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**Journal of the City and Regional Planning Department**  
College of Architecture and Environmental Design, California Polytechnic State University

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We wish you a warm welcome to the third edition of FOCUS, the annual journal of the City and Regional Planning Department. FOCUS presents the current faculty work, student involvement, and alumni accomplishments. In a very real way FOCUS reflects the present, the past and the future of the profession as we know it at Cal Poly.

We ask you, the reader, to provide us with feedback and suggestions for improvement. As always, we owe a special thank you to the private donors (see inside back cover) who provide the funding for this publication.

This issue reflects the continuing departmental effort to enrich our curriculum through international experiences. You will find some very interesting international planning articles, including a wonderful environmental planning project to protect the ancient Mayan city of Copan, located in the northwest highlands of Honduras. This was our first interdisciplinary effort to team with faculty and students from Cal Poly’s Landscape Architecture Department and a Honduran University.

In November 2005 CRP coordinated the International Urban Disaster Risk Reduction Symposium. We brought to campus a multidisciplinary group of thirty international and national experts on disaster and hazards reduction. The symposium overview article provides insight into the central message that we can save lives and protect property through planning and design procedures. CRP wishes to become a leader in developing a curriculum on “Community Safety and Design.” If you wish to help us do this, please contact us so we can see how you can help in designing disaster resistant communities. The symposium proceedings are available in CD form as a special issue of FOCUS. If you are interested in obtaining the proceedings, please contact us.

CRP now has four exchange programs for students who wish to study planning abroad. In this edition you will find excellent student writing about their international educational experiences in Brazil and Honduras. We also had one student in Switzerland this year.

For many years the City and Regional Planning Department has partnered with central coast communities to address planning issues. Student work resulting from these partnerships has earned several national awards from the American Institute of Certified Planners. An example of effective partnering is laid out in the article on the King City (Monterey County) planning studio. When students engage with the community they are faced with real world issues and the nuances of local culture and context. Students benefit from the real world experience, and the community benefits by getting fresh ideas and useful planning products. In addition to King City, this year the CRP studio courses have worked in the city of Ventura on sector plans, in Redding on riverfront revitalization, in San Luis Obispo on sustainable transit oriented development, and in Pascagoula, Mississippi on site designs for Katrina recovery.

I hope you enjoy this edition of FOCUS and think about becoming a FOCUS supporter, either as a contributor of content or through financial assistance. If there is any subject matter that you wish to see included in future issues, please let us know.

William J. Siembieda, Ph.D. AICP
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It is with a very sad heart that I open this Editorial with a note on the passing of our very dear friend and colleague Walt Tryon, professor of Landscape Architecture. Walt taught at Cal Poly for more than 30 years, and he was a much respected educator, an excellent designer, and a beloved colleague. His interdisciplinary, holistic, and spiritual approach to practice and teaching captivated students and faculty alike. My colleagues in the City and Regional Planning Department and myself who were fortunate enough to work with Walt will miss him, but will always have him in hearts and soul. We wanted to pay homage to Walt’s memory in this Editorial section by including a beautiful poem dedicated to him by his colleague and friend William MacElroy, of the Landscape Architecture Department.

The FOCUS Special Events section this year starts with an overview of the International Symposium on Urban Disaster Risk Reduction and Regeneration Planning, by BSCRP student Christina Batteate. This important event, organized by William Siembieda and Ken Topping of the City and Regional Planning Department, attracted participants and professionals from various countries, who discussed what is perhaps the biggest challenge of contemporary urban development: how do we build more disaster resistant communities and provide safer places for people? This is indeed an enormous challenge in today’s urban world threatened by all sorts of high-risk situations in the rise: global warming, rapid urban growth and speculative development, pollution, deforestation, and, on top of all that, terrorism and other man-spurred “disasters” triggered by poverty and hunger. This article is appropriately followed by Flavio Malta’s brief account on his work as a city planner in Brazil, and the difficulties with dealing with the conditions of poverty and squatter settlements in an area which is environmentally protected and dependent on tourism.

Readers will find very different and interesting papers in the Essays section. Tom Jones, Dean of Cal Poly’s College of Architecture and Environmental Design, points out the economic and social advantages of compact urban oriented housing in California, and suggests a typology of urban and in-country housing choices towards this goal. Paul Wack, associate professor at CRP, writes about his long-term association with the Sustainable Environments minor, and reviews the evolution of what has evolved as the most popular minor in the College, and commenting on some of its most important aspects. The next two articles are by CRP’s newest faculty, Cornelius Nuworsoo and Umut Toker, who joined us last fall to cover community design and transportation, respectively. Nuworsoo writes about a city-wide transit system he developed and is helping implement in Accra, capital of Ghana, his native country. Joined by planner Zeynep Toker, Umut writes about the evolution of the garden city concept through a discussion of Hampstead Garden Suburb, London.

The section on Student Work begins with the proud announcement that Cal Poly graduate student team won the 2005 Bank of America Low-Income Housing Challenge, upsetting strong teams from Berkeley and Stanford! Traditionally spearheaded by CRP and coached by assistant professor D.Gregg Doyle, the team proposed the rehabilitation of Oak Park, originally built in WWII as temporary military housing and owned by the Paso Robles Housing Authority. Next, the importance of the community-outreach pedagogy and the effects of class projects is discussed by Doreen Liberto-Blanck, a CRP lecturer and community development director for King City, CA. Located in the Salinas Valley, this agricultural community is facing complex land use and environmental problems related to urban growth and development pressure from Salinas, Monterey, and Silicon Valley workers. Expanding on CRP’s collaboration with King City, Nuworsoo and Topping write an account on their graduate planning studio which is currently developing a series of in-depth studies and visioning community workshops towards a draft community plan. The student work section follows with a graduate project for the revitalization of a riverfront site in Redding, CA, which has gained client and community support, a review of the CRP student entry in the Cool Cities Urban Design Competition (Jackson, MI), an article on a concept plan for Katrina-striken Pascagoula, and another on the partial results of this year’s community planning lab which is working in collaboration with Crawford, Multari & Clark and the City of Ventura, CA.

The CRP tradition of international work is represented in this issue by an important collaborative process which lead to a concept plan for the sustainable development of the town of Copan and its Mayan temple archeological site, designated a
world heritage site by UNESCO. Graduate student Richard Rojas writes about this collaborative project with Cal Poly’s Landscape Architecture Department, the Centro de Diseño, Arquitectura y Construction, and the Ministry of Tourism in Honduras. Closing this section, Cal Poly students write about their life enriching experiences in participating in CRP’s exchange programs and studying in Brazil and Honduras.

This issue’s Spotlight section begins with a great interview with CRP alumni Nick Saskell, Clark Williams, Colleen Hart, and Sierra Russell, who form EDAW’s Planning and Urban Design Studio in the San Francisco area. They talk about their undergraduate learning experiences, how they relate to their day-to-day work, and what students should be better prepared for the real world. Chris Jordan, a recent CRP graduate and FOCUS assistant editor for the first two issues, writes about life after Cal Poly and the application of the knowledge he gained as a planning student.

I hope you enjoy the 2006 edition of FOCUS. Inevitably, for all of us who joined forces to make this edition happen it has been hard work, but lots of fun. It is rewarding to see a journal taking shape, meeting its mission, expanding its horizons, and being able to contribute to city and regional planning. We are always open to your participation and suggestions.

Vicente del Rio
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Friendship

My friend Walt told me a story about a boy who was a soldier.

At eight years of age, and who published his first book of poems at seventeen.

The boy was asked during an interview, “Were you born a soldier who became a poet, or a poet who became a soldier?”

He replied: “I was born a poet, the way a bird is born. A musician.”

Walt said, “When I heard that I told myself I have to remember this for Bill.”

Bill MacElroy
3/14/04
Cal Poly’s Housing Team Upsets Berkeley and Stanford

An interdisciplinary team of Cal Poly graduate and undergraduate students from City and Regional Planning, Architecture, Business, and Construction Management won the 2005 Bank of America Low-Income Housing Challenge. This is the second time a Cal Poly team – traditionally coached by a CRP faculty – takes home the trophy upsetting teams from the Bay Area. The team chose to propose the revitalization of the Oak Park, a facility which was originally built as temporary military housing during World War II. Now belonging to the Paso Robles Housing Authority, the structures house hundreds of families who earn only a fraction of the Area Median Income, but were suffering from many deferred maintenance problems.

Assisted by a panel of university experts who brought advice in finance, design, construction, and planning, the Cal Poly finetuned their project, which rehabilitates the structures and revitalizes the community so that Oak Park continues to attract lower income families. Besides accommodating the 150 families who already live in the site through a phased building plan, the project increases the total number of units by 50%. In addition to the quality of the design and its technical aspects, a key to Cal Poly’s victory was the creative financing and legal structure proposed.

Student Team from City and Regional Planning is Finalist in the Cool Cities National Urban Design Competition

A team composed by graduate students Craig Minus and Robert Betts, and senior Noah Christman, all from the CRP Department, was a finalist in the Cool Cities urban design competition in Jackson, MI. Responding not only to the existing community needs but also the needs of the future population, the team’s proposal weaves the old with the new and creates a thriving new mixed use area. It maintains existing historic and civic elements which are complemented by a culinary arts center and digital arts studio, a shopping center, town homes, apartments, and other attractions, interconnected by a system of small parks. The team considered the feasibility aspects associated with a practical design which the city Jackson could successfully use to help guide, incorporate future development, and revitalize its downtown.

Cal Poly Shines with Third Place Finish in International Solar Decathlon

Cal Poly’s solar house and student team, Solar CalPoly, won third place at the international Solar Decathlon competition in Washington, D.C., in October 2005. Cal Poly held on to second place throughout most of the weeklong competition, and earned first place in many of the individual daily decathlon competitions that gave teams points toward an overall total. Judges commented that Cal Poly’s entry was excellently crafted and offered elegant design and living solutions. “The best part has been watching the students from all the teams rise to this significant challenge,” said Cal Poly Architecture Professor Robert Peña, one of the team’s advisors.
Over the last two years, more than 100 Cal Poly students from numerous departments, along with architecture and engineering faculty, designed and built the 650-square-foot Solar CalPoly structure. The design was based on some very specific challenges, including the longest overland travel route. Cal Poly’s house traveled across the country by truck to the National Mall.

Architectural Engineering Department Student Creates Safe Haven for Kenyan Orphans

David Lambert, a fifth-year architectural engineering student, is attempting to create an ideal adobe brick to be used in Kenya. The bricks are for villages that will be home to 600-800 orphans whose parents have died because of the AIDS virus. Bricks are being tested with blows from a nine-pound sledgehammer, as that is the ideal tool used by intruders in Kenya, who literally knock down the wall to a building and make-off with supplies for the needy.

The bricks are being made out of materials that cost almost nothing. Dirt and bamboo are easily accessible by the villagers and can make strong and durable structures. More conventional building materials, like steel and concrete, are too expensive and not readily available in Africa. Lambert hopes to go to Africa to teach the villagers how to make the bricks this summer. This project may be on display at Open House in April.

Cal Poly Architecture Program Again Ranks High in National Survey

A national poll of practicing architects ranked Cal Poly’s architecture program as one of the best in the United States at producing “graduates most prepared for real-world practice.” The 2006 survey, conducted for the architecture and engineering journal DesignIntelligence, rated Cal Poly’s program No. 3 in the nation tied with Rice University in Texas among Bachelor of Architecture degree programs.

In other categories, the magazine polled within regions. Firms in the West chose Cal Poly’s architecture program as tops in the nation. When western firms were asked to list the “most innovative architecture programs that are growing, changing, transitioning,” Cal Poly’s undergraduate program was judged second in the West, ahead of several universities offering master’s programs. And when firms in every region considered all bachelor’s and master’s programs, the architecture program was ranked second nationally in the assessment of how construction methods and skills are taught.

Students from the Construction Management Department Win National Homebuilders Competition

Cal Poly’s construction management team topped 34 other universities to earn first place at the National Association of Homebuilders (NAHB) Student Competition last January in Orlando, FL. The “Polytex” team spent more than 300 hours developing the winning plan for a 10-acre, 28 buildings, 175 units, condominium project in Addison, TX. Team members included Aaryn Abbott (Medford, OR), Aaron Amuchastegui (Klamath Falls, OR), Jeremy Johnson (Pauma Valley, CA), Dan Loper (Chico, CA), John Parnell (Whittier, CA), and Clayton Thompson (Portola Valley, CA). The first-place award included $2,000, a plaque for the department, and a traveling Legacy trophy that will be displayed at Cal Poly until next year’s event.

Landscape Architecture Department – National Ranking and Design Competition

Cal Poly’s Landscape Architecture program moved up two spots over last year to be rated sixth in the nation in a survey on undergraduate education. In the regional survey of western firms, Cal Poly was rated as the best undergraduate landscape architecture program in the nation.

Two recent graduates from the program are among the 2005 winners of the sixth annual Wayne Grace Memorial Student Design national competition. Joshua Circle-Woodburn (of Kula, Hawaii) and Kathryn Hergenrather (of San Luis Obispo) were both awarded $1,000 from the Landscape Architectural Registration Boards Foundation. They were among only four students honored for the landscape design plans which served as their entries. Circle-Woodburn and Hergenrather graduated from Cal Poly in June, but submitted their entries before the competition deadline in May. The landscape foundation announced the awards in late September.
The judges found the students’ winning entries covered a “wide-range of issues impacting public health, safety and welfare, many of which are not clearly seen or easily understood by the public and legislators.”

Circle-Woodburn’s project was titled: “Lokahi, A Culturally Centered Sustainable Resort.” His entry united ancient Hawaiian cultural design elements with modern techniques for environmental preservation and protection. His plans called for construction using green building and sustainable design principles.

Hergenrather’s project, “A Sustainable Redesign of the Cal Poly Equine Center,” provided for a complete restructuring of the existing equine facility at the university in order to build a new, more efficient, environmentally responsible and enjoyable facility using sustainable design principles.
From November 3 to 5, 2005 the City and Regional Planning and the College of Architecture and Environmental Design promoted the International Symposium on Urban Disaster Risk Reduction and Regeneration Planning: Integrating Practice, Policy and Theory. Christina Batteate presents an overview of these three intense days when more than thirty leading professionals from the US and abroad presented their work and their views, and participants were able to engage in important discussions. FOCUS has also published a special issue with the complete proceedings of the symposium.¹

Statistics show that disasters are on the rise in frequency and severity. The year 2005 brought disasters to the forefront with the category five Hurricane Katrina and the 7.6 magnitude Pakistani earthquake. The estimated 9.0 magnitude Indian Ocean Earthquake of 2004 created a tsunami that leveled coastlines in multiple countries and claimed the lives of over 283,000 people. A growing world population and its contribution to environmental degradation, climate change and rapid urbanization further add to the already rising disaster potential. In lieu of this imminent disaster threat, Cal Poly State University San Luis Obispo held the International Symposium on Urban Disaster Risk Reduction and Regeneration Planning: Integrating Practice, Policy and Theory from November 3-5, 2005 and invited prominent professionals and academics specialized in the field, from six different countries, to participate and help answer the question: “How do we build more disaster resistant communities that provide safer places for people and their individual and collective property?”

The main goal of the symposium was to contribute to the creation of an international foundation of knowledge furthering effective actions enhancing sustainability through mitigation of disaster risks and facilitation of recovery. The symposium’s objectives were:

- Expand the international knowledge among academics and practitioners in community development and disaster management.
- Create university level education plans for integrating and strengthening undergraduate and graduate curricula for the design and implementation of disaster resistant communities.
- Prepare faculty, students, and professionals to provide technical assistance to disaster-stricken regions, such as Southeast Asia, Pakistan, and the Gulf Coast.

The symposium was organized around five sets of themes explored through presenters, panel discussions and audience input: a) Threats and Vulnerabilities, b) Location and Design Issues, c) Economic and Social Issues, d) Educational and Institutional Issues, and e) Technical Assistance. What follows is a summary of the main discussions and conclusions related to each theme.

**Threats and Vulnerabilities: What is at Risk?**

At the highest risk to disasters is human life, followed by property or assets, and finally environment or source of livelihood. Assessing highly vulnerable areas is a multi-phase process. At what point a region picks up in this process depends largely upon their level of development. Technological advances in geology and meteorology aid us in creating GIS (Geographic Information Systems) maps that catalog elements such as severity of disasters and frequency of disasters. SDI (Spatial Data Infrastructures), explained by Mark Sorenson (University of Redlands), help identify the fragility of the population, reaction capacity, and ability to recover, in what he calls “lifecycle disaster management”. Stanley Goosby (Pacific Disaster Center) and Feng-Tyan Lin (Taiwan) are spearheading the creation of these GIS composite maps. Once complete, these technical and comprehensive maps provide design professionals with clear guidance.

The built environment is most often the culprit in claiming lives when disaster strikes. Be it shanty-towns of squatters or metropolises with poor architectural configurations, these forms pose a substantial challenge to reducing disaster-risk. The lack of resources and trained professionals in developing countries too often result in a recipe for catastrophe. As Marjorie Greene (Earthquake Engineering Research Institute)
noted in her presentation, “the world’s poor are forced to build in the most dangerous urban zones—steep hillside, river banks, floodplains, in the shadow of refineries, chemical factories and toxic dumps.” The widespread existence of this type of living conditions led her to the strong claim that “poverty has constructed the urban disaster problem.”

A closer look at the built environment by Teresa Guevara-Perez (Venezuela) examined the evolution of modern architectural configurations. Her analysis identified the weakest architectural configurations most prone to failure during earthquakes. Despite the continued collapse of certain structures in disasters, their construction is still prevalent, which she attributes to a disconnect between architects, engineers, and the urban codes and zoning. Charles Real (California Geological Survey) shared how the state of California is currently involved in a process of mapping areas most prone to liquefaction and ground failure during earthquakes and transmitting those maps to local agencies with the power to begin seismic retrofitting processes. This effort at state level provides critical risk assessment information to local governments and operating agencies.

Most challenging to disaster-risk assessment is the varied perceptions of threats, vulnerability, and risk. Because in general it is the citizens who bear the brunt of the cost on safer construction techniques or retrofitting, a paradigm shift must occur before stakeholders initiate the first steps in disaster mitigation. To close this gap, Eve Gruntfests’ (University of Utah) project WAS*IS (Weather and Society* Integrated Studies) lies between the physical and the social sciences. The project goal is to help people fully understand the vulnerability of their region and to design appropriate zoning regulations, a process in which community education workshops proved to be vital in encouraging the paradigm shift.

Knowing where natural hazards are most likely to occur spatially is only the first step in reducing urban disaster risk. Better design, collaboration between the design (engineering and architecture) and construction fields; and public relations on disaster awareness must follow. As the discussions in the next session showed, this is not as simple as it sounds. Many factors arise to hinder and weaken a successful disaster risk reduction program.

Location and Design Issues: What are the Obstacles and Opportunities Influencing Disaster Mitigation and Recovery?

When a disaster impacts a community or a region, buildings, trees and families are not the only things uprooted. Disasters bring to the surface social and institutional relationships and issues that have long been ignored. Paul Farmer (American Planning Association) and Raymond Burby (University of North Carolina) both used New Orleans as an example of how competing interests within society and governmental bodies can slow or sabotage a successful recovery. Farmer illustrated the rush for every interest group to get their hands into the rebuilding process. While this can slow the process, public officials and planners need to embrace the input and attempt to accommodate as many of the groups’ needs as possible. Disasters are inherently a terrible thing but they do present an opportunity to completely refurbish an area’s built environment and policies.

Burby warned us of two paradoxes: the safe development and local government paradoxes. The safe development paradox argues that society is amiss in the belief that we can conquer nature. However, an unsafe area is unsafe no matter how advanced our technology and engineering capabilities become. Attempting to build in these high-risk areas only invites a higher risk and greater damage in terms of loss of life and property. The local government paradox purports that governments do not devote adequate resources to risk-assessment and mitigation. For example, the city government of New Orleans lobbied the Army Corps of Engineers for smaller levees to cut costs, and in turn that local government was sued by FEMA for inadequate levees. Then, after all that, additional billions of dollars were lost from the disaster
itself, which perhaps could have been prevented or softened by proper building standards and levee maintenance.

Multiple spheres of pre-disaster mitigation are to be explored. In non-developed areas that are deemed hazardous, the proper steps must be taken by the government to prohibit building there. In areas deemed hazardous through detection technology or GIS mapping, the appropriate zoning and mitigation must occur, in some cases relocating residents. There are saw successful examples in California, such as the seismic retrofit project of the City of San Luis Obispo California, and Berkeley’s efforts in community disaster preparedness and hazard mitigation over a two decade period. Success was achieved through incorporating legislation and community safety initiative strategies. The experience of the City of Berkeley contains strong sustainability practices down to the household level. While scientists and policymakers may know which areas are unsafe, legislation will not be well-received until citizens and communities understand the risk and support measures to channel funding for pre-disaster mitigation upgrades.

Mitigation in the developed world is the first and less problematic challenge we face. Applying first world technology to third world situations must also occur if we are to alleviate the impact of disasters worldwide. Statistics continually show that more deaths occur in developing nations than in developed nations under equal natural hazard conditions. The developing world is challenged by lack of funds and sufficient education of the poor in techniques of self protection and risk reduction. The developed world needs to improve technology transfer so that poor people can build safer buildings at affordable prices. Transfer of assessment technology, mitigation techniques and upgrading processes often break social, political and geographic boundaries and should be viewed not as threatening or burdensome but for the life-saving potential that is offered.

We can plan as much as possible and disasters will still catch us by surprise. In relating her post-Katrina experiences, Laura Steinberg (Tulane University, Louisiana) listed a slough of unpredicted problems that arose such as garbage disposal, hazardous waste clean-up, and unraveling of the social fabric. In helping to deal with these unexpected post-disaster crises, Aseem Inam (author and Los Angeles consultant) discussed his model of comparative analysis of post-disaster reconstruction programs which studied successful programs under divergent conditions. In comparing reconstruction in Los Angeles and Mexico he discussed fund channeling, community outreach and participation, institutional coordination, rate of response, and the overall success of each case study. What this format produces is an archive of successful recovery elements under vastly different circumstances. We can draw from these lessons and conclusions to aid us in future recovery responses.

**Economic and Social Issues: Stakeholder Based Risk Reduction and Recovery Planning**

Why is it that keeping people out of harms’ way proves to be so difficult? Cultural perceptions, old habits, misunderstanding or insufficient hazard education, socio-economics and political dodging of responsibility all complicate the reduction of disaster risk. Paul Farmer’s recommendation to “make self-interest a common interest” holds the key to remediing this problem. Grassroots groups and communities are the largest untapped resource in disaster-risk reduction. They are also our clients, but often do not understand how and why disasters affect them. By educating the public and fostering an understanding of disaster-risk we garner the support that provides the leeway for successful retrofitting, mitigation and recovery program implementation. The critical role of local grassroots organizations was illustrated in Inam’s cross national case comparisons. As demonstrated by the successful programs in Marikina (Philippines), Kobe (Japan), and Berkeley (California) social projects, like community workshops, stir stakeholders’ interest and gain community participation. Community members are also the best detectors for opportunities and vulnerabilities within their sphere, and they are the best able to network disaster related consciousness and to serve as first responders.
Often hindering community educators is the gap between science, politics, and the population. Attempting to make weather warnings more palatable to the general public is Gruntfest’s WAS*IS project bridging the physical and social sciences. Burdening this process is poor social, political and risk-reduction infrastructure. We generally associate these characteristics with developing countries, but this dilemma was seen in New Orleans as well. Without standard zoning and land-use regulations, funding for disaster prevention and recovery, and the political and social will to drive improvement, we cannot progress in our disaster-risk reduction program.

