

LUDINGTON ELEMENTARY SCHOOL

LUDINGTON AREA SCHOOL DISTRICT / LUDINGTON, MICHIGAN



2023 Submission / James D. MacConnell Award

EXECUTIVE SUMMARY

Ludington Area School Districts' three elementary buildings and early childhood center were more than 50 years old and in need of significant, costly renovations. Instead of renovating, the community made the decision to consolidate the four schools into one new, centralized facility that takes a forward-looking approach to curriculum design, facilities planning, and classroom design. The district approached the planning process with a focus on developing a better teaching and learning model rather than starting with facility features. The central idea of "What should education look like?" drove the decision making for community and student involvement, location, and ultimately the facility design.

The teams looked at major functional structures within the existing schools,

that were not working for the district, and found ways to make improvements and increase efficiencies in the new building.

The resulting elementary building establishes a learning ecosystem within the community and breaks down the classroom wings into smaller, grade-level centered neighborhoods that feel more approachable to an elementary-aged student. Extended learning areas and cozy nooks throughout the building reinforce the idea that learning can happen anywhere on campus. All of the shared amenities and special programs are organized along a center spine that connects all the neighborhoods together, creating a clear wayfinding path and circulation loop around the building.

With sustainability and stewardship in mind, creating meaningful connections to



the outdoors was important to the district. All the classroom wings connect outside through covered outdoor learning areas to playgrounds that encourage outdoor learning and play. The new facility also creates a hub for the community, fostering inclusion and encouraging relationship building that promotes a sense of community pride.

Motifs, colors, wayfinding signage, and community embellishments all tie to animals native to the area and important to the local indigenous tribe, from the owl to the wolf to the bear, and connect to the school's grade levels.



Guiding Principles

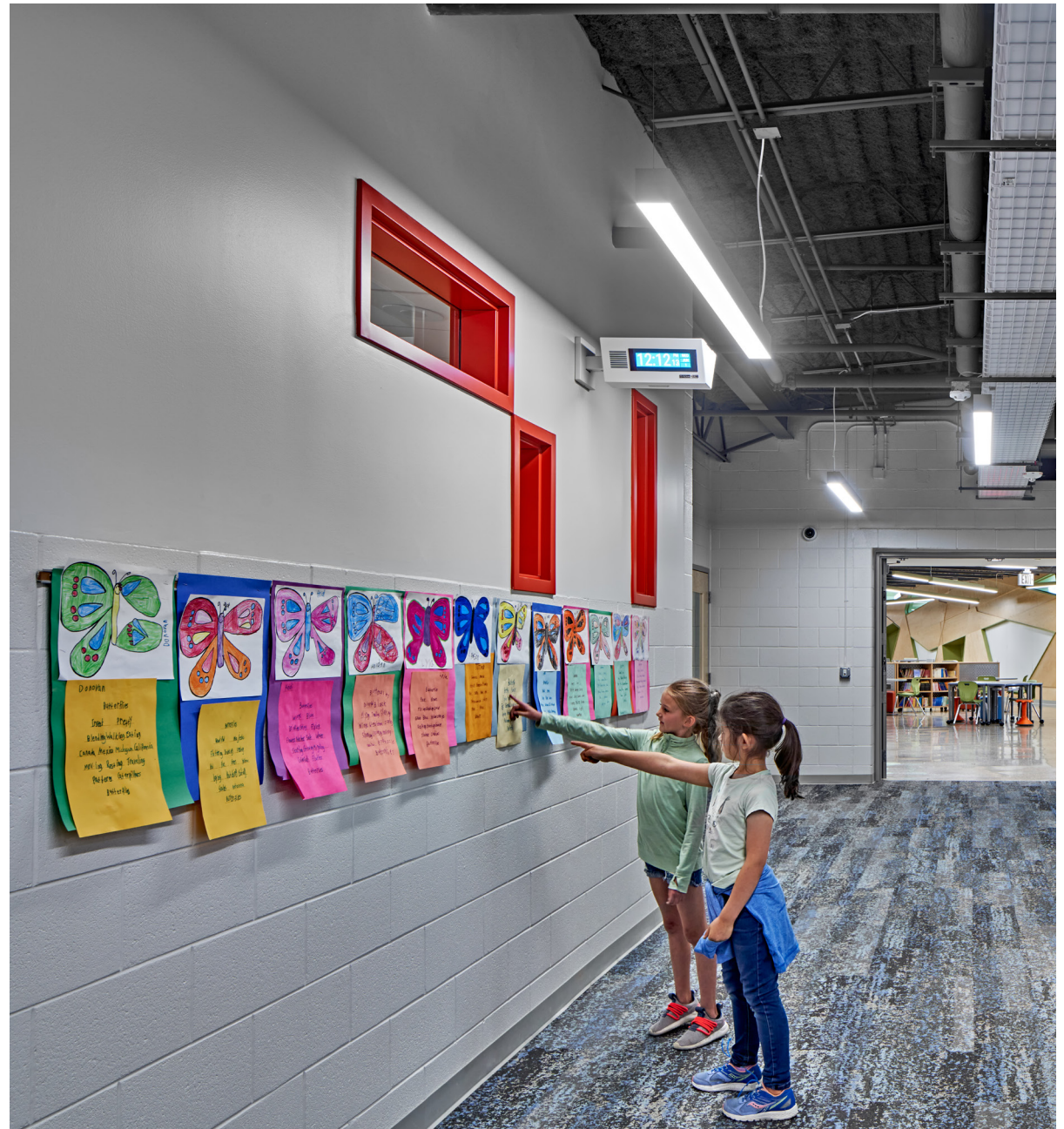
Fueling Community Culture: Creating a facility that is a hub for the community fostering inclusion and encouraging relationship building will promote a sense of community pride.

Promoting Stewardship: Seeking opportunities to embrace natural site conditions, to highlight its beauty enhancing connections to the outdoors for students to build awareness of sustainable thinking in a global context.

Enhancing The Learning Experience: Encourage a collaborative relationship among students, faculty, staff, and neighbors by creating places for cross-curricular opportunities, exploration, and interaction that is age appropriate and fun.

Prioritizing Student Safety: Build layers of security while reinforcing a welcoming community that supports the whole child.

Planning For Flexibility: Proliferate the efficient, adaptable, fluid variety of place to inspire growth and stimulate education for the present (2021) and the future (2071).





SCOPE OF WORK AND BUDGET

- **Owner:** Ludington Area School District
- **Location:** Ludington, Michigan
- **Project Type:** New Construction
- **Project Size:** 155,000 SF
- **Student Capacity:** 1,000 students
- **Project Cost:** \$33,000,000
- **Site Area:** 50 acres
- **Year Completed:** 2021
- **Grades Served:** PK-5

