LINN-MAR®
Community
School District

Planning for the Future

19/20 Enrollment Analysis (April 2020)

RSP

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)
  - ❑ Projection Accuracy
  - ❑ Past, Current, Future Enrollment
  - ❑ Long Range Enrollment Forecast
  - ❑ Building Projections
- Moving Forward (Part Four)
  - ❑ Next Steps

Who We Are

- ❏ 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

Educators

Clay Guthmiller
Education Planner

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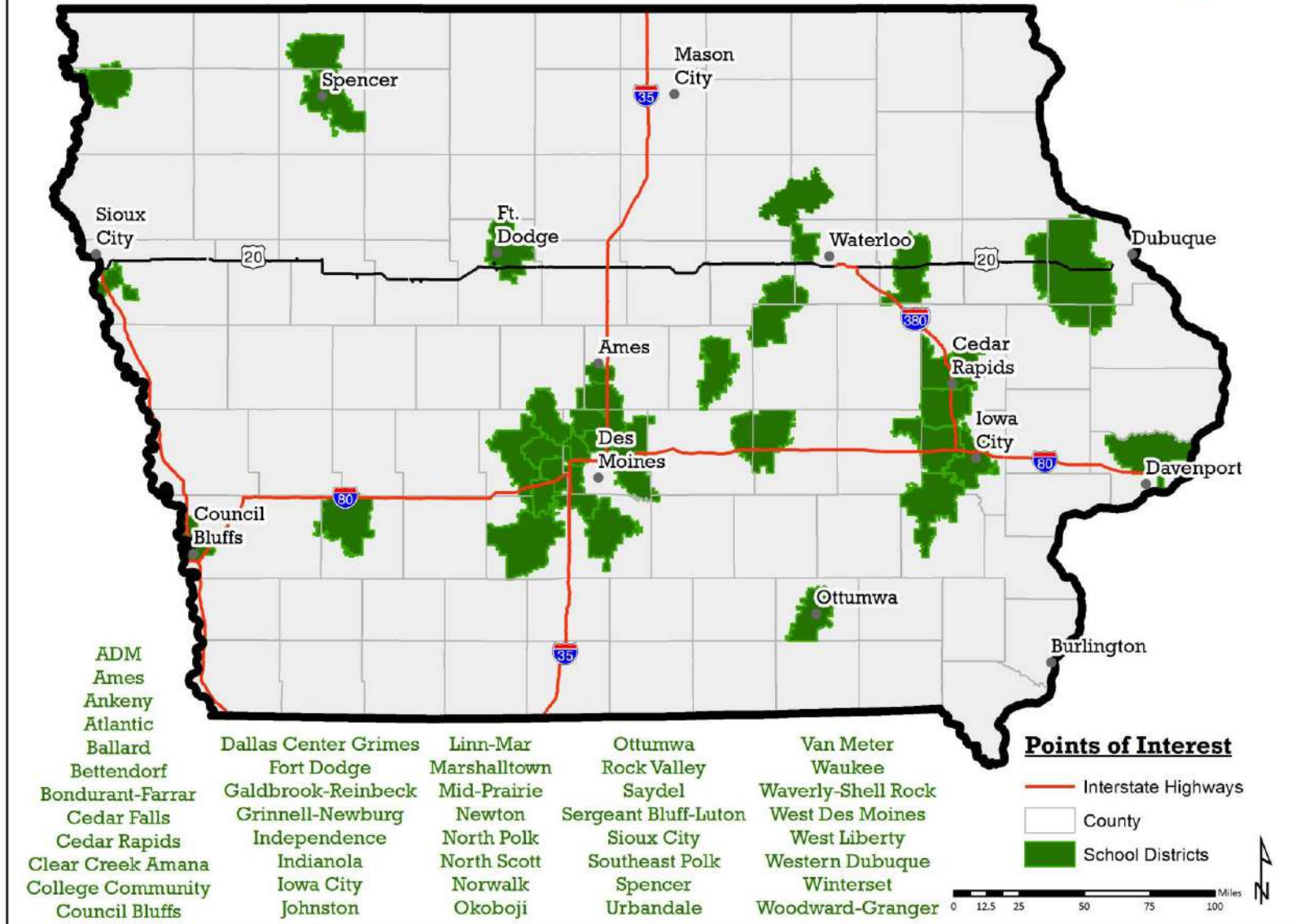Education Planner, PhD

GIS Analyst

Tyler Link
GIS Analyst, GISP

Brandon Sylvester
GIS Analyst, GISP Candidate

RSP & Associates - Clients in Iowa

ADM
Ames
Ankeny
Atlantic
Ballard
Bettendorf
Bondurant-Farrar
Cedar Falls
Cedar Rapids
Clear Creek Amana
College Community
Council Bluffs

Dallas Center Grimes
Fort Dodge
Galdbrook-Reinbeck
Grinnell-Newburg
Independence
Indianola
Iowa City
Johnston

Linn-Mar
Marshalltown
Mid-Prairie
Newton
North Polk
North Scott
Norwalk
Okoboji

Ottumwa
Rock Valley
Saydel
Sergeant Bluff-Luton
Sioux City
Southeast Polk
Spencer
Urbandale

Van Meter
Waukee
Waverly-Shell Rock
West Des Moines
West Liberty
Western Dubuque
Winterset
Woodward-Granger

Points of Interest

— Interstate Highways
County
School Districts

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Expectations

Below are some key points to think about as you examine how the analysis looked at creating a planning tool for making decisions:

❑ Project timeline a result of ensuring student data could represent as close as possible the Official Count with attributes that would allow RSP to forecast enrollment at a parcel level geography

❑ The findings were not focused on supporting or contradicting any past internal or outsourced studies – the analysis is based on data, data, and more data

❑ The study factored in many different data sets to provide data driven analysis that is the foundation to the RSP Statistical Forecast Model (SFM)

❑ Enrollment change in the community is influenced by but not limited to: the birth rate, demographics, types of development and housing affordability

❑ The study does not provide specific information about which site would be best suited for a new facility or for that matter should the district build any new facility – this analysis is one portion of how to make that decision

❑ This analysis is based on the same grade configuration and educational programming expectations the patrons have for each student

❑ Projecting enrollment is not a science – like life in general some assumptions happen that may lead to greater enrollment while others toward a smaller enrollment

❑ The goal of this study is to help the board, administration, and public understand how to make the best decision for the students at the classroom level

Making It Happen

School District

❑ Linn-Mar Community School District

County, City & Others

❑ Linn County

❑ City of Cedar Rapids

❑ City of Marion

❑ Iowa DOT

❑ United States Geological Survey

❑ Census Bureau/ Esri

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

Thank you!

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

Part One:
Enrollment & Demographics

RSP

VISUALIZING SUCCESS

100,000 Foot Perspective

Enrollment Projections - Ten Year Outlook:

❑ District increases by about 600 students (+7.9%) (+0.19% to +1.33% a year)
❑ Elementary increases by nearly 130 students (+4.9%) (-2.07% to +2.52% a year)
❑ Middle School increases by nearly 100 students (+5.0%) (-3.21% to +3.20% a year)
❑ High School increases by about 330 students (+14.8%) (-1.07% to +3.24% a year)

Capacity over the next five years:

❑ Elementary Capacity (Mostly Alleviated with two new intermediate schools in 2020/21):
  ▪ Indian Creek Elementary will again be beyond its 500-student capacity by 2024/25

❑ Middle School Capacity (Alleviated with two new intermediate schools in 2020/21):
  ▪ Boulder Peak Intermediate and Excelsior Middle School is projected to have about 100 more students than the Hazel Point Intermediate and Oak Ridge Middle School (This could be balanced with other building and attendance area changes)

❑ High School Capacity:
  ▪ Linn Mar High School will near its 2,400-student capacity (LRC being used for additional space)

❑ Options could be considered to improve overutilized schools and/or increase educational teaching spaces (Portables, Boundary Changes, additions, enrollment capping, etc.)
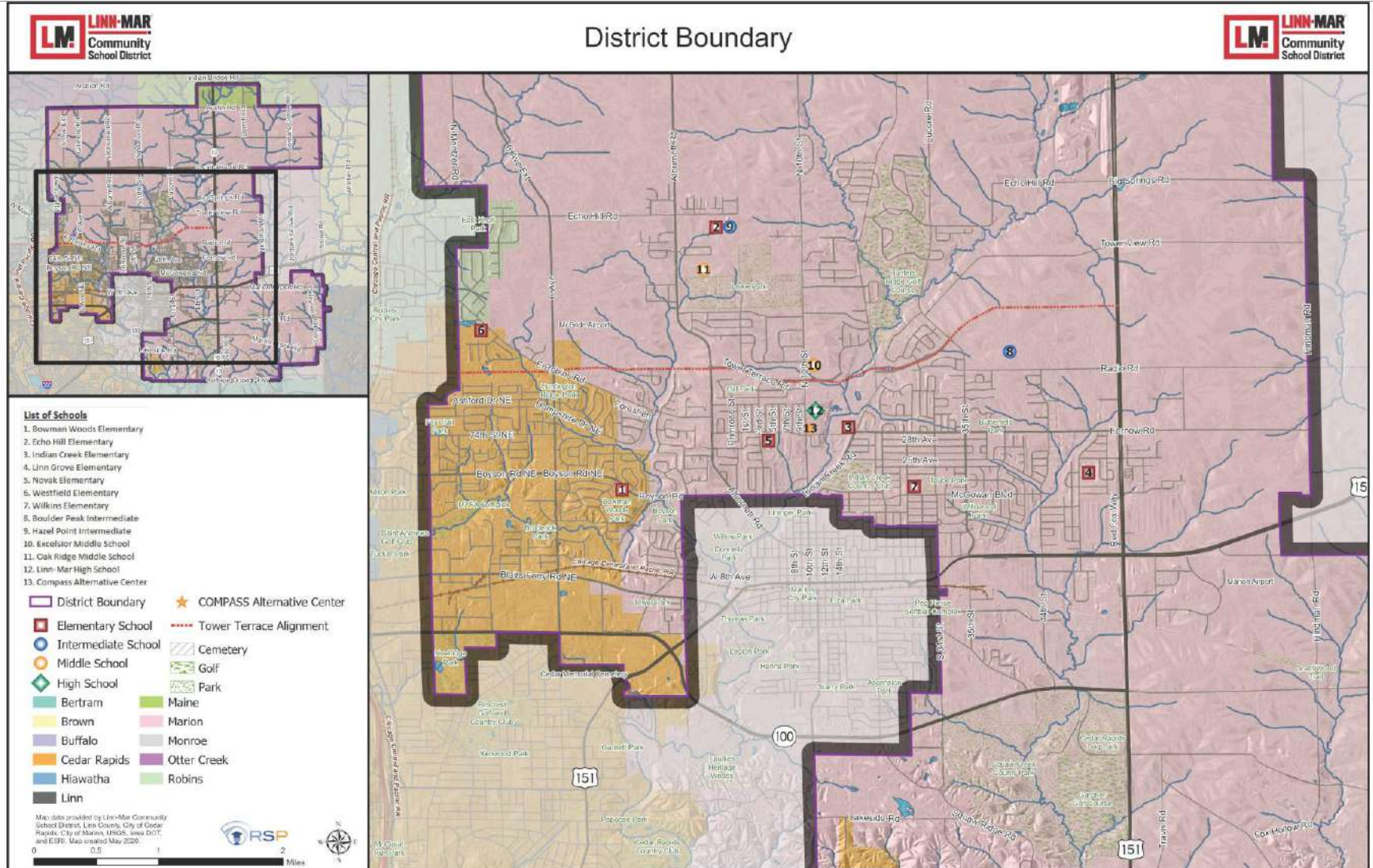
Development Opportunities:

❑ Significant available land for residential development
❑ Speed and type of residential development will affect rate of enrollment increase
❑ With many of the major infrastructure items either completed or planned to be completed in the next few years, it will impact a household choice to locate to the district
❑ The impact COVID-19 may have on the economy and housing starts must be monitored

- ❑ District Boundary **(Purple Line)**
- ❑ Major Streets
- ❑ Major water features & cultural features

- ❑ Municipality Limits
  - ▪ Cedar Rapids **(Orange)**
  - ▪ Marion **(Pink)**
  - ▪ Robins **(Green)**

