

National Longitudinal Study of Adolescent Health

Wave I Street Connectivity Files Codebook

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Persons interested in obtaining data files from Add Health should contact Add Health, Carolina Population Center, 123 W. Franklin Street, Chapel Hill, NC 27516-2524 (addhealth@unc.edu).

Add Health Wave I Connectivity

Filename: w1conn.xpt

Description

The purpose of this Add Health data file is to provide measures of accessibility to physical resources in respondents' communities. Specifically, this file contains road network connectivity measures within 1, 3, 5, and 8.05 km (5 miles) of Wave I respondent locations.

The road networks for Wave I respondents were extracted from the StreetMap 2000 product from Environmental Systems Research Institute in Redlands, CA. The StreetMap 2000 product was derived from roads data developed by Geographic Data Technology, which has since been acquired by TeleAtlas. Before the connectivity measures could be calculated, the road networks were subjected to pre-processing steps as follows:

Step 1: Corrected a significant digitizing error in the street file for one of the Add Health communities. The digitizing error was corrected by applying a shift to the street file to align it with digital orthophoto quarter quadrangle imagery, which is imagery from which the geometric distortions inherent in aerial photography have been mostly removed. Respondent locations derived from GPS coordinates were not shifted.

Step 2: To eliminate road links that were not useful in measuring accessibility to physical activity resources in respondents' neighborhoods, interstates and on-ramps were dropped from the dataset. The condensed dataset was then run through a network topology cleaning program to repair undershoots and overshoots, and to intersect overlapping lines. The cleaning program also removed intersections incorrectly placed in the middle of blocks. Intersections from the newly cleaned roads files were output as "nodes" files for use in the connectivity calculations.

The core road network variables from which the other connectivity measures were calculated are as follows:

V	Number of nodes (intersections)
L	Number of links (connections between nodes)
J1	Number of single-link "intersections" (cul de sacs)
J3/J4	Number of three-way/four-way intersections (three/four links meeting at a node)
JN	Number of four plus-link intersections (four or more links meeting at a node)

The connectivity measures derived from the core variables, and their corresponding formulas, are as follows¹:

Measure	Description	Formula
Alpha Index	<ul style="list-style-type: none"> Ratio of observed to maximum possible route alternatives between nodes (circuitry; circuit is present when $L > V-1$). Maximum possible number of circuits is the maximum number of links, $3(V-2)$, minus the number of links in a minimally connected network, $V-1$: $C_{\max} = 3(V-2) - (V-1) = 2V-5$. Higher values indicate higher connectivity/accessibility. 	$\alpha = \frac{C_{obs}}{C_{\max}} = \frac{L - V + 1}{2V - 5}$
Beta Index	<ul style="list-style-type: none"> Link-to-node ratio. Higher values indicate higher connectivity/accessibility. 	$\beta = \frac{L}{V}$
Cul de Sac Density	<ul style="list-style-type: none"> Lower values indicate higher connectivity/accessibility. 	$\frac{J_1}{AREA}$
Cyclomatic Index	<ul style="list-style-type: none"> Number of route alternatives (circuits) between nodes. Higher values indicate higher connectivity/accessibility. 	$\mu = L - V + 1$
Gamma Index	<ul style="list-style-type: none"> Ratio of actual links in a network to the maximum possible number of links in the network. Note: Maximum possible number of links in a network = $3(V-2)$. Range = 0 to 1. Higher values indicate higher connectivity/accessibility. 	$\gamma = \frac{L_{obs}}{L_{\max}} = \frac{L_{obs}}{3(V-2)}$
Intersection Density: Nodes with 3+ Links	<ul style="list-style-type: none"> Density of 3-way, 4-way, and higher intersections. Higher values indicate higher connectivity/accessibility. 	$\frac{J_3 + J_4 + \dots + J_{\max}}{AREA}$
Intersection Proportion: Nodes with 3+ Links	<ul style="list-style-type: none"> Proportion of 3-way, 4-way, and higher intersections. Higher values indicate higher connectivity/accessibility. 	$\frac{J_3 + J_4 + \dots + J_{\max}}{J_1 + J_3 + J_4 + \dots + J_{\max}}$

¹ The formulas used are based on classical graph theory, in which a network is defined by links that have a node at each end. As a result of identifying links and intersections within specified search radii of respondents, however, nodes at the ends of links that continued outside the search radii were omitted. This decrease in the number of nodes vis-à-vis a theoretically true network created values that were outside of the expected ranges, but that still fell along a meaningful continuum. This should be taken into account when interpreting the Add Health Wave I connectivity data.

