

Redistricting Study for 2020 and 2023

Presentation of Recommendations November 21, 2019

CropperGIS

Who We Are

Cropper GIS Consulting, LLC

K-12 school planning is our business and our passion. Our specialty is school redistricting.

Cropper works with K-12 school districts to:

- develop redistricting plans,
- facilitate community engagement,
- research, map and write demographic studies,
- prepare long-range facility master plans,
- author site feasibility studies,
- conduct & publish housing impact and yield factor studies, and
- provide GIS implementation & training.

Cropper GIS is an ESRI Authorized Business Partner



Past Redistricting Projects:

- Big Walnut Local Schools, OH
- South-Western City Schools, OH
- Westerville City Schools, OH
- Lakota Local Schools, OH
- Cabarrus County Schools, NC
- Union County Public Schools, NC
- Brunswick County Public Schools, NC
- Frederick County Public Schools, MD
- Richmond Public Schools, VA
- Henrico County Public Schools, VA
- Alexandria City Public Schools, VA
- Frederick County Public Schools, MD
- Baltimore County Public Schools, MD



Matthew Cropper

- 20 years experience providing GIS mapping and analysis services to school districts and other clients.
- Manages and Facilitates K-12 redistricting and facility planning projects across the U.S.
- Expert consultant for U.S. Department of Justice, Civil Rights Division
- Published numerous papers about using GIS in master planning and educational planning.

Why We're Here

Big Walnut Local School District is in the process of making changes to their facilities, which involves the construction of a new school as well as changes to grade configurations. The following details changes to facilities, which necessitate the need to evaluate school attendance boundaries:

- A new 500-seat capacity elementary school is planned to be opened in Fall 2020, which will serve grades K-4.
- Harrison Street School is planned to only serve the district's Pre-K students, effective Fall 2020.
- A new high school is planned to be opened in Fall 2022, which will serve grades 9-12.
- The current high school will serve grades 7-8, beginning Fall 2022.
- The current middle school will serve grades 5-6, beginning Fall 2022.
- The current intermediate school building will serve grades K-4, beginning Fall 2023.

Elementary School	2019-20 Grade Config	2019-20 Capacity	Total Enrolled (PK-4)	Enrolled Utilization (PK-4)
Big Walnut	PK-4	405	423	104%
General Rosecrans	K-4	500	539	108%
Hysten Souders	PK-4	407	379	93%
Harrison Street	PK-4	265	280	106%
Total		1577	1621	103%

Redistricting Criteria

Rules to Follow

Develop new Elementary Attendance boundaries that:

- Use natural boundaries if possible.
- Avoid splitting neighborhoods or subdivisions, and try to draw lines along major roads if possible.
- Move as few students as possible for 2020 and 2023.
- Balance building utilization, but also be mindful of future residential growth.



Project Process

Review of Timeline

Redistricting Process

	Jan '19	Feb '19	March '19	April '19	May '19	June '19	July '19	Aug '19	Sept '19	Oct '19	Nov '19	Dec '19
<i>Data Collection/Development</i>												
<i>Baseline Options Development</i>												
<u><i>Internal Planning Meetings</i></u> <i>- Develop DRAFT Options</i>								8/29				
<u><i>Redistricting Advisory Committee Meeting 1</i></u> <i>- Review and provide input towards DRAFT Options to share with public</i>									9/18			
<i>Public Information Session: Present DRAFT Redistricting Options to Community for Comment/Feedback</i>									9/30			
<u><i>Internal Planning Meetings</i></u> <i>- Continue to develop DRAFT Options</i>										10/25		
<u><i>Redistricting Advisory Committee Meeting 2</i></u> <i>- Review Public Information Session Results and evaluate school districts DRAFT Recommendations</i>											11/11	
<i>Presentation of Final Recommendation to the Board of Education</i>												11/21
<i>School Board Vote on Redistricting Recommendation</i>												12/19

We are here →

Five Project Phases

The redistricting study consists of several phases. The phases are:

1. Data Collection
2. Data Conversion/Development
3. Baseline Options Development
4. Committee and Public Engagement
5. School Board Process

School Capacity

School capacity is calculated with the following parameters:

- Only permanent capacity is factored into the school capacity numbers.
 - Mobile units are not counted in capacity
- Only standard classrooms factored into capacity
- Special use rooms accounted for in capacity, such as resource/pull-out and special education
- Core spaces not included in capacity, such as gymnasium, cafeteria, or media center.
- Capacity is not using square footage-based calculation like may have been seen in the past for Big Walnut.

