Planning for the Future

Dickinson Public Schools

Enrollment Analysis

June 2022

Presented July 8, 2022

Expectations

Things to Consider…

o **Timeline** – Project timeline is a result of ensuring student data could represent as close as possible to the Official County Data with attributes that would allow RSP to forecast enrollment at a parcel level geography.

o **Findings** – The finding were not focused on supporting or contradicting any past internal or outsourced studies. This analysis is based on data, data, and more data.

o **Study** – This study factored in many different data sets to provide data driven analysis that is the foundation to the RSP Statistical Forecast Model (SFM).

o **Change** – Enrollment change in the community is influenced by, but not limited to, the birth rate, demographics, types of development and/or housing affordability.

o **Facts:**

   1) 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

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

   3) 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.

RSP & Associates

RSP Quick Facts:

- Founded in 2003
- Professional educational planning firm
- Expertise in multiple disciplines (GIS, Planning, Facilitation)
- Over 20 years of planning experience
- Over 80 years of education experience
- Over 20 years of GIS experience
- Projection accuracy of 97% or greater

RSP Planning Team:

Robert Schwarz, AICP, CEFP
- Military, County, City, and School District Planner
- University of Kansas – Master of Urban Planning (MUP)
- American Institute of Certified Planners (AICP)
- Certified Educational Facility Planner (CEFP)

Ginna Wallace, Planner
- University of Kansas – Master of Urban Planning (MUP)

Our Partners:

Company was started with the desire and commitment to assist school districts in long-range planning. RSP has served over **130** clients in:

- Arkansas
- Colorado
- Iowa
- Illinois
- Kansas
- Minnesota
- Missouri
- Nebraska
- North Dakota
- Oklahoma
- South Dakota
- Tennessee
- Wisconsin

RSP Recent Projects:

Minot Public Schools
- Enrollment Analysis, 2021/22
- Boundary Analysis, 2021/22

Devils Lake Public Schools
- Enrollment Analysis, 2021/22

Grand Forks Public Schools
- Enrollment Analysis, 2021/22

Bismarck Public Schools
- Enrollment Analysis, 2021/22

Discussion Points

Part 1
Enrollment & Demographics

- Things to Consider
- Maps & Data
- Sophisticated Forecast Model
- Demographics
- Past Enrollment & Change

Part 2
Development

- Population, Development, & Enrollment Trends
- Yield Rate
- Maps & Data

Part 3
Projections

- Past, Current, & Future Enrollment
- Building Projections

Part 4
Next Steps

- Moving Forward
- Next Steps & Key Consideration

Appendix

- Demographics
- Intra-transfer Tables
- Other Student Analysis Maps

Part One: Past Enrollment and Demographics

100,000 Foot Perspective

Enrollment

District enrollment forecasted to increase by 600 students (K-12) and surpass 4,300 total students by 2026/27

- **Elementary School** enrollment forecasted to increase to over 2,200 of students by 2026/27
- **Middle School** enrollment forecasted to increase to over 950 of students by 2026/27
- **High School** enrollment forecasted to increase to over 1,100 of students by 2026/27

Capacity

Capacity of buildings was provided by the district – the following buildings are forecasted to exceed the building capacity and may face challenges within the next five years (Reside or Attend):

- **Elementary schools:**
  - Berg (2026/27)
  - Heart River (2022/23, 2024/25, 2026/27)
  - Jefferson (2023/24 – 2026/27)
  - Lincoln (2026/27)

- **Total Elementary School capacity exceed in 2026/27**
- **High School: projected over capacity in 2025/26**
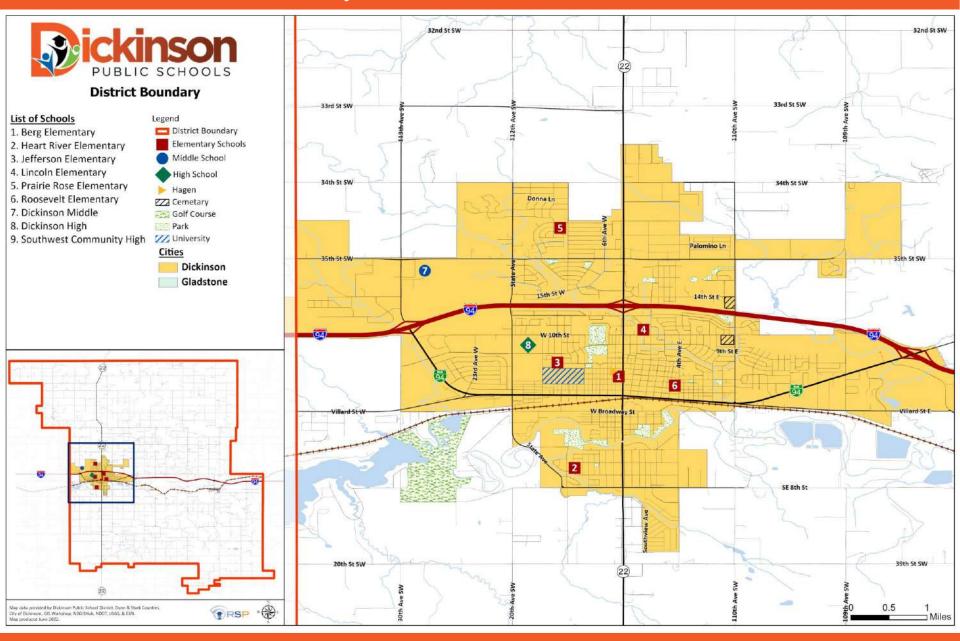
Indicators of Change

Monitor Kindergarten and PK enrollment – *are the kindergarten classes enrolling as forecasted?*
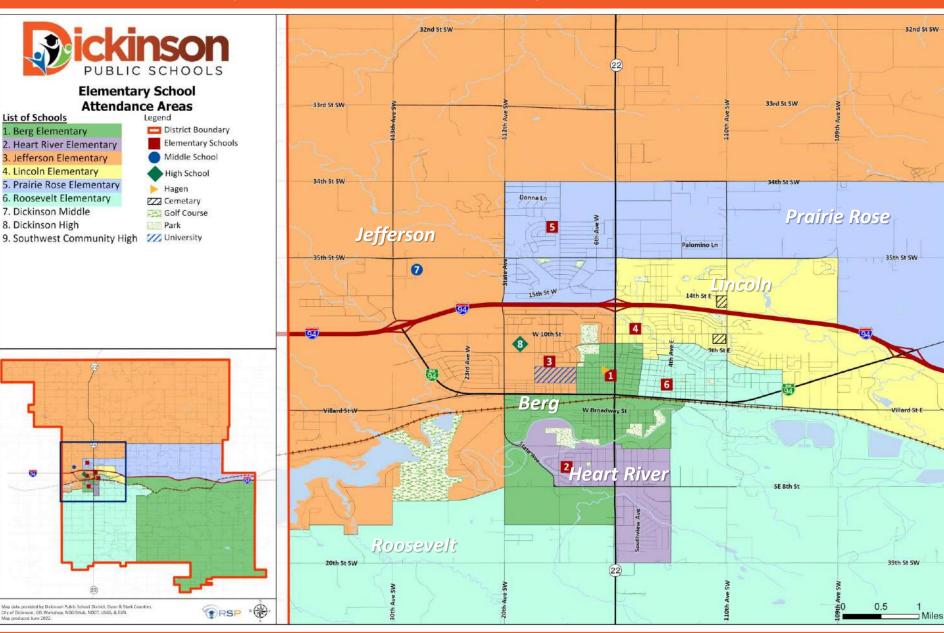
Monitor live birth data for Stark county – *does the county continue to see over 550 live births per year?*

Monitor the development trends – *do the anticipated areas north of I-94 develop within the next five years?*

District Boundary

Elementary School Boundary

Planning Areas

Planning Areas-Detail

Map Details

o District Boundary: **Orange Line**

o Planning Areas: **Green Line**

Planning Areas are created from: Land Use, Residential Density, Natural Features, Manmade Features, Attendance Areas

Notes

o Statistically analyzing data with this number of geographic based polygons will provide a deeper context to how change is happening resulting in a reliable tool to make credible planning decisions

o Each planning area had a different outlook based on indicators such as value of housing, square footage of housing unit, when the housing product was constructed, as well as access to amenities such as shopping, parks, trails, and roads

Map data provided by Dickinson Public School District, Dunn & Stark Counties, City of Dickinson, GIS Workshop, NDGISHub, NDOT, USGS, & ESRI. Map produced June 2022.

RSP

Dickinson High School (8) and Jefferson Elementary (3)

Sophisticated Forecast Model Methodology

Built-Out $\quad S_{c,t,x} = S_{c-1,t-1,x} * GC$

Let:

S = The number of students, either an actual count or a projected count

x = A subscript denoting an attendance ares 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 $\quad S_{c,t,x} = S_{c-1,t-1,x} + (BP_{t,x} * R_{c,x})$

Where: $\quad BP_{t,x} = \left(\dfrac{(CP_x)(BT_x)(A_x)}{\sum_x (CP_x)(BT_x)(A_x)} \right) * CT$

Let:

S = The number of students, either an actual count or a projected count

x = A subscript denoting an attendance area in 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 planning area

A = An index which models the likelihood of development

CT = Building permit control total forecast

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.

The SFM is…
- a social science… not an exact science; it identifies behavior trends to determine the propensity of them to be recreated
- valuable in how our team created and analyzes the geography at a planning area level for any commonality which while help produce an accurate forecast

Some variables examined for each planning area (but not limited to) are…
- natural cohort (district data)
- planning area subdivision lifecycle (a RSP variable)
- the value of homes (county assessor data)
- type of residential units like single-family, multi-family, townhome, mobile home, etc. (county assessor data)
- year units were built
- 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 (county and city data)
- future development (county and city data)
- in-migration of students (district data) & out-migration of students (district data)

Birth Rate Information

Stark County, North Dakota Live Births and Dickinson Kindergarten 5-Years Later

Calendar Year	# Live Births	Birth Change	% Birth Change	School Year	# Kdg	%Kdg of Live Births
2007	290			2011/12	233	80.3%
2008	289	-1	-0.3%	2012/13	264	91.3%
2009	306	17	5.9%	2013/14	293	95.8%
2010	301	-5	-1.6%	2014/15	336	111.6%
2011	339	38	12.6%	2015/16	311	91.7%
2012	398	59	17.4%	2016/17	321	80.7%
2013	484	86	21.6%	2017/18	357	73.8%
2014	543	59	12.2%	2018/19	374	68.9%
2015	546	3	0.6%	2019/20	413	75.6%
2016	549	3	0.5%	2020/21	288	52.5%
2017	493	-56	-10.2%	2021/22	382	77.5%
2018	526	33	6.7%	2022/23	276	587
2019	550	24	4.6%	2023/24	289	614
2020	552	2	0.4%	2024/25	290	616
3-Year Average	542.7	19.67				
3-Year Weighted Average	547.0	14.50				

Updated 07/08/22

Source: North Dakota of Department of Health and Dickinson Public Schools

⬭ Low Range
⬭ High Range

Live Birth Observations

o Tracks the number of live births and the corresponding number of kindergarten students in Dickinson Public Schools five years later

o The number of live births have been increasing

o 3-year average of 20 more live births per year

o Kindergarten enrollment has varied between 233-413 students per year

o 2020/21 enrolled a small class of kindergarteners – likely due to the global pandemic. How this smaller class influences district enrollment in the upcoming years is an important indicator to monitor

o The kindergarten classes moving forward are forecasted to be between 276 - 290 students on the low end and 587 - 616 students on the high end

Main Takeaway: in 2019/20 kindergarten enrollment peaked. The number of live births per year has been increasing steadily in Stark County. Continually monitor this variable and if live births continue to be above 550 in the upcoming years – kindergarten enrollment may increase to enrollment similar to the 2019/20 school years.