In some instances, metrics could not be calculated for respondents, because in the absence of nodes/intersections the formula would have required division by zero. In these instances, the resulting missing values were assigned either the Add Health replacement code for legitimate skip or the value zero. For specific assignments, regard the following.

Beta Index missing, at 1 km and 3 km: legitimate skip code equals 7.

Gamma index missing, at 1 km and 3 km: zero, instead of 7, in order to indicate the existence of some connectivity (two nodes present) within the range of possible connectivity values.

Three or more-way intersection proportion missing, at 1 km and 3 km: legitimate skip code equals 7.

Variable Listing

Variable Name	Variable Label and Description
W1CN01_1	Alpha index, 1km
W1CN01_3	Alpha index, 3km
W1CN01_5	Alpha index, 5km
W1CN01_8	Alpha index, 8km
W1CN02_1	Area (sq km), 1km
W1CN02_3	Area (sq km), 3km
W1CN02_5	Area (sq km), 5km
W1CN02_8	Area (sq km), 8km
W1CN03_1	Beta index, 1km
W1CN03_3	Beta index, 3km
W1CN03_5	Beta index, 5km
W1CN03_8	Beta index, 8km
W1CN04_1	Cul de sac density-sqkm, 1km
W1CN04_3	Cul de sac density-sqkm, 3km
W1CN04_5	Cul de sac density-sqkm, 5km
W1CN04_8	Cul de sac density-sqkm, 8km
W1CN05_1	Cyclomatic index, 1km
W1CN05_3	Cyclomatic index, 3km
W1CN05_5	Cyclomatic index, 5km
W1CN05_8	Cyclomatic index, 8km
W1CN06_1	Gamma index, 1km
W1CN06_3	Gamma index, 3km
W1CN06_5	Gamma index, 5km
W1CN06_8	Gamma index, 8km
W1CN07_1	3-way or more intersection density-sqkm, 1km
W1CN07_3	3-way or more intersection density-sqkm, 3km
W1CN07_5	3-way or more intersection density-sqkm, 5km
W1CN07_8	3-way or more intersection density-sqkm, 8km
W1CN08_1	3-way or more intersection proportion, 1km
W1CN08_3	3-way or more intersection proportion, 3km
W1CN08_5	3-way or more intersection proportion, 5km
W1CN08_8	3-way or more intersection proportion, 8km
W1CN09_1	1 link intersection count, 1km

W1CN09_3	1 link intersection count, 3km
W1CN09_5	1 link intersection count, 5km
W1CN09_8	1 link intersection count, 8km
W1CN10_1	3 link intersection count, 1km
W1CN10_3	3 link intersection count, 3km
W1CN10_5	3 link intersection count, 5km
W1CN10_8	3 link intersection count, 8km
W1CN11_1	4 link intersection count, 1km
W1CN11_3	4 link intersection count, 3km
W1CN11_5	4 link intersection count, 5km
W1CN11_8	4 link intersection count, 8km
W1CN12_1	More than 4 link intersection count, 1km
W1CN12_3	More than 4 link intersection count, 3km
W1CN12_5	More than 4 link intersection count, 5km
W1CN12_8	More than 4 link intersection count, 8km
W1CN13_1	Link (roads) count, 1km
W1CN13_3	Link (roads) count, 3km
W1CN13_5	Link (roads) count, 5km
W1CN13_8	Link (roads) count, 8km
W1CN14_1	Node (intersections) count, 1km
W1CN14_3	Node (intersections) count, 3km
W1CN14_5	Node (intersections) count, 5km
W1CN14_8	Node (intersections) count, 8km

