

SIGN INVENTORY AND MANAGEMENT (SIM) PROGRAM TUTORIAL



pennsylvania

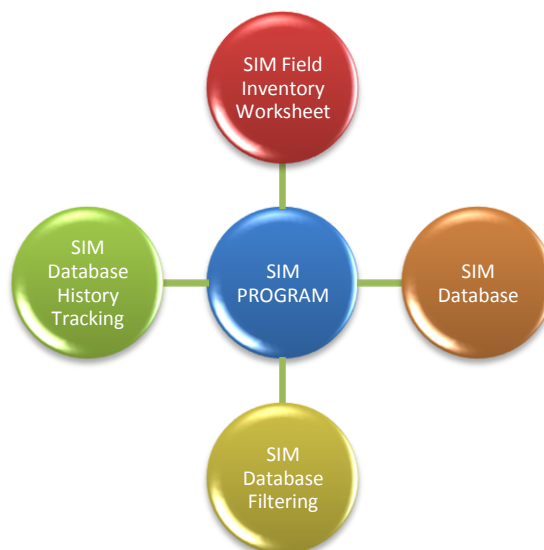
DEPARTMENT OF TRANSPORTATION

PennDOT Local Technical Assistance Program

SIGN INVENTORY AND MANAGEMENT (SIM) PROGRAM TUTORIAL

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Sign Inventory and Management (SIM) Program Introduction

A Sign Inventory and Management (SIM) Program is an area of asset management that focuses specifically on creating an inventory of traffic signs throughout a municipality in order to facilitate a practical and cost effective means of assessing and managing these assets. The SIM Program detailed in this tutorial is a Microsoft Office based program that was built to:

- Be simple to use;
- Be simple to modify to meet municipal needs;
- Provide for straight-forward data collection; and
- Provide for straight-forward data retrieval (filtering).

There are numerous other SIM programs available either commercially or through other state Local Technical Assistance Programs (LTAP) or Tribal Technical Assistance Programs (TTAP). These available programs have a wide range of functions and costs that should be considered in addition to this SIM Program so that the most appropriate program is chosen to meet each municipality's needs.

What is one reason to use a SIM Program? According to the most recent edition of Federal Highway Administration (FHWA)'s Manual on Uniform Traffic Control Devices (MUTCD), agencies have until January 2012 to establish and implement a sign assessment or management method to maintain minimum levels of sign retroreflectivity. This SIM Program includes features to help agencies manage their signs' maintained retroreflectivity levels to comply with FHWA's standard. The compliance date for regulatory, warning, and ground-mounted guide signs is January 2015, and for overhead guide signs and street name signs the compliance date is January 2018. Pennsylvania LTAP's SIM Program has been created in part to facilitate compliance with these FHWA requirements.

In general, the SIM Program presented in this tutorial will provide Pennsylvania's municipalities with the tools to complete the following tasks.

1. Initial Sign Inventory – The SIM Program will help municipalities with gathering and compiling sign data in an organized and consistent manner.
2. Asset Management – The SIM Program will allow municipalities to manage their sign assets through the Program's ability to query the sign data.
3. Sign History – The SIM Program will provide a means to actively track individual sign maintenance activities or other activities (i.e. retroreflectivity evaluations) completed after the initial sign inventory.

To facilitate the completion of these tasks, the SIM Program has four components of functionality:

1. SIM Program Field Inventory Worksheet
2. SIM Program Database
3. SIM Program Database Filtering
4. SIM Program Database History Tracking

The remainder of this tutorial will address each of these components in more detail.

Municipalities may tailor the SIM Program to meet specific needs but Pennsylvania LTAP does not provide technical assistance relating to the Program beyond its original presentation. True to the nature of LTAP, we are always willing to answer questions relating to the Program as a whole or about any one specific data field.

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IMPORTANT: *The SIM Program was built using Microsoft Office 2007 so the references and images used in this tutorial that are specific to either Microsoft Word or Microsoft Excel may not directly correlate to the version of these programs that the user is using. The functionality of the SIM Program may change based on the version of Microsoft Office being used.*

SIM Program Field Inventory Worksheet

The purpose of the SIM Program Field Inventory Worksheet is to provide an organized and consistent means of gathering needed sign inventory data for each sign while in the field so that the information may easily be entered into the SIM Program Database. The SIM Program Field Inventory Worksheet may be printed and information manually input, or the sign inventory data may be entered directly into the SIM Program Database if a field computer is used. Each data field on the SIM Program Field Inventory Worksheet correlates with a data field found within the SIM Program Database so that the transfer of data is as seamless as possible.