Paulina Chevarri (Costa Rica) poignantly noted that “the entities in charge of control, enforcement and damage reporting are still different actors and that regional high level managers, emergency entities, municipal engineers, community groups and inspectors hardly speak to each other, let alone work together.” Only through infrastructure organization and better communication between the risk reduction professionals and the public, can we progress in achieving our goal. Barreling through bureaucracy and holding public officials responsible is a major step, but ultimately it will be the will of the people that are the driving force to safer communities. Hazard awareness and risk reduction education is needed for all governmental sectors so they can work with communities in productive partnerships. Risk reduction needs to become an across the board public objective; not left solely to specialized agencies.

**Education and Institutional Issues: Obstacles and Opportunities Affecting Interdisciplinary Collaboration**

Educational institutions shoulder special responsibility in promoting disaster risk reduction and regeneration planning. National and international presenters spoke on the various curricula being practiced in their institutions. However, universities are not the only place where learning is happening: grassroots groups, political bodies, and cross-field collaboration can also serve to generate knowledge, mitigation and funding strategies for disaster risk reduction. The most common recommendations in the university arena are interdisciplinary curricula and field-work in recovery planning. Rob Olshansky (University of Illinois) recommended that instead of creating new disaster courses we should integrate disaster and hazard management into the regular coursework of the following:

- Physical planning courses (to consider site planning and mitigation related to flood areas, storm-water runoffs, landslides, coastal erosion, and earthquake impacts)
- Housing courses (to consider safe locations for housing, insurance and financing of rehabilitation, retrofitting, relocation and reconstruction)
- Comprehensive planning courses (to consider mitigation and recovery elements)
- Economic development courses (to develop job development, job training, small business assistance and business retention following disasters)
- GIS courses (to identify sources of hazard data, relevant vulnerability data, land use, economic and structure data and infrastructure data)
- Neighborhood planning courses (to utilize neighborhood organization as a means for community disaster preparedness and also crime-watch and community clean-up projects)

Sudha Arlikatti (Texas A&M University) presented the success of the Hazard Reduction and Recovery Center and the Graduate Certificate in Environmental Hazard Management at Texas A&M. She emphasized supporting international study exchange whenever possible. Alejandro Linayo (Venezuela) presented the work at the Ejido Technologic Institute of Merida, a three-year program in “disastrology”, with areas of instruction being urban operations, industrial operations and citizen self-protection. As Venezuela’s ministries of Higher Education and of Science and Technology are interested in expanding the number of disaster management professionals, they want “to provide the same courses in other institutions of learning around the country, ensuring that training courses in disaster management are accredited by the National System of Higher Education and creating a competency program to meet the needs of non-professionals with many years of experience in disaster management bodies.”

In the U.S., the similar and successful program Partners for Disaster Resistance & Resilience: Oregon Showcase State Program was presented by Michelle Steinberg (National Fire Protection Association) and Andre LeDuc (University of Oregon). The University of Oregon statewide partnership was initiated by the Institute for Business & Home Safety (IBHS) and is now operated by the Oregon Natural Hazards Workgroup with a number of public and private sponsors. It functions as an interagency/interorganizational clearinghouse for natural hazards information, education, grants and resources, as well as an active participant in local capacity-building through projects and planning. It also educates city planning students and improves field practice by sending them out to communities to assist with hazards planning.
and projects. At the federal level, FEMA launched a Higher Education Project that included the development of college-level courses that could be used by teachers and students in a wide variety of disciplines. The consensus was best summed up by Michelle Steinberg in her declaration on the need for “service learning programs in universities that provide hands-on experiences for students that simultaneously boost capacity and knowledge at the community level and extend learning to long-term practitioners.”

Businesses, political bodies, and grassroots groups are also proving instrumental in promoting community disaster risk awareness. Drawing upon business organizational security, James Sena (Cal Poly) showed how businesses are more efficient at disaster assessment, management, and recovery than are public agencies. He listed the methods currently in use by businesses and how public agencies can easily augment them to fit their goals. Politics and grassroots groups entered the discussion in the course of Haruo Hayashi (Kyoto University, Japan) imparting lessons learned from recent projects on holistic earthquake disaster management planning based on a participatory strategic planning method. This methodology resulted in the development of a format in which participatory strategic planning processes can be described in terms of activity, input, output, control, and mobilization (AIOCM). Community members are invited to establish comprehensive goals, policies and programs which then direct the appropriate agencies in implementation. Hayashi acknowledged that the hardest part of the process is getting commitment from top officials in the form of funding and resource development.

Paulina Chevarri also addressed poor commitment from the top as a major problem: “Entities in charge of the reconstruction, (such as housing, human settlements, transportation and health authorities) show the slowness of bureaucracy, the lack of procedures, mechanisms, funding, and planning. Annual plans and budgets do not include recovery with better development standards. Nor have they mainstreamed risk-reduction in their policy framework and investments.”

On a more positive note, Marikina in the Philippines provided a thriving example of a city with the concept of safety as the organizing principle for risk-reduction. Tomas Aguilar, Marikina’s Economic Development Director, showed us how local government induced the mobilization of stakeholders and accomplished prevention and disaster preparedness programs that make for a safer society. Safety as the central organizing concept also leads to economic sustainability in that businesses know they can invest there with a minimum potential for loss.

Discussions showed that all players involved in the process must be in sync in reaching for the goal. More vertical and horizontal collaboration between grassroots groups, businesses, and governmental agencies must be achieved in order to reduce risk and to increase preparedness. On the other hand, the responsibility for hazard risk reduction must be awakened in students through multi-disciplinary hands-on experience, and in the community through charrettes and educational workshops. Practicing risk-reduction exercises is also effective training.

Figure 3. The “hammer effect” during a shake: high and narrow buildings will oscillate more and “hammer” their neighbors. (photo and schem from T. Guevara-Perez presentation)
Technical Assistant: Participation in Rebuilding Disaster Stricken Areas and Guidance in Designing Sustainable Disaster Resistant Cities

After a disaster event occurs, a three-phase process follows and while it may not always be so linear it follows as response, recovery, and reconstruction. Discussions in the symposium’s first session showed that identification and assessment of risk is the first step in reduction of impacts. After a disaster hits there is no longer the need to identify it, but rather to recover from it and prevent it from happening again. Lack of integration between governing bodies, funding for reconstruction, and information availability on the causes for disaster propel this cycle of repeating disasters. Prevalent in the developing world is the rush of displaced people back to the same site where the disaster occurred. Mismanagement by governing bodies and top-down control policies have not prevented people from rebuilding in the same high risk area. We must learn from past experiences and build management models that capitalize on the disaster event to impose appropriate land use zoning (locational) and building (design) guidelines.

Out of Taiwan’s National, Regional and Urban Planning Act and the Disaster Prevention and Response Act comes Feng-Tyan Lin’s work on Mitigation Plans Embedded in Zoning Maps, which involves collecting relevant data, reviewing city maps by hazard potentials individually and comprehensively, simulating urban development under hazard potential, delimiting the areas under hazard potential, and reviewing refuge sites, evacuation roads and other spaces in mitigation plan. Areas with high hazard risk are grouped into three hazard categories: “prohibited or move out”, “no growth” and “managed growth”, and zoning maps are then designed with hazard potentials considered. The results reflect a myriad of benefits as the maps offer comprehensive, concise data that allows for maximum accuracy in land use, urban development and insurance policies with disaster potential in mind. The maps can also be made available online thereby allowing citizens to educate themselves and form their own disaster mitigation strategies. The more effective governance and management permits a balance between urban development and sustainable environment and disaster mitigation.

Because most deaths result from the failure of man-made structures (buildings, bridges and roadways), the need to focus on these structures and strengthen their withholding capacity is of utmost importance. After her in-depth study of contemporary cities, Teresa Guevara-Perez noted that current “mitigation of seismic vulnerability is concentrated mainly in the application of seismic codes to individual buildings as independent units and not as components of the city system.” She concluded that “professionals in planning, design and construction should work as a team, not independently” and that “to mitigate seismic risk in contemporary cities, buildings have to be considered as components of the urban system.” While Perez’s recommendations apply to new buildings, there is also the issue of existing high-risk structures, especially in self-built housing occupied by the poor.

Fred Turner (California Seismic Safety Commission) walked us through the seismic retrofitting process that is ongoing in California. After a series of unsuccessful mitigation laws designed to enforce retrofitting of unreinforced masonry buildings, the state realized that without citizen initiative their goal was unattainable. Arietta Chakos (City of Berkeley, CA) maintained that “by reframing a fatalistic acceptance of disasters and their consequences, it is possible to cultivate and implement a positive, resilient response to societal risk.” Because it is the citizens and property-owners that often bear the brunt of the cost in seismic retrofitting, governments and municipalities must offer incentives for the public to undertake the cost burden. As seen in Marikina Phillipines and Berkeley California informed citizens inherently make the right decisions. Some of the common incentive methods are levying tax rebates for residential seismic upgrades, waiving permit fees for retrofits, and city grants to low-income homeowners and seniors to make their homes safer.

Now we know that it takes citizens initiatives to make headway in the disaster risk reduction program; but where do governmental agencies procure funding to provide these initiatives (tax breaks and grants) to motivate citizens? The money is there but appropriate lobbying with the right governmental bodies is needed. The overseeing bodies governing disaster management are not always in coordination with one another. Allen Settle (Cal Poly) warned that “elected officials and citizens are caught between competing agencies with considerable power to issue legal sanctions even if they contradict each other.” He used the vulnerability of the California Central Valley levee system as a framework to display this quagmire. The levees were haphazardly constructed, they are not properly maintained, and are now subject to a similar fate of New Orleans’ should extreme weather hit. Regrettably, to receive post-disaster funds FEMA requires that there be some documented value of the assets lost. These values should be included in the capital improvement plans and list of fixed assets and depreciation schedules, but the State has not yet created these documents, thus voiding any potential post-disaster relief funds.
All players in the local, state and federal arena must fulfill their duties so that we avoid being caught up in bureaucratic loopholes that undermine our goal. Another part of fulfilling this obligation is tapping all available financial resources. Laurie Johnson (Risk Management Solutions Inc.) reminds us that programs such as FEMA, the National Flood Insurance Program, H.U.D., the U.S. Dept of Transportation, the U.S. Army Corps of Engineers, state programs and projects, local programs, non-profits, corporations and individuals are all sources of potential funding and support for disaster-risk reduction and recovery. The tools are out there for us to achieve our goal. It’s a matter of synchronizing our agency players, tapping all available financial resources and mobilizing programs of disaster risk reduction.

Conclusions

After nearly three full days of immersion in disaster risk reduction topics, everyone came away from the symposium with a broader and deeper understanding of the context in which disasters happen, the forces that still encouraged them, and the needs to reduce their risk and impacts. Presentations and discussions fully addressed and advanced the original symposium question “How do we build more disaster-resistant communities that provide safer places for people and their individual and collective property?”. The presentation by William Siembieda (Cal Poly) served perhaps as the best summary of the concluding lessons, when he proposed a new three Ps paradigm for disaster prevention through the investment in Places, People and Process.

Investing in Place means identifying vulnerable areas using GIS and SDI technology. That information is then used to create composite maps that direct design professionals and local agencies in zoning, building regulations, mitigation and retrofitting processes. Becoming aware of malfunctioning building configurations leads the way to creating newer and stronger ones. Transferring technology to poor people will help them build safer and more affordably.

Investing in People is crucial because they are the greatest resource we have to draw upon. Once educated, these people become conscious stake-holders with interest vested in protecting their lives, livelihoods and property. Community education workshops promote a heightened awareness and responsibility in citizens that logically leads them to the roles in enforcing mitigation, implementing retrofitting processes and training to be first responders to disasters. Through an process of community education a dialogue based on self interest equals common interest language is built, allowing us to archive our experiences and draw from them in the future.

Investing in Processes requires the most energy and coordination. The first step is putting in place the legal, institutional and operational mechanisms that make people accountable for their actions. Reducing disaster risk does not lie solely on one agency, or entity. It must be viewed as an across the board public objective; not the sole responsibility of specialized agencies. Local, state and federal governments, risk reduction professionals, universities, businesses, grassroots organizations, and the public are obliged to heed this call. This echoes many of the lessons brought to us by the international presenters. Interdisciplinary collaboration in the public, professional and educational fields is mandatory for optimum success in reducing disaster risk and impact. The ultimate result we hope to see is competent infrastructure organization between communities, risk reduction professionals and governmental agencies.
Low Income Housing in Brazil: The Case of São Sebastião

In the winter of 2006, the CRP department received visiting researcher Flavio Malta from Brazil. He presents us with an overview of one of the most challenging planning problems faced by Brazilian cities: the exploding housing demand for the poor and the conflicts that it generates. Through the case of São Sebastião municipality, in São Paulo, he discusses some of the issues he deals with in his job as a city planner: the control of illegal settlements and the production of low income housing in a city which depends on tourism development and is located in an environmentally protected coastal zone.

From a sociological point of view, housing is an issue that depends on specific economic and social realities and needs to be understood in its full dynamics and complexity. The provision of housing is not only a material issue, but it also responds to a collective demand that is present in most cultural conditions, in individual and family aspirations. This helps to explain why demand for housing varies significantly within the different sectors of society, and why it is subject to a continuous change over time.

In Brazil, social reality is compounded by inequality. In other words, the market does not operate equally for all people and reveals the fact that capitalist processes are deficient in many ways, particularly in the provision of housing for the poor. As a result, today Brazil’s housing deficit is around 7 million units, mostly in the southeast and northeast regions. Moreover, a great number of existing dwellings in the country have very poor living conditions and lack adequate infrastructure, such as sewage and drinking water.

It is important to note that “housing deficit” is a key concept for the planning of public housing in Brazil because it expresses a deficiency in the housing market. Firstly, the deficit encompasses all housing that is inadequate due to precarious building conditions or bad infrastructure. Such units may also be overpopulated or located in areas not fit for residential use (such as flood zones, areas subject to land slides, public rights-of-ways, etc) and need to be replaced or evicted. Therefore, the housing deficit is a concept that needs to include not only the production of new housing but also the replacement, reconstruction, and expansion of existing units. Secondly, bearing this concept in mind, it has been identified that 84% of the housing deficit in Brazil is concentrated on families earning less than three minimum wages (a minimum wage is around $360 per month).

It is also important to note that the housing deficit has been a long-standing problem in Brazil; it is ever marked with a limited amount of government resources and poor planning. This problem has become even more complicated since 1990, when the federal government closed the National Housing Bank (BNH). Since then, housing production has become a real challenge for all levels of government. An enormous gap has opened between public policies and the actual housing provision, which has decreased to an almost insignificant level.

One of the main reasons for this gap is the difficulty to continue providing funds to subsidize large housing programs mainly for the poorest sectors of society. From the mid 1980s a new political and economic global order imposed severe limits on governmental expenditures as the nation became much busier paying never-ending internal and external loans and service debts.

Last but not least, there is another key aspect: land tenure and the need for public policies to regulate it. In many Brazilian cities, regulating land tenure together with upgrading existing irregular settlements are fundamental goals in housing policies, particularly in dealing with “favelas” (squatter settlements). In the city of São Paulo for instance, the local government has put a great amount of effort and money into land acquisition for low-income housing projects. However, some critics point out that this policy is inappropriate because it facilitates government corruption in buying the land at unreasonable prices according to the real estate market, or because it can generate vacant lots nearby while landowners bet on the appreciation of their properties along the development process.

1 The National Housing Bank (BNH) had been created by the military regime in their first year in power (1964) to “solve” the housing problem by encouraging ownership and supporting the production of large quantities of low-income projects. As a “second-line” bank it captured money from savings accounts and workers compensation funds to fund housing programs through banks and state agencies. The bank was also meant to inject dynamism and resources in the construction sector.
The Case of São Sebastião

The municipality of São Sebastião is located in the northern coast of the state of São Paulo, and holds a population of 70,000. The region, called “The Green Coast” due to its lavish landscape and the surrounding Atlantic Forest, is within a state environmental protection area and was declared a national natural heritage along with other ecosystems by the 1998 Federal Constitution. Tourism is a major economic activity in São Sebastião, and while the pressure for land with good infrastructure, public facilities, public transportation, and services is very high, this type of valuable land is mostly located near the seafront and is also the area of major tourist attraction.

The local topography is an obstacle to development due to the steep hills, rivers, mangroves, and other natural elements concentrated along the plains near the sea. As a result of high land values near the sea, lower income groups are pushed out towards cheaper areas with no infrastructure or services, and where job opportunities are scarce.

To make things worse, land tenure is a peculiar issue in the whole region due to its historic conditions that date back to colonial times. São Sebastião was initially settled in the sixteenth century as a stronghold, but the Portuguese were only interested in the exploitation of natural resources such as wood, precious stones and gold from the inner regions. A formal settlement was only formed during Brazil’s second economic period in the seventeenth century to support sugar cane plantations and the production of “pinga”, a spirit made of distilled sugar cane juice that is very popular in Brazil. Due to constraints on the productiveness of its plantations, such as the lack of good soils, the narrowness of its valleys and geographical formation, São Sebastião grew at a slow pace and its economy was mostly based on the small-scale production of tobacco, sugar cane, and cassava.

In the beginning of the nineteenth century, during the third economic period that was based on coffee plantations in the hinterland, along the Paraiba Valley, the first roads were opened to provide a connection to the sea in order to export coffee beans to Europe. São Sebastião then became connected to the Valley and the coastline began to experience more intense urban growth. After World War II tourism grew in the region and together with better accessibility, induced a radical change in the local lifestyle. A new settlement pattern started to consolidate. Land subdivisions along the sea line expanded the original historic central area into a corridor-like shape, initially towards the north.

Unfortunately, most of this urbanization lacked basic infrastructure, particularly sewage systems. The coastal environmental conditions were aggravated as new housing for tourism began to appear, with the real estate market.

Figures 1 & 2. Map indicating the municipalities of the Green Coast of São Paulo state and the exuberant Atlantic Forest in the coastal region.

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2 The Brazilian ecosystems protected by the Constitution are: the Amazon Tropical Rain Forest, the Atlantic Forest, the Ocean Mountains, the Pantanal, and the Coastal Zone.
catering for the middle and upper classes. This urban growth in São Sebastião results from what is named the “second home movement,” which can be considered the biggest tourist impact in the region. It is still the prevalent form of urban expansion and has an immense influence on local and regional social and economic structures.

Paradoxically, this type of urban pattern is based on high levels of land occupation and generates a great deterioration of environmental quality, which negatively impacts the image of São Sebastião as a tourist destination. The excessive use of land close to the sea for tourism and second-home subdivisions, the lack of proper infrastructure, and the seasonality proper to tourism result in an increase in low paying jobs and informal work. Tourism development generates service work, such as cleaning and gardening, that attracts unskilled workers from outside areas and stimulates migration.

Also, a large number of residents and migrants coming to work have no job security and no access to banks, mortgages, or loans. They are not able to buy houses in the formal market. Meanwhile, the pressing demand for low-income housing poses a difficult problem to be solved, as in everywhere else in Brazil. Besides, the majority of the properties don’t have regular land deeds, which largely restricts the possibility of receiving financial support from a bank or normal lenders.

Therefore São Sebastião has a large quantity of illegal housing built in favelas and land invasions on hill slopes or inside areas that otherwise should not be urbanized. Some of these areas are those subject to land sliding and floods, or in Environmental Areas. The intensity of social exclusion gives rise to all sorts of violence that damages the city’s image as a tourist destination and its potential for business.

The Provision of Public Housing

The history of public housing in São Sebastião is short and discontinuous. It started in the late 60s with the construction of a new harbor for an oil terminal. Administrative buildings and pipelines in the São Paulo metropolitan region attracted workers, who in turn needed suitable housing. Between 1967 and 1981 a number of housing cooperatives were formed and received loans from the National Housing Bank (BNH) for the construction of 300 residential units in the central area.

Later, between 1986 and 1988, the municipality promoted and managed a self-help housing program that produced 24 residential units for city employees. More recently, from 1988
to 1996, there were two main public housing initiatives in São Sebastião. One led by the CDHU, the state government housing agency, built 181 units, and an initiative of the local government built 176 units through a partnership with the union of local public employees.

According to the city planning division, the housing demand in São Sebastião is approximately 5,000 units, which includes both what the market could provide and what needs to be provided through some sort of public subsidy. It is also important to note that the lack of consistent and reliable information on the housing market in São Sebastião, both formal and informal, is another serious obstacle to proper planning.

In São Sebastião, the customary city government attitude towards the urban problems that are derived from tourism development does not differ from those of other municipalities in the region. There are not enough resources available and government action is slow and unable to face the increasing numbers of illegal settlements and the overall social exclusion.

To better understand the real picture, one also needs to consider that the tourism development model in practice by the municipality is based on the existing natural resources, such as the beaches, the sea, and the forest. This affects local social relations and land use patterns because tourists want to stay close to the attractions, therefore increasing land value.

The favelas and illegal settlements follow a pattern that include precariously built buildings, lack of infrastructure and urban services, and, of course, a lack of land deeds. Housing demand in a context of social inequality to which the local government is unable to respond gives rise to illegal actions, such as invasion of land as a means of surviving. Illegal settlements scare tourism, destroy the natural environment, and augment social conflict. It is a difficult problem to face, but the local government needs a housing policy able to support the provision of adequate low income housing in order to promote a socially just urban development. The poor have hardly any access to jobs and are totally dependent on public services that the municipality has to provide.

**Planning and Design**

It terms of the planning and design of low-income housing by São Sebastião, three major aspects are to be considered. Firstly, in Brazil local governments have no tradition of providing for housing, except in larger cities such as São Paulo where it is still very recent. Lack of public resources and financial means have always marked Brazilian small cities; even if the National Housing Bank was inefficient, its extinction created a much larger void in the production of low-income housing. Housing as a local planning issue has not yet been prioritized by the city in terms of data collection, analysis, and proposals to be considered within the planning process.

Secondly, participatory planning processes are almost unheard of in local government planning practices, again a situation not unlike the vast majority of Brazilian cities. Despite the fact the Local Plan of 1998 set up a participatory system as a condition for local planning in São Sebastião, there were almost no such initiatives since then. The absence of community participation has amplified social exclusion, particularly in terms of access to land and in the production of low cost housing.
The final aspect to be considered is the lack of design quality. On one hand, even the small number of housing units provided by the local government were extremely poorly designed in every possible sense: aesthetics, quality of the construction, mix of housing types, quality of the architecture and the urban design, etc. On the other hand, apart from the zoning law there is no other regulation to ensure urban quality as well as to improve the decision making process in land tenure regulation and property development. Care and proper guidance in defining suitable locations and sites for construction, and in developing the projects are badly needed if São Sebastião wants to promote quality in low-income housing.

