



# *Greenfield Bilingual School*

Conceptual Schoolyard Redevelopment Plan /  
Plan Conceptual de Reurbanización del Patio Escolar

*December / Diciembre*  
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Compost Crusader  
Dancworks  
El Rey  
Mad Hot Ballroom  
Urban Ecology Center  
Zemlicka Family

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### Conceptual Plan Drawings:

Existing Site Plan

Proposed Site Plan

Stormwater Green Infrastructure Plan

Arts, Outdoor Education, and Community Engagement Plan

## *Land Acknowledgment*

We acknowledge that Milwaukee lies on traditional Menominee, Potawatomi, and Ho-Chunk homeland along the southwest shores of Lake Michigan, part of North America's largest system of freshwater lakes. On this site, the Milwaukee, Menominee, and Kinnickinnic rivers meet, and the people of Wisconsin's Menominee, Ojibwe, Ho-Chunk, Oneida, and Mohican sovereign nations remain present to this day.

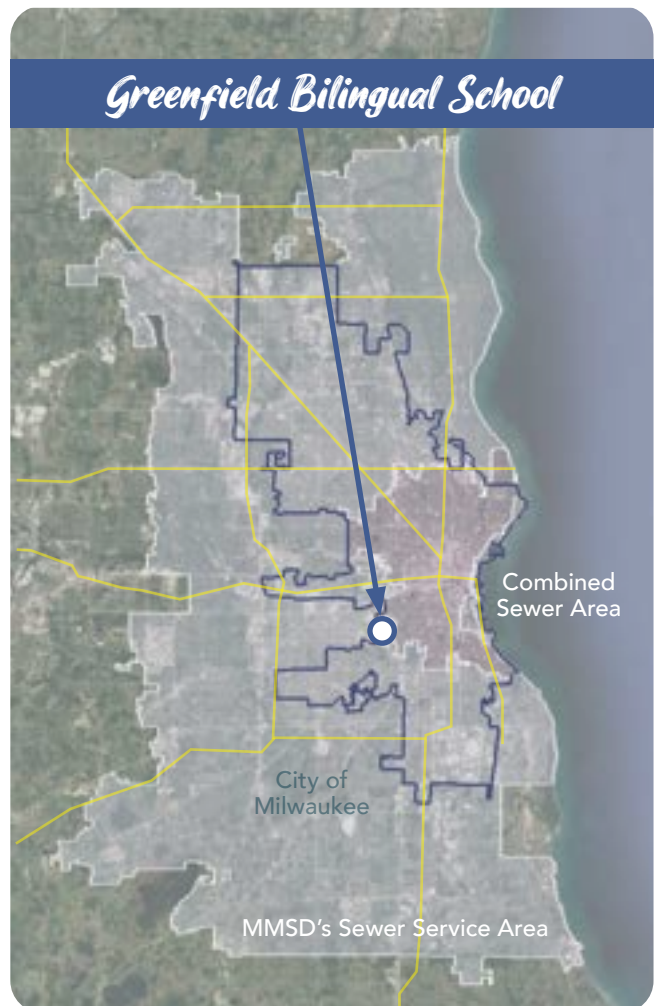


Existing schoolyard at Greenfield Bilingual School

## 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

For 100 years, our school has been educating students who live in the neighborhood and surrounding communities. Greenfield Bilingual School is a Spanish-English school that serves over 550 students in both bilingual and monolingual classrooms. Our students' families come from Mexico, Puerto Rico, Venezuela, Peru, Honduras, and many other Latin American Countries. Students and families feel at home when they enter our school building because our staff is representative of just as many countries!

Our school has a strong focus in the arts which is cultivated through our many community partnerships providing students with amazing opportunities to showcase their talents in arts, dance, and science. Families are drawn to Greenfield not only because of our bilingual education and high academic standards, but also because of the variety of extracurricular activities offered such as cooking club, sewing club,

book club, walking club, arts and crafts, chess and more! Along with these clubs, we also have competitive teams in cross country and soccer at multiple grade levels.

Greenfield Bilingual has long set the standard for what it means to be an inclusive, creative, welcoming and diverse school community. Our close relationships with our families are enhanced through the help of our full-time parent coordinator and dedicated volunteers. Everyday you will find parents helping out in classrooms, chaperoning with field trips, assisting with fundraising efforts, or setting up one of the many school events throughout the year.

It is because of these hard working parents, dedicated staff, strong leadership, and a close tie with the community, that Greenfield Bilingual continues to, and will forever be, a landmark in education on Milwaukee's South Side.



## Greenfield Bilingual School

1711 S 35th St.  
Milwaukee, WI 53215

- Milwaukee Public School
- Grades: K4 through 8th
- 587 students
- 89% economically disadvantaged
- 17% special education
- 48% English learners
- Separated sewer area
- Menomonee River watershed

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## *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.

Greenfield Bilingual'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.

### **Greenfield Bilingual School's Vision and Core Values:**

*Greenfield Bilingual School envisions preparing young learners to pursue their aspirations and contribute to the world. Greenfield Bilingual School respects all people, values equality, and celebrates diversity while focusing on honesty, kindness, and equity.*

