

focus



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Dean, CAED: Christine Theodoropoulos
CRP Department Head: Hemalata C. Dandekar

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Welcome to Focus XI. With this volume the CRP department celebrates the achievements of this award-winning departmental journal as it proudly embarks on a second decade of publication. We fully anticipate that FOCUS will consolidate and expand its impact on the planning profession and achieve the next level of its evolution. Our department is widely recognized for a curriculum that emphasizes physical planning, land use and environmental issues, and exposure to a rich array of hands-on, learn-by-doing, practical and applied experiences. It is fitting that FOCUS too has privileged this approach.

Thanks to Professor Vicente del Rio's editorial efforts, during the past eleven years the journal has matured and attracted more contributions from a wider set of practitioners, alumni, and faculty. And FOCUS has benefitted from the evolution in digital technology making the experiences represented in its pages graphically compelling and therefore more accessible. FOCUS has evolved from a basic black and white publication with local and regional distribution, to a journal that is graphically rich, full-color, and available internationally in print and digital formats. The California Chapter of the American Planning Association recognized the importance of FOCUS by granting it the 2006 Outstanding Planning Award in Journalism.

As the content has embraced state, national, and international topics, and with the shift in dissemination and reach, FOCUS's readership and sphere of influence expanded, and its articles have resonance. For instance, the history of the Association of Bay Area Governments (ABAG) was delineated and published for the first time in FOCUS 10: an insider's perspective and overview of an important regional planning agency whose jurisdiction covers an area that is one of the economic engines for the State of California. Offprints of the article "Mumbai Port and City: Planning for Symbiosis" (also from FOCUS 10) were provided to India's newly elected (May 2014) Central Government policy committee charged with planning the development of Mumbai port lands. Noting that the article was "well appreciated and timely," the committee recently completed a draft report and is wrestling with the management and financing issues pinpointed in the FOCUS article.

In the interest of making opportunities for experience in other countries a possibility for faculty and students, the CRP Department has continued to be engaged internationally. Professors Vicente del Rio and William Siembieda's book *Contemporary Urbanism in Brazil* was recently adapted into a very successful Portuguese edition for both Brazil and Portugal. Professor Siembieda's expertise in natural hazard mitigation and post-disaster recovery has had applied and scholarly impacts in New Zealand, Chile and Japan. Professor Hemalata Dandekar was invited to



a comparative policy-related conference on Ports and Cities in Hamburg, Germany, and Professor Adrienne Greve expanded her research at several venues in Japan during her yearlong sabbatical at Kyoto University. Professors Dandekar and del Rio presented papers at an international conference in Porto, Portugal and started planning for a monthlong study trip to London, Lisbon, and Barcelona in 2015. Adding to this international commitment, this past year CRP hosted Susan Mason, Assistant Professor at Boise State University, Idaho, in her post-doctoral studies, and Lorenza Pavesi, a doctoral student from the University of São Paulo, Brazil. Two graduate students spent the summer

in Chennai, South India, implementing strategies to improve health-augmenting practices in schools.

The CRP department is at a significant point of transition with Professor Paul Wack, a long-standing faculty member, now teaching only one course on professional practice, Professor David Conn embarking on an early retirement program to actively engage in research, and Professor Zeljka Howard's retirement (Summer 2014). Professor Howard's absence is of particular note as she has taught some 25 different courses since 1986, including her signature community-planning studio that embodies CRP commitment to service learning. She established the 410/411 studio sequence as the capstone learn-by-doing experience in BCRP's curriculum, and as a signature element of our sponsored studios. Professor Howard's studios have received no less than twelve American Planning Association (APA) awards, including three at the State level and two at the national level from the American Institute of Certified Planners (AICP). CRP's mix and culture is changing as new faculty join the ranks. Professor William Riggs has augmented our strengths in transportation, sustainability, pedestrian and bicycle planning, and GIS. We look forward to additional hires in urban design and joint appointments with other CAED departments in sustainability and visualization.

Our tradition of award winning student work continued this past year. Professors del Rio and Dandekar's third-year studio vision plan for the City of Milpitas won the California Chapter APA 2014 Academic Award of Merit and awards of excellence from APA's Central Coast and Northern divisions. This and other student driven efforts are described in these pages. We hope you enjoy reading this issue of FOCUS as a record of some of our significant achievements. Through FOCUS we welcome you to our world and invite you to contribute to this conversation in future volumes.

Hemalata C. Dandekar
Department Head
City and Regional Planning Department

When I started FOCUS eleven years ago, I never thought it would demand so much of my time and dedication. But I also never dreamed that it would be so well received by alumni, students, and planning professionals in California, and be honored with awards from the American Planning Association. This year's issue represents yet another threshold: for the first time FOCUS had to turn down articles submitted by external authors due to the volume of material submitted! There are two possible reasons for this abundance of submissions. First, that our journal provides academia and the profession useful content, covering local and regional to national and international contexts. Second, that FOCUS's editorial policy has been correct in searching for articles with a clear and direct relationship to the practice of planning, without the onerous demands of blind-review journals but with an eye to quality and usefulness. What readers will find in the present issue are perfect representatives of these choices and the reasons behind FOCUS's success story.

Opening FOCUS as customary, in "A Planner's View" Chris Clark shares his views of why private consultants do not get gold watches, while the Cartoon Corner adds some satirical humor to an otherwise very serious endeavor that is publishing this professional journal. The Special Section features the guest presentation made by Andrea Broaddus at the CRP Department in 2014, on the impact of London's Congestion Charge policy and its impacts on travel patterns and choices, and possible lessons for sustainable transportation in United States cities.

The Essays Session opens with renowned scholar Jon Lang, professor emeritus at the University of New South Wales, Australia. He discusses international urban design paradigms, branding, and the need for a neo-functional and ecological approach that values the culture of places. Next, Uta Birkmayer—founder and CEO of Xsense authentic places in San Luis Obispo—continues in the same important vein of planning and urban design: the need to understand the real sense of a place and honor it through our design interventions. True placemaking is also about equity and social justice, issues at the base of the lessons discussed by Anne Wyatt, planner and CRP alumnus, in her article about Dignity Village, a self-built and self-organized encampment of families in Portland. Ivor Samuels—famous British urban design scholar and constant collaborator of FOCUS—follows with yet another issue directly linked to placemaking: design coding as a tool to generate design quality in private residential developments, an inspiration from new urbanism. Next, João Pedro Costa, professor at the University of Lisbon, reminds us of the increasing impacts of global warming and the rise of sea level on places, and the need to step up to the challenge and invest in creative solutions, bringing in European examples. Last in the section, Carlos Smaniotto Costa and Jacqueline Hoyer, researchers and faculty in Germany, discuss four recent applied research proj-

ects in public open spaces in Europe and their importance in changing planning paradigms in the European Union.

Opening the section on Faculty and Student Work, Karlo Felix summarizes his senior project that consisted of a thorough study of the City of Vallejo's alleys and the development of tools to protect and value this important element of its original morphology. Senior BCRP student Clarissa Caruso and I follow with an article discussing a project developed by the third-year urban design studio for the City of Milpitas, winner of three awards from the American Planning Association in 2014. Another excellent studio project is discussed next by Faculty Emeritus Zejlka Howard and BCRP senior Shelby Messner, in their account of the Broadway Corridor Study developed in collaboration with the City of Redwood by the fourth-year planning studio. Next, CRP Professor Emeritus David Conn, Professor Jennifer Pedrotti, and BCRP senior Alice Zanmiller write about the success of the new class Intergroup Dialogues, devised to help Cal Poly increase diversity education on campus. CRP Assistant Professor William Riggs and Henry Pontarelli, planner and principal at LWC in San Luis Obispo, discuss the Community Sustainability Plan as a tool to achieve a balance between social, economic, and ecological factors. Closing the section, Assistant Professor Riggs presents a thought provoking discussion on leadership and its importance for efficiency, user satisfaction, and innovation in public planning and governance.

The International Section is back, with an account by BCRP senior Kirsten Harrison on her semester studying at the Metropolitan Studies program in Germany, going through a range of classes that added much to her education as a planner. Next, Lorenza Pavesi, a doctoral student from the University of São Paulo, Brazil writes about her experience spending almost a year at the CRP Department developing research towards her dissertation on the influence of the Townscape movement in planning circles in the United States, Italy, and Brazil. In the Spotlight Section, CRP Department Head Hemalata Dandekar shines light on the community outreach work provided through our studios in recent years; alumnus Geoff Bradley writes about the Metropolitan Planning Group, a firm that he co-founded and which has become one of the busiest in the Bay Area; and alumnus Sierra Russell, interviewed by FOCUS, talks about her career as a planner and the challenges of deciding to become a lawyer. Closing the Spotlight Section are the abstracts of all masters' theses and projects defended this past academic year in CRP.

Once again, FOCUS is a good representation of CRP's mission of disseminating good planning for more sustainable, equitable, and inclusive communities.

Vicente del Rio, PhD
Professor, Managing Editor

Depth and Breadth

Chris Clark

JD; lecturer, CRP Department.

I am often asked by planning students whether they should start in the private sector or public. I tell them different things each time I answer. But there is a theme. If I had to boil the difference down to simple words, they would be Depth and Breadth. And the answers are really just stories.

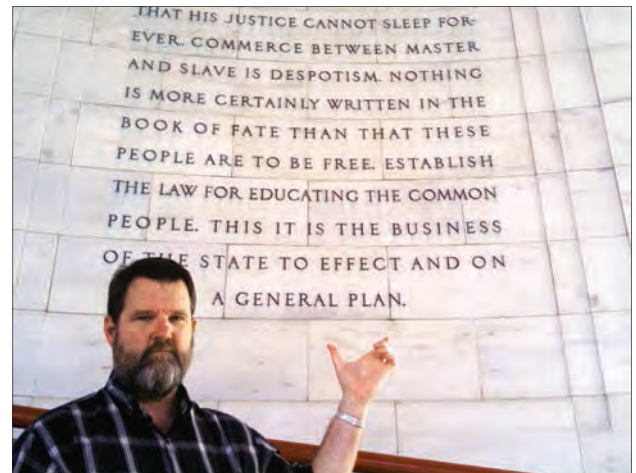
So, for example, I will tell them about Platforms. That's what jobs provide. A stable position for carrying out one's work. For planners, there are many platforms. We can work for cities and counties and states and even the federal government. We can work in engineering firms, or with architects, or huddled together in private companies, all with a common mission. The work we do is the most important thing, but there are important differences between the platforms, and each provides advantages. Oh, and disadvantages. Let's explore some.

The most common locus for a practicing planner is in a local government. Why so? That's where the police power resides with respect to land use. States do some land use, and the feds do a little bit. But towns and counties do the bulk. They divide the land and develop it, and preserve it. They provide the city-scale infrastructure that makes things work.

I have spent most of my career as a consulting planner, working for and with planners in that public sector at the local level. While I have worked with many at the state and federal levels, I don't think I understand them so well. So I'll stay local.

A long time ago in Barnstable, Massachusetts I sat down with a planner to go over a subdivision proposal. Planner Bill had been working on Cape Cod for over a decade. He came from Ohio. When I rolled out the land division plan, he immediately rolled tracing paper over the top of it, pulled from his drawer a box of markers and went to work redrawing the road and the lots. I couldn't speak. In about three minutes there was a new road, a new configuration of housing sites, a change in the main access location. There hadn't been a chance to explain the layout, prepared by an engineer after consultations with soil experts, drainage analysts, the fire department and even . . . the owner of the property. In my calmest lawyerese I began to explain that the more appropriate tact would be to hear my little presentation. He just raised his hand and said, "Take it back to your client." Couldn't argue with that.

I showed the colorful and crinkly trace to the engineer. He got a bit huffy, then looked at it some more, and then he said, "This actually looks pretty good. I can clean this up and make it work."



Chris Clark at the Jefferson Memorial in Washington, DC pointing out the importance of the General Plan.

Well that wasn't what I wanted to hear. This planner should be taught not to mess with the work of somebody with a professional stamp. Bill's job was to accept or reject, and eventually to recommend something to the Planning Commission. The arrogance of assuming his design skills were a match for an engineer. But later the client agreed to the changes, and they prepared a revised submittal, which Bill loved.

Many years later I came to understand what was going on. Bill was a good planner. From a great breadth of experience, he could quickly absorb new information, then revamp it to better fit into a larger community context—which he knew quite well, certainly better than an engineer from out of town. So while the engineer's plan was technically faultless, the planner's plan took it up a notch, literally, so that the subdivision would work better given its surroundings.

Who else but a planner is going to do that?

Malcolm Gladwell set the bar at 10,000 hours for mastering a trade. That's five years at a job (40 hours x 52 [minus 2 weeks vacation] x 5 years). We might consider the time spent working for a city to be working towards mastery. Learning the nuances of decision-makers, the streets, the weaknesses of infrastructure, the strengths of our residents, where that memo is that was written nine years ago explaining why the park has a retired fire engine in it. A million bits of data, assembled to help us plan. A million bits of data, any number of which we will draw upon to solve a yet to be articulated problem.

And there are gold watches. At the end of a career in one place is the appreciation of all the time that was spent there. Valuable.

The consulting planner gets no watch. They move, from city to city as needs arise. There are two reasons to hire a consulting firm to help with a city's planning. They either lack labor or expertise.

Crawford Multari and Clark served both needs. All work, like planning, knows its ebbs and flows. When the economy gets dry, fewer building projects are coming in, fewer permits going out, and the need for planners is reduced. When budgets go bad at the municipal and state level, then the funding for the eternal needs of a city are drained.

Given such, it is bad form in the public sector to hire employees to fit squarely with the level of work; laboring up when times are busy, laying off when they are not. (It is bad form to do this in the private sector, but there are often no options.) When someone is hired at a city, they come under the umbrella of civil service. Without going into much on labor law, suffice it to say that it becomes difficult to let them go. Quite difficult. So cities are cautious about hires, and have a considerable process for bringing in new people, and especially creating new positions. The more prudent approach for a city is to hire contract labor, often supplied by consulting firms, to cover the work needed during the boom times. It is understood that the contract is for a short duration. The contractor is usually more expensive than an employee, but the short hire makes it more economical.

These consultants behave just like the city employees. They have an office (actually a cubicle) and show up at 8:00 and leave at 5:30 and dress just like everybody else. They become part of the municipal planning team and are brought into the organization for the purposes of management and efficiency. But the other employees are not allowed to get attached to the consultants. Maybe a cupcake on their birthdays, but no party. And they most certainly get no watch.

The other type of consulting does not increase staff, it increases expertise. It provides a group of specialists to a city to fix a problem, develop a plan, or make people love something that they might otherwise miss the chance to. Take the general plan. This is the long-range document that by its necessary nature is rarely updated comprehensively. There are certainly perennial amendments, but few overhauls. So while the tune-ups can be done in the garage, it is best to send the big repairs off to the shop. This is also what my firm did. We worked on big plans. We were hired for two reasons.

First, like with the contract planning demand, cities would not staff up for an intense project that might last a year or two, and then would not be repeated for another twenty. Nothing worse than general plan employees sitting idle for a couple of decades. The other reason is that, because it is not done very often, there are no real experts on a city's staff. Now that is not to say they have no expertise. All planners learn about general

plans in school, and then work with them every single day. They know the local plan and the locale far better than the consultants (certainly initially anyway).

The planning consultant works with general plan updates all the time. These are big projects, with sizable budgets and long schedules. The last one we did was \$1.4 million and took two years. Managing them is difficult at best. Wheels slipping sideways off their axles is a common metaphor in this business. Predicting the cost and timing of a general plan is voodoo. Which we would do, routinely. And I am proud to say there was no general plan that I was unable to lose money on.

I complained to myself about this work from time to time. Yes, I was doing what planners were really trained for, high level management of the developable resources of a region and community. Still, I could find room for complaint. They were complicated and political. And every town I worked in had someone who told me that their town was utterly unique. And in every town there was a measure of townsfolk who stood ready to loathe any idea we put forward, ready long before the idea was formed. So bitter sounding!

But honestly, this was great work. Travelling to different cities, taking them in, solving problems, using ideas from one to develop solutions for the next. Meeting great people, great planners. Working with overworked city managers upon whose shoulders all of this rested, and public works directors whose job it would be to build all of this, and city planners who would have to convey this into development, and citizens who would have to live there after the plan came to fruition. Really great work. (Though no watch, mind you.)

But a watch is just a metal reminder that time is passing. More precious were the handshakes. There is a moment, everyone knows it when it comes, when the job has met its success. Often on the final vote of the City Council, with many staff reports yet to be written, but the realization that the plan is approved, that discretionary milestone achieved. As the chair bangs the gavel, the room full of supporters and their counterparts stand to leave. When the planning director acknowledges her staff, then turns to you, reaches out and shakes your hand, mouthing a silent thank you. Worth its weight in gold watches. They will head off to the cocktail party, while you take the long drive home.

Conflicting Priorities

by Paulo Ito

Brazilian street artist Paulo Ito is known for the quality of his socially engaged graffiti. He painted this mural on the gate of a private school in Sao Paulo, not far from the stadium hosting the opening match for the 2014 World Cup. The image, a shocking reminder of the conflicting priorities that still blemish Brazilian society, went viral once posted on Twitter and published by The Washington Post.

See Paulo Ito's art at:
www.facebook.com/pauloito8
(courtesy of Paulo Ito)



Planners, careful with your reviews!

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"Wait a minute! Aren't you the chap who denied the St. Mary's church extension application?"

FOCUS II

Special



Sustainable Transportation: Lessons from London

Andrea Broaddus

PhD candidate; UC Berkeley.

Andrea Broaddus was a Visiting Scholar at University College London, researching the London Congestion Charge policy and its impacts on travel patterns and location choices. In May 2014 she guest lectured at Cal Poly's City and Regional Planning Department, presenting her research and discussing opportunities for experimentation in the United States. Her talk is summarized in this article.

I became interested in congestion charging as a policy 'stick'—the kind of policy that complements policy 'carrots' like great bike, pedestrian and transit infrastructure, and can make them much more effective as part of a sustainable transportation strategy. Congestion charging is a method of influencing travel behavior using pricing. During peak congestion hours in London, vehicles are charged a daily fee of £11.50 (roughly \$19), to enter the central business district. The policy was adopted in 2003 to deter private vehicle trips and encourage people to travel by other modes. It has been highly effective.



I am convinced, after having lived in London for a year, and interviewed dozens of experts there, that sustainable transportation policies need to work together. London set mode shift as an explicit policy goal, and implemented an aggressive combination of measures to get there. What we have in London is a great case example of mode shift at scale. The lesson learned is that you cannot reduce vehicle miles travelled (VMT) and achieve mode shift by doing one disparate thing at a time. You need to do a lot of things simultaneously, linked together, and they incrementally add up to big changes.

There are a few examples of congestion charging in California, such as the Bay Bridge in San Francisco, where drivers are charged a higher price to cross the bridge during peak hours, or tolled express lanes on I-10 and I-110 in Los Angeles, where drivers can opt to pay a fee to use express lanes otherwise reserved for high occupancy vehicles. These are examples of managing peak demand in a single corridor. In London, the congestion charge is applied to all roads in a central area of about four square miles, to manage demand for driving throughout that area. It is also in effect for the entire business day, from 7:00 am until 6:00 pm. The charge is enforced by a ring of cameras that match the license plates of cars entering the charged area with a list of payments.

London is one of a handful of cities in the whole world that has actually implemented a (citywide) congestion charging scheme because they tend to be unpopular in places where a lot of people drive. The most famous example is Singapore. In London, only about 10% of people were commuting by car when the congestion charge went into effect in 2003, which helped make it less controversial. Public support was won over by dedicating all revenues raised from the congestion charge to public transportation improvements. The congestion charge nets about £130 million (\$200 million) per year, most of which is invested in bus services (Transport for London, 2008).

A long-term trend of mode shift

The impacts of London's congestion charge policy have been well documented. The congestion charge area was expanded in 2008 to include a 'western extension' area, but this was removed in response to residents' complaints in 2011. The central charged area has become part of the city fabric, and is not controversial today (Figure 1). When it was introduced, the fee was £5, but it is currently £11.50 (about \$19.50). The increases were necessary both to cover the cost of the expansion, and to remain competitive with public transit fares, which have also been increasing. There are exemptions for low emission vehicles and disabled drivers, and a fleet discount for freight vehicles. Traffic volumes fell by an estimated 80,000 vehicles per day (20%) within the central area when it was implemented, and have remained stable over the decade (Transport for London, 2013). Transit use increased 14% in the first year and has continued increasing over the decade (Transport for London, 2008). A bicycling renaissance is underway, and the number of people entering central London by bike has doubled since 2003 (Transport for London, 2013). New pedestrian and bicycle infrastructure has been built and pedestrian injuries and fatalities have decreased.

My study looks at how central London has been changing over the past 20 years, in terms of population, employment, land

use, and travel behavior. There was steady population growth from 1993 when the city had 6.8 million residents until 2013 when it had 8.5 million (21% growth) (Transport for London, 2013). Employment growth, while cyclical, also trended steadily upward, from 3.8 million jobs in 1993 to 5.2 million in 2013 (37% increase) (Transport for London, 2013). Both of these factors drove growth in travel. The estimated average daily number of trips made by Londoners grew from 20.8 million to 25.9 million (25% increase) over this timeframe (Transport for London, 2013).

The impacts of the congestion charge were most noticeable in central London. Figure 2 shows trips entering central London during the weekday morning peak from 1996 to 2009, by mode. The number of people entering central London grew from 993,000 to 1.1 million over this timeframe (10% increase) (Transport for London, 2010). The proportion using a car was stable until the early 2000s, when it began to decline and bus ridership began to increase. By 2003, when the congestion charge was introduced, car commuting had already fallen substantially, and more people bus riders exceeded drivers for the first time.

Behavioral change, especially of people switching out of cars, accounted for a significant portion of the mode shift trend. Table 1 shows a calculation of the changes in the number of people commuting by public transit and private auto from 1996 to 2002, and from 2002 to 2009. These can be considered pre- and post-congestion charging periods. Between 1996 and 2002, 75,000 people entered the workforce commuted to central London. Yet the number of people commuting by public transit increased by 119,000. So if we assume that all the new commuters took transit, that means approximately 44,000 people (the difference) must have switched modes. This seems to be explained by noticing that 34,000 fewer people were commuting by car, 12,000 fewer by taxi, which adds up to 46,000 fewer people using those modes. Accounting for 2,000 additional bicycle commuters, that leaves 44,000 people who switched out of cars and taxis onto public transit.

A similar calculation may be done for the change from 2002 to 2009, but in this case people were clearly switching to bicycles



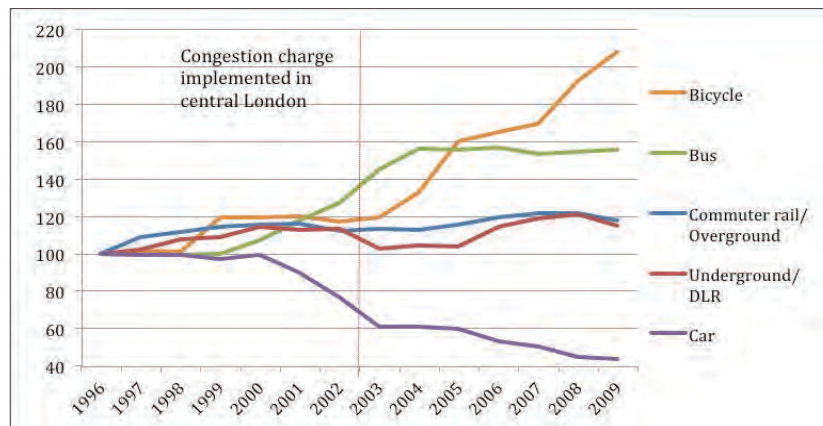
Figure 1: The congestion charge boundary on Euston Road, where two of six lanes are dedicated for bus priority.

as well. In this case, assuming all new commuters were transit riders, 21,000 people must have switched out of cars to transit (as no more switched away from taxis). The remaining 15,000 switched from cars to bikes, with some rounding errors. Table 1 reveals that the congestion charge was not the original impetus for people switching modes in central London. It came into effect during a period when people were already switching to transit in droves, and served to continue the trend.

How was mode shift achieved?

Why were people abandoning their car for commuting in the pre-congestion charge period? Congestion was worsening in central London throughout the 1990s, which is the main reason that the idea of congestion charging arose. Increasing traffic congestion was making cars and taxis inefficient and unreliable. In 1997, the average travel speed in central London during the morning peak was 15.2 kilometers per hour (9.4 mph), and by 2002 it had slowed to 14.2 kilometers per hour on average (8.8 mph) (Transport for London, 2003).

Figure 2: Trend of people entering central London, weekday morning peak (in thousands; 1996 = 100). From Transport for London, 2010.



	Public transit	Private auto	Taxi	Bicycle	Total commuters
1996	800	154	29	10	993
2002	919	120	17	12	1,068
Change	119	-34	-12	2	75
2009	968	85	17	27	1,096
Change	49	-35	0	15	28

Table 1: Change in number of people commuting by public transit and private auto (thousands). From Transport for London, 2010.

Starting in 1997, when a pro-transit national government came to power in the UK, investment in transit increased dramatically. This was a complete turnaround from previous decades of neglect, during which London's transit system was fragmented and deteriorating. From 1997 to 2012, London added four new extensions to its Docklands Light Rail (DLR) system, extended the Jubilee line of the Underground, and built a new suburban tram system called Croydon Tramlink. From 2007 to 2012, major upgrades were made to the city's commuter rail network, including extensions to form a new orbital service called the Overground. Massive investments were made to improve the quality and reliability of the bus network. Over 26 kilometers (16 miles) of bus priority lanes were installed by reallocating road space on major arterial roads leading to central London, and throughout the central business district.* In 1997, 337 million bus kilometers of service were operated in London. By 2003, there were 437 million bus kilometers of service (34% increase), and in 2009, 483 million (Transport for London, 2010; 2013). Some of these expanded service kilometers were new bus routes, but mainly they were increased frequencies and longer service hours on existing routes. By 2009, nearly 100 of London's 700 bus routes were running 24 hours per day.*

Transit ridership grew as capacity expanded, increasing the reach of rail and bus networks and therefore the catchment area for new passengers. But quality upgrades to vehicles, stations and bus stops also attracted new riders out of choice. Over 200 stations were refurbished to relieve overcrowding and improve disabled access and bicycle parking, and over 7,000 bus stops were upgraded with lighting (Transport for London, 2005). A major communications campaign called Legible London installed new wayfinding signage at all rail stations, bus stops, and major intersections. The signs all follow the same design and give information about the route and frequency of service, as well as maps of the local area. In 2003, a smartcard ticketing system was launched, the Oyster card. Smartcard readers were installed in all Underground stations and buses, significantly reducing boarding times and easing transfers.

From 2005 to 2010, over £200 million was invested in walking and cycling improvements throughout London (Transport for London, 2005). In central London, traffic signals were re-timed to favor pedestrian crossings over traffic throughput. In 2008, a bicycle share system was launched, boosting the trend of commuting by bike. High volume tourist areas such as Trafalgar Square and Exhibition Road were redesigned to enhance pedestrian comfort and safety. In contrast to the systemic overhaul and consistent design which characterized transit system improvements, many bicycle and pedestrian infrastructure enhancements were experimental in nature.

A visitor biking around London will find a variety of designs for bike lanes, signalized crossings, and parking in use. Transport planners monitor use patterns and user feedback. For instance, in the early 2000s, a network of blue bicycle lanes were painted on high-volume arterial roads. Called 'Cycle Superhighways', the idea was to give cyclists capacity on high speed routes, allowing them to cut through London's Victorian tangle of side streets. However, the blue paint was not well respected by drivers and cyclists using the lanes complained about contending with parked cars, leapfrogging buses, and sudden turns by cars. Therefore in 2014, a new generation of cycle superhighways was unveiled (Figure 3).

Lessons learned from the London experience

An important caveat to keep in mind, when thinking about whether these sort of effects could be achieved by similar policy interventions in other cities, is that London is an ancient city with good bones to build on. Its core, inside the charged area, still has pedestrian-scale streets laid out by the Romans 2,000 years ago and during medieval times. During the Victorian era, a dense railway network was developed, including fifteen rail stations and the first ten lines of the Underground system. These stations and right of ways have been in near-constant use, or redeveloped to meet changing needs, over the past 150 years. London's highly transit accessible center helped it develop into a monocentric city where employment is concentrated in the central business district. So we are at a disadvantage in a lot

Figure 3: Near Stratford, the newest generation of bicycle superhighways segregate bicycle and bus traffic.



¹ Personal Communication. John Barry, Head of Bus Network Development. London, 2014.

of the American cities that we work in, where high capacity public transportation infrastructure is lacking.

Another important caveat is London's regional approach to transportation. Since 2000, London has had a regional agency, Transport for London (TfL), which is responsible for the entire public transportation system and a strategic regional network of arterial roadways. It is an integrated, powerful agency that owns and manages all rail, Underground, bus and taxi services in the 600 square mile London region. This change in governance structure made transit system integration, repair and modernization possible. It enabled a systemic approach, meaning transit network capacity could be improved quickly and at scale. TfL is headed by a directly elected Mayor who has executive authority over the agency. This means an elected official who is directly accountable to the public for transportation outcomes. Maintaining high levels of customer satisfaction with public transportation is a key part of retaining the office. Therefore the Mayor's office engages in frequent public outreach and polling. This combination of centralized authority and visible accountability helps ensure that service levels are equitable throughout the region, rather than varying based upon the economic status and political will of each locality.

I think there are a few lessons from the London experience that are relevant for American transportation planners. First, setting mode shift as an explicit policy goal and using paired carrot and stick measures to achieve it. In the US we are often reluctant to say that getting people out of cars is a policy goal, and we use measures that reduce capacity for private autos, like reallocation of roadspace or pricing, very sparingly. When used, they are deployed on a small scale for discrete projects. London's example shows the value of engaging in public debate about priorities. It shows that utilizing a combination of measures, especially linking them together, can be effective in winning public support and legitimize more controversial measures.

Another lesson learned is about the power of quality improvements to attract new transit riders. Measures like increased frequencies and service hours, refurbished stations and stops, and new vehicles were powerful attractors of choice riders in London. Communication strategies like Legible London and smartphone-friendly route planners made the transition easier for people. Clearly, this was only achievable in London after a pro-transit government came to power at the national level. However, in the United States we have more locally-controlled sources of funding that could be used to upgrade transit to be more reliable, comfortable, and smartphone-compatible. One step that TfL took to improve communications was free: data feeds are published online for developers to use and develop apps like route planners (also known as Application Programming Interface specifications, APIs). Some United States transit operators have begun to do this, and I think we should see more.

Finally, London's willingness to experiment has helped it remain nimble and responsive to rapidly changing conditions as volumes of bicyclists and pedestrians increase. Installing



Figure 4: In Notting Hill, a street was closed to divert traffic and create a pedestrian plaza with a bikeshare station. The sign is an example of the Legible London wayfinding system.

a variety of designs and monitoring use patterns and user feedback has allowed transport planners to rip out the facilities that do not work and scale up the ones that do. Planning for bicycles in urban areas is a young field, and I think we need some way to learn what works. Experimentation can be problematic in the United States, where traffic engineers are held liable for their designs. Some cities where bicycling is growing rapidly, like San Francisco and New York, have managed to experiment with new bicycle and pedestrian designs as pilot projects. I hope we will see that kind of experimentation spread to more cities.