Final Remarks
In spite of a great deal of effort that has been put into the organization of local government recently in São Sebastião, low-income housing provision is, together with overall distribution of public services, an unsolved urban problem. One of the main reasons is the lack of a housing policy that is capable of establishing criteria and principles for the planning process: firstly for land provision and financing, as well as for urban design and architecture. Another reason is that the municipality needs to adopt planning for housing as a strategic element within its overall planning issues if a sound tourist image is desired.

Sources
In this article¹, Dean Jones discusses housing choices in California, one of the themes around which he built his professional career. He is a long time advocate of and has been directly involved with socially and environmentally responsive design, affordable housing, community planning, and smart growth. He co-authored the book “Good Neighbors: Affordable Family Housing” (McGraw Hill, 1995).

As Coastal counties continue to grow, can we really imagine our towns and countryside also growing better? It may be that by expanding housing choices to include more compact and land conserving types, we can also improve our towns and countryside. That appears to be one of the conclusions made when 140 citizens and planning officials gathered on March 11 in San Luis Obispo to review and vote on the ideas generated from two earlier countywide visioning sessions.

Compact housing, which is a key concept of the smart growth movement, has certainly caught on in the major metro areas, but the idea was once considered unrealistic in rural markets. However, new trends have emerged over the last five years suggesting both buyer demand and builder interest in compact housing in coastal areas. With new live-work lofts attracting former Montecito residents into downtown Santa Barbara, housing over shops slated for Atascadero, and ecologically planned communities preserving vulnerable landscapes in Carmel, there are some exciting new development models in our regions that are reducing the usual impact on the environment and creating new ways of living.

A combination of factors are leading to the “back to the town” compact housing movement, including the high cost of building and maintaining large homes on large lots, the social isolation of remote homes, a need to shorten commuting, and a desire to be closer to town conveniences like shops, cultural activities, and walkable neighborhoods. Younger couples and those whose children have grown are two groups who are gravitating toward compact homes near town. In particular, the housing choices sought by those over 55, who are slated to become a greater proportion of our coastal population, will greatly shape the region. Indications are that many will seek an alternative to the single family detached home on a larger lot at some point, and that health or sociability, not just cost, will be a major factor in the decision.

For those who still seek a rural setting within an agricultural or forested area, there is also an emerging market for homes that require fewer materials and energy resources to construct and maintain, as the idea of living more sustainably has also garnered interest recently with segments of the builder and buyer communities. The compact housing movement is growing due to a “3-D” combination of demographics, demand, and design.

Based on my own studies, including conversations with a variety of builders, environmentalists, and governmental representatives, the following is the list of the different housing types for which the coast will potentially see more consumer demand. What they all have in common is they take less land away from farming or nature, require fewer roads to support, are better at conserving water and other resources, and meet the needs of a broader cross section of our population than the average new single family home. Additionally, experts have shown that compact homes close to town help bolster local small businesses while reducing traffic congestion. Compact housing turns out to provide several public benefits then, in addition to meeting growing private needs.

**Town Housing Types**

- **Small Lot Homes** (Fig. 1) – Many buyers and communities have found that by shrinking side yards and front yards and narrowing the streets, and using more small-scale architectural design features, homes on small lots can look and feel compatible with standard lot homes, yet save 20-40% more land. If some of the land saved by creating small lot homes can be used to create a neighborhood park, the experience may actually make small lot communities feel more spacious, and they provide more forms of outdoor activities, than conventional subdivisions.

- **Secondary Units** (Fig. 2) – State law now mandates all communities allow for these. It is important to design

¹ This article was originally published in the Central Coast Magazine, April 2005.
also work well when used to line a pedestrian-only mews or semi-private lane between two streets, with parking for the residents at the ends. Mews townhomes originated in New York and San Francisco, where they begun as affordable homes for the tradesmen, but have evolved to be a very fashionable house type nowadays.

• Live-Work Lofts (Fig. 6) – the idea of having a tall ceiling open plan space with a sleeping loft above for both living in and doing work originated as artists converted old warehouse lofts into illegal residences in New York. Originally conceived of as an urban, big city building type, they have now succeeded in smaller cities and are being built as a new building type. They also appeal to a broader number of individuals than just artists and singles as working at home has grown tremendously. No longer limited to the Bay Area and the LA/San Diego regions, they are attracting buyers from Sacramento to Santa Barbara, and soon will come to San Luis Obispo and Nipomo.

• Mixed Use Condominiums (Fig. 7) – Living above stores and restaurants has always been considered one of the most urban housing types. Mixing housing with other uses is also one of the most challenging building types to design or finance. Older towns all have some building where people lived above the stores, but land use controls and lending practices saw such buildings fall out of favor for many years. Now even cities as small as Atascadero are being considered as good places to locate mixed use, multiple story buildings. The proposed three story, 72 unit Colony Square in that city will feature new shops and restaurants plus a new movie theater, and also and site them well to fit in with traditional homes. Some designers have reintroduced the idea of a small rental unit over a garage facing a back alley or a cottage at the back of the lot as a good approach. This house type is attracting major interest among buyers who foresee themselves as caregivers for aging parents or value the rental income provided by a second unit.

• Bungalow and Cottage Courts (Fig. 3) – California invented the idea of clustering six to ten cottages or small homes around a shared courtyard, with common parking behind. This 1920’s era creation started in Hollywood, and is being revived as a good model for small town senior housing, or for entry-level housing where a shared kids play area is the focus of the courtyard.

• Manses (Fig. 4) – not to be confused with mansions, the “manse” is a two to six unit building designed to look like one very large home. This idea comes from the rural east coast, where developers who were required to build affordable housing as a condition for getting approval for large market rate homes wanted to provide housing that was compatible with large new homes nearby. Several California versions have taken the form of looking like large old farmhouses, old Victorian mansions, or large Arts and Crafts era homes.

• Townhomes and Mews Homes (Fig. 5) – Sometimes called townhouses, row houses, or attached houses, there are some 1960’s to 80’s townhome style developments in central coast areas, but they went out of favor. To work best, they should not be isolated in clusters at the edges of town and surrounded by parking, but fronted on attractive walking streets and be near conveniences. Townhouses
include a 15,000 square foot city hall plus public square. Mixed use buildings rising to four or even five stories would not be out of scale with some of the taller old buildings in the downtown blocks of our larger Central Coast cities.

In Country Housing Types

• Co-housing in Extended Farmhouses and Rural Villas (Fig. 8) – The co-housing movement originated in Denmark, wherein a group of people jointly hires an architect, finds a site, and creates a cluster of homes that share common spaces. The co-housing model can take many forms, but a new possible one will be the creation of rural shared homes for small group retirees who want to live in the country while having proximity to old friends. Current zoning for agriculture areas may not permit the development of shared farmhouses or villas, and would instead require subdivision into separate home sites which requires more paving, fences, infrastructure runs, and changing the character of the surrounding area. I predict more interest in developing shared housing models that fit unnoticed into rural agricultural and natural areas as a new housing type that could be more desirable for the landscape as well as for the owners.

• Sustainable Living (Fig. 9) – Sometimes referred to as Green Architecture or living light on the land, the desire to be more environmentally friendly motivates an increasing number of buyers, regardless of the housing type they select. This means building in a way that leaves very little of the natural landscaped disturbed by the building process, harnessing solar power to heat water and generate electricity, and even collecting rainwater...
and recycling gray water so as to limit the impact on groundwater resources. These techniques can also be used to fit clusters of homes, or small scale resorts, into the coastal environment. Though some components of sustainable systems require more initial investment, they offer lower operating costs over time.

The emerging trends in compact housing are coinciding nicely with what the citizens and planners say we need for a better future. Providing compact housing does not mean limiting access to traditional housing. The goal of planning more areas for compact and sustainable homes is to expand housing choice while also better conserving our Central Coast towns and countryside.
Planning is about the future. Tomorrow matters! This is one reason that the idea of sustainable communities is attractive to planners. Although defining sustainability has been a challenge to many, the idea that future generations have a rightful interest in the conduct of current human activity is basic to the planning profession (Wheeler, 2005). Another aspect of sustainability attractive to planners is reflected in the first law of ecology: “Everything is connected to everything else” (Commoner, 1971), which acknowledges the important relationship between the economic, environmental, and social forces of humanity. Added to the mix is the need to appreciate the scale of design which defines the scope of the built environment, including products, interiors, structures, landscapes, cities, regions, and the earth (Bartuska and Young, 1994).

The City and Regional Planning (CRP) Department has been part of the College of Architecture and Environmental Design’s (CAED) interdisciplinary effort for the past 15 years to incorporate the idea of sustainability into the curriculum. Today, there is a CAED Sustainable Environments minor and three core EDES (Sustainable Environments) courses with rapidly increasing enrollments. It all started with a unique course offered by two CAED faculty members, Dan Panetta and Henry Hammer, entitled “Sustainable Community Development”. It was an immediate success since the subject was not part of other existing courses on the campus. CAED faculty interest grew and the Sustainable Environments Emphasis (SEE) Group was established, including those that entered and won an American Institute of Architects (AIA) design competition involving an innovative waste recovery proposal for Los Osos.

From these beginnings, the SEE Group became a forum for faculty from several CAED departments to begin building a sustainability curriculum at the college level, starting with the EDES 406 (Sustainable Environments) course. This course was originally designed for about 30 students, seasoned with guest speakers and class discussion sessions to exchange global to local ideas and information about sustainable principles and practice. One of the activities requires each class member to complete the “Ecological Footprint Quiz” to determine how many planets it takes to support their current lifestyle (Wackernagel and Rees, 1996). Most students consume resources and generate waste requiring the support of three to five planets, which is clearly not sustainable. However, from this information the students quickly develop ideas and practices to reduce their impact in the “learn by doing” tradition of Cal Poly.

Student demand increased allowing for the establishment of a studio course (EDES 408, Implementing Sustainable Principles) for students to apply what they learned in the first course. Every year, the EDES 408 final group projects are presented at a festive open house with many campus and community leaders invited to see the display of powerpoint presentations, brochures, and posters. Interest continued to build leading to the creation of a CAED Sustainable Environments (SE) minor and the addition of the EDES 410
The popularity of the CAED sustainability curriculum has continued to expand almost exponentially. The EDES 406 course has increased to almost 80 students, with more students being turned away for lack of space and resources. The EDES 408 studio has expanded to more than 40, double its original design capacity. Restructuring has become necessary to meet demand, including the establishment of a theme for each academic year. Past years have included water, energy, housing, and consumption. This year it is values. Last year, through the efforts of Architecture professor Jonathan Reich, the CAED Sustainable Environments program received the top award from the American Institute of Architects Committee on the Environment (AIACOTE) for demonstrating exemplary initiative for teaching environmental awareness and ecological design.

Although systemic budgetary constraints remain a problem, with most faculty support over the years provided beyond normal teaching loads, student interest in sustainable planning, design and development continues to multiply. The CRP Department remains committed to the interdisciplinary value of this sustainability project and is hopeful that this award winning CAED program will continue to contribute to the educational experience of future planners and designers committed to the seventh generation.

For more information about Cal Poly’s CAED Sustainable Minor, please write to Professor Margot McDonald at: mmcdonal@calpoly.edu

References
Figure 3 & 4. The “Magic Bus Proposal”, a project for an improved bus system for San Luis Obispo, including route planning, bus and signage design. (from EDES 408 - Implementing Sustainable Principles)

Figure 5. The “SLO Freeway Lid” was proposed for two miles of the Highway 101 through San Luis Obispo to reconnect both sides of the city. Image by Duk Chang. (from EDES 408 - Implementing Sustainable Principles)
Hampstead Garden Suburb has become an example of how a social agenda had initiated a new settlement and eventually had disappeared to yield an empty shell with tree-lined streets and picturesque image. Due to the similarities between the garden suburb concept and the new urbanist ideals, the story of Hampstead Garden Suburb is discussed as a cautionary one, despite the remarkable accomplishments of the individuals involved in its development.

A spring walk in Hampstead Garden Suburb last spring suggested resilience of a concept that is rooted in the late 19th century. It was the garden city concept, which initiated first semi-garden cities and then garden suburbs; a concept that found ample application through the first and second generations of new towns in the UK. Overlapping practices with another tradition, the city beautiful movement, played an important role in shaping the visual attributes of the concept.

Although Hampstead Garden Suburb is neither the first nor the largest one of the garden suburbs, we find it exemplary in terms of its transformation over the years. Rather than the original garden city concept or the new town interpretation, it was the garden suburb concept that was found profitable over the decades since. Although increasingly popularized recent revisits to garden suburb practices (which also present a model of suburban development) have taken a new name (i.e. New Urbanism), the resemblance is overwhelming. Both garden suburb and New Urbanism aspire to provide remedies for social problems by applying (or claiming to have applied) certain spatial principles, such as picturesque images, strict control on design, physical distance from crowded cities, a degree of mixed use, and diverse housing for a heterogeneous population of residents. The fact that Hampstead Garden Suburb has become one of the most expensive neighborhoods in London despite the original intention of providing housing for all, especially for working class, supports the critiques (e.g. Harvey, 1997), who find the spatial determinism embedded in new urbanism naïve and useless.

The story of Hampstead Garden Suburb is therefore a cautionary one, which has to be seen in light of the recent discussions on New Urbanism. In the following sections, we briefly discuss the garden city concept and the city beautiful movement in relation to the roots of the garden suburb concept. Following the historical account of how Hampstead Garden Suburb came about, we summarize the principles of New Urbanism to point out its resemblance to the implementation of garden city and city beautiful concepts in garden suburbs.

**Garden city**

Garden city concept was launched when Ebenezer Howard published a detailed urban model in “Tomorrow: A Peaceful Path to Real Reform” in 1898, and soon after in “Garden Cities of Tomorrow” in 1902. His suggestion was to build satellite cities with open space and sunlight as an alternative to the existing crowded cities of the time (Rowe, 1993; Benevolo, 1960; Tafuri and Dal Co, 1976; Kaplan, 1973; Jacobs, 1961). Different from the earlier examples of a similar idea (i.e. employer housing), however, these satellite cities were imagined to be self-sufficient. It was the agricultural beltline and the factories of leading industrialists (to be moved there upon being convinced), which would provide the self-sufficiency of around 32000 residents of a garden city (Rowe, 1993, Benevolo, 1960, Hall, 2005) – although both the town and the agricultural belt were to be permanently controlled by the public authority under which the town was developed (Jacobs, 1961). Howard’s ideas, in essence, constituted a social program rather than a prescription on “how to” design self-sufficient, picturesque towns.
Howard’s ideas found implementation first in Letchworth in 1904, and soon after in Welwyn. Here, it is important to underline the difference between the idea and its looks. The implementation in Letchworth was for the most part true to Howard’s ideas of social organization and physical distribution (despite the fact that it was perceived by the press as a weekenders’ paradise, a “darling wee, little place” for middle-class ladies) (Hall, 2005). However, the image of picturesque, low-density, green medieval country village was conceived by the architects, Raymond Unwin and his partner R. Barry Parker (Rowe, 1993, Benevolo, 1960, Tafuri and Dal Co, 1976, Hall, 2005). Following Letchworth, the interpretation in Welwyn became the first of many to forego the principle of self-sufficiency (Benevolo, 1960) and therefore the landmark ideal of Howard’s social agenda (Hall, 2005). Unwin and Parker’s relationship with Edward Lutyens, a key figure in the City Beautiful movement, reveals much about the sources of this interpretation.

Dwelling on aesthetics, Camillo Sitte was largely responsible for the city beautiful movement, which criticized the planning practices of the nineteenth century for putting technical issues forward. Monotony, excessive regularity and symmetry were the results of such practices. According to Sitte “art and utility were mutually exclusive” (Benevolo, 1960: 349). In order to understand old communities’ principles of design, he advocated studying old communities, especially medieval towns for their irregular and picturesque character. He believed that the square was an important element of a city, which was a visual entity derived from the relationship between solids and voids (Jackson, 1985).

The city beautiful movement was criticized mainly for being Center Monumental, building civic centers or cultural centers that were complete units and never became a part of the city (Jacobs, 1961). However, Hampstead Garden Suburb’s and other garden cities’ molding owed much to these ideals.

**Hampstead Garden Suburb**

The initial steps for Hampstead Garden Suburb were taken by Henrietta Barnett, whose sole purpose was to “spread the contagion of refinement to working class life and housing” (Miller, 1992: 80). More particularly, based on her work with her husband, the Vicar of St. Jude’s in Whitechapel, in the middle of the worst East End slums of London, Henrietta Barnett was determined to provide spiritual guidance for the poor and strongly believed that overcrowded housing was undermining those efforts (Miller, 1992). Soon after she learned about the plans to extend the London Underground railway to Hampstead – where the Barnetts had a weekend house – in 1903 she mobilized the Heath Extension Council to purchase 80 acres for a permanent open space and the remaining 243 acres for development of housing for the working class (Miller, 1992; Jackson, 1985). She simply preferred the development in Hampstead following the underground railway to be controlled.

The Garden City Association took interest in her proposal, since she referred to the proposed housing development as a garden suburb, probably to exploit the publicity of the first garden city, Letchworth. In May 1904, Henrietta Barnett brought eight relatively “important” people together as a Steering Trust to work in coordination with the Heath Extension Council (Miller, 1992). The Barnetts had mistrust for local authority housing and found it “too easy and too cheap a remedy” (Jackson, 1985: 83). Also, the local authority showed no interest in this proposal (Miller, 1992). Unwin was hired to materialize Henrietta Barnett’s dreams (Miller, 1992). Although Raymond Unwin strongly criticized suburbs (Hall, 2005) and had his own dreams, these obviously were not at odds with Henrietta Barnett’s – at least in appearance.

In essence, Hampstead Garden Suburb was a compromise of the Garden City ideals and an endorsement of suburban sprawl. However, Unwin, realizing the visual potential of the Heath and cottages of various sizes, chose to focus on the aspects of the scheme which were parallel to the Garden City ideals (Miller, 1992). Rather than the Garden City ideals, however, Henrietta Barnett was interested in replacing the slums with village living where all classes live in harmony and in abundance of space and beauty (Jackson, 1985).
One aspect they seemed to agree was to bring a range of income groups together in Hampstead Garden Suburb. This was to happen by renting more expensive, larger and better-located houses to higher income groups and using the profit to compensate for amenities of the lower income groups, more particularly working classes (Miller, 1992; Jackson, 1985). Unwin’s belief that all income groups should reside in attractive houses was certainly satisfied in this way.

In terms of site planning, Unwin abandoned the central framework of Letchworth and adapted a loose approach with non-linear tree-lined roads among groups of cottages (Miller, 1992). In order to implement the unusual layout for the time, the first British town-planning legislation had to be passed: Hampstead Garden Suburb Act 1906, because of which narrower roads and cul-de-sacs became possible in addition to alterations in density requirements (Miller, 1992; Jackson, 1985). The overall pedestrian oriented layout was provided with the help of this act.

Another dimension was soon introduced when Edward Lutyens, whose association with the city beautiful tradition was well established by that time, was hired as a consultant (Miller, 1992). Due to Unwin’s own interest in the city beautiful tradition, Unwin and Lutyens worked in harmony (Jackson, 1985). In the final plan, Lutyens’ influence was mostly confined to the central Town Square, which was placed on the suburb’s highest point at the request of Henrietta Barnett, since it accommodated the church, the chapel and the institute (Hall, 2005; Miller, 1992). The final proposal had something for everyone: a church located on the highest point of the site with an emphasis on it configurationally and visual centrality for Barnett, a central square with public buildings (the church and a school named after Ms. Barnett) and axial arrangements leading to it for Lutyens, and a medieval, organic layout surrounding all this for Unwin.

The high standard of architecture and firm design-control policy exercised through the Trust were notable characteristics of the Hampstead Garden Suburb. The Suburb was praised for its achievement of the English domestic revival in its eclectic visual expression (Miller, 1992). It was also seen as a viable solution for extending big cities by the proponents of the city beautiful tradition (Jackson, 1985). However, the emphasis on design and the high quality of architecture obscured Henrietta Barnett’s social purpose and subverted her original intentions (Miller, 1992; Jackson, 1985). Unwin’s intention of creating aesthetic quality in housing was so exaggerated that it became an obstacle in creating housing for all (Jackson, 1985). By 1936, it was admitted that Hampstead Garden Suburb could not meet its original social objectives (Miller, 1992). Hampstead Garden Suburb also failed to fulfill the expectations of the Garden City movement and served as a model for the easier suburban option (Miller, 1992).

By the time Raymond Unwin published his book, “Town Planning in Practice” in 1909, his Hampstead Garden Suburb of 1905-1907 had already become the way garden city concept was perceived and implemented with its elegant layout of roads, uniform buildings, and distributed open spaces, and without the agricultural belt (Rowe, 1993; Benevolo, 1960). Then, suburban physical qualities and small town social qualities of the garden cities’ popularized version provided the foundation for new towns (Burnett, 1978; Jacobs, 1961).
Shortly before the Second World War, in order to overcome the housing shortage, public authorities began to provide housing on any available site, which could be acquired without worrying about the problems of slum clearance and redevelopment of the central areas (Rowe, 1993). The most influential policy was the generation of new towns, which were mostly directly provided by the central government in the beginning and by the local authorities in the following applications, as satellite cities in order to decentralize the industry (Benevolo, 1960). Nevertheless, the production level of housing significantly decreased quickly due to the war. The number of houses and flats built in 1938 was 350,000, while it became 7,000 in 1944, right before the end of the Second World War (Russell, 1981). Initially the idea was generated as an emergency measure before the Second World War for London due to the high concentration of industry. However, after the Town Planning Act of 1947, new towns became the norm in the whole country under ordinary circumstances. By 1954 about half the population anticipated for the seven new towns around London had been settled into them (Benevolo, 1960). New towns turned out to be large and fully equipped suburbs (Tafuri and Del Co, 1976).

What followed after this was even more interesting in Hampstead Garden Suburb. The gradual shift from a rental scheme to a for-sale scheme resulted in the change of tenure, which eventually led to a change in the social structure of the area. In 1971, 58% of all houses in the Garden Suburb were owner occupied (Shankland Cox, 1971). In 2002, the average price of a detached house in the Garden Suburb was £1,399,620, almost seven times higher than the average price of a detached house in England and Wales (£208,435) (UK National Statistics, n.d.).

In support of these statistics, the heartfelt speech of a 40 year resident of the Suburb titled “Yesterday, Today and Tomorrow: The survival of a Suburb” also underlines the shift in population and drift from the original social objectives and its influence on daily life (A talk by Ivor Hall at St Jude’s on Open Day 21 September 2003). He claims that during his 40 years in the Suburb, the working classes have disappeared and now, remaining population can be grouped in two: the rich and “the longer standing resident who, apart from the unrealisable value of their modest homes, would hardly claim to be rich” (Hampstead Garden Suburb, n.d.).