District Boundary

List of Schools
1. Bowman Woods Elementary
2. Echo Hill Elementary
3. Indian Creek Elementary
4. Linn Grove Elementary
5. Novak Elementary
6. Westfield Elementary
7. Wilkins Elementary
8. Boulder Peak Intermediate
9. Hazel Point Intermediate
10. Excelsior Middle School
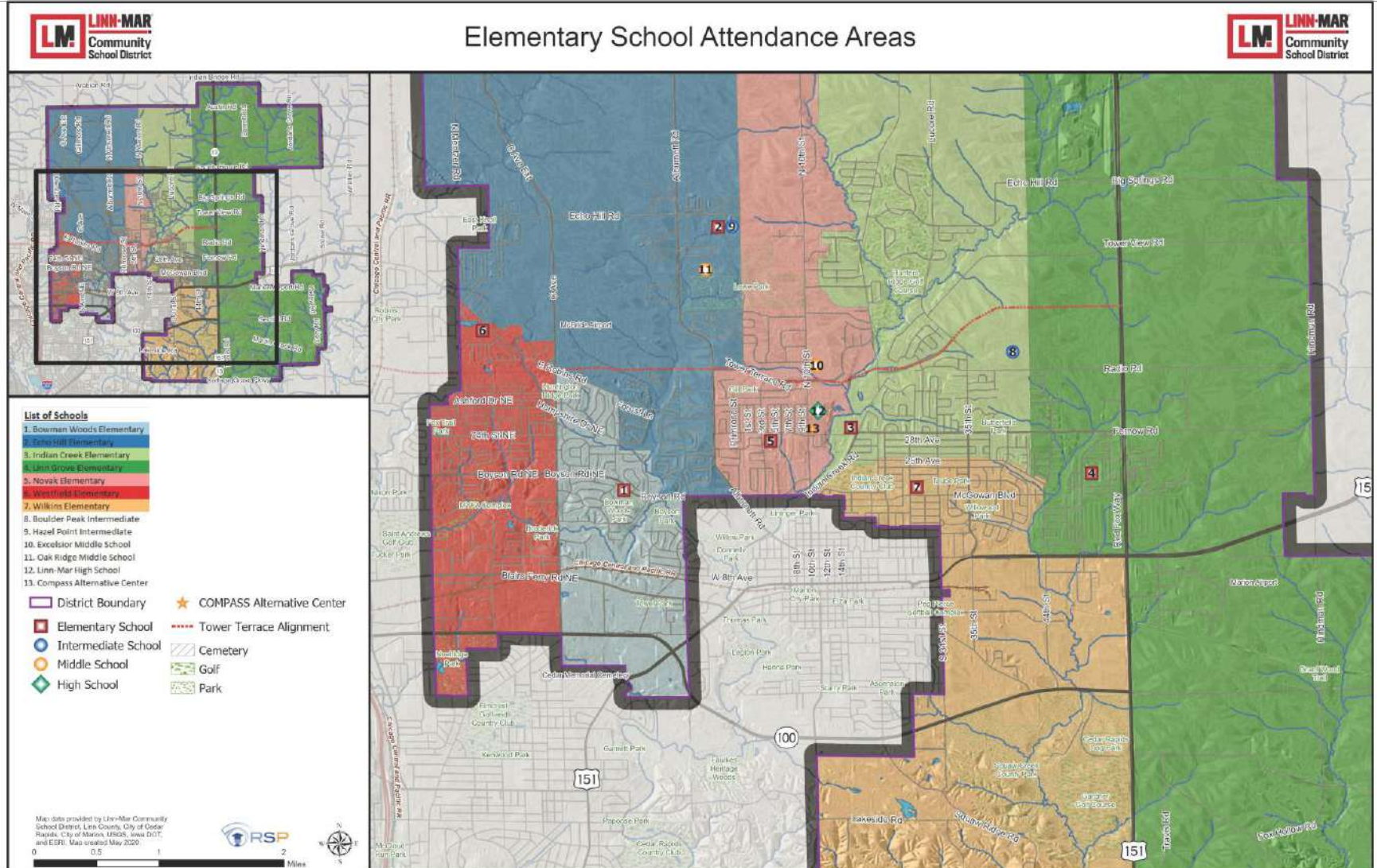11. Oak Ridge Middle School
12. Linn-Mar High School
13. Compass Alternative Center

- ❑ District Boundary (Purple Line)
- ❑ Major Streets
- ❑ Major water features & cultural features
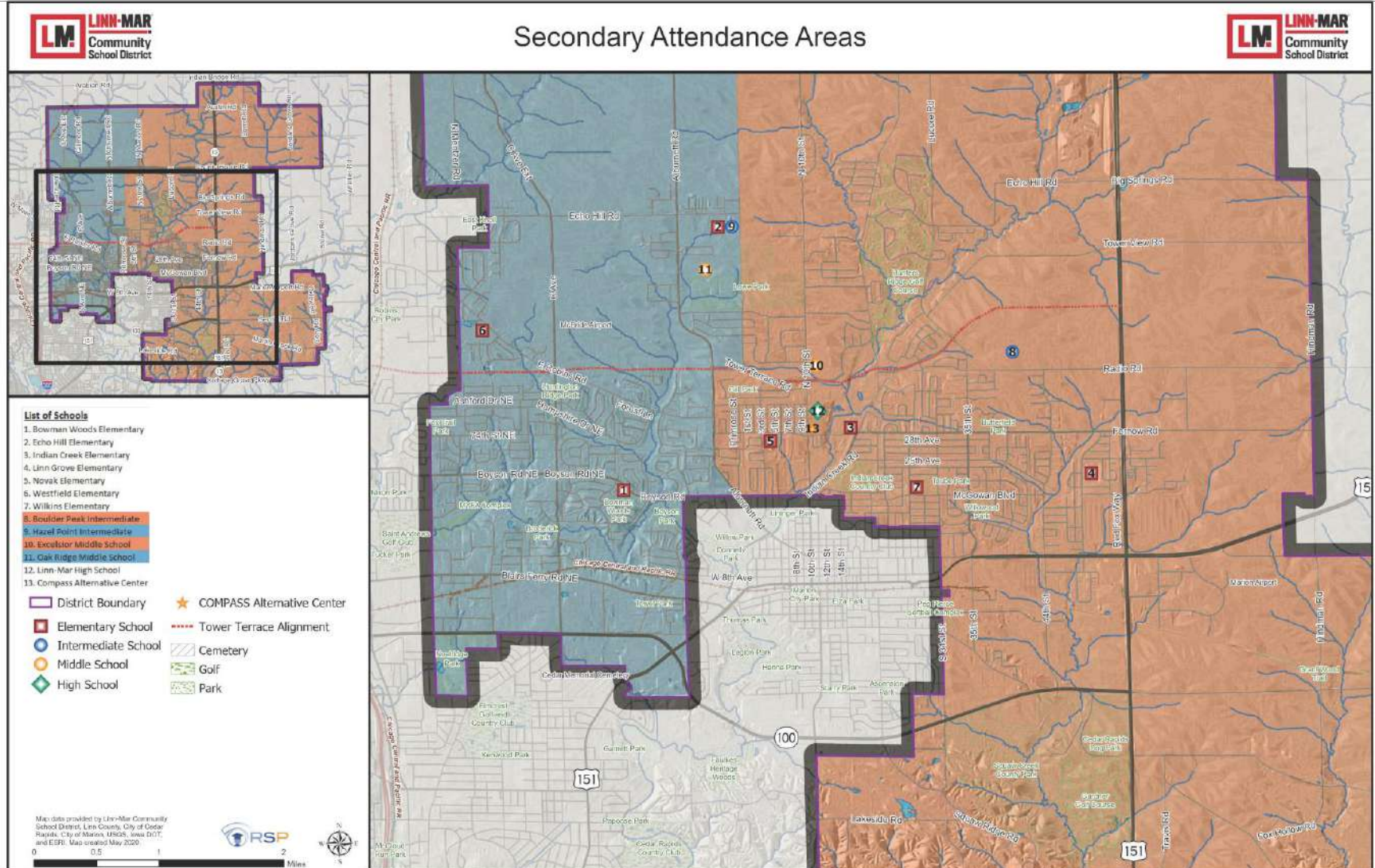- ❑ Attendance Areas (Solid Colors)

- ❑ Bowman Woods (Blue)
- ❑ Echo Hill (Navy)
- ❑ Indian Creek (Light Green)
- ❑ Linn Grove (Dark Green)
- ❑ Novak (Pink)
- ❑ Westfield (Red)
- ❑ Wilkins (Orange)

Elementary School Attendance Areas

List of Schools
1. Bowman Woods Elementary
2. Echo Hill Elementary
3. Indian Creek Elementary
4. Linn Grove Elementary
5. Novak Elementary
6. Westfield Elementary
7. Wilkins Elementary
8. Boulder Peak Intermediate
9. Hazel Point Intermediate
10. Excelsior Middle School
11. Oak Ridge Middle School
12. Linn-Mar High School
13. Compass Alternative Center

- ▢ District Boundary
- ■ Elementary School
- ● Intermediate School
- ● Middle School
- ◆ High School
- ★ COMPASS Alternative Center
- ----- Tower Terrace Alignment
- ▨ Cemetery
- ▨ Golf
- ▨ Park

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- ❑ District Boundary (Purple Line)
- ❑ Major Streets
- ❑ Major water features & cultural features

- ❑ Attendance Areas
  - ❑ Boulder Peak Intermediate/Excelsior Middle (Orange)
  - ❑ Hazel Point Intermediate/Oak Ridge Middle (Blue)

Secondary Attendance Areas

List of Schools
1. Bowman Woods Elementary
2. Echo Hill Elementary
3. Indian Creek Elementary
4. Linn Grove Elementary
5. Novak Elementary
6. Westfield Elementary
7. Wilkins Elementary
8. Boulder Peak Intermediate
9. Hazel Point Intermediate
10. Excelsior Middle School
11. Oak Ridge Middle School
12. Linn-Mar High School
13. Compass Alternative Center

District Boundary
Elementary School
Intermediate School
Middle School
High School
COMPASS Alternative Center
Tower Terrace Alignment
Cemetery
Golf
Park

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Planning Areas

- Land Use (Residential, Commercial, Industrial)
- Residential Density (Single-Family, Mobile Home, Duplex, Apartment)
- Natural and Manmade Features (Rivers, Creeks, Railroads, Streets)
- Near **400** planning areas monitored for demographic, development, and enrollment data sets
- Planning areas allow RSP the ability to statistically evaluate trends that individually impact each planning area
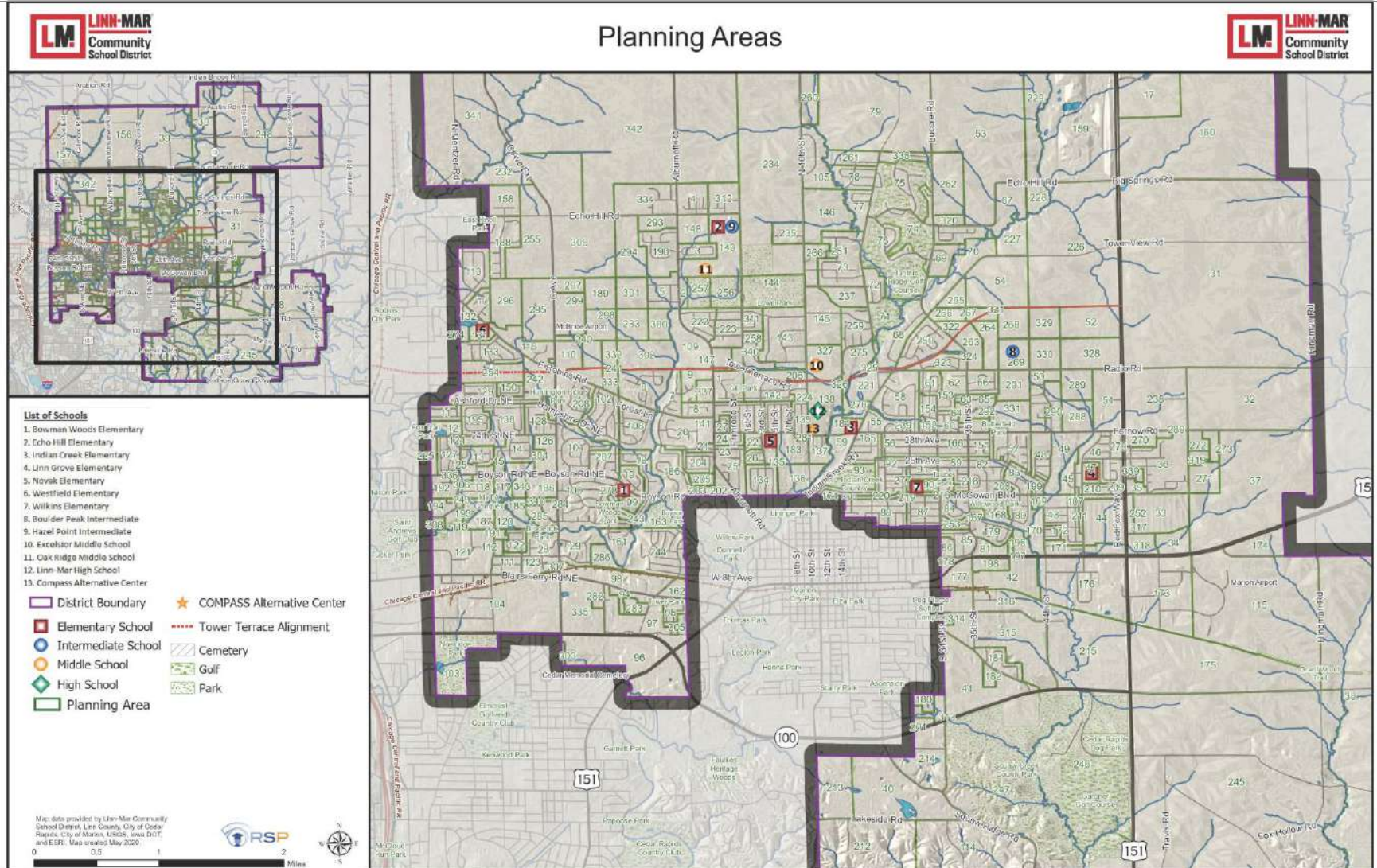
Detailed Planning Areas

- ❑ Zoomed in view of Planning Areas (Green Line) and Bowman Woods Elementary School
- ❑ Displays the power of GIS data & Information
- ❑ See where students are located by grade in relation to streets, subdivisions, and parcels
- ❑ Illustrates how the planning areas are tied to development types at the parcel level
- ❑ The utilization of many different data sets provides a more robust analysis of the district trends

