPDACT

Maintained by: VTrans

Type: String Required: False Editable: True Nullable: True Default: N/A

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Domain: N/A **Length:** 1

Description: Used for flagging the type of update made to an arc.

Field values:

A = Added arc (i.e., a new arc)

M = Moved arc (by reshaping the arc, moving a node, moving or deleting a vertex, or other action altering the shape of the arc)

S = Split arc (both new arcs are coded 'S') U = Unsplit arc (originally 2 or more arcs)

NOTE: For S (split) and U (unsplit), the locations of the vertices may be unchanged. The shapes (and combined lengths) of the arcs may remain the same, but nodes may have been added, removed or moved along the arcs.

Moving a pseudo node is sometimes required to modify the location where an attribute changes. For example, a pseudo node will need to be changed in response to a change in the location of a town boundary. All the attributes for the two arcs remain the same; only the location of the pseudo node has changed. This would entail splitting and unsplitting the two arcs, and therefore would be coded as 'S' and 'U'.

Sometimes an arc may be modified more than once, in which case either of the appropriate UPDACT codes can be assigned. For example, an arc might be reshaped and then split. In such a case, the arcs could be coded with either an 'M' (moved) or an 'S' (split). Although it is not critical, it is preferable for the 'M' (moved) code to take precedence over the 'S' and 'U' codes (which don't alter the locations of vertices). Like wise, 'A' (added arc) takes precedence over the other codes, so that if an added arc is later split, the UPDACT code should remain 'A'.

- 1. A
- 2. M
- 3. S
- 4. U

It is not necessary to record changes to attributes.

60 - LOCMETH

Maintained by: VTrans

Type: Short Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 5

Description: Method used to locate/digitize a road segment (arc). Many Class 4 roads, legal trails, and other roads are difficult to locate with confidence on the orthophotos. For such roads, a road clearly visible on the orthophoto may have been digitized and assigned a value equal to 2 due to the uncertainty of it was the correct road. Code 4 was not in use at the beginning of the original digitizing contract. For northern parts of the state [approximately north of northing STP meters 216000], roads not appearing on the orthophotos may have been given a value equal to 2. Use of the digital orthophotos is improving the accuracy of the road centerlines and any roads not clearly visible on the paper orthophotos may be moved to match the digital orthophotos. If this process is performed, the LOCMETH will be altered to reflect the new location method. (Please refer to SRCORG for the organization making the location alteration or addition.)

Field values:

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- 1 = Visible on and digitized from a 1:5000 orthophoto (or better, as documented in the update record) with good degree of certainty as to location and correct RTNO (now known as RTNUMBER) attribute.
- 2 = Road not clearly visible on the orthophoto, but it appears that it probably was there at the time the photo was taken. Location estimated from the AOT maps, adjoining roads, and land features.
- 3 = Not clearly visible on the orthophoto; location estimated from State Forest maps.
- 4 = No indication of the road on the orthophoto; apparently a new road built since the orthophoto was taken. Location estimated from VTrans maps.
- 5 = Road centerlines drafted onto orthophotos from engineering drawings and the like.
- 6 = Invisible on the orthophoto, but located based on town or other local knowledge of the area.
- 7 = Digitized centerline of the parcel (tax map) road right-of-way.
- 8 = Screen digitized from drafting by town officials onto maps of approximately 1:15000 to 1:20000 scale.
- 9 = Coordinates captured via a GPS device utilizing "dead reckoning" with typical horizontal accuracy within five meters.

61 - SRCORG

Maintained by: VTrans

Type: Short Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 5

Description: Organization/project which created/updated a road segment (arc). This attribute identifies the organization or project which digitized an arc. When a road arc is digitized, moved, or reshaped, the SRCORG code should be updated. The SRCORG codes will serve as a record of "who did it". VTrans currently updates the SRCORG field with a code of 26 for each altered arc. This includes arcs moved to match the orthophotos, splits due to new roads, or unsplits due to same attribution. LOCMETH and UPDACT can also be viewed to give pedigree or tracking of the latest changes to an arc.

Field values:

- 1 = VCGI, original data (assigned Sept 1993)
- 2 = VCGI, updated location
- 10 = Addison County RPC
- 11 = Bennington County RC
- 12 = Central VT RPC
- 13 = Chittenden County RPC
- 14 = Northwest RPC
- 15 = Lamoille County PC
- 16 = Northeast VT Development Assoc.
- 17 = Rutland RPC
- 18 = Southern Windsor RPC (or its contractor)
- 19 = Two Rivers-Ottauquechee RPC
- 20 = Upper Valley-Lake Sunapee RPC
- 21 = Windham RPC
- 22 = microData, incorporated by CVRPC
- 23 = Incorporated from municipal updates
- 24 = E911 GIS database development project (1996)
- 25 = IVS Highway Mapping System Project
- 26 = VTrans HMS updates

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62 - SCENICHWY

Maintained by: VTrans

Type: Short
Required: False
Editable: True
Nullable: True
Default: 0
Domain: N/A
Precision: 5

Description: Highways officially designated as "Scenic Highways" by VTrans or municipalities. Previously known as SCENIC. The ability to designate a Scenic Highway is defined in Vermont Statute and documented on the Mileage Certificates. The VTrans Mapping Section maintains the official listing of Scenic Highways within the State of Vermont.

NOTE: There have been some sections of Town Highway in Norwich that have been designated as Scenic Highway, but are not coded due to the Selectboard's request not to map or distribute information regarding the highway's locations. Due to this request, the coding for SCENIC is incomplete in the Town of Norwich.

Field values:

- 0 = Not designated as Scenic Highway
- 1 = Designated as Scenic Highway by local municipality
- 2 = Designated as Scenic Highway by VTrans

63 - SCENICBYWAY

Maintained by: VTrans

Type: Short Required: False Editable: True Nullable: True Default: 0 Domain: N/A Precision: 5

Description: Designated Scenic Byways.

Field values:

0 = Not a scenic byway

100 = Connecticut River Scenic Byway

200 = Lake Champlain Byway

300 = Molly Stark Trail: A Byway Through the Green Mountains

400 = Mad River Byway 500 = Stone Valley Byway 600 = Green Mountain Byway 700 = The Crossroad of Vermont

800 = Scenic Route 100 Byway

900 = The Shires of Vermont Byway 1000 = Northeast Kingdom Byway

64 - FORMER_RTNAME

Maintained by: VTrans

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A

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Length: 12

Description: Former Town Highway Number or Route Number for an arc. This is used primarily on Class 2 transfers, reclassifications of town highways to or from legal trails, or discontinuance of highways.