Arguments for Caution

The phases in the story of Hampstead Garden Suburb have much in common with the development and implementation of new urbanist ideals. Since we claim this story to be a cautionary one due to its resemblance to new urbanist developments, we would like to point out their problematic similarities.

Interestingly, both new urbanist ideals and the garden city concept start out with a strong concern over creating a new moral order and a new lifestyle. Howard’s social agenda obviously separates the garden city ideal from new urbanism in this respect, however, in the time period from Letchworth to Hampstead Garden Suburb, this social agenda was the first thing to erode, leading the way to a spatial determinism that claims it can create a new way of life and save communities. It is this focus on spatial arrangements and form (i.e. picket fences and gazebos) in new urbanism that leads one to recognize the parallels to the erosion of the social agenda in garden cities and suburbs.
The principles guiding the physical layout and picturesque image, and the compulsory nature of these principles are also similar in garden suburb and new urbanism. New urbanism proposes to build residential communities beyond the edge of metropolitan areas by commercial developers (Torre, 1999). The guiding principles of new urbanism are based on decentralization of urban patterns, where housing, jobs, schools, daily needs, and other activities are accommodated within easy walking distance of each other. Accordingly, communities should have a center that combines commercial, recreational and cultural uses. With an emphasis on pedestrian movement in these decentralized small units, the streets and sidewalks are to be organized to slow down vehicular traffic, encourage bicycle and pedestrian circulation, and make public transportation accessible. For these communities’ social composition, diversity of household types, and income and age groups are proposed to be supported in the variety of house types (Torre, 1999; Calthorpe, 1993, 1994; Bressi, 1994; Duany and Plater-Zyberk, 1994; Moule and Ployzoides, 1994; Talen, 1999). In practice, however, new urbanist developments seem to be private, for-profit developments based on single-family houses standing on private lots as their predominant residential type (Torre, 1999; Harvey, 1997).

Although the design principles of two traditions almost a century apart can hardly be expected to echo each other in the literal sense, the fact that both garden suburbs and new urbanist developments aspire to create a small town life in picturesque style just outside of the city with strict control on design is undeniable.

It is no wonder that principles of new urbanism have been criticized for privileging spatial forms over social processes (Fulton, 1996; Sorkin, 1998; Harvey, 1997; Talen, 1999). Harvey (1997) questions the very concept of community as advertised in new urbanist developments. He claims that in such developments instead of actually building communities, image of a small town community is marketed for the affluent residents. Due to the spatial determinism embedded in new urbanism, which assumes that proper design will “save” American cities and provide a new moral order, the neighborhood becomes equivalent to the community in new urbanism (Harvey, 1997).

Just as garden suburbs had become a model for suburbanization, new urbanism presents a similar threat of becoming part of suburbanization without much difference partly due to its emphasis on similar principles.

**Conclusion**

Today Hampstead Garden Suburb has become a pleasant-looking, quiet neighborhood full of expensive cars parked on tree-lined streets and cul-de-sacs, through which pedestrian access is provided to large green areas and tennis courts. Coming out of the underground station, one feels the abundance of beauty and space in the Suburb, which is now in the middle of ever so crowded and polluted London. Consequently, one question remains unavoidable: Considering the pleasantness of this neighborhood today, how cautionary its tale can be?

Here, we would like to point out the fact that this pleasant experience of living in Hampstead Garden Suburb is a privilege available to the rich, and occasionally even to the royalty. It is the loss of social agenda what makes the tale of the Suburb cautionary. It is also the role of overemphasis on design in obscuring the social agenda what makes the present pleasantness of the Suburb irrelevant. It is the increasing popularity of new urbanism and its parallels to garden suburb what makes us point out the importance of social agenda and the potential problems of spatial determinism. It is the emphasis on “picket fences and gazebos” in new urbanism what makes the tale of the Suburb cautionary for us a century after its conception.

Hampstead Garden Suburb is exemplary in this discussion both because it has changed so much demographically and because it has remained almost the same physically. We believe that this aspect of the Suburb undermines the arguments favoring spatial determinism. Unwin, Lutyens and many other architects who worked in the Suburb have created a physical environment, which prevailed in terms of durability and pleasantness but failed to “save” the slum residents or “improve” the living conditions of the working class. However, we also concur with many critiques of spatial determinism that such expectations from mere physical design is unrealistic. Therefore, our purpose is not to undervalue the remarkable work of these architects. It is rather to point out the fact that their remarkable work has become another ring in the chain of suburbanization due to the loss of original social agenda which was embedded in the Hampstead Garden Suburb project in the beginning and which was the sole motivation of Henrietta Barnett.

**References**


Cornelius Nuworoso joined the CRP department in 2005 and specializes in transportation planning. He developed the full concept for a city-wide rapid transit system for Accra, capital city of Ghana. The system was adopted by government officials and the World Bank has recently approved a loan to the Government of Ghana for a demonstration program as the first step in plan implementation.

Like many developing cities of the world, Accra is faced with rapid motorization and increasing automobile use without commensurate development of roadway infrastructure. Mobility and accessibility are increasingly hindered as traffic flow, particularly during morning and evening commute hours, continues to deteriorate over the years. The situation is exacerbated by a limited, existing road network and lack of funds to expand the network at a rate commensurate with growth of the city and pace of motorization. Planners and government officials realized the need to find a solution before the City grinded to a halt. This realization prompted the search for feasible, sustainable and affordable solutions to mass transportation for Accra. The search led to the identification of Bus Rapid Transit (BRT) as the system with potential to satisfy the City’s public transport needs.

BRT is a flexible, rubber-tired, public transportation mode designed to provide rapid transit services through an integrated system of Intelligent Transportation System (ITS) technologies that include priority treatments, dedicated or demarcated running ways, stations, vehicles and short service headways. Its advantages include the flexibility of the motorbus (a) to go off fixed routes for collection and distribution functions, and (b) the ease with which routes can be reconfigured along the street network to suit demand. BRT requires relatively low capital and operating costs compared to the rail-based transit modes. It can also be incrementally implemented as conditions in its service area change.

Background to the Study Location

Ghana is located on the West Coast of Africa (Figure 1). The country lays north of latitude 4 degrees north and is intersected by longitude 0 degrees, the Greenwich Meridian. Ghana is a former British Colony named the Gold Coast. Thus the official language of government is English although there are several local languages of which seven are officially used on radio. The country covers an area of 238,477 square-kilometers (or 93,000 square-miles) and is about the size of the state of Oregon.
Ghana’s population estimate for 2000 is 19 million people, of which 40% live in urbanized areas. Automobile ownership is relatively low at 60 autos per 1000 population, which is equivalent to 1/9th the US rate in 1995, or the rate where Greece was in 1975 or where the United Kingdom was in 1955.

Accra, the Capital City of Ghana, is situated on the southern coast, along the Gulf of Guinea. It is a Primate City spread over an area of 1,390 square-kilometers, which is the equivalent of two times the land area of either Singapore or the City of San Francisco. The metropolitan area boasts 25% of the urban population in the country, 50% of the national vehicle fleet and a density of approximately 1150 persons per square-kilometer (or 11.5 persons per hectare). See Figure 2 for a comparison of density in Accra with selected world cities. Falling on the low end of the density scale, it became apparent that rail transit systems that require very high densities may not be the appropriate investment in Accra. Figure 3 and Figure 4 show the streetscape along major thoroughfares in Accra. It is noticeable that physical development is predominantly low to mid-rise. This is consistent with its low development density.

**Existing Transportation System**

Public transportation is the dominant method of travel in Accra, and the nation as a whole. Nearly half of all trips to work are completed by one of many types of buses that operate like jitneys. This means they have no fixed schedules or stop locations although they may run specific origin to destination routes. Nearly 15% more of work trips are by taxis, which are shared-ride for which passengers pay per person per ride. A healthy 25% of work trips are conducted on foot. About 10% of commuters use private automobiles. Due to climate and lack of safe facilities, less than 3% of trips are by bicycle or motorcycle.

Large municipal buses have been unable to compete effectively for trips to the CBD of Accra due to high levels of delay and inability to maintain any semblance of a regular schedule. Thus the traffic stream comprises of multitudes of “jitney”-type public transportation vehicles intermingled with private automobiles, trucks and taxis. The lack of pullouts or designated stopping points for jitneys results in numerous interruptions to flow even within non-conflicting streams of traffic.

Planners and government officials realized the need to find a solution before the City grinded to a halt. This realization prompted the development of the BRT plan.

**Philosophical Basis for the Plan**

The development of the BRT plan was predicated on the following three premises:

1. Cities in developing countries have some of the worst congestion and mobility problems in the world. The negative effects of these on productivity cannot be over-emphasized.
2. Developing countries do not have the resources to embark on large-scale rail transit projects. BRT offers a relatively low-cost alternative for reasonably high

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_Figures 3 & 4. Streetscapes of Accra. A major thoroughfare towards the CBD showing the ocean in the background, and a major traffic circle on the way to the downtown._
person-carrying capacity and is generally known to offer the “best bang for the buck.”

3. Cities of developing countries have either strong central city cores or concentrations of employment and commercial activities linearly along radial corridors. These conditions augur well for “mass” transit systems.

Previous studies of bus rapid transit systems (Cervero, 1986, 1998, 1999; Cornwell, 1990; Fouracre, 1994; Smith, 1998) note its advantages and indicate the following:

• Under appropriate regulation, organization and capital investment, bus-based transit systems are capable of transporting large volumes of passengers at reasonable speeds for relatively low capital and operational costs;

• A busway can provide equivalent capacity to light rail transit (LRT) at a fraction of the capital cost under comparable levels of guide-way segregation and station spacing.

Proponents of the BRT plan therefore saw the potential of BRT as a feasible and affordable form of mass transportation for Accra. It is anticipated that several benefits will accrue from its implementation to include the following:

1. The operational effectiveness of the Accra BRT system in a separate right-of-way will include:
   a. Speed advantages over mixed-mode operation;
   b. Flexible routing, entry and exit;
   c. Ease of incremental development.

2. The cost effectiveness of the Accra BRT system mainly from upgrading existing secondary roads will include:
   a. Relatively low cost investment;
   b. High local content in construction.

The Vision and the Plan

A vision statement for the BRT plan was articulated as follows: “A network of high capacity bus rapid transit routes...”

Figure 5. Proposed physical layout of the Accra BRT Plan.
that will provide opportunity for equal accessibility to all persons regardless of income or stature and enable sustainable growth and economic expansion of the capital city”.

The BRT Plan comprehensively addresses many aspects of the BRT system. These include the physical layout, operational arrangements, legal and institutional requirements, and supporting policy changes in land use. See Figure 6 for the proposed physical layout of the BRT plan.

**Conclusion**

The government of Ghana has recently solicited proposals from firms worldwide to provide consultant services in the deployment of the first of the proposed BRT lines as a demonstration project. Although successful BRT operations exist in Brazil and Canada, the idea is to use local knowledge gained from the demonstration project in the design and implementation of the city-wide BRT plan. The consultant selection is underway at the time of this article.

**References**


Student Work
In what has become a tradition in Cal Poly, an interdisciplinary team of graduate students from the departments of City and Regional Planning, Architecture, Business, and Construction Management, coached by assistant professor Doyle, participated in the Bank of America’s Low Income Housing Challenge. In 2005 they upset all other participants such as Berkeley and Stanford, and made us proud by bringing back home the trophy for the first place!

One of the advantages that Cal Poly’s team has over the mostly Ivy-Leaguers who make up Berkeley and Stanford’s graduate teams is that in addition to business and design savvy, our team includes planning, development, and construction-focused students who focus on real-world building. Thus, our CM students immediately began to assess the physical and fiscal realities of existing structures at Oak Park, and determined that it would be both more cost-effective and preferable design-wise to start from scratch. But there was one hitch: nearly 150 families already live on the site, and both morally and legally, the Team would have to accommodate them. As it turns out, this challenge also turned into an advantage; the Planning and Construction subteams became experts in relocation law, and created a phased building plan that wowed the Bank of America’s judges in San Francisco and which would displace only 35 families off-site in the short-term. All other households would move out of their older units into newly constructed units, just before the old units were demolished and replaced. In all, the total number of units would be increased by 50%, the existing tight-knit community would remain intact, and every one of the dozens of mature oak trees—for which Paso Robles is named—would be saved.

Another key to Cal Poly’s victory was the creative financing and legal structure of the proposal. As the federal government has de-funded Hope VI and other programs intended to allow for the mixing of incomes during redevelopment of older, run-down Housing Authority properties such as Oak Park, many Authorities have been struggling with the question of how to preserve existing housing opportunities while integrating them into revitalized neighborhoods. The innovation that Cal Poly’s Team brought to this problem was a proposal that Paso’s Housing Authority lease the entire property—for the long term—to a newly created non-profit housing corporation. This would allow the use of Tax-Credit Financing, injecting crucial capital into the deal—sufficient, when combined with revenues from the sale of a few market-
rate homeownership units at the north end of the site, to allow each phase in the project to “pencil out.” Thus, the finances, construction, and solid design of the site and buildings led to strong community support — including letters from the Mayor, Planning Commission, and Housing Authority board — and to the prize awarded by the Bank of America Jury of experts in May.

The victory was particularly sweet, as it was only the third time in more than a decade of competition that Berkeley was not the winning team, and only the second time that Cal Poly took the trophy. Our teams are often viewed as the underdog, as we are the only team with undergraduates — and a majority at that — but we showed that our applied, “learn by doing” educational philosophy prepares our students for success in the real world. Our panels of experts, bringing advice from the fields of finance, design, construction, and planning, worked closely with the students to ensure the best quality proposal. Now, the gauntlet has been thrown down; this spring, Cal Poly has a championship to defend.
One of the fundamental roles of universities is to contribute to community development and social equity. Liberto-Blanck, a lecturer at Cal Poly’s City and Regional Planning Department and King City community development director, discusses her job, the urgent needs that the city is facing, and the importance of the CRP department community-outreach pedagogy and of the contributions represented by ongoing student work.

When first approached by Michael Jencks, the then-City Attorney for King City, to help resolve some complex land use and environmental issues in King City, I did not anticipate my company would eventually become responsible for the entire community development department. Nor, did I realize the critical part Cal Poly’s City and Regional Planning Department would play in the city’s future. At the time, my company had other opportunities: a land use mediation in Northern California and a large mixed use specific plan in a well-established city in Southern California. But those assignments would have been by rote. Realizing King City was the real challenge, Robert Frost’s poem, *The Road Not Taken*, flashed in my head.

King City is located in southern Monterey County, along Highway 101, and approximately 70 miles north of Cal Poly. It was incorporated in 1911. The City provides a great example of New Urbanism because it was built on a grid pattern, and has small walkable streets lined with trees. There is a faint outline of an older “downtown” area along a portion of Broadway Street that is in need of rehabilitation. Recognizing the historic strengths of the community, one resident said, “We have some good bones in this town, we just need calcium to make them stronger!”

While the 2000 Census estimated the population to be approximately 11,000 people, due to overcrowding living conditions due primarily to lack of farmworker housing, it is safe to say that thousands more can be added to the census count. Of the 11,000 people, 80 percent identified themselves as Hispanic or Latino. The City municipal boundary contains approximately 1,449 acres with an additional 6,133 acres within its General Plan Planning Area.

The community has many assets that may not be apparent when traveling along Highway 101. The George L. Mee Memorial Hospital provides primary care, with a heliport, and is one of the City’s major employers. King City owns and operates the Mesa del Rey Airport, which includes a 4,485 foot long paved runway. Additionally, there is a Greyhound bus stop, and the Union Pacific Railroad’s main coastal rail line runs along First Street. San Lorenzo Park, which includes the Monterey County Agricultural and Rural Life Museum and 90 campsites, is located along the banks of the Salinas River. The King City Fairgrounds, a city owned golf course and Hartnell College’s Education Center are other community strengths.

The agricultural industry provides the most jobs, with education and social services following. King City is considered the south end of the Salinas Valley, which is known as the “Salad Bowl of the Nation.” The City is surrounded by prime agricultural land due to the high quality soils deposited over time by the Salinas River. However, King City, like the rest of Monterey County, faces development pressure due to Silicon Valley, Monterey and Salinas area workers willing to commute long distances in exchange for the opportunity to purchase a home.

The growth pressure on King City is similar to what I experienced in Southern California when hired as City Planner for the newly incorporated city of Moreno Valley located in Riverside County. Young families working in Los...
Angeles and Orange County were anxious to own a home in which to raise children but could not afford anything close to their jobs. The growth pressure on Moreno Valley was mounting and large developments including three separate 10,000-acre specific plans, were waiting in line for approval. However, Moreno Valley had one critical piece of the puzzle King City lacks: a robust budget. While Moreno Valley could afford to contract with high priced consulting firms and pay the Urban Land Institute (ULI) to prepare a long-range plan, King City is forced to live frugally in difficult economic times.

Due to budget constraints, King City was forced to reduce the staff workweek to 36 hours and close City Hall on Friday. The City was forced to endure severe staff reductions and privatized a number of City services to save money. The Planning and Building Department was divided into two separate departments. The City contracts with Monterey County to provide building inspection. Earth Design, Inc. provides staff for the Community Development Department, and Boyle Engineering and Hanna and Brunetti Engineering provide City Engineering Services.

The City’s development application review fee schedule was revised based on time and materials rather than a flat application fee. Developers submitting large projects are required to enter into a Memorandum of Understanding (MOU) that requires a substantial upfront deposit to cover all costs associated with processing applications. The deposit is placed in a separate trust account and replenished when it goes below a certain amount. A number of State grant proposals have been accepted and are providing additional funds for a number of projects. For example, the City recently received a grant to prepare a geographical information system (GIS) base map with all infrastructure locations. Although this may sound fundamental in most jurisdictions, it is a major advancement in King City.

Police and fire services are in severe need of funding. The police department operates with a minimum paid staff, and the fire department is all volunteer. To help generate more revenue for public safety, in November 2005, King City held a special election to raise the utility user tax rate on telephone, electricity, water, gas, and cable television services to the statewide average of six percent subject to annual review by a Citizen Advisory Committee. It is interesting to note that only 910 people voted in the election and the proposed tax lost.

The City’s planning documents need updating. For example, the zoning ordinance was adopted in 1973. But clearly the City does not have the financial resources to comprehensively update all planning documents at one time. Small and medium sized cities can no longer fund the large planning programs of a decade ago and have to find creative approaches to fund planning programs. Cities provide services such as fire and police services, water, sewer, parks and recreation, public works and planning programs. These services are paid for from local taxes, fees and user charges, state and federal assistance and other resources.

However, over the decades, the federal and state governments have substantially reduced the amount of aid provided to local government. In tough economic times, usually the first programs to be cut are planning programs. In order for King City to prepare for future development, joint participation and cooperation by higher educational institutions, public sector,
private enterprise and non-profit organizations are critical. Ann Marie Gallant, the City Manager and I decided one key in helping the City’s future is to update the community development documents and to tap into the talents of the faculty and students of Cal Poly’s City and Regional Planning Department, as is discussed in more detail below.

King City has been completely unprepared for the onslaught of development encroaching from the Silicon Valley-Monterey-Salinas area. In early 2000, the City processed a Sphere of Influence (SOI) amendment of 565 acres which would allow 800 new dwelling units. However, the Monterey County Local Agency Formation Commission (LAFCo) decided that only 210 acres could be annexed and the remaining 355 acres should be placed in an agricultural conservation easement. This required the 800 units be built on 210 acres rather than 565 acres, making the project denser. The agricultural conservation easement does make a buffer zone at the City’s edge. CreekBridge Homes (of Salinas) and Woodman Development, Co. and Urban Community Partners (of Monterey) developed adjacent specific plans for that area, each proposing 400 housing units.

In July 2004, CreekBridge Homes’s Arboleda Specific Plan was approved and included soccer, baseball and linear parks, tot lots, and a new middle school. Pedestrian sidewalks and smaller streets meander along the community’s various housing types and sizes. In August 2005, the adjacent Mills Ranch Specific Plan by Woodman Development, Co. and Urban Community Partners was approved with the intent to develop a neighborhood based upon traditional neighborhood design planning principles.

The issuance of the building permits for the Arboleda and Mill Ranch Specific Plans is helping the City’s finances; however, it is only a short-term income. There are several property owners within the unincorporated area that have approached the city requesting annexation within the next 20-years. Before this can occur, the Monterey County LAFCo must give approval, and substantial planning, environmental and infrastructure work must be completed. Many property owners are approaching King City about annexation because Monterey County has gone through a tumultuous general plan update over the last six years that centers on how to address rural growth. A general plan County growth control initiative recently qualified for the June 2006 ballot. The initiative would direct growth toward the cities in the Monterey County. Therefore, it is important for King City to plan for substantial growth for the next 20-years.

In anticipation of the continued growth pressure, King City leaders understand the need to update their planning and regulatory documents to protect their city’s future. The City has begun preparing a Citywide SOI amendment. Five properties within the unincorporated area will be included within the SOI amendment. An Environmental Impact Report (EIR) and Capital Improvement Plan (CIP) will accompany the SOI amendment to LAFCo for a determination on the City’s 20-year growth boundary. The CIP will consider the following issues:

- Traffic and Circulation Master Plan.
- Wastewater Master Plan.
- Wastewater Collection System Master Plan.
- Storm Drain System Master Plan.

Figure 3: Example of the housing type that gives King City a small town flavor.

Figure 4: Another example of Main Street America housing stock in King City.
• Park Facility Master Plan.
• Police and Fire Safety Facilities Master Plan.

Each master plan will include an analysis of existing City conditions; background conditions which include recently approved development projects; cumulative project scenarios; a summary of relevant plans; funding infrastructure improvements; and funding and reimbursement for the master plan preparation costs. The master plans will be combined into a CIP, including a budget and impact fee schedule. The SOI amendment and CIP will be presented to LAFCo to demonstrate that the City can accommodate the build out of the proposed area within the next 20-years. If LAFCo approves the SOI amendment, the City and LAFCo can consider applicant sponsored annexation, prezoning and specific plan requests.

Concurrent with processing the Citywide SOI amendment, the 1973 zoning ordinance and other development regulations are being updated. The SOI amendment and CIP will be presented to LAFCo to demonstrate that the City can accommodate the build out of the proposed area within the next 20-years. If LAFCo approves the SOI amendment, the City and LAFCo can consider applicant sponsored annexation, prezoning and specific plan requests.

The students contacted community members, including members of the Spanish speaking community, to determine community strengths and desires. Recently, the Background Report was produced summarizing their findings. The Background Report also includes recommended goals and objectives for the City’s future growth. The students in CRP 552 will finalize their project in winter quarter in the Regional Planning and Analysis class (CRP 554). In mid-March, a joint City Council and Planning Commission meeting will be conducted requesting community input on the final document produced by the class. As the City updates the general plan and prepares the development code, the final goals and objectives presented by the students will be given strong consideration by staff and policy makers.

A component of the general plan update and development code preparation will be to define a “downtown” area.