Past Enrollment by Grade

Enrollment by Grade

Year	K	1st grade	2nd grade	3rd grade	4th grade	5th grade	6th grade	7th grade	8th grade	9th grade	10th grade	11th grade	12th grade	K-12
2011/12	233	219	243	198	204	219	179	196	169	174	210	183	219	2,646
2012/13	264	246	238	259	199	230	234	197	213	185	186	219	184	2,854
2013/14	293	283	277	269	285	226	244	251	213	226	207	206	222	3,202
2014/15	336	297	287	294	266	284	245	239	256	234	246	225	213	3,422
2015/16	311	312	305	281	285	256	282	239	236	259	248	241	208	3,463
2016/17	321	267	306	282	264	277	247	258	230	238	258	207	233	3,388
2017/18	357	324	269	329	289	266	294	258	279	244	255	258	217	3,639
2018/19	374	344	311	271	316	286	286	283	261	275	245	234	219	3,705
2019/20	413	360	334	318	278	313	310	286	289	271	290	240	244	3,946
2020/21	288	339	320	288	291	257	301	286	247	278	256	252	220	3,623
2021/22	382	294	330	321	302	295	263	291	286	261	272	238	225	3,760

Source: Dickinson Public Schools (Student Data 2011/12 to 2021/22)

Totals includes Roughrider Virtual Academy

Observations:

o Largest K-12 class in 2021/22 – Kindergarten (382 students)

o Smallest K-12 class in 2021/22 – 12th grade (225 students)

o Graduating senior class is smaller than the incoming kindergarten class which will increase total enrollment

o Largest historical increase was from 2011/12 to 2012/13 with increase of 3.3%

o District enrollment peaked in 2019/20 – before the pandemic

o 7th grade is the largest class since 2011/12

o 1st grade is less than 300 students – first time since 2016/17

o 2021/22 Kindergarten is the 2nd largest since 2011/12

Past 5 Year Enrollment Change

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 Counts (Statistically 99% greater match by grade)

Cohort Student Change

Change by Grade from the Previous Year
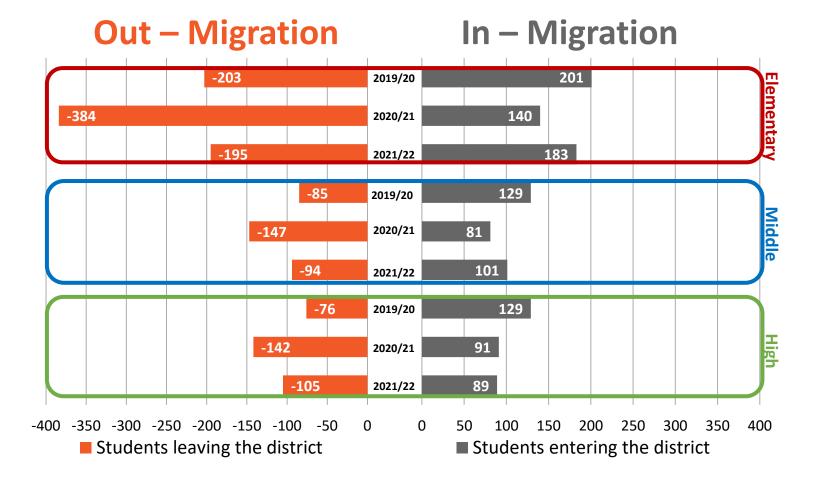
From	To	K	K to 1st grade	1st to 2nd grade	2nd to 3rd grade	3rd to 4th grade	4th to 5th grade	5th to 6th grade	6th to 7th grade	7th to 8th grade	8th to 9th grade	9th to 10th grade	10th to 11th grade	11th to 12th grade	K to 12th grade Total	K to 12th grade Percentage
2011/12	2012/13	31	13	19	16	1	26	15	18	17	16	12	9	1	208	7.9%
2012/13	2013/14	29	19	31	31	26	27	14	17	16	13	22	20	3	348	13.2%
2013/14	2014/15	43	4	4	17	-3	-1	19	-5	5	21	20	18	7	220	7.7%
2014/15	2015/16	-25	-24	8	-6	-9	-10	-2	-6	-3	3	14	-5	-17	41	1.3%
2015/16	2016/17	10	-44	-6	-23	-17	-8	-9	-24	-9	2	-1	-41	-8	-75	-2.2%
2016/17	2017/18	36	3	2	23	7	2	17	11	21	14	17	0	10	251	7.2%
2017/18	2018/19	17	-13	-13	2	-13	-3	20	-11	3	-4	1	-21	-39	66	1.9%
2018/19	2019/20	39	-14	-10	7	7	-3	24	0	6	10	15	-5	10	241	6.6%
2019/20	2020/21	-125	-74	-40	-46	-27	-21	-12	-24	-39	-11	-15	-38	-20	-323	-8.7%
2020/21	2021/22	94	6	-9	1	14	4	6	-10	0	14	-6	-18	-27	137	3.5%
3-Year Average		3	-27	-20	-13	-2	-7	6	-11	-11	4	-2	-20	-12	18	0.46%

Source: Dickinson Public Schools (Student Data 2011/12 to 2021/22)   Totals includes Roughrider Virtual Academy

Observations:

o Largest 3-year average K-12 class cohort increase – 5th to 6th grade **(+6 students)**

o Largest 3-year average K-12 class cohort decrease – K to 1st grade **(-27 students)**

o Overall percent change from previous year of 3.5% – increase of 137 students

o 1st to 2nd, 6th to 7th, and 9th to 12th grade cohorts decreased from last year

o 2019/20 to 2021/21 saw the largest decrease of students
  • Cohort loss at every grade level
  • Loss of 323 total students (-8.7%)

o Instructional Modality will have to be monitored to determine if the students who are not attending the district still reside in the district and if or how many return to receive services in the future years

Out – Migration   In – Migration

Elementary
	Out	Year	In
	-203	2019/20	201
	-384	2020/21	140
	-195	2021/22	183

Middle
	Out	Year	In
	-85	2019/20	129
	-147	2020/21	81
	-94	2021/22	101

High
	Out	Year	In
	-76	2019/20	129
	-142	2020/21	91
	-105	2021/22	89

-400 -350 -300 -250 -200 -150 -100 -50 0   0 50 100 150 200 250 300 350 400

■ Students leaving the district   ■ Students entering the district

Definition

Out-Migration: Shows number of students in grade K to 11th that were attending the District in 2020/21, but are not attending the District in 2021/22.

In-Migration: Shows number of students in grade 1st to 12th that are attending the District in 2021/22, but were not attending the District in 2020/21.
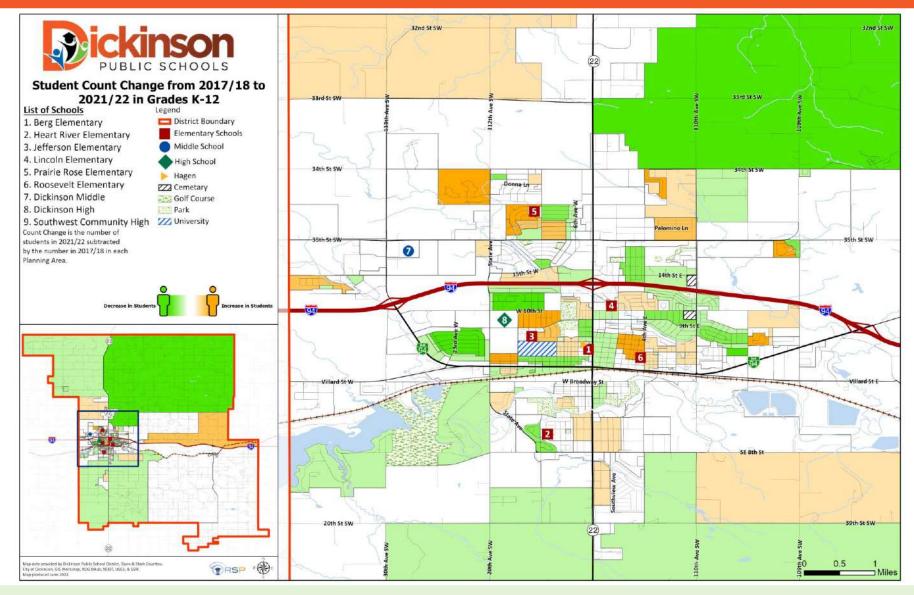
Observations

o 2019/20 lost 364 students and gained 432 students; NET: +68

o 2020/21 lost 673 students and gained 312 students; NET: -361

o 2021/22 lost 394 students and gained 373 students; NET: -21
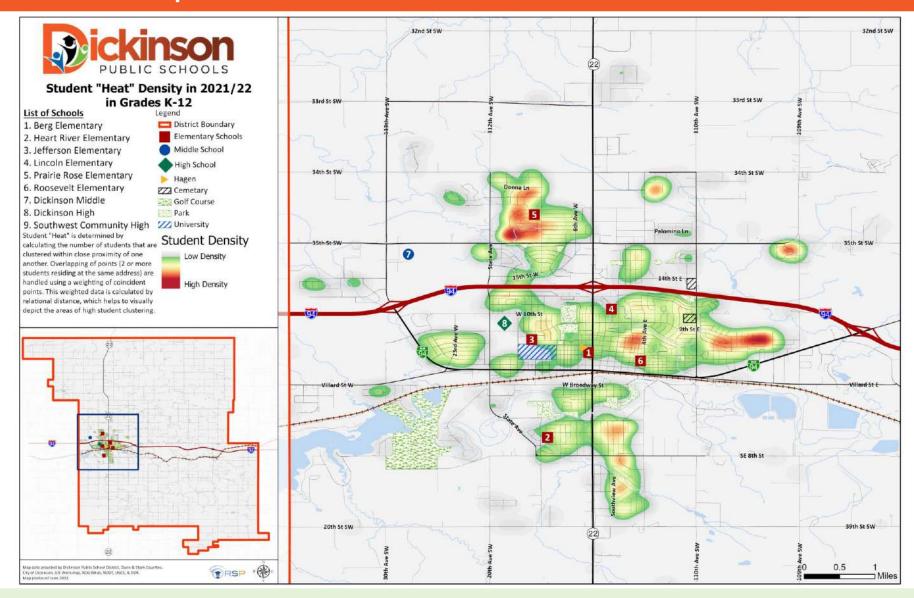
Main Takeaway:
The district had a negative net gain of transfer students for the past two school years – 2020/21 saw a district loss of 650 students contributing to the district decrease that year.