W1CONN: Wave I Connectivity Data

Wave I Connectivity Data

AID		Str 8	Respondent Identifier NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	10316654	
1	0.0%	10316952	
1	0.0%	10506342	
1	0.0%	10570810	
1	0.0%	10606128	
20735	100.0%	10676355-99886994	NOTE: Range of values omitted from display
1	0.0%	99886995	
1	0.0%	99886996	
1	0.0%	99886997	
1	0.0%	99886998	
1	0.0%	99886999	

W1CN01_1		Num 8	Alpha Index, 1km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	-8	
23	0.1%	-6	
63	0.3%	-5	
92	0.4%	-4	
34	0.2%	-3	
20336	98.0%	-2-3	NOTE: Range of values omitted from display
63	0.3%	4	

84	0.4%	5	
36	0.2%	6	
7	0.0%	7	
6	0.0%	8	

W1CN01_3		Num 8	Alpha Index, 3km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	-2	
3	0.0%	-.4	
1	0.0%	.0321	
1	0.0%	.0359	
1	0.0%	.0483	
20731	99.9%	.0493- 1.1333	NOTE: Range of values omitted from display
2	0.0%	1.2	
1	0.0%	1.4	
1	0.0%	2.3333	
2	0.0%	3	
1	0.0%	4	

W1CN01_5		Num 8	Alpha Index, 5km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	.0591	
1	0.0%	.0602	
1	0.0%	.0611	
1	0.0%	.0624	
1	0.0%	.0635	

20734	99.9%	.0638-.5652	NOTE: Range of values omitted from display
2	0.0%	.5882	
1	0.0%	.6022	
1	0.0%	.6415	
1	0.0%	.7164	
1	0.0%	1.2	

W1CN01_8		Num 8	Alpha Index, 8.05km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
3	0.0%	.0497	
1	0.0%	.0503	
2	0.0%	.0525	
1	0.0%	.0536	
1	0.0%	.0545	
20730	99.9%	.0553-.4327	NOTE: Range of values omitted from display
2	0.0%	.4344	
2	0.0%	.4444	
1	0.0%	.4483	
1	0.0%	.494	
1	0.0%	.5371	

W1CN02_1		Num 8	Area (sq km), 1km
Frequency	Percent	Value	Label
20745	100.0%	3.14159265	

W1CN02_3		Num 8	Area (sq km), 3km
Frequency	Percent	Value	Label

20745	100.0%	28.27433388	
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W1CN02_5		Num 8	Area (sq km), 5km
Frequency	Percent	Value	Label
20745	100.0%	78.53981634	

W1CN02_8		Num 8	Area (sq km), 8.05km
Frequency	Percent	Value	Label
20745	100.0%	203.41719051	

W1CN03_1		Num 8	Beta Index, 1km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
28	0.1%	1	1
1	0.0%	1.0455	1.0455
1	0.0%	1.0556	1.0556
1	0.0%	1.0588	1.0588
3	0.0%	1.087	1.087
20506	98.8%	1.0909-3.3333	NOTE: Range of values omitted from display
23	0.1%	3.5	3.5
92	0.4%	4	4
1	0.0%	4.5	4.5
6	0.0%	5	5
83	0.4%	7	Legitimate Skip

W1CN03_3		Num 8	Beta Index, 3km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	1.0521	1.0521

1	0.0%	1.0625	1.0625
1	0.0%	1.0849	1.0849
1	0.0%	1.0865	1.0865
1	0.0%	1.0938	1.0938
20731	99.9%	1.0952-2.5	NOTE: Range of values omitted from display
1	0.0%	2.5263	2.5263
2	0.0%	2.6	2.6
1	0.0%	2.6154	2.6154
2	0.0%	2.7	2.7
3	0.0%	7	Legitimate Skip

W1CN03_5		Num 8	Beta Index, 5km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	1.0769	
1	0.0%	1.1014	
1	0.0%	1.1034	
1	0.0%	1.1111	
1	0.0%	1.1147	
20735	100.0%	1.1167-2.027	NOTE: Range of values omitted from display
1	0.0%	2.0357	
1	0.0%	2.0889	
1	0.0%	2.1224	
1	0.0%	2.1379	
1	0.0%	2.3056	

