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/* NAME: Ziyu Song
 * NET ID: zsong10
 * ASSIGNMENT: Project #4
 * LAB SESSION: TR 615-730pm
 * Collaborator: Sifan Ye (sy8), Qiuyue Sun (qsun15)
 * COURSE: CSC 172
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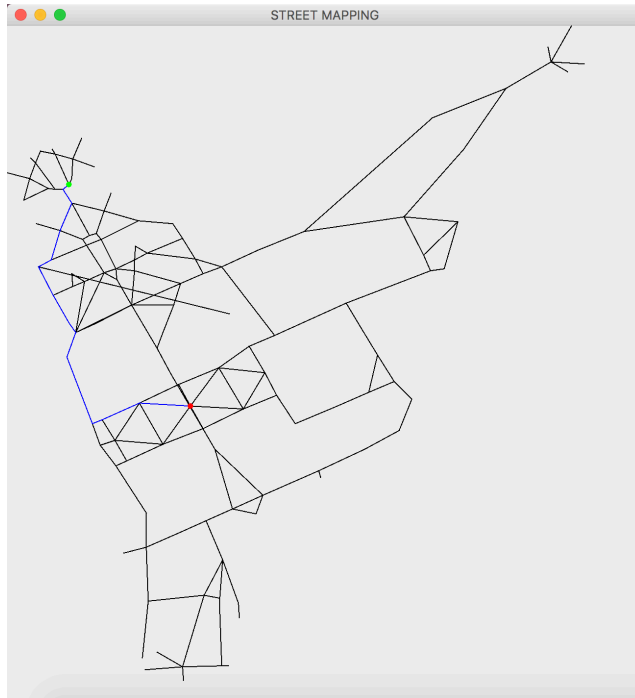
To print the map, the user need to enter the file name (“ur.txt” “monroe.txt” “nys.txt”) and “-show” argument in program arguments in eclipse. To find the shortest path between two intersection, the user need to enter “-directions” argument and two intersections. To show the meridian map, the user need to enter “-meridianmap” argument.

In the OUTPUT below, there are several examples of the output of this project.

As for extra credit, I think my map is very clear and readable. As for the shortest path map. I marked the start point green and the end point red. I painted the path as a kind of blue. In my meridian map, I painted the path as a kind of purple by referring to the RGB Color Codes Chart. In the nys map, I marked six big cities in the State of New York (NYC, Buffalo, Rochester, Syracuse, Ithaca, Tony, and Albany) with a kind of green.

OUTPUT:

ur.txt -show -directions i7 i45

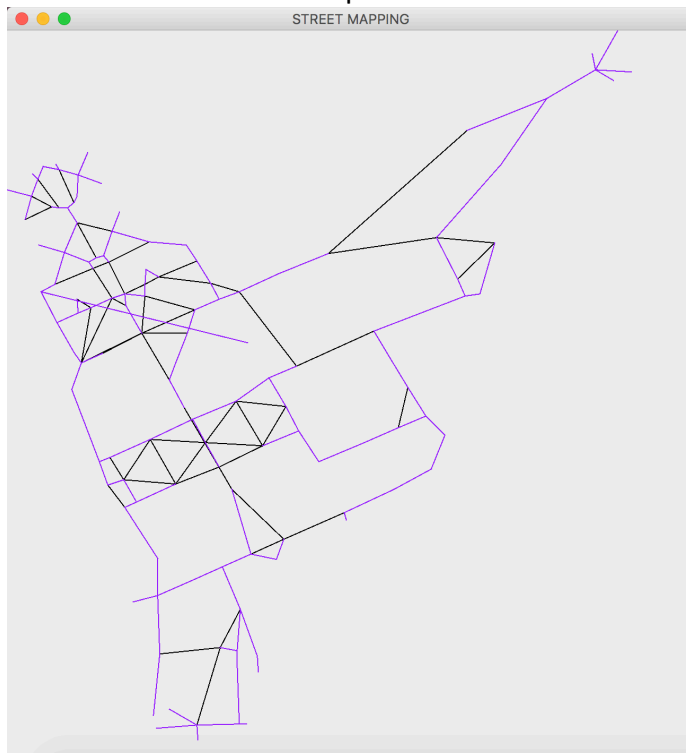


Shortest Path from i7 to i45:
 ID: i7; Latitude: 43.130128; Longitude: -77.631369
 Travel 0.002906 miles to:
 ID: i8; Latitude: 43.130079; Longitude: -77.631433

Travel 0.006545 miles to:
ID: i13; Latitude: 43.129944; Longitude: -77.631336
Travel 0.012602 miles to:
ID: i14; Latitude: 43.129666; Longitude: -77.631465
Travel 0.012945 miles to:
ID: i16; Latitude: 43.129376; Longitude: -77.631578
Travel 0.005332 miles to:
ID: i41; Latitude: 43.129311; Longitude: -77.631723
Travel 0.013435 miles to:
ID: i36; Latitude: 43.129026; Longitude: -77.631546
Travel 0.012818 miles to:
ID: i37; Latitude: 43.128759; Longitude: -77.631363
Travel 0.004737 miles to:
ID: i38; Latitude: 43.128662; Longitude: -77.631291
Travel 0.011076 miles to:
ID: i51; Latitude: 43.128415; Longitude: -77.631393
Travel 0.029947 miles to:
ID: i50; Latitude: 43.127753; Longitude: -77.631092
Travel 0.004351 miles to:
ID: i48; Latitude: 43.1278; Longitude: -77.630969
Travel 0.015077 miles to:
ID: LATTIMORE; Latitude: 43.127959; Longitude: -77.63054
Travel 0.018877 miles to:
ID: i45; Latitude: 43.127929; Longitude: -77.629939

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Total Distance Travelled: 0.150647 miles.

ur.txt -show -meridianmap



Meridian Map:

ID: r1; Start Point: ID: GILBERT-LONG; Latitude: 43.13048; Longitude: -77.631559; End Point: ID: i2; Latitude: 43.130425; Longitude: -77.631532.
Road length 0.002508 miles.

