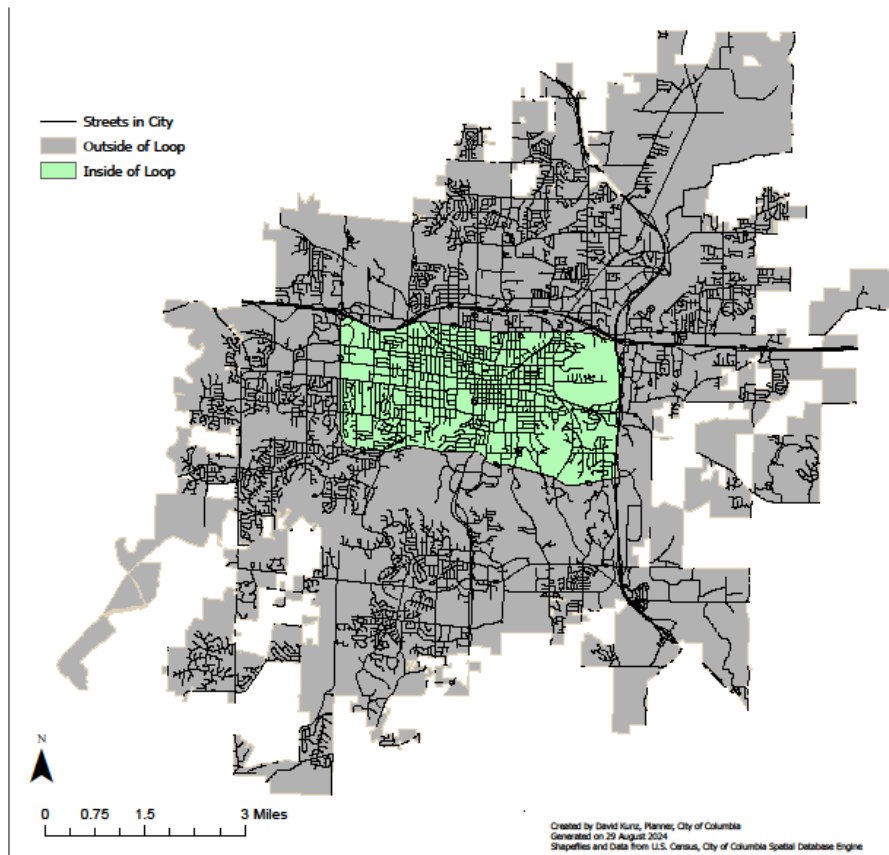




Date: November 14, 2024
To: Planning and Zoning Commission Members
From: David Kunz, Planner
Re: Residential Lot Research

Following discussion at the August 8 work session, refined analysis of lots, particularly based on lots with residential uses, was performed for two geographies. For the sake of this memo, they will be referred to as “Inside of Loop” and “Outside of Loop”. The “Loop,” is a boundary informed by roads. To the west, it is bound by Stadium Boulevard, where the polygon follows Stadium then south and east until it intersects with HWY 63, which is the eastern border. The polygon then follows 63 north until the I-70/63 interchange, where the polygon follows Business Loop 70 on the northern edge until intersecting with Stadium Boulevard westbound, where the loop is closed. The “Outside of Loop” is all parcels included in the City of Columbia’s Spatial Database Engine (SDE) that were not included in the loop, and are contained within City Limits. Some parcels that were recently annexed may not be included as they have not yet been entered into the dataset. The graphic below illustrates the boundaries of these study areas.



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Inside the Loop, proportionally, there is significantly more residential zoning. However, there is a similar amount of R-1 zoning, again, proportionally when comparing all zoning square footage. Additionally, there is more than 500% more R-MF zoning inside the loop compared to outside, proportionally. The tables below illustrate the percent of total square footage in these study areas dedicated to particular zoning districts.

Outside of Loop			Inside of Loop		
DISTRICT	Total	% of Total SFT	DISTRICT	Total	% of Total SFT
A	354,449,239	22.82%	A	634,220	0.33%
IG	113,181,816	7.29%	IG	3,549,538	1.84%
M-BP	3,850,503	0.25%	M-BP	0	0.00%
M-C	64,103,029	4.13%	M-C	11,975,658	6.20%
M-DT	0	0.00%	M-DT	6,141,814	3.18%
M-N	20,597,717	1.33%	M-N	2,534,193	1.31%
M-OF	20,641,615	1.33%	M-OF	4,818,900	2.50%
O	25,071,605	1.61%	O	0	0.00%
PD	228,888,253	14.74%	PD	11,313,018	5.86%
R-1	612,416,529	39.43%	R-1	83,456,899	43.24%
R-2	41,094,250	2.65%	R-2	22,084,648	11.44%
R-MF	57,297,704	3.69%	R-MF	46,494,261	24.09%
R-MH	11,408,916	0.73%	R-MH	0	0.00%
Grand Total	1,553,001,177	100.00%	Grand Total	193,003,149	100.00%

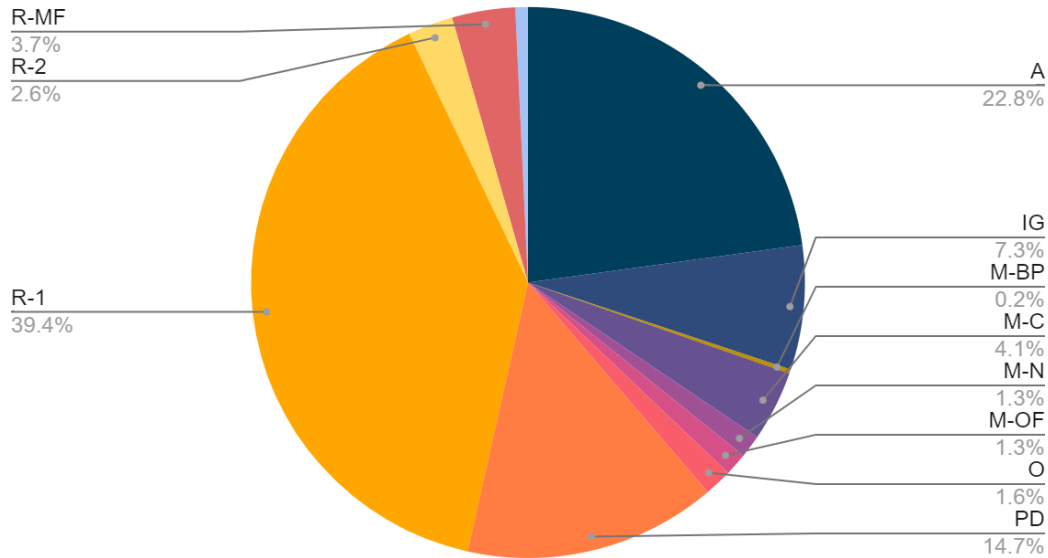
When only considering residential districts, the following metrics are yielded.

Outside Loop			Inside Loop		
DISTRICT	Area in SFT	% Zoning	DISTRICT	Area in SFT	% Zoning
R-1	612,416,529	85%	R-1	83,456,899	55%
R-2	41,094,250	6%	R-2	22,084,648	15%
R-MF	57,297,704	8%	R-MF	46,494,261	31%
R-MH	11,408,916	2%	R-MH	0	0%
Residential Total	722,217,400		Residential Total	152,035,808	
% of Total Zoning	46.50%		% of Total Zoning	78.77%	

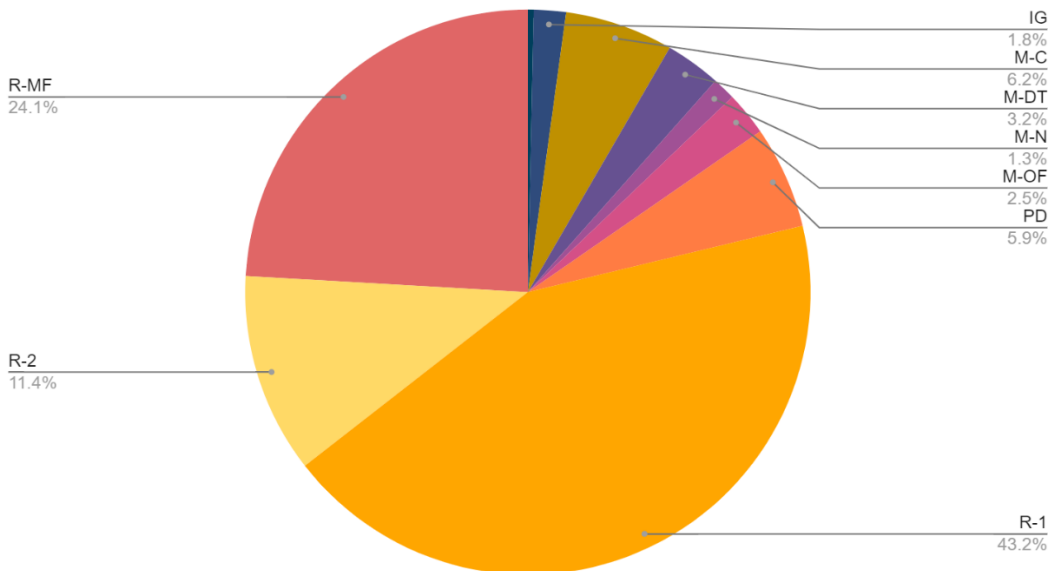
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As the above table indicates, there is aggregate more land with residential zoning distinction outside of the loop, but provided how much more land there is outside of the loop, this is expected. Residential zoning is nearly 80% of all of the total square footage in the loop area, whereas it only occupies 46% outside of the loop. This also illustrates how R-1 is the majority residential zoning proportionally, particularly outside of the loop, where 85% of the residential zoning square footage is R-1.

% of Zoning District Out of Study Area



% of Zoning District in Study Area



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As zoning and parcels are not always uniform (that is, parcels may not be entirely zoned one way) it is challenging to get accurate measures of true lot coverage based on zoning district. The tables above all consider zoning districts agnostic to lots. All analysis were based on polygons of zoning districts and not lots, therefore no statistics pertaining to lots is included above.

Many institutional uses are permissible in residential districts. Notable examples include the Daniel Boone Library and much of the University of Missouri, Columbia College and Stephens College campuses. Therefore, analysis was conducted based on building code classification and structure codes were then classified into a broader use for the sake of visualization and more meaningful analysis considering all residential uses. This dictionary where all codes for structure based on use, how that use is defined, and the broad use group we categorized the use within is included in the appendix.

