## PLANNING FOR THE FUTURE 18/19 Enrollment Analysis



Presented May 20

TRSP Visualizing Success

## **Discussion Points**

#### Introduction

#### Enrollment and Demographics (Part One)

- Key Considerations
- Maps: Planning Areas and Attendance Areas
- Sophisticated Forecast Model (SFM)
- Demographics
- Past Enrollment and Change
- Baseline Maps and Data

#### Development (Part Two)

- Population, Development, and Enrollment Trends
- Yield Rate of Students
- Maps and Data

#### Enrollment Projections (Part Three)

- Past, Current, Future Enrollment
- Building Projections

#### Moving Forward (Part Four)

Next Steps



## About RSP

Founded in 2003

- Professional educational planning firm
- Expertise in multiple disciplines
- Over 20 Years of planning experience
- Over 80 years of education experience
- Over 20 years of GIS experience
- Clients in Arkansas, Iowa, Illinois, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Oklahoma, and Wisconsin

Projection accuracy of 97% or greater

#### Planning

Robert Schwarz CEO, AICP, REFP, ALEP, CEFP

**Grant Lang** Planning Coordinator

#### Educators

Clay Guthmiller Education Planner

Craig Menozzi Education Planner

**David Stoakes** Education Planner, EdD

**Dave Wilkerson** Education Planner, PhD

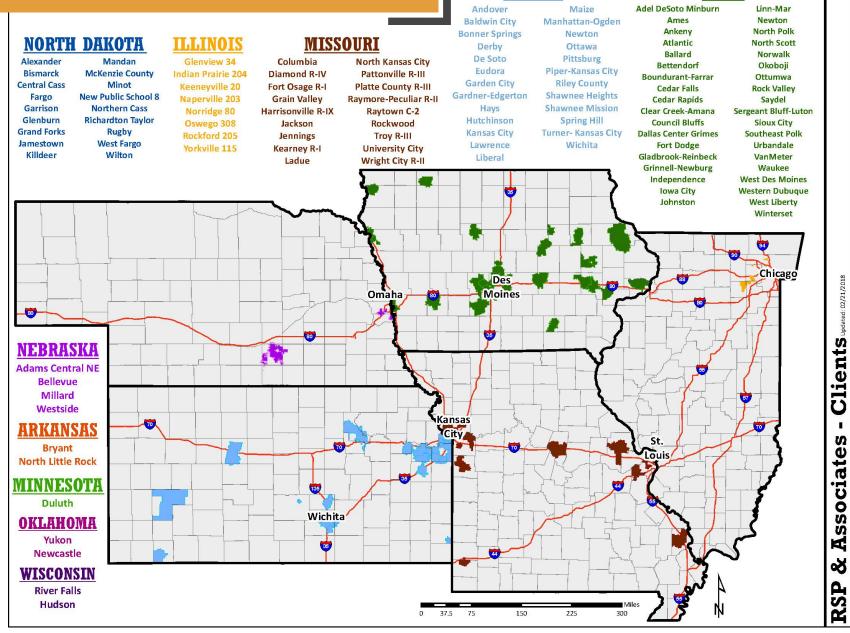
#### **GIS** Analyst

**Tyler Link** GIS Analyst, GISP Candidate

**Brandon Sylvester** GIS Analyst, GISP Candidate



## **Our Clients**



KANSAS

IOWA

## Making it Happen

#### **Oak Park and River Forest High School**

Administration

#### County, City, & Others

- Cook County
- Village of Oak Park
- Village of River Forest
- Chicago Transit Authority
- Metra
- Google Maps
- United States Geological Society
- Census Bureau/ Esri

#### **Development Community**

- Builders
- Developers



# [hank you! **Kev Point:**

Accurate projections are a result of the local entities providing quality data.

#### <u>Disclaimer</u>:

The data utilized in the analysis is the best available information each of the entities could provide at the time of the study.



## **Key Considerations**

#### **Enrollment Projections - Five Year Outlook:**

□ High School enrollment increases to 2020/21 (3,519 students) than decreases by 2023/24 (3,466) to about the same enrollment the high school has in 2018/19

□ Looking out beyond 2023/24, there likely will be another high school enrollment increase that begins in 2024/25