W1CN03_8		Num 8	Beta Index, 8.05km NOTE: Smallest 5 and largest 5 values are displayed.
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Frequency	Percent	Value	Label
3	0.0%	1.0951	
1	0.0%	1.0961	
2	0.0%	1.1007	
1	0.0%	1.1043	
1	0.0%	1.1062	
20731	99.9%	1.1068-1.8414	NOTE: Range of values omitted from display
1	0.0%	1.8429	
2	0.0%	1.8629	
1	0.0%	1.8722	
1	0.0%	1.9609	
1	0.0%	2.0333	

W1CN04_1		Num 8	Cul De Sac Density (sq km), 1km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1023	4.9%	0	
965	4.7%	.31830988654751	
713	3.4%	.63661977309502	
606	2.9%	.95492965964253	
631	3.0%	1.27323954619005	
16801	81.0%	1.59154943273756-32.1492985412987	NOTE: Range of values omitted from display
1	0.0%	32.4676084278463	
1	0.0%	33.4225380874888	
2	0.0%	33.7408479740363	
1	0.0%	35.6507072933214	
1	0.0%	36.9239468395114	

W1CN04_3		Num 8	Cul De Sac Density (sq km), 3km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
59	0.3%	0	
84	0.4%	.03536776513441	
73	0.4%	.07073553026883	
119	0.6%	.10610329540325	
131	0.6%	.14147106053767	
20274	97.7%	.17683882567209- 19.8766840055437	NOTE: Range of values omitted from display
1	0.0%	20.1949938917535	
1	0.0%	20.2657294220223	
1	0.0%	20.5486715430977	
1	0.0%	21.6804400273991	
1	0.0%	24.792803359228	

W1CN04_5		Num 8	Cul De Sac Density (sq km), 5km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
5	0.0%	0	
2	0.0%	.01273239544731	
7	0.0%	.02546479089462	
13	0.1%	.03819718634193	
12	0.1%	.05092958178924	
20700	99.8%	.06366197723655- 17.9908747670494	NOTE: Range of values omitted from display
1	0.0%	18.2837198623375	
2	0.0%	18.385579025916	
1	0.0%	18.4365086077052	

1	0.0%	18.6529593303095	
1	0.0%	20.9575229062726	

W1CN04_8		Num 8	Cul De Sac Density (sq km), 8.05km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	.00491600536558	
1	0.0%	.00983201073117	
1	0.0%	.01474801609676	
3	0.0%	.02458002682794	
4	0.0%	.02949603219352	
20727	99.9%	.03441203755911- 14.7283520753017	NOTE: Range of values omitted from display
3	0.0%	14.7775121289575	
1	0.0%	14.7971761504199	
2	0.0%	14.8070081611511	
1	0.0%	14.8610842201725	
1	0.0%	15.2740286708819	

W1CN05_1		Num 2	Cyclomatic Index, 1km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
42	0.2%	1	
176	0.8%	2	
328	1.6%	3	
510	2.5%	4	
542	2.6%	5	
19140	92.3%	6-424	NOTE: Range of values omitted from display
1	0.0%	425	

1	0.0%	430	
1	0.0%	437	
1	0.0%	441	
3	0.0%	446	

W1CN05_3		Num 2	Cyclomatic Index, 3km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
8	0.0%	2	
9	0.0%	3	
20	0.1%	4	
57	0.3%	5	
49	0.2%	6	
20596	99.3%	7-2026	NOTE: Range of values omitted from display
2	0.0%	2122	
1	0.0%	2209	
1	0.0%	2440	
1	0.0%	2651	
1	0.0%	2947	

W1CN05_5		Num 2	Cyclomatic Index, 5km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	3	
4	0.0%	4	
5	0.0%	5	
7	0.0%	6	
8	0.0%	7	
20714	99.9%	8-4743	NOTE: Range of values omitted from display