65 – PROVISIONALYEAR

Maintained by: VTrans

Type: Short
Required: False
Editable: True
Nullable: True
Default: 0
Domain: N/A
Precision: 5

Description: Year a provisional highway is added to the VTrans Town Highway Map, based on information supplied by the town as part of the Certificate of Highway Mileage process. According to Vermont Statute, 19 V.S.A. § 302. Classification of town highways (a)(3)(C), a highway not meeting the minimum standards for a class 3 town highway may be reclassified as a provisional class 3 highway if within five years of the determination, it will meet all class 3 highway standards.

Null values are allowed in this field.

66 - ANCIENTROADYEAR

Maintained by: VTrans

Type: Short Required: False Editable: True Nullable: True Default: 0 Domain: N/A Precision: 5

Description: Year a road that was considered an ancient road was added or most recently modified based on a change prompted by the Certificate of Highway Mileage process. This relates to Act 178 of 2006 and Act 158 of 2008 which sunset on July 1, 2015.

67 – TRUCKROUTE

Maintained by: VTrans

Type: Short Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 5

Description: Designated Truck Routes. These designations identified which routes allowed up to 72-foot long trucks with no permits required. These designations are now obsolete, but remain in the data for historical purposes. Please consult the Vermont Department of Motor Vehicles for current rules, routes, and permitting for commercial trucking.

Field values:

0 = Not a truck route

100 = National Network – Limited Access (no overall length limit)

200 = Brattleboro VT-9 between I-91 and New Hampshire

300 = Truck Network, 72-foot limit (no permit)

400 = US-4, Permit Required

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500 = Urban Avoidance Route, Part of Truck Network, 72-foot limit (no permit) 600 = Network – Limited Access (no overall length limit)

68 - SPEEDLIMIT

Maintained by: VTrans

Type: Double Required: False Editable: True Nullable: True Default: N/A Precision: 38 Scale: 8

Description: Speed limit. Currently a place holder for future use.

69 - ROADCLOSED

Maintained by: E911

Type: String **Required:** False **Editable:** True **Nullable:** True **Default:** N/A

Domain: Road_Closed

Length: 15

Description: Road Closed status. Currently a placeholder for future use; incompletely populated in this

release.

Field values:

Closed = Road closed

Closed_AVO = Road closed – passage restricted to authorized vehicles only

Closed_LTO = Road closed – passage restricted to local traffic only

Closed_W = Road closed for winter Normal_SR = Normal service requested

Open = Road open

Open_CD = Road open with construction delays

 $Open_R = Road open with restrictions$

70 - ISVISIBLE

Maintained by: VTrans

Type: Long Required: False Editable: True Nullable: True Default: 1 Domain: N/A Precision: 10

Description: Flag used by the Highway Mapping System for cartographic purposes.

Field values:

0 = Not visible 1 = Visible

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71 – CERTYEAR

Maintained by: VTrans

Type: Short
Required: False
Editable: True
Nullable: True
Default: 0
Domain: N/A
Precision: 5

Description: Year an arc was altered due to a change reflected on the Certificate of Highway Mileage.

72 – MAPYEAR

Maintained by: E911

Type: Date Required: False Editable: True Nullable: True Default: N/A

Description: Not defined and incompletely populated in this release.

73 - UPDATESOURCE

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 30

Description: The source of the information used to update a road segment; incompletely populated in this

release.

74 – UPDATEDATE

Maintained by: E911

Type: Date Required: False Editable: True Nullable: True Default: N/A

Description: The year the feature was last updated; incompletely populated in this release.

75 – GPSUPDATE

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: 'Y'

Domain: GPSUpdate

Length: 1

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Description: GPS update; incompletely populated in this release.

76 - GlobalID

Maintained by: Esri Type: Global ID Required: True Editable: False Nullable: False

Description: Globally Unique Identifier or GUID; not defined in this release.

77 – STATE

Maintained by: E911

Type: String Required: False Editable: True Nullable: True Default: 'VT' Domain: N/A Length: 2

Description: The state in which the road segment appears; incompletely populated in this release.

78 - GAP

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: Not defined and incompletely populated in this release.

79 - GAPMILES

Maintained by: E911

Type: Double Required: False Editable: True Nullable: True Default: N/A Precision: 38 Scale: 8

Description: Not defined and incompletely populated in this release.

80 - GAPSTREETID

Maintained by: E911

Type: Long Required: False Editable: True Nullable: True Default: N/A

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Domain: N/A **Precision:** 10

Description: Not defined and incompletely populated in this release.

81 - FIPS8

Maintained by: VTrans

Type: Long
Required: False
Editable: True
Nullable: True
Default: N/A
Domain: N/A
Precision: 10

Description: Municipality (town, city, gore, grant) FIPS code. The FIPS8 code identifies the municipality in which each road falls, as shown on the VTrans Town Highway Maps. The FIPS8 code is a modified version of FIPS6 (as listed in the Geographic Area Codes Standard of the VGIS Handbook). FIPS8 includes the FIPS state code (for example: 50 for Vermont) + FIPS6. VTrans makes adjustments to the FIPS8 coding based on the best available information at its disposal. VTrans maintains its own version of the town boundaries, called townindex and townindex_arc. These data layers are sent to VCGI for review and inclusion of any pertinent changes into BNDHASH.

82 - RTNUMBER_N

Maintained by: VTrans

Type: Double
Required: False
Editable: True
Nullable: True
Default: 0
Precision: 38
Scale: 8

Description: Similar to RTNUMBER, but in numeric format. Previously known as RTNO_N. It is used to have public highway listings display in numeric order instead of text order - for example, a listing based on RTNUMBER would be ordered as 1, 10, 11, 2, 20, 21, while a listing based on RTNUMBER_N would be ordered as 1, 2, 10, 11, 20, 21. The letter suffix in routes is assigned a decimal value.

Examples:

100A = 100.10 100B = 100.20 100C = 100.30 US-ALT5 = 5.9 ALT VT-100 = 100.9

83 - RDNAME

Maintained by: VTrans

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: Road name code. Road names are stored as an integer code, referencing look-up table RDS.RDNAMES. An integer code is used to minimize the space required in the road centerline attribute

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table. Each named road will have a unique RDNAME value and should reflect the "official" road name from E911, but there may have been some roads that either did not match in automated evaluation, or were missed. Users should generally turn to the E911\RDS data layer when they need "official" road name information and use the Trans_Road_RDS as a secondary name source. The current equivalent of RDNAME in E911RDS is GEONAMEID. Because GEONAMEID is incompletely populated in this release, VTrans continues its use of RDNAME until the VTrans and E911 road centerline data sets are merged. A value of 99999999 indicates that the RDFLNAME entered by VTrans is more correct than the E911 PRIMARYNAME for the arc at the time the arc was added or modified.