These data fields include:

Sign Basics

- Sign ID* (ID that the agency can assign that is unique to each sign)
*The Sign ID can be any numerical, alphabetical, or alphanumeric naming convention that the municipality chooses to use. This naming convention should be determined prior to conducting the initial inventory. The Sign ID section of the SIM Program Field Inventory Worksheet may be completed after the initial sign inventory is completed because Sign IDs may not yet be assigned prior to completing the initial inventory. It is also recommended that the Sign ID be placed on the back of each sign by either writing it on or by using weatherproof stickers.
- Activity Number (number that the agency can assign to track sign activities such as maintenance and evaluation activities for an individual sign. See the SIM Program Database History Tracking section of this tutorial)
- Inventory Date (date the sign was assessed and inventoried in the field)
- Sign Description* (per PennDOT Publication 236M, Handbook of Approved Signs)
 - Sign Designation (i.e. R 1-1)
 - Sign Name (i.e. STOP Sign)
*Signs that have numerous variations of the same type of sign such as Street Name signs (D 3-1) should be added to the SIM Program Database on an as-needed basis. See the SIM Program Database: Editing Drop-Down Lists section of this tutorial.
- Owned By (agency responsible for the sign's maintenance)

Sign Location

- Road Name (name of the road along which the sign is located)
- From (starting point for the section of road along which the sign lies)
- End (ending point for the section of road along which the sign lies)
- Distance (distance from the "From" point)
- Global Positioning System (GPS) Data (Latitude and Longitude Coordinates)

Sign Location Examples:

Example 1: The sign is located along a stretch of road between two intersections. The "From" field is the first intersection, the "End" is the second intersection, and the "Distance" is the distance from the first intersection.

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A sign is located along Main Street between 1st Street and 2nd Street and it is 250-feet from 1st Street. The “Road Name” is Main Street, the “From” is 1st Street, the “End” is 2nd Street, and the “Distance” is 250-feet.

Example 2: The sign is located between an intersection and a landmark. The “From” field is the intersection, the “End” is the landmark, and the “Distance” is the distance from the intersection.

A sign is located along Main Street between 1st Street and a Bank and it is 50-feet from 1st Street. The “Road Name” is Main Street, the “From” is 1st Street, the “End” is Bank, and the “Distance” is 50-feet. OPTION: Instead of using a landmark’s name, consider using the specific address of the landmark if available. This will help maintain the integrity of the SIM Program Database if the landmark changes name and/or use in the future.

Example 3: The sign is located at an intersection. The “From” field is an intersection you came from, the “End” is the intersection where the sign is located, and the “Distance” is noted using “AT” because the sign is at the “End” intersection. Use an “X” before the name of the “End” intersection to note that the sign is located at that particular intersection.

On Main Street, coming from the intersection of 1st Street, the sign is located at the intersection of 2nd Street. The “Road Name” is Main Street, the “From” is 1st Street, the “End” is X 2nd Street, and the “Distance” is AT.

Example 4: The sign can be quickly located by its position relative to a landmark. In this case, use “AT” in the “Distance” field to show that the sign is at the landmark in the “End” field.

A sign is located along Main Street at the ABC Coffee House as you’re driving from 1st Street. The “Road Name” is Main Street, the “From” is 1st Street, the “End” is ABC Coffee House, and the “Distance” is AT.

Example 5 (GPS): The sign is located along a stretch of road between two intersections and a GPS device is being used. The “From” field is the first intersection, the “End” is the second intersection, and the “Distance” is noted using “GPS” because the distance is irrelevant. The “Latitude” and “Longitude” fields will be populated with the GPS readings in either Degrees Minutes Seconds (i.e. 40.910233, -74.967055) or Decimal Degrees (i.e. N 40°54.6140', W 74°58.0233').

Sign Position

- Road Position (position of sign relative to motorists (i.e. left, right, overhead))
- Cardinal Position (direction the sign face is facing relative to north)
- Sign Assembly Position (location of sign on post relative to others on the post)
- Sign Lateral Offset (per PennDOT Publication 111M, TC-8702B)
- Sign Height (per PennDOT Publication 111M, TC-8702B)

Sign Characteristics

- Sign Dimensions (sign size measured in inches per PennDOT Publication 236M (Width X Height))
- Blank Material (material the sign blank is made of)
- Sign Color* (color of sign background)

*Sign Color is typically standard according to the type of sign (i.e. a Stop Sign’s background color is red) but some signs such as the Pedestrian Sign (W 11-2) may be

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either yellow or fluorescent yellow green. This data field accounts for this possible variance.