2	0.0%	4758	
1	0.0%	4764	
1	0.0%	4768	
1	0.0%	4810	
1	0.0%	5315	

W1CN05_8		Num 2	Cyclomatic Index, 8.05km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	4	
1	0.0%	5	
1	0.0%	9	
2	0.0%	11	
1	0.0%	13	
20733	99.9%	14-10777	NOTE: Range of values omitted from display
1	0.0%	10904	
2	0.0%	10917	
1	0.0%	10919	
1	0.0%	10971	
1	0.0%	11306	

W1CN06_1		Num 8	Gamma Index, 1km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
6	0.0%	-1.6667	
92	0.4%	-1.3333	
116	0.6%	-1	
32	0.2%	-.6667	

4	0.0%	-.5	
20298	97.8%	-.3333-1.8333	NOTE: Range of values omitted from display
64	0.3%	2	
84	0.4%	2.3333	
36	0.2%	2.6667	
7	0.0%	3	
6	0.0%	3.3333	

W1CN06_3		Num 8	Gamma Index, 3km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
3	0.0%	-.1667	
1	0.0%	0	
1	0.0%	.3582	
1	0.0%	.3598	
1	0.0%	.3686	
20729	99.9%	.3693-1.0417	NOTE: Range of values omitted from display
2	0.0%	1.0833	
2	0.0%	1.125	
1	0.0%	1.2222	
3	0.0%	1.6667	
1	0.0%	2	

W1CN06_5		Num 8	Gamma Index, 5km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	.3735	
1	0.0%	.3753	

1	0.0%	.3763	
1	0.0%	.3768	
1	0.0%	.3774	
20735	100.0%	.3781- .7287	NOTE: Range of values omitted from display
1	0.0%	.7308	
1	0.0%	.7376	
1	0.0%	.7654	
1	0.0%	.8137	
1	0.0%	1.1111	

W1CN06_8		Num 8	Gamma Index, 8.05km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
3	0.0%	.3676	
1	0.0%	.368	
2	0.0%	.3695	
1	0.0%	.3698	
1	0.0%	.3704	
20730	99.9%	.3711- .6232	NOTE: Range of values omitted from display
2	0.0%	.6246	
2	0.0%	.6311	
1	0.0%	.6336	
1	0.0%	.664	
1	0.0%	.6932	

W1CN07_1		Num 8	3-Way or More Intersection Density (sq km), 1km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label

148	0.7%	0	
339	1.6%	.31830988654751	
367	1.8%	.63661977309502	
382	1.8%	.95492965964253	
292	1.4%	1.27323954619005	
19209	92.6%	1.59154943273756-162.974661912326	NOTE: Range of values omitted from display
1	0.0%	164.247901458516	
2	0.0%	164.884521231611	
1	0.0%	165.202831118159	
3	0.0%	167.749310210539	
1	0.0%	168.067620097086	

W1CN07_3		Num 8	3-Way or More Intersection Density (sq km), 3km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
3	0.0%	0	
4	0.0%	.03536776513441	
2	0.0%	.07073553026883	
9	0.0%	.10610329540325	
10	0.0%	.14147106053767	
20711	99.8%	.17683882567209-94.3611973786312	NOTE: Range of values omitted from display
2	0.0%	96.6954698775029	
1	0.0%	99.2419489671811	
1	0.0%	110.630369340464	
1	0.0%	112.469493127454	
1	0.0%	121.452905471596	

W1CN07_5		Num 8	3-Way or More Intersection Density (sq km), 5km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	.05092958178924	
2	0.0%	.07639437268386	
1	0.0%	.08912676813117	
2	0.0%	.10185916357848	
1	0.0%	.11459155902579	
20733	99.9%	.1273239544731- 71.4669356457524	NOTE: Range of values omitted from display
1	0.0%	71.9380342773029	
1	0.0%	75.83414728417991	
1	0.0%	76.3816402884142	
1	0.0%	77.00552766533239	
1	0.0%	77.3111051560679	

