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TIMS User Guide for Desktop and Tablet
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First Edition.

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Preface

Who is this guide for?
This User Guide is for people who use the Transportation Information Mapping System (TIMS) on a desktop computer or tablet. These are individuals who need to access Ohio Department of Transportation information, view that information in maps or tables, and download or share the data with others.

Potential users include:
- Executive Management
- Local Government Officials
- Engineering Departments
- Planning Departments
- Financial Departments
- Operations Personnel
- Facilities Personnel
- Communications Personnel
- Construction Managers
- Rail Commission
- External Consultants

Why read this guide?
This guide provides step-by-step instructions for accessing the various web pages of TIMS to gather the information you need for the job at hand. The type of information available to you includes:
- Project details
- Project funding and schedules
- Construction plans and specs
- Roadway characteristics
- Routes
- Traffic Counts
- Crash and Safety data
- Transit data
- Facilities and assets data
- Land use and zoning data
- Permits
- Bridges and culverts
- Demographics data
- Environmental data
- Aerial imagery
- And more!

How is this guide organized?
The guide is organized for ease of use. Each section corresponds to a major section of the TIMS website, which is accessed by a large button on the TIMS home page.
- Project Search
- Create a Map
- Data Download
- Standard PDF Maps
- Map Viewers
- Data Glossary

Within each section, we provide a list of useful tasks you can perform and step-by-step instructions for successfully completing each task. We also provide screenshots to illustrate what the web pages look like to guide you through each task.
Section 1. Getting Started with TIMS

The Transportation Information and Mapping System (TIMS) is a web-based application used to access Ohio Department of Transportation information. TIMS runs in your web-browser.

All sections in this guide refer to the version of TIMS developed for desktop computers and tablets.

1.1 Start up TIMS

1. To start the TIMS application, open your browser.
2. From the browser, enter the URL you have been given. Note: Bookmark it for future reference.
3. The Home page opens as shown in the next task.

1.2 Get familiar with the Home page

1. When you start up TIMS, the following Home page appears in your browser:

2. Each of the blue buttons takes you to a new Web page that deals with a different aspect of transportation information.

<table>
<thead>
<tr>
<th>Button</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Search</td>
<td>Search for transportation project information.</td>
</tr>
<tr>
<td>Create a Map</td>
<td>View and search ODOT transportation data to create custom maps.</td>
</tr>
<tr>
<td>Data Download</td>
<td>Download geodata by district, state, or transportation project.</td>
</tr>
<tr>
<td>Standard PDF Maps</td>
<td>Generate maps with specific layouts and formats.</td>
</tr>
<tr>
<td>Map Viewers</td>
<td>Access interactive maps by content focus (for example, Construction).</td>
</tr>
<tr>
<td>Data Glossary</td>
<td>Search for and view dataset and field descriptions stored in the database.</td>
</tr>
</tbody>
</table>

Note: When you hover over each of the blue buttons, a helpful tool tip appears telling you what the button does.
3. The Search field appears on every TIMS webpage. It lets you search for information by Project ID (PID).

   a. Enter a specific PID and press the magnifying glass icon or press the Enter or Return key. A Project Information page will appear for that project.

   b. For details about searching for projects, see Project Search.

1.3 Access standard links

The menu of standard links across the bottom of every web page takes you to these pages:

<table>
<thead>
<tr>
<th>Link</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>Returns you to the TIMS Home page.</td>
</tr>
<tr>
<td>Help</td>
<td>Opens a PDF version of the TIMS User Guide for Desktop and Tablets in a new browser window or tab.</td>
</tr>
<tr>
<td>About</td>
<td>Provides information about all supported browsers for TIMS.</td>
</tr>
<tr>
<td>Contact</td>
<td>Provides contact information for the Ohio Department of Transportation if you have any problems with the TIMS application.</td>
</tr>
<tr>
<td>Privacy</td>
<td>Opens a page with the privacy notice.</td>
</tr>
<tr>
<td>Ohio.gov</td>
<td>Takes you to the Ohio.gov website.</td>
</tr>
<tr>
<td>Login</td>
<td>Provides a login screen for the TIMS Administrator to log in and perform administrative functions.</td>
</tr>
</tbody>
</table>
Section 2. Project Search

The Project Search section of the TIMS website lets you search for transportation project information.

2.1 Display the Project Search page.

1. From the Home page, press the Project Search button. The Project Search page appears.

2.2 Enter search criteria in user input area

1. From the top of the Search Transportation Project page, enter your search criteria.

   a. District. Pull-down list of districts in numeric order, where District 13 represents statewide projects.
   
   b. County. Pull-down list of counties in alphabetical order. If you already selected a district, you will see only the counties in that district.
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2. As you enter the criteria, TIMS begins searching the database for data that meets your criteria; a revolving icon typically appears. Once the search completes, the search results appear at the bottom of the page in a table. For details, see the next task: View search results as records in a table.

2.3 View search results as records in a table

1. After you select search criteria in the web page, the results of your search appear at the bottom of the page. For example, suppose you selected District 1, Allen County for your search criteria. You would see all transportation records for Allen County in District 1:

2. The table of results is organized into pages.
   a. The top-left corner of the results indicates how many records appear on each page. In this example, 5 records appear per page. Change the value if you need to see more or less records.
   b. The bottom-left corner of the results shows you how many records you are viewing. In this example, you are viewing records 1 – 5 of 41,116 total entries.
   c. The bottom-right corner of the results contain buttons that let you move between pages of the Results table
      • First: Display the first page of results.
      • Previous: Display the previous page of results.
      • Next: Display the next page of results.
      • Last: Display the last page of results.
2.4 Search through the search results

1. If the number of results is large, consider using the Search field in the top-right corner of the Results table. This lets you search for records in the table by typing a few characters of text that you want to search for in each record. As you type, the search begins.

2. For example, suppose you wanted to search for all work done on bridges (maintenance, repair, replacement). By typing Bridge in the results Search field, you would see records that contain Bridge in any of their columns.

As you can see, this reduced the number of results from 41,116 entries to 64!
2.5 View details of a record

1. Once you find a record of interest in the Results table, you can view its details.
2. Identify the record of interest and press the Details button in the far-left side of the record: 
3. The Project Information page appears.

- This page contains a summary of all information about the project. This information is updated on a nightly basis.
- Projects may have multiple work locations and the PID Est. Total Construction Cost represents the total cost for ALL associated locations.
- Some of the information on the page may have links to other documents. This symbol designates a link:  

4. Scroll down to review all the information associated with the project. The information is grouped into categories for ease of reading. For example, the details about the bridge repair projects in the example are organized into these categories:
   - Overview
   - Dates and Numbers
   - Bridge Information
   - Additional Information

Note: To print the project details, use your browser’s Print feature.
2.6 View project search results as a layer on the map.
If you want to view the search results on a map, from the Project Information page, press this button:

View in map

1. The Create a Map page appears.

2. The page has several areas:
   - **Toolbar:** Black bar along top of map containing different tools for performing tasks on the map.
   - **Map Area:** Displays the map with the results.
   - **Tool Area:** Area beneath the map contains user input fields for the selected tool (none shown in this example, since no tool was chosen).
   - **Results:** Area beneath the tool area contains results from the tool. (not visible in this example).

3. For details on how to interact with the toolbar, map, tool area, and results, see Create a Map.
Section 3. Create a Map

The Create a Map section of the TIMS website deals with viewing and searching ODOT transportation data and creating custom maps for visual analysis. This is a great part of the website for those of you who like to see your data on maps.

Note: This section of the User Guide is large because of the wide variety of actions you can take when creating, viewing, and working with custom maps. That’s why we have broken it down into subsections.