Planning Areas-Detail

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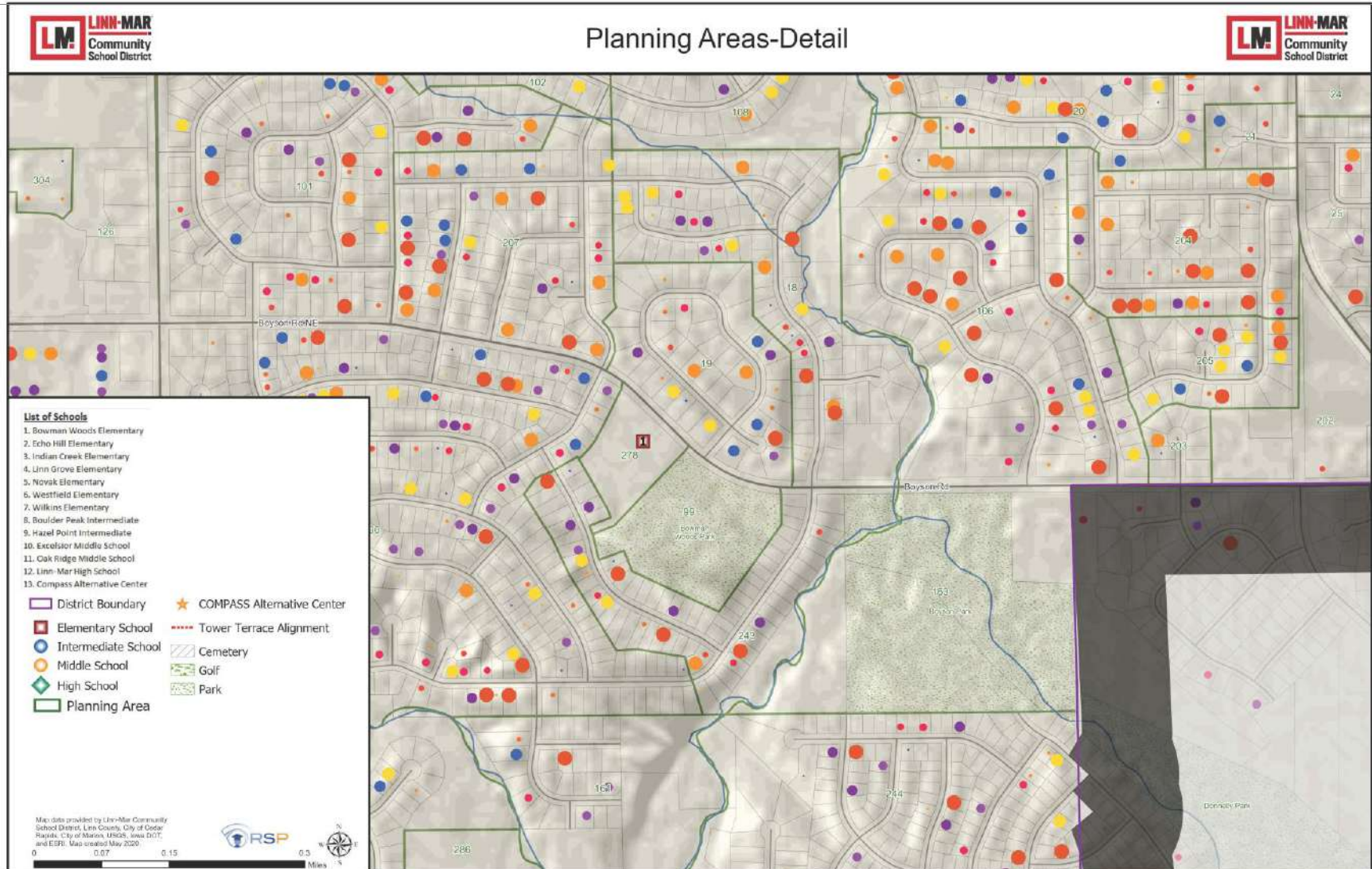
Sophisticated Forecast Model

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
x	=	A subscript denoting an attendance area in the School District
c	=	Grade level
t	=	Time (Years)
GC	=	Growth component either modeling enrollment increase or decrease based on historical information, expressed as a real number

Developing

$$S_{c, t, x} = S_{c-1, t-1, x} + (BP_{t, x} * R_{c, x})$$

Where:

$$BP_{t, x} = \left(\frac{(CP_x)(BT_x)(A_x)}{\sum x (CP_x)(BT_x)(A_x)} \right) * CT$$

Let:

S	=	The number of students, either an actual count or a projected count
x	=	A subscript denoting an attendance area in the School District
c	=	Grade level
t	=	Time (Years)
BP	=	Building permit forecast as given by the Building Permit Allocation Model (BPAM) model
Rc, x	=	Student enrollment ratio of cohort c in planning area x
CP	=	Capacity of a planning area as expressed by available housing units
BT	=	Building history trend of a planning area
A	=	An index which models the likelihood of development
CT	=	Building permit control total forecast

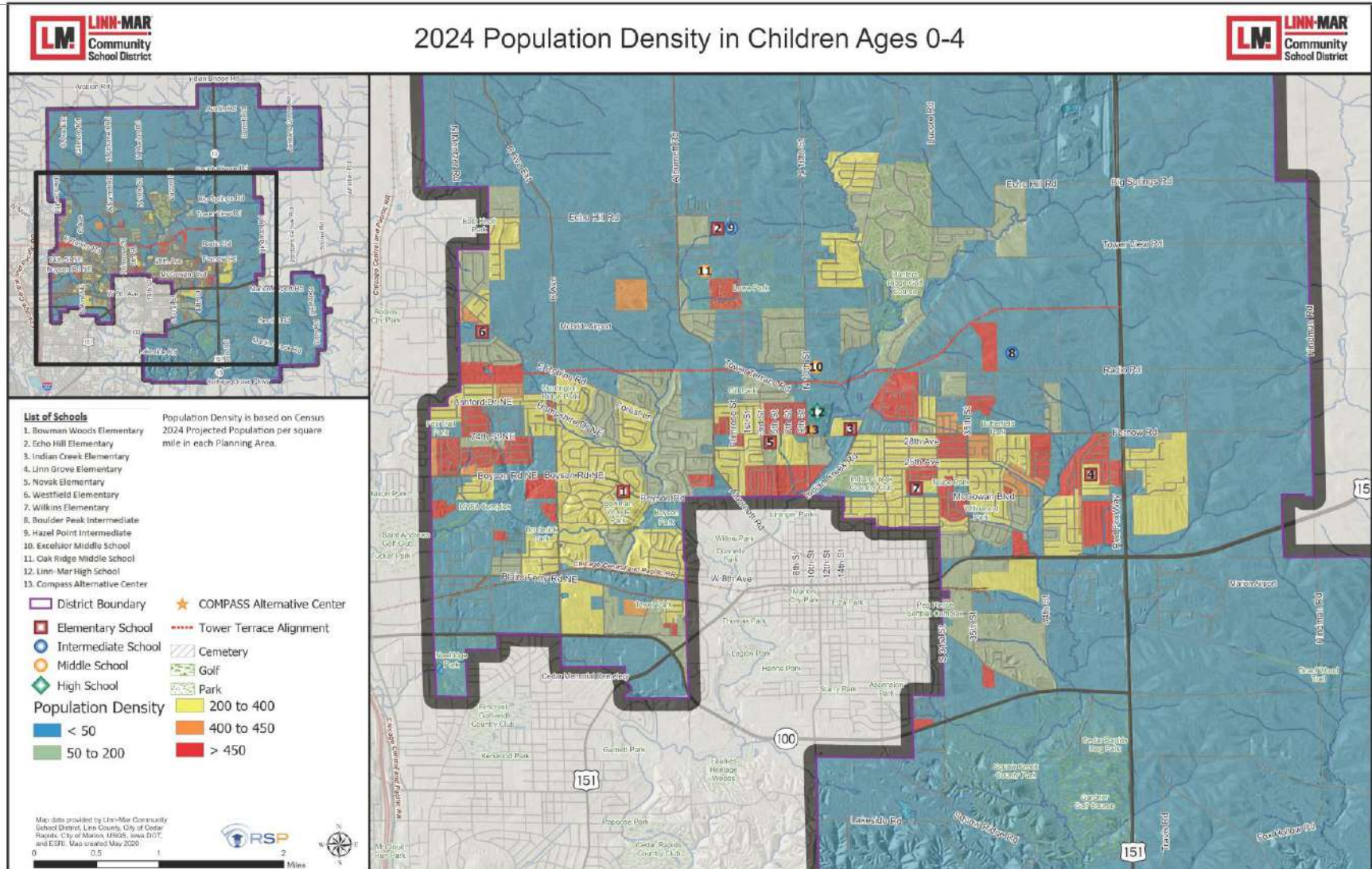Nearly 400 Planning Areas are statistically analyzed in the district

RSP SFM Detail

❑ The important factor concerning the RSP SFM is that it is a Social Science not an exact science; it identifies behavior trends to determine the propensity of them to be recreated:

❑ The value of the RSP SFM is how our team creates and analyzes the geography at a planning area level for any commonality which will help produce an accurate forecast

❑ Some of the variables examined for each planning area (but not limited to):

- Natural Cohort (District data)
- Planning Area Subdivision Lifecycle (RSP variable)
- Value of Homes (County assessor data)
- Type of Residential unit (SF, MF, DUP, TH, Resort, etc.) (County assessor data)
- Year units were built (County assessor data)
- Estimated female population (Census data)
- Estimated 0-4 population (Census data)
- Existing Land Use (County and City data)
- Future Land Use (County and City data)
- Capital Improvement Plan (CIP) (County and City data)
- Future Developments (County and City data)
- In-Migration of students (District data)
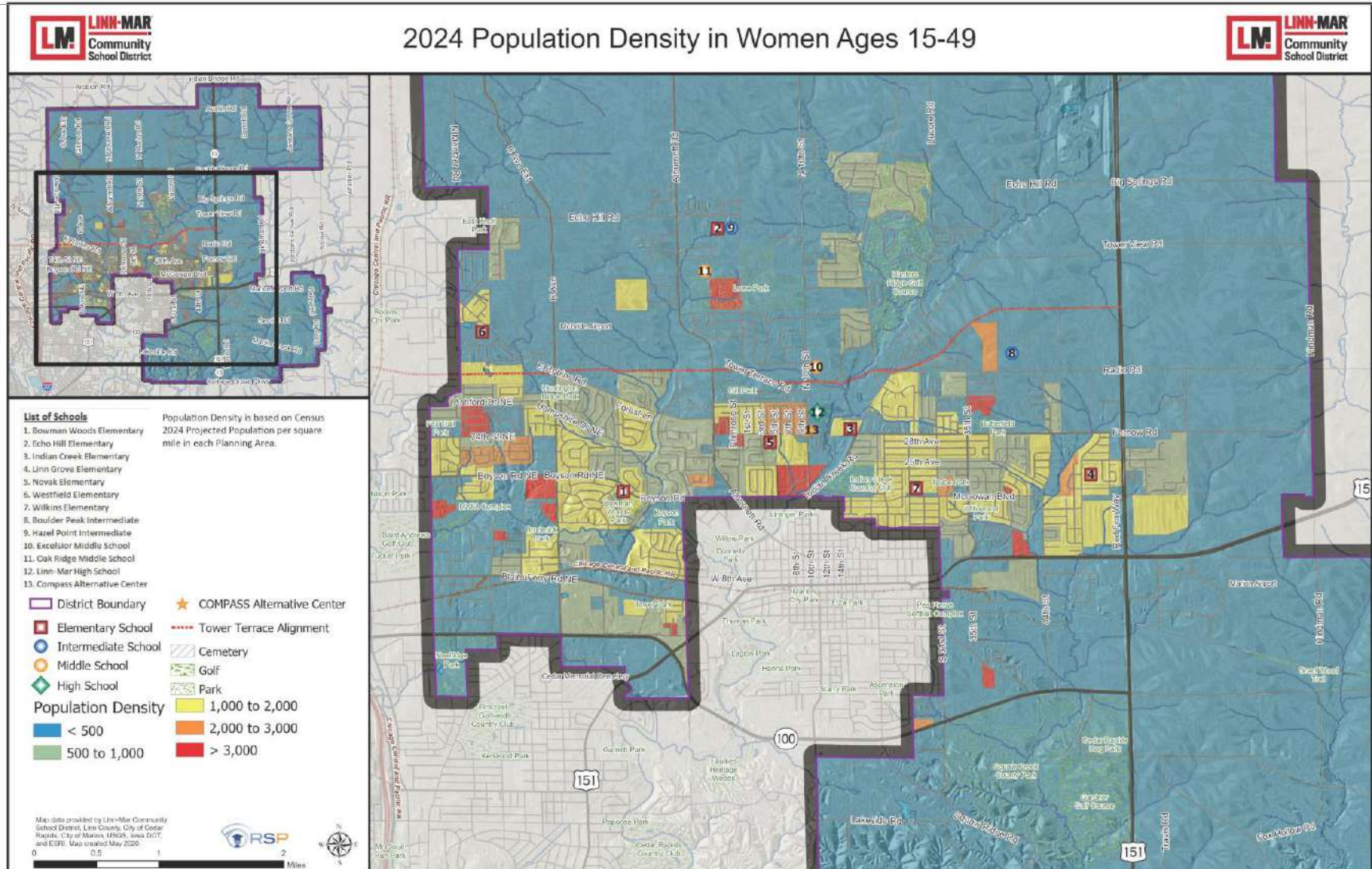- Out-Migration of students (District data)

- Depicted by Census Block Group with 2024 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
- Future growth areas are likely not included in the Census estimates
- RSP factors the Census data lapse with local data

2024 Population Density in Children Ages 0-4

- Depicted by Census Block Group with 2024 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
- Future growth areas are likely not included in the Census estimates
- RSP factors the Census data lapse with local data

2024 Population Density in Women Ages 15-49

District Demographics

Population
Annual Rate; Percentage Change

2000-2010: 3.25%
2010-2019: 1.53%
2019-2024: 1.29%

Housing
Annual Rate; Percentage Change

2000-2010: 4.80%
2010-2019: 1.57%
2019-2024: 1.25%

Income
Per Capita; Percentage Change

2019-2024: 2.63%
Increase

Workforce
Unemployment Rate

2019: 1.9%
Lower than U.S. average

NOTES:

Overall the District is experiencing an increase in population and housing, and is projected to continue over the next five years.