- Sheeting Material* (per ASTM D4956 “Type” designations)
*If unknown, use FHWA’s Retroreflective Sheeting Identification Guide to visually determine the ASTM Type)
- Sheeting Manufacturer (manufacturer of sheeting material)
 - Lot Number (typically identified during sign delivery)
- Expected Sign Life (approximate time, expressed in months, the sheeting material is expected to remain effective as determined by the sheeting manufacturer)

Sign History

- Sign Installation Date (date the sign was first installed or first inventoried)
- Sign Age (age, expressed in months, of the sign calculated based on the difference in time between the Sign Installation Date and the current date of the database. Sign Age is calculated within the SIM Program Database via integrated formulas)
- Expected Time to Replacement (approximate time, expressed in months, until the sign should be replaced calculated based on the difference between the Expected Sign Life and the Sign Age. Expected Time to Replacement is calculated within the SIM Program Database via integrated formulas)

Sign Retroreflectivity Evaluation*

- Date of Sign Retroreflectivity Evaluation (date the sign’s retroreflectivity was inspected, measured, or addressed through management methods)
- Assessment Method Used (per FHWA Pub No. FHWA-HRT-08-026)
 - Nighttime Visual Inspections
 - Measured Sign Retroreflectivity (record readings directly on the SIM Program Field Inventory Worksheet)
- Management Method Used (per FHWA Pub No. FHWA-HRT-08-026)
 - Expected Sign Life
 - Blanket Replacement
 - Control Signs
- Minimum Retroreflectivity Obtained? (per FHWA Pub No. FHWA-HRT-08-026)

*Consider adding additional data fields to the SIM Program Database if Measured Sign Retroreflectivity is chosen as the preferred retroreflectivity maintenance method. Municipalities may combine different assessment and management methods or parts of different methods to achieve sign retroreflectivity maintenance practices that best fit the municipality’s needs and budget.

Sign Post Characteristics

- Sign Post Type (per PennDOT Publication 111M)
- Approved Breakaway Sign Support? (per PennDOT Publication 111M)
- Sign Post Condition (i.e. rusted, bent, loose)

Sign Summary

- Compliant (does the sign meet all state and federal standards?)
- Engineering Study (if required, does the sign have a completed engineering study?)
- Ordinance (if required, does the sign have an ordinance?)

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Sign Maintenance*

- Maintenance Required? (based on the sign inventory, is sign maintenance required?)
- Description of Maintenance Activities (section devoted for use to describe needed sign maintenance and to describe maintenance activities completed)

*See the SIM Program Database History Tracking section of this tutorial for additional information on using the SIM Program Field Inventory Worksheet and Database to track maintenance activities.

Additional Notes (section for additional notes)

Please note that it is not necessary to complete every single SIM Program Field Inventory Worksheet entry while in the field. Some data fields such as Sheeting Manufacturer, Expected Sign Life, Sign Age, Expected Time to Replacement, etc. can be completed once the physical and measurable sign data has been obtained. Some municipalities may even elect to completely remove these data fields from the Worksheet altogether.

IMPORTANT: Many of the data fields require background knowledge of both State and Federal standards relating to traffic control devices in order to expediently and accurately inventory traffic signs. A list of applicable State and Federal resources can be found on the following page. SIM Program Field Inventory Worksheets should be consistently filled out by the same individual(s) to ensure inventory consistency.

SIM Program Field Inventory Worksheet

The image displays two pages of the SIM Program Field Inventory Worksheet. The left page (Page 1) includes sections for Sign Basics (Sign ID, Maintenance Number, Inventory Date, Sign Description, Sign Name, Owned By, Sign Location (Road Name, From/End Starting Point, Distance, GPS Data, Longitude, Sign Position, Road Position, Cardinal Position)) and Sign Assembly Position (Top, 2ft from top, 3ft from top, 4ft from top, Bottom, Lateral Offset, Height). The right page (Page 2) includes sections for Sign History (Installation Date, Sign Age, Expected Time to Replacement), Sign Retroreflectivity Evaluation (Assessment Method, Management Method, Minimum Retroreflectivity Obtained), Sign Post Characteristics (Sign Post Type, Approved Breakaway Sign Support, Sign Post Condition), and Sign Maintenance (Compliance, Engineering Study, Ordinance, Maintenance Required?, Description of Maintenance Activities, Additional Notes). Both pages feature the Pennsylvania Department of Transportation logo and PennDOT Local Technical Assistance Program branding.

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PennDOT and Federal Standards Quick References:

- PennDOT Publication 212, Official Traffic Control Devices:
<ftp://ftp.dot.state.pa.us/public/PubsForms/Publications/PUB%20212.pdf>
- PennDOT Publication 236M, Handbook of Approved Signs:
<ftp://ftp.dot.state.pa.us/public/PubsForms/Publications/PUB%20236M/1-Nomenclature%20Index.pdf>
- PennDOT Publication 111M, Traffic Control Pavement Markings and Signing Standards - TC 8600 and 8700:
<ftp://ftp.dot.state.pa.us/public/PubsForms/Publications/PUB%20111M.pdf>
- PennDOT Publication 35 (Bulletin 15), Approved Construction Materials:
<ftp://ftp.dot.state.pa.us/public/PubsForms/Publications/PUB%2012.pdf>
- Federal Highway Administration (FHWA), Manual on Uniform Traffic Control Devices (MUTCD):
http://mutcd.fhwa.dot.gov/kno_2003r1r2.htm
- FHWA Publication No. FHWA-HRT-08-026, Methods for Maintaining Traffic Sign Retroreflectivity:
http://safety.fhwa.dot.gov/roadway_dept/night_visib/policy_guide/fhwahrt08026/fhwahrt08026.pdf
- FHWA Retroreflective Sheeting Identification Guide – September 2005:
http://safety.fhwa.dot.gov/roadway_dept/night_visib/sign_visib/sheetguide_sept05/

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SIM Program Database

SIM Program Database: Introduction

The SIM Program Database is a Microsoft Excel based database that consists of two worksheets.