# Network of Support

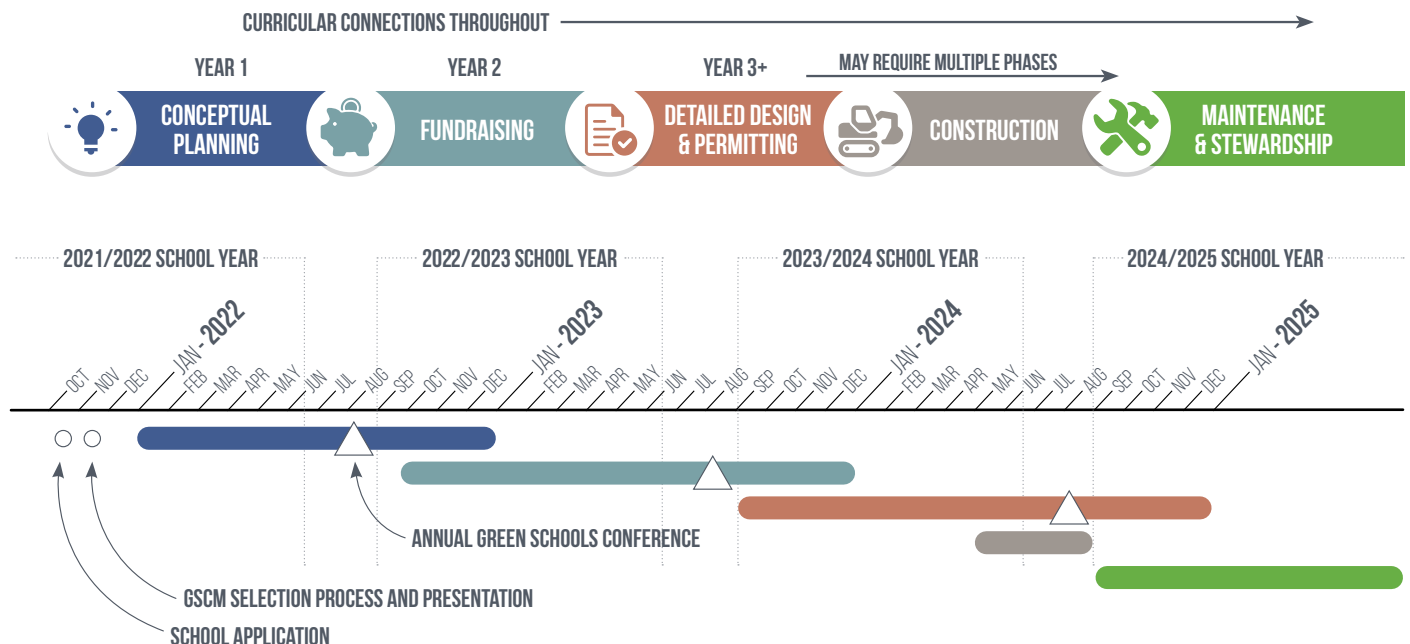
The GSCM is a local network of practitioners, agencies, and funders that are committed to supporting greener, healthier schools and ecoliteracy in the Milwaukee area. The GSCM gathers on a bimonthly and annual basis to share resources and lessons learned. The 6th Annual Green & Healthy Schools Conference hosted nearly 500 participants and over 70 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.

Greenfield Bilingual School's conceptual plan calls for removal of approximately **11,600 sq. ft.** of asphalt and replacing it with new green space and mixed-use recreation and educational areas. The design includes a new outdoor classroom, mindfulness garden, bioswales, and the addition of over 15 stormwater trees. 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 vision also includes a porous, synthetic turf soccer field with an underground cistern beneath to further manage rainwater where it falls. The plan manages approximately **85,445 gallons** of stormwater per rain event.

*Our students should be able to enjoy outdoor activities with their school peers in a safe, welcoming environment.*



**Aldaberto Salas – Principal**





## 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.



## Porous Groundcover

Built surfaces that allow for stormwater to pass through them and infiltrate into the soil below, come in many varieties including synthetic turf, pavers, concrete, rubber, or asphalt. These surfaces allow for play or other uses while also supporting stormwater management that may otherwise be difficult to accomplish in areas that are heavily used.

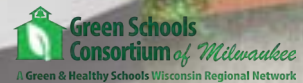


## Native Plantings

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.



Rendering of Greenfield Bilingual School's conceptual schoolyard redevelopment by CDS



## 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.

Greenfield Bilingual's schoolyard redevelopment includes an **outdoor classroom** complete with seating and materials to support outdoor learning. A **mindfulness garden** will provide pollinator habitat and a calm relaxing area to support social-emotional well-being and other curricular connections. Nearby green infrastructure including stormwater trees, bioswales, and native plantings also serve as unique learning spaces. **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.***

*The lack of defined activity areas on our playground not only leads to injuries, but also hinders children from learning to work together. A redesigned playground will allow children to feel safe and therefore enhance their creativity and imagination, help build their collaborative and problem-solving skills, and will have a long lasting positive affect on their social and emotional well-being.*



**Alli Begel – School Counselor**



## 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 school is unique in that we have entire families and multiple generations whose children grown up in our school from K4 - 8<sup>th</sup> grade. We have siblings and cousins in the same classrooms, and now previous graduates are returning as teachers. It is time to upgrade the playground to reflect the passion, learning, and recreation interests of the school and neighborhood community.*

**Evelyn Velazquez – 3rd Grade Teacher**



## 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 Greenfield Bilingual 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**.

Greenfield Bilingual's conceptual plan includes a **synthetic turf soccer field**, gaga ball pits, nature play area, and colorful asphalt markings. The plan calls for **balance logs** and stumps 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 for activities such as soccer, tag, four square, and hopscotch.

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

*I think we need this because when it rains, a lot of kids slip and get hurt on the playground. Having more grass and less concrete will be a good thing because it will help kids stay safe. A lot kids also like having a garden, so I am excited for those too.*



**Eva Sepulveda – 7th Grade Student**



## 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



## 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 the school plans to make the most out of the new schoolyard components and connect the exciting redevelopment to the curriculum.

The envisioned outdoor spaces will help build strong classroom communities, with dedicated areas for play and exploration, while supporting a variety of curricular lessons for our students. Children will be able to experience hands-on learning in natural areas while supporting their growth and development and drawing meaningful connections to our neighborhood community.

## Conexiones Curriculares Planificadas

Es importante que la remodelación del patio escolar incluya planes para como usar el espacio remodelado activamente. Esta sección proporciona una descripción general de alto nivel de cómo la escuela planea aprovechar al máximo los nuevos componentes del patio escolar y conectar la remodelación emocionante con el plan de estudios.

Los espacios al aire libre previstos ayudarán a construir comunidades de aula fuertes, con áreas dedicadas para jugar y explorar, mientras también respaldan una variedad de lecciones curriculares para nuestros estudiantes. Los niños podrán experimentar el aprendizaje práctico en áreas naturales, apoyar su crecimiento y desarrollo y establecer conexiones significativas con la comunidad de nuestro vecindario.

*I'm so excited to help transform our old, lifeless playground into an ecologically rich space for our students to grow and learn about natural environments. This will be an oasis in the city and will put the "green" in Greenfield School for our students for many generations to come.*



**Jacqueline Jansen – School Social Worker**



## Literacy & Language

The redeveloped schoolyard offers many opportunities to enhance our students' literature and language skills. Students will be encouraged to observe and make direct connections with their environment as they learn new **vocabulary**. In addition, the natural environment will provide inspiration for **creative and informational writing**, read alouds, and journaling for all grades.

**Early childhood** students (K4–K5) will be encouraged to explore realistic fiction and practice scientific **storytelling** using animal footprints and evidence of species interactions on the schoolyard as inspiration.