ID: r9; Start Point: ID: i6; Latitude: 43.130186; Longitude: -77.631336; End Point: ID: i7; Latitude: 43.130128; Longitude: -77.631369.
Road length 0.002696 miles.

ID: r130; Start Point: ID: i63; Latitude: 43.127293; Longitude: -77.628432; End Point: ID: HARKNESS; Latitude: 43.127227; Longitude: -77.628402.
Road length 0.002986 miles.

ID: r4; Start Point: ID: TIERNAN-SHORT; Latitude: 43.13039; Longitude: -77.631811; End Point: ID: i3; Latitude: 43.130335; Longitude: -77.63176.
Road length 0.002851 miles.

ID: r28; Start Point: ID: i17; Latitude: 43.129523; Longitude: -77.631157; End Point: ID: i18; Latitude: 43.129587; Longitude: -77.6312.
Road length 0.003060 miles.

ID: r11; Start Point: ID: i7; Latitude: 43.130128; Longitude: -77.631369; End Point: ID: i8; Latitude: 43.130079; Longitude: -77.631433.
Road length 0.002906 miles.

ID: r37; Start Point: ID: i20; Latitude: 43.12958; Longitude: -77.63099; End Point: ID: i19; Latitude: 43.129644; Longitude: -77.631039.
Road length 0.003148 miles.

ID: r14; Start Point: ID: i9; Latitude: 43.130075; Longitude: -77.63153; End Point: ID: i10; Latitude: 43.130085; Longitude: -77.631613.
Road length 0.002636 miles.

ID: r34; Start Point: ID: i19; Latitude: 43.129644; Longitude: -77.631039; End Point: ID: i22; Latitude: 43.129617; Longitude: -77.631119.
Road length 0.002762 miles.

ID: r156; Start Point: ID: i74; Latitude: 43.125359; Longitude: -77.629572; End Point: ID: GOERGEN; Latitude: 43.125357; Longitude: -77.629486.
Road length 0.002696 miles.

ID: r30; Start Point: ID: i18; Latitude: 43.129587; Longitude: -77.6312; End Point: ID: i22; Latitude: 43.129617; Longitude: -77.631119.
Road length 0.002846 miles.

ID: r12; Start Point: ID: i8; Latitude: 43.130079; Longitude: -77.631433; End Point: ID: i9; Latitude: 43.130075; Longitude: -77.63153.
Road length 0.003044 miles.

ID: r59; Start Point: ID: i26; Latitude: 43.12938; Longitude: -77.630591; End Point: ID: i32; Latitude: 43.129268; Longitude: -77.630593.
Road length 0.004809 miles.

ID: r47; Start Point: ID: i24; Latitude: 43.129294; Longitude: -77.630813; End Point: ID: i25; Latitude: 43.129182; Longitude: -77.630805.
Road length 0.004815 miles.

ID: r67; Start Point: ID: i37; Latitude: 43.128759; Longitude: -77.631363; End Point: ID: i38; Latitude: 43.128662; Longitude: -77.631291.
Road length 0.004737 miles.

ID: r153; Start Point: ID: i73; Latitude: 43.125907; Longitude: -77.629585; End Point: ID: i71; Latitude: 43.126029; Longitude: -77.629596.
Road length 0.005249 miles.

ID: r56; Start Point: ID: i35; Latitude: 43.129112; Longitude: -77.631323; End Point: ID: BURTON; Latitude: 43.129239; Longitude: -77.631328.
Road length 0.005455 miles.

ID: r101; Start Point: ID: i50; Latitude: 43.127753; Longitude: -77.631092; End Point: ID: i48; Latitude: 43.1278; Longitude: -77.630969.
Road length 0.004351 miles.

ID: r161; Start Point: ID: i75; Latitude: 43.125347; Longitude: -77.630028; End Point: ID: CSB; Latitude: 43.125214; Longitude: -77.630017.
Road length 0.005721 miles.

ID: r54; Start Point: ID: i26; Latitude: 43.12938; Longitude: -77.630591; End Point: ID: CROSBY; Latitude: 43.129515; Longitude: -77.630585.
Road length 0.005799 miles.

ID: r115; Start Point: ID: i49; Latitude: 43.127391; Longitude: -77.630687; End Point: ID: i53; Latitude: 43.127344; Longitude: -77.630816.
Road length 0.004518 miles.

ID: r3; Start Point: ID: i1; Latitude: 43.13046; Longitude: -77.631701; End Point: ID: i3; Latitude: 43.130335; Longitude: -77.63176.
Road length 0.005676 miles.

ID: r154; Start Point: ID: i72; Latitude: 43.125976; Longitude: -77.629376; End Point: ID: WILMOT; Latitude: 43.125835; Longitude: -77.62936.
Road length 0.006075 miles.

ID: r45; Start Point: ID: i23; Latitude: 43.129249; Longitude: -77.630948; End Point: ID: i24; Latitude: 43.129294; Longitude: -77.630813.
Road length 0.004651 miles.

ID: r176; Start Point: ID: i82; Latitude: 43.131338; Longitude: -77.625693; End Point: ID: ANDERSON; Latitude: 43.131487; Longitude: -77.625729.
Road length 0.006496 miles.

ID: r52; Start Point: ID: i34; Latitude: 43.129167; Longitude: -77.631178; End Point: ID: i35; Latitude: 43.129112; Longitude: -77.631323.
Road length 0.005121 miles.

