Find Route

The **Find Route** tool is used to compute routes from one point to another using routing services available online. The tool allows you to evaluate routes based on time or distance, add restrictions or barriers to avoid certain roads or methods of transportation, and change the trip start time to account for expected traffic conditions.

1: Open a blank map file and add the **Streets** basemap layer.
   - Click the drop-down arrow next to **Add Data** and choose **Add Basemap**.
   - Select the **Streets** basemap and click **Add**.

2: Click **File > Sign In** and enter your information to sign in to your ArcGIS Online organizational account so that you may access the ArcGIS Online World Routing Service.

3: Open the **Find Route** dialog box and go to the **Options** tab.
4: Click on the **Impedance** drop-down box and select **Travel Time**.
This calculates shortest time routes based on historical traffic conditions at the trip start time. Additionally, routes can be calculated based on distance and time.

5: Check **Use trip start** and set the date to today’s date and the time to 8:00 AM.

6: Zoom to Seattle.

7: Click the **Add Stop by Click** tool in the **Stops** tab and add some stops on the map.
8: Click **Find Route**. When the **Directions** tab opens, click **Zoom to Route**.
Pay attention to the directions and the total travel time and distance.

![Map with route and directions](image)

9: In the **Options** tab, check **Reorder stops to find optimal route**.
This keeps the first and last stop the same, but reorders the middle stops in order to produce the most efficient route.

10: Click **Find Route** and observe the new directions, time, and distance.

![Map with re-ordered route](image)
11: In the **Options** tab, change the trip start time to 12:00 AM and click **Find Route**.

You can see that changing the start time of the trip, alters the effect of traffic on the route.

![Map showing route with traffic information]

In addition to changing the order or start time of the trip, restrictions can also be used to avoid certain routes.

12: Click **Remove All** in the **Stops** tab.

13: Click **Add Stop** and make sure **World Geocode Service (ArcGIS Online)** is selected in the **Choose a locator** drop down.

14: Enter **451 NE 6th St, Coupeville, WA 98239** and click **Find**.

15: Right-click the top candidate and click **Add as Stop to Find Route**.

16: Repeat steps 14 and 15 with **745 Washington St, Port Townsend, WA 98368**.

17: Close the **Find** window and click **Find Route**, then **Zoom to Route**.
The directions include travel across the bay in a ferry.

18: In the **Options** tab, uncheck **Use trip start** and **Reorder stops to find optimal route**.

19: Click the **Restrictions** button.

20: Check **Avoid Ferries** and change the **Preference** from **Avoid: Medium** to **Restricted**. Click **OK**.

21: Click **Find Route** and then **Zoom to Route**.

The route now goes around Puget Sound because the ferry is not an option.