Worksheet 1.	Database
Worksheet 2.	Drop-Downs

The Database worksheet is the main component of the Database where data input and filtering is completed. The data fields within the Database worksheet correlate directly with the data fields contained within the SIM Program Field Inventory Worksheet. Individual sign data is either entered in the Database worksheet by manually typing in the appropriate responses or by selecting a response from a pre-determined list of options within a drop-down list.

Each drop-down list has been populated with a list of options as defined in the Drop-Downs worksheet. Drop-down lists are used for certain data fields where the responses are limited and data consistency is necessary. Drop-down lists help to eliminate typing errors and maximize filter and search consistency. The options within each drop-down list have already been populated but if a user feels that they would like to add and/or remove an option or create and/or delete a data field, the Drop-Downs worksheet may be edited.

Additional data fields to consider:

- Sign text and number size
- Sign legend color
- Sign shape
- Dimensions of sign post
- Measured sign retroreflectivity readings
- Sequence Number
- Division Number
- Section Number
- Etc.

IMPORTANT: *If any of the data fields are changed in the SIM Program Database in any way, the SIM Program Field Inventory Worksheet may need to be modified to reflect these changes. Modifying the Worksheet should be simple to do by opening up the SIM Program Field Inventory Worksheet Microsoft Word document and making any necessary changes.*

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SIM Program Database: Data Input

Once a SIM Program Field Inventory Worksheet has been completed, the gathered sign data may be entered into the SIM Program Database. Open up the SIM Program Database Excel file and access the Database worksheet. Use the following procedure to input all the data for each sign, one sign at a time.

Data Input Procedure:

1. Each column header of the Database worksheet corresponds to a SIM Program Field Inventory Worksheet data field. One should be able to go straight through the Worksheet and fill in the Database.
2. Enter the information for each sign row by row, one sign per row.
3. If data was not obtained for every data field, simply skip past the blank entries.
4. For the data entries that are drop-down list enabled, a drop-down button will appear to the right of the cell when the cursor is hovering over it. When the arrow appears, click on it and a drop-down list will appear below. Select the appropriate input from the list of available options. To modify the options within a drop-down list please refer to the SIM Program Database: Editing Drop-Down Lists section of this tutorial. Please note that the drop-down buttons for a specific data entry differ from the drop-down buttons used to filter the Database as discussed in the SIM Program Database Filtering section of this tutorial.

Sign Basics			
Inventory Date	Sign Description		Own
01/01/09	R 1-1, STOP		Muni
10/01/09	R 1-1, STOP		Muni
07/03/09	R 1-1, STOP		Muni
01/01/09	R 1-1A, RIGHT LANE KEEP MOVING		State
01/02/09	S 1-1, SCHOOL		ate
01/02/09	S 1-1, SCHOOL		va
01/03/09	S 3-1, SCHOOL BUS STOP AHEAD		ate
01/03/09	S 3-1-1, SCHOOL BUS TURN AROUND		ate
01/07/09	S 3-3, SCHOOL BUS CROSSING		ini
02/23/09	S 4-3, SCHOOL (panel)		va
02/23/09	S 4-4, WHEN FLASHING		va
02/28/09	S 4-5, REDUCED SPEED (SCHOOL) ZONE AHEAD		ini
04/05/09	S 5-2, END SCHOOL ZONE		ate

5. For the data entries that require manual inputs, make a conscious effort to type in inputs the same each time where applicable. This will make filtering the Database worksheet easier and will yield more accurate results. Data fields that require entries such as dates or a calculated input have already been formatted to assist with data entry consistency.

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SIM Program Database: Editing

The SIM Program Database can be easily edited to meet each municipality's specific sign inventory needs. The integrated Excel functions within the SIM Program Database are relatively basic so that the Database is both usable and modifiable by most Microsoft Office users. Most users should be able to find answers on how to modify the Database by utilizing the Microsoft Excel Help menu, but if additional clarification is needed, the following sections have been included in this tutorial to provide specific examples of how the Database may be modified.

IMPORTANT: Some of the data fields within the SIM Program Database are time sensitive, as in they are subject to change over time based on the most current State and Federal standards. An example of this is the drop-down list for Sign Descriptions. Occasionally the sign designations or sign names change in PennDOT Publication 236M. The contents of the SIM Program Database are only as current as the time that it was created and it is the municipality's responsibility to ensure that the SIM Program Database is updated as needed.