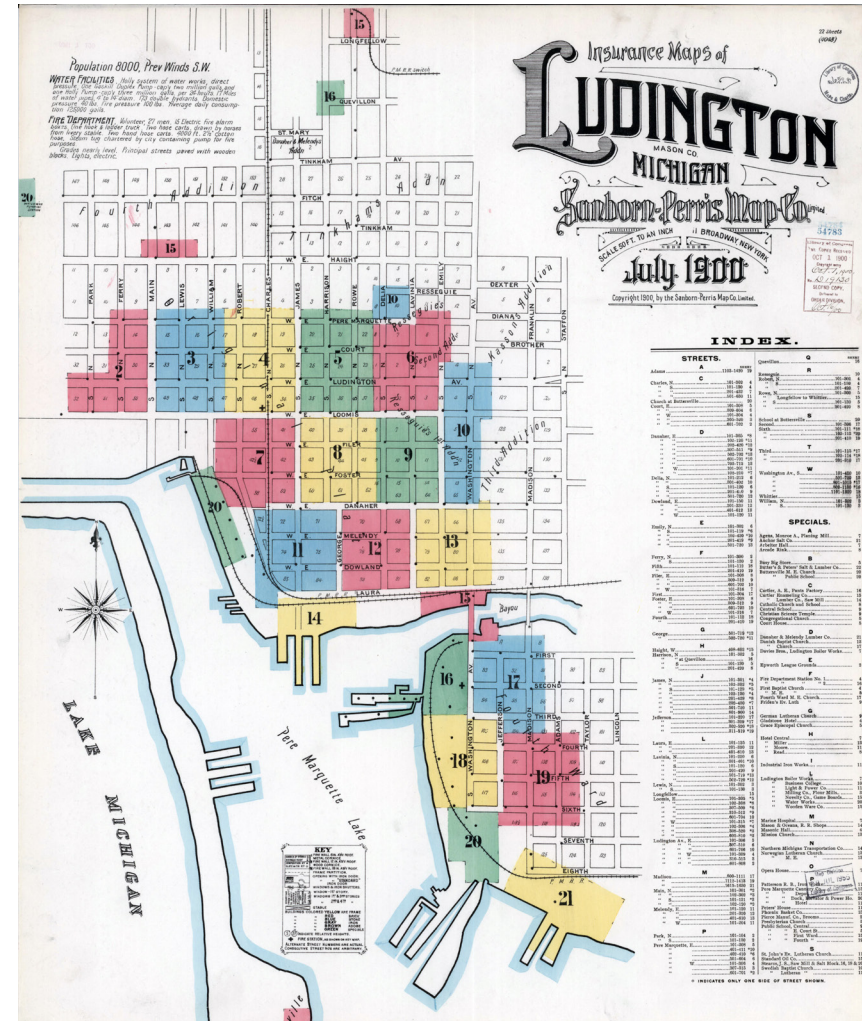
SCHOOL & COMMUNITY RESEARCH AND/OR ENGAGEMENT

A Historic Lakeshore Community

Ludington is a harbor town on the coast of Lake Michigan with a rich history in the lumber and car ferry industries. Originally settled by the Ottawa Native American tribe, Ludington was incorporated as a city in 1873. The small Northern Michigan city, with a population around 9,000 people, has since become a favorite destination for vacation homes and year-round recreation.

There is a significant taxable value in the community (approximately \$1.5 billion), which is considerable for a district of Ludington's size that teaches over 2,000 students. The district funds school bond projects through non-homestead property taxes, which are homes not considered a full-time residence for the owner. Because of these unique factors, it was important to keep the community of Ludington involved and informed from the start of the facilities analysis and bond planning process.

The Ludington Area School District (LASD) had not passed a bond since 2003 and was asking the community to approve more than \$100 million in improvements for the district's facilities. A major piece of the bond was to build a new elementary school for PK-5 students. The current early childhood center and elementary schools were built in the 1950s and 60s, respectively, and were aging beyond repair. Instead of using \$55 million in funds needed to repair the district's old buildings, it was decided that investing in a new facility that was purposefully designed to transform the teaching and learning that was happening in Ludington, while also solving functional problems the district was experiencing, was the right decision.



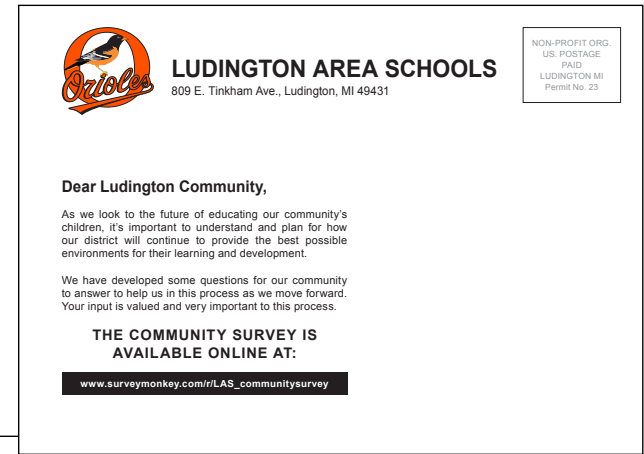
Stakeholder Engagement

Over 1,000 stakeholders in the area participated in various workshops, planning sessions, walk-throughs and more during the bond planning process. After repeated bond failures in the area, it was imperative to create a community committee that would be engaged in long-term facilities planning. The community was asked many guiding questions such as “What are we trying to create in a Ludington area school student?” and “What skills are we trying to cultivate?” They were also asked to describe their ideal learning environment and any barriers that would exist to create that environment.

A Transformation Think Tank was formed and included members from all sectors of the community like local leaders, business owners, school board members, school administrators, teachers, and others. Every ward within the city and townships were represented and the district was very intentional about selecting individuals to join the work, including those who were adversarial to the process. This 21st century think tank employed a number of visible thinking strategies adapted from Harvard University's Project Zero.

Within the Transformation Think Tank there were five subgroups:

- Early childhood and literacy
- Workforce development and career readiness
- College access and readiness
- Science, technology, engineering, arts and mathematics
- Facilities in space design and planning



Facilities and Educational Programming
We operate one early childhood center, three elementary schools, one middle school, and one high school. The middle school is the district's most modern school, having been built in 1965. Our average school building age is 63 years old. The State of Michigan defines the useful life of a school building at 40 years. Our school building original construction dates are as follows:

PERE MARQUETTE ECC, built in 1965
FOSTER ELEMENTARY, built in 1925
LAKEVIEW ELEMENTARY, built in 1964
FRANKLIN ELEMENTARY, built in 1957
MIDDLE SCHOOL, built in 1965
HIGH SCHOOL, built in 1953

Teaching and learning look much different today than when our school buildings were constructed and renovated. Diverse student instructional needs have expanded and can be better supported with physical and academic environments that inspire 21st century learning.




THE COMMUNITY SURVEY IS AVAILABLE ONLINE AT:

www.surveymonkey.com/r/LAS_communitysurvey

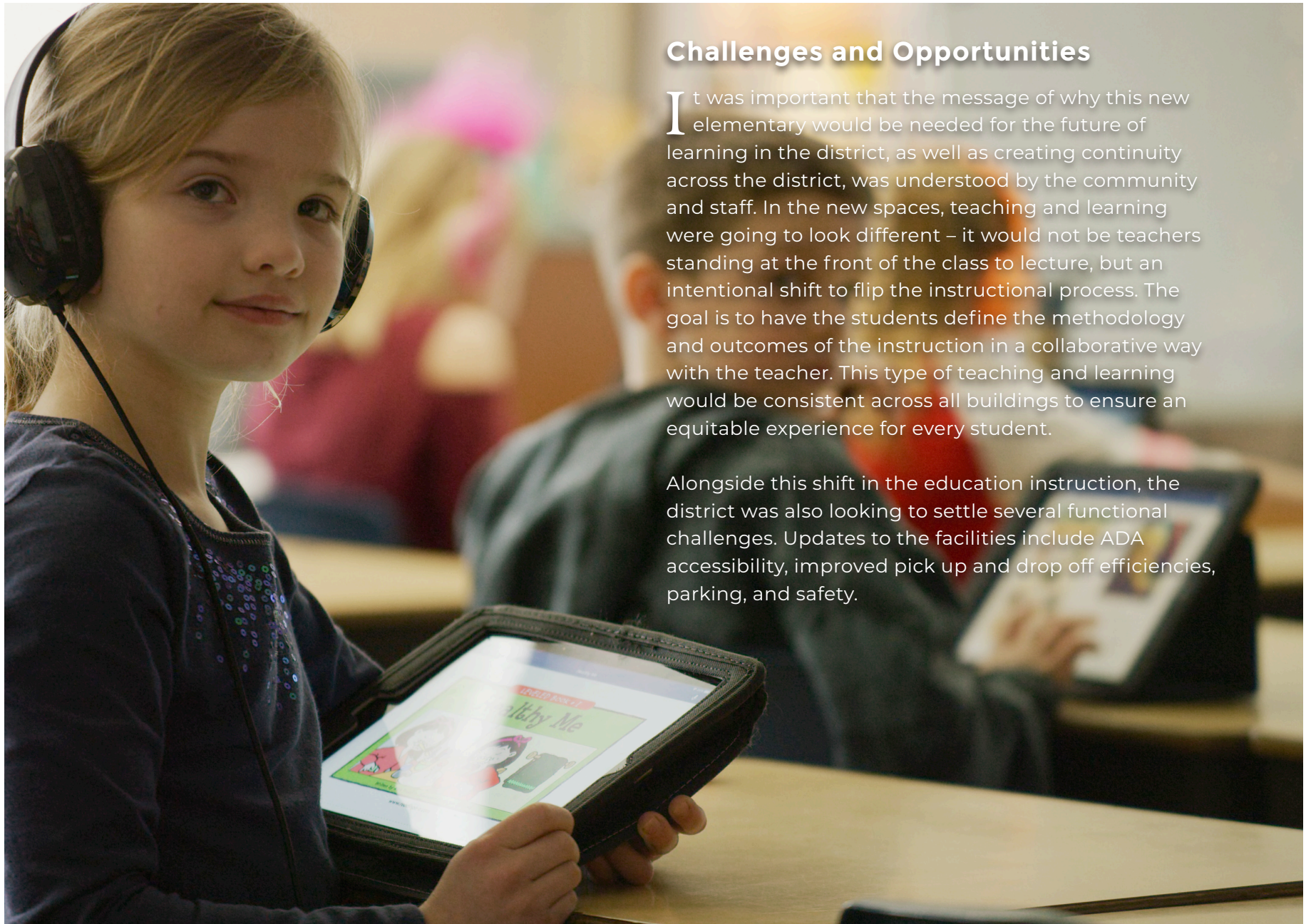
Ludington Area Schools is committed to listening to constituent stakeholders, while also addressing the 21st century learning needs of our students and greater school community. To learn more about the District's strategic plan, facilities assessment process, or proposed facilities solutions, please visit www.lasd.net/district/facilities-assessment.

After reviewing the website, if you have questions, please contact me. My door is always open to you. Thank you in advance for your time and for helping to plan for the future of Ludington Area Schools.

Sincerely,
Jason Kennedy
Superintendent
(231) 845-7303
jkennedy@lasd.net

*This think tank process fostered
Collaboration, Collegiality, and Connection
to achieve a result that serves multiple goals and stakeholders.*



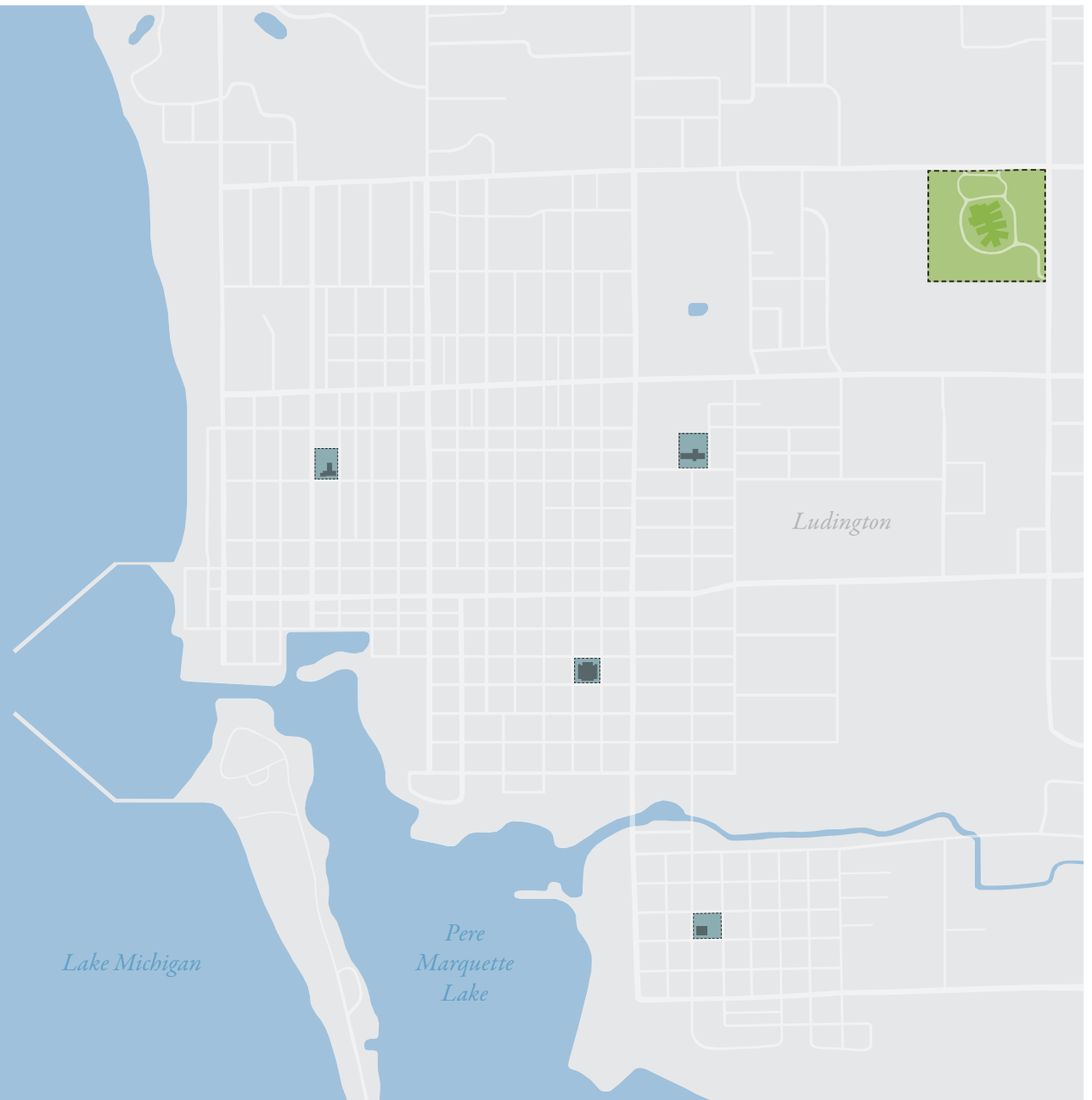
Challenges and Opportunities

It was important that the message of why this new elementary would be needed for the future of learning in the district, as well as creating continuity across the district, was understood by the community and staff. In the new spaces, teaching and learning were going to look different – it would not be teachers standing at the front of the class to lecture, but an intentional shift to flip the instructional process. The goal is to have the students define the methodology and outcomes of the instruction in a collaborative way with the teacher. This type of teaching and learning would be consistent across all buildings to ensure an equitable experience for every student.

Alongside this shift in the education instruction, the district was also looking to settle several functional challenges. Updates to the facilities include ADA accessibility, improved pick up and drop off efficiencies, parking, and safety.

Assets and Resources

In 1999, the school board purchased a property that was connected to the school forest, a more than 200-acre expanse of forested land with a disc golf course, biking and cross country skiing trails, and more. The land was originally purchased to be developed with bond dollars, but that had not happened yet after several failed bond proposals. After much consideration, it was clear that the property would be the best location for the new Ludington Elementary School. Changing the location of several buildings into one area meant greater access to programs and resources for all students, faculty, and staff.



Value of Process and Project to Community

Years of strategic planning and strong community engagement set Ludington Area School District up for success. Transparency with all stakeholders throughout the entire process was key from day one and all information pertaining to the district projects was available on the school's website.

