Green Schoolyards for All Plan

November 15, 2023 | Greening Schools and Climate Resilience Committee
Facilities Services Division

Green Schoolyards for All Plan

Plan Overview – responds to the Resolution including:

- Engagement process
- Definition of schoolyards and green/natural elements
- Criteria and guidelines for scoping improvements
- Prioritization of future projects
- Current projects and programs analysis
- Next steps

Background

Green Schools for All Resolution - adopts the standard of 30% green/natural space for all District schools.

- Over 600 District schools do not meet the Resolution's goal ~ 80% of all Schools.
    - This does not account for grass football fields and baseball fields
    - Implementation of goal will not be feasible at all sites

- Approx. 15 Million sq. ft. (350 acres) of paved schoolyard areas need to be upgraded to green/natural space.

- $4 Billion needed to meet 30% green schoolyard goal.

Engagement

Q2-2023: Solicited input from community/stakeholders to help inform the 'Green Schoolyards for All Plan' priorities, scoping, and project development.

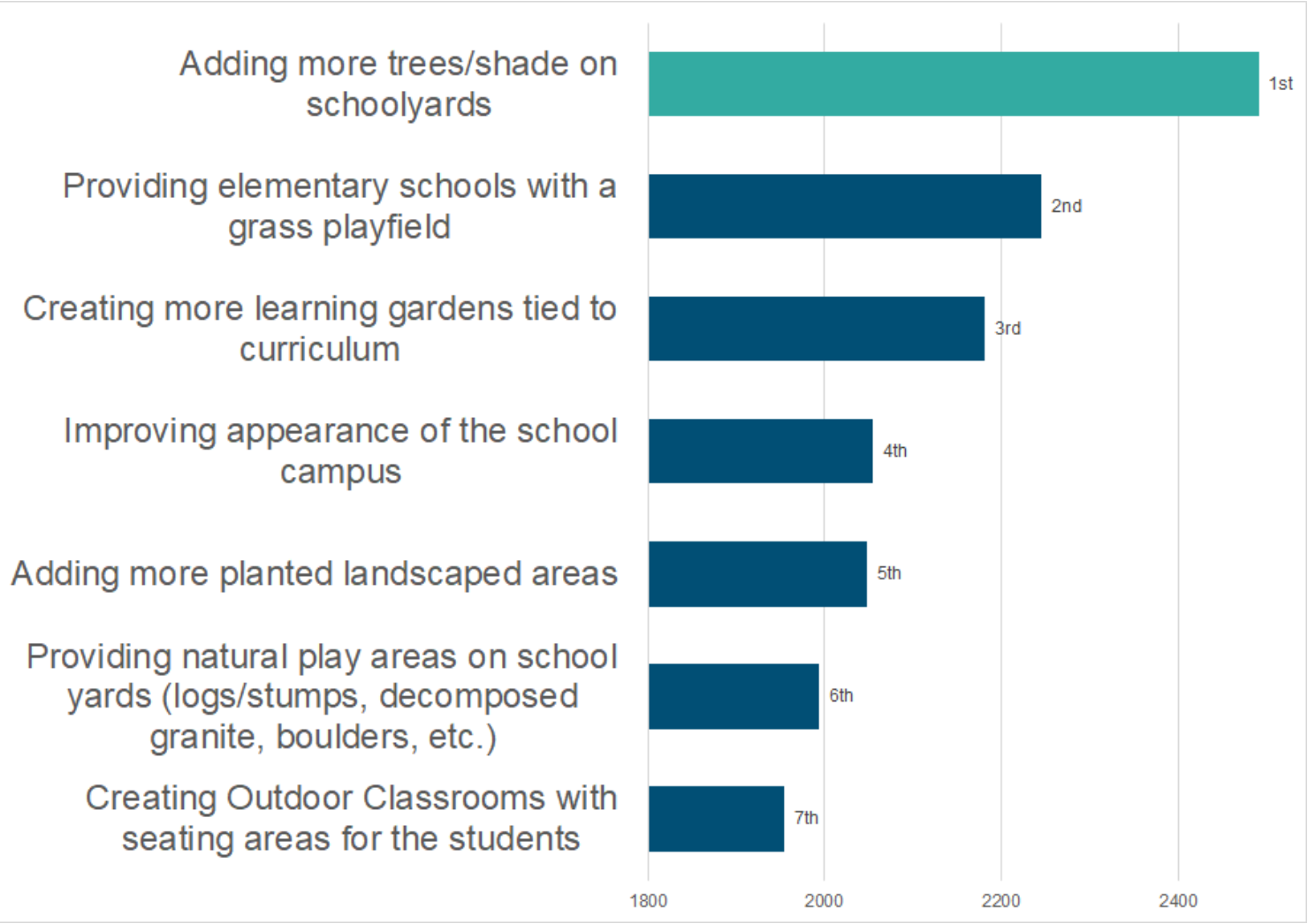
Part 1:

- Five Zoom sessions held, approximately 90 minutes each, 349 participants
- Input collected through online survey tool and follow up discussions in 7 languages.
- Participants: LAUSD students, families, educators, community-based partners, and environmental experts.