Current 3<sup>rd</sup> grade class of 875 will be in high school

#### Capacity over the next five years:

Appears to be no capacity challenges at the high school

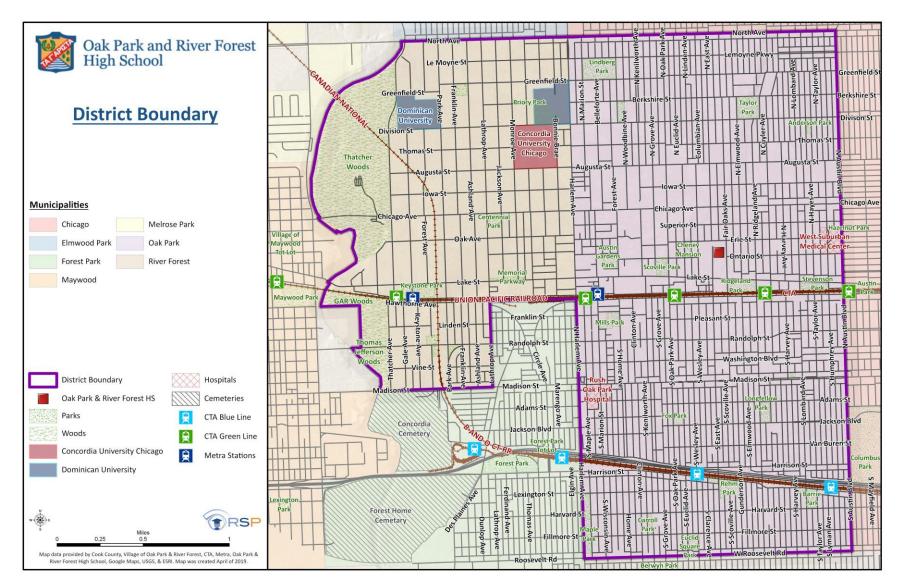
 RSP recommends a functional capacity evaluation of the high school to determine if the appropriate space is able to be utilized for the desired educational programming experience for each student

#### **Development Opportunity:**

- The district is built-out resulting in any change to the housing within the district being related to In-fill development, specifically any residential component related to the following:
  - Greater Mall Tax Increment Area (Downtown TIF District)
  - Madison Business Corridor Redevelopment Project Area
  - Harlem and Garfield Redevelopment Project Area

#### **District Boundary**

- District Boundary (Purple Line)
- Major Streets
- Major water features & cultural features
- Municipality Limits (Solid Colors depicted in map)



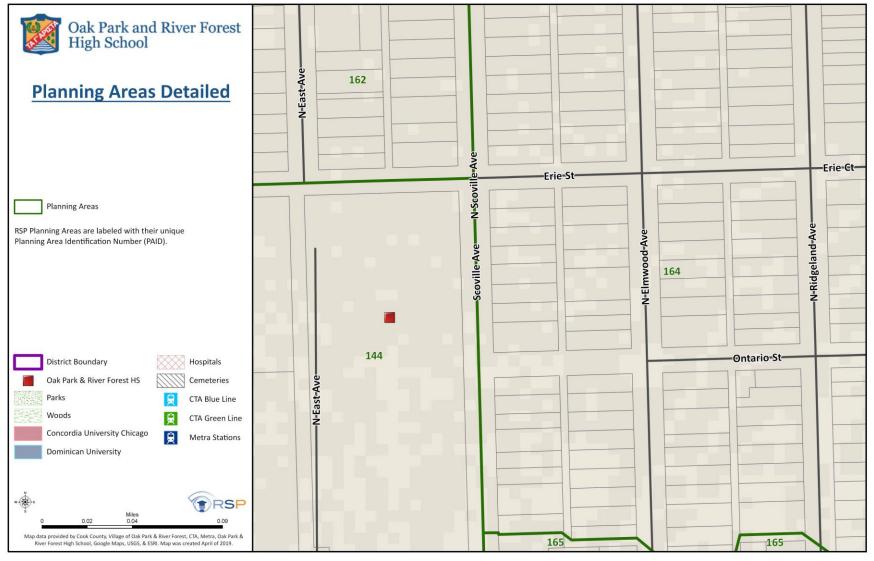
#### Planning Areas

- Land Use (Residential, Commercial, Industrial)
- Residential Density (Single-Family, Mobile Home, Duplex, Apartment)
- Natural and Manmade Features (Rivers, Creeks, Railroads, Streets)
- Nearly 200 planning areas monitored for demographic, development, and enrollment data sets



#### **Detailed Planning Areas**

- Zoomed in view of Planning Areas (Green Line)
- Displays the power of GIS data & Information
- □ The location of students are by grade are associated to streets, subdivisions, and parcels
- Illustrates how the planning areas are an important component to statistically forecasting the future enrollment



## Sophisticated Forecast Model

This is the central focus of everything RSP does. The model is based on what is happening in a school district. The best data is statistically analyzed to provide an accurate enrollment forecast. The District will be able to use RSP's report and maps to better understand demographic trends, school utilization, and the timing of construction projects.

#### **Built-Out**

#### $S_{c,t,x} = S_{c-1,t-1,x} * GC$ Let: S = The number of students, either an actual count or a projected count = A subscript denoting an attendance area in the School District X = Grade level C t Time (Years) = GC Growth component either modeling enrollment increase or decrease based on historical = information, expressed as a real number $S_{c,t,x} = S_{c-1,t-1,x} + (BP_{t,x} * R_{c,x})$ Developing Where: Where: $BP_{t,x} = \left(\begin{array}{c} (CP_{x}) (BT_{x}) (A_{x}) \\ \overline{\Sigma_{x} (CP_{x}) (BT_{x}) (A_{x})} \end{array}\right) * CT$ Let: S The number of students, either an actual count or a projected count = A subscript denoting an attendance area in the School District х = = Grade level C = Time (Years) t BP Building permit forecast as given by the Building Permit Allocation Model (BPAM) model = Student enrollment ratio of cohort c in planning area x Rc, x =CP Capacity of a planning area as expressed by available housing units = BT = Building history trend of a planning area An index which models the likelihood of development A

