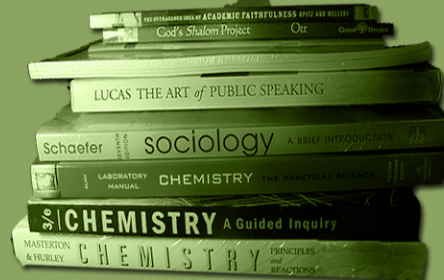




**Urban Land  
Institute**

Orange County/Inland Empire



December 2009

# GREEN WORKS URBAN ACADEMY

## TECHNICAL ASSISTANCE PANEL



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Institute  
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*"The mission of the Urban Land Institute is to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide."*



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## ABOUT THE URBAN LAND INSTITUTE

The Urban Land Institute is an international, non-profit research and educational organization that serves to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide. The ULI is based out of Washington D.C., and is connected throughout the Americas, Europe and Asia by a network of district councils. ULI has grown from seven regional district councils in 1983 to more than 60 global district councils today. In North America, there are currently 55 district councils, and in Europe, there are currently 12 district councils. The ULI Orange County/Inland Empire is the sixth largest district council, with nearly 1,200 members. The ULI is funded by sponsors, programs, and its members. Over 30,000 members are active in the research and education of land use planning and development issues. ULI members have access to information such as publications, case studies, and community catalyst reports. The ULI also organizes special workshops and programs geared towards people who develop and redevelop neighborhoods, business districts and communities across the U.S. and around the world. Networking is one of the primary reasons to join the ULI as professionals seek to be connected and share best practices.

The members of the ULI Orange County/Inland Empire are community builders. They represent a range of professions from academicians to economic development officials and designers to property managers. The activities of the ULI Orange County/Inland Empire are geared specifically towards local land use issues, but also towards issues that affect the Southern California region and California statewide. In an effort to create a forum where professionals under 35 years old could network with their colleagues or meet seasoned professionals in the industry, in 2003, the Young Leaders Group was formed.

The mission and the principles of the ULI have withstood the test of time for more than 70 years. Founded in 1936, by J. C. Nichols, the ULI has been bringing together leaders from the private and public sectors in an open exchange of ideas and experiences to improve the quality of real estate and development decisions in regions throughout the world and in the Orange County/Inland Empire region.

## ULI ADVISORY SERVICES

The Urban Land Institute is a leader in conducting research and providing information on all aspects of real estate development and land use policy. In order to maintain its status as a valued and objective source in the private and public sectors, the ULI seeks to bring together leaders from across the fields of real estate and land use policy to exchange best practices and serve community needs; foster collaboration within and beyond ULI's membership through mentoring, dialogue and problem-solving; explore issues of urbanization, conservation, regeneration, land use, capital formation, and sustainable development; advance land use policies and design practices that respect the uniqueness of both built and natural environments; share knowledge through education, applied research, publishing, and electronic media; and, sustain a diverse global network of local practice and advisory efforts that address current and future challenge.



# Urban Land Institute

## Orange County/Inland Empire

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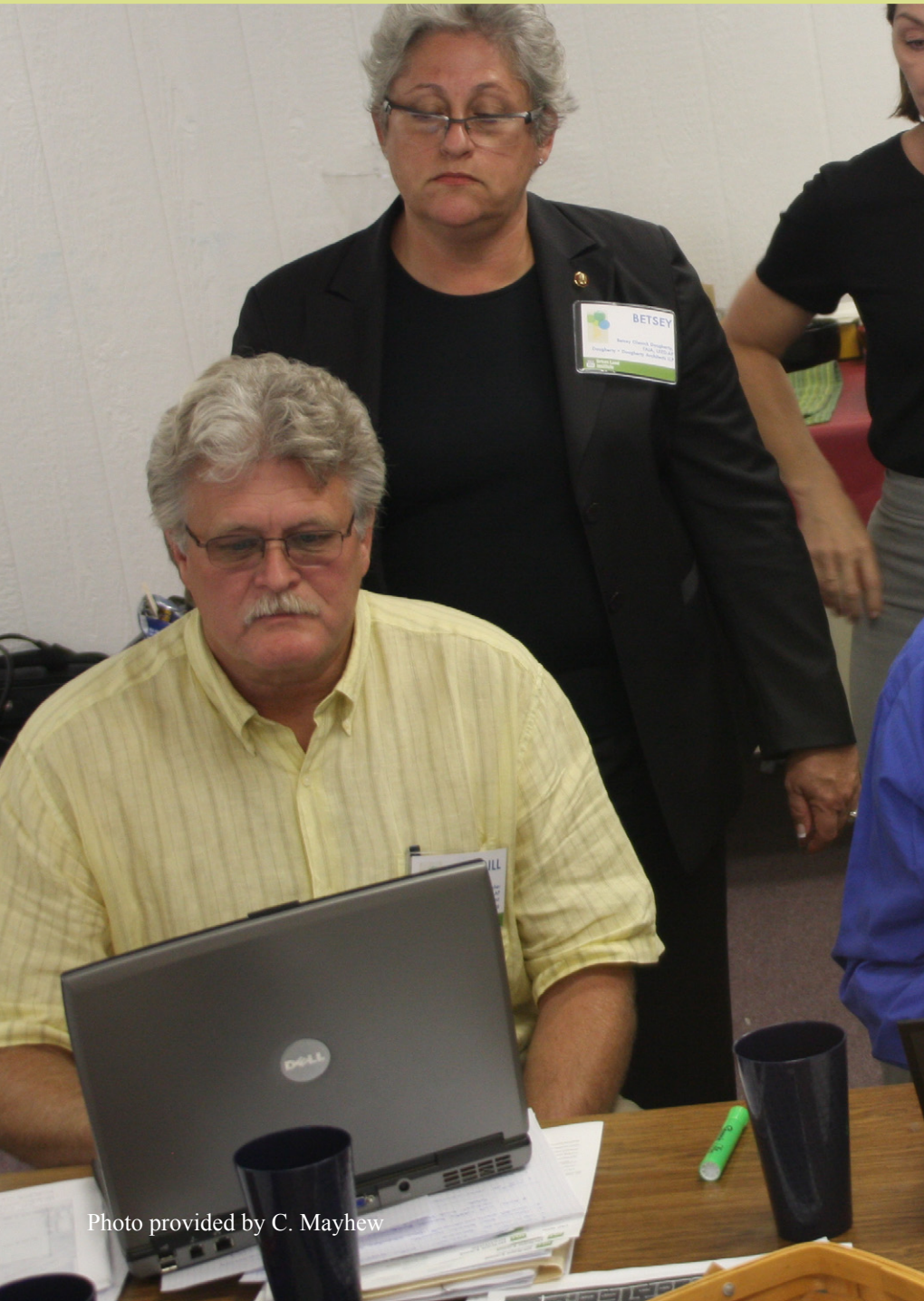


Photo provided by C. Mayhew

Since 1947, ULI's Advisory Services Program has been assisting communities by bringing together panels of seasoned real estate, planning, financing, marketing, and development experts to provide unbiased pragmatic advice on complex land use and development issues. At the local level, the ULI Orange County/Inland Empire District Council provides advisory services panels on specific issues, which are addressed in one or two days.

To ensure objectivity, members of a District Council Technical Advisory Panel (TAP) cannot be involved in matters pending before or be working for the sponsor and cannot solicit work from the sponsor during the panel's assignment period. The panel consists of professionals, who are ULI Orange County/Inland Empire members, with expertise relative to the scope of the project. All TAP panelists are volunteering their time and expertise to participate. Sponsors request TAPs and the District Council assist the sponsor in refining the scope of the assignment and in organizing the panel's efforts. At the conclusion of the TAP, the panel issues a report with findings and recommendations to the sponsor. A fee is paid to the ULI Orange County/Inland Empire for the TAP, which is used by the District Council to further the Institute's mission to share best practices and provide educational services in local land use planning and real estate development.



Photo provided by Masada Homes

## ABOUT MASADA HOMES

*Counseling & Research Associates, dba Masada Homes, a California non-profit corporation, was founded in 1967 by experienced social service professionals. The mission of Masada Homes is to build a foundation for youth and families by providing quality residential, vocational, mental health and substance abuse services so that they may become healthy, independent, and productive members of their communities. Masada Homes provides services in six main program areas: Community Mental Health Services, School Based Services, Substance Abuse Services, Residential Treatment, Foster Family Care and Therapeutic Behavioral Services.*

*School Based services are provided in various locations throughout Los Angeles County. Through a partnership with the Los Angeles County Office of Education, Masada serves students at their Alternative Education sites as well as providing services in a number of other middle and high school settings. Services include: individual and group therapy, case management, social skill development, recreational therapy, occupational therapy and substance abuse counseling and education. Masada also works cooperatively with the Cal-Safe program providing mental health services to pregnant and parenting teens.<sup>1</sup>*

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<sup>1</sup> Refer to [www.masadahomes.org](http://www.masadahomes.org)



## INTRODUCTION

As an extension of their school-based services, Masada Homes is proposing the adoption of a new charter school to the Los Angeles Unified School District (LAUSD). The proposed charter school aims to educate, employ, and empower at-risk youth by providing students with resources and skills for 21st century green-collar jobs. In addition, the school will teach students practices and procedures which empower them to become stewards of their own environments and positive contributors to the communities in which they live. Given the “green” aspect of the program, the proposed name for this charter school is Green Works Urban Academy (GWUA).