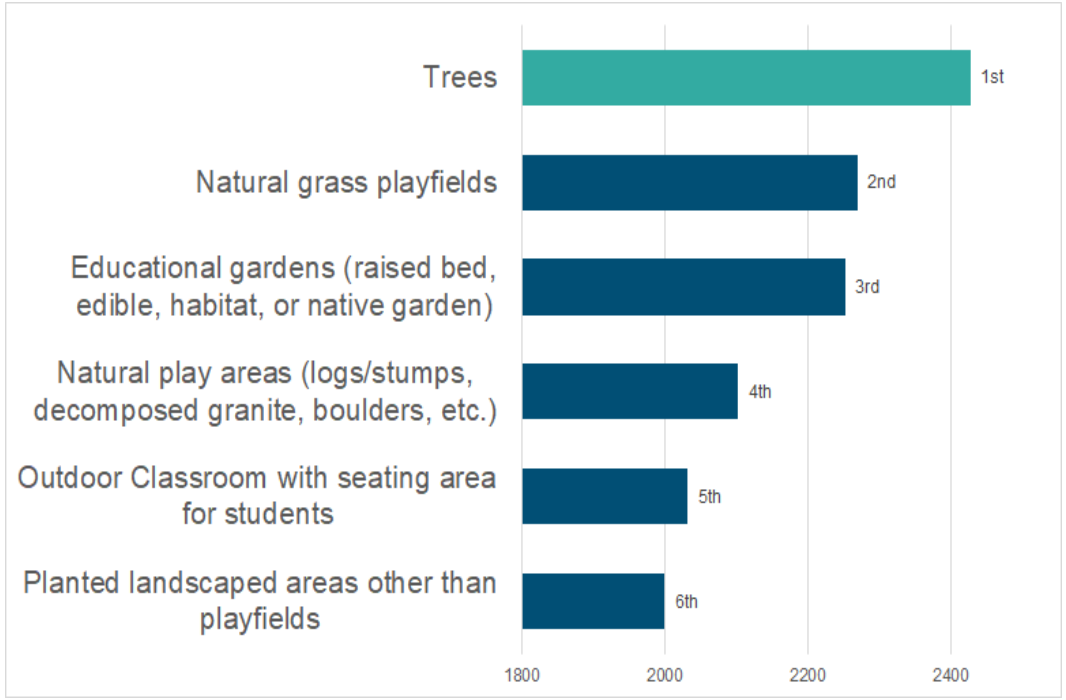
Part 2:

- Follow-up online survey sent to all 349 participants.
- 576 responses received - representing more than 164 schools.

Which do you feel the District should focus on when greening schoolyards?

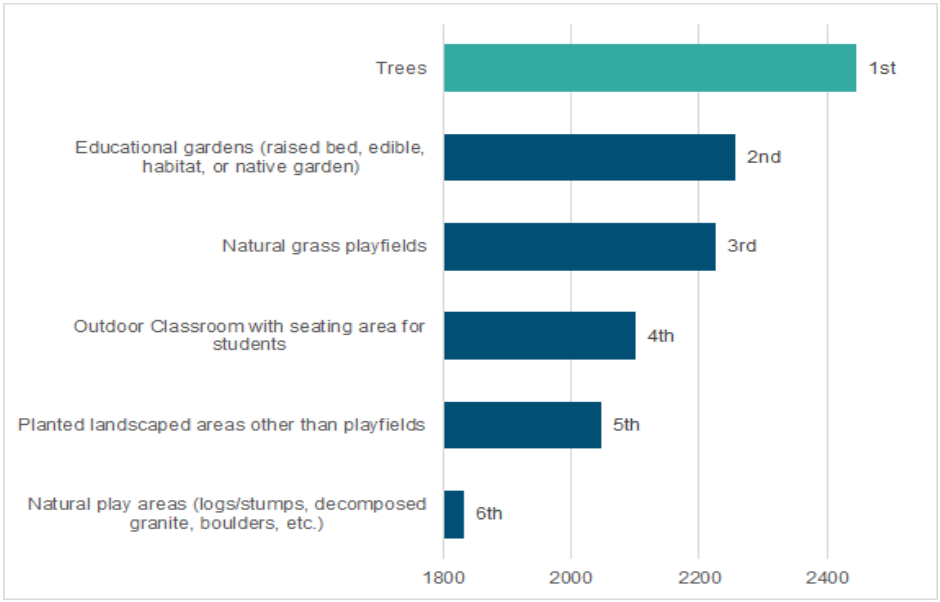


When it comes to a student's access to green schoolyard space on their campus, which is most important to you?

