



# *Milwaukee German Immersion School*

Conceptual Schoolyard Redevelopment Plan

*December 2021*

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German Immersion Foundation  
Heatherscape Design Support, LLC  
Fred Kessler

KinderCamp  
MGIS PTA  
Rutter's Automotive

## Special thanks to those supporting the schoolyard redevelopment planning:



Kevin Shafer  
Bre Plier  
Lisa Sasso  
Jay Feiker

**Conceptual  
Planning Sponsor**



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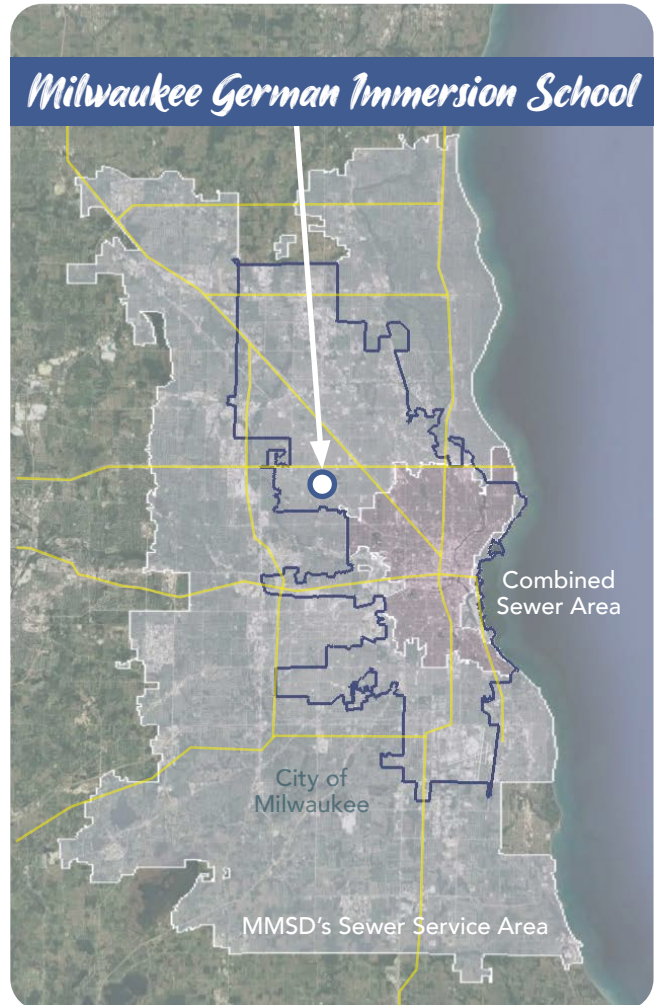


Existing schoolyard at Milwaukee German Immersion School

## Introduction

Impervious surfaces (hardscapes including asphalt and concrete) characterize so much of our built environment that we no longer even notice how they shape the contours of our urban communities. Excessive imperviousness leads to sewage overflows and basement backups, degrades the quality of our rivers and lake, and costs us millions each year in economic losses and infrastructure repair, all of which deter investment and impede socioeconomic progress. Schools surrounded by seas of splintering asphalt offer opportunities to replace imperviousness with beautiful, nature-inspired landscapes that increase urban biodiversity, educate, and inspire.

Through funding provided by the Milwaukee Metropolitan Sewerage District and the Fund for Lake Michigan, the nonprofit Reflo and its partners collaborate with five schools annually to develop conceptual schoolyard redevelopment plans that holistically address the issue of each school's imperviousness. This document compiles over a year of conceptual planning in order to provide a single, feasible vision for redeveloping a greener, healthier schoolyard. These projects also provide a multitude of STEAM (science, technology, engineering, arts, and mathematics) curricular connections as well as triple-bottom-line (social, environmental, and economic) benefits for the students, school, and community.



# School Story

Milwaukee German Immersion School (MGIS) is a K4 through grade 5 elementary school founded by Milwaukee Public Schools in 1977. As the largest public German Immersion program in the nation, we provide a safe, nurturing, and highly stimulating environment. We serve as a city-wide school to attract children from all parts of the Milwaukee area with our innovative total language immersion program that challenges our students and provides them the foundation to becoming true citizens of the world.

Immersion programs involve students in the use of the second language for communicating in normal everyday situations and in subject content learning. The immersion approach to language learning makes bilingualism an attainable goal and provides exciting opportunities for children to gain deeper insights into themselves, other

ways of thinking, and self expression. These learning experiences support children's verbal creativity, develop problem-solving skills, and build a greater knowledge and appreciation of other cultures.

MGIS has a dedicated staff and welcomes parent involvement and community partnerships. We provide opportunities for our families to be actively involved in creating a purposeful and productive environment for everyone to enjoy. This plan to convert German Immersion's asphalt-heavy playground into a nature-inspired landscape will increase our urban biodiversity and result in a transformed schoolyard that becomes a destination for our students and community and represents a stronger connection to German culture and educational methodologies taught by our sister schools across the globe.



## *Milwaukee German Immersion School*

3778 N. 82nd St.  
Milwaukee, WI 53222

- Milwaukee Public School
- Grades: K4 through 5th
- 594 students
- 31% economically disadvantaged
- 8% special education
- Separated sewer area
- Milwaukee River watershed

# 2



## *Conceptual Redevelopment Plans*

On an annual basis, the nonprofit Reflo and its partners, with the support of the Milwaukee Metropolitan Sewerage District (MMSD), works through the Green Schools Consortium of Milwaukee (GSCM) to select and collaborate with schools that are interested in redeveloping their schoolyards. Planning efforts incorporate creative applications of stormwater green infrastructure, outdoor educational elements, and other features that improve the social, environmental, and economic health of the school and community. With the approval of school and district administrators, schools apply for and are selected to receive conceptual planning support. The over year-long collaborative planning process has resulted in the production of this

conceptual planning document, which is intended to guide the multi-year redevelopment.

German Immersion's conceptual plan includes many stakeholder perspectives including those of students, parents, teachers, administrators, maintenance staff, neighborhood residents, and project partners. The plans are intended to be feasible and to support the school's and project stakeholders' needs and interests. Significant care was taken to consolidate project ideas and coalesce around one unified project vision. As the project progresses through the fundraising and detailed design phases, project components will be further defined and best fit to the amount of funds raised.

*This project will help us align the outdoor environment with the culture and heart that is MGIS. The redeveloped spaces will help students learn and provide a welcoming gathering area for students, families, and the broader school community.*

**Anthony Downing – Parent**

# Network of Support

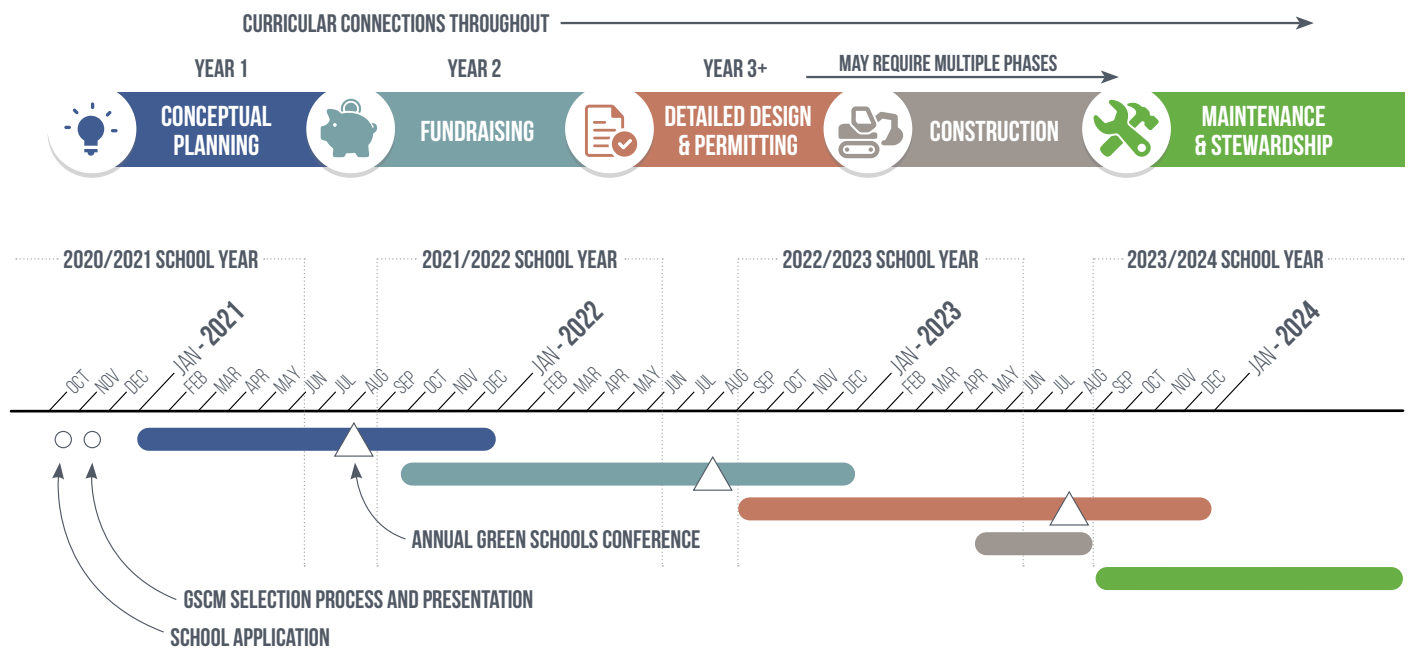
The GSCM is a local network of practitioners, agencies, and funders that are committed to supporting greener, healthier schools and ecoliteracy in the Milwaukee area. The GSCM gathers on a bimonthly and annual basis to share resources and lessons learned. The 5th Annual Green Schools Conference hosted more than 300 participants and over 60 exhibitors. Each year the GSCM also hears from schools that are interested in schoolyard redevelopment projects and collectively decides which projects to support, in part, based on need and enthusiasm.