The tables below illustrate the distribution of uses of structures both in and out of the loop irrespective zoning.

Outside Loop	Total Structure Area SFT	% of Area	# of Structures	% of Structures	Avg Structure Size SFT	Median Structure Size
Agriculture	464,794	0%	191	1%	2,433	1,423
Industrial	7,272,260	7%	571	2%	12,736	4,909
Infrastructure	169,129	0%	91	0%	1,859	439
Institutional	5,057,943	5%	335	1%	15,098	3,347
Office	4,804,647	5%	345	1%	13,927	7,777
Recreative	620,894	1%	104	0%	5,970	1,201
Residential	73,642,123	70%	27,750	81%	2,654	2,447
Retail	10,824,501	10%	841	2%	12,871	6,449
Storage	1,422,189	1%	3,394	10%	419	152
Unknown	862,848	1%	557	2%	1,549	414
Grand Total	105,141,330	100%	34,179	100%	3,076	2,374

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In Loop	Total Structure Area SFT	% of Area	# of Structures	% of Structures	Avg Size SFT	Median
Agriculture	114,515	0%	22	0%	5,205	1,223
Industrial	857,688	3%	93	1%	9,222	4,840
Infrastructure	11,096	0%	4	0%	2,774	765
Institutional	5,360,651	18%	282	3%	19,009	10,121
Office	1,288,926	4%	167	2%	7,718	4,750
Recreative	85,172	0%	8	0%	10,646	1,307
Residential	15,206,309	52%	7,006	67%	2,170	1,768
Retail	4,305,935	15%	485	5%	8,878	4,472
Storage	2,076,424	7%	2,322	22%	894	242
Unknown	58,403	0%	143	1%	408	169
Grand Total	29,365,118	100%	10,532	100%	2,788	1,558

The median structure is about 800 square feet larger outside of the loop than inside it. Similarly, the median home size is around 700 square feet larger outside of the loop and the average home is around 500 feet larger. Storage (which includes parking garages), institutional, recreative and infrastructure based uses are all larger for median in the loop than outside of loop, again likely due to the college/universities all being located within said loop.

To understand the context under which these structures exist, the zoning district was summarized within the structure polygon, so any underlying zoning district would be attached to the structure, providing a field for both use and zoning associated with one structure. The maps on the following pages show coded uses of structures on top of zoning districts. PDF copies of these maps should be included for a more detailed view, as much data is obscured on the outside of the loop maps due to the geographic extent of the map and formatting to fit on a word document.

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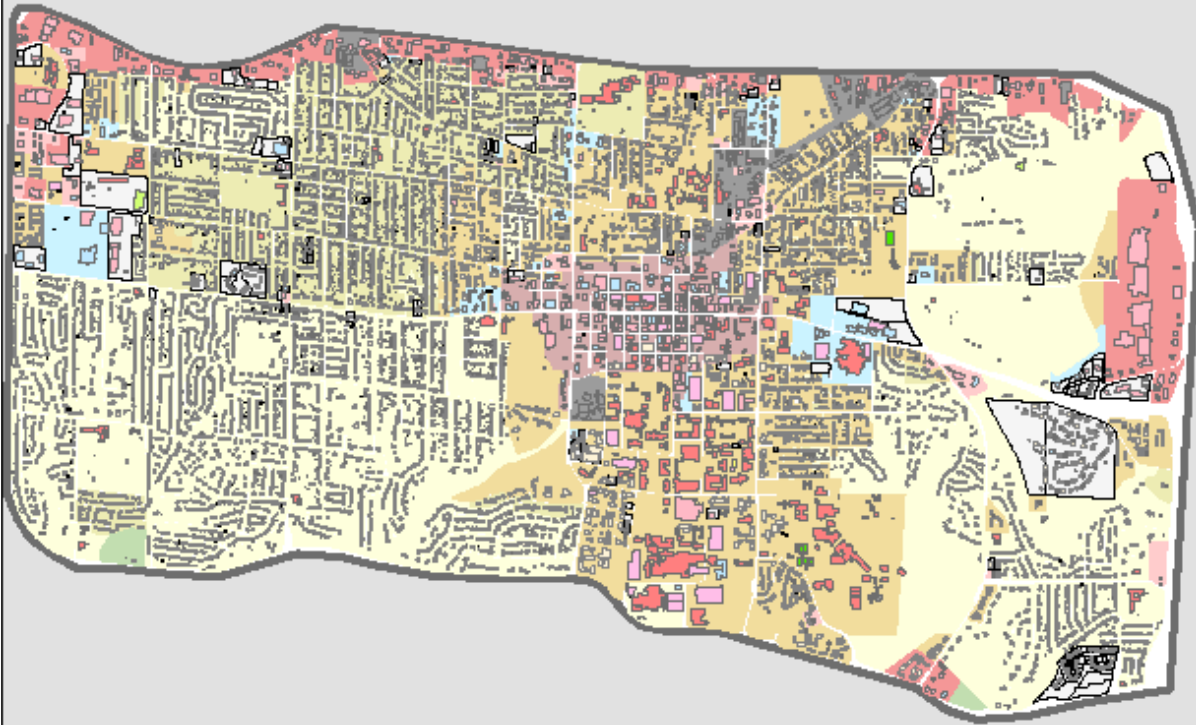
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Inside of Loop - Structure and Zoning

Lot x Zoning x Structure Analysis


Majority DISTRICT	<ul style="list-style-type: none"> M-BP R-1 R-2 R-MF R-MH A IG 	<ul style="list-style-type: none"> M-C M-DT M-N M-OF O PD City Border
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Broad Use	<ul style="list-style-type: none"> Agriculture Industrial Infrastructure Institutional Office 	<ul style="list-style-type: none"> Recreative Residential Retail Storage Unknown <all other values>
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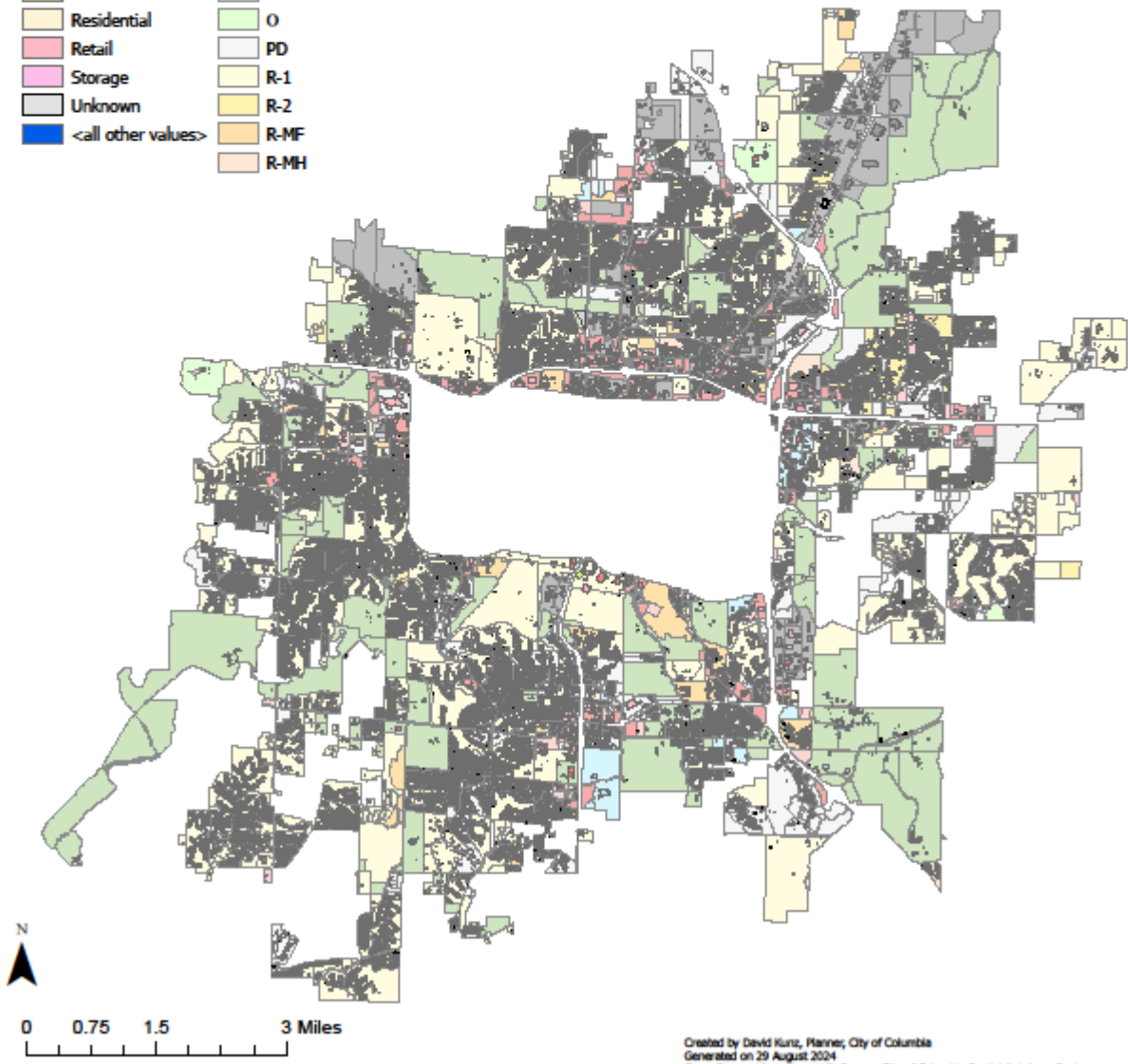
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Outside of Loop - Structure and Zoning

Lot x Zoning x Structure Analysis

Broad Use	DISTRICT
Agriculture	A
Industrial	IG
Infrastructure	M-BP
Institutional	M-C
Office	M-N
Recreative	M-OF
Residential	O
Retail	PD
Storage	R-1
Unknown	R-2
<all other values>	R-MF
	R-MH



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As the purpose of this research is largely understanding where residential uses exist, the tables below illustrate zoning districts where residential structures exist both in and out of the loop.