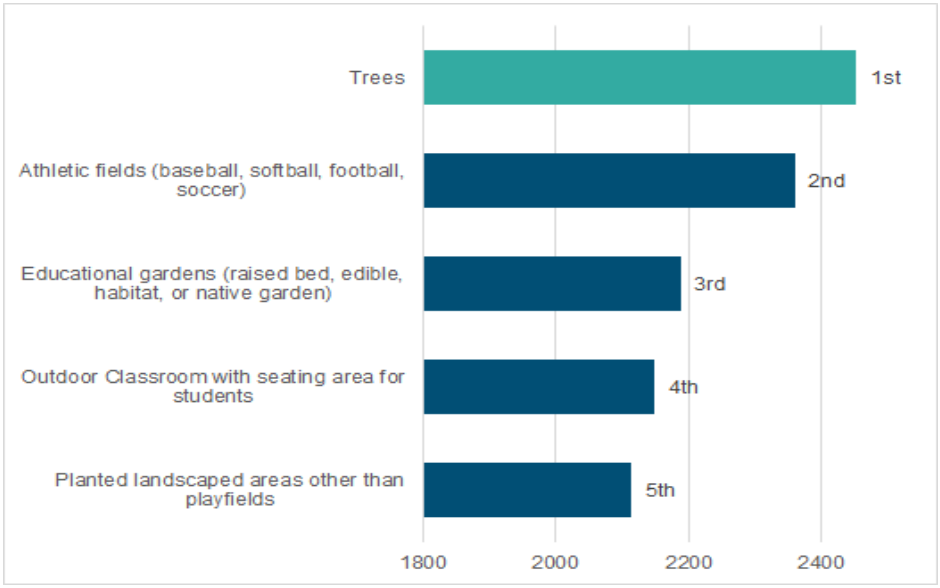


EEC/Elementary School

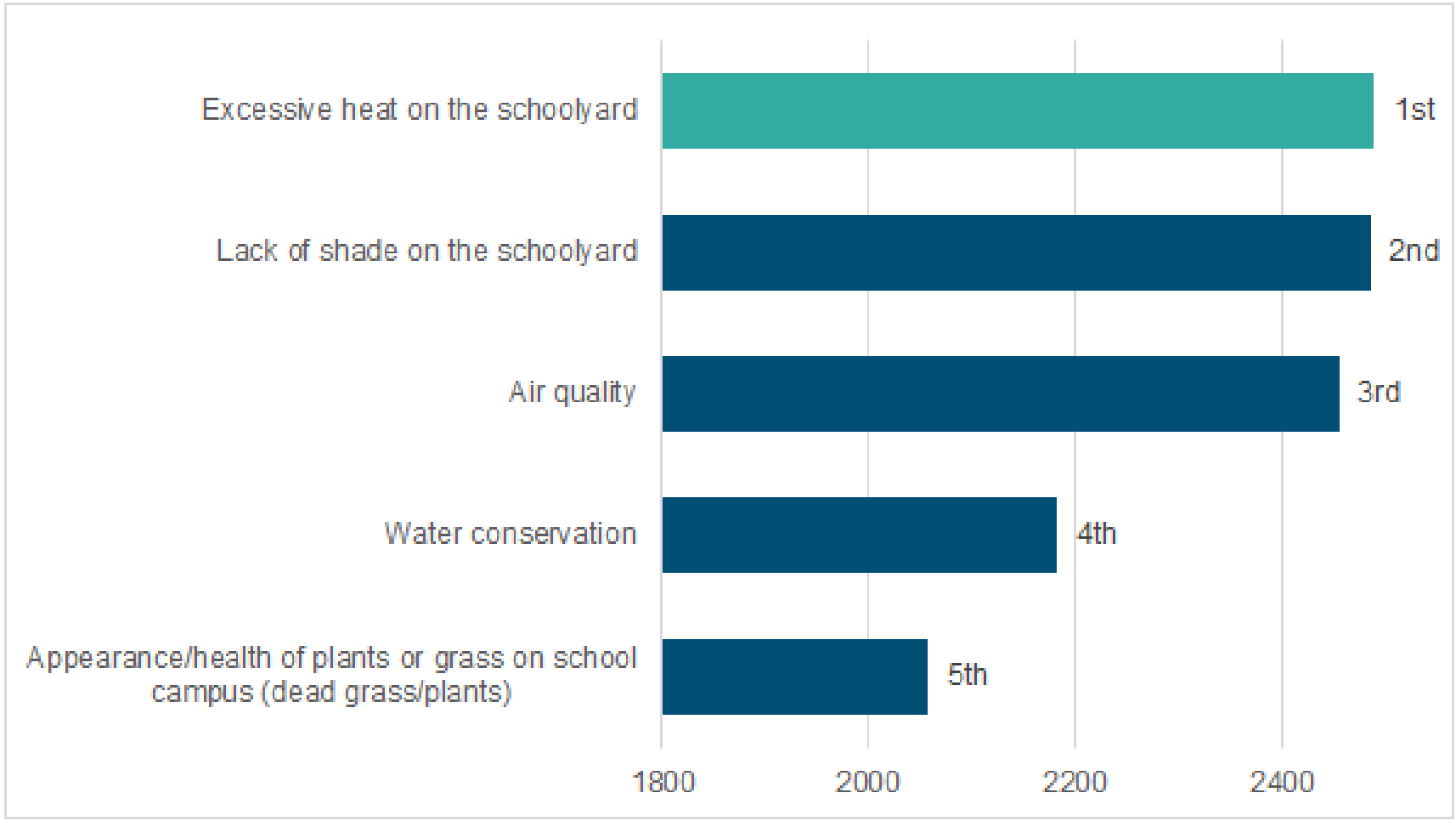
Middle School



High School



When it comes to climate-related concerns for students on a school campus, which of the following are most important to you?



Green Schoolyards

Green and natural spaces that students have access to during the day:

- Natural features for learning and active play
- Opportunities for interactive educational observation of natural systems
- Areas of both typical and unique plant and animal communities
- Areas of respite within the school campus
- Features and materials include:
  - Trees and shade
  - Permeable surfaces - water can pass through
  - Native/drought tolerant plants
  - Grass play fields

Green Schoolyard - Definitions

Schoolyard is defined as:

The exterior areas of the school site to which students have general, unrestricted, and secure access within the school fence line, including open space between permanent buildings wider than 20 feet.