The vision and design workshops developed several goals that helped the process run efficiently:

- Reinforce strategic alignment within a large group of stakeholders.
- Build design momentum fueled by a rapid feedback cycle in comparison to the traditional workflow cycle.
- Create a safe and trusting forum for large group discussion, feedback, and critique.
- Encourage focused engagement by stakeholders and participants to respect the time dedicated.
- Achieve design direction more quickly to propel schematic design forward and reinforce commitment to the proposed schedule.


Other vision and design workshop exercises included qualitative programming for space planning and ideation, empathy mapping with teachers, students and the community, and concept planning.

The district also led a number of internal and external site visits with stakeholder groups for idea generation. Not only did they visit high performing school districts, but they also visited modern learning places like the Steelcase Innovation Center. The teams really began to dig into the research around what active and engaged learning looked like in these different spaces and how that research informed the design of education buildings with the goal of improving teaching and learning.

Having a modern, state-of-the-art school, the first new school building in the district in over 50 years, is a point of pride in the community. LASD did not want to build a new building just for the sake of newness. It was intentionally designed to reflect the 21st, and even 22nd, century teaching and learning practices that are starting to develop and move Ludington forward in ways that allows all students to thrive. Students can enjoy a safe and healthy school environment that is focused on next generation learning with dedicated STEAM spaces, outdoor discovery, extended learning areas, and more.

The building and surrounding forest was also intended for broader community use. Multiple spaces are available for scheduled community use, like a competitive-sized gym and large divisible cafeteria for event use, which have purposefully separated access. It was important that as much of the school forest remained intact as possible and includes a community disc golf course and biking/walking trails. Outdoor accessible restrooms, both for students on the playground and for community use, are located on the campus. Use of the school forest for school curriculum is another benefit for students attending.





LUDINGTON AREA SCHOOL DISTRICT
BOND PROPOSAL IMPROVEMENTS

NEW ELEMENTARY SCHOOL COMPLEX

PLEASE VOTE
Tuesday, May 7, 2019

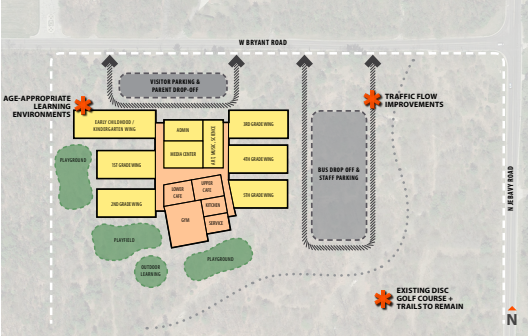
www.lasd.net [LudingtonASD](#)

PLANNING FOR THE FUTURE - SAFE AND MODERN SCHOOLS

The Ludington Area School District Board of Education is asking the community to vote on a bond proposal on May 7, 2019. If approved, it would provide district-wide improvements to address identified and ongoing facility needs based on years of strategic planning, facility assessments, and community input. The bond proposal was developed to create safe and modern schools, and address the aging facilities. The average age of the District's school buildings is 64 years old, and all schools are between 34 - 98 years old.

BUILDING A NEW ELEMENTARY SCHOOL COMPLEX

- Providing up-to-date school safety and security including secure building entrances, classroom door locking systems, and appropriate playgrounds.
- Safer and more efficient traffic flow during student drop-off and pick-up, and separate bus loop.
- Designing a modern elementary school building for pre-kindergarten through 5th grade students to replace the aging elementary school buildings, which average 70 years old. The new facility would be energy efficient and ADA-accessible.
- Creating age-appropriate classrooms and learning spaces with integrated technology and flexible furniture that inspire 21st century learning.
- Increasing District operational efficiency by consolidating four schools into one larger school with shared resources, which would provide equitable resources for all elementary students.
- Utilizing property that the District already owns. In 1995, the LASD Board of Education purchased property with the intention to later develop the site for a new school building. Now that our schools have aged beyond repair, the District is following through with that plan. A significant amount of the property would remain undisturbed.





EDUCATIONAL ENVIRONMENT

When visioning for this elementary school in the design workshop stage, stakeholders asked themselves “What is the future of education at Ludington?” and “What does the educational experience look like at Ludington?” The community and district connected on the following ideas that helped drive the project:

- Flexible to support the 21st century learner in 2021 and 2071.
- Safe and secure.
- Every student is motivated to influence their own learning path and success.
- Every educator is excited to work at LASD, is driven by the potential success of every student, and promotes the fun of learning everyday.
- More supportive of the needs of each student as a “whole” child.
- More collaborative
 - Between teachers
 - Between teachers and students
 - Between the school and the community
- Facilities that fuel community pride and reinforce that “We are all Orioles.”
- Students leave prepared to be leaders in the next generation workforce and connected to their community to keep talent in the region.
- Facilities that foster a cohesive culture.
- LASD will build quality facilities that are welcoming, professional, and a hub for the community.

VISION / DESIGN WORKSHOP(S)

16

Ideas that STICK

What is the FUTURE OF EDUCATION at LASD?

- Flexible to support the 21st century learner in 2021 and 2071.
- Safe and secure.
- Every student is motivated to influence their own learning path and success.
- Every educator is excited to work at LASD, is driven by the potential success of every student, and promotes the fun of learning everyday.
- More supportive of the needs of each student as a “whole” child.
- More collaborative
 - Between teachers
 - Between teachers and students
 - Between the school and the community
- Facilities that fuel community pride and reinforce that “We are all Orioles”.
- Students leave prepared to be leaders in the next generation work force, and connected to their community to keep talent in the region.
- Facilities that foster a cohesive culture.
- LASD will build quality facilities that are welcoming, professional, and a hub for the community.

Ideas that STICK

What does the EDUCATIONAL EXPERIENCE look like at LASD?

- Flexible to support the 21st century learner in 2021 and 2071.
- Safe and secure.
- Every student is motivated to influence their own learning path and success.
- Every educator is excited to work at LASD, is driven by the potential success of every student, and promotes the fun of learning everyday.
- More supportive of the needs of each student as a “whole” child.
- More collaborative
 - Between teachers
 - Between teachers and students
 - Between the school and the community
- Facilities that fuel community pride and reinforce that “We are all Orioles”.
- Students leave prepared to be leaders in the next generation work force, and connected to their community to keep talent in the region.
- Facilities that foster a cohesive culture.
- LASD will build quality facilities that are welcoming, professional, and a hub for the community.

Ludington believes that learning happens everywhere for everyone.

L ASD trained several coaches, who are now employees of Ludington Area Schools, whose sole responsibility within the organization is to coach staff in working through the matrix from becoming an entry level teacher that's just simply delivering content and meeting standards to really working with students and having them define what the methodology for their learning needs to look like. LASD is working with their staff and building the capacity within their own employees to do this work themselves and move them from being the teacher who's delivering content to more of a facilitator of learning, and doing it in an equitable way because students learn in very different ways.



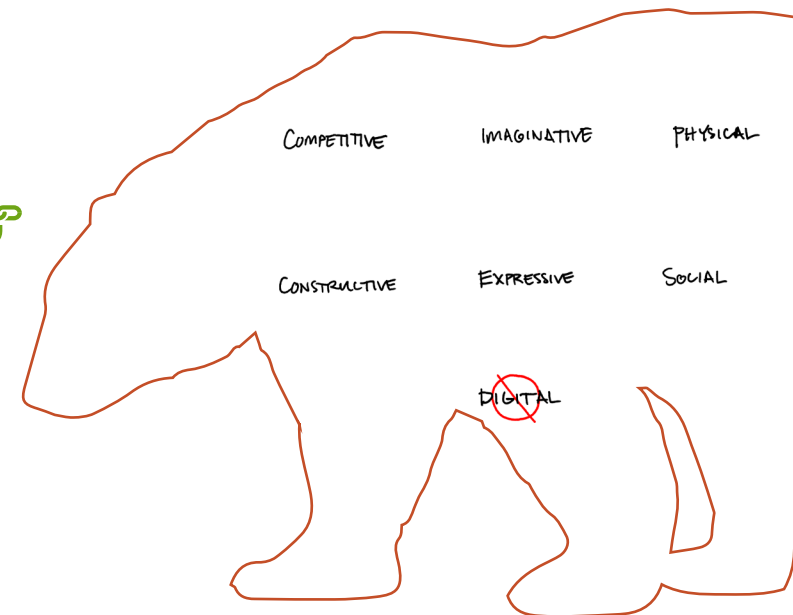
Supporting Curriculum

As part of the planning process, the design team collaborated with the district's board members, school staff, and the community through an extensive two-day Design Workshop to develop initial concepts about the student experience they wanted to create in the new school. The workshop created cohesion among the staff of the three buildings who were coming together, many for the first time, which helped foster collaboration when ideating new spaces and curriculum together.