# Project Development Process and Timeline

The following process diagram and timeline visualizes the major project development phases that a typical schoolyard redevelopment project in the Milwaukee area undertakes when supported by Reflo and the Green Schools Consortium of Milwaukee. The process begins in October with schools applying to receive a conceptual planning grant provided by Reflo and the

Milwaukee Metropolitan Sewerage District. Schools that advance to the second stage are then asked to present to the GSCM's Project Selection Committee on their need and enthusiasm. Following the selection, five schools are awarded the planning grant and begin the conceptual planning process with monthly Green Team meetings starting in January the following year.





## Stormwater Green Infrastructure

Green infrastructure is a strategy that diverts stormwater runoff from entering the sewer system and **manages stormwater where it falls** through a more sustainable means, mimicking natural water systems. Green infrastructure can also provide creative opportunities to incorporate STEAM (science, technology, engineering, arts, and math) concepts in student learning and promote community engagement. The school grounds currently contribute a significant amount of stormwater runoff that can lead to area flooding and impaired water quality for our rivers and lake. The conceptual redevelopment plan includes multiple green infrastructure strategies to manage as much stormwater as feasible on the school grounds.

MGIS's conceptual plan calls for removal of approximately **66,700 sq. ft.** (1.5 acres) of asphalt and replacing it with new green space and mixed-use recreation and educational areas. An outdoor classroom complete with stage and performance area and several informal learning areas are planned throughout the schoolyard. Raised bed gardens, bioswales, porous pavement, and the addition of 70 stormwater trees are also included in the plan. The inclusion of a variety of native plantings allow for unique spaces on the schoolyard that can represent natural Wisconsin ecosystems, complete with student-created signage. The plan manages approximately **264,190 gallons** of stormwater per rain event.

*Our current schoolyard reflects a lot of heat and ices over in the winter. I am so excited for our school to enjoy more green and shady spaces, to offer outdoor learning activities combined with natural toys, musical instruments, art, and to be able to run around and play in nature because of this project!*

**Natascha Nill – 5th Grade Teacher**







## Asphalt Removal

Hard surfaces like asphalt and concrete are the primary sources of stormwater runoff. Replacing hardscapes with more porous landcovers and other types of green infrastructure helps infiltrate stormwater into the ground and prevent it from running off into the sewer system. These changes promote better stormwater management, reduce the heat island effect, improve social-emotional outlook, improve urban habitats, and increase biodiversity.



## Bioswales

Bioswales typically capture polluted stormwater runoff from roads and parking lots, infiltrating that water into the ground and cleaning it naturally. They are planted with vegetation that helps to soak up and clean the polluted runoff. They can be installed as meandering or straight channels depending on the land that's available, and are designed to maximize the time rainwater spends in the swale.



## Stormwater Trees

Trees reduce stormwater runoff by capturing and storing water, improving water quality by decreasing the amount of pollutants that enter rivers, streams, and lakes. Tree roots help slow down and store runoff, which further promotes infiltration into the soil, decreasing erosion and flooding events. Stormwater trees also improve air quality, reduce urban heat island effect, increase habitat for wildlife, and provide recreational and aesthetic value.



## Native Plantings

Vegetation native to Wisconsin has adapted to the region's climate and soils. Native plants typically have deeper root systems that help them withstand both droughts and heavy rains and also allow for greater stormwater infiltration. These native plant sensory gardens also promote biodiversity and provide habitat for pollinator species.



## Outdoor Education and Healthy Food Access

As illustrated in the infographics produced by Children & Nature Network and Cream City Conservation Corps (found in the Planned Curricular Connections section of this document), access to outdoor classrooms on school grounds can significantly **enhance learning** outcomes and social-emotional well-being. Raised bed gardens also offer the opportunity to provide low-cost, **healthy food** options to students, their families, and the surrounding communities. Successful Green Teams use school gardens as **educational opportunities** to explore topics such as water and life cycles, ecosystems, economics, geometry, conservation, and social studies.

Milwaukee German Immersion School's schoolyard redevelopment includes an **outdoor classroom** complete with seating and materials to support outdoor learning. A shade structure will cover the stage and performance area while nearby green infrastructure including stormwater trees, bioswales, and native plantings also serve as unique learning spaces. **Raised bed gardens** will provide pollinator habitat and enhance the school's garden-based lessons. **Interpretative signage** throughout the schoolyard will support student-curated tours and encourage learning through self-guided exploration.

**Green schoolyards promote academic achievement through hands-on, experiential learning and by enhancing the cognitive and emotional processes important for learning.**

*A new creative, healthy, green space will provide opportunities for students to lead their own discoveries and provide much needed breaks from structured learning time. I'm excited for the possibilities this plan provides for outdoor learning and student engagement!*

**Melanie Buenning – Parent**





## School Gardens

School gardens range in scale from the typical 4-by-8-foot raised bed garden, to hoop houses, to larger-scale greenhouses. Milwaukee-area schools have successful demonstrations of each scale of school garden and are best sized based on the interest level and capacity of the school's Green Team to manage the gardening operations.



## Healthy Food Access

Some communities do not have easy access to low-cost, healthy foods. On top of providing engaging outdoor learning opportunities, school gardens are excellent opportunities to provide fresh, locally grown produce. Culinary arts lesson plans and tasting programs can demonstrate how healthy food can also be tasty food.



## Culturally Relevant Curricular Connections

Developing lesson plans that are culturally relevant to students can help to create a sense of inclusiveness and promote positive learning outcomes for all students. For example, school gardens can include a diversity of crops that support exploration of different cultures and can demonstrate that food production is an important component of all cultures.



## Outdoor Classrooms and Interpretative Signage

Outdoor classrooms can include natural green space and/or built shade structures. Seating and shade elements are common design features to accommodate longer class periods outdoors. Interpretative signage can serve to engage local artists and support learning not only by students, but also by the surrounding community.



Professional local artist Reynaldo Hernandez with students from Parkside School for the Arts during an unveiling of the new outdoor murals they created together at the school.



## Arts and Community Engagement

The arts can be a simple yet profound way to address **educational equity** in our communities. Through the use of arts-enhanced and arts-integrated classroom methodologies, teachers can implement strategies that support curricular connections, maximize student engagement, and further academic success. Green and healthy themes can be explored through visual and performing art forms as students build their knowledge, investigate human impacts on the environment, analyze perceptions, and enhance personal connections to the natural world.

Green and healthy schools provide a unique opportunity to support the development of **social-emotional learning (SEL)** through the integration of the arts and environmental education. Arts @ Large and Milwaukee Public Schools are committed to designing programs that promote SEL while creating supportive learning environments that address the needs of the whole child. School staff receive training about the impacts of trauma, explore ways to meaningfully **engage families**, and support youth through experiential learning to better position them for potential future careers.

**Natural areas promote child-directed free play that is imaginative, constructive, sensory rich and cooperative.**

*Our new playground will add to our 21<sup>st</sup> Century Learning Curriculum at Milwaukee German Immersion School. Not only will the innovative playground provide our children a deeper cultural understanding of the links between their own lives and those of people throughout the world, but will enhance our global environmental influences which shape all of our lives.*



**Herr Lammers – Principal**



## Social-Emotional Learning

The arts can be an incredible vehicle to model best practices in Social-Emotional Learning (SEL). SEL is the process of developing fundamental skills for life success within supportive, participatory learning environments. These skills include recognizing, managing emotions, setting/achieving goals, feeling/demonstrating empathy for others, establishing/maintaining positive relationships, and making responsible decisions.



## Visual Arts

The use of visual arts strategies in the classroom can lead to greater engagement and deeper learning by the student. When paired with a project such as a schoolyard redevelopment, the works of art created by the students will not only beautify the space, but also provide a sense of ownership and accomplishment to celebrate with the students and their families. With the visual arts, the invisible becomes visible!



## Performing Arts

The performing arts can be an incredible tool to activate spaces within the school environment. Theatrical performances and activities are a great way to explore a space and learn how to create meaningful interactions between students and nature, develop empathy for other forms of life, and learn to embrace sustainability as a community practice.



## Exhibition

Creating student-led exhibitions is a great way to build an understanding of how nature sustains life. Through research and design, students can learn from content experts and share their experiences and knowledge through docent-led exhibits.



Rendering of Milwaukee German Immersion School's conceptual schoolyard redevelopment by CDS



## Recreation and Other Site Improvements

Naturalized spaces provide opportunity for cooperative play and help children **develop resilience** skills as they navigate novel environments and encounter new challenges. Well-supported and engaging recreational opportunities can also help increase attention spans, improve social-emotional learning, and encourage team building. Creative applications of **visual arts** on walls and ground coverings can help guide students in independent and group physical fitness activities. These recreational improvements can enhance critical thinking and problem-solving skills, reduce instances of childhood obesity, and promote other **positive health outcomes**.

MGIS's conceptual schoolyard redevelopment plan includes a **grass soccer field**, gaga ball pits, nature play areas, and colorful asphalt markings. The plan calls for **balance features** to support gross motor development and the addition of musical instruments to provide a variety of play experiences. To increase accessibility to the schoolyard, **artistically designed** benches are intended to help beautify the space and provide areas for rest. Significant thought was put into the flow of how students move through the various spaces with special consideration to include elements that align with German culture and curricular connections.

