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Berkeley California Outdoor
Engagement Coalition



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Camp



**OUTDOORS
EMPOWERED
NETWORK**

SALT



October 26, 2018

California Building Standards Commission
Attn: Mia Marvelli, Executive Director
2525 Natomas Park Drive, Suite 130
Sacramento, CA 95833
cbcs@dgs.ca.gov and DSAcommunication@dgs.ca.gov

**RE: Support for Section 5.107 Shade Trees of the California Green Building Standards Code,
California Code of Regulations, Title 24, Part 11 — Government Code Section 11346.5(a)(17)**

Dear Ms. Marvelli,

We are writing to express our strong support for the new *Shade Tree* section (Section 5.107) of the *45-Day Express Terms for Proposed Building Standards of the Division of the State Architect - Structural Safety (DSA-SS), Regarding the 2019 California Green Building Standards Code (CALGreen), California Code of Regulations, Title 24, Part 11.*

We are very pleased to see shade trees added to the Code, and commend your efforts to make California's schools more climate resilient and protect our state's children from the sun.

This letter is endorsed by organizations and agencies across California who agree that trees are important components of our public school grounds. Planting trees in child-accessible locations on school grounds has the following benefits:

- **Learning:** Green schoolyards that include trees provide valuable opportunities for hands-on learning across all grade levels and subject areas, while making the physical environment more comfortable and enjoyable. They also provide places for students to practice stewardship principles as they care for shared schoolyard spaces.
- **Stress:** Research by Li and Sullivan (<http://bit.ly/TreeViewStudy>) indicates that students who have views of trees from their classroom windows recover faster from stress and mental fatigue, and have higher academic achievement than students who do not have a view of trees from their classroom window.
- **Health:** Trees create shade, which can reduce playground temperatures and provide opportunities for children to be active, improving their physical fitness and motor coordination. Planting trees improves air quality, which is important for children's respiratory health. Many green schoolyards also include edible gardens with fruit orchards, improving nutrition.

- **Climate:** Most of California's urban school grounds are covered with asphalt and rubber that heat up in the sun, contributing to urban heat island problems. According to a pilot study by Green Schoolyards America, planting trees to shade asphalt and rubber surfaces, in particular, can reduce playground surface temperatures by up to 60°F.
- **Watersheds:** Removing schoolyard asphalt to plant trees and other vegetation allows stormwater to infiltrate onsite, reducing runoff and improving water quality downstream.
- **Parks and Equity:** Many of our cities do not have equitably distributed public green space. If we add trees to all schoolyards in California, all children and their communities will have access to the natural world, every day.

California's school grounds desperately need more shade trees, and they need them most in places where they directly benefit children. A detailed study of Los Angeles's school grounds by researchers at Claremont Graduate University and the Council for Watershed Health found that ~20% of LAUSD's schools have 0% tree canopy and are also 100% paved (<http://bit.ly/LA-TreeStudy>). Moreover, this study found that for the schools with trees, the children's play areas had "approximately 50% less tree canopy coverage than that of the entire school site tree canopy coverage." So, schools that have trees are not placing many of them where children can benefit from the shade.

The California Department of Public Health and Green Schoolyards America have been working to characterize conditions on school grounds across the state, as a whole. They estimate that:

- only ~8,750 of California's ~130,000 acres of public school land is currently shaded by tree canopy
- 58% of public school grounds have less than 5% tree canopy
- **10% of public schools statewide have less than 2% tree canopy.**

Optimize Section 5.107 to Benefit Children

While we are very pleased to see that your agency is proposing to include shade trees in the new Code, the organizations endorsing this letter would like to recommend modifications to the language in Section 5.107 to help the new standards achieve maximum benefit for climate resilience *while also* improving the well-being of the millions of children who use school grounds every day.

We recommend that DSA revise Section 5.107 to remove emphasis on planting trees in parking lots and instead recommend that children should be the main beneficiaries of school districts' investments in shade trees. We believe that this can be accomplished by setting one requirement for the entire school grounds (25% tree canopy coverage), and allowing schools to determine tree placement to prioritize shade where children directly benefit.

We recommend that the text of Section 5.107 be amended and simplified to read as follows:

5.107.1 Shade trees. [DSA-SS] Shade trees shall be planted to comply with Sections 5.107.1.1, ~~5.107.1.2, and 5.107.1.3~~. Percentages shown shall be measured at noon on the spring equinox. Landscape irrigation necessary to establish and maintain tree health shall comply with Section 5.304.6.

5.107.1.1 School grounds. Shade tree plantings, minimum #10 container size or equal, shall be installed to provide shade over 25% of the school property within 15 years. Tree planting should prioritize student-accessible areas of the school grounds, so that students will directly benefit from shade during school hours.

Exception: If building footprints cover more than 50% of the school property, tree canopy coverage may be reduced to 30% of the remaining land.

We further recommend that sections 5.107.1.2 and 5.107.1.3 be eliminated, since the language above includes all areas of the school grounds.

We believe that these recommendations are reasonable and achievable because there are already some schools with 25% tree canopy coverage in California. We would like California to provide school environments with this level of tree canopy for all children.

This level of tree canopy will also help California's schools work toward the Governor's ambitious and much-needed climate goals, and will model climate responsive design for the next generation.

Thank you again for including trees in the updated Code. We see this addition as a great leap forward and believe it will result in multi-benefit outcomes for education, health, communities, and the environment, if applied with the changes suggested above.

The endorsing organizations would be pleased to engage in further conversation with DSA about tree planting on California's school grounds. Please contact this group of endorsers via our coordinator, Sharon Danks, at Green Schoolyards America using the contact information below.

Thank you.

Sincerely,



Signed on behalf of the organizations endorsing this letter

Sharon Danks, MLA-MCP
CEO and Founder, Green Schoolyards America
2150 Allston Way, Suite 460, Berkeley, CA 94704-1375
sharon@greenschoolyards.org
510-872-4554

cc: Ida Clair, Ida.Clair@dgs.ca.gov

Endorsing organizations and their contacts include:

- Bay Tree Design, inc. – Lisa Howard, Principal
- California Outdoor Engagement Coalition – Jenny Mulholland-Beahrs, Director
- Canopy – Catherine Martineau, Executive Director
- Education Outside – Rachel Pringle, VP of Strategy
- Environmental Volunteers – Elliott Wright, Executive Director
- The Friends of Berkeley Tuolumne Camp – Scott Gelfand, Executive Director
- Green Schoolyards America – Sharon Danks, CEO
- Groundwork Richmond – Matt Holmes, Executive Director
- Ocean Discovery Institute – Shara Fisler, Executive Director
- Outdoors Empowered Network – Kyle Macdonald, Executive Director

- SALT Landscape Architects – Allen Compton, Founder/Principal
- Shawn Maestretti Garden Architecture – Shawn Maestretti, Principal
- Ten Strands – Karen Cowe, CEO
- The Trust for Public Land – Rico Mastrodonato, Acting Director of CA Government Affairs
- TreePeople – Candice Dickens-Russell, Director of Environmental Education
- Trees for Oakland – Derek Schubert, Coordinator

Endorsing individuals include:

- Bevin Ashenmiller, PhD, Associate Professor of Economics, Occidental College
- Marcella Raney, PhD, Associate Professor of Kinesiology, Occidental College