As mentioned above, an older area engulfing a portion of Broadway near First Street will be recommended for future renovation and identified as an “Aldea.” The Aldea, or village, will include mixed uses, a pedestrian friendly streetscape, renovated buildings, and mixed cultural activities. The Aldea will eventually transition into a 90-acre Transit Oriented Development (TOD) specific plan submitted by the property owner, which is located across First Street. It is anticipated that Union Pacific Railroad will eventually have a stop in this area of King City.

The City is also considering what to do with the mid-1900 vintage motels located along Broadway Street and First Street that are low-income residents. The lack of low-cost housing and migrant farm worker housing is an issue the City will address through a combination of private funds, public grants and non-profit organizations. King City is fortunate to have a State certified Housing Element, so there are a number of available grants available to address this growing problem.

The City and Regional Planning Department may be helping shape the City’s future in other ways for years to come, as the City Manager has provided a long wish list of student and class projects for consideration. King City has a long voyage and many obstacles to overcome but with strong leadership and a collaborative approach utilizing the talents made available by higher education, private industry, public entities and non-profits. . . well, as Robert Frost concludes,

Somewhere ages and ages hence:
Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.
During the current academic year, the City and Regional Planning Department graduate Community Planning Studio is engaged in important community-outreach that will make a difference in King City CA. Nuworsoo and Topping, the class instructors, resume the studio’s pedagogy and do a brief discussion of the process and progress of this year’s work in King City. In next year’s issue, FOCUS will publish the final results of this important studio.

The community planning studios are organized in a sequence of two one quarter-long classes. They are designed to provide a bridge between theoretical knowledge about planning principles and techniques and the application of this knowledge to “real life” planning situations. This is accomplished by engaging the students in community-based projects which provide opportunities for working with the residents, staff and government officials throughout all stages of the planning process. To provide an added dimension of reality, the studio work scope is structured to simulate the planning process following the procedures and guidelines established by the planning laws of the state of California.

The studio project for this academic year focuses on the community of King City in southern Monterey County.¹ It serves as a case study in an investigation of how a rapidly growing community could optimize its growth potential. The overall goal is to prepare a Community Plan which will assist the County staff in guiding future development in King City and create optimum levels of services, economic activities and quality of life for the community residents and visitors. King City is a relatively small community of 11,100 people (2000 Census) located on the Central Coast of California. Its population grew rapidly by nearly a third between 1990 and 2000 with 80% of its inhabitants claiming Hispanic or Latino ancestry. The agricultural sector employs the greatest percentage of King City workers (37.8%) with education and social services a distant second (11%). It has a higher percentage of families with incomes below the poverty level than the US average. King City is confronted with important challenges that need to be addressed in order to accommodate the anticipated population increase and minimize negative impacts of growth. These challenges include addressing the high cost of housing, shortage of workforce housing and the dangers of traffic congestion, sprawl and the degradation of natural resources.

¹ Note from FOCUS: see the first article in this Student Work section by Liberto-Blanck.
In his article “Cal Poly project takes on King City’s general plan” published by the King City Rustler, Marc Leblanc noted that “King City Councilman Jeff Pereira was one of many council members that attended the community planning meeting” on October 27th. He reported the following:

“The evening was the first of four scheduled meetings between 17 California Polytechnic graduate students and King City residents. The students’ goal was to take the first step into helping King City draft an advisory document to the city’s existing general plan. It is a report that will guide the city’s growth and development for years to come.

Advised by experienced Cal Poly faculty and guided by the residents of King City, the students will work for approximately five months drafting the community plan that will focus on issues such as safety, noise, housing, conservation, economics, and sense of community. According to the students’ flyer, ‘The community plan is something like a general plan in that it is modeled after these elements, just in somewhat less detail, and in a more advisory capacity’.”

The study team is pleased to note that community leaders, city officials and the public at large have received their work with high commendation. The background information is compiled into a draft report to serve the remainder of the studio project and subsequent other planning tasks. The report is organized in chapters to correspond with the mandatory and optional elements of a General Plan. Each chapter contains descriptive text with tables, charts, maps and pictures as appropriate. In addition, a large collection of GIS files and related data resides on the departmental server. The electronic files include base maps, various shape files, land use inventory, miscellaneous data on soils and other natural resources.

This Winter Quarter, the study team proceeds in collaboration with the community to develop a community vision; goals and objectives; policies, program and projects. A land use allocation procedure will be employed to formulate alternative future development scenarios. Two other community meetings are planned. One will engage the community in the alternatives development process and the other is to present findings. The final product will be a draft community plan that addresses the mandatory and optional elements of the City’s General Plan. The background report and community plan document will provide a foundation for updating the existing General Plan.
Through a community outreach effort and in a true learn-by-doing fashion, in winter 2005 CRP’s Graduate Planning Project Lab developed a concept plan for the revitalization of an important riverfront area in Redding, CA. Their vision and proposals were successful in responding to all stakeholders’ expectations, and received full support from the local community. The design process included an innovative on-line survey which guaranteed significant inputs from the community.

One of the fundamental goals in planning education is teaching students how to develop a specific plan, including the maximum exposure to the urban design process and plan implementation. This goal gets harder if one considers the need for a hands-on experience in the context of a graduate professional program where most students do not possess a planning or a design background, and when the quarter-based system makes long studios impossible. The graduate student class of 2005 reached this goal and advanced on CRP’s learn-by-doing pedagogy and on community outreach by playing a major role in process towards the development of a riverfront site in Redding, CA.

The proprietors together with a local architect invited the College of Architectural and Environmental Design to develop a concept plan for an area by the Sacramento River. The goal was to conceptualize how it could be developed and the riverfront revitalized through a long-term process that would respond to city policies and to stakeholders expectations, while serving as a catalyst for community discussion. The City and Regional Planning Department accepted the challenge through its graduate Planning Project Lab (CRP 553) class of 2005, which included 19 graduate students (second year, MCRP) and one undergraduate senior (BSCRP). The Park Marina Drive Concept Plan develops a unique approach for the revitalization of Redding’s most important asset. The quality and feasibility of the work done by the class prompted the city to support a community discussion process for the implementation of the plan’s vision and design concepts.

The Project

The City of Redding is located on the banks of the Sacramento River in Northern California. The Kutras family owns a 27-acre parcel of land on the Sacramento River that presented a prime location for a development based on a bold fresh new vision for the future of the area. Les Melburg, a local Redding architect and Cal Poly San Luis Obispo Alumni, recommended getting R2L Architects of San Luis Obispo involved because of the firm’s experience with mixed-use projects. Both Melburg and R2L wanted to get the CAED involved not only because of the quality of the design and planning students, but because their work would provide them with a vision and a platform to initiate a public debate over the future of the area. These relationships resulted in a partnership through which, in a collaborative fashion, an amazing student project of professional quality resulted.

The Kutras Family Property Project has been a long time in the making. Unfortunately because of past disagreements and mistrust between the Kutras Family, The City of Redding, and the McConnell Foundation, little has been done to move forward with something special on this incredibly scenic

Note: This article incorporates the handout prepared by the class for the final public presentation of the project in Redding.
and valuable piece of property. For a number of years the divisions between the groups were too large for any type of compromise to be reached. The working collaboration of the Kutras family and the McConnell foundation was a major goal that the Cal Poly Students had set out for themselves,

In early 2005, when the Cal Poly students were brought on board to re-envision the site, a major goal of the student-study team was to create a plan that would serve as a new common ground to allow all the disparate parties to try to come together and create something truly special for the community.

The Process

Our planning and design process began with a complete analysis of the site and its historical background; community needs, and market demands. A group of graduate students, their CRP professor, and three professionals from R2L traveled to Redding for an initial assessment of the site and its development potentials, the Park Marina Drive area and the local community. This visit allowed us to gather fundamental data (such as GIS mapping, existing plans, zoning, aerial photos, etc) and to meet with stakeholders to initiate the planning process; meetings were held with representatives from the City, local McConnell Foundation, and the Chamber of Commerce. Studies during this initial visit included systematic observations and mappings of the site, its vicinities, and the city, besides conducting interviews and discussions with residents and visitors. An initial survey was administered, consisting of interviewing thirty-two people at various locations in Redding on their perceptions and expectations regarding development in Redding and in the Park Marina area.

The visit to Redding also allowed us to meet with editors of the local newspaper, The Record Searchlight, who decided to support our work since they recognized the future potential of the project site. Based on the initial survey conducted in the site, a revised and more focused twenty-two question survey was posted online allowing residents to share their opinions about the revitalization of the riverfront and development in the project site. The online survey was promoted in an article we wrote specially for the Record Searchlight article on February 6, 2005. After only ten days the survey website had received 864 online responses as well additional e-mails and letters. This high rate of responses indicated a community that was truly interested and wanted to be involved with the future of their city. They shared with us their perceptions about the site as it now exists, their preferences for its future design, and other thoughts on how future developments should look like in the area. The results of the online survey were divulged to the community in an article published in the Record Searchlight.

The Proposal

Building upon all the information that was made available to us, from the various local contacts, the initial site analysis, and the incredible amount of community input gathered from the surveys, the team developed a program for the project area. After long hours of analyzing the data and responses from the community a design began to take form. The program included not only a set of goals, objectives, and design concepts, but also a vision for the project:

The intent of the Park Marina Area Concept Plan is to revitalize Redding’s riverfront and create a unique place that is a destination for both the community and visitors. Sustainability, vitality, and social interaction will be facilitated by providing an array of compatible water-oriented recreational and cultural uses that are accessible to all segments of the community.

The project incorporated all of the natural beauty the site had and looked to emphasize all of the potential it held for the future of the area and region. Although the vast majority of the site will be kept for open space, the project also provides ways for developers to create economic plans that will fit well in the community that is one of the established goals of a truly mixed-use development. The Park Marina Area Concept Plan creates a three-tiered redevelopment design that includes the riverfront area, the Convention Center and Turtle Bay Museum, and the Downtown areas of the City of Redding.

The plan includes open spaces connected by pedestrian and bicycle trails which are easily accessible to the public. Paths were designed to connect with existing trail systems that link the neighborhood to the south of the proposed project and the

Figure 2: The group of students and the instructor during a visit to Redding: the project area and the Sacramento River are in the background. (photo by Glenn Wood)
Turtle Bay Exploration Center and Sundial Bridge just north of the site. The new and existing paths will meander along the water’s edge revealing picturesque views of the river. Pedestrians will also be able to enjoy scenic vistas along the boardwalks and piers that will be created as part of the new project. Park Marina Drive, an established thoroughfare, has been redesigned as boulevard-type street to include two travel lanes, a landscaped median, and parallel parking, creating a pedestrian friendly environment. Wide, tree lined sidewalks designed at a pedestrian scale have also been included along Park Marina Drive.

Of the 27 acres in the Park Marina area, 18 acres will be dedicated to open space for various recreational uses. New development on the site will include:

- a 6,000 square foot outdoor amphitheater;
- a 12 screen theater complex;
- 145 residential units of different types and sizes;
- two hotels and a bed-and-breakfast;
- a marketplace with eateries, small scale development, a permanent outdoors facility for weekly farmers’ markets and seasonal craft fairs, an arts plaza;
- 1,000 parking spaces in two new three-story garages on Park Marina Drive;
- traffic calming measures along the whole project site and a pedestrian bridge;

The Concept Plan was divided into three sub-areas: the Northern, Central, and Southern Sections. The Northern Section of the site includes housing and mixed-use developments that are oriented toward the river. All of the homes are situated to best take advantage of the natural beauty the site has to offer. A strong sense of place has been
created through the integration of public plazas, seating areas, paths and greenways, which will make the additions easily recognizable as a new and unique area in the city.

The Central Section is predominantly reserved for open space and recreational uses, including a formal park with an old fashioned merry-go-round, a water-feature sculpture, a beach, playgrounds, and bike rental kiosks. Barbecue pits, tables, seating and other facilities are also included to encourage visitors to stay and enjoy the scenic views while eating a meal.

The Southern Section of the plan creates an exciting, vibrant, and pedestrian-friendly place. It includes unique features such as the Marketplace, with small shops and restaurants. Along with the bed-and-breakfast buildings, the Marketplace surrounds a small existing water inlet that also creates a new distinct place to visit. The Southern Section also includes an outdoor amphitheater with a floating stage, and a boat ramp for easy access to the river.

The geography of the site was also taken into consideration when this plan was created; a conscious effort was made to avoid placing structures in the existing floodplain. The design quality and the composition of The Park Marina Area Concept Plan will attract a mix of uses, activities, and people to a high quality environment that will integrate the riverfront into community life, create a new destination in Redding, attract tourists, and help revitalize the western part of the downtown, bringing Redding back to the river.

Final Remarks

Besides trying to meet the goals and needs of the Kutras Family within the graduate course’s pedagogical objectives, the class strove to incorporate the visions and ideas on what type of development the public felt should be pursued on the waterfront, particularly as expressed through the on-line survey. The class created a comprehensive and feasible design idea for the site and presented this vision to the community.

Redding’s Record Searchlight published an extensive and illustrated first-page article on the local section titled “Designs shape riverfront – Students will unveil plan for Park Marina on Saturday” setting the stage for a public presentation. A couple of days after this article, a group of students from the class and their instructor presented the plan to over 100 community members at the Shasta County Administration Center. On this same day, the newspaper was publishing an article with a very positive evaluation of the project and support for the implementation of its vision. The public was extremely enthusiastic during the presentation and supported in full the students’ project. On the day after the presentation, the news headlines were “Student project thralls – residents cheer ideas to recast Park Marina”. Evidently the clients, the Kutras family, were very happy with the results and understood them as doors opening for a future sustainable and community-friendly development of their property.

Since then, a lot of progress on this site development occurred. Several articles in the local newspaper recognized the superiority of Cal Poly’s plan over the existing specific plan for the riverfront area, particularly for providing a humanistic approach, more recreational and public uses, smarter land uses, and much less land dedicated to parking. The City of Redding appointed a citizens committee chaired by a city councilor and including the assistant city manager to pursue a public consensus on the development of the Kutras’ riverfront property and Cal Poly’s vision.

The working collaboration of the Kutras family and the McConnell foundation was a major goal that the class had set out for themselves, but were unsure if it could be realized based on the previous diverting perspectives of the two groups. Even this seemingly lofty goal has been achieved. Public meetings and discussions have evolved and have moved forward with the McConnell Foundation and the Kutras family striving to put aside their past differences and work together. Now the two sides meet regularly as each group has obvious interests in the development and both will gain by its successful completion.

In the final analysis, the Cal Poly students under the guidance of their professor and R2L Architects not only created a new comprehensive vision for future development of the riverfront area in Redding but also created a project that was able to galvanize the support of what were formerly highly polarized groups in the community. The students could never have predicted the enthusiasm with which their plan was greeted by the Redding community, and they are gratified with the knowledge that they have created something special for a community and even increased the reputation of Cal Poly’s City and Regional Planning graduate program. The students’ achievement is further testimony to the value of Cal Poly’s learn-by-doing philosophy and of the CRP department’s community outreach projects.
Figures 4 & 5: Left: a view from the south shows the gateway, the market place, and boat decks; in the background the park, piers, and sand beach. Below: the sand beach and the park with the merry-go-round along Park Marina Drive.

Figures 6 to 8: Sketches showing design concepts, and a section through Park Marina Drive, the public park, a pier and the sand beach.
In 2005 a team of CRP students was one of the finalists in the Cool Cities urban design national competition for the revitalization of an area in downtown Jackson, MI. The team developed a strong and feasible proposal marked by its contextual design. In this article, Craig Minus, one of the participants, writes about the competition and comments on their design vision and on the major features of their competition entry.

Jackson, Michigan, poses a great challenge to the architects, designers and planners of the future. The city is currently facing many of the economic and social challenges that small towns across the country are battling, namely, trying to retain both the younger and educated demographic. While both young people and educated students are located at major universities around the City of Jackson, its current ability to attract this demographic is fatally flawed. This demographic is choosing to relocate to more active and savvy cities, quite often outside of the state. Rather than accepting this current trend, Jackson and the state of Michigan have taken proactive roles in fighting it by plotting out the course for the future of the city.

On June 2, 2004, Jackson was designated as one of twenty Cool Cities finalists that would receive a catalyst grant of up to $100,000 and have access to another $100 million in state grants, loans, and other resources. The goal of the Cool Cities program is to develop vibrant, attractive cities and urban centers. Along with other catalyst projects, the city opened a nationwide urban design competition to graduate programs across the country. This three-month competition aimed to design an 8-acre Downtown site in the context of its surroundings and based upon the Cool Cities goals and City initiatives.

Our team envisioned a design approach that intended to respond not only to the existing community needs but also future needs of those of who may one day call Jackson home. As planners, we were very careful not to lose sight of the feasibility aspects associated with the design. Neither did we propose a futuristic nor a theoretical solution, but rather one that Jackson could practically use to help guide and incorporate future development and success within the community. Our design was dramatically influenced by the younger and educated target demographic that the Cool Cities initiative aimed to attract and retain.

Throughout the design process we were guided by and maintained the following goals:

- Create a diverse, vibrant environment that will attract and enrich the young and educated while retaining the current citizens that make Jackson a great place to raise a family;
- Provide options for retail, eating facilities, entertainment, culture, living and transportation that appeal to those at both the local and regional level;
- Create a sense of place where the town of Jackson can come together to socialize and function as a community;
- Maintain the character of the historic buildings and architecture;
- Create an environment that offers options for a healthy, active lifestyle;
- Accelerate the artistic revival movement set forth by the city;
- Design in context to the current urban fabric and integrate with other catalyst projects.

In addition to our goals, the general design principles used were the following:

- Incorporate mixed-use buildings wherever appropriate;
- Introduce two new creative learning centers: the Jackson Culinary Arts Center and the Jackson Digital Arts Center;
- Provide adequate open space linking all the elements of our design;
- Incorporate elements of visual complexity that encourage visitors to explore the site;
- Promote a pedestrian-friendly environment.

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1 The team was composed of students Craig Minus (MCRP), Robert Betts (MCRP/MSc Engineering) and Noah Christman (BSCRP). Roberto Rodriguez (CRP visiting professor) was the academic advisor.
Our final design proposal weaves the old with the new while providing for the needs of Jackson. It maintains the historic and civic elements, including churches, libraries, and a historic hotel; complimented by a culinary arts center and digital arts studio. In our proposal the historic but underutilized Hayes Hotel shall undergo exterior façade treatments and interior renovation to achieve desirable aesthetic qualities. Our decision to retain the Hayes Hotel stems from its iconic and defining presence for the community. Throughout our proposed developments, many upper level residential units were added to first floor commercial space to achieve the vitality needed for a lively public space and a sustainable downtown.

Open space was used to simultaneously provide pedestrian-friendly links throughout the project area, a visual frame for the historic Hayes Hotel, and connections to the surrounding city fabric. The open space element incorporates many of our design goals while providing an organic sense of place, which was integral to the circulation element. Exceptional internal circulation and exterior linkages were fundamental to encourage an active lifestyle. Pedestrian and bicycle movements were given priority while not sacrificing the needs of the automobile. To directly connect the site with the rest of Jackson, a light rail system was proposed to complement the current bus system, providing more transportation choices for the future.

Other city promoted actions should complement the design elements and could help bring vitality back to the Downtown. Some of the suggestions in our proposal included:

- Outdoor concerts and festivals;
- Public art within the downtown central business district;
- Computer networking including a “wireless downtown”;
- Identity through creation of Districts with a sense of place and ownership characteristics.

Our design proposal also included a general implementation program to guide development in Jackson towards a successful future. Jackson should use the downtown intervention as catalyst, and a vibrant Downtown as its first step. A strategic approach to program development and project goals should be used to improve the perception of Downtown Jackson. The use of adjacent catalyst projects will help overcome negative stereotypes of the greater Downtown area, while offering increased entertainment and recreational activities will attract a larger critical mass. As the positive momentum continues and the excitement about Downtown grows, providing residential units will be a dynamic way of further promoting the city center. With retail following the critical mass, Downtown Jackson will foster its own new identity and would evolve into a regional attraction offering services for locals and tourist alike.

While what we proposed isn’t an exact blueprint for the future of the Downtown, it does provide a framework of practical and feasible solutions to guide the City of Jackson. We should remember that redevelopment does not occur overnight and great things happen with small steps. Our design would provide a vision and the correct elements to accelerate and guide the city’s current pursuit of becoming a Cool City.

\*Figures 1 & 2: Details of the project showing the proposed Jackson Digital Arts Center along Michigan Ave (left), and the townhome development in the downtown district where elevated entries provide a level of security and distance from the streetlevel. All renderings in SketchUp CAD modelling.*
Figure 3: Aerial view of the proposed Marketplace, a shopping area with outdoor plazas for the community. The plazas and building envelope respond to the proposed Visual Arts center across the street.

Figure 4: Perspective looking down the main street of Jackson, Michigan Ave, as entering the proposed project site.

Figure 5: A general view of the proposed project for the redevelopment of the 8-acre site.
In the aftermath of Hurricane Katrina, Cal Poly Architecture and Planning Students have responded to a September 9th USA Headline: “Mayor Worries FEMA Overlooking Pascagoula.” The students adopted the community of Pascagoula, Mississippi, for the Fall 2005 Arch 351 (Third Year Architecture Design Studio) and CRP 341 (Third Year Community Design Lab) studio projects. The community had not only suffered devastation from Katrina, but had been further decimated by the Federal Base Realignment Closure Commission’s decision to close the Pascagoula Naval Station. The Station is located in Singing River Island at the mouth of the harbor for the City of Pascagoula.

Students divided themselves into five interdisciplinary teams with the goal of creating five distinctive sustainable redevelopment plans for the Pascagoula Naval Station. Their vision is to revitalize a community through principles of economic development, sustainability, renewable energy, and ecological restoration. Each proposal links Singing River Island to a revitalized pedestrian-friendly mixed-use downtown, via an Inter-Modal Waterfront Transit Center, serviced by a Ferry System. The students hope that their Singing River Island Proposals, for the redevelopment of the Pascagoula Naval Station, will serve as the lynchpin for the rejuvenation of the community.

The City of Pascagoula is located between the cities of New Orleans, Louisiana, and Pensacola, Florida. According to the 2000 Census the city has over 26,200 residents. Pascagoula is currently a major Gulf Coast shipping port, and also features several shipyards. The proximity to the coast and the low elevation of the city has and will make Pascagoula a target for large-scale natural disasters like Hurricane Katrina.

**Step One: Disaster Assessment**

Project teams gathered data on the consequences rendered by Hurricane Katrina by utilizing information about Pascagoula from the internet. Locating newspaper print articles, TV/cable footage, newspaper/TV/cable/radio websites, chamber of commerce websites, tourism websites, real estate websites, federal/state/local government websites, relief agency websites, blogs, and Google Earth have proven to be invaluable tools.