LASD belongs to an association for supervision and curriculum development guidance that says that healthy, safe, engaged, supported, and challenged students do best when it comes to learning. They are also one of the few school districts in the state of Michigan that are [EdLeader21](#) members. EdLeader21 is the nation's first professional learning community (PLC) designed exclusively for district and independent school leaders committed to 21st century education. Ludington actively uses the four Cs model that focuses on critical thinking,

communication, collaboration, and creativity in their curriculum.

Additional features like flexible furniture, natural light, community spaces and comfortable calming spaces with functionality, enhance the curriculum. Cross discipline, cross functional, flexible, and collaborative spaces provide opportunities for teachers and students to learn and mentor each other as a part of the educational process. The new elementary spaces also encourage these types of play, which are important to the development of the whole child.



Active Teaching and Learning Experiment with Steelcase

It was important to the district to look at space design and how it impacts active learning practices in 12 different ways:

1. Collaboration
2. Focus
3. Active involvement
4. Opportunity to engage
5. Multiple means
6. In-class feedback
7. Real-life scenarios
8. Ways of learning best
9. Physical movement
10. Stimulation
11. Comfortable to participate
12. Enriching experience

Steelcase allowed Ludington to conduct a pilot program with one of their classrooms to see if the 12 practice areas would be impacted by simple actions within the classroom. Steelcase researchers worked directly with an elementary teacher to redesign her entire classroom. The teacher in the classroom saw multi-fold improvements in how students were engaged with learning and how they participated in the learning process. Students who traditionally did poorly in the teacher's classroom set up in the traditional way

prior to this pilot, with the introduction of active learning principles, flexible furniture, etc. saw significant gains, almost one and a half standard deviation of improvement. This experiment demonstrated that **Place Matters** and shows an alignment of teaching and learning with the physical environment.

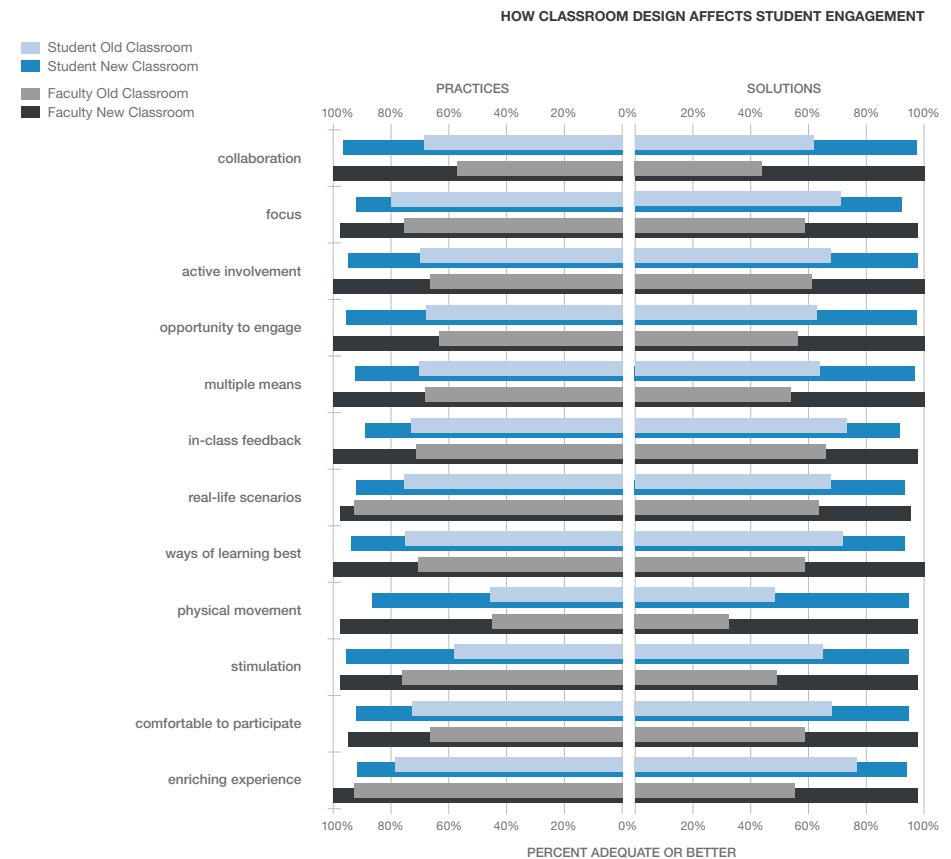
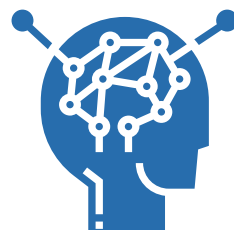


Figure 4: Analysis of Individual Survey Items (n=386 Students, n=42 Faculty)

2) The majority of students rated the new classroom better than the old classroom on each of the 12 factors. For all of the items in both sections of the evaluation, the differences between old/pre and new/post ratings were highly statistically significant ($p < 0.001$) for both faculty and students. (See Figure 4)

3) Overall, active learning practices and the impact of the physical space significantly

improved in the new classrooms for both students and faculty.

In the practices section, average composite scores rose from 23.2 (old/pre) to 34.2 (new/post) for students, and from 24.0 (old/pre) to 37.3 (new/post) for faculty. In the solutions section, average composite scores rose from 21.8 (old/pre) to 35.5 (new/post) for students and from 19.1 (old/pre) to 38.8 (new/post) for faculty. (See Figures 5 and 6)

4) The majority of students and faculty reported that the new classrooms contributed to higher engagement, the expectation of better grades, more motivation and more creativity. A large majority of students self-reported a moderate to exceptional increase in their engagement (84%), ability to achieve a higher grade (72%), motivation to attend class (72%), and ability to be creative (77%). Almost all faculty members reported a moderate

Access to Outdoor Learning

All the classroom wings connect outside through covered outdoor learning areas to the playground to encourage outdoor learning and play. There is also an additional outdoor learning space with corridor access that features overhead garage doors in several classrooms that open to the outside.



Learning Beyond the Classroom

Recognizing that learning doesn't happen only in the classroom, Ludington Elementary was designed with outdoor learning areas, dedicated extended learning areas, and niches in the corridors that function as an accommodated learning space. Technology options are available in every space, alongside a variety of furniture options with mobility for easy set up based on learning event. Learning environments come in a variety of different sizes to accommodate changing needs and group sizes. Larger learning environments beyond the classroom —STEAM, art room, media center — foster engaged learners and provide opportunities for collaboration within and between grade levels.



Giving Students a Voice

It was critically important to give students a voice in this discovery process. The district incorporated the design of a building into their curriculum and were engaging students at all grade levels. Teachers were using some of the architectural principles and some design principles with their students to help them design what they felt like was an ideal learning environment. This process demonstrates a **Learners First** culture and environment that recognizes the importance of student experience and places their needs as the top priority.