3.1 View the Map
3.2 Navigate Around the Map
3.3 Find, Identify, Measure, and Bookmark Information
3.4 Work with the Results
3.5 View Additional Imagery on the Map
3.6 Add Data to Map
3.7 Filter Data on the Map
3.8 Print and Share the Map
3.1 View the Map
This subsection deals with setting up your base and map layers.

3.1.1 Get familiar with the interface
1. From the Home page, press the Create a Map button. The Create a Map page appears.

2. Here are the different areas of the map you will be working with:

   **Menu bar**

   Menu items with down arrows (b, d, e, f, g, and j) have pull-down menus with more items. **Note:** You can hover over any of the items on the menu bar for a friendly tool tip.
   a. **Set visible layers.** Specify which layers you want to appear on the map. For details, see Show and hide map layers.
   b. **Find locations on map.** Find specific map locations based on address, lat/long, route and measure, and coordinates. Then view the attributes. For details, see Find, Identify, Measure, and Bookmark Information.
   c. **Identify features on map.** Select any feature on the map to view its attributes. For details, see Find, Identify, Measure, and Bookmark Information.
d. **Select tools.** Use a number of tools to gather information about data on the map. For details, refer to any of these tasks: Find, Identify, Measure, and Bookmark Information, Add Data to Map, or Filter Data on the Map.

e. **Filter data on map.** Once you get results from using a tool, search through those results to further filter the results. For details, see Filter Data on the Map.

f. **Add data to map.** Once you have a basemap and other layers visible on the map, add additional information to the map. For details, see Add Data to Map.

g. **Set basemap.** Specify what map will be your basemap. For details, see Select basemap for a new map.

h. **Print map.** Print the full extent of the visible map. For details, see Print the map.

i. **Share map with friends.** Email a URL to others that points to the current map. For details, see Share the map with others.

j. **Adjust map height.** Change the height of the map you see displayed on your web page. For details see Adjust the size of the map.

**Interactive map and controls**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>Zoom in by increments.</td>
</tr>
<tr>
<td></td>
<td>After zooming in or out, return to original map extent.</td>
</tr>
<tr>
<td>-</td>
<td>Zoom out by increments.</td>
</tr>
</tbody>
</table>

These items impact how the map looks. For details on how to zoom in and out, see the corresponding tasks under Navigate Around the Map.

**Collapsible tool interface**

The area directly beneath the map is where you interact with any tool you have selected. For example, if you selected the Measure tool, you would see pull-down lists allowing you to select your units of measure for distance, area, and latitude and longitude. However, if you have not yet used a tool, no fields are visible in this area.

For details on how to interact with various tools, see the individual tasks in this section.
**Tool results area**

This area lies directly beneath the tool interface. This is where you see the table of results (if there are any) from the tool used. For example, if you looked up a location by address, you would see the information about that location in the results area. However, if you have not used any type of tool, no results are visible in this area.

For details on how to work with the **Results table**, see [Work with the Results](#).

### 3.1.2 Adjust the size of the map

Once you see a map on the screen ([Create a Map](#)), you can adjust its overall size.

1. From the map toolbar, select **Adjust Map Height**.
2. From the resulting pull-down list, select any of the following menu items:
   - **Hide map**. Hides the map so all you see are the map toolbar, the tool interaction area, and the **Results** table. This is useful when you have a large set of results and want to view as many rows on the screen as possible.
   - **Show small map**. Shows a map that is about one half the size of the screen.
   - **Show medium map**. Shows a map this is about one third the size of the screen.
   - **Show large map**. Shows a map that is about the full size of the screen.

**Note:** The map size preference is stored in the browser once you select the small, medium, or large option. The next time you return to the Create a Map page, the map will be restored to your preferred map height.

*Please see the next page for examples of different map sizes.*
3. Here are the comparative map sizes in an example where a user searched for a particular address.

**Hide map**

![Hide map screenshot]

**Show small map**

![Show small map screenshot]
Show medium map
3.1.3 Select a basemap for a new map

The basemap is the aerial photography or imagery that is the basis for the map. Other vector layers may lie upon it.

1. From the map toolbar on the Create a Map page, select Set basemap.
2. From the resulting pull-down list, select any of the following menu items:
   - Streets. Esri Streets map.
- **Hybrid.** Aerial photography with labels for major features.

- **Topo.** Topographic map.

- **Gray.** Light gray version of the topographic map.
- **National geographic.** National Geographic streets map.

- **Open street maps.** Esri Open Streets map.

- **OSIP 1.** Ohio State Imagery Program 1 map.
- **OSIP 2.** Ohio State Imagery Program 2 map (high-resolution imagery and elevation data). 
  *Note: OSIP 2 imagery may not be available for all areas of Ohio; that's why the example below shows a different area that of the previous OSIP 1 map.*

- **OSIP best available.** Best available Ohio State Imagery Program map.
### 3.1.4 Show and hide map layers

Once a basemap is on the screen, you can turn on and off map layers that you want to appear on top of it. **Note:** The list of available map layers has been set by the TIMS System Administrator.

1. From the map toolbar on the *Create Map* page, select **Set visible layers on map**.
2. Beneath the map you will now see groupings of map layers from which to choose. For example:

   ![Map Layers Example]

   - DTS Reference Layers
   - Boundaries
   - Road Inventory
   - DTS LRS Layers
   - Transportation

3. Once you select a group, it expands so you can see its list of layers.

   ![Expanded Map Layers]

   - HPMS
   - Scenic Byways
   - FC 2 - Other Principals
   - FC 8 - Minor Collectors
   - FC 12 - Other Freeways
   - FC 17 - Collector Urban
   - Ownership
   - Federal Truck Route
   - NHS Class
   - PC 6 - Minor Arterial
   - PC 9 - Local Road Ru.
   - PC 14 - Other Principals
   - PC 19 - Local Road U.
   - Federal Urban Area
   - Federal Aid Route
   - FC 1 - Interstate Ru.
   - FC 7 - Major Collectors
   - FC 11 - Interstate U.
   - FC 16 - Minor Arterial
   - NHS Intermediate
   - Current Segments
4. Click to highlight one or more layers to select them and they appear on both the map and the legend. In this example, the user expanded **Road Inventory** and decided to display the **Scenic Byways** layer. Notice how the legend shows all the scenic byways, and Scenic Byway 06 is displayed in the bottom-right corner of the map in light green. The legend has been updated to show the different colors that represent different scenic byways.

![Map Layers and Legend](image)

- To collapse the list of layers within any group, re-click the name of the group.
- To collapse the list of groups, re-click **Layers**.

### 3.2 Navigate around the map

When all the necessary layers are visible on the map, you will probably want to move around the map to view different areas of interest.

**Important!** If you want to scroll up and down the web page to see more of the map, use the vertical scroll bar, NOT the mouse wheel. The mouse wheel causes you to zoom in and out.

#### 3.2.1 Pan around the map

The amount of map that is visible to you may not contain the information you need to see. You can pan (move) to see other areas of the map using any of these methods:

- Click and drag the mouse to pan in any direction.
- Use the arrows on the numeric keypad to slowly move up, down, left, or right.
3.2.2 Zoom into a rectangular region

There may be times when you want to zoom into a rectangular region of the map to better view information of interest. To do so, follow these steps:
1. Imagine a box around the region of the map you want to zoom into.
2. Press the Shift key as you left-click one corner of the box, hold down the mouse button, and drag the mouse diagonally.
3. A red, outlined box should appear as you drag.
4. When the box contains the region you want to zoom into, let go of the mouse.
5. The map will zoom into the area you outlined and center it on the map.

Note: If you are zooming way in, the map may take awhile to refresh. Please be patient.