Student Count Change Map

Main Takeaway: map shows whether planning areas have increased or decreased in student count in the past five years. Areas of increase (orange) are located near downtown.

Heat Map

Student "Heat" Density in 2021/22 in Grades K-12

List of Schools
1. Berg Elementary
2. Heart River Elementary
3. Jefferson Elementary
4. Lincoln Elementary
5. Prairie Rose Elementary
6. Roosevelt Elementary
7. Dickinson Middle
8. Dickinson High
9. Southwest Community High

Legend
- District Boundary
- Elementary Schools
- Middle School
- High School
- Hagen
- Cemetary
- Golf Course
- Park
- University

Student "Heat" is determined by calculating the number of students that are clustered within close proximity of one another. Overlapping of points (2 or more students residing at the same address) are handled using a weighting of coincident points. This weighted data is calculated by relational distance, which helps to visually depict the areas of high student clustering.

Student Density
- Low Density
- High Density

Main Takeaway: map shows location of students in proximity to other students – the closer more students live together, the hotter the density. Areas of hottest student density are south and west of Prairie Rose Elementary and east of 110th Street in the City of Dickinson.
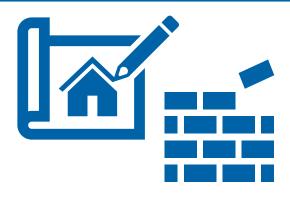
Enrollment Observations and Conclusions

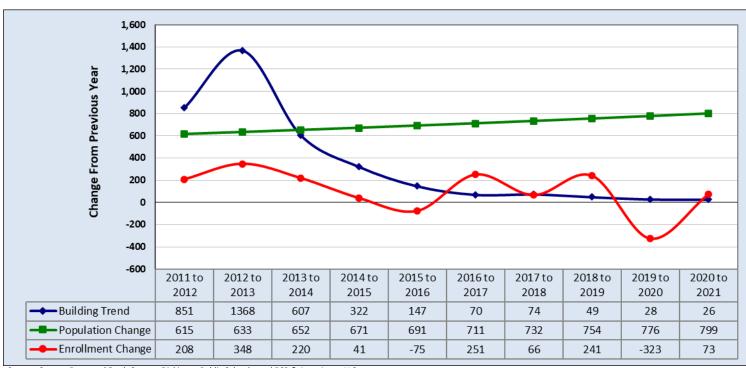**The following are some general enrollment observations:**

o RSP & Associates monitors almost 300 planning areas for demographic, development, and enrollment data sets

o Live births in Stark County have been increasing steadily with the past two years above 550 county live births *– indicator of student growth*

o District enrollment increased by 137 students from last year *– indicator of student loss*
   - Pandemic cohort recovery was limited
   - 2019/20 to 2020/21 saw a loss of almost 350 students district-wide
   - 2021/22 enrollment is now similar to 2018/19

o Graduating senior classes are smaller than incoming kindergarten classes *– indicator of student growth*
   - Kindergarten class is larger than the rest of the elementary class sizes this year

o District historically has had a negative migration trend for the past two years *– indicator of student loss*
   - Net loss of over 300 students last year

o Greatest student density is near Prairie Rose Elementary School

Part Two: Development and Growth Trends

Population, Development, & Enrollment

	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015	2015 to 2016	2016 to 2017	2017 to 2018	2018 to 2019	2019 to 2020	2020 to 2021
Building Trend	851	1368	607	322	147	70	74	49	28	26
Population Change	615	633	652	671	691	711	732	754	776	799
Enrollment Change	208	348	220	41	-75	251	66	241	-323	73

Source: Census, Dunn and Stark County, Dickinson Public Schools, and RSP & Associates, LLC

Benchmark data to determine if there is a correlation between:

- Population change
- Building activity
- School enrollment

Observations

o Graphic tracks the relationship between three main indicators of change: **population, occupancy of new units, and enrollment**

o **GREEN LINE:** population has been steadily increasing (reported by the census yearly)

o **BLUE LINE:** occupancy of new units has been decreasing

o **RED LINE:** student enrollment has fluctuated throughout the years – a large drop in student enrollment in 2019/20 (likely due to COVID-19 pandemic)

Student Yield Rate by Elementary School

Single-Family Yield Rate	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Avg
Berg Elementary School	10	9	9	9	10	11	10	11	12	10	10	10
Heart River Elementary School	14	14	17	18	18	19	20	23	22	21	21	19
Jefferson Elementary School	19	19	20	19	19	18	17	18	18	17	17	18
Lincoln Elementary School	18	18	19	20	22	21	21	20	22	20	21	20
Prairie Rose Elementary School	20	20	23	22	20	21	23	23	23	21	24	22
Roosevelt Elementary School	12	13	14	15	15	16	16	16	18	13	17	15
District (K-5):	16	16	17	17	18	18	18	18	19	17	18	17

General Notes:
- Adding new housing inventory can increase the yield rate
- **There were 1,219 single-family homes built from 2012 to 2021**
- **There was 2,323 multi-family homes built from 2012 to 2021**

Single-Family Yield Rate Observations
- Table shows the number of K to 5th grade students per 100 single-family (SF) units by year and elementary school boundary
- District sees on average 17 K to 5th grade students per 100 single-family households
- Prairie Rose Elementary has the largest 2021 SF yield rate with 24 students per 100 single-family households – this school is consistently higher than the district average
- Berg Elementary has the smallest 2021 SF Yield rate with 10 students per 100 single-family households – this school is consistently lower than the district average

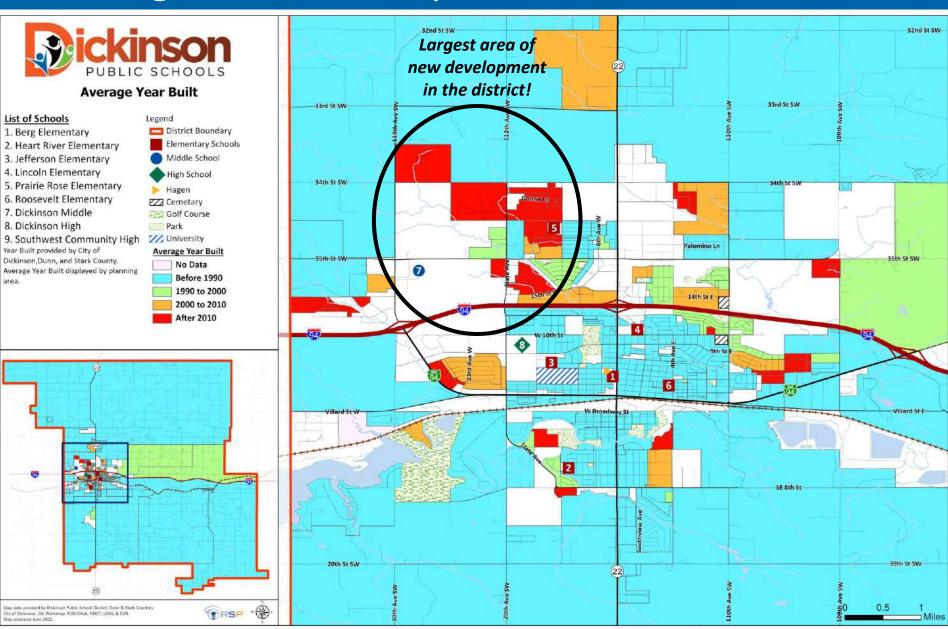| Multi-Family Yield Rate	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Avg
Berg Elementary School	6	6	9	7	7	8	8	8	9	6	7	7
Heart River Elementary School	9	10	12	13	12	12	13	13	14	12	14	12
Jefferson Elementary School	6	7	4	4	6	5	7	8	10	5	7	6
Lincoln Elementary School	8	7	6	8	8	9	15	16	16	16	16	11
Prairie Rose Elementary School	6	5	6	7	6	7	9	8	10	8	9	7
Roosevelt Elementary School	8	8	9	10	11	10	10	13	13	12	14	11
District (K-5):	7	7	7	8	8	8	10	10	11	9	10	9