**Meaningful, positive experiences in nature guide children, youth and adults toward care for nature.**

*Our connection to German culture lends itself to provide learning opportunities in outdoor spaces. I teach outside most of the year already. The ability to add new and safer learning experiences excites me. Our kids all deserve to have an engaging, safe outdoor space to play.*

**Eric Arndt – Physical Education Teacher**





## Nature Play

The incorporation of balance beams, loose parts, boulders, play mounds, and other nature-inspired features encourages imaginative, cooperative free play as students work together to explore their environment. These naturalized play features support the physical, social-emotional, and motor skill development of youth while promoting creativity and critical thinking.



## Outdoor Recreation

Green schoolyards support a wide range of recreation activities that provide additional opportunities for student choice compared to traditional schoolyards. Youth may participate in quiet, solitary explorations or opt for organized group play. Varied recreation components allow children to build cooperation and negotiation skills and strengthen the connection between play and learning.



## Game Play

Organized game play can provide students with the structure and support needed to approach challenges with confidence and build negotiation skills. Popular playground games like hopscotch and four square are often maintained while new games are also introduced through structured play activities. Youth are encouraged to experience the green schoolyard through free play and create new games led by their curiosity and imagination.



## Mindfulness

Mindfulness practices encourage us to be present, attentive, and accepting. They provide an opportunity to learn how to be peaceful and kind while also reducing anxiety and promoting happiness. Areas designed for quiet play, sensory exploration, and reflection help students build self-awareness and emotional regulation by connecting with the natural world.

# 3



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PREPARING AMERICA'S STUDENTS FOR COLLEGE & CAREER

## Planned Curricular Connections

It is important that the schoolyard redevelopment include plans for actively using the redeveloped space. This section provides a high level overview of how Milwaukee German Immersion School plans to make the most out of the new schoolyard components and connect the exciting redevelopment into the curriculum.

The new outdoor green spaces offer exciting opportunities for learning from K4 through 5th grade. Students will experience inclusive, hands-on learning in natural areas while supporting their academic, physical, and social-emotional growth and development and drawing meaningful connections to the arts and German culture. Our school community will be inspired to extend

learning in the outdoor environment exploring spaces designed to support curiosity and sensory experiences in nature.

Our dedicated staff and active Parent Teacher Association (PTA) provide the foundation to foster parent involvement in learning and social activities at school. We envision that the new outdoor green spaces will help support relationship-building within our school community, enhance learning experiences for students, and engage families in educational and recreational activities that help strengthen the bonds within the Milwaukee German Immersion School community.

*Our school is committed to teaching about our environment and how to protect it. These improvements will make that possible right on our own new green space. It is an amazing opportunity to incorporate German language and cultural elements in the schoolyard, and will likely help increase enrollment and attract new families to join MGIS!*



**Martina Varelis – Paraprofessional**



## STEM Connections

With a variety of native plants and ecosystems right on school grounds, our children will learn firsthand about the living requirements of different organisms and their interconnected relationships. Students will be able to compare and contrast native Wisconsin plant species to those native to Germany. Students will study **plant life cycles** and investigate species interactions by observing pollinators such as monarch butterflies, birds, and other urban wildlife to learn the importance of pollinator species in maintaining the health of our green spaces.

GartenKlub and KinderCamp members will help **plant, maintain, and harvest** vegetables grown in the raised bed gardens and provide gardening support throughout the school year and into the summer season.



The green outdoor spaces will also support **weather, climate, and water cycle** studies with ample opportunity for students to put their math learning into practice on the schoolyard. Children will identify shapes in the environment, count, estimate, and measure the growth of plants, and investigate living examples of **geometry, symmetry, and patterns** that will support math curriculum.

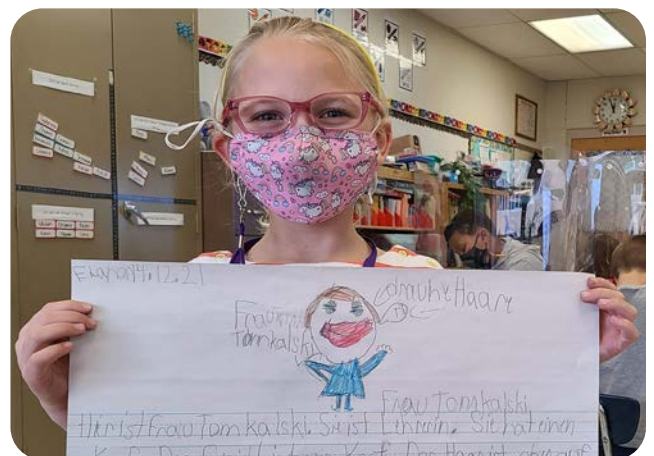
Shapes found in nature can provide inspiration for building structures and reinforce design elements observed in classic architecture. In addition, a favorite **measurement** activity demonstrating the scale of the Titanic ship will now be conducted outside, drawing cross-connections to social studies, engineering, and mathematics concepts.

## Literacy and Language

The redeveloped schoolyard offers many opportunities to enhance our students' literature and language skills. Students will be able to **develop language and speaking skills** as they explore nature on the playground. Children will be encouraged to observe and make direct connections with their environment to help internalize new **vocabulary** as they are engaged in hands-on experiences on the schoolyard that will enhance their learning and comprehension in both languages.



Schoolyard play features and colorful design elements will also help reinforce connections to traditional **German literature** such as the story of Pippi Langstrumpf (Pippi Longstocking) and the importance of play as an integral part of the learning process. Interpretive signs will help communicate scientific concepts in both English and German languages to promote an inclusive school community and support our immersion programming. In addition, the natural environment will provide inspiration for creative and informational writing, poetry, read alouds, and **journaling** while the stage and performance area will provide a backdrop for student theatrical performances.



## Arts Connections

The new green spaces will provide inspiration for a variety of arts activities and sensory exploration opportunities that will enhance student learning. We will celebrate our connections to German culture by creating murals or **decorative culture posts** to be installed throughout the schoolyard. The addition of benches and varied seating areas throughout the grounds offer an opportunity to add German quotes and poems to further connect our curriculum and school community.

Students will experiment with **sounds and rhythms** as they engage with natural materials and outdoor musical instruments. These elements allow students to interact with peers by exploring nature and objects in the environment.

Children may learn about different art techniques such as chalk art, scientific drawing, and studying of light and shadows as they engage with nature. **KunstKlub** members will have additional areas to observe as they study the artistic methods and

create **multimedia art** inspired by prominent artists. Students will listen to the dramatic stories that ignite their imaginations and inspire them to create their own musicals, plays, and stories which extend their learning in the outdoor classroom area. This space will also be used for presentations, performances, and celebrations for our school and community.

Additionally, visual art lessons can be expanded outside on a larger scale. Students may be inspired to **sketch** and document the details of a native plant growing in the bioswale or collaboratively work with peers to complete a beautiful mandala design on the schoolyard. Colorful asphalt markings to include maps, agility pathways, and **sensory walks** will provide additional visual art pieces for all to enjoy. These creative, welcoming outdoor spaces will help students take ownership and pride in their artwork and provide further connection and understanding of German culture.



## Health & Wellness

The renovated schoolyard will be an invaluable resource for **social-emotional and physical health** instruction at MGIS. Healthy classrooms depend on the practice of **mindfulness** and the pursuit of strong relationships between teachers and students. All students will benefit from the opportunity to unwind and release energy in the outdoor spaces.

Each day, our students practice **self-regulation** and mindfulness activities. Fresh air, green space, and native planting areas will support creative mindfulness activities, encouraging students to connect to their environment through sensory experiences enriched with bright colors, scents, and textures.

Students will acquire much-needed motor skills in the green space, which will allow them to run, skip, jump, and play with **fewer injuries** than they experienced when the entire schoolyard was only asphalt. They will learn turn-taking and cooperative play in the gaga ball pits, basketball courts, and four square courts. Nature play and loose parts areas will give students opportunities to develop their balance and coordination, support **healthy risk-taking**, and build confidence in students as they play.



Teachers from all grade levels will lead **team-building activities** in the outdoor spaces and use the variety of seating and natural areas for outdoor learning and free play activities.



The physical education teacher will use the space for teaching team sports and engaging students in building grade-appropriate physical skills. Children will practice pedestrian safety by riding their bikes around a central track and **traffic garden**, following directions, and learning the different road signs. In addition, colorful agility and sensory pathways will further support our children's health and fitness.

The native plantings will provide a space where students can **reflect**, develop independent skills related to managing their feelings, and reset. Having green spaces devoted to peace and calm will help us raise healthy individuals and support our students' social-emotional learning and well-being.

*I would really like having more green space because I will be able to do more with my friends like play kickball, climb or sit on stumps and logs, and explore an outdoor garden. Recess will be so much more fun with all these things to do instead of just running around.*

**Annabelle Manning – Student**



## German Cultural Connections

As an immersion school, it is important for our students to be immersed in German cultural celebrations. These experiences help connect to the German heritage and provide meaningful opportunities to share personal traditions and cultural connections as we celebrate together while strengthening our school community.

Events such as **Grillfest** (bratfest) bring together our school's families to share a meal, taste German cuisine, and get to know one another.



Each fall, we gather to celebrate **Laternennacht**, the German festival of light, music, and thanksgiving based on the German legend of St. Martin. This family gathering includes choir performances from students featuring traditional German songs, and a beautiful lantern light display that follows the customs in Germany.



