

Multi-Family Study

As development continues throughout Delaware County, jurisdictions have seen an increase in multi-family developments. These developments often cause conflict. Multi-family often appears in conflict with the typical single-family development pattern. Second, requested densities are typically higher than the recommended densities in the local Comprehensive Plan.

The density issue often leads to questions and confusion. Higher densities suggest additional traffic, more students in the school system, and an increased need for services such as sewer and emergency services.

This study looked specifically at several developments, using student numbers provided by the Olentangy Local School District to determine what factors contribute to higher densities in certain developments. It also seeks to give guidance to local jurisdictions by providing real-world numbers on student generation by development type.

Data

Base map datasets are provided by the Delaware County Auditor's GIS Office (parcel, water, political boundaries, topography, road centerlines, right-of-way, etc.)

Student numbers were provided in Autumn, 2014 by the Olentangy Local School District transportation office and includes students K-12.



The **Student Index** is a simple calculation dividing the number of students located in each development by the total number of units in that development.

Effective Density is a simple calculation of approved units divided by overall acreage. **This number does not take the zoning density into consideration, nor does it count acreage that might be related to the approved density but not platted with it (such as golf course property or park dedication).**

Developments used were at or near build-out. Newer developments with undeveloped lots were not used.

Average Value is a range provided by Zillow.com.

Selected Single-Family Developments

Ranked by number of students generated per unit (Student Index)

	Jurisdiction	Name	Units	Students	Student Index	Acreage	Effective Density	Ave. Lot Size	Ave. Value
1	Liberty	Wingate	55	14	0.255	162	0.33	1 ac.	\$600k-\$1.3m
2	Powell City	The Retreat	148	57	0.385	243	0.61	1 - 2 ac.	\$450-\$700k
3	Orange/ Liberty	River Bend	161	70	0.435	162	1.00	.4 - 1 ac.	\$450-\$750k
4	Liberty	Scioto Hills and Scioto Hills 3	55	29	0.527	69.77	0.78	1 ac.	\$280-\$320k
5	Powell City	Deer Run	85	45	0.529	94.97	0.90	.80 ac.	\$550-\$900k
6	Orange	Highmeadows/ Greenmeadows	662	367	0.554	210.38	3.14	.16-.30 ac.	\$180-\$230k
7	Powell	Liberty Hills	100	63	0.630	63.18	1.00	.3-.5 ac.	\$270-\$350k
8	Berlin	Arbors at Cheshire	21	14	0.667	8.44	2.49	.20 ac.	\$225-\$250k
9	Liberty	Scioto Bluffs	33	26	0.788	43.77	0.75	1 - 1.5 ac.	\$450-\$520k
10	Powell City	Grandshire	297	240	0.808	117.16	2.53	.22 ac.	\$285-\$295k
11	Columbus	Village at Polaris Green	35	32	0.914	10.91	3.20	.075 ac.	\$150-\$170k
12	Orange	Glen Oak	235	217	0.923	135.46	1.73	.22 ac.	\$230-\$240k
13	Genoa	Sheffield Park	231	214	0.926	198	1.16	.3 ac.	\$350-\$380k
14	Orange	Cross Creek	131	132	1.008	71.52	1.83	.25-.3 ac.	\$290-\$340k
15	Berlin	Summerwood	136	142	1.044	182	0.74	1-1.4 ac.	\$450-\$800k
16	Berlin	Meadows at Cheshire	227	242	1.066	120.26	1.88	.3-.5 ac.	\$260-\$305k
17	Orange	McCammion Chase	91	100	1.099	64.26	1.41	.33 ac.	\$430-\$600k
18	Liberty	Wedgewood Park	92	104	1.130	73.62	1.25	.42 ac.	\$450-\$520k
19	Berlin	Cheshire Cove	67	80	1.194	44.24	1.52	.45-.5 ac.	\$230-\$250k
					Top Five Highest Ratios		Top Five Highest Densities	Top Five Smallest Lots	Top Five Highest Values

Selected Multi-Family Developments

Ranked by number of students generated per unit (Student Index)

	Jurisdiction	Name	Type	Units	Students	Student Index	Acreage	Eff. Density	Ave. Value
1	Genoa	Retreat at Grand Oak	2-unit condos	66	0	0.000	13.99	4.71 units/acre	\$160-\$250k
2	Orange	Village at Walker Woods	4-unit condos	108	3	0.028	19.54	5.52 units/acre	\$140-\$160k
3	Columbus	Kenyon Square	Four-story apartments	352	24	0.068	5.586	63 units/acre	1 br—\$772-\$1250/mo. 2 br—\$916-\$1765/mo.
4	Powell	Woods at Big Bear Farms	4-unit condos	88	7	0.080	17.73	4.96 units/acre	\$125-\$155k
5	Powell	Stonebridge at Golf Village	4-unit condos	180	16	0.089	35.05	5.13 units/acre	\$150-\$200k
6	Orange	Village at North Falls	4-unit condos	124	13	0.105	37.94	3.26 units/acre	\$160-\$215k
7	Genoa	Homestead at Highland Lakes	Single detached condo	62	7	0.113	18.47	3.35 units/acre	\$218-\$330k
8	Columbus	Lakes of Olentangy	8 to 12-unit apartments	282	34	0.121	20.32	13.87 units/acre	1 br—\$739-\$789/mo. 2 br—\$859-\$989/mo.
9	Powell	Village at Kinsale	3-unit condos	51	7	0.137	13.25	3.85 units/acre	\$280-\$345k
10	Columbus	Traditions at Walker Wood	4-unit condos	32	10	0.313	6.18	5.17 units/acre	\$145-\$165k
11	Columbus	Village at Polaris Park	Single detached condos	294	122	0.415	44.82	6.55 units/acre	\$135-\$155k
12	Orange	Dooley's Orchard	16-unit apartments	216	178	0.824	20.39	10.59 units/acre	2 br—\$759/mo. 3 br—\$959/mo.
			Three Most Dense Product Type			Top Five Highest Student Index		Top Five Highest Densities	