Also, note that the utilization of schools for 2023-24 appears to be low. Data used is based on Fall 2019 enrollment.

Enrollment is projected to continue to increase, and utilization rates for schools are expected to rise by 2023-24 as new residential development activity continues.

1. Data Collection

A series of data was collected to perform GIS analysis and to facilitate redistricting options development. Data sources include:

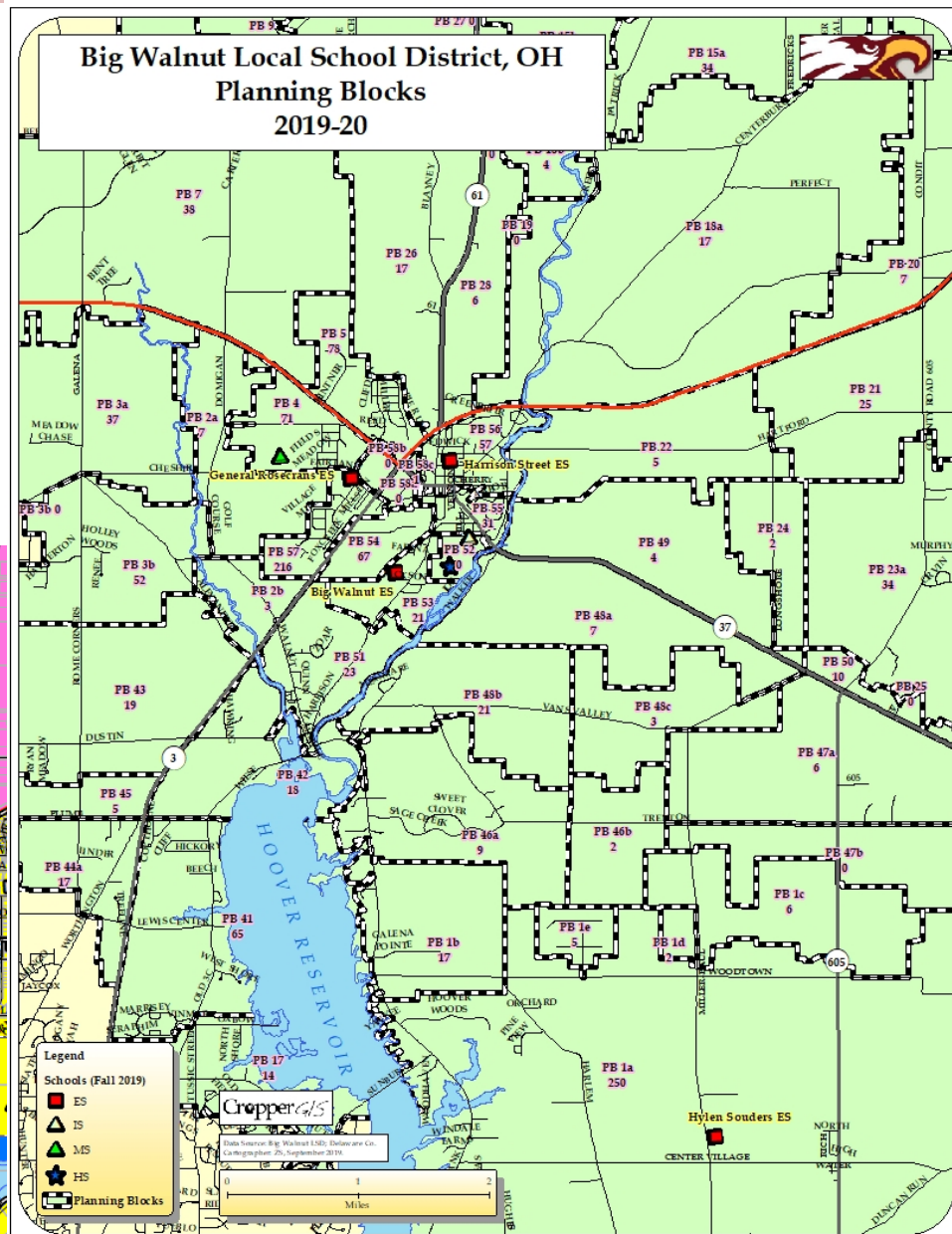
- Big Walnut Local School District
 - Current (2019-20) student enrollment database with student attributes, including:
 - Student ID
 - Student Address
 - Student grade level
 - School name and number
 - ESL/LEP Information
 - Ethnicity
 - Free/Reduced Lunch attributes
 - Special Education Information
 - School locations including school name, type, address, and capacity.
 - Future planned changes to facilities, including new construction and repurposing of existing buildings.
- County Auditors Offices
 - Planimetric layers (streets, rivers, railroads, etc.)
 - Parcels/Property Lines, subdivisions, neighborhoods, planned developments
 - Aerial Photography