Green/Natural areas are defined as incorporating the following surface materials:

- In-ground planting/trees
- Grass/lawn/natural turf
- Dirt/mulch
- Decomposed granite (DG)
- Permeable pavers

Measuring Green Schoolyards

Data System:

The **Computer Aided Facilities Management (CAFM) System** retains an inventory of physical property across the District including sites, buildings, and interior/exterior spaces, including tree locations, types, and canopies. The CAFM System has been utilized by the District since 2008.

Data Updates:

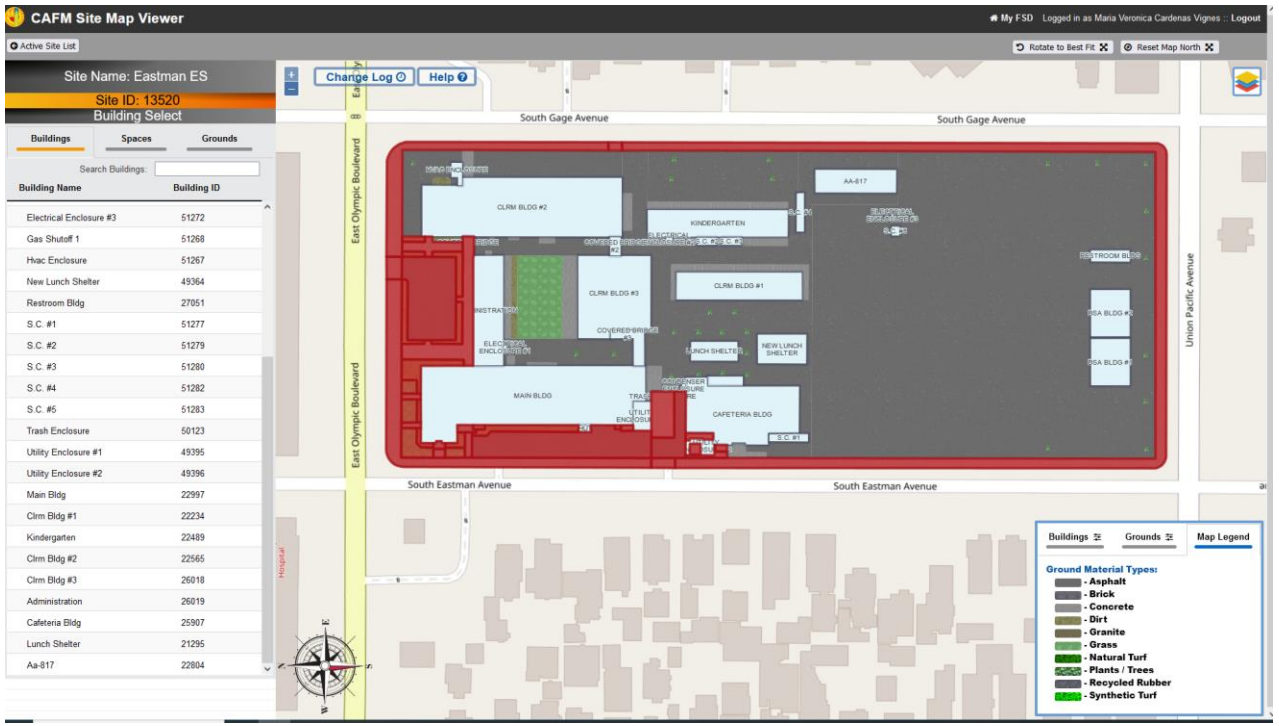
Spring/Summer 2023 - Staff updated measurements of outdoor spaces at elementary schools including:

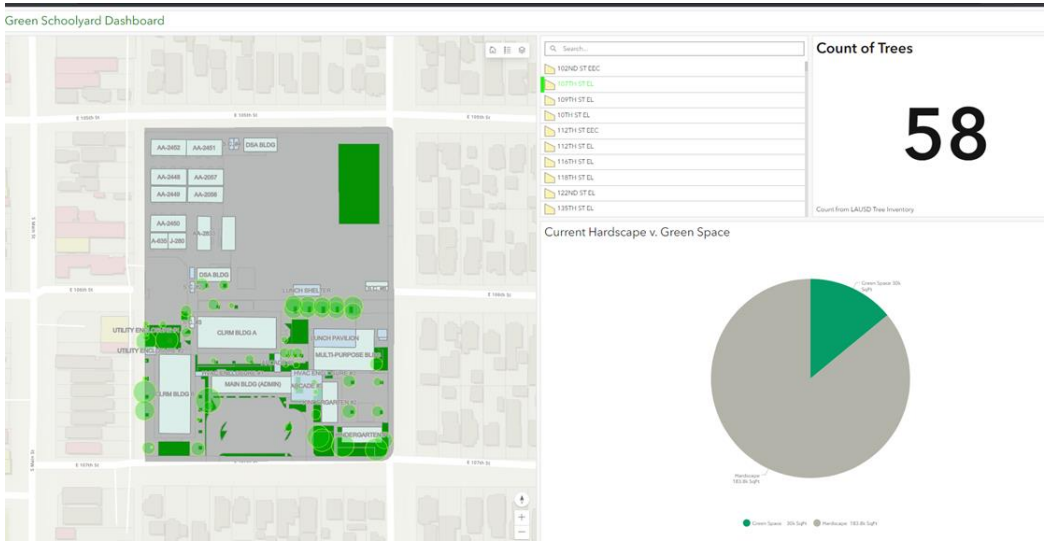
- Delineation of areas considered part of the “schoolyard”
- Delineation of areas consider green/natural
- QA/QC performed across the Districts school sites including CAFM reviews and physical surveys as needed.