During the winter season, we continue the celebration of German **holiday traditions**. Nikolas visits our classrooms, we decorate a holiday tree at Cathedral Square, have choir performances at the Pfister Hotel, City Hall, and other performances that share our traditions and bring positivity to the community. MGIS also hosts a Wintermarkt where we welcome the community to join us in celebrating the holiday season.

In the spring, we celebrate **Kinderfest**, a day dedicated to the children. We organize a day full of games, activities, and fun all celebrating our children. The festivities include a cultural dance around the maibaum (maypole).



## Extra Curricular Activities

Milwaukee German Immersion School offers many extra curricular activities to support our children as they develop new interests and further connect with German culture. These activities include a soccer club, choir, dance group, and chess club.



**Tanzgruppe**, MGIS's dance group, teaches youth traditional German dance complete with traditional clothing. The dance group shares these traditions with the community and performs at German Fest and other community gatherings each year.



German Immersion's **Chess Club**, is regarded as one of the top winning elementary chess clubs in Wisconsin. Playing chess supports academic learning, critical and creative thinking, problem-solving, and collaboration as teammates support and challenge each other throughout the season.

## Community Engagement

At MGIS, we value our parents and families as significant supporters of a child's education. Our active Parent Teacher Association (PTA) helps engage and support our school community to provide a welcoming, **nurturing environment** for our students to learn and grow.

As an immersion school, we emphasize the German culture and traditions in our curriculum. As students learn the **customs and traditions**, they share those with the broader community with a variety of performances, events, and gatherings.



We would like to build a **Little Free Library** on the schoolyard to encourage a love for reading and reinforce the sense of community sharing. It is our hope that by redeveloping the asphalt schoolyard to green space with places to explore, play, and gather, that our students will become **stewards for the environment** and spread that love and care for the world to the surrounding community.

We look forward to making changes to our playground that will invite community members to use our urban space whether it's young families bringing their children to play outdoors in a safe environment or neighborhood groups utilizing our outdoor classrooms for community events. We are excited to host **school gatherings** outdoors in our new outdoor classroom and performance area and providing our children the opportunity to learn in a natural environment.

# Benefits of Green and Healthy Schoolyards

## Nature Can Improve Academic Outcomes

Spending time in nature enhances educational outcomes by improving children's academic performance, focus, behavior, and love of learning.

### BETTER ACADEMIC PERFORMANCE

Learning in natural environments can:



**BOOST PERFORMANCE**  
in reading, writing, math, science and social studies  
1, 2, 3, 4, 5



**ENHANCE**  
creativity, critical thinking and problem solving<sup>9</sup>

Seeing nature from school buildings can foster academic success<sup>6, 7, 8</sup>

### ENHANCED ATTENTION

Spending time in nature can help children focus their attention:



**FOCUS AND ATTENTION**  
10, 11, 12, 13



**ADHD SYMPTOMS**  
14, 15

The greener the setting, the better the focus<sup>14, 15</sup>

### INCREASED ENGAGEMENT & ENTHUSIASM

Exploration and discovery through outdoor experiences can promote motivation to learn:



**INCREASED ENTHUSIASM FOR LEARNING**  
1, 16



**GREATER ENGAGEMENT WITH LEARNING**<sup>17</sup>

### IMPROVED BEHAVIOR

Nature-based learning is associated with reduced aggression and fewer discipline problems:<sup>18, 19</sup>



**MORE IMPULSE CONTROL**<sup>10</sup>



**LESS DISRUPTIVE BEHAVIOR**  
20

#### SUPPORTING RESEARCH

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# Green Schoolyards Can Provide Mental Health Benefits

Green schoolyards can enhance mental health and well-being and promote social-emotional skill development.

## GREEN SCHOOLYARDS HELP KIDS FEEL:

### CALMER & LESS STRESSED<sup>2,3</sup>

Views of green landscapes from classroom windows helped high school students recover more quickly from stressful events.<sup>4</sup>

### POSITIVE & RESTORED<sup>3</sup>

Forest schools enhanced positive and decreased negative emotions.<sup>5</sup>

### RESILIENT<sup>2</sup>

Natural areas enhanced feelings of competence and increased supportive social relationships that help build resilience.<sup>2</sup>



## GREEN SCHOOLYARDS PROMOTE SOCIAL-EMOTIONAL SKILLS

### PRACTICE RELATIONSHIP SKILLS<sup>2</sup> ★★★★★

Children demonstrated more cooperative play, civil behavior and positive social relationships in green schoolyards.<sup>6,7</sup>



### DEVELOP SELF-AWARENESS & SELF-MANAGEMENT

Green schoolyards can reduce aggression and discipline problems.<sup>6,7</sup>

Gardening at school helped students feel proud, responsible & confident.<sup>2</sup>



#### SUPPORTING RESEARCH

<sup>1</sup>[www.nlm.nih.gov/health/statistics/prevalence/any-disorder-among-children.shtml](http://www.nlm.nih.gov/health/statistics/prevalence/any-disorder-among-children.shtml) <sup>2</sup>Chawla et al. (2014). Green schoolyards as havens from stress and resources for resilience in childhood and adolescence. *Health Place*, 28, 1-13. <sup>3</sup>Kelz et al. (2015). The restorative effects of redesigning the schoolyard: A multi-methodological, quasi-experimental study in rural Austrian middle schools. *Environ Behav*, 47(2), 119-139. <sup>4</sup>Li & Sullivan (2016). Impact of views to school landscapes on recovery from stress and mental fatigue. *Landscape Urban Plan*, 148, 149-158. <sup>5</sup>Roe & Aspinall (2011). The restorative outcomes of forest school and conventional school in young people with good and poor behaviour. *Urban For Urban Gree*, 10(3), 205-212. <sup>6</sup>Bell & Dymont (2008). Grounds for health: The intersection of green school grounds and health-promoting schools. *Environ Educ Res*, 14(1), 77-90. <sup>7</sup>Nedovic & Morrissey (2013). Calm, active and focused: Children's responses to an organic outdoor learning environment. *Learn Environ Res*, 16(2), 281-295.

# Green Schoolyards Encourage Beneficial Play

Natural areas promote child-directed free play that is imaginative, constructive, sensory-rich, and cooperative.



## ENCOURAGING IMAGINATIVE, COOPERATIVE FREE PLAY

GREEN SCHOOLYARDS CAN:

- Accommodate different ages & abilities <sup>2,3</sup>
- Sustain children's interest <sup>4,5</sup>
- Offer a variety of options that appeal to a wide range of play interests <sup>2</sup>
- Promote cooperation & negotiation <sup>4,6</sup>
- Strengthen links between play & learning <sup>2,3,4</sup>

## GREEN SCHOOLYARDS CAN SUPPORT DIFFERENT TYPES OF PLAY <sup>2,4,7,8</sup>

### DRAMATIC PLAY

Loose parts—such as sticks, stones, acorns & pinecones—engage the imagination.

### EXPLORATORY PLAY

Natural areas provide opportunities for children to explore.



### SOLITARY PLAY

Areas under bushes or other nooks allow children to engage in alone time and contemplation.

### CONSTRUCTIVE PLAY

Building things out of natural materials helps children learn hands-on skills.

### LOCOMOTOR PLAY

Natural items such as logs and rocks can be carried. Looping paths allow walking, running and biking.

### SUPPORTING RESEARCH

<sup>1</sup>Rideout et al. (2010). Generation M2: Media in the lives of 8-18 year olds. Kaiser Family Foundation <https://kaiserfamilyfoundation.files.wordpress.com/2013/01/8010.pdf> <sup>2</sup>Dymont & Bell (2008). Grounds for movement: Green school grounds as sites for promoting physical activity. *Health Educ Res*, 23(6), 952-962. <sup>3</sup>Stanley (2011). The place of outdoor play in a school community: A case study of recess values. *Child Youth Environ*, 21(1), 185-211. <sup>4</sup>Dennis et al. (2014). A post-occupancy study of nature-based outdoor classrooms in early childhood education. *Child Youth Environ*, 24(2), 35-52. <sup>5</sup>Luchs & Fikus (2013). A comparative study of active play on differently designed playgrounds. *J Adven Educ & Outd Learn*, 13(3), 206-222. <sup>6</sup>Acar & Torquati (2015). The power of nature: Developing pro-social behavior towards nature and peers through nature-based activities. *Young Children*, 70(5), 62-71. <sup>7</sup>Chawla (2015). Benefits of nature contact for children. *J Plan Lit*, 30(4), 433-452. <sup>8</sup>Cloward Drown & Christenson (2014). Dramatic play affordances of natural and manufactured outdoor settings for preschool-aged children. *Child Youth Environ*, 24(2), 53-77.



# Green Schoolyards Can Increase Physical Activity

Green schoolyards can promote physical activity by offering a variety of active play options that engage children of varying fitness levels, ages, and genders.