In a growing community housing and population should have a correlation and on the surface indicate a general housing supply/demand.

The type of residential unit is not known in these numbers or how affordable the units are so more analysis required.

Income is projected to increase over two percent by 2024.

Unemployment is lower than the State of Iowa & U.S. average.

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Source: US Census, Esri BAO

Demographic Consideration

Demographics	Linn-Mar Community School District	Cedar Rapids Community School District	College Community School District	Linn County	Johnson County	State of Iowa
Unemployment Rate	1.9%	2.6%	2.6%	2.4%	2.1%	2.6%
Average Household Size	2.58	2.32	2.55	2.41	2.35	2.43
Median Age	37.5	38.8	34.4	38.1	30.9	39.1
Total Population	41,017	128,442	27,991	231,709	154,377	3,236,212
Median Household Income	$81,945	$58,848	$70,652	$64,215	$63,078	$58,745
Total Housing Units	16,621	58,176	11,312	100,523	65,802	1,425,893
Owner Occupied Housing Units	13,216	39,878	8,400	72,276	39,215	921,797
Renter Occupied Housing Units	2,527	14,077	2,481	21,753	22,789	371,152
Vacancy Rate	5.3%	7.3%	3.8%	6.5%	5.8%	9.3%

Ethnicity	Linn-Mar Community School District	Cedar Rapids Community School District	College Community School District	Linn County	Johnson County	State of Iowa
White	86.3%	81.2%	87.9%	84.6%	76.6%	84.7%
Black	3.3%	8.3%	4.1%	6.0%	7.5%	3.9%
American Indian	0.1%	0.2%	0.2%	0.2%	0.2%	0.3%
Asian	5.2%	2.7%	2.3%	2.9%	7.3%	2.8%
Pacific Islander	0.1%	0.2%	0.2%	0.1%	0.0%	0.1%
Other Race	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%
Two or More Races	2.0%	3.2%	2.1%	2.6%	2.3%	1.8%
Hispanic	3.0%	4.2%	3.1%	3.5%	5.9%	6.4%

Demographics Information
- Demographic attribute information is mostly consistent between the geographies
- Unemployment is lower than the compared area and the U.S. rate of 4.0% (Note: Pre-COVID 19 data)
- Total population is expected to increase 6.60% by 2023
- Median household income within the district is higher than the U.S. average
- The vacancy rate within the district is lower than the Iowa rate of 9.3%

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Source: US Census 2019

Employment Information

	Linn-Mar Community School District	Cedar Rapids Community School District	College Community School District	Linn County	Johnson County	State of Iowa
2019 Agriculture/Mining (SIC01-14) Employees	0.8%	0.6%	0.7%	0.7%	0.8%	1.6%
2019 Construction (SIC15-17) Employees	4.6%	2.8%	8.1%	4.2%	2.3%	4.1%
2019 Manufacturing (SIC20-39) Employees	32.7%	14.8%	8.3%	15.4%	2.7%	11.1%
2019 Transportation (SIC40-47) Employees	0.9%	7.6%	4.5%	5.8%	1.8%	3.1%
2019 Communication (SIC48) Employees	2.5%	2.1%	0.3%	1.8%	0.3%	0.9%
2019 Utility (SIC49) Employees	0.7%	1.0%	0.5%	1.0%	0.2%	0.7%
2019 Wholesale Trade (SIC50-51) Employees	3.6%	3.7%	7.1%	4.2%	2.3%	5.1%
2019 Home Improvement (SIC52) Employees	1.8%	0.9%	0.9%	1.2%	1.0%	1.5%
2019 General Merchandise (SIC53) Employees	3.9%	1.4%	0.9%	1.6%	1.4%	1.9%
2019 Food Stores (SIC54) Employees	3.6%	3.0%	0.8%	2.8%	2.1%	3.5%
2019 Auto Dealer/Gas Station (SIC55) Employees	1.3%	1.5%	1.9%	1.7%	1.9%	2.2%
2019 Apparel/Accessory (SIC56) Employees	1.3%	0.4%	0.4%	0.5%	0.7%	0.5%
2019 Furniture/Home Furnishings (SIC57) Employees	1.5%	0.8%	0.2%	0.8%	0.6%	0.7%
2019 Eating & Drinking (SIC58) Employees	6.6%	5.0%	2.7%	5.0%	6.6%	6.1%
2019 Miscellaneous Retail (SIC59) Employees	3.0%	1.8%	1.3%	2.0%	3.6%	2.7%
2019 Banks (SIC60-61) Employees	0.8%	1.3%	0.3%	1.1%	1.1%	1.9%
2019 Securities Broker (SIC62) Employees	0.3%	3.3%	0.4%	2.2%	0.2%	1.3%
2019 Insurance (SIC63-64) Employees	0.5%	8.5%	0.1%	5.4%	0.3%	2.2%
2019 Real Estate/Holding (SIC65-67) Employees	1.5%	1.5%	0.4%	1.4%	1.4%	2.3%
2019 Hotel/Lodging (SIC70) Employees	0.8%	0.6%	1.7%	0.9%	1.1%	1.2%
2019 Auto Services (SIC75) Employees	1.0%	0.7%	2.3%	1.1%	0.5%	1.1%
2019 Movie/Amusement (SIC78-79) Employees	1.8%	1.4%	0.6%	1.3%	2.3%	2.4%
2019 Health Services (SIC80) Employees	5.2%	13.3%	15.2%	12.0%	22.9%	11.9%
2019 Legal Services (SIC81) Employees	0.2%	0.9%	0.2%	0.6%	0.3%	0.5%
2019 Education/Library (SIC82) Employees	6.9%	4.7%	19.2%	8.6%	13.1%	8.2%
2019 Other Service (SIC72-89SEL) Employees	10.8%	13.2%	11.0%	12.4%	15.9%	14.5%
2019 Government (SIC91-97) Employees	1.4%	3.3%	9.7%	4.3%	12.7%	6.3%
2019 Unclassified Establishments (SIC99) Employees	0.1%	0.1%	0.0%	0.1%	0.1%	0.3%

Source: US Census 2019

Employment Information

❑ This table to illustrate the typical person information about the type of employment a person has based on the school district they choose to live in

❑ Highest % of employees are in manufacturing industry

❑ When compared to a neighboring school district, Linn-Mar Community School District has a greater % of employees working in manufacturing. (Note: Data from before COVID-19)

Linn County Birth Information

Linn County Iowa Live Births and Linn-Mar Kindergarten 5-Years Later

Calendar Year	# Live Births	Birth Change	% Birth Change	School Year	# Kdg	%Kdg of Live Births
2007	2,844			2012/13	611	21.5%
2008	2,847	3	0.1%	2013/14	448	15.7%
2009	2,899	52	1.8%	2014/15	519	17.9%
2010	2,761	-138	-4.8%	2015/16	505	18.3%
2011	2,732	-29	-1.1%	2016/17	506	18.5%
2012	2,722	-10	-0.4%	2017/18	563	20.7%
2013	2,705	-17	-0.6%	2018/19	630	23.3%
2014	2,804	99	3.7%	2019/20	525	18.7%
2015	2,851	47	1.7%			
2016	2,791	-60	-2.1%			
2017	2,790	-1	0.0%			
2018	2,717	-73	-2.6%			
3-Year Average	2,766.0	-44.67				
3-Year Weighted Average	2,753.7	-46.83				

Linn County Live Birth data is from January 1st to December 31st of each year

NOTE: The number of Kindergarten students five years later is one variable to understand the transiency of a community

Source: Iowa Department of Public Health (IDPH) and Linn-Mar Community School District

Live Birth Observations

❑ Tracks the number of live births and the corresponding number of kindergarten students five years later
❑ The number of live births in Linn County is 4.5% fewer in 2019 than it was in 2007
❑ Linn-Mar Community School District has a range of 15.7% to 23.3% of County live births five years later

Past School Enrollment

Enrollment By Grade

Year	ECBP	K	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	K-12 Total	K-12 Change
2000/01		367	353	375	387	361	383	344	323	321	368	342	343	307	4,574	
2001/02		375	342	359	378	400	358	401	344	320	308	334	298	295	4,512	-62
2002/03		437	327	377	366	378	390	381	394	349	301	298	326	292	4,616	104
2003/04		404	430	351	400	371	397	415	376	407	346	309	306	328	4,840	224
2004/05		476	408	448	366	411	388	398	416	381	415	349	312	309	5,077	237
2005/06		521	394	418	444	356	415	391	403	415	393	421	353	343	5,267	190
2006/07		459	507	442	430	470	394	436	410	429	449	406	414	366	5,612	345
2007/08		542	450	513	456	431	488	408	448	414	440	444	421	436	5,891	279
2008/09		598	483	478	530	468	439	494	420	451	424	443	461	424	6,113	222
2009/10		554	546	508	482	543	468	461	508	426	440	430	453	491	6,310	197
2010/11		555	506	555	506	486	544	480	466	516	432	434	434	461	6,375	65
2011/12		544	525	508	565	512	498	552	478	485	513	426	434	454	6,494	119
2012/13		608	527	528	531	561	523	503	563	488	488	505	433	476	6,734	240
2013/14		535	557	555	526	541	564	530	499	566	507	488	516	477	6,861	127
2014/15	56	607	527	573	574	542	552	581	542	503	567	491	483	546	7,088	227
2015/16	50	578	575	533	578	582	554	570	585	545	509	566	491	491	7,157	69
2016/17	63	506	551	594	565	591	583	569	563	594	562	508	554	475	7,215	58
2017/18	50	563	536	575	607	583	592	578	571	567	590	546	519	568	7,395	180
2018/19	68	630	556	541	590	593	571	593	583	590	553	569	508	476	7,353	-42
2019/20	66	525	646	552	562	596	603	584	610	584	617	565	567	498	7,509	156

Source: Iowa Department of Education (2000/01 to 2015/16) and Linn-Mar Community School District (2019/20)

Table Explanation:

- Largest class in 2019/20 – 1st grade (646)
- Smallest class in 2019/20 – 12th grade (498)
- Graduating senior class smaller than the incoming Kindergarten class
- Early Childhood Blended Program (ECBP) are retained Kdg who attend Kdg the following year
- Largest grade ever: 1st, 4th, 5th, 7th, 9th, and 11th

Cohort Change

Enrollment Grade Change

From	To	K	K 1st	1st 2nd	2nd 3rd	3rd 4th	4th 5th	5th 6th	6th 7th	7th 8th	8th 9th	9th 10th	10th 11th	11th 12th	K-12 Change Total	K-12 Change Percent
2000/01	2001/02	8	-25	6	3	13	-3	18	0	-3	-13	-34	-44	-48	-62	-1.4%
2001/02	2002/03	62	-48	35	7	0	-10	23	-7	5	-19	-10	-8	-6	104	2.3%
2002/03	2003/04	-33	-7	24	23	5	19	25	-5	13	-3	8	8	2	224	4.9%
2003/04	2004/05	72	4	18	15	11	17	1	1	5	8	3	3	3	237	4.9%
2004/05	2005/06	45	-82	10	-4	-10	4	3	5	-1	12	6	4	31	190	3.7%
2005/06	2006/07	-62	-14	48	12	26	38	21	19	26	34	13	-7	13	345	6.6%
2006/07	2007/08	83	-9	6	14	1	18	14	12	4	11	-5	15	22	279	5.0%
2007/08	2008/09	56	-59	28	17	12	8	6	12	3	10	3	17	3	222	3.8%
2008/09	2009/10	-44	-52	25	4	13	0	22	14	6	-11	6	10	30	197	3.2%
2009/10	2010/11	1	-48	9	-2	4	1	12	5	8	6	-6	4	8	65	1.0%
2010/11	2011/12	-11	-30	2	10	6	12	8	-2	19	-3	-6	0	20	119	1.9%
2011/12	2012/13	64	-17	3	23	-4	11	5	11	10	3	-8	7	42	240	3.7%
2012/13	2013/14	-73	-51	28	-2	10	3	7	-4	3	19	0	11	44	127	1.9%
2013/14	2014/15	72	-8	16	19	16	11	17	12	4	1	-16	-5	30	227	3.3%
2014/15	2015/16	-29	-32	6	5	8	12	18	4	3	6	-1	0	8	69	1.0%
2015/16	2016/17	-72	-27	19	32	13	1	15	-7	9	17	-1	-12	-16	58	0.8%
2016/17	2017/18	57	30	24	13	18	1	-5	2	4	-4	-16	11	14	180	2.5%
2017/18	2018/19	67	-7	5	15	-14	-12	1	5	19	-14	-21	-38	-43	-42	-0.6%
2018/19	2019/20	-105	16	-4	21	6	10	13	17	1	27	12	-2	-10	156	0.0%
3-Year Average		6.3	13.0	8.3	16.3	3.3	-0.3	3.0	8.0	8.0	3.0	-8.3	-9.7	-13.0	98.0	0.0%
3-Year Weighted Average		-20.7	10.7	3.7	17.7	1.3	1.2	6.0	10.5	7.5	8.2	-3.7	-11.8	-17.0	94.0	0.0%

Source: Iowa Department of Education (2000/01 to 2015/16) and Linn-Mar Community School District (2019/20)

Table Explanation:
- ❑ Largest average K-12 class increase – **2nd** to **3rd** grade **(+16)**
- ❑ Largest average K-12 class decrease – **11th** to **12th** grade **(-13)**
- ❑ Propensity to have positive cohort change From Kindergarten through 9th grade
- ❑ Kindergarten to 5th grade 3-Year Average Class Size Change: 15.7
- ❑ 6th to 8th grade 3-Year Average Class Size Change: 17.3
- ❑ 9th to 12th grade 3-Year Average Class Size Change: 37.0