ID: r41; Start Point: ID: i16; Latitude: 43.129376; Longitude: -77.631578; End Point: ID: i41; Latitude: 43.129311; Longitude: -77.631723.
Road length 0.005332 miles.

ID: r167; Start Point: ID: i76; Latitude: 43.129274; Longitude: -77.627115; End Point: ID: UHS; Latitude: 43.12929; Longitude: -77.626956.
Road length 0.005029 miles.

ID: r55; Start Point: ID: CROSBY; Latitude: 43.129515; Longitude: -77.630585; End Point: ID: i27; Latitude: 43.129443; Longitude: -77.630441.
Road length 0.005470 miles.

ID: r22; Start Point: ID: i8; Latitude: 43.130079; Longitude: -77.631433; End Point: ID: i13; Latitude: 43.129944; Longitude: -77.631336.
Road length 0.006545 miles.

ID: r79; Start Point: ID: RETTNER; Latitude: 43.128658; Longitude: -77.630258; End Point: ID: i39; Latitude: 43.128509; Longitude: -77.630333.
Road length 0.006815 miles.

ID: r21; Start Point: ID: i11; Latitude: 43.130181; Longitude: -77.631825; End Point: ID: i3; Latitude: 43.130335; Longitude: -77.63176.
Road length 0.006919 miles.

ID: r165; Start Point: ID: i77; Latitude: 43.129423; Longitude: -77.627198; End Point: ID: i76; Latitude: 43.129274; Longitude: -77.627115.
Road length 0.006906 miles.

ID: r73; Start Point: ID: i30; Latitude: 43.129245; Longitude: -77.629789; End Point: ID: i29; Latitude: 43.129388; Longitude: -77.629883.
Road length 0.006810 miles.

ID: r105; Start Point: ID: i52; Latitude: 43.127542; Longitude: -77.630993; End Point: ID: i47; Latitude: 43.127587; Longitude: -77.630827.
Road length 0.005549 miles.

ID: r2; Start Point: ID: i1; Latitude: 43.13046; Longitude: -77.631701; End Point: ID: i2; Latitude: 43.130425; Longitude: -77.631532.
Road length 0.005505 miles.

ID: r142; Start Point: ID: SIMON; Latitude: 43.127201; Longitude: -77.630711; End Point: ID: i53; Latitude: 43.127344; Longitude: -77.630816.
Road length 0.006966 miles.

ID: r150; Start Point: ID: i70; Latitude: 43.126054; Longitude: -77.629778; End Point: ID: i71; Latitude: 43.126029; Longitude: -77.629596.
Road length 0.005803 miles.

ID: r40; Start Point: ID: i40; Latitude: 43.129742; Longitude: -77.63014; End Point: ID: i28; Latitude: 43.129591; Longitude: -77.630028.
Road length 0.007372 miles.

ID: r8; Start Point: ID: i4; Latitude: 43.130374; Longitude: -77.631315; End Point: ID: i6; Latitude: 43.130186; Longitude: -77.631336.
Road length 0.008099 miles.

ID: r32; Start Point: ID: i15; Latitude: 43.129865; Longitude: -77.630953; End Point: ID: HOEING; Latitude: 43.130042; Longitude: -77.630872.
Road length 0.008012 miles.

ID: r133; Start Point: ID: i64; Latitude: 43.127047; Longitude: -77.629089; End Point: ID: GAVETT; Latitude: 43.126861; Longitude: -77.629169.
Road length 0.008370 miles.

ID: r179; Start Point: ID: i82; Latitude: 43.131338; Longitude: -77.625693; End Point: ID: SAGE; Latitude: 43.131238; Longitude: -77.625502.
Road length 0.007366 miles.

ID: r61; Start Point: ID: i24; Latitude: 43.129294; Longitude: -77.630813; End Point: ID: i32; Latitude: 43.129268; Longitude: -77.630593.
Road length 0.006983 miles.

ID: r5; Start Point: ID: i2; Latitude: 43.130425; Longitude: -77.631532; End Point: ID: i4; Latitude: 43.130374; Longitude: -77.631315.
Road length 0.007143 miles.

ID: r19; Start Point: ID: i12; Latitude: 43.129971; Longitude: -77.631902; End Point: ID: i11; Latitude: 43.130181; Longitude: -77.631825.
Road length 0.009334 miles.

ID: r76; Start Point: ID: i33; Latitude: 43.129149; Longitude: -77.630052; End Point: ID: WILSON; Latitude: 43.128934; Longitude: -77.630132.
Road length 0.009565 miles.

ID: r162; Start Point: ID: i54; Latitude: 43.129315; Longitude: -77.629569; End Point: ID: i30; Latitude: 43.129245; Longitude: -77.629789.
Road length 0.007520 miles.

ID: r6; Start Point: ID: GILBERT-COMMON; Latitude: 43.130584; Longitude: -77.631216; End Point: ID: i4; Latitude: 43.130374; Longitude: -77.631315.
Road length 0.009535 miles.

ID: r104; Start Point: ID: i50; Latitude: 43.127753; Longitude: -77.631092; End Point: ID: i52; Latitude: 43.127542; Longitude: -77.630993.
Road length 0.009576 miles.

ID: r33; Start Point: ID: i15; Latitude: 43.129865; Longitude: -77.630953; End Point: ID: i19; Latitude: 43.129644; Longitude: -77.631039.
Road length 0.009864 miles.

ID: r53; Start Point: ID: i35; Latitude: 43.129112; Longitude: -77.631323; End Point: ID: i36; Latitude: 43.129026; Longitude: -77.631546.
Road length 0.007903 miles.

ID: r114; Start Point: ID: i49; Latitude: 43.127391; Longitude: -77.630687; End Point: ID: i47; Latitude: 43.127587; Longitude: -77.630827.
Road length 0.009490 miles.