**Step Two: Case Studies**

Two different series of case study typologies were undertaken by project teams. The first series focused on five communities at the forefront of sustainable development, the innovative communities of Battery Park (New York), Civano (Arizona), Malmo (Sweden), Celebration (Florida), and Stapleton (Colorado). The second series of case studies examined military bases that have been closed recently and were converted into private developments. Five former military bases converted into sustainable master planned communities were studies: El Toro, Great Park, Noisette, Baldwin Park, and The Glen. Many of these cases are former brownfield sites. These studies proved to be invaluable sources in educating the project teams to prepare innovative master plans for Pascagoula and sustainable developments in their Singing River Island Proposals.

**Step Three: Site Analysis**

The Pascagoula Naval Station site was analyzed by gathering data from aerial photographs, Naval Station Websites, GIS Data, and various historical archives. The information was vital to the teams so that proposed sustainable development plans may mitigate hazards, maximize the site’s resources, utilize renewable energy, and strengthen mainland connections. Opportunities and constraints were documented for each project team’s proposals.

**Step Four: Guiding Principles**

Project teams listed a series of principles that they then applied to each of their development Proposals, based on the 2004 Strategic Plan of the City of Pascagoula.
Step Five: Proposals

The Interdisciplinary Project Teams created five proposals for the redevelopment of the Pascagoula Naval Station.

First Master Proposal

This proposal draws on ideas currently in use in the Netherlands in order to mitigate the effects of hurricanes and floods. Amphibious buildings are designed to float in the event of a flood and are one of the newest concepts in flood-mitigation for developments. The team proposed a new Performing Arts Center on Singing River Island, connected by a Ferry System, to a revitalized Mixed-Use Downtown. The students envision people downtown dining in restaurants, strolling through shops and galleries, and taking leisurely ferry rides to cultural performances on Singing River Island. The mixed-use downtown would include a new theatre and commercial node, a civic node, a new mixed-use housing district, and an aesthetically pleasing watershed canal doubling for storm water drainage, wetland restoration, and open public space. Development on the island would be limited to the performing arts center and a marina to mitigate the cost of future storm damage. By incorporating solar panels, rooftop gardens, recycled water, native landscaping, storm water retention, permeable pavement, and a pedestrian-friendly environment, this group feels that concepts in sustainability can be included.

Second Master Proposal

This project team proposed a sustainable casino including a marina. Ferry Service, via a new Waterfront Multi-Modal Transit Station, would link Singing River Island to the Downtown and other Gulf Coast Communities. Casino employees will have a priority for below-market housing, above restaurants, shops, and galleries in the revitalized Downtown.

Third Master Proposal

This proposal included a resort hotel with a water park located in a remote part of Singing River Island. The Water Park will be an amenity enjoyed by both resort hotel visitors and by citizens of the various Gulf Coast Communities. This project, specifically the water park, would be a demonstration model for renewable energy sources and sustainability principles. The development will use recycled water, solar panels, native landscaping, and green building materials. Singing River Island would be connected to Downtown Pascagoula, with its restaurants, shops, and cultural amenities, by a ferry system to a waterfront multi-modal transit station.
Fourth Master Proposal

Proposal Four seeks to infuse the Pascagoula Community with a variety of economic, cultural, and recreational opportunities through the process of transforming the Pascagoula Naval Station into a local, regional, and worldwide destination as an eco-resort and spa. The Singing River Island Eco Resort and Spa would include botanical gardens, planted with native species noted for their rejuvenating powers so that they might be used in the spa treatments. Many of the existing abandoned Ingalls Shipyard Buildings at the Western Harbor would be renovated into a mixed-use complex which includes restaurants, retail space, offices, and housing. Spa employees would live in this new complex overlooking the waterfront. The revitalized Ingralls Shipyard Project would connect by a trolley system to the Downtown, the Beach Park, and other Pascagoula neighborhoods through a waterfront multi-modal transit station. Ferry service would be provided to Singing River Island.

Fifth Master Proposal

Proposal Five combined the natural environment, a culinary school, and diverse dining experiences to create a lively atmosphere that capitalizes on the strong Gulf Coast tradition of cooking, music, and a reliance on the land and the water. This team’s vision is to create a place of education and entertainment in an interconnected sustainable environment. Housing for students and employees would be provided in the revitalized downtown, above restaurants, shops, art galleries, and other neighborhood icons, and in the revitalized Ingalls Shipyard Mixed-Use Project. An Organic Garden would not only provide food for the culinary school and restaurants, but it would also rejuvenate the island landscape. The Island would be served by a natural Wastewater Reclamation System. Restaurants would serve as demonstration models for renewable energy and sustainable building principles under the guise of entertainment and dining enjoyment. The Island’s Foundation would subsidize the cost of public transportation for its students and employees. One of the goals of the 2004 Pascagoula Strategic Plan is to provide for vocational education. In this regard culinary school graduates will be able to work in the neighboring communities, especially those supported by large Casinos and Resorts.

Epilogue

Each Project Team designed a project which exemplifies design excellence, sustainable principles, and cutting-edge technology. They have engaged in collaborative partnerships, consulting with faculty and students in the disciplines of Civil Engineering, Architectural Engineering, Construction Management, Landscape Architecture, and Business. The teams have presented their proposals through large-format posters, drawings, and models. The work of each project team has been formed into a final report entitled “Singing River Island, The Vision: Five Proposals for the Pascagoula Naval Station, Post-Katrina.” A local television station has filmed the presentation and featured it on the evening news. Mayor Avara, and the citizens of Pascagoula can be assured that they were not overlooked, nor will they ever be forgotten, by these thirty-five students who enthusiastically sent them their compiled work in a final class report as a New Year’s present.

Figure 3: The cover of the final class report.
During fall and winter quarters BSCRP students get through the Community Planning Labs series, two studio-based courses designed to simulate a professional-like environment in responding to community-outreach projects. In 2005-06 one of this class sessions developed a plan for the Saticoy-Wells community in conjunction with the city of Ventura and consultants Crawford, Multary & Clark, and relied on strong input from local residents and developers.

As part of the long-standing Cal Poly “learn by doing” tradition, the City and Regional Planning Department’s Community Planning Lab (CRP 410/411 – fall and winter quarters) provides students an opportunity to work in conjunction with a local jurisdiction to create a plan for its future.

The 2005-2006 lab is working with the City of Ventura, CA to create a community plan for the Saticoy and Wells areas at the eastern edge of the City, under the direction of Professor Zeljka Pavlovich Howard and with technical assistance from Lisa Wise of Crawford Multari & Clark Associates, a San Luis Obispo-based consulting firm that specializes in form-based codes. The code will be written by the class in conjunction with Crawford Multari & Clark Associates.

The process and Community Involvement

The 2005-2006 Community Planning Lab has dedicated two academic quarters to the Saticoy-Wells Community Plan effort. As community involvement is essential to the entire planning process, the class conducted a series of workshops to present their findings and gather input from community members and developers. Initial workshops focused on getting comments about existing conditions, while later workshops were focused around comments on recommendations for the final plan.

First Phase: Fall 2005

The first phase of the planning process, conducted during the Fall Quarter of 2005, was devoted to collecting the background information needed to develop a Community Plan. This information was collected through the following studies: 1) analysis of existing land uses, housing, environmental resources, circulation, infrastructure, community facilities and services, and economic activities; 2) transect analysis and synoptic survey; and 3) assessment of the opportunities and constraints for future development in the study area.

On December, 2005 the outcome of this research was presented in a community meeting which attracted 157 people, including both residents and developers. The class presented the findings on the existing conditions in the area, and coordinated roundtable discussions to get feedback from participants. The class learned about initial plans from developers and listened to the concerns of residents. Also, a questionnaire was administered to residents to find out their expectations and concerns, and where they go for services such as medical care, groceries, clothing, and school. Results were summarized and interpreted into concerns, opportunities, and planning priorities. The outcome of this phase was assembled into a draft report on existing conditions in the Saticoy-Wells planning area.
Second Phase: Winter 2006

The second phase is currently being conducted during the Winter Quarter as the class focused its efforts on formulating the Community Plan. The work is based on the research from the previous quarter, input from community workshops, and feedback from the Community Development Department staff. To date, two community workshops have been conducted during the present second planning phase.

During the first workshop of the current phase, held on January 27, 2006, the class presented their findings from the December workshop, and conducted a visual preference survey with residents. In this survey, residents were asked to rank images of different design types (residential and commercial environments, parks, and streets) according to what they would like to see developed in their community. Students also administered the questionnaire from the previous workshop to increase the number of responses. Results from both workshops were compiled into a report on the needs and expectations of residents.

In the second workshop of the present phase, held on February 11, 2006, the focus was on formulating alternative concept plans. The class presented the findings from the previous workshops as well as the recommendations for a concept plan, including several alternatives. Developers posted current plans for their sites and spoke with students and community members about their alternatives. Then, in roundtable discussions, students obtained feedback from residents about their alternatives and the developers’ plans in order to create a preferred alternative. Discussions also focused on assessing impacts on the environment and the surrounding communities, as well as on the allocation of jobs, housing, circulation, and infrastructure.

The findings, community input, and final concept plan were presented by the class at a City Council meeting on February 27, 2006. The class is now processing the comments from
this meeting and preparing a draft Community Plan for the Saticoy-Wells planning area and development codes for selected sub-areas. Crawford Multari & Clark Associates will take this information, prepare a final administrative draft of the Community Plan, and create the SmartCode.

The Community Plan

The process allowed the definition of three major goals to guide the development of the Saticoy-Wells Community Plan. These goals are: 1) to maintain and preserve the natural resources, view sheds, and agricultural heritage of the community for future generations; 2) to enhance the family-oriented community character and historical aspects, while improving public safety, transportation, and educational opportunities; and 3) to create diverse housing while improving upon civic and recreational opportunities in order to foster physical consistency throughout the community and to soften edges and buffers.

The Community Plan now being developed focuses on intensifying development throughout the area while also preserving its rich agricultural heritage. The application of appropriate smart growth concepts and new-urbanist transect zones has guided plan development and will foster a controlled transition from urban to agricultural environments. It will also generate well-defined neighborhoods and centers.

Equal consideration has been made for pedestrians, bicyclists, transit riders, and the automobile when planning for the circulation system throughout the study area. A system of pedestrian and bicycle paths (nicknamed the "green link") was proposed along the two barrancas and the Santa Clara River. This system will connect public places to neighborhoods, and will allow for alternative means of transportation. The Ventura County Transportation Commission (VCTC) has expressed interest in continuing a light rail system along the tracks which run through the study area. Surrounding the historic rail depot, the class proposed a transit-oriented development, Saticoy Station, to be connected to the green link and to an integrated and rerouted bus service.

What Students Have Learned

This is the farthest along any community plan has gone in CRP’s Community Planning Lab series, and hopefully this plan will set the precedent for future projects. In this series, students traditionally work with city agencies and members of the community, and combine their needs and desires into their pedagogical exercise. However, in this project for Ventura, students also had the opportunity to work with the consulting firm Crawford Multari & Clark Associates, which has contributed enormously in adding a professional edge to the process.

Overall, the class has had a valuable experience working with the City of Ventura, the consulting firm, residents, and developers. Students advanced in their knowledge of the planning process and have learned how to collaborate with multiple stakeholders. Every student had an opportunity to facilitate table discussions with residents and take a leading role in working with focused areas within Saticoy-Wells.

While not every student will have the same experience or gain the same skills, they will all leave this lab series much more prepared for the professional practice after graduation. Also, several students have gathered contact information for potential employers or at least contacts for their professional career. Along with showing potential employers a copy of their Community Plan, students will be able to mention that their plan has been adopted by the city and will have a lasting impact on this community. This Community Plan will influence the future the Saticoy-Wells community, and will remain in the hearts and minds of these students as a constant reminder of the skills they have learned and the great potential there is for change in this world.

Figure 3: The class, the instructors, and the Ventura community development director Susan Dulugung after the presentation to the city council.
For one week in the fall of 2005, a team of CRP and LARCH professors and students from the City and Regional Planning and Landscape Architecture departments traveled to Copan, Honduras to collaborate with university students, professionals, government officials, and community members in a concept plan for the sustainable development of the Copan River Valley Region. Within this valley is the modern town of Copan Ruinas and an archaeological park containing Mayan ruins that is designated a World Heritage Site by UNESCO, the United Nations Educational, Scientific and Cultural Organization.

In a program initiated by City and Regional Planning (CRP) Department Head Bill Siembieda, Landscape Architecture (LARCH) professors Joe Donaldson and Stratton Semmes organized a group of students to work in cooperation with the Center of Design, Architecture and Construction (CEDAC), a university in Tegucigalpa, Honduras, to work on a planning and design project for the Honduran Ministry of Tourism and Institute of Archaeology. This unique international opportunity was made possible thanks to a grant from the World Bank.

As the client for the project, the Ministry of Tourism had special concerns about the project area, the Copan River Valley and its surroundings. The area is a mountainous and lush landscape that contains rainforests, numerous streams and rivers, and precious cultural resources. At the heart of the Valley, and the focal point of concern, is the Copan archaeological park and fragmented archaeological sites containing ancient Mayan Ruins. As the southernmost region of the historic Mayan Empire, this Valley has been heralded as a place of national and worldwide interest. In fact, this area holds the distinction as a UNESCO-designated World Heritage Site.

The Mayan ruins within this Valley are popular tourist attractions and one of the main tourist destinations in Honduras. With this increase in tourism has come the pressure for more development - visitor-serving commercial, residential, and infrastructure development. However, there is no plan for how the area should be developed. Thus, the development that has taken place is haphazard. The reaction from the Honduran government is to draft a plan to preserve, protect, and restore the Copan Valley while allowing for a limited amount of development that will enable tourism to continue to flourish and support the local economy.

Cal Poly Preparation

For Cal Poly participants, this project took many months of careful preparation to come to realization. In early 2005, Cal Poly and CEDAC submitted a work proposal to the Honduran government through the Ministry of Tourism. This plan was accepted and funded through a World Bank community development grant. Once funding was secured, Cal Poly and CEDAC maintained close correspondence. As the details became finalized, the two universities arranged to meet in October to conduct field research and host a design charrette.

Here at Cal Poly, 10 CRP and LARCH students and professors eagerly awaited departure for Honduras. We prepared for the trip by educating ourselves as best we could about the history,
culture, and natural environment of the Copan Valley. This included watching a presentation from Stratton Semmes, who spent the summer in Copan as part of a Spanish language immersion program. Thanks to her visit, we became better acquainted with the remarkable countryside and the type of customs, people and places we would encounter in Honduras. This and other preparations made in advance helped each of us become properly equipped to learn from the experience that awaited us.

**Our Travels**

As we met at the parking lot outside of Dexter Hall to embark for Honduras, most of us were filled with excitement. There were so many unknowns before us – the country, the land, the people, and even each other. The only thing most of us knew about each other was that we had some connection to City Planning or Landscape Architecture. Our lack of prior acquaintance soon faded as we exchanged stories of prior travels, school assignments, and future expectations from our studies. Within a matter of hours, we were a cohesive unit that banded together to make the most of our trip.

This camaraderie was tested early in our trip. After a long flight from Los Angeles to Houston to San Pedro Sula, we packed into a small van for a long ride into the remote countryside to our destination of Copan. We had nearly reached the end of our 20-hour travel journey when we were abruptly stopped by traffic. What lay ahead was something none of us had prepared for – a landslide. The recent downpour saturated the steep banks alongside the road to the point where the hill gave way. What was left was a deep and messy wall of mud and rock that completely shut down the road. Unfortunately for us, this was the only road for hundreds of miles that led to Copan and a clean up crew was nowhere in sight. As a group, we gave the situation a quick look, talked it over, realized we were within minutes of our hotel, and made the executive decision to hike through the slide. One by one, we slopped through the mud that came up to our knees. Once we made it through, we didn’t look back and afterwards we had plenty of mud-caked shoes and laughs to go around.

**Visiting in the Copan Valley**

The Copan Valley is a place of incredible natural beauty. Two places with a comparable setting include Hawaii and Costa Rica. The vivid green landscape was striking and kept our cameras busy as we traversed the valley by foot and bus. The countless waterways and forested hilltops tempted our best efforts to keep our time spent casually exploring to a minimum. The lush and exotic environment was a stark but
welcomed contrast to the arid and familiar surroundings of San Luis Obispo.

In order to become better acquainted with the region, we spent the first half of our week investigating points of interest throughout the area. Our primary navigator was Ben Feldman, an alumnus of the LARCH program at Cal Poly. For the past year, Ben had been working as a lecturer at CEDAC and called the busy streets of Tegucigalpa his home. For our week in Honduras, Ben took us under his wing and allowed the teacher in him to shine through. He shared with us his unique perspective of Honduran culture and customs and patiently taught us a variety of things such as proper terminology for technical Spanish terms. It was great to have him in our group, as he was an invaluable asset to us.

One of our first stops was the impressive Mayan Archaeological Park. At arrival, we were greeted by a local guide with Mayan heritage and extensive knowledge of Mayan culture and religion. He carefully explained the significance of the many features of the park. Everything about the park - the grounds, the trails, and the temples - was in remarkable condition. A dense forest buffer surrounding the immediate park boundary helped create a sense of enclosure in the middle of a pristine natural setting. One aspect of the park that was especially memorable was the abundant carved stone figures. The ornate detail of the animal statues, cultural monuments, and other carvings was like nothing any of us had ever seen.

The modern-day town of Copan Ruinas was the place where we began and ended each day. Copan Ruinas is an incredibly distinctive place. Though quite small in size, the town draws people from all over the world. The international collection of tourists, artists, craftspeople and locals thrives in this unique community. This may partially be attributed to the sense of safety fostered by the grid layout of the town and arrangement of buildings. At the center of the grid is the town square, which serves as a recognizable landmark to orient pedestrians. In conjunction, the narrow cobblestone roads and sidewalks and close placement of buildings to the street’s edge create a sense of enclosure. This feature also slows vehicle traffic and makes pedestrian navigation of the roadways safe and easy.

Perhaps our most thorough educational experience came during the afternoon that we visited Hacienda San Lucas. The hacienda is a lodge catering to eco-tourists and contains extensive grounds with a diversity of native plants and Mayan artifacts. It is owned and operated by Flavia Cueva, who is also an advocate for locally-led improvement of the community. We learned a great deal from her about some of the larger issues at stake in the region. According to her account, although much of the valley retains its original feel, in recent years, it has experienced the impacts of expanded development. These include impacts to the natural resources such as deforestation, loss in rare and unique biological habitat, and pollution to water sources; social impacts such

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Figure 4: The town of Copan. Just beyond, the forest and agricultural lands dominate the landscape.
as growing poverty and insufficient healthcare facilities and schools; and economic impacts such as insufficient infrastructure development and maintenance of utilities. Involvement and input from locals like Flavia is the reason the Honduran government has initiated a process for change.

The Government of Honduras has recognized the impacts that people like Flavia are concerned about and has taken the first step in evaluating what can be done about them. They recognize the need for expanded development in order to improve the economic and social conditions of the area. At the same time, they recognize the need to balance this development in a manner that can protect, preserve, and restore the quality and condition of the environment. Striving for balance between social, economic, and environmental needs is commonly referred to as sustainable development and was central to the plan that we helped create for Copan.

**Design Charette**

After a few days of site visits, preliminary analysis, and meeting with locals, we were prepared to begin the three-day design charette. This charette brought many together in Copan including students from CEDAC and professionals from Copan and beyond. These professionals included archaeologists, planners, government representatives, architects and community members. Once everyone arrived, the exercise began with all participants dividing into groups based on interest and expertise. Each group was responsible for analyzing one of five areas of concentration. These areas were planning standards, environmental systems, infrastructure and social resources, archeological resources, and design guidelines. For each area, groups engaged in conversations and devised their own work path.

Most groups devoted much of their time completing a series of tasks. For example, the environmental systems group needed maps of environmental resources. Unfortunately, digital map production programs such as ArcGIS were unavailable. As a result, the group recruited some of the most skilled drafts people to produce hand-drawn elevation, slope, streams and rivers, and watershed maps to aid their environmental constraints analysis. For other groups, these tasks ranged from making detailed conceptual maps to interpreting and rewriting existing guidelines and regulations. At the end of each day, the groups would present their work products for the day. These presentations prompted many spirited debates over topics such as whether to include the opportunity for golf resorts and where to plan any future highway expansion. Nonetheless, all were dedicated to making the process work...
despite the language barrier, condensed work period, and conflicting ideologies. Everyone involved was committed to producing a plan that contained well-considered and carefully crafted proposals.

At the end of the charette, the final product was a plan containing design and planning standards to promote sustainable development. Standards addressed approaches such as protection of riparian areas, limited expansion of visitor-serving development, and relocation of traffic away from the most well preserved areas of the archaeological park. In total, the design charette produced the foundation of what is intended to become the master plan for the region.

**Reflections**

Engaging in planning and environmental design in Honduras was eye-opening, challenging, exhilarating and humbling. The place amazed us with its visually stunning scenery and accommodating hospitality. It challenged us to focus on how we could maximize our efforts and the technical application of our learned knowledge. It gave us a series of adventures that we will always look back on with good memories. And it helped provide us with a look at planning from a perspective that is very different from what we are accustomed to here in California with our comparably limitless resources and corresponding mountain of bureaucracy.

Most of us returned to Cal Poly in a fog of enchantment over what we had just taken part in. Sadly, the sting of the daily grind demanded our full attention once we entered the halls of Dexter. Occasionally, those of us still at Cal Poly will run into each other as we rush to meetings or try to finish one of the many assignments that we have committed ourselves to. Sometimes we exchange the usual small talk of a familiar acquaintance. More often though, one of us will bring up some reflection of Copan. Something that is usually pretty vivid, like a craving for one of our tortillas, beans, fresh fruit and chocolate breakfasts or a thought of a hilarious botched Spanish phrase that one of us made. It’s the kind of thing we will probably reflect on long after we’ve left the friendly confines of Cal Poly. It is a welcomed feeling though, one we hope future students from our disciplines can experience during their time at Cal Poly.

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**Figure 7: Final Zoning Map proposed for the Copan area.**
In 2005 a total of six Cal Poly students participated in the CRP department’s exchange program with the School of Architecture and Urbanism at the Federal University of Rio de Janeiro. This was the largest contingent of Cal Poly students in Brazil over a single academic year and also included students from the Landscape Architecture Department, what proves the success of this exchange program. CRP students Aaron, Karlo and Leah, and LA student Aron Nussbaum share their thoughts about academic and life experiences in Brazil.

Aaron Brownwood’s thoughts
Arriving in Brazil was great. Ricardo, Carol, and Leticia (local students who had participated in the exchange with CRP) were waiting at the airport and took us directly to the hotel where we were staying. Ricardo’s mother helped us find a nice apartment in Copacabana and also gave us daily language lessons which were great.

I went alone for my first day of school and with only a little information regarding where my class was. I had been in Brazil for less than two weeks and my Portuguese was horrible. It took me nearly twenty minutes to find someone who spoke some English and then that person had to find another professor who was able to direct me to my class.