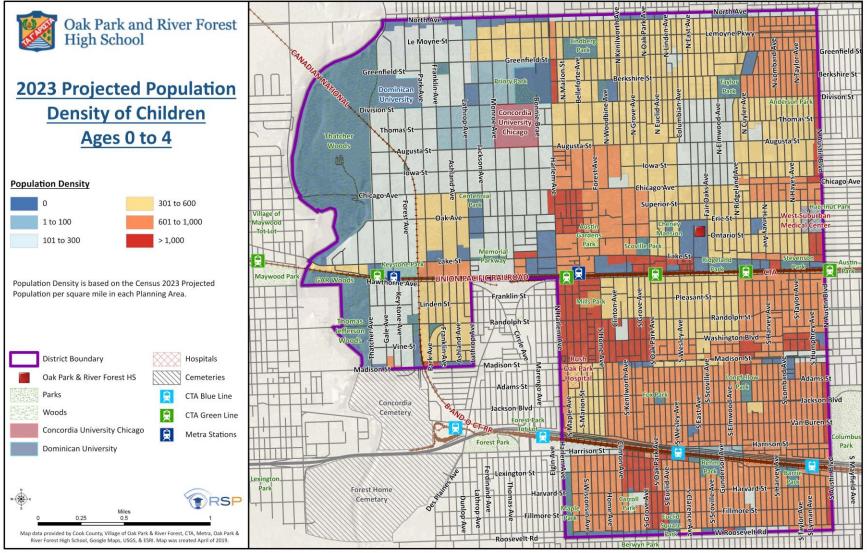
CT = Building permit control total forecast

#### NOTE:

In future studies, if the K-8 school districts could provide student data in the same manner as the high school district the analysis will be more complete for a parcel level projection.

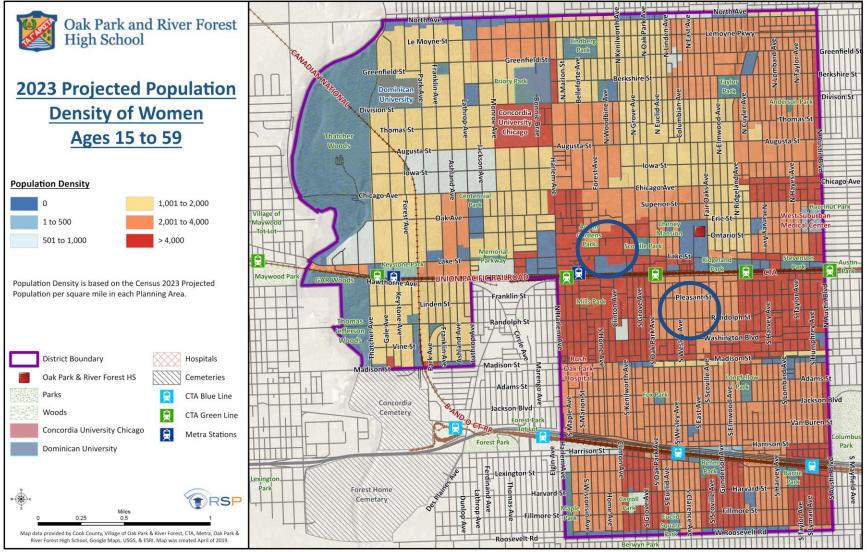
#### Population: Ages 0-4

- Depicted by Census Block Group with 2023 estimates
- Density weighted by land area of each Block Group
- Red areas have greatest density, Blue have the least density
- This data helps benchmark the projection model choices for future student enrollment
- This information assists in understanding where the district may have future students reside



#### Population: Women 15-59

- Depicted by Census Block Group with 2023 estimates
- Density weighted by land area of each Block Group
- **Red** areas have greatest density, **Blue** have the least density
- This data helps benchmark the projection model choices for future student enrollment
- There are areas with high density not yielding higher rates of children (Indicated by Blue Rings)



## **District Demographics**

## **Population**

Annual Rate; Percentage Change

2000-2010: -0.17% 2010-2018: -0.04% 2018-2023: 0.12%

Housing Annual Rate; Percentage Change 2000-2010: **-0.20%** 2010-2018: **0.00%** 2018-2023: **0.22%** 

Income

Per Capita; Percentage Change





2018: **38.64%** Education: Graduate / Professional Degree Overall the District is expected to **Increase** in population and housing.

Income is projected to increase to almost 2 percent by 2023.

Nearly 40% of residents have achieved a Graduate / Professional Degree.