SIM Program Database: Editing Drop-Down Lists

Some municipalities may desire to add or remove options from one or more drop-down lists to better meet their specific inventory needs. To do this, select the Drop-Down worksheet within the SIM Program Database, and complete the following steps:

1. Identify the data field requiring modification. Type in an option or delete out an option from the existing list. Where in the list the new option is inserted will be where the option appears in the modified drop-down list.

	D	E	F
	CardinalPosition	SignAssemblyPosition	BlankMaterial
	North	Top	Aluminum
	Northeast	2nd From Top	Steel
	East	3rd From Top	Wood
	Southeast	4th From Top	Composite
	South	Bottom	
	Southwest	New Option	
	West		
	Northwest		

2. The reference name for the drop-down list found in the **Name Box** now has to be modified to reflect the new list of options. The existing reference names are unique to the SIM Program Database as first acquired. As an example, the image below depicts an existing list of options and its associated reference name.

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Get External Data		Connections		Sort & Filter	
SignAssemblyPosition					
C			E		
1	RoadPosition	Position	SignAssemblyPosition		
2	Median	North	Top		
3	Right	Northeast	2nd From Top		
4		East	3rd From Top		
5		Southeast	4th From Top		
6		South	Bottom		
7			New Option		
8					
9		Northwest			
10					

Since the drop-down list was modified to include “New Option”, the reference name needs to be modified to include the new option. This is done by first highlighting all of the cells to be included in the new list. Next, in the **Name Box**, type in a new reference name and hit the “enter” key. Now the new list has a unique reference name. To check that the new list has been created successfully, click the drop-down arrow on the right side of the **Name box** and make sure that the new reference name appears. Below is an example of a new list and its associated reference name.

Get External Data		Connections		Sort & Filter	
SignAssemblyPosition2					
C		D	E		
1	RoadPosition	CardinalPosition	SignAssemblyPosition		
2	Median	North	Top		
3	Right	Northeast	2nd From Top		
4		East	3rd From Top		
5		Southeast	4th From Top		
6		South	Bottom		
7		Southwest	New Option		
8					
9					
10					

- After naming the new list, navigate back to the Database worksheet and select the first cell underneath the data field for which the drop-down list was just modified. Select the **Data** tab and then the **Data Validation** icon. In the window that pops up, type in the new drop-down list reference name under **Source** (“=SignAssemblyPosition2”). To update all cells for a specific data field, check **Apply these changes to all other cells with the same settings**.

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The screenshot shows the Microsoft Excel interface with the 'Data' tab selected. A red box highlights the 'Data Validation' button in the ribbon. Another red box highlights the 'Data Tab' in the ribbon. The 'Data Validation' dialog box is open, showing the 'Settings' tab. The 'Validation criteria' section is set to 'List' with 'Ignore blank' and 'In-cell dropdown' checked. The 'Source' is set to '=SignAssemblyPosition2'. The 'Apply these changes to all other cells with the same settings' checkbox is checked. The background shows a worksheet named 'Sign Position' with columns for 'Cardinal Position', 'Sign Assembly Position', and 'Sign Lateral Offset'. The 'Sign Assembly Position' column contains various options like 'Top', 'Bottom', '2nd From Top', and '3rd From Top'.

- Next click the **OK** button to successfully complete modifying the drop-down list. Click on one of the drop-down buttons to check that the new option has been successfully added to the drop-down list.

IMPORTANT: *The steps above are only necessary when adding or removing options within a drop-down list. If an option is only being edited, there is no need to create a new reference list and re-reference the list in the Database worksheet. When creating a brand new data field and an associated drop-down list, a similar process as explained above may be used.*

SIM Program Database Filtering

SIM Program Database Filtering: Introduction

SIM Program Database Filtering is the process of taking the SIM Program Database and obtaining specific information tailored to criteria that the municipality elects to use. This process involves filtering one or more data fields so that the remaining sign data only includes that information that the municipality wishes to see. This resulting data should then be used to more effectively manage sign assets. The total number of possible filters and the combination of filters is too many to list but the following list of filters will result in typical outputs for use by most municipalities.