Inside the Loop				Outside the Loop			
Broad Use	Zoning District	Structure SFT	% of Residential SFT	Broad Use	Zoning District	Structure SFT	% of Residential SFT
Residential	A	1,660	0%	Residential	A	637,213	1%
	IG	5,399	0%		IG	55,352	0%
	M-BP	0	0%		M-BP	1,113	0%
	M-C	91,216	1%		M-C	380,780	1%
	M-DT	253,202	2%		M-DT	0	0%
	M-N	44,799	0%		M-N	300,461	0%
	M-OF	65,671	0%		M-OF	202,335	0%
	PD	678,267	4%		PD	10,366,798	14%
	R-1	7,039,989	46%		R-1	50,491,433	69%
	R-2	2,747,504	18%		R-2	5,062,446	7%
	R-MF	4,278,598	28%		R-MF	5,231,935	7%
	R-MH	0	0%		R-MH	912,256	1%

In the loop, consistent with the zoning district observations, much more land is zoned R-MF and much more residential development therefore occurs in the R-MF district in the loop compared to out of the loop, proportionally. It is also important to consider **what type of residential development** occurs in the loop compared to out of the loop, also by zoning district. The tables on the following page show this agnostic zoning. Tables where use is grouped by zoning district further (and zoning district is segmented by use) are available in the appendix.

Inside the Loop	SFT	% of Residential Use Type	# of Struct	% of Structures	Avg Struct Size	StDev	Median
1 or 2 family dwelling	11,681,255	77%	6,332	90%	1,845	791	1,684
Boarding/rooming house, residential hotels	12,176	0%	1	0%	12,176	0	12,176
Dormitory-type residence (i.e. sorority/fraternity house, barracks, dormitory)	788,757	5%	61	1%	12,930	13,647	8,407
Multifamily dwelling	2,722,312	18%	610	9%	4,463	4,624	3,477
Residential or Cannot Be Classified Further	1,810	0%	2	0%	905	824	905
Residential Total	15,206,309	100%	7,006	100%	2,170	2,372	1,768

Outside of Loop	SFT	% of Residential Use Type	# of Struct	% of Structures	Avg Struct Size	StDev	Median
1 or 2 family dwelling	65,127,165	88%	25,947	93%	2,510	847	2,431
Boarding/rooming house, residential hotels	6,214	0%	2	0%	3,107	340	3,107
Multifamily dwelling	7,500,961	10%	1,283	5%	5,846	3,822	4,917
Residential board and care	148,201	0%	12	0%	12,350	19,443	5,080
Residential or Cannot Be Classified Further	859,582	1%	506	2%	1,699	710	1,657
Residential Total	73,642,123	100%	27,750	100%	2,654	1,437	2,447

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Single family and two family homes represent much of the residential development in both areas, but particularly more outside of the loop. **The homes end up being around 800 sft larger outside of the loop, consistent with the broader analysis of all lots in the residential group.** Dorms and boarding/room housing/residential hotels are larger within the loop than outside of the loop, which again would make sense given the university’s and colleges’ locations. Overall, residential development inside of the loop, particularly as it pertains to single and two family residences, is about 50% larger on both average and median, but there is a comparable observed standard deviation for these residential structures. The following tables look at statistics for 1 or 2 family dwellings based on zoning districts both inside and outside of the study loops.

Inside of Loop	Zoning	SFT of Use	% of SFT	Structure Count	% of Structure	Avg Struct	Med Struct
1 or 2 family dwelling	A	1,660	0%	1	0%	1,660	1,660
	IG	5,400	0%	4	0%	1,350	1,379
	M-C	24,557	0%	19	0%	1,292	1,261
	M-DT	8,556	0%	6	0%	1,426	1,373
	M-N	24,993	0%	14	0%	1,785	1,387
	M-OF	25,780	0%	18	0%	1,432	1,320
	PD	147,931	1%	63	1%	2,348	2,106
	R-1	6,998,010	60%	3,205	51%	2,183	2,086
	R-2	2,700,306	23%	1,863	29%	1,449	1,338
	R-MF	1,744,061	15%	1,139	18%	1,531	1,422
1 or 2 family dwelling Total		11,681,255		6,332		1,845	1,684

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Outside of Loop	Zoning	SFT of Use	% of SFT	Structure Count	% of Structure	Avg Struct	Med Struct
1 or 2 family dwelling	A	596,528	1%	270	1%	2,209	2,005
	IG	48,982	0%	42	0%	1,166	1,113
	M-BP	1,113	0%	1	0%	1,113	1,113
	M-C	67,555	0%	32	0%	2,111	2,214
	M-N	33,411	0%	10	0%	3,341	2,232
	M-OF	47,825	0%	21	0%	2,277	2,265
	PD	7,197,262	11%	2,613	11%	2,754	2,474
	R-1	50,301,683	77%	19,692	75%	2,554	2,484
	R-2	4,674,445	7%	2,107	8%	2,219	2,239
	R-MF	1,440,826	2%	558	2%	2,582	2,412
	R-MH	717,536	1%	601	2%	1,194	1,179
1 or 2 family dwelling Total		65,127,165		25,947		2,510	2,431

When looking particularly at only single and two family dwellings, the disparity in typical structure size is more evident based on the zoning district. That is, outside of the loop, identical zoning districts end up having around 50% larger homes on average and on the median. Additionally, around 15% of the single or two family housing square footage inside the loop occurs in the R-MF district and 1 or 2 family dwellings have a comparable average and median to R-2.

When looking at parcels rather than polygons based on zoning, lot coverage may be considered. For this analysis, only lots which were identified to contain at least one instance of a residential use were considered to isolate lot summary statistics for lots actually containing residential districts opposed to institutional. Lots which were analyzed are illustrated on the maps on the following pages.

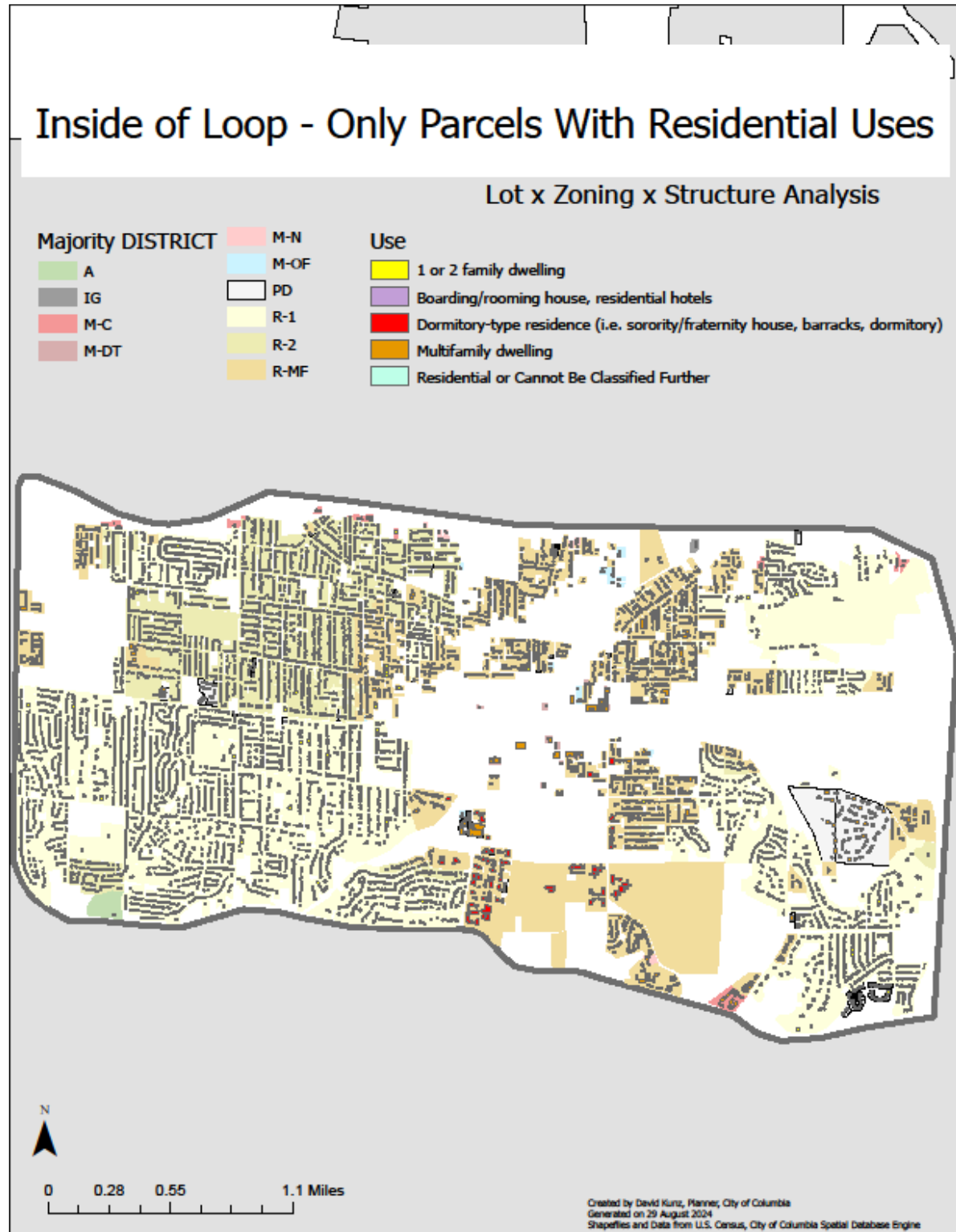
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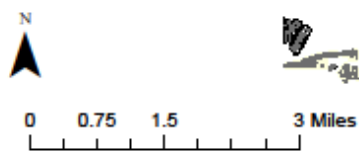
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Outside of Loop - Only Parcels With Residential Uses

Lot x Zoning x Structure Analysis

Majority DISTRICT	Use
A	1 or 2 family dwelling
IG	Boarding/rooming house, residential hotels
M-BP	Multifamily dwelling
M-C	Residential board and care
M-N	Residential or Cannot Be Classified Further
M-OF	
O	
PD	
R-1	
R-2	
R-MF	
R-MH	



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The following series of tables show **summary statistics for lots** from the maps above rather than structures, necessarily, which contain residential structures on them. To assign 'zoning' to a lot for this research, the lot must be zoned 80% of one zoning district, which is greater than a super majority. This may explain discrepancies in metrics derived from these tables compared to the tables based on zoning district polygons, which, again, are not tied exactly to parcel.