## **Demographic Comparison**

	Oak Park & River Forest High School	J. Sterling Morton High School 201	Proviso Township High School 209	Village of River Forest	Village of Oak Park
Unemployment Rate	4.3%	7.6%	7.6%	2.3%	4.6%
Average Household Size	2.31	3.34	2.80	2.6	2.26
Median Age	40.3	31.2	37.7	42.4	40.0
Total Population	62,856	161,675	125,931	11,063	51,793
Median Household Income	\$93,159	\$50,228	\$54,719	\$127,948	\$88,909
Total Housing Units	29,019	53,298	48,711	4,181	24,838
Owner Occupied Housing Units	16,473	25,836	28,313	3,400	13,073
Renter Occupied Housing Units	10,162	22,512	16,360	525	9,637
Vacancy Rate	8.0%	9.0%	8.0%	6.0%	9.0%
Ethnicity	Oak Park & River Forest High School	J. Sterling Morton High School 201	Proviso Township High School 209	Village of River Forest	Village of Oak Park
White	65.1%	19.1%	23.5%	78.8%	62.2%

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	High School	School 201	School 209	River Forest	Oak Park
White	65.1%	19.1%	23.5%	78.8%	62.2%
Black	17.1%	3.4%	37.8%	6.0%	19.5%
American Indian/Alaskan	0.1%	0.1%	0.1%	0.0%	0.1%
Asian	6.1%	1.5%	2.7%	5.8%	6.1%
Pacific Islander	0.0%	0.0%	0.0%	0.0%	0.0%
Other Race	0.3%	0.1%	0.1%	0.3%	0.3%
Two or More Races	3.3%	0.7%	1.3%	1.9%	3.6%
Hispanic	7.9%	75.2%	34.4%	7.1%	8.1%

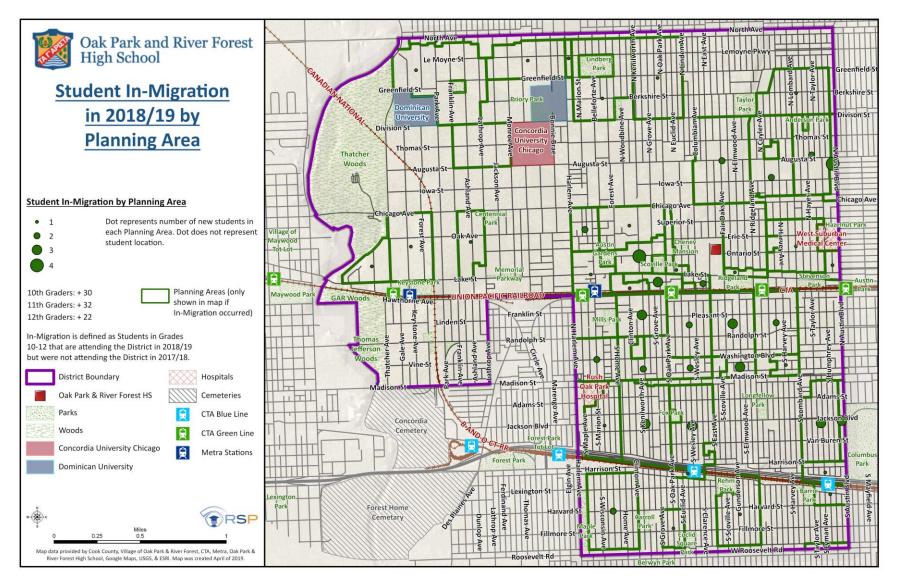
Source; U.S. Census, Esri BAO

#### **Benchmarking Data**

- Demographic attribute information mirrors that of the Villages of Oak Park & River Forest
- Unemployment is lower than the neighboring High School Districts
- Total population is expected to increase slightly to 0.12% by 2023
- □ Median household income within the district is higher than the U.S. average of \$56,124
- □ The vacancy rate within the district is lower than the U.S. rate of 11.3%

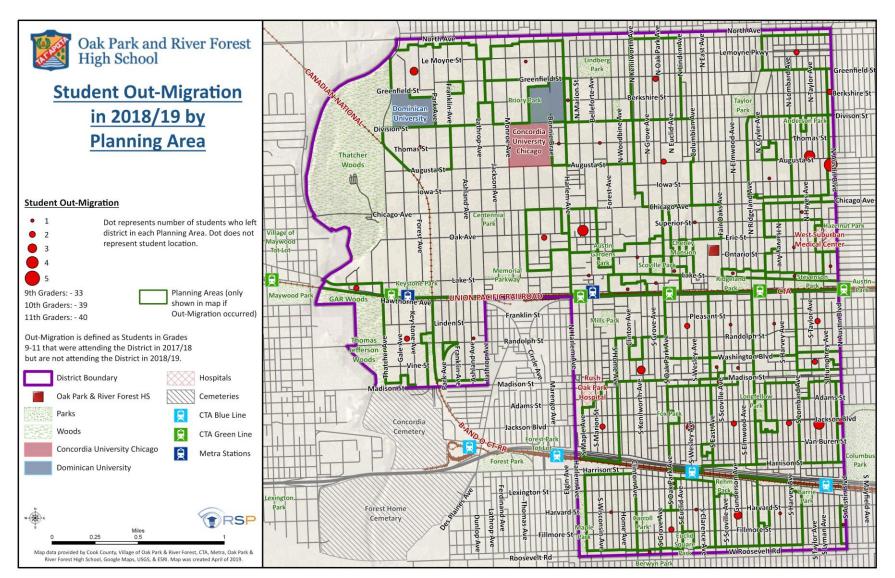
#### **Student In-Migration**

- 2018/19 students who are in 10<sup>th</sup> through 12<sup>th</sup> grade that were not attending the District in 2017/18 as 9<sup>th</sup> through 11<sup>th</sup> grade
- Depicts who is new to the district that was not attending in previous years
  - 84 new students in 2018/19