2. Data Conversion/Development

Cropper has developed and aggregated the data for mapping. This includes:

- Geocoding current enrollment files into ESRI Shapefile format.
- Aggregating all school, city, county, and federal GIS data into mapping system for analysis.
- Gaining a clear understanding of the long-range facilities plan (to 2023) and how facilities will be utilized.
- Ensuring that the latest set of attendance boundaries that **Cropper** has are correct and have not been revised since last working with the district.

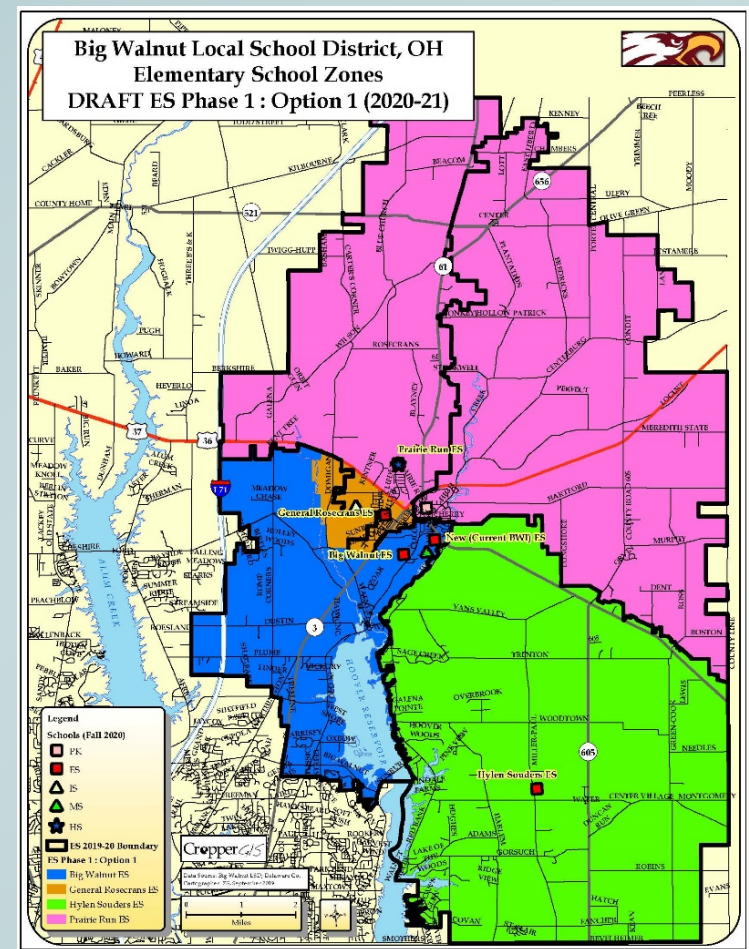
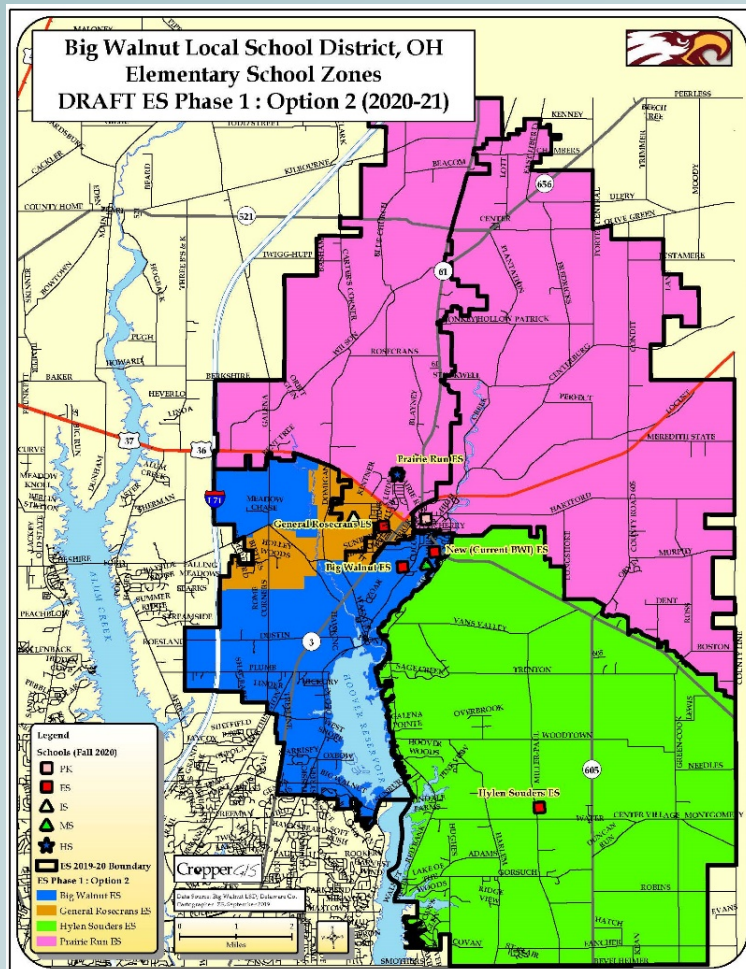
Key data were analyzed by these planning blocks, such as total number of elementary students