Fall/Winter 2023 – Staff anticipates completion of all secondary school's data updates.

Monitoring Progress - CAFM

- Facilities based data is captured and managed in both tabular and graphical formats.
- Staff updates the records as features change including site improvements, planting or removal of trees, and changes in occupancy.
- Facilities based data is integrated with other District systems for reporting, tracking, and analyzing school sites.





Current Funded Efforts

Greening as the Primary Scope

- Bond-Funded (Measure RR) $400M
  - $300M Playground And Campus Exterior Upgrades
  - $5M SEEDS Learning Gardens
  - $50M Outdoor Learning Environments
  - $40M EEC Outdoor Classrooms
- Non-Bond:
  - ~$40M Greening Upgrades (~30 projects)
  - ~$50M Green Schoolyard Projects (~6-8 projects)
  - Third Party Greening Grants
    - $55M CAL FIRE Green Schoolyards
    - CNRA Urban Greening Grants
    - Safe Clean Water Program

Greening Provided as Feasible

Projects include upgrades to outdoor areas impacted by construction - positively improving green/natural schoolyards:

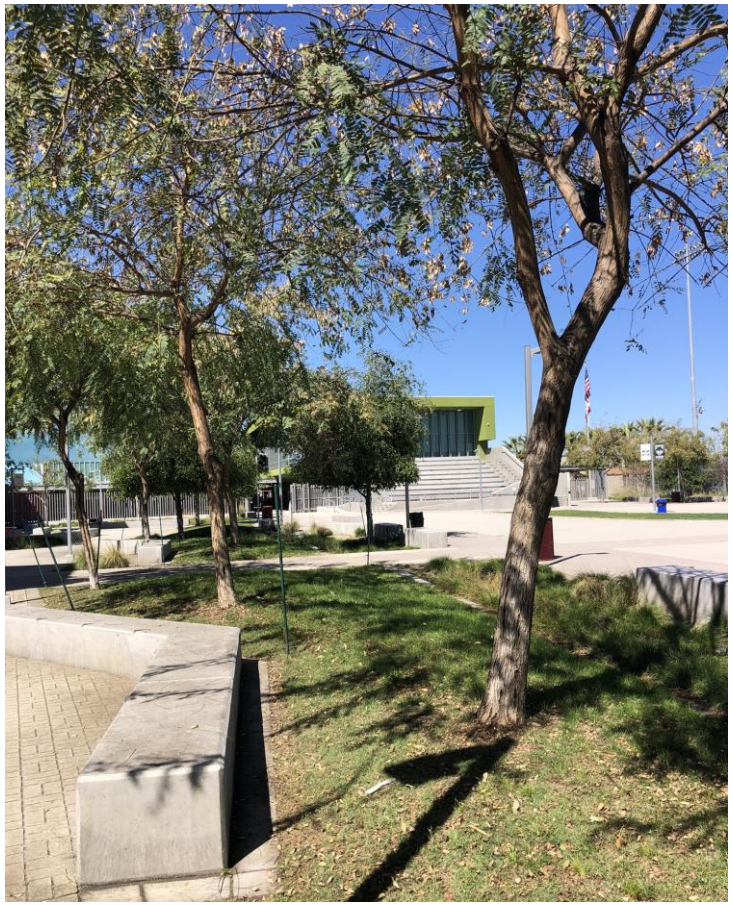
- $840M Major Modernizations
- $720M Classroom Replacements
- $186M High School Athletic Facilities Upgrades

Greening Analysis of Current Projects

For projects underway that include upgraded schoolyards:

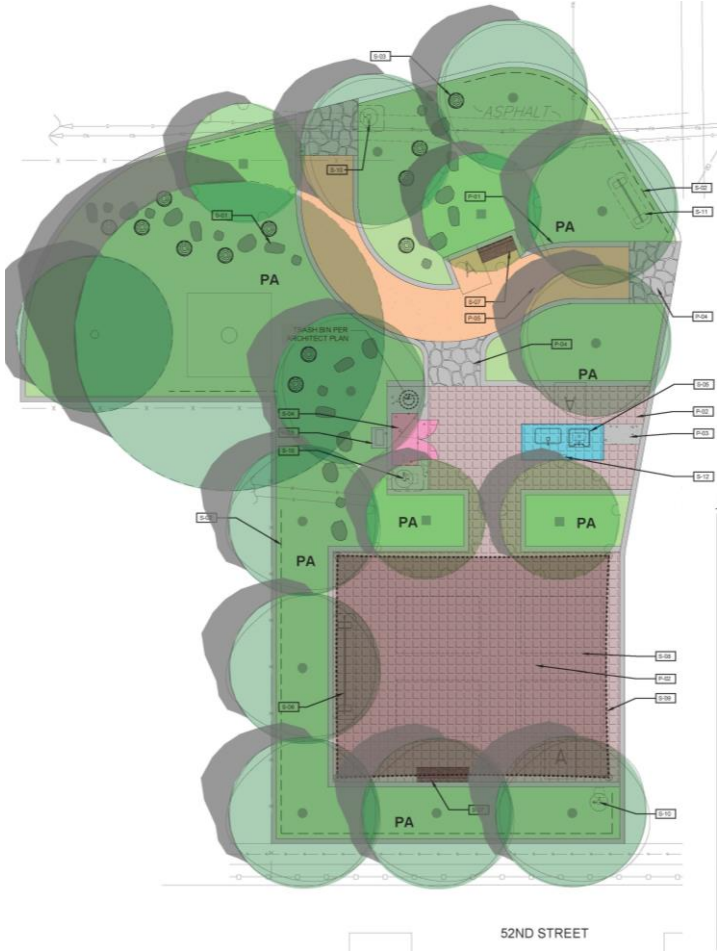
- **Elementary Schools:**
  Majority of projects yielded 22-30% green/natural schoolyards