## 85%

**OF EDUCATORS AND PARENTS**

said green schoolyards support a wider range of play activities than other types of schoolyards.<sup>2</sup>

## MORE OPTIONS, MORE ACTIVITY

PROMOTE

trees  
logs  
shrubs  
rocks

running  
jumping  
climbing  
lifting<sup>2</sup>

Variety in landscaping increases variety in active play.<sup>2</sup>

## MEETING DIVERSE & CHANGING NEEDS

GREEN SCHOOLYARDS COMPLEMENT CONVENTIONAL PLAYGROUNDS WITH OPPORTUNITIES FOR

**LIGHT & MODERATE PHYSICAL ACTIVITY**

that are more appealing to some children.<sup>3,4</sup>

GREEN SCHOOLYARDS CAN CONTRIBUTE TO

**GIRLS' PHYSICAL FITNESS** 🌸🌸🌸🌸

Physical activity decreases as children grow, especially for girls. Green schoolyards sustain activity as children age and preferences change.<sup>5,6,7</sup>

### SUPPORTING RESEARCH

<sup>1</sup>[www.cdc.gov/physicalactivity/data/facts.htm](http://www.cdc.gov/physicalactivity/data/facts.htm) <sup>2</sup>Dymont & Bell (2008). Grounds for movement: Green school grounds as sites for promoting physical activity. *Health Educ Res*, 23(6), 952-962. <sup>3</sup>Barton et al. (2015). The effect of playground- and nature-based playtime interventions on physical activity and self-esteem in UK school children. *In J Environ Health Res*, 25(2), 196-206. <sup>4</sup>Dymont et al. (2009). The relationship between school ground design and intensity of physical activity. *Child Geogr*, 7(3), 261-276. <sup>5</sup>Brink et al. (2010). Influence of schoolyard renovations on children's physical activity: The Learning Landscapes Program. *Am J Public Health*, 100(9), 1672-1678. <sup>6</sup>Mårtensson et al. (2014). The role of greenery for physical activity play at school grounds. *Urban For Urban Gree*, 13(1), 103-113. <sup>7</sup>Pagels et al. (2014). A repeated measurement study investigating the impact of school outdoor environment upon physical activity across ages and seasons in Swedish second, fifth and eighth graders. *BMC Public Health*, 14(1), 803.

# Diversity, Equity & Inclusion Lens In Green & Healthy Schools

As schools across the Milwaukee area take part in greening their schoolyards for the health benefits of students and teachers alike, this segment is offered as an addendum to addressing environmental injustice and cultivating culturally relevant curricular activities.

## DIVERSITY: The unique differences between us that make a difference.

*What diversity is not: a  
euphemism for people of color.*

There are many facets of diversity, such as ability, socio economics, gender identity/expression, sexual orientation, immigration status, religion, etc.

It is important for educators not to discredit the significance of their students' unique identities and lived experience. It is also important to acknowledge difference as a *value-add* to the classroom. Allowing students the opportunity to practice navigating conversations about a difference in an affirming way helps build empathy, innovation, and collaboration. Consequently, educators should be mindful of how their own unique identities and experiences, consciously and unconsciously, inform how they lead the classroom.

*Source: Hines, Mack T., White Teachers, Black Students, Rowman & Littlefield, 2017*



## EQUITY: A process of ensuring everyone has access to what they need to thrive.

*What equity is not: giving everyone  
the same thing, such as equality.*



We all have strengths and areas of growth opportunity. Educators with a **growth mindset** recognize that their students can learn anything, it's a matter of identifying the teaching style that will create the most impact for each student. This also means recognizing that not all students start out at the same place, nor have access to the same resources or experiences.

**Critical takeaways:** Diversity is often used as a euphemism for people of color. This notion promotes the fallacious assumption that 1. A single person can be diverse and 2. White people are not racialized and therefore excluded from diversity efforts and problematically perceived as the "norm," the "baseline" against which people from all other ethnicities and cultures are measured.



For more information and educator support in embedding equity into curricular connections, please email [info@creamcityconservation.org](mailto:info@creamcityconservation.org)

No matter how homogeneous or diverse the classroom, every student benefits from culturally relevant curricula. When educators use materials that depict characters, language, culture, and more from a diversity of backgrounds, perspectives, and abilities it creates a sense of belonging as students see themselves reflected in the teachings.

## INCLUSION: Celebrating, welcoming, valuing, and leveraging differences.

*What inclusion is not: ignoring,  
overcoming, or tolerating difference.*



### WHY AN EQUITY LENS IS IMPORTANT TO SCHOOLYARD DEVELOPMENT

**Climate Change – With regards to environmental injustice, people of color are hit first and worst.**

The U.N. Climate Report 2018 states our world has 12 years to take critical action before the effects of climate change are irreversible.

*Source: Climate Change Is Not A Future Problem for POCs., U.N. Climate Report 2018*

**82% of public school educators are white.**

Culturally competent educators contribute positively to the social-emotional well-being of students. Educators that push color-blindness and discourage exploration of difference may harm students by making them feel as though they themselves are not seen and that diversity is taboo.

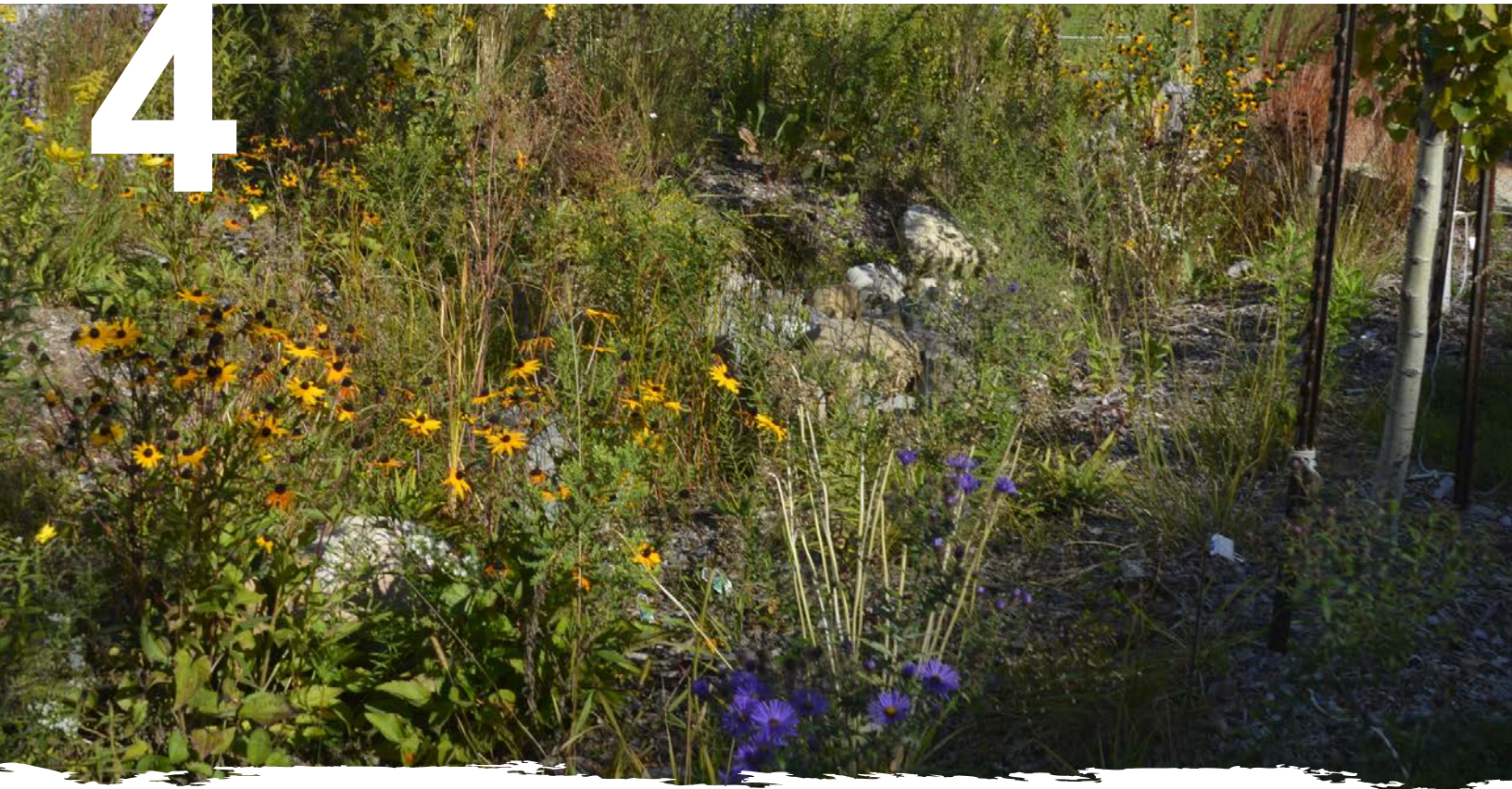


*Source: The State of Racial Diversity in the Educator Workforce, July 2016 US Dept. of Education; White Teacher, Black Students by Mack T. Hines III.*

**Critical takeaways:** The health, education, and economic disparities experienced by marginalized communities is not a coincidence. A firm understanding of the historical context and current policies and practices that fuel disproportionate effects of environmental injustice is paramount. Without this foundation, educators will not be empowered to systematically dismantle institutional oppression and rebuild social structures that ensure equitable access for all students to thrive.



# 4



## *Maintenance and Stewardship*

Green infrastructure features require varying levels of maintenance and offer opportunities to engage youth in active environmental stewardship, raise awareness of environmental impacts, and make meaningful curricular connections. Some maintenance activities such as weeding, debris pickup, inspection of plant health, crop harvesting, watering, etc. can further engage faculty, students, parents, and the surrounding neighborhood in school activities and outdoor learning, while also sharing the responsibility of maintaining the new green space.

To promote the longevity and active use of the redeveloped schoolyard, recommendations were made to provide features that match the maintenance capacity and planned curricular connections of the school and community. The following section provides a summary of seasonal and monthly maintenance needs for the school's new green features. Comprehensive maintenance plans will need to be developed in the project's detailed design phase to fully support the new elements. It should be noted that generally, the school's engineer/custodial staff will be responsible for additional maintenance needs.