84 – RDFLNAME

Maintained by: VTrans

Type: String
Required: False
Editable: True
Nullable: True
Default: N/A
Domain: N/A
Length: 30

Description: Full road name. VTrans has put an effort forward to correct the TransRoad_RDS data layer to reflect the "official" road names from E911, but there may have been some roads that either did not match in automated evaluation, or were missed. The E911 data should still be used as the "official" source and the Trans_Road_RDS as a secondary name source.

NOTE: There currently isn't a reliable mechanism for maintenance of this item. Users should generally turn to the EmergencyE911_RDS data layer when they need "official" road name information. The current equivalent of RDFLNAME in E911RDS is PRIMARYNAME, but because PRIMARYNAME is incompletely populated in this release, VTrans will continue its use of RDFLNAME until the VTrans and E911 road centerline data sets are merged.

85 – ISVISIBLE_UC

Maintained by: VTrans

Type: Long Required: False Editable: True Nullable: True Default: 0 Domain: N/A Precision: 10

Description: Flag used by the VTrans Highway Mapping System for cartographic purposes.

Field values: 0 = Not visible 1 = Visible

86 – Shape

Maintained by: Esri Type: Geometry Required: True Editable: False Nullable: True Geometry Type: Line

Description: Feature geometry.

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87 - FAID N

Maintained by: VTrans

Type: Double
Required: False
Editable: True
Nullable: True
Default: N/A
Precision: 38
Scale: 0

Description: This field will be removed in future releases. (See FAID for more information.)

88 - FUNCL_OLD

Maintained by: VTrans

Type: Short Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 5

Description: Old Functional Class Code. These functional classification codes were used in the FUNCL field in data releases prior to 2015 and are based on a federal classification system in use by VTrans. Functional classes distinguish between rural and transportation-defined urban areas (8 in Vermont). Therefore, proper assignment of this attribute requires that road arcs be split at the rural/urban boundaries.

NOTE: See FUNCL for the current Functional Classification codes.

Field values:

- 0 = Not part of Functional Classification System
- 1 = Principal arterial Interstate
- 2 = Rural principal arterial
- 4 = Rural principal arterial other (not other freeway); not a standard federal code
- 6 =Rural minor arterial
- 7 = Rural major collector
- 8 = Rural minor collector
- 9 = Rural local
- 11 = Urban principal arterial Interstate
- 12 = Urban principal arterial other freeway
- 14 = Urban principal arterial other
- 16 = Urban minor arterial
- 17 = Urban collector
- 19 = Urban local

89 - Urban_Code

Maintained by: VTrans

Type: Long Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 10

Description: Census urban code.

Field values:

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- 11755 = Five-digit code to uniquely identify the Census 2010 Urbanized Area (population greater than or equal to 50,000) of Burlington, VT, adjusted for transportation planning purposes by VTrans in conjunction with regional planning partners.
- 99998 = Small Urban area to identify the Census Urban Clusters with a population greater than or equal to 5,000 and less than 50,000, adjusted for transportation planning purposes by VTrans in conjunction with regional planning partners.
- 99999 = Rural areas; all areas outside the adjusted Urbanized Area and Small Urban Area boundaries, for transportation planning purposes.

90 – FAID

Maintained by: VTrans

Type: Double Required: False Editable: True Nullable: True Default: N/A Precision: 38 Scale: 0

Description: Calculated field based on FIPS8 and ARCID. The first eight digits represent the FIPS8 value

and the last four digits represent the ARCID value.

91 - FED_AID

Maintained by: VTrans

Type: String Required: False Editable: True Nullable: True Default: N/A Domain: N/A Length: 15

Description: The Federal Aid Number for specific highway sections that are part of the Federal Aid Highway System or functionally classed as minor collectors. This number is used by VTrans in reporting

on federal aid routes.

92 – Facility_Type

Maintained by: VTrans

Type: Short Required: False Editable: True Nullable: True Default: N/A Domain: N/A Precision: 5

Description: Facility_Type has been added to allow for better summary of mileage for the Federal Highway Administration's Highway Performance Monitoring System (HPMS). This field represents the operational characteristics of a highway segment, based on the definitions in the HPMS Field Manual. A copy of this manual can be found on-line at the following link:

http://www.fhwa.dot.gov/policyinformation/hpms/fieldmanual/HPMS 2014.pdf; see also http://www.fhwa.dot.gov/policyinformation/hpms/fieldmanual/chapter4b.cfm.

Field values:

1 = One-Way Roadway – Roadway that operates with traffic moving in a single direction during non-peak period hours.

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- 2 = Two-Way Roadway Roadway that operates with traffic moving in both directions during non-peak period hours.
- 4 = Ramp Non-mainline junction or connector facility contained within a grade-separated interchange.
- 5 = Non-Mainline All non-mainline facilities excluding ramps.
- 6 = Non-Inventory Direction Individual road/roads of a multi-road facility that is/are not used for determining the primary length for the facility.
- 7 = Planned/Unbuilt Planned roadway that has yet to be constructed.

93 – CREATIONUSER

Maintained by: VTrans

Type: String Required: False Editable: False Nullable: True Default: N/A Domain: N/A Length: 50

Description: Added November 18, 2016 as one of four fields to be used for editor tracking. This field

records the ArcSDE geodatabase user name of the user who created the arc.

94 - DATECREATED

Maintained by: VTrans

Type: Date Required: False Editable: False Nullable: True Default: N/A

Description: Added November 18, 2016 as one of four fields to be used for editor tracking. This field records the date and time the arc was created. The time is recorded in the database's local time zone (Eastern Time). This field has been superseded by DATECREATED_Converted which is in UTC time.

95 – LASTUSER

Maintained by: VTrans

Type: String Required: False Editable: False Nullable: True Default: N/A Domain: N/A Length: 50

Description: Added November 18, 2016 as one of four fields to be used for editor tracking. This field records the ArcSDE geodatabase user name of the user who last modified the record in any way.