**Lower elementary** students (1st–3rd) will use the new schoolyard to further develop their **descriptive language** skills as they engage all five senses to explore nature on the playground. Children may practice their creative writing with inspiration from nature as they observe native plants, insects, and varied textures on the schoolyard.

**Upper elementary** students (4th–5th) will develop a deeper understanding of complex vocabulary and continue to build their background knowledge that is important for **reading comprehension** in the calming green spaces.

**Middle school** students (6th–8th) will explore literacy foundations such as **similes, metaphors, and hyperbole** as they learn in the outdoor classroom area and spark ideas for creative expression.



## Literatura e Idioma

El patio escolar remodelado ofrece muchas oportunidades para mejorar las habilidades literarias y lingüísticas de nuestros estudiantes. Se animará a los estudiantes a observar y hacer conexiones directas con su entorno a medida que aprenda **vocabulario** nuevo. Además, el entorno natural brindará inspiración para la **escritura creativa e informativa**, lecturas en voz alta y diarios para todos los grados.

Se les animará a los estudiantes de la **primera infancia** (K4-K5) a explorar la ficción realista y practicar la **narración** científica usando huellas de animales y evidencia de interacciones de especies en el patio de la escuela como inspiración.



Los estudiantes de **primaria** (1° a 3°) utilizarán el nuevo patio escolar para desarrollar aún más sus habilidades de **lenguaje descriptivo** mientras involucran los cinco sentidos para explorar la naturaleza en el patio escolar. Los niños pueden practicar su escritura creativa con la inspiración de la naturaleza mientras observan plantas nativas, insectos y texturas variadas en el patio de la escuela.

Los estudiantes de **primaria superior** (4° a 5°) desarrollarán una comprensión más profunda del vocabulario complejo y continuarán desarrollando su conocimiento previo que es importante para la **comprensión de lectura** en los tranquilos espacios verdes.

Los estudiantes de la **secundaria** (6° a 8°) explorarán los fundamentos de la alfabetización, como los **similes, las metáforas y la hipérbole**, mientras aprenden en el área del salón de clases al aire libre y generarán ideas para la expresión creativa.

## STEM Connections

The green schoolyard offers many STEM (science, technology, engineering, math) curricular connections. These vibrant, living classrooms will provide a variety of enrichment activities to support **hands-on learning** that activate the curiosity and engagement of our students.

Children will discover living examples of **geometry, symmetry, and patterns** that support math curriculum across grade levels. Students of all ages will explore green infrastructure and the water cycle using the schoolyard as their classroom and will investigate life science concepts including **biodiversity**, life cycles, animal habitats, and the changing of seasons.



Our **early childhood** students (K4–K5) will investigate science concepts through **play and curiosity**. Children will search for evidence of urban biodiversity such as animal tracks, **pollinator species**, and a variety of colors found in nature, extending their learning with nearby nature on the schoolyard.

**Lower elementary** students (1st–3rd) will use the green spaces while studying earth and physical science concepts such as **weather**, climate and the water cycle. Children will **plant, maintain, and observe** a variety of species as they grow and see firsthand how they help manage stormwater in the area and change throughout the seasons.



Children in **upper elementary** (4th–5th) will dive into life science concepts of ecology, food webs, and **species relationships**. In addition, the new schoolyard will provide opportunities to study **earth and physical sciences** while completing experiments outdoors that are not possible inside the classroom, such as investigating flight and propulsion.



**Middle school** students (6th–8th) will use the **green infrastructure** features of the schoolyard to examine systems and design criteria in their **engineering** units. Children will have ample opportunity to collect real-world data from rain gauges in the bioswales, conduct biodiversity counts of urban flora and fauna species and compare the **ecological composition** of monoculture grass fields to diverse native planting areas.

## Conexiones "STEM"

El patio verde ofrece muchas conexiones curriculares STEM (ciencias, tecnología, ingeniería, matemáticas). Estas aulas vivas y vibrantes proporcionarán una variedad de actividades de enriquecimiento para apoyar el **aprendizaje práctico** que activa la curiosidad y el compromiso de nuestros estudiantes.

Los niños descubrirán ejemplos vivos de **geometría, simetría y patrones** que respaldan el plan de estudios de matemáticas en todos los niveles de grado. Los estudiantes de todas las edades explorarán la infraestructura verde y el ciclo del agua utilizando el patio escolar como salón de clases e investigarán conceptos de ciencias de la vida que incluyen la **biodiversidad**, los ciclos de vida, los hábitats de los animales y el cambio de estaciones.

Nuestros estudiantes de la **primera infancia** (K4–K5) investigarán conceptos científicos a través del **juego y la curiosidad**. Los niños buscarán evidencia de la biodiversidad urbana, como huellas de animales, **especies de polinizadores** y una variedad de colores que se encuentran en la naturaleza, ampliando su aprendizaje con la naturaleza cercana en el patio escolar.



Los estudiantes de **primera** (1° a 3°) utilizarán los espacios verdes mientras estudian conceptos de ciencias físicas y de la tierra, como el **tiempo**, el clima y el ciclo del agua. Los niños **plantarán, mantendrán y observarán** una variedad de especies a medida que crecen y verán de primera mano cómo ayudan a controlar las aguas pluviales en el área y cambian a lo largo de las estaciones.

Los niños de **primaria superior** (4° a 5°) se sumergirán en los conceptos de ecología, redes alimentarias y **relaciones entre especies** de las ciencias de la vida. Además, el nuevo patio escolar brindará oportunidades para estudiar **ciencias físicas y de la tierra** mientras se realizan experimentos al aire libre que no son posibles dentro del salón de clases, como investigar el vuelo y la propulsión.



Los estudiantes de **secundaria** (6° a 8°) utilizarán las características de **infraestructura verde** del patio escolar para examinar los sistemas y los criterios de diseño en sus unidades de ingeniería. Los niños tendrán amplia oportunidad de recopilar datos del mundo real de los pluviómetros en los bioswales, realizar recuentos de la biodiversidad de las especies de flora y fauna urbanas y comparar la **composición ecológica** de los campos de pasto de monocultivo con diversas áreas de plantación nativa.



## Community Connections

Greenfield Bilingual works to provide **family and** community engagement opportunities in a safe and supportive climate. Our staff encourages respecting, taking care of their school environment, and learning more about nature.