ID: r51; Start Point: ID: i23; Latitude: 43.129249; Longitude: -77.630948; End Point: ID: i34; Latitude: 43.129167; Longitude: -77.631178.
Road length 0.008021 miles.

ID: r68; Start Point: ID: i38; Latitude: 43.128662; Longitude: -77.631291; End Point: ID: LECHASE; Latitude: 43.12875; Longitude: -77.63106.
Road length 0.008165 miles.

ID: r75; Start Point: ID: i29; Latitude: 43.129388; Longitude: -77.629883; End Point: ID: i28; Latitude: 43.129591; Longitude: -77.630028.
Road length 0.009829 miles.

ID: r93; Start Point: ID: i44; Latitude: 43.128141; Longitude: -77.630078; End Point: ID: i45; Latitude: 43.127929; Longitude: -77.629939.
Road length 0.010091 miles.

ID: r7; Start Point: ID: i4; Latitude: 43.130374; Longitude: -77.631315; End Point: ID: i5; Latitude: 43.130298; Longitude: -77.631063.
Road length 0.008544 miles.

ID: r126; Start Point: ID: i58; Latitude: 43.128178; Longitude: -77.627536; End Point: ID: i61; Latitude: 43.128004; Longitude: -77.627337.
Road length 0.009731 miles.

ID: r96; Start Point: ID: i45; Latitude: 43.127929; Longitude: -77.629939; End Point: ID: HOYT; Latitude: 43.127712; Longitude: -77.629786.
Road length 0.010478 miles.

ID: r86; Start Point: ID: RUSH-RHEES; Latitude: 43.128262; Longitude: -77.629062; End Point: ID: i43; Latitude: 43.128037; Longitude: -77.62892.
Road length 0.010636 miles.

ID: r99; Start Point: ID: i38; Latitude: 43.128662; Longitude: -77.631291; End Point: ID: i51; Latitude: 43.128415; Longitude: -77.631393.
Road length 0.011076 miles.

ID: r139; Start Point: ID: i67; Latitude: 43.126538; Longitude: -77.630457; End Point: ID: WALLIS; Latitude: 43.126479; Longitude: -77.630725.
Road length 0.008772 miles.

ID: r26; Start Point: ID: i14; Latitude: 43.129666; Longitude: -77.631465; End Point: ID: i18; Latitude: 43.129587; Longitude: -77.6312.
Road length 0.008970 miles.

ID: r136; Start Point: ID: i65; Latitude: 43.126913; Longitude: -77.629443; End Point: ID: GAVETT; Latitude: 43.126861; Longitude: -77.629169.
Road length 0.008872 miles.

ID: r20; Start Point: ID: i11; Latitude: 43.130181; Longitude: -77.631825; End Point: ID: TIERNAN-COMMON; Latitude: 43.130243; Longitude: -77.632098.
Road length 0.008959 miles.

ID: r72; Start Point: ID: i33; Latitude: 43.129149; Longitude: -77.630052; End Point: ID: i30; Latitude: 43.129245; Longitude: -77.629789.
Road length 0.009214 miles.

ID: r24; Start Point: ID: i14; Latitude: 43.129666; Longitude: -77.631465; End Point: ID: LOVEJOY; Latitude: 43.129734; Longitude: -77.631747.
Road length 0.009306 miles.

ID: r58; Start Point: ID: i25; Latitude: 43.129182; Longitude: -77.630805; End Point: ID: i31; Latitude: 43.128936; Longitude: -77.630634.
Road length 0.011843 miles.

ID: r78; Start Point: ID: WILSON; Latitude: 43.128934; Longitude: -77.630132; End Point: ID: RETTNER; Latitude: 43.128658; Longitude: -77.630258.
Road length 0.012491 miles.

ID: r23; Start Point: ID: i13; Latitude: 43.129944; Longitude: -77.631336; End Point: ID: i14; Latitude: 43.129666; Longitude: -77.631465.
Road length 0.012602 miles.

ID: r118; Start Point: ID: i60; Latitude: 43.128955; Longitude: -77.628107; End Point: ID: ITS; Latitude: 43.128707; Longitude: -77.627926.
Road length 0.012064 miles.

ID: r98; Start Point: ID: i39; Latitude: 43.128509; Longitude: -77.630333; End Point: ID: TUNNEL-MOREY; Latitude: 43.128252; Longitude: -77.630162.
Road length 0.012267 miles.

ID: r25; Start Point: ID: i14; Latitude: 43.129666; Longitude: -77.631465; End Point: ID: i16; Latitude: 43.129376; Longitude: -77.631578.
Road length 0.012945 miles.

ID: r83; Start Point: ID: i55; Latitude: 43.128634; Longitude: -77.628949; End Point: ID: i42; Latitude: 43.128528; Longitude: -77.629242.
Road length 0.010247 miles.

ID: r120; Start Point: ID: i59; Latitude: 43.128432; Longitude: -77.627732; End Point: ID: i58; Latitude: 43.128178; Longitude: -77.627536.
Road length 0.012516 miles.

ID: r85; Start Point: ID: i42; Latitude: 43.128528; Longitude: -77.629242; End Point: ID: RUSH-RHEES; Latitude: 43.128262; Longitude: -77.629062.
Road length 0.012738 miles.

ID: r66; Start Point: ID: i36; Latitude: 43.129026; Longitude: -77.631546; End Point: ID: i37; Latitude: 43.128759; Longitude: -77.631363.
Road length 0.012818 miles.

ID: r122; Start Point: ID: i57; Latitude: 43.128068; Longitude: -77.627844; End Point: ID: i58; Latitude: 43.128178; Longitude: -77.627536.
Road length 0.010745 miles.