96 – DATEMODIFIED

Maintained by: VTrans

Type: Date Required: False Editable: False Nullable: True Default: N/A

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Description: Added November 18, 2016 as one of four fields to be used for editor tracking. This field records the date and time the record was modified in any way. The time is recorded in the database's local time zone (Eastern Time). This field has been superseded by DATEMODIFIED_Converted.

97 - DATECREATED_Converted

Maintained by: VTrans

Type: Date Required: False Editable: False Nullable: True Default: N/A

Description: One of four fields used for editor tracking. This field records the date and time the arc was created. The time is recorded in UTC time. The field DATECREATED, which recorded in the database's local time zone (Eastern Time), was originally used for this purpose, but has been superseded by

DATECREATED_Converted.

97 - DATEMODIFIED_Converted

Maintained by: VTrans

Type: Date Required: False Editable: False Nullable: True Default: N/A

Description: One of four fields used for editor tracking. This field records the date and time the record was modified in any way. The time is recorded in UTC time. The field DATEMODIFIED, which was in the database's local time zone (Eastern Time), was originally used for this purpose, but has been superseded by

DATEMODIFIED_Converted.

97 – Shape.STLength()

Maintained by: Esri Type: Geometry Required: True Editable: False Nullable: True Geometry Type: Line

Description: Feature geometry. Automatically calculated length measurement of the arc in meters.

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APPENDIX A

FIELD ORDER - DEFAULT VALUES - DOMAINS

FIELD ORDER – numeric indexing for each attribute corresponds to the order in which that field appears in the dataset's attribute table.

Quick reference for all attributes

Q	Total and and a second	Maintaining						
Index	Field name	agency	Type	Required	Editable	Nullable	Default	Domain
1	OBJECTID	Esri	Object ID	Y	N	N/A	N/A	N/A
2	SEGMENTID	E911	Long	N	Y	Y	N	N
3	ARCID	VTrans	Long	N	Y	Y	N	N
4	STREETID	E911	Long	N	Y	Y	N	N
5	PD	E911	String	N	Y	Y	N	N
6	PT	E911	String	N	Y	Y	N	N
7	SN	E911	String	N	Y	Y	N	N
8	STREETID	E911	String	N	Y	Y	N	N
9	SD	E911	String	N	Y	Y	N	N
10	GEONAMEID	E911	Long	N	Y	Y	N	N
11	USEGEONAMESALIASES	E911	Long	N	Y	Y	Y	Y
12	PRIMARYNAME	E911	String	N	Y	Y	N	N
13	ALINAME	E911	String	N	Y	Y	N	N
14	ALIAS1	E911	String	N	Y	Y	N	N
15	ALIAS2	E911	String	N	Y	Y	N	N
16	ALIAS3	E911	String	N	Y	Y	N	N
17	ALIAS4	E911	String	N	Y	Y	N	N
18	ALIAS5	E911	String	N	Y	Y	N	N
19	COMMENTS	E911	String	N	Y	Y	N	N
20	SURFACETYPE	VTrans	Short	N	Y	Y	N	Y
21	ONEWAY	VTrans	String	N	Y	Y	Y	Y
22	ADDRESSLOCK	E911	Long	N	Y	Y	Y	Y
23	NO_MSAG	E911	Long	N	Y	Y	N	N
24	C1_EXCEPTION	E911	Long	N	Y	Y	N	N
25	MCODE	E911	Long	N	Y	Y	N	N
26	LESN	E911	Long	N	Y	Y	N	N
27	RESN	E911	Long	N	Y	Y	N	N
28	LTWN	E911	String	N	Y	Y	N	N
29	RTWN	E911	String	N	Y	Y	N	N
30	LLO_A	E911	Long	N	Y	Y	Y	N
31	RLO_A	E911	Long	N	Y	Y	Y	N
32	LHI_A	E911	Long	N	Y	Y	Y	N
33	RHI_A	E911	Long	N	Y	Y	Y	N
34	LZIP	E911	String	N	Y	Y	N	N
35	RZIP	E911	String	N	Y	Y	N	N
36	LLO_T	E911	Long	N	Y	Y	N	N
37	RLO_T	E911	Long	N	Y	Y	N	N
38	LHI_T	E911	Long	N	Y	Y	N	N
39	RHI_T	E911	Long	N	Y	Y	N	N
40	ADDRESRANGEID	E911	Long	N	Y	Y	N	N

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41	ROUTEINCLUDE	E911	Long	N	Y	Y	Y	Y
42	RTNAME	VTrans	String	N	Y	Y	N	N
43	RTNUMBER	VTrans	String	N	Y	Y	N	N
44	HWYSIGN	VTrans	String	N	Y	Y	N	N
45	RPCCLASS	VTrans	Short	N	Y	Y	N	N
45 46								
	AOTCLASS	VTrans	Short	N	Y	Y	Y	Y
47	NUTS	VTrans	String	N	Y	Y	Y	N
48	NHS	VTrans	Short	N	Y	Y	Y	N
49	FUNCL	VTrans	Short	N	Y	Y	N	N
50	TWN_LR	VTrans	String	N	Y	Y	N	N
51	ETE_LR	VTrans	String	N	Y	Y	N	N
52	CTCODE	VTrans	String	N	Y	Y	N	N
53	UA	VTrans	Short	N	Y	Y	Y	N
54	CTUA	VTrans	String	N	Y	Y	N	N
55	CERTCODE	VTrans	String	N	Y	Y	N	N
56	ARCMILES	VTrans	Double	N	Y	Y	N	N/A
57	AOTMILES	VTrans	Double	N	Y	Y	N	N/A
58	AOTMILES_CALC	VTrans	Double	N	Y	Y	N	N/A
59	UPDACT	VTrans	String	N	Y	Y	N	N
60	LOCMETH	VTrans	Short	N	Y	Y	N	N
61	SRCORG	VTrans	Short	N	Y	Y	N	N
62	SCENICHWY	VTrans	Short	N	Y	Y	Y	N
63	SCENICBYWAY	VTrans	Short	N	Y	Y	Y	N
64	FORMER_RTNAME	VTrans	String	N	Y	Y	N	N
65	PROVISIONALYEAR	VTrans	Short	N	Y	Y	Y	N
66	ANCIENTROADYEAR	VTrans	Short	N	Y	Y	Y	N
67	TRUCKROUTE	VTrans	Short	N	Y	Y	N	N
68	SPEEDLIMIT	VTrans	Double	N	Y	Y	N	N/A
69	ROADCLOSED	E911	String	N	Y	Y	N	Y
70	ISVISIBLE	VTrans	•	N	Y	Y	Y	N
			Long					
71	CERTYEAR	VTrans	Short	N	Y	Y	Y	N N/A
72	MAPYEAR	E911	Date	N	Y	Y	N	N/A
73	UPDATESOURCE	E911	String	N	Y	Y	N	N
74	UPDATEDATE	E911	Date	N	Y	Y	N	N/A
75	GPSUPDATE	E911	String	N	Y	Y	Y	Y
76	GlobalID	Esri	Global ID	Y	N	N	N/A	N/A
77	STATE	E911	String	N	Y	Y	Y	N
78	GAP	E911	Long	N	Y	Y	N	N
79	GAPMILES	E911	Double	N	Y	Y	N	N/A
80	GAPSTREETID	E911	Long	N	Y	Y	N	N
81	FIPS8	VTrans	Long	N	Y	Y	N	N
82	RTNUMBER_N	VTrans	Double	N	Y	Y	Y	N/A
83	RDNAME	VTrans	Long	N	Y	Y	N	N
84	RDFLNAME	VTrans	String	N	Y	Y	N	N
85	ISVISIBLE_UC	VTrans	Long	N	Y	Y	Y	N
86	Shape	VTrans	Geometry	Y	N	N	N	N/A
87	FAID_N	VTrans	Double	N	Y	Y	N	N/A
88	FUNCL_OLD	VTrans	Short	N	Y	Y	N	N
89	Urban_Code	VTrans	Long	N	Y	Y	N	N
90	FAID	VTrans	Double	N	Y	Y	N	N/A
			_ 00010	- 1	-	-	-,	- 1/ - 1