- **Middle Schools And High Schools:**
  Greening increased above 30% goal



Project Greening Analysis

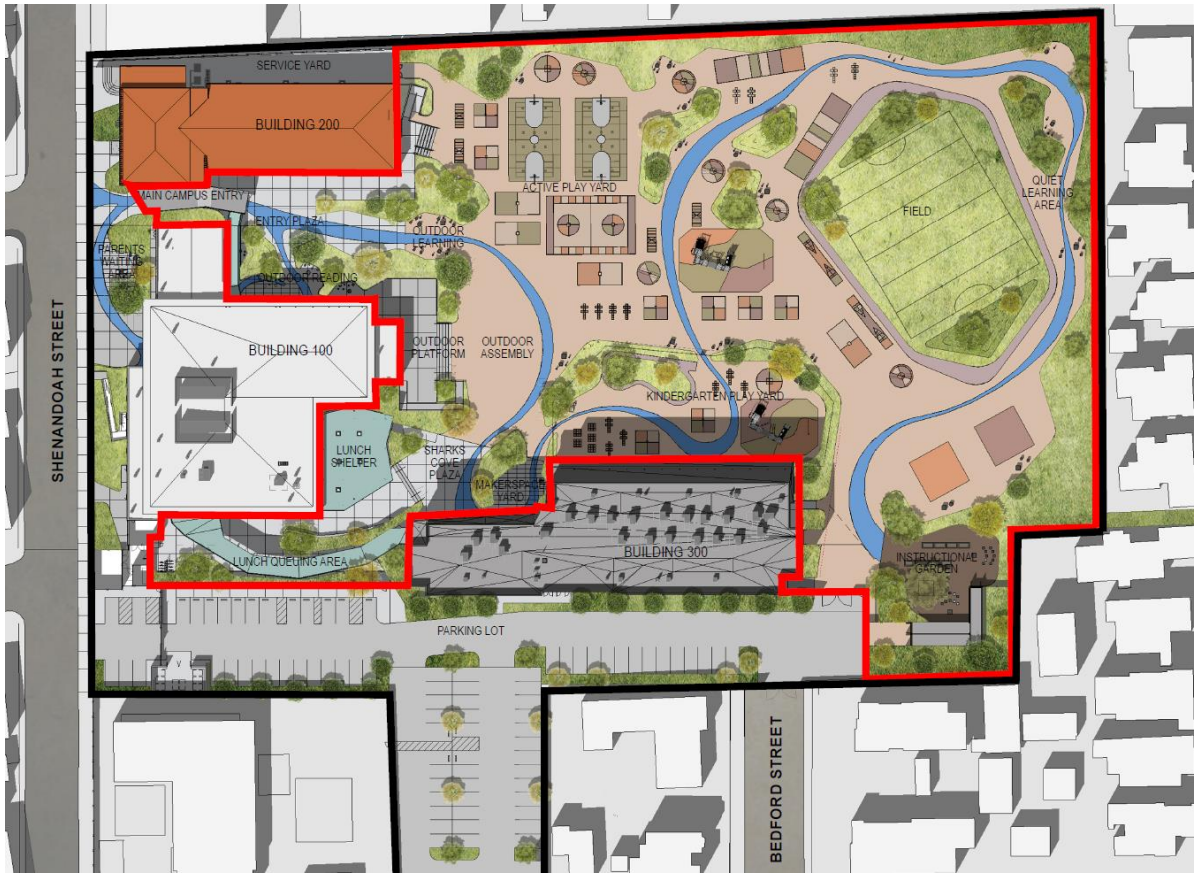
Outdoor Learning Environment
52nd Street Elementary Street



ELOP Project
109th Street Elementary School

Project Greening Analysis

Shenandoah Elementary School Comprehensive Modernization Project



Ivanhoe Elementary School Classroom Replacement Project

Green Schoolyard Improvements Scoping Goals

The development of the definitions, scoping process, and core principles for project scoping were informed by the engagement process, including community meetings, survey, and partners meeting.

- The highest priority identified in the stakeholder survey was trees and shade.
- Therefore, a goal of 20% shading of the schoolyard was added to the 30% green/natural goal set by the Resolution.

Green Schoolyard Project Goals:

- 30% green/natural schoolyard
- 20% shading of the schoolyard by trees

Green Schoolyard Improvements Scoping Criteria

Core Principles for Developing Site-specific Project Definitions:

- **Increase green/natural areas to 30%** or to the maximum extent feasible.
- **Plant trees to achieve 20% shade** from trees at landscape and hardscape areas within 15 years. Provide shade where students are most active.
- **Provide grade level appropriate outdoor learning environments** aligned with curriculum and programs at the school.
- **Provide space for physical education and active play.** Prioritize green/natural spaces that allow for active play. Include a grass playfield at elementary schools, as space permits.
- **Consider visibility and site lines to improve safety and security** of the schoolyard.
- **Ensure access** to the green schoolyard is provided to all students.
- **Improve physical conditions and site infrastructure** to ease maintenance of the schoolyard.