Table Legend (Single-Family & Multi-Family)
- Greater than 3 from District Average
- Less than 3 from District Average
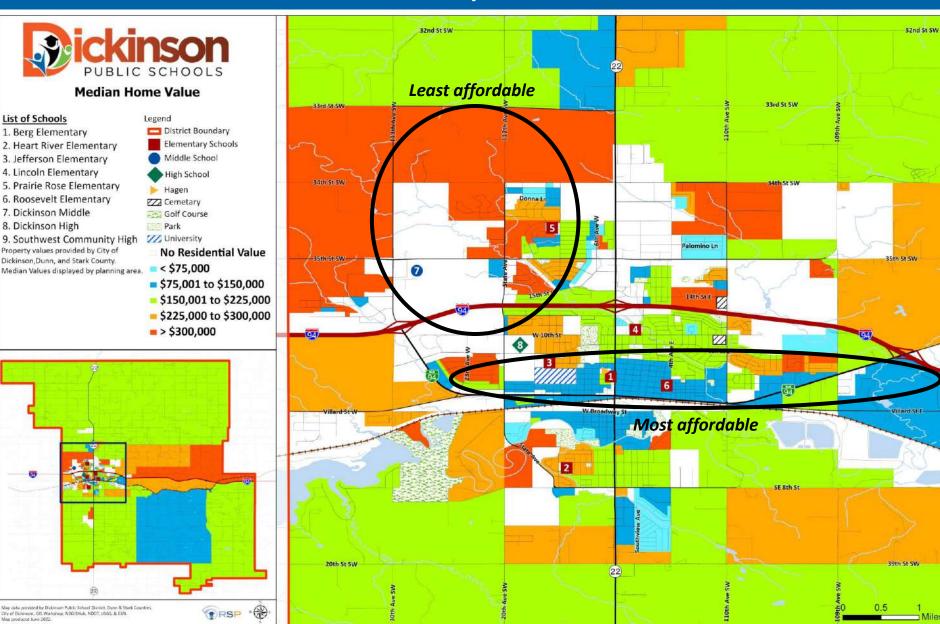
Multi-Family Yield Rate Observations
- Table shows the number of K to 5th grade students per 100 multi-family (MF) units by year and if by elementary school boundary
- District sees on average 9 K to 5th grade students per 100 multi-family households
- Lincoln Elementary has the largest 2021 MF yield rate with 16 students per 100 multi-family households – this yield rate for this boundary increased after 2016 due to the Villas at Sun Dance Cove and other townhome developments coming online
- Berg and Jefferson Elementary have the smallest 2021 MF yield rate with 7 students per 100 multi-family households
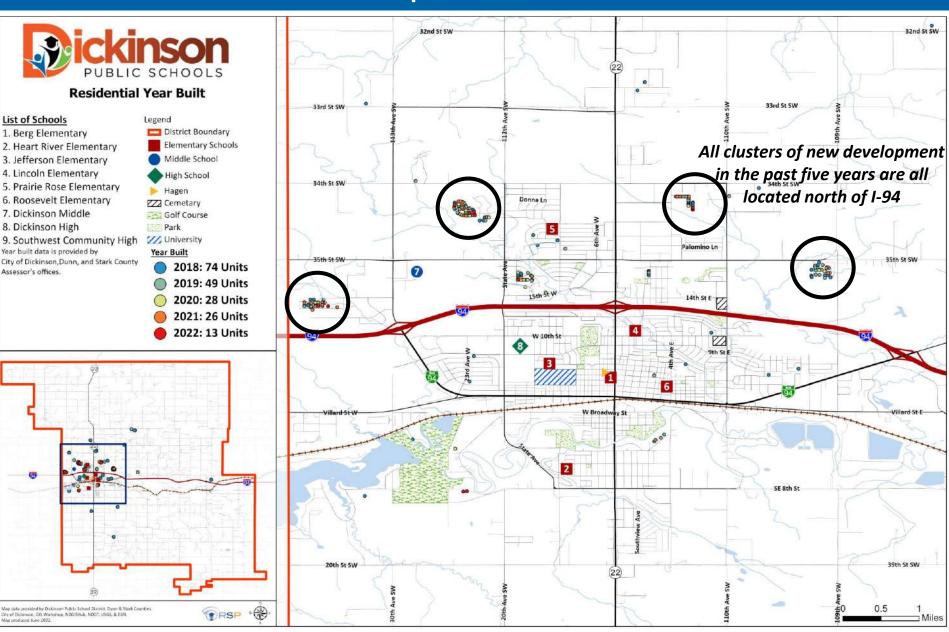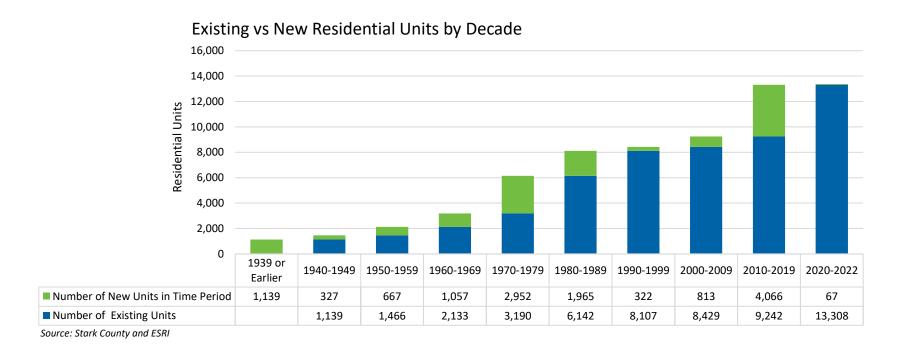
All past student data is exported from the district student database allowing the ability to do robust statistical analysis by student geography The student database export will not always align perfectly with the Official Counts (Statistically 99% greater match by grade)

Average Year Built Map

Largest area of new development in the district!

Median Home Value Map

Recent Year Built Map

Development Activity Over Time

Existing vs New Residential Units by Decade

	1939 or Earlier	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	2010-2019	2020-2022
■ Number of New Units in Time Period	1,139	327	667	1,057	2,952	1,965	322	813	4,066	67
■ Number of Existing Units		1,139	1,466	2,133	3,190	6,142	8,107	8,429	9,242	13,308

Source: Stark County and ESRI

Observations:

o Table has been created to illustrate the number of units by year built in reference to the number of existing units

o The average number of units built per year from 2010 to 2019 (407 per year) is higher than from 2000 to 2009 (81 per year)

o The decade with the most units built was 2010 to 2019 – 30% of total units in the district

o The average year for all units built was 1968 while the median year built is 1978

Future Land Use Map

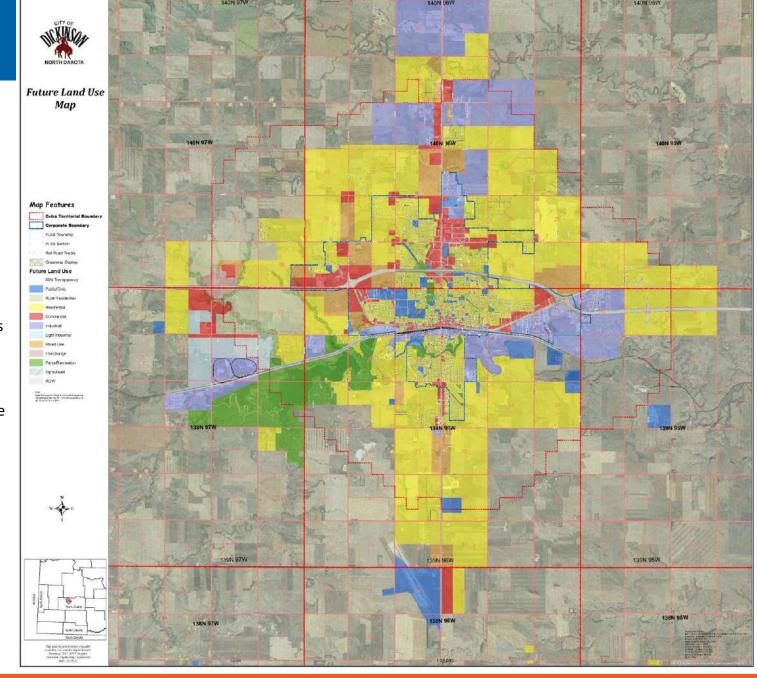## Map Details

- **Yellow:** Residential
- **Purple**: Industrial
- **Red:** Commercial
- **Green:** Parks and Recreation

Observations:

- Growth to the southeast is limited and must extend past the industrial growth
- Most of the connected residential growth is to the north

Source: City of Dickinson
https://dickinsongov.com/

Dickinson PUBLIC SCHOOLS

Growth Areas

Map Details: Growth areas are created from existing land use, future land use, capital improvement plan, zoning, and city staff input

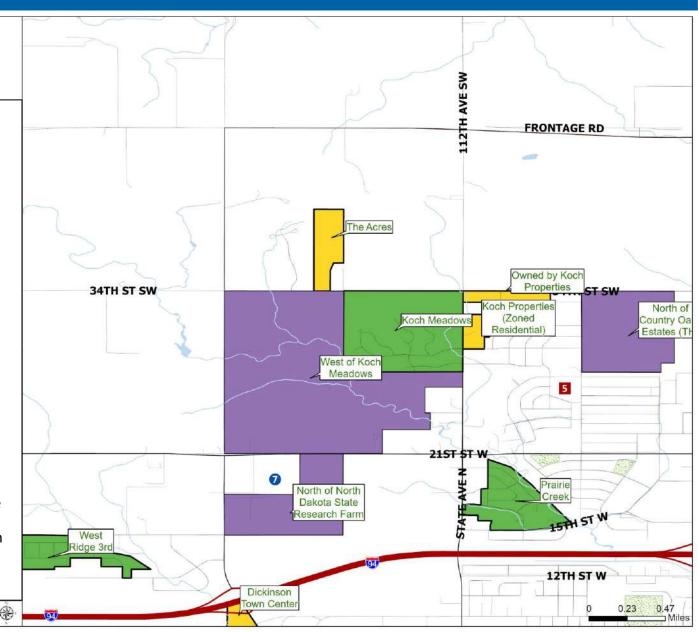**Green:** Identifies where development activity is happening

Yellow: Identifies possible areas that could develop within a 5-year rage

Purple: Identifies possible areas that could develop within a 10-year range

Notes

o The market demand and property owners desire to build guides the timing and type of development

o Some growth areas may require infrastructure improvements

o There is no guarantee any of these growth areas will develop or that other areas not shown as a growth area will develop

Map data provided by Dickinson Public School District, Dunn & Stark Counties.
City of Dickinson, GIS Workshop, NDGISHub, NDDOT, USGS, & ESRI.
Map produced June 2022.

RSP

Map labels: 33RD ST SW, 110TH AVE SW, 34TH ST SW, 40TH ST E, Lyons Ave, Proffutt Limited Partners, Broken X Estates, 25TH AVE, South of Roshau Sub, 21ST ST E, Diamond Acres West, Diamond Acres East, East of North Ridge Estates, Sundance Cove, 10TH AVE E, 14TH ST E, MUSEUM DR E, 10TH ST E, North of North Washington's 4th, North of 22nd Ave E, 94

0   0.23   0.47   Miles

Growth Areas

Map Details: Growth areas are created from existing land use, future land use, capital improvement plan, zoning, and city staff input

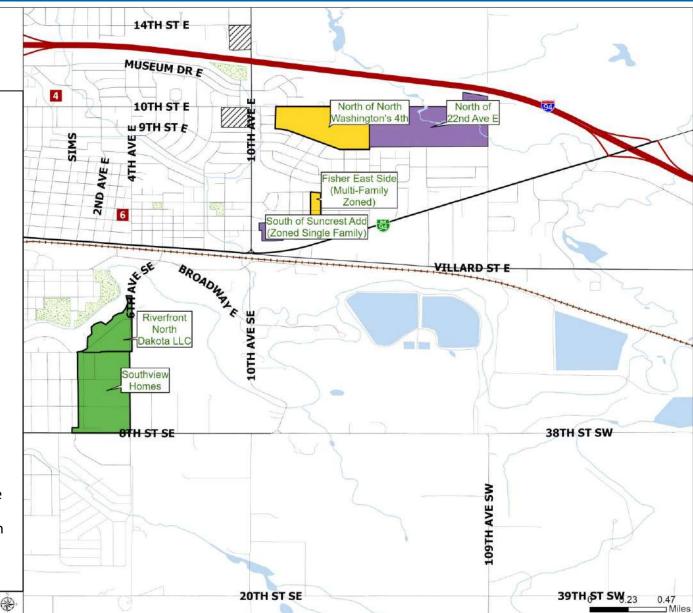**Green:** Identifies where development activity is happening

Yellow: Identifies possible areas that could develop within a 5-year rage

Purple: Identifies possible areas that could develop within a 10-year range

Notes

o The market demand and property owners desire to build guides the timing and type of development

o Some growth areas may require infrastructure improvements

o There is no guarantee any of these growth areas will develop or that other areas not shown as a growth area will develop

Dickinson PUBLIC SCHOOLS

Growth Areas

Map Details: Growth areas are created from existing land use, future land use, capital improvement plan, zoning, and city staff input