3. Baseline Options Development

Cropper has found that beginning the process with several baseline options helps to expedite the process.

Options were initially drafted by Cropper, then reviewed and analyzed by BWLS staff (principals, transportation, central office).



The input from the advisory committee drove changes to the options as the process continued.

The recommended plan is being brought forward by the superintendent, with the support of the advisory committee, staff, and consultants.

4. Advisory Committee and Public Engagement

Cropper worked with the Big Walnut staff members (principals, transportation, central admin, school board) to formulate a series of options.

In addition to working with the internal planning group, Big Walnut invited a number of volunteer community members to serve as an advisory committee for the process.

The purpose of the redistricting advisory committee is to provide initial input regarding the options that are being drafted.

The advisory committee served as an early 'sounding board' to determine if additional thoughts/observations should be considered before options were presented to the entire public, and they twice before the superintendent finalized a recommendation to be presented to the school board.



Help from the Public

Public Participation

- A Public Information Session was hosted on September 30th to keep the public informed and to solicit feedback.
 - At the session, two (2) draft options were presented for the 2020-21 school year, and one (1) draft option was presented for the 2023-24 school year.
 - After a presentation was made to orient the public on the process, they were invited to look at maps in a gallery walk format, and talk with staff, advisory committee, and consultants.
 - A survey was opened at that point, and remained open through October 20th.
 - Input from the public was received from community members across the district, and was very useful in understanding how the public feels about the various options that were being considered.

Elementary Options Attitude Summary						
Option Attitude	Phase 1: Option 1		Phase 1: Option 2		Phase 2	
Approve	56	51.4%	59	54.1%	49	45.0%
Like	16	14.7%	12	11.0%	18	16.5%
Neutral	19	17.4%	20	18.3%	27	24.8%
Dislike	13	11.9%	13	11.9%	17	15.6%
Oppose	5	4.6%	5	4.6%	9	8.3%
Total	109		109		120	

Total Respondents by Live-In Elementary School Zone		
Live-In Elementary Zone	Total Respondents	Percent of Respondents
Big Walnut	31	28.70%
General Rosencrans	28	25.93%
Harrison Street	28	25.93%
Hysten Souders	21	19.44%
Total	108	

Note: 14 respondents did not identify with an Elementary Zone.