Masada Homes intends to locate Green Works Urban Academy in a building located on their existing alternative education site. This 4-acre industrial site currently contains two old warehouse buildings, both of which are currently being used for alternative education. With the adoption of the charter school petition, Masada Homes will expand and/or remodel one or both of the buildings for this new educational use.

The proposed schedule for GWUA indicates the school will be open for enrollment beginning in September, 2010. The school will initially serve grades 6-8 with a student population of approximately 150 students. At a scheduled build-out in 2015, the school will serve a student population for grades 6-12 (approximately 450 students).

## PROFESSIONAL ADVICE

Masada Homes sought input from green-industry professionals and educators on how to develop an educational program and facility which 1.) meets the needs of the targeted at-risk student population, and 2.) provides students with green-collar job skills.

Given these parameters, the Urban Land Institute (ULI) provided a panel of industry-related experts who could address a comprehensive feasibility analysis for the implementation of a successful educational program. In a one-day charrette, the panel focused on the following areas:

1. Organizational structure, governance, and expertise,
2. Economic feasibility and sustainability,
3. Curriculum development, green technology, and vocational skills, and
3. Facility design requirements.

## PANEL COMPOSITION

Given the broad range of expertise necessary to fully envelop the task at hand, panelists were selected based on their experience in community outreach and education, school facility design, sustainable construction, and green collar skills. Biographies for each panelist are provided below:

**Betsey Olenick Dougherty, FAIA LEED-AP**  
 (Panel Chair)  
 Founding Partner  
 Dougherty + Dougherty Architects LLP  
 3194D Airport Loop  
 Costa Mesa, CA 92626

Betsey Olenick Dougherty, FAIA, LEED AP, is founding partner in the architectural firm of Dougherty + Dougherty Architects LLP, with offices in Costa Mesa and Oakland, California. The firm specializes in the design of environmentally responsive and sustainable institutional and educational projects throughout the State. Betsey has been actively involved in her community and her profession since establishing the firm thirty years ago. She is a former Orange County and State AIA President, served on the National AIA Board representing California, and later served as National AIA Secretary. She then went onto the AIA College of Fellows Executive Committee, and served as National Chancellor of the AIA College of Fellows in 2004. As a member of the California Architect's Board CIDP Task Force, Betsey worked toward the implementation of Architectural Internship in California, and now serves the CAB as a member of the Professional Qualifications Committee. Community volunteer services include: Orange County Department of Education TIE member (Together Industry and Education); Boy Scout Leader and Committee Chair; Girl Scout Leader and GSCOC Board Member; National Charity League member; Social Action Committee Chair and Board Member of

Temple Bat Yahm; and Yacht Club Flag Officer. The firm supports two Adopt-a-Family programs, Habitat for Humanity, and CANstruction, a joint program between the architectural and engineering community and the Orange County Food Bank. Dougherty + Dougherty has been fortunate to have been recognized for design excellence throughout the Western United States.

**Julie Avnit**  
 Founder  
 Spectrum Management Solutions  
 5642 Melvin Avenue  
 Tarzana, CA 91356

Ms. Avnit has twenty-two years experience as manager of planning and construction of public facilities. After managing projects from initial planning and condition assessment through design, construction and close-out phases, she founded Spectrum Management Solutions (SMS) thirteen years ago to provide program and project funding analysis, budgeting, monitoring and reporting. She assists districts with cash flow projections and budget management, planning and coordinating the prioritizations of sites and activities, state and local agency reporting, presentations to school boards and bond oversight committees, reconstruction of the history of prior expenditures, preparation for close-out audits, proper account coding, proper procedures for purchase orders and payments specific to construction-related accounts, documentation and signature procedures, and trends in spending. Ms. Avnit created a proprietary software program called F.A.S.T.PRO that is a complete cost tracking and control system for projects from initial budget definition to construction completion. She has been referred to school districts around the state by FCMAT for the purposes of evaluating construction funding and expenditure processes and procedures. Her experience also includes monitoring state funding program activities and expediting program paperwork; estimating; and scheduling.





Ms. Avnit holds a degree in architecture and construction management with a minor in business from Ferris State University, Big Rapids, Michigan. She has spoken on numerous seminar and workshop panels about accurate budget management, cost control, value engineering and change order management and participated in discussions on public/private partnerships, design/build, construction management, and project management.

**Charlie Fitzpatrick**  
Schools Program Manager  
ESRI  
380 New York St  
Redlands, CA 92373

Charlie Fitzpatrick is Co Manager of ESRI's Schools Program (K12 Education). He has held this position since coming to ESRI in 1992 to begin their initiative supporting the use of GIS in schools and libraries. He is part of ESRI's 10 person Education Team, which covers primary and secondary schools, colleges and universities, libraries, museums, zoos, science centers, and out of school youth programs such as 4H, Boy Scouts, Girls Club, and so forth, for the US and the world. His primary training for these roles came as a school teacher St. Paul, Minnesota, where he taught social studies in grades 7-12 from 1977 to 1992. He is a recipient of the Distinguished Teacher Award from the National Council for Geographic Education.

**Vinceena Kelly, AIA**  
Regionalized Business Services Coordinator  
Los Angeles County Office of Education (LACOE)  
Division of Business Advisory Services  
Williams Facilities Unit  
9300 Imperial Highway, #205  
Downey, CA 90242

Vinceena Kelly, AIA is a licensed architect and a certified architectural specification writer. She is employed by

the Los Angeles County Office of Education (LACOE) as a Regionalized Business Services Coordinator. Her primary responsibility at LACOE involves overseeing the annual inspection of 600 low performing schools throughout Los Angeles County. In addition to these Williams Legislation inspections, Ms. Kelly provides assistance to Los Angeles County school districts on issues related to school facilities and State of California school construction funding programs. Prior to her work at LACOE, Ms. Kelly was an associate at several architectural firms where her primary focus was on school construction. She has chaired major state facilities committees, has served the American Institute of Architects at the local and state level and has participated as an instructor for the Construction Specification Institute.

**William Lacher, C.C.M. LEED-AP**  
Vice President/Sr. Construction Manager  
Vanir Construction Management, Inc.  
408 Magazine St., Suite 201  
New Orleans, LA 70130

Mr. Lacher is a professionally Certified Construction Manager and LEED Accredited Professional. He also holds four contractor licenses in Building Construction; Public Works and Municipal Facilities; Bridges, Roads and Highways; and Heavy Construction.

Mr. Lacher's 34 years of experience includes design, design management, project management, construction management, CPM scheduling, inspection, and claim analysis/resolution.

Currently, Bill is completing a \$400 million construction program for the City of Los Angeles. He also currently serves Vanir CM at a corporate level as K-12 market segment leader, a member of the wastewater market segment team, member of the Technology Team and the Quality Improvement Council.

**Malcolm Lewis, PE LEED AP**  
President  
Constructive Technologies Group  
16 Technology Drive, Suite 109  
Irvine, CA 92618

Dr. Lewis has been active in the design of leading-edge buildings for over 30 years as a consulting engineer specializing in Mechanical, Electrical, and Energy Systems. This started with energy-efficient buildings and solar energy systems in the 1970's, evolved to include intelligent buildings. In the 1980's, and now focuses on sustainable design of green buildings. He specializes in integrating innovative technologies into the mainstream of building practice, and he accomplishes this through his professional activities in design, education, and public policy.

He has been the engineer of record for hundreds of commercial, institutional, and industrial buildings totaling over 20 million square feet. He has been consulting on green building design since the mid-1990's and advises clients on low energy and low carbon strategies for buildings and communities. His projects have won numerous awards for energy efficiency, sustainability, and design.

He served on the Board of Directors of the US Green Building Council (1997-2002), is currently a member of the USGBC's LEED Steering Committee, and is Chair of the LEED Technical Committee.

**Evan Marks**  
Executive Director  
The Ecology Center  
32701 Alipaz  
San Juan Capistrano, CA 92675

Evan Marks is a native Californian who became interested in the environment when he joined the



Photo provided by C. Mayhew

Surfrider Foundation while in high school. Through this participation, Evan became aware that people have the ability to directly impact the environment. To continue his advocacy he attended the University of California at Santa Cruz where he studied Agroecology (the study of Sustainable Agriculture) with the goal of transforming modern agriculture through integrated and organic systems management. Evan has worked extensively in California and Hawaii and internationally in, Costa Rica, Peru, Mexico, Ghana and Nigeria in the fields of Ecological Design and Sustainable Agriculture.

Most recently, Evan has been given the opportunity to bring environmental education and awareness to Southern California through the development of The Ecology Center. The Ecology Center seeks to bring all members of the community together in a solution-based educational setting to create a healthy and abundant future for San Juan Capistrano and all of Orange County. The effects of the programs of this center have the potential to mold the future of Orange County.

## Ed Maya

Community Activist  
1485 N. Chester Avenue  
Pasadena, CA 91104

Mr. Maya spent 30 years in education as a High School History Teacher with the Pasadena Unified School District (1971-2001). During the 1970's, Mr. Maya also served eight years as a Board Member and Active Supporter of El Centro de Accion Social, a Latino Community Organization. In addition, Mr. Maya volunteered his service as a Planning Commission for the City of Pasadena, serving the great city from 1979-1981.