Green: Identifies where development activity is happening

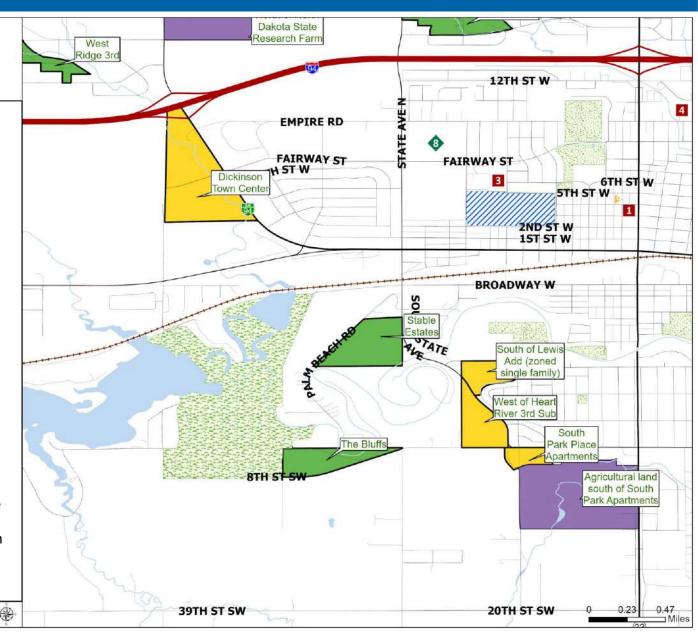**Yellow:** Identifies possible areas that could develop within a 5-year rage

Purple: Identifies possible areas that could develop within a 10-year range

Notes

- The market demand and property owners desire to build guides the timing and type of development

- Some growth areas may require infrastructure improvements

- There is no guarantee any of these growth areas will develop or that other areas not shown as a growth area will develop

Map labels on map:
- 14TH ST E
- MUSEUM DR E
- 10TH ST E
- 9TH ST E
- SIMS
- 2ND AVE E
- 4TH AVE E
- 10TH AVE E
- North of North Washington's 4th
- North of 22nd Ave E
- Fisher East Side (Multi-Family Zoned)
- South of Suncrest Add (Zoned Single Family)
- VILLARD ST E
- 6TH AVE SE
- BROADWAY E
- 10TH AVE SE
- Riverfront North Dakota LLC
- Southview Homes
- 8TH ST SE
- 38TH ST SW
- 109TH AVE SW
- 20TH ST SE
- 39TH ST SW
- 0.23 0.47 Miles

Map data provided by Dickinson Public School District, Dunn & Stark Counties. City of Dickinson, GIS Workshop, NDGISHub, NDOT, USGS, & ESRI. Map produced June 2022.

RSP

Potential Growth Areas – *Southwest*

Map Details: Growth areas are created from existing land use, future land use, capital improvement plan, zoning, and city staff input

Green: Identifies where development activity is happening

Yellow: Identifies possible areas that could develop within a 5-year rage

Purple: Identifies possible areas that could develop within a 10-year range

Notes

o The market demand and property owners desire to build guides the timing and type of development

o Some growth areas may require infrastructure improvements

o There is no guarantee any of these growth areas will develop or that other areas not shown as a growth area will develop

Development Table

Definition

o Table has been created to illustrate the type and amount of potential development

o Type is the potential residential units that will be built

o The speed in which any developments are built are influenced by who owns the property, access to infrastructure, and economic indicators

Main Takeaway

o Almost 700 potential units within current development stages

o Over 1,000 potential units forecasted for a 5-year development timeline

o Over 1,600 potential units forecasted for a 10-year development timeline

o 3,429 total potential units identified in this study

Largest current development projects:

o Southview Homes (Heart River Elementary Boundary)

o Diamond Acres (Lincoln Elementary Boundary)

o Koch Meadow (Jefferson Elementary Boundary)

RSP Plan Area Name	Type	Growth Area	Existing Units	Potential Units	Elementary
Riverfront North Dakota LLC	SF	Current	6	22	Berg
Southview Homes	SF	Current	69	200	Heart River
Stable Estates	Rural	Current	1	28	Jefferson
The Bluffs	Rural	Current	2	13	Jefferson
Koch Meadows	SF	Current	48	101	Jefferson
West Ridge 3rd	SF	Current	42	73	Jefferson
Diamond Acres East	SF	Current	0	130	Lincoln
Diamond Acres West	SF	Current	12	21	Lincoln
Sundance Cove	SF	Current	69	35	Lincoln
Lyons Ave	SF	Current	44	8	Prairie Rose
Prairie Creek	SF	Current	65	66	Prairie Rose
South Park Place Apartments	MF	5 Year	96	96	Berg
West of Heart River 3rd Sub	PUD	5 Year	0	50	Berg
South of Lewis Add (zoned single family)	SF	5 Year	0	50	Heart River
Dickinson Town Center	PUD	5 Year	0	200	Jefferson
The Acres	SF	5 Year	0	26	Jefferson
North of North Washington's 4th	SF	5 Year	0	115	Lincoln
Broken X Estates	AG	5 Year	0	48	Prairie Rose
Owned by Koch Properties	CM	5 Year	0	38	Prairie Rose
South of Roshau Sub	Rural	5 Year	5	381	Prairie Rose
Koch Properties (Zoned Residential)	SF	5 Year	0	37	Prairie Rose
Fisher East Side (Multi-Family Zoned)	MF	5 Year	0	11	Roosevelt
Ag. land south of South Park Apartments	Rural	10 Year	1	235	Berg
North of North Dakota State Research Farm	AG	10 Year	0	255	Jefferson
West of Koch Meadows	AG	10 Year	0	500	Jefferson
East of North Ridge Estates	AG	10 Year	0	250	Lincoln
North of 22nd Ave E	Rural	10 Year	29	90	Lincoln
North of Country Oaks Estates (TH)	AG	10 Year	0	285	Prairie Rose
Proffutt Limited Partners	SF	10 Year	0	35	Prairie Rose
South of Suncrest Add (Zoned SF)	SF	10 Year	0	30	Roosevelt
Current Total			358	697	
5 Year Total			101	1,052	
10 Year Total			30	1,680	
All Total			489	3,429	

Source: City of Dickinson and Stark County

Key

SF = Single-Family   Rural = Rural   PUD = Planned Unit
AG = Agriculture   MF = Multi-Family   CM = Commercial

30

30

Development Observations and Conclusions

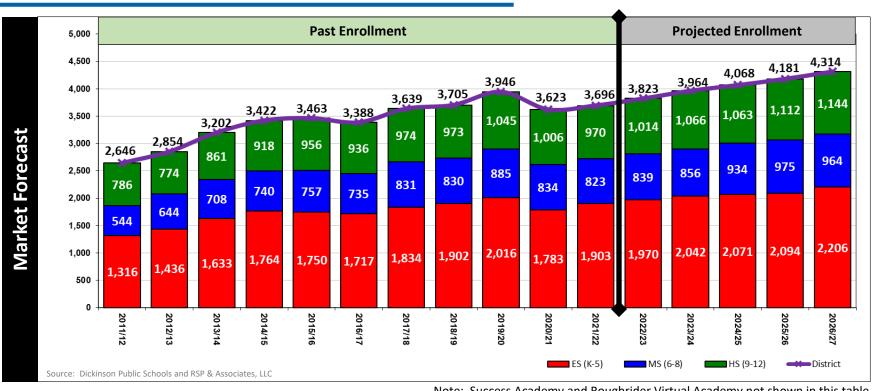**The following are some general development observations:**

o Over 3,400 units identified for potential development within the next 10+ years *– indicator of student growth*

o Single-family residential has the highest propensity to have school aged students, yield rates of this development type are higher than that of multi-family
- Single-family units are being developed at a higher rate than multi-family – 2021 saw 26 single-family units built and no multi-family units
- Tracking 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

o Building activity has been decreasing the past couple of years (only 21 units built in 2021) *– indicator of student loss*
- Opportunities of residential growth still exist – however the speed of the activity is forecasted to continue decreasing
- Monitor local factors that may affect development timing and economic outlook to gauge how the new decade of residential growth will play out

o Growth areas are mostly located north of I-94 – the northwest corridor will continue to have the most potential for future growth

o Residential development will continue if the housing product is affordable and have active residential projects – infrastructure connectivity also plays a role in the desirability and timing of residential development

o As of February 2022, construction costs have increased over 100% from August 2020 and supply chain challenges impact the potential of new development and where new developments will occur in the district

Part Three: Enrollment Projections

Past, Current, & Future Enrollment

Source: Dickinson Public Schools and RSP & Associates, LLC

Note: Success Academy and Roughrider Virtual Academy not shown in this table

Observations: Graphic is a visual of a grade configuration being K-5, 6-8, 9-12

o **District increases by over 600 students (+16.7%)**

o **Elementary School increases by over 300 students (+15.9%)**

o **Middle School increases by about 150 students (+17.1%)**

o **High School increases by over 175 students (+17.9%)**

Projection Notes & Clarifications

Projections Clarification:

o 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)

o **Projections are shown two 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 - includes Open Enrollment)

o **Capacity**

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

o **Other Items**
- Enrollment Grade Configuration in Student Forecast Model (K-5, 6-8, 9-12)
- Open enrollment trends are assumed to follow district policy and will continue like those trends during the projection time frame
- Students enrolled in the Success Academy or Roughrider Virtual Academy not included in projections

Building Level Projections

Market Forecast

School	Student Location	Past Enrollment			Projected Enrollment				
		2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Berg Elementary	Res/Att	237	166	182					
Capacity 270	Reside	246	185	192	210	229	220	236	261
Grades K-5	Attend	248	217	204	227	246	237	253	278
Heart River Elementary	Res/Att	258	221	245					
Capacity 270	Reside	267	251	262	269	268	271	263	270
Grades K-5	Attend	269	260	258	270	269	272	264	271
Jefferson Elementary	Res/Att	391	300	342					
Capacity 405	Reside	412	353	369	384	408	430	441	479
Grades K-5	Attend	405	335	356	370	394	416	427	465
Lincoln Elementary	Res/Att	368	320	344					
Capacity 405	Reside	382	357	365	375	387	395	392	417
Grades K-5	Attend	385	370	362	378	390	398	395	420
Prairie Rose Elementary	Res/Att	431	351	428					
Capacity 540	Reside	450	411	450	470	485	492	496	511
Grades K-5	Attend	458	395	461	472	487	494	498	513
Roosevelt Elementary	Res/Att	244	185	246					
Capacity 270	Reside	259	226	265	262	265	263	266	268
Grades K-5	Attend	251	206	262	253	256	254	257	259
Dickinson Middle School	Res/Att	885	834	823					
Capacity 1,050	Reside	885	834	823	839	856	934	975	964
Grade 6-8	Attend	885	834	823	839	856	934	975	964
Dickinson High School	Res/Att	1,009	963	929					
Capacity 1,100	Reside	1,045	1,006	970	1,014	1,066	1,063	1,112	1,144
Grades 9-12	Attend	1,009	963	929	1,014	1,024	1,021	1,070	1,102
Southwest Community High School	Res/Att	0	0	0					
Capacity 0	Reside	0	0	0	0	0	0	0	0
Grades 10-12	Attend	36	43	41	0	42	42	42	42
ELEMENTARY TOTAL	Res/Att	1,929	1,543	1,787					
Capacity 2,160	Reside	2,016	1,783	1,903	1,970	2,042	2,071	2,094	2,206
Grades K-5	Attend	2,016	1,783	1,903	1,970	2,042	2,071	2,094	2,206
MIDDLE SCHOOL TOTAL	Res/Att	885	834	823					
Capacity 1,050	Reside	885	834	823	839	856	934	975	964
Grades 6-8	Attend	885	834	823	839	856	934	975	964
HIGH TOTAL	Res/Att	1,009	963	929					
Capacity 1,100	Reside	1,045	1,006	970	1,014	1,066	1,063	1,112	1,144
Grades 9-12	Attend	1,045	1,006	970	1,014	1,066	1,063	1,112	1,144
DISTRICT K-12 TOTALS	Res/Att	3,823	3,340	3,539					
Capacity 4,310	Reside	3,946	3,623	3,696	3,823	3,964	4,068	4,181	4,314
Grades K-12	Attend	3,946	3,623	3,696	3,823	3,964	4,068	4,181	4,314