3.2.3 Zoom in incrementally

To zoom in by increments so you can see more detail on the map, use any of these methods:

- **Map control:** Press the Zoom In button.
- **Mouse:** Double-click to zoom in.
- **Mouse Wheel:** Roll your mouse wheel forward to zoom in.
- **Mouse Pad:** Press the Shift key and drag the mouse to zoom in.

3.2.4 Zoom out incrementally

To zoom out by increments and see more of the map, use any of these methods:

- **Map Control:** Press the Zoom Out button.
- **Mouse Wheel:** Roll mouse wheel backward to zoom out.
- **Mouse Pad:** Press Shift + Ctrl keys and drag the mouse to zoom out.

3.2.5 Center

To center the map on a particular feature, press the Shift key and click a location on the map.
3.3 Find, Identify, Measure, and Bookmark Information

This subsection looks at the various analytical operations you can perform.

3.3.1 Find a location by address

You can quickly discover information about an address and find it on the map.

1. From the map toolbar, click **Find locations on map** and choose **Find address or intersection**.
2. The **Find address or intersection** user input fields appear in the tool interface beneath the map.

![Find address or intersection input fields](image)

3. Enter a one or two line address, the state, and the zip code.
4. Press **Find**. The map zooms into the location and a small icon appears there. The full details of the address appear as a row in the **Results** table blow the tool interface.

![Location icon and Address details](image)

**Note**: For details on the **Zoom**, **Export**, and **Download** buttons, see: [Work with the Results](#).
5. Press **Clear** to clear the address fields in case you want to enter another address.
3.3.2 Identify the latitude and longitude of a map location

You can identify the latitude and longitude of any location on the map.

1. From the map toolbar, click **Find locations on map** and select **Find latitude/longitude**.
2. The **Find latitude/longitude** user input fields appear in the tool interface beneath the map.

3. Press the **Click on map** button and then click any location on the map.

   a. A small flag appears at that location. The latitude and longitude of the location appear beneath the button in a format like this:
      
      Lat/Long: 39.95721228934779, -83.04447418246433
   
   b. Click **Reset** to remove the flag and **Lat/Long information** so you can click another location.
3.3.3 Zoom into a feature at a particular latitude and longitude

You can quickly find a location on a map associated with a particular latitude and longitude, and then zoom into it.

1. From the map toolbar, click Find locations on map and choose Find latitude/longitude.
2. The Find latitude/longitude user input fields appear in the tool interface beneath the map.

   a. Enter the latitude in the upper field and the longitude in the lower field.
   b. Press Find. You will now zoom and center to that location on the map, marked with a flag.

   Press Clear to clear the latitude and longitude fields so you can enter new values.
3.3.5 Determine the measure at a particular location

If you do not know the route and measure of a specific location on the map, you can easily determine it.

1. From the map toolbar, click Find locations on map and choose Find route measure.
2. The Find route measure user input fields appear in the tool interface beneath the map.

3. Select either County LRS or State LRS, depending on which linear referencing system (LRS) you want to use. The selected option always appears darker than the other. In this example, County LRS is selected.
4. Make sure the appropriate road layers are displayed on the map and you have adequately zoomed into the area of interest.
5. Press the **Click on map** button and then click any location on the map.

c. A small flag appears at the selected location.

d. Scroll down to the **Results** table to see the details of the route and measure. **Note:** Scroll left and right to see all the columns in the table.

```
<table>
<thead>
<tr>
<th>OBJECTID</th>
<th>NLF_ID</th>
<th>Measure</th>
<th>Distance</th>
<th>MMin</th>
<th>MMax</th>
<th>ADDRESS</th>
<th>ZON</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SHOLLUS0000901491</td>
<td>22.526165</td>
<td>221.276464</td>
<td>28.61792325199967</td>
<td>0</td>
<td>37.1409999999962</td>
<td>6172 9TH STW</td>
</tr>
</tbody>
</table>
```

**Note:** For details on the **Zoom**, **Export**, and **Download** buttons, see: [Work with the Results](#).

e. Click **Reset** to remove the location flag and click another location for new results.
3.3.6 Show the map location of a particular route and measure

If you know the route and measure of a feature, you can quickly find that location on the map and zoom to it.

1. From the map toolbar, click **Find locations on map** and choose **Find latitude/longitude**.
2. The **Find route measure** user input fields appear in the tool interface beneath the map.

   ![Find route measure](image)

   d. Select the **County**

   e. Select the **Route**. Only those in the selected county are available for selection. You may be given the choice to select a township road, county road, state road, US highway, or federal interstate.

   f. Type the **Measure** according to the helpful tip that appears next to the measure, indicating a minimum and maximum value.
3. Press **Find**. You will now zoom and center to that location on the map, marked with a flag. In the following example, the selections were: Allen county, US 30, measure 24.00.

![Map screenshot with Find route measure interface](image)

- A small flag appears at the specified location.
- Scroll down to the **Results** table to see the details of the location. **Note:** Scroll left and right to see all the columns in the table.

![Results table](image)

**Note:** For details on the **Zoom**, **Export**, and **Download** buttons, see: *[Work with the Results]*.

- Click **Reset** to remove the location flag and click another location for new results.
3.3.7 Find a particular area of the map

There may be times where you want the map to zoom to a particular area of the map based on certain criteria.

1. From the map toolbar, click **Find locations on map** and choose **Find area on map**.
2. The **Find area on map** user input fields appear in the tool interface beneath the map.
   - If you select **County** from the top field, choose a specific county from the pull-down list of the bottom field.
   - If you select **MPO** from the top field, choose a specific municipal planning organization from the pull-down list of the bottom field. If you select **District** from the top field, choose a specific district from the pull-down list of the bottom field.
   - If you select **Urban Areas** from the top field, choose a specific urban area from the pull-down list of the bottom field.
3. Once you make your choice, press **Find** and the map automatically zooms in and highlights your area of interest. **Note:** In this example, **Allen** county was selected. [FindAREAOnMap_County.jpg]
   - Click **Clear** to remove the highlight and clear the fields so you can select enter new criteria.
3.3.8 View (identify) attributes of any point on the map

You can learn about features on the map by identifying them.

1. From the map toolbar click Identify features on a map. The Identify field appears in the tool interface beneath the map.

2. Select any layer from the pull-down list whose features you want to identify. Note: The layers in the list are all visible layers on the map.

3. Next, click any location on the map to identify its features. A red rectangle immediately appears at the location.
5. Scroll down to the Results table to review the information about the feature(s) on the layer at the location you selected. In this example, these are the features associated with the Scenic Byways layer at the selected location.

![Results Table]

Note: For details on the Zoom, Export, and Download buttons, see: Work with the Results.

### 3.3.9 Take measurements

At anytime, you can determine the area, distance, or location of any feature(s) on the map.

1. From the map toolbar, click Tools and choose Measure.
2. The Measure user input fields appear in the tool interface beneath the map.

![Measure Tool]

- **Area.** Lets you measure the area inside a closed shape, as well as the perimeter around it.
- **Distance.** Lets you measure the length of any continuous line (single start point and end point) or polyline (start point, many points in between, and end point).
- **Location.** Lets you determine the coordinates of any point on the map.
3. Using the pull-down lists, enter the units of measure you want to use for area, distance, or location.

Note: If you change the units of measure AFTER drawing a shape, the unit measures will automatically be recalculated and displayed.
4. Click the Measure button associated with what you are measuring and begin clicking on the map:
   a. **Area:**
      (1) Left-click the starting point.
      (2) Left-click other points that define the perimeter of the shape until you get close to the starting point again.
      (3) Double-click to close the shape.
      The shape appears outlined in red on the map, with the calculated area and perimeter beneath the Measure fields.