Adaptable and Flexible Environments

The new elementary school spaces are designed to be flexible and transitionally appropriate for each age group. To help alleviate the large complex feel, the team deployed an innovative design to break down the classroom wings into smaller, grade-level centered neighborhoods that feel more

approachable to an elementary student. Extended learning areas and cozy nooks throughout the building reinforce the idea that learning can happen anywhere on campus. Built-in nooks were designed within the walls outside the media center and in corridors, as well as window seats in the classrooms, an amenity for

quiet, calm down, or individual space within the classroom without taking up square footage. These extra areas provide opportunities for students to find their place and help propel the district in a new direction around collaborative learning.



One of the main guiding principles for this project from the start was “Planning For Flexibility: Proliferate the efficient, adaptable, fluid variety of place to inspire growth and stimulate education for the present (2021) and the future (2071).” The Transformation Think Tank that was created during the pre-bond phase identified their top priorities for the changes they would like to see in learning environments at Ludington. Their top request was to include flexible furniture for students and teachers that is adaptable to their daily needs.

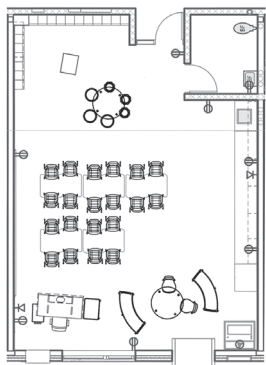


Ludington Area School Think Tank Committee Priorities list

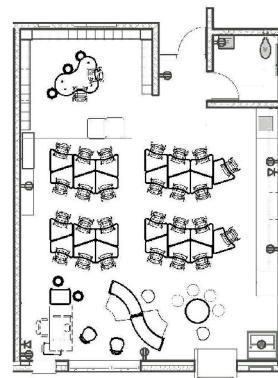


In an effort to help facilitate discussions about possible changes within the learning environments of Ludington Area Schools, the Think Tank Committee shared and discussed elements of physical spaces and programs after several site visits facilitated by CBD Consulting. The lists below are elements they feel are important to explore for LASD. This list of priorities was developed by the LASD Think Tank Committee on 2/22/18.

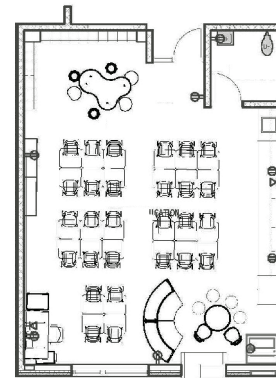
Physical Spaces List	Votes
Flexible furniture; student and teacher furniture are movable and varied	31
Natural lighting	14
Community Center	13
Comfortable, calming spaces that are functional not flashy	10
Extra spaces for students to collaborate/work; breakout spaces	9
Community Involvement	9
Open spaces with fewer items (posters, student work) on walls	7
Maker spaces	7
Lots of writing areas; whiteboards, glass, etc.	7
Improved security; front door access, key cards	5
Students up and moving a lot	4
Double door entry to classrooms	4
Ask teachers what they need before it is designed	4
No front of room	3
Spaces large enough to flex, move, collaborate	3
Smaller teacher desks	1
Shared/collaborative spaces for teachers	1
Glass walls	1
Cafe style cafeteria	1
Quiet spaces	1
No teacher desk	1
No lockers	1



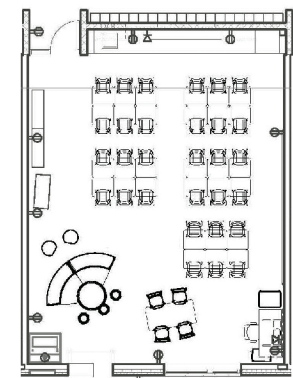
Typical Preschool
Classroom



Typical Kindergarten
Classroom



Typical 1st - 3rd Grade
Classroom



Typical 4th and 5th Grade
Classrooms

RESULTS OF THE PROCESS & PROJECT

Ludington's new elementary creates operational efficiency for the district through the consolidation of four lower elementary and pre-kindergarten buildings into one facility with shared resources. The resulting facility achieves one of the main guiding principles for the project of "Enhancing The Learning Experience: Encourage a collaborative relationship among students, faculty, staff, and neighbors by creating places for cross-curricular opportunities, exploration and interaction that is age appropriate and fun." These resources foster equity in learning environments and access for all of Ludington's youngest students.

The new elementary has also had a positive impact on the school culture. Using the land and its connection to Native American culture, each neighborhood has an identifiable animal to connect to and identify with. Each animal was chosen specifically through feedback from the local indigenous tribe. This feeling of

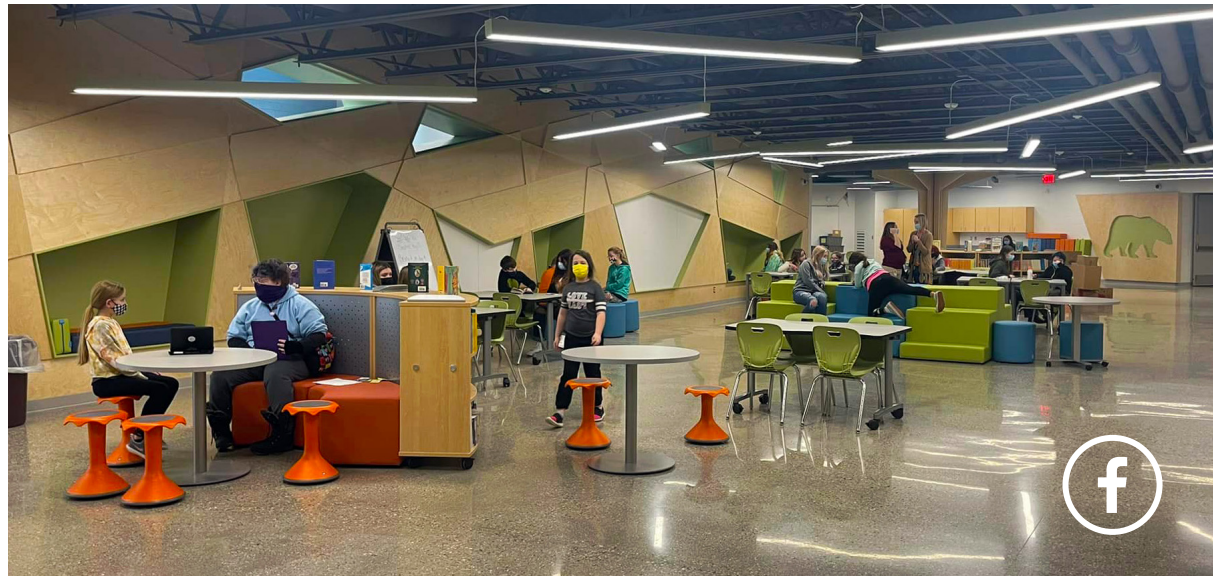


belonging fosters student connection to the physical environment and smaller grade level community while also serving as a way-finding strategy for the overall school community.

The Ludington Elementary's social media shared how they are successfully using the school's intentionally designed extended learning areas to promote collaborative learning in new ways



This is one of our beautiful extended learning areas in action. Mrs. Rowe's child development class from the high school is working hard with some 4th graders!



Student Safety a Top District Priority

Another guiding principle that states, “Prioritizing Student Safety: Build layers of security while reinforcing a welcoming community that supports the whole child,” has been fulfilled by this project.

Student safety was a large focus for the district, and this facility was designed with multiple layers of security while continuing to reinforce a welcoming community that supports the whole child. The building is equipped with electronic hardware (no physical keys) which allows for more efficient access control and monitoring of the building, which can be locked down with the push of a button. Each neighborhood is also equipped with a set of security doors that can be locked down individually as another layer of protection as well. Transparency between classrooms and adjacent extended learning areas is limited to allow for secure shelter in place options and is used strategically to allow for classroom monitoring when needed. The creation of secure entrances and connected welcome lobbies (one for Pre-K and one for all other students) prevents visitors from accessing the rest of the building.