## Martha (Marty) Maya

Senior Consultant  
Principal's Exchange  
1485 N. Chester Avenue  
Pasadena, CA 91104

Martha (Marty) Maya invested a 35-year career in public education. Twenty-five of those years were spent in the Little Lake City School District. Ten years of that time, she served as a site principal and then served the next fifteen years as a district level administrator. As the Assistant Superintendent, Educational Services she was responsible for the development and promotion of a standards based instructional program in accordance with federal, state, and policies/philosophy of the district. She also provided leadership related to staff development, categorical programs, instructional programs, student data, testing, special education, pupil services, Instructional Media Center, Library Media Centers, and technology. Prior to joining Little Lake City School District, she was an elementary school teacher in the Montebello Unified School District. She holds bachelor's and master's degrees from California State University, Los Angeles. Currently Marty Maya is a senior consultant with an educational consulting firm.



## THE LOS ANGELES APOLLO ALLIANCE

“The scope and scale of LA’s policy efforts to promote renewable energy and energy efficiency are driven by a mayor, Antonio Villaraigosa, and a City Council who recognize the environmental and economic necessity of greening their city. But the related challenge of ensuring that the green economic development resulting from these efforts benefits workers and communities has by no means been a top-down process. Indeed, a remarkable cross-section of community leaders and stakeholders, have forced this issue to center stage by organizing the Green Jobs Campaign, an ambitious effort to retrofit city buildings and other infrastructure while at the same time creating jobs for low-income communities of color.

The Campaign is spearheaded by the Los Angeles Apollo Alliance, a coalition that includes community-based organizations, labor unions, and environmental groups, and which is convened and led by SCOPE (Strategic Concepts in Organizing and Policy Education), a grassroots organizing and research organization based in South Los Angeles. The campaign kicked off in August of 2006 when over 500 residents came together at a church in South LA to applaud Mayor Antonio Villaraigosa, City Council President Eric Garcetti, and local Councilman Herb Wesson as they signed the “Apollo Challenge,” committing to work with the Alliance to shape green workforce and economic development strategies. In June of 2007, the city council established a City Retrofit Jobs Task Force that includes council members, city agencies, and LA Apollo Alliance representatives to coordinate and lead the city’s building retrofit efforts, which include identifying workforce needs and financing mechanisms for the work.”<sup>1</sup>

## INTERVIEWS

As part of the due diligence period, the panel hosted a series of interviews with third-party experts. Consultations included professionals in the following industries: energy professionals, educators, local cultural advocates, and other non-profit organizations. Refer to Appendix A for interview notes.

## OPPORTUNITIES

The TAP concurs the underlying principles of the Green Works Urban Academy host great opportunities not only for the students but the green-collar industry. Through an environmental-based education, Green Works Urban Academy promises to deliver students with a marketable skill set for 21<sup>st</sup> Century green-collar employment. This marketable skill set will enable the students to attain and excel at jobs which pay high enough wages for them to sustain themselves and their families.

As indicated by the Los Angeles Apollo Alliance, the need for a green-collar workforce is prevalent in urban areas such as Los Angeles. Given the anticipated shift for industries to be more environmentally-resourceful, job seekers in Los Angeles who acquire green-collar relevant job skills will have an advantage in this emerging workforce.

*...Utilities will simultaneously be transitioning to cleaner sources of energy and water conservation. Over this period, much of the incumbent workforce that builds and maintains LA’s infrastructure will retire. Half of the Los Angeles Department of Water and Power’s (LADWP) workforce is eligible to retire in the next five years. The obvious danger is that in just a few years time LA won’t have the skilled workers necessary to build and maintain its sewers, pipelines, and buildings, let alone green them; the equally obvious opportunity is that LA’s low-income population, the vast majority of whom are people of color, can move into these good, living-wage jobs, as long as more accessible career pipelines and a more aligned and effective employment and training infrastructure is constructed.”<sup>2</sup>*

Green Works Urban Academy is unique in that there are few schools which integrate this green-collar skill development as part of the core curriculum. Given this

niche, there is great potential for Green Works to lead green-collar education and set precedent for other environmental-based charter schools.

Since the proposed Green Works site is privately owned by Masada Homes, there is some flexibility in the design of the facility. Building renovations could be used as a launching pad for sustainable development. In addition, the process of upgrading the facility could be used as a teaching tool for site planning, landscape, architecture, engineering, construction, and sustainable design.

Seeking input from other green-collar organizations such as the Los Angeles Apollo Alliance poses an opportunity for Green Works Urban Academy to utilize local talent and expertise in developing a green business model. In addition, partnerships with other green-related industries and agencies could help spur a "Green Renewal" program for the City, making it a win-win opportunity for both the City and the school alike.

## CONSIDERATIONS

Currently, there is a shortage of educational facilities which address the needs of today's at-risk youth population. Instead of modifying the learning environment to meet their needs, oftentimes these students are discarded as opportunity transferred. The Green Works model aims to target this discarded (or at-risk) population. With a different approach to engaging these students, Green Works hopes to retain the students who've previously opted out.

In order to be successful (and turn the would've been drop-outs into graduates), Green Works must establish a plan. This plan should include organizational structure and governance, the hiring of teachers, curriculum writing, facility upgrades, and operations. The balance of these five components is integral to the school's success.

As with any type of organization, empowering the right people can either make or break the organization. Everyone from the Board of Directors, the school administration, teachers, faculty, and custodial staff must be aligned the Green Works vision in order to ensure the school's vision.

Teachers need not only understand the green-collar job market but should also have the ability to bring that knowledge to the classroom. While the curriculum is the medium for delivering this knowledge, it is paramount the curriculum marries the green-collar job skills to the state standards in a way that makes learning enjoyable for the students. Furthermore, facility development and operations must mirror a

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sustainable approach and wherever possible, the school should demonstrate green building materials and practices. This will help reinforce the school's values therefore reinforcing the ultimate vision.

## CONSTRAINTS

With consideration for the opportunities and constraints at-hand, the TAP urges Masada Homes to consider some of the existing constraints prior to moving too far ahead with the proposed Green Works Urban Academy Charter application.

First and foremost, the anticipated schedule for GWUA should be revisited. With a target enrollment date of September 2010, the proposed time line does not accommodate proper facility upgrades, personnel hiring and training, curriculum development, and other organizational logistics. There are a number of establishment procedures that should be addressed (which could affect the proposed schedule). This includes filing an application as an independent 501(c)(3) non-profit organization and identifying top leaders to serve on the Board of Directors.

It should also be noted the proposed facility does not meet code and would not be approved as an educational facility for a new Charter school as currently built. The as-built workshop and other on-site hazards provide health and safety concerns for the students and faculty. Classroom standards will require upgrades to the areas used for Occupational Therapy. In addition, if GWUA seeks state funding, the facilities will need to be reviewed and approved by DSA. Whereas the facility upgrade could be a great learning tool, labor laws will prohibit middle-school students (which happen to be the first grade level enrolled in the school) from working on the construction.

While Masada Homes is moving forward with the petition to charter, the approval is uncertain and could delay the anticipated 2010 grand opening. One major adjustment is the nomenclature of the targeted at-risk student population. As part of the 501(c)(3) and Charter School applications, the school cannot legally limit enrollment to a specific population. Masada Homes should consider the impacts of how this change will affect the schools' mission statement.

Lastly, financial restrictions might also pose setbacks for the school's development. While there are numerous opportunities for grants and private partnerships, there has been few funding sources identified to-date.

## RECOMMENDATIONS

Given their breadth of experience in community outreach and education, school facility design, sustainable construction, and green-collar skills, the panel provided Masada Homes with recommendations on how to develop an educational program and facility which 1.) meets the needs of the targeted student population (at-risk), and 2.) provides students with green-collar job skills.

The panel's recommendations are formatted to address four key areas of program development:

**Q1:** How will this school function as an organization?

**Q2:** How will this organizational structure & program economically sustain itself?

**Q3:** What areas of expertise and governance are critical to support curriculum, green technology, and vocational skills?

**Q4:** How will the facility (campus design) support a learning environment conducive to the targeted student population?

In addition, the panel noted this charge should not be taken lightly. While the passion and vision to create something great are admirable, empowering the right professionals and taking time to build a solid foundation will aid in the school's success. In the long run, this will save time and resources.

Given the multi-faceted nature of creating a school, it is imperative that Masada Homes consider the following recommendations in a comprehensive manner.