Outside of Loop - Only Residential Uses					
Zoning	Lot Count	Lot SFT	Average Lot SFT	Median Lot SFT	Stdev Lot SFT
A	201	77,997,508	388,047	78,518	1,253,344
IG	14	1,224,673	87,477	28,180	125,072
M-BP	1	71,360	71,360	71,360	0
M-C	46	3,243,479	70,510	27,061	134,536
M-N	18	1,508,056	83,781	46,235	94,755
M-OF	30	1,520,658	50,689	23,354	65,602
PD	3,198	56,696,258	17,729	7,350	80,740
R-1	19,745	328,754,523	16,650	12,191	57,879
R-2	2,206	30,555,902	13,851	11,624	13,723
R-MF	630	44,398,506	70,474	13,750	442,635
R-MH	17	9,858,296	579,900	415,375	475,831
Grand Total	26,106	555,829,218	21,291	11,896	147,310

Inside of Loop - Only Residential Uses					
Zoning	Lot Count	Lot SFT	Average Lot SFT	Median Lot SFT	Stdev Lot SFT
A	1	458,066	458,066	458,066	0
IG	4	52,036	13,009	11,565	4,403
M-C	23	576,139	25,050	9,750	53,932
M-DT	20	373,027	18,651	12,414	13,611
M-N	16	175,342	10,959	6,776	13,691
M-OF	22	296,662	13,485	11,032	10,123
PD	99	4,653,668	47,007	8,579	233,741
R-1	3,200	60,118,634	18,787	12,762	62,345
R-2	1,846	19,029,138	10,308	8,582	20,282
R-MF	1,349	30,577,951	22,667	8,324	171,294
Grand Total	6,580	116,310,663	17,676	10,522	94,438

Lots containing residential uses in the city are on average and median smaller within the loop. However, R-1 lots which contain residential uses inside the loop were identified to have a larger median and average than outside of the loop. So, R-1 lots outside of the loop are smaller and have greater uniformity – this may be due to subdivision development out of the loop having less variation in lot sizes as they were all platted/constructed around the same time and under different regulations than many of the lots within the city loop. PD lots are also smaller outside of the lot, but are consistent with R-1 lots, so this may be due to the increased number of residential PDs outside of the loop, as there are few instances of PDs inside the loop (99 or 6,580 parcels).

The following tables are analyzing **structures** based on the parcel they lie within and its corresponding zoning, again, only looking at residential structures.

Outside of Loop - Only Residential Uses					
Zoning	# of Structure	SFT of Structures	Avg Structure Size	Median Structure Size	Stdev Structure SFT
A	629	1,083,403	5,390	3,233	10,621
IG	90	75,210	5,372	2,899	7,327
M-BP	1	1,113	1,113	1,113	0
M-C	104	629,840	13,692	8,543	31,014
M-N	61	221,117	12,284	7,680	14,312
M-OF	65	282,501	9,417	2,376	12,249
PD	4,414	10,731,433	3,356	2,408	11,745
R-1	22,150	50,942,788	2,580	2,496	838
R-2	2,735	5,118,411	2,320	2,270	1,045
R-MF	1,689	5,983,557	9,498	2,444	29,399
R-MH	1,115	954,691	56,158	43,364	47,524
Grand Total	33,053	76,024,065	2,912	2,463	6,793

Inside Loop table on following page...

Inside of Loop - Only Residential Uses					
Zoning	# of Structure	SFT of Structures	Avg Structure Size	Median Structure Size	Stdev Structure SFT
A	2	2,071	2,071	2,071	0
IG	9	10,222	2,555	2,486	976
M-C	45	109,485	4,760	2,446	9,754
M-DT	26	257,292	12,865	8,661	11,618
M-N	24	46,366	2,898	1,646	3,577
M-OF	32	48,089	2,186	1,595	1,501
PD	247	758,245	7,659	1,959	29,886
R-1	4,502	7,382,249	2,307	2,187	918
R-2	2,934	3,016,407	1,634	1,493	1,048
R-MF	2,469	6,514,749	4,829	1,684	42,235
Grand Total	10,290	18,145,175	2,758	1,877	19,562

This table shows summary statistics for structures based on zoning district for all residential types, not just one to two family as shown before. Proportionally, the plurality of residential structures are on R-1 lots in both district. This is consistent mostly with the % of R-1 zoning in the study areas. Residential structures are larger in every district, on average and median, outside of the loop compared to inside of the loop, with the exception of PD which has a larger average but lower median. Overall these results are consistent with previous tables illustrating all structures based on zoning district rather than parcel.

The following tables illustrate lot coverage by zoning district by lots only containing residential uses to understand how the buildable area is leveraged for residential uses based on zoning district.

Outside of Loop - Only Residential Uses			
Zoning	Average Lot Coverage	Median Lot Coverage	Stdev of Lot Coverage
A	7%	5%	7%
IG	13%	10%	9%
M-BP	2%	2%	0%
M-C	25%	29%	12%
M-N	18%	22%	8%
M-OF	18%	15%	10%
PD	35%	29%	20%
R-1	20%	20%	7%
R-2	19%	19%	6%
R-MF	20%	20%	7%
R-MH	11%	11%	4%
Grand Total	21%	20%	11%

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Inside of Loop - Only Residential Uses			
Zoning	Average Lot Coverage	Median Lot Coverage	Stdev of Lot Coverage
A	0%	0%	0%
IG	20%	18%	6%
M-C	22%	24%	10%
M-DT	58%	68%	29%
M-N	26%	25%	9%
M-OF	18%	16%	7%
PD	38%	30%	22%
R-1	17%	17%	6%
R-2	18%	18%	6%
R-MF	23%	22%	9%
Grand Total	19%	18%	9%

Consistent with findings in previous tables, lots with residential uses outside of the loop tend to have greater lot coverage (with exception of R-MF, M-OF and PD) due to having larger structures despite lots being sized similarly. Regardless, the range of residential lot coverage ends up being between 17% and 23% for conventionally residentially zoned (R-1, 2, MF) lots. Overall, since R-1 represents the majority residential zoning district, and R-1 lots are smaller outside of the loop compared to inside the loop, it is reasonable that it has a higher lot coverage % since structures outside of the loop are typically larger.

Conclusion

Outside of the loop, residential lots are...

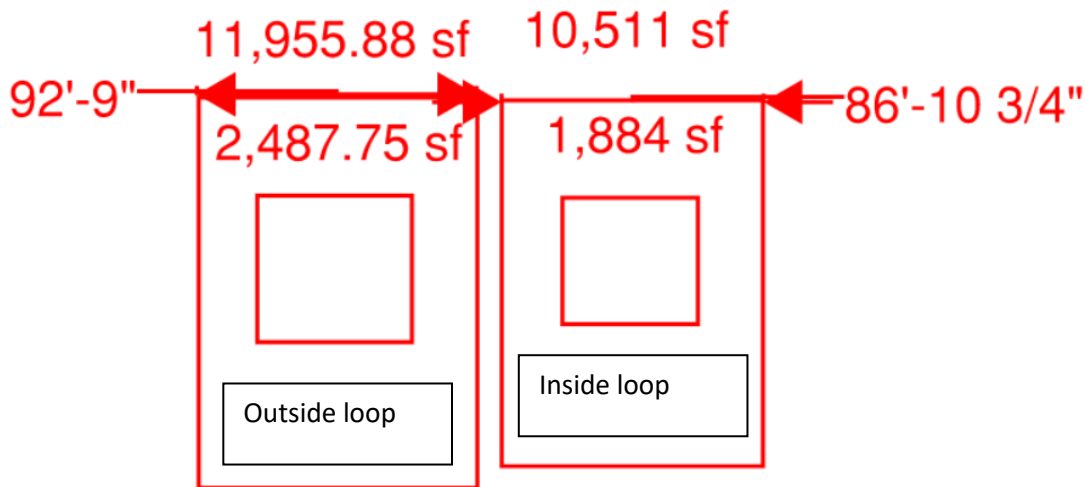
- Probably R-1 zoned, almost for sure a single family home or two family home
- Probably around 12,000 SFT of land and around 2,500 SFT of structure, which is right around 20% lot coverage.
- Structures deviate less in size because there is an overwhelming majority of single or two family home representing total residential structures (93% of all structures, 83% of total structure square footage).

Inside of the loop...

- Zoning may not be R-1, but the structure is still likely to be a single or two family home.
- Probably around 10,500 SFT of land and around 1,900 SFT of structure, which is 17% lot coverage

- If not R-1, lot is probably closer to 9,000 SFT and structure is closer to 1,400 SFT, ~16% lot coverage, based on medians of lots and structures
- Structures deviate more in size because multifamily developments comprise 9% of structures and 18% of total square footage

An average lot containing residential uses outside vs. inside of the loop would look like as follows, with the inner square representing the building footprint.



In summary...

Most residential lots are zoned R-1. Residential structures are larger outside of the loop, normally, but may be on a smaller lot. R-2 and R-MF lots in the loop are mostly used for 1 or 2 family dwellings. There is no way to identify duplexes based off the coding of the structure layer within the City’s SDE, which may be a shortcoming of this research. However, R-2 and R-MF structures in the loop are substantially smaller than outside of the loop, and lot sizes are also smaller typically. Nearly the same amount of land in R-MF is dedicated to 1 or 2 family dwellings as land dedicated to multifamily structures within the loop.

PDs are much more commonly utilized outside of the loop compared to inside the loop and contain structures larger than inside the loop, typically. However, the lots are smaller than inside the loop, around 7,000 square feet, which leads to a higher lot coverage compared to other zoning districts outside the loop. PDs inside the loop tend to be for multifamily development while outside the loop, PDs are/were used for single family developments. Also outside of the loop, the R-MF district is actually used for multifamily dwellings more commonly than within the loop where, again, it is observed to be a split between ‘multifamily’ dwellings and single or two family dwellings.