Surprisingly classes were not as difficult as I imagined them to be. I learned a lot of language when working in teams since no one spoke much English. Of course, at (many) times I was lost but personally speaking, the main messages were transmitted and understood. I enjoyed both my classes. Unfortunately, I did not attend much of the watercolor painting class because of conflicting events happening at the university. For example I missed two classes because I went on a two-week trip to participate in the conference of Latin American architecture students in Fortaleza, in the northeast of Brazil. It was a sixty hour bus ride with about 35 students from Faculdade de Arquitetura e Urbanismo and I got to know ALL of them very well and they really took me in as one of their own.

The urbanismo class I took was not very educational for me but I enjoyed the people in the class and working with my group. I wouldn’t say that this class was bad but it seemed to have very little direction; the professor did not provide us guidelines to work with. She recommended readings and gave examples of types of urban form but gave no restrictions on our group projects, which was confusing. I think the professor should have taught us the current land use laws in Rio and Brazil and how to plan within those regulations.

Just planning an area with no restraints doesn’t really teach much about planning. Maybe one can learn about spatial relationships and how buildings relate to the street, etc. but everyone’s final project seemed so different and arbitrary, as if we were all in different classes.

For the next students who come I would recommend more language lessons even if he/she knows Spanish. Its not much help when it comes down to it. I think that the way FAU operates can be a bit hard for us to understand but I also think students should be somewhat prepared for that and the conditions in a developing country. For example, the lack of toilet paper, soap, and hand towels in the school’s bathrooms. It was a major shock to get accustomed to FAU. This is not that they operate incorrectly, it’s just so different than anything we deal with. Finding classes can be difficult because the building is huge (there are almost 1,500 students in the architecture school!) and classrooms are hard to find. Bottom line: students should understand how FAU operates and how to get by upon arrival.
One of the greatest things about the Brazilian culture is the friendliness and openness of the people. Students were so great to us and the professor was equally as welcoming. It took a couple of weeks but I began to know each of the students in our class to some degree. My group understood that I had poor language skills yet still tried to talk with me and ask me questions. They really wanted to learn from me which surprised me. I would recommend others to come to Brazil and see the great country that it is.

**Karlo Felix’s thoughts**

Picture postcards do not do the “Cidade Marvilhosa” justice. Rio de Janeiro stunningly spills between its forest covered peaks and coastlines. The seductive curves of its mountains are mirrored in the sensuous arcs of its beaches. Bustling like the throbbing beat of the samba, Rio is a city that never ceases to amaze. Along with three other CAED students (Aaron Brownwood, Santiago Garcia, and Leah Price), I studied at the Faculty of Architecture and Urbanism of the Federal University of Rio de Janeiro. It is one of the most prestigious schools in Latin America; while there I had the opportunity to study with the future environmental designer of Brazil. During my almost 6 month stay in Rio, I was able to fully immerse myself in Brazilian culture and also meet other students from around the world. I came away with a greater knowledge in international planning, a new awareness for cultural peculiarities, and a love for Rio de Janeiro.

Located at Ilha do Fundão, a 1,200-acre man-made island created exclusively for the university, the university became the subject of my studies. Fundão was created in the 1950’s by filling in nine islands in Guanabara Bay in the city’s North Zone. The plan for the island was chosen through a competition and was won by the famous Brazilian architect, Jorge Machado Moreira. His plan called for providing adequate academic space for the premier teaching and research institution of Brazil, then called the University of Brazil. It also called for wide avenues and expansive green spaces. The new academic structures were built in the modernist style and became the new landscape for the island. Unfortunately, his plan was not fully realized and a majority of the campus remains unfinished to this day.

In my urbanism class I was placed in a group with three other Brazilian students. Through collaboration and compromise, our final design proposed a “new” model for the Brazilian university. Rather than being solely an academic district, we proposed integrating more of the city into the island. Shops, restaurants, bars, hotels, offices, apartments, theatres, and other services would make their place among laboratories, classrooms, and studios to create a more vibrant community. The plan itself called for a continuation of modernistic academic buildings, superimposed onto a traditional street grid and connected with large tree-lined axes. Although some items in our proposal ended up needing further exploration, our project became an interesting exercise in integrating ideas from both Brazil and California.

My other studies focused on urbanism and the environment. While many students at the school seemed to dislike the political nature of the subject matter, I found the coursework both interesting and engaging. The class focused on the evolution of Rio’s built form, and how those forms have affected its natural environment, its economy, and its people.
With CRP’s focus on environmentally conscious decision-making, it was interesting to partake in a class and see many of the same ideas applied in different ways. The class also proved to be challenging as Brazil has very different agencies charged with environmental review. Learning the structure and responsibilities of these agencies provided me with a different perspective on our own environmental practices here in California.

But the beauty of Rio de Janeiro kept me from focusing entirely on academics. With spectacular beaches, beautiful mountains, an endless nightlife and friendly citizens, Rio provided enough distractions. Cariocas, as citizens of Rio de Janeiro are affectionately called, are a beautiful and amazingly accepting people. To them arriving fashionably late is almost a rule, ever-changing plans are a norm, and chance encounters while waiting in Brazil’s many long lines become social events. Dramatic soap operas and football are always spoken of with flailing arms, wide eyes, and profound passion. But despite the discussions of distaste over the latest governmental corruption scandal or the failure of the latest civic project, Cariocas are rightfully proud of their city and their country.

My senses have been seduced by the splendor of Rio’s scenic surroundings. The Carioca spirit has captured my heart. Brazil has been one of the greatest experiences in my life. The experience was a challenge that I am glad I undertook. Aside from learning to work in another language, I was provided insight into how Brazilians think about their surroundings and therefore organize their urban form. I know that the Cariocas have left a definite impression on the way I think; not only about the built environment, but about life as well. I hope that I was able to reciprocate the act and leave a positive impression upon all the people I have encountered in Rio.

Leah Price’s thoughts

Where should a student travel if that student desires adventure, the experience of another culture, and a different perspective on planning, design and environmental protection while not incurring additional student loans? For me, this question was answered after a late night conversation with Sierra Russel in CRP’s Computer Lab. This is how I ended up in Rio de Janeiro Brazil with three friends from Cal Poly for five and a half months of study, travel and cultural education.

The city of Rio de Janeiro can only be summed up with one word- amazing. It is not possible to understand its true meaning unless you have experienced the city yourself. From a planner’s perspective Rio has the typical problems of a large city; odors, traffic, crime, air pollution and more. But the largest and most complex problem is the irregular development that occurs on the hillsides throughout the city, favelas. These shantytowns are a blatant display of the social inequality that exists within the city and the enormous social, economical and environmental problems Rio faces because of it. These issues and other obvious disregards for laws and regulation kept me constantly fascinated while living in Rio.
However, not all of my learning experience was a result of negativity. I thoroughly enjoyed the carioca (natives of Rio) attitude about life and the sincerity of almost everyone we encountered. The city itself was a prime example of proximity; high-density development, mixed uses, culture, character and vibrancy existed almost everywhere. Buses were packed with people of all demographic classes, the sidewalks were always full of people, and in the evening it was nearly impossible to walk. The metro station dropped cariocas off at plazas where vendors waited to sell various fatty foods, and old men played chess in the evening. Rio has an energy and life our cities so often lack in the United States.

Nightlife in the city was the best; whether it was a chill bar in Leblon, live music or a street party in Lapa, or various nightclubs throughout the city, Rio has a scene for everyone. Or, if you like, just hang out; or more realistically, conclude your evening at a waterfront kiosk with one last drink and enjoy the characters you encounter at 4am on the beach. The night will come to an end when you sense the sky lighten and early morning joggers start to appear in spandex and other outrageous attire. If you’re lucky, your day will begin with a recovery trip to Ipanema beach, where one’s biggest concern is to find a vacant patch of sand among the crowd of beautiful people and locate the açai (Amazon fruit) guy before your favorite icicle is gone.

When we arrived in August at the University Federal do Rio de Janeiro, my colleagues from CRP Aaron, Karlo, Santiago and I had been prepared as to the conditions of the facilities on campus, along with the modern design style. The facilities and organization within the University were not what we were used to at Cal Poly, yet we were able to enroll and meet some of our classmates with ease. Our classes included an Urbanism Lab and an Environmental Planning class. In addition, we took a Portuguese class at another college, Faculdade de Letras, just across the street.

Although we knew little Portuguese upon arrival, we were still able to gain an international perspective on urban design. It was very interesting to see how my group members dealt with social, environmental, and economic issues in the design of the university campus that is located at the island of Fundão. The environmental class gave us a brief history of the evolution of Rio, its environmental policies and current problems, and sustainability concepts. The class included discussions and analysis of environmental conditions throughout the city and the campus island. It was very interesting to experience familiar concepts applied to a different culture, society, and nature. Brazilian ideas and thoughts gave me insight and a new perspective for regarding how they prioritize environmental problems and sustainability concepts.

Brazil was my first real experience outside the United States, and almost everyone told me this experience would be life changing. I have to agree that it was just that, even though the difference came about through a different means than I expected. Together, my academic and personal experiences were very educational. I was able to step from a perspective I have always had into another where concepts and ideals I had been taught as import took a back seat to basic necessity such as health and safety. Rio knows no bounds, it is an amazing city in a country where culture and character is everywhere. The people I met and the memories I have are irreplaceable.

Figure 5. The historic colonial town of Paraty, on the coast south of Rio. (photo by Leah Price)

Figure 8. Partying on a Saturday night at Lapa, Rio de Janeiro. A revitalized area with numerous bars, art galleries, and night clubs that holds several public events in the year. (photo by Karlo Felix)
and the experience made for a perfect conclusion to my college education.

Aron Nussbaum: “Vida no Brasil”

...Sunday afternoon, sun at full staff, the heat fills every breath, fans blast on my bare skin, windows wide open. Working fastidiously on my makeshift sawhorse desk. Eyes are constantly drawn away from my paper to the window, the view of the city below my high-rise apartment, the view of the mountains and jungle, the famous Cristo Redentor (Christ the Redeemer) statue, and the music of drum and dance echoing through the blocks. Yes. It was Sunday and the weather was beautiful, another unofficial holiday in Rio de Janeiro. Tossing my work aside, I grab my Havaianas (Brazilian flip-flops), my bike and descend down the service elevator heading towards the music. I am quickly at the street level of Botafogo, a diverse neighborhood at the doorstep of Pão de Açucar (Sugar Loaf) mountain offering views of the entire city set amongst its extreme topography of mountains, bays, lakes, and forests with in a dense urban fabric of apartment high rises.

I continue to descend my rusty bike towards the city with my ears tuned to the sounds of the drums, remembering my golden rule, maneuvering through the city with the intent of staying on my bike and arriving at my predetermined destination alive. In the dense urban jungle of Rio de Janeiro maneuvering through speeding taxis and motorcycles and the onslaught of pedestrians, delivery bikes, parked cars, dogs, trees, magazine stands, fruit carts, polícia, patio seating, street merchants, and very large buses, riding a bike through the city can add up to quite an adventure. And if it’s past 10 at night, not that I would consider riding my bike, cars are not required to stop at red lights... an effective way that developing countries manage their security issues.

I finally make it through the multiple intersections into relatively calm streets and find my destination. Groups of people have gathered together each holding a different drum and are marching through the street creating a rhythm that can be heard for miles or rather, kilometers. Kids follow along with their bicycles and soccer balls, women and children dance, shopkeepers stand and watch in front of their shops, the city stops to listen, dance, talk, and walk together. I follow with my bicycle passing by corner cafes and juice bars open to the street with their stools and tables set out on the sidewalks, we pass by the local hardware store, the auto-mechanic, the hair salon, the butcher shop, the bakery, the little bars. Each city block we pass under the shade of trees and the sounds of birds, we pass by the residential towers lining the street with the door men out front watching the crowd, we pass by taxi drivers pulled over taking a cigarette break, we pass by a farmers market selling fresh fruits, flowers, spices, fish, and meat, we pass a cart selling fresh coconut water, another cart selling batteries and can openers, we pass by a couple in bikinis and Speedos on their way to the beach, we pass by a man selling old records and books, we pass by a kid passing out flyers for a live show, we pass a magazine and newsstand, we pass our neighborhood as we parade down the street to the beat of the drums.

We march our way into the central plaza. An urban gathering on a Sunday afternoon. We sit, laugh, hug, kiss, and rejoice the brilliant sun, the beat of our hearts, and the rhythm that keeps the spirit of Rio de Janeiro dancing and celebrating its eternal ecstasy.
Experiencing beautiful tropical landscapes, beaches, and pine forests, and the life in the capital city Tegucigalpa, Todd Fawley had a wonderful time in Honduras. During his participation in CRP’s exchange program with the Centro de Arquitectura y Construcción (CEDAC), he learned from his classes but also gained a new perspective of the world and learned the secrets of a slower rhythm of life.

My advice for students studying abroad is to be cautious of the “exotic/mystic phase” that one experiences during the first month of the trip, when everything seems more interesting, beautiful, and fun than at home. This advice is more aimed at those who study abroad in Europe than those that travel to the Third World. However, the beauty and mysticism of these countries, such as Honduras, though not readily apparent to visitors, is breathtaking once one knows where to look. As a student studying abroad my time in Honduras opened me to experiences as different from San Luis Obispo as one could get. For five months -from January to May 2005- I studied at the Centro de Arquitectura y Construcción (CEDAC), a small architecture school located in Tegucigalpa, the capital city.

Located in Central America between Guatemala, El Salvador, and Nicaragua, Honduras is a developing nation still recovering from the devastating effects of Hurricane Mitch in 1998. The country includes a diverse range of terrain: jungle (as well as amazing beaches) along the Caribbean ocean, pine forests across the center of the country, and an extremely arid almost desert region in the south. Lightly populated –only 6 million– Honduras routinely ranks among the three poorest nations in the western hemisphere.

Approximately 160 students attend CEDAC, most of them from the elite social class in the capital. Once, when wearing a Cal Poly sweatshirt, one of the students informed me that his father owned the factory where they were made (the tag confirmed the sweater was indeed made in Honduras)! In Honduras students continue to live with their parents or relatives until marriage thus the university felt more like an American high school than a university. I took courses on art history, urban history, photography, and Honduran history.

In addition to taking courses, I got the chance to travel to virtually all corners of Honduras and interact with all types of people. Though not officially a national pastime, there does exist a verb that best translates as “shooting the breeze”: platicando. Virtually everywhere from waiting for a bus to eating lunch in a comedor Hondurans would initiate conversation that wound on through languid afternoons. One of my best memories is sitting at a bus stop in a rather remote rural village discussing the state of the world with a group of campesino farmers who were among the nicest and most interesting people I met there. Though much of the world has
little regard for the United States and Americans, I encountered no problems in Honduras although I frequently engaged in political discussions regarding the state of the world.

Although the courses I took through CEDAC were valuable, traveling to the more remote areas of the country and talking with people were the most educative part of my time there. The physical and social differences between Honduras and California are stark: extremely poor ghettos and shanties climbed the hills ringing Tegucigalpa, and most rural residents are subsistence farmers. Poverty is a constant issue (unofficially estimates set the poverty level at 80-85% of the population) and most people have seen little change in the quality of life from the days of their grandparents; in many regions of the country the Central government is just not present. The poverty levels manifest themselves in society in different ways: buses run constantly between the major cities and charge only several dollars to cross the country (although they stop every mile to pick up more passengers); taxis called collectivos run set routes in the major cities, waiting to go until 4 people fill it up (each passenger paying 50 cents); few people expect large changes in their lives and thus the pace of life is much more relaxed and easy going (why rush about if nothing will come of it?).

Although beset with many social issues ranging from poverty to gang violence, Honduras is a uniquely beautiful society. As an outsider, everyone I encountered was genuinely interested in who I was and what I was doing in Honduras. Coming from a state and a society that is increasingly individualistic and isolated, the inclusiveness of Honduras was a good change. Though I have resumed to my old pattern of life six months after my return, my experience down there has influenced my perspective and expectations in life as well as my perspective on the US. I hope to continue traveling after college.
In this issue FOCUS brings you an exciting interview with four CRP alumni who work for EDAW, a private international design, environment, and planning consulting firm, that is consistently ranked among the world’s leading design firms. Nick Haskell (Principal and Studio Co-Leader), Clark Williams (Associate), Colleen Hart (Planner), and Sierra Russell (Planner) are part of EDAW’s Planning and Urban Design Studio in the San Francisco office, one of the firm’s 25 locations throughout the United States, Asia, Australia, and Europe.

**Focus:** When did you all graduate from CRP?


**Focus:** Tell us about your professional life after you left CRP.

**Nick:** I have worked full time as a private sector planner since graduation. My early goal was to be a designer, which I did immediately following graduation. However, I was laid off in the early 1990’s and “had” to take a job as a policy planner which I stayed at for about five years, then worked briefly for a “boutique” design/planning office. I started with EDAW in 1997. Getting experience with policy and design has been really good for me – while it took a while for me to understand, I finally concluded good design can only be realized if it’s based on strong policy.


**Colleen:** I have been working for EDAW for two and a half years. I am a project planner and designer, and project manager for both private and public sector clients.

**Sierra:** I have been working for EDAW since I graduated. My project experience so far has been with both public and private sector clients, and has included strategic land planning, transit-oriented development, policy planning, and master planning projects.

**Focus:** Did you take any graduate degree? Do you think graduate studies are important to complement undergrad education? If so, should one do them right after school, or a little professional experience before is preferred?

**Nick:** I didn’t pursue graduate studies after Cal Poly. I think the necessity of graduate studies depends on the individual, their goals and motivation, and the nature of their undergraduate program. I knew what I wanted to do after school and aggressively pursued it. That said, I was fortunate to have had some early pre-graduation experiences which coupled with my BS provided me with some unique skills and the confidence to move ahead. The Cal Poly degree is particularly good because you are taught to think and to do something, and have more than a fundamental grasp on local government planning in California – in other words, if we hire you, we believe you can take on responsibility almost immediately and we can depend on you, and as a studio leader, I like that.

**Clark:** I have not pursued a graduate degree; however a graduate degree can be beneficial for candidates seeking to pursue more expertise in our broad profession. My personal goals and interests have aligned with the work
I’ve been doing. In that respect Cal Poly’s motto of “learn by doing” has been my professional motto also.

**Colleen:** I do not have a Masters Degree. In my situation working for EDAW, I have decided I do not need to enroll in a Masters Program to complement my understanding of planning. I feel that with the Cal Poly CRP Undergrad Program, and my work experience from my internship and here at EDAW, I will continue to learn and grow with more professional experience. I have a great mentor here at EDAW, who has given me the chance to work on a variety of projects to help me find my niche in the wide world of planning.

If I had a different degree and was interested in planning, I would recommend a Masters to get into the field and have a better understanding of it. I also believe that you should “dabble” in the field you are interested in before you jump into a Masters Program. Therefore, I think that one should have a bit of professional experience after undergraduate work before doing more schooling.

**Sierra:** I do not have a graduate degree and I do not think it is necessary to enter the field of planning with a Master’s Degree if you have a Bachelors’ Degree in City and Regional Planning. I felt prepared to enter a professional level position after I graduated, particularly because I had working experience before graduating as a planning intern for the City of Paso Robles, and also for KTGY, Inc. I felt fortunate for having both these working experiences. Working with the City of Paso Robles over an extended period of time complemented my education with practical real-world experience, and also gave me a platform to go into the private sector. I don’t think I would have the job I have now without both of those work experiences. For now, my career goals are to continue my professional experience, and I don’t feel the need to get a Master’s to continue to progress in my career.

**Focus:** Tell us a little about your job at EDAW. Tell us a bit about the projects that you did here you most enjoyed.

**Nick:** I’m a principal with EDAW, San Francisco, and co-lead the planning and urban design studio. I’m involved with hiring, marketing, management, and project work. We try and maintain an almost even balance of public and private sector clients, and our staff includes policy and design planners. Our private sector jobs include infill neighborhoods and larger master planned communities, for national homebuilders and developers, and small property owners and developers. For these projects we prepare overall concept plans, development yield studies, and refined neighborhood/district design. For the public sector we predominantly prepare specific plans and transit-oriented development plans. The setting for these jobs is diverse, ranging from thriving...
downtowns, to rural small downtowns, and neglected city neighborhoods.

I really enjoy having a mix of projects and challenges. We regularly work on projects all over the western United States, and have done work in the Philippines, Middle East, and Asia. Even now, I’m always excited to take on new projects, like winning work. I’m part of a really strong firm and team, and frequently work with a group of really smart and collaborative consultants. This combination of factors ensures our work to be interesting and never predictable. Who would have thought planning could be intense and rewarding? - - It can be, and it is.

Clark: I am a project manager working on a variety of planning and urban design projects. Most projects are residential master plans and mixed-use master plans.

Colleen: My project work focuses on large scale master planned communities, physical land planning, yield studies and analysis, “sense of place” and community character analysis, new residential, commercial and neighborhood developments, infill and urban design projects, and strategic site analysis. Currently (2005) – I have been working on Master Planned Communities for some of the largest home builders in the Nation – Pulte, Lennar, KB Homes, The Grupe Company, Pardee Homes, and Bridge Housing – helping them create livable communities with neighborhood crafting elements that make the plan a desirable place to be. My principles include creating enduring solutions by blending traditional planning methods with forward-looking visions. New urbanism ideas and sustainable development techniques area also integrated within my creative vision.

Sierra: Since with EDAW, I have worked on a diverse set of projects, widely ranging in scale and focus. Although all projects have been valuable in my professional growth and learning, two projects come to mind that I have particularly enjoyed: a strategic land planning project and a transit-oriented development project.

The first involves a large area of land holdings in Florida, which we have spent the last four months preparing a long-term implementation strategy encouraging immediate development, as well as strategies for long-term quality investments. I think what I’ve liked most about this project is that it has given me exposure to a wide range of disciplines and the opportunity to learn about large scale regional planning efforts. I also think projects of this scale allow unique opportunities to distribute development in a manner that encourages greater resource conservation, while still serving a regional growth demand with the creation of more sustainable and compact communities.

Figure 3. Woodland Park Specific Plan, Woodland Park, CA., 2002 - on going.
The second project is the preparation of a Transit-Oriented Development Specific Plan. We are currently looking at ways to intensify development around a BART (Bay Area Rapid Transit) station located in a business park for several key properties near the station, without exceeding the City’s housing cap and still meeting the goals of all stakeholders involved, including the property owners. Although there are many competing interests involved, in addition to potential barriers presented by local politics and recently publicized criticism of TOD development, I like the complexity that is presented to us as planners from these challenges.

Focus: Do you think planners need a design education? How much graphic thinking you do?

Nick: Yes. Even if you never pick up a pen as a planner/designer, you will very likely find yourself evaluating, reviewing or preparing policies for development. At the very least, your credibility as an analyst will be enhanced if you know what you are looking at. At best, you will find yourself designing or making critical decisions about someone else’s design. A common stereotype is that planners aren’t designers, and yet planners are usually those informing elected and appointed officials about design. I don’t think all planners need to be designers, but I do believe that planners should not be intimidated by the graphic aptitude or powerful attitudes or convictions of other design professionals. We need to be just as confident and committed. Having at least some design competence greatly enhances the likelihood of truly collaborative involvement on projects.