Source: RSP & Associates, LLC - June 2022

◯ Exceed Building Capacity

Observations:

o The pandemic had dramatic impact on the number of students the district served

o There has been an enrollment recovery, but enrollment has not returned to pre-pandemic levels

o Berg Elementary exceeds capacity by 2026/27 (Attend)

o Heart River Elementary exceeds capacity in several years (Reside and Attend)

o Jefferson Elementary exceeds capacity in most years (Reside and Attend)

o Lincoln Elementary exceed capacity in 2026/27 (Reside and Attend)

o Dickinson High School exceeds capacity by 2025/26 (Reside and Attend)

Main Takeaway: More Elementary and High School capacity needed by 2025/26 – finalized decision needed by 2023/24

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 Counts (Statistically 99% greater match by grade)

By Grade Projections

Enrollment By Grade

Year	K	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	Total	Change
2011/12	233	219	243	198	204	219	179	196	169	174	210	183	219	2,646	2,646
2012/13	264	246	238	259	199	230	234	197	213	185	186	219	184	2,854	208
2013/14	293	283	277	269	285	226	244	251	213	226	207	206	222	3,202	348
2014/15	336	297	287	294	266	284	245	239	256	234	246	225	213	3,422	220
2015/16	311	312	305	281	285	256	282	239	236	259	248	241	208	3,463	41
2016/17	321	267	306	282	264	277	247	258	230	238	258	207	233	3,388	-75
2017/18	357	324	269	329	289	266	294	258	279	244	255	258	217	3,639	251
2018/19	374	344	311	271	316	286	286	283	261	275	245	234	219	3,705	66
2019/20	413	360	334	318	278	313	310	286	289	271	290	240	244	3,946	241
2020/21	288	339	320	288	291	257	301	286	247	278	256	252	220	3,623	-323
2021/22	379	289	329	317	298	291	256	289	278	256	261	232	221	3,696	73
2022/23	377	367	282	328	318	298	299	253	287	289	254	247	224	3,823	127
2023/24	384	365	360	282	331	320	309	295	252	299	286	241	240	3,964	141
2024/25	370	371	357	358	284	331	335	306	293	261	296	272	234	4,068	104
2025/26	367	358	365	358	362	284	340	331	304	306	260	282	264	4,181	113
2026/27	401	358	353	367	363	364	294	339	331	318	303	248	275	4,314	133

Market Forecast (vertical label at left)

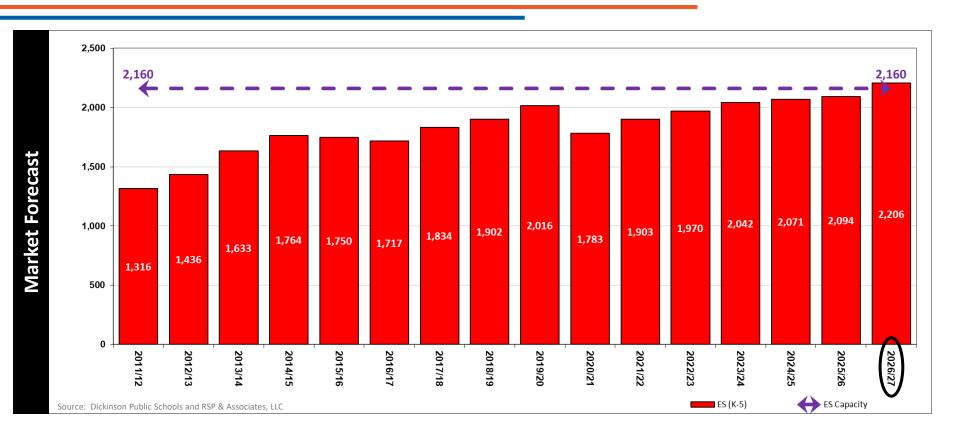Source: Dickinson Public Schools Student Data from 2011/12 to 2021/22 (No Roughrider Virtual Academy Students)

Understanding the Projections:

o Evaluate how grade levels have increased year to year historically by diagonally tracking the boxes downward (see red arrow)

o Values in BLUE BOX represent the projections by grade level (2022/23 to 2026/27)

Projection Observations: most grade levels expected to increase year to year for the next five years

o Most grades are forecasted to be above 300 students by 2026/27

o Annually review the number of projected kindergarteners and compare with kindergarten round up to monitor how projections are tracking year to year
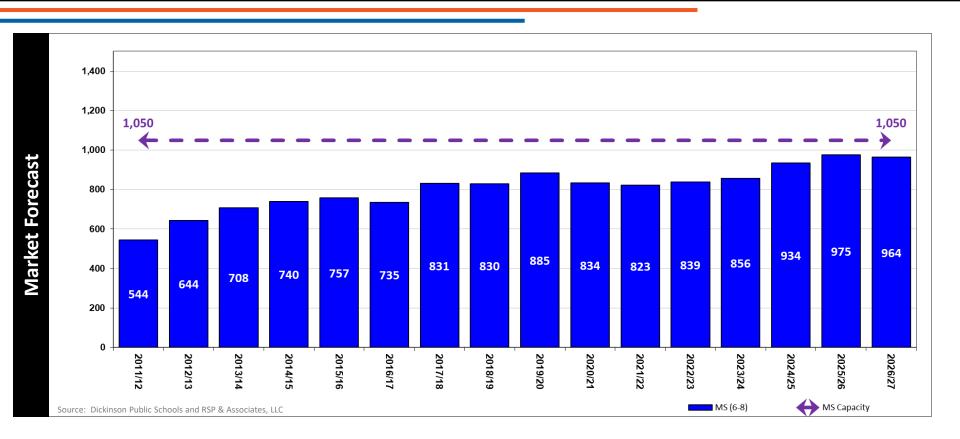
Elementary Enrollment & Capacity

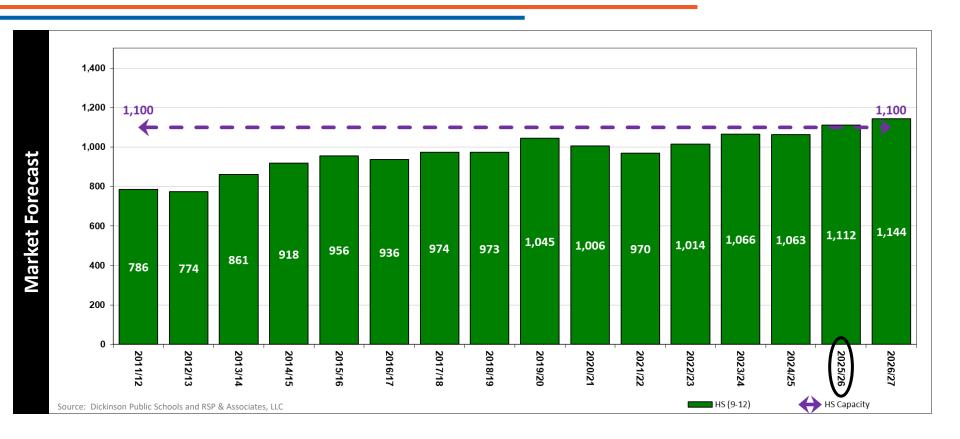

Source: Dickinson Public Schools and RSP & Associates, LLC

Observations:

- This graphic helps to ensure the enrollment and capacity conversation addresses all current and future programming needs

- The district-wide capacity for elementary schools will have challenges by 2026/27 (five years later than originally forecasted)

- There will be capacity challenges at individual schools and the educational programming changes may impact how space can be best utilized for students

Middle School Enrollment & Capacity

Source: Dickinson Public Schools and RSP & Associates, LLC

Observations:
- This graphic helps to ensure the enrollment and capacity conversation addresses all current and future programming needs
- The district-wide capacity for middle school will have challenges but will be under total capacity of 1,050
- Depending on the solution chosen, the district will likely need between 3 to 5 years to include decision making, planning, and implementation of a solution that will positively impact the student learning environment
- Solutions include grade configuration, ideal school size, additions, and/or new middle school building

High School Enrollment & Capacity

Source: Dickinson Public Schools and RSP & Associates, LLC

Observations:
- This graphic helps to ensure the enrollment and capacity conversation addresses all current and future programming needs
- The district-wide capacity for high school will have challenges by 2025/26 (five-years later than originally forecasted)
- Depending on the solution chosen, the district will likely need between 3 to 5 years to include decision making, planning, and implementation of a solution that will positively impact the student learning environment
- Solutions include grade configuration, ideal school size, additions, and/or new high school building

Projection Observations & Conclusions

Enrollment at all levels is expected to increase:

1. District-wide enrollment to increase by 618 students in five years totaling 4,314

2. Elementary School enrollment to increase by 303 students in five years to total 2,206

3. Middle School enrollment to increase by 141 students in five years to total 964

4. High School enrollment to increase by over 174 students in five years to total 1,144

Potential/Future Challenges:

- Roughrider Virtual Academy may affect future enrollment
- Future potential for other pandemics
- Unforeseen economic indicators

Notes:
- There are more students residing in the district that are not part of the forecast – the forecast is the likely school district enrollment of students physically attending each school or enrolled in the Virtual school
- Enrollment changes from day to day – the enrollment forecast is based on the enrollment from the 1st quarter of each school year

Driving forces of enrollment increase:

2021/22 student population

Indicators:
- *Ability for grades be 300 or greater*
- *Larger kindergarten classes than senior classes*

Development Activity

Indicators:
- *Increasing yield rates for students per unit*
- *2020 to 2022 building trends reversing*
- *Potential new developments*

Migration Trends

Indicators:
- *Live Birth trends*
- *Positive student migration (potential)*
- *Cohort growth year to year (COVID Recovery)*
- *Increasing number of out of district students*

Economic Trends

Indicators:
- *Price for barrel of oil*
- *Type of economy*
- *Potential for population increase*

Part Four: Next Steps

Conclusion & Key Considerations

Projected Enrollment

o   District to increase over the next five years: **total about 4,300 students**

o   Elementary School to increase over the next five years: **total to about 2,220 students**

o   Middle School to increase over the next five years: **total about 960 students**

o   High School to increase over the next five years: **total about 1,100 students**

Main Takeaway: District enrollment is forecasted to increase for the next five years. This increase has been delayed about five years from pre-pandemic projections.