ID: r137; Start Point: ID: i65; Latitude: 43.126913; Longitude: -77.629443; End Point: ID: i66; Latitude: 43.126794; Longitude: -77.629749.
Road length 0.010865 miles.

ID: r140; Start Point: ID: i67; Latitude: 43.126538; Longitude: -77.630457; End Point: ID: GLEASON-HALL; Latitude: 43.126872; Longitude: -77.630451.
Road length 0.014342 miles.

ID: r42; Start Point: ID: i41; Latitude: 43.129311; Longitude: -77.631723; End Point: ID: i36; Latitude: 43.129026; Longitude: -77.631546.
Road length 0.013435 miles.

ID: r119; Start Point: ID: ITS; Latitude: 43.128707; Longitude: -77.627926; End Point: ID: i59; Latitude: 43.128432; Longitude: -77.627732.
Road length 0.013280 miles.

ID: r159; Start Point: ID: i75; Latitude: 43.125347; Longitude: -77.630028; End Point: ID: HYLAN; Latitude: 43.12549; Longitude: -77.630333.
Road length 0.011360 miles.

ID: r127; Start Point: ID: i61; Latitude: 43.128004; Longitude: -77.627337; End Point: ID: i62; Latitude: 43.127689; Longitude: -77.627479.
Road length 0.014238 miles.

ID: r125; Start Point: ID: i56; Latitude: 43.127761; Longitude: -77.628708; End Point: ID: i43; Latitude: 43.128037; Longitude: -77.62892.
Road length 0.013585 miles.

ID: r138; Start Point: ID: i66; Latitude: 43.126794; Longitude: -77.629749; End Point: ID: HOPEMAN; Latitude: 43.126673; Longitude: -77.630084.
Road length 0.011713 miles.

ID: r151; Start Point: ID: i71; Latitude: 43.126029; Longitude: -77.629596; End Point: ID: i68; Latitude: 43.126412; Longitude: -77.629555.
Road length 0.016494 miles.

ID: r123; Start Point: ID: i57; Latitude: 43.128068; Longitude: -77.627844; End Point: ID: MELIORA-NORTH; Latitude: 43.127931; Longitude: -77.628206.
Road length 0.012778 miles.

ID: r177; Start Point: ID: i82; Latitude: 43.131338; Longitude: -77.625693; End Point: ID: WILDER; Latitude: 43.131316; Longitude: -77.625301.
Road length 0.012319 miles.

ID: r144; Start Point: ID: HOPEMAN; Latitude: 43.126673; Longitude: -77.630084; End Point: ID: i67; Latitude: 43.126538; Longitude: -77.630457.
Road length 0.013047 miles.

ID: r39; Start Point: ID: i21; Latitude: 43.129768; Longitude: -77.630543; End Point: ID: i40; Latitude: 43.129742; Longitude: -77.63014.
Road length 0.012677 miles.

ID: r90; Start Point: ID: i43; Latitude: 43.128037; Longitude: -77.62892; End Point: ID: B&L; Latitude: 43.127898; Longitude: -77.629314.
Road length 0.013713 miles.

ID: r141; Start Point: ID: GLEASON-HALL; Latitude: 43.126872; Longitude: -77.630451; End Point: ID: SIMON; Latitude: 43.127201; Longitude: -77.630711.
Road length 0.016307 miles.

ID: r35; Start Point: ID: i15; Latitude: 43.129865; Longitude: -77.630953; End Point: ID: i21; Latitude: 43.129768; Longitude: -77.630543.
Road length 0.013505 miles.

ID: r87; Start Point: ID: i42; Latitude: 43.128528; Longitude: -77.629242; End Point: ID: MOREY; Latitude: 43.128315; Longitude: -77.629606.
Road length 0.014620 miles.

ID: r145; Start Point: ID: i66; Latitude: 43.126794; Longitude: -77.629749; End Point: ID: i68; Latitude: 43.126412; Longitude: -77.629555.
Road length 0.017492 miles.

ID: r160; Start Point: ID: i75; Latitude: 43.125347; Longitude: -77.630028; End Point: ID: HUTCH-UPPER; Latitude: 43.125324; Longitude: -77.630462.
Road length 0.013636 miles.

ID: r178; Start Point: ID: i82; Latitude: 43.131338; Longitude: -77.625693; End Point: ID: OBRIEN; Latitude: 43.131704; Longitude: -77.625452.
Road length 0.017435 miles.

ID: r128; Start Point: ID: i62; Latitude: 43.127689; Longitude: -77.627479; End Point: ID: MELIORA-SOUTH; Latitude: 43.127505; Longitude: -77.627882.
Road length 0.014896 miles.

ID: r164; Start Point: ID: i78; Latitude: 43.129807; Longitude: -77.62742; End Point: ID: i77; Latitude: 43.129423; Longitude: -77.627198.
Road length 0.017895 miles.

ID: r113; Start Point: ID: DEWEY; Latitude: 43.12755; Longitude: -77.630264; End Point: ID: i49; Latitude: 43.127391; Longitude: -77.630687.
Road length 0.014910 miles.

ID: r157; Start Point: ID: i74; Latitude: 43.125359; Longitude: -77.629572; End Point: ID: i75; Latitude: 43.125347; Longitude: -77.630028.
Road length 0.014299 miles.

ID: r102; Start Point: ID: i48; Latitude: 43.1278; Longitude: -77.630969; End Point: ID: LATTIMORE; Latitude: 43.127959; Longitude: -77.63054.
Road length 0.015077 miles.

ID: r180; Start Point: ID: i54; Latitude: 43.129315; Longitude: -77.629569; End Point: ID: GOERGEN-ATHLETIC; Latitude: 43.129478; Longitude: -77.62914.
Road length 0.015155 miles.