LASD took safety to a new level and engaged in a meaningful safety simulation training called an Active Shooter & Hostile Response (A.S.H.E.R.) Drill. Nearly 250 members from law enforcement, first responders, local community members, and staff from all school districts in Mason County participated in an active shooter simulation held at the new Ludington Elementary School. Three different drills were performed to test reaction time, establish a safe environment, and simulate helping the injured. This type of training proved the importance of testing an emergency response plan in conjunction with providing insight into any weaknesses or blind spots within the plan and building design.



All 2,000 students at Ludington, I view as my own kids. I want to know that they're safe.

- Kyle Corlett, Superintendent
Ludington Area School District



Functional Improvements

This bond proposal was developed as a part of the district's strategic plan and long-term master plan for school buildings and sites. The State of Michigan defines the useful life of a school building at 40 years, and Ludington's school buildings ranged between 54 - 94 years old. Many core infrastructure systems had outlived their expected life cycles and the district had done as much preventative maintenance as possible. For the elementary school, the new building achieved several functional district goals that included:

- Safer and more efficient traffic flow during student drop-off and pick-up
- More energy efficient building
- ADA-accessible



Achieving Community Goals

The centralized facility promotes community engagement with multiple spaces for the community to access, which speaks to another guiding principle, “Fueling Community Culture: Creating a facility that is a hub for the community fostering inclusion and encouraging relationship building will promote a sense of community pride.”

The Ludington community wanted a place for gathering and large spaces, like the cafeteria and gym, can accommodate events outside of school hours. Nestling the facility in the surrounding forest with bike trails, outdoor play areas, disc golf course, and access to restrooms created another opportunity for the community to utilize the property like a community park.



Unintended Results

The site itself is unique not only for the natural landscape encircling the property, but also for its historical significance and context. The land contains an ancient Native American burial ground, so during the groundbreaking ceremony, the team invited the Little River Band of Ottawa Indians to do a traditional smudging ceremony over the property. The location of the built facility is not impacting any of the mound sites and the district continues to work to create a partnership between the school and the Native American Indian tribe to make the site an educational experience. Their partnership demonstrates a **Respect** for new ideas and embraces diverse perspectives of the local community. They also intend to create an educational space that helps the community understand the impact of the people that inhabited the land prior to the district.

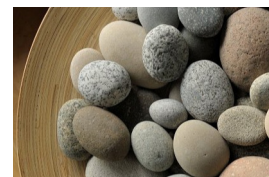
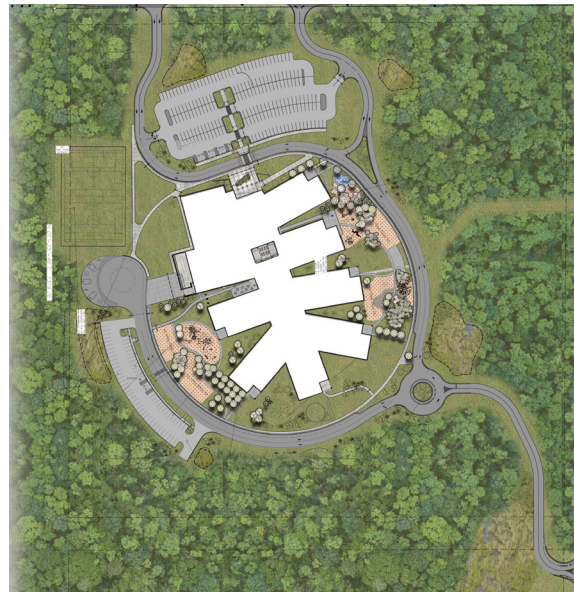


PHYSICAL ENVIRONMENT DESIGN

To help alleviate the large complex feel, the team deployed an **Innovative** design to break down the classroom wings into smaller, grade-level centered neighborhoods that feel more approachable to an elementary student. All the classroom wings connect immediately outside to the playground area from the extended learning areas, and the entire property is surrounded by forest, trails, and natural space. Each wing of the building provides a direct connection to the outdoors, buffered by a playground for safety and supervision, to encourage outdoor learning and play. All of the shared amenities and special programs are organized along a center spine that connects all the neighborhoods together, creating a clear wayfinding path and circulation loop around the building. Through a planning and architectural design lens, the scale of every element and space was thoughtfully considered for the students and teachers inhabiting the building.



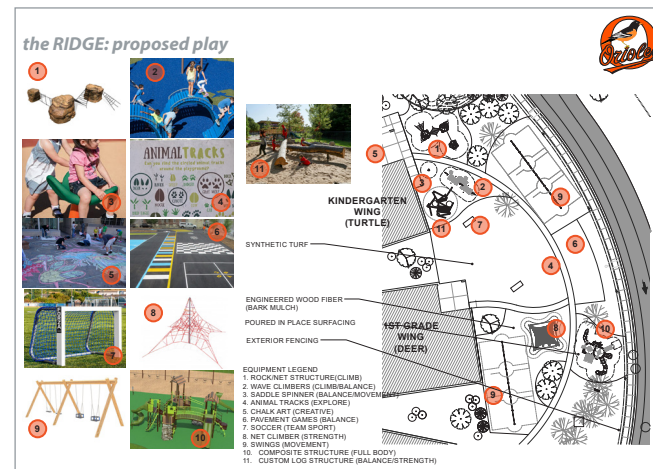
selected **Finish Palette**



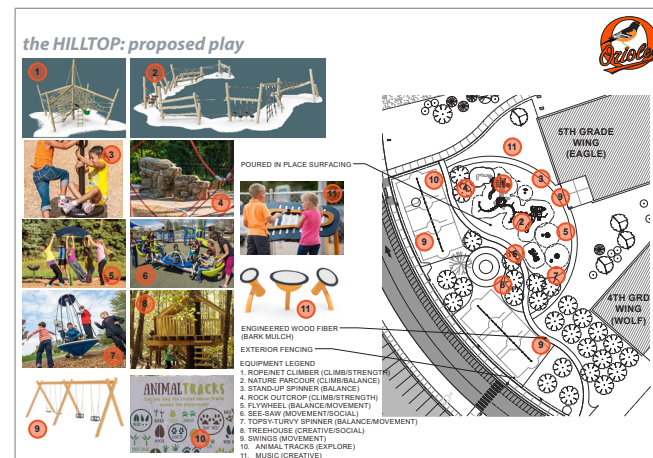
the FEN



the RIDGE



the HILLTOP





Technically, there are no corridors in the entire building, as everything is considered an extended learning area, yet compartments are thoughtfully broken down and egressing and exiting occurs in a natural flow. The extended learning areas provide opportunities for students to find their place and help propel the district in a new direction around

collaborative learning. Built-in nooks were designed within the walls outside the media center as well as window seats in the classrooms, presenting ways for students to find their niche in a big building and to provide that amenity for quiet, calm down, or individual space within the classroom without taking up square footage.