Note: In this example, assume you were determining the area of Grand Lake St. Mary’s State Park.
b. **Distance:**
   (1) Left-click the starting point.
   (2) Left-click any other points that define the shape of the line.
   (3) Double-click to finish.
   A red line appears on the map, with the calculated distance beneath the **Measure** fields.

**Note:** In this example, assume you were determining the distance between Coldwater and Montezuma.
c. **Location:** Left-click the point whose location you are determining. A red circle appears where you clicked with the location information beneath the **Measure** fields.

*Note:* In this example, assume you were determining the exact location of the intersection of Ohio State 219 and Scenic Byway 14.
3.3.10 Make and use bookmarks

It takes time to pan and zoom to just the right region of the map. Bookmarks provide shortcuts to regions on the map you consistently work with.

1. Pan and zoom to the exact region you want to bookmark.

2. From the map toolbar, click Tools and choose Bookmarks.

3. The Bookmarks user input fields appear in the tools interface beneath the map.

4. Type a name for the region and press Add. The name now appears in the list of bookmarks. See Marysville_AmericanLegionPark in the example below.

   a. In the future, no matter where you are on the map, you can click Tools and choose Bookmarks, scroll through the list of bookmarks, and press Zoom. The bookmarked region will automatically appear on the map.

   b. If you no longer want to use the bookmark, press Delete.
3.4 Work with the Results

Once you create a map and operate on it with various tools, Results layers are created. The data in these layers appears in the Results table. You can view and work with those results. Note: Not all operations produce results in the Results table.

3.4.2 Move through the pages of the Results table

When you perform a map operation that provides data in the Results table, you can interact with the table similarly to the way you interact with a project data table.

For example, suppose you zoomed into the Rickenbacker National Guard Base and used Identify to view information from the Aviation map layer about the airport there. You would see something like this, where the airport is in the red circle:

1. The results of the Identify operation are stored in a map layer called Identify Results. The Results table displays the data as follows:
   a. The rows in the table can be quite long. Use the horizontal scroll bar to see all the columns in the row.
   b. The top-left corner of the results indicates how many records appear on each page. In this example, 5 records appear per page. Change the value if you need to see more or less records.
c. The bottom-left corner of the results shows you how many records you are viewing. In this example, you are viewing record 1 of 1 total entry.

d. The bottom-right corner of the results contain buttons that let you move between pages of the Results table
   - **First**: Display the first page of results.
   - **Previous**: Display the previous page of results.
   - **Next**: Display the next page of results.
   - **Last**: Display the last page of results.

2. If the number of results is large (unlike this example), you can use the Search field in the top-right corner of the Results table. This lets you search for records in the table by typing a few characters of text that you want to search for in each record. As you type, the search begins. You can reduce the number of results in this way.

### 3.4.3 Zoom to the Results layer on the map

When you perform an operation that produces a Results layer, you may want to zoom to the location associated with the operation.

Suppose you performed an **Identify** operation mentioned earlier. When you click the **Zoom to results** button, the map zooms to the airport you identified (whose data is in the Results table).

![Map with zoomed-in location](image)

### 3.4.4 Remove the Results layer from the map

If you perform a number of operations, you may end up with a lot of Results layers, not all of which you want to keep.

1. To see the list of Results layers, go to the map toolbar and click **Set visible layers on map**.
2. When the groups of layers appear, scroll down to **Results Layers** and click.
3. You will now see any Results layers you produced.

![Layer list](image)

4. To remove a layer, click the down-arrow above the name of the Results layer.
5. From the pop-up menu, select **Remove layer**. The layer is no longer part of the map.
3.4.5 Show attributes of a Results layer

If you are looking through the list of Results layers, you may want to view their data in a table.

1. Go to the map toolbar and click Set visible layers on map.
2. When the groups of layers appear, scroll down to Results Layers and click.
3. You will now see the Results layers you produced. (in this example, Identify Results).

4. To view the attributes of the layer, click the down-arrow above the name of the Results layer.
5. From the pop-up menu, select Show attributes. The attributes will now appear in the Results table at the bottom of the web page.

3.4.7 Select a feature from the Results table and view it on a map

When viewing the Results table, you may want to see the location on the map of a feature identified in a particular row.

1. From the Results table, locate the row with the data you are interested in.
2. Click any column on the row, except the first column containing the Zoom To icon.
3. The map will highlight the feature described in that row.

3.4.8 Select a feature in the Results table and zoom to it on the map

When viewing the Results table, you may want to zoom in to see a feature of interest on the map.

1. From the Results table, locate the row with the data you are interested in.
2. Click the Zoom To icon at the far-left side of the row.
3. The map will zoom in and center upon the feature described in that row.
### 3.4.9 Export and download the attributes associated with the Results layer

Once you have data in the **Results** table associated with the **Results** layer, you can export it for later analysis using other applications.

1. Click the Export data button and select the format for the data:
   - **Excel.** The data will be exported as a spreadsheet.
   - **KMZ/KML.** The data will be exported as a track that appears on a map.
   - **Shapefile.** The data will be exported as an Esri shapefile.
   - **Geodatabase.** The data will be exported as an Esri file geodatabase.

2. A rotating image replaces the Download button while the data is exported to the desired format. When the image stops rotating, press the **Download** button.

3. The formatted data is then downloaded according to your browser settings.
   - Some browsers prompt you for a folder location, while others automatically download.
   - The downloaded file uses the same name as the **Results** layer (without any blank spaces), with the appropriate extension. For example, if you wanted to export the results from the **Identify Results** layer to an Excel spreadsheet, those exported results would be stored in a file called **Identify_Results.xls**.

### 3.5 View Additional Imagery on the Map

There may be times you need to see more detailed imagery than is available with your basemap and map layers. PathWeb and Map Channel imagery is available for this purpose.

#### 3.5.1 View ODOT PathWeb imagery associated with location

**ODOT Path Web** lets you see photographs of roadway and pavement conditions, as well as peripheral assets associated with the area of the map you are viewing.

1. Pan and zoom into the area of interest on the map. You need to zoom in far enough to clearly see the lines that represent a road.

2. From the map toolbar, click **Tools** and choose **ODOT PathWeb**.

3. Click a location directly on the road you want to view.

4. **ODOT PathWeb** opens in a new browser window or tab. **Note:** Make sure your popup blocker is disabled for this website, otherwise the ODOT PathWeb site will not open.

5. Interact with ODOT PathWeb as usual.
3.5.2 View Map Channel imagery associated with a location

Sometimes you need additional visual information when viewing a map. Map Channel lets you see a Google Street View, Google Map View, and Bing Birdseye View of the current map location. In addition, you can get geospatial information as well.

1. To see the additional information, zoom into the area of interest on the map.

2. From the toolbar, click **Tools** and choose **Map Channel**.

3. Click a location on the map.

4. Map Channel opens in a new browser window or tab.

![Map Channel Image]

Depending on the checkboxes you check in the top-left corner, you will see anywhere from one to four items associated with the location you clicked on the map:

- **Map**: Gives you the standard Google Streets map.
- **Street View**: Gives you a Google Street view of the location.
- **Bird’s Eye**: Gives you the Bing aerial photo view of the location.
- **Info**: Provides geospatial information about the location such as latitude, longitude, zoom factor, and more.
3.6 Add Data to Map
Sometimes your map needs more than just imagery (basemap and layers) to provide adequate information. In this case, you can add other data to the map, such as shapes, KML tracks, latitude, longitude, and more.

3.6.1 Add shapefile
There are times when you need to see a shapefile on the map. If you already have a shapefile containing geometric location and attribute information of geographic features, use Add shapefile.