- Recommendation 1A:** Establish an educational program with a commitment to integrity in Facility, Operations, Governance, and Curriculum.
- Recommendation 1B:** The selection of the Board of Directors (BOD) is critical to the success of GWUA; select a strong leadership who will manage, implement, and promote the school's vision.
- Recommendation 1C:** Apply for non-profit status as an independent 501(c)(3) non-profit organization.
- Recommendation 1D:** Identify a means for selecting an administration which supports the school's vision.
- Recommendation 1E:** Recruit teachers with values in line with GWUA's vision.
- Recommendation 1F:** Use GWUA as a teaching academy to develop teachers and Green Works staff.
- Recommendation 1G:** Size the school for success.
- Recommendation 1H:** Develop a realistic timeline that shows critical paths and milestones; consider a phased approach where items can be done concurrently.
- Recommendation 1I:** Develop a partnership with surrounding areas by initiating a community outreach campaign.
- Recommendation 1J:** Use community outreach as an opportunity to market the Green Works vision to the surrounding communities.
- Recommendation 2A:** Identify and hire professional grant/petition writer(s).
- Recommendation 2B:** Identify and hire curriculum development and training specialist(s).
- Recommendation 2C:** Identify funding sources for pre-charter planning and petition writing process.
- Recommendation 2D:** Create initial budget.
- Recommendation 2E:** Remedy difference in initial cost versus funding sources.
- Recommendation 2F:** Identify other funding opportunities early in the process.
- Recommendation 2G:** Develop plan for fund-raising; look for funding opportunities outside of traditional government programs.
- Recommendation 2H:** Use 501(c)(3) non-profit charity status as a funding opportunity.
- Recommendation 2I:** Develop Middle School program based on existing building square footage of existing building.
- Recommendation 2J:** Apply and attain local zoning and local building department approval.
- Recommendation 2K:** Determine cost of renovating existing facility to adhere with state and local codes; use ballpark estimates to establish initial facilities budget.
- Recommendation 2L:** Determine cost of building school on new site.
- Recommendation 2M:** Review Appendix B for difference in requirements for state and locally-funded Charter Schools.
- Recommendation 3A:** Consider the school as piece of an Urban System Program.
- Recommendation 3B:** Connect with higher learning and other outside agencies.
- Recommendation 3C:** Develop strategic partnerships to create an industry and education relationship.
- Recommendation 3D:** Identify the types of skills needed for a 21<sup>st</sup> Century green collar workforce.
- Recommendation 3E:** Utilize alternative teaching models.
- Recommendation 3F:** Consider alternative school year schedule.
- Recommendation 3G:** Ensure school will sustain Middle School students through High School.
- Recommendation 4A:** Remedy current facility so that it is suitable for students and faculty.
- Recommendation 4B:** Select a well-qualified consultant team who can integrate the GWUA vision into a cohesive design concept.
- Recommendation 4C:** Prepare an environmental assessment.
- Recommendation 4D:** In keeping with the school's mission statement, design and operate the school facility with a high-level of integrity; become an exhibit for green building technologies, philosophies, and materials.
- Recommendation 4E:** Develop a program that fits current and future physical needs.
- Recommendation 4F:** Use building facility design as opportunity to teach High School students hands-on green collar job skills; translate skills to off-site projects (empowering students to be "stewards of their own environments").
- Recommendation 4G:** Design facility to improve resource efficiency; take advantage of water- and energy-efficiency rebates and incentives.



### Q1: How will this school function as an organization?

The TAP recommends the organizational process be initiated with the development of comprehensive plan (or master plan). This comprehensive plan should envelop five components of the organization: governance, curriculum, faculty, facility, and operations. In addition, it is imperative GWUA develop a identity of its own and become an independent 501(c)(3) non-profit organization with a carefully selected Board of Directors (BOD). The BOD will ultimately ensure the school's success by managing, implementing, and promoting the school's vision. By investing time and resources in recruiting and training staff, GWUA will not only deliver an exceptional education for the students but the faculty alike. All this is possible if the program is developed from a solid foundation with an achievable schedule.

#### Establishing Values: Work + Wealth + Wisdom

**Recommendation 1A:** Establish an educational program with a commitment to integrity in facility, operations, governance, and curriculum.

- a. Use experts to help lead the program's development process.
  - o Seek input from professionals with experience in green collar job skills, technology, facility planning, non-profits, local culture, and education.
- b. Allow 1 year to get the process in motion.

#### Selection of BOD

**Recommendation 1B:** The selection of the Board of Directors (BOD) is critical to the success of GWUA and 501(c)(3) non-profit application; select a strong leadership who will manage, implement, and promote the school's vision.

- a. Select BOD members whom represent a diverse cross section of stakeholders, including business owners, educational community, and green technology professionals.
- b. Seek input on BOD selection from network of qualified industry-related professionals and decision makers.
  - o Consider experts outside of current network.
  - o Select board members who are non-nepotistic.
  - o Select board members who are explicitly independent of existing Masada Homes.
  - o Select board members who are validated as qualified.
- c. Maintain odd number of people to establish quorum.

#### 501(c)(3) Filing Process

**Recommendation 1C:** Apply for non-profit status as an independent 501(c)(3) non-profit organization.

- a. Develop a separate legal identity for the charter school.
- b. Seek advice from a CPA and tax attorney who specialize in 501(c)(3) non-profit organizations.
- c. Allow 6-12 months to file and process application for 501(c)(3) non-profit organization.
- d. Account for general operations within 501(c)(3) non-profit organization.
  - o Account for annual review and audit
  - o Board of Directors need to convene annually

The **Board of Directors**  
 will ultimately ensure the  
 school's success by **managing,**  
**implementing,** and  
**promoting** the school's **vision.**



Photo provided by Flickr.com: Nic McPhee

## School Administration

**Recommendation 1D:** Identify a means for selecting an administration which supports the school's vision.

- a. Overlap the strategic partners with the Board of Directors; create a sub-committee of experts who are knowledgeable of green-collar job skills and what it takes to be educated in the 21<sup>st</sup> Century.
  - Engage strategic partners who employ green collar workers, professional energy content experts, and other environmental professionals.
- b. Identify experts who can aid in the development of an innovative curriculum which bridges state standards and GWUA's mission.
- c. Develop protocol for hiring a principal (and possible assistant) with middle school education experience and who demonstrate ability to deliver on the school's vision.
  - Empower the principal (and core group independent committee comprised of LACOE, LAUSD, and teachers) to do hiring for all accredited professionals.
  - Build a team of faculty who understand and share in the school's values.
    - Hire mental health counselors and special education advisors who are familiar with the student population.
    - Recruit experienced technology professionals who can bring hands-on skills to the classroom environment.
    - Develop a teaching staff who can implement the school's vision.
  - Do not settle on status quo; aim for best and highest school curriculum and staff.

## Teacher Selection

**Recommendation 1E:** Recruit teachers with values in line with GWUA's vision.

- a. Make teaching positions highly-competitive through benefits such as training and professional growth opportunities.
- b. Recruit credentialed teachers who understand technology; acknowledge that this may not be a traditional teacher.
- c. Hire teachers who are committed to the vision and can deliver a teaching style appropriate given the needs of the student population.
  - Incorporate a practical performance-based selection process.
  - Be perceptive enough to know a quality teacher.
  - Seek out teachers who've demonstrated experience with the student population.
  - Seek out teachers who are confident, visionary, enthusiastic, and committed.

## Staff Training Program

**Recommendation 1F:** Use GWUA as a teaching academy to develop teachers and Green Works staff.

- a. Prepare and support teachers and faculty.
- b. Front-load teacher education and curriculum development by hiring 1-year in advance to give them time to prepare for program.
- c. Use experts to educate teachers on sustainable principles and green collar job skills; help teachers develop curriculum and teaching expertise.



- d. Retain teachers for a minimum of 3 years by giving them opportunities to grow within the school.

## Sized for Success

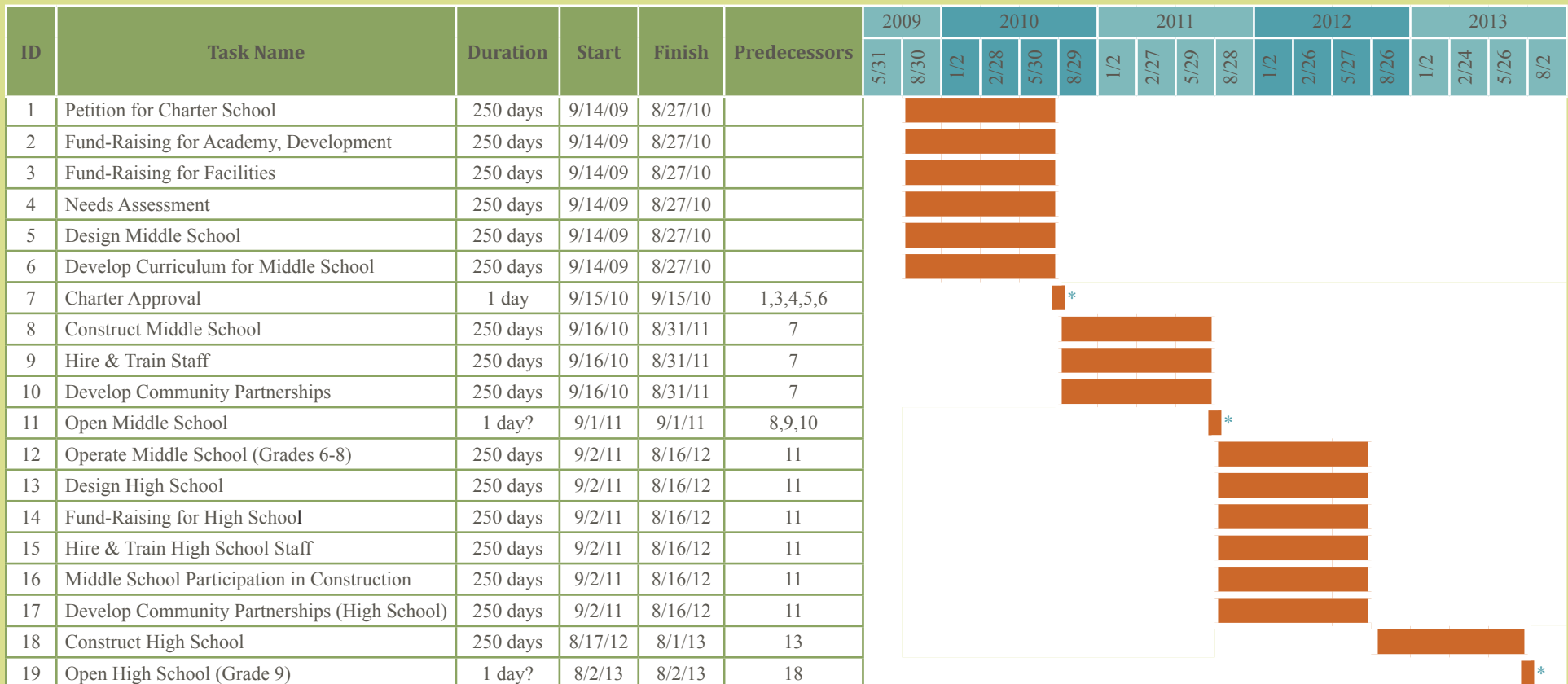
**Recommendation 1G:** Size the school for success.