Considerations – Small School Sites

At **small school sites** it is extremely challenging to provide adequate space to support Physical Education.

- Per California Department of Education (CDE), a K-5 elementary school of 600 students requires 5.7 acres for physical education.
- Very few District elementary school sites currently meet these requirements.
- Strategies for green schoolyards on small urban school sites include:
  - Maximize the schoolyard area available for active play, including grass play fields, DG areas, running/walking paths, and areas for climbing and balancing on logs and stumps.
  - Provide shade to make the available area more usable and comfortable.
  - Adjust the fence line to capture green/natural front yards for student use.
- When 30% green/natural schoolyard is not achievable, consider cool paving.
  - Not considered as part of the 30% green/natural area.

Considerations – Secondary Schools

At **secondary schools**, the needs for green schoolyards differ from those at elementary schools.

To provide benefits to the maximum number of students, consider:

- Focus green/natural improvements and outdoor learning environments at quads and areas within the academic core.
- As the hardcourt physical education stations such as basketball courts often have limited shade, providing shade and cool paving to these areas should be considered to reduce the heat island effect.

Prioritizing Improvements for Green Schoolyards

Green Schools for All Resolution – provides guidance on prioritizing resources for improvements at school sites where the need for green/natural spaces is highest and as follows:

Greening Index 2.0 (GI 2.0) - Updated Greening Index to Align with the Resolution

GI 2.0 - Category 1: prioritize elementary schools with 10% or less green/natural schoolyards

- Approximately **205** elementary schools are 10% or less "Category 1"
- Estimated to cost approximately **$1.5 Billion** in capital upgrades
  - Project budgeting assumptions include landscape and planting, trees, outdoor learning environments, irrigation, infrastructure, and accessibility upgrades, adjusted for inflation

Prioritizing Improvements for Green Schoolyards – GI 2.0

Special Focus: Communities most affected by extreme heat & climate change.

- **CalEnviroScreen 4.0 (CES) -** Identifies communities that are disproportionately burdened by multiple sources of pollution. Environmental, health, and socioeconomic information produces scores for every census tract in CA. A high scoring area experiences a much higher pollution burden than low scoring areas.

- **Extreme Heat Temperature Tool -** Explores the temperature of extreme heat days. Data is derived from daily maximum temperature, 30-year average for 1976-2005, including baseline, mid-century, and late-century projections by 6km grid cell.

Ranking: Based on a weighted calculation of 75% applied to the CalEnviroScreen (CES) score and 25% applied to the Extreme Heat Temperature score.

Category 1: 1-25 Priority List

GSY Priority Rank	Site Name	BD	Region	Schoolyard % Green	CalEnviroScreen Score	Extreme Heat Temperature Score	Combined Score
1	EASTMAN EL	2	East	3.49%	73.71	71.22	73.09
2	ARMINTA EL	6	North	2.89%	68.18	76.69	70.31
3	UTAH EL	2	East	6.80%	73.31	57.40	69.33
4	BRIDGE EL	2	East	0.62%	73.09	57.40	69.16
5	SAN PEDRO EL	5	East	7.19%	76.52	43.64	68.30
6	COLDWATER CYN EL	6	North	3.64%	65.23	76.69	68.09
7	DENA EL	2	East	2.26%	70.13	57.40	66.94
8	HELIOTROPE EL	5	East	2.30%	64.41	72.99	66.56
9	NEVIN EL	5	East	8.94%	69.26	57.40	66.29
10	STRATHERN EL	6	North	5.05%	62.66	76.69	66.17
11	SOTO EL	2	East	1.49%	68.92	57.40	66.04
12	GRAPE EL	7	South	1.89%	76.85	33.52	66.02
13	LORETO EL	2	East	5.63%	66.95	62.77	65.90
14	TELFAIR EL	6	North	9.02%	63.26	72.52	65.57
15	ROSCOE EL	6	North	9.51%	62.14	74.76	65.29
16	CANOGA PARK EL	3	North	3.02%	55.01	92.94	64.50
17	SATICOY EL	6	North	4.53%	59.45	76.69	63.76
18	FLETCHER DR EL	5	West	3.61%	64.05	62.77	63.73
19	LORENA EL	2	East	7.14%	65.82	57.40	63.71
20	EUCLID EL	2	East	0.00%	65.82	57.40	63.71
21	ALBION EL	2	East	4.07%	63.82	62.77	63.56
22	BELVEDERE EL	2	East	7.00%	60.98	71.22	63.54
23	SOLANO EL	2	East	7.51%	63.58	62.77	63.38
24	ANN EL	2	East	0.61%	63.58	62.77	63.38
25	VERNON CITY EL	5	East	9.60%	65.20	57.40	63.25