DISCLAIMER: All past student data is exported from the district student database allowing the ability to do robust statistical analysis by student geography. The student database export will not always align perfectly with the Official Count (Statistical 99% or greater match by grade)
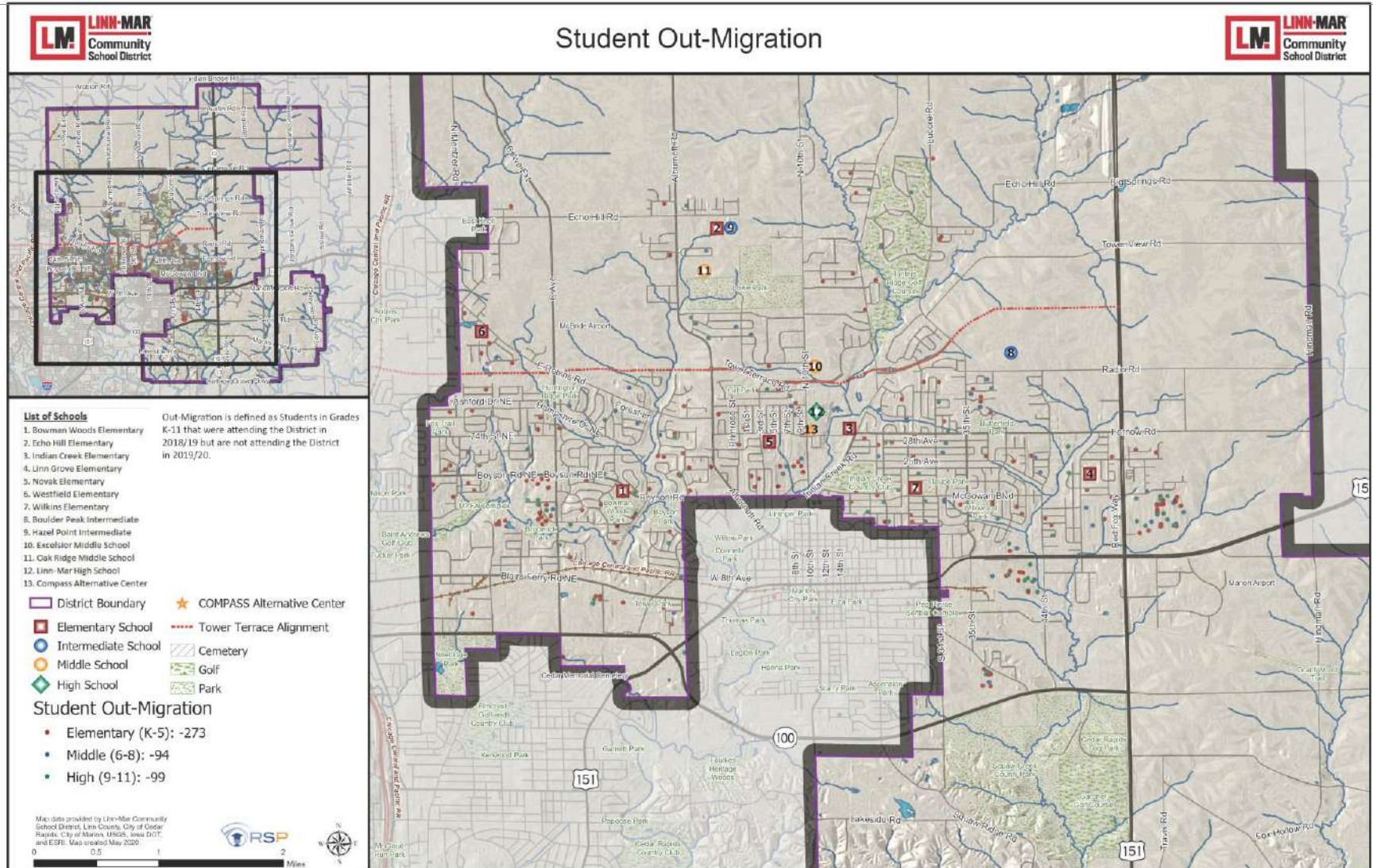
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- 2019/20 nonalternative students who are in 1st through 12th grade that were not attending the District in 2018/19 as Kindergarten through 11th grade
- Provides a location for where a new student resides
- Having a large number of new students could mean additional educational services will be required

- **555** new students in **2017/18**
- **539** new students in **2018/19**
- **548** new students in **2019/20**
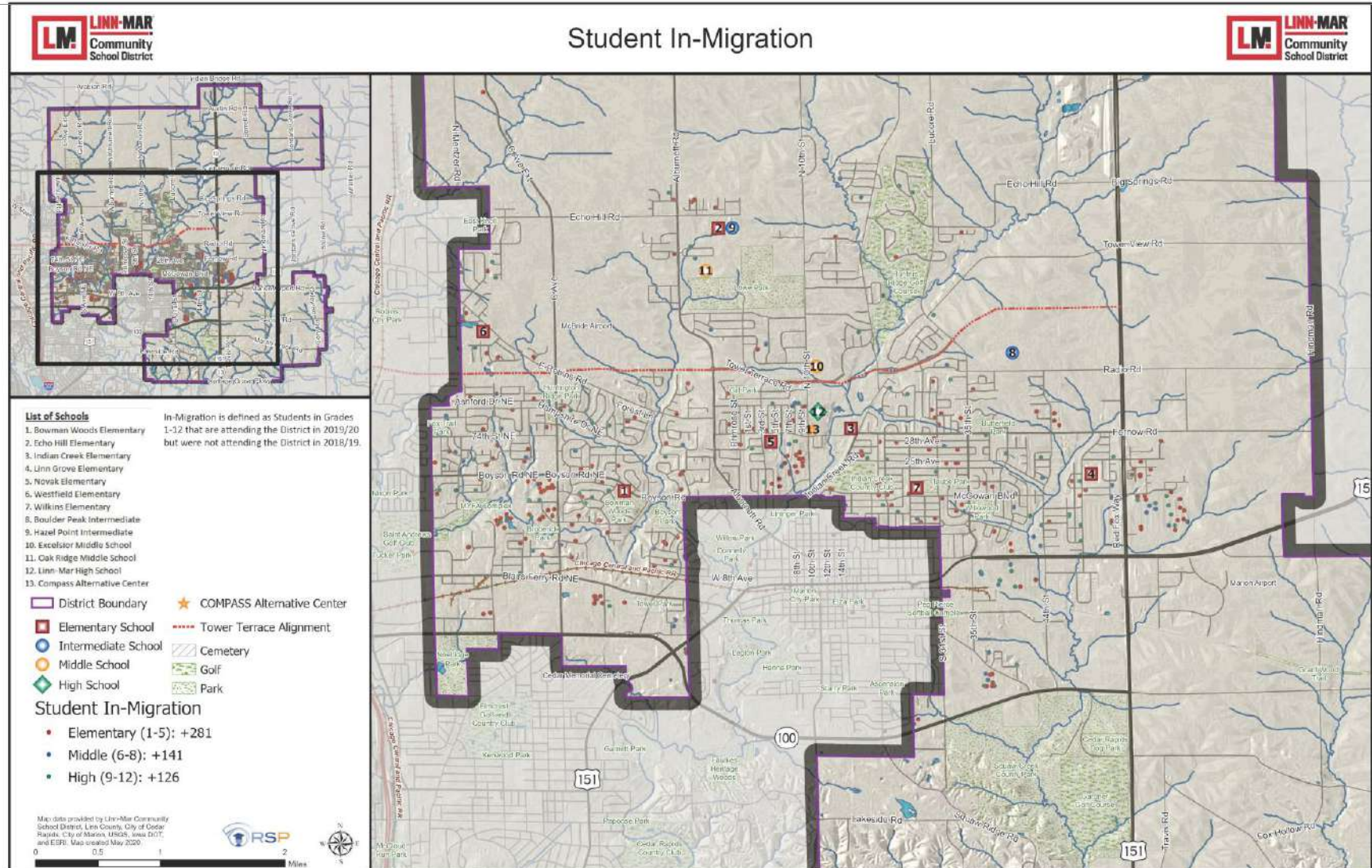
- ❑ Nonalternative students attending the district in 2018/19 who were in Kindergarten through 11th grade that did not attend in 2019/20 as 1st through 12th graders

- ❑ A negative Total migration indicates the propensity to have a future decreasing student enrollment

- ❑ **495** students left the district in **2018/19**,
  - ❑ **Total Migration** +44

- ❑ **466** students left the district in **2019/20**,
 - ❑ **Total Migration** +82

Student Out-Migration

List of Schools
1. Bowman Woods Elementary
2. Echo Hill Elementary
3. Indian Creek Elementary
4. Linn Grove Elementary
5. Novak Elementary
6. Westfield Elementary
7. Wilkins Elementary
8. Boulder Peak Intermediate
9. Hazel Point Intermediate
10. Excelsior Middle School
11. Oak Ridge Middle School
12. Linn-Mar High School
13. Compass Alternative Center

Out-Migration is defined as Students in Grades K-11 that were attending the District in 2018/19 but are not attending the District in 2019/20.

- ☐ District Boundary
- ★ COMPASS Alternative Center
- ■ Elementary School
- ---- Tower Terrace Alignment
- ⬤ Intermediate School
- ▨ Cemetery
- ⬤ Middle School
- ▨ Golf
- ◆ High School
- ▨ Park

Student Out-Migration
- • Elementary (K-5): -273
- • Middle (6-8): -94
- • High (9-11): -99

- Depicts student movement at each Planning Area from **2012/13** to **2019/20**
- **Orange** areas experienced an increase since **2015/16, Green** areas experienced a decrease, **White** areas had no net change of students between **year to year**
- New developments have a greater propensity to have more students in future years
- Current colors do not indicate area will continue to increase or decrease

Student Count Change from 2018/19 to 2019/20 in Grades K-12
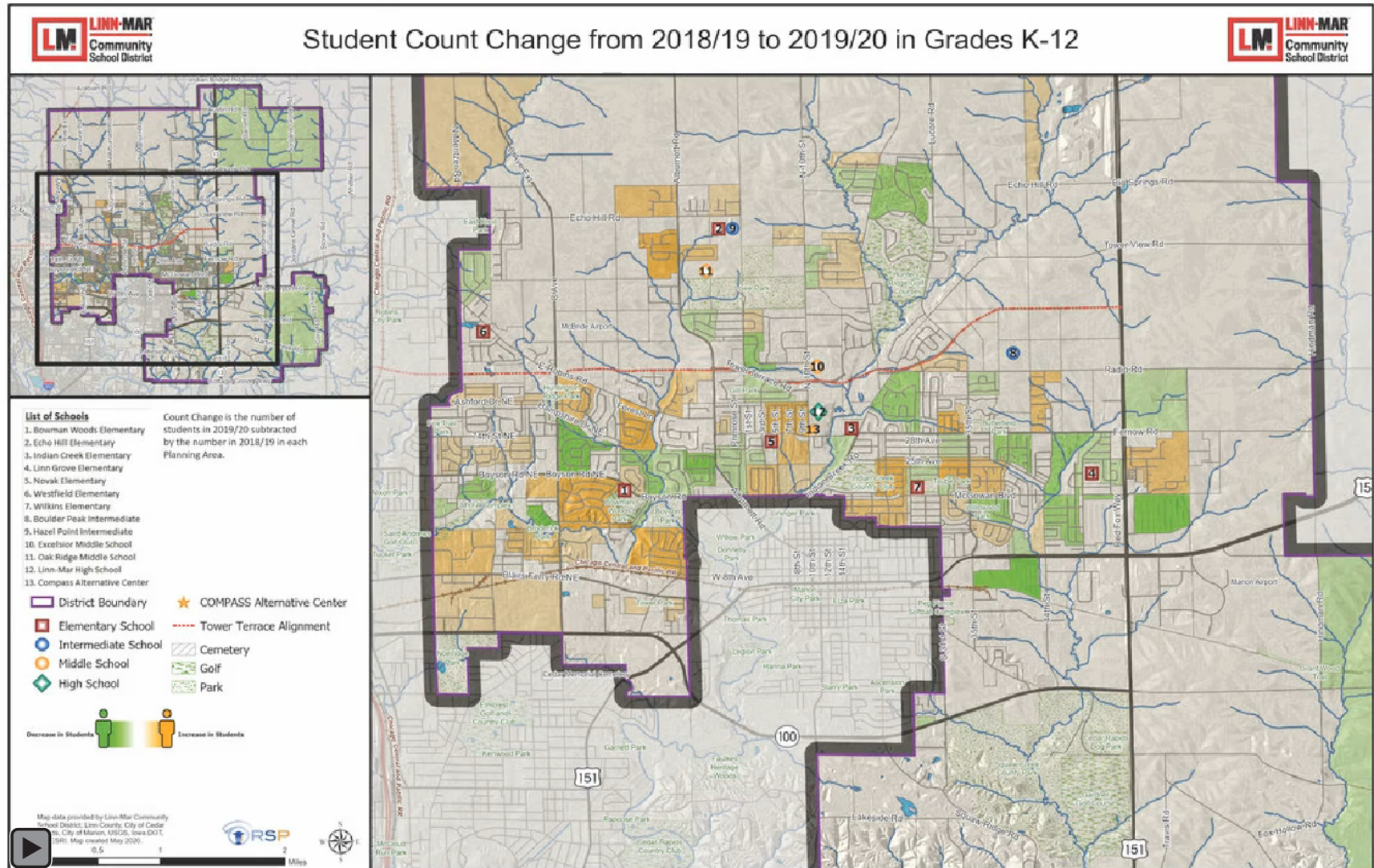
- **Red** areas depict highest density of students, **Gray** as lowest student density
- Overlapping points (2 or more students) are handled using a weighting of coincident points
- This analysis helps with understanding student population and geographic proximity to schools
- Some new areas do not necessarily lead to similar yield rates of like developments