Code	Use	Broad_Use
UU	Undetermined	Unknown
10	Assembly or Cannot Be Classified Further	Unknown
11	Fixed-use recreation places (i.e. bowling, arcade, roller/ice rink, swimming facility, billiard/pool hall)	Retail
12	Variable-use amusement, recreation places (i.e. playground, stadium/arena, convention center/hall, gymnasium, ballroom, indoor/outdoor amusement center)	Recreative
13	Places of worship, funeral parlors (i.e. church, mosque, synagogue, temple, chapel)	Institutional
14	Clubs (i.e. athletic/health club, clubhouse, yacht club, casino, gambling clubs)	Recreative
15	Public or government buildings (i.e. library, museum, memorial structure including monuments & statues, courthouse)	Institutional
16	Eating, drinking places (i.e. restaurant or cafeteria, bar or nightclub)	Retail
17	Passenger terminal (i.e. airport passenger terminal, bus station, rapid transit station)	Institutional
18	Studio/theater (i.e. live performance theater, auditorium, concert hall, movie theater, radio/television studio, film/movie production studio)	Recreative
20	Educational or Cannot Be Classified Further	Institutional
21	Schools, non-adult (i.e. preschool, elementary school including kindergarten, high school, junior high school, middle school)	Institutional
24	Adult education center, college classroom	Institutional
25	Day care (i.e. in commercial property, in residence licensed, in residence unlicensed)	Retail
30	Health care, detention and correction. Includes animal care. Cannot Be Classified Further	Office
31	24-hour care Nursing homes, 4 or more persons	Office
33	Hospital (i.e. medical or psychiatric hospitals, hospices)	Institutional
34	Clinics, doctors offices, hemodialysis center (i.e. clinic or clinic-type infirmary, doctor, dentist or oral surgeon office, hemodialysis unit)	Office
36	Jail, prison (i.e. reformatory, juvenile detention center, police station)	Institutional

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40	Residential or Cannot Be Classified Further	Residential
41	1 or 2 family dwelling	Residential
42	Multifamily dwelling	Residential
43	Boarding/rooming house, residential hotels	Residential
44	Hotel/motel, commercial	Retail
45	Residential board and care	Residential
46	Dormitory-type residence (i.e. sorority/fraternity house, barracks, dormitory)	Residential
50	Mercantile, business, or Cannot Be Classified Further	Retail
51	Convenience store (i.e. food and beverage sales, grocery store)	Retail
52	Textile, wearing apparel sales	Retail
53	Household goods, sales, repairs	Retail
54	Specialty shop	Retail
55	Personal service, including barber & beauty shops (i.e. recreational, hobby, home repair sales, pet store)	Retail
56	Laundry, dry cleaning (i.e. professional supplies, services)	Retail
57	Service station, gas station (i.e. motor vehicle or boat sales, services, repairs)	Retail
58	General retail (i.e. department or discount store)	Retail
59	Bank (i.e. veterinary or research office, post office or mailing firms, business office)	Office
60	Industrial, utility, defense, agriculture, mining, or Cannot Be Classified Further	Industrial
61	Energy production plant (i.e. steam, heat, or electric generating plant)	Industrial
62	Laboratory or science laboratory	Office
63	Defense, military installation (i.e. flight control tower, computer center, communications center)	Office
64	Utility or Distribution system (i.e. electrical distribution, gas distribution, gas pipeline, flammable liquid distribution, F.L. pipeline, water utility, sanitation utility)	Infrastructure
65	Crops, orchard, or livestock production	Agriculture

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66	Forest, timberland, woodland	Agriculture
67	Mine, quarry	Industrial
70	Manufacturing, processing, or Cannot Be Classified Further (i.e. Includes factories that are devoted to operations making products of all kinds. Such as processing, assemblies, mixing, packing, finishing or decorating, and repairing.)	Industrial
80	Storage or Cannot Be Classified Further	Storage
81	Grain elevator, silo (i.e. livestock or poultry storage)	Agriculture
83	Refrigerated storage	Industrial
84	Outside storage tank	Storage
88	Vehicle storage (i.e. parking garage detached from residential garage, parking garage for general vehicles, fire stations)	Storage
89	Warehouse (i.e. dock, marina, pier, wharf, residential or self-storage units)	Industrial
90	Outside, special property or Cannot Be Classified Further	Unknown
91	Dump, sanitary landfill	Industrial
92	Bridge, trestle (i.e. tunnel, outbuilding, protective shelter)	Infrastructure
93	Open land or field (i.e. campsite with utilities, vacant lot, beach, graded and cared-for plots of land, lawn)	Open
94	Water area (i.e. open ocean, sea or tidal waters, lake, river, stream)	Open
95	Railroad right-of-way or Railroad yard	Infrastructure
96	Street (i.e. sidewalk, highway or divided highway, residential street, road or residential driveway, street or road in commercial area, vehicle parking area)	Infrastructure
97	Aircraft runway, taxiway, or loading area	Infrastructure
98	Construction site (i.e. oil or gas field, pipeline, power line or other utility right-of-way, industrial plant yard - area)	Industrial
100	Commercial - Multiple Occupancy	Retail
101	Commercial - Single Occupancy	Retail
102	Commercial/Residential Mixed	Retail
103	Office - Multiple Occupancy	Office
104	Office - Single Occupancy	Office

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Inside of Loop - Structure Use - Zoning District - Pivot

Inside of Loop	Zoning	SFT of Use	% of SFT	Structure Count	% of Structure	Avg Struct
1 or 2 family dwelling	A	1,660	0%	1	0%	1,660
	IG	5,400	0%	4	0%	1,350
	M-C	24,557	0%	19	0%	1,292
	M-DT	8,556	0%	6	0%	1,426
	M-N	24,993	0%	14	0%	1,785
	M-OF	25,780	0%	20	0%	1,289
	PD	147,931	1%	65	1%	2,276
	R-1	6,998,010	60%	3,231	51%	2,166
	R-2	2,700,306	23%	1,868	29%	1,446
	R-MF	1,744,061	15%	1,163	18%	1,500
1 or 2 family dwelling Total		11,681,255		6,391		1,828
Boarding/rooming house, residential hotels	M-C	12,176	100%	2	100%	6,088
Boarding/rooming house, residential hotels Total		12,176		2		6,088
Dormitory-type residence (i.e. sorority/fraternity house, barracks, dormitory)	PD	18,257	2%	2	3%	9,129
	R-2	16,816	2%	2	3%	8,408
	R-MF	753,683	96%	58	94%	12,995
Dormitory-type residence (i.e. sorority/fraternity house, barracks, dormitory) Total		788,757		62		12,722
Multifamily dwelling	M-C	54,483	2%	14	2%	3,892
	M-DT	244,647	9%	17	3%	14,391
	M-N	19,806	1%	4	1%	4,951
	M-OF	39,891	1%	13	2%	3,069
	PD	512,079	19%	81	13%	6,322
	R-1	40,169	1%	14	2%	2,869
	R-2	30,383	1%	16	3%	1,899
	R-MF	1,780,854	65%	466	75%	3,822
Multifamily dwelling Total		2,722,312		625		4,356
Residential or Cannot Be Classified Further	R-1	1,810	100%	2	100%	905
Residential or Cannot Be Classified Further Total		1,810		2		905
Residential Total		15,206,309		7,082		2,147

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Outside of Loop - Structure Use - Zoning District - Pivot

Inside of Loop	Zoning	SFT of Use	% of SFT	Structure Count	% of Structure	Avg Struct
1 or 2 family dwelling	A	596,528	1%	277	1%	2,154
	IG	48,982	0%	46	0%	1,065
	M-BP	1,113	0%	1	0%	1,113
	M-C	67,555	0%	34	0%	1,987
	M-N	33,411	0%	11	0%	3,037
	M-OF	47,825	0%	21	0%	2,277
	PD	7,197,262	11%	3,017	11%	2,386
	R-1	50,301,683	77%	19,806	75%	2,540
	R-2	4,674,445	7%	2,120	8%	2,205
	R-MF	1,440,826	2%	585	2%	2,463
	R-MH	717,536	1%	607	2%	1,182
1 or 2 family dwelling Total		65,127,165		26,525		2,455
Boarding/rooming house, residential hotels	PD	6,214	100%	3	100%	2,071
Boarding/rooming house, residential hotels Total		6,214		3		2,071
Multifamily dwelling	M-C	220,900	3%	39	3%	5,664
	M-N	267,050	4%	61	4%	4,378
	M-OF	141,814	2%	33	2%	4,297
	PD	3,114,393	42%	577	40%	5,398
	R-1	28,396	0%	14	1%	2,028
	R-2	57,187	1%	23	2%	2,486
	R-MF	3,671,221	49%	687	48%	5,344
Multifamily dwelling Total		7,500,961		1,434		5,231
Residential board and care	A	2,000	1%	1	5%	2,000
	M-C	89,600	60%	3	15%	29,867
	M-OF	12,697	9%	1	5%	12,697
	PD	43,904	30%	15	75%	2,927
Residential board and care Total		148,201		20		7,410
Residential or Cannot Be Classified Further	A	38,685	5%	30	6%	1,290
	IG	6,371	1%	6	1%	1,062
	M-C	2,725	0%	1	0%	2,725
	PD	5,025	1%	5	1%	1,005
	R-1	161,354	19%	89	18%	1,813
	R-2	330,815	38%	172	34%	1,923

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	R-MF	119,887	14%	52	10%	2,306
	R-MH	194,720	23%	153	30%	1,273
Residential or Cannot Be Classified Further Total		859,582		508		1,692
Totals		73,642,123		28,490		2,585

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Inside Study Area - Zoning - Use (residential only)

Zoning	Use (residential only)	SFT	% of SFT	Structure Count	% of Structures	Avg Struct
A	1 or 2 family dwelling	1,660	100%	1	100%	1,660
A Total		1,660		1		1,660
IG	1 or 2 family dwelling	5,400	100%	4	100%	1,350
IG Total		5,400		4		1,350
M-C	1 or 2 family dwelling	24,557	27%	19	54%	1,292
	Boarding/rooming house, residential hotels	12,176	13%	2	6%	6,088
	Multifamily dwelling	54,483	60%	14	40%	3,892
M-C Total		91,217		35		2,606
M-DT	1 or 2 family dwelling	8,556	3%	6	26%	1,426
	Multifamily dwelling	244,647	97%	17	74%	14,391
M-DT Total		253,202		23		11,009
M-N	1 or 2 family dwelling	24,993	56%	14	78%	1,785
	Multifamily dwelling	19,806	44%	4	22%	4,951
M-N Total		44,799		18		2,489
M-OF	1 or 2 family dwelling	25,780	39%	20	61%	1,289
	Multifamily dwelling	39,891	61%	13	39%	3,069
M-OF Total		65,671		33		1,990
PD	1 or 2 family dwelling	147,931	22%	65	44%	2,276
	Dormitory-type residence (i.e. sorority/fraternity house, barracks, dormitory)	18,257	3%	2	1%	9,129
	Multifamily dwelling	512,079	75%	81	55%	6,322
PD Total		678,268		148		4,583
R-1	1 or 2 family dwelling	6,998,010	99%	3,231	100%	2,166
	Multifamily dwelling	40,169	1%	14	0%	2,869
	Residential or Cannot Be Classified Further	1,810	0%	2	0%	905
R-1 Total		7,039,990		3,247		2,168