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91	FED_AID	VTrans	String	N	Y	Y	N	N
92	Facility_Type	VTrans	Short	N	Y	Y	N	N
93	CREATIONUSER	VTrans	String	N	N	Y	N	N
94	DATECREATED	VTrans	Date	N	N	Y	N	N
95	LASTUSER	VTrans	String	N	N	Y	N	N
96	DATEMODIFIED	VTrans	Date	N	N	Y	N	N
97	DATECREATED_Converted	VTrans	Date	N	N	Y	N	N
98	DATEMODIFIED_Converted	VTrans	Date	N	N	Y	N	N
99	Shape.STLength()	Esri	Geometry	Y	N	Y	N/A	N

ATTRIBUTES WITH DEFAULT VALUES

Index	Field name	Default value
11	USEGEONAMESALIASES	1
21	ONEWAY	N
22	ADDRESSLOCK	0
30	LLO_A	0
31	RLO_A	0
32	LHI_A	0
33	RHI_A	0
41	ROUTEINCLUDE	1
46	AOTCLASS	9
47	NUTS	N
48	NHS	0
53	UA	0
62	SCENICHWY	0
63	SCENICBYWAY	0
65	PROVISIONALYEAR	0
66	ANCIENTROADYEAR	0
70	ISVISIBLE	1
71	CERTYEAR	0
75	GPSUPDATE	Y
77	STATE	VT
82	RTNUMBER_N	0
85	ISVISIBLE_UC	0

ATTRIBUTES WITH DOMAINS

Field Name	Domain Name
USEGEONAMESALIASES	YesNo
SURFACETYPE	SurfaceType
ONEWAY	Oneway
ADDRESSLOCK	YesNo
ROUTEINCLUDE	YesNo
AOTCLASS	AOTClass
ROADCLOSED	Road_Closed
GPSUPDATE	GPSUpdate
	SURFACETYPE ONEWAY ADDRESSLOCK ROUTEINCLUDE AOTCLASS ROADCLOSED

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APPENDIX B

AGENCY ASSIGNMENT OF ATTRIBUTES

ATTRIBUTES MAINTAINED BY E911		ATTRIBUTES MAINTAINED BY VTRANS			
	Maintaining		Maintaining		
Index Field name	agency	Index Field name	agency		
2 SEGMENTID	E911	3 ARCID	VTrans		
4 STREETID	E911	20 SURFACETYPE	VTrans		
5 PD	E911	21 ONEWAY	VTrans		
6 PT	E911	42 RTNAME	VTrans		
7 SN	E911	43 RTNUMBER	VTrans		
8 ST	E911	44 HWYSIGN	VTrans		
9 SD	E911	45 RPCCLASS	VTrans		
10 GEONAMEID	E911	46 AOTCLASS	VTrans		
11 USEGEONAMESALIASES	E911	47 NUTS	VTrans		
12 PRIMARYNAME	E911	48 NHS	VTrans		
13 ALINAME	E911	49 FUNCL	VTrans		
14 ALIAS1	E911	50 TWN_LR	VTrans		
15 ALIAS2	E911	51 ETE_LR	VTrans		
16 ALIAS3	E911	52 CTCODE	VTrans		
17 ALIAS4	E911	53 UA	VTrans		
18 ALIAS5	E911	54 CTUA	VTrans		
19 COMMENTS	E911	55 CERTCODE	VTrans		
22 ADDRESSLOCK	E911	56 ARCMILES	VTrans		
23 NO_MSAG	E911	57 AOTMILES	VTrans		
24 C1_EXCEPTION	E911	58 AOTMILES_CALC	VTrans		
25 MCODE	E911	59 UPDACT	VTrans		
26 LESN	E911	60 LOCMETH	VTrans		
27 RESN	E911	61 SRCORG	VTrans		
28 LTWN	E911	62 SCENICHWY	VTrans		
29 RTWN	E911	63 SCENICBYWAY	VTrans		
30 LLO_A	E911	64 FORMER_RTNAME	VTrans		
31 RLO_A	E911	65 PROVISIONALYEAR	VTrans		
32 LHI_A	E911	66 ANCIENTROADYEAR	VTrans		
33 RHI_A	E911	67 TRUCKROUTE	VTrans		
34 LZIP	E911	68 SPEEDLIMIT	VTrans		
35 RZIP	E911	70 ISVISIBLE	VTrans		
36 LLO T	E911	71 CERTYEAR	VTrans		
37 RLO_T	E911	81 FIPS8	VTrans		
38 LHI_T	E911	82 RTNUMBER_N	VTrans		
39 RHI_T	E911	83 RDNAME	VTrans		
40 ADDRESRANGEID	E911	84 RDFLNAME	VTrans		
41 ROUTEINCLUDE	E911	85 ISVISIBLE UC			
69 ROADCLOSED	E911	86 Shape	VTrans		
72 MAPYEAR	E911	-	VTrans		
	E911	87 FAID_N	VTrans		
73 UPDATESOURCE	E911	88 FUNCL_OLD	VTrans		
74 UPDATEDATE	E911	89 Urban_Code	VTrans		
75 GPSUPDATE		90 FAID	VTrans		
77 STATE	E911	91 FED_AID	VTrans		