Continue monitoring:

1.   Development trends; future developing areas to the east contingent on infrastructure expansion, building costs/developer interest, and demand for future housing (job/population growth)
2.   Size of incoming kindergarten classes (larger) versus size of outgoing senior classes (smaller)
3.   Number of live birth reported year to year (stable to increasing)
4.   Kindergarten and PK roundup (data to determine how close the potential students match up to the projection)
5.   The Southwest CTE Academy effects on enrollment and on the community
6.   Trends in the oil industry, Bakken Shale, and how this may impact employment and development

RSP Enrollment forecasting is based on the best-known information at the time of the study.
Each of the items listed in monitoring must be watched to ensure the best decisions are made for the student academic experience

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.

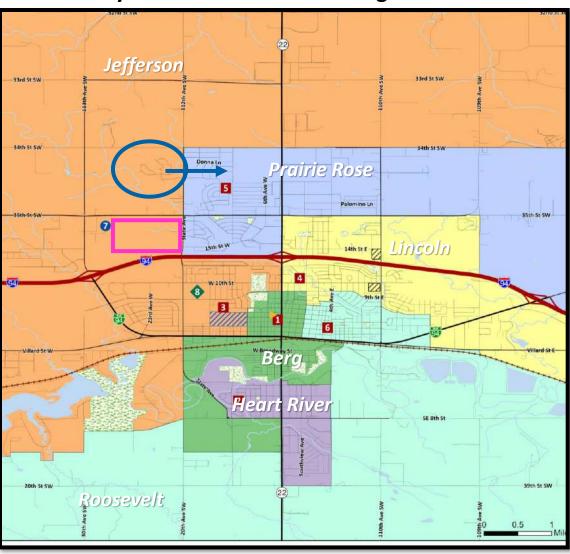# Next Steps – *discussion items*

Goal: Address capacity challenges at elementary schools and Dickinson High School

Elementary solutions:

1. Build an addition
   - Increase Heart River capacity
   - Requires boundary adjustment after addition is complete *(delayed fix)*
   - Relieves other elementary schools in south

2. New Elementary School
   - Built on vacant district property east of the Middle School, see area in pink square
   - Requires boundary adjustment after school is complete *(delayed fix)*
   - Relieves all elementary school capacity challenges

3. Immediate boundary adjustment
   - Consider moving neighborhood directly west of Prairie Rose to Prairie Rose *(immediate fix),* see area in **blue circle**
   - Relieves capacity challenges at Jefferson Elementary

4. Comprehensive boundary adjustment
   - Complete boundary analysis (could include committee, public input, detailed process)
   - Could provide immediate relief to schools, but would still run out of capacity by 2026/27

High School solutions:

1. Addition/Remodel at the current High School

2. New High School

Appendix

Enrollment & Demographics

Development

Note: Presentation slide heading color in the appendix matches the section in which the information corresponds

Demographics Summary

Population
Percent Change of Annual Rate

2000 to 2010: 0.92%
2010 to 2021: 2.96%
2021 to 2025: 2.37%

Housing
Percent Change of Annual Rate of Housing Inventory

2000 to 2010: 1.14%
2010 to 2021: 3.48%
2021 to 2025: 2.44%

Income
Percent Change of Income per Capita
2021: $42,697
2025: $45,712
2021 to 2025: 1.37%

Workforce
Unemployment Rate

7.6% as of July 2021

Observations:
- The population has been increasing the past two decades and is forecasted to continue increasing, but at a slower rate than the previous decade
- The housing inventory increased at the highest rate from 2010 to 2021 and is forecasted to continue increasing, but at a slower rate
- Income has increased in the district and is forecasted to increase at a 1.37% for the next five years
- The unemployment rate is higher than the State of North Dakota (4.2% as of July 2021)

Demographics

	Dickinson Public Schools	Mandan Public Schools	City of Dickinson	Dunn County	Stark County	State of North Dakota
Unemployment Rate	7.6%	3.3%	8.2%	5.2%	7.5%	4.1%
Average Household Size	2.26	2.36	2.22	2.41	2.27	2.29
Median Age	38.9	39.7	38.3	46.6	39.5	38.5
Total Population	28,826	28,539	24,971	4,434	32,816	783,161
Median Household Income	$67,528	$66,266	$65,996	$77,717	$68,039	$63,433
Total Housing Units	13,255	12,544	11,564	2,590	15,173	379,256
Owner Occupied Housing	7,712	8,266	6,534	1,335	9,014	207,913
Renter Occupied Housing	4,828	3,575	4,469	454	5,194	123,931
Vacancy Rate	5.4%	5.6%	4.9%	30.9%	6.4%	12.5%

	Dickinson Public Schools	Mandan Public Schools	City of Dickinson	Dunn County	Stark County	State of North Dakota
White	91.3%	91.3%	90.8%	88.7%	91.8%	84.2%
Black	0.9%	0.6%	1.0%	0.3%	0.8%	3.0%
American Indian/Alaskan	1.6%	3.7%	1.8%	8.3%	1.5%	5.2%
Asian	1.5%	0.5%	1.7%	0.3%	1.5%	1.6%
Pacific Islander	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%
Other Race	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%
Two or More Races	1.9%	1.9%	1.9%	1.3%	1.8%	2.1%
Hispanic	2.7%	1.9%	2.8%	1.2%	2.5%	3.9%

Source: U.S. Census, ESRI BAO

Notes:

o Vacancy Rate is lowest in the Dickinson Public Schools except for City of Dickinson when compared to the other geographies

o The Unemployment Rate is the higher than the State of North Dakota (estimates from July 2021 from the US Census)

o Vacancy Rate is 43.2% lower in Dickinson Public Schools when compared to the State of North Dakota

o Average Household Size is lowest in Dickinson Public Schools except for City of Dickinson when compared to the other geographies

Employment Information

Employment	Dickinson Public Schools	Mandan Public Schools	City of Dickinson	Dunn County	Stark County	State of North Dakota
2021 Agriculture/Mining (SIC01-14) Employees	10.3%	1.1%	2.6%	27.4%	10.0%	3.9%
2021 Construction (SIC15-17) Employees	8.0%	7.1%	5.7%	6.2%	8.6%	5.4%
2021 Manufacturing (SIC20-39) Employees	10.4%	8.0%	9.8%	7.6%	9.8%	5.7%
2021 Transportation (SIC40-47) Employees	2.6%	2.8%	2.0%	7.6%	2.8%	3.5%
2021 Communication (SIC48) Employees	0.5%	1.3%	0.5%	0.0%	0.4%	1.1%
2021 Utility (SIC49) Employees	0.8%	0.8%	0.9%	2.5%	0.9%	0.9%
2021 Wholesale Trade (SIC50-51) Employees	6.6%	3.0%	3.9%	2.7%	7.0%	5.3%
2021 Home Improvement (SIC52) Employees	1.3%	1.1%	1.8%	1.1%	1.4%	1.6%
2021 General Merchandise (SIC53) Employees	1.7%	3.3%	2.3%	0.3%	1.7%	1.6%
2021 Food Stores (SIC54) Employees	1.6%	1.1%	2.2%	1.4%	1.6%	1.9%
2021 Auto Dealer/Gas Station (SIC55) Employees	2.7%	5.8%	3.3%	2.4%	2.8%	2.8%
2021 Apparel/Accessory (SIC56) Employees	0.4%	0.1%	0.6%	0.4%	0.4%	0.6%
2021 Furniture/Home Furnishings (SIC57) Employees	0.7%	0.4%	0.8%	0.1%	0.7%	1.3%
2021 Eating & Drinking (SIC58) Employees	6.1%	7.5%	8.2%	4.2%	6.1%	6.1%
2021 Miscellaneous Retail (SIC59) Employees	1.7%	1.5%	1.9%	1.8%	1.7%	2.6%
2021 Banks (SIC60-61) Employees	1.3%	2.2%	1.8%	0.5%	1.3%	1.8%
2021 Securities Broker (SIC62) Employees	0.2%	0.5%	0.3%	0.0%	0.2%	0.4%
2021 Insurance (SIC63-64) Employees	0.6%	0.9%	0.8%	0.4%	0.6%	1.9%
2021 Real Estate/Holding (SIC65-67) Employees	1.0%	8.3%	1.2%	0.4%	0.9%	2.0%
2021 Hotel/Lodging (SIC70) Employees	1.7%	0.4%	2.3%	2.1%	2.0%	1.7%
2021 Auto Services (SIC75) Employees	1.4%	1.6%	1.2%	1.2%	1.4%	1.3%
2021 Movie/Amusement (SIC78-79) Employees	1.1%	2.6%	1.4%	1.0%	1.0%	2.4%
2021 Health Services (SIC80) Employees	6.3%	4.9%	8.5%	6.1%	6.0%	12.6%
2021 Legal Services (SIC81) Employees	0.5%	0.6%	0.7%	0.2%	0.5%	0.6%
2021 Education/Library (SIC82) Employees	6.1%	12.2%	8.3%	6.4%	6.6%	8.4%
2021 Other Service (SIC72-89SEL) Employees	19.2%	14.2%	21.5%	7.8%	18.5%	15.8%
2021 Government (SIC91-97) Employees	4.3%	4.0%	5.1%	7.9%	4.2%	6.0%
2021 Unclassified Establishments (SIC99) Employees	0.8%	2.7%	0.4%	0.2%	0.8%	0.6%

Source; U.S. Census and Esri BAO

Notes:
- Highest percentage of employees are in Other Service (19.2%)
- When compared to all neighboring geographies, Dickinson Public Schools has the highest percentage of employees working in Manufacturing and lowest percentage of employees working in Education/Library

Intra-District Transfer Table

Reside	Attend						
	Berg	Heart River	Jefferson	Lincoln	Prairie Rose	Roosevelt	Attend Total
Berg		2	1	2	4	1	10
Heart River	6			2	9		17
Jefferson	4	7		4	8	4	27
Lincoln	1	3	4		5	8	21
Prairie Rose	5		8	6		3	22
Roosevelt	6	1	1	4	7		19
Grand Total	22	13	14	18	33	16	116