I draw a distinction between “graphic thinking” and being a designer. Thinking graphically is useful and important when preparing a presentation or report, but understanding “design” is useful when designing places and influencing change. About half of our team does no literal “design” at all, yet these people regularly manage projects and designers and are directly responsible for the preparation of plans which often include intense design solutions which must be credible.

Clark: It’s critical that planners have an education in design. Planner’s need to not only be exposed to design but have a critical eye towards the understanding good design. My time is divided almost evenly between project management and design.

Colleen: I do believe that planners need a design education. Even if they work in the public sector and focus on policy work such as General Plans and Specific Plans, they still need to understand what makes a good plan. Also, when working on design guidelines, it is essential to know and understand what planning elements make a community work. These include design standards, compatible land uses, diversity, open space and recreation, pedestrian scale, etc. In other words, even if you don’t draw it, you need to understand it to apply it.

Sierra: A lot. Graphics are important, and although I don’t think graphics should ever supersede content, they are extremely important in communicating ideas. I think clear and concise graphics, in addition to understandable and logical writing, are key in being successful as a planner. I also think it depends on your professional goals. Some people enjoy the design aspects of planning more, and in that case they should pursue a more intense design education. Others prefer the policy aspects -- either way, a planner should know what aspects form a good design, and how it should be graphically communicated.

Focus: What do you remember most about CRP? Which were your best moments, and your worst?

Nick: I really liked the 200 design series (in hindsight), third year, and a 400 series design aesthetics class I took with Leo Jacobsen. I only figured out years later that the 200 series (at the time) was largely based on the Bauhaus, and while at the time seemed abstract and not too applicable, was formative in broadening my perspective as a designer. We did quite a bit of strict two and three-dimensional design of shapes and objects. Our teacher (Joe Kourakis) pushed us and expected quality design and craftsmanship. The rigor from this has carried with me.

I enjoyed third year because it was big and felt important – we did a community plan for Cambria, which was packed with drama and challenges; in many ways not unlike a “real” project. This was also when strong friendships were formed and we began to figure out what we might actually like to do as planners. The 400 (arch) series design class was good because it was far reaching and complex – we watched hundreds of slides of places and things and talked about them. This was a very small class and for a designer, very self indulgent - we talked and wrote about design. Fourth year (CRP) was a letdown, and compared to third year slow paced and dull. Our projects were rambling and in recollection, almost completely free of focus.
Clark: I remember the third year studio as one of my favorite classes. It was an exposure to a real design problem, working in a team, and the realities of working within the regulatory framework of a local municipality. Paul Wack’s classes were always the right mix of fun and learning.

Colleen: I remember the professors who were passionate about their work – Vicente del Rio, Paul Wack, and Paul Crawford. It was great to learn from people who had experience professionally practicing and undertaking real-world planning projects. Best moments – coming back from my internship one summer and actually understanding what planning was. The little bit of real world experience really made a difference in the way I viewed planning from then on. Worst moments: drawing for hours on mylar with rapidographs, then realizing in the working world, we don’t use either one – just tracing paper and sign pens. Also, I had a few frustrated professors who took it out in the students – that should never happen.

Sierra: I remember most working with a great bunch of people, professors and students alike, and appreciating being in a program where I could actually get to know the professors, especially those who were genuinely dedicated to the students (Vicente del Rio, Paul Wack, Zeljka Howard, among others). Best moments were studying abroad, marveling at how well our CRP 411 group worked together, and the APA Washington DC conference. Worst moments were doing repetitive and tedious design work for many hours in my first design course, and working on a never-ending senior project. I should have narrowed the scope of my senior project, and I ended up working on it until the last minute.

Focus: What do you think CRP did right in your education, and what do you think could be improved? How does your education reflect in your work?

Nick: The CRP program was (and I think still is) very good in teaching the fundamental elements of planning, the ability to take responsibility and preparing people to start their careers as more than competent generalists (based on two of our Cal Poly hires over the last three years, who are both doing very well). This basic characteristic of Cal Poly students may explain the disappointment (possibly since changed) associated with fourth year.
No matter your core area of interest, after third year, students are ready for something challenging, and when I was there, this was not the case. I’m not sure what happens in fourth year now, but it might want to be either more focused, such as preparation of a specific plan, or more specialized study such as transit oriented development, neighborhood or district planning, green communities, or area revitalization – just something challenging and interesting.

Experiences gained at Cal Poly comes to light most vividly in my work ethos, through my long time willingness to take on new challenges with the confidence that one way or other, I will be able to figure them out. While clearly not only normative, this bit of willingness has influenced my career and opened the door for an array of opportunities. The President of our firm recently commented to me “don’t be prepared, be ready” and I think that is indicative of the best Cal Poly offers.

Clark: I enjoyed the opportunity to take architecture classes and interact with students in other majors. Also the importance of internships is a key element of the coursework. I would encourage more interdisciplinary projects.

Colleen: Learning the basics was great. It would have been nice to have classes or even one class which would focus solely on specific land uses and community design and how to make them work – commercial, retail, office, streetscape, residential low density, high density, open space – then wrap it up on how to actually put it together in a plan. Also, I do quite a bit of product and lotting analysis... We were never taught how to create neighborhoods. I remember in school I did a plan with a single-loaded block in the middle of a residential development… that’s a huge no-no.

Sierra: I think the CRP program excellently prepared me with the basic practical knowledge and technical skills I needed to enter in the field after graduating. I feel very fortunate that I was able to jump right in to the career that I did without a master’s degree.

There should be greater flexibility in the context and scale of planning projects for the community design courses required. For instance, students should have the opportunity to work on projects more urban in nature if they want to, or focus on projects in rural areas dealing more with environmental conservation and impacts to the natural setting. Also, group projects are great learning experiences, but they also can result in an uneven workload across the group. I think students should be given more opportunities to work individually to explore their interests. I also think there could be more theory classes offered. My education is reflected in my work everyday. CEQA, eminent domain, reading site plans, the Ahwahnee Principles, the seven mandated elements of the General Plan…. Those pesky CRP facts seem to all become useful at some point.

Focus: Do you think CRP does the right mix between theory and practice?

Nick: No. While I am a huge advocate for learning “the basics”, directly useful when finding and keeping a job, having a better understanding of planning theory would make for stronger students. During my second job, I worked with several Cal grads, and while I knew much more than them about CEQA/OPR, they were much bigger thinkers. The irony here is that during tough times, I saw many of these people get laid off, and I think I kept a job because I could easily shift between projects and work tasks. That said I sometimes felt like a bit of an intellectual outsider, not fully grasping why they had such commitment to their perspectives and the apparent compulsion to implement an idea rather than a policy. Read and understand Jane and Allan Jacobs! (The Death and Life of Great American Cities, and Great Streets).

Clark: Yes. There are always new theories and skills to learn and it is impossible to master these in an academic environment. The proof is in the workplace and the department provided me with the skills and knowledge to immediately be a productive team member in a high-pressure office straight out of school.

Colleen: Yes. This gives students the chance to figure out what they are interested in – design or policy, or both. I do believe that in the last 2 years of the program you should be able to choose a more design-specific focus curriculum, or a more policy driven one.

Sierra: In hindsight and when comparing my own educational experiences with graduates from other planning programs, I really feel CRP emphasizes practice too much over theory. Being a student is a time to develop your own philosophy and theoretical understanding that will form the platform for your professional practice. Being well-studied in the history,
theories, and trends of design and development are as integral as learning how to draw or write a staff report. It wasn’t until I studied abroad that I learned about twentieth century planning and architectural history. Although this is just my own personal example, and I know that theory and history classes are offered and required in the CRP program, I do feel more theory should be incorporated into CRP courses.

**Focus: What are the critical knowledge areas and skills for planners today?**

**Nick:** Planners need to be solid generalists with very good writing and problem solving skills, and should have a core area of interest, not the other way around. What specifically comes to mind is the frequency with which I see resumes that someone is really good at GIS. While useful, this or any other specific technical competence is not why our studio hires people. We have other experts within the firm who do GIS (and are really experts), visual simulations, or other technical fields. They are usually hired to focus on those areas of expertise. We need people who can appreciate and understand this, but really we need people who can do planning.

Although possibly obvious, people should be good at Word, Excel, Photoshop, Illustrator and InDesign, but again, don’t need to be “experts” at any of them – they will learn more than they thought possible working with us for just a few months. As for AutoCad, we really don’t need experts, but a basic understanding is useful for people who want to get involved with more intense design projects.

Finally, if someone wants to be a designer, they need to be able to draw – specifically layout through free hand ink work. Almost all of our design work involves huge amounts of drawing, which is scanned and colored electronically. Like technology, people who draw almost always get better after only a few months in our studio. I still spend a good deal of my time working with our new designers explaining the theory and technical aspects of our work. At the end of the day, we want each of our team members at all levels to be important contributors that we can depend on – we are not about the traditional apprenticeship.

**Clark:** Understanding the regulatory framework of land use, economic, and financial realities of development, sustainable concepts, and the importance of community involvement are just a few that come to mind.

**Colleen:** For my position at EDAW, I need to understand how a community works. What makes a great place? This requires knowing great places and actually going out to see them. Seeing them first hand gives you a sense of

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Figure 5 & 6. The Sanctuary Master Plan, Stockton CA., 2003 - on going.
human scale rather than looking at it on a map or plan. We need to know where to go to find regulations, zoning, and constraints, and then how to apply them to the plans we create – whether they are specific plans, master development plans, or design guidelines. The computer skills that I would recommend are: Adobe PhotoShop, Adobe Acrobat, Adobe InDesign, AutoCAD (how to read files, scale, revise plans), Adobe Illustrator, and other basics like Excel, Word, and PowerPoint.

Sierra: These are in no particular order: hand-drawn graphics; understanding of 3-D applications and how they can assist us in planning projects; principles of new urbanism, sustainable design, and smart growth; and local government planning and the development review process. Some basic applications I would recommend using and that I probably use the most are Photoshop, AutoCAD, Illustrator, and InDesign.

Focus: What would you recommend to someone just starting his/her professional career?

Nick: I suggest that to the extent possible, they be open-minded and stick with it. As hard to believe as it may sound and I think it frequently does, doing a good job on a first tedious (or at least non-glamorous) task does much in building the rest of the team’s confidence in that person. We don’t expect our new team members to win work or run big projects – we are still trying to figure out what they are good at and like to do. As we learn more about each other their responsibility increases and often dramatically. Being sloppy on an apparently minor task can result in big problems, ranging from embarrassment to project trouble, to unfortunately steering important work away from that person – not good for anybody. Two positive examples of Cal Poly graduates sticking with it come to mind.

In one case, our team member has been on a master planned community project for the last three years. She started doing basic color ups and area takeoffs, and is now essentially running neighborhood design, and dealing directly with the client’s Director of Development. In another case our planner’s early tasks on a TOD/suburban office park transformation, began with her doing very tedious APN/FAR/Excel work. The work she prepared (and did rigorously) is being used as the baseline data for the traffic engineer for modeling. I have complete confidence and trust in both of their work, and we embrace them as integral team members. So, don’t give up, be patient, don’t whine too much, and do good stuff – opportunities will follow.

Clark: Stay motivated to constantly learn and increase your skill sets. Use your Cal Poly education as a foundation for your career. Cal Poly offers a good breadth of academic knowledge, but it will be up to you to develop an area of expertise. Work on your communication skills. One advantageous skill set planners have is our ability to fill the role of the generalist. That can allow us to communicate and collaborate successfully with architects, designers, developers, and citizens.

Colleen: Don’t expect to know how to start planning right away. There is SO much to learn. Go out and explore. Find places, communities, plazas, parks, residential neighborhoods that you like. Take pictures. The more you get out there and find good and bad examples of places, the better designer you will become, and the more ideas you will have to create a great place.

Sierra: Look for a job where you will get experience with a wide variety of types of projects. Don’t get frustrated when you realize you can’t jump right in as project manager right out of school. Know that even with a degree from a very strong planning program and any internships you’ve done, you will still have a lot to learn and it will take a lot of time to build up the necessary skills and knowledge to manage projects. And always continue to explore and pursue areas that intrigue you.
In this article Chris Jordan writes about his work at a PMC, large planning consultancy firm based in Sacramento, CA. While an undergraduate student at CRP, Chris helped put Focus together and was assistant editor for the two first issues. His class received a state award from the American Planning Association and a national award for best student project from the American Institute of Architects for the San Miguel Community Plan in 2004.1

As graduation neared in the spring of 2004, I knew I needed to find a job and get into the working world. I wanted something flexible - that would provide a smooth transition from the Cal Poly experience to professional practice, yet would help build my skills for the future. I also wanted a job that I could grow into by showcasing my skills and proving myself as a leader. So while filling out job applications and interviewing with Planning Departments that were well off the beaten path, I made a phone call to my old boss at Paciﬁc Municipal Consultants (PMC).

While my internship with PMC in the summer of 2003 was short (only six weeks and part time at that), it gave me an opportunity to see how this organization of highly motivated people function as a team. I got to observe how PMC, a consulting ﬁrm that works exclusively for municipalities, special jurisdictions, and other governmental agencies, addresses the needs of their clients by producing a high quality product in a fun and exciting atmosphere that is the very dichotomy of stereotypical municipal planning work. When I started looking for employment I knew instantly that I wanted to return.

My First Project

The ﬁrst project I worked on – and continue to work on to this day – was the General Plan for Rancho Cordova. The City of Rancho Cordova is one of the newest cities in California, having incorporated in July of 2003. It is located in Sacramento County along the Highway 50 corridor between downtown Sacramento and Folsom. Today, it is a small community of about 55,000 people; however over 35,000 dwelling units are in the pipeline for development between now and 2030. When the General Plan reaches buildout in 2050, the planning area will be populated with over 310,000 people.

The project has been unique to say the least. What started out as a fairly “normal” project had mushroomed into something that could conservatively be called the most exhaustive and comprehensive general plan process. At the heart of it all has been the creation of a General Plan Pro Forma that evaluates the ﬁscal implications of new development on the City. Rancho Cordova is fairly unique in that, as a result of the revenue neutrality agreement with the county at the time of incorporation, almost all of the property tax generated in the City is returned to the County. The only real money generator is sales tax. For that reason, it is important that the City include an adequate supply of commercial land while at the same time balancing the infrastructure and service costs associated with new development so as to insure that the City will maintain its ﬁscal solvency for the next 30 years.

One of the requirements for completing the Pro Forma has been the creation of accurate land use projections. With nearly two-thirds of the City undeveloped and the City committed to not being in the land planning business (leaving detailed planning to a developer initiated speciﬁc plan process), development buildout potential is not as simple as totaling up the acreages in GIS (Geographic Information System) and multiplying by a density. Rather, assumptions need to be made that reﬂect the most likely land uses but still leave the speciﬁcity to a later date.

1 For information on the San Miguel Community Plan see Focus 2 (April 2005).
The solution has been two fold. First, all greenfield areas of the City are located within “planning areas” that do not lock down land uses to specific parcels. Second has been the creation of a land development scenario in PLACE’S – a GIS-like system that calculates development potential based on an assumption set. I have been leading up this effort, creating value-rich data sets that can be used for economic analysis, traffic modeling, and overall statistics generation for the General Plan.

The Design of the City

While working on the General Plan for the Rancho Cordova, I was asked to assist in the development of that City’s first Design Guidelines. Many areas of the City feature older patterns of development (e.g. strip retail centers) that are not in keeping with the City’s vision. For some folks it is the design of these areas that helped them decide to vote for incorporation in the first place.

The Design Guidelines for Rancho Cordova are, as the title states, “provisions for a quality community.” It lays out four design goals and a series of design objectives, guidelines, and standards that implement the vision as identified in the General Plan and serve to provide design professionals, property owners, residents, City staff, and decision makers with a common understanding of the City’s expectations for the planning, design, and review of development proposals in Rancho Cordova.

The resulting document is illustrated cover to cover with vibrant imagery that showcases design concepts preferred and encouraged by the City. Also include are so-called “don’t do” images – illustrations that show how not to design a project.

Creating the New Code

My third big project with PMC has been a project with the City of Elk Grove. Like Rancho Cordova, Elk Grove is a newly incorporated jurisdiction that has been slowly replacing its existing County-created documents with ones that it can call its own. The latest effort has been a reworking of the Zoning Code.

The entire project, when completed later this spring, will have taken just over two years to complete. Over twenty public workshops, stakeholder, Planning Commission, and City Council meetings will have been conducted, on top of the countless staff meetings. Hundreds of comments will have been received from rural residents, religious organizations, retail developers, and even a computer software company.

Still a traditional Euclidian Zoning Code, the new code is a clear departure from the organizational crisis that is the

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Figure 1.
The Design Guidelines for Rancho Cordova feature a two-page layout that describes the objective area, includes design guidelines standards for implementing the objective, and is well illustrated to help describe the concepts included inside.
existing. Rather than development standards being spread out across dozens of pages, all the information a builder or staff needs is contained in nice, neat, little tables. Use listings are consolidated and all uses are defined.

Best of all, the document features many custom-made graphics that illustrate the concepts and regulations contained within. Using skills I developed at Cal Poly, I have, in addition to writing several sections of the document, created many of these graphics.

**How this relates to Cal Poly**

If someone asked me how I have been able to handle so many complex projects so early in my career, I would have to say that it is a result of my Cal Poly education. The “Learn by Doing” atmosphere prepares you for the kind of work you experience after college – crazy project schedules and constant deadlines, demanding bosses and clients, and cranky coworkers. Not to mention projects that are designed with real-world applicability.

I am constantly reminded of my experience with the fourth-year community planning lab where we drafted a community plan for the town of San Miguel. My experience at the public meetings, work on development projects, and coordination skills developed while working with team members are constantly being called upon. Without these skills and experiences, I do not think that I would have been able to transition as well as I have from the academic world to the working world.
This section brings a reference list of all MCRP theses and professional projects that have been defended in the City and Regional Planning program since the last issue of Focus published in April 2005. They represent the research and professional interests of faculty and students. These works may be consulted in the CRP department, at Cal Poly’s Kennedy Library, or through inter-library loan.

**Environmental Design Elements Affecting Students’ Perception of Safety on the California Polytechnic State University Campus.**

Dominic A. Farinha, 2005.

This thesis investigated student’s perceptions of safety on a university campus and environmental factors which may cause such perceptions. Perceptions were obtained using focus groups and locations of personal crimes, and a comparison of perceived safety and locations of personal crimes is made. Research implies that students’ perceptions of safety do not accurately reflect the locations of personal crime, and factors influencing perceptions of safety are poor indicators of criminal activity.

**City of Grover Beach: Housing Element Project.**

Corey Daniel Funk, 2005.

According to mandate by the State of California, every city must update the Housing Element portion of its General Plan periodically. This project was intended to complete the update process and bring the document into compliance with State laws. The draft amendment created proposes that the City should increase downtown housing density through a zoning overlay program, and was submitted to State HCD in May of 2005. Included in the amendment are a Final Report, conclusions and recommendations.

**Placebo, Panacea, or Poison Arrow: The Impact of Inclusionary Housing on Residential Development.**

Amy E. Graham, 2005.

This thesis empirically analyzes the effect that inclusionary housing policies have on residential development of cities in California for the period of 1991 to 2000. The hypothesis tested is that inclusionary housing status has no negative effect on the rate of residential development. Two secondary, implicit hypotheses were also tested: inclusionary housing has 1) a positive effect on the ratio of newly constructed multi-family units to all existing units, and 2) a positive effect on the percent of newly constructed multi-family units. In order to test the hypotheses, multivariate regression models were developed to analyze the relationship between inclusionary housing status and the rate and type of residential development for 342 California cities. Research results indicate that inclusionary housing status is not a statistically significant predictor of overall housing development, but does have a positive effect on the rate of multi-family development.

**A Modeling Approach to Wildlife Corridor Creation: An Assessment Using ArcGIS and the San Joaquin Kit Fox in San Luis Obispo County, California, USA.**

Lauren Rachelle McElwee, 2005.

This project presents a methodology for establishing a wildlife corridor and proposes one between the Carrizo Plain and Camp Roberts in San Luis Obispo County, CA. The San Joaquin Kit Fox is used as an umbrella species for corridor delineation. Because it has a wide range, protecting the Kit Fox is thought to protect many other federally and state listed species as well. The corridor aims to prevent habitat isolation, which inhibits genetic diversity and species survival. ArcGIS was used to assess the viability and location of a potential corridor. A corridor location was identified, development pressure was analyzed, and priority areas determined. Conclusions made were that: antiquated subdivisions in the corridor require further study to determine their effect; the areas of the corridor crossed by Highway 46 need immediate attention for conservation; ground-truthing needs to be done to verify findings; and a combination of conservation tools will be needed to effectively protect the wildlife corridor.

Note: These abstracts were compiled and edited by Jennifer Venema and Vicente del Rio.
City of San Luis Obispo: Pedestrian Transportation Plan.

The General Plan Circulation Element of the City of San Luis Obispo requires a Pedestrian Transportation Plan that will ensure a pedestrian friendly-environment for residents and visitors alike. It aims to promote walking and create pedestrian linkages throughout the community, and is relevant to planning, development and maintenance of pedestrian facilities and activities within the corporate limits of San Luis Obispo. The plan will provide guidance to City Council advisory bodies, community members, developers, and other design practitioners in planning, designing, and constructing pedestrian facilities throughout San Luis Obispo.

Complexity and Collaborative Planning: Skilled Process Intervention Does Make a Difference.
Jerry Sturmer, 2005.

This study questioned if the complexity of the planning context predetermines the outcome of the collaborative planning processes. To answer this, online surveys of process managers (professional facilitators and mediators) were conducted regarding their experience with collaborative planning processes. The results indicate complexity was not a determining factor in the success or failure of a collaborative process, but that the outcome was rather more affected by the skill in which the process was conducted. The study recognizes that planners and other professionals would benefit from more consistency in definitions and approaches to collaborative planning, and that more comprehensive research is needed to explore the conclusion.

Sean Nicholas, 2005.

Mixed-use planning has a historical basis in urban design, and is recently enjoying a renaissance because of a growing population and lack of available land. Using a theoretical framework based on the creation of a sense of place and financial success, two recent mixed-use projects in Burbank and Atascadero, CA are explored as case-studies. This thesis contributes to research by defining mixed-use development and by advancing factors that make mixed-use developments successful to both the community and the market.

Corinne Rosenblum, 2005.

This thesis evaluates the short-term recovery from earthquake disaster in two California cities using successful mitigation and recovery practices. The San Simeon Earthquake in Paso Robles of 2003 and the Yountville Earthquake recovery of the City of Napa in 2000 are analyzed. The three main propositions of the thesis are: 1) Following a damaging earthquake, localities often approve enhanced seismic safety building codes, 2) Communities will develop new mitigation policies after an earthquake, and 3) Recent disasters increase awareness of risk from future disasters. The cases of Napa and Paso Robles support these propositions, and validate the effectiveness of seven mitigation and recovery practices outlined by the author.
focus

This journal highlights the work produced in the City and Regional Planning Department, Cal Poly, San Luis Obispo.

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