1. From the map toolbar, click Add data to map and select Shapefile.
2. The Shapefile tool interface appears.
   a. Click Choose File to display the Open dialog.
   b. Navigate to a shapefile of your choice, select it, and click Open. Note: The shapefile you select must be a ZIP file that contains the following file types: .shp, .shx, .dbf, and .prj. The selected file cannot exceed 10 MB in size.
3. Press the Upload button to view the selected shapefile as a Results layer on the map.

   - In this example, the shapefile puts pink rectangles on the map to identify all airports. Note: If the data in the shapefile is associated with a different area of the map than you have displayed, as soon as you upload the file, the map will pan and zoom to the correct area.
If you want to hide the shapefile layer, go to the map toolbar and click **Select visible layers on map.** Scroll down and expand the **Results Layers** grouping. Select the layer to turn it off so it is no longer appears on the map.

4. The records representing the features in the shapefile appear in the **Results** table. Here is an example of the table showing the list of airports from the shapefile.

![Results table](image)

**Note:** Only the top 1000 features appear in the **Results** table.

5. Click the **Zoom To** icon for any row in the table to zoom to the location of its associated feature on the map. **Note:** You can also click **Zoom to results** to see the locations of all the features on the map, or select **Export Data** to convert the table to a specific format, and **Download** to download the data to your computer, or **Search** for information in the table. For details, see 3.4 **Work with the Results**.
3.6.2 Add KMZ/KML

There are times when you need to see a GPS track (composed of points or lines) on the map. If you already have a GPS track log in .kml or .kmz format, use Add KMZ/KML.

1. From the map toolbar, click Add data to map and select KML/KMZ.
2. The KMZ/KML tool interface appears.

   a. Click Choose File to display the Open dialog.
   b. Navigate to a .kml or .kmz file your choice, select it, and click Open. **Note:** The file you select must be available on a publicly accessible URL and cannot exceed 5 MB in size.
3. Press the Upload button to view the selected file as a Results layer on the map.

   - In this example, the .kml file puts aqua boxes on the map that represent LUC bridge deficiencies. **Note:** If the data in the .kml or .kmz file is associated with a different area of the map than you have displayed, as soon as you upload the file, the map will pan and zoom to the correct area.
   - If you want to hide the KML/KMZ layer, go to the map toolbar and click Select visible layers on map. Scroll down and expand the Results Layers grouping. Select the layer to turn it off so it is no longer appears on the map.
4. The records representing the features in the KML/KMZ file appear in the Results table. Here is an example of the table showing the list of LUC bridge deficiencies from the .kml file.

**Note:** If you selected a multi-layer .kml file, only the last processed layer will appear in the Results table. However, you can find the other layers if you go to the map toolbar, click Set visible layers on map, and then expand the Results Layers grouping. There you can toggle the visibility of each layer and show its attributes in the Results table.

![Results Table Example](image)

**Note:** Only the top 1000 features appear in the Results table.

5. Click the Zoom To icon for any row in the table to zoom to the location of its associated feature on the map. **Note:** You can also click Zoom to results to see the locations of all the features on the map, or select Export Data to convert the table to a specific format, and Download to download the data to your computer, or Search for information in the table. For details, see 3.4 Work with the Results.
3.6.3 Add LRS events

There are times when you need to see linear reference system (LRS) data on the map. If you have a .xls or .xlsx file containing LRS events (NLFID and measure), use Add LRS events.

1. From the map toolbar, click Add data to map and select LRS events.
2. The LRS events tool interface appears.

![LRS events tool interface]

   a. Click Choose File to display the Open dialog.
   b. Navigate to the .xls or .xlsx file of your choice containing LRS events, select it, and click Open.
   c. Press the Upload button to upload the selected LRS events file.
3. Next, specify the type of LRS data you are interested in adding to the map and columns in the file that contain that data.

![LRS events](image)

a. Select the appropriate button to indicate the type of LRS data you want to add to the map. The selected button turns dark blue; the unselected button remains a lighter blue.

   - **Point Events.** Add events (features) to the map that will appear as points.
   - **Line Events.** Add events (features) to the map that will appear as lines. This button is selected in the example.
   - **County LRS.** Measure values will be determined relative to county boundaries. This button is selected in the example.
   - **State LRS.** Measure values will be determined relative to state boundaries.

b. Select values from the pull-down lists to specify the columns in the LRS file where specific data is stored.

   - **NLFID Field.** This is the column that contains the unique event identifier for each event.
   - **From Measure Field.** This is the column that contains the location where measure begins for each event. This field IS required for both point and line events.
   - **To Measure Field.** This is the column that contains the location where the measure ends for each event. This field is required for line events only.
4. Press **Add** to view the LRS events as a **Results** layer on the map. **Note:** This may take awhile, depending on how many events there are, so be patient. You may also want to zoom in further.

- In this example, the .xls file puts aqua lines on the map that represent LRS events in a number of Ohio counties (the map is further zoomed into Franklin county). **Note:** If the data in the .xls or .xlsx file is associated with a different area of the map than you have displayed, as soon as you upload the file, the map will pan and zoom to the correct area.
- If you want to hide the layer, go to the map toolbar and click **Select visible layers on map**. Scroll down and expand the **Results Layers** grouping. Select the layer to turn it off so it is no longer appears on the map.

5. The records representing the events appear in the **Results** table. Here is an example of the table showing the list stations and measures.

   ![Table Example](image)

   **Note:** Only the top 1000 features appear in the **Results** table.

6. Click the **Zoom To** icon for any row in the table to zoom to the location on the map with the specified NLFID and measure. **Note:** You can also click **Zoom to results** to see the locations of all the features on the map, or select **Export Data** to convert the table to a specific format, and **Download** to download the data to your computer, or **Search** for information in the table. For details, see **3.4 Work with the Results**.
3.6.4 Add lat/long coordinates

There are times when you need to see the GPS coordinates associated with features on the map. If you have a .xls or .xlsx file containing latitudes and longitudes, use Add lat/long coordinates.

1. From the map toolbar, click Add data to map and select Lat/long coordinates.
2. The Lat/long coordinates tool interface appears.

   a. Click Choose File to display the Open dialog.
   b. Navigate to the .xls or .xlsx file of your choice containing coordinates, select it, and click Open.
   c. Press the Upload button.
3. Next, use the pull-down lists to specify the columns in the selected file containing latitude and longitude information.
4. Press **Add Coordinates** to view points with known latitudes and longitudes as a **Results** layer on the map.

- In this example, the `.xlsx` file puts green points on the map to indicate features where GPS coordinates are known. **Note:** If the data in the `.xls` or `.xlsx` file is associated with a different area of the map than you have displayed, as soon as you upload the file, the map will pan and zoom to the correct area.

- If you want to hide the **Results** layer, go to the map toolbar and click **Select visible layers on map.** Scroll down and expand the **Results Layers** grouping. Select the layer to turn it off so it is no longer appears on the map.

5. The records representing the features with known coordinates appear in the **Results** table. Here is an example of the table showing the list of features with known longitudes and latitudes.

![Results Table Example](image)

**Note:** Only the top 1000 features appear in the **Results** table.
6. Click the **Zoom To** icon for any row in the table to zoom to the location on the map with that latitude and longitude. **Note:** You can also click **Zoom to results** to see the locations of all the features on the map, or select **Export Data** to convert the table to a specific format, and **Download** to download the data to your computer, or **Search** for information in the table. For details, see 3.4 **Work with the Results**.

**3.6.5 Add geocode addresses**

There are times when you need to see addresses associated with features on the map. If you already have a `.xls` or `.xlsx` file containing addresses, use **Add geocode addresses**.

1. From the map toolbar, click **Add data to map** and select **Geocode addresses**.
2. The **Lat/long coordinates** tool interface appears.