W1CN07_8		Num 8	3-Way or More Intersection Density (sq km), 8.05km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	.04916005365588	
1	0.0%	.06390806975264	
1	0.0%	.07374008048382	
1	0.0%	.08848809658058	
1	0.0%	.09340410194617	
20734	99.9%	.15239616633322- 64.3849222731062	NOTE: Range of values omitted from display
2	0.0%	64.5176544179771	
1	0.0%	64.6405545521168	
1	0.0%	64.89618683112739	

1	0.0%	65.5303515232882	
1	0.0%	67.6393178251255	

W1CN08_1		Num 8	3-Way or More Intersection Proportion, 1km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
57	0.3%	0	0
1	0.0%	.1429	.1429
2	0.0%	.2	.2
4	0.0%	.25	.25
27	0.1%	.3333	.3333
19626	94.6%	.3478- .9964	NOTE: Range of values omitted from display
1	0.0%	.9965	.9965
2	0.0%	.9967	.9967
2	0.0%	.997	.997
932	4.5%	1	1
91	0.4%	7	Legitimate Skip

W1CN08_3		Num 8	3-Way or More Intersection Proportion, 3km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
4	0.0%	.3333	.3333
3	0.0%	.375	.375
2	0.0%	.4118	.4118
1	0.0%	.4286	.4286
3	0.0%	.4444	.4444
20669	99.6%	.4516- .9849	NOTE: Range of values omitted from display
2	0.0%	.9858	.9858

1	0.0%	.9865	.9865
1	0.0%	.9869	.9869
56	0.3%	1	1
3	0.0%	7	Legitimate Skip

W1CN08_5		Num 8	3-Way or More Intersection Proportion, 5km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	.4681	
1	0.0%	.4844	
5	0.0%	.5	
2	0.0%	.5135	
1	0.0%	.5167	
20726	99.9%	.5172- .9734	NOTE: Range of values omitted from display
1	0.0%	.974	
1	0.0%	.9748	
1	0.0%	.9775	
1	0.0%	.9808	
5	0.0%	1	

W1CN08_8		Num 8	3-Way or More Intersection Proportion, 8.05km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	.4762	
1	0.0%	.52	
1	0.0%	.544	
3	0.0%	.5468	
1	0.0%	.5481	

20732	99.9%	.5484-.9648	NOTE: Range of values omitted from display
2	0.0%	.9649	
1	0.0%	.9656	
1	0.0%	.9706	
1	0.0%	.9839	
1	0.0%	.9884	

W1CN09_1		Num 2	1 Link Intersection Count, 1km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1023	4.9%	0	
965	4.7%	1	
713	3.4%	2	
606	2.9%	3	
631	3.0%	4	
16801	81.0%	5-101	NOTE: Range of values omitted from display
1	0.0%	102	
1	0.0%	105	
2	0.0%	106	
1	0.0%	112	
1	0.0%	116	

W1CN09_3		Num 2	1 Link Intersection Count, 3km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
59	0.3%	0	
84	0.4%	1	
73	0.4%	2	

119	0.6%	3	
131	0.6%	4	
20274	97.7%	5-562	NOTE: Range of values omitted from display
1	0.0%	571	
1	0.0%	573	
1	0.0%	581	
1	0.0%	613	
1	0.0%	701	

W1CN09_5		Num 2	1 Link Intersection Count, 5km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
5	0.0%	0	
2	0.0%	1	
7	0.0%	2	
13	0.1%	3	
12	0.1%	4	
20700	99.8%	5-1413	NOTE: Range of values omitted from display
1	0.0%	1436	
2	0.0%	1444	
1	0.0%	1448	
1	0.0%	1465	
1	0.0%	1646	

W1CN09_8		Num 2	1 Link Intersection Count, 8.05km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	1	
1	0.0%	2	

1	0.0%	3	
3	0.0%	5	
4	0.0%	6	
20727	99.9%	7-2996	NOTE: Range of values omitted from display
3	0.0%	3006	
1	0.0%	3010	
2	0.0%	3012	
1	0.0%	3023	
1	0.0%	3107	