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R-2	1 or 2 family dwelling	2,700,306	98%	1,868	99%	1,446
	Dormitory-type residence (i.e. sorority/fraternity house, barracks, dormitory)	16,816	1%	2	0%	8,408
	Multifamily dwelling	30,383	1%	16	1%	1,899
R-2 Total		2,747,505		1,886		1,457
R-MF	1 or 2 family dwelling	1,744,061	41%	1,163	69%	1,500
	Dormitory-type residence (i.e. sorority/fraternity house, barracks, dormitory)	753,683	18%	58	3%	12,995
	Multifamily dwelling	1,780,854	42%	466	28%	3,822
R-MF Total		4,278,598		1,687		2,536
Total		15,206,309		7,082		2,147

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Outside Study Area - Zoning - Use (residential only)

Zoning	Use (residential only)	SFT	% of SFT	Structure Count	% of Structures	Avg Struct
A	1 or 2 family dwelling	596,528	93.62%	277	89.94%	2,154
	Residential board and care	2,000	0.31%	1	0.32%	2,000
	Residential or Cannot Be Classified Further	38,685	6.07%	30	9.74%	1,290
A Total		637,213		308		2,069
IG	1 or 2 family dwelling	48,982	88.49%	46	88.46%	1,065
	Residential or Cannot Be Classified Further	6,371	11.51%	6	11.54%	1,062
IG Total		55,352		52		1,064
M-BP	1 or 2 family dwelling	1,113	100.00%	1	100.00%	1,113
M-BP Total		1,113		1		1,113
M-C	1 or 2 family dwelling	67,555	17.74%	34	44.16%	1,987
	Multifamily dwelling	220,900	58.01%	39	50.65%	5,664
	Residential board and care	89,600	23.53%	3	3.90%	29,867
	Residential or Cannot Be Classified Further	2,725	0.72%	1	1.30%	2,725
M-C Total		380,780		77		4,945
M-N	1 or 2 family dwelling	33,411	11.12%	11	15.28%	3,037
	Multifamily dwelling	267,050	88.88%	61	84.72%	4,378
M-N Total		300,461		72		4,173
M-OF	1 or 2 family dwelling	47,825	23.64%	21	38.18%	2,277
	Multifamily dwelling	141,813	70.09%	33	60.00%	4,297
	Residential board and care	12,697	6.28%	1	1.82%	12,697
M-OF Total		202,335		55		3,679
PD	1 or 2 family dwelling	7,197,262	69.43%	3017	83.41%	2,386
	Boarding/rooming house, residential hotels	6,214	0.06%	3	0.08%	2,071
	Multifamily dwelling	3,114,393	30.04%	577	15.95%	5,398
	Residential board and care	43,904	0.42%	15	0.41%	2,927
	Residential or Cannot Be Classified Further	5,025	0.05%	5	0.14%	1,005
PD Total		10,366,798		3617		2,866

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R-1	1 or 2 family dwelling	50,301,683	99.62%	19806	99.48%	2,540
	Multifamily dwelling	28,396	0.06%	14	0.07%	2,028
	Residential or Cannot Be Classified Further	161,354	0.32%	89	0.45%	1,813
R-1 Total		50,491,433		19909		2,536
R-2	1 or 2 family dwelling	4,674,445	92.34%	2120	91.58%	2,205
	Multifamily dwelling	57,187	1.13%	23	0.99%	2,486
	Residential or Cannot Be Classified Further	330,815	6.53%	172	7.43%	1,923
R-2 Total		5,062,446		2315		2,187
R-MF	1 or 2 family dwelling	1,440,826	27.54%	585	44.18%	2,463
	Multifamily dwelling	3,671,221	70.17%	687	51.89%	5,344
	Residential or Cannot Be Classified Further	119,887	2.29%	52	3.93%	2,306
R-MF Total		5,231,935		1324		3,952
R-MH	1 or 2 family dwelling	717,536	78.66%	607	79.87%	1,182
	Residential or Cannot Be Classified Further	194,720	21.34%	153	20.13%	1,273
R-MH Total		912,256		760		1,200
Residential Total		73,642,123		28490		2,585

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Outside of Loop - Lot Coverage

HotSpots - Lot Coverage

- Cold Spot with 99% Confidence
- Cold Spot with 95% Confidence
- Cold Spot with 90% Confidence
- Not Significant
- Hot Spot with 90% Confidence
- Hot Spot with 95% Confidence
- Hot Spot with 99% Confidence

Lot x Zoning x Structure Analysis



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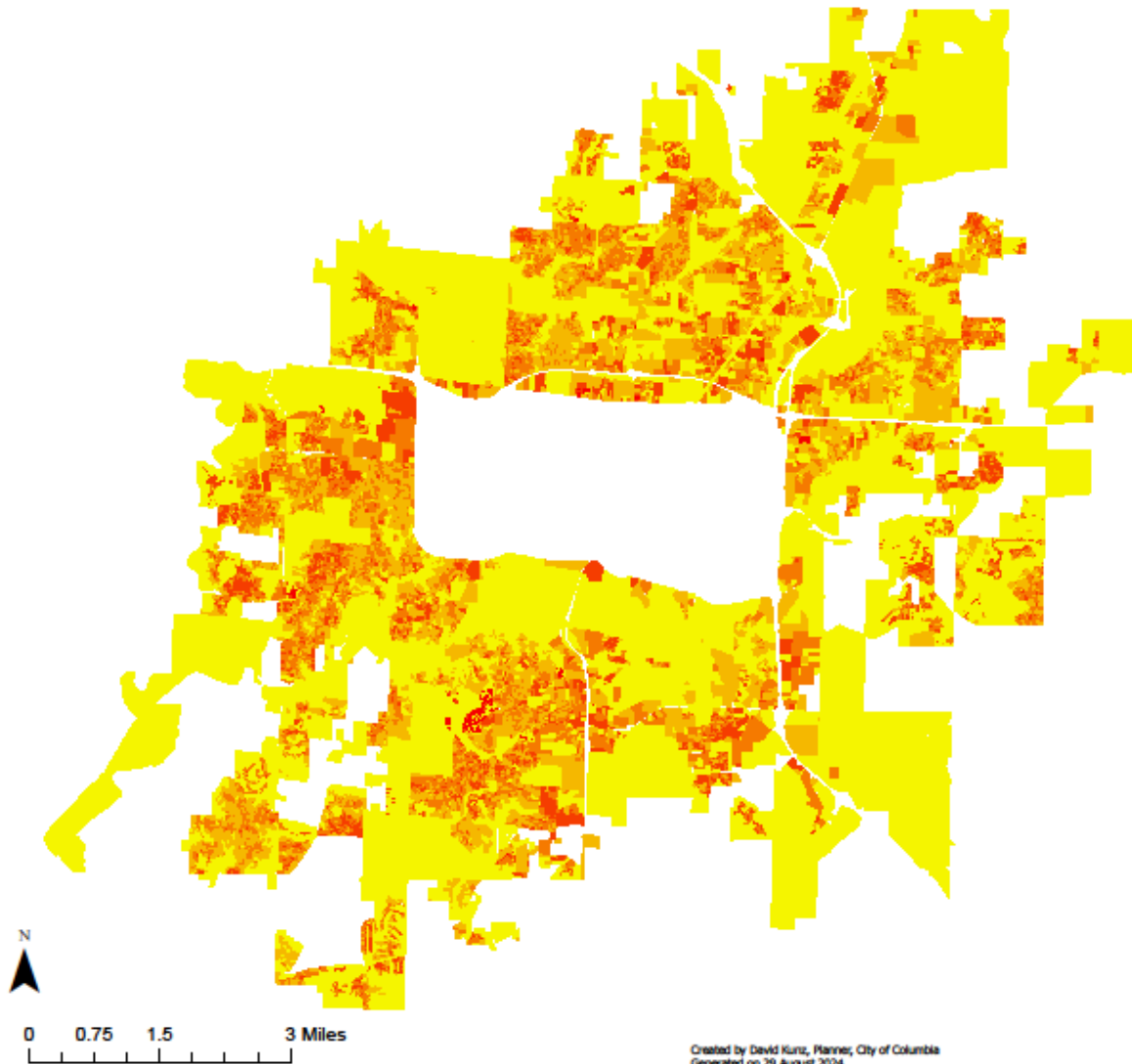
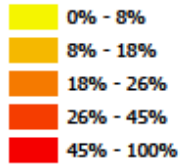
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Outside of Loop - Lot Coverage

Lot x Zoning x Structure Analysis

LotCoverage



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Generated on 29 August 2024
Shapefiles and Data from U.S. Census, City of Columbia Spatial Database Engine