***Well-maintained green infrastructure and play spaces can help reduce the potential need for costly repairs.***





## Asphalt Removal

### Ongoing/Monthly Considerations:

Depending on the groundcover replacement such as grass, woodchips, permeable pavement, etc., the replacement may require additional maintenance such as grass cutting, woodchip replacement, vacuuming, etc.

### Seasonal/Annual Considerations:

Some asphalt areas at schools are used in winter as snow management locations. Confirming the seasonal use of the asphalt areas can help with determining the feasibility of asphalt removal and/or ways to adjust snow management.



## Tree Plantings

### Ongoing/Monthly Considerations:

Newly planted trees will require protection from children wanting to play around them for the first few years. Strategies such as temporary or permanent fencing, signage, or planting boxes can help allow the trees space and time to grow.

### Seasonal/Annual Considerations:

Berries, leaves, sticks, and branches often fall from trees during spring or fall. The litter may not need to be actively managed. However, large amounts may need to be composted or discarded.



## Raised Bed Gardens

### Ongoing/Monthly Considerations:

Gardens will require ongoing weeding and watering (weekly/daily). Determining who will be responsible (ideally multiple people/groups/classrooms) beyond planting the gardens is important, especially over summer months.

### Seasonal/Annual Considerations:

Spring planting and harvest events are great ways to engage the school and prepare the garden. Accounting will be needed for the cost and storage of required hoses, shovels, gloves, buckets, etc.



## Native Plantings

### Ongoing/Monthly Considerations:

Similar to raised bed gardens, native plantings will require ongoing weeding (weekly) as they mature. Determining who will be responsible (ideally multiple people/groups/classrooms) beyond planting is important, especially over summer months.

### Seasonal/Annual Considerations:

Native plants are more resilient and require less ongoing maintenance as they mature. One to three years of weeding is required initially, but long-term expected maintenance is minimal.

# 5



## Fundraising Targets

An important component of the conceptual planning effort was to develop plans that are feasible. Estimates of funding requirements were discussed throughout the planning effort in order to keep the designs within reasonable cost ranges. The following table of estimated costs are presented in terms of “fundraising targets” to better represent the approximate budgetary nature of the numbers.

It should be noted that the following funding targets represent conceptual, high-level estimates with many assumptions, not consultant or contractor bids based on detailed design work, which would be more accurate.

The following estimates are expected to vary from actual incurred expenses. However, significant consideration and review of the fundraising targets were provided from engineers, contractors, and school administrators with experience in schoolyard redevelopment projects.

Although the following fundraising targets are intended to incorporate reasonable cost expectations for schoolyard redevelopment, changes to the design, contracting requirements, or amount of in-kind contributions can significantly impact the following numbers either upward or downward.



***It's ideal to raise enough funds to be able to complete the schoolyard redevelopment in one pass; however, in some cases, projects can take several years to be completed due to funding constraints.***








## Invitation for Support

We invite your enthusiastic review of this conceptual plan document and welcome any questions you may have on the schoolyard redevelopment. Please visit Reflo’s website for status updates and how to donate to the schoolyard redevelopment project:

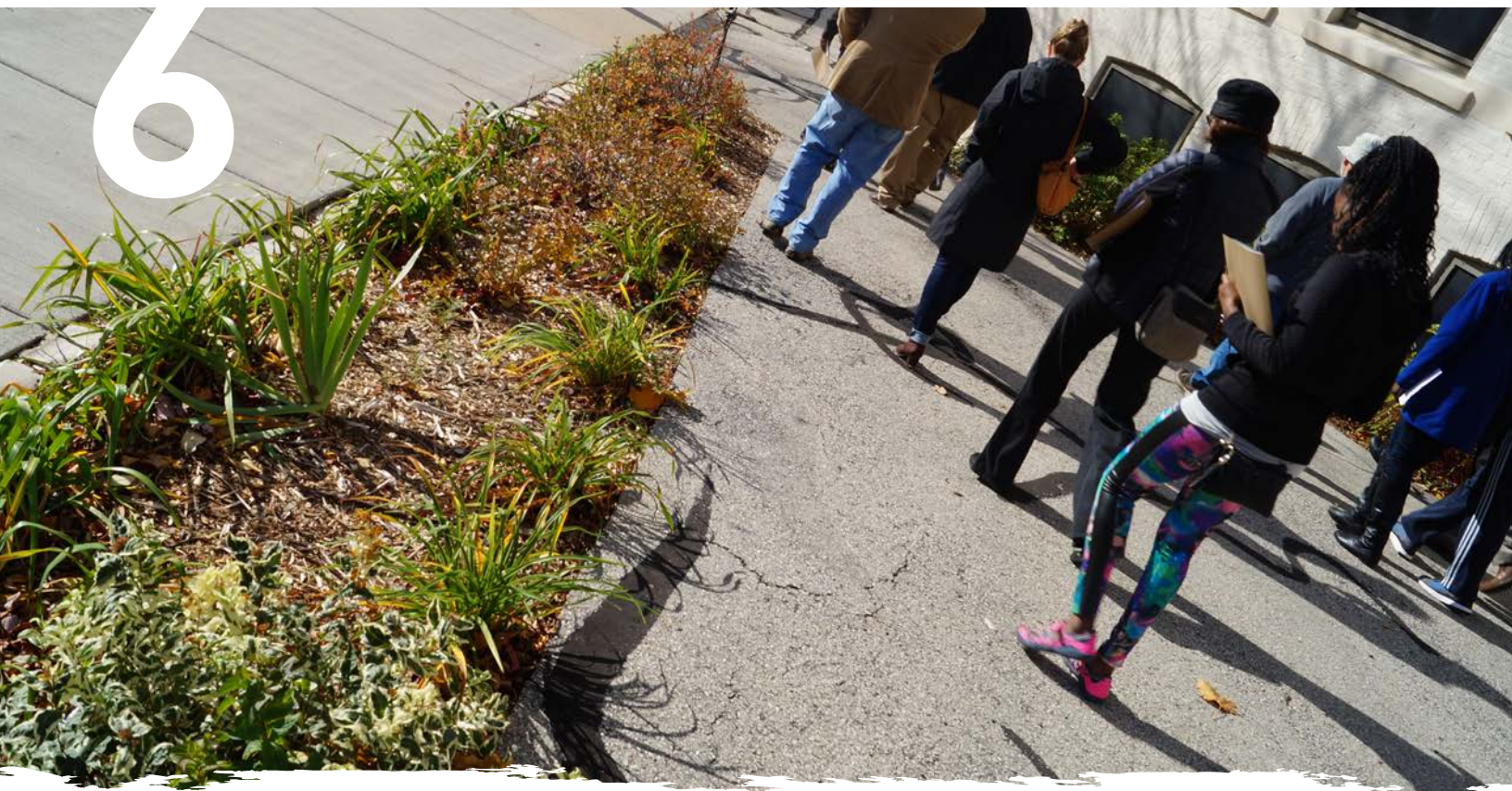
[www.RefloH2o.com](http://www.RefloH2o.com)



# Conceptual Redevelopment Plan Fundraising Targets

	Apx. Fundraising Targets	Apx. In-kind Contribution
 <b>Stormwater Green Infrastructure</b>		
Asphalt removal, sawcutting, mobilization, etc.	\$ 380,000	
Soil, grass, and other porous resurfacing	\$ 45,000	
Trees (and protective fencing)	\$ 55,000	
Bioswales (native plantings and protective fencing)	\$ 130,000	\$ 7,500
Porous Pavement - Outdoor Classrooms	\$ 50,000	
Engineering, surveying, and construction admin.	\$ 40,000	
Facilities project management	\$ 5,000	\$ 26,000
Continued Reflo project development support	\$ 12,500	\$ 12,500
Project signage	\$ 7,500	\$ 2,500
Demonstrations, workshops, tours		\$ 2,500
Water-focused curricular activities	\$ 10,000	\$ 10,000
Vegetation establishment	\$ 5,000	\$ 5,000
<b>Stormwater Green Infrastructure Subtotal</b>	<b>\$ 740,000</b>	<b>\$ 66,000</b>
 <b>School Gardens &amp; Healthy Food Access</b>		
Raised bed planters		\$ 5,000
<b>School Gardens &amp; Healthy Food Access Subtotal</b>	<b>\$ -</b>	<b>\$ 5,000</b>
 <b>Recreational Improvements</b>		
Gaga Ball pits (2) with rubber matting and ADA door	\$ 10,000	
Asphalt sealcoating and striping	\$ 25,000	
Nature play features (embedded logs and stumps)	\$ 35,000	
<b>Recreational Improvements Subtotal</b>	<b>\$ 70,000</b>	<b>\$ -</b>
  <b>Educational Elements</b>		
Arts programming	\$ 25,000	\$ 5,000
Musical instruments and sensory boards	\$ 20,000	
Outdoor classrooms		
Structures	\$ 40,000	
Surfacing	\$ 20,000	
Seating	\$ 20,000	
Amenities	\$ 10,000	
<b>Educational Elements Subtotal</b>	<b>\$ 135,000</b>	<b>\$ 5,000</b>
  <b>Other Site Improvements</b>		
Bike parking equipment	\$ 1,500	\$ 1,500
Pathways, entrances and fencing	\$ 25,000	
Schoolyard benches and other Amenities	\$ 25,000	\$ 2,500
<b>Other Site Improvements Subtotal</b>	<b>\$ 51,500</b>	<b>\$ 4,000</b>
<b>Total Estimated Fundraising Target: \$ 996,500 \$ 80,000</b>		

# 6



## Project Timeline and Next Steps

Although there has already been a significant amount of time and energy invested in the schoolyard redevelopment project by Milwaukee German Immersion School and its partners, the compilation of this conceptual plan document realistically represents step one of a multi-year, major construction-focused redevelopment project.

