Instructor:
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Network Analyst (2 points for any effort)

Tutorial Assignment

Complete the Network Analyst Tutorials 1-7 and answer the following questions as you work the exercises. Creating the OD Cost Matrix on Exercise 6 is not required.

Exercise 4 (1 point):
Calculate a route between GIRARD MEDICAL CENTER and CALIFORNIA PACIFIC MEDICAL CENTER. What is the total distance? 3.9 miles

Exercise 5 (2 points):
What are the two closest fire stations to 1202 Twin Peaks Blvd and what is the distance to each?
Station 12 (1.2 miles)
Station 24 (1.3 miles)

Exercise 6 (4 points):
Name the stores within a 5-minute service area of the relocated warehouse.
Galerie Carrousel du Louvre
Samaritaine
Le Marche Saint Germain
Le Bon Marche

Exercise 7(2 points):
Create a model for route analysis that differs from the example in the tutorial. Include a screenshot of both the model and the output.
Screenshot with model and output and explanation of what you did

Additional Questions

Use Network Analyst and the data provided for tutorial Exercise 5 to answer the following questions.

1) Map the shortest route, and provide directions, of an inspector who needs to visit all fire stations in one tour. Also provide the distance traveled. (3 points total)
   47.5 miles and 1 hour 29 minutes plus screen shot
   46.5 miles and 1 hour 41 minutes plus screen shot
   Either one of these is fine. 1 point for miles, time, and screen shot

2) Generate a map which shows 2, 4, and 6 minute service areas around each fire station. (1 point)
   screenshot

3) Identify a possible location for a new fire station that would help provide better coverage to the city. Explain why you chose this location (2 points).
   Location and explanation

4) What is the expected travel time from a fire station (the closest one) to the following addresses? (3 points, check I, K, and R are greater than 1 minute)

Letter	Address	Travel time in minues
A	601 Van Ness	0.96
B	2300 16th Street	0.44
C	2257 Market Street	0.60
D	310 Broderick Street	0.55
E	680 Mission Street	0.35
F	2197 Fillmore Street	0.49
G	595 Mission Street	0.61
H	217 Montgomery Street	0.82
I	2139 Polk Street	1.21
J	22 Battery Street	0.71
K	405 Howard	1.54
L	Two Embarcadero Center	
M	1 California Street	0.78
N	3419 California Street	0.55
O	1 Ferry Building	
P	2156 Chestnut Street	0.70
Q	5201 Geary Blvd.	0.78
R	54 West Portal Avenue	1.71

Tip: Solving a Shortest Path Problem with Network Analyst

Create a route with the fire stations as all of the stops (load locations – fire stations).

Then under layer properties for this route go to the analysis settings tab. You will see a box for "reorder stops to find optimal route".

You can then use the solve button to get the best sequence and route. If you minimize distance it will provide you with the total distance in the attribute table. If you minimize time it will provide you with the total time in the attribute table.