**Collaboration** with our community partners will enhance the opportunities to use the green spaces for **events**, classes, programming, and other activities. Our school's Community Learning Center (CLC), supported by the Boys & Girls Clubs of Greater Milwaukee, provides **out-of-school time** experiences and extended learning opportunities where students engage in sports, arts programming, and outdoor activities.



We look forward to connecting family and community members to help support the **maintenance and stewardship** of the new green spaces and the ability to host fun, school-wide events in a welcoming outdoor space where everyone can enjoy a calming, natural environment and build a stronger community.

## Conexiones Comunitarias



Greenfield Bilingual trabaja para brindar oportunidades de participación **familiar y comunitaria** en un clima seguro y de apoyo. Nuestro personal anima a respetar, cuidar su entorno escolar y aprender más sobre la naturaleza.

La **colaboración** con nuestros socios comunitarios mejorará las oportunidades de usar los espacios verdes para **eventos**, clases, programas y otras actividades. El Centro de Aprendizaje Comunitario (CLC) de nuestra escuela, respaldado por Boys & Girls Clubs of Greater Milwaukee, brinda experiencias **fuera de la escuela** y oportunidades de aprendizaje extendidas donde los estudiantes participan en deportes, programación artística y actividades al aire libre.

Esperamos conectar a las familias y a los miembros de la comunidad para ayudar a apoyar el **mantenimiento y la administración** de los nuevos espacios verdes y la capacidad de organizar eventos divertidos para toda la escuela en un espacio acogedor al aire libre donde todos puedan disfrutar de un entorno natural y tranquilo y construir un ambiente más fuerte comunidad.

## Arts

The arts will come to life with the redeveloped schoolyard. Children will be encouraged to exercise their visual art skills through **observational drawings** of living organisms and explore different art media. Students will be able to use the natural outdoor spaces to experience and better express themselves while enhancing their **visual and auditory senses** through creative means.

Expanding a student's art and cultural experience is essential to making youth more **compassionate** to the wider world, supporting our core values of respecting all people, valuing equality, and celebrating diversity. Vibrant green spaces will become the backdrop for **performing arts** experiences.



Students participating in Mad Hot Ballroom's **dance programming** and our school's **band** will have outdoor venues to share their art with others. These experiences provide students the opportunity to develop **positive shared experiences** with their community.

The schoolyard enhancements will provide an **inclusive** public space where our students and families will have a chance to explore and create meaning during and after school, further supporting an accessible, welcoming **community gathering** space for all to enjoy.

## Las Artes

Las artes cobrarán vida con el patio escolar remodelado. Se alentará a los niños a ejercitar sus habilidades de artes visuales a través de **dibujos de observación** de organismos vivos y explorar diferentes medios artísticos. Los estudiantes podrán usar los espacios naturales al aire libre para experimentar y expresarse mejor mientras mejoran sus **sentidos visuales y auditivos** a través de medios creativos.

Expandir la experiencia artística y cultural de un estudiante es esencial para hacer que los jóvenes sean más **compasivos** con el resto del mundo, lo cual apoya a nuestros valores fundamentales de respetar a todas las personas, valorar la igualdad y celebrar la diversidad. Los espacios verdes vibrantes se convertirán en el fondo de las experiencias de las **artes escénicas**.

Los estudiantes que participen en la **programación de baile** de *Mad Hot Ballroom* y la **banda** de nuestra escuela tendrán lugares al aire libre para compartir su arte con los demás. Estas experiencias brindan a los estudiantes la oportunidad de desarrollar **experiencias positivas compartidas** con su comunidad.

Las mejoras en el patio de la escuela proporcionarán un espacio público **inclusivo** donde nuestros estudiantes y familias tendrán la oportunidad de explorar y crear significado durante y después de la escuela, apoyando aún más un **espacio de reunión comunitaria** accesible y acogedor para que todos disfruten.



## Health & Wellness

Spending time in green spaces can provide mental health benefits. Our students practice **self-regulation** and mindfulness activities every day. 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. The natural spaces will help our students feel calmer and less stressed, positive and restored, and prepared to be even more **resilient**.



We recognize the need to increase physical activity within a safer, greener, healthier environment. Playing outdoors in a safe space also promotes imaginative play and **cooperation**. Experiences in nature can also support our students who need to practice their relationship skills and develop more **self-awareness** and self-management. Students will participate in creative and **imaginative play** as they practice balance when playing on the

agility pathways, logs, and stumps placed throughout the schoolyard. Teachers from all grade levels will lead **team-building** activities outdoors and use the variety of seating and natural spaces for learning.

Children will learn to take turns, build patience, and follow rules as they practice **healthy risk-taking** and **gain confidence** through play and physical education classes. They will acquire much-needed motor skills in the green space which will allow them to run, skip, jump, dance, and play with **fewer injuries** than they experienced before the redevelopment. Students will learn game rules and procedures, and participate in cooperative play in the gaga ball pit, basketball court, and soccer field. A traffic garden will teach our learners **bike and pedestrian safety**, supporting physical education standards and building vital life skills.

All children will benefit from taking **brain breaks** and nature walks outdoors, enhancing their communication and sportsmanship skills while participating in sports, **restorative circles**, and cooperative play. The holistic schoolyard redevelopment supports our vision that all students will grow and learn within a safe, respectful, and responsible environment.



## Salud y Bienestar

Pasar tiempo en espacios verdes puede brindar beneficios para la salud mental. Nuestros alumnos practican actividades de **autorregulación** y atención plena todos los días. El aire fresco, los espacios verdes y las áreas de plantas nativas apoyarán las **actividades creativas de atención plena**, alentando a los estudiantes a conectarse con su entorno a través de experiencias sensoriales enriquecidas con colores brillantes, aromas y texturas. Los espacios naturales ayudarán a nuestros estudiantes a sentirse más tranquilos y menos estresados, positivos y restaurados, y preparados para ser aún más **fuertes**.

Reconocemos la necesidad de aumentar la actividad física dentro de un entorno más seguro, más verde y más saludable. Jugar al aire libre en un espacio seguro también promueve el juego imaginativo y la **cooperación**. Las experiencias en la naturaleza también pueden ayudar a nuestros estudiantes que necesitan practicar sus habilidades de relación y desarrollar más **autoconciencia** y autogestión.

Los estudiantes participarán en **juegos creativos e imaginativos** mientras practican el equilibrio cuando juegan en los caminos, troncos y tocones de agilidad colocados en todo el patio escolar. Los maestros de todos los grados conducirán actividades de **equipos** al aire libre y utilizarán la variedad de asientos y espacios naturales para el aprendizaje.

