Closest Facility Analysis

469 Main Street, Lawrencetown to Middleton Hospital

When finding closest facilities, you can specify how many to find and whether the direction of travel is toward or away from them. Once you've found the closest facilities, you can display the best route to or from them, return the travel cost for each route, and display directions to each facility.

When finding the closest facility, you can specify a cutoff cost beyond which ArcGIS Network Analyst should not search for a facility. For instance, you can set up a closest facility problem to search for hospitals within a 15-minute drive time of the site of an accident. Any hospitals that take longer than 15 minutes to reach will not be included in the results.

The hospitals are referred to as facilities, and the accident is referred to as an incident. ArcGIS Network Analyst allows you to perform multiple closest facility analyses simultaneously. This means you can have multiple incidents and find the closest facility (or facilities) to each incident. Finding the closest facility to an incident follows the same work flow as other network analyses. (GEOM 2022 Applied GIS Introduction to Network Analysis)

Origin-Destination Service Analysis

Total Minutes from Post Office to Destinations

- 2.44121301279
- 6.51628151183
- 8.97908940368
- 10.9768755385
- 15.2053342664
- 17.2379801085
- 18.7550736782
- 19.4598260192

Finally, you can create an origin-destination (OD) cost matrix from multiple origins to destinations. An OD cost matrix is a table that contains the total impedance from each origin to each destination. Additionally, it ranks the destinations that each origin connects to in ascending order of the time it takes to travel from that origin to each destination.

The paths from each origin to each destination are represented as straight lines on the map, which can be symbolized by color, representing which point they originate from; or by thickness, representing the travel time of each path. (GEOM 2022 Applied GIS Introduction to Network Analysis)

Roads & Railroads

- Arterial Highway (100 Series)
- Collector Highway (200-300 Series)
- Local Paved
- Local Unpaved
- Seasonal Dry Weather Road
- Cart Track
- Trail
- Abandoned Railroad

Line Features

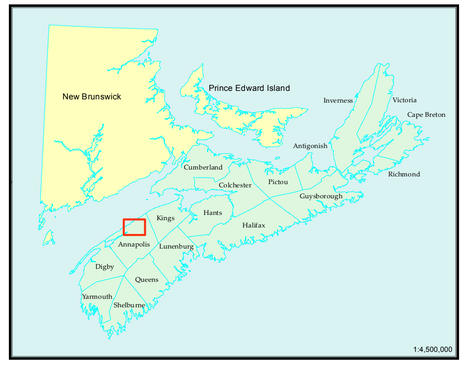
- Structure, Wall, Dam
- Bridge
- River, Stream, Coastline
- Tree Area, Line, Row or Orchard

Buildings

- Building
- Church
- School

Area Features

- Commercial Area
- Building or Structure
- Campground
- Cemetery
- Cut or Fill
- Dump
- Recreation Area
- Hydrography
- Gravel Pit
- Sewage Treatment Plant
- Swamp



Closest Facility Analysis & Origin-Destination Service Analysis: Annapolis County, Nova Scotia

0 0.5 1 2 3 4 Kilometers

1:50,000

nscc Centre of Geographic Sciences

This map is produced as a portion of the requirements of the Cartography: Digital Mapping Technology Program at the Centre of Geographic Sciences, NSCC, Lawrencetown, Nova Scotia. The product is unedited, unverified and intended for educational purposes only.

Produced by: Barbara C. Pietersma
Date: March 2009

Projection: Universal Transverse Mercator, Zone 20 North
Datum: North American Datum 1983 (NAD83)
Correction: Canadian Spatial Reference System 1998 (CSRS98)

Base Source: Nova Scotia Topographic Database (NSTDB)
1:10000 Nova Scotia Topographic Data Base
Compliments of the Nova Scotia Geomatics Centre (NSGC)
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160 Willow Street, Amherst, N.S.

Map Sheets: 1044900065100;1044900065200;1044900065300;1044900064900
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