Conclusion

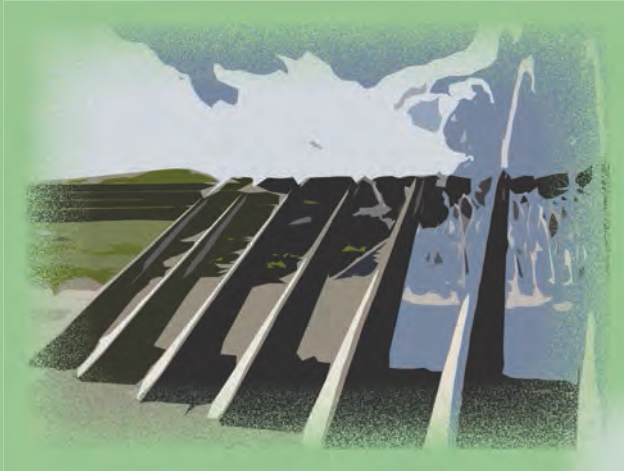
The aim of my talk here at San Luis Obispo today was to tell you a little bit about what's going on over in London, and to inspire you. Mode shift on a large scale is possible. Urban areas are growing, demographics are changing, and people are less interested in being stuck in cars. The future looks bright for planners interested in sustainable transportation.

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FOCUS 10

Essays



International Urban Designs: Brands in Theory and Practice

Jon Lang

Professor Emeritus, University of New South Wales, Sydney, Australia;
Former chair, Urban Design Program, University of Pennsylvania.

A leading author and scholar in urban design, Jon Lang discusses the increasing globalization of urban design paradigms. As international investments impose branding and the commodification of design, and professionals firms work in several different countries, he calls for a neo-functional and ecological urban design that fosters respect for the culture of places.

Urban design has long been considered to mean the self-conscious design of cities or, much more likely, their precincts or, even more likely, a large block of a city comprised of several buildings and the open spaces among them. A number of thoughtful scholars have sought to broaden this definition to comprise the ongoing processes that shape human settlements¹ but even they, when it comes to actually taking action, deal with urban design as individual project design. This paper brings attention to and questions the utility of the urban design paradigms being employed in an increasingly globalized world. These models incur significant opportunity costs when applied universally. It ultimately argues that we need a new set of generic solutions that are climatically and culturally sensitive.

The Globalization of Contemporary Urban Design Practice

We live in a growing international society as the result of the many political, economic and cultural changes taking place in the world. While today's supra-national economy seems overwhelming, international trade has had a globalizing impact on the nature of cities since the beginning of recorded history. What is happening today is, however, on a much greater scale. This observation is as true of architecture and urban design as it is for any other commercial activity.²

Notes from the Editor:

* This paper is an updated version of 'International Urban Design: Theory and Practice' published in the *Proceedings of the Institution of Civil Engineers - Urban Design and Planning* 162 (March 2009 Issue DPI0): 7-17, for which the author received the Reed and Mallik Medal from the Institution. We thank the author for graciously adapting it for FOCUS.

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¹ See, for instance, Cuthbert (2006) and Carmona (2014).

² See Olds (2001) on the internationalization of design firms and the property market, Olds and Marshall (2003) on the mega Pacific region projects, and Altani et al. (2012) on the impact of the internationalization of planning on urban Saudi Arabia.

Many factors contribute to the increasing globalization of urban design and architectural practice today. Real estate capital investment flows are increasingly international. Major manufacturing companies such as Sony and Daimler Benz and conventional organizations such as Bangkok Land, Henderson Land and New World Development are behind the design and implementation of major development projects in many countries. Hong Kong investors have contributed much to the development of Vancouver. Canadian money flows into the United States. Chinese property developers are building feverishly across Africa and Asia and investing in Australia. Taiwanese financial institutions are funding the building of South Saigon. They all possess a modernist attitude towards urban design while the architecture is post-modernist with a tendency to use materials that are regarded as prestigious: glass, expensive stones, and steel.

Architectural education and practice are global. A few architectural schools are trend setters and, perhaps, two dozen architectural and urban design firms dominate practice in the world today. The USA, Japan, the UK, Germany, Australia and Singapore are amongst the countries that are major exporters of design and educational services. Firms in these countries have urban design projects in China and now China is exporting architectural services to countries as diverse as Sri Lanka and Angola. China not only exports design but also construction services using its own workers.

The urban designing process tends to be one in which generic solutions that are developed within specific design paradigms are adapted to the situation at hand. Often, little heed is paid to contextual concerns. For instance, although a number of Chinese observers wonder about the quality of work that property developers, public and private, and their architects, foreign and local, are producing in places such as Lujiazui in Shanghai, Chinese development companies and their architects are reproducing the same model around the world. The East China Architectural Design Institute based in Shanghai is the designer for the Gujarat International Finance Tech City



Figures 1a & b: Lujiazui, Pudong, Shanghai (above) and office tower at Gujarat International Finance Tech City (GIFT), Ahmedabad (right). (photos: a) by the author; b) <http://modi2014.blogspot.com>)



(GIFT), for Ahmedabad in India. The proposal pays little heed to its context, climatic or cultural; the 'crystal' imagery is what is important. Ahmedabad, somewhat in the economic doldrums since the decline of its cotton based industry, wants to join the club whose members include La Défense in Paris, Docklands in London, Shinjuku in Tokyo and Lujiazui in Pudong. The character of the urban design product demonstrates it.

Specific urban design ideas and patterns have become commodities that can be 'bought' in a manner similar to any other product. The elite who make urban development decisions consist of the municipal authorities, wealthy property developers, politicians and the taste makers among the cognoscenti.³ Members of this group, although they themselves may not be fully aware of it, assume the power to run the programs of the major political, financial and communication institutions of a country and possess the authority to select and approve designs that have the character they seek. These designs have a brand image that serves the financial and aesthetic ends of the power elite.

Branding and the Commodification of Urban Design

A brand consists of a set of goods that has a name, a specific identity and is produced by a single manufacturer. Architectural firms produce products that are clearly identified with them. Property developers recognize the value-added impact of those products. Zaha Hadid, Norman Foster, and Frank Gehry all have clear brand images. A Frank Gehry building, for instance, is a

Frank Gehry building. In seeking a design for Main Street in Los Angeles, municipal authorities and commercial organizations know what they are getting in selecting Frank Gehry to produce a design. There is nothing new in this observation. Jawaharlal Nehru (1889-1964), independent India's first prime minister, knew that India would be getting a product that would make people 'sit up and think' when Le Corbusier (1887-1965) was selected to design Chandigarh.

Some cities have a clear and much esteemed identity. The power elite, and often the general population, in other cities want their cities to be to be like those that are admired. In the 1950s, Singapore wanted to be like Tripoli in Libya; today Tripoli would love to be like Singapore. Since the 1950s Singapore's leaders have transformed a backwater colonial entrepôt into one of the world's major urban brands. Many Asian cities now want to be a Singapore; others want to be a Dubai, a city that has been propelled from being an insignificant desert village to a globally recognizable brand.

Singapore and Dubai are clear urban brands in people's imaginations and the expectations of visitors are largely fulfilled when they visit. Outsiders have clear expectations of a number of major cities. New York is the 'Big Apple' with all the brand implications associated with the term. Paris, London, Tokyo and Hong Kong are their own unique and generally positive brand images. In stark contrast, a number of cities are in economic decline. Of these cities Detroit may be the most widely known. It has a clear but generally negative identity. Maybe one day if its economy revives it will be known as the 'Come-back kid'.

The brand of a city depends much on its physical appearance. As cities compete for a place in the economic sunshine they become self-conscious about what they look like. Many municipal governments now pay considerable attention to the

³ The term 'power elite' was coined by sociologist C. Wright Mills in 1956. Today it is estimated that of the USA's 300 million people, 250 men and women are the most influential in the three branches of the federal government and 220 control the nation's major television channels and newspapers.



Figures 2a & b: International rationalism at Zhandong, Zhengzhou by architect Kisho Kurokawa and Associates (left). The Dubai skyline turned into a brand (right). (left: courtesy Kurokawa Associates; right: <http://www.wallm.com>)

quality of their city's public realm in order to: 1) provide residents and visitors with a pleasant environment in which to carry out day-to-day activities, and 2) create a positive image, or brand, in the eyes of the world and thus attract capital investments in order to compete effectively with other cities for the creative class of people.⁴ In doing so they have to choose between competing design paradigms that reflect competing ideas of what makes a good place (Figure 2). What then are the brands available for them to purchase?

The Design Paradigms of Globalization

Architecture and urban design play a major role in fulfilling the imagery demanded by aspiring cities. Perhaps the most prominent are the urban design of economic libertarianism and that of the neo-traditional. There are, however, other competing design ideologies – competing brands – that are seeking attention. The two streams of Modernist thought that we inherited from the beginning of the twentieth century still provide the intellectual foundations for urban designing. They are the Rationalist and the Empiricist. The former with its bold new architectural forms captures the imagination of architects

and powerful clients alike. The latter has been more concerned with reproducing what works well in new forms.

Rationalist paradigms have a clear internally valid logic based on efficiency in movement and construction and the symbolism of being up-to-date. In the 1950s and 1960s, Rationalist models developed into a 'corporate Modernism' used universally executed by many architectural firms who had adopted its basic formal characteristics as the current design paradigm. It was characterized by curtain wall buildings of glass and steel set as individual elements, 'objects in space' rather than space makers. Late in the twentieth century its qualities gave way to a more flamboyant architecture and, often, less of a pure grid-iron layout in urban design. The essence of this modernist paradigm remains the norm across the world.

For mass housing, project after project in Eastern Europe and the countries of the former Soviet Union, but also the United States and Western Europe, was imbued with the spirit of international rationalism. These schemes consist of slab and/or tower blocks set in open green space with parking for cars and children's playgrounds located in between the buildings. The model remains the standard for much of East Asia, particularly China, today. It is seen as the generic solution for housing many people in limited space, although, as it is often argued the same density can be achieved with lower buildings and a more clearly articulated public realm (Figure 3).

From the Empiricist side of twentieth century modernism the generic subdivision of a new town into districts each with its center and with districts being subdivided into neighborhoods each also with its center is still the norm for new developments. It can be regarded as the 'new town layout brand.' We have also

Figure 3: The generic mass housing design in China and an example in Shenzhen (2002). (photo by Kath Kolnick)



⁴ Although much disputed the perception is that if cities are to prosper they require a population of people who are innovators in both the arts and technology (Florida, 2002).

inherited the garden city concept and the townscape approach to urban design from the Empiricists. The former is still with us; the latter, with a little imagination, can be said to have evolved into a number of Neo-traditional approaches to urban design.

The generic garden city model is still widely applied to new suburban design around the world. In many cases the principles behind the creation of the model are neglected; only the imagery is retained. Although developed for cool temperate climates, the model has been used as the basis for new town design in a variety of climatic and cultural contexts, including arid zones where designs would be better off 'brownd' rather than 'greened'. The greenery and the consumption of space are, however, seen as prestigious and so meet the aspirational needs of many of the middle-class particularly in countries where significant economic growth is recent. The Shongsang Lake development (2004 and beyond), for instance, is based on car-ownership rather than the needs of pedestrians (Figure 4).

The urban design projects being developed around the world are clearly based on a handful of global brands. Many have been criticized on a number of grounds but the paradigms continue to be followed. They seem to work well-enough; they are, in economic terms, satisficing solutions.

Does It Matter?

Globalization has been seen as the solution to many of the world's ills and the way to eliminate poverty from the world. In the late nineteenth century Henry George (1839-1897) believed that the universalization of the world's economy by free-trading among nations was highly desirable. His ideas have been influential on libertarian thinking to this day and spill over into urban design. In architecture and urban design globalization has been seen as the natural answer to common problems being faced everywhere. It assumes the universality of a world culture.

Walter Burley Griffin (1876-1937), is amongst those architects who assumed that there is 'no longer any difference between races, and there should be no artificial barrier erected between them' (Griffin, 1946). In his design for Canberra he merged two designs paradigms – the City Beautiful and the Garden City – that were developed in Europe and America during the late nineteenth and early twentieth centuries. The most celebrated statement on the universalism of the problems facing architects was that by Le Corbusier (1923): 'I propose a single building for all nations and all climates.'

The globalization of urban design might seem to be inevitable in an age of patronage and the power of international corporations. Perhaps the observation of Werner Hegemann (1881-1936) on the imagery of Le Corbusier's urban design proposals sums the situation up. They, he thought, would be sought after:

"... not because they are desirable, healthy, reasonable ... but because they are theatrical ... unreasonable and generally harmful and ... part of the money making activity of the metropolis." (Hegemann cited in Oeschlin 1993, 287)



Figure 4: The model of Shongsang Lake, Guangdong, China (2004).
(photo by the author)

Yet Hegemann too sought a universal urbanism that would benefit humanity (Collins, 2005).

In the face of universalizing forces much remains local. In China the universal housing types end up with common touches. Laundry is still hung out on balconies to dry and the people themselves and their activities locate the developments in the country. The built environment is only a backdrop to life. Serious questions can, nevertheless, be raised about the urban designs of the globalized economy. The need to create a more sustainable world as many non-renewable resources get depleted, the needs of the poor, the quality of a locale's natural ecology, and issues of a sense of place remain largely unaddressed and when addressed get treated superficially. If this situation prevails what are the remedies; what are the alternative paradigms? What other brands are available for purchase?

Urban Designing for a Sense of Locale: Current Paradigms

In the urban design field, both in theory and practice there has been a strong reaction to the universalizing tendencies of the urban designs of globalization. While seen as a recent phenomenon this reaction goes back, at least, to colonial architects of the British and French attempting to localize their work by incorporating elements of the aesthetic traditions of specific colonies. In the nineteenth century there were the Indo-Saracenic buildings in India and in the twentieth century the work of French architects in North Africa and Vietnam.⁵

Current efforts to create a paradigm for localizing new urban designs vary from those designers resurrecting vernacular processes to those proposing neo-traditional designs and to those advocating a critical regionalism. Of these the Neo-traditional in the guise of the New Urbanism has attracted the most attention. Before it, postmodernists captured the imagination of a minority of architects and clients by rejecting

⁵ See Lang, Desai and Desai (1997: 99-106) for an overview of the Indo-Saracenic architecture of British Colonial architects.

the blandness of modernist urban designs. They sought to inject a greater liveliness and a sense of locality into their designs. They, however, attempted to meet this end by incorporating traditional elements in an abstract rather than a literal form. The associations were not recognizable to lay people (Groat and Canter, 1979). The abstractions had to be explained. A strong reaction to both modernism and post-modernism can also be traced back to the mid-twentieth century when a number of architects were attracted by vernacular architectures that had evolved over time to meet the climatic characteristics and cultural traditions of specific locales.

The book by Bernard Rudofsky (1905-1988) and the exhibition at the Museum of Modern Art in New York on Architecture without Architects made the intelligentsia look again at settlement patterns and buildings created with limited resources (Rudofsky, 1964). In creating neo-vernacular designs architects failed, however, to consider the aspirations of the inhabitants of those locales. The best known example of such an experience is that of the design of New Gournia near Luxor in Egypt. Hassan Fathy (1900-1989) largely replicated the design of Gournia, a village due to be flooded by the Aswan Dam on the Nile. Fathy certainly demonstrated the utility of indigenous materials such as mud-brick for the modern world but his design, both in its symbolic and utilitarian qualities, represented a world the villagers were trying to escape. The new village was never fully inhabited. The neo-vernacular continues to attract the attention of designers both in holistic form or in bits and pieces (Figure 5).

The Neo-traditionalists have been more successful by relying on the principles rather than simply the forms of traditional architectures in their new designs. They have, however, also fallen into the trap of copying past forms and of assuming past ways of life would endure. The design products are valid only to the extent that their assumptions are accurate. The question is: On what traditions does one draw?

Figure 5: The Neo-Vernacular Shri Ramiaiah Institute campus, Bengaluru, 1990s. (photo by the author)



Neo-traditional Urban Design

The university town of Louvain-la-Neuve (1970s+) was designed to stand in strong contrast to the somewhat soul-less modernist universities built in Belgium during the 1960s (Figure 6). The architecture is Neo-modernist, that is, it is clearly of its time but richer in detail and general character than modernist forms but its urban design harkened back to the past. In this case the medieval city and the embedding of a university in a town rather than being isolated from it in a separate campus was the model.

There are many other examples of neo-traditional urban designs. Seaside, Florida (1979+) with its houses based on the regional patterns was an early example of the work of Andrés Duany and Elizabeth Platter-Zyberk. It has a clear brand image and been a precedent for much that has followed. It placed the requirements of pedestrians to the forefront and through strong design guidelines created a uniformity in appearance that relates Seaside to the architecture of north-west Florida.

Poundbury in England (1993+) and the Income Tax Colony (1997) in India are other examples created by prominent architects (Figure 7). Their quality ultimately depends on the appropriateness of the precedent on which they are based. Jaisalmer in the Thar Desert is a very different world to the monsoon climate of Navi Mumbai. The precedents for the buildings in Poundbury are a very mixed and hardly local set. Much Neo-traditional design, nevertheless, works well multi-dimensionally today because we exaggerate the changes in the ways of life of the middle-class since the world was turned upside down, technologically, socially, and politically during the first half of the twentieth century.

In an urban context the core of Battery Park City (1979-2010), the World Finance Center, is international in character and a precedent for the core of the Docklands in London and the Abandoibarra precinct of Bilbao in Spain. They were, after

Figure 6: The new university town of Louvain-la-Neuve, Belgium, central axis, Michel Woltin and Raymond Lemaire, urban designers, 1970. (photo by Katsura; <http://europolmem.hypotheses.org/702>)





Figure 7: The Income Tax Colony, Navi Mumbai: the precedent Jaisalmer, Rajasthan (left) and the design (right), Raj Rawal, architect, 1996+. (photos by the author)

all, designed by the same architect: César Pelli. The block design and the appearance of the residential buildings was, in contrast, based on the neighborhoods of New York that New Yorkers like –Gramercy Park and Morningside Heights in particular. The same design attitude prevailed in the design of Paternoster Square in London (2003). Critics are dismissive of its architecture and the square being only quasi-public property, but the square functions well on many dimensions; it has the qualities that result in lively urban spaces (Figure 8).

Much Neo-traditionalist urban design is seen by locals as being part of their heritage. It is often disparaged as being out of date and not creative. The cognoscenti of the art academy take a more radical view of how the future, present and the past should go together in urban design and architecture. Critical regionalism is one such approach.

Critical Regionalism

A number of architects reject the banality of modernist urban designs, the individualist abstract expressions of post-modernist designs and the universalism of the urban designs of commercial globalization. They seek to be both modern and local in their designs. While critical regionalism is, like neo-traditional architecture, seen to be a brand of design developed in the late twentieth century its roots go much further back.

Florestano Di Fausto is an example of a pre-World War Two architect seeking to be both modernist and local.⁶ In his designs in Italian controlled Libya, Di Fausto incorporated indigenous patterns that responded to climatic, cultural necessities, and local motifs in an otherwise Italian Rationalist architecture and urban design. He, like our contemporary critical regionalists, believed that design should be grounded in its context and be related to historical traditions without losing a sense of modernity.

Di Fausto's works in Libya had a simplicity of form but were

broadly functional in a manner sought by more renowned architects such as Alvar Aalto and Jørn Utzon. Alvaro Siza is a current architect who applies the concept of critical regionalism to urban design as in Quinta da Malaguieria in Portugal (Figure 9). While of much interest to the cognoscenti and apparently meeting the needs of local people, it is not the type of urban environment that has attracted the widespread attention of contemporary politicians.

Designs through the Sustainable cities Paradigm

Recent efforts to develop generic models of sustainable urban environments include explorations for the generic form of cities given their climate and basic cultural ethos and the somewhat fragmented ideas of the Landscape Urbanists. These explorations are exemplified by the similar designs for cities in the United Arab Emirates by the Office for Metropolitan architecture (OMA) under the leadership of Rem Koolhaas and the Foster Partnership (Figure 10). The former's design for Masadar City and the latter's design for Ras El Khaimah have many of the same urban design characteristics. That is not surprising as they are responding to essentially the same environmental conditions.

Figure 8: Neo-traditionalism at Paternoster Square, London. (photo by Vicente del Rio)



⁶ See Anderson (2010) for an overview of the work Di Fausto and McLaren (2006: 183-218) on Di Fausto's regionalism.



Figure 9: Alvaro Siza's critical regionalism:
Quinta da Malaguieria in Evora, Portugal.
(photo by Eduardo Belleza; www.flickr.com)

Landscape Urbanism represents an approach to urban design that promises much but has yet to present a coherent unified model of its intentions to the professional world. Starting with the plea of Ian McHarg to "design with nature" (McHarg, 1969). Landscape Urbanists take the position that the natural ecology of an area should provide the framework, the basic armature, for an urban design (Steiner, 2011; Kuitert, 2013). Applying this concept to green-field sites may be conceptually, if not politically and economically straight forward, but applying it to existing cities is less so. Little has been said by Landscape Urbanists about how to provide for the ways of life of diverse sets of people within diverse cultural environments.

Conclusion: A Neo-Functional Approach to Urban Design?

Each of our current paradigms represents a thoughtful way to deal with particular concerns. They cannot be dismissed simply as poorly considered models; they meet the basic requirements set by the market place. They do, nevertheless, incur substantial opportunity costs. The question many observers are therefore now asking is: 'Rather than applying a brand, a pre-conceived image of an urban design to a new development, is it possible to develop a problem-solving, opportunity-seizing approach to urban design in which a rich program becomes the basis for a design?' or 'Is it better to marry a paradigmatic and a programmatic approach to design?' Colin Rowe thought so fifty years ago (Rowe, 1963).

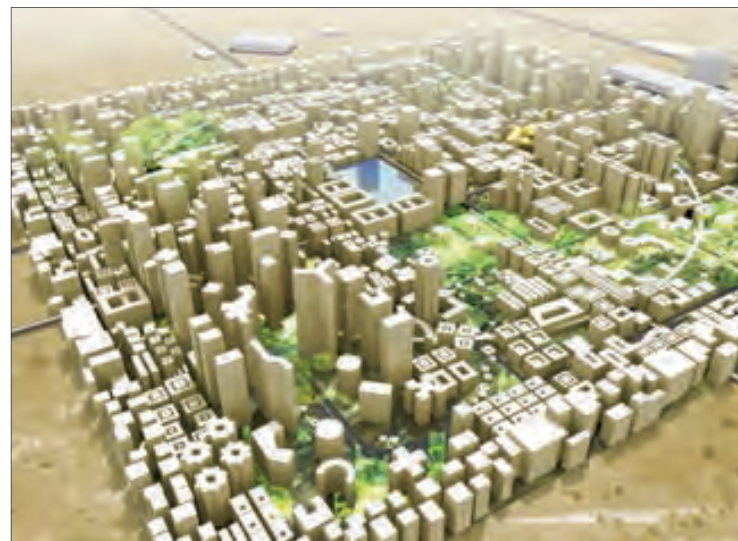
Much thought has been given over the past fifty years to how best to create cities and the precincts that will function well-enough to satisfy the full range of human needs and aspirations of their diverse inhabitants and visitors. This statement recognizes that the problems that need to be addressed are wicked and that the best that can be hoped for in any design is a *Prato* optimal solution – one that fulfils the requirements of some specific ends without being harmful to others. Such designs also need to be robust enough to undergo change.

A problem-solving, program based approach to urban design follows a rational model. The first step is always the political one of setting broad goals and then designing the definition of these goals in a set of specific objectives for activities and aesthetic ends. A statement of these ends forms the program for a project. The program is then met by linking ends with particular patterns of built form through the application of evidence-based design principles. The creative task is one of synthesizing a design that meets often contradictory ends. The design also has to function in a future context that cannot be predicted with certainty. Our ability to predict outcomes well depends on the quality of our substantive theory about how cities work and an understanding of the relationship between social and physical systems. The knowledge is there for us to use if we so desire (Lang and Moleski, 2010).

The issues that have to be addressed in forming a program are numerous. Whose values take precedence? Is it the young or the elderly? Is designing for the flushing effect of breezes more important than the economic benefits of particular patterns of land parcelization? How much should one worry about desirable species of the fauna and flora of cities. Do, for instance, monkeys have the right to continue to live in a city? How comfortable or challenging should the built environment be? Do the symbolic qualities of cities override their pleasantness as places in which to conduct our daily lives? How does one create a sense of place, social and physical? Does the aesthetics of globalization take precedence over the aesthetics of regionalism? How does one marry the two? What elements of a city should be in the foreground and what in the background? Are all such questions to be left to the market place to dictate? The list of questions goes on and on.

The designing process is one of conjecturing and testing. Designers argue about ends and means among themselves, their sponsors, and a variety of interest groups each striving to be heard. Designers' power comes from their knowledge about how cities function in a multi-dimensional manner for diverse populations. Good evidence for designers' claims comes from

Figure 10: A generic design for the arid climate Islamic Arabic City.
(image courtesy of the Office for Metropolitan Architecture)



case studies, and deducing patterns from research-based theoretical knowledge, but we rely more heavily on personal experiences and beliefs. These experiences are important and cannot be discounted but are inevitably heavily biased by our own cultural and social frameworks.

It is clear that the rational model cannot be implemented in a step-by-step fashion. To do so would require comprehensive knowledge and objective thinking. Designing programs and the consequent built environments is a more fragmented process that involves many iterations of thought. The model does, however, provide an 'ideal' framework for asking serious questions about how to design a salubrious city or precinct that is full of opportunities for people to lead a rich life without deleterious effects on the natural flora and fauna of a place. The argument against attempting to follow such a process is that it is time consuming. In the 'real' world decisions have to be made quickly so we have to rely on the brands of good urban form that we have at our disposal.

Modernist urban design, despite many premature obituaries, is alive and well in many places. Such designs function well when the assumptions about people, nature and ways of life on which they are based coincide with contemporary culture-based activity systems, economic conditions and aesthetic values. People do adapt to them well-enough even if the designs do not function well. The modernist urban design paradigm continues to be employed by city planners and architects engaged in new town and housing precinct design in countries such as Korea and China. It is valued for its up-to-date qualities and the privacy it affords. It, has, however been largely rejected in countries such as the United States and the United Kingdom, the so-called Anglo-Saxon world, and in Continental Europe. Even where it is still in vogue, there is a great sense of opportunity costs – the designs could have been better if another paradigm had been followed and/or a much more thorough programming process with community input had been followed. In many east European countries such as Hungary, the unused and meaningless open spaces between blocks of buildings are being filled in to create an environment that affords a richer range of settings for engagements in a communal life. It is no easy design task.

For commercial areas, the urban designs of international economic libertarianism rules supreme in many places and particularly in the modernizing world. Its bold individual buildings set in space attract the attention of many corporate and political leaders around the world today. It assumes the individual motor vehicle is the major mode of transportation and the pedestrian is of little consequence. It is the image that counts. In one proposed design for the proposed new CBD for Dammam in Saudi Arabia the buildings are set in a lush green precinct replete with ponds (Figure 10). Such a design stands in strong contrast to a neo-traditional design for the same site.

The density of the two schemes responds to the same program, or brief, but the way of handling the density is very different.

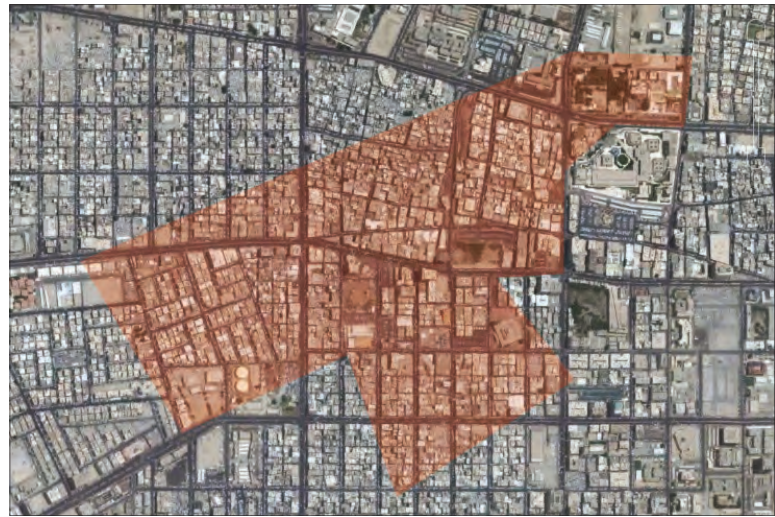
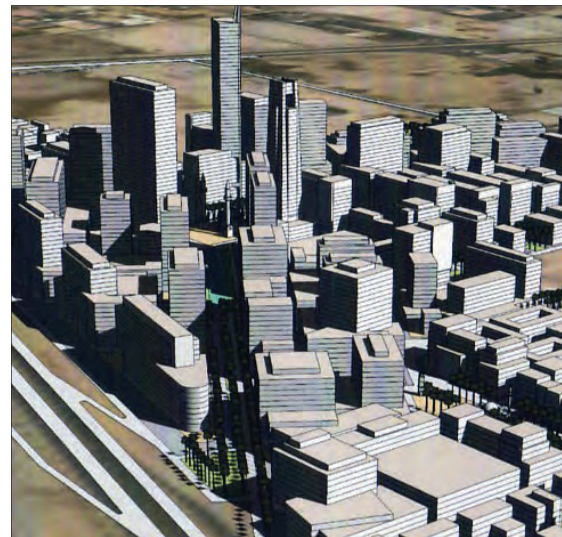


Figure 10 a, b & c: Two proposals for the new CBD in Central Dammam, Saudi Arabia (top). The economic libertarian (middle) and the neo-traditional (bottom), 2007. (sources: a) Google Earth + author archives; b) author; c) courtesy Marina Khoury, DPZ Architects)



The neo-traditional design follows the generic qualities of Dammam's existing street pattern, mixed-use qualities, patterns of climate control, and housing patterns. It provides a much richer set of offerings for the pedestrians in a shaded world. Which is the better scheme? It depends on the criteria used in the evaluation. When I show these two schemes to lay people, architects and students at public and professional society presentations, the economic libertarian scheme is clearly the preferred proposal in the audience's eyes; it is seen as up-to-date. Ultimately it is the power elite that make decisions but they can be persuaded by strong arguments.

How does one move ahead? I have been an advocate for a knowledge-based neo-functional ecological urban design process but have been told that 'designers simply do not and will not work that way'. If this is indeed the case what is needed by urban designers is a new and broad set of generic solutions that deal with diverse cultural environments and climates and assume different levels of technological and economic constraints. This range of possibilities would present professionals working under severe time constraints with a set of models that would form the basis for asking serious questions about how best to address the situation at hand. Whose job is it to produce them? Surely it is that of the academic community.

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Make it Real. Make it Matter. Make it Last.

Uta Birkmayer

MPS, founder & CEO of Xsense authentic places.&

Deni Ruggeri

PhD, Associate Professor of Landscape Architecture, Norwegian University of Life Sciences, Xsense Human Factors Expert.

*“Sense of place” and “place making” became buzz expressions in land development, planning and design. Grounded in psychology, history, and social anthropology, Birkmayer and Ruggeri discuss **Xsense authentic places**’ holistic approach to generating places that are authentic, meaningful, and connected to land and people.*

When we travel around the world, we fall in love with certain places. Almost every traveler becomes enchanted with the villages of Tuscany, the romance of Paris, the flavors of Thailand, the colors of India, Provence’s lavender scents, or the captivating sounds and movements of the Hawaiian hula dance. Such experiences go deep under the skin, they become unforgettable, and, over our lifetimes, they are passed on through storytelling, supported by photos, CDs, recipes, and other souvenirs. These stories define our lives, our identities. We call them magical, delightful, and unforgettable—and while they may not always be tangible, they are all too real.

A place does not exist separate from its stories. When we experience a new place, we become inevitably immersed in its architectural history, its culinary tradition, its flora and fauna—whatever it is, our exploration of a place also becomes a personal reflection of our unique passions. We like to talk about things that are meaningful to us and, thus, the story of an individual is uniquely tailored to what is meaningful to that person. Two people may have completely different stories about Paris, as one may focus on its food while the other on its artistic beauty. Both stories are true, both stories are about Paris; yet the stories are entirely different. Paris is the sum of all these stories. Places that touch us deeply and allow us to remember them as rich stories become more socially and economically sustainable than those places we forget or that never touch us at all.