- a. Establish a middle school projected attendance of 160 students.
- Conventional classroom size: 27 student max.
  - Laboratory classroom size: 20 students max.
  - Grade level size: 40 students per grade level

## Timing

**Recommendation 1H:** Develop a realistic timeline that shows critical paths and milestones; consider a phased approach where items can be done concurrently.

- a. Allow 6-12 months for 501(c)(3) application and approval.
- b. Allow 9-12 months to establish the organizational structure (i.e. the backbones of GWUA) including a qualified BOD explicitly independent of existing Masada Homes (note: this will be necessary for 501(c)(3) application).
- c. Allow 18 months for development, application, and approval of LAUSD Charter School Petition.
- d. If initial petition is rejected by LAUSD, consider alternative route for application through Los Angeles County Office of Education (LACOE).



- e. Accommodate a realistic timeframe for infrastructure implementation:
  - Clean-up the site so that it is safe for the building occupants (i.e. children and faculty).
  - Perform a needs assessment that reinforces the curriculum.
  - Develop initial pieces as 3-dimensional classroom.
  - Allow 30-60 days to go to bid (this can be done simultaneously).
  - Identify minimum of \$250,000 for initial site improvements.
- f. Identify and establish financial partners and resources.

### Community Outreach

**Recommendation 1I:** Develop a partnership with surrounding areas by initiating a community outreach campaign.

- a. Handle the community outreach campaign with care; community is critical to the success of the school.
- b. Identify community leaders and empower them to deliver message; acknowledge that a local voice and familiar face has more power at the community-level than an outsider.
  - Create a strategic script that is speaks to cultural needs.
  - Teach them how to deliver message.
  - Conduct practice exercises in which door to door interaction is simulated; it is important to give them tools to assist in delivering an accurate message.
- c. Identify all languages spoken by target population and use appropriate media to connect with these given populations (i.e. radio, TV, newspaper, community message boards, fliers, etc.).
- d. Identify political leaders who can support the outreach campaign (i.e. chamber of commerce, local officials, etc.).
- e. Utilize social networking sites as a means to keep up with communication technology.
- f. Identify neighborhood hotspots and establish printed material as well as physical human presence.

**Recommendation 1J:** Use community outreach as an opportunity to market the Green Works vision to the surrounding communities.

- a. Demonstrate the benefits the school will bring to the community.
- b. Identify ways to for community to be involved in executing the school's vision.





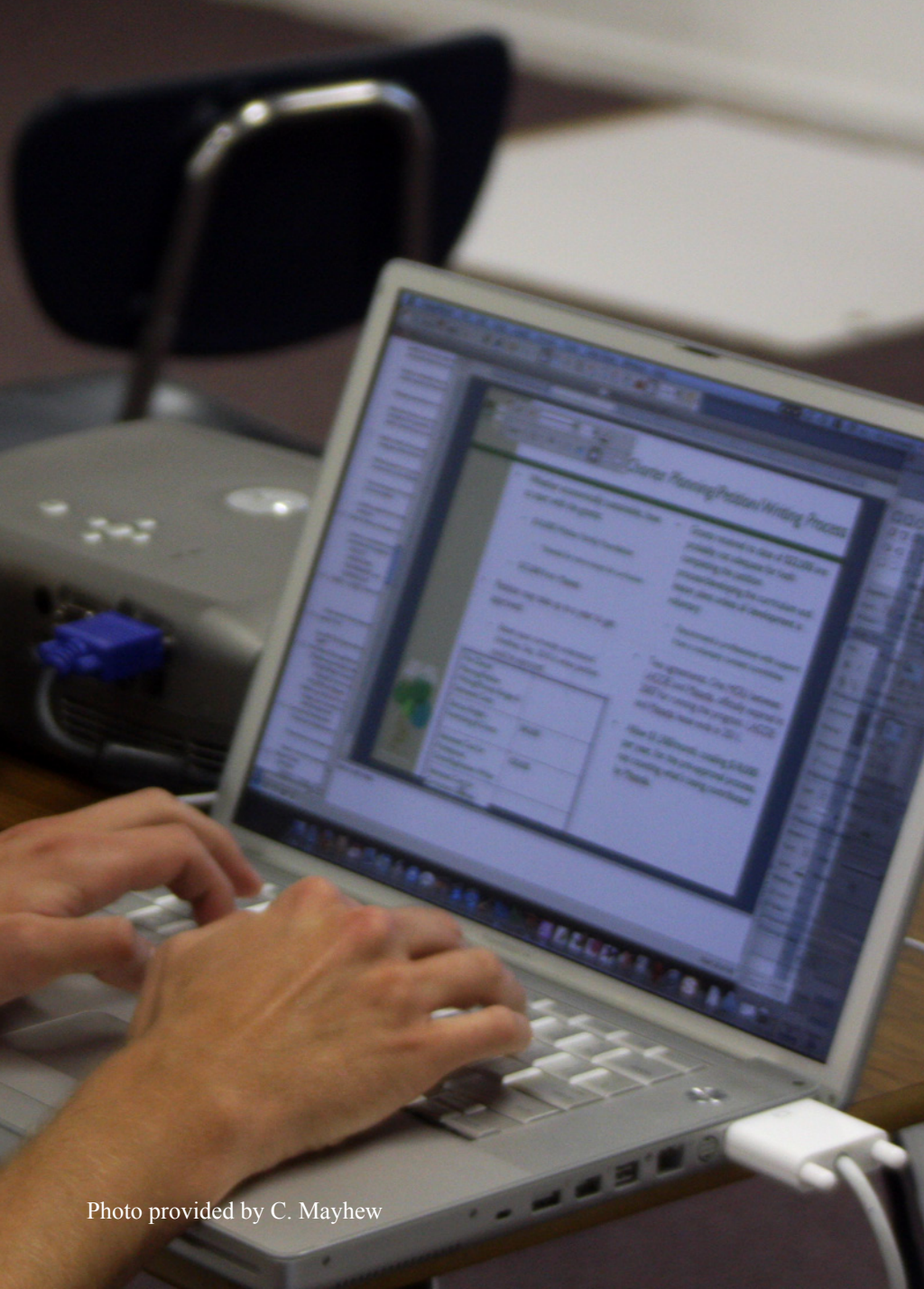


Photo provided by C. Mayhew

## Q2: How will this organizational structure & program economically sustain itself?

In order to ensure the GWUA program can economically sustain itself, the TAP recommends that Masada Homes work with a professional consultant who can identify costs (start-up investment, building facility, personnel, curriculum development, and operating costs) and funding sources associated with the start-up of a Charter School. Accommodating a plan to engage professional grant/petition writer(s), curriculum development, and training specialist(s) will save time and help move the Charter process forward. Since professional consultants will require additional monies that may not be accounted for in the initial budget, the panel recommends identifying additional funding sources to support the pre-charter planning needs. In addition, a long term budget and funding strategy should be established.

### Budgeting for Pre-Charter Planning

**Recommendation 2A:** Identify and hire professional grant/petition writer(s).

- Select professional grant/petition writer(s) who have experience in education and understand the needs of the emerging green-collar workforce.
- Allow \$1,500/month, totaling \$18,000 per year, for a professional grant/petition writer, (this amount does not include money being contributed by Masada).

**Recommendation 2B:** Identify and hire curriculum development and training specialist(s).

- Select curriculum development and training specialist(s) who have experience in education and understand the needs of the emerging green-collar workforce.
- Allow approximately \$80,000/year for curriculum development and training specialist(s).
- Note: Curriculum development and petition process can be completed concurrently.

**Recommendation 2C:** Identify funding sources for pre-charter planning and petition writing process.

- Include \$10,000 Walton Family Foundation with potential to acquire more grant money for curriculum.
- Include \$12,000 start-up investment from Masada Homes.