Student "Heat" Density in 2019/20 in Grades K-12
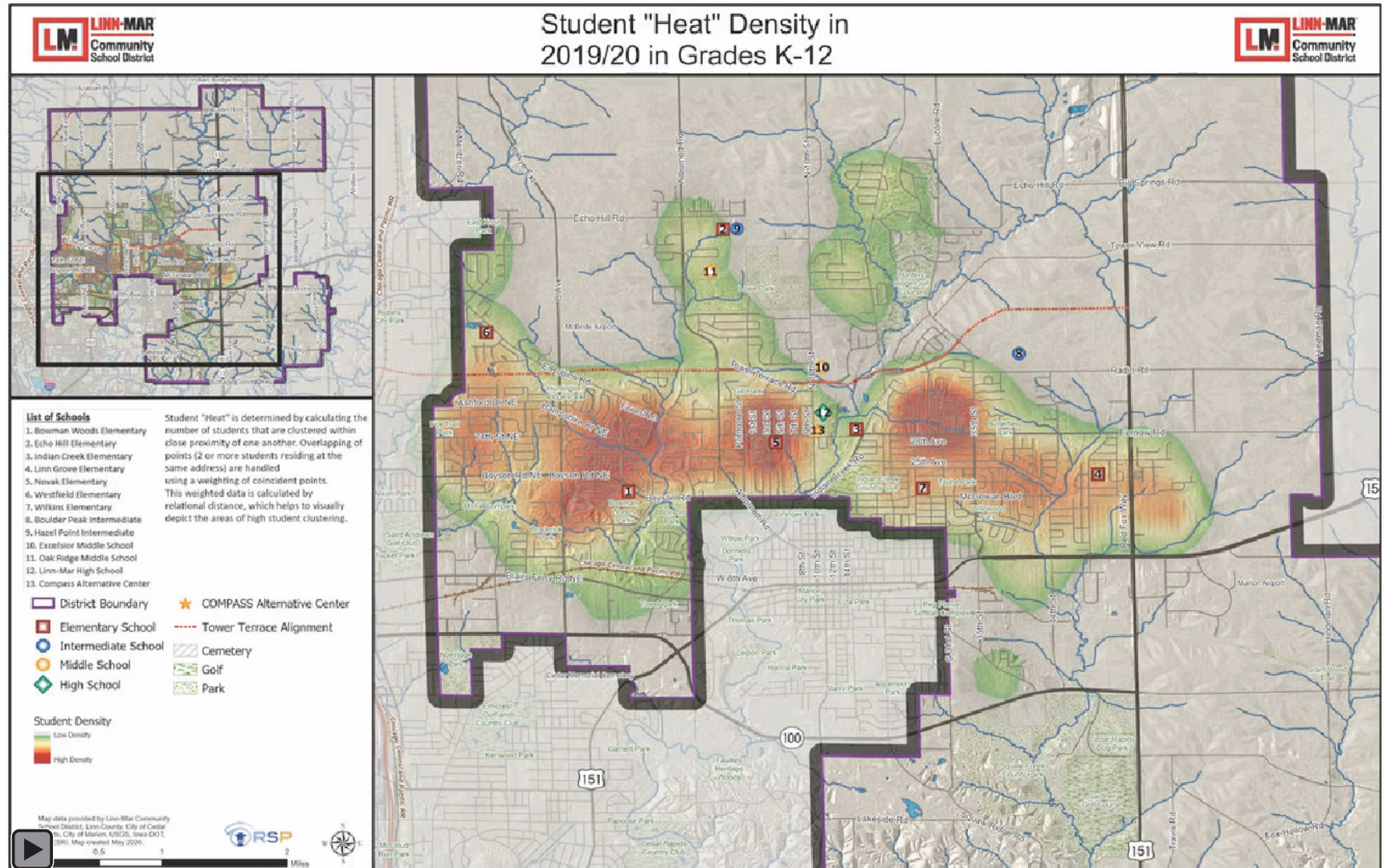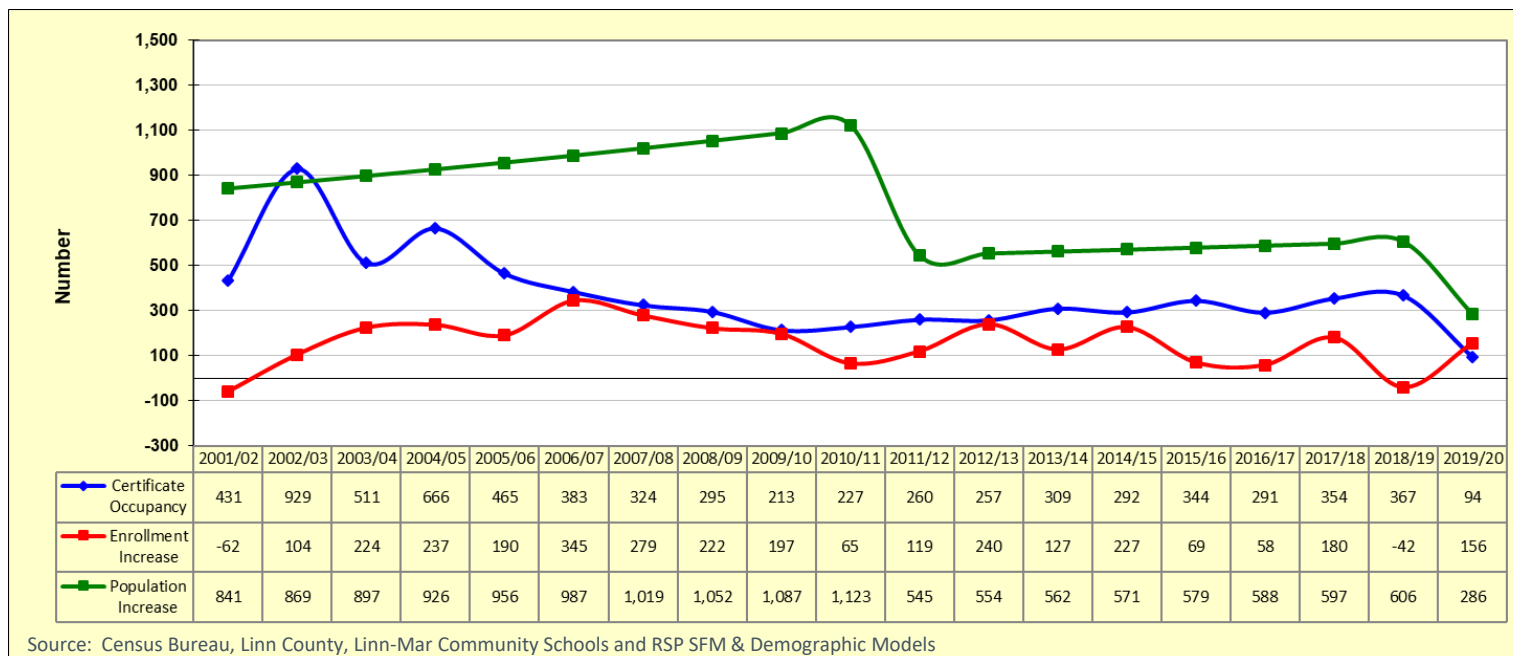
Enrollment Observations

The following are some general enrollment observations;

❑ The district has maintained contiguous boundaries for elementary schools

❑ RSP & Associates monitors nearly 400 planning areas for demographic, development, and enrollment data sets

❑ Direct correlation between women in childbearing ages (15-49) and where children (0-4) reside

❑ Enrollment tends to increase from grade to grade each year at each level

- Large increases happen from 2nd to 3rd grade and
- Large decreases happen from 11th to 12th grade

❑ The average class size has increased at each grade level (ES, MS, HS)

❑ Larger elementary school grades will result in future larger middle and high school grades if the current trends continue into the future

❑ Greatest density is east of Indian Creek Elementary

❑ New developments coming online predominately will be north of Tower Terrace Road which will change the heat map dramatically

Part Two:
Development

RSP

Population, Development, Enrollment

Source: Census Bureau, Linn County, Linn-Mar Community Schools and RSP SFM & Demographic Models

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
Certificate Occupancy	431	929	511	666	465	383	324	295	213	227	260	257	309	292	344	291	354	367	94
Enrollment Increase	-62	104	224	237	190	345	279	222	197	65	119	240	127	227	69	58	180	-42	156
Population Increase	841	869	897	926	956	987	1,019	1,052	1,087	1,123	545	554	562	571	579	588	597	606	286

Benchmark data to determine if there is a correlation between:
- Population change
- Building activity
- School enrollment

Graphic Explanation

❑ Census data indicates an increasing population (Range: 500 to 700 persons, Census estimates annual 1.29% increase)

❑ Building trend indicates there has been new residential activity (5-Year Average 290 units a year – 2019/20 amount likely lower based on when the county updates year built information)

❑ Student Enrollment growth has varied the last three years (Range -42 to +180 students)

❑ Households moving into the district do not have the typical household demographics resulting in cohort changes that are very dynamic – new building and student change have a statistical correlation

❑ New development has been strong over the last decade

❑ Older areas of the community have the propensity for demographic trend change if they remain affordable

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Student Yield Rate (SF & MF)

Elementary Single Family (SF)

Schools	Year								
	2012	2013	2014	2015	2016	2017	2018	2019	Avg
Bowman Woods Elementary School	0.22	0.21	0.21	0.20	0.21	0.20	0.21	0.21	0.21
Echo Hill Elementary School	0.32	0.34	0.33	0.30	0.30	0.32	0.32	0.33	0.32
Indian Creek Elementary School	0.27	0.29	0.29	0.29	0.27	0.28	0.30	0.27	0.28
Linn Grove Elementary School	0.24	0.23	0.23	0.25	0.24	0.25	0.23	0.22	0.24
Novak Elementary School	0.24	0.24	0.24	0.25	0.24	0.24	0.25	0.24	0.24
Westfield Elementary School	0.35	0.32	0.31	0.31	0.30	0.31	0.30	0.31	0.32
Wilkins Elementary School	0.18	0.16	0.16	0.17	0.17	0.17	0.16	0.18	0.17
District (K-5):	0.26	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25

Source: Linn-Mar Community School District, City of Cedar Rapids, and Linn County

Elementary Multi-Family (MF)

Schools	Year								
	2012	2013	2014	2015	2016	2017	2018	2019	Avg
Bowman Woods Elementary School	0.10	0.08	0.08	0.07	0.08	0.09	0.10	0.11	0.09
Echo Hill Elementary School	0.00	0.25	0.25	0.25	0.25	0.00	0.00	0.00	0.12
Indian Creek Elementary School	0.05	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.05
Linn Grove Elementary School	0.15	0.12	0.13	0.11	0.12	0.10	0.11	0.10	0.12
Novak Elementary School	0.09	0.06	0.05	0.05	0.06	0.07	0.05	0.07	0.06
Westfield Elementary School	0.08	0.06	0.09	0.10	0.10	0.10	0.10	0.10	0.09
Wilkins Elementary School	0.13	0.10	0.13	0.13	0.12	0.12	0.12	0.10	0.12
District (K-5):	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.10

Source: Linn-Mar Community School District, City of Cedar Rapids, and Linn County

DISCLAIMER: All past student data is exported from the district student database allowing the ability to do robust statistical analysis by student geography. The student database export will not always align perfectly with the Official Count (Statistical 99% or greater match by grade)

Yield Rate Table Explanation

❑ Depicts elementary (K-5) enrollment and the corresponding yield rate for 100 housing units

❑ Single-Family residential average (.25) or 25 K-5 students for each 100 units has stable over the past decade

❑ Multi-Family residential average (.10) or 10 K-5 students for each 100 units has stable over the past decade

❑ Adding newer housing inventory typically can increase the yield rate

- The Heat map assists in understanding how that has changed over time (Page 27)
- Residential unit activity provides the basis for timeline and where units likely are built (Page 33)
- From 2007 to 2019 there were approximately **996** single family units added to the building inventory
- From 2007 to 2019 there were approximately **830** multi-family units added to the building inventory
- Single-family residential average (.25) has slightly higher student yield rate when compared to Multi-Family residential (.10) within the district

❑ 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
❑ Majority of the most affordable properties are located in the oldest part of the community
❑ The most expensive properties tend to be newer developments