#### **Student Out-Migration**

- Students attending the district in 2017/18 who were in 9<sup>th</sup> through 11<sup>th</sup> grade that did not attend in 2018/19 as 10<sup>th</sup> through 12<sup>th</sup> graders
- □ Who has left the district?
  - <u>112</u> students left district in 2018/19 Total Migration <u>-28</u>



## **Past School Enrollment**

#### Enrollment By Grade

Year	PreK	К	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	PK-12 Total	9-12 Total	9-12 Change
2009/10	172	739	786	739	741	748	703	685	722	754	845	805	778	785	10,002	3,213	
2010/11	172	707	796	801	738	746	757	731	682	732	795	862	803	741	10,063	3,201	-12
2011/12	158	686	772	806	809	753	753	753	736	680	819	795	860	743	10,123	3,217	16
2012/13	166	731	742	782	804	837	755	759	772	736	796	813	794	823	10,310	3,226	9
2013/14	180	665	796	761	824	807	855	766	785	783	826	785	820	835	10,488	3,266	40
2014/15	195	707	737	790	774	830	812	856	774	788	835	825	784	866	10,573	3,310	44
2015/16	184	732	791	751	800	782	826	808	860	761	828	850	821	819	10,613	3,318	8
2016/17	197	734	824	830	806	829	807	842	826	861	811	833	848	880	10,928	3,372	54
2017/18	220	767	812	853	826	809	826	815	815	852	881	815	856	911	11,058	3,463	91
2018/19	186	763	835	826	875	819	796	813	805	823	875	878	808	907	11,009	3,468	5

Source: Illinois Department of Education and Oak Park River Forest HS Student Data

#### Change By Grade from the Previous Year

			К	К	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	Change 9t	h to 12th
From	То	PreK	к	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total	Percent
2009/10	2010/11	0	-32	57	15	-1	5	9	28	-3	10	41	17	-2	-37	-12	-0.12%
2010/11	2011/12	-14	-21	65	10	8	15	7	-4	5	-2	87	0	-2	-60	16	0.16%
2011/12	2012/13	8	45	56	10	-2	28	2	6	19	0	116	-6	-1	-37	9	0.09%
2012/13	2013/14	14	-66	65	19	42	3	18	11	26	11	90	-11	7	41	40	0.39%
2013/14	2014/15	15	42	72	-6	13	6	5	1	8	3	52	-1	-1	46	44	0.42%
2014/15	2015/16	-11	25	84	14	10	8	-4	-4	4	-13	40	15	-4	35	8	0.08%
2015/16	2016/17	13	2	92	39	55	29	25	16	18	1	50	5	-2	59	54	0.51%
2016/17	2017/18	23	33	78	29	-4	3	-3	8	-27	26	20	4	23	63	91	0.83%
2017/18	2018/19	-34	-4	68	14	22	-7	-13	-13	-10	8	23	-3	-7	51	5	0.05%
3-Yr Avg		0.7	10.3	79.3	27.3	24.3	8.3	3.0	3.7	-6.3	11.7	31.0	2.0	4.7	57.7	50.0	0.5%
3-Yr Weigh	nted Avg	-7.2	9.3	75.3	23.2	18.8	2.3	-3.3	-1.2	-11.0	12.8	26.5	0.7	3.8	56.3	41.8	0.4%

Source: Illinois Department of Education and Oak Park River Forest HS Student Data

#### **Table Explanation**

- □ Largest 9<sup>th</sup> to 12<sup>th</sup> grade class in 2018/19 **12<sup>th</sup>** grade (907)
- Smallest 9<sup>th</sup> to 12<sup>th</sup> grade class in 2018/19 –11<sup>th</sup> grade (808)
- Graduating senior class typically larger than the incoming 9<sup>th</sup> grade class
- □ Largest average 9-12 class increase 11<sup>th</sup> to 12<sup>th</sup> grade (+51)
- Largest average 9-12 class decrease Most years every grade has a cohort increase (18/19 decreased from 9<sup>th</sup> to 10<sup>th</sup> and 10<sup>th</sup> to 11<sup>th</sup>)