Common SIM Program Database Filters:

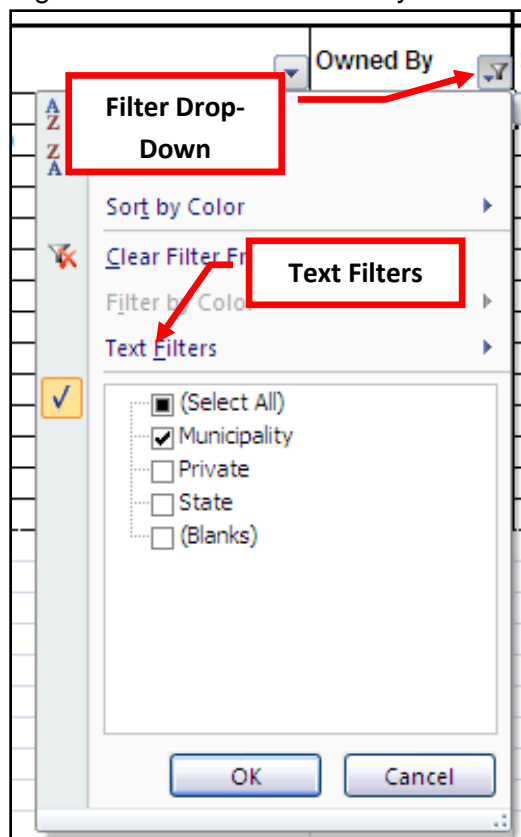
1. Signs by Road – Filter: “Road Name”
2. Signs by Type of Sign – Filter: “Sign Description”
3. Signs by Age – Filter: “Sign Age”
4. Signs by Condition – Filter: “Compliance”
5. Signs by Required Retroreflectivity – Filter: “Minimum Retroreflectivity Obtained”

The municipality may also use their SIM Program Database to get even more specific results such as a list of signs on a specific road that don’t meet the required minimum levels of retroreflectivity. This would require filtering both the “Road Name” and “Minimum Retroreflectivity Obtained” data fields simultaneously. The possibilities are almost endless!

SIM Program Database Filtering: Procedure

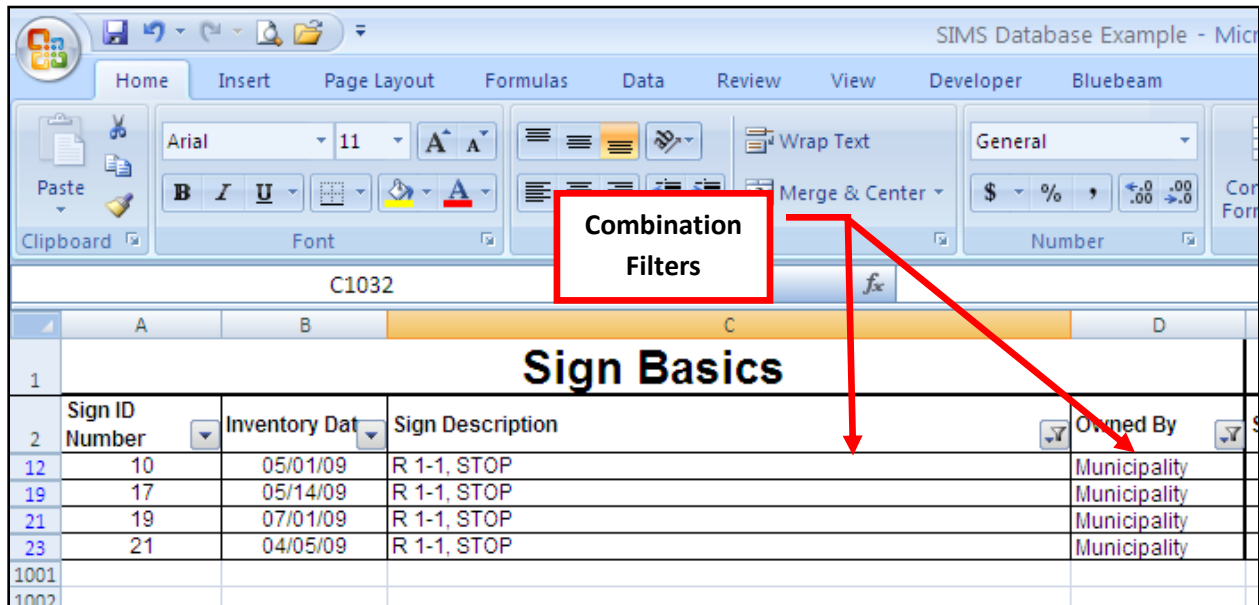
This section of the tutorial focuses on filtering the SIM Program Database to obtain any combination of sign data. To begin filtering, select the Database worksheet within the SIM Program Database Excel file, and complete the following:

1. Identify the data field to be filtered. Click on the drop-down icon to the right of the data field and all of the filtering options will appear. All of the sign data that has been entered in for that particular data field will appear towards the bottom of the drop-down list. To filter, click the **(Select All)** check box to deselect all options. Then, select the check box(es) next to the option(s) to be filtered. Once all options are checked, click the **OK** button. Now only those options that were checked will be displayed in the SIM Program Database.
2. If the list of options is too long to click every instance of what the user is looking for, the user can hover over the **Text Filters** option and several more filter options will appear. These additional filter options enable the user to manually type in a word or phrase to filter.
3. More than one data field may be filtered at a time. The user may filter as many data fields

