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Board Cover Memorandum

To Facilities Committee

From Preston Thomas, Chief Systems and Services Officer
Megan Allegretti, Director of Program Improvement

Meeting Date March 21, 2024

Subject Development of Living Schoolyards and Partnership with ELP and Kaboom!

Ask of the Board Understand the development of Living Schoolyards thus far, why and how we do this work and include partners, and the benefits to our students, staff, community and environment. Consider budget and capacity considerations for installation and maintenance over time.

Background OUSD is redesigning and realizing next-generation schoolyards that provide dynamic joyful play spaces for health, wellness, and academic success. We are integrating critical issues we need to solve at our schools into how we design our schoolyards moving forward: boosting mental and physical health, improving children’s educational outcomes, creating opportunities for social and emotional development, mitigating heat and pollution, and strengthening our community. We are making incredible progress thus far, and need to have the following budget and capacity considerations in mind: new capacity and training needed for surfacing materials upkeep to maintain safety and play quality and living elements such as trees require investments in irrigation, care, and maintenance; school supervision programming support to effectively use new play areas; and expanding new ground surfacing and shade to all schoolyards. In partnership with Kaboom! Eat.Learn.Play has committed to supporting the playground transformations at 25 schools.

Discussion In 2019, we passed the Living Schoolyards policy, and in November 2022, the OUSD Living Schoolyards Guidelines were published. Both the policy and guidelines drive our work today. Research on Living Schoolyards shows:

- Student academic progress
- Living schoolyard implementation contributes to **significant academic progress.**
- Green renovations lead to **better utilization of play areas.**
- Previously sedentary during recess period are now **active.**

- Green space leads to greater **play equity & quality**
 - Girls will play actively just as much as boys on green space.
 - Green play areas are more conducive to small group activities, vigorous-intensity activity, and **prosocial behavior**.
 - **Creative play** in green space is frequently synonymous with collaborative, non-competitive play.
- Antisocial interactions/**bullying decreased** by 40-50% after students were given time to adjust to the novelty.

In our schools, we're seeing significant positive results thus far including decrease in disciplinary issues on schoolyards during recess, lunch and after-school programming; increased participation in sports for girls and more diverse groups of students; more diversity in activities/different types of activities on schoolyards; staff retention; and we are seeing some enrollment trending up at schools like Hoover and Lockwood, even though there are many variables that influence family enrollment choices.

Additionally, we are combating urban heat islands in our schools by using different ground materials to decrease heat and adding shade on play structures and with trees.

Fiscal Impact

No current fiscal impact for this Board item. Continued expansion of Living Schoolyards programming will require additional funding and capacity.

Attachment(s)

- Presentation

Building Living Schoolyards

OUSD's Implementation and Partnership with ELP and Kaboom!

Preston Thomas, Chief Systems and Services Officer
Kenya Chatman, Executive Director of Facilities
Megan Allegretti, Director of Program Improvement



**OAKLAND UNIFIED
SCHOOL DISTRICT**

Community Schools, Thriving Students

Our Vision

All OUSD students will find joy in their academic experience while graduating with the skills to ensure they are caring, competent, fully-informed, critical thinkers who are prepared for college, career, and community success.

Our Mission

Oakland Unified School District (OUSD) will build a Full Service Community District focused on high academic achievement while serving the whole child, eliminating inequity, and providing each child with excellent teachers, every day.



Transformation of Schoolyards

OUSD is redesigning and realizing next generation schoolyards that provide dynamic joyful play spaces for health, wellness, and academic success.



Transformation of Schoolyards

We are integrating critical issues we need to solve at our schools into how we design our schoolyards moving forward:

- boosting mental and physical health,
- improving children's educational outcomes,
- creating opportunities for social and emotional development
- mitigating heat and pollution,
- and strengthening our community.



Transformation of OUSD Schoolyards

ACCESS TO JOYFUL PLAY



8,079 HOURS
PLAYED



14 SPORT
COURTS ADDED



10 PLAY
STRUCTURES
ADDED

NATURE & CREATIVE OUTLETS

17 MURALS &
GROUND ART

39 TREES
PLANTED

18 OUTDOOR
CLASSROOMS & GARDENS





Why Transform Schoolyards?

