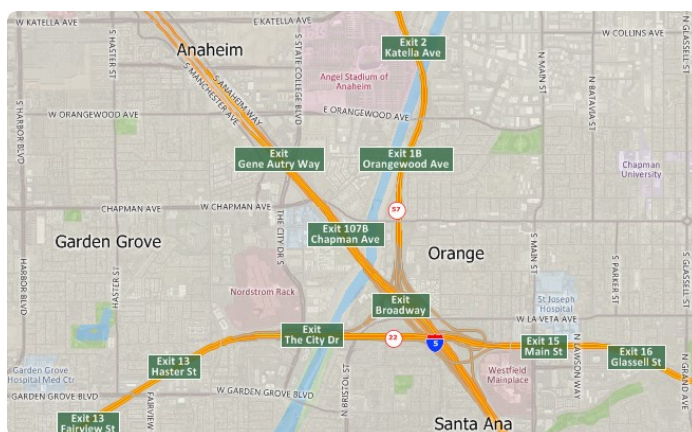# Highway Exit and Interchange Locations

Free point layers of all signed and numbered highway exits are now downloadable for free to users of the latest version of Maptitude that are licensed to use the USA or Canada Country Packages. Don't have the latest version? **Purchase or upgrade to the latest version of Maptitude** to use this premium data.

When choosing the location for a new facility, whether it is using existing stock or new construction, several factors need to be considered. Maptitude provides tools to evaluate many of these factors including labor presence and demographics, traffic, network accessibility, and proximity to other businesses. The Highway Exit data provides some of the key information needed to evaluate sites for network accessibility based on proximity to major highways and interchanges.

The Highway exit layer provides a nationwide reference for all signed and numbered highway exits, including the latitude and longitude, number, and name for each one.

Highlights:

- Allows site location analysts to determine the nearest highway interchange
- Can be used to determine the proximity to a chosen or desired interchange
- Applications include site location assessment, commercial real estate, franchise development, and accessibility studies
- Can be used in conjunction with the AADT data (U.S. only) to determine traffic volumes around a chosen exit.

Download Exit/Interchange Layer	Buy/Upgrade Maptitude
(Most Recent Version of Maptitude Required)	(Required to download the Exit/Interchange Layer)

REQUIREMENTS:	Requires the most recent version of Maptitude and a USA or Canada Country Package.
USING THE LAYERS:	The layers are typically installed to your c:\ccdata folder. You can add any of these layers to a map by choosing Map > Layers > Add Layer, browsing to the install folder, typically c:\ccdata, and choosing the layers that you would like to map.
ABOUT THE DOWNLOAD:	The install codes and instructions for downloading are emailed after the shipping confirmation email. Download orders received after 3pm are usually processed the same business day, but may be processed on the next business day, excluding US federal holidays.

Tips and Tricks for Using the Highway Exit and Interchange Locations Layer

There are many ways that this information can be utilized in your site analysis. See below for instructions on some basic analysis techniques.

Downloading and Loading the Highway Exit and Interchange Locations Layers

This layer is accessible as a free download from our online store.

1. Download the data from the [Caliper Store](#). NOTE, you must have the most recent version of Maptitude in order to download the layers.
2. Once the files are downloaded, click OK, then click Install, and follow the prompts. The default save location is c:\ccdata. We recommend saving to this location.
3. To add the layer to a Maptitude map, open the map, choose ***Map>Layers***, and click Add Layer in the Layers dialog box.
4. Browse for the folder where the downloaded data are located (e.g., c:\ccdata) and find "ntHighwayExit.cdf" (ntCanadaHighwayExit.cdf for users with the Canada country Package) from this folder and click Open in the File Open dialog box.
5. Maptitude adds the "Highway Exit" layer to the map. Close the layers dialog box to see the layer on the map.

The Highway Exit and Interchange locations layer comes with default symbol, label, and autoscale settings. All of these can be adjusted to meet your own needs.

- To change the symbol, click the symbol icon to the left of the layer name in the Display Manager to display the Style dialog box. Change the symbol, size, color, and/or opacity and click OK.
- To change the autoscale settings, double-click the layer name in the Display Manager to open the Layer dialog box and click Autoscale.
- To change the labels, click the label symbol to the left of the layer name in the Display Manager to display the Labels dialog box. Change the position, font, size, and/or style on the Labels tab and change the background type, colors, and/or opacity on the Background tab.