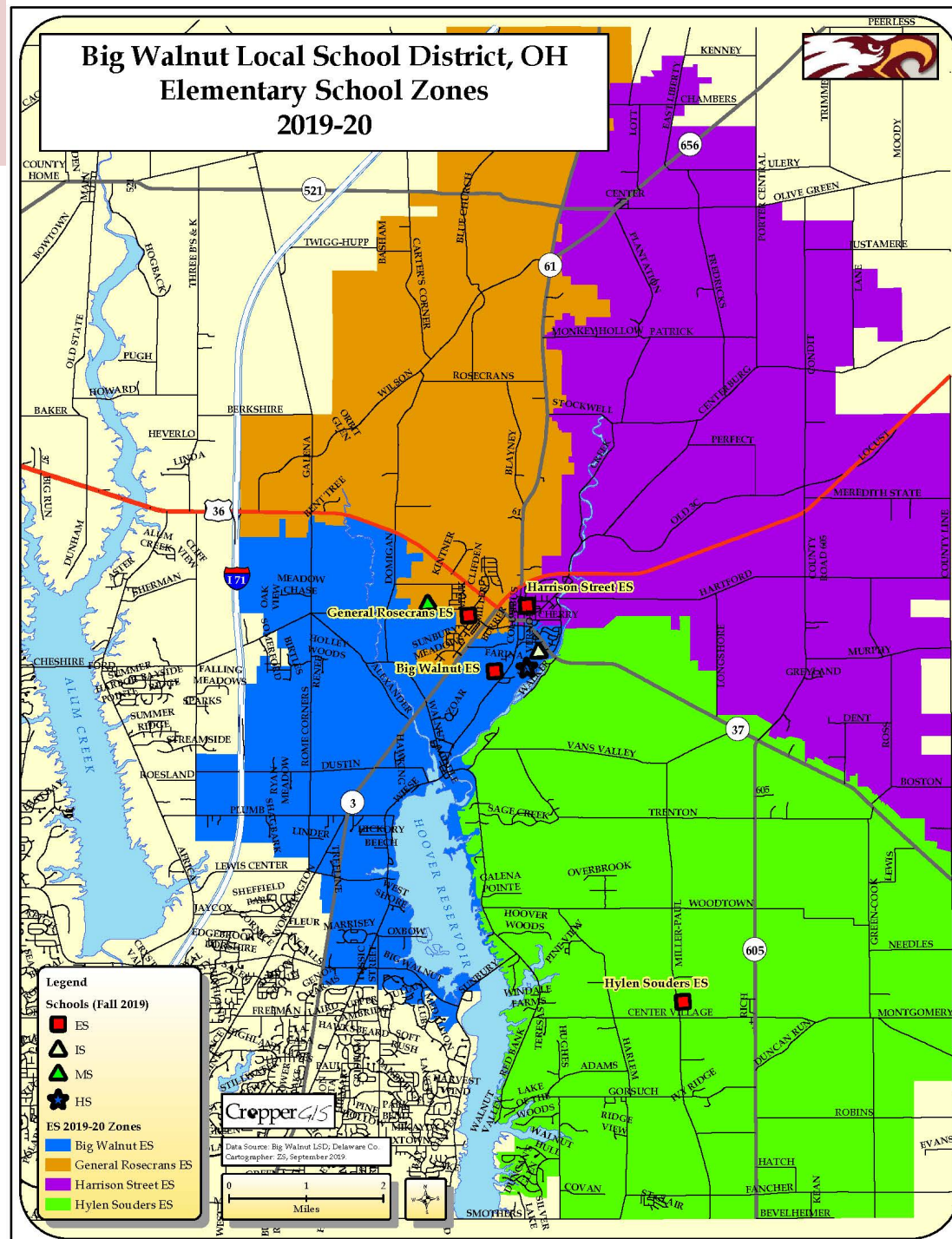
5. School Board Process

We are now at the final phase, which is where the recommendation is being presented to the board. Once the recommendation is handed over to the school board, it is up to you to determine what to do with the draft plan.