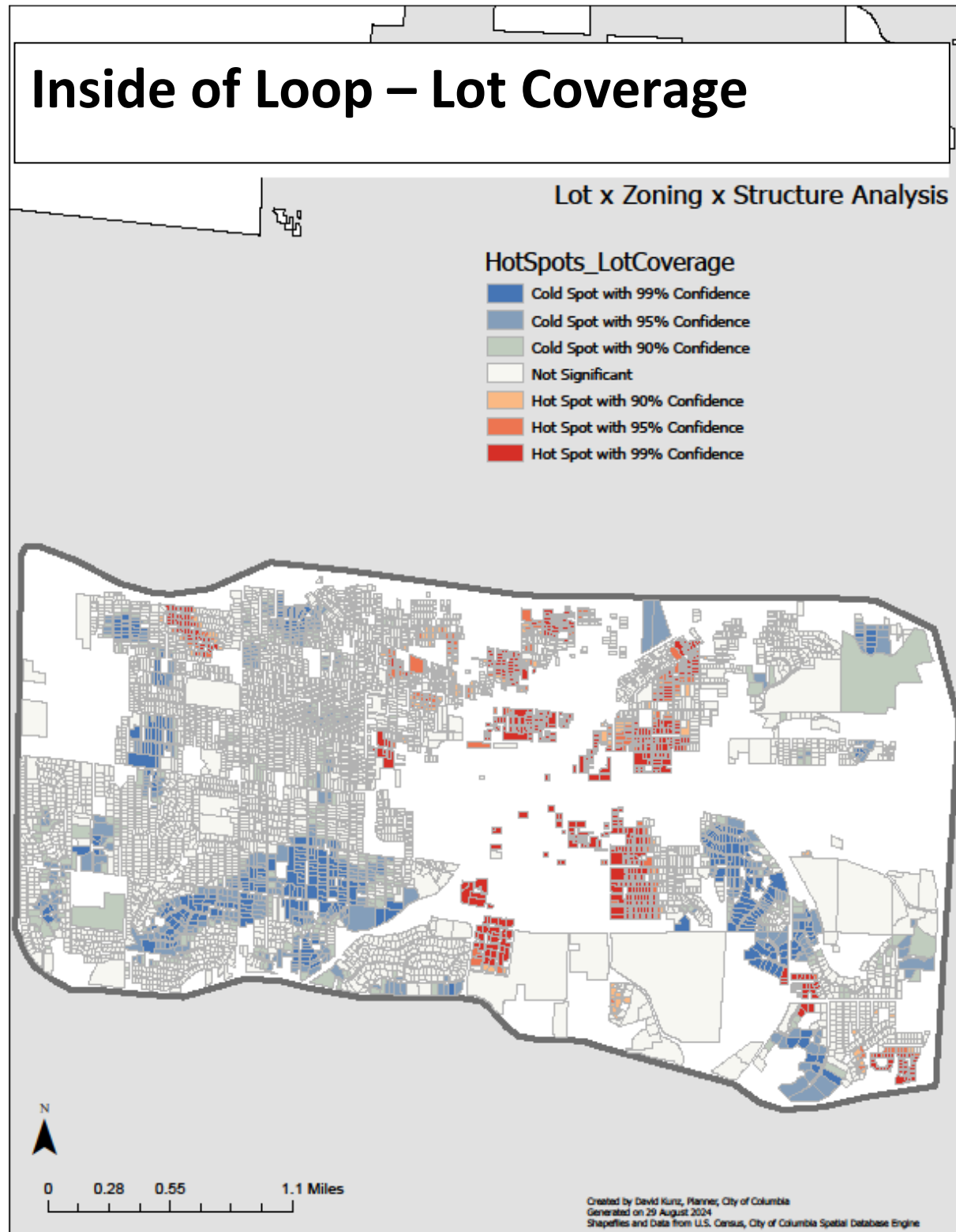
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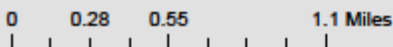
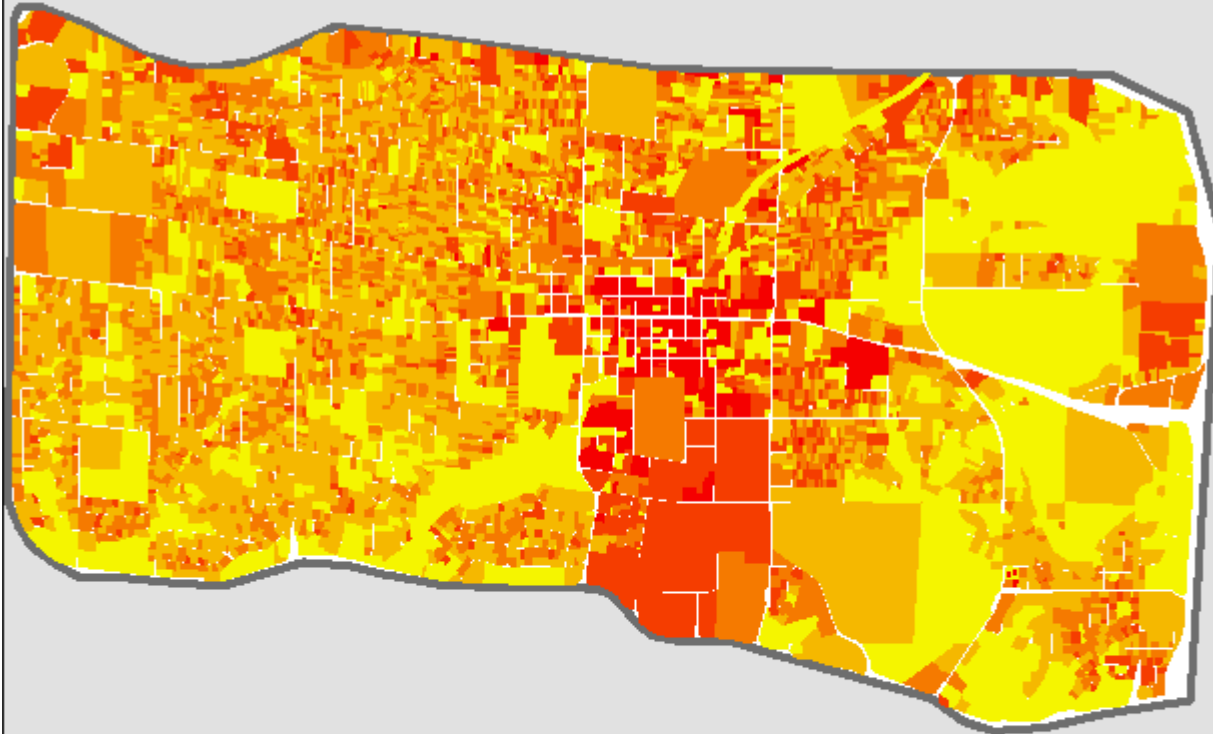
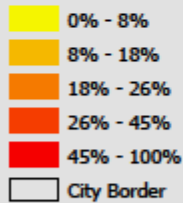
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Inside of Loop – Lot Coverage

Lot x Zoning x Structure Analysis

LotCoverage



Created by David Kurz, Planner, City of Columbia
Generated on 29 August 2024
Shapefiles and Data from U.S. Census, City of Columbia Spatial Database Engine

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Outside of Loop - Only Parcels With Residential Uses

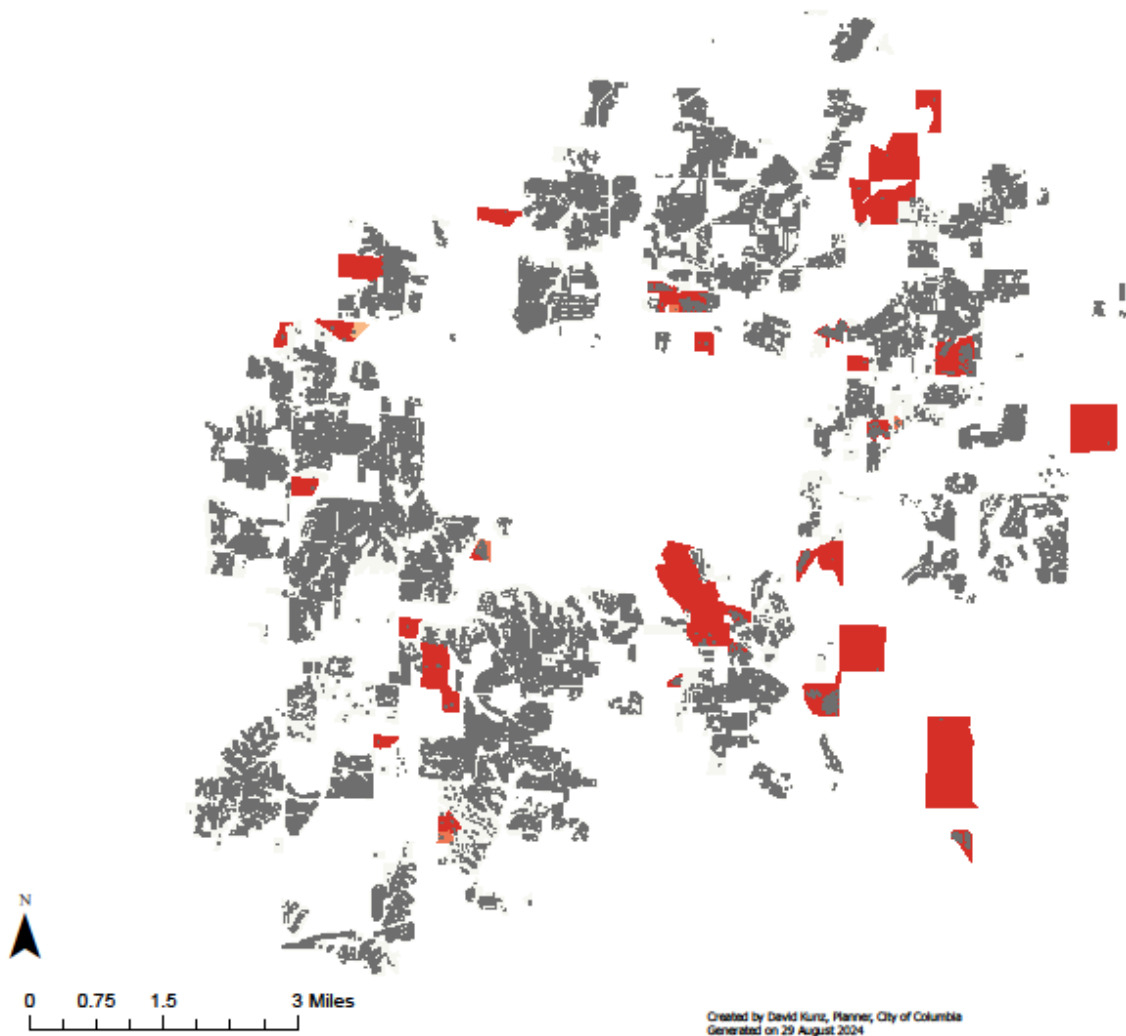
Lot x Zoning x Structure Analysis

Use

- 1 or 2 family dwelling
- Boarding/rooming house, residential hotels
- Multifamily dwelling
- Residential board and care
- Residential or Cannot Be Classified Further

HotSpots - Lot Area

- Cold Spot with 99% Confidence
- Cold Spot with 95% Confidence
- Cold Spot with 90% Confidence
- Not Significant
- Hot Spot with 90% Confidence
- Hot Spot with 95% Confidence
- Hot Spot with 99% Confidence