Show all the grades to understand how the future HS enrollment could be impacted

## **Enrollment By Village**

#### Village of Oak Park

Year		Grade													Totals			
	PreK	к	1	2	3	4	5	6	7	8	9	10	11	12	PK-5	6-8	9-12	PreK-12
2009/10	148	625	628	577	597	594	552	542	555	603	682	664	611	651	3,721	1,700	2,608	8,029
2010/11	150	603	661	639	574	596	603	582	538	565	682	697	661	585	3,826	1,685	2,625	8,136
2011/12	136	584	634	667	634	585	598	603	588	544	668	674	698	605	3,838	1,735	2,645	8,218
2012/13	150	624	615	634	661	663	585	603	621	589	676	662	669	661	3,932	1,813	2,668	8,413
2013/14	150	566	665	633	658	663	681	587	625	628	691	660	667	704	4,016	1,840	2,722	8,578
2014/15	170	607	606	658	639	659	672	677	600	626	695	688	656	710	4,011	1,903	2,749	8,663
2015/16	176	608	651	608	664	634	655	664	674	597	687	707	683	687	3,996	1,935	2,764	8,695
2016/17	181	629	669	674	652	677	649	666	677	671	676	700	704	731	4,131	2,014	2,811	8,956
2017/18	182	630	676	695	671	648	668	651	643	699	724	680	716	757	4,170	1,993	2,877	9,040
2018/19	150	662	663	678	697	653	623	653	647	649	744	725	674	760	4,126	1,949	2,903	8,978

Source: Illinois Department of Education and Oak Park River Forest HS Student Data

#### Village of River Forest

Year		Grade													Totals			
	PreK	к	1	2	3	4	5	6	7	8	9	10	11	12	PK-5	6-8	9-12	PreK-12
2009/10	24	114	158	162	144	154	151	143	167	151	163	141	167	134	907	461	605	1,973
2010/11	22	104	135	162	164	150	154	149	144	167	113	165	142	156	891	460	576	1,927
2011/12	22	102	138	139	175	168	155	150	148	136	151	121	162	138	899	434	572	1,905
2012/13	16	107	127	148	143	174	170	156	151	147	120	151	125	162	885	454	558	1,897
2013/14	30	99	131	128	166	144	174	179	160	155	135	125	153	131	872	494	544	1,910
2014/15	25	100	131	132	135	171	140	179	174	162	140	137	128	156	834	515	561	1,910
2015/16	8	124	140	143	136	148	171	144	186	164	141	143	138	132	870	494	554	1,918
2016/17	16	105	155	156	154	152	158	176	149	190	135	133	144	149	896	515	561	1,972
2017/18	38	137	136	158	155	161	158	164	172	153	157	135	140	154	943	489	586	2,018
2018/19	36	101	172	148	178	166	173	160	158	174	131	153	134	147	974	492	565	2,031

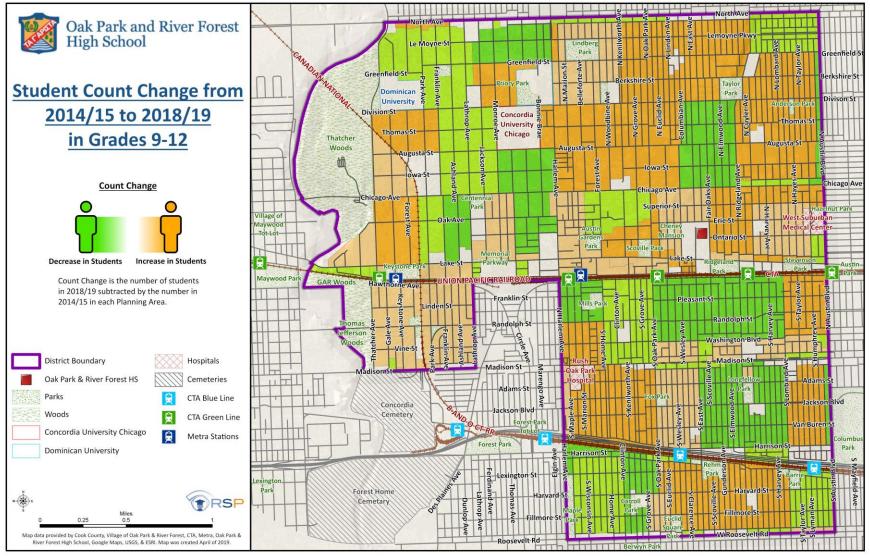
Source: Illinois Department of Education and Oak Park River Forest HS Student Data

#### Table Description:

- It is important for accurate projections to have an understanding of the PreK-8 enrollment that will eventually cohort to the high school
- If the PreK-8 student data could have been provided the projections would have an element of sophistication leading toward a more comprehensive analysis
- The majority of the enrollment are students who reside in the city of Oak Park