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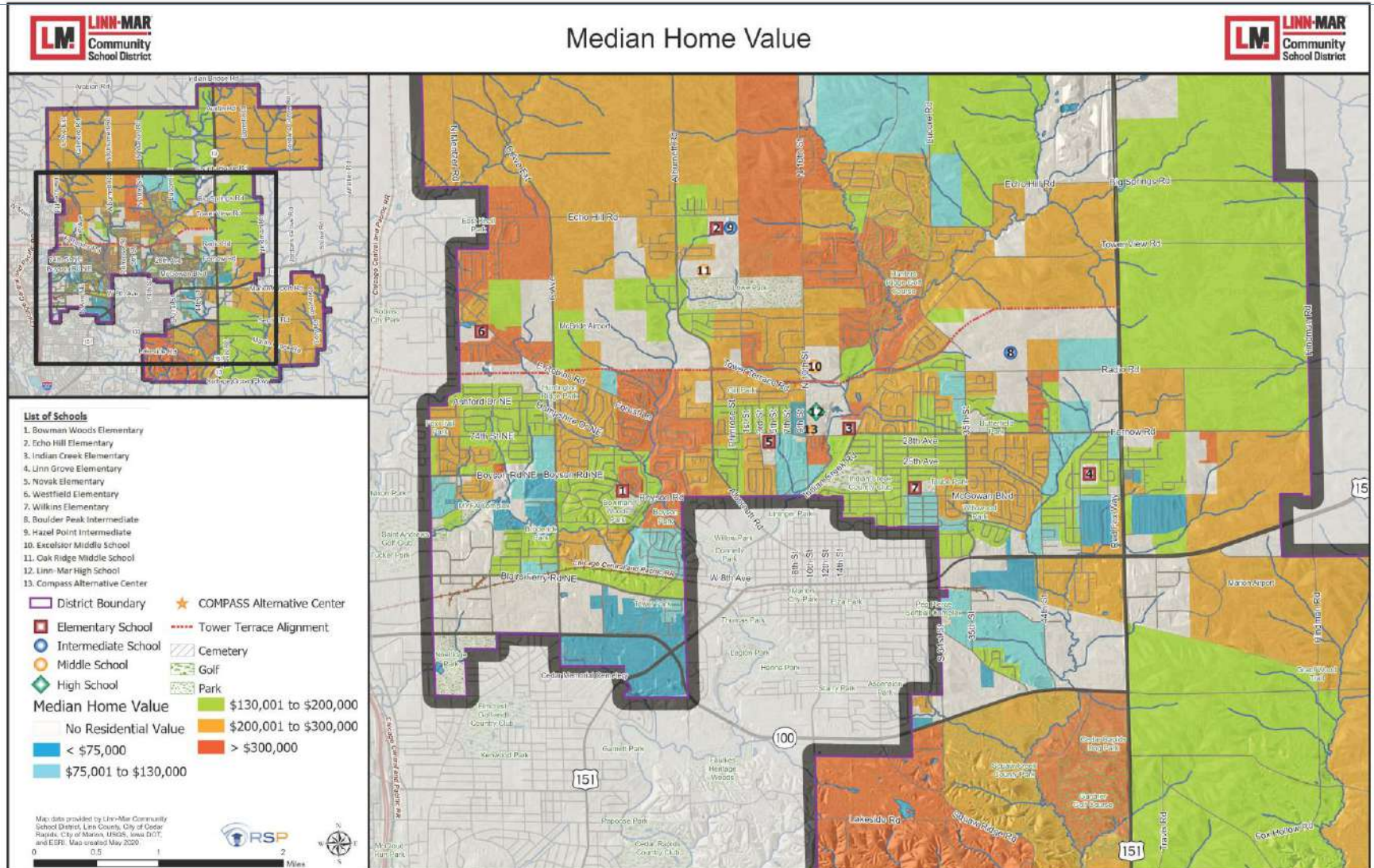
- ❑ Reveals the build out and timing of residential development within the district
- ❑ Some new areas do not necessarily lead to similar yield rates of like developments
- ❑ While areas may be platted for residential it may take several years for houses to be built and new student residents to move in to those residences
- ❑ The amount of new development appears to have slowed, but it could be a result of how the County data is processed and released to RSP

33
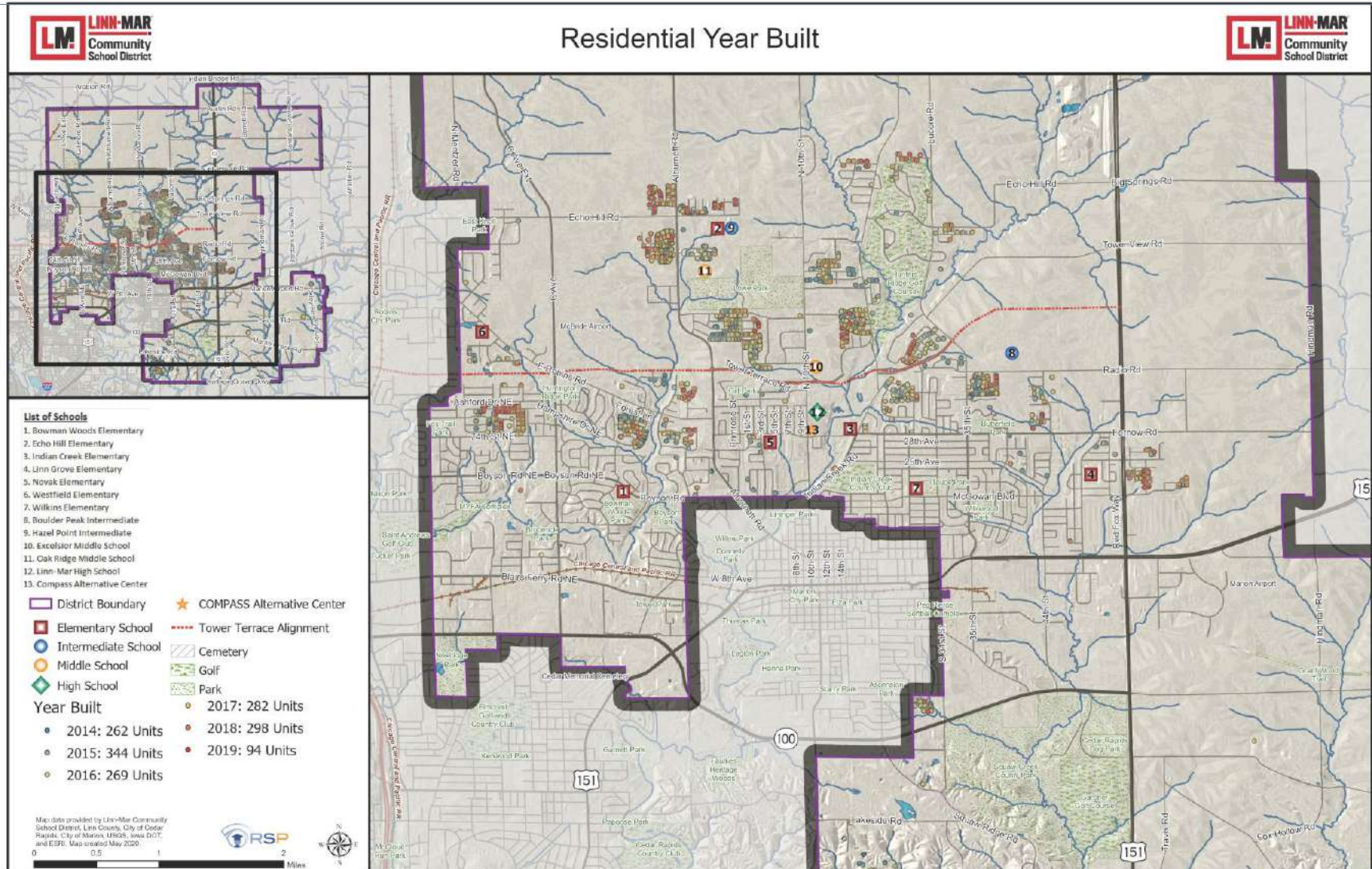
Growth Areas

- Identifies where development activity is happening (Green)
- Identifies possible areas that could develop (Yellow and Purple)
- The market and property owners desire to build guides the timing of development
- Other properties not shown might develop while some shown might not develop
- Majority of potential growth is along the outer areas of the district

34
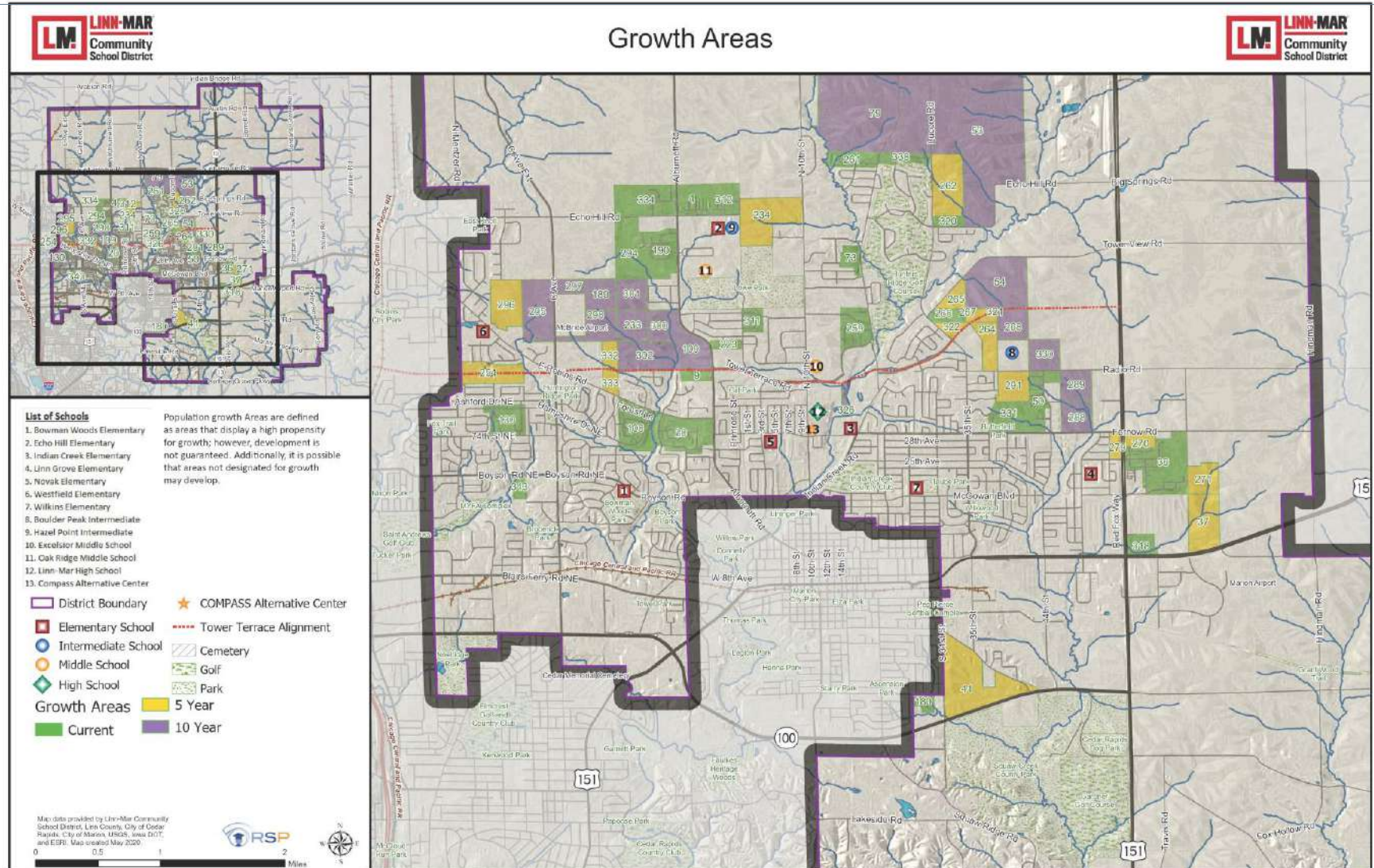
Development Observations

<u>The following are some general development observations that are similar to last years observations:</u>

❑ Potential for Population and Building activity will be influenced by COVID-19
❑ Single-family residential has the highest propensity to have school aged students
❑ There are abundant residential development opportunities available within the district boundary as infrastructure improvements allow
❑ Future residential activity is dependent on the economy (job growth/expansion)
❑ The type of development (Single-family, Duplex, Apartments) have different yield rates
❑ Tower Terrace Road expansion and connection to a future I-380 Hwy interchange will influence development in the community because of better connectivity
❑ Current residential development is concentrated largely in the west portion of the Linn-Mar District, largely along Alburnett Rd
❑ Future residential development activity outlook is promising – mostly concentrated just north of Echo Hill Rd
❑ Timing of new development will determine the rate of future enrollment increase
❑ Monitoring the economic impacts of COVID-19 will be critical in understanding the terms of students physically residing in the community or utilizing online learning environments, along with how communities adapt to changes with respect to attending sporting events and day to day shopping, as well as interaction with people could radically change where people choose to live, and as such the number of students the district will have in future years

Part Three:
Enrollment Projections

RSP

Projection Accuracy Year One

Elementary
- Projected: 3,584
- Actual: 3,484
- Accuracy: **97.1%**

Middle School
- Projected: 1,764
- Actual: 1,778
- Accuracy: **99.2%**

High School
- Projected: 2,257
- Actual: 2,247
- Accuracy: **99.6%**

District
- Projected: 7,605
- Actual: 7,509
- Accuracy: **98.7%**

<u>Notes:</u>
- ❑ This depicts the accuracy of the 1st year of the 2018/19 RSP Projections
- ❑ Demographic shifts with millennials impacting future enrollment (Jobs, Jobs, Jobs)
- ❑ In future model RSP has created some modeling factors for the Early Childhood Blended Program (ECBP) students to minimize elementary projections over forecasting
- ❑ Many areas of the community having significant demographic shifts influencing changes in enrollment (type of households not generating similar yield rates of students