Source: RSP and Dickinson Public Schools

Observations:
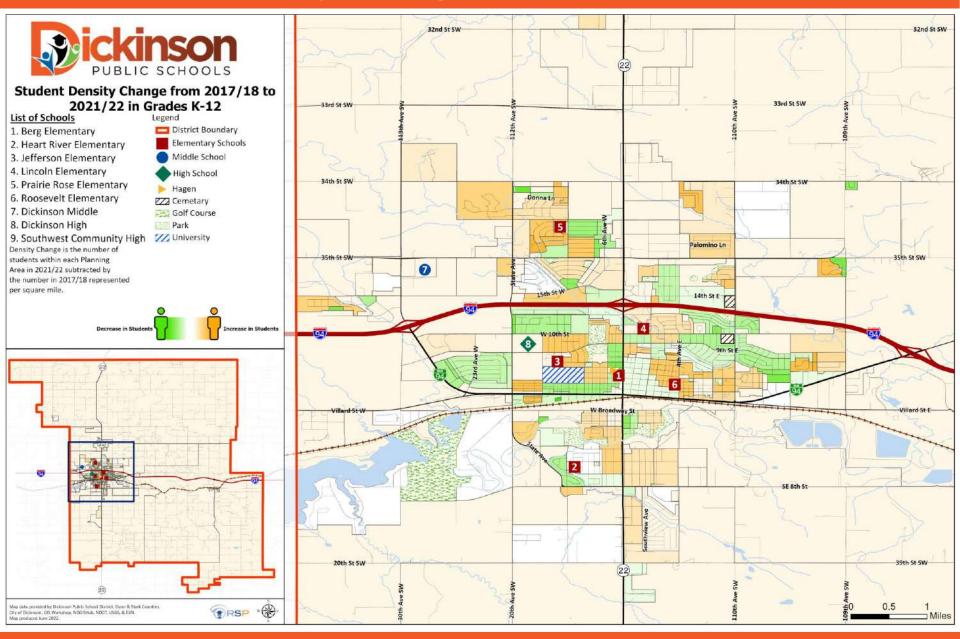
o Illustrates school choice that could be impacted by location of educational programming

o Reviewed on an annual basis and approved based on capacity availability

o A total of 116 elementary students are transferring out of the residing school boundary to attend a different elementary school in the district

o Prairie Rose Elementary had the most transferring in (+33)

o Jefferson Elementary had the most transferring out (-27)

o Berg Elementary had the most net gain (+12)

o Jefferson Elementary had the most net loss (-13)

NOTE: the schools in the left column are associated with the current attendance area. Reading to the right indicates a school choice change from where they are assigned based on the Reside attendance area. For example: Berg has 10 students attending a different elementary school **(Green Number)** and 22 students from another elementary school choosing to attend Berg **(Blue Number).** This results in a 12 more students attending Berg Elementary than what reside in that attendance area.
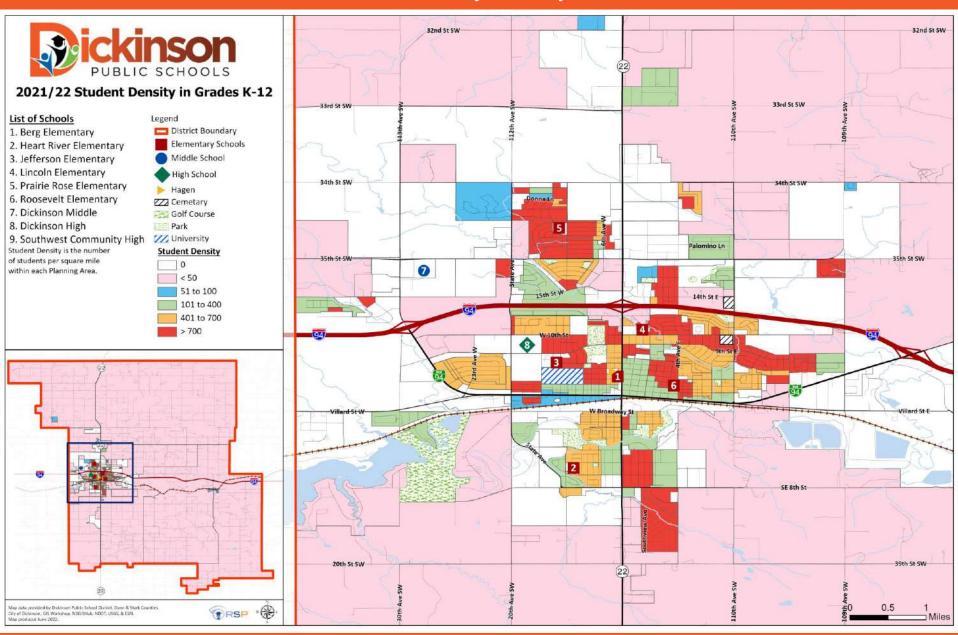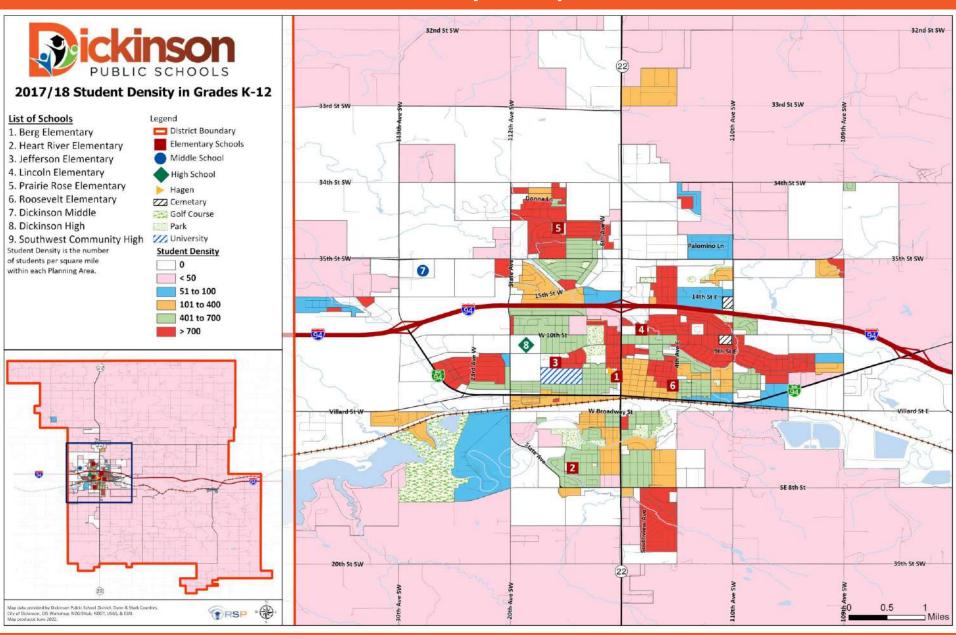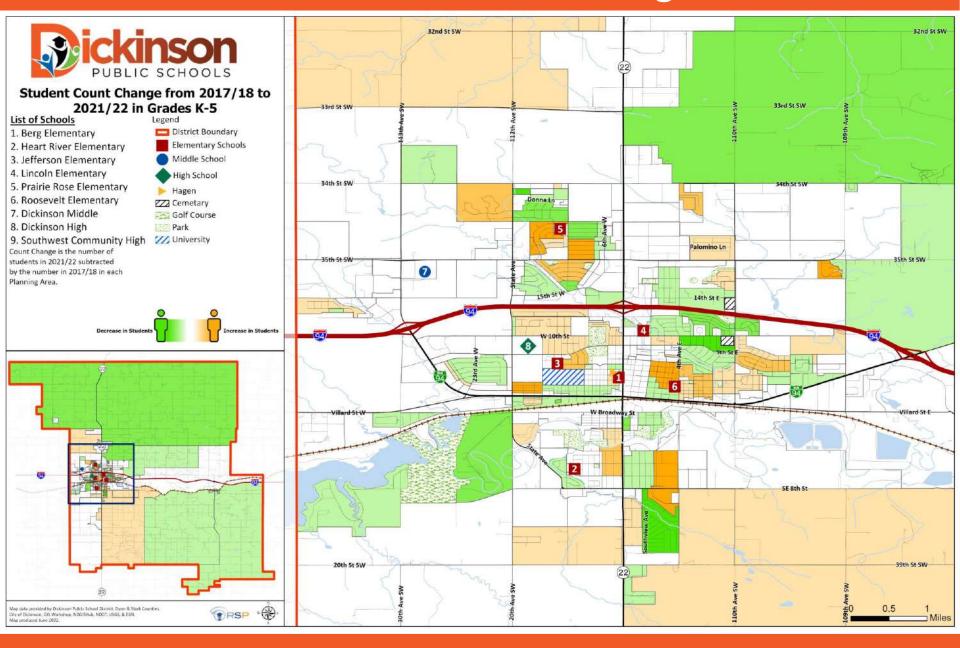
2021/22 Student Density Map

2017/18 Student Density Map

Dickinson PUBLIC SCHOOLS

2017/18 Student Density in Grades K-12

List of Schools
1. Berg Elementary
2. Heart River Elementary
3. Jefferson Elementary
4. Lincoln Elementary
5. Prairie Rose Elementary
6. Roosevelt Elementary
7. Dickinson Middle
8. Dickinson High
9. Southwest Community High

Student Density is the number of students per square mile within each Planning Area.

Legend
- District Boundary
- Elementary Schools
- Middle School
- High School
- Hagen
- Cemetary
- Golf Course
- Park
- University

Student Density
- 0
- < 50
- 51 to 100
- 101 to 400
- 401 to 700
- > 700

Map data provided by Dickinson Public School District, Dunn & Stark Counties, City of Dickinson, GIS Workshop, NDGIShub, NDOT, USGS, & ESRI.
Map produced June 2022.

Yield Rate Map

Distribution of Development Activity

Source: Stark County and ESRI

Observations:

o Graphic has been created to illustrate the distribution of units by year built

o Year built based on Stark County Data and ESRI

o The average number of units built per year from 2010 to 2019 (407 per year) is higher than from 2000 to 2009 (81 per year)

o The decade with the most units built was 2010 to 2019 – 30% of total units

o The average year for all units built was 1968 while the median year built is 1978

Definitions

o Cohort: a group of individuals having a statistical factor (such as grade level) in common in a demographic study

o Out-migration: shows number of students in grade Kindergarten to 11th that are attending the district in 2020/21 but were not attending the district in 2021/22

o In-migration: shows number of students in grade 1st to 12th that are attending the district in 2021/22 but were not attending the district in 2020/21

o Yield-rate: ratio of students that attend each school to the number of housing units in that school's attendance area

o Single-family: a house that is may be fully detached or semi-detached occupied by one household or family

o Multi-family: a classification of housing where multiple separate housing units for residential inhabitants are contained within one building or several buildings within one complex

o Town Homes: Side by side housing units that do not meet the definition of single-family houses

o Mobile Home Park: movable dwelling, 8 feet or more wide and 40 feet or more long, designed to be towed on its own chassis, with transportation gear integral to the unit when it leaves the factory, and without need of a permanent foundation.

o Vacant Land: means any undeveloped land/ erf within a proclaimed township or a land development area and will continue to be rated as vacant until such time as a certificate of occupancy

o Mixed-use development: development that blends two or more residential, commercial, cultural, institutional, and/or industrial uses

o Median Year Built: equal to the middle point of all reported years when each dwelling unit was built based on information from the local assessor's office

o Median Home Value: equal to the middle point of all reported home values from the assessor's office in the district