Living Schoolyards Policy & Guidelines

In 2019, we passed the Living Schoolyards policy and in November 2022, the OUSD Living Schoolyards Guidelines were published. Both the policy and guidelines drive our work today.

| Living Schoolyard Goals | |
|--|--|
| Create Outdoor Environments Optimized for 21st Century Education | Increase Access to Park Space |
| Increase Children's Joy | Strengthen Community Engagement |
| Improve Students' Health and Wellness | Prioritize Equity |
| Create Vibrant Play and Social Environments | Strengthen OUSD's Environmental Resilience |

State of Play Oakland by Project Play Aspen Institute

- **Oakland youth are less physically active than the nation.** Only 14% of youth in Oakland meet the 60 minutes of physical activity per day recommended by the Centers for Disease Control and Prevention, below the national average of 23%. Oakland girls (9%) are less likely to be sufficiently physically active than boys (19%). Physical activity decreases as youth get older.
- **Access to quality parks is unevenly distributed.** Residents in Oakland neighborhoods where people most identify as a person of color have access to 66% less park space per person than those in predominantly White neighborhoods. Although 89% of Oakland residents live within a 10-minute walk of a park, the amenities and investments are much lower than comparable U.S. cities.

Research on Schoolyards Impact on Students

Living Schoolyard Longitudinal and Cross-Sectional Investigations (K-6)

- Living schoolyard implementation contributes to **significant academic progress**.
- Green renovations lead to **better utilization of play areas**.
- Previously sedentary during recess period are now **active**.
- Green space leads to greater **play equity & quality**
 - Girls will play actively just as much as boys on green space.
 - Green play areas are more conducive to small group activities, vigorous intensity activity, and **prosocial behavior**.
 - **Creative play** in green space is frequently synonymous with collaborative, non-competitive play.
- Antisocial interactions/**bullying decreased** by 40-50% after students were given time to adjust to the novelty.

Raney, Hendry, Yee, Am J Prev Med, 2019; Raney, Bowers, Rissberger, J Phys Act Health, 2021



OUSD Schoolyards Impact on Students

“The new play structure, multi-sport court, outdoor exploration areas and striping of games like hopscotch and a soccer pitch give students **lots to do during recess and something to look forward to each day**. Because there are so many different opportunities for play, students always have a **beautiful and engaging space** to be in. Being outdoors and playing has helped their **physical and social emotional well-being**. Students have **developed their social skills** tremendously. We are especially surprised and delighted by the positive impact the spinners have had on students. The spinners offer students a tangible and non-disruptive outlet to address sensory needs- **especially our students whose IEPs call for extra sensory outlets**. All of this has translated into **more grounded student behavior**, allowing students to be better **engaged in academic tasks in class** and to have **positive interactions with peers and adults**. School staff are now spending **less time mediating conflicts** between students and more time helping them **develop social, emotional and academic skills**.”

-- Hoover Principal, Lissette Averhoff

OUSD Schoolyards Impact





How to Transform Schoolyards

Program Improvements

Joyful Schools Facilities Rubric & Assessment

- Developed to rate each school on a scale by schoolyard element
- Allows for real-time comparison and ranking of schoolyard needs

Living Schoolyard Operations Team

- Building internal capacity to execute and maintain schoolyards
- Continuous learning through site visits, reviewing studies, etc

Living Schoolyard Project Plan

- Creating a central space for managing projects across sites and partnerships to identify challenges and opportunities
- Ongoing learning and record of how work is done to create multi-year plan