**Recommendation 2D:** Create initial budget.

- Base initial budget upon currently understood time lines: September 2010 is when petition could be approved (note: petition approval may take longer).



- b. Identify start-up budget (fundraising and grants) as developed by GWUA consultant: \$40,000.
- c. Identify actual funding sources received to-date: \$22,000 (see Recommendation 2C above)
- d. Estimate cost for pre-charter planning/petition writing/process: \$98,000 (see Recommendations 2A and 2B above).
  - o \$18,000 per year for a professional grant/petition writer
  - o \$80,000 for curriculum development and training specialist(s)

**Recommendation 2E:** Remedy difference in initial cost versus funding sources.

- a. Note \$22,000 in grants received to-date is not adequate for completing the petition process and developing the curriculum and lesson plans.
- b. Consider hiring a professional petition manager with support from a voluntary content committee.

### Other Funding Opportunities

**Recommendation 2F:** Identify other funding opportunities early in the process.

- a. So Cal Edison's Savings By Design
  - o Incentives for programs that are total renovations
  - o Must exceed Title 24 by 10% to qualify
- b. Qualified School Construction Bonds
  - o Investors get tax benefits
- c. Community Development Block Grants
  - o Three different types
- d. Credit Enhancement for Charter School Facilities
  - o Federal program (Department of Education Office of Innovation)
  - o Provides grants to leverage funds through credit enhancement programs to assist Charter schools in using private sector capital to get facilities.
- e. Hispanic Serving Institutions
- f. Readiness & Emergency Management for Schools
- g. Credit Enhancement for Charter School Facilities
- h. Local foundations, such as Canyon Johnson Urban Fund
- i. Other green industry organizations for partnership opportunities
- j. Using the current Masada owned facility rules out any State building funds due to restrictions of School District property ownership.

**Recommendation 2G:** Develop plan for fund-raising; look for funding opportunities outside of traditional government programs.

- a. Identify and hire a professional fund-raiser who is knowledgeable of funding opportunities.
- b. Create a sound "sellable" program and begin a PR/outreach campaign.
- c. Investigate private partnerships/sponsorships opportunities.
- d. Consider opportunities for political partnerships.
- e. Consider in-kind donations from local manufacturers.





State-Funded Charter School vs. Local-Funded Charter School		
Approval/Requirement	State-Funded Charter School (on district property)	Local-Funded Charter School (on non-district property)
Is the school project subject to CEQA?	Yes	Yes
Who serves as CEQA lead agency?	Sponsoring district or city or county from whom approval is sought.	The city or county from whom approval is sought.
Do the requirements of Title 5 apply?	Yes	No
Is CDE approval required?	Yes	No
Is Department of Toxic Substances Control (DTSC) review/ approval required?	Yes	No, although the DTSC offers its consultancy/ advisory services through a reimbursable oversight program.
Is the school subject to local zoning?	Rarely occurs. Technically, answer is yes, but a 2/3 board vote will nullify.	Yes
Is a conditional use permit required from the local jurisdiction?	Rarely occurs. Only if zone requires it. And if required, board zoning override will nullify.	Yes
Whose building standards is the school subject to?	Division of the State Architect (DSA)	City or county
Who approves occupancy?	DSA	City or county

## 501(c)(3) Tax Deductible Donations

**Recommendation 2H:** Use 501(c)(3) non-profit charity status as a funding opportunity.

- Use status as a marketing opportunity since charitable donations are tax deductible (consult with tax advisor for rules and applications).
- Seek in-kind donations of time and materials from private businesses.
- Look for opportunities to share resources with other non-profits.

## Sample Program for Middle School Program in Existing Building

**Recommendation 2I:** Develop Middle School program based on existing building square footage of existing building (approximately 17,000sqft).

## Option 1: Facility Renovation

**Recommendation 2J:** Apply and attain local zoning and local building department approval.

- LAUSD Petition approval will require building facility to have zoning and building permit.

**Recommendation 2K:** Determine cost of renovating existing facility to adhere with state and local codes; use ballpark estimates to establish initial facilities budget.

- $\$200/\text{sf} \times 17,000\text{sf} = \$3.5$  million for complete rehab of current building
- 17,000sf can accommodate 3 classrooms (81 students) + 2 labs (40 students) + 2 shops (40 students) for 161 students
  - Square footage includes use of area currently being occupied by Duke's workshop.
  - Additional \$250,000-\$400,000 needed for a kitchen solution.
  - Construction will take an estimated 6 months after bidding, etc; estimated opening in September 2011.

## Option 2: New Construction

**Recommendation 2L:** Determine cost of building the school on new site.

- Approximately \$6 million depending on site chosen.
- Construction will take an estimated 15 months after bidding.
- This is dependent on the same program as OPTION 1

## Difference in Requirements for State and Locally-Funded Charter Schools

**Recommendation 2M:** Refer to State-Funded Charter School vs. Local-Funded Charter School table for difference in requirements.

## Q3: What areas of expertise and governance are critical to support curriculum, green technology, and vocational skills?

A key component of environmentalism is looking at the system as sum of its parts. In the case of Green Works Urban Academy, the school is a piece within a larger Urban System. While it has the potential to be a catalyst for environmental awareness, the TAP recommends that the school leverage its benefit to the surrounding community. By partnering with private industry, higher learning, and other agencies (including the City), Green Works can become the training grounds for educating students, teachers, and the community at large. With help from green industry leaders, GWUA should identify the types of skills necessary for a 21st Century green-collar workforce. The methods for teaching this skill set may be different from that of a traditional teaching approach. Faculty and staff should embrace these differences and seek out alternative teaching models that will ensure the school will sustain itself.

### Urban System

**Recommendation 3A:** Consider the school as piece of an Urban System.

- Create a synergistic relationship with City of Carson and initiate a "Green Carson" program.
- Provide immediate benefit to City through partnering on AB811 funding opportunities.
- Host design charrette for building facility; invite participation from community and current student body.
- Use campus as a learning slate by using green building technology as an on-site demonstration area; extend this educational benefit to the surrounding communities.
- Use the school site as hub for expertise (i.e. students could use GIS to map the City or students can help City in writing their Climate Action Plan).
- Consider hosting events for community at large (i.e. community gardens).

### Partnerships

**Recommendation 3B:** Connect with higher learning and other outside agencies.

- Evaluate opportunities for affiliation with Higher Ed by utilizing green technology to telecommute.
- Create partnership/internships (i.e. summer camp as a 12-week learning experience).
- Partner with outside educational agencies (i.e. UCLA's math institute, Science on the Go, the Arboretum, etc.)
- Invite industry-professionals to team-teach green collar job skills.

**Recommendation 3C:** Develop strategic partnerships to create an industry and education relationship.

### Define Green Collar job skills

**Recommendation 3D:** Identify the types of skills needed for a 21<sup>st</sup> Century green collar workforce.

- Work with private industry to identify desired skill set.
- Look to Apollo Alliance for guidance on what types of jobs will be needed 5 years out, 10 years out, etc.
- Recognize green-collar skills are primarily geared towards problem-solving (not test scores).

## URBAN SYSTEM DIAGRAM

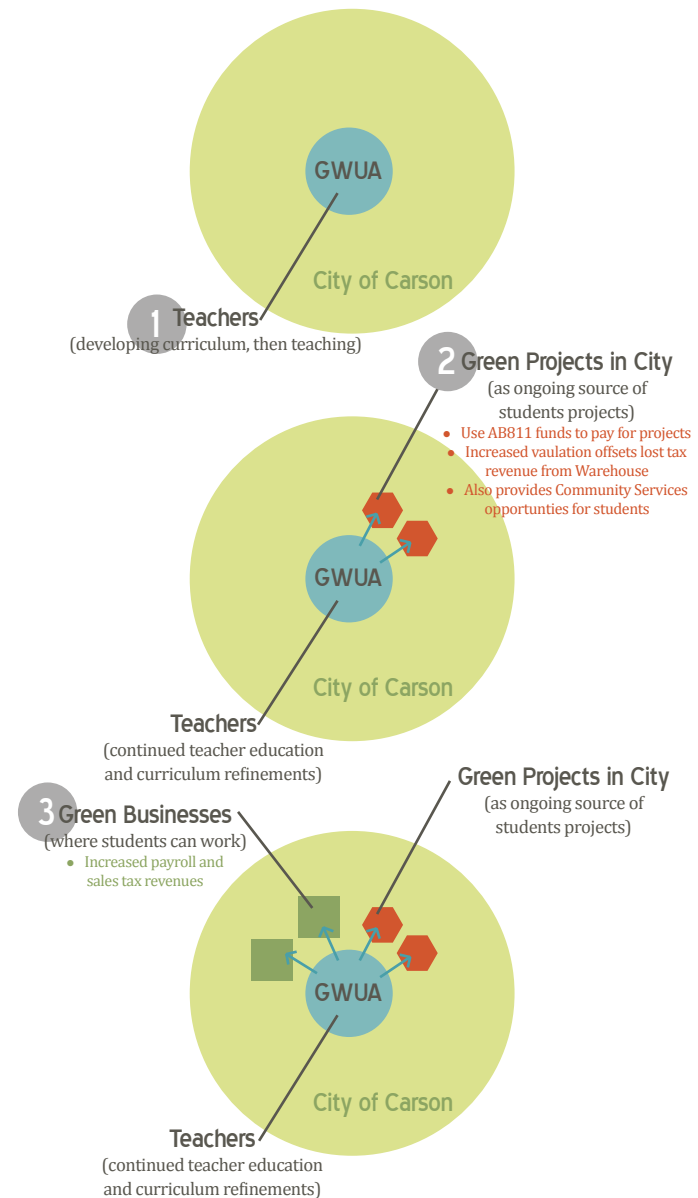






Photo provided by Flickr.com: Nic McPhee

- d. Determine root skills of the engineers vs. technicians (i.e. developing the technology to the wind mill vs. polishing the wind mill blades).
- e. Focus on project-based learning.
- f. Teach students how to communicate in various media.