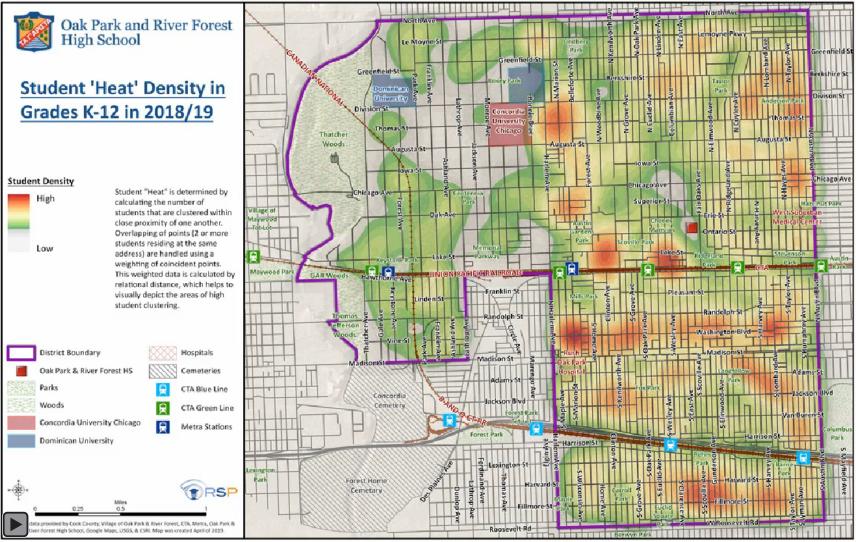
#### **Student Count Change**

- Depicts student movement at each Planning Area from **2014/15** to **2018/19**
- Orange areas experienced an increase since 2014/15, Green areas experienced a decrease, White areas had no net change of students between 2014/15 to 2018/19
- New developments have a greater propensity to have more students in future years
- This is a static snapshot to illustrate how each planning area changes at a different rate



#### Student "Heat" Density

- **Red** areas depict highest density of students, **Gray** as lowest student density
- Overlapping points (2 or more students) are handled using a weighting of coincident points
- This analysis helps with understanding student population and geographic proximity to schools
- The data illustrates changing demographic patterns
- The greatest density of students are in the southern portion of the district





## **Enrollment Conclusion**

#### The following are some general enrollment observations;

- RSP & Associates monitors nearly 200 planning areas for demographic, development, and 9<sup>th</sup> to 12<sup>th</sup> grade enrollment data sets
- Direct correlation between women in child bearing ages (15-59) and where children (0-4) reside
- Enrollment tends to increase from grade to grade each year at each level
  - Large increases happen from 11<sup>th</sup> to 12<sup>th</sup> grade
  - Generally the grades continue to increase as they cohort
- Smaller middle school grades likely result in High school grades
- Greatest student density north of 290 Hwy and south of the Transit line
- Time was spent analyzing the K-8 school enrollment to ensure the projections fully factor in the possible number of incoming freshman each year
  - In future studies, if the K-8 school districts could provide student data in the same manner as the high school district the analysis will be more complete for a parcel level projection



### Population, Development, Enrollment



Source: Census Estimates, Cities of Oak Park and River Forest, Oak Park & River Forest High School Enrollment and RSP SFM & Demographic Models

#### **Graphic Explanation**

- Census data indicates an decreasing population (Demographic trends influence)
- Building trend indicates there has been no activity (Built-out community potential for infill development opportunities)
- Student Enrollment growth has remained positive the last eight years

#### What Does This Mean

- Households moving into the district are changing demographics
- Anticipating little or no development over the next five years
- Older areas of the community have the propensity of having more children than in the past

## **Student Yield Rate**

#### Yield Rate by Jurisdiction (9th to 12th grade)

Jurisdiction		Un	its		15/16:	9th to 12th	grade Yiel	d Rate	18/19: 9th to 12th grade Yield Rate				
	SF	MU	MF	Total	SF	MU	MF	Total	SF	MU	MF	Total	
Village of Oak Park	8,098	4,756	3,589	16,443	0.09	0.35	0.09	0.17	0.11	0.35	0.10	0.18	
Village of River Forest	3,418	719	647	4,784	0.08	0.21	0.18	0.12	0.08	0.25	0.17	0.12	
Total	11,516	5,475	4,236	21,227	0.09	0.34	0.11	0.16	0.10	0.34	0.11	0.16	

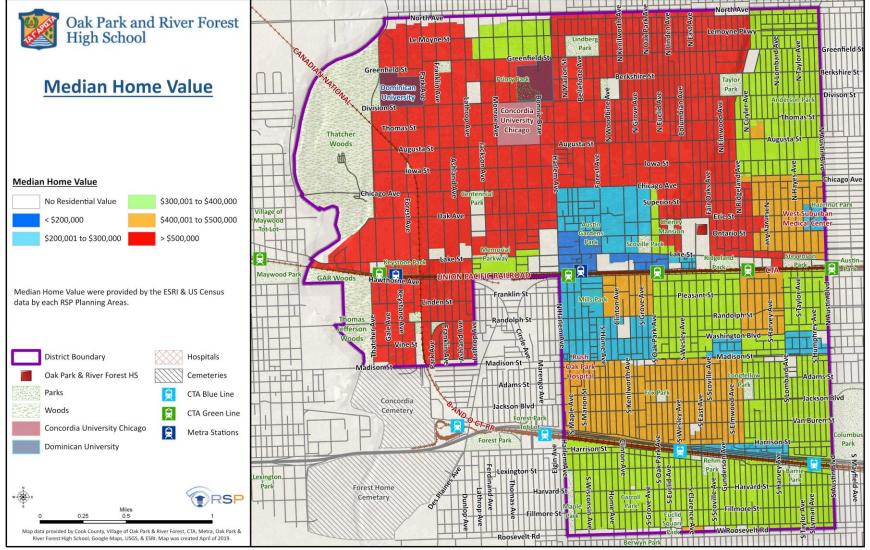
Source: Cook County, State of Illinois Department of Education and Oak Park and River Forest High School