The next phase of project development is fundraising, which is intended to conclude by the end of 2022. The scope of the construction is based on the funds obtained through budget allocations, grants, donations, and school fundraisers. Engineering, surveying, and

architecture firms are typically hired in fall to support the detailed design and permitting process. To minimize disruption to regularly scheduled school functions, it is preferred to conduct construction over a relatively short time frame in summer months.

Big changes like this project require a great deal of time, resources, and, most of all, commitment. Accomplishing this conceptual redevelopment plan is a major milestone itself. This plan shows the school's desire and ability to focus its efforts on meaningful outdoor education and healthy learning spaces for their students and community.



**For information on how to support MGIS's schoolyard redevelopment:**

Please go to Reflo's website: [www.RefloH2o.com](http://www.RefloH2o.com) or send an email to: [lisa.neeb@RefloH2o.com](mailto:lisa.neeb@RefloH2o.com)



# Supporting Organizations



The Milwaukee Metropolitan Sewerage District (MMSD) is a regional government agency that provides water reclamation and flood management services for about 1.1 million people in 28 communities in the Greater Milwaukee Area. MMSD is a strong supporter of green infrastructure, with many available resources.



Milwaukee Public Schools is committed to accelerating student achievement, building positive relationships between youth and adults, and cultivating leadership at all levels. Many departments are engaged on an ongoing basis to support the multifaceted schoolyard redevelopment projects.



The Fund for Lake Michigan (FFLM) provides grants to support organizations and communities committed to enhancing the Lake's health through projects with both immediate and long-term benefits. The FFLM has been a longtime partner of the green and healthy schools movement and continuously promotes its expansion.



As a nonprofit, Reflo partners with Milwaukee-area schools, neighborhood associations, community garden groups, and local governments to promote sustainable water management such as green infrastructure through education, research, and the implementation of community-based water projects.



Community Design Solutions (CDS) is a funded design center in the UWM School of Architecture & Urban Planning (SARUP) that assists communities, agencies, civic groups, and campuses throughout Wisconsin. CDS provides preliminary design and planning services to underserved communities and agencies.



Cream City Conservation is a two-prong social enterprise: working with organizations to address internal cultures and practices that contribute to workforce homogeneity; and training and employing young adults 15–25 whose social identities are traditionally underrepresented in the environmental industry.



The Green Schools Consortium of Milwaukee (GSCM) is a robust local network of schools and resource providers that are motivated to promote greener, healthier schools. Through bimonthly meetings and an annual conference, hundreds of local participants have collectively shared ideas, resources, and lessons learned.



Arts @ Large activates Milwaukee's education communities to build environments that support arts-rich, lifelong learning. Arts @ Large uses the arts as a tool to engage students in academic learning and provide meaningful work for artists.

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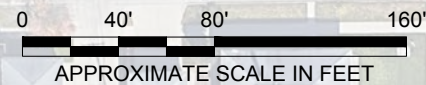
### CONTINUING THE MOMENTUM

The MGIS community is engaged and excited to support additional greening efforts that are beneficial for student learning, social-emotional well-being, and environmental health. Past projects have included the creation of the school's reading garden that provides a calming environment to relax, read, and play and a raised bed garden in within the school's courtyard area.



### OPPORTUNITIES FOR STORMWATER MANAGEMENT

Stormwater flows across Milwaukee German Immersion's expansive playground causing asphalt erosion and icy conditions in the winter months. There is opportunity to install green infrastructure including porous pavement, native plantings, and stormwater trees to divert stormwater into large bioswales on the schoolyard to manage stormwater where it falls.



### EXISTING GREEN SPACE

There is a large, open green space adjacent to MGIS's campus complete with a baseball diamond and grass field. MGIS would like to increase regular use of these amenities to offer additional recreation opportunities for students.



### OPPORTUNITIES TO CONNECT GERMAN CULTURE

German Immersion's schoolyard offers an opportunity to redesign the site to reflect German culture and play spaces with strong ties to nature, further supporting the school's mission and vision.



### ASPHALT GAMES

Students play several games on German Immersion's expansive schoolyard. Pavement markings facilitate games such as kickball, hopscotch, four square, and others during recess and physical education classes.



**Reflo**  
Sustainable Water Solutions

Drawing Title:

## EXISTING SITE PLAN

Project: Milwaukee German Immersion School  
1250 E. Burleigh St.  
Milwaukee, WI 53212

Project No: CS.MPS.25

Figure No:

Designed By: Reflo, CDS, and the MGIS Green Team  
Drawn By: Justin Hegarty

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### STORMWATER GREEN INFRASTRUCTURE

Green infrastructure including large bioswales, porous pavement, and stormwater trees will help to better manage stormwater on the school grounds, where it falls, improving the aesthetics, biodiversity, recreational facilities, and the health of local watersheds.



### NATURE PLAY ELEMENTS

MGIS would like to incorporate natural playscape elements that nurture childhood creativity, foster wonder and imagination, and inspire healthy risk-taking.

### MULTIPLE ARTS OPPORTUNITIES

There are many opportunities to include artistic elements throughout the schoolyard including murals and educational signage to support the redevelopment project. The outdoor classrooms will also provide a setting for the performing arts.



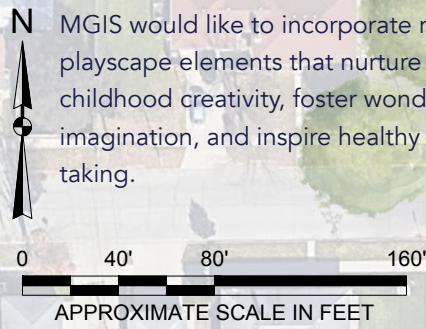
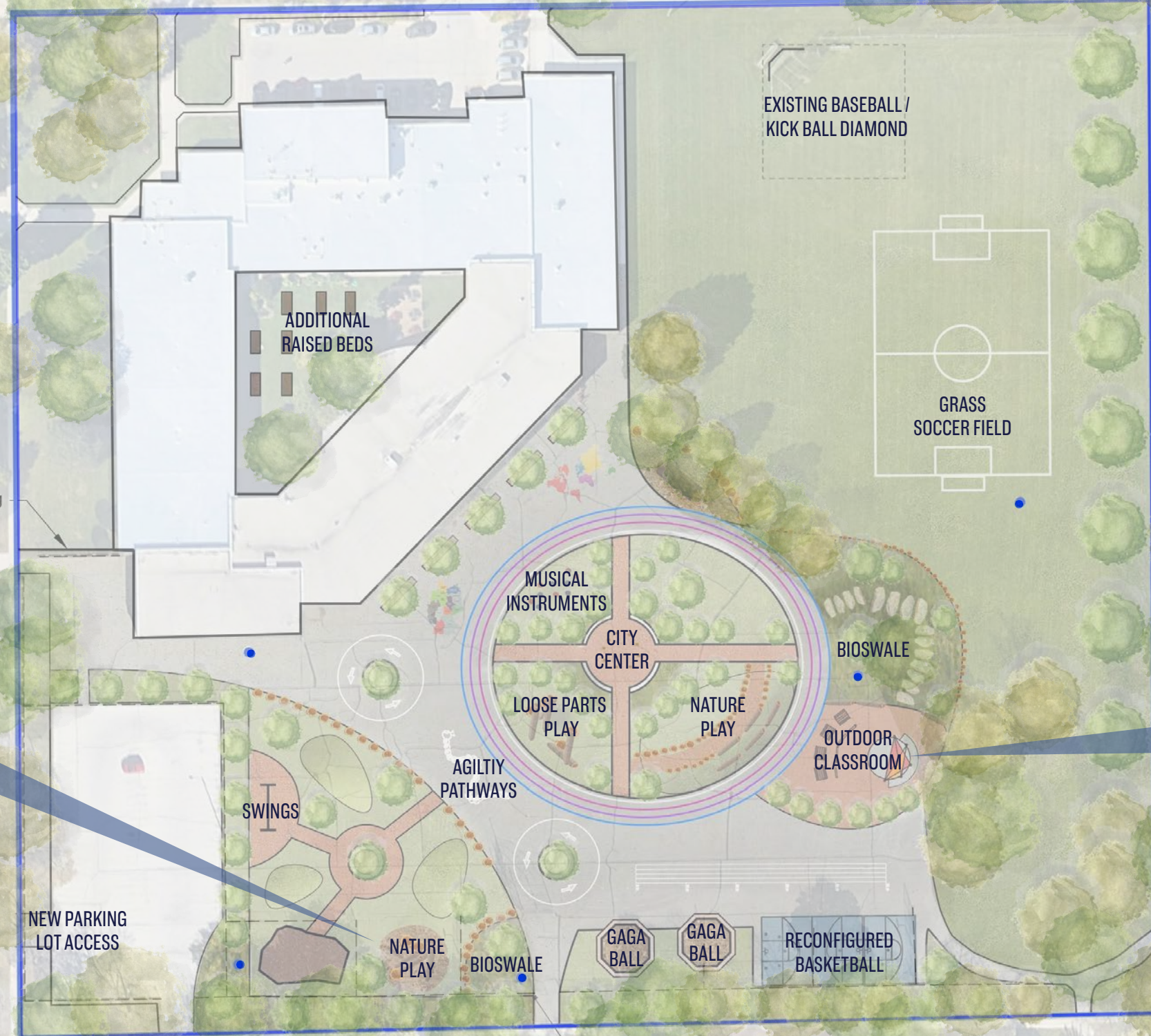
### ADDITIONAL GREEN SPACE AND RECREATIONAL IMPROVEMENTS

Reducing the amount of asphalt on the school grounds is a central component of the redevelopment plan. Along with new green space, earthen mounds, and tree plantings, MGIS would like to encourage nature play with wooden climbers and loose parts play elements. In addition, the school would like to add a running track, colorful pavement markings, and gaga ball pits to support exercise activities and game play.