Tagging Your Locations with the Nearest Highway Exit Name or Distance

The Highway Exit and Interchange layer is great to use as a visual tool to show on a map, but this layer can also be used with the selection and tagging tools in Maptitude to determine those that are close to your locations.

The first step to tagging is to create columns to populate. These can be added as blank columns in your spreadsheet before you import or added to the data in the map. These instructions assume that you have a map open with your data and the Highway Exit and Interchange layer loaded.

Adding columns to your data layer:

1. Right-click on the layer name that represents your locations and choose ***New Dataview***.
2. Choose ***Dataview>Table>Modify***.
3. Click **Add Field** three times to add three new fields/columns to your data.

4. Click "Field_1" that you added in the Field Name column and rename the field "Near Exit". Rename the other field that you created "Dist Exit" (this will be the straight-line distance to the nearest Exit). Rename the third field to "Count Exit" (this will be the count of Exits within a specified radius). Your field names can be different if you like, but these will be used for describing the steps in this exercise.

5. Choose "Character" from the drop-down list in the Type column for the "Near Exit" field, choose Real (8 bytes) for the "Dist Exit" field, and choose Integer (4 bytes) for the "Count Exit" field.

6. Click **OK** and **Yes** to confirm. The fields have now been added to your Dataview. Scroll the Dataview to the far right so that you can see the headings for the new fields.

Field Name	Type	Width	Deci	Index	Default	Format	Display Name
ID	Integer (4 bytes)	10		✓		None	
Longitude	Integer (4 bytes)	10		☐		None	
Latitude	Integer (4 bytes)	10		☐		None	
Near Exit	Character	32		☐		None	
Dist Exit	Real (8 bytes)	10	2	☐		None	
Count Exit	Integer (4 bytes)	8		☐		None	

Tagging your data with the nearest exit number and name:
Note, the instructions below refer to the "US Highway Exit" layer. If you are using the Canadian layers, then use the "CA Highway Exit" layer.

1. Right-click on the "Near Exit" field heading and choose **Fill** to display the Fill dialog box.
2. Choose the **Tag** option from the radio list.
3. Choose **US Highway Exit** from the Using Layer drop-down list, **All Features** from the Selection Set drop-down list, and **Label** from the Tag With drop-down list.
4. Click **OK**. Maptitude fills the field with the Exit number and the Destination for the nearest Exit.
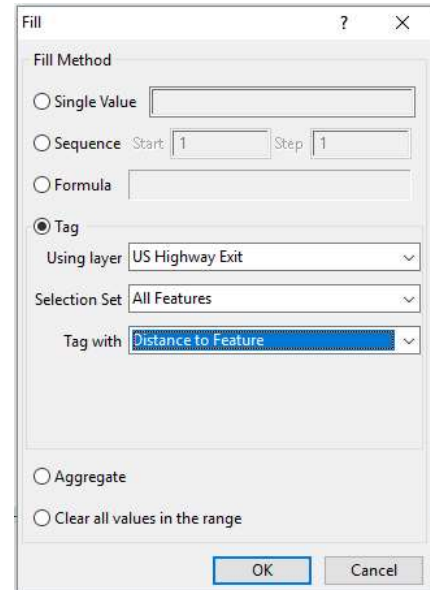
Tagging your data with the straight-line distance to the nearest highway exit:

1. Right-click on the "Dist to Exit" field heading and choose ***Fill*** to display the Fill dialog box.
2. Choose the **Tag** option from the radio list.
3. Choose **US Highway Exit** from the Using Layer drop-down list, **All Features** from the Selection Set drop-down list, and **Distance to Feature** from the Tag With drop-down list.
4. Click **OK**. Maptitude fills the field with the distance to the nearest Exit. This value will be reported in the default units for Maptitude (found on the System tab when you choose ***Edit>Preferences***).
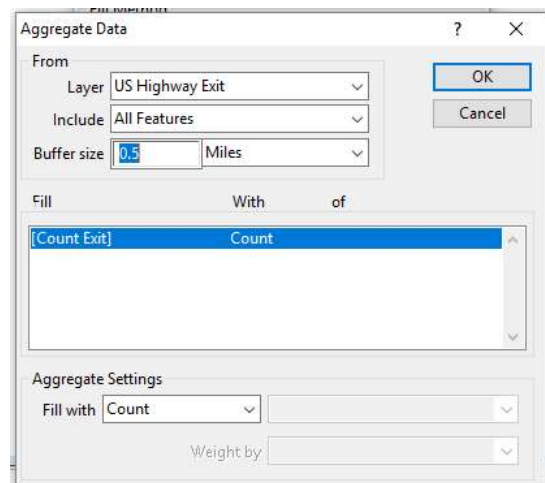
Tagging your data with the count of exits within a radius:

1. Right-click on the "Count Exit" field heading and choose ***Fill*** to display the Fill dialog box.
2. Choose the **Aggregate** option from the radio list.
3. Choose **US Highway Exit** from the Layer drop-down list and **All Features** from the Include drop-down list.
4. Enter a buffer size (this can be any distance and units you want).
5. Choose **Count** from the Fill With drop-down list.
6. Click **OK** and click **OK** again. Maptitude fills the field with count of exits within the buffer radius that you chose.

Selecting the Exits within an Area and Using the Distance and Travel Time Tables to Determine the Travel Time and Distance to/from Your Locations.

Some users might need to get more detail than the previous method allows. For these users we offer the following steps. These instructions assume that you have a map open that contains a layer with your locations of interest (stores, warehouses, etc.) and the Highway Exit and Interchange layer. This method details how a user can select all the Exits within a given area and then calculate the network distance from their locations of interest to or from the Exits.

1. Begin by selecting the exits in your area of interest. The method that you use depends on how many locations of interest you have and how broadly you wish to select the Exits.

    a. The more selective you are, the more efficient and fast the analysis will be.

    b. For larger areas (a list of nationwide locations, for example) you might consider breaking up your analysis into different groups.

    c. When conducting this analysis, you will want to limit other tasks on your computer as this can be very resource intensive.

2. Here are some of the recommended selection options. If you are familiar with the selection tools use the method of your choice:

    a. Select By location: Use this to select all of the Exits that are within a specified radius of your locations of interest.

        i. Make the Highway Exit layer the working layer

        ii. Choose **Selection > Select by location**

            1. For Layer, choose your locations of interest.

            2. Choose All Features, or a selection set of interest.

            3. Choose "within" and then specify your radius.

            4. Name the Selection Set by clicking in the "Selection Set" box and typing a name such as "Exits within 1 mile."

            5. Click OK. This creates a selected set of Exits for further analysis

    b. Select by Circle: Use this method to select all of the exits within a certain radius of one location, such as a city center or a property of interest.

        i. Make the Highway Exit layer the working layer

        ii. From the Selection Toolbar (turn this on by going to **Selection > Toolbar**) choose the Select by Circle button

        iii. Click on the map where you want the center of your circle to be and type in the size of the circle

        iv. This will create a selection set of all the exits that fall within the circle, it does not draw a circle.

c. Select by rectangle: Use this method to select all of the exits on your screen or within an area.

   i. Make the Highway Exit layer the working layer
   ii. From the Selection Toolbar (turn this on by going to **Selection > Toolbar**) choose the Select by Rectangle button
   iii. Click on the map where you want the corner of your rectangle to be and drag your cursor out to cover your area of interest.
   iv. This will create a selection set of all the exits that fall within the area you have defined, it does not draw a rectangle.

3. After you have selected the Exits, you might also need to select your locations of interest. Review the methods above if you want to filter your locations of interest. If you want to use all of your locations of interest, then proceed to the next step.

4. Go to **Tools > Routing & Direction > Distance and Travel Time Tables** to open this tool. With this tool you can choose one layer as your origins and one as your destinations.

   a. Choose your origin. If you would like to know the distance from your Locations to the Exits, then choose your Locations layer as your origin. Also choose a selection set and the appropriate Name field from your list of locations.

   b. Choose your destinations, typically the Exits. You should definitely be using a selection set, so choose one created in step 2 above. The recommended Name field would be "Label".

   c. Choose "Route" for the Method

   d. Choose Fastest for the route type, and set the appropriate threshold values

      i. Choose to skip routes that are longer than the drive time you are interested in. Something small would be appropriate, typically not more than 10 to 15 minutes.
      ii. You might also choose to only report the 1 or 2 closest locations by checking the Limit To box and choosing the number you want returned for each of your locations.

   e. It is recommended to choose the Table output option and open the results in an Excel file for use outside of Maptitude.

   f. Click OK

5. This tool can take a long time, depending on the number of locations chosen and the computer you are using. The resulting Excel file will have one column that identifies your locations, one column that identifies the Exit, and then a column each for the drive time and the drive distance.

Caliper Highway Exit & Interchange Data

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