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78 GAP	E911	92 Facility_Type	VTrans
79 GAPMILES	E911	93 CREATIONUSER	VTrans
80 GAPSTREETID	E911	94 DATECREATED	VTrans
		95 LASTUSER	VTrans
		96 DATEMODIFIED	VTrans
		97 DATECREATED_Converted	VTrans
		98 DATEMODIFIED_Converted	VTrans
		97 Shape.STLength()	VTrans

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APPENDIX C

CTCODE LIST (by county)

CTCODE TOWN

ADDIS	<u>SON</u>	CALE	DONIA	ESSEX	<u> </u>	GRAN	ID ISLE
0101	Addison	0301	Barnet	0501	Averill	0701	Alburgh
0102	Bridport	0302	Burke	0502	Averys Gore	0702	Grand Isle
0103	Bristol	0303	Danville	0503	Bloomfield	0703	Isle La Motte
0104	Cornwall	0304	Groton	0504	Brighton	0704	North Hero
0105	Ferrisburgh	0305	Hardwick	0505	Brunswick	0705	South Hero
0106	Goshen	0306	Kirby	0506	Canaan		
0107	Granville	0307	Lyndon	0507	Concord		
0108	Hancock	0308	Newark	0508	East Haven		
0109	Leicester	0309	Peacham	0509	Ferdinand	LAMI	<u>OLLE</u>
0110	Lincoln	0310	Ryegate	0510	Granby	0801	Belvidere
0111	Middlebury	0311	St. Johnsbury	0511	Guildhall	0802	Cambridge
0112	Monkton	0312	Sheffield	0512	Lemington	0803	Eden
0113	New Haven	0313	Stannard	0513	Lewis	0804	Elmore
0114	Orwell	0314	Sutton	0514	Lunenburg	0805	Hyde Park
0115	Panton	0315	Walden	0515	Maidstone	0806	Johnson
0116	Ripton	0316	Waterford	0516	Norton	0807	Morristown
0117	Salisbury	0317	Wheelock	0517	Victory	0808	Stowe
0118	Shoreham			0518	Warners Grant	0809	Waterville
0119	Starksboro			0519	Warren Gore	0810	Wolcott
0120	Vergennes City						
0121	Waltham	CHIT	<u>renden</u>				
0122	Weybridge	0401	Bolton				
0122	1103011450	0.01					
0123	Whiting	0402	Buels Gore	FRAN	<u>KLIN</u>	ORAN	<u>IGE</u>
				FRAN 0601	KLIN Bakersfield	ORAN 0901	I <mark>GE</mark> Bradford
		0402	Buels Gore				
		0402 0403	Buels Gore Burlington City	0601	Bakersfield	0901	Bradford
0123		0402 0403 0404	Buels Gore Burlington City Charlotte	0601 0602	Bakersfield Berkshire	0901 0902	Bradford Braintree
0123	Whiting	0402 0403 0404 0405	Buels Gore Burlington City Charlotte Colchester	0601 0602 0603	Bakersfield Berkshire Enosburgh	0901 0902 0903	Bradford Braintree Brookfield
0123 BENNI	Whiting INGTON	0402 0403 0404 0405 0406	Buels Gore Burlington City Charlotte Colchester Essex	0601 0602 0603 0604	Bakersfield Berkshire Enosburgh Fairfax	0901 0902 0903 0904	Bradford Braintree Brookfield Chelsea
0123 <u>BENNI</u> 0201	Whiting INGTON Arlington	0402 0403 0404 0405 0406 0407	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg	0601 0602 0603 0604 0605	Bakersfield Berkshire Enosburgh Fairfax Fairfield	0901 0902 0903 0904 0905	Bradford Braintree Brookfield Chelsea Corinth
0123 BENNI 0201 0202	Whiting INGTON Arlington Bennington	0402 0403 0404 0405 0406 0407 0408	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg Huntington	0601 0602 0603 0604 0605 0606	Bakersfield Berkshire Enosburgh Fairfax Fairfield Fletcher	0901 0902 0903 0904 0905 0906	Bradford Braintree Brookfield Chelsea Corinth Fairlee
0123 BENNI 0201 0202 0203	Whiting INGTON Arlington Bennington Dorset	0402 0403 0404 0405 0406 0407 0408 0409	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg Huntington Jericho	0601 0602 0603 0604 0605 0606 0607	Bakersfield Berkshire Enosburgh Fairfax Fairfield Fletcher Franklin	0901 0902 0903 0904 0905 0906 0907	Bradford Braintree Brookfield Chelsea Corinth Fairlee Newbury
0123 BENN 0201 0202 0203 0204	Whiting INGTON Arlington Bennington Dorset Glastenbury	0402 0403 0404 0405 0406 0407 0408 0409 0410	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg Huntington Jericho Milton	0601 0602 0603 0604 0605 0606 0607 0608	Bakersfield Berkshire Enosburgh Fairfax Fairfield Fletcher Franklin Georgia	0901 0902 0903 0904 0905 0906 0907 0908	Bradford Braintree Brookfield Chelsea Corinth Fairlee Newbury Orange
0123 BENNI 0201 0202 0203 0204 0205	Whiting INGTON Arlington Bennington Dorset Glastenbury Landgrove	0402 0403 0404 0405 0406 0407 0408 0409 0410 0411	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg Huntington Jericho Milton Richmond	0601 0602 0603 0604 0605 0606 0607 0608 0609	Bakersfield Berkshire Enosburgh Fairfax Fairfield Fletcher Franklin Georgia Highgate	0901 0902 0903 0904 0905 0906 0907 0908 0909	Bradford Braintree Brookfield Chelsea Corinth Fairlee Newbury Orange Randolph
0123 BENNI 0201 0202 0203 0204 0205 0206	Whiting INGTON Arlington Bennington Dorset Glastenbury Landgrove Manchester	0402 0403 0404 0405 0406 0407 0408 0409 0410 0411 0412	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg Huntington Jericho Milton Richmond St. George	0601 0602 0603 0604 0605 0606 0607 0608 0609	Bakersfield Berkshire Enosburgh Fairfax Fairfield Fletcher Franklin Georgia Highgate Montgomery	0901 0902 0903 0904 0905 0906 0907 0908 0909 0910	Bradford Braintree Brookfield Chelsea Corinth Fairlee Newbury Orange Randolph Strafford
0123 BENNI 0201 0202 0203 0204 0205 0206 0207	Whiting INGTON Arlington Bennington Dorset Glastenbury Landgrove Manchester Peru	0402 0403 0404 0405 0406 0407 0408 0409 0410 0411 0412 0413	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg Huntington Jericho Milton Richmond St. George Shelburne	0601 0602 0603 0604 0605 0606 0607 0608 0609 0610	Bakersfield Berkshire Enosburgh Fairfax Fairfield Fletcher Franklin Georgia Highgate Montgomery Richford	0901 0902 0903 0904 0905 0906 0907 0908 0909 0910	Bradford Braintree Brookfield Chelsea Corinth Fairlee Newbury Orange Randolph Strafford Thetford
0123 BENNI 0201 0202 0203 0204 0205 0206 0207 0208	Whiting INGTON Arlington Bennington Dorset Glastenbury Landgrove Manchester Peru Pownal	0402 0403 0404 0405 0406 0407 0408 0409 0410 0411 0412 0413	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg Huntington Jericho Milton Richmond St. George Shelburne South Burlington	0601 0602 0603 0604 0605 0606 0607 0608 0609 0610 0611	Bakersfield Berkshire Enosburgh Fairfax Fairfield Fletcher Franklin Georgia Highgate Montgomery Richford St. Albans City	0901 0902 0903 0904 0905 0906 0907 0908 0909 0910 0911	Bradford Braintree Brookfield Chelsea Corinth Fairlee Newbury Orange Randolph Strafford Thetford Topsham