The recommendation is being presented at this meeting as an information item, and the board is scheduled to vote on the plan at their December 19th school board meeting.

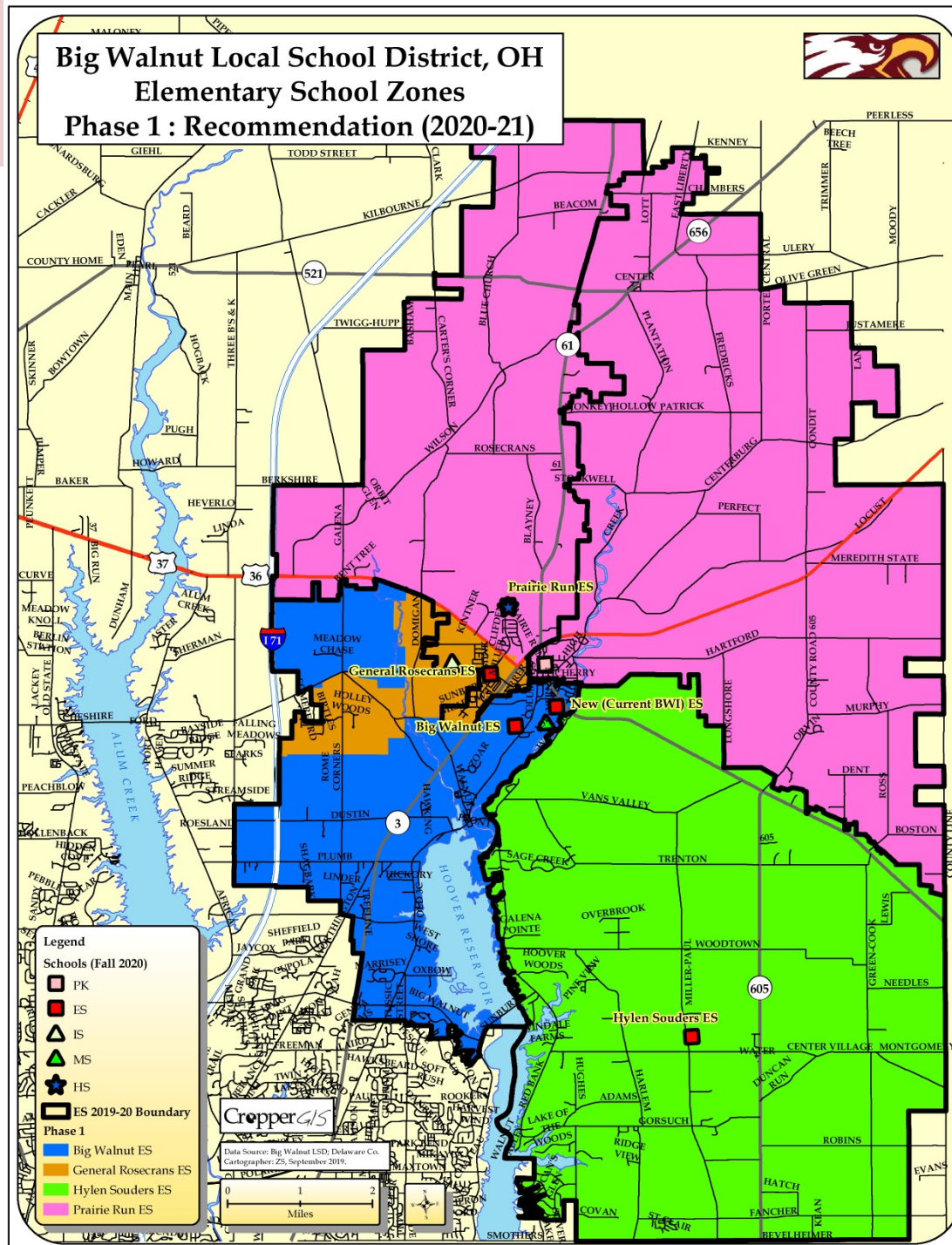
The current elementary school zones are shown in the map to the right.