Los niños aprenderán a tomar turnos, desarrollar la paciencia y seguir las reglas a medida que practican la toma de **riesgos saludables** y **ganan confianza** a través de clases de juego y educación física. Ellos adquirirán habilidades motoras muy necesarias en el espacio verde que les permitirán correr, brincar, bailar y jugar con **menos lesiones** e las que experimentaron



antes de la remodelación. Los estudiantes aprenderán las reglas y los procedimientos del juego y participarán en juegos cooperativos en la piscina de pelotas *gaga*, la cancha de baloncesto y la cancha de fútbol. Un jardín de tráfico enseñará a nuestros alumnos **seguridad para ciclistas y peatones**, apoyando los estándares de educación física y desarrollando habilidades vitales para la vida.

Todos los niños se beneficiarán de tomar **descansos mentales** y caminatas al aire libre, mejorando sus habilidades comunicativas y deportivas mientras participan en deportes, **círculos restaurativos** y juegos cooperativos. La remodelación holística del patio escolar respalda nuestra visión de que todos los estudiantes crecerán y aprenderán en un ambiente seguro, respetuoso y responsable.



# 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>



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



**LESS DISRUPTIVE BEHAVIOR**  
20

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



ADDITIONAL RESEARCH ON THE BENEFITS OF NATURE AVAILABLE AT [childrenandnature.org/research](http://childrenandnature.org/research)

#### SUPPORTING RESEARCH

Lieberman & Hoody (1998). Closing the achievement gap: Using the environment as an integrating context for learning. Results of a Nationwide Study. *San Diego: SEER*.<sup>2</sup> Chawla (2015). Benefits of nature contact for children. *J Plan Lit*, 30(4), 433-452.<sup>3</sup> Berezowitz et al. (2015). School gardens enhance academic performance and dietary outcomes in children. *J School Health*, 85(8), 508-518.<sup>4</sup> Williams & Dixon (2012). Impact of garden-based learning on academic outcomes in schools: Synthesis of research between 1990 and 2010. *Rev Educ Res*, 83(2), 211-235.<sup>5</sup> Wells et al. (2015). The effects of school gardens on children's science knowledge: A randomized controlled trial of low-income elementary schools. *Int J Sci Edu*, 37(17), 2858-2878.<sup>6</sup> Li & Sullivan (2016). Impact of views to school landscapes on recovery from stress and mental fatigue. *Landscape Urban Plan*, 148, 149-158.<sup>7</sup> Wu et al. (2014). Linking student performance in Massachusetts elementary schools with the "greenness" of school surroundings using remote sensing. *PLoS ONE* 9(10): e108548.<sup>8</sup> Matsuoka, R. H. 2010. Student performance and high school landscapes. *Landscape and Urban Planning* 97 (4), 273-282.<sup>9</sup> Moore & Wong (1997). Natural Learning: Rediscovering Nature's Way of Teaching. Berkeley, CA: MIG Communications.<sup>10</sup> Faber Taylor et al. (2002). Views of nature and self-discipline: Evidence from inner-city children. *J Environ Psy*, 22, 49-63.<sup>11</sup> Mårtensson et al. (2009). Outdoor environmental assessment of attention promoting settings for preschool children. *Health Place*, 15(4), 1149-1157.<sup>12</sup> Wells (2000). At home with nature effects of "greenness" on children's cognitive functioning. *Environ Behav*, 32(6), 775-795.<sup>13</sup> Berto et al. (2015). How does psychological restoration work in children? An exploratory study. *J Child Adolesc Behav* 3(3).<sup>14</sup> Faber Taylor et al. (2001). Coping with ADD: The surprising connection to green play settings. *Environ Behav*, 33(1), 54-77.<sup>15</sup> Amoly et al. (2014). Green and blue spaces and behavioral development in Barcelona schoolchildren: The BREATHE Project. *Environ Health Perspect*, 122,1351-1358.<sup>16</sup> Blair (2009) The child in the garden: An evaluative review of the benefits of school gardening. *J Environ Educ*, 40(2), 15-38.<sup>17</sup> Rios & Brewer (2014). Outdoor education and science achievement. *Appl Environ Educ Commun*, 13(4), 234-240.<sup>18</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>19</sup> Nedovic & Morrissey (2013). Calm, active and focused: Children's responses to an organic outdoor learning environment. *Learn Environ Res*, 16(2), 281-295.<sup>20</sup> Ruiz-Gallardo & Valdés (2013). Garden-based learning: An experience with "at risk" secondary education students. *J Environ Educ*, 44(4), 252-270.



# 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>

Strengthen links between play & learning <sup>2,3,4</sup>

Promote cooperation & negotiation <sup>4,6</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>Dyment & 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>Dyment & 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>Dyment 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.

INFOGRAPHICS PROVIDED BY THE CHILDREN & NATURE NETWORK

Supporting references and research on the benefits of nature can be found at [childrenandnature.org/research](http://childrenandnature.org/research)

children & nature  
NETWORK

# 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.



**CREAM CITY  
CONSERVATION  
& CONSULTING**

# 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. It should be noted that generally, the school's Green Team will be responsible for additional maintenance needs.

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.



***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.



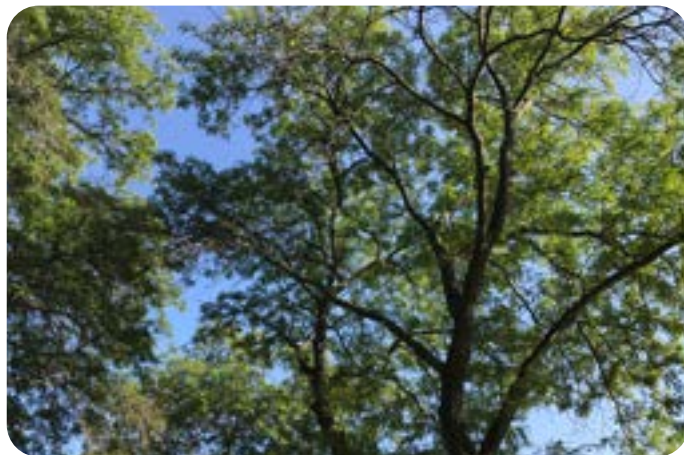
## Porous Groundcover

### Ongoing/Monthly Considerations:

Debris and sediment washing into pavement pores can lead to clogging — monthly inspection is recommended to remove leaves, woodchips, and other debris. Also monitor for turf sections that need to be pinned down or replaced due to damage/heavy use.