Category 1: 26-50 Priority List

GSY Priority Rank	Site Name	BD	Region	Schoolyard % Green	CalEnviroScreen Score	Extreme Heat Temperature Score	Combined Score
26	MARIANNA EL	2	East	7.87%	60.33	71.22	63.05
27	92ND ST EL	7	South	7.52%	67.75	48.10	62.84
27	FLORENCE G JOYNER EL	7	South	8.82%	67.75	48.10	62.84
29	BURTON EL	6	North	8.92%	59.69	71.59	62.66
30	SYLVAN PARK EL	3	North	5.64%	64.22	57.85	62.63
31	VANALDEN EL	4	North	6.95%	51.71	93.41	62.14
32	66TH ST EL - COS RIVERA	7	South	8.04%	71.24	33.36	61.77
33	GARDENA EL	7	South	5.46%	74.44	23.12	61.61
34	RITTER EL	7	South	4.23%	70.56	33.52	61.30
35	HOLMES EL	5	East	8.36%	65.69	48.10	61.29
36	CASTELAR EL	2	East	1.24%	60.63	62.77	61.17
37	ASCOT EL	5	East	5.74%	62.38	57.40	61.14
38	BREED EL	2	East	3.31%	62.08	57.40	60.91
39	VENA EL	6	North	7.79%	55.40	76.69	60.73
40	HART ST EL	3	North	7.59%	49.80	92.94	60.59
41	EL DORADO EL	6	North	8.39%	56.56	72.34	60.51
42	CITY TERRACE EL	2	East	8.88%	56.59	71.22	60.25
43	WEIGAND EL	7	South	0.34%	63.83	48.10	59.90
44	HUMPHREYS EL	2	East	3.87%	56.07	71.22	59.86
45	HAZELTINE EL	3	North	7.41%	55.78	71.59	59.73
46	SHARP EL	6	North	5.99%	55.40	72.52	59.68
47	GARDEN GROVE EL	4	North	3.27%	50.07	88.13	59.58
48	96TH ST EL	7	South	4.02%	63.19	48.10	59.41
49	HADDON EL	6	North	4.47%	54.89	72.52	59.30
50	FAIR EL	6	North	3.26%	53.26	76.69	59.12

Category 1 – 10 Highest Need Schools

GSY Priority Rank	Site Name	BD	Region	Schoolyard % Green	CalEnviroScreen Score	Extreme Heat Temperature Score	Combined Score
1	EASTMAN EL *	2	East	3.49%	73.71	71.22	73.09
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School has a funded project to improve greening of the schoolyard. Extent of improvements will be analyzed against the 30% goal.

* CAL FIRE Grant ** Outdoor Learning Environment Project *** SEEDS and CAL FIRE Grant

Prioritizing Improvements for Green Schoolyards – GI 2.0

GI 2.0 - Category 2

- Elementary Schools with greater than 10% green/natural schoolyards.
- All Middle and High Schools
- Ranking based on:
  - Percentage of green/natural schoolyard
  - CalEnviroScreen Score
  - Extreme Heat Temperature Tool

Next Steps

1 – Existing Projects and Programs

- Capitalize on existing programs and projects that incorporate green/natural schoolyard improvements.
- Track progress as investments are approved and completed.

2 – New Green Schoolyard Upgrade Projects

- Identify funding for new projects targeting improvements to achieve the green/natural schoolyard goals.
- As funding is identified, develop GSY Projects in the ranked order reflected in the updated Greening Index 2.0.

Next Steps cont.

3 – Prioritize Green Schoolyard Improvements

- Greening Index 2.0
  a. Update the Greening Index to incorporate current measurements of schoolyards, green/natural components, and the CalEnviroScreen and Extreme Heat Temperature tools.
  b. Category 1 - Establish the 205 elementary schools with less than 10% green/natural schoolyards as the highest priority for green schoolyard improvements.
  c. Category 2 - All remaining elementary and secondary schools - analysis of the data to establish the remainder of the Greening Index 2.0 priority list.

4 – Early Education Center Outdoor Classroom Program

- Upgrades underway at approximately 43 EEC's, including 16 completed projects.
- Additional funding (approximately $200 million) is needed to provide upgrades at approximately 45 EEC's.
- Projects make progress towards the 30% goal as feasible.

Next Steps cont.

5 - Address Maintenance Resource Needs

- Identify additional funding for staffing.
- Provide training to ensure the longevity of investments.
- Identify ongoing funding for repair, monitoring and replacement of green/natural schoolyard features.

6 - Facilities Design Standards and Guidelines

- Update design requirements and scoping process for future projects to include 30% green/natural schoolyards goal as feasible.
- Ensure current and future capital projects align with and/or make progress towards the core principles for scoping projects including GSY improvements.
- Integrate green/natural schoolyards definitions and goals into District standards and guidelines, including the School Design Guide.
- Update the School Design Guide as new products and materials are created, presented and fully analyzed for durability, maintainability and safety.

Next Steps cont.

7 – Partnerships, Grants and Advocacy

- Pursue funding through grant programs.
- Partner with entities that may provide capital and/or maintenance resources.
- Advocate for State and Federal funding targeted to investing in green/natural schoolyards including capital investments and resources for maintenance.
- Advocate for State and Federal grant programs to cover all costs of grant projects.
- Advocate for grant programs to benefit LAUSD equitably.

Conclusions

- Systems are in place to measure, prioritize, and monitor green/natural spaces at school sites.
- Existing projects, programs and design standards align with the goals of the green schools for all resolution.
- Opportunities for partnerships are encouraged and supported.
- Collaboration with stakeholders, partners, and experts continues.
- Funding is in place to continue greening efforts.
- Additional funding needs to be identified for new capital projects focused on upgrading schoolyards.

Questions and Discussion