As a result of the culmination of work performed by the staff, advisory committee, and consultants, The DRAFT recommendations for redistricting are depicted on the following slides:



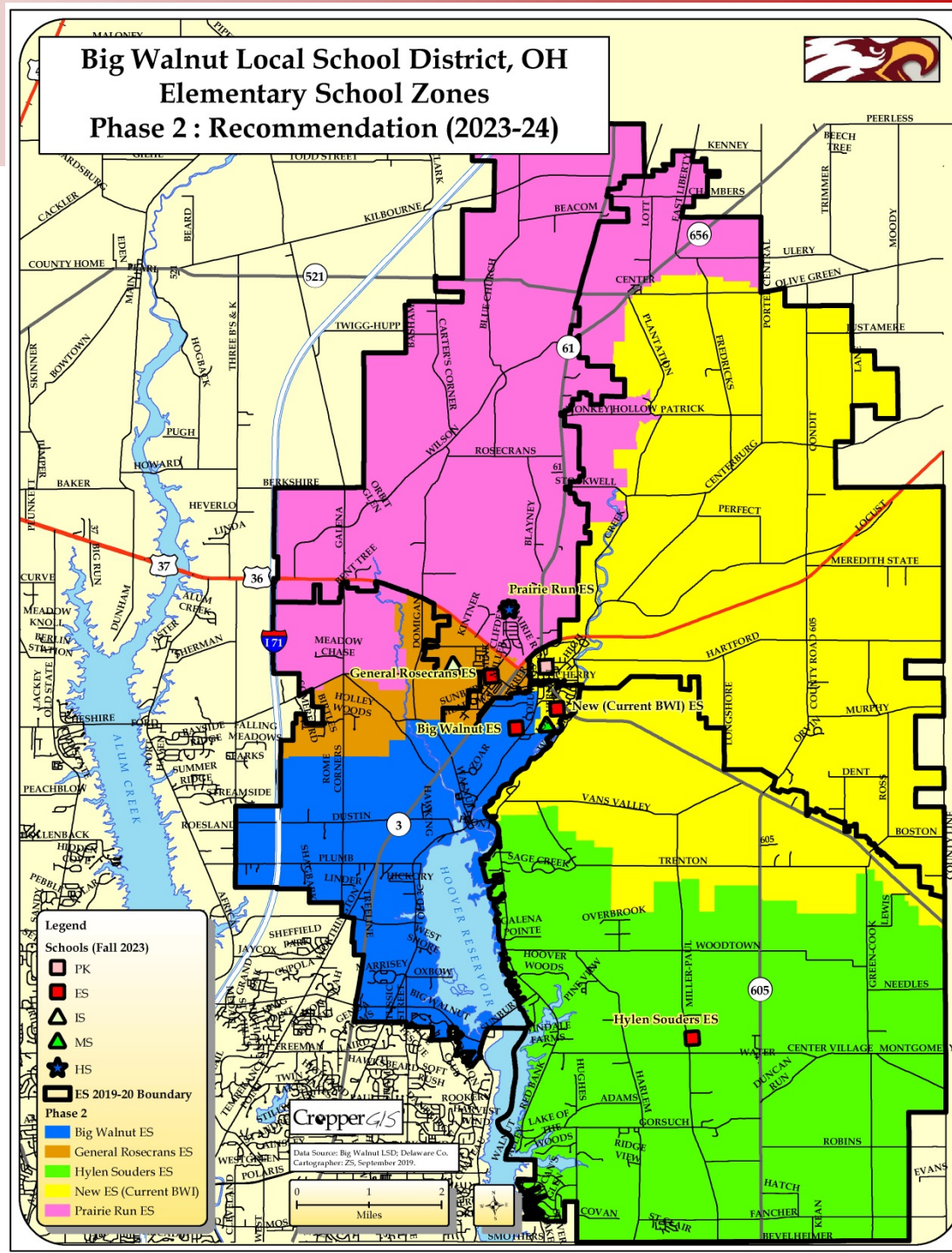
Review of Recommendations

- Phase 1, Option 2 is being recommended for 2020-21 school year.
 - This is the option that moves students from Big Walnut Elementary to General Rosecrans in 2020-21.
 - The public didn't have any major opposition to this move and it is felt that giving BWE more immediate relief for next year is critical.