![Geocode addresses interface](image)

   a. Click **Choose File** to display the **Open** dialog.
   b. Navigate to the `.xls` or `.xlsx` file of your choice containing address information, select it, and click **Open**.
   c. Press the **Upload** button.
3. Next, use the pull-down lists to specify the columns in the selected file containing the address information and press **Geocode**.

```plaintext
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Address column:</td>
<td>ADDRESS</td>
</tr>
<tr>
<td>Address 2 column:</td>
<td>choose</td>
</tr>
<tr>
<td>City column:</td>
<td>CITY_NAME</td>
</tr>
<tr>
<td>Zip column:</td>
<td>ZIP_CODE</td>
</tr>
</tbody>
</table>
```

a. If the Excel file does not have a column with secondary address information, you can leave that field blank (noted as “choose” in the example).

b. Press **Geocode** to view points that represent features with known addresses as a **Results** layer on the map.

- In this example, the `.xlsx` file places purple squares on the map to represent features with known addresses. **Note:** If the data in the `.xls` or `.xlsx` file is associated with a different area of the map than you have displayed, as soon as you upload the file, the map will pan and zoom to the correct area.

- If you want to hide the **Results** layer, go to the map toolbar and click **Select visible layers on map**. Scroll down and expand the **Results Layers** grouping. Select the layer to turn it off so it is no longer appears on the map.
4. The records representing the points on the map with known addresses appear in the **Results** table. Here is an example of the table showing the list of addresses.

<table>
<thead>
<tr>
<th>OBJECTID</th>
<th>AIRPORT NA</th>
<th>CITY_NAME</th>
<th>ADDRESS</th>
<th>ZIP_CODE</th>
<th>AIRPORT ID</th>
<th>AIRPORT CL</th>
<th>COUNTY_CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ADA</td>
<td>ADA</td>
<td>2646 AIRPORT RD</td>
<td>45810</td>
<td>007</td>
<td>HAR</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>AKRON FULTON INTERNATIONAL</td>
<td>AKRON</td>
<td>1436 TRIPLETT BLVD</td>
<td>44306</td>
<td>AKR</td>
<td>1</td>
<td>SUM</td>
</tr>
<tr>
<td>3</td>
<td>AKRON-CANTON REGIONAL</td>
<td>AKRON</td>
<td>5400 LAUBY RD NW, NORTH CANTON</td>
<td>44720</td>
<td>CAK</td>
<td>1</td>
<td>SUM</td>
</tr>
<tr>
<td>4</td>
<td>ALDERMAN</td>
<td>SAINT CLAIRESVILLE</td>
<td>67160 AIRPORT RD, RT 3</td>
<td>43950</td>
<td>2P7</td>
<td>3</td>
<td>BEL</td>
</tr>
<tr>
<td>5</td>
<td>ALEXANDER SALAMON</td>
<td>WEST UNION</td>
<td>2389 CROSS RD, WINCHESTER</td>
<td>45697</td>
<td>AMT</td>
<td>2</td>
<td>ADA</td>
</tr>
</tbody>
</table>

**Note:** Only the top 1000 features appear in the **Results** table.

5. You can click the **Zoom To** icon for any row in the table to zoom to the location of its associated feature on the map, or click **Zoom to results** to see the locations of all the features on the map, or select **Export Data** to convert the table to a specific format, and **Download** to download the data to your computer, or **Search** for information in the table. For details, see **3.4 Work with the Results**.
3.6.6 Add reverse geocode lat/longs

There are times when you need to see addresses associated with features on the map, but only have a .xls or .xlsx file containing latitudes and longitudes. This is when you should use **Add reverse geocode lat/longs**.

1. From the map toolbar, click **Add data to map** and select **Reverse geocode lat/longs**
2. The **Reverse geocode lat/long coordinates** tool interface appears.

   ![Reverse geocode lat/longs tool interface](image)

   a. Click **Choose File** to display the **Open** dialog.
   b. Navigate to the .xls or .xlsx file of your choice containing latitude and longitude information, select it, and click **Open**.
   c. Press the **Upload** button.
3. Next, use the pull-down lists to specify the columns in the selected file containing the latitude and longitude information and press **Reverse geocode**.

   ![Reverse geocode lat/longs tool interface](image)
6. Press **Reverse geocode** to view points with known addresses associated with their GPS coordinates as a **Results** layer on the map.

- In this example, the `.xls` file puts aqua points on the map representing features with addresses associated with their latitudes and longitudes. **Note:** If the data in the `.xls` or `.xlsx` file is associated with a different area of the map than you have displayed, as soon as you upload the file, the map will pan and zoom to the correct area.

- If you want to hide the **Results** layer, go to the map toolbar and click **Select visible layers on map.** Scroll down and expand the **Results Layers** grouping. Select the layer to turn it off so it is no longer appears on the map.

7. The records representing the points on the map appear in the **Results** table. Here is an example of the table showing the list of addresses.

    ![Results Table Example](image)

**Note:** Only the top 1000 features appear in the **Results** table.
4. Click the **Zoom To** icon for any row in the table to zoom to the location of its associated feature on the map. Note: You can also click **Zoom to results** to see the locations of all the features on the map, or select **Export Data** to convert the table to a specific format, and **Download** to download the data to your computer, or **Search** for information in the table. For details, see 3.4 Work with the Results.

### 3.7 Filter Data on the Map

There may be times when you want to search for specific information on the map and narrow down the search results by specific search criteria. You can do this in a number of ways.

#### 3.7.1 Search by attribute

If you want to identify all features on a particular map layer with a particular characteristic, use **Filter by attribute**. For example, you might want to locate the county whose county seat is Akron, OH.

1. From the map toolbar, click **Filter data on map** and choose **Filter by attributes**.
2. The **Filter by attributes** tool interface appears.

![Filter by attributes interface](image)

3. Next, use the pull-down lists to specify the criteria for the search. The format for specifying criteria is always:

   - **Select features from**: *layer* (The list of *layers* comes from visible layers on the map.)
   - **Where**: *attribute* *operator* *value* (The lists for *operator* and *value* vary, based on the attribute you select.)

For example, if you are trying to find the county whose county seat is Akron, you would enter the following information:

- **Select features from**: County
- **Where**: County Seat is Akron

![Filter by attributes interface](image)

**Note:** If you make a mistake selecting the criteria, press **Clear** to make the search fields blank again.
4. Once you specify the criteria, press Search.
   a. The map automatically zooms into the county that meets the criteria. For example, based on the criteria in the example, the map would zoom as follows. Note: Summit county is highlighted in aqua because its county seat is Akron.

![Map zoom into county meeting criteria]

b. The Results table lists the results.

![Results table with data entries]

5. Click the Zoom To icon for any row in the table to zoom to the location of its associated feature on the map. Note: You can also click Zoom to results to see the locations of all the features on the map, or select Export Data to convert the table to a specific format, and Download to download the data to your computer, or Search for information in the table. For details, see 3.4 Work with the Results.
3.7.2 Search by geography

If you want to identify all features on a particular map layer that lie within a specific geographic area (county, MPO, district, or urban area), use Filter by geography. For example, you might want to locate all railroad tracks within Allen county.

**Before You Begin:** Make sure you have the appropriate layers displayed on the map.

1. From the map toolbar, click Filter data on map and choose Filter by geography.
2. The Filter by geography tool interface appears.

3. Next, use the pull-down lists to specify the criteria for the search. The format for specifying criteria is always:
   - **Filter features from:** layer. This is the list of layers that comes from visible layers on the map.)
     **Note:** Make sure the layer you select is the one with the features you are interested in.
   - **Feature from:** type of geographic area. Your choices are: County, MPO, District, or Urban area.
   - **Choose feature:** name. Specify the name of the geographic area from the pull-down list. **Note:** This list varies depending on the type of geographic area you selected.