Example Joyful Schools Assessment Results

| School | Projected Enrollment | Student Demographics | Living Schoolyard | | | | | | | | |
|---------------------------|----------------------|----------------------|-------------------|--------------|------------------------------|-------------------------|-------------------------|-------------------|---------------|--------------------------------------|------------------|
| | | UPP Rate | Play Structure | Play Matting | Schoolyard Ground Conditions | Play & Gathering Places | Nature Exploration Area | Outdoor Classroom | School Garden | Outdoor Dining/Student Seating Areas | Playground Shade |
| Bridges | 412 | 99.8% | 2 | 2 | 2 | 2 | 0 | 2 | 2.5 | 3 | 2 |
| Lockwood STEAM Academy | 555 | 99.1% | 1.5 | 1.5 | 2 | 2 | 0 | 2.5 | 3 | 3 | 2 |
| Global Family | 404 | 99.0% | 1.5 | 1.5 | 2 | 2 | 0 | 1 | 1 | 3 | 1 |
| Esperanza | 405 | 98.9% | 2 | 1 | 2 | 2 | 0 | 1 | 1 | 2 | 0 |
| PRIDE | 288 | 98.4% | 3 | 3 | 1 | 1 | 0 | 1 | 2 | 2 | 1 |
| Highland | 449 | 98.1% | 2.5 | 2.5 | 2.5 | 2.5 | 0 | 2 | 2.5 | 3 | 2.5 |
| Horace Mann | 178 | 98.0% | | | 1 | | | | | | |
| EnCompass (Woodland) | 301 | 97.5% | 1 | 1.5 | 2 | 3 | 2 | 2 | 3 | 2 | 2 |
| MLK | 295 | 97.3% | 2.5 | 2.5 | 1.5 | 2 | 0 | 2.5 | 2.5 | 2.5 | 2 |
| Garfield | 472 | 97.3% | 2 | 1.5 | 2 | 2 | 1 | 1 | 2 | 2 | 1 |
| Markham | 263 | 97.1% | 2 | 3 | 4 | 4 | 4 | 2 | 3 | 2 | 2 |
| Madison Primary | 254 | 97.0% | 2.5 | 3 | 1.5 | 2 | 0 | 2.5 | 2 | 3 | 2.5 |
| Allendale | 348 | 96.9% | 2 | 2 | 2 | 1 | 0 | 2 | 2 | 0 | 1 |
| Manzanita Community | 316 | 96.1% | 1.5 | 1.5 | 2.5 | 3 | 0 | 2 | 3 | 3 | 2 |
| ACORN Woodland (Woodland) | 259 | 96.0% | 1 | 1.5 | 2 | 3 | 2 | 2 | 3 | 2 | 2 |
| Reach | 428 | 95.7% | 1.5 | 1.5 | 2 | 2 | 0 | 2.5 | 2.5 | 3 | 2 |
| TCN | 266 | 95.7% | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 |
| Greenleaf | 596 | 95.7% | | | | | | | | | |
| ICS | 278 | 95.6% | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 |

Key Features

Nature Exploration Area,
Gardens & Trees



Play Structure



Multisport Court



Murals



Ground Games



Partnerships & Grants

- Eat.Learn.Play. & KABOOM! committed to 25 schoolyards from 2023-2026 (doesn't include 4 completed before 2023)
- Trust for Public Land is in the process of completing the fourth living schoolyard renovation in Oakland
- CalFire grant received for 2 implementation sites and 14 planning sites (\$8 million)



Community Engagement Process

1. Site leader feedback about schoolyard elements and zones
2. Operations design team redesigns elements on schoolyard, reviewed by site leaders and district education specs
3. Community and students have design days to design their dream play structures
4. School community votes on final play structure design
5. School community designs rest of schoolyard elements through planning calls and additional engagement sessions (mural design, tree ideas, etc)
6. ~210 volunteers build the new schoolyard over three days
7. School community ribbon-cutting to celebrate new schoolyard





Results

Lockwood STEAM Before



Lockwood STEAM During



Lockwood STEAM After



Impact thus Far

- Decrease in disciplinary issues on schoolyards during recess, lunch and after school programming.
- Increased participation in sports for girls and more diverse group of students
- More diversity in activities/different types of activities on schoolyards
- Staff retention
- We are seeing some enrollment trending up at schools like Hoover and Lockwood however there are many variables that influence family enrollment choices.