### Seasonal/Annual Considerations:

Reapplication or raking of the rubber pellets may be needed to keep the synthetic turf weighed down. Replacing sections of turf or re-securing to the perimeter edging by trained technicians.



## 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.



## 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.	\$ 125,000	
Soil, grass, and other porous resurfacing	\$ 40,000	
Trees (and protective fencing)	\$ 15,000	
Bioswales (native plantings and protective fencing)	\$ 30,000	
Native plantings / mindfulness garden	\$ 5,000	
Porous Pavement - Syn. Turf Soccer Field	\$ 80,000	
Underground cistern	\$ 80,000	
Engineering, surveying, and construction admin.	\$ 50,000	
Facilities project management	\$ 5,000	\$ 28,000
Continued Reflo project development support	\$ 15,000	\$ 15,000
Project signage	\$ 10,000	\$ 7,500
Demonstrations, workshops, tours		\$ 5,000
Water-focused curricular activities	\$ 10,000	\$ 10,000
Vegetation establishment	\$ 10,000	\$ 5,000
<b>Stormwater Green Infrastructure Subtotal</b>	<b>\$ 475,000</b>	<b>\$ 70,500</b>
<b>School Gardens &amp; Healthy Food Access</b>		
-		
<b>School Gardens &amp; Healthy Food Access Subtotal</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Recreational Improvements</b>		
Gaga Ball pit (1) with ADA door	\$ 5,000	
Asphalt crackfilling and striping	\$ 20,000	
Tot lot improvements	\$ 15,000	
Nature play features (embedded logs and stumps)	\$ 40,000	
<b>Recreational Improvements Subtotal</b>	<b>\$ 80,000</b>	<b>\$ -</b>
<b>Educational Elements</b>		
Arts programming	\$ 25,000	\$ 5,000
Musical instruments and sensory boards	\$ 25,000	
Outdoor classroom		
Surfacing	\$ 15,000	
Seating	\$ 20,000	
Amenities	\$ 10,000	
<b>Educational Elements Subtotal</b>	<b>\$ 95,000</b>	<b>\$ 5,000</b>
<b>Other Site Improvements</b>		
Bike parking equipment	\$ 2,500	
Bollards	\$ 10,000	
Pathways and fencing	\$ 25,000	
Schoolyard benches and other Amenities	\$ 40,000	
<b>Other Site Improvements Subtotal</b>	<b>\$ 77,500</b>	<b>\$ -</b>
<b>Total Estimated Fundraising Target:</b>	<b>\$ 727,500</b>	<b>\$ 75,500</b>

# 6



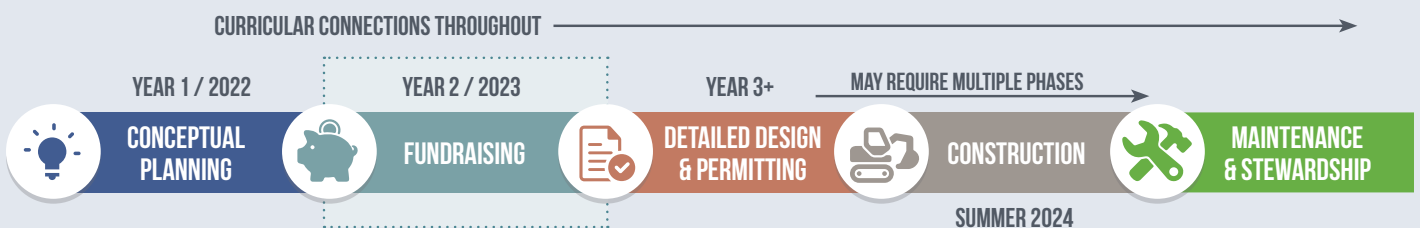
## Project Timeline and Next Steps

Although there has already been a significant amount of time and energy invested in the schoolyard redevelopment project by Greenfield Bilingual 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 2023. 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 Greenfield Bilingual School'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.



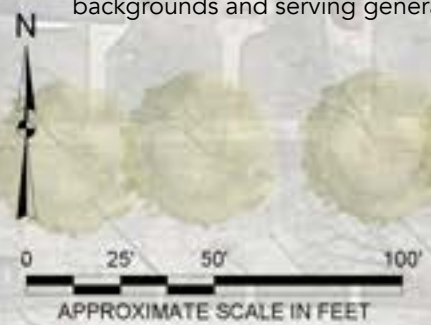
The Green Schools Consortium of Milwaukee (GSCM) is a robust local network of schools and resource providers that are motivated to promote greener, healthier schools. Through bimonthly meetings and an annual conference, hundreds of local participants have collectively shared ideas, resources, and lessons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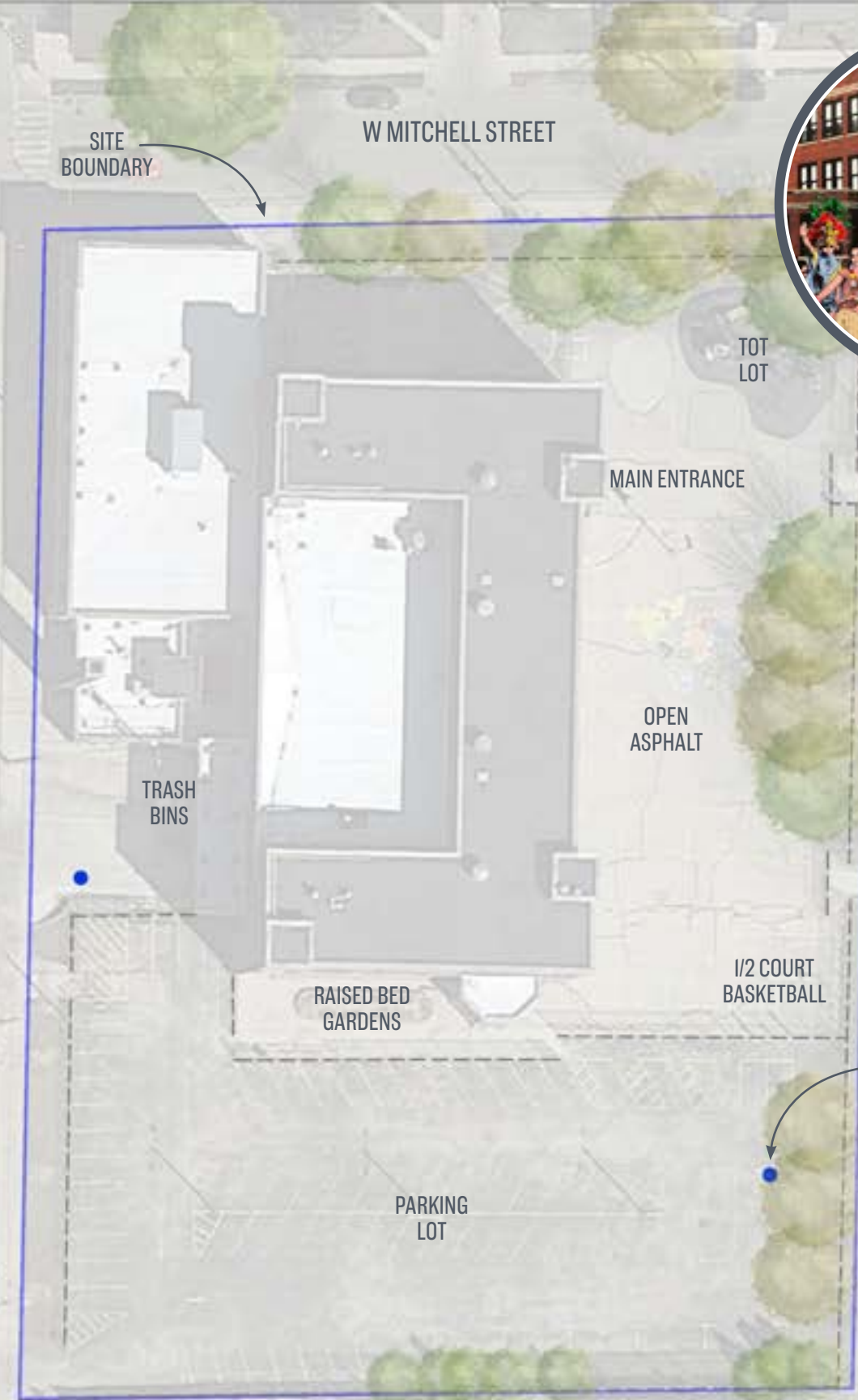
**ASPHALT GAMES**