0123 BENNI 0201 0202 0203 0204 0205 0206 0207 0208 0209	Whiting INGTON Arlington Bennington Dorset Glastenbury Landgrove Manchester Peru Pownal Readsboro	0402 0403 0404 0405 0406 0407 0408 0409 0410 0411 0412 0413	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg Huntington Jericho Milton Richmond St. George Shelburne South Burlington City	0601 0602 0603 0604 0605 0606 0607 0608 0609 0610 0611 0612	Bakersfield Berkshire Enosburgh Fairfax Fairfield Fletcher Franklin Georgia Highgate Montgomery Richford St. Albans City St. Albans	0901 0902 0903 0904 0905 0906 0907 0908 0909 0910 0911 0912	Bradford Braintree Brookfield Chelsea Corinth Fairlee Newbury Orange Randolph Strafford Thetford Topsham Tunbridge
BENNI 0201 0202 0203 0204 0205 0206 0207 0208 0209 0210	Whiting INGTON Arlington Bennington Dorset Glastenbury Landgrove Manchester Peru Pownal Readsboro Rupert	0402 0403 0404 0405 0406 0407 0408 0409 0410 0411 0412 0413 0414	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg Huntington Jericho Milton Richmond St. George Shelburne South Burlington City Underhill	0601 0602 0603 0604 0605 0606 0607 0608 0609 0610 0611 0612 0613	Bakersfield Berkshire Enosburgh Fairfax Fairfield Fletcher Franklin Georgia Highgate Montgomery Richford St. Albans City St. Albans Sheldon	0901 0902 0903 0904 0905 0906 0907 0908 0909 0910 0911 0912 0913	Bradford Braintree Brookfield Chelsea Corinth Fairlee Newbury Orange Randolph Strafford Thetford Topsham Tunbridge Vershire
BENNI 0201 0202 0203 0204 0205 0206 0207 0208 0209 0210 0211 0212 0213	Whiting INGTON Arlington Bennington Dorset Glastenbury Landgrove Manchester Peru Pownal Readsboro Rupert Sandgate Searsburg Shaftsbury	0402 0403 0404 0405 0406 0407 0408 0409 0410 0411 0412 0413 0414	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg Huntington Jericho Milton Richmond St. George Shelburne South Burlington City Underhill Westford	0601 0602 0603 0604 0605 0606 0607 0608 0609 0610 0611 0612 0613	Bakersfield Berkshire Enosburgh Fairfax Fairfield Fletcher Franklin Georgia Highgate Montgomery Richford St. Albans City St. Albans Sheldon	0901 0902 0903 0904 0905 0906 0907 0908 0909 0910 0911 0912 0913 0914 0915	Bradford Braintree Brookfield Chelsea Corinth Fairlee Newbury Orange Randolph Strafford Thetford Topsham Tunbridge Vershire Washington
BENNI 0201 0202 0203 0204 0205 0206 0207 0208 0209 0210 0211 0212 0213 0214	Whiting INGTON Arlington Bennington Dorset Glastenbury Landgrove Manchester Peru Pownal Readsboro Rupert Sandgate Searsburg Shaftsbury Stamford	0402 0403 0404 0405 0406 0407 0408 0409 0410 0411 0412 0413 0414	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg Huntington Jericho Milton Richmond St. George Shelburne South Burlington City Underhill Westford Williston	0601 0602 0603 0604 0605 0606 0607 0608 0609 0610 0611 0612 0613	Bakersfield Berkshire Enosburgh Fairfax Fairfield Fletcher Franklin Georgia Highgate Montgomery Richford St. Albans City St. Albans Sheldon	0901 0902 0903 0904 0905 0906 0907 0908 0909 0910 0911 0912 0913 0914 0915	Bradford Braintree Brookfield Chelsea Corinth Fairlee Newbury Orange Randolph Strafford Thetford Topsham Tunbridge Vershire Washington West Fairlee
BENNI 0201 0202 0203 0204 0205 0206 0207 0208 0209 0210 0211 0212 0213 0214 0215	Whiting INGTON Arlington Bennington Dorset Glastenbury Landgrove Manchester Peru Pownal Readsboro Rupert Sandgate Searsburg Shaftsbury	0402 0403 0404 0405 0406 0407 0408 0409 0410 0411 0412 0413 0414	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg Huntington Jericho Milton Richmond St. George Shelburne South Burlington City Underhill Westford Williston	0601 0602 0603 0604 0605 0606 0607 0608 0609 0610 0611 0612 0613	Bakersfield Berkshire Enosburgh Fairfax Fairfield Fletcher Franklin Georgia Highgate Montgomery Richford St. Albans City St. Albans Sheldon	0901 0902 0903 0904 0905 0906 0907 0908 0909 0910 0911 0912 0913 0914 0915	Bradford Braintree Brookfield Chelsea Corinth Fairlee Newbury Orange Randolph Strafford Thetford Topsham Tunbridge Vershire Washington West Fairlee
0123 BENNI 0201 0202 0203 0204 0205 0206 0207 0208 0209 0210 0211 0212 0213 0214 0215 0216	Whiting INGTON Arlington Bennington Dorset Glastenbury Landgrove Manchester Peru Pownal Readsboro Rupert Sandgate Searsburg Shaftsbury Stamford Sunderland Winhall	0402 0403 0404 0405 0406 0407 0408 0409 0410 0411 0412 0413 0414	Buels Gore Burlington City Charlotte Colchester Essex Hinesburg Huntington Jericho Milton Richmond St. George Shelburne South Burlington City Underhill Westford Williston	0601 0602 0603 0604 0605 0606 0607 0608 0609 0610 0611 0612 0613	Bakersfield Berkshire Enosburgh Fairfax Fairfield Fletcher Franklin Georgia Highgate Montgomery Richford St. Albans City St. Albans Sheldon	0901 0902 0903 0904 0905 0906 0907 0908 0909 0910 0911 0912 0913 0914 0915	Bradford Braintree Brookfield Chelsea Corinth Fairlee Newbury Orange Randolph Strafford Thetford Topsham Tunbridge Vershire Washington West Fairlee
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ORLE	ANS	WASH	<u>IINGTON</u>	WIND	SOR
1001	Albany	1201	Barre City	1401	Andover
1002	Barton	1202	Barre	1402	Baltimore
1003	Brownington	1203	Berlin	1403	Barnard
1004	Charleston	1204	Cabot	1404	Bethel
1005	Coventry	1205	Calais	1405	Bridgewater
1006	Craftsbury	1206	Duxbury	1406	Cavendish
1007	Derby	1207	East Montpelier	1407	Chester
1008	Glover	1208	Fayston	1408	Hartford
1009	Greensboro	1209	Marshfield	1409	Hartland
1010	Holland	1210	Middlesex	1410	Ludlow
1011	Irasburg	1211	Montpelier City	1411	Norwich
1012	Jay	1212	Moretown	1412	Plymouth
1013	Lowell	1213	Northfield	1413	Pomfret
1014	Morgan	1214	Plainfield	1414	Reading
1015	Newport City	1215	Roxbury	1415	Rochester
1016	Newport	1216	Waitsfield	1416	Royalton
1017	Troy	1217	Warren	1417	Sharon
1018	Westfield	1218	Waterbury	1418	Springfield
1019	Westmore	1219	Woodbury	1419	Stockbridge
		1220	Worcester	1420	Weathersfield
				1421	Weston
				1422	West Windsor
RUTL	AND			1423	Windsor
1101	Benson	WIND		1424	Woodstock
1102	Brandon	1301	Athens		
1103	Castleton	1302	Brattleboro		
1104	Chittenden	1303	Brookline		
1105	Clarendon	1304	Dover		
1106	Danby	1305	Dummerston		
1107	Fair Haven	1306	Grafton		
1108	Hubbardton	1307	Guilford		
1109	Ira	1308	Halifax		
1110	Mendon	1309	Jamaica		
1111	Middletown Springs	1310	Londonderry		
1112	Mount Holly	1311	Marlboro		
1113	Mount Tabor	1312	Newfane		
1114	Pawlet	1313	Putney		
1115	Pittsfield	1314	Rockingham		
1116	Pittsford	1315	Somerset		
1117	Poultney	1316	Stratton		
1118	Proctor	1317	Townshend		
1119	Rutland City	1318	Vernon		
1120	Rutland	1319	Wardsboro		
1121	Killington	1320	Westminster		
1122	(formerly Sherburne)	1321	Whitingham		
1122	Shrewsbury	1322	Wilmington		
1123	Sudbury	1323	Windham		