Braiding Funding Sources






Addressing Climate Change

Research on Urban Heat Islands in Schools

- Children suffer the greatest consequences
- Heat and Pollution
 - ↑ heart rate & blood pressure
 - ↑ bronchoconstriction/asthma
 - Dehydration and overheating
 - ↓ exercise capacity
 - ↓ ability to concentrate/learn
- Possible Solutions
 - Paint/alternative materials on asphalt, trees, vegetation and pervious surfacing

To thrive at school, students need outdoor space that protects them from heat.



Playing outside in the heat can lead to dehydration, headaches, heat stroke, and other health impacts.


On the other hand, staying inside all day deprives them of important health and academic benefits of outdoor play.

Shade is the best solution.

By blocking sun from the body, shade can reduce heat burden by up to 70 F.

Grass stays cooler than asphalt with the same sun exposure...

...but shade can even cool down hot asphalt!



HEAT BURDEN, OR MEAN RADIANT TEMPERATURE, IS THE CUMULATIVE HEAT WE EXPERIENCE FROM THE AIR, HUMIDITY, RADIATION, AND MORE

THIS EXAMPLE SHOWS POSSIBLE HEAT BURDEN AT 1:00 PM WITH AIR TEMPERATURE OF 92 F

Heat Mitigation Strategies Utilized in Our Work

Different ground materials to decrease heat

- Remove asphalt where not needed and add pervious surfaces (engineered wood fiber, corkeen, park tread, decomposed granite, etc.)
- Sportcourt tiles and ground art decrease heat of remaining asphalt

Adding shade

- Every new play structure includes as many shade canopies as possible
- Trees are strategically placed and sourced to provide immediate and ever-expanding shade across the schoolyard

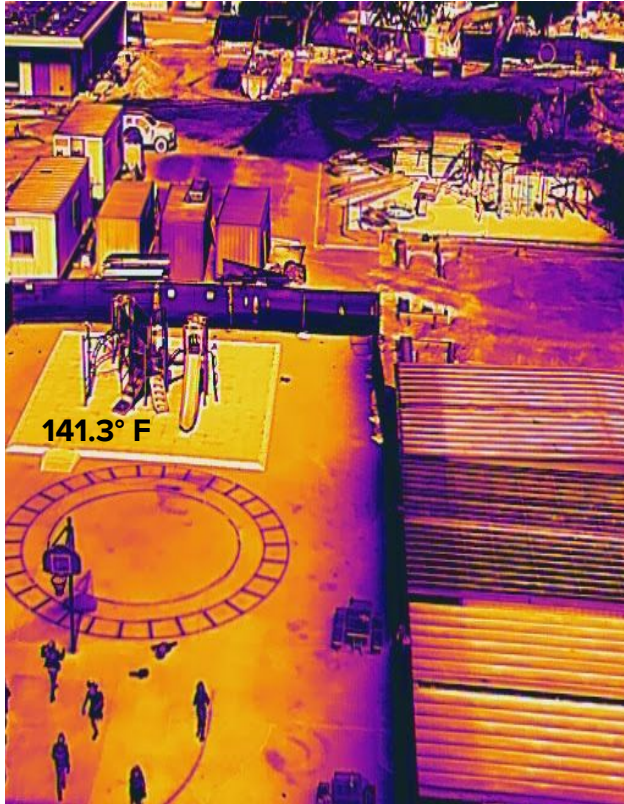


Trees & Asphalt Removal
Laurel Elementary



Shade structures with every new play structure
Global Family Elementary

Laurel Elementary Playground



Asphalt Removal

Whenever possible and particularly when asphalt is already in bad condition, we can replace it with pervious surfacing to mitigate heat and bring nature and safer surfacing into our schoolyards.



Manzanita Lower Yard



Budget and Capacity Considerations

- New capacity and training needed for:
 - surfacing materials upkeep to maintain safety and play quality
 - living elements such as trees requires investments in irrigation, care, and maintenance
- School supervision programming support to effectively use new play areas
- Expanding new ground surfacing and shade to all schoolyards





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