RSP Multi-Year Projection Accuracy
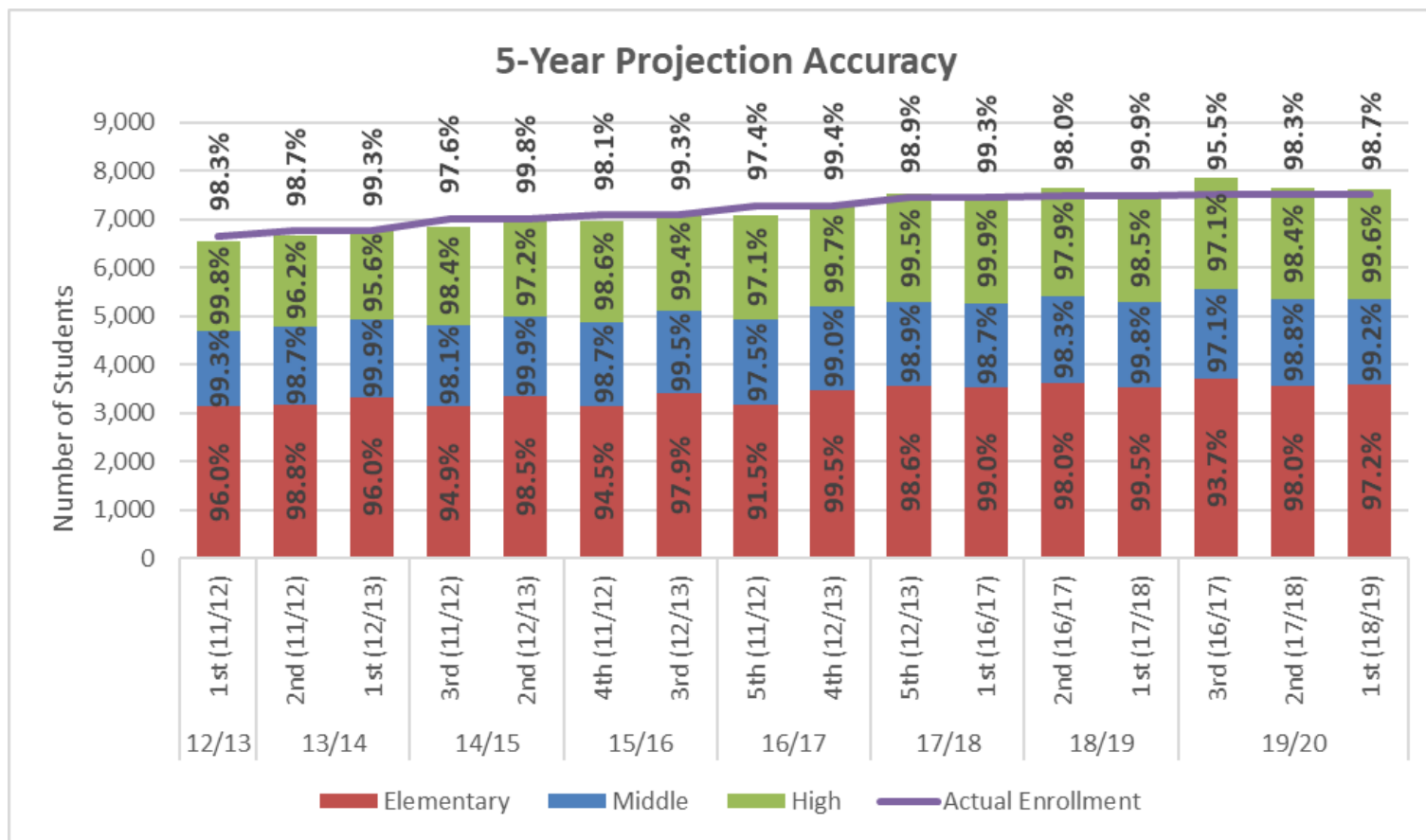
Actual enrollment provided by Linn-Mar Community School District, Projections provided by RSP SFM
RSP & Associates, LLC was not commissioned to provide an enrollment forecast for 13/14, 14/15, 15/16

What does this Mean?
- ❑ RSP has maintained an average of **98.5%** for district enrollment for **16** projections
- ❑ The closer the projection the more likely the accuracy is higher
- ❑ 3ʳᵈ year **19/20** projections conducted in **16/17** has the accuracy of **95.5%**, while 1ˢᵗ year **19/20** projections conducted in **18/19** has the accuracy of **98.7%**
- ❑ Future accuracy results will factor in the grade configuration change that takes place in 2020/21
- ❑ The RSP projections should be integrated into all areas of district planning

Past, Current, Future
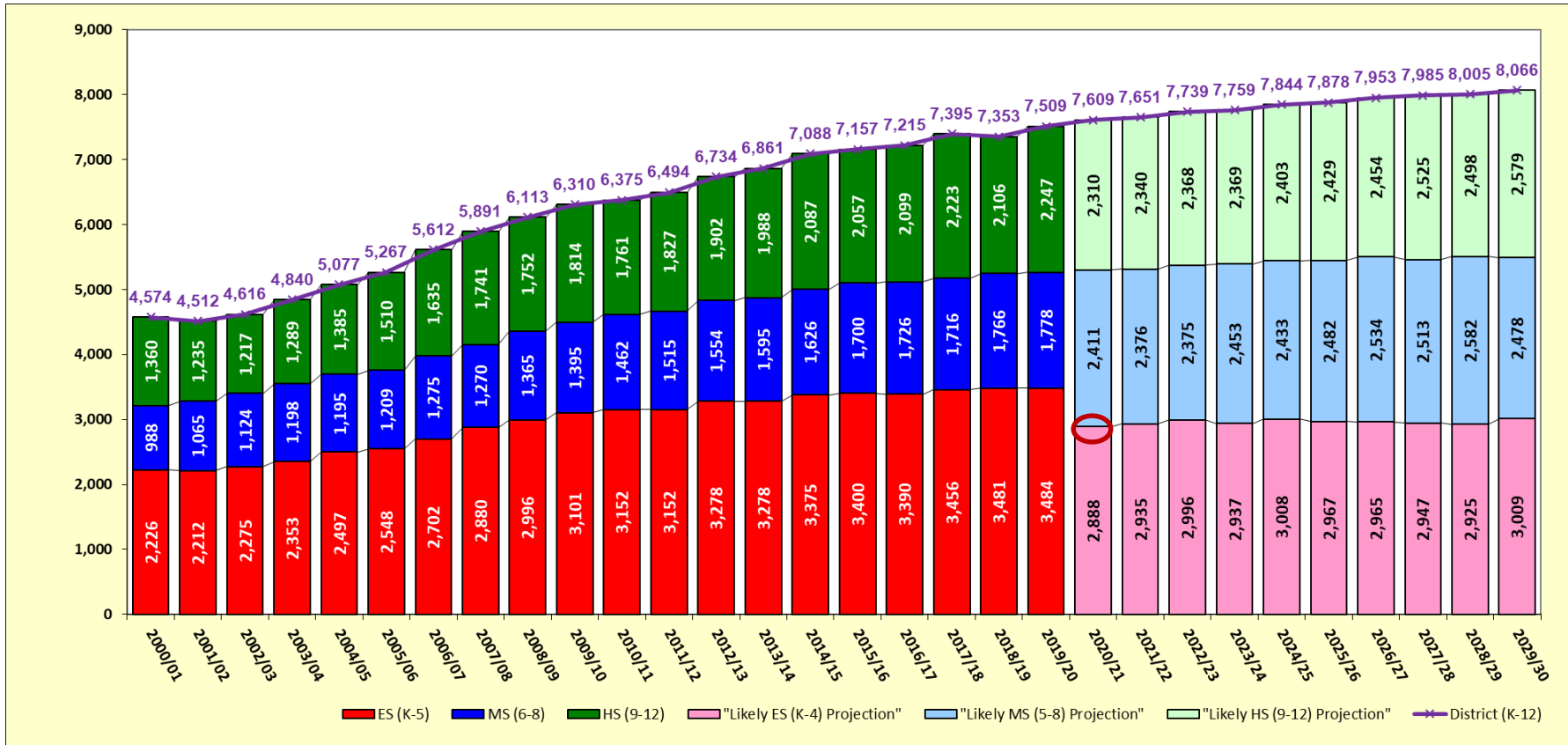
Source: Linn-Mar Community Schools and RSP SFM & Demographic Models

⭕ Grade Configuration Change ES (K-4) MS (5-8)

What Does This Mean

❑ Enrollment Change – Overall increasing enrollment projected over the ten years

❑ Stability based on new development and demographic shifts

❑ District increases by about 600 students (+7.9%) (+0.19% to +1.33% a year)

❑ Elementary increases by nearly 130 students (+4.9%) (-2.07% to +2.52% a year)

❑ Middle School increases by nearly 100 students (+5.0%) (-3.21% to +3.20% a year)

❑ High School increases by about 330 students (+14.8%) (-1.07% to +3.24% a year)

Projection Notes

Projections Clarification:

❑ **Past Enrollment is shown three different ways:**

1. Reside (Based on where a student Resides in relation to the attendance area – includes Open Enrollment)
2. Attend (Based on what school the student is attending includes Open Enrollment)
3. Reside/Attend (Subset of Reside to know how many of the Reside attend the school based on the attendance area they are assigned to)

❑ **Projections are shown one way:**

1. Reside (Based on where a student Resides in relation to the attendance area: Includes Open Enrollment)

❑ **Capacity**

- Provided by district administration
- Should be annually examined to ensure appropriate education space is available

❑ **Other Items**

- Enrollment Grade Configuration in Student Forecast Model (K-4, 5-6, 7-8, 9-12)
- Boulder Peak and Hazel Point Intermediate open in 2020/21 school year
- Open enrollment trends are assumed to follow district policy and will continue like those trends during the projection time frame
- Early Childhood Blended Program (ECBP) are retained kindergarten students who will likely attend kindergarten the following school year – these students are not included in the RSP projections

Building Projections (Elementary)

School	School Capacity	Student Location	Past School Enrollment			Projections Based on Residence				
			2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Bowman Woods Elementary		Reside/Attend	429	431	442					
K to 5th	500	Reside	452	453	462	385	399	411	395	392
		Attend	459	462	480					
Echo Hill Elementary		Reside/Attend	464	471	487					
K to 5th	600	Reside	490	497	517	430	450	446	456	477
		Attend	532	521	525					
Indian Creek Elementary		Reside/Attend	526	540	502					
K to 5th	500	Reside	587	622	582	480	480	488	481	514
		Attend	568	574	533					
Linn Grove Elementary		Reside/Attend	411	421	408					
K to 5th	600	Reside	445	452	433	365	379	397	395	412
		Attend	476	500	490					
Novak Elementary		Reside/Attend	390	379	390					
K to 5th	600	Reside	427	417	433	356	362	363	343	355
		Attend	437	429	433					
Westfield Elementary		Reside/Attend	536	548	584					
K to 5th	600	Reside	587	588	613	511	498	512	505	494
		Attend	547	561	599					
Wilkins Elementary		Reside/Attend	417	398	389					
K to 5th	500	Reside	468	452	444	361	367	379	362	364
		Attend	437	434	424					
ELEMENTARY TOTAL		Reside/Attend	3,173	3,188	3,202					
K to 5th (2020/21 K to 4th)	3,900	Reside	3,456	3,481	3,484	2,888	2,935	2,996	2,937	3,008
		Attend	3,456	3,481	3,484					

Source: RSP & Associates, LLC - April 2020

⬭ Over School Capacity

Building Projections (Secondary)

School	School Capacity	Student Location	Past School Enrollment			Projections Based on Residence				
			2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Boulder Peak Intermediate		Reside/Attend								
5th to 6th (Begins 2020/21)	800	Reside				661	639	616	684	670
		Attend								
Hazel Point Intermediate		Reside/Attend								
5th to 6th (Begins 2020/21)	800	Reside				542	527	534	576	584
		Attend								
Excelsior Middle School		Reside/Attend	924	949	936					
6th and 8th (7th to 8th begins 20/21)	1,100	Reside	953	986	971	612	644	670	653	630
In 15/16 becomes 8th and 9th		Attend	949	967	951					
Oak Ridge Middle School		Reside/Attend	738	762	792					
6th and 8th (7th to 8th begins 20/21)	750	Reside	763	780	807	596	566	555	540	549
In 15/16 opens as 8th and 9th		Attend	767	799	827					
Linn Mar High School										
9th to 12th	2,400	Reside	2,223	2,189	2,247	2,310	2,340	2,368	2,369	2,403
		Attend	2,223	2,189	2,247					
ELEMENTARY TOTAL		Reside/Attend	3,173	3,188	3,202					
K to 5th (2020/21 K to 4th)	3,900	Reside	3,456	3,481	3,484	2,888	2,935	2,996	2,937	3,008
		Attend	3,456	3,481	3,484					
MIDDLE TOTAL		Reside/Attend	3,173	3,188	3,202					
6th to 8th (2020/21 5th to 8th)	3,450	Reside	953	1,766	1,778	2,411	2,376	2,375	2,453	2,433
		Attend	949	1,766	1,778					
HIGH TOTAL										
9th to 12th	2,400	Reside	2,223	2,189	2,247	2,310	2,340	2,368	2,369	2,403
		Attend	2,223	2,189	2,247					
DISTRICT TOTALS										
K to 12th	9,750	Reside	6,632	7,436	7,509	7,609	7,651	7,739	7,759	7,844
		Attend	6,628	7,436	7,509					

Source: RSP & Associates, LLC - April 2020

◯ Over School Capacity

Part Four:
Moving Forward

RSP

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 to ensure decisions are made on the latest data available

❑ Annually review enrollment projections to make the best planning decisions

❑ The type of residential development (Single-Family, Duplex, Apartments) and how affordable that housing product is will influence where a household chooses to live and as such impact and number of students that potentially could attend a school

❑ Determine the criteria to address capacity issues and timing for future school construction, remodeling, or new attendance areas based on growth trends over the next five years

> **(Highest Priority Indian Creek Elementary and Linn-Mar High School)**

❑ Administration continue to examine utilization opportunities to improve the student education experiences

> **(Highest Priority Specialized programming and the potential utilization of the LRC for high school programming)**

❑ 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

❑ RSP Enrollment forecasting is based on the best-known information at the time. COVID 19 has presented a challenge as it is unknown how this event may impact enrollment, demographics, and development trends in each individual school district. RSP has started with some of the short-term knowns to include social distancing and people working more from home environments, school closures, and no clear timeline for this pandemic to work its way through our communities. As a result, the RSP forecast may indicate some short-term decrease in residential development activity and economic uncertainty for the next year to 18 months. RSP is hopeful a cure, change in season, or other solution happens to decrease the potential negative outcomes and as such recommends our school district clients collaborate with RSP prior to the school year to best plan for the changes happening in your district.

Notes