Early in her career, Uta was inspired by the following comment from a successful developer at Shea Homes:

“You see, Europe has all the history. We have nothing here. What else can we do but to copy them?”

We share this comment with the creators of places (developers, planners, designers, marketers, and operators) by way of introducing them to Xsense’s philosophy on developing meaningful places that enrich lives by highlighting these stories and demonstrating how they may be incorporated into new development. For us at Xsense, it is not a matter of copying the qualities that make Paris, Venice, or Stockholm unique, but

allowing the unique qualities of each place to emerge, become apparent, and become seeds of new stories.

Uta spent many years in the hotel industry, both on the management and design sides. Through her European training where the focus was on the Art of Hospitality, and later through her American education at Cornell’s School of Hotel Management where she learned about the Industry of Hospitality, she experienced both the traditional and innovative sides of the field—two important counterparts. As her passions led her toward new hospitality developments, Uta soon learned that much of the hotel management industry focused on importing foreign themes that delighted guests for a Property Improvement Plan cycle of 8 years—still a widespread industry practice—before the ideas became stale, guests became bored, and the brand needed “refreshing”.

In the thousands of years of its history, Tuscany has never had to artificially reinvent itself. The English countryside remains fundamentally the same, the Japanese carefully repair old temples, and the Swedes lovingly restore 100-year-old baths for the enjoyment and memory making of generations. All these places are connected to their pasts, but they are not stuck in those pasts. They have found ways to tie the past to the future seamlessly that allow their cores, their authenticity to stay true to themselves and thrive. Stephen A. Mouzon describes this type of rooted authenticity as “keeping things going in a healthy way long into an uncertain future” (Figure 1).

Authenticity matters to business. Throughout Uta’s career, she has seen how customers prefer such authentic and rooted places. These places are more efficient to operate and enjoy return visits from people throughout their lifetimes. She was determined to understand what made these many valued places so sustainable, not just on an environmental level, but on the cultural, social, and emotional fronts as well. She recognized the value of this knowledge to her clients who plan new places and rethink existing ones. Thus, she made it Xsense’s mission to teach these clients about the viability of place.

Uta’s team at Xsense is made up researchers selected for their

cultural diversity and trained in the unique Xsense method (more on that later). Working with this core team is a small group of subject experts, typically university professors with specialization in areas such as social factors, history, food culture, health, wellness, and folklore, who work in synch with the Xsense team and local subject experts who are close to the site of development. These local experts usually include citizens with particular knowledge of history and culture, community leaders, and key stakeholders. As a whole, Xsense is made of motivated people who know how to reach out wide and deep to gather information as efficiently as possible, but without rushing. We visit sites, talk to locals, read, write, photograph, and film. Most of all we listen, feel, and observe. Lastly, we document and share what we have learned and refine our findings so they can be truly representative of the place.

Key Principles

As Uta developed her consulting practice over the last 12 years, she uncovered four guiding principles that have helped to inform the work Xsense and its collaborators do in the places where we operate: Experiences are Multi-Sensual; Authenticity is Found, not Made; Meaning is Different for Everyone; and Meaningful Experiences may be Transformative. Before applying these principles through a holistic approach to exciting real-life projects, it is worth describing them in greater depth and illustrating their value to authentic placemaking.

Principle 1: Experiences are Multi-Sensual

As human beings, we remember events and places more vividly when all five senses are engaged (sight, sound, touch, smell, and taste) and when we engage with people in these places. If all sensual triggers tie back to one coherent experience—the smell and energy of a spice market visit in

India, attending a lively and colorful Obon festival in Kyoto, or a Lederhos'n-slapping beer hall at the Oktoberfest in Munich—these memories become unforgettable and can be brought back easily by a signature scent or distinguishing sound bites. We share the memory in the format of stories (Figure 2).

Connected multi-sensual experiences are distinct and valuable economic offerings. They do not only deliver services, they stage experiences. In the experience market, memories are valued more than mere services, which are not memorable. A 3-star hotel room offers a service and that service is, theoretically-speaking, interchangeable with any other 3-star hotel. However, if a guest walks away with a positive memory—packaged into a story—he has made an investment in an experience, which is something well worth paying for.

Here is the key: The more senses we involve, the stronger the experiences and the memories, as long as all of these sensual touch points tie back to one common theme. Tourists may experience a night in Ernest Hemingway's room in Havana (perhaps still smelling his cigar), which may leave them inspired to buy a case of cigars and a Hemingway novel; or a witty Ian Schrager hotel that entertains the senses and makes them feel super-cool or downright awestruck. A great experience creates memories, which guests share as stories; it turns them into promoters and patrons of your brand because you have become part of theirs. The fact that they have paid for it becomes secondary to the experience. People love to buy cigars, books, and other memorabilia that help them remember and share a story that has enriched their lives.

The takeaway point here is that places are not just architecture and design, but sensorial experiences. The more senses involved, the more memorable the event, the more connected the senses, and the stronger the memory. A developer should



Figure 1: Tuscan Village. (Xsense Archives)



Figure 2: Obon Festival, Japan. (Xsense Archives)



Figure 3: Hemingway Room Havana, Cuba. (courtesy of Time & Life Pictures/Getty Image)

be aware of the fact that every investment they make into a place—in terms of architectural design, landscaping, materials, colors, scents, etc.—has the potential to promote the place to a valuable experience. As Uta always preaches: “You’re spending money on bricks, paint, finishes, systems, art, and operations. If aligned wisely, every expenditure will also “sell” the establishment, make a memory, and become part of a valuable story.”

Principle 2: Authenticity is Found, not Made

After years of hotel development experience within hospitality projects in Europe and Asia, Uta settled down in California and founded Xsense experiential design with the goal of helping developers apply the principles of experiential design to create memorable places. However, she soon learned that an experiential approach was a nice tool, but it was not enough to create places where people lived and not just visited as tourists. We like to escape to a resort, but we want to live in a truly authentic place.

There is a distinct difference between visiting Venice in Italy and staying at the Venetian Resort in Las Vegas. Both are man-made experiences. The difference is that one is authentic, while the other is fake. One is sustainable and the other is not. One is a deeply connected cultural experience, the other is a short-term escape. One has deep history, while the other will probably be torn down at some point to make way for something new (Figures 4 & 5).

In 2001, development was booming and interpretations of Tuscan, Greek, and English architecture with modern American proportions and functions were going up at an alarming rate. Xsense’s first major client, Trilogy, an upscale resort-style residential developer, already had the ubiquitous Tuscan style of architecture in place. We asked why. The answer would define Xsense’s future work. “You see, Europe has all the history. We have nothing here. What else can we do but to copy them?” It was at that moment that Uta realized an experiential approach would indeed touch on all of the senses and create a

personal (Vegas or Disney style) brand memory. However, she also realized that it was too shallow an approach to create a true place where people lived rich lives.

Why would we copy architecture from elsewhere? Because there is not an established architecture typical for the area? Because we have fallen in love with certain architecture from elsewhere and we want to replicate that feeling? We all know that a copy of a place we love will not automatically create the same feels we have about the original. One must go deeper to understand how to truly connect to the authentic place before aligning this information with the experiential principles discussed earlier. This process required going back to the originals and researching places such as Tuscany, Paris, and Venice. How did they evolve? How do places in general become what they are? What are the underlying principles that we can use to create lasting places anywhere in the world?

While themed places such as Las Vegas are created by (and for) few people in (and for) a relatively short amount of time, places that naturally evolve over a much longer time frame always work with the genius of the local people: Norwegian architect, architectural historian, and theorist, Christian Norberg-Schulz, called this *genius loci* (in Latin, the spirit of place) or phenomenology of place. What exactly does this mean? First, every place has natural resources (plants, minerals, and water), weather, an economic and sociopolitical environment, climate, etc. In these places, people have found ways to live healthy and productive lives using local resources to shelter and nourish themselves, be healthy, and find happiness and, perhaps, even fulfillment. Second, every generation passes wisdom to the next, and every new generation has the choice and common sense to adapt their ancestors’ wisdom to new situations, new trends, and their own creative thinking processes. There is always a reason why certain things are done in a certain way: the way dwellings are built was because it is most efficient, safe, economical, and beautiful. Colors and ornaments used may originate in belief systems or religions. Traditional recipes may use available crops and herbs. The design of plazas may be

Figure 4: Venice, Italy. (Xsense Archives)



Figure 5: The Venetian, Las Vegas. (Xsense Archives)



influenced by rituals and celebrations linked to historic events, moments of jubilation, and hardship the people have had to overcome. Traditions have been passed down for thousands of years, and every generation has applied these traditions to new trends and new situations.

How did pizza become today's beloved (and often copied) ubiquitous Italian specialty? Tomatoes are from South America and the idea of pita was brought back from the Middle East by the knights Templar. Tomatoes and local herbs and cheeses were placed onto the pita and, viola, pizza! Sometimes individuals travel and import ideas from elsewhere and yet, putting it all together has become an authentic Italian tradition, as has the Venetian carnival, which has deep roots in the tight spaces of Venice that allowed too little privacy. Wearing masks was common practice in business and at parties to simply create more privacy, making a very small place more livable. This practice was elevated to an art form and became a significant element of Venetian culture that still celebrated today (Figure 6).

A few years ago, Uta worked with the community of Holland, Michigan. Community members were not happy with the neighborhood designs that the developer's team produced. The developer was frustrated because he had made efforts to employ what he thought would be an appropriate Dutch style that was in synch with the town's (tourist-focused) architectural code. To understand the reason behind everyone's discontent, Xsense and its experts decided to give people cameras as part of a photovoice exercise and asked them to photograph what they loved and what they didn't love in their town. All of the Dutch-themed architecture, including the imported windmill, was on the un-loved list! Their common remark was "This is Dutch. We're not really Dutch!" So, we formed a focus group in the Netherlands and asked them what it meant to be Dutch. The result crystallized into the one single word "gezelligheid," which is an abstract noun that describes a cozy, fun, quaint atmosphere of belonging, a meaningful togetherness.

Although the residents of Holland, MI had never heard that

word, the photos of what they loved about their place reflected the Netherlands' "gezelligheid" in every sense. We explained to them what "gezelligheid" meant, and they all agreed that they were, indeed, very connected to this traditional Dutch feeling, but not necessarily to the architectural forms that created "gezelligheid" in the old country. The windmills, which were used to drain swamps, produce energy, and make the old country more livable (more "gezellig"), were meaningless in an environment that did not need windmills. What was meaningful in Holland, MI was their beloved red lighthouse, which was, indeed, the breakthrough that made the place economically viable. The result was a development scheme that lowered the cost per square foot, as residents removed the superfluous architecture in favor of smaller spaces, and rejected the use of granite in favor of more humble, less costly materials. The residents felt so connected to the Dutch word, "gezelligheid", and its feeling that they agreed unanimously to call their coffee shop 'Zellig' to remind them of this important concept that connected them to their Dutch roots (Figure 7).

The lesson learned in Holland, MI is one that can easily be transferred to other developments. Authenticity and tradition are not kept alive through architecture alone, but through symbolic meaning or special significance that sits much deeper and may be expressed differently at different times and in different places. In return, these places are made uniquely authentic, resilient, and indisputably sustainable.

At Xsense, we see this traditional and generational thinking as a tree with deep roots. In fact, we use the tree analogy in almost every conversation, as it allows a variety of people to work together democratically without intimidating design-speak. Every place is like a tree, it has roots, a trunk, branches, leaves, and fruit. If the tree is an apple tree, every year it will grow apples. Some years the apples will be bigger, sweeter, and more plentiful than others, but, the tree's DNA only allows that tree to grow apples. The roots of the tree carry the wisdom of our ancestors and new generations of fruit adapt this wisdom to their current climate. Roots are specific to a place

Figure 6: Venetian Carnival, Italy. (Xsense Archives)



Figure 7: Red Lighthouse, Holland MI. (Xsense Archives)



and its climate. If we transplant a tree, it has to adapt to a whole new environment, climate, soil, etc. Places that bear the fruit of stories are typically steeped in authenticity, traditions or roots, a creative genius or something meaningful that nurtures our passions. We may experience the taste of Carpaccio at Harry's Bar where it was invented for a special client who had dietary issues (and named after the artist exhibiting at the time), a traditional Mozart Opera performed in an innovative way; every shape and surface of the 9/11 Memorial in New York reminds us of a very recent tragedy and a way to honor our own heroes in the place that saw their demise.

By being rooted, we feel those places in deeper ways. Sitting in a Starbucks, which no longer ties you to a specific place, is not like having a cup of coffee at Caffè Florian in Venice's St. Marcos Square. The fact that this café has been operating in Venice since 1720 make the place authentic, traditional, and meaningful. The experience it provides does not rely on the coffee alone, but it engages the waiters, patron's attitudes, the music, and the romantic views of the piazza within the context of Venice's history. Taken as a whole, these experiences make its 12 Euro cup of coffee an authentic, unforgettable experience, and a meaningful story in one's life.

Quickly assembled and inauthentic places are like Christmas trees: rootless with shiny ornaments; they look good for about a month and then the tree dies and the shiny ornaments are no longer interesting. Tree-talk is part of many client, community, and stakeholder conversations at Xsense (Figure 8). People quickly understand the meaning of this metaphor regardless of their backgrounds. We actually have pre-printed tree pads we use in most client meetings. It is not unusual for locals to

identify the ornaments in their own communities and point out to architects and planners what is ornamental and inauthentic. As an Xsense expert, Deni Ruggeri has brought his research interests in place attachment and identity to our work. He has reminded us that community ornaments may often be places that support daily lives and communal activities, and it is the interaction of people around these semi-sacred landmarks where the identity of a community is formed.

When Xsense looks at places, we look for their unique diverse roots: natural resources, climate, culture, history, traditions, mysteries, food culture, health, and so forth. These ingredients fill the palette for a design team to create as they allow the new place to grow into branches that connect back to the land: architecture, art, colors, festivals, healing philosophies, hospitality concepts, and other authentic experiences.

When we can see, feel, touch, taste, and smell a place, when we can name it, remember its buildings and landscapes, language, music, art, and culture: We "feel" these roots. Many guidebooks and stories of a place connect us to its roots as we read the reasons behind the use of a particular stone or stonemason technique, the shape of the ovens that bake a unique local bread, the positioning of religious sculptures facing the sunrise. It's when a community can say "We do this because (add something meaningful here)" when we know that the connection to their roots is intact. These places teach us that everything has a reason, a story, and a real and lasting connection. Places that are authentic matter! It was this realization that led Uta to change the name of her company to Xsense Authentic Places.

"Collaborating with Xsense has reinforced for us the notion that great place making requires the ability to integrate design concepts with local customs and cultures into understandable, compelling, and memorable experiences for a project's end users. The staff at Xsense works extremely hard at going beyond the superficial aspects of a storyline, creating experiences of depth and nuance for a project."
Stuart M. Grinstain, AIA – Architect, Williams+Paddon

Figure 8: Xsense's Tree. (Xsense Archives)



Principle 3: The Meaning is Different for Everyone

What exactly are the experiences that entice people to visit and dwell in places? In Xsense's investigations, we have come across a fabulous study conducted every year that asks 100,000 people worldwide what type of experiences they value most (www.makingmeaning.org), these experiences are:

Accomplishment: Achieving goals that make something of a person or a community (e.g., a community river cleanup project).

Beauty: Anything that gives pleasure to the senses, especially when form and function blend.

Community: A sense of union with others around us (e.g., a park or common area where all generations connect in harmony).

Creation: Producing something new and original (e.g., not copying what's been done before but putting thoughts and creativity into something anew and never-done-before solution).

Duty: Responsibility to oneself, one's family, one's community (e.g., donating a talent to serve as a common good, working out, and being healthy).

Enlightenment: People love to get honest and fair information (e.g., let's not ignore the homeless problem, but let's understand the situation with honest facts).

Freedom: Living without unwanted constraints (e.g., the ability to walk through nature without fences; not needing to lock your doors).

Harmony: A balanced and pleasing relationship of parts to a whole (e.g., the way sidewalks interface with street cafes, shops, and traffic).

Justice: The assurance of equitable and unbiased treatment (e.g., there is something to enjoy for every age and interest group).

Oneness: A sense of unity with everyone around us (e.g., a large audience enjoying the same concert or beach, enjoying the sunset, or whale watching).

Redemption: Atonement or deliverance from past failures or decline (e.g., a cool retrofit of a run-down building).

Security: We want to be safe and free of worry about loss; in place design, this demands making people feel safe while still feeling free.

Truth: We are committed to honesty and integrity (e.g., we appreciate open design where we can see the kitchen of a restaurant or a community where the homeless are not hidden from view but integrated in just ways).

Validation: We recognize individuals and groups as worthy of *respect* (e.g., we position historic figures in our parks, honor certain people or events in street or venue names, or make special efforts to include children in the overall experience of a place).

Wonder: We are in awe of creation beyond one's understanding (e.g., we gaze at the pyramids in absolute amazement not quite understanding how its construction was possible, we take in the views of Venice from a gondola in complete awe of how the Venetians transformed a malaria-infested marshland, we arrive at a hotel and are flabbergasted by how the staff knew to stock the minibar with a favorite snack).

We have added Health and Wellbeing to this master list of meaningful experiences. Health is as important today as it has been for millennia. All traditional cultures have instinctively included elements of health and wellbeing into their everyday lives and in the design of their places—even if it has required removing unhealthy elements like malaria-infested swamps.

For example, an important piece in the success of Venice was an uninhabitable malaria-infested swamp. The genius of its local people drained it, developed suitable economies, architectural styles, navigation system, cultures, cuisine, and traditions that would have been impossible without health as the primary prerequisite. The point being, every culture requires some effort to adapt and transform to survive and strive!

What is important is that we cannot buy meaning. We cannot buy oneness, enlightenment, accomplishment, or wonder. These meaningful events happen within us. They give us goose bumps or make us gasp; they create the deepest fulfillment or take our breath away. What we have to ask ourselves as consultants, developers, and builders is, 'Does this place have the potential to elicit those meaningful events within people?'

Principle 4: Meaningful Experiences may be Transformative

The last of the guiding principles, personal transformation, is somewhat a combination of the first three, but significant enough to be described as a separate entity because it has the capability of taking any place to a uniquely distinguished level.

If experiences can be measured in terms of the memories they generate, some experiences have the potential to be more than just memories, they can elicit sustained change. Some environments can simply change the way you feel about yourself, the world, and the future. Attending a boot camp may leave you more physically and mentally fit, a semester at a university may leave you more educated, a visit to an *ashram* may leave you more enlightened.

Such personal transformations are most successful when the experience is complete, the environment authentic, and the touch points meaningful. Although we readily sell transformations in the form of tuition, travel, and membership, the actual value of a transformation cannot be bought—it happens within and through the person. What developers should focus on are those experiences that help individuals reach their personally transformative events, which will forever connect them to the venue. That is the truly priceless value of authentic place development, Xsense style.

The Methodology

These four core principles: the Experience, Authenticity, Meaning, and Transformation lie at the core of our work at Xsense along with common sense and intuition. We pull it all together through our unique methodology, a semi-structured way to understand what makes a place memorable, meaningful, and lasting. We supply deep research, publication, and meaningful interaction with the development team, local community, and subject experts. Experts can have small roles in the process, contributing to methodological oversight, or adding something completely new.

Deni—co-author of this paper—offered his own expertise in

mapping a community's 'sacred' spots so that they are built upon, rather than forgotten. Deni was also integral in the introduction of new methods in Xsense's already established methodology, including the use of pictures to elicit stories about people and their connections to places. In another project, he helped engage a large stakeholder group in a series of community charrettes.

Typically, a developer, operator, or landowner hires Xsense three or four months before the first design charrette when it is necessary to understand the roots of a place and the fruits of its tree. A team of anthropological researchers and subject experts use different research methods that often begin by skimming the internet and quickly graduate to meeting community members, stakeholders, more experts and, of course, the development team. We listen. We ask. We look. We photograph. We film. We read. We gather. We collect an amazing amount of information to understand the place, the people, the traditions, and how these traditions are expressed today. We ask: What is important to them? What are their fears? What are they excited about? What are the developer's dreams? What does the developer perceive as a negative? We often share our research with local community members and ask what's missing and sometimes we're told that soccer, rain, or a certain smell are incredibly important. We ask children, mothers, visiting grandparents, activists, artists, and healers. We read the slogans on cars, t-shirts, and lunch boxes; we meet the local craft people, bakers, and musicians.

Planners don't often have the privilege of spending more than a day on site to grasp the essence of place. At Xsense, we aim to bridge that gap by spending quality time with the locals. It gets personal. People take us to their grandmothers' houses in the middle of the jungle; we're invited to sit with shipwrecked historians living in the mountains and taste the food only a local can cook. We spend time with land owners and developers to understand their deeper motivations, dreams, ideas, and issues, and they often remark that no one ever spends this much time with them to really listen.

It is important that we take the time to do this research before we begin to interpret the data and turn it into creative acts. That process is reserved for a later phase and a larger group. Initially, we focus only on the roots and publish several iterations of our exploratory research until the development team is convinced we have grasped the most important elements (e.g., roots, to include statistics, population, weather, geography, biology, history, culture, legends, perceived "negatives," stakeholder opinions, and developer visions). The information is then assembled into an ever-expanding master document that we call an Exploration Book. The Exploration Book is a workbook that leaves plenty of room for notes and idea sketching—an important component of Xsense's unique visioning and implementation process. Before the first design charrette, all members of the charrette receive their books and are asked to read them and jot down or sketch ideas and thoughts inspired by the research.

The Xsense's work runs about 7-10% of a project's professional services budget or a mere 0.1% to 0.15% of the total development cost, an "almost insignificant amount in lieu of the overall value added and costs saved on any project," remarked Stephen Tindle, former project manager at Shea Homes.

And here is the beauty and value of what Xsense does: Say you are reading a chapter on the ubiquitous tree on the property, the Mesquite tree. The audience includes the developer, the land planner, the engineer, the architect, the interior designer, the marketing manager, the spa manager, the restaurant manager, and chosen individuals from the community. Although all of these individuals are reading the exact same chapter about the Mesquite tree, they will have fundamentally different ideas and find a variety of meanings as to how to use the Mesquite tree in the development because of their inevitable differences. The developer may think that these trees need to be cut down, the land planner may consider how to integrate them into the overall landscaping, the engineer may think "Mesquite Avenue" may be a great name for the central avenue, the architect may want to learn how the Mesquite tree survives in the desert and use bio-mimicry principles in the architectural design, the interior designer may look at design elements that feature the shiny pods of the Mesquite tree, the marketing manager may see the tree on a brochure, the spa manager may design a body scrub treatment using ground mesquite seeds, while the restaurant manager may create low-glycemic menu items baked with mesquite flour. The complex interweaving of different truths synthesized into the Experience Book helps us define the synthesized truths that help us define what makes the place interesting, compelling, and full of surprises.

During a series of visioning and design charrettes, the team discusses which roots are the most important and which may be secondary or just little "hairline" roots. As the roots finally connect into a tree trunk, the vision comes together. The team is now ready to apply the vision to the tree's branches, always carefully connecting the fruits back to its roots. This process may feel like extra work and extra time spent during these early phases, but our project teams often remark that a strong vision ultimately allows them to work faster down the line, establish stronger synergies with one another, and ultimately leads to fewer rework and change orders—and they have more fun. Teams particularly enjoy this process because it allows them to do what they do best: Create and collaborate to enable meaningful results (Figure 9).

You may imagine the Exploration Book morphing into an Exploration Guidebook, which explains every aspect of the development connected with meaning for a vastly diverse audience, but we invite you to imagine further the twisting of various meanings and stories into inventions that are entirely new, multifaceted, amazingly creative, and full of elements that define the place (in lieu of a marketing brochure). Welcome to a real place!



Figure 9: Uta in a design charrette in Dominical, Costa Rica. (Xsense Archives)

Case Studies: Stories of Authentic Places

Describing the wealth of research and discoveries Xsense has made over the years would fill many more pages than are available in this essay. Over the following pages, we highlight significant elements we have uncovered that defined the development of these projects. In some cases, these site elements were seen initially as constraints or as things to be removed or hidden to avoid interference with the development plans, but through our investigations, they became assets to each project.¹

The Story of Rocks and People

Setting: Resort-style community adjacent to historic Marsh House in Brentwood, CA.

Setting: Located at the foot of Mount Diablo with dramatic views at the site of the original end of the historic California Trail. 1,600 acres, 1,450 homes, clubhouse, trails, and vineyards.

Constraints: The site was covered with large boulders and rocks, which were being exploded as Uta first walked the site with the comment “We don’t need these rocks!” and “This is costing a fortune...” (Figure 10).

Background Situation: Brentwood had already decided the “theme” would be a Vineyard and the architectural style would be “Tuscan.” The developer also wanted to include the historic aspect of John Marsh, the original landowner and prominent California visionary, as well as the Native American Village on his property.

Roots: Xsense uncovered the hidden meaning of the local rock so that destruction not only stopped, but this local Mount Diablo granite found an honorable and meaningful place in the site design and cultural tradition. We discovered that the local

Miwok tribe cleverly used these stones for cooking and sweat lodges, and they worshipped Mount Diablo and its stones were sacred. We also researched the life and works of John Marsh and his wife, Abby, and his scholarly tradition as a Harvard graduate. We discovered that Marsh house was located at the end of the California Trail—the “immigration” route for many Americans into Mexican California (Figures 11 and 12).

Authenticity, Meaning, and Stories: Traditional customer touch points were connected cleverly to root stories. The result was that every interaction with such experiences had the potential to connect to a deep and meaningful core element of this land and its people.

The Spa: After discovering the word for rock in the Miwok language, the spa was named Sawā Spa, and featured rock and stone in its design, sauna, spa treatments, and retail items. A large warm “touchable” boulder became the focal point of the spa, which was another element that retold the story of the Miwok people.

The Warm Rock Tea Garden: During exploration, Xsense uncovered Abby Marsh’s tradition to invite the Miwok women for peppermint tea. In the landscape plan, peppermint was

Figure 10: Trilogy Vineyards, site with original rocks. (Xsense Archives)



Figure 11: Marsh House. (courtesy of the archives of Contra Costa County Historical Society, Martinez, CA)



¹ These and several other case studies (with full details) are available on our website www.xsenseauthenticplaces.com.

planted around rocks inviting visitors to sit, connect, chat, and enjoy peppermint tea. Through this ritual, the story of health and healing was rewoven into the development (Figure 13).

Hot Rock Cooking: Native Americans placed hot rocks into soup or other liquids to heat the liquid, as they had no pottery, which could be placed over a fire. This hot rock technique can be translated into modern tabletop hot-rock cooking in the restaurant, especially with the traditional steaks of the historic ranch.

Gifts & Retail: Hand-size rocks were cleverly engraved with the writings of John Marsh and family names for new home buyers, thus connecting new residents to the story of the Miwok, Mount Diablo, and the wisdom John Marsh brought to the area.

Street names: Naming is an important strategy in Xsense's storytelling approach. Names such as Sacred Mountain Lane, Healing Rock Court, and California Trail connect to the many stories of this unique place and contribute to the establishment of new authentic experiences.

Venue names: Club Los Meganos ties back to the original rancho name; Café d'Oro ties back to a legend of gold buried on the site (even officially mentioned in home sales contracts); Abby's Studio Kitchen, The Marsh Library, The Delta Athletic Club, and the Mount Diablo Ballroom remind us of elements of the history of John Marsh and his neighbors, which add depth and the potential to dive into the place's story (Figure 14).

"Uta and her Xsense team have been integral to the success of our Trilogy communities. This is particularly the case when we have brought them on board in the earliest, conceptual stages of our planning and design process. The world-class skillsets that Xsense offers, as an augmentation to our team's vision, have become fundamental to our success. Through their extensive research, creativity, and meticulous execution, Xsense has been invaluable in helping us establish not only a decisive competitive advantage, but also creating communities that feel right to our residents. The value-added ingredients that Xsense delivers, far beyond the 'bricks and mortar' of their home, give our residents a sense of belonging to a real community, in the true sense of the term. That was always our goal when we conceived the Trilogy concept and Xsense has helped us raise the bar on the delivery of our vision." Stephen Tindle – General Manager, Trilogy Vineyards, Shea Homes.

The All-American Story of Blue Denim

Setting: Casual resort-style community adjacent to Tracy, CA.

Site: Flat & windy with no particular views or ambiance; 1,400 acres, 1,200 homes, & golf course.

Background Situation: The developer was concerned that the site had no charm and that it was too windy and isolated. The project, however, had a name, "Mountain House," which could not be changed as it was part of the identity of the larger



Figure 12: John Marsh with Native Americans at Los Meganos Ranch, ca. 1850s. (courtesy of Contra Costa County Historical Society, Martinez, CA)



Figure 13: Abby's Rock Tea Garden. (courtesy of The Wallace Group)

Figure 14: Club Los Meganos, Trilogy. (courtesy of The Wallace Group)



community by the same name. The target market for this community was a culturally and generationally diverse group of people with various ethnic backgrounds: Middle East, Far East, South America, Asia, and North America.

Roots: Xsense began by searching for the roots of the name. There was no mountain in sight, so why would such a place be called Mountain House? Our research proved quite challenging. There was no record of a Mountain House online nor did the local museum have any information. Our persistent research led us to the house of a local writer who shared with us a chapter she had been writing on Mountain House and its identity over the centuries. The book was published 12 months later.

Thanks to our research, we discovered that Mountain House—located only four miles away as the crow flies—had a diverse history, beginning as a stagecoach and a place born to provide “real hospitality for man and beast” during California’s Gold Rush (Ann Marshall Homan’s *Historic Livermore, California*).

Figure 15: Mountain House today: a Harley hangout. (Xsense Archives)



Figure 16: Mountain House Clubhouse: as comfortable as your favorite pair of denims. (courtesy DTJ Design)



A biker hangout today, its original structure was a blue denim tent that was later replaced by an adobe building, and eventually re-built as a wooden structure—a sign of its adaptability to changing times. From shelter to restaurant, from a restful amusement to a biker’s pit stop, its use had also changed overtime (Figure 15). The denim tent finding was intriguing. Upon further research, we were fascinated to learn that Levi Strauss sold blue denim tents for about 20 years before getting into his much more lucrative apparel business. Another impelling story referred to its ownership by a German immigrant named Simon Zimmermann, a man who was known for his good humor, funny accent, and knack for hospitality. He also loved the wind! We located the great-great-granddaughter of Simon Zimmermann, Noreen Perschud, who was fascinated with our research and supplied us with historic anecdotes and artifacts, including samples of Simon’s handwriting and signature.

Authentic, Traditional, & Meaningful Experiences and Stories: The denim story uncovered during Xsense’s explorations is an authentic part of American History, yet unmistakably pan-ethnic. Around the world, denim has become a symbol of an honest and unpretentious fabric that easily adapts to every culture and generation, and we found it would be a good fit with the residents of Mountain House. Looking at the deeper meaning of denim, we discovered the origin of its name, which could be traced back to the city of Nîmes in France where the fabric was born and named “de Nîmes” (meaning “from Nîmes”), which eventually became denim. Xsense also discovered that it was traditionally woven with a neutral and colored thread, but that it was not always blue. The traditional indigo color, we found, was probably due to the availability of indigo dye in the region. Levi Strauss, a transplanted Bavarian, would easily have recognized in it a reference to the colors of the Bavarian blue and white flag, while Simon Zimmerman would have seen Prussian blue. In every way, blue denim became the thread that helped connect the past and present of Mountain House.

The experiences created as a result of Xsense’s exploration included the following:

The new Community Clubhouse was designed to feel like everyone’s favorite pair of blue denims, giving continuity to the traditional “real hospitality for man and beast” at the core of the story (Figure 16).

Following the tradition of worldly open-mindedness, the model homes took inspiration from local California architecture integrated to enticing design elements from around the world: Naan ovens, tatami rooms, meditation areas facing mecca, and Bavarian blue shutters. This approach tapped into the multicultural story of denim as a metaphor of the American melting pot.