The land the elementary occupies contains an ancient Native American burial ground, and the team saw an opportunity to connect the school to that history as well as connect the community to the people who lived there long ago. The native history was also woven into the

building, connecting a modern structure with the community and deep history that came before. Each of the classroom wings is like a micro-community within the building, and were therefore each given an identity, naming them after an animal that was important to the Native American tribe and

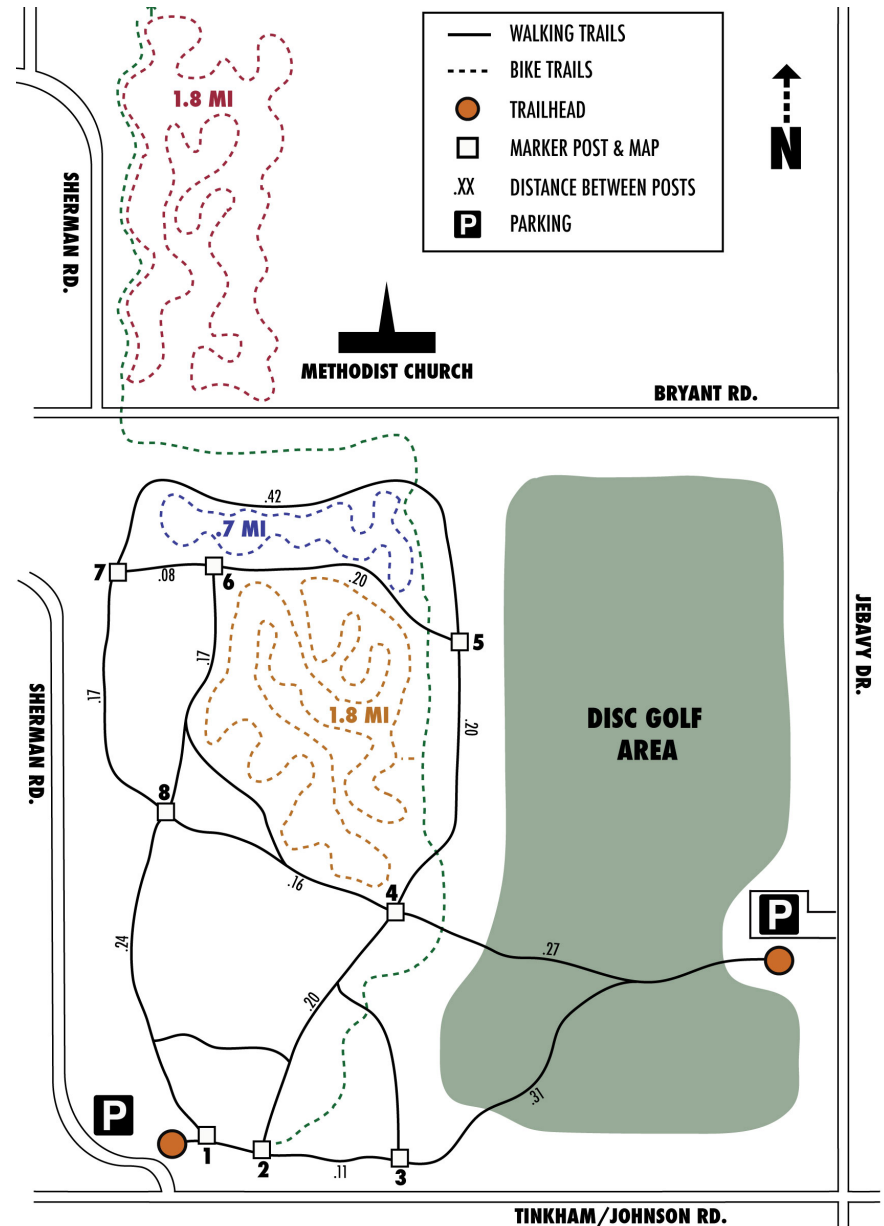
the land. Motifs, colors, wayfinding signage, and community embellishments all tie to animals native to the area, from the owl to the wolf to the bear, and connect to the school's grade levels.





This new facility creates a hub for the community, fostering inclusion and encouraging relationship building that promotes a sense of community pride. Nestling the facility in the surrounding forest with bike trails, outdoor play areas, a disc golf course, and access to restrooms created an opportunity for the community to use the entire property like a park.

Local foresters created a forestry management plan with the Manistee and Mason-Lake Conservation District for the property, clearing some invasive species and thoughtfully creating trails throughout the wooded area and planting native shrubs and trees on the grounds. The Michigan Department of Natural Resources was also involved in creating a stewardship plan for the forest and wetlands on site.



Trail/Disc Golf Map on site of elementary school



The mission of Ludington Elementary School is to inspire a passion for learning in all students through positive relationships, focused instruction, and encouraging growth mindsets. This facility helps Ludington achieve this mission because of the robust project planning process that fostered an environment of **Justice, Equity, Diversity and Inclusion** between all stakeholders and community members. New teaching and learning styles, encouraged by the district and adopted by the educators in this school, have motivated students to engage in new ways of learning.

The Ludington Elementary School has been recognized as an award-winning project that will inspire other education leaders by the following organizations:

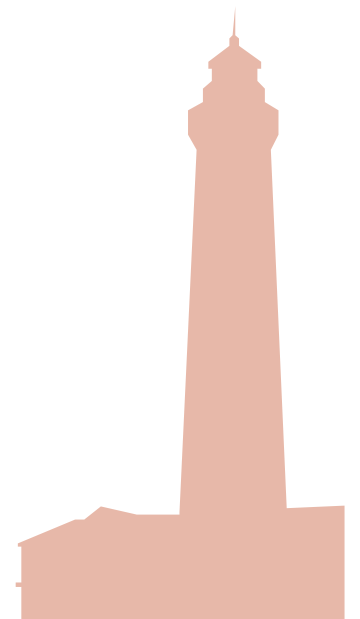
- American School & University 2022 Outstanding Design Award
- Learning by Design 2023 Outstanding Project Award

The project has also been featured in Education Snapshots, Learning by Design Magazine, and School Construction News.



The opening of Ludington Elementary School has been an amazing experience for our staff, students, and community! We are beyond fortunate to be able to provide our students with the best education in state-of-the-art facilities. Uniting four buildings into one has allowed greater opportunities for professional collaboration across the various grade levels as well as the opportunity to foster peer mentoring and buddy classrooms. While Ludington has always been a desired place to work, as educators, it's a once in a lifetime opportunity to work in a brand-new building. We thank our community for supporting the education of its students!

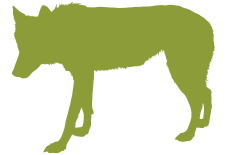
- Katie Eisinger, Elementary Principal



SUSTAINABILITY AND WELLNESS



Ludington Elementary students have experienced a true transformation from the district's previous, decades-old facilities to the updated and energy-efficient new school. The new school was designed to meet the Michigan Energy Code, which reduces energy consumption and supports the state's climate and sustainability goals. A complete set of advanced lighting controls including vacancy-sensing, partition sensors, and daylight harvesting helps to ensure that energy use is kept to a minimum. High-efficiency systems, like a condensed water chiller system and building envelope materials, promote energy-efficiency throughout the facility.



In line with the guiding principle of "Promoting Stewardship: Seeking opportunities to embrace natural site conditions, to highlight its beauty enhancing connections to the outdoors for students to build awareness of sustainable thinking in a global context," the use of simple materials was paramount. Polished concrete in high traffic areas is complemented by versatile carpet tiles that are cradle to cradle certified, which means the products are safe, circular, and responsibly made. This certification takes a comprehensive and holistic approach to

sustainability, considering not only environmental factors but also social and economic elements. Carbon neutral painted block for durability in public spaces and drywall partitions between classrooms and will allow for potential flexibility in reconfiguration now and in future. The lay-in ceiling panels have high a noise reduction coefficient (NRC) of 0.75 for acoustical comfort in learning spaces, are manufactured with 48% recycled content, and are GREENGUARD certified, which means the product has been tested and evaluated to meet stringent chemical emissions limits.



A strong connection to the outdoors through garage door openings, soft furniture that mimics natural elements, and animal motifs connect the elementary students to nature. Lots of natural light and transparency throughout the facility, coupled with direct outdoor access, encourages students to learn hands-on and engage with their natural surroundings. Outdoor play improves children's sensory skills, cognitive and social/emotional development, and increases attention spans, which creates a positive environment for successful learning [\(source\)](#). An indoor rock-climbing wall in the gymnasium also promotes the development of gross motor skills and complements the concept of integrating indoor and outdoor play.