For example, if you are trying to locate all rail lines in Allen county, you would enter the following information:

- **Filter features from:** Railroads
- **Feature from:** County
- **Choose feature:** Allen

**Note:** If you make a mistake selecting the criteria, press Clear to make the search fields blank again.
4. Once you specify the criteria, press **Search**.
   a. The map automatically zooms into the geographic that meets the criteria. For example, based on the criteria in the example, the map would zoom in as follows to display the railroad lines in Allen county. **Note:** Allen county is highlighted, as are the railroad lines in the county.

![Map zoom example]

b. The **Results** table lists the results.

![Results table]

5. Click **Zoom To** icon for any row in the table to zoom to the location of its associated feature on the map. **Note:** You can also click **Zoom to results** to see the locations of all the features on the map, or select **Export Data** to convert the table to a specific format, and **Download** to download the data to your computer, or **Search** for information in the table. For details, see 3.4 **Work with the Results**.
3.7.3 Search by

If you want to limit the features you are looking for to those within a particular rectangular area, use \textit{Filter by rectangle}.

\textbf{Before You Begin:} Make sure you have the appropriate layers displayed on the map.

1. From the map toolbar, click \textbf{Filter data on map} and choose \textit{Filter by graphic}.
2. The \textit{Filter by geography} tool interface appears.

3. Select the layer you plan to search from the \textit{Filter features from} pull-down list. In this example, you are searching for airports within the rectangular area.
4. Next, press the **Draw rectangle** button, press down the left-mouse button and drag your cursor diagonally on the map to form a rectangle of the area you want to search. When you let go of the mouse button, the rectangle appears highlighted in yellow.

![Map with highlighted rectangle](image)

**Note:** If you make a mistake selecting the criteria, press **Clear** to make the search fields blank again.

5. Once you specify the criteria, press **Search**.
   a. The map automatically zooms and centers into the rectangular area and displays the features you were searching for. For example, based on the criteria in the example, the map would zoom as follows to show all airports and heliports in the rectangular area.

![Zoomed map with highlighted area](image)

**Note:** If you want to remove the highlighted rectangle, press the **Clear graphic** icon. 

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b. The **Results** table lists the results. In this case, there are 7 airports and heliports within the rectangular area and 5 of them are shown on the current page.

<table>
<thead>
<tr>
<th>OBJECTID</th>
<th>Class_ID</th>
<th>Associated_City</th>
<th>Airport_Name</th>
<th>Address</th>
<th>City</th>
<th>State</th>
<th>Zip_Code</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>356</td>
<td>A3</td>
<td>Columbus</td>
<td>Columbus Southwest</td>
<td>1751 Alton Rd.</td>
<td>Galway</td>
<td></td>
<td>43119</td>
<td>614-876-4080</td>
</tr>
<tr>
<td>444</td>
<td>A3H</td>
<td>Columbus</td>
<td>Department of Transportation</td>
<td>1800 W. Broad St.</td>
<td>Columbus</td>
<td></td>
<td>43220</td>
<td>614-397-2950</td>
</tr>
<tr>
<td>445</td>
<td>A3H</td>
<td>Columbus</td>
<td>Ohio State University</td>
<td>2160 West Case Road</td>
<td>Columbus</td>
<td></td>
<td>43235</td>
<td>614-292-5460</td>
</tr>
<tr>
<td>455</td>
<td>A2</td>
<td>Columbus</td>
<td>Bolton Field</td>
<td>2000 Norton Road</td>
<td>Columbus</td>
<td></td>
<td>43228</td>
<td>614-851-9900</td>
</tr>
<tr>
<td>491</td>
<td>A1</td>
<td>Columbus</td>
<td>Ohio State University</td>
<td>2160 West Case Road</td>
<td>Columbus</td>
<td></td>
<td>43230</td>
<td>614-292-7350</td>
</tr>
</tbody>
</table>

6. Click the **Zoom To** icon for any row in the table to zoom to the location of its associated feature on the map. **Note:** You can also click **Zoom to results** to see the locations of all the features on the map, or select **Export Data** to convert the table to a specific format, and **Download** to download the data to your computer, or **Search** for information in the table. For details, see **3.4 Work with the Results**.
3.7.4 View search results

Once you perform any type of search, the results appear at the bottom of the screen in a table. The following example shows the results of searching for patrol outposts in a particular rectangular area.

- The top-left corner of the table indicates how many records you want displayed per page (5 in this example).
- The bottom-left corner shows how many total records were found (23 in this example).
- The bottom-right corner contains buttons you can press to move through the pages of results (First, Previous, Next, Last). These are very useful when you have a lot or results.

3.7.5 Search through search results

Sometimes there may be so many records in the Results table that trying to move through them to find a particular record using Next and Previous may prove too time consuming. This is when Search is useful.

1. Go to the Search field in the top-right section of the table and type a value to help you find a record of interest.
2. For example, suppose you wanted to find the patrol post in Marysville. You would begin typing Marysville in the Search field. As soon as the system found a match, it would display it.

- The system performs the search as you type, so you may not have to type the entire word you are looking for.
- To see all the results records again, delete the text in the Search field.
3.7.6 Zoom to results record
Once you locate a particular record, you can zoom directly to the feature it represents on the map. Identify the record of interest.

1. Click the **Zoom to** icon in the far-left column of the record.
2. The map immediately zooms and centers to the location of the feature identified by the record. For example, if you selected the **Marysville** patrol post record from the previous example and zoomed into it, the map would look like this:

![Map with Marysville patrol post highlighted](image)

**Note:** If instead, you press the **Zoom to result** button, you will zoom to the area of the map containing ALL the results (not just the individual record).

3.7.7 Export and download search results
Anytime you produce a **Results** table, you can export those results to a file in a variety of formats.

**Before you begin:** Make sure the **Results** table contains records.

1. Press the **Export data** button above the **Results** table (top-right side).
2. From the resulting pull-down menu, select the format you prefer for export:
   - To Excel
   - To KMZ/KML
   - To Shapefile
   - To Geodatabase
3. Once you select a format, a revolving circle appears over the **Download** button. When it stops revolving, the table has been exported to the desired format.
4. Press the **Download** button to save the exported data to your computer.
   **Note:** Depending on your browser, the data may be automatically downloaded to a designated folder or you may be prompted for the folder where you want to download it.
3.8 Print and Share the Map

Other people may need to see your map. You can print the map for them or share it electronically.

3.8.1 Print the map

1. Zoom in to the area of the map you are interested in printing.

2. From the map toolbar, press **Print map**.

3. A PDF map pops up in another browser tab or window. Notice the map only displays features currently visible when you pressed **Print map**. It also has a title and a scale. **Note:** If the PDF map does not appear, you may have pop-ups disabled; check your browser settings and make sure pop-ups are allowed for the TIMS website.

4. You can now print the displayed map by using the **Print** button on the browser.
3.8.2 Share the map with others

There may be times when you want other people to see the map you have created.
1. Zoom in to the area of the map you are interested in sharing.
2. From the map toolbar, press Share map with your friends.
3. The Share tool interface appears.

- The **Url** is the link to the map.
- If you want to verify that the URL is valid, click Verify. The URL opens in a new browser tab or window.
- If you accidentally delete the URL, press Update to ensure the link represents the displayed map.
4. Copy and paste the link into an email and send the email to those whom you want to see the map.
   - When the email recipients click the link, TIMS will start up in the browser, and the map will open in the Create a Map page. Shared map links may be opened on desktop or mobile browsers.
   - **Note:** The basemap that others see will be the default basemap set up by the TIMS Administrator, which may or may not be the basemap you used.
Section 4. Data Download

The Data Download section of the TIMS website lets you download information by county, district, or state without interacting with a map.