W1CN10_1		Num 2	3 Link Intersection Count, 1km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
263	1.3%	0	
394	1.9%	1	
401	1.9%	2	
351	1.7%	3	
295	1.4%	4	
19033	91.7%	5-239	NOTE: Range of values omitted from display
2	0.0%	240	
2	0.0%	243	
1	0.0%	249	
2	0.0%	260	
1	0.0%	279	

W1CN10_3		Num 2	3 Link Intersection Count, 3km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
5	0.0%	0	

7	0.0%	1	
9	0.0%	2	
15	0.1%	3	
12	0.1%	4	
20692	99.7%	5-1360	NOTE: Range of values omitted from display
1	0.0%	1378	
1	0.0%	1381	
1	0.0%	1391	
1	0.0%	1481	
1	0.0%	1532	

W1CN10_5		Num 2	3 Link Intersection Count, 5km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
2	0.0%	4	
1	0.0%	5	
1	0.0%	6	
3	0.0%	7	
2	0.0%	8	
20730	99.9%	9-3155	NOTE: Range of values omitted from display
1	0.0%	3165	
2	0.0%	3167	
1	0.0%	3177	
1	0.0%	3184	
1	0.0%	3707	

W1CN10_8		Num 2	3 Link Intersection Count, 8.05km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label

1	0.0%	9	
1	0.0%	12	
1	0.0%	13	
1	0.0%	16	
1	0.0%	18	
20735	100.0%	19-7019	NOTE: Range of values omitted from display
1	0.0%	7023	
1	0.0%	7028	
1	0.0%	7096	
1	0.0%	7351	
1	0.0%	8181	

W1CN11_1		Num 2	4 Link Intersection Count, 1km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1980	9.5%	0	
1305	6.3%	1	
816	3.9%	2	
658	3.2%	3	
474	2.3%	4	
15503	74.7%	5-274	NOTE: Range of values omitted from display
1	0.0%	275	
1	0.0%	278	
1	0.0%	286	
2	0.0%	287	
4	0.0%	291	

W1CN11_3		Num 2	4 Link Intersection Count, 3km NOTE: Smallest 5 and largest 5 values are displayed.
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Frequency	Percent	Value	Label
327	1.6%	0	
372	1.8%	1	
333	1.6%	2	
321	1.5%	3	
311	1.5%	4	
19076	92.0%	5-1569	NOTE: Range of values omitted from display
1	0.0%	1571	
1	0.0%	1589	
1	0.0%	1738	
1	0.0%	1870	
1	0.0%	2519	

W1CN11_5		Num 2	4 Link Intersection Count, 5km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
71	0.3%	0	
108	0.5%	1	
127	0.6%	2	
140	0.7%	3	
130	0.6%	4	
20162	97.2%	5-3826	NOTE: Range of values omitted from display
1	0.0%	3832	
3	0.0%	3834	
1	0.0%	3840	
1	0.0%	3849	
1	0.0%	4499	

W1CN11_8		Num 2	4 Link Intersection Count, 8.05km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
11	0.1%	0	
31	0.1%	1	
11	0.1%	2	
28	0.1%	3	
31	0.1%	4	
20627	99.4%	5-8327	NOTE: Range of values omitted from display
1	0.0%	8331	
1	0.0%	8499	
2	0.0%	8512	
1	0.0%	8537	
1	0.0%	8583	

W1CN12_1		Num 2	More than 4 Link Intersection Count, 1km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1971	9.5%	0	
1302	6.3%	1	
821	4.0%	2	
647	3.1%	3	
479	2.3%	4	
15516	74.8%	5-278	NOTE: Range of values omitted from display
1	0.0%	279	
1	0.0%	281	
3	0.0%	289	
3	0.0%	294	

1	0.0%	302	
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W1CN12_3		Num 2	More than 4 Link Intersection Count, 3km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
324	1.6%	0	
367	1.8%	1	
321	1.5%	2	
329	1.6%	3	
302	1.5%	4	
19097	92.1%	5-1596	NOTE: Range of values omitted from display
1	0.0%	1597	
1	0.0%	1614	
1	0.0%	1768	
1	0.0%	1902	
1	0.0%	2565	