#### **Graphic Explanation**

- SF = Single-Family Units
- MU = Mixed use Units
- MF = Multi-Family Units
- Depicts elementary (9-12) enrollment and the corresponding yield rate for 15/16 and 18/19
- The yield rate represents the number of 9<sup>th</sup> to 12<sup>th</sup> grade students attending the high school for every 100 units of that specific type of development
- Single-Family residential average tends to lower than the Mixed use or Multi-Family
- Yield rates are statistically similar over the last three years
- Any new infill development could potentially change the yield rate
- SF, MU, and MF designation was obtained using the zoning maps form the Villages of Oak Park and River Forest by each RSP Planning Area. Due to the block by block different changes in zoning type, the Mixed Use in some instances incorporates a large number of SF and MF units together

#### Median Home Value

- Based on assessed Home Value as provided and maintained by the county assessor's office
- Home values correlated to socio-economic status new areas tend to be the least affordable
- Areas shaded in Orange and Red have the greatest Median Home Value, Blue represents the greatest affordability
- The most affordable areas are in the southern portion of the district



## **Development Conclusion**

#### The following are some general development observations;

- Population within the district has been decreasing and there has been some planning for limited infill development
- The district is built-out resulting in any change to the housing within the district being related to In-fill development, specifically any residential component related to the following:
  - Greater Mall Tax Increment Area (Downtown TIF District)
  - Madison Business Corridor Redevelopment Project Area
  - Harlem and Garfield Redevelopment Project Area
- Future residential development activity is dependent on the economy (specifically employment, interest rates), as well as demographic trends and subdivision life cycles
- Tracking enrollment by the types of development is important to understand the yield rate of students for every part of the community there are varying yield rates with all developments

## Part Three: Enrollment Projections

## Past, Current, Future Enrollment

Enrolime		aue															
Year	PreK	K	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	PK-12 Total	9-12 Total	9-12 Change
2009/10	172	739	786	739	741	748	703	685	722	754	845	805	778	785	10,002	3,213	
2010/11	172	707	796	801	738	746	757	731	682	732	795	862	803	741	10,063	3,201	-12
2011/12	158	686	772	806	809	753	753	753	736	680	819	795	860	743	10,123	3,217	16
2012/13	166	731	742	782	804	837	755	759	772	736	796	813	794	823	10,310	3,226	9
2013/14	180	665	796	761	824	807	855	766	785	783	826	785	820	835	10,488	3,266	40
2014/15	195	707	737	790	774	830	812	856	774	788	835	825	784	866	10,573	3,310	44
2015/16	184	732	791	751	800	782	826	808	860	761	828	850	821	819	10,613	3,318	8
2016/17	197	734	824	830	806	829	807	842	826	861	811	833	848	880	10,928	3,372	54
2017/18	220	767	812	853	826	809	826	815	815	852	881	815	856	911	11,058	3,463	91
2018/19	186	763	835	826	875	819	796	813	805	823	875	878	808	907	11,009	3,468	5
2019/20											850	877	880	868		3,475	7
2020/21											842	854	878	945		3,519	44
2021/22											848	846	855	943		3,492	-27
2022/23											838	851	848	921		3,458	-34
2023/24											859	842	853	912		3,466	8

Source: Illinois Department of Education and Oak Park River Forest HS Student Data

Note: Blue Font represents the RSP Projection for the Oak Park and River Forest HS

#### **Change is Happening**

Enrollmont By Grado

□ The grades highlighted with the red rectangle – If the K-8 school districts could provide student data the same manner as the high school district, the enrollment forecast would be more rich and increase the projection accuracy

RSP utilized the by grade data Official Count from the two elementary schools to guide the Student Forecast Model to a logical projection

Enrollment Change – Overall enrollment stability – some years an increase others a decrease

Out of District into the district has decreased significantly from 2017/18

- 2017/18: <u>53</u> (9<sup>th</sup> to 12<sup>th</sup> grade)
- 2018/19: <u>20</u> (9<sup>th</sup> to 12<sup>th</sup> grade)

■ High School enrollment increases to 2020/21 than decreases by 2023/24 to about the same enrollment the high school has in 2018/19

Looking out beyond 2023/24, there likely will be another increase that begins in 2024/25



## Next Steps

#### The following items will assist the district advance its educational goals;

- District administration and the Board of Education further study the enrollment, demographic, and development information presented
- Annually review enrollment projections
  - Collaborate with the K-8 feeder schools to get a more robust student analysis at the parcel level
- Utilize the enrollment projections to assist with planning for staff need for the following school year
- Administration continue to examine utilization opportunities to improve the student education experiences
- Continue to make decisions and communicate that information to the community so they can understand how educational opportunities will support College and Career ready students

	Notes	