## Teaching Models

**Recommendation 3E:** Utilize alternative teaching models.

- a. Develop teaching models that involve students in the process.
- b. Utilize project-based learning (3-dimensional model) where evaluation is based on performance.
- c. Encourage a collaborative learning process.
- d. Imbed community service as part of curriculum.
- e. Encourage creative ways to weave core content into tasks (i.e. use English standards as a means of teaching how to write a proposal to the City).

**Recommendation 3F:** Consider alternative school year schedule.

- a. Integrate summer internship program or summer camp as part of learning process.
- b. Adhere to instructional minute guidelines but consider out-of-the-box approaches (i.e. year round 4-day week schedule: classroom learning 2 days, project day 1 days, community service 1 day)
- c. Look at alternatives to conventional structured day (not typical “periods”); set aside time for core standards and skill set .

## Longevity

**Recommendation 3G:** Ensure school will sustain Middle School students through High School.

- a. Create a draw for the students; eventually open enrollment to application process where student need to bring talent.
- b. Develop continuity in student population.



## Q4: How will the facility support a learning environment conducive to the targeted student population?

First and foremost, the ULI panel recommends the proposed building(s) be renovated to comply with health and safety codes. With assistance from a well-qualified consultant team, the panel believes there is great potential to design a facility which addresses environmental concerns and fits the physical needs of the students. In keeping with the school's mission, any renovations and/or facility upgrades should integrate sustainable building methods and materials. In an effort to ensure longevity and pay-back on initial costs, staff should be trained on how to operate and maintain the green features of the building.

### Current Facility

**Recommendation 4A:** Remedy current facility so that it is suitable for students and faculty.

- a. Current facility does not appear to comply with fire, life, safety or access compliance and may require substantial renovation in order to be used as middle school program.
- b. In order to house an educational program for middle school curriculum, at least one hard science classroom shall be provided with proper utilities (electricity, gas, water, fume control, etc).
- c. Site will require substantial renovation to accommodate curriculum and physical education programs which should be separated from parking facilities.
- d. Parking and access to campus should be examined.
- e. Current kitchen facilities in 108 Building are inadequate and do not comply with public health code; food service solution for site needs to be developed.
  - o Consider out-sourcing food service with local businesses.

### Qualified Building Expertise

**Recommendation 4B:** Select a well-qualified consultant team who can integrate the GWUA vision into a cohesive design concept.

- a. Identify expertise in building technology, green building materials and design, environmental assessments, charter school requirements, etc.
- b. Develop a team of building experts and educators who will collaborate on a facility design concept that is conducive to the school's needs and vision.







Photo provided by Flickr.com: Wayne National Forest

## Environmental Assessment

**Recommendation 4C:** Prepare an environmental assessment.

- a. Know that CEQA/EIR could add 2 years to process but may be required by City/County.
- b. Determine if on-site geotechnical report is needed.
- c. Consider site-related environmental concerns which could affect state-funding (i.e. freeways, railroad, power lines, pipelines, waterlines, airports, oil fields, etc).

## Green Building Techniques

**Recommendation 4D:** In keeping with the school's mission statement, design and operate the school facility with a high-level of integrity; become an exhibit for green building technologies, philosophies, and materials.

- a. Use the CHPS or LEED checklists (refer to Appendix B).
- b. Educate staff on resource-efficient operating procedures
  - o Day lighting and natural ventilation
  - o Mechanical heating and cooling controls
  - o Lighting controls – fixtures and habits
  - o Reducing waste through reuse and recycle
  - o Water efficiency – fixtures and habits
  - o Reusable vs. disposable goods
- c. Integrate green practices into custodial operations
  - o Share school's mission with custodial staff
  - o Select earth-friendly products

## Program

**Recommendation 4E:** Develop a program that fits current and future physical needs.

- a. Conduct needs assessment (existing square footages, fire/life safety, etc).
- b. Determine needs based on GWUA curriculum (i.e. a pottery room requires a kiln which has specific building req.); consider non-traditional learning environments.
- c. Consider restrictions on DSA schools (state funded) vs. non-funded schools.
- d. Comply with applicable state and local building codes:
  - o Exceed Title 24 (energy efficiency)
  - o Compliance with CDE – Title 5 such as square footage, building materials, light/ventilation, etc.
- e. Refer to Ed Specs for fire and life safety, structural safety, access.
- f. Meet regulatory criteria for LAUSD & LACOE.
- g. Integrate natural light and ventilation (natural light and ventilation

promotes learning).

- h. Consider interior environments (i.e. movable furniture, flex spaces, etc.).

**Recommendation 4F:** Use building facility design as opportunity to teach High School students hands-on green collar job skills; translate skills to off-site projects (empowering students to be “stewards of their own environments”).

- a. Use school site to teach community about green building.
- b. Talk with City about off-site AB811 opportunities.
- c. Consider CSA (Community Supported Agriculture) or other local food program to assist school with food service needs

### Rebates and Incentives

**Recommendation 4G:** Design facility to improve resource efficiency; take advantage of water- and energy-efficiency rebates and incentives.

- a. Consider incentive opportunities provided by SCE’s Savings by Design Program.
- b. Energy and water efficiency will cut operational costs.
- c. Explore funding opportunities through AB811.
- d. Explore other Stimulus funds for water and energy efficient building design and construction.

## SAVINGS BY DESIGN

Savings By Design is a statewide program encouraging high-performance nonresidential building design and construction. Sponsored by California utilities, the program offers building owners and design teams a wide range of services:

**Design Assistance** supports the integration of innovative design technologies into new construction projects.

**Energy Design Resources** offers analysis tools, training and in-depth information on efficient technologies and strategies.

**Owner Incentives** help offset the costs of energy-efficient buildings.

**Design Team Incentives** reward designers who meet ambitious energy-efficiency targets.

The benefits of participating in Saving By Design include: reduced long-term operating costs; greater comfort, health and productivity for occupants; and conservation of natural resources and cleaner air due to lower need for power generation.

*Contact your utility early in the design process to optimize your projects’ energy efficiency, to learn about program options, and to determine funding availability.*

education

economics

“Green is not a color  
but a **practice** and  
**matter of course.**”

budget

resources

politics

governance

## CONCLUSION

The TAP recommends the organizational process be initiated by the development of comprehensive plan (or master plan). By investing time and resources in creating a solid foundation, Green Works can ensure its success and longevity as a premier charter school.

As part of the comprehensive plan, the following order of operations should occur:

1. **Establish qualified Board of Directors.** The BOD will ultimately ensure the school's success by managing, implementing, and promoting the school's vision.
2. **Recruit, train, and hire qualified staff.** Hire staff that are committed to the vision and can bring longevity to the program.
3. **Take time to develop a sound curriculum.** Hire professional curriculum developers who can marry green-collar job skills with state standards in a way that makes learning enjoyable.
4. **Create a viable learning site.** In keeping with the school's mission statement, design and operate the school facility with a high-level of integrity; become a community exhibit for green building technologies, philosophies, and materials.
5. **Recruit students and outreach to the community.** Use community outreach as an opportunity to market the Green Works vision to the surrounding communities.

Prior to any student enrollment at the proposed facility, the buildings must be renovated to comply with health and safety codes. However, the panel challenges the creators to go beyond minimum building standards. In keeping with the school's mission statement, the school must become an exhibit of sustainability. The TAP recognizes there will be some financial implications involved in a building overhaul but the TAP also recognizes there is great opportunity to tap into some creative funding sources (i.e. in-kind donations, grants, fund-raising, partnerships, etc). By taking the time to establish a well-qualified (and resourceful) development team, there is great potential to build a facility which exhibits the same values as taught in the classroom.

## FINAL WORD

As a final note, the TAP would like to pose one more thought on sustainability: *Green is not a color but a practice and matter of course.* Given this philosophy, it is imperative that the creators of Green Works Urban Academy not merely use a broad green brush to wash over governance, faculty, curriculum, facility, and operations. Instead, the panel challenges the creators to consider a holistic approach to sustainability. The success of the school is dependent on the balance of politics, economics, education, budget, governance, and resources. With careful thought, each factor should be consciously integrated to support the fundamental principles of public education. That is, to deliver an unequivocal high-quality learning experience.



## APPENDIX A SAVINGS BY DESIGN INTERVIEW NOTES

Interviewer: Vinceena and Julie  
Phone interview on Friday 9/11/09

Contact: Harry Pemberton

Company: Southern California Edison Savings by Design Program  
Expertise: Energy Efficiency Incentives

### What incentives are available for energy efficient buildings? How do we go about securing these funds?

So CA Edison program "Savings by Design" (SBD) is available to any Edison customer, in an Edison territory, using an Edison meter. The program covers New Construction, Additions and Major Renovation to existing buildings.