Review of Recommendations

- Phase 2 is being recommended for the 2023-24 school year (as was presented to the public in October).
 - Although this is the recommended plan, the recommendation is for the School Board to not take action on the 2023-24 plan, and consider this still DRAFT and finalize this decision closer to the implementation year.
- Ensures that the final plan can be finalized using more recent data closer to implementation date, and determine the impact of ongoing housing in the next 2 years.



Review of DRAFT Recommendations

Elementary School	2019-20 Grade Config	2019-20 Capacity	Total Enrolled (PK-4)	Enrolled Utilization (PK-4)
Big Walnut	PK-4	405	423	104%
General Rosecrans	K-4	500	539	108%
Hysten Souders	PK-4	407	379	93%
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Total		1577	1621	103%

Elementary School	2023-24 Grade Config	2023-24 Capacity*	Total Enrolled (PK-4)**	DRAFT Phase 1 Rec. (2020-21) Estimated Enrollment	DRAFT Phase 2 Rec. (2023-24) Estimated Enrollment
Big Walnut	K-4	405	398	326	258
General Rosecrans	K-4	500	539	358	358
Hysten Souders	K-4	407	361	351	298
New (Current BWI)	K-4	500	0		275
Prairie Run	K-4	500	0	454	300
Harrison Street	PK	265	258		
Total		2312	1555	1489	1489

* Mobile classrooms are not included in the capacity.

** PK only counted as half enrollment because it includes AM and PM class.

Elementary School	2023-24 Grade Config	2023-24 Capacity*	Total Enrolled (PK-4)**	DRAFT Phase 1 Rec. (2020-21) Utilization	DRAFT Phase 2 Rec. (2023-24) Utilization
Big Walnut	K-4	405	398	80%	64%
General Rosecrans	K-4	500	539	72%	72%
Hysten Souders	K-4	407	361	86%	73%
New (Current BWI)	K-4	500	0		55%
Prairie Run	K-4	500	0	91%	60%
Harrison Street	PK	265	258		
Total		2312	1555	82%	64%

* Mobile classrooms are not included in the capacity.

** PK only counted as half enrollment because it includes AM and PM class.

Review of DRAFT Recommendations

2019-20 ES Zone	ES Phase 1 Rec. (2020-21)	Total K-4th Live In Students
Big Walnut ES	Big Walnut ES	320
Big Walnut ES	General Rosecrans ES	59
General Rosecrans ES	General Rosecrans ES	288
General Rosecrans ES	Prairie Run ES	223
Harrison Street ES	Prairie Run ES	224
Hylen Souders ES	Hylen Souders ES	349

Phase 1	Total K-4th Live In Students Impacted
DRAFT Recommendation (2020-21)	506

ES Phase 1 Rec. (2020-21)	ES Phase 2 Rec. (2023-24)	Total K-4th Live In Students
Big Walnut ES	Big Walnut ES	252
Big Walnut ES	New ES (Current BWI)	31
Big Walnut ES	Prairie Run ES	37
General Rosecrans ES	General Rosecrans ES	347
Hylen Souders ES	Hylen Souders ES	296
Hylen Souders ES	New ES (Current BWI)	53
Prairie Run ES	New ES (Current BWI)	184
Prairie Run ES	Prairie Run ES	263

Phase 2	Total K-4th Live In Students Impacted
DRAFT Recommendation (2023-24)	305

2019-20 ES Zone	ES Phase 1 Rec. (2020-21)	ES Phase 2 (2023-24)	Total K-4th Live In Students
Harrison Street ES	Prairie Run ES	New ES (Current BWI)	184

Total K-4th Live In Students Impacted Twice
184



Questions?