Institute of Traffic Engineers Trip Generation

Use	Trips per day
Single Family	9.57 trip ends/dwelling unit
Apartment—General	6.63 trip ends/dwelling unit
Residential Condominium	5.86 trip ends/dwelling unit
55+ Detached Housing	3.7 trip ends/dwelling unit
55+ Attached Housing	3.5 trip ends/dwelling unit

Averages

The average number of Olentangy students generated in the selected **single-family** developments is **.783 students** per household.

The average number of Olentangy students generated in the selected **multi-family** developments is **.147 students** per household (factoring out the lowest and highest).

Recommended density for Single-Family	Condominium equivalent
1 unit per acre	5 units per acre
1.5 units per acre	8 units per acre
2 units per acre	10 units per acre

Conclusions

There are many factors that contribute to student generation that aren't reflected in these tables: location, age of neighborhood, the age of housing stock, availability of private schools, etc. One thing that is certain is that multi-family development does not contribute the same impacts to schools and traffic.

Using just the overall averages of single-family versus multi-family development, it takes **5.33 units of multi family** to have the same impact as **one single-family unit** on schools. For traffic generation, the number is lower, with only two condominiums needed to generate the same trip ends as a single-family home. Apartments generate slightly more traffic per unit than condos. Age-restricted uses generate significantly less.

However, regardless of the numbers generated, the location must be correct. Depending on the type of building product, multi-family uses must be carefully blended with typical commercial and single-family development. Ideally, all these uses are designed under a unified development plan that balances this mix of uses.



Multi-Family Update

Last year's Annual Report presented information that compared single-family development to multi-family development in regards to population and student generation. This table presents a compressed version of the multi-family portion of that data and adds the average school tax as collected by the County Auditor. That information is divided by the number of students generated in that development to produce the amount of tax collected per student.

All information is generalized and uses average amounts as reflected on the Auditor's website.

Data

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Tax information was derived from property information at the Delaware County Auditor's website.

Selected Multi-Family Developments

Ranked, low to high by number of students generated per unit (Student Index)

Jurisdiction	Name	Units	Students	Student Index	Eff. Density	Typical school tax	Ave. tax multiplied by units	Total tax divided by total students
Orange	Village at Walker Woods (4-unit condos)	108	3	0.028	5.52 du/ac	\$2,004/unit	\$216,432	\$72,144
Columbus	Kenyon Square (Four-story apartments)	352	24	0.068	63 du/ac	\$268,492*	*	\$11,187
Powell	Woods at Big Bear Farms (4-unit condos)	88	7	0.080	4.96 du/ac	\$2,309/unit	\$203,192	\$29,027
Powell	Stonebridge at Golf Village (4-unit condos)	180	16	0.089	5.13 du/ac	\$2,957/unit	\$532,260	\$33,266
Orange	Village at North Falls (4-unit condos)	124	13	0.105	3.26 du/ac	\$3,175/unit	\$393,700	\$30,285
Genoa	Homestead at Highland Lakes (Single detached condos)	62	7	0.113	3.35 du/ac	\$5,853/unit	\$362,886	\$51,841
Columbus	Lakes of Olentangy (8-unit to 12-unit apartment buildings)	282	34	0.121	13.87 du/ac	\$252,121*	*	\$7,415
Powell	Village at Kinsale (3-unit condos)	51	7	0.137	3.85 du/ac	\$4,866/unit	\$248,166	\$35,452
Columbus	Traditions at Walker Wood (4-unit condos)	32	10	0.313	5.17 du/ac	\$2,068/unit	\$83,456	\$8,346
Columbus	Village at Polaris Park (Single detached condos)	294	122	0.415	6.55 du/ac	\$2,179/unit	\$640,626	\$5,251
				Five Highest Student Index Shaded	Top Five Highest Densities Shaded	*Taxed as a single unit.		



Regional Sewer District Master Plan

In July, the Regional Sewer District initiated a Sewer Master Plan Update. The plan is intended to evaluate the condition and capacity of the current system, identify improvements needed to support future growth, and establish appropriate financial structures to do both. More information is available at www.co.delaware.oh.us/sanitary/newweb/index.asp.