Students play several asphalt games on Greenfield Bilingual's schoolyard. Hopscotch, four square, and other pavement markings help guide students to use a variety of spaces during recess, physical education classes, and out-of-school time programs offered in partnership with the Boys & Girls Clubs of Greater Milwaukee.



**INCLUSIVE & WELCOMING COMMUNITY**

Greenfield Bilingual celebrates its 100th anniversary of serving children in 2022. The school is a mainstay in the community welcoming students from diverse backgrounds and serving generations of families.



**DIVERSE LEARNING COMMUNITY**

Greenfield Bilingual School offers monolingual and bilingual education to support its multicultural school community. This approach honors cultural diversity, promotes positive character development, and supports active citizenship as students build problem-solving and biliteracy skills in English and Spanish.



**NEIGHBORHOOD PARK ACCESS**

Part of the Milwaukee County Parks system, Burnham Park offers a newly redeveloped green space, and playfield with play structures, Futsol courts, baseball diamond, and outdoor pavilions adjacent to Greenfield Bilingual School's campus. Greenfield Bilingual would like to increase regular use of these amenities to offer additional recreation and outdoor learning opportunities for students.



**NEED FOR STORMWATER MANAGEMENT**

Stormwater flows across the playground causing asphalt erosion and icy conditions in the winter months. There is opportunity to install green infrastructure and divert stormwater from the parking lots and schoolyard into bioswales to further manage stormwater where it falls.



**EXISTING SITE PLAN**

Drawing Title:

Project: Greenfield Bilingual School  
1711 S 35th St.  
Milwaukee, WI 53215

Designed By: Reflo, CDS, and Greenfield's Green Team  
Drawn By: Justin Hegarty

Project No: C6.MPS.30

Figure No:

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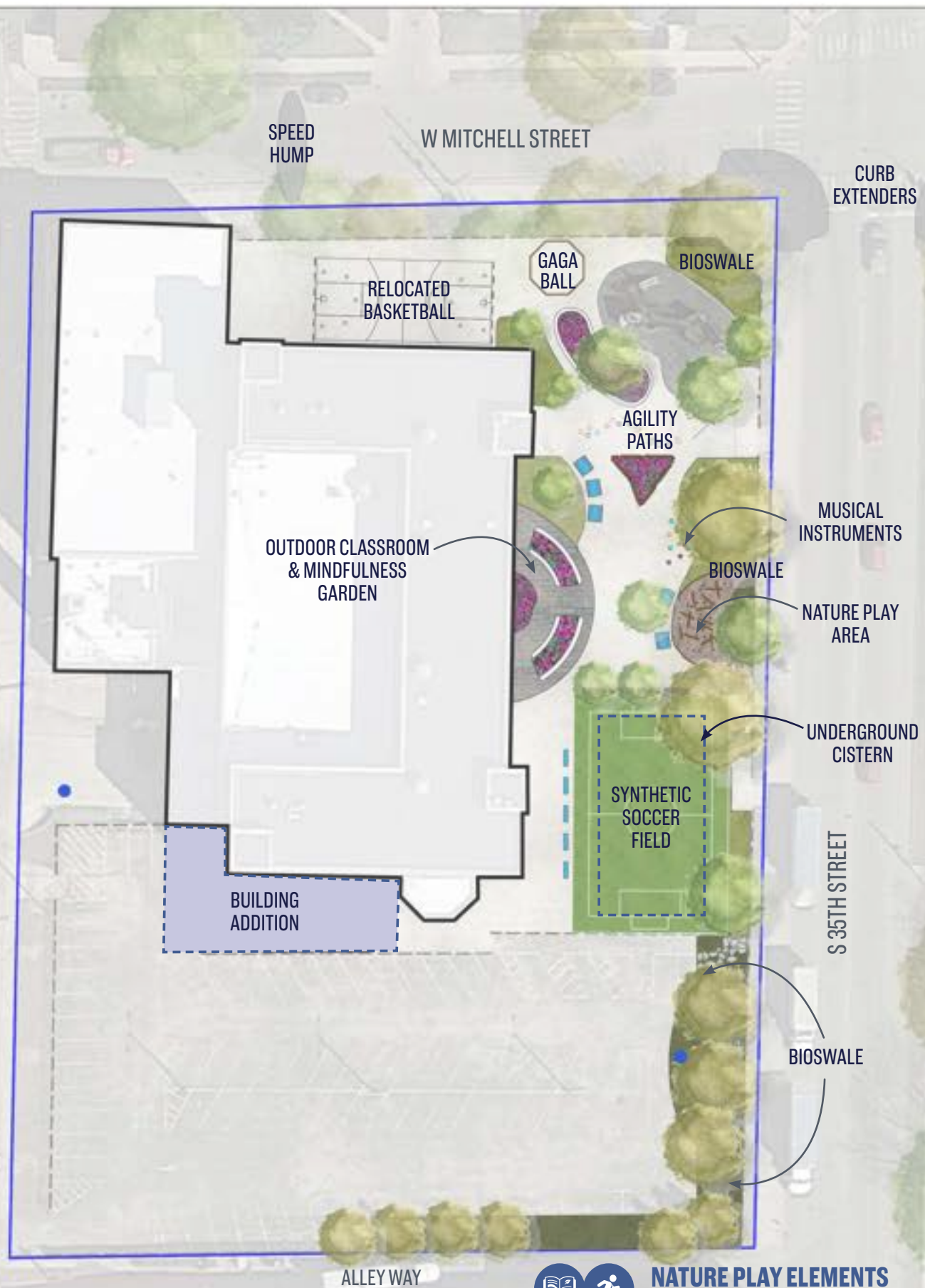
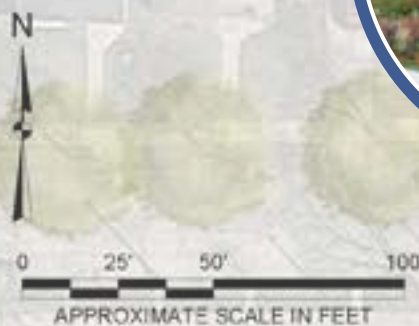
### ADDITIONAL GREEN SPACE AND RECREATIONAL IMPROVEMENTS