Tinmouth

Wells

Wallingford

West Haven 1128 West Rutland

1124

1125 1126

1127

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APPENDIX D

UA CODES

The 1-digit code is used in conjunction with the CTCODE code to uniquely identify each urban area.

Listed in order of CTCODE, the UA codes include:

CTCODE	TTA	TOWN
CICODE	UA	IUVVIN

0103	1	Bristol Urban Compact	1001	1	Albany Village
0111	1	Middlebury Urban Compact	1002	1	Barton Village
0201	1	Arlington Urban Compact	1002	2	Orleans Village
0202	1	North Bennington Village	1007	1	Derby Center Village
0202	2	Old Bennington Village	1007	2	Derby Line Village
0202	3	Bennington Urban Compact	1017	1	North Troy Village
0206	1	Manchester Village	1102	1	Brandon Urban Compact
0206	2	Manchester Center Depot Urban	1107	1	Fair Haven Urban Compact
		Compact	1117	1	Poultney Village
0302	1	West Burke Village	1118	1	Proctor Urban Compact
0304	1	Groton Village	1125	1	Wallingford Urban Compact
0305	1	Hardwick Urban Compact	1128	1	West Rutland Urban Compact
0307	1	Lyndonville Village	1209	1	Marshfield Village
0310	1	South Ryegate Village	1218	1	Waterbury Village
0311	1	St. Johnsbury Urban Compact	1302	1	Brattleboro Urban Compact
0406	1	Essex Junction Village	1302	2	West Brattleboro Urban Compact
0406	2	Essex Center Urban Compact	1312	1	Newfane Village
0409	1	Jericho Village	1314	1	Bellows Falls Village
0410	1	Milton Urban Compact	1314	2	Saxtons River Village
0504	1	Island Pond Urban Compact	1317	1	Townshend Village
0603	1	Enosburg Falls Village	1320	2	Westminster Village
0611	1	Richford Urban Compact	1321	1	Jacksonville Village
0615	1	Swanton Village	1407	1	Chester-Chester Depot Urban
0701	1	Alburgh Village			Compact
0802	1	Cambridge Village	1408	1	White River Jct. Urban Compact
0802	2	Jeffersonville Village	1408	2	Wilder Urban Compact
0805	1	Hyde Park Village	1410	1	Ludlow Village
0806	1	Johnson Village	1418	1	Springfield Urban Compact
0807	1	Morrisville Village	1418	2	North Springfield Urban Compact
0907	1	Newbury Village	1420	1	Perkinsville Village
0907	2	Wells River Village	1423	1	Windsor Urban Compact
0909	1	Randolph Urban Compact	1424	1	Woodstock Village

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