1. From the Home page, select the Data Download button.
2. The Data Download page appears.

3. To download data for a particular area of interest within the state, enter the necessary values into one or more of the following fields. Note: If you want to download data for the entire state, leave the District, County, and PID fields blank.
   - District. Select a district from the pull-down list.
   - County. Select a county from the pull-down list. The list of counties are those associated with the selected District (or state, if you did not select a District).
   - PID. Select the project ID from the pull-down list. The list of projects are those associated with the selected County (or District if you did not select a County, or state if you did not select a District).

Note: To make the fields blank again, press Reset.
4. Next, select the layers whose data you want to export for the area of interest. **Note:** These are the layers you previously displayed using **Set visible layers on map** (from the **Create a Map** page).
   a. Click the down-arrow to expand each layer grouping and click the layers you are interested in.
   b. Click to select those whose data interests you. For example, suppose you want to look at data pulled from the **airports**, **patrol posts**, and **county** layers — data associated with the area of interest you specified: District = 02, County = Ottawa, PID = 20630.

5. Press **Export data**.
6. From the resulting pull-down menu, select the format you prefer for export:
   - To Excel
   - To KMZ/KML
   - To Shapefile
   - To Geodatabase
7. Once you select a format, a revolving circle appears over the **Download** button. When it stops revolving, the table(s) has been exported to the desired format.
8. Press the **Download** button to save the exported data to your computer.

   **Note:** Depending on your browser, the data may be automatically downloaded to a designated folder or you may be prompted for the folder where you want to download it.
Section 5. Standard PDF Maps

The Standard PDF Maps section of the TIMS website lets you generate maps with specific layouts and formats.

**IMPORTANT!** The PDF maps are generated using standardized map type definitions, and they are rendered from live database connections. For some uses, these standardized map definitions may not produce the exact results seen in other maps produced internally at ODOT, as each District often refines their program based on local needs.

### 5.1 Define and generate a PDF map

1. From the Home page, press the Standard PDF Maps button.
2. The Standard PDF Maps page appears.

3. This is where you specify the criteria for the maps generation and appearance:
   - **Map Type:** Annual Construction Work Plan, Fiscal Year Project Map, Multi-Year Work Plan, Seasonal Construction Projects, and STIP Map. **Note:** Press Map Only if you want to generate a map that has no layout elements on it (title, legend, scale, etc.).
   - **Area of Interest:** County, ODOT District, MPO, City, or Urban area. Once you select the type of area, select its value from the field beneath.
   - **Format:** PDF, JPG, or PNG
   - **Basemap:** Streets, Hybrid, Topo, National Geographic, Gray
4. Once you make your selections, you are ready to produce the map. Press **Generate Map**. A revolving circle appears over the **Download** button. When it stops revolving, the map is ready to download.

5. Press the **Download** button to save the PDF map to your computer. **Note**: Depending on your browser, the data may be automatically downloaded to a designated folder or you may be prompted for the folder where you want to download it. The default name for the map can be somewhat cryptic, so you may want to rename it.

6. Here is an example of a Seasonal Construction Project map for Adams county.

- A title appears at the top.
- A legend appears at the bottom, along with descriptive notes.
- **Note**: If you selected **Map Only**, the title, legend, and notes will not appear.
Section 6. Map Viewers

The Map Viewers section of the TIMS website lets you access interactive maps by content focus.

1. From the Home page, press the Map Viewers button.

2. The Interactive Map Viewers page appears.

3. Each button represents a different map theme. The buttons you see vary depending on what map themes the TIMS Administrator has set up for you.
4. Each button you press takes you to a different map page where the map displays only the datasets associated with the map’s theme. For example, if you pressed Construction, the Construction page would appear.

5. You can now use any of the tools in the black toolbar along the top of the map and view the results on the map and in the Results table. For details, see: Create a Map. All instructions about viewing, measuring, searching, filtering, exporting, downloading, printing, and sharing apply.
Section 7. Data Glossary

This section of the TIMS website lets you search for information in the dataset name, dataset description, field name and field description columns of all tables in the database.

This is useful in several situations:

- **Data discovery.** You are trying to find out what data is available pertaining to a particular subject. For example, you might want to find out all the fields across all the datasets that contain "traffic" in the either the field name or field description.
- **Explanation.** You need an explanation of dataset or field descriptions. For example, what does the field "AADT" represent?
- **Additional information.** You can find additional links and metadata that have to do with a particular dataset or field.

1. From the **Home** page, press the **Data Glossary** button.
2. The **Data Glossary** page appears.

3. Go to the search field at the top of the screen and enter a value that might be found in the **Name**, **Column Name**, **Type**, or **Description** columns of the database.
   - **Dataset.** Name of the dataset in the database
   - **Name.** The name displayed next to a field on the screen when you are on a particular TIMS web page.
   - **Column Name.** Name of the column in the database.
   - **Type.** Type of data stored in the database (for example, numeric, integer, text, etc.).
   - **Description.** Descriptive text explaining the data stored in the column.
4. You can enter an exact value or a partial value in the search field. For example, suppose you know there are some columns that store land cover information, but you do not know their names, and you do not know what dataset they are in. You could type **land cover** in the search field and press **Search**. The results would appear as follows:

```
Search performs a partial or wildcard search across dataset name, dataset description, field name and field description fields.
```

```
Limit search to dataset:
Choose
Optional
```

```
Search results
```

<table>
<thead>
<tr>
<th>Dataset</th>
<th>Name</th>
<th>Column Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>USGS ZZ Landcover</td>
<td>AREA_ID</td>
<td>AREA_ID</td>
<td>int</td>
<td>Unique ID for Land Cover Area</td>
</tr>
<tr>
<td>USGS ZZ Landcover</td>
<td>LC CODE</td>
<td>LC_CODE</td>
<td>int</td>
<td>Land Cover code</td>
</tr>
<tr>
<td>USGS ZZ Landcover</td>
<td>LC_DESCRIP</td>
<td>LC_DESCRIP</td>
<td>mvarchar(50)</td>
<td>Land Cover Description</td>
</tr>
</tbody>
</table>

In this example, the search saved you a lot of time, because you did not have to scroll through 1,140 entries! **Note:** Rather than searching through the entire database, you can also limit your search to a particular dataset if you know it. For example, you could have limited the previous search to **USGS ZZ Landcover** dataset, in which case, the results would have been the same, but the search would have taken less time.

5. The icons on the far left side of each record in the table do the following:

<table>
<thead>
<tr>
<th>Icon</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="icon1.png" alt="Icon" /></td>
<td>Hover over the icon to learn the purpose of the dataset referenced in the record.</td>
</tr>
<tr>
<td><img src="icon2.png" alt="Icon" /></td>
<td>Click this link to go to a URL with related information. This link is enabled if a link to related information exists.</td>
</tr>
<tr>
<td><img src="icon3.png" alt="Icon" /></td>
<td>Click to view a related document. This link is enabled if metadata for the dataset exists.</td>
</tr>
</tbody>
</table>

6. To export and download the search results, do the following:
   a. Press **Export data**.
   b. From the resulting pull-down menu, select the format you prefer for export:
      - To Excel
      - To KMZ/KML
      - To Shapefile
      - To Geodatabase
c. Once you select a format, a revolving circle appears over the Download button. When it stops revolving, the table has been exported to the desired format.

d. Press the Download button to save the exported data to your computer.

Note: Depending on your browser, the data may be automatically downloaded to a designated folder or you may be prompted for the folder where you want to download it.