SBD can offset costs up to 75% of items being included in the design of new or renovated facilities including lighting systems, HVAC systems, daylighting systems. The savings are measured in Kwh and they must be 10% better than CA Title 24. There is a cap on the amount available.

To participate, a Letter of Interest is necessary from the building owner, dated and signed. Provide information on the building/project. Provide names of architects and engineers for the project. This puts them into the program with no obligation to continue to participate. So CA Edison will provide advice and assistance on the design savings available.

There is NO CHARGE for this program and for the design assistance.

### What types of energy efficiency measures are typical for new school construction? For rehab? Easy things to do?

There are a lot of easy and simple measures that schools can utilize for energy efficiency including things like:

1. Use of daylighting – through side windows, skylights, solar tubes. It has been documented that the use of daylighting in classrooms improves the educational environment and increases test scores for students.
2. Use of high efficiency lighting – such as direct/indirect T8 (25w) technology
3. Use of natural ventilation when possible to avoid the need for energy to run HVAC systems
4. Use of HVAC package units with the best Energy Efficiency Ratio (EER) rating. Anything with 11.0 or greater is eligible for energy efficiency incentives.

### What type of opportunities are available for educational partnerships with the utility companies (guest lectures, site visits/facility tours, etc)?

One of the greatest resources here in So CA is completely FREE to all Edison customers. It is the Customer Technology Application Center (CTAC) located at 6090 Irwindale Blvd., Irwindale (close to the 605 / 210 intersection).

See [www.sce.com/CTAC](http://www.sce.com/CTAC) for more information.

There are free workshops and seminars available. The sessions repeat 4 times per year.

Some examples of classes include solar technology, hands on lighting seminars and even workshops on refurbishing schools. Guest lecturers may be available depending on the topics.

Although So CA Edison does not have any direct partnerships available for schools, contact Mr. John Rensch (offices at the CTAC) for many other private partnerships opportunities available.

### What type of skills would be helpful for students who are hoping to work for the Utility company?

So CA Edison does not actually hire individuals to perform green collar jobs like installation of solar panels.

For those headed towards college – electrical engineers, mechanical engineers etc will be in demand during the 21<sup>st</sup> century.

# APPENDIX B LEED-SCHOOLS CHECKLIST



## LEED 2009 for Schools New Construction and Major Renovation

Project Checklist

Project Name

Date

### ☐ ☐ ☐ Sustainable Sites Possible Points: 24

Y	N	?			
<input checked="" type="checkbox"/>			Prereq 1	Construction Activity Pollution Prevention	
			Prereq 1	Environmental Site Assessment	
			Credit 1	Site Selection	1
			Credit 2	Development Density and Community Connectivity	4
			Credit 3	Brownfield Redevelopment	1
			Credit 4.1	Alternative Transportation—Public Transportation Access	4
			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	2
			Credit 4.4	Alternative Transportation—Parking Capacity	2
			Credit 5.1	Site Development—Protect or Restore Habitat	1
			Credit 5.2	Site Development—Maximize Open Space	1
			Credit 6.1	Stormwater Design—Quantity Control	1
			Credit 6.2	Stormwater Design—Quality Control	1
			Credit 7.1	Heat Island Effect—Non-roof	1
			Credit 7.2	Heat Island Effect—Roof	1
			Credit 8	Light Pollution Reduction	1
			Credit 9	Site Master Plan	1
			Credit 10	Joint Use of Facilities	1

### ☐ ☐ ☐ Water Efficiency Possible Points: 11

<input checked="" type="checkbox"/>			Prereq 1	Water Use Reduction—20% Reduction	
			Credit 1	Water Efficient Landscaping	2 to 4
			Credit 2	Innovative Wastewater Technologies	2
			Credit 3	Water Use Reduction	2 to 4
			Credit 3	Process Water Use Reduction	1

### ☐ ☐ ☐ Energy and Atmosphere Possible Points: 33

<input checked="" type="checkbox"/>			Prereq 1	Fundamental Commissioning of Building Energy Systems	
<input checked="" type="checkbox"/>			Prereq 2	Minimum Energy Performance	
<input checked="" type="checkbox"/>			Prereq 3	Fundamental Refrigerant Management	
			Credit 1	Optimize Energy Performance	1 to 19
			Credit 2	On-Site Renewable Energy	1 to 7
			Credit 3	Enhanced Commissioning	2
			Credit 4	Enhanced Refrigerant Management	1
			Credit 5	Measurement and Verification	2
			Credit 6	Green Power	2

### ☐ ☐ ☐ Materials and Resources Possible Points: 13

<input checked="" type="checkbox"/>			Prereq 1	Storage and Collection of Recyclables	
			Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 2
			Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
			Credit 2	Construction Waste Management	1 to 2

### ☐ ☐ ☐ Materials and Resources, Continued

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3	Materials Reuse	1 to 2
			Credit 4	Recycled Content	1 to 2
			Credit 5	Regional Materials	1 to 2
			Credit 6	Rapidly Renewable Materials	1
			Credit 7	Certified Wood	1

### ☐ ☐ ☐ Indoor Environmental Quality Possible Points: 19

<input checked="" type="checkbox"/>			Prereq 1	Minimum Indoor Air Quality Performance	
<input checked="" type="checkbox"/>			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
<input checked="" type="checkbox"/>			Prereq 3	Minimum Acoustical Performance	
			Credit 1	Outdoor Air Delivery Monitoring	1
			Credit 2	Increased Ventilation	1
			Credit 3.1	Construction IAQ Management Plan—During Construction	1
			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
			Credit 4	Low-Emitting Materials	1 to 4
			Credit 5	Indoor Chemical and Pollutant Source Control	1
			Credit 6.1	Controllability of Systems—Lighting	1
			Credit 6.2	Controllability of Systems—Thermal Comfort	1
			Credit 7.1	Thermal Comfort—Design	1
			Credit 7.2	Thermal Comfort—Verification	1
			Credit 8.1	Daylight and Views—Daylight	1 to 3
			Credit 8.2	Daylight and Views—Views	1
			Credit 9	Enhanced Acoustical Performance	1
			Credit 10	Mold Prevention	1

### ☐ ☐ ☐ Innovation and Design Process Possible Points: 6

			Credit 1.1	Innovation in Design: Specific Title	1
			Credit 1.2	Innovation in Design: Specific Title	1
			Credit 1.3	Innovation in Design: Specific Title	1
			Credit 1.4	Innovation in Design: Specific Title	1
			Credit 2	LEED Accredited Professional	1
			Credit 3	The School as a Teaching Tool	1

### ☐ ☐ ☐ Regional Priority Credits Possible Points: 4

			Credit 1.1	Regional Priority: Specific Credit	1
			Credit 1.2	Regional Priority: Specific Credit	1
			Credit 1.3	Regional Priority: Specific Credit	1
			Credit 1.4	Regional Priority: Specific Credit	1

### ☐ ☐ ☐ Total Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110



Views and opinions expressed in the media, articles or comments on the websites listed below are those of the speakers or authors and do not necessarily reflect the views and opinions held by Urban Land Institute. We are making such material available in our efforts to advance the understanding of Charter Schools, green collar job skills, and sustainable development.

- Build Green Schools (USGBC): <http://www.buildgreenschools.org/>
- California Charter Schools Association: <http://www.myschool.org/AM/ContentManagerNet/HTMLDisplay.aspx?ContentID=5651&Section=Home>
- Collaborative for High Performance Schools (CHPS): <http://www.chps.net/>
- Ed Source: [http://notebook.lausd.net/portal/page?\\_pageid=33,212438&\\_dad=ptl&\\_schema=PTL\\_EP](http://notebook.lausd.net/portal/page?_pageid=33,212438&_dad=ptl&_schema=PTL_EP)
- EdSource: [http://www.edsource.org/pub\\_CharterPerf6-09.html](http://www.edsource.org/pub_CharterPerf6-09.html)
- Green Career Central: <http://yourgreencareer.com/tipoftheweek/2009/07152009.html>
- Green for All - Greener Pathways: <http://www.greenforall.org/resources/greener-pathways-jobs-and-workforce-development-in>
- Green Technology Community College Summit: <http://green-technology.org/ccsummit/>
- LAUSD Petition: [http://notebook.lausd.net/portal/page?\\_pageid=33,212438&\\_dad=ptl&\\_schema=PTL\\_EP](http://notebook.lausd.net/portal/page?_pageid=33,212438&_dad=ptl&_schema=PTL_EP)
- LEED-EB (USGBC): <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=221>
- LEED-Schools (USGBC): <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1586>
- National Energy Education Development Project (NEED): <http://www.need.org/>
- National Resource Center on Charter School Finance & Governance: <http://www.charterresource.org/>
- NY Times Article on Inferior Charter Schools: [http://www.nytimes.com/2009/06/22/education/22duncan.html?\\_r=1&scp=1&sq=stanford%20charter%20school%20report&st=cse](http://www.nytimes.com/2009/06/22/education/22duncan.html?_r=1&scp=1&sq=stanford%20charter%20school%20report&st=cse)