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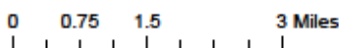
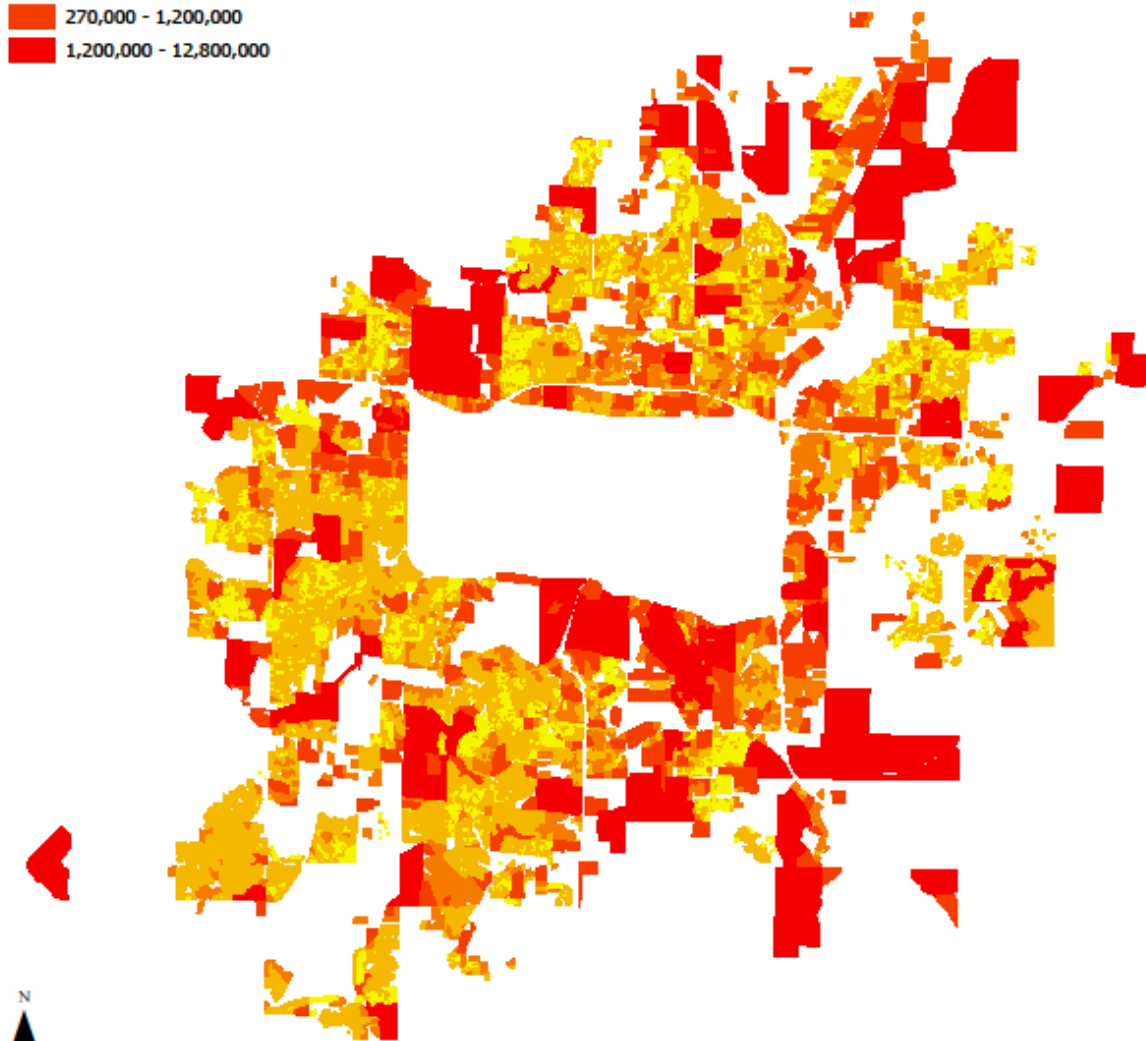
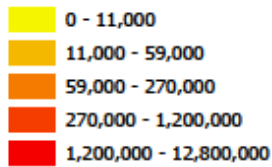
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Outside of Loop - Lot Area (in SFT)

Lot x Zoning x Structure Analysis

Shape_Area



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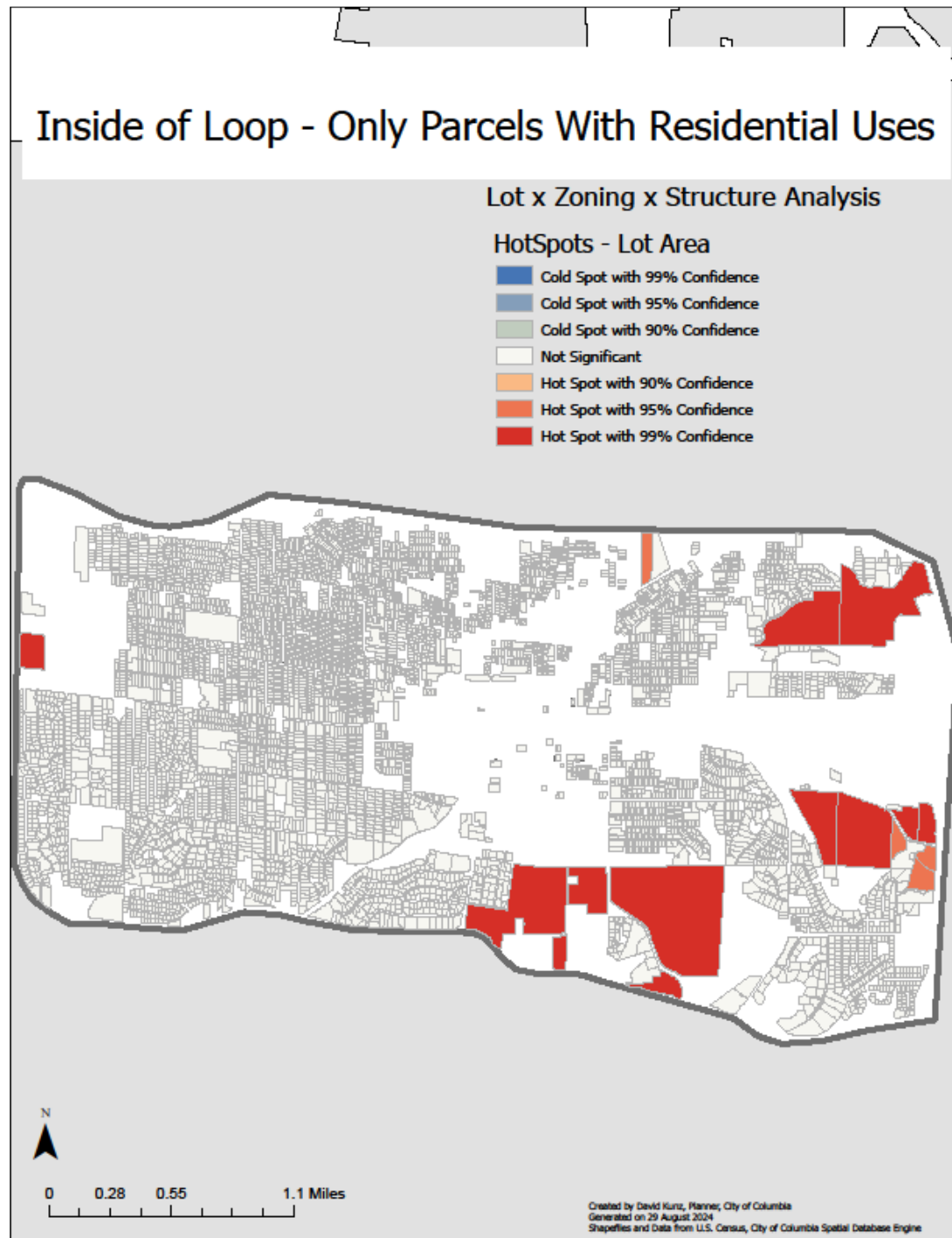
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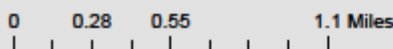
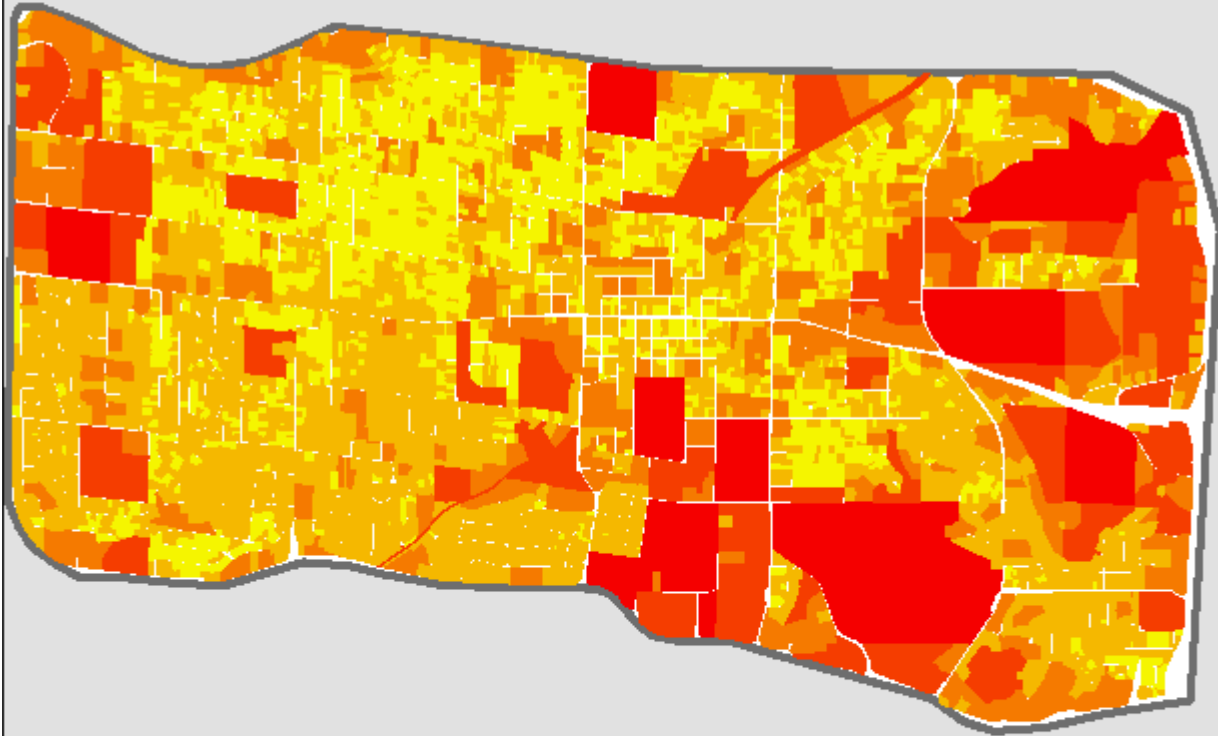
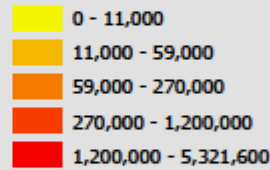
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