### OUTDOOR CLASSROOMS AND PERFORMANCE AREA

To help facilitate ecoliteracy and all of the benefits that come with outdoor learning, MGIS would like to build a shaded outdoor classroom, completed with natural seating elements. This area will support the school's performing arts program that includes the Tanzgruppe (dance group) and choir.



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**TOTAL POTENTIAL GREEN INFRASTRUCTURE CAPTURE CAPACITY = 264,190 GALLONS**

**DEPAVING**

Total asphalt removal is anticipated to be 66,700 sq. ft. (1.5 acres) and replaced with more porous ground cover including grass, native plantings, bioswales, walking paths, and porous pavement.

*Managing approx. 13,340 gallons*

**STORMWATER TREES**

70 stormwater trees are intended to be planted.

*Managing approx. 1,750 gallons*

**POROUS PAVEMENT**

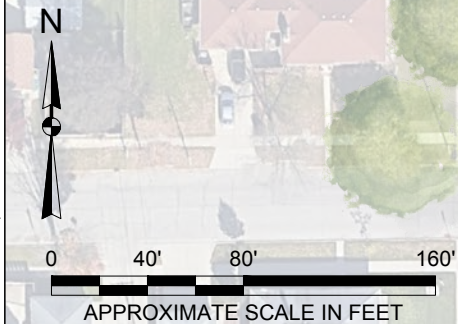
Approximately 3,800 sq. ft. of porous pavement will be installed to create pathways and play spaces.

*Managing approx. 11,400 gallons*

**BIOSWALES**

Bioswales will be added to the school grounds to promote biodiversity and further manage stormwater.

*Managing approx. 237,700 gallons*



**NOTES**

The planned green infrastructure is intended to manage at least a 25-year, 24-hour storm event (4.53 inches of rainfall) as described in the National Oceanic and Atmospheric Administration (NOAA) Atlas 14 point precipitation frequency estimates for Milwaukee's General Mitchell International Airport station. Green infrastructure estimates calculated using MMSD's Capacity Table and MMSD's Green Infrastructure Sizing Calculator. Conceptual planning depictions and estimates, including stormwater management capacity, will need to be confirmed during the detailed design and construction as-built processes.



**Reflo**  
Sustainable Water Solutions

Drawing Title:

**STORMWATER GREEN INFRASTRUCTURE PLAN**

Project: Milwaukee German Immersion School  
1250 E. Burreigh St.  
Milwaukee, WI 53212

Project No: CS.MPS.25

Figure No: 3

Designed By: Reflo, CDS, and the MGIS Green Team  
Drawn By: Justin Hegarty

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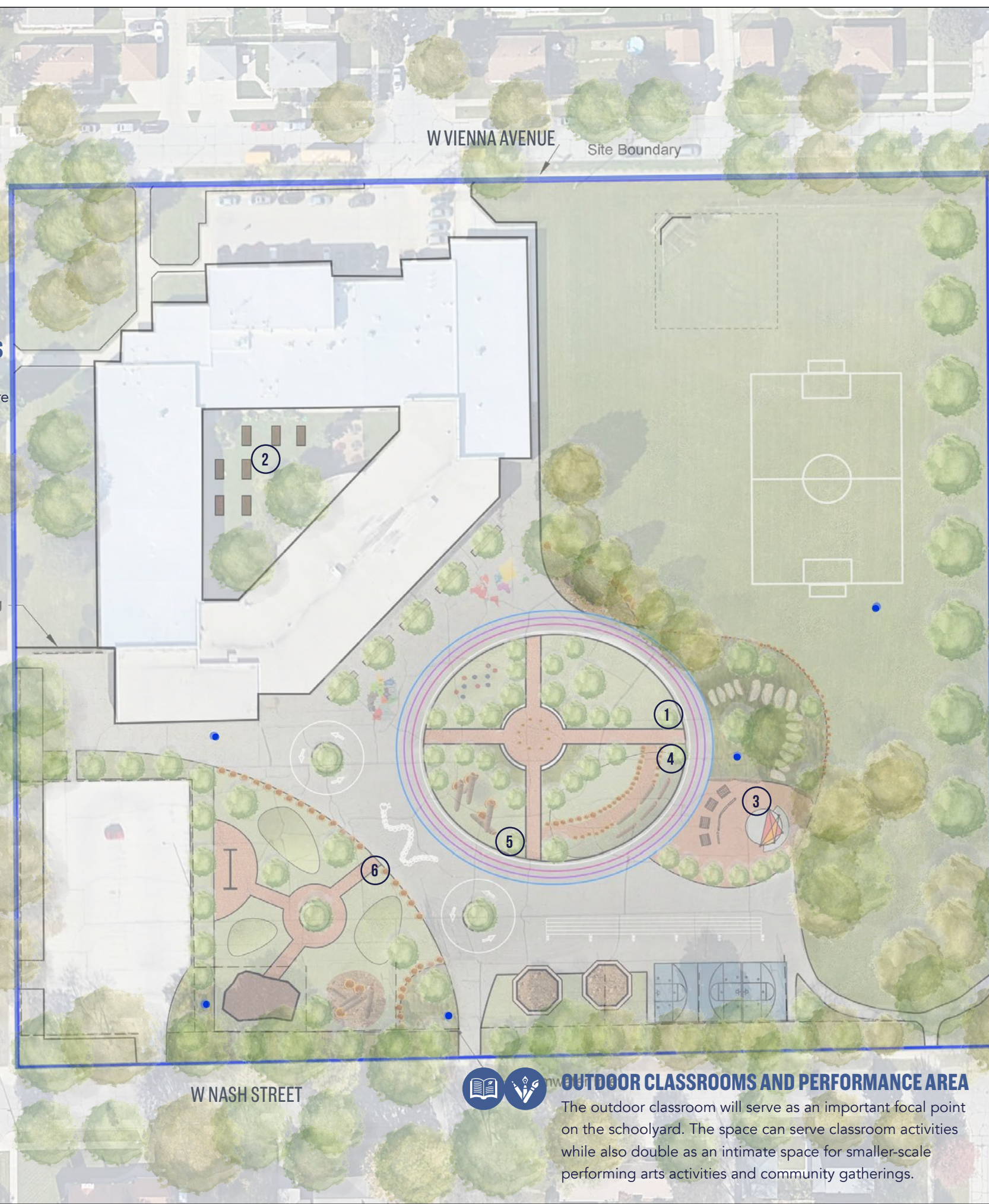
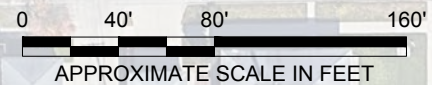
### MURALS AND PAVEMENT MARKINGS

MGIS would like to further activate the schoolyard through the visual arts. There are opportunities to add murals and pavement markings to support sensory and curricular connections. Adding professionally developed murals with themes that reflect the schoolyard redevelopment can help to make the space more welcoming and connected while also providing an opportunity to engage local artists.



### OUTDOOR SEATING

Currently, there are limited seating options throughout the schoolyard. Seating is important for students that would like to socialize, quietly read or journal during outdoor free time, as well as for parents waiting for their children during dismissal. Benches also provide an opportunity for visual arts and sponsor recognition.



### OUTDOOR CLASSROOMS AND PERFORMANCE AREA

The outdoor classroom will serve as an important focal point on the schoolyard. The space can serve classroom activities while also double as an intimate space for smaller-scale performing arts activities and community gatherings.



### MUSICAL PLAY ELEMENTS

To enhance the learning experience and support sensory exploration, German Immersion would like to add secured musical instruments to provide students the opportunity to hone their creativity by freely creating music on the schoolyard.



### EDUCATIONAL SIGNAGE AND EXHIBITION

Looking at the redeveloped school grounds through the lens of exhibition, there are several opportunities to display educational themes through artistic means. Students can participate in the original creation of the signs and if panels are to be easily replaceable, portions of the signs could be refreshed with new thematic student art on a regular basis. The following is a preliminary list of potential themes:

#### Potential Sign Themes

- ① Bioswales and Stormwater Management
- ② School Gardens and Healthy Food Access
- ③ Outdoor Classroom - Use Schedule
- ④ Green Infrastructure Strategies
- ⑤ Project Partners and Site History
- ⑥ Native Plantings and Pollinator Species



**Refilo**  
Sustainable Water Solutions

**ARTS, OUTDOOR EDUCATION, AND COMMUNITY  
ENGAGEMENT PLAN**

Drawing Title:

Project: Milwaukee German Immersion School  
1250 E. Burleigh St.  
Milwaukee, WI 53212

Project No: C5.MPS.24

Figure No:

For more information on how to support the  
*Milwaukee German Immersion School*  
schoolyard redevelopment project please contact:

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For additional information please visit

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