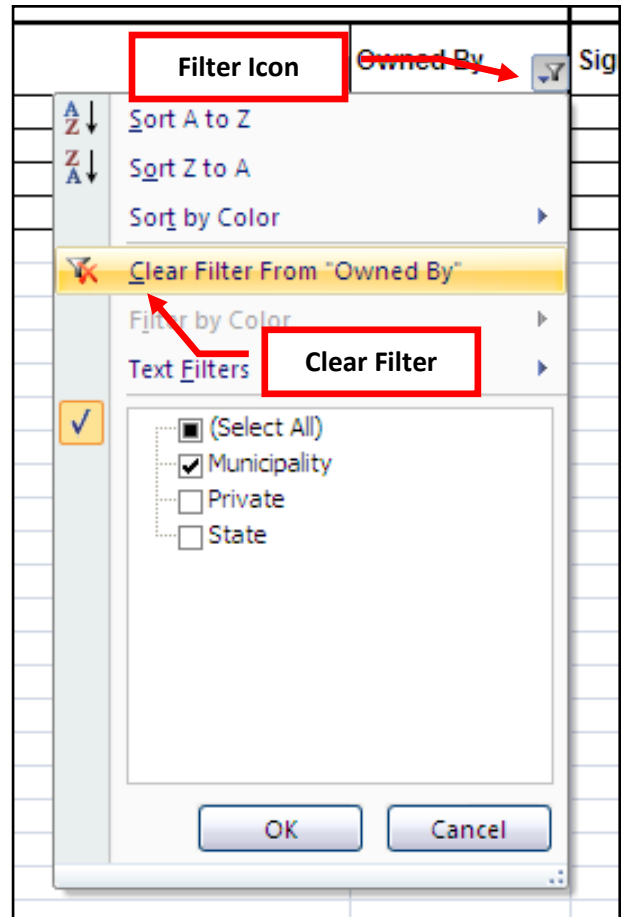


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as desired by using each data field's drop-down icon and selecting additional filters.



IMPORTANT: In order to restore the fully populated SIM Program Database, the user needs to clear each filter previously activated. To clear a filter, click the drop-down icon next to a data field, which now has the **Filter Icon** on it (showing that a filter is active). Next, select the **Clear Filter From** option which clears all filters and restores the data field to include all entered sign data.



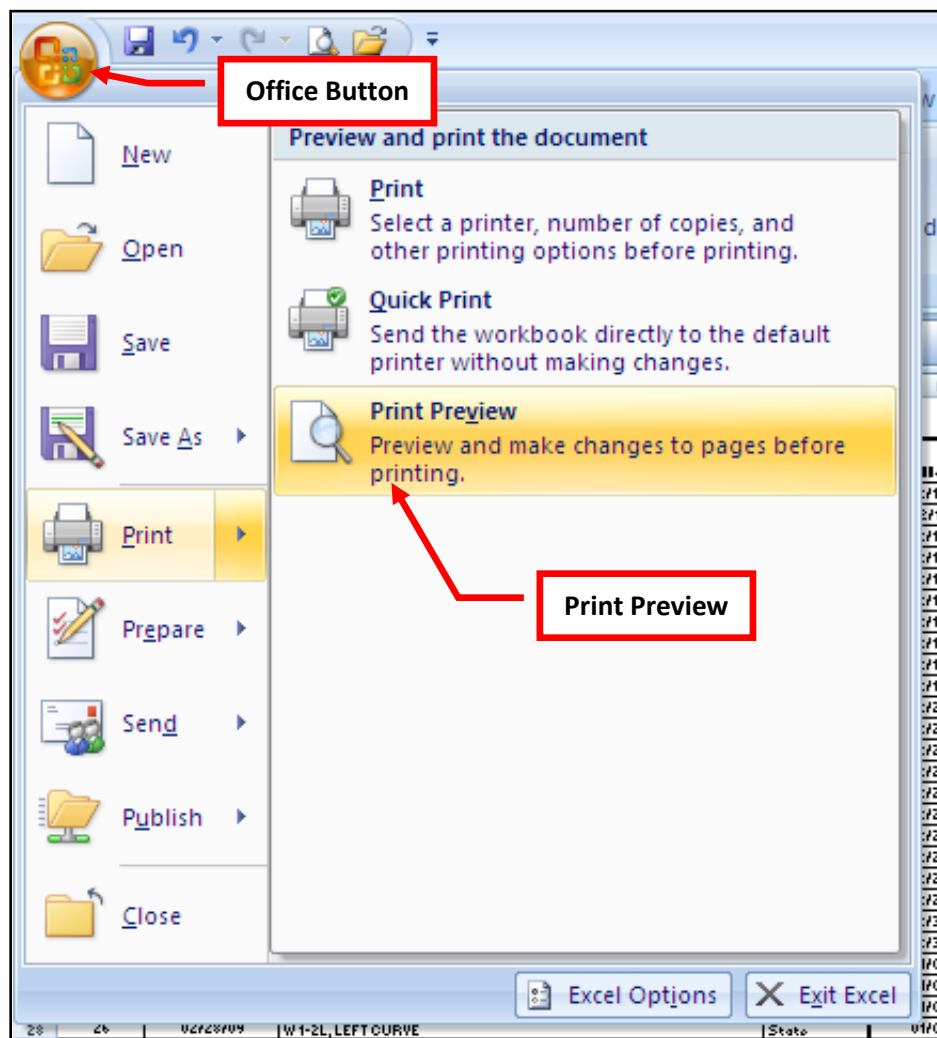
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SIM Program Database Filtering: Report Printing