ID: r152; Start Point: ID: i68; Latitude: 43.126412; Longitude: -77.629555; End Point: ID: i72; Latitude: 43.125976; Longitude: -77.629376.
Road length 0.019542 miles.

ID: r103; Start Point: ID: LATTIMORE; Latitude: 43.127959; Longitude: -77.63054; End Point: ID: i44; Latitude: 43.128141; Longitude: -77.630078.
Road length 0.016451 miles.

ID: r168; Start Point: ID: UHS; Latitude: 43.12929; Longitude: -77.626956; End Point: ID: SUEB; Latitude: 43.12976; Longitude: -77.62679.
Road length 0.020839 miles.

ID: r92; Start Point: ID: MOREY; Latitude: 43.128315; Longitude: -77.629606; End Point: ID: i44; Latitude: 43.128141; Longitude: -77.630078.
Road length 0.016570 miles.

ID: r124; Start Point: ID: MELIORA-NORTH; Latitude: 43.127931; Longitude: -77.628206; End Point: ID: i56; Latitude: 43.127761; Longitude: -77.628708.
Road length 0.017341 miles.

ID: r146; Start Point: ID: i67; Latitude: 43.126538; Longitude: -77.630457; End Point: ID: i69; Latitude: 43.125995; Longitude: -77.630438.
Road length 0.023321 miles.

ID: r155; Start Point: ID: i73; Latitude: 43.125907; Longitude: -77.629585; End Point: ID: i74; Latitude: 43.125359; Longitude: -77.629572.
Road length 0.023532 miles.

ID: r147; Start Point: ID: i69; Latitude: 43.125995; Longitude: -77.630438; End Point: ID: HUTCH-LOWER; Latitude: 43.125435; Longitude: -77.630505.
Road length 0.024135 miles.

ID: r181; Start Point: ID: GOERGEN-ATHLETIC; Latitude: 43.129478; Longitude: -77.62914; End Point: ID: i79; Latitude: 43.12966; Longitude: -77.628598.
Road length 0.018695 miles.

ID: r129; Start Point: ID: MELIORA-SOUTH; Latitude: 43.127505; Longitude: -77.627882; End Point: ID: i63; Latitude: 43.127293; Longitude: -77.628432.
Road length 0.019491 miles.

ID: r175; Start Point: ID: i81; Latitude: 43.131081; Longitude: -77.62623; End Point: ID: i82; Latitude: 43.131338; Longitude: -77.625693.
Road length 0.020122 miles.

ID: r135; Start Point: ID: i65; Latitude: 43.126913; Longitude: -77.629443; End Point: ID: TUNNEL-HOYT; Latitude: 43.127507; Longitude: -77.629652.
Road length 0.026331 miles.

ID: r100; Start Point: ID: i50; Latitude: 43.127753; Longitude: -77.631092; End Point: ID: i51; Latitude: 43.128415; Longitude: -77.631393.
Road length 0.029947 miles.

ID: r174; Start Point: ID: i80; Latitude: 43.130478; Longitude: -77.626726; End Point: ID: i81; Latitude: 43.131081; Longitude: -77.62623.
Road length 0.030197 miles.

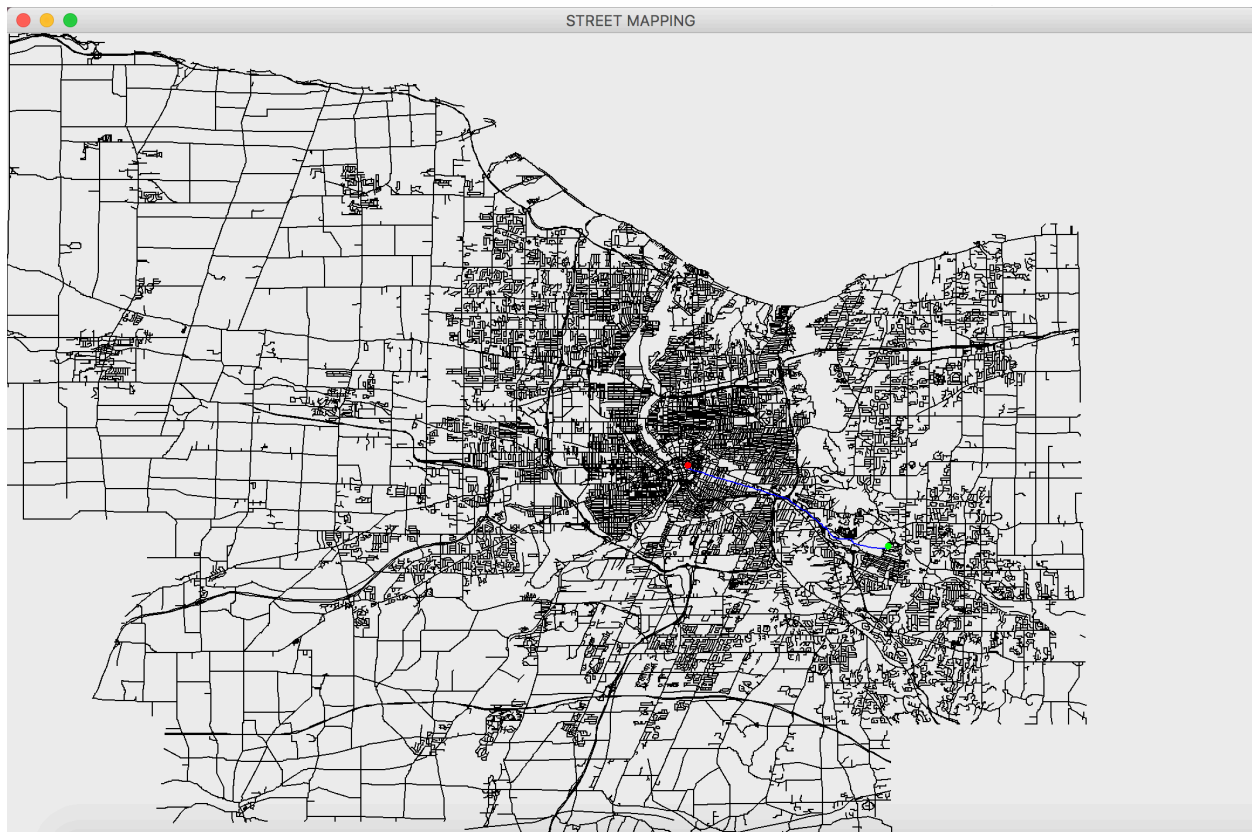
ID: r173; Start Point: ID: SPURRIER; Latitude: 43.130789; Longitude: -77.627093; End Point: ID: i81; Latitude: 43.131081; Longitude: -77.62623.
Road length 0.029806 miles.

ID: r171; Start Point: ID: i78; Latitude: 43.129807; Longitude: -77.62742; End Point: ID: i80; Latitude: 43.130478; Longitude: -77.626726.
Road length 0.036095 miles.

ID: r166; Start Point: ID: i76; Latitude: 43.129274; Longitude: -77.627115; End Point: ID: i60; Latitude: 43.128955; Longitude: -77.628107.
Road length 0.033968 miles.

ID: r84; Start Point: ID: i41; Latitude: 43.129311; Longitude: -77.631723; End Point: ID: WILSON-BRIDGE; Latitude: 43.128846; Longitude: -77.629472.
Road length 0.073306 miles.

monroe.txt -show -directions i24 i77



Shortest Path from i24 to i77:

ID: i24; Latitude: 43.11974599999985; Longitude: -77.48580199999999

Travel 0.012226 miles to:

ID: i23; Latitude: 43.11951599999999; Longitude: -77.48603199999998

Travel 0.006910 miles to:

ID: i22; Latitude: 43.11938599999999; Longitude: -77.48616199999998

Travel 0.003277 miles to:

ID: i21; Latitude: 43.119323; Longitude: -77.486221

Travel 0.002958 miles to:

ID: i20; Latitude: 43.119265999999996; Longitude: -77.48627399999998

Travel 0.023768 miles to:

ID: i19; Latitude: 43.118809999999996; Longitude: -77.486704

Travel 0.004627 miles to:

ID: i1801; Latitude: 43.118819999999985; Longitude: -77.486851

Travel 0.021428 miles to:

ID: i1800; Latitude: 43.118871999999996; Longitude: -77.48753099999999

Travel 0.011627 miles to:

ID: i1799; Latitude: 43.118899999999999; Longitude: -77.48789999999998

Travel 0.002298 miles to:

ID: i1798; Latitude: 43.118905; Longitude: -77.487973

Travel 0.005580 miles to:

ID: i1797; Latitude: 43.118919; Longitude: -77.48814999999999

Travel 0.014317 miles to:

ID: i1796; Latitude: 43.118956; Longitude: -77.488604

Travel 0.006119 miles to:

ID: i1795; Latitude: 43.118971999999985; Longitude: -77.488798

Travel 0.006052 miles to:

ID: i1794; Latitude: 43.118986999999999; Longitude: -77.488899

Travel 0.009708 miles to:
ID: i1793; Latitude: 43.119011; Longitude: -77.48929799999999
Travel 0.034702 miles to:
ID: i1792; Latitude: 43.11909699999999; Longitude: -77.49039899999998
Travel 0.206674 miles to:
ID: i1791; Latitude: 43.119655999999985; Longitude: -77.496949
Travel 0.016919 miles to:
ID: i1790; Latitude: 43.119703; Longitude: -77.49748499999998
Travel 0.045711 miles to:
ID: i1789; Latitude: 43.11983099999999; Longitude: -77.49893299999998
Travel 0.132073 miles to:
ID: i8602; Latitude: 43.120678999999996; Longitude: -77.502984
Travel 0.072766 miles to:
ID: i8601; Latitude: 43.121145999999996; Longitude: -77.50521599999999
Travel 0.005241 miles to:
ID: i8600; Latitude: 43.121186; Longitude: -77.505374
Travel 0.004961 miles to:
ID: i8599; Latitude: 43.121234; Longitude: -77.505518
Travel 0.005327 miles to:
ID: i8598; Latitude: 43.121294999999996; Longitude: -77.50566599999999
Travel 0.005883 miles to:
ID: i8597; Latitude: 43.121369; Longitude: -77.50582399999999
Travel 0.017372 miles to:
ID: i8596; Latitude: 43.121598; Longitude: -77.506281
Travel 0.008103 miles to:
ID: i8595; Latitude: 43.121725999999995; Longitude: -77.50647099999999
Travel 0.007271 miles to:
ID: i8594; Latitude: 43.121852; Longitude: -77.506626
Travel 0.006997 miles to:
ID: i8593; Latitude: 43.121984999999995; Longitude: -77.506755
Travel 0.005901 miles to:
ID: i8592; Latitude: 43.122108; Longitude: -77.506839
Travel 0.007156 miles to:
ID: i37363; Latitude: 43.122268; Longitude: -77.506903
Travel 0.002236 miles to:
ID: i37362; Latitude: 43.122318; Longitude: -77.506923
Travel 0.007215 miles to:
ID: i37361; Latitude: 43.122481; Longitude: -77.506979
Travel 0.005755 miles to:
ID: i37360; Latitude: 43.122613; Longitude: -77.50701099999999
Travel 0.005873 miles to:
ID: i37359; Latitude: 43.122749; Longitude: -77.507031
Travel 0.021340 miles to:
ID: i37358; Latitude: 43.123245999999995; Longitude: -77.50703899999999
Travel 0.004896 miles to:
ID: i37357; Latitude: 43.12335999999999; Longitude: -77.50704299999998
Travel 0.075317 miles to:
ID: i54154; Latitude: 43.123391999999996; Longitude: -77.50944599999998
Travel 0.068285 miles to:
ID: i54153; Latitude: 43.12339399999999; Longitude: -77.51162499999998
Travel 0.027335 miles to:
ID: i54152; Latitude: 43.123409999999986; Longitude: -77.51249699999998
Travel 0.045629 miles to:
ID: i54151; Latitude: 43.123416999999996; Longitude: -77.513953
Travel 0.036542 miles to:
ID: i54150; Latitude: 43.123533999999985; Longitude: -77.51510799999998
Travel 0.036433 miles to:

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Travel 0.026046 miles to:
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Travel 0.026133 miles to:
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Travel 0.033269 miles to:
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Travel 0.048592 miles to:
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Travel 0.076019 miles to:
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Travel 0.013935 miles to:
ID: i36968; Latitude: 43.12805999999999; Longitude: -77.52147099999999
Travel 0.005361 miles to:
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ID: i36966; Latitude: 43.12824299999999; Longitude: -77.52167399999999
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Travel 0.011888 miles to:
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Travel 0.007545 miles to:
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Travel 0.009889 miles to:
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Travel 0.008614 miles to:
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Travel 0.016308 miles to:
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ID: i36720; Latitude: 43.135225999999996; Longitude: -77.53177099999999
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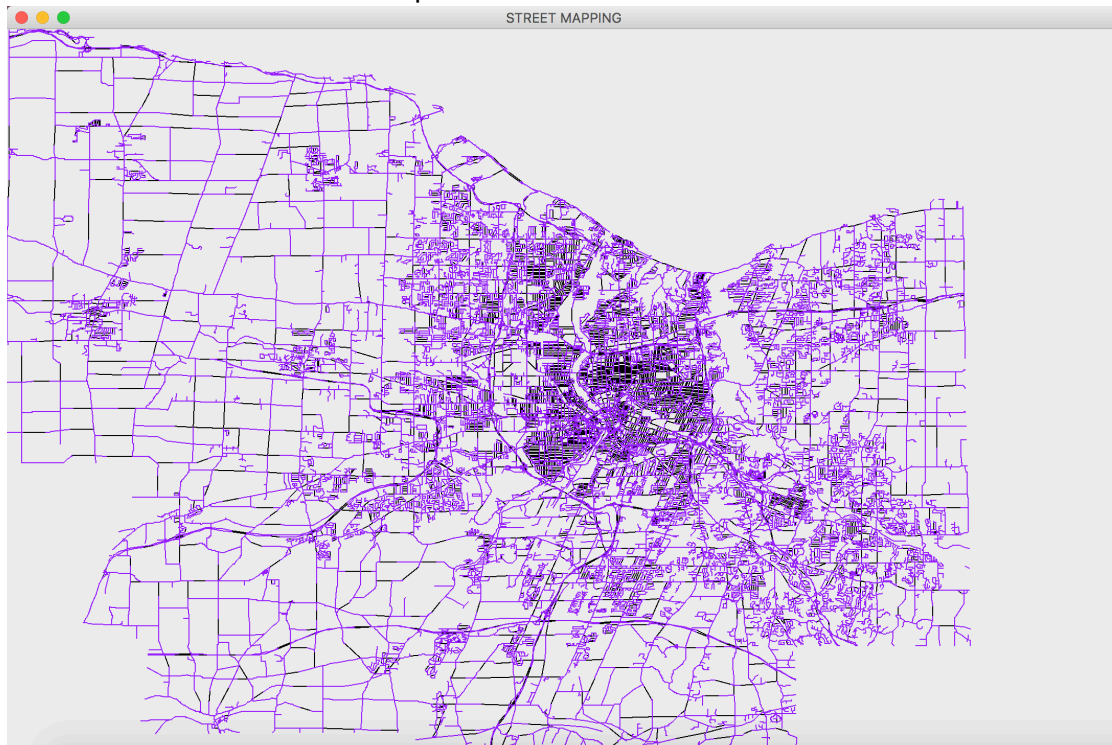
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Travel 0.074897 miles to:
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Travel 0.014951 miles to:
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Travel 0.020783 miles to:
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Travel 0.035498 miles to:
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Travel 0.043299 miles to:
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Travel 0.112209 miles to:
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Travel 0.043102 miles to:
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Travel 0.019204 miles to:
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Travel 0.005150 miles to:
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Travel 0.005974 miles to:
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Travel 0.028439 miles to:
ID: i15771; Latitude: 43.156479999999995; Longitude: -77.600087
Travel 0.031076 miles to:
ID: i15770; Latitude: 43.156718; Longitude: -77.601024
Travel 0.027637 miles to:
ID: i15769; Latitude: 43.156924; Longitude: -77.60186
Travel 0.017656 miles to:
ID: i73; Latitude: 43.15706; Longitude: -77.602392
Travel 0.018520 miles to:
ID: i74; Latitude: 43.157474; Longitude: -77.602226
Travel 0.007045 miles to:
ID: i75; Latitude: 43.157638; Longitude: -77.60221899999999
Travel 0.018104 miles to:
ID: i76; Latitude: 43.158048; Longitude: -77.60235399999999
Travel 0.022715 miles to:
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-----*****-----
Total Distance Travelled: 4.244351 miles.

monroe.txt -show -meridianmap



nys.txt -show