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, Greenfield Bilingual would like to add a synthetic turf soccer field, colorful pavement markings and gaga ball pits to support physical activity, team building, and cooperative play,



### OUTDOOR CLASSROOMS

To help facilitate ecoliteracy and all of the sensory exploration that comes with outdoor learning, Greenfield Bilingual would like to construct an outdoor classroom and mindfulness garden completed with seating options.



### TRAFFIC CALMING FEATURES

To increase pedestrian safety on nearby streets, Greenfield Bilingual plans to work with the City of Milwaukee to install traffic calming features.



### MULTIPLE ARTS OPPORTUNITIES

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



### STORMWATER GREEN INFRASTRUCTURE

Green infrastructure including bioswales, native plantings, stormwater trees, and a synthetic turf field 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

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



## PROPOSED SITE PLAN

Drawing Title:

Project: Greenfield Bilingual School  
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Milwaukee, WI 53215

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**TOTAL POTENTIAL GREEN INFRASTRUCTURE CAPTURE CAPACITY = 85,445 GALLONS**

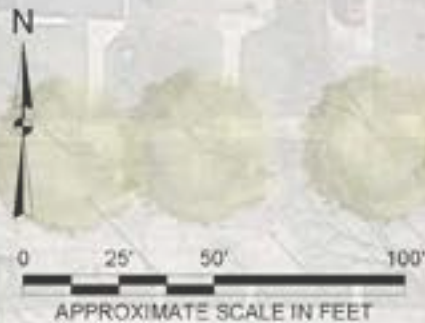
**DEPAVING**

Total asphalt removal is anticipated to be approximately 11,600 sq. ft. and replaced with more porous ground cover including synthetic turf, native plantings, bioswales, walking paths, and porous pavement.

**Managing approx. 2,320 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. Green infrastructure estimates calculated using MMSD's Capacity Table and engineer's estimates for conceptual bioswale capacity; up to a 100-year, 24-hour storm event. Conceptual planning depictions and estimates, including stormwater management capacity, will need to be confirmed during the detailed design and construction as-built processes.



S 36TH STREET

W MITCHELL STREET

S 35TH STREET

ALLEY WAY

BUILDING ADDITION

BIOSWALE

BIOSWALE



**STORMWATER TREES**

15 stormwater trees are intended to be planted.

**Managing approx. 375 gallons**



**NATIVE LANDSCAPING**

A total of 1,000 sq. ft. of native planting areas will be installed throughout the schoolyard.

**Managing approx. 400 gallons**



**POROUS PAVEMENT**

Approximately 6,850 sq. ft. of porous, synthetic turf will be installed to support soccer and outdoor classroom groundcover.

**Managing approx. 20,550 gallons**



**UNDERGROUND CISTERN**

A 40,000-gallon cistern will store stormwater and further manage water where it falls.

**Managing approx. 40,000 gallons**



**BIOSWALES**

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

**Managing approx. 21,800 gallons**



**STORMWATER GREEN INFRASTRUCTURE PLAN**

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### 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.

#### Potential Sign Themes

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



### MURALS AND PAVEMENT MARKINGS

Greenfield Bilingual would like to further activate the schoolyard through the visual arts. There are opportunities to add murals and colorful 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 feel more welcoming and connected while also providing an opportunity for local artists.

W MITCHELL STREET

S 36TH STREET

S 35TH STREET



### OUTDOOR CLASSROOMS

The outdoor classroom will serve as an important focal point in the schoolyard. These space can support educational activities and serve as an intimate space for smaller scale performing arts and community-based activities.



### MUSICAL PLAY ELEMENTS

To enhance the learning experience and create a full sensory experience, Greenfield Bilingual would like to add secured musical instruments to provide students the opportunity to hone their creativity by freely creating music on the schoolyard.



### 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.



Reflo  
Sustainable Water Solutions

Project:  
Greenfield Bilingual School  
1711 S 35th St.  
Milwaukee, WI 53215  
Designed By: Reflo, CDS, and Greenfield's Green Team  
Drawn By: Justin Hegarty

Drawing Title:

ARTS, OUTDOOR EDUCATION, AND COMMUNITY  
ENGAGEMENT PLAN

Project No:  
C6.MPS.30

Figure No:

For more information on how to support the /  
Para más información en cómo apoyar a  
***Greenfield Bilingual School***  
schoolyard redevelopment project please contact: /  
proyecto de reurbanización del patio de recreo por favor contacte:

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For additional information please visit /  
Para obtener información adicional, visite

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