Wind games and wind art became part of the landscape design and a basis for community events such as an annual kite festival, which connected the community to Simon Zimmerman’s love for the wind.

Color therapy, Aromatherapy, and pan-ethnic treatments were the basis for the spa, and they expanded on simple elements that are used on a global level and that can tell different local stories when combined with the essence of the place.

Pan-ethnic: community festivals, food traditions, design options, and the sales strategy took a decidedly pan-ethnic approach to celebrating not only the weaving of denim, but the weaving of culture as the core tradition of the place (Figure 14).

The new restaurant was named “Zimmermann’s,” thus, linking it to Mountain House and his unique kind of hospitality that translates into all ages and times.

The suggested spelling of Mountain House with the “i” of Nimes became a common conversation starter and allowed every employee and resident to link to the site’s historical narratives of blue denim, the denim tents, and the history of Mountain House.

“As Director of Community Design, responsible for the ‘vision’ of lifestyle architecture, site design, and landscape, I was impressed and intrigued by the personal connection and innovation that Uta and the Xsense team brought to our envisioning process. Through reconnaissance, insight, and inspiration, expressed in words, visuals, and mementos, Xsense guided the crafting of a relevant story of place through collaborative design. Our client will benefit from their unique ‘kit of ideas’ to better position and foster a distinctive ‘lifestyle culture’ for the community.”

Steven James, AIA – Principal, DTJ Design

The Story of Rain, Coffee, and Pura Vida

Setting: Residential and local community development with cultural and hospitality offerings.

Site: Eight miles of Costa Rican rainforest and Pacific beachfront.

Situation: Among the many unique elements that characterized this site was the copious rain, which the landowner perceived as a major point of weakness in this project. Indeed, the rain falls 70% of the year. This challenge became a focus in Xsense’s investigation.

Roots: During the Exploration phase, Xsense spent significant time researching all that could be done with rain and what it meant to the local community. During a typical downpour, Uta asked a group of locals how many words they had for rain. She explained how Eskimos have over one hundred words for snow; they must have many words for rain. A spirited and lively discussion led to a listing of wonderfully poetic names that described different rain conditions, from “Cat’s Fur” used to indicate a gentle drizzle to “the Sky is Coming Down” to describe torrential rains. There were about twelve equally beautiful descriptions that helped us understand how the locals engaged and connected with this fundamental element. The tradition of rain was evidently engrained in the culture

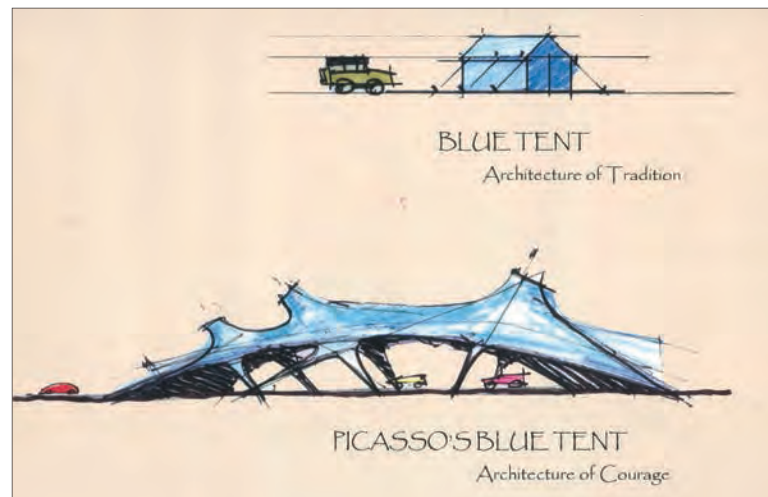


Figure 17: Mountain House's Blue tent reinterpretation.
(courtesy DTJ Design)

because there was no way to avoid it, so they embraced it with their beautiful language. The research team proceeded to study everything that could be done with rain, from rain music to rain dances.

The Exploration findings also revealed other important community landmarks, such as the traditional pulperia, a convenience-type store where one can buy anything, gossip, or meet a future spouse. The pulperia is also the place for dance lessons and to enjoy an incredible cup of Costa Rican coffee, nibble on pastries while relaxing in a traditional rocking chair, and engage in what they call Pura Vida, pure life or “the essence of life.”

Authenticity, Meaning, and Stories: As we often do, Xsense organized a community charrette to uncover the shared vision for the new town center design, which was to include a public square, a pulperia, and a café. During the charrette, residents discussed the rain and its related traditions.

We contemplated rain dancers entertaining the patrons in the café when the local engineer critiqued our euphoric discourse on water and rain, and reveal to us that, in reality, there was a water shortage, because water was never captured and filtered and simply ran down the mountain and into the ocean! After an initial quiet pause, our environmental engineer suggested creating beautiful water filters on top of people’s homes and the café so the water that the community so desperately needed could be filtered through an iconic architectural form. As we discussed the new architectural filters, local coffee aficionados informed us that different rainfalls had different pH levels and different coffees were better paired with certain types of water pH. A completely new and innovative concept emerged for the coffee shop: Water would be filtered ceremoniously into the center of the coffee shop and used to make specific kinds of coffee, thus, making coffee drinking a deeply meaningful



Figure 18: Pulperia in Palmar Sur, Costa Rica. (Xsense Archives)

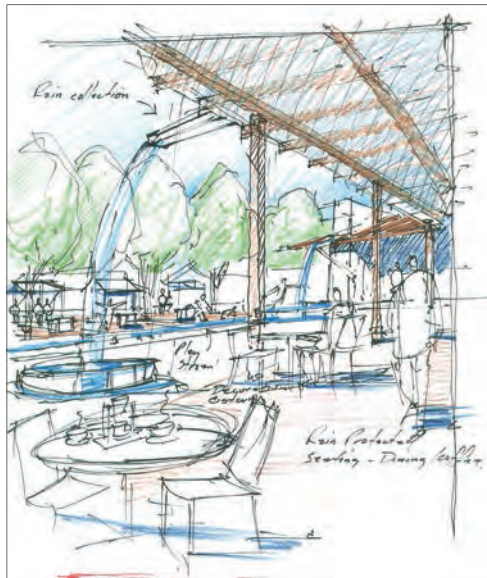


Figure 19: Rain architecture.
(courtesy Harmony Project)

Figure 20: Rain Dance Square. (courtesy Harmony Project)



experience that valued local tradition and added an element of ingenuity and wonder to connect a constraint to the local love for rain, coffee, Pura Vida, and sustainability (Figures 30, 31, 32). These insights also led the architects to design the plaza and buildings according to a new gestalt that said, "We own the rain."

"Few convert challenge to brilliant inspiration. For the decade I have known Uta in Asia, this was her routine. As a businesswoman immersed in masculine cultures, this is an additional achievement. Her perennial state of energy, self-challenge, innovation, and organization is the genesis of her Xsense genius. For Uta, the cliché is to practice what you preach and connect to culture in meaningful ways. Her efforts are exponential—with results that are anything but cliché." Bradford Zak – Founder, New Tourism & The Harmony Project

Authoring Many More Stories

Over the course of the years, Xsense has researched many stories and communities, from places grounded in family histories of smuggling, to utopian communities seeking to be reconnected to their original communal living values, to the a wonderful stretch of California coastline where we worked with descendants of the original Native American inhabitants seeking to re-root to the land of their ancestors and heal the site from its recent history of environmental degradation. Each story is unique, each place characteristic, and each exploration slightly different, which allows the authenticity of each place and its people to emerge. Throughout it all, we have brought together a range of skills, techniques, and knowledge, and have grown as individuals together with the stakeholders we have served. We have created value that, while hard to quantify at times, is evident in the success of the projects we have helped finalize, or the processes we have helped set into motion by putting into practice the four principles, which are worth reiterating here:

Principle 1: Experiences are Multi-Sensual

Principle 2: Authenticity is Found not Made

Principle 3: Meaning is Different for Everyone

Principle 4: Meaningful Experiences May be Transformative

Recommendations for Successful and Authentic Places

Legendary places are not created overnight; they grow and change with time. If we set out to add to the human spirit by creating new places, we must first tap into their roots to deeply understand the contexts and add to their souls by connecting to their authenticity: their physical form, meaningful traditions, and historical narrative. Authentic places cannot be themed or imposed top-down; they are the result of adaptation and change overtime. By tapping into the existing authenticity of a place, we can ensure that new development will be loved and, therefore, will be sustainable because all generations will find value and meaning they wish to keep alive. Most of

all, places are not only made of things, but consist of makers of experiences and may elicit meaningful transformations that can be an important added value to any project and to people's lives.

There is an art and science to finding roots and uncovering the traditions that nurture them with new vital lymph. There are people who appear to have a natural instinct for this type of work, and at Xsense, we take great care in selecting a culturally diverse group of individuals with an unparalleled ability to conduct deep research, read between the lines, and unveil meaningful information that can help connect past with present.

It is imperative to take as much time as you can possibly afford to understand a place, its people, its traditions, its challenges, and its many opportunities. The more time you spend up front, the deeper and more resilient the product. Probably one of the greatest downfalls is that developers neither carve out the budget nor the time for the type of investigation needed before the design clock can start ticking, or it may be that a planner's own research never gets passed on to the community or the rest of the team. Xsense's work not only delivers the inspiration needed for physical design, but it supplies a place and set of lived experiences far superior to any marketing story or theme. Our work is intended to give operational direction, human resource training, and a physical roadmap to help agents of change and development keep the place alive and interesting for future generations, and throughout inevitable adaptation phases. This requires the establishment of a culture of honoring the authentic roots of place. For larger projects, such as entire communities, we often recommend setting up a dedicated Experience Center, a place of learning and inspiration for future residents, visitors, local shopkeepers, restaurateurs, architects, and planners who can tap into this resource to ensure their local businesses are connected to the vital traditions and stories of the place.

To all of those engaged in the art of making places, I suggest a few questions to start. Are the places you aim to create connected to meaning, tradition, and social and environmental sustainability? Is it authentic? Does it mean anything? It is valuable? And, most of all, will it last?

Want to create a story? Don't just build one. Build on one. You think there's nothing there? There always is.



Figure 32: Pura Vida coffee break during the design charrette in Dominical. (Xsense Archives)

Rethinking Shelter and Tiny House Communities: Dignity Village, Portland and Lessons for San Luis Obispo

Anne Wyatt

MCRP Cal Poly (2005)
Former County of San Luis Obispo Planning Commissioner

Homelessness is a growing concern for communities in the United States, and planners are looking for innovative ways to respond to it. Anne Wyatt, a planner in the San Luis Obispo area and an egress from Cal Poly's MCRP program, discusses Dignity Village, a city-recognized encampment of 60 families in Portland. She points out both benefits and challenges, and takes away several inspiring lessons for planning.

Dignity Village Portland (DV), a community of approximately 50 tiny houses with a common house with kitchen, toilets and showers, provides a successful operating model of how we may collaboratively shelter a small segment of the approximately 2,300 unhoused persons in San Luis Obispo. The non-profit Hope's Village of San Luis Obispo now attempts to acquire a ten-acre parcel for a similar village. History and lessons from Portland may strengthen chances of success for Hope's Village.

In 2012, when I visited Dignity Village, it had housed approximately 60 persons at a time over a ten-year period. Lease renewals with the City of Portland were underway to extend the dollar-a-year lease and continue the community operation.

"People call this a homeless camp, but we have homes. We are no longer homeless. Why is it a homeless camp then?"
David, Dignity Village resident

David, our tour guide, posed this pertinent question at the start of our Dignity Village tour. He ushered my friend Elaine and me around on a typical gray Portland day that threatened rain. David immediately pointed out one of many challenging realities: there are different ideas how to describe and define "homeless" persons, before we even begin to address sheltering them. Becky Jorgeson, a San Luis Obispo advocate for unhoused persons and president and founder of Hope's Village, suggests substituting the terms "unhoused" or "landless" for "homeless," (personal communication June 14, 2014). Spellcheck does not accept "unhoused," but I have

adopted this term. Labels affect the way we frame things, so they are useful to call out and consider at the start of a journey.

Elaine and I—housers working toward provision of shelter for all—had come to Portland's Dignity Village armed with Pata-gonia rain clothes to learn more about how this unconventional community worked. We recognized that issues are complex. Still, averting our eyes neither makes homelessness nor messy challenges go away.

General Description and History

DV resembled my sister's suburban-gated community in some respects, fenced in with one official way in and out. Similar to entering at my sister's enclave north of San Francisco, Elaine and I signed in at the security hut, as required, and stated our purpose of entry, lacking a contact. As two women in sporty clothes hopping out of a Honda Fit, we were deemed worthy of entry and welcomed, even though at the time we knew no residents and lacked official business.

Figure 1: Sign and mail box at Dignity Village's entrance.
(photo by the author)



Note about the author: Anne Wyatt is a freelance writer specializing in housing and housing policy. She enjoys wandering around peeking into open windows observing the relationships between houses and their people, challenging assumption, restoring funky old buildings and working with materials at hand. She is completing her first book, *Downward Mobility: Revisiting Shelter*, a kooky travel story. A former County of San Luis Obispo Planning Commissioner, she graduated from Cal Poly with an MCRP in 2005. Contact her at a.reneewyatt@gmail.com.

Suburban-gated community comparisons may end at the front security gate. Some would say comparison to the jail next door to DV would be more apt. A municipal composting facility on the other side of DV made it challenging to hear David, our guide. Large grinding equipment has a way of disrupting things, as do jets. Beyond DV and the noisy composting facility was PDX, Portland's airport. The site, amongst public facilities, was city-owned and available, not pristine.

Established in 2000, DV arose out of a self-organized "Out of the Doorways" movement. A group of unhoused persons bonded together and demanded a better solution than sleeping in doorways. The goal, according to founding documents provided by community organizer Mark Lakeman (2004), was "to create a community oriented, efficient, sustainable, temporary residential living community for homeless adult residents."

The original intent, according to Lakeman, was to serve County residents not already served by existing services. Residency was not limited to this target population, but this group included those excluded from other programs, including parolees, 288 and 290 sexual offenders, and persons with no state issued identification.

Inclusivity, serving of the underserved, makes theoretical sense. There is long standing tradition of attempt at equal treatment. Jesus just broke bread and passed the wine without asking a lot of questions, as the story gets told. However, some residents complained to me on the visit that the inclusionary vision made day-to-day living problematic. I recently heard a similar complaint in an Occupy Detroit squatter settlement. The Occupy Movement may have crumbled under the weight of its noble, inclusive ideals. DV, like so many groups I have watched and participated in, struggled as it attempted to align ideals with day-to-day reality.

As planners, we talk high-mindedly about diversity and inclusivity, but practical challenges involved are important considerations; inclusivity is a nice theoretical concept, but it

is hard to live, build, and create when crazy, scary thieves and druggies live next door, howl at the moon at all hours, and steal your bike, bread, wine, and tools. Many planners live in tidy condo complexes and subdivisions with homeowners' associations, with locked garage doors, and thick booklets of covenants, conditions, and restrictions for reasons. Diversity can be like Mother Theresa or that admired relative we often choose not to stand too close to because she makes us look selfish, petty, and forces us out of our comfort zones as we challenge assumptions and decide whether we want to live with the stench of reality or not.

DV was a two-acre cluster of approximately 50 self-built 200 square foot or smaller "temporary movable" structures (think toolsheds). The City of Portland leased the property, about the amount of space that ten typical suburban homes would sit on, to the not-for-profit 501(c)(3) community group in 2000. In addition to the common house, kitchen, toilets, and showers, the community shared raised-bed gardens, a computer room, garden shed, parking area, sales (recycle) area, and entry station.

Over the years, DV has housed 50-70 adults at one time, under 1% of the estimated Portland unhoused population. The other 99% of unhoused persons in Portland were not pounding on DV doors demanding admittance. Given this context, it is important to acknowledge that DV is one option for housing unhoused persons, not a one-size-fits-all solution.

While not a solution for all, the DV has proven transformational for some. Mark Lakeman, a Portland architect who helped found DV, inspired a large group and kicked off the community village movement in San Luis Obispo during a talk he gave in 2011. He told me in a phone conversation shortly after that witnessing the transformation in confidence and interpersonal social skills of residents was amazing. Some residents, he said, came into the group unable to piece together a sentence at first. Then after working together could eloquently testify at city council meetings. "It took a few years of hand holding," he said, but at some point residents stepped into community

Figure 2: View of Dignity Village's major thoroughfare.
(from: <http://www.communitecture.net/dignity-village.html>)



Figure 3: Parking just outside the main gate. (photo by the author)





Figures 3 and 4: Example of stylish homes at Dignity Village. (photos by the author)

sufficiency (M. Lakeman, personal communication, 2011). (Because my visit was brief with only a few point-in-time conversations, I was not able to judge this claim.)

Homes

The 50 individual houses sat two to four deep along a road in a T off the main entry. Two-thirds were single occupancy and one-third were shared homes, David estimated. Propane heater boxes and tanks showed on exterior walls. Except for some homes with individual solar panels, there was no plumbing or electricity inside homes. Most structures were standard stick frame, ranging from trendy homemade Tiny House charm to tarp-tacked-over-roof-ramshackle. Accommodating for heavy rain events and rodent control, all residences were on platforms raised several feet off the ground.

As with a city block in a funky, gentrifying neighborhood, some structures in DV seemed to succeed and serve purpose. A vacant, half demolished straw bale and cob (sand, clay, and straw) structure stood decomposing in the weather, uninhabited by humans, an example of something that did not work.

"Rats," our guide David explained. Anyone who's experimented with natural home building materials probably has a few rodent stories. It is not altogether uncommon to confuse hay and straw, for example, an important distinction when binding earthen building mixes and doing straw bale construction. We seem to like to experiment with architectural form on our unhoused. They make for a ready concrete "problem" to "solve," and practically, without a lot of options, they make willing experimental subjects.

Village Location and Transit

Loud neighbors behind bars make for minimal opposition, but also mean DV residents have to travel some distance for

services, such as food, healthcare and social services. Six miles from downtown Portland, it may take over 30 minutes by bicycle or by local bus to get from DV to other places. Residents probably benefit little from proximity to air travel, but bus Route 70 goes by the front entrance and connects to Bus 17. It takes about 45 minutes to get downtown to the social services center. When we visit, the cost of a day bus pass ranges from \$2 to \$5. Transportation costs can be a large part of Village residents' budgets. There were a couple of car parking spaces at the front of the Village, and David told us a few residents had cars. It is likely that residents often shared rides in an informal system of car sharing and reciprocity.

Members and Rules

Membership and residence in DV was of variable terms, contingent upon adherence to rules and a one-month trial residence period. In addition to pitching in for costs, DV residents, "members," were required to volunteer ten hours per week of community service and to follow a few rules: no violence, no theft, no constant disruptive behavior, and no alcohol or illegal drugs on-site or within a one block radius.

My experience living with a variety of persons in a variety of homes and communities—from "the fringes" in squatters' camps, Detroit, and mobile home parks to affluent and downscale traditional housing and with college freshmen in dormitories—is that the no alcohol and other even basic rules often prove problematic; some cannot and some will not follow rules. Paradoxically, persons living on the edge—those most in need of social assistance—are often those least able to follow rules and receive necessary social support (help from government, family, or their peers).

Social assistance requires some degree of playing by rules. College freshmen had to successfully play some game to get into college; they had to get decent grades, score high

on the SAT, fence well, or write a brilliant essay to earn that acceptance letter. They showed they could follow rules of some sort. Still, they are infamous for causing trouble. Many probably choose to break rules. Others with poor social or organizational skills and those who suffer scars from trauma and abuse cannot follow rules for a variety of reasons. Society revokes offers of support as need becomes overwhelming and rules are not followed. And so we witness a messy conundrum of need and desire to support but inability to match the two. In the resulting gray zone, we are often not clear on who opts out and who is forced out. Blame escalates problems without solving them. While the housed ask why they, the unhoused, can't get their acts together, the unhoused ask why they, the housed, can't get their acts together.

Rules and blame thus become intricately wrapped up with the unhoused and housing issues, inside and outside of DV. Things get a little murky in the entangled mess. Officially, those who cannot or will not follow rules cannot be part of DV, just as troublesome freshman may get kicked out of the college dorm. The uncooperative college student may be able to rent a less well-regulated, noisy, dilapidated, party room off campus, but it is less clear where the former DV resident is supposed to go. In this way, many are excluded from service provision, in general. We want to accept people in various states of imperfection and allow for some hint of wild, but we do not want to enable people to be drunken idiots repeatedly peeing in the public realm. This leaves us all—housed and unhoused alike—caught in the messy bind.

Resident composition

David, our guide, told us that males over 30 comprised two-thirds of DV residents, and one-third of residents were women. "Any single woman is not single for long," he added with a smile. There are possible advantages to being a minority, in addition to challenges. (A discussion of gender dynamics here would be fascinating, as in most communities, but is outside the scope of this brief study.) As resident members move out, new residents are accepted after a temporary member trial period. Compatibility is tested with gradual moves from common house sofa to dorm room to individual house and community membership.

Originally, there was a limit on the time people were allowed to stay in homes; DV was considered transitional housing. Exceptions have often been made, David explained, because of such few other housing options to move on to. Some residents, he said, have made DV home for several years. At the time of our tour there was a waiting list of ten or twelve persons, David said.

Benefits

DV met a variety of lofty higher-level and lower-level practical objectives as a middle-ground alternative to "institutional warehousing" (shelters) or "doing nothing" (sleeping by the creek or on the sidewalk). DV provides both benefit to residents



Figure 5: A modernistic house. (photo by the author)

Figure 6: A sign with Dignity Village's Basic Rules: part of the community self-government.
(from http://en.wikipedia.org/wiki/File:Dignity_Village_Rules.jpg#mediaviewer/File:Dignity_Village_Rules.jpg)



Figure 7: Community control; the sign asks visitors to check in and out. (photo by the author)



and benefit to the greater community of non-residents. Although de facto subsidized with city land, DV falls outside of typical government “by-the-book help” response. This creates benefits and challenges, and is a point of contention, primarily as relating to funding, creative application of codes, and oversight costs to the City. DV resident members’ accountability for following rules and instituting basic safety measures, such as fire prevention requirements, is essential.

Resident benefits:

- Middle ground housing: Safe, adequate protection for persons and possessions from predation and elements; between permanent standard housing and tents by the creek; provides cross between “permanent” and “temporary” shelter; a foothold.
- Dignified existence: Ability to live and work without constant fear and requirement to keep moving around.
- Self-sufficiency/Autonomy/Self-governing: Self-operated construction, management, security, fundraising; people create and maintain their own space.
- Second chance: Allows those penalized and locked out of opportunity because of previous transgressions/convictions.
- Pets allowed: Often not allowed in other shelter for the unhoused.
- Couples allowed to room together: Often not allowed in other shelter for the unhoused.
- Continuity: No daytime lock out/constant disruption, moving between daytime and nighttime facilities, lines, uncertainty, and constantly different rooms and beds, as at many facilities.
- Low cost: Monthly housing fees as low as \$50 per month (calculations below).

Community Benefits:

- Cleaning and greening public spaces: By providing a place for the unhoused and keeping it safe and tidy, other places can be less impacted; trash and refuse will be adequately placed rather than dumped into parks, public areas, and creeks.
- Environmentally sound: Small, simple self-built structures in a compact “community” use less resource than other types of housing; an autonomous organized community can find appropriate environmentally conscious ways to dispose of sewage and trash, and minimize environmental impacts of residence.
- Efficient: With donated time and materials, the average cost of DV houses was \$200 each to build. With total operational expense of approximately \$3,000 per month, the cost per person of community living at DV is about \$50/person/month. One month of housing expense

for all DV equals about the cost of two average families’ monthly expenses, or for each person, the equivalent of a dorm bed in a hostel for two nights, or about one-third the cost of warming centers (Frost, 2011). Most of the operational cost was for utilities: fuel charges (cooking and heat); porta-potty dumping; electricity to common house; and trash collection. Firewood sales, Ebay, and nursery sales contributed some income to the group to offset operational costs.

- Reduction of public costs of services. Public service dependence, such as for police, emergency room, and jail, decreases as unhoused persons get into comfortable, safe, dignified housing. In one study, costs of emergency room visits alone decreased from over \$28,000/year to just over \$6,000/year per person when unhoused persons were provided with homes.
- Community empowering: The Village project gives housed community members a place to contribute hands on and to learn about the needs of the unhoused and benefit from their skills and resourcefulness, and a place for the unhoused to work together and interact. Community members, frustrated by the failures in our system, seek constructive ways to help their neighbors. The Village model offers constructive forms of interactive participatory collaboration, which helps both housed and unhoused populations.

Challenges and Lessons

One San Luis Obispo advocate for the unhoused told me recently he fears appearing “a nut.” He says his middle class friends do not want to hear about “homeless and homelessness issues.” I share a similar experience: when I first met this guy I wondered if he was a nut too. Similarly, when I moved into a squatters camp called Slab City for a couple of winters to study issues of alternative housing, housing prejudice, off grid living, and then carried my study on to Metro Detroit, residential hotels, mobile home parks and sleeping on the

Figure 8: Dignity Village’s community garden. (photo by the author)



side of the road, there was some general suspicion that some of my own marbles went missing. More troubling, I shared these questions about myself. It is important to watch how we judge and get judged for experimenting with housing and community deemed outside societal norms, acknowledging challenges and human potential and calling attention to issues some others have chosen to ignore.

Given this setting, DV creation and operation has been and remains fraught with challenges, as with other such housing around the country. In a study of American tent cities, Heben (2011), who briefly lived in Ann Arbor, Michigan's Camp Take Notice, counts approximately two-dozen sanctioned and unsanctioned and organized or unorganized "tent villages" across the country. Sanctioned, organized villages, such as DV, have approvals to use the land they occupy and some system of group organization. Unsanctioned, unorganized villages, on the other hand, such as Slab City, where I have spent several months, have no approval for the ground they occupy and no group system of governance. Although order and reciprocity is the norm, in my limited experience, these villages have no formal systems of organization.

General challenges include:

- **Prejudice/Classism:** Society often frowns upon those living lightly; there are "visible" and "invisible" unhoused: often visible unhoused are more unpalatable than invisible unhoused who, embarrassed about their situations, quietly hide.
- **Fear and criminalization of unhoused:** Trespassing and sleeping on sidewalk charges are common against non-violent unhoused persons.
- **Causal confusion:** Unhousedness is often a result of trauma. There is a societal failure and lack of understanding of persons facing trauma, including: veterans, penal inmates, and sufferers of child abuse and molestation.
- **Needs:** These extend beyond housing to need for understanding, healthcare and community; access to these resources involves time, money, and distance.
- **Many now denied access to services:** Sexual offenders (California 290s and 288s), persons with no ID, mentally ill, and others land in this category. Many of these residents with unmet needs are desperate for housing but are difficult to serve, with limitations on places they can legally be, mental challenges, and other parole reporting requirements. While it is necessary to protect citizens and limit repeat offenses, it is not clear what options many of these persons have.
- **Finance/Equity vs. Efficiency/Allocation of limited resource:** Conflicts arise over who to serve and who gets what. When a village is considered "temporary" (often by necessity for approvals), there is resistance to paying infrastructure costs for a "temporary" village. DV residents and residents in San Luis Obispo alike express

unhappiness at the public expense for some unhoused services. [Just prior to our Village tour, Portland opened the Bud Clark Commons, housing and services for the unhoused, at a cost of approximately \$50 million. It has 130 apartments for formerly unhoused persons, a 90 bed men's shelter, and day use facilities.] DV residents were angry they did not get help with their \$50 per month expense once they knew that the new Clark Commons residential unit occupants received a much larger subsidy.

- **Aesthetic/Standard of beauty:** As with other such camps, Dignity Village was not beautiful. The day we visited, the entry could be described as artsy or looking like a swap meet, with various items spread out on tables for sale. (A messy example of why we zone business out of residential areas while we talk about encouraging community self-sufficiency and mixes of uses.) Signs of disrepair were evident amongst accumulating "stuff." The lives of persons on the edge are not tidy with purple Target storage bins and garages to conceal accumulations.

"Government agencies can't keep drugs and alcohol out of federal prisons. It is a consistent problem here." -David

Organizational and operational challenges include:

Governments are charged with providing some basic level of safety and security for citizens. This means either they are obligated to provide it, in some fashion, or they turn a blind eye to operations, by necessity. Because DV is on land owned by the City of Portland, the blind eye is out of the question. There is need to provide strong organizational support, training, and guidance to ensure that promises for safety and orderly conduct to grantors of land, services, and other code exempting agents and agencies will be kept. Maintaining an engaged community of residents and volunteers to ensure enforcement of rules and fair application are ongoing challenges, as with any group of people anywhere. Other challenges include:

- **Terminology and tenure confusion:** As things stand, when we talk about DV residents today, there remains confusion whether we are talking about "housed" persons or "unhoused" ones. The same questions are asked about the village itself: is it temporary or a permanent facility, a village or a temporary warehouse? Different answers affect investment in camp infrastructure and attitude of residents and others toward residents: If the village is perceived as long term, more investment in infrastructure may be prudent. If short term, less infrastructure and more fast tracking to get people a step up from under bridges may be useful.
- **Cliques and favoritism:** As with any group, cliques form in DV and favoritism affects rule enforcement and distribution of group costs and benefits between individual members.

- Partnering and rule following: Special needs groups, such as the unhoused served by DV, are the most in need of solid partnerships and partnering, but ironically, are often the type of group and individuals inherently least able to forge partnerships, due to fears and lack of trust resulting from historical trauma, lack of social skills, and inability or unwillingness to follow rules.
- Physical site: Finding adequate, appropriate and available site for villages is challenging. Village location should be close to city services and job centers but also must be a place with few neighbors to disrupt with visual messiness, noise, smoke, and other impacts.
- Health and safety: Village concept can be safe but often requires flexible, creative application of codes, including fire, building, planning, and health.

Takeaways: Lessons from Portland

- Build community facilities first: In a self-build model, such as DV, it gets harder to focus on community infrastructure if individual homes are constructed first. At DV, individual homes were constructed prior to the construction of the common house. As individual homes were finished, work on community facilities lagged. Construction of community infrastructure prior to home construction would have minimized such challenge (M. Lakeman, personal communication, 2011).
- Consider distinctions between permanent and temporary: "Campground," "Village" or "Tiny house Village" would work better than the more common terms "homeless encampment" or "tent city." Tenure of both Village and its residents should be considered upfront. Should Village and residents be permanent or temporary? Costs and benefits of permanent and temporary: does moving encourage people to move on and upward? Does moving Village itself around require more neighborhoods to share in impacts and benefits from camp? (Heben, 2011).
- Minimize car parking spaces and other storage spaces: "Things will accumulate if space is provided," (M. Lakeman, personal communication, 2011). "Provide space for people and limited space for stuff."
- Use structures to create edges for common areas: Look at blank space as positive space in terms of public/shared use/outdoor areas (M. Lakeman, personal communication, 2011).
- Build communication skills: Many, even the most unskilled in community building and management techniques, can become highly skilled with appropriate training and assistance (M. Lakeman, personal communication, 2011).
- Understand target population: Set priorities for who will be served and not served upfront: Will Village serve felons and/or sexual offenders, adults or families, people who expect to drink alcohol; understand and use triage

model which assesses needs to put people in right places; understand that many homeless persons choose to live alone or are incapable or unwilling to work with a group or follow rules and respect that choice; provide communication training and outreach, but do not expect it will be universally accepted.

- Maintain partnerships: In addition to resident oversight and communal governing body, provide outside group or responsible party to guarantee that promises to partners are being met, e.g., health and safety requirements and member rules enforced.
- Alternative housing type issues and architectural experimentation: Some experiments fail; proceed with caution.

Conclusion

Seeds sprout from molten lava, despite their odds. Challenges and messiness do not keep seeds—in the form of good ideas or hope—from taking root. Sometimes beauty comes outside our rigid societal standard of "decent" aesthetic. Dignity Village provides a practical model that can be an efficient middle-ground on which we can shelter and empower a segment of our current unhoused population, even those most challenging to serve. It is another useful tool to help us build stronger community and provide shelter for our neighbors.

My experience living in several unconventional, tiny dwellings, such as these, is that in decent weather, with adequate windows and light, many forms of dwelling can be both safe and pleasant, even if frowned upon societally and "substandard," according to government code. Small size and simplicity of structures can make them easy to clean and maintain, open time for activities other than housekeeping and maintenance, and allow income to go toward more than just housing. Beyond this, sense of community derived from common facilities and shared experience there can be an asset to some, as opposed to detriment. (Think bonding at summer camp in a dorm room.) The safe, simple residences and transformed lives at Dignity Village reflect this experience.

Because individual unconventional homes often have limited or no infrastructure, such as water, sewer, and power, provision of common amenities, clean water and adequate methods for dealing with wastes, are essential. It is important for the health, safety, and wellbeing of residents of any proposed community that a certain amount of community infrastructure and services be provided, even if not available in every housing unit. Dignity Village, a small seed struggling to break through the lava, illustrates that basic living in community can work for some and has the power to transform lives. Both the housed and unhoused can benefit.

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SLO County housing the unhoused. See *Path to a Home: San Luis Obispo Countywide 10-Year Plan to End Homelessness* at: <http://www.slocounty.ca.gov/Assets/PL/Housing/10+Year+Plan+to+End+Chronic+Homeless+Plan.pdf>

Design Codes in England – New Urbanist Inspiration?

Ivor Samuels

Architect; Honorary Senior Research Fellow, Birmingham University;
Tutor, Oxford University Continuing Education. Visiting Lecturer, CRP, Cal Poly.

In this article Ivor Samuels, one of FOCUS's most constant collaborators, discusses the growing use of design codes in England and the influence of New Urbanism. He does so by examining Fairfield Park and Upton, two recent successful development schemes, as well as a design code for the West End, Oxford which he co-authored. He concludes by discussing the feasibility of design codes as well as the qualities they should abide by.

The form of cities is governed by the layout of the public spaces, mainly its streets, and also by the form of the buildings that define these places. Height limits, the extent to which plots are built out, and the design of the facades with their openings and entrances all influence the form of the "ordinary" buildings (used in the sense of Habraken's 1998 book *The pattern of the ordinary*) which make up the greater part of our cities. Together with the plan, these rules or codes influence the actions of those who make towns and the resulting qualities, both good and bad, of those places.

This paper reviews an attempt to make design codes more extensively used in England, then briefly examines two successfully implemented codes for large housing developments which were reviewed by the author for the Commission on Architecture and the Built Environment (CABE). These are followed by an examination of a code prepared by the author for a district of Oxford. The code was prepared in an optimistic development climate but it was adopted immediately before the recession of 2008. The paper concludes by reflecting on the lessons from these experiences and the possibilities of transferring them to other contexts.

The Origins of Design Codes in England

Control over the built form of cities is an ancient practice and some of our best loved places are the result of the imposition of some degree of control through rules or codes, whether imposed by public agencies or private landowners. In England these include the streets and squares of Georgian London and the circuses and crescents of Bath, although Larkham (2001) has pointed out that the first building regulations of significance in England dated from 1189 when the Mayor of London made provisions dealing with party wall matters, obstruction of views and right to light. It was not until the rebuilding of London in the century after the Great Fire of 1666 that regulations were imposed which determined the appearance of many parts of the city with which we are familiar today. These related to four "rates" or types of house defined according to floor area, minimum height linked to specific street locations. In some

favoured locations private landowners imposed more detailed design controls on the developments which they promoted for their urban landholdings, such as those around Bedford Square in London. These controls had the objective of maintaining the value of these projects against attempts to construct housing of inferior quality in the vicinity. This remains a valid reason today for developers to commission design codes for large residential developments which will take many years to complete.

It was not until the 1960s and 1970s that the current interest was revived in qualitative codes and design guides. This started as a reaction to the problems of monotonous and standardised suburban housing design dominated by standards imposed by highway engineers. It was inspired by the work of Gordon Cullen and the Townscape Movement, and the "Outrage" campaign in the *Architectural Review Journal* led by Ian Nairn.¹ *The Essex Design Guide* published in 1973 was the first of a continuing line of attempts to counter these problems through detailed residential design guides. It advocated a careful respect for local design traditions even though its advice often neglected the realities of financial viability. For example, it suggested wide frontage lots which would lead to increased infrastructure costs for developers and thus raise the selling price of houses, possibly beyond the reach of the local market.

The Last Decade

In 2003 the Deputy Prime Minister (himself a visitor to and admirer of Seaside, a new-urbanist development in Florida) announced, during a conference on *Rational Urbanism* at the Prince's Foundation, that the Government was undertaking research into the potential for adopting design codes. The lines of contact between the Prince of Wales' Foundation and the U.S. New Urbanists have been very close since the building of a traditional urban extension at Poundbury on land belonging to the Duchy of Cornwall—a royal landholding. Now entering its second decade of development, this model community,

¹ See Lorenza Pavezzi's article "Ian Nairn, Townscape and the campaign against Subtopia" in *FOCUS* 10, 2013.

designed by the Neoclassicist Leon Krier, reinforced the linkage between the revived British interest in design codes and the New Urbanism (Duchy of Cornwall). They have in common an attempt to control the form and layout of developments through such elements as building typologies, public space standards, and the application of a limited range of architectural components. Poundbury has generated an extensive literature both in support and against its attempt to impose very strict and detailed controls over all aspects of the development (Figures 1 & 2).

The results of the government initiative were a series of publications (Commission on Architecture and the Built Environment [CABE] 2003, 2005; Department for Communities and Local Government [DCLG], 2006a, 2006b) which set out the role of design coding and demonstrated how it could be incorporated into the British Planning system which is much less regulatory than that of the United States, leaves much to the discretion of the participants, and, of course, thus opens the door to endless litigious conflicts and work for lawyers. This may be the reason why the documents cited are largely concerned with process at the expense of guidance on the substance of design codes.

Carmona and Dann (2007) found a number of common factors in the codes they examined. These included a return to perimeter block urban forms, a desire to integrate with their surroundings, and often a conservative style exemplified by Seaside in the United States and Poundbury in the United Kingdom. An unfortunate by-product of this return to the traditional forms of residential buildings (at least in this author's opinion) has been the use of exceedingly small windows. Justified by developers as reflecting traditional forms, they happen to be a cheaper way of achieving a satisfactory thermal performance than using larger windows. Developers justify this practice by claiming that their neo-traditional designs sell better.

Fairfield Park and Upton

These are two implemented residential schemes, both of which used design codes and reveal the extent to which these codes are valuable in maintaining overall quality over an extended time periods with a multiplicity of developers. They can also claim some relative success in retaining a high quality of build out on with number of builders not especially noted for the quality of their developments.

At Fairfield Park, a former mental hospital and its surrounding parks and gardens has been transformed into a housing development of 1,200 houses sited in open country two miles north of Letchworth. Incidentally, this was the first English New Town. The mid-nineteenth-century hospital, a protected building of historic interest, has been transformed into apartments. The eight different house builders followed a design code that has consciously reinterpreted the Victorian style of the hospital. This has been used to justify the code's great control of detail, which includes brick window arches and



Figure 1: First phase of Poundbury's Master Plan, by Leon Krier. (source: <http://www.placemakers.com/2012/08/09>)

Figure 2: The Whistling Witch, Poundbury. (photo by Zonda Grattus; http://commons.wikimedia.org/wiki/File:The_Whistling_Witch,_Poundbury.jpg)



even lays down a range of acceptable colours for painting the front door to the houses. A new primary school, community centre, small supermarket, and playgrounds have been provided within the landscape of mature trees and orchards. One surprising negative aspect of the project is that by virtue of having only one vehicular access from the existing road network and Fairfield Park's distance from neighbouring towns or villages it has become virtually a gated community (CABE, 2011a). (Figures 3 to 5)

The consistency of the development across the different parcels erected by eight house building firms using a wide variety of house types is due to the support of the local authority for the design code imposed by the landowner. It is ironic that the urban designer responsible for overseeing the code lost her job immediately after completion of the scheme as a result of public sector economies. This raises the issue of urban design

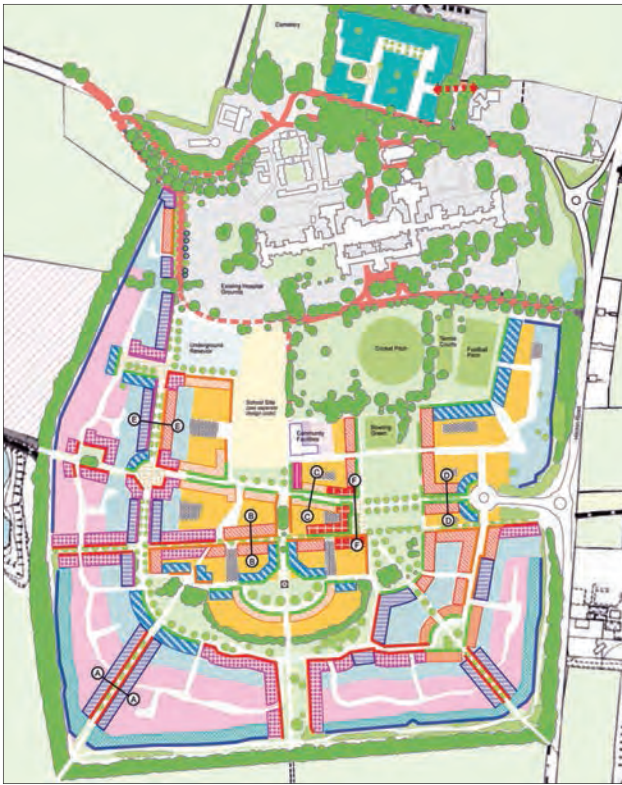


Figure 3: Regulating Plan for Fairfield Park. Colors indicate the different development types which design features are set-up in the Regulating Matrix (Fig. 3).

Figure 4: Complementing the Regulating Plan (Fig. 2) the Regulating Matrix sets up block and building types, heights, and set backs.

BLOCK CODE 1	Terrace	Semi-detached	2 1/2 storey	2 storey	
BLOCK CODE 2	Terrace	Terrace	Semi-detached	Semi-detached	2 1/2 storey
BLOCK CODE 3	Terrace	Semi-detached	Semi-detached	2 storey	single storey
BLOCK CODE 4	Terrace	Semi-detached	Semi-detached	2 1/2 storey	2 storey
BLOCK CODE 5	Terrace	Terrace	Semi-detached	Semi-detached	2 storey
BLOCK CODE 6	Semi-detached	Semi-detached	Detached	2 1/2 storey	2 storey
BLOCK CODE 7	Terrace	Semi-detached	Semi-detached	2 storey	
BLOCK CODE 8	Semi-detached	Semi-detached	Semi-detached	Detached	2 storey
BLOCK CODE 9	Semi-detached	Detached			2 storey

in England being regarded as an optional function not strictly necessary to the execution of a Local Authority's statutory duties and therefore an easy target in a time of austerity.

Upton is an extension of the town of Northampton with 1,300 houses completed in the first stage. It is particularly notable for the introduction of a sustainable urban drainage system (SUD) on a large scale for the first time in England. A network of swales or ditches runs throughout the scheme. They are designed and landscaped so that surface water is collected and disposed of through the system and thus expensive underground surface water drainage and disposal systems are not required (Figures 6 to 8).

Work started in 2001 and involved the Prince's Foundation in an Enquiry by Design exercise—the English version of the Charette, again a link to New Urbanism. The design code was submitted in 2003, and became the landowner's instrument (in this case a public agency, English Partnerships) for implementing the Master Plan objectives. A two stage tendering process was adopted with the first short list based on design quality and the second stage taking financial considerations into account (CABE, 2011b).

The Oxford West End Design Code (OWEC)

This code is unusual in England in that most codes have been devised for residential areas—usually on the edge of towns. OWEC is for part of central Oxford—away from those ancient quarters of the dreaming spires of the University, which gives the city its reputation. It is an area which has seen change over the last fifty years including a bypass road, skating rink, further education college, car and bus parks, and housing, all developed in an incoherent way with no guiding plan (Figure 9).

OWEC is also unusual in that most codes are delivery vehicles for plans that encapsulate a vision, i.e., a code is not a vision making tool. In the case of this part of Oxford, while change was expected with landholdings by colleges to be sold for development and semi derelict areas of land ripe for

Figure 5: Mixed-use buildings overlooking the central plaza in Fairfield Park. (photo by the author)





Figures 6 to 8: Aerial view of Upton with the completed first phase, the swale drainage system and the interior of a residential block. (photos Google Earth and the author)

development, no plan existed. The code had to incorporate a degree of uncertainty as to future uses. Twenty-four sites had been identified for change. The Action Area plan gave a preferred range of uses for each site but no guidance on the form of development or its relation with the public realm. In the absence of a vision the Code had to provide clarity as to what would be considered acceptable design quality.

The author and Sue McGlynn, practising as Placemaking Associates, were commissioned to prepare the design code in 2006 and it was adopted in 2008 at the start of the biggest financial crash for a century. This of course affected the expectations for disposal of the sites—property investment slowed down dramatically and none of the expected change took place. However, the code is still being used as the property market recovers and a recent interview with officers of Oxford City Council Planning Department confirmed that, as interest was being revived, the code was proving a useful reference for discussion with potential developers (Oxford City Council, 2008).

OWEC was innovative in a number of ways. It set out to be easily understood by those who had to operate it with a step by step guide to its use. Because of the uncertainty over uses, it proposed a variable street mesh depending on future uses, i.e., a finer mesh for residential streets as opposed to a coarser one for larger buildings. It proposed that any larger buildings should be sleeved with smaller units to avoid the large blank facades which are often the result of free standing buildings. Unlike most residential codes, it tried to establish a minimum of criteria for the design of the buildings and the examples chosen to illustrate the principles laid down were exclusively local.



The code can be considered eclectic in that it draws on a number of approaches for its inspiration and often combines them in ways which may upset purists. For example, it uses a regulating plan drawn from New Urbanist practice and while ascribing to the principles of townscape it uses concepts drawn from Space Syntax to establish how and where variations from standard street design should occur (Figures 9 to 12).

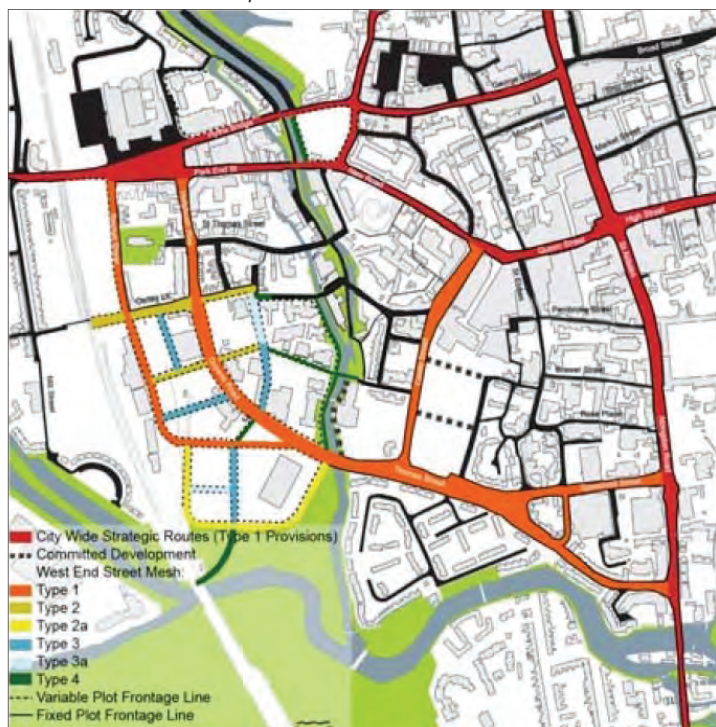
In the words of the Government inspector who carried out an evaluation of the West End Action Plan:

"The West End Design Code is a comprehensive document based on a combination of general urban design principles and the place-specific qualities of Oxford City centre and the West End. Its priority is to set the relationships between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and urban blocks. It has sought to identify the least number of most significant and long-lasting elements of the public realm of the West End in order to provide a flexible framework for the generation of a new, successful and highly locally distinctive public realm. I



Figure 9: Oxford's West End Design Code Area (photo Google Earth)

Figures 11 & 12: The Regulating Plan for Oxford's West End Design Code Area and the map for Places of Variation - two and three dimensional.



STEP 1: Locate your development parcel or plot on the Regulating Plan. This shows and classifies the variable mesh of streets described above and the urban blocks or development parcels defined by the street layout. It is the key source for the general provisions and standards relating to the type of street(s) adjoining your development parcel. (Section A)



STEP 2: Identify the street types that adjoin all public edges of your development parcel or plot. Each street type has general provisions for the scale of development appropriate to the street/route type, (street widths and building heights), the continuity of frontage to define the public realm, and the degree of active frontage to the public realm. (Section B)



STEP 3: Refer to the relevant Street Segment Plans. They are the main device in the Code for variations from the general provisions. They indicate where variations should occur in the design of buildings, the width of streets, and the design of special public spaces at focal points where street segments intersect. (Section C)



STEP 4: Refer to the Street Design section for general principles relating to the design of the public highway, traffic management and parking standards. The Code advocates the 'shared space approach' to achieve the highest quality of public realm in the West End and to ensure a safe and comfortable co-existence for all users of the street space. (Section D)



STEP 5: Refer to Building and Architectural Design for principles relating to the location of large building types within the street mesh and the design of building facades only as they affect and contribute to the definition of the public realm. These are not framed to limit architectural creativity or expression but to set parameters for the articulation of street elevations and variety of massing to the skyline. (Section E)

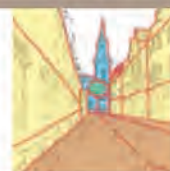


Figure 10: The five-step process for using Oxford's West End Design Code.



consider that this innovative Design Code, which has been commissioned specifically for the West End, will ensure that local features that make the area distinctive are considered and built upon in its renaissance.” (Bussey, 2008, p. 12)

Conclusions

This section is based on a number of published studies (Street, 2007) and interviews with the planning officers charged with implementing codes both in Oxford, as noted above, and with as yet unpublished evaluations of design codes carried out by the author in France (Samuels, 1999). The most striking finding of these interviews was how difficult codes proved to be in use, especially if they have to be implemented by professionals who have not been associated with their production. This is not only the case where consultants have been contracted to produce the code but also where staff changes in local government have replaced officers who may have had a close involvement in the production of the instrument and therefore must be assumed to have been familiar with its operation.

Codes are regarded with some suspicion by architects in that they “represent a threat to designers’ creative autonomy” (Street, 2007, p. 5). This in spite of the fact that some of our best loved places have been designed according to design codes and that architects concerned with buildings as unique objects are often unconcerned with the public realm that these buildings produce. The argument has also been raised that the detailed codes remove the need for an architect and therefore constitute a threat to their employment prospects.

Street’s survey found that 22% of architects surveyed (the total number of responses to a postal survey was 207) agreed that codes were a good thing while 39% disagreed. One anonymous respondent observed that “they were a reaction to the dreadful mess that we made . . . you know, with the normal private housing estates, the cul de sac crap that we produced right across the country that was simply allowing builders to do what they wanted” (Street, 2007, p. 11).

The point must be that architects are controlled by their clients and in the case of the major house builders this means repeating standard house types on the most economical layouts—so that the possibility of the architect being free to innovate in design is in most cases a myth. However, if codes result in avoiding the worst 25% of development perhaps missing the 5% of iconic projects is a price worth paying.

Those developments in England which have used design codes tend to appeal to the better off and younger purchasers. They have thus been accused of social exclusion in that they tend to be more expensive schemes. This claim is supported by some evidence at Upton where a two bedroom apartment costs more than the average home in the locality (Street, 2007, p. 33). The character of Fairfield Park as a virtual, if not literal, gated community has been pointed out and these types of development are distinguished by their social exclusivity.

It is also more difficult to impose a design code where the housing market is less buoyant. For example the Dorset market town where Poundbury has been developed is a wealthier area than South Manchester where a code was proposed for the district of Hulme.

It is claimed that the use of design codes reduce the time taken to achieve planning permissions for new developments. However, these assertions do not take into account the time and resources needed to prepare the design code in advance of the application.

In summary, it is suggested that any code must pass the PEST test. The code has to demonstrate four types of feasibility:

- Political - acceptable to the local authority;
- Economic - it must be capable of meeting the market context, if not it will not get built;
- Social - acceptable to both future inhabitants and existing neighbours;
- Technical - it must satisfy standards for highways, maintenance, and environmental impacts.

Furthermore, it is suggested that any code must obey five commandments. It must be:

- Precise, in its demands of developers
- Positive, in emphasising what should be built rather than what should be avoided;
- Prescriptive, in giving stakeholders an argued justification for the content of the code;
- Prioritising its impacts on the public realm, which must be its main concern;
- Produced by design enquiry and stakeholder involvement.

The author hopes that this article and the lessons from these experiences may contribute to similar efforts in other contexts.

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Climate Change Adaptation, Urban Flooding and Water: Old Problems, New Challenges for Planners and Architects

João Pedro T. A. Costa

Architect; PhD. Professor, School of Architecture and CIAUD – Research Centre of Architecture, Urbanism and Design, University of Lisbon.

The effects of global warming on sea level rise is one of the most challenging immediate futures faced by planning and the design disciplines. These effects can lead to grave consequences in coastal cities and is a growing field for policy and plan making in the United States and across the globe. Joao Pedro Costa brings us this debate from an European perspective, discussing the challenges and new creative solutions.

The occurrence of flooding in cities has been a part of the urban design and architecture agendas for a long period of time. In the 20th century, defensive approaches to such phenomenon increased alongside society's growing confidence with infrastructural capacities. More specifically, urban flooding was mainly an infrastructural issue, and hence had the responsibility to deal with such respective hazards. Cities, buildings, and public spaces were, moreover, directed at addressing a major concern: the control of water and circumventing its dynamic threats within the city.

Amongst other typologies of water defensive infrastructures, dikes, pumping stations, flexible water barriers, and underground deposits were revered as inevitable, and thus given priority over urban design and architectural agendas. Indomitably, the priority was to save lives and protect economic assets and design disciplines were thus obliged to accept this established precedence.

Nevertheless, a change in this paradigm has been witnessed in recent years. In conjunction with the emergence of the climate change adaptation agenda, the customary use and dependence on heavy infrastructure started to be substituted by the increasing convergence between urban development and encircling natural systems. Although the sustainability agenda has arguably reinforced humankind's role within cities, the reason for this substitution was not the result of his "romantic" reinvention. Instead, it is the result of the recognition and ongoing verification that: (1) natural systems frequently reveal themselves as more resilient to hazards, hence presenting a more robust progression through time; and (2) the more dependent a city and society is upon its engrained infrastructure, the worse the disaster shall become in the case of the infrastructure's failure.

Climate Change Adaptation as a Contemporary Agenda

Climate change made its first appearance in international debate during the last quarter of the 20th century. This was

the result of an emerging new international agenda that was formed as a result of the following key moments: (i) Wally Broecker's pioneer paper in 1975; (ii) establishment of the International Panel on Climate Change (IPCC) in 1988; (iii) followed by the IPCC's First Assessment Report in 1990; and, (iv) the Framework Convention on Climate Change held in Rio de Janeiro in 1992 (United Nations, 1992). Delineated through a top-down approach, climate change was dominated by mitigation policies whereby the United Nations emanated protocols that were then downscaled in the different countries, regions, cities, and economic activities. Furthermore, the signing of the Kyoto Protocol in 1997 most likely also served as a crucial moment for this mitigation policy, one which committed its signing countries to internationally binding reductions in greenhouse gas emission targets for the period between 2005 and 2012 (United Nations, 1998).

During such period, the climate change adaptation policy was not a priority. Instead, the focus was on reducing emissions and increasing carbon sinks, with the hope that mitigation attitudes would be able to stop the expected effects. Additionally, it was hoped that there would be an established convergence between economic activities and the planet's long-term sustainability. However, this focus has shifted in recent years and the second half of the 2000s decade witnessed the emergence of the adaptation agenda. As the scientific community disseminated more confident climate change scenarios for the medium to long-term and observed the continuous growth of global greenhouse gas emissions, spatial planning began to consider the consequences of these changes and how they could be incorporated into planning processes (Blunden & Arndt, 2014).¹ Followed by several

¹ According to the 2013 State of the Climate report by the American Meteorological Society, global greenhouse gas concentrations continued to rise in 2013, once again reaching historic high values, with atmospheric CO₂ concentrations reaching a global average of 395ppm and, for the first time since measurements began in 1958, daily concentrations exceeded 400ppm (Blunden & Arndt, 2014).

national and regional studies, and annual climate reports, the IPCC's Fourth Assessment Report in 2007 had a significant impact upon academia, local administration, and media. The message was guileless, yet ardent: The climate is already changing.

Nonetheless, the key factor for this new conscience was the occurrence of various extreme climatological events. Focusing on waterfronts, the impacts of Hurricane Katrina in August 2005 upon New Orleans, leading to more than 1,800 deaths and 250,000 evacuees, was the ultimate eye-sawing and irrefutable evidence that:

"If Hurricane Katrina taught us anything, it is that the worst-case can happen. For the first time in human history, science has given us the ability to peer into a crystal ball of numbers and models and see what kind of a climate we'll be living in by mid-century if we continue to emit carbon at our current levels." (Cullen, 2010, p. xvii)

This again enforced the idea that the climate was in fact changing and, moreover, that extreme scenarios were in fact possible.

As a result of Hurricane Katrina and the Dutch-American collaboration, the Second Dutch Delta Commission was appointed to develop a new integrated vision for the territorial development of the Netherlands. The 2008 report "Working together with water. A living land builds for its future," marked a profound change in national policy that had been established for 200 years (Deltacommissie, 2008). More specifically, the new paradigm "working with nature" replaced the previous "fighting against the water," with a medium and long-term vision which would include adaption orientations for climate change scenarios. In the years 2008, 2009, and 2010, several other countries, regions, and cities developed their climate change adaptation agendas. Some national agendas inaugurated new policies, while others made use of previous documents and combined them under a coherent umbrella, such as in the United Kingdom (Department for Environment, Food and Rural Affairs, 2008).²

Based on projected climate change scenarios, various cities were particularly orienting their strategies to the most relevant problems and existing local planning approaches. This approach is exemplified by: (1) New York City, which is mainly concerned with the change of patterns and impacts of extreme phenomena (New York City Panel on Climate Change, 2010); (2) San Francisco, which is confronting projected impacts in its Bay and encircling key occupations, such as principal infrastructures, networks, and priority development zones (San

Francisco Bay Conservation and Development Commission, 2009); (3) Rotterdam, which is developing new orientations for flood management, retaining the water inside consolidated urban areas, and recovering new space for the river (Rotterdam Climate Initiative, 2010); and lastly, (4) London, which is preparing the future adaptation of its existing infrastructures, such as the Thames Barrier, and also developing territorial units with orientations for flood risk management (Environment Agency, 2009; Mayor of London, 2010).

Although each city develops its own climate change adaptation policy with a specific methodology, some common orientations can be observed (Costa, 2013). The first consists of the definition of climate change models for the specific territory and downsizing global, national, and sometimes regional studies. This delineation's objective is to establish medium and long-term scenarios to work with that further consider the inferred uncertainty regarding future projections and definition of tasks. The second focus tackles the application of these very scenarios to local territories, where attempts are made to assess the impacts of climate change upon a specific site. This inquisitive exploration is the analytical pillar of the "what if" agenda. The third focus consists of the adaptation strategy itself, which launches the exploration into other existing adaptation strategies or into past solutions that dealt with similar impacts. This approach is described by the World Bank as defining a long-term plan "your own way" (Prasad et al., 2009).

Urban Flooding: The Role of Infrastructure, Urban Design, and Architecture in Facing New Challenges

It is in this recent context that new approaches are emerging to address the phenomenon of urban flooding. The new challenges can be synthesized into six main topics:

1) Urban areas should retain as much rainwater as possible, including in flash flood situations. This would approach a "self-sufficient" balance. Moreover, it is essential to address such stresses in downstream urban areas, particularly in the city's waterfront. Not only do they suffer from issues of flash flooding, they also might fall victim to the decreased capacity to discharge rainwater into the river given future climate change scenarios. This is particularly tangible given the estimations of sea level rise, or due to the steep increase of such phenomena. Hence, this objective prompts new challenges both to urban design and architecture. Nevertheless, this presents a new realm of opportunity whereby creativity can be developed in conjunction with recovering former practices, including those that were frequently abandoned due to an "extreme faith" in infrastructure.

2) Public spaces can become particularly key elements in retaining rainwater without the need for heavy infrastructure. This propagates the creation of multifunctional spaces not only prepared for everyday leisure or other exterior activities, but to also handle retention roles while simultaneously enforcing safety within the public realm.

² United Kingdom was one of the pioneer countries on climate change adaptation. The report *Adapting to Climate Change in England: A Framework for Action* was more than a new policy, it was a policy document oriented to join several initiatives of the last decade and coordinate them under a common approach (Department for Environment, Food and Rural Affairs, 2008).

3) The multifunctional use of valley streets should be part of urban design approaches. Particularly in cities with strong topographies, the streets along the valley lines in consolidated urban fabric, corresponding to former water lines, tend to be corridors of considerable strain in events of flooding. In extreme cases, the pluvial drainage system might exceed its capacity and cause street flooding. Given these circumstances, this may lead to the formation of a fleeting artificial, yet destructive river. Both in existing and future cases, as projected by future climate change scenarios, urban design must acknowledge this unwavering reality and formulate controlled flood situations.

4) Cities should no longer grow by reducing the river's flooding basins. For example, dikes should no longer advance on rivers in order to protect new or renewed urban areas. Consequently, and particularly in urban waterfront renewal operations, new urban design solutions are required to assure safe new urban areas located outside the respective dikes or protected areas.

5) Existing "protected" waterfront areas should incorporate new resilient design solutions, thus increasing adaptability and reducing risk. This is relevant both for the future scenarios of climate change and for future extreme situations if defensive, pluvial drainage or other types of infrastructure are to fail. As a result, the exploratory and analytical "what if" agenda must gain increased importance in urban planning.

6) Buildings are also imperative when addressing urban flooding. An architectural project cannot take place without context and several architectural responses can be found at the building scale, namely: (i) creating flood resilient buildings; (ii) retaining rainwater in tanks given an extreme phenomenon; (iii) preparing the building to deal with possible flood situations; and lastly, (iv) offering shelter and safe urban connections in specific cases of flooding.

It is worth noting that the "working with nature" approach does not imply that infrastructure is not needed, but that it should be used with moderation and in conjunction with "natural" design solutions. Additionally, it is also inferred that the elevated dependence on infrastructure should be avoided as much as possible, as its potential failure could imply the invigoration of the very threat it was created to neutralize.

It can be argued that this ultimately translates into a maturing relationship between society and infrastructure. In other words, if the 20th century was marked by the incredible increase of society's technological capacities and by his intentions to control every urban problem with regards to infrastructure; then, the 21st century would be marked by the recovery of light design solutions to deal with the same issues. In other words, the relationship after the turn of the century is one that induced a more moderate approach towards heavy infrastructure, one which also called upon the cooperative relationship with the continuous growth of technological capacity. As a result, the confidence in heavy infrastructure

of the "young technological human" could arguably now give way to a more matured practice, one that also calls upon the use of natural system solutions when respectively applicable.

Water and Environment, an Increasingly Important Agenda for Urban Design and Architecture

Together with the emergence of natural system design solutions regarding urban flooding, the development of the sustainability agenda during the last decade allowed for the establishment of new relations between the environment, water, and the city. Water is part of the city today, firstly through the recovery of waterfront areas during the last quarter of the 20th century (associated with large urban regeneration interventions) (Meyer, 1999). Secondly, by the importance that these elements assumed in planning and at the proximity scales, which resulted in an improved local environment; where its use represents quality of life, and competitiveness in areas such as the economic, leisure, and tourism markets.

For urban design, public space design, and architecture, natural systems become a central agenda as they can often integrate water and green areas. Nevertheless, this does not imply that the agenda is artificial. On the contrary, values such as the promotion of local landscapes, the use of autochthonous vegetation, the reinforcement of heritage approaches (resulting in the reuse of former buildings and infrastructures as an alternative to urban renewal), and the reduction in space maintenance requirements, are all evidence of the "working with nature" principles. Furthermore, this evidence enforces the augmented maturity of humankind in relation to our surrounding environment, one which is not fixated on its control, but instead living in harmony with it.

Urban design and architecture have been naturally incorporating these new values. "Living with nature" has become a societal requisite in developed countries, which has been a demonstration of the dynamic relational transformation of humanity, one that has already been expressed in some institutional documents in the last decade.³ "Working with nature" approaches have found, therefore, an existing practice with convergent objectives, one which ultimately has opened new perspectives for architecture and urban design.

Designing a New Relationship with Water?

It is in this context that contemporary urban design has found new horizons of creativity in its relationship with water. This relationship is one that has resulted from the fertile combination of three approaches: (1) recovery of former knowledge in the very site itself, or from cases of other geographical locations that witnessed similar obstacles; (2) development of technological innovations to answer construction problems, which have enabled the possibility to implement new ideas; and lastly,

³ For example, the European Landscape Convention (also known as the Florence Convention, the city where it was adopted in 2000).



Figures 1a & b: Flood resilient urban design at Hamburg's HaffenCity a solution for flood resilient urban design area: the upper level circulation network and the protection systems at ground level. (photos by the author and by Jan-Moritz Müller)

(3) unmistakable basic conditions to explore creativity, which enables broader and “out of the box” thinking.

The combination of these three approaches has led to several relevant examples, those that simultaneously answer to urban flooding, sustainability, and the improvement of local environments. Varying between different scales and typologies, various exemplars shall be here discussed.

Starting with an example of urban design, the HaffenCity's 255 hectares regeneration of former port and industry areas in Hamburg (Figure 1), decided to maintain its position outside the dikes. The implementation of resilience through what was called the “B plan of the city” (Costa, 2013) combines the everyday interactive use of the proximity to the water on the Elbe River, increasing the site's environmental quality with controlled answers to local flooding through urban design. The entire urban area is prepared to accommodate urban flooding due to its design solutions both at the urban and architectural scales, hence avoiding damage and certifying the continuity of normal urban activities. Anticipating flooding situations and their influence upon accessibility, infrastructure, buildings, public spaces, and all other functions is part of an integrated approach, which accepts regular flooding. Moreover, it refuses the construction of dikes, and therefore does not lead to the reduction of the Elbe's flood basin.

Downscaling now to public space design, Rotterdam is a living example of innovation. Both Westersingel, exemplifying an urban corridor (a street), or the Water Square that exemplifies a centrality (a square) are conceived as multifunctional spaces. These examples demonstrate conjoining the design for everyday life with a functional retention basin within the consolidated and dense urban fabric.

Westersingel (Figure 2), was not only a renaturalization of a former channel that was piped during the 20th century in order to permit car circulation, it also introduced a high quality urban environment on a central axis that permitted the recovery of the

channel's identity within the city. Furthermore, it also allowed the construction of a flood retention bay through the creation of a down-level platform of public space closer to the water plan. Consequently, this exploited the relationship with surrounding environmental qualities and safely supports flooding without any damage to the urban fabric at ground level.

The Water Square is both a creative and innovative project (Boer, Jorritsma, & van Peijpe, 2013) (Figures 3a & b). It answers to the previously mentioned need for a consolidated urban area to have a “self-sufficient” balance, being able to both retain water in extreme events and also neutralize the stress on downstream areas. Its design encompasses a neighborhood approach, through the creation of channel networks, and a site approach, through the development of a multifunctional public square. The result is the amalgamation of a down-level platform for sport and leisure uses that can support everyday life, whilst simultaneously, safely handling flooding events.

A similar logic can be seen in some of Barcelona's examples, both in street corridors and square centralities. In this case, rainwater retention respects not only the local neighborhood,

Figure 2: Rotterdam's Westersingel: a renaturalized channel with its flood retention bay. (photo by Maria Matos Silva)





Figures 3 a & b: Rotterdam's Water Square, 2010: collection of the neighborhood's storm water and retention in a multifunctional park. (courtesy: De Urbanisten, Florian Boer, Jens Jorritsma, and Dirk van Peijpe; photo by Maria Matos Silva)

but also the large upstream urban fabric. As a result, heavy infrastructure is needed to accommodate large quantities of water in short periods of time, which, in turn, avoid problems downstream. The multifunctional solution consists of the construction of large water deposits underground, combined with the development of high quality public space design at city level, e.g., the Joan Miró Park (Figure 4) or the Doctors Dolsa Square (Matos Silva, 2011).

Occasionally, the design of a new relationship with water already exists in the everyday life of a city, all that is required is for it to be observed and recognized. With high topography and waterlines coming upstream in the Madeira Island, the city of Funchal regularly experiences flash flood events (Figure 5). In these cases, urban design in waterline corridors is crucial. As demonstrated by the flash flood in 2010, the common, yet considerable streambed might prove insufficient in accommodating large quantities of water. In these situations, the streets become open rivers and hence urban infrastructure,

planning, and public space design must take this into account. More specifically, this implies that: (1) infrastructure ensures that the waterline walls and city foundations are safe and prepared to accommodate the flooding events; (2) urban planning ensures the respective corridor is kept free, i.e. without any transversal obstacles, such as buildings or closed bridges; and lastly, (3) public space design develops multifunctional solutions which combine everyday life with the required resilience for these occasional events. It is here again that the integration of the "what if" scenarios gain their importance in urban planning. This importance is connected to the preparation of the city for future events, that, having a mid or long-term occurrence, might be very destructive if not carefully prepared for.

Focusing on innovative solutions, the contemporary design of new relationships with water includes a significant exploration and development of floating structures. Being an old concept and practice, floating structures gain a new dynamic through both their resilient capacity of floating and their high experimental potential.⁴ Hence, this permits a

Figure 4: Barcelona's Joan Miró Garden: a square with a high quality public space design, integrating a large pluvial water deposit underground. (photos by Maria Matos Silva and Clavegueram de Barcelona)





Figure 5: Netherland's Maas amphibious houses: located on firm soil, they are anchored to the site by a vertical structure and are prepared to float during a flood event. (photo: Factor Architecten and Dura Vermeer)



Figure 6: Finnish floating houses have an locking mechanism under their decks. (photo by Marina Housing Ltd.)

Figure 7 a & b: Rexwal's floating SPA, Germany. (photo by Deutsche Composite GmbH)



greater and more efficient proximity to water that otherwise would not be viable for traditional constructions. The advance of technology has mainly contributed to determining the type of floating structure (both in concept and material), structural configuration, and light construction methods. The last decade witnessed a large expansion of these type of constructions, mainly through: (i) construction of small buildings with small scale floating structures; and (ii) exploration of floating mega structures through learning lessons from existing constructions such as sea oil platforms, with the purpose of exploring the design of futuristic utopias.

The creation of floating buildings has undergone an important development in recent years, and in numerous geographical locations. As expected, the Netherlands is one of the leading countries in this subject, although it is also worth acknowledging other very interesting cases in countries such as Germany, Finland, France, United States, and although with a different scope, projects in Vietnam and Bangladesh. It should also be recognized that the development of these concepts is also supported by international aid. Although others exist, two main concepts shall be here discussed. The first consists of permanently floating constructions that are fixed to the land through a specific technology. The second focuses on amphibious constructions that are prepared to float in high waters in light of flooding events. Under normal circumstances, the amphibious constructions are located on the ground, but they also have technology for the guides to maintain a fixed structure when it changes level. Both the 2004 Dutch Maas amphibious and floating houses, by Factor Architecten and Dura Vermeer, with a vertical guide lock mechanism (Figure 5), and the 2010 Finish Floating Villas by Marina Housing Ltd., with an inferior lock mechanism (Figure 6), illustrate such techniques.

Revealing extreme creativity and oriented more towards exploring the versatile qualities of the proximity to water, the 2010 German Floating SPA in Rexwal by Deutsche Composite GmbH designed a cold bath directly upon the lake (Figure 6). With a similar creative flair, the 2004 Badeschiff floating pool in Berlin by Spanish AMP Architects installed a comfortable swimming facility all year round at river level, giving the illusion that one was in fact swimming in the Spree (Figure 7). Both of these examples show the almost unlimited potential of design innovation in exploiting this novel relationship with water.

Finally, we can conclude that a new relationship between society and water is emerging, namely with urban infrastructure, planning, public space design, and architecture.

⁴ One can mention, among several other examples: (1) the biblical example of the Noah's Arch; (2) the local tribe floating islands by the Uros in Peru and Bolivia, built with local vegetation; (3) The Teatro del Mondo architectonic gesture, by Aldo Rossi, a floating building designed for the 1979 Venice Biennale which recovered a former venetian practice of the 18th century; or, (4) some floating structures developed in the United States during the 19th century, such as Philadelphia's floating church.

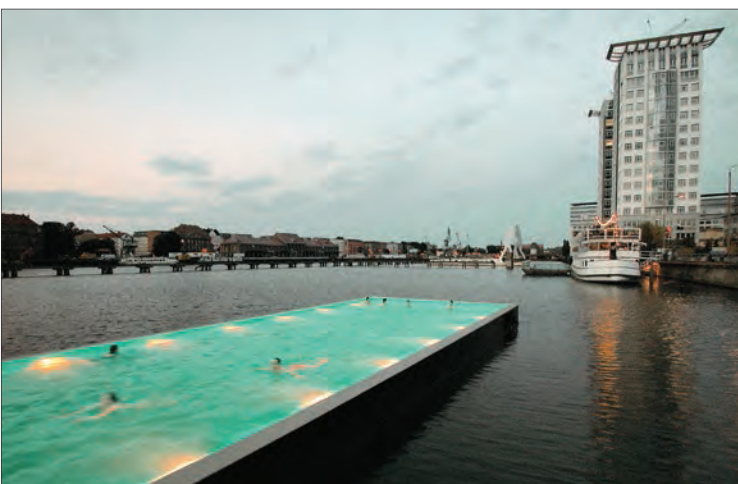


Figure 7: Berlin's floating pool: comfortable swimming is offered the entire year at the river level; roofless in the summer and covered during winter. (photo by AMP Architects, S. Lorenz and G. Wilk)

Innovation and the recovery of former knowledge are hence combined into a new agenda of multidisciplinary articulation and creativity. This multifaceted and ever-maturing agenda is one that has directly originated from the exploration of: (i) water's diverse and bountiful capacities in today's contemporary society; (ii) the increase of resilient approaches to urban flooding; and (iii) the new dimension acquired by flooding under the emerging climate change adaptation agenda. Furthermore, the role of heavy infrastructure is also itself under reevaluation. Although it is still recognized as necessary, it is correspondingly acknowledged that high dependence on it is acrimonious with the resilient city. As an alternative, the development of a "living with nature" approach and the use of natural systems is thus unequivocally gaining substantial weight in contemporary design.

Accordingly, if the sustainability agenda was to open such horizons, the concomitant resilience and climate change agendas would indubitably reinforce their own adaptability capacities—hence strengthening the potential to combine environmental quality and everyday life with risk reduction.

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Why Invest in Urban Landscapes? Impacts of European Research on Paradigm Shift in Urban Planning

Carlos Smaniotto Costa

Planner and Landscape Architect, PhD.; head of the Experimental Laboratory on Public Spaces, Lusofona University, Lisbon; project manager, UrbanDialog Research Center, Germany.

Jacqueline Hoyer

Landscape Architect; research and teaching fellow, Department of Sustainable Infrastructure Planning, Hafen City University, Hamburg, Germany.

Costa and Hoyer discuss four recent applied research projects in Europe that support the importance of innovative sustainable solutions for public open space networks. They show how these projects may contribute to a sustainable urban development agenda that is changing paradigms and policies in the European Union.

In recent years, the European Union encouraged plenty of research on the development of innovative solutions, strategies, and networks to develop sustainable cities. In this paper, we present and discuss the outcomes and perspectives of four European projects (URGE, GreenKeys, SWITCH, and CyberParks) and their contributions to bridge the gap between knowledge, policymaking, and citizens.

While URGE, GreenKeys, and SWITCH are already completed, CyberParks is in its initial steps. The projects URGE and GreenKeys focus on green landscapes. In URGE, a set of criteria was created to assess urban green spaces, and thus increase their potential for improving the quality of life in cities. GreenKeys addressed the creation and adoption of green space strategies as a shared vision towards more inclusive urban spaces. SWITCH focused on blue landscapes, it aimed to advance and adopt integrated urban water management by connecting urban water and urban green issues. Finally, CyberParks is focusing on urban landscapes in a digital era. It aims to foster greater knowledge about the relationship between new information, communication technologies, and public spaces. Having projects with different time lag allows us to better understand the impacts on urban planning practices resulting from these projects, and show the needs for ongoing research agendas.

Background

The growth of cities is a dynamic and very diverse process, taking place all over the world. It is accompanied by a steady concern: it is increasingly space-intensive (United Nations Population Fund, 2007). Urban growth leads to more and more land taken for urban uses and related infrastructure, which affects the natural environment, both functionally and morphologically, and its biodiversity (European Environment Agency [EEA], 2010). Moreover, in order to accommodate urban needs, such as housing, business, and transport; open spaces are converted into highly artificial spaces at an

accelerating rate. This results in a high percentage of paved-over land, and in consequence, a serious loss of the potential for their sustainable development. Further, it affects the quality of life, since the quality of the built environment depends very much on the nourishing quality of the natural environment.

Although urban growth and the loss of green spaces are part of the same process, they are usually not discussed and treated with the same concern and consideration. In numerous cases, urban growth implies landscape fragmentation and a substantial loss of open spaces. Open spaces are often treated as “potentially developable” land within the urban fabric. Rural zones, forests and semi-natural and natural water bodies are disappearing in favor of urbanization. In this line, there is more and more pressure on urban green spaces and urban waterways—on the one hand through the cities expanding—on the other hand through rising demands by citizens to use urban green spaces and water bodies for recreation.

While cities are expanding and the urban population is growing, the demands of citizens are high: people wish to live in cities that offer many and well-designed parks, clean air, less traffic, and a high quality of life. At the same time, the effects of climate change lead to high instances of extreme events such as heavy rain, local flooding, and heat island effects due to high levels of soil sealing in urban areas. This forces cities to find new ways of coping with water in urban spaces. In this context, water and green spaces have a crucial role for the sustainable development and competitiveness of a city.

European Research Projects

The European Union provides funding and grants in a broad range of community programs covering a vast area of interests for urban development, although the city as such is seldom seen as a research subject. The subject areas go from environmental issues, public health, to lifelong learning processes. Although these programs are targeted to

different subject areas, they all seek to advance knowledge, develop innovative solutions and strategies, and support networks to reach these objectives. Their common goal is to foster sustainable development in European cities and they are characterized through transnational cooperation, as the involvement of partners from at least three different European countries is mandatory.

The four projects presented in this paper and funded by different community programs, have as common goals to a) increase knowledge, b) bridge the gap between knowledge available and their inclusion in policymaking, and c) empower citizens in the development process of cities. All projects encompass a wide range of scientific expertise that addresses urban issues in a holistic way. They exemplify current trends in European research, expanding segmented views on urban ecology towards integral visions for sustainable and livable cities.

URGE - Urban Green and Environment

<i>Program</i>	<i>5th Framework Research Programme Key Action "City of Tomorrow Cultural Heritage"</i>
<i>Period</i>	<i>2001-2004</i>
<i>Partners</i>	<i>8 research institutions in Europe 4 city councils</i>
<i>Web address</i>	<i>http://www.urge-project.ufz.de</i>

The URGE Project developed a Toolbox for an interdisciplinary analysis of the urban green structure of a city and for the performance evaluation of individual green spaces. It provides comprehensive evidence decision makers can use to back up the development of sustainable urban strategies.

The Toolbox consists of several supportive tools, which enable users, such as municipalities or planning authorities, to carry out an analysis and self-assessment of the ways in which they deal with urban green space issues. The Toolbox allows the operation and evaluation on two levels: for a whole city (City Level), or particular sites (Site Level).

The main tool of the Toolbox is an Interdisciplinary Catalogue of Criteria (ICC Set). It contains a set of 116 criteria, sorted into four different groups: 1) Quantity, 2) Quality, 3) Use of the urban green system, and 4) Planning, development and management. Other instruments are the Catalogue of Questions (a compilation of questions for citizen's surveys to be used with the ICC), the Worksheets (to support the evaluation of quality criteria), and a checklist to provide an overview of compliance items.

Beside the Toolbox, URGE provides guidance for improving urban green spaces with the help of good practice examples, selected from research in 15 European cities. The Toolbox and good practice examples are compiled into a manual "Making Greener Cities", which is completely available at the website mentioned above.

GreenKeys - Urban Green as a Key for Sustainable Cities

<i>Programs</i>	<i>INTERREG III B - A Programme for International Cooperation financed through the European Regional Development Fund (ERDF) and the German Federal Ministry of Transport, Building and Urban Affairs.</i>
<i>Period</i>	<i>2005-2008</i>
<i>Partners</i>	<i>8 research institutions in Europe 12 city councils</i>
<i>Web address</i>	<i>http://www.greenkeys-project.net</i>

The main goal of the GreenKeys Project was to develop supportive tools and a methodology, in order to guide and assist cities in formulating an Urban Green Space Strategy. The project was based on a study in 15 European cities, which detected that although the number and size of green spaces increased over a period of ten years, budgets available for their development and maintenance have been reduced intensively. This was unfortunate, as seemingly well-planned projects are put on hold because of lack of funds.

Starting with this principle, the GreenKeys Project developed a methodology to approach better green space qualities. It developed a set of supportive tools, which help to identify the drivers and to establish a system for developing, adopting, and monitoring the implementation of an urban green space strategy. GreenKeys developed arguments as a tool to strengthen the weak position of green spaces in the context of planning efforts. The GreenKeys Approach is not a blueprint to be followed in strict adherence: it is more a model that offers an open process for formulating an Urban Green Space Strategy.

The tools and project results are compiled in the manual GreenKeys @ Your City – A Guide for Urban Green Quality, which is available in hard copy or downloadable on the project's website.

SWITCH - Managing Water for the City of the Future

<i>Program</i>	<i>6th Framework Research Programme Key Action "City of Tomorrow Cultural Heritage"</i>
<i>Period</i>	<i>2006-20011</i>
<i>Partners</i>	<i>33 research institutions around the world 12 demonstration cities</i>
<i>Web address</i>	<i>http://www.switchurbanwater.eu/</i>

SWITCH involved 33 partners mainly from Europe, but also Asia, Africa, and South America including the Netherlands, Germany, United Kingdom, Poland, Egypt, Israel, Ghana, Brazil, and China. Lead partner was the United Nations Educational, Scientific and Cultural Organization's Institute for Water Education (UNESCO IHE) from Delft, Netherlands, a major Institute for Water Education in Europe.

The overall aim of the project was to promote innovative solutions for sustainable urban water management. This included to challenge existing paradigms, to find sustainable alternatives to conventional ways, to develop strategies for a water sensitive urban design, and to have action-oriented research in cities. Major results have been the implementation of innovative pilot projects in different partner cities, the promotion of a holistic view on urban water management, and the generation and share of knowledge. In general, SWITCH adopted a grey-to-green approach, which recognizes urban green and blue landscapes, such as parks and clean rivers, as essential foundation for the function, health, and character of urban communities.

One of the many deliverables resulting from the project, to be mentioned in terms of the sustainable development of green and blue landscapes, is the 'Manual on Water Sensitive Urban Design' (Hoyer, Dickhaut, Kronawitter, & Weber, 2011). This manual promotes the idea of retaining rainwater in the city and bringing it back to the surface to make open spaces attractive and usable. This planning concept is described as Water Sensitive Urban Design (WSUD), as it not only effectively resolves urban water management issues, but also contributes to the visual and recreational amenity of the city. The book provides an overview of the WSUD approach, creates guidelines by setting principles for WSUD, and presents case studies from all over the world, to be used as a source of inspiration for creating water sensitive places in urban areas.

CyberParks - Fostering knowledge about the relationship between Information and Communication Technologies (ICT) and Public Spaces

Program	<i>COST - Intergovernmental Framework for European Cooperation in Science and Technology</i>
Period	2014-2018
Partners	39 research institutions and CT developers 22 countries
Web address	http://www.cyberparks-project.eu http://www.cost.eu/domains_actions/tud/Actions/TU1306

Contrary to the previous projects, CyberParks is currently at the very beginning. It is a network aiming to strengthen the dialogue between research communities already involved in the production of public open spaces (urban parks, gardens, squares, etc.) and ICT development. It focuses on creating a transdisciplinary dialogue to share knowledge, spark new ideas, and trigger new projects, which capitalise on bringing nature and the digital closer together.

ICT is a driving force, media, and tool, which operates as a mediator between users and their virtual and real worlds. Public open spaces have multiple functions, including as social gathering places where outdoor interactions between people

can occur, and communication and information exchange can take place. In the past, these two domains have been seen as distinctly different from each other. But, now when people carry the internet in their pockets, the growth of social media, wearables, and mobile connectivity is profoundly influencing the way we experience time, other people, and space we share with them. The use of ICT outdoors will lead to even more blended environments.

CyberParks deals with opportunities and risks ICTs offer to the user via the appreciation, design, and usage of public open spaces. It exploits the benefits of interweaving a green experience with digital engagement centered one the two research questions: How can ICT contribute to attract more users to engage with public spaces more efficiently, motivating them to embark in a more active lifestyle, thus enhancing their health and wellbeing? How can ICT contribute to a better understanding of needs and requirements on public spaces from users' perspectives?

The central challenge is how to use digital technologies to transform our cities into interactive landscapes, encouraging involvement and better social environments, rather than just more high-tech.

The Urban Landscape

Following the definition by Eionet (2012), urban landscape is understood as the "traits, patterns and structure of a city's specific geographic area, including its biological composition, its physical environment and its social patterns."

Therefore, it comprises the total sum of the open spaces within and around our cities. In addition to these non-built areas, buildings and urban (infra)structures can also be thought of as part of the urban landscape, as their form and distribution have direct impact on the matrix of public and private spaces and on the quality of such. However, the open spaces network forms the main and the vital component of the urban landscape, it encompasses both man-made and natural, non-built-up spaces.

The list of examples can be long and varies according to the features of each city: parks, gardens, allotment gardens, recreational areas, playgrounds, school and sports grounds, open air swimming baths, green belts, scenic and natural reserves, woodlands, forests, water bodies and waterfronts, railway and canal corridors, housing landscapes, streets and squares, roadside grass verges and embankments, cemeteries, industrial and derelict sites, and agricultural used land. Urban landscape is the sum of all these components—but it needs also to be addressed holistically, which is much more than a linear sum.

Offering quality of life in urban areas by improving the quality of the environment remains indispensable. Green spaces assume a key role in the efforts towards enhancing the urban

environment, improving the quality of urban life, and play a key role for realising sustainable ideals. Quality green spaces can also contribute to a sense of community identity and ownership. However, frequent deficits in quantity and quality require appropriate strategies for the development and improvement of urban green systems (GreenKeys Team, 2008).

Cities vary tremendously with regard to their urban form, the manner in which they are arranged around natural features, and how they have been shaped by economic factors and decisions for housing, retail, infrastructures, roads, open spaces, etc. Every city is unique, and in this particularity, it partially shapes their residents, sensitising them to some concerns, while discouraging others.

While cities are unique, most of them are facing similarly serious problems related to urban landscape issues. Some cities have enough open spaces available but have inequitable distribution, or too simplified a typology to really meet the needs of the inhabitants; others are short of even a basic amount of park space available for their citizens (GreenKeys Team, 2008). Even those that have plenty of green spaces in a great variety of shapes, structures, and types that are well distributed around the city, often face a lack of financial support for appropriate maintenance (Wilkinson, 2007).

Green Landscapes

Green landscapes can be described as the network of green spaces in urban areas, comprising small and large sites. These could reach from street trees and pocket parks up to large-scale city parks and urban forests.

Urban green spaces are the home of nature and well-being in the urban environment. A green space is directly used for active or passive recreation, or indirectly used by virtue of its positive impact on the urban environment. Serving the diverse needs of citizens and thus offering good quality of life in cities, green spaces exist in a great variety of shapes, structures, and types within the urban fabric. They affect the cityscape, provide ecological diversity, have relevance for healthy citizens and societal well-being, deliver important economic benefits, and form essential structural and functional spaces that make cities more livable places (URGE Team, 2004).

Within the scope of sustainable urban development, a positive attitude concerning the role of urban green spaces in European cities can be detected (e.g., Toledo Declaration, Leipzig Charter of European Cities, Aalborg Charter of European Cities & Towns towards Sustainability). This attitude is even shared by city authorities, the scientific community, and the public. Many of the urban green spaces (especially those publicly owned) are part of the public realm, and so it is expected that their development, financing, and maintenance are to be carried out by public authorities. For all that, the attitude mentioned above and the various charter statements are not robust enough with regard to the point of view of green space issues, as there is very

little evidence supporting a comprehensive entailment position, which places green spaces development at a higher level or sees it as a major political priority (GreenKeys Team, 2008).

Although green spaces have an important influence on many different environmental aspects (see Figure 2), these are usually not directly noticeable, and are thus poorly recognized and under-valued. However, their absence or poor quality worsens the built environment, since, for example, plants absorbing CO₂ through photosynthesis contribute to the renewal of the air and reduction of air pollution. Besides these environmental deficits, their absence also limits the recreational opportunities of the population, causing many people to spend their free time indoors and live under more urban stressors (noise, unpleasant odors, heat, air pollution, etc.). It is important to consider that being outdoors, in a pleasant environment, promotes the process of recovery after illnesses and serves a “buffer function” in an era marked by rapid technological and social development and urbanization.

Green spaces also alleviate causes of stress, such as crowded environments and time pressure. The current sedentary lifestyles are leading people to become overweight. The population's obesity can be also tackled through the provision of more adequate outdoor places for active sports and personal fitness. Parks are ideal places to enjoy healthy exercise, but an overweight person will not be attracted to it, unless the park quality is high (Barber 2005), and easily and safely accessible. The higher the quality, the more people will cherish the space.

Blue Landscapes

Blue landscapes are the sum of natural urban water bodies, including natural urban streams, ponds, and lakes, and the corresponding artificial ones of different scale. These could be natural rivers, port regions, artificial channels, swales, or even fountains and rain art.

Water is an element of magical power and ecological value. It shapes the environment and plays a fundamental role for all ecosystems. “Water is essential for life. . . . It is a prerequisite for human health and well-being as well as for the preservation of the environment” (United Nations Department of Economic and Social Affairs [UNDESA], 2014, para. 1).

Water exerts an elementary, often an almost magical attraction on people (Mader, 2011). In the urbanized environment, water is present in different forms: as flowing or standing surface water, as groundwater to be used as drinking water resource, and as water from precipitation. The urban water flow, originally operating in a cycle of precipitation, infiltration, surface runoff, and evaporation, is disrupted and heavily disturbed. Open water bodies are in danger of drying out or becoming occupied solely for human uses. However, particularly these open water bodies are an important element of the urban fabric due to their high potential for recreational and nature conservation purposes.



Figure 1: Water as an element in the living environment in Malmö, Sweden. (photo J. Hoyer)



Figure 2: Urban Water as an element of attraction in public spaces. The fountains in Sydney Olympic Park run with recycled water. (photo J. Hoyer,)

Figure 3: The water body as habitat with a sustainable function. A constructed wetland for rainwater cleansing and retention in Dockland Park, Melbourne, Australia. (photo J. Hoyer)



Water has a high impact on the atmosphere of a city: it can radiate great calmness or overwhelming power and fullness of life, it can be pumped up or fall down, as a glittering fine stream or a powerful waterfall. There is no limit to its appearance. But its presence is for sure a plus in attracting people to the outdoors and making the environment more fascinating.

Like green spaces, water bodies offer intrinsically interrelated benefits and opportunities to transform the built up conditions into a more liveable environment. In addition to the environmental effects and benefits, water bodies can assume a structural and recreational component in urban spaces. Table 1, next page, lists these benefits in a systematic way. Clean water is an element of urban quality and once perceptible can be a key element to experiencing the environment and natural processes. In the urban development of policy question, issues related to water bodies should be considered in a holistic manner and in context with aspects such as housing, mobility, agricultural, and environmental policies.

Due to these facts, different cities around the world are (re) discovering the potential of water for the development of the city. Enhancing the attractiveness of “river banks” and “waterfront” is being used as a motor for the redevelopment of once rundown harbours and former industrial areas along rivers. The number of international waterfront projects is impressive, among others Buenos Aires, Cape Town, Hamburg, Newcastle, and Oslo made a name worldwide in transforming former brownfields with warehouses, cranes, and barracks into liveable neighbourhoods with a sound mix of residential, retail, leisure, gastronomic, and cultural highlights. Such projects are relevant for urban redevelopment, as they contribute to reducing the number of brownfields, in part transforming no-go-areas into healthy quarters, and supporting the creation of more employment opportunities. These transformations invite people to stroll, linger and use the spaces, and, with this, pave the road for private investments. Having a high quality urban and natural environment is the road to improving quality of urban life, enhancing urban competitiveness, and advancing urban economic growth in a sustainable way.

Benefits and Opportunities of Urban Green Spaces and Water Bodies

Green spaces and water bodies offer many benefits and opportunities. Several authors have researched and reported on varied evidence of those benefits and functions to a greater or lesser extent (as summarised in Table 1). The benefits are extensive and multi-functional, which means that green spaces and water bodies can bring different benefits in different ways to different users, at different times, and with different results.

Table 1: A simplified list of the benefits, functions, and values green spaces and water can provide Based on mentioned projects. Not intended to be a comprehensive list but to deliver an initial notion.

Benefits and Roles of		
	Urban Green Spaces	Urban Water Bodies
Ecological and Environmental	<ul style="list-style-type: none"> - Support the protection of natural resources, preserve functions of soil, water, flora, and fauna, buffer climate - Offer opportunities for enrichment and enhancement of biodiversity, wildlife corridors, etc. - Ameliorate micro and meso-climate air and atmospheric quality - Mitigate urban heat island effects - Influence the drainage potential and groundwater quality 	<ul style="list-style-type: none"> - Support the protection of the resource water in the city - Retain water from rain events - Improve microclimate, temperature, humidity, and bind dust - Mitigate urban heat island effects - Provide habitat for an ecosystem rich in species - Are part of open space networks providing connection among biotopes
Economic	<ul style="list-style-type: none"> - Have positive impact on business and property values - Are source of additional revenues for the municipality (events, taxes on property, etc.) - Are the sum of values that people, both individually and collectively, attach to nature 	<ul style="list-style-type: none"> - Attract tourists and investments and, therefore, invigorate local businesses and neighbourhood - Provide an attractive surrounding and, therefore, are an important factor in the location of new businesses and residents inflow - Can be used for commercial water sports
Social	<ul style="list-style-type: none"> - Are intimately related to the possibilities such spaces offer for recreational and social activities outdoors, e.g., platform for interaction between human activities and the environment, meeting places catering to all ages, nature experiences and enjoyment of natural processes, "outdoor classroom" - Have popular value of being close to nature as venues for events, fairs, and concerts 	<ul style="list-style-type: none"> - Attract people - Act as a place of communication and contemplation - Make people aware of the importance of water and their influence on the urban climate/microclimate - Educate people about the urban water flow, particularly when flowing and connected to each other - Provide places to experience nature and enjoy calm surroundings
Structural	<ul style="list-style-type: none"> - Can define the urban structure and character - Are a quality factor of the urban landscape, enrichment of visual aspects, promotion of identity of an area or a city - Provide diversification of the built landscape and beautification of the city 	<ul style="list-style-type: none"> - Structure cities and can be the strongest expression of urbanity - Act as a natural border between open spaces of different use without interfering with design - Have educational function

Integrative Planning Processes: A Key Towards Sustainable Urban Development

Urban landscape is becoming the "home" of most people across the world, and it is being transformed into highly artificial landscapes—with consequences. Sustainable urban development, although a fluid and expansive concept, calls for a holistic and integrated understanding of the urban landscape and in particular ensuring the ability of the natural environment to sustain the human society today and in the future. It further makes it necessary not to limit approaches to sectorial views or administrative boundaries, but to understand them in a broader context. Moreover, greater awareness of the economic value of ecosystem goods and services is needed among decision-makers and the public. Basic preconditions for the development of an Urban Green Spaces Strategy require: 1) political will, 2) holistic view of the green infrastructure, and 3) time, trust, and efforts in the beginning.

In addressing quality of urban landscape and environment, GreenKeys (2008, pp. 7–12) identified the most important elements that cities have to deal with:

- 1) The identification of the social, economic, environmental, and political driving forces, along with their reflection in policies and/or strategies;

- 2) The urban living surroundings: the physical spaces and their management;
- 3) The resources available for investment; and
- 4) The people who use the spaces and how they use them, in all facets.

These four elements are inseparable—each influences the others and as urban planners, landscape architects, ecologists, and politicians we all have to think and act concurrently about all four. This also means that design, financial resources, or political intention alone are not enough to achieve sustainability, only the interaction of these elements.

The SWITCH project goes far beyond, as it states the following principles for successful water sensitive planning (Hoyer, Dickhaut, Kronawitter, & Weber, 2011, pp. 34–39):

Water Sensitivity - Create water sensitive spaces by bringing urban water management closer to the natural water cycle;

Aesthetics - Use water to provide an aesthetic benefit where possible and integrate it into the surrounding area;

Functionality - Use an appropriate design and appropriate maintenance, and consider possibilities for adaptation when designing water spaces to ensure long term functionality;

Usability - Use water to create places that can be used for recreation and/or nature conservation purposes;

Public Perception/Acceptance - Consider the demands of all stakeholders, involve them in the planning process, and ensure acceptable costs;

Integrative Planning - Plan in an integrative, interdisciplinary process that considers all the different demands and incorporates professionals from different sectors including urban planning, water management, ecology, landscape architecture, and urban design.

Although these principles have been primarily developed to promote water sensitive planning, they can easily be transferred to other sustainable urban planning processes, when replacing 'Water Sensitivity' with 'Ecology'. Whatever the case, the formulation of comprehensive development strategies and their implementation is not a readily achieved exercise. It is a comprehensive and very demanding process. It requires placing the present situation side by side with the society's common values and needs, along with its economic prospects and future urban development. The experiences of GreenKeys and SWITCH show that good organisation is necessary, along with well-founded and supportive cooperation between city departments, stakeholders, scientific advisors, and the public. It is very important to plan the work in an appropriate and meaningful way that suits the characteristics of the particular city and the characteristics of the particular site.

Impacts of European Research on Paradigm Shift in Urban Planning

The sustainable development agenda already conquered a dominating position in urban policy and planning discourses. Sustainable development can be, on the one hand, a multifac-

eted, dynamic, flexible, and powerful strategy; on the other hand, it can be vague, empty, ambiguous, or even meaningless. In order to foster sustainable development, cities around the world share the same need for strategic planning. Encouraging and empowering citizens to participate in local policy decisions is a central issue in a sustainable development pattern.

Planning culture is increasingly changing in Europe. Research provided municipalities not only the evidence that participatory planning processes can be crowned of success, but it has shown that this can be a long-term commitment for designing and managing sustainable projects. The dissemination of findings and results, especially of good practice, opened new horizons. Moreover, cities need to plan sustainably due to European Union legislation (e.g., Water Framework Directive, Air Quality Directive), rapidly changed environmental conditions (climate change), and empowered communities that demand healthy and liveable cities. There are higher demands on public open spaces with regard to their usability and a rising demand on multi-functional spaces due to limited space available for public uses. This results in more complex solutions, each adapted to particular needs, availability of space, and natural conditions. Here research plays a relevant role, in particular in the broad interpretation of opportunities, in demonstrating possibilities, and in identifying creative impulses that trigger the interest of policymakers for immediate measures or long-term actions. In this respect see Figure 4.

Concluding remarks

Green spaces, water bodies, and natural ecosystems all underpin human life and activities. The loss of their services requires costly alternatives. Investing in our natural capital saves money and is important for the welfare and long-term survival of our urban society. When urban landscape and environmental is-

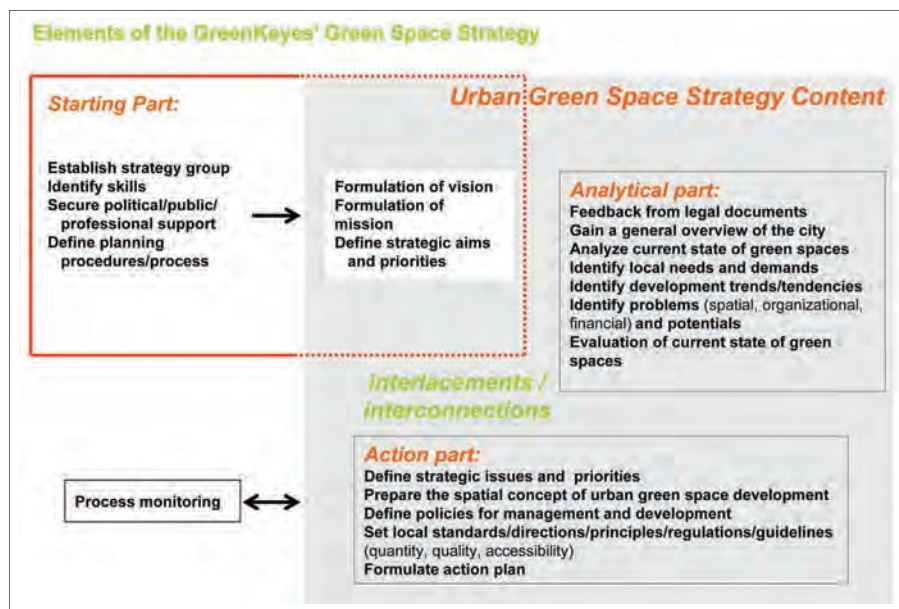


Figure 4: Elements of the GreenKeys Green Space Strategy (from GreenKeys team, 2008).

sues are placed at the heart of the development process, this can lead to a healthier urban environment—with fewer problems and more opportunities. Therefore, we will all profit—through a higher recreational value of the cityscape, reduction in illnesses, and higher competitiveness that makes the city an attractive place for new investments, providing businesses and communities with the economic benefits of the improvements of urban green spaces. To meet all these demands, nothing is simpler than investing in the quality of the urban environment.

Fundamental to the process of strategic planning is the promotion of platforms that advance and share knowledge, provide strategies and tools for goal-oriented planning, summarize good-practice examples, and test large-scale applications. With rising demands, planning becomes a more complex issue, which can only be resolved by involving all the different disciplines concerned from the very beginning. This appears to be very difficult as many cities have few experiences and limited budget. Research projects, such as those presented here, help to overcome these barriers as they provide sufficient funding and scientific expertise, and represent an push for starting the process of interdisciplinary planning and discussion with all stakeholders. These projects have demonstrated that once an integrative planning process was started, cities continued it even after the official end of the research projects and associated funding.

One thing is clear, research can replace neither good planners who develop upright and innovative ideas, nor politicians with foresight who embark on implementing these ideas and set them into the political agenda.

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FOCUS II

Faculty and Student Work



Reinterpreting City Alleys: Design Guidelines for the City of Vallejo, CA

Karlo Felix

BCRP, Cal Poly,
Associate Planner, City of Napa.

Not unusually, good students get jobs before they even finish their senior projects! This was the case for Karlo Felix, BCRP class of 2005, now a planner with the City of Napa. In 2013 he had the chance to wrap up his senior project which consisted of a thorough study of the City of Vallejo's alleys and the proposal of a policy and a strategy to protect and enhance these important elements of the city's original morphology.

The original function of the alley, designed as a means to access the rear of properties, has given way to its reputation as the storage location of garbage bins, the dumping ground of unwanted furniture, the cruising grounds for immoral encounters and acts. To some, the City of Vallejo shares the same notoriety as the forgotten side streets. A city founded to support a new state and a new country's Navy, its stature has ceded to its distinction as a dying town.

San Francisco, Sacramento, Los Angeles, Chicago, and Baltimore are among many cities that have embarked on alley activation projects. The overlooked and disregarded side-streets left over from the days of carriage houses are becoming unique and integral aspects of these cities. Vallejo too has an existing system of alleys in the heart of a city. This essay explores three questions: (1) how have alleys been reintegrated in other communities; (2) what design elements have encouraged their reintegration; and (3) from this exploration what design guidelines can be distilled to achieve those means in a manner appropriate to Vallejo.

Historical Overview of Alleys

Elfreth's Alley in Philadelphia claims to be "Our Nation's Oldest Residential Street" and may be the earliest form of the alley as we understand it today. Created in 1702, it was the product of two businessmen who decided to share a strip of land between their two properties to allow for easier access between their blacksmith shops near the Delaware River and the commercial thoroughfare of Second Street (Elfreth's Alley Association, 2010).

The 19th century brought the expansion of the newly created United States of America. Cities expanded in a regimented grid-pattern to accommodate the easy sale of land. Alleys were a common element in the urban morphology, allowing access to the rear of lots where stables, privies, and other unwanted elements were kept away from street view.

Post-Civil War economic growth drove people into cities. Property owners capitalized on the influx of freed slaves and immigrants and converted outbuildings into alley housing. With the automobile becoming a more widely available means of transportation, barns and stables reserved for horses and carriages were converted into residential units for people.

It is also at this time that cities began to take note of the poor circumstances that compromised alleys. The nascent field of planning held the First National Conference on City Planning and the Problems of Congestion in 1910. Several speakers at the conference detailed the problems of overcrowding and noted the poor housing conditions of alleys (Meck & Retzlaff, 2009).

Alleys disappeared from the nation's development vocabulary in the years after the Great Depression. Tasked with assisting the recovery of the housing market the Federal Housing Administration (FHA) published technical bulletins to assist developers and communities in securing financing, most efficiently subdividing their land, and locating home buyers (FHA, 1934; Southworth & Ben-Joseph, 2003). By coupling the ability to obtain financing and mortgage insurance with the use of FHA standards, the federal government was able to usurp local land use controls (Southworth & Ben-Joseph, 2003). Returning veterans looking to start families drove a residential development boom in the years after World War II where the suburban pattern defined by the FHA dominated.

Alleys only began to reappear in development patterns with the New Urbanism movement of the early 1990s. The Charter of the New Urbanism defines 27 principles to guide public policy, development, and design. These principles address a broad array of disciplines and range in scale from the region, city, neighborhood, and building. Developments utilizing these principles have several defining features that have encouraged the use of alleys. With a focus on fine-grain, alleys once again became prominent as the movement rejected suburban development patterns in favor of mixed-use and neo-traditional design. These principles have created

identifiable communities that include an interconnected and shared network of streets, a variety of housing typologies, and parking in the rear of properties.

Existing alleys nationwide are undergoing a revitalization movement. While New Urbanism added alleys back into the fabric of cities, contemporary programs seek to improve on existing alleys. Many communities have alley systems that are still intact. Large cities such as Chicago, Los Angeles, and Seattle have garnered a lot of attention for their programs. But mid-size to smaller cities such as Sacramento, Santa Cruz, and Fullerton have drafted their own programs as well. Under the banner of “alley activation” or “alley greening” the new focus is to reimagine alleys to serve as a community resource.

Alleys and City Form

The urban design principles present in alleys are explored here through two approaches. First, by applying Kevin Lynch’s concepts to examine how alleys are perceived by their users. Second, by using Donald Appleyard’s studies on the social effects of traffic on the lives of residents.

Lynch’s analysis model is based on *imageability*, the “mental picture of the exterior physical world that is held by an individual” (Lynch, 1960, p. 2) and is formed by five elements: paths, edges, districts, nodes, and landmarks.

Paths are the main element used by people and are “channels along which the observer customarily, occasionally, or potentially moves” (Lynch, 1960, p. 47). Segregated by land uses, alley identity is tied closely with the building form in which it is located. Enclosed mid-rises with continuous facades in commercial areas and fences with a staccato of low-rise accessory structures in single-family residential areas are a contrast, but provide the user with a specific identity. Continuity can be reinforced by the design of the alley through unified paving materials, lighting, and width. The naming of alleys contributes to the mental map of users and strengthens the path’s image.

Edges, according to Lynch, are “the linear elements not used or considered paths by the observer. They are the boundaries between two phases, linear breaks in continuity” (Lynch, 1960, p. 47). Physically, alleys evoke few characteristics of edges as they generally are not features that divide distinct areas. However, where alleys intersect streets, a mental edge is present. As a break in the street façade, the gap may provide casual users with little incentive to explore. The association of alleys with social ills provides a reinforcement of alley ends which users may choose to avoid.

Most people order their community into districts that have an identifiable characteristic (Lynch, 1960). They are “medium-to-large sections of the city, conceived of as having two-dimensional extent, which the observer mentally enters ‘inside of’” (Lynch, 1960, p. 47). Lynch further identifies physical characteristics that allow districts to develop a strong image.

These include continuous and homogeneous building facades of similar form, detail, materials, and uses. A unifying activity whether it be art, architectural history, bars, or retail, plays into the identity of districts. Alleys do not form the backbone of districts. However, evoking the characteristics previously listed, alleys can be a contributor to districts they are located within and reinforce the internal identity of the district.

Nodes are “the points, the strategic spots in a city into which an observer can enter, and which are the intensive foci to and from which he is travelling back” (Lynch, 1960, p. 47). While identified with plazas, squares, and transit stations, some alleys may serve as nodes. Alleys that open up at intersections may serve as a node simply due to the large influx of users at the junction. Alleys that function as neighborhood rear yards or as restaurant rows provide for a unified concentration of an activity which creates a recognizable node.

While simple objects, landmarks are “another type of point-reference, but in this case the observer does not enter within them, they are external. They are usually a rather simply defined physical object” (Lynch, 1960, p. 48). Stumbling upon a distinctive alley may arguably help orient users, but landmarks are meant to be external identifiers. As alleys are tucked within the urban fabric they lack the ability to provide wayfinding cues. However as linear paths, alleys can be used to reinforce axial design. Locating prominent landmarks at the terminus of alleys, similar to monuments located at street intersections, can help users navigate through alleyways or to particularly distinctive alleys.

Appleyard’s *Charter of Street-Dwellers’ Rights* captures the wants and needs of his survey respondents with seven aspects of an ideal street (Appleyard, 1981). While these goals are designed with a broader road network in mind, they nonetheless speak to an alley’s sense of place and further contribute to our understanding of design principles present in alleys.

Safe Sanctuary - As a sanctuary, streets are the territory of pedestrians where children can walk or bike safely to places they visit such as schools and parks. While vehicles are expected on the streets they should “move slowly, carefully, and with warning - as guests, not as owners” (Appleyard, 1981, p. 243). The limited vehicular use of alleys lends itself naturally to use by residents for walking and cycling. Furthermore, the relatively narrow design of alleys forces drivers to use the alley at slower speeds and with greater caution. Appleyard does not discount that streets must nonetheless be able to meet the need for access by emergency vehicles. This also holds true for utility vehicles such as garbage collection trucks.

Livable, Healthy Environment - Local residents “should not be forced to withdraw from the street because of the discomforts caused by traffic” (Appleyard, 1981, p. 244). Everyday activities should not be impaired by noise, dust, excessive lighting, and vibrations. Places on the street should be available for people to use whether it be for talking or playing. Unmaintained alleys can detract from achieving this goal. Poor paving can lead to pools

of water collecting when it rains and dust clouds in dry weather. Broken and uneven paving also may unnecessarily add to noise pollution as vehicles navigating the alley get jarred. Poor placement and design of safety lighting in alleys can affect the sleep of residents if glare is not adequately shielded.

Community - Streets can be a communal space where residents engage in daily activities. Community events such as block parties are also valid street activities. The short lengths and narrow widths of alleys create a defined area that lends itself to these activities. These communal events may be specific to the residents or businesses that abut the alley. Subject specific events relevant to the broader community, such as those found in arts districts, may find a home in alleys. These users maintain their communal space which in turn promotes activity within them.

Neighborly Territory - The cleanliness of streets and their amenities such as landscaping and seating areas is encouraged when residents take responsibility for their streets. "The street should be symbolic, if not in a legal sense, territory that the residents feel belongs to them" (Appleyard, 1981, p. 244). Along the same lines as "Streets as Community," active users will maintain their alley that they have "customized" by keeping it free of litter, serving as "bouncers" to keep unwelcome strangers away, and notifying municipal officials when it needs fixing.

Place for Playing and Learning - In urbanized settings with small rear yards and limited parks, the streets become a playground for children. Appleyard (1981, p. 244) notes, "[o]n it children can learn much about nature, through plants and trees, the sun and the wind, and through exposure to earth itself. They can learn about social life if there are people on the street whom they can safely meet" (1981, p. 244). Streets that include a variety of spaces, surfaces, landscaping, and textures provide a diverse place not only for playing, but learning as well. Limited vehicular traffic allows for residential alleys to become an extension of the neighborhood rear yards. However, poorly maintained alleys increase the potential for injury when they are littered, flooded, pot-holed, or occupied with strangers.

Green and Pleasant Land - Landscaped city centers "provide relief from the hardness and greyness of the city" and can provide glimpses of nature in an otherwise austere urban landscape (Appleyard, 1981, p. 244). Where alleys no longer function as access to residential properties there are opportunities to "cede" the space back to its residents for landscaping. Current stormwater management practices also encourage the greening of streets and alleys to serve as a means to control non-point-source water pollution. Commercial alleys can utilize planters to soften them and to screen utility meters and waste receptacles.

Unique Historic Place - The stories and activities that have taken place over the years on streets contribute to the history of the street. Users take pride in a space that has a special identity to them, becoming a "place" to residents rather than just a route (Appleyard, 1981). Across a city, alleys may lack a broad quality that makes them unique. However individual alleys, such as

those with views, that lead to parks, or within a historic district, can create an identity for themselves.

Design Principles

Four overall design principles for alleys are detailed below based on the historical aspects of alleys and the design elements that alleys contribute to the urban fabric.

Provide Access - Alleys as a means to access the rear of properties must be maintained, as they are channels of movement within an existing circulation network. This network provides people with passage to homes, businesses, and public spaces. This principle extends beyond simple ingress and egress as alleys provide an accessible location for utility meters, waste collection facilities, and emergency access.

Define the Place - A self-defining feature bound by buildings or fences along its length and streets at its ends, an alley should be an identifiable place. A continuous alley-fronting facade pattern that links both ends of the alley with quality architectural elements encloses the space. Paving that is durable and consistent the length of the alley increases the legibility of the alley. Thoughtful orientation and placement of building facades, signage, lighting, plantings, and utilities must be accompanied by a contextually-based selection of materials and expression forms that are appropriate to the surrounding uses and history to establish a legitimate sense of place.

Foster Neighborhood Ownership - Like streets, alleys provide access for nearly anyone. In a manner different than streets, alleys have boundaries, a permeable edge that allows for them to become outdoor living rooms. Here users can play, socialize, and interact—creating a territory that the neighborhood invests in and maintains.

Encourage Multiple Uses and Functions - Pedestrians, bicycles, and vehicles bringing residents, workers, visitors, and customers. The safe sharing of the alley by these users is encouraged and expected. Urban life is not limited to the confines of private property and positive casual encounters can be encouraged when alleys are seen as an extension of the community.

Case Studies

San Francisco, Sacramento, Baltimore, and Austin created separate programs that resulted in unique alley "products". San Francisco's Belden Place exemplifies a concentration of a single-use on an alley: restaurants. Liestal Row in Midtown Sacramento's Handle District is an example of an evolving alley where both restaurant and residential uses are oriented toward the alley and include environmentally-protective features. The Hill and Patterson Park neighborhoods in Baltimore are an example of the successful implementation of a program to return alleys to adjacent residences. And Austin's Alley #111 is an example of engaging an alley as a cultural space through temporary events. Each case study includes an examination of the alley based on the four design principles discussed earlier.

San Francisco - Belden Place

- *Provide Access* - With the exception of service vehicles, the alley is generally closed to vehicular traffic. A sidewalk lines both sides of the alley and allows the middle of the alley to remain free of channels and drainage inlets.
- *Define the Place* - A continuous facade of storefronts encloses the alley, with high-rise buildings beyond providing layers of building form to the site. Further accentuating the intimate atmosphere of the alley is a set of string lights that drape across the length of the alley. Awnings project into the alley and denote the entrances into the restaurants which comprise the dominant land use within it.
- *Foster Neighborhood Ownership* - Moveable tables, chairs, planters, and windscreens fill the alley in the afternoons after the alley has been vacated for use by service and delivery trucks.
- *Encourage Multiple Uses and Functions* - Reflecting on the alley's original establishments of French cuisine, celebrations such as Bastille Day are hosted at Belden Place.



Figure 1: Belden Place, San Francisco, CA.
(photo © Esther Reyes; <http://www.flickr.com/photos/estify/>)

Sacramento - Liestal Row

- *Provide Access* - Vehicular access was maintained to allow access to parking lots and alley-loaded housing units.
- *Define the Place* - While 20-feet at its widest points, Liestal Row narrows down to 12-feet. This reduction allows for the placement of above-ground planters and several consolidated trash enclosures. The majority of utilities are located beneath the alley. Gutter drains, fire risers, and electrical panels are located on the facades facing the alley. Several surface lots interrupt the facade lines along the alley. A few businesses front onto the alley, including a cafe and bike repair shop on the north-side and a three-unit alley-loaded condominium building on the south-side. The alley-loaded units allow for efficient use of land that was previously used as a surface parking lot. The alley is lined with pervious pavers that include built-in lights that accentuate the alley in the evenings.
- *Foster Neighborhood Ownership* - Small tables and chairs are located adjacent to the alley, but are limited in their placement and location as the alley is still utilized by vehicles. There are several murals painted on the walls of the sides of buildings facing the parking lot on the east-side of the alley.
- *Encourage Multiple Uses and Functions* - The alley's location in the cultural and culinary heart of Sacramento provides for a steady stream of pedestrian traffic throughout the day and night. The alley is also the location of small festivals throughout the year that close the center of the alley for events. Its pervious pavers allow for a portion of rainwater to infiltrate the soil, reducing surges in the stormwater system. Throughout the year the alley closes for neighborhood and City events.



Figure 2: Liestal Row (Old Sould Alley), Sacramento, CA.
(photo © Geno Massuda)

Baltimore - Glover-Luzerne Alley

- *Provide Access* - East Fairmount Avenue bounds the alley to the north. Two alley entrances are located along North Glover Street on the east-side of the alley. A fourth entrance to the alley is located on the west-side, accessing North Luzerne Avenue, directly across from the southern access off of North Glover Street.
- *Define the Place* - The alley is approximately 20-feet wide but appears to be wider as the rear yard fences of abutting residences enclose the alley. This is especially apparent where fences have been lowered or set back from the alley. Beyond the fences are continuous rows of attached homes which front on the street. All four entrances into the alley are gated with access granted only to residents with keys and to public safety personnel.
- *Foster Neighborhood Ownership* - As the alley has limited access, it has become the location of neighborhood block parties and gatherings. It functions as an additional open

space, serving as an extension of the adjacent rear yards. Residents have personalized the space with brightly painted planters and walls. The alley is also furnished with tables, chairs, grills, and umbrellas. Rainwater drains along the center of the alley which is also dotted with utility poles. No formal lighting is provided within the alley, but several residents have installed lighting on their own fences and around utility poles.

- *Encourage Multiple Uses and Functions* - This alley no longer provides access to vehicles and users are limited to those with keys. Gover-Luzerne functions as a neighborhood space for those with residences that directly abut the alley. As an extension of their rear yards, the space is a playground and park utilized by the residents for playing and socializing.

Austin - Alley #111

- *Provide Access* - Alley #111 is bounded by 10th Street and 9th Street on the north and south and Congress Avenue and Brazos Avenue on the east and west. It is open to vehicular access.



Figure 3: Glover-Luzerne Alley, Baltimore, MD.
(photo © Kate Herrod, Director of Community Greens;
wikipedia/creative commons)

Figure 4: Alley 111, Austin, TX.



- *Define the Place* - Alley #111 is 20-feet in width and approximately 350-feet in length. With the exception of a large service area on the northern-side of the alley, the alley has a continuous facade, enclosed by two-story buildings on the south and a three-story and 12-story building on the north. Gutter drains, electrical panels, and fire escapes hang over the alley, with waste bins lining the edges of the alley.
- *Foster Neighborhood Ownership* - The exhibition was the pilot project of the Alley Workgroup: a group organized by the City of Austin's Downtown Commission and composed of representatives from the Commission, city staff, Downtown businesses, and art organizations. Planning for the exhibition focused on physical improvements to the alley and activation of the alley. Grants funded the design of physical art that was to be installed on the ground and above the alley. Donations funded smaller individual art pieces, furniture, and landscaping. Activation of the alley took place over five days with the goal of attracting a diversity of interests. Over the course of the program there were vocal exhibitions, visual art installations, commuter networking events, culinary showcases, and family-oriented activities.
- *Encourage Multiple Uses and Functions* - The organizers of this project sought to involve families, artists, and businesses in their pilot installation.

Lessons Learned

Adding to the four principles discussed earlier are four lessons learned from existing alleys based on the exploration of the elements that contribute to their character.

Not All Alleys are the Same - A single typical design pattern for alleys cannot be applied to all alleys in a community. A community's alleys must be grouped into alley types based on surrounding land uses. As guidelines regarding alleys are developed, they must keep in mind activities of those using the alley and that they establish an expectation of a high-level of design quality.

Garner Community Buy-In - Regulatory authority over rights-of-ways generally required that municipalities take the lead in implementation of alley programs. However, funding sources came from various agencies and the community with technical assistance provided by businesses and local universities. As these alleys will eventually be largely patrolled by abutting users, neighborhood buy-in is required.

Urban Life Can Occur in Alleys - Alleys are an underutilized land resource that can be transformed into recreational spaces to supplement parks and open space in a developed area. The community space can further strengthen neighborhoods by addressing criminal and safety concerns through their attractive appearance and active use.

Alleys Can be "Green" - Plantings within the alley soften what can often be an austere environment. Alleys can also assist with the treatment of runoff through the choice of materials and the design of the alley. When correctly designed the alleys will reduce nonpoint sources of pollution discharged into waterways, eliminate localized pooling and/or flooding of alleys, and require minimal maintenance.

The City of Vallejo and its Alleys

Located approximately 32 miles northeast of San Francisco and 57 miles southwest of Sacramento, Vallejo is the largest city in Solano County (Metropolitan Transportation Commission & Association of Bay Area Governments [MTC & ABAG], 2013). The city is situated on Mare Island Strait, which drains the Napa River into San Pablo Bay.

When California gained independence from Mexico and was subsequently annexed by the United States, General Mariano Guadalupe Vallejo offered 156 acres of his rancho to establish a new state capitol, which the new California legislature named after him (Kern, 2004). However General Vallejo was unable to develop the capitol to the satisfaction of legislature who eventually decided to move the capitol to Sacramento in 1852 (Delaplane, 1995).

While the city's 1852 stint as capital was brief, Vallejo's new identity as a navy town would soon begin. Due to Vallejo's sheltered location across from the selected site for the state's new capital, the federal government purchased Mare Island, a new naval facility to support commerce in the newly opened Pacific the same year. Construction of ship-building facilities began immediately and in 1854 Commander David Farragut, of Civil War fame, opened Mare Island Naval Shipyard; the nation's first naval base on the West Coast (Delaplane, 1996; Kern, 2004).

Vallejo was little more than a small town of 3,000 in the early 1860s. But the shipyard brought business interests into town from San Francisco and California's hinterland. Over the next 100 years the City of Vallejo would grow to support the Navy through the Spanish-American War, World War I, and World War II. By the 1950s Vallejo had grown-up into a city with all the amenities required to support a navy town. Hotels, shops, offices, churches, schools, and hospitals grew in the city center alongside stately mansions. Vallejo also began to push eastward to accommodate the growing population of World War II veterans that either remained or settled in Vallejo. The city's population exploded from 26,000 in 1950 to 61,000 in 1960 (MTC & ABAG, 2013). But the growth left the downtown in disrepair, and like countless towns across the United States, redevelopment took hold in the 1960s and 1970s. Large areas of the historic downtown and waterfront were demolished under the banner of urban renewal (City of Vallejo, 1994).

With the end of the Cold War in 1989, Mare Island's budget was gradually reduced and in 1996 the base closed after constructing

513 vessels and repairing another 1,227 which ranged from wood ships to nuclear submarines (City of Vallejo, 2003). The Navy's presence had identified the city since its inception and the base closure left the City reeling. While Vallejo's population continued to grow outward, the commercial heart of the city began to fade. Vallejo's identity as an industrious American navy town shifted to a crime-ridden central core with empty storefronts. This identity was further pushed with Vallejo's bankruptcy in 2008, which was at that time the largest municipal bankruptcy in the nation. *Newsweek* listed Vallejo in their "Dying Cities" rankings and *Forbes.com* listed it as one of the "Most Miserable Cities" in 2011, 2012, and 2013.

With the City's exit from bankruptcy, Vallejo's appeal is drawing new investments due to its established infrastructure, centralized location, and trained workforce. The City is home to the Vallejo Center (a campus of Solano Community College), Touro University (an osteopathic medical school), and California Maritime Academy (a campus of the California State University System). Six Flags Discovery Kingdom and the regional office of the United States Forest Service also call Vallejo home. Downtown has retained a majority of its historic structures which have appealed to those from around the Bay Area seeking to own a historic home.

Project Area

Development patterns within the city have varied throughout time. Despite the redevelopment movement of the 1960s and 1970s, Vallejo has been able to retain a large portion of its original lotting pattern. Alleys that separated the rear yards of properties on a block are still present today. These alleys are the focus of this report and guided the establishment of the boundaries of the project area. The project area encompasses approximately 444 acres with 2,054 parcels over 116 blocks. There are 108 alley segments that total 8.2 miles in length.

The majority of the project area is composed of residential uses. Detached single-family residences dominate but attached single-family and multi-family residences are also present. Strip commercial uses are located along Tennessee Street to the north, as well as Sonoma Boulevard and Broadway Street which bisect the project area. The Downtown provides for a mix of commercial uses, including restaurants, a theatre, and small markets.

The roadway system is oriented in a north-south and east-west direction. Streets running east-west are named after states and streets running north-south are named after California counties. The alleys run in the east-west direction and are named after motorcycle brands (York, 2013).

Despite the hilly terrain, the project area retains essentially the same block pattern from when the City was first platted with blocks 280-feet by 400-feet. Lots 50-feet in width and 130-feet deep were separated by 20-foot alleys and 80-foot streets. The majority of the project area is composed of

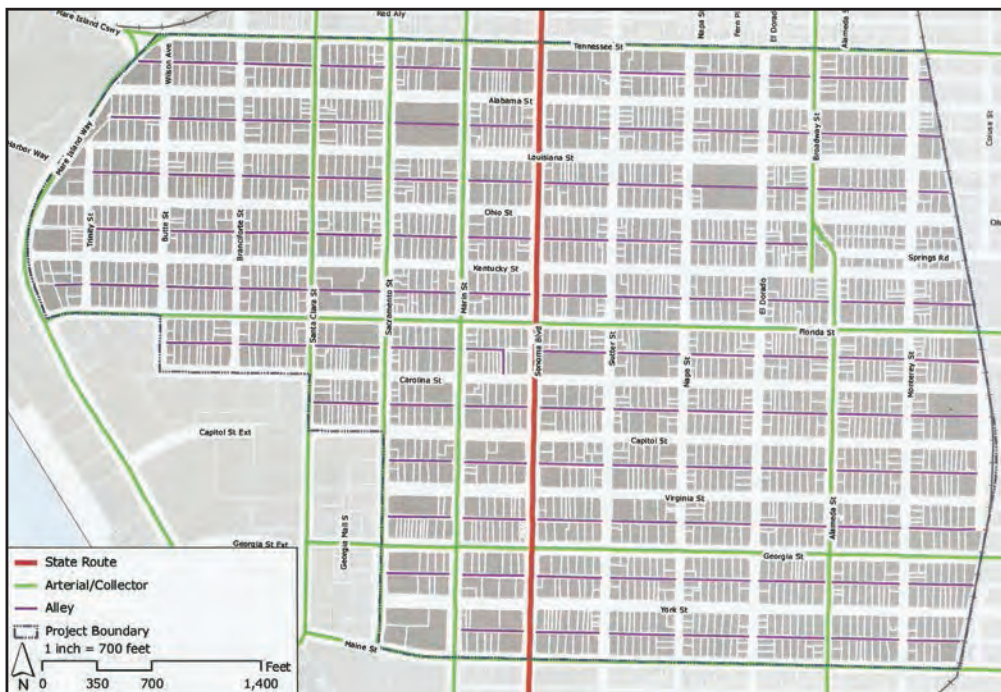


Figure 5: Downtown Vallejo's street grid, with the alleys show in purple.

single-family detached houses that are two- to three-stories in height. Downtown consists mainly of three- to four-story buildings. The grain of the project area is varied. While the historic block pattern remains, the inconsistent building pattern and patchwork of surface parking lots do not provide for long lengths of continuous street-fronts or alley-fronts. The strong defining features of historic buildings are lost on more contemporary structures in the area. Both historic commercial and residential buildings provide a base, body, and crown that are accentuated with detail missed on buildings developed within the past 60 years. These historic structures are also oriented towards the street and are pedestrian in scale with a rhythmic pattern of windows.

Opportunities

Intact Alley System - While many of the alleys require a significant amount of maintenance, the lanes themselves have survived and the purchase of additional right-of-way is not required. A large amount of development potential is stored in the surface parking lots that are located throughout the area that about the alleys.

Prime Location - Alleys located within the Downtown are located within walking distance of the City's civic center, arts district, and transit hubs. This positioning allows not only for an increase in street-level activity but the influx of potential customers spending money within commercial establishments.

Planned as a Center - Recently adopted policies and regulations seek to greatly increase the number of residents in the Downtown. A larger neighborhood base allows for a wider variety of uses to flourish during the day and evening.

Green Trend - A trend towards the greening of communities has been extant in Vallejo for some time. Opportunities to create new open space for infill areas that incorporate green technologies are welcome.

Constraints

Local Regulation - Although the City has relaxed many of its regulations toward restaurants to encourage a more active Downtown, the City maintains very restrictive requirements and permitting processes for outdoor dining and alcohol service. Many permits are not subsidized and require the applicant to pay the full cost of the processing of applications. A lack of adequate staffing also results in a lengthy processing timeframe.

Maintenance of Functionality - Aside from their function as a means of access to the rear of properties, alleys provide service access to residences and businesses. Waste collection and utility meters are located within the alley requiring access by both large waste collection vehicles and utility workers on foot. Additionally, fire trucks must also be able to access the rear of properties and require a minimum width and vertical clearance.

Insufficient Financing - The City is still undergoing a recovery from the recent economic downturn and bankruptcy. While the passage of a voter-approved sales tax increase benefited City services, a consistent and sufficient amount of public funding may still not be available to upgrade, beautify, and maintain the alleys. Additionally, private property owners do not appear to have the financial means to upgrade their own buildings so private funding of improvements may be a challenge.

Vision for Vallejo's Alleys

Vallejo's alleys serve a diversity of uses and are attractive spaces that encourage neighbors, the community, and visitors to share in the distinct cultural character of the City. As a part of the community's network of streets, sidewalks, and open spaces, alleys are inviting and functional, linking the community and contributing to the environmental, social, and economic well-being of Vallejo. (City of Vallejo, 2005)

Design Goals

Neighborhood Identity - Create alleys that enhance the neighborhood and are respectful of the residents and businesses that abut the alley. Build on the character of existing neighborhoods to create a distinct identity.

Economic Vitality - Strengthen the historic heart of Vallejo by creating destination alleys that attract residents and visitors and encourage them to patronize neighborhood businesses.

Aesthetic Quality - Foster a pedestrian environment with public improvements that provide visual interest, durability, and functionality. Maintain the rhythm and scale of the neighborhood with the use of quality materials and architectural elements.

Environmental Responsibility - Incorporate green infrastructure systems that improve stormwater drainage, minimize resource consumption, and promote a healthy lifestyle.

Accessibility - Ensure that alleys retain their function as a means of access to the rear of properties. Provide a route for residents

to access garages, alley units, and accessory second units and for customers patronizing businesses.

Social Vitality - Encourage the potential for social interactions by creating a usable outdoor space. Create safe spaces for a diverse range of users.

Design Guidelines

This essay only presents the guidelines as a single list. The actual design guidelines are broken into three sections: (1) the "private realm," which includes privately-developed buildings and improvements; (2) the "public realm," which pertains to alleys; and (3) programs related to the use of alleys.

The project area is additionally divided into three alley districts: (1) the "single-family districts," which are located in areas that are exclusively residential and function mainly as automobile access to homes; (2) the "shared-use districts," which are located on blocks that include both commercial uses and residential uses; and (3) the "central core district," which is located in the heart of Vallejo's historic Downtown. The actual design guidelines tag each specific guideline to the district or districts where they should be applied as guidelines for an alley in one district may not be applicable to another district.

A. Site Layout and Building Design - Orienting uses towards the alley creates a feeling of vibrancy and reduces potential for criminal activity. Setbacks from the alley should respond to the neighborhood.

- Orient buildings so that facades and pedestrian entrances face the alley in addition to streets and plazas.

Figure 6: The three proposed Alley Districts for Vallejo.

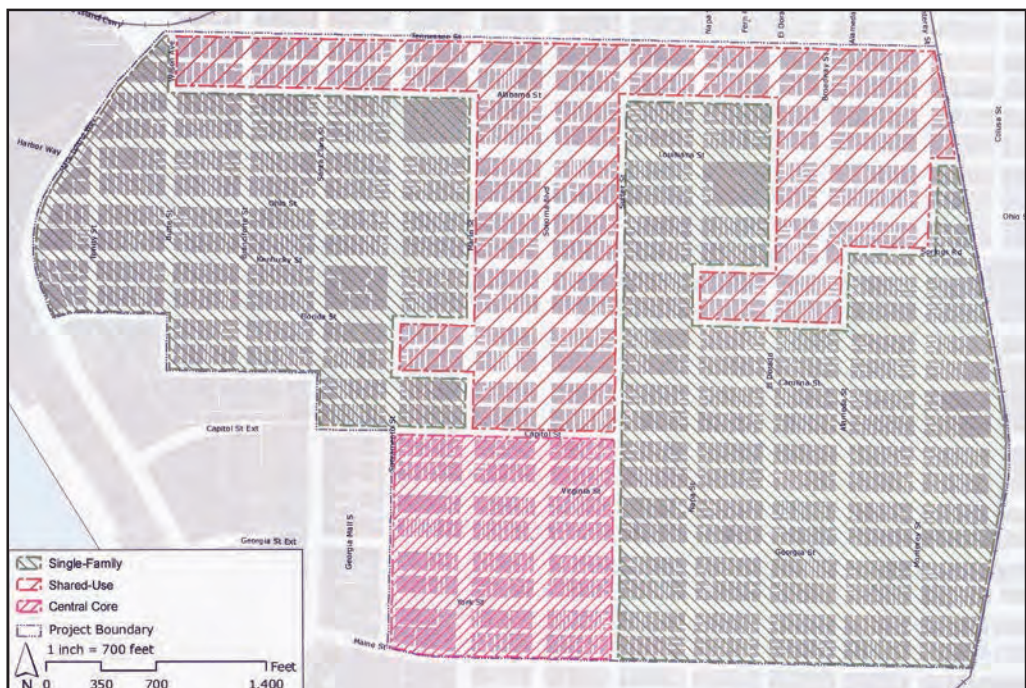




Figure 7: Typical alley in the Single-Family District. (author's photo)



Figure 8: Typical alley in the Shared-Use District. (author's photo)

Figure 8: Typical alley in the Shared-Use District. (author's photo)



- Encourage rear and side facades that are visible from the public realm to be pleasant and inviting. These facades should have the same level of trim and finish as street-facing facades.
- Avoid large uninterrupted expanses of wall surfaces.
- Ensure that buildings are designed with references to a particular style or period and use materials consistent that are consistent. New developments should not, however, imitate historic styles but complement them.
- Locate ground-floor commercial uses that encourage pedestrian activity in the alley.
- Encourage new development to reflect the parcel widths that characterize the Downtown, with sensitivity to historic building sizes and storefronts.
- Strengthen the rhythm of alley facades by ensuring a consistent setback and continuous facade patterns.
- Reduce potential for criminal activity by discouraging cutouts or openings that are not visible from the ends of the alley.
- Require the placement of fencing along rear property lines to provide a continuous enclosure of the alley and prevent criminal activity by eliminating spaces that are not visible from the ends of the alley.
- Allow for awnings or overhangs to provide protection for pedestrians and to highlight alley entrances. Awnings should complement the overall alley facades.
- Ensure that the alley network remains intact by preventing the abandonment for a singular private use of an alley.

B. Landscape and Lighting - Plantings provide for an inviting pedestrian atmosphere and can soften austere facades. Adequate lighting discourages crime and encourages pedestrian use. Lighting fixtures should be attractive and provide for an inviting ambiance.

- When they do not conflict with the structural integrity of the building, access to utilities, and public safety systems, encourage the use of green walls to soften facades and to add vegetation to alleys.
- Ensure that alley entrances are adequately lit with light fixtures that complement the architectural style of the building.
- Avoid washing the rear facades with light to reduce unnecessary glare that only flattens the appearance of the facade.
- Unique materials, such as masonry, can be accentuated by using lighting that grazes the facade to highlight their texture.
- Lighting should be downward-oriented or shielded to prevent glare onto residential properties.

- Landscaping should incorporate plants, shrubs, and trees native to California. These species require less maintenance and watering than those from other climates. Additionally the impact of invasive species is reduced with local plant selection.
- Match new installations to current lighting fixture specifications in the Downtown Specific Plan and Sonoma Boulevard Design Corridor Plan. [applicable district(s): Shared-Use, Central Core]
- Encourage the use of lighting that employs low-consumption technologies to reduce the use of electricity.
- Consider in-pavement lighting within destination alleys to create an identifiable place.
- Canopy lighting or decorative lighting that drapes across the alley is encouraged to reduce the scale of surrounding buildings. Lighting should be placed at a minimum clearance of 14-feet to allow for service by utility vehicles and public safety vehicles.

C. *Signage* - Signage is important not just for business identification, but for contributing to the character of the alley. Signage also assists users with wayfinding and should be designed for pedestrians and vehicles.

- Encourage the use of suspended signs that are mounted perpendicular to the wall and are scaled for pedestrians.
- Signs on awnings should be on the valances. Placement on the sloping portion of the awning should be avoided.
- Require that all electrical components be placed behind the wall.
- Prohibit interior illuminated plastic panel faces with sheet metal enclosures.
- Consider the placement of pole-mounted signs of a different sign-type than street name signs to businesses.
- Match new installations to current sign fixture specifications in the Downtown Specific Plan and Sonoma Boulevard Design Corridor Plan. Consider placement of building-mounted signs to identify alleys. Explore an alley name sign-type different than the street name signs.

D. *Paving* - As public right-of-way, the paving and maintenance of alleys falls to the City. Paving should be chosen not only based on pattern and style, but on ability to reduce environmental impacts, reduce ongoing maintenance, and support the functions of the alley.

- Consider the use of special paving materials, colors, and/or patterns to differentiate the alley from the periphery streets and sidewalks. The change in materials should provide for an attractive pedestrian environment and lend an identity to the alley.
- Impervious paving should be avoided to reduce associated stormwater pollution. Encourage the use of pervious

pavement, permeable pavers, grid pavers, and or strip paving where appropriate.

- Explore on-site water treatment through the use of drainage channels located within the alley.
- Encourage the use of high-albedo paving to reduce the heat absorbed by the pavement and reduce the heat-island effect.
- Explore the use of recycled construction materials, potentially from existing street repair projects, to reduce the amount of new material utilized when rehabilitating an alley.
- Ensure that the design and installation of paving satisfies the bearing loads required by utility vehicles, such as waste collection trucks, and public safety vehicles, such as fire trucks.
- Ensure that the design and installation of paving is completed using quality materials and practices with low-maintenance needs and a long life cycle in mind.

E. *Furniture* - Furniture provides convenience for users and is a way to encourage public use of the alley. Moveable tables and chairs allow for use of the space by restaurants while allowing for deliveries and pickups to operate. Furniture also includes waste receptacles, bicycle racks, bollards, and public art.

- Match new installations to current fixture specifications in the Downtown Specific Plan and Sonoma Boulevard Design Corridor Plan.
- Encourage the use of quality and attractive furniture by businesses utilizing the alley.
- Ensure that bicycle racks are placed in convenient locations within the alley.
- Waste receptacles placed within the alley should be screened. Screenings should be consistent with the building architecture in form, material, and detail.
- Property owners and/or tenants are encouraged to consolidate collection areas to provide for efficient service and to reduce encroachments into the alley. To the extent possible, these areas should be located away from public pathways and public gathering places to minimize views and offensive odors.
- Encourage the placement of public art to be installed within the alley. Non-historic facades provide a canvas that can bolster the local art community.

F. *Alley Programs*

- Festival Space - Consider a process to allow for the use of alleys as an event space for festivals. Alleys can be an alternative for intimate festivals that do not require the closing of large streets, parks, or plazas.
- Gating - Consider a process to allow for the gating of alleys in locations where vehicular access is no longer required. These

spaces can be used as an extension of rear yards, adding recreational space to an area lacking in open space.

Implementation Strategies

Implementing the proposed alley design guidelines requires the adoption of amendments to City policies and regulations. In order to involve the public, a community-based planning process is encouraged to engage property owners, business owners, residents, City staff, and appointed and elected officials. Recommended “next steps” may include:

Exploratory Committee - Similar to efforts in Sacramento and Baltimore, a committee could be formed and tasked with creating protocols and implementation plans for an alley program, as well as identifying potential pilot projects. This body should be composed of community stakeholders as well as City of Vallejo staff members.

Funding Sources - Funding source should be sought to pay for the development of plans, the creation of pilot projects, the evaluation of those projects, and the eventual full implementation of plans. The identification of potential funding sources is discussed later in this chapter.

Pilot Alleys - As funding and existing regulations permit, construct pilot projects. Once these projects are constructed an analysis of their benefits and impacts should be performed. Lessons learned should be incorporated into any comprehensive guidelines or standards that are to be adopted by the City.

Regulation Development - Ideas drafted by the committee must then be “grounded” against existing regulations to identify where amendments to regulations must occur to implement the plans. Vallejo’s Planning, Building, Development Engineering, and Fire Prevention Divisions should be consulted as those divisions must draft the amendments, implement processes, and administer the policies and regulations.

Financing Strategies

Several sources that may be available to fund the further exploration and implementation of these guidelines. They include public sources, project-funded sources, and new taxes.

General Fund - An appropriation from the General Fund could be approved to allow for the further exploration and development of a program directly related to alleys. Once a program has been established, funds could be appropriated to implement alley programs. Additionally, incremental sales tax or property tax revenues in the Downtown area could be set aside and dedicated for specific use of alley reintegration in that area.

Federal and State Grants - The Community Development Block Grant (CDBG) program provides Department of Housing and Urban Development (HUD) funds to support low-income development. These HUD funds could be used to rehabilitate

existing neighborhoods, improve infrastructure, and assist in the development of affordable housing. The Vallejo Downtown area has been identified by MTC as one of the Bay Area’s Priority Development Areas (PDA). This designation allows for technical assistance as well as disbursement of funds.

Measure B - In 2012, the citizens of Vallejo voted to levy an additional sales tax. A portion of these funds are available to fund one-time projects proposed by Vallejo residents. Through a unique Participatory Budget process, programs are proposed, identified, and recommended for funding to the City Council. As a one-time money source, Measure B funds could be used to fund the development of an alley plan.

Benefit Zones - Property Business Improvement Districts can be used to finance programs, infrastructure, and maintenance of commercial areas. Businesses located within a benefit zone pay an additional tax on their business licensees. A portion of these funds could be directed to the physical implementation of an alley plan. The City has also legislated the creation of Community Benefit Districts. These districts allow for residents to impose a tax on their properties to fund neighborhood improvements.

Development Impact Fee - An impact fee special to alleys could be adopted. A study would have to be completed that demonstrates a nexus between the alley improvements that are programmed and the calculated fee.

Development Agreements - As the City has large amounts of under-developed land within the Downtown, Vallejo could negotiate for the funding or actual completion of alley programs as individual private development projects are proposed.

Capital Improvement Program - Once an alley program is adopted, selected alley programs can be incorporated into Vallejo’s Capital Improvement Program (CIP). CIPs are five-year programs in public infrastructure that pool federal, state, regional, and local funds.

Special Districts - Partnering opportunities with the local parks and recreation district, sanitation and flood control district, and school district should be explored. Several goals of alley reintegration projects match-up with the mission of these districts. Jointly pursuing grants with shared costs requirements may maximize the potential to be awarded funds.

Concluding Remarks

These guidelines to reintegrate alleys are only a starting point in a community-wide discussion on their future use. Any alley program implemented by the City should reflect the desires of the community. As planners we are tasked with bringing forward the latest processes, tools, and practices that support those desires. But the educational and professional background we have allows us, and requires us, to bring forward ideas that are new to the community. This targeted and single-topic

exploration of a small feature of the built environment is not the panacea to Vallejo's reemergence. But perhaps in the same manner that alleys have seen a rise in esteem, a reinterpretation of Vallejo alleys will see the same for the City.

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Re-Visioning for the City of Milpitas, CA Identity and Positive Transformation through Urban Design

Clarissa Caruso

Senior, BCRP, Cal Poly.

Vicente del Rio

PhD; Professor
CRP Department, Cal Poly.

In the fall 2013, BCRP's third-year urban design studio engaged in a successful visioning process for two sites in the City of Milpitas. Discussed here by two participants from this class—a student and a faculty member—the resulting set of projects were fully embraced by city officials and captured two local awards and one state award from the American Planning Association in 2014.

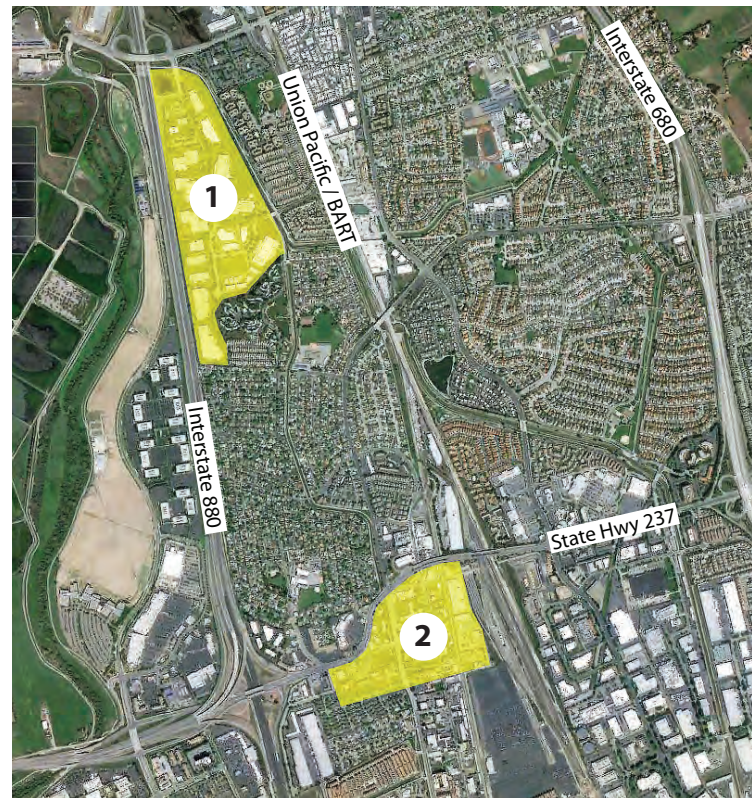
In September 2013, the City of Milpitas Planning and Neighborhood Services Department contracted Cal Poly's City and Regional Planning Department to develop pre-planning insights and urban design concepts for the California Circle and Main Street at Serra areas (Figure 1). Both were seen as important development opportunities to help Milpitas develop a new identity and sense of place in the region. The task was undertaken by BCRP's third-year urban design studio, directed by Professors Vicente del Rio and Hemalata Dandekar, and overseen by Steven McHarris and Scott Ruhland, respectively planning director and senior planner with the City of Milpitas. The class engaged 29 energetic students who turned their skills and creative imaginations to devising a desirable future for these key sites. All products from this class process and the final student proposals and video simulations are available from the City of Milpitas Planning and Neighborhood Services Department's website.*

Milpitas, California is home to approximately 70,000 people – the majority of whom are immigrants or descendants of immigrants from Asia and Latin America (U.S. Census Bureau, 2010). Many of these immigrants came seeking a job in the technological industry of Silicon Valley. While still part of Santa Clara County, Milpitas is located at its very northern edge and lies within the dominating shadow of San Jose and Santa Clara. Milpitas has struggled to gain industry and employment within its city limits, as well as entertainment and civic attractions. Competition with surrounding cities has hindered Milpitas from moving beyond a "bedroom community" for Silicon Valley.

The first project area, known as California Circle, lies at the intersection of Interstate 880 and Dixon Landing Road, at the northern tip of Milpitas. Currently zoned industrial-commercial and largely under-utilized, its 110 acres have a strong potential to become an important gateway due to its high visibility and

easy access. The second project area, of approximately 60 acres, includes the intersection of Main Street and Serra Way, in Milpitas' historic core. This site also enjoys excellent accessibility but is currently a hodgepodge of commercial development of different types, ages, and maintenance levels. Both project areas were chosen for their potential to bring about catalytic, transformative impacts in the City of Milpitas; stimulating changes within the city and generating activity nodes to serve the residents and attract new regional economic opportunities. In addition, new visual and physical imagery could inspire new identities for both sites and a new image for Milpitas, representing the city as a new regional destination.

Figure 1: California Circle (1) and Main at Serra (2), project areas in Milpitas.



* Material available from the City of Milpitas Planning Division at http://www.ci.milpitas.ca.gov/government/planning/special_projects.asp

The Design Process

The quarter-long design process included three phases and ten steps, including background research, fieldwork, SWOT analysis, project development, fly-through 3D simulations, and student reports (Figure 2). The final step was completed in January when all the work was combined into a final report and presented to the Milpitas City Council.

Phase 1: Understanding the Problem

This first phase included four steps: analysis of existing documents, field survey, site assessment with SWOT analysis, and the analysis of relevant case studies. Organized into seven teams, the students started the quarter by studying available material on Milpitas (history, market, general trends, etc.), as well as local planning documents such as the General Plan, the Streetscape, Trails, Bikeways, and Parks and Recreation master plans, and various specific plans.

On September 27, the class traveled to Milpitas for a two-day study trip. After a presentation by the city staff on various planning issues pertaining to Milpitas and the project sites, planning staff took the class to visit nearby successful redevelopment efforts: Mountain View's and Sunnyvale's downtowns, and San Jose's Santana Row. Being accompanied in the visits by the Milpitas planning director and the senior planner was of great advantage to the class as important planning and design issues unfolded constantly. The first day ended with a visit to both project sites.

On the second day, the student teams engaged in windshield and on-foot surveys of the entire city and the two project sites. Students documented city and neighborhood aspects under four major headings: imageability, legibility, accessibility, and sense of community. Moreover, the teams investigating the project sites utilized a specially designed lot survey form for intensive data collection of every lot. This included: current uses, maintenance aspects, photographs of buildings, and other relevant attributes.

After returning to Cal Poly and analyzing the information from the fieldwork and the data collected so far, the class engaged in a SWOT (Strengths-Weaknesses-Opportunities-Threats) analysis for the project sites covering man-made, natural, cultural, economic, and social-political resources. Together with site assessment maps, this effort revealed the positive and negative factors affecting the sites' development potentials.

The highly visible California Circle project site is located in the north of the city, bounded by Highway 880 (west), Dixon Landing Road (north), and the Berryessa Creek (east). It is directly served by ramps connecting the highway to Dixon Landing Road which leads to Interstate 680 (another important north-south connection) located in the east. The area, currently designated as an Industrial Park, measures 110 acres and includes a hotel, a gas station, and several industrial buildings

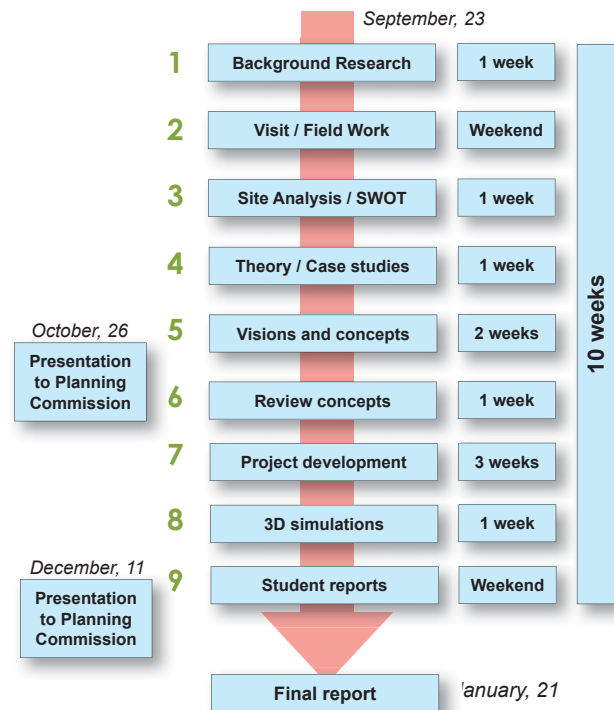


Figure 2: The quarter-long design process.

of which approximately 32% are vacant. It is surrounded by residential land uses except to the west across Highway 880 where an industrial park area currently holds agricultural uses and the city's sewage pump station. The San Jose sewage treatment plant is located nearby, also west of Highway 880, and odors are clearly discernable in the California Circle project site due to the dominant winds. A commercial developer had bought two lots there and proposed a single-family closed community. The Milpitas planning department was opposing the community until a specific plan could be approved for the whole area, for which the department counted on the ideas from the Cal Poly studio.

The 60-acre Main at Serra site is located in Milpitas' Midtown district and includes the city's historic core, of which there are practically no remnants. To the east, the project area is bound by the strong barrier represented by railroad tracks, patios and facilities. A ramp from Interstate Highway 880 leads directly onto West Calaveras Boulevard (California Highway 237) that holds one of the few bridges over the railroad lines. Calaveras Boulevard leads to the Milpitas Government Center and Interstate 680 on the East. This project area is also well below its development potential as it holds several outdated shopping centers, commercial and office buildings, as well as various under-utilized lots. It also holds a variety of popular ethnic restaurants, several religious temples, and a well-attended Indian movie theatre. Accessibility is excellent, particularly from Interstate 880, but limited from the east due to the railroad, and soon a BART station that will be built nearby to

provide public transportation (although the exact site for the station had not been decided yet). Walkability is low and the existing Midtown Specific Plan needs updating and better detailing in the study area.

Following the site analysis, student teams selected case studies according to their relevance to the two project sites and the Milpitas situation. All cases represented successful urban design interventions in the United States. They were analyzed according to the seven qualities for good place-making as proposed by Ian Bentley and colleagues in their book, *Responsive Environments - A Manual for Designers*: permeability, variety, legibility, robustness, visual appropriateness, richness, and personalization. The case-studies included: City Place (West Palm Beach, FL), Mizner Park (Boca Raton, FL), Downtown Brea (Brea, CA), Uptown District (San Diego, CA), The Grove (Los Angeles, CA), Santana Row (San Jose, CA), and Valencia Town Center (Valencia, CA).

Some of the important lessons taken from analysing these projects were the need for mixed use and pedestrian-centric environments that attract community through vibrant and high-density design, accessible public space, unique features and identity, recognition of the history of the community, the importance of development “anchors” (such as a key institutions, amenities, or land-use), and the idea of having a theme or identity for the project.

Phase 2: Concept Development

This phase included developing vision statements, objectives, design ideas, and preliminary concept diagrams, as well as a basic development program for the project areas. The work was developed within a framework of seven design principles derived from Ian Bentley’s approach to good place-making (as noted above).

Mixing hand-drawn and digital techniques, the teams developed their unique preliminary visions and ideas, using report, poster, and PowerPoint formats. On October 26, the class traveled to Milpitas and presented to the Planning Commission and staff in a special session open to the public. Assessment forms were distributed in the session so that, in addition to the oral comments, the class could collect written statements of likes, dislikes and the most appealing aspects of each team’s concepts.

As suggested by city staff, the concepts were centered on sense of place, walkability, and sustainability, but differed in their modes of achieving them. Concept elements perceived as most appealing by the Planning Commissioners included: thinking of the project as gateways, traffic calming measures, a high-tech “walk” and a tech museum, the rejuvenation of the creek and a creek walk, a water park, a performing arts center, a cultural and community center, an international movie theater, outdoor gathering areas, a restaurant row, a hotel complex and a convention center.

The Planning Commission was especially pleased with students’ attention to incorporating Milpitas’ diverse history and culture into the designs; as well as the students ideas for creating an identity for, and unifying the City of Milpitas. The feedback was very positive and helpful, and provided students with further direction on creativity, aesthetic quality, functionality, and feasibility. The posters with the visions and concepts from all seven teams remained at the Planning Commission’s meeting room with full access for the public.

Phase 3: Project Development

This last phase started with a discussion of comments received during their first presentation in Milpitas, and a critique by planning director Steve MacHarris and senior planner Scott Ruhland during a visit to our Cal Poly studio. The next steps included creating a final development program (all land uses and buildings proposed, their square footages, and parking provided), illustrative site plans, sections, and computer-based 3D renderings and simulations in both project areas, and reports and posters from all seven student teams. The three-dimensional models and digital fly-through simulations of each concept were particularly important in communicating the final urban design visions and the enhanced sense of place and pedestrian appropriateness.

The work was presented to the City of Milpitas Planning Commission on December 11 and concluded with a report and video that documents the process and design concepts of the students. Following the students’ presentations of their ideas, the chair of the city’s planning commission declared: “This is your world, your future, and I hope we can see these visions become a reality here in Milpitas.” His words summed up well his and the commission’s satisfaction with the proposals for more walkable, memorable, and sustainable environments in Milpitas where people would enjoy to live, work, and visit.

The class presented a total of three proposals for the California Circle area, and four for the Main at Serra area. The proposals included the following key elements:

California Circle Area:

The Waterview Plaza (by S. Benzel, M. Johnson, H. Shimer, E. Vargas, and A. Zannmiller) is an innovative, attractive, mixed-use, and pedestrian friendly development, designed to establish