This section of the tutorial briefly touches on the process of printing the filtered SIM Program Database. The municipality has already populated the SIM Program Database and filtered it to show only that information that they want to use. In order to present this data in a physical form for others to see and use, the SIM Program Database may need to be printed.

IMPORTANT: *There is no one way to print the SIM Program Database that is appropriate for all users because print settings and options vary depending on the version of Microsoft Excel being used, users' Microsoft Excel competence, and the printer being used. The existing SIM Program Database Excel file has been preset to offer one specific option for printing.*

In general, to begin printing, select the Database worksheet within the SIM Program Database Excel file. Click on the **Office Button** and select **Print**. It is encouraged that the user select **Print Preview** to check the page size, print areas, page orientation, and page margins. These can be modified by utilizing **Page Setup** within the **Print Preview** screen. To get the print preview to look and print as wanted, it may take some time to familiarize oneself with Excel's print options. Once satisfied with the print preview, simply print the Database worksheet to the local printer of choice.



SIM Program Database History Tracking

SIM Program Database History Tracking: Introduction

The initial sign inventory has been completed and successfully inputted into the SIM Program Database. What happens next? Most likely there are a number of signs that have been identified as deficient for one reason or another as noted on each SIM Program Field Inventory Worksheet and reflected in the SIM Program Database. The next logical step is to address these deficiencies. The following SIM Program Database History Tracking procedure may be used to track individual sign maintenance activities and other completed activities, such as retroreflectivity evaluations, which are not considered maintenance activities.

SIM Program Database History Tracking: Procedure

This section of the tutorial explains one way to use the SIM Program Database to actively input and track sign activities. To track sign activities, complete the following:

1. Complete a new SIM Program Field Inventory Worksheet in the field after a new sign activity has been completed. Ensure that each new Worksheet notes the correct Sign ID, which may be found on the back of sign if applicable. To save time, the new Worksheet only needs to include the sign data that has changed.
2. To log the now completed activity into the Database, open the SIM Program Database Excel file and select the Database worksheet. Find the correct sign by locating the sign's Sign ID. Next, insert a new row below the initial inventory row.
3. In the initial inventory row, type a "0" in the **Activity Number** column. All initial inventories will be denoted as such by typing a "0" in the **Activity Number** column.
4. In the new row, complete the following tasks:
 - a. Type "1" in the **Activity Number** column to denote that the new row is the first inventory completed in addition to the initial inventory. All subsequent inventories completed will be entered on a new row and will use the numbers "2", "3", "4" and so on.
 - b. Next, input any sign data that has changed between inventories as noted on the new Worksheet.
 - c. Ensure that the Sign ID remains unchanged for each additional inventory. This will allow the user to easily filter to a specific sign and see the history of the sign. If you user only wants to see the initial inventories for the whole municipality, filter the **Activity Number** column to only show "0".

Sign Basics							S
Sign ID	Activity Number	Inventory Date	Description	Owned By	Road Name	From	
1	0	01/01/09	R 1-1, STOP	Municipality	Broad Street	Elm	
1	1	10/01/09	R 1-1, STOP	Municipality	Broad Street	Elm	
1	2	07/03/09	R 1-1, STOP	Municipality	Broad Street	Elm	
2	0	01/01/09	R 1-1A, RIGH	State	Main Street	Elm	
3	0	01/02/09	S 1-1, SCHOOL	State	Chestnut Street	Elm	

IMPORTANT: An organized filing system should be setup during the initial inventorying process so as to accurately keep track of all SIM Program Field Inventory Worksheets. As each additional Worksheet is completed they should be filed with the initial inventory Worksheets. Doing so will enable a municipality to have both an electronic and physical sign inventory that can be easily cross referenced.

SIGN INVENTORY AND MANAGEMENT (SIM) PROGRAM TUTORIAL

SIM Program Questions

The SIM Program is to be used as is. LTAP will not provide technical support relating to Microsoft Office. True to the nature of LTAP, LTAP is willing to answer questions about the topic of Sign Inventory and Management and anything else relating to the content of the SIM Program.

Please contact LTAP using one of the following means:

- Call: 1-800-FOR-LTAP
- Write: LTAP – Local Technical Assistance Program
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- E-mail: ltap@state.pa.us
- Website: www.ltap.state.pa.us