W1CN12_5		Num 2	More than 4 Link Intersection Count, 5km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
71	0.3%	0	
104	0.5%	1	
131	0.6%	2	
139	0.7%	3	
124	0.6%	4	
20170	97.2%	5-3875	NOTE: Range of values omitted from display
2	0.0%	3876	
1	0.0%	3881	
1	0.0%	3893	

1	0.0%	3909	
1	0.0%	4577	

W1CN12_8		Num 2	More than 4 Link Intersection Count, 8.05km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
11	0.1%	0	
31	0.1%	1	
11	0.1%	2	
27	0.1%	3	
31	0.1%	4	
20628	99.4%	5-8476	NOTE: Range of values omitted from display
1	0.0%	8483	
1	0.0%	8651	
2	0.0%	8663	
1	0.0%	8688	
1	0.0%	8741	

W1CN13_1		Num 2	Link (Roads) Count, 1km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
14	0.1%	0	
69	0.3%	1	
43	0.2%	2	
166	0.8%	3	
144	0.7%	4	
20301	97.9%	5-971	NOTE: Range of values omitted from display
1	0.0%	973	
1	0.0%	979	

2	0.0%	983	
1	0.0%	1001	
3	0.0%	1002	

W1CN13_3		Num 2	Link (Roads) Count, 3km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
3	0.0%	1	
1	0.0%	3	
4	0.0%	5	
1	0.0%	6	
1	0.0%	8	
20729	99.9%	9-5004	NOTE: Range of values omitted from display
2	0.0%	5113	
1	0.0%	5260	
1	0.0%	5837	
1	0.0%	6290	
1	0.0%	6387	

W1CN13_5		Num 2	Link (Roads) Count, 5km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	10	
1	0.0%	14	
1	0.0%	16	
1	0.0%	17	
1	0.0%	18	
20735	100.0%	20-10555	NOTE: Range of values omitted from display

1	0.0%	10653	
1	0.0%	11009	
1	0.0%	11059	
1	0.0%	11148	
1	0.0%	11792	

W1CN13_8		Num 2	Link (Roads) Count, 8.05km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	26	
1	0.0%	31	
1	0.0%	32	
1	0.0%	45	
1	0.0%	47	
20734	99.9%	62- 24732	NOTE: Range of values omitted from display
1	0.0%	24790	
2	0.0%	24827	
1	0.0%	24968	
1	0.0%	25052	
1	0.0%	25862	

W1CN14_1		Num 2	Node (Intersections) Count, 1km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
83	0.4%	0	
261	1.3%	1	
254	1.2%	2	
268	1.3%	3	

239	1.2%	4	
19633	94.6%	5-549	NOTE: Range of values omitted from display
1	0.0%	554	
1	0.0%	555	
3	0.0%	557	
1	0.0%	560	
1	0.0%	561	

W1CN14_3		Num 2	Node (Intersections) Count, 3km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
3	0.0%	0	
1	0.0%	2	
3	0.0%	3	
3	0.0%	4	
2	0.0%	5	
20728	99.9%	7-2992	NOTE: Range of values omitted from display
1	0.0%	2999	
1	0.0%	3052	
1	0.0%	3344	
1	0.0%	3398	
1	0.0%	3737	

W1CN14_5		Num 2	Node (Intersections) Count, 5km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	5	
1	0.0%	9	
1	0.0%	10	

1	0.0%	11	
1	0.0%	12	
20735	100.0%	17-6255	NOTE: Range of values omitted from display
1	0.0%	6259	
1	0.0%	6478	
1	0.0%	6627	
1	0.0%	6651	
1	0.0%	6724	

W1CN14_8		Num 2	Node (Intersections) Count, 8.05km NOTE: Smallest 5 and largest 5 values are displayed.
Frequency	Percent	Value	Label
1	0.0%	22	
1	0.0%	23	
1	0.0%	27	
3	0.0%	37	
2	0.0%	59	
20731	99.9%	68-13887	NOTE: Range of values omitted from display
2	0.0%	13911	
1	0.0%	13956	
1	0.0%	13998	
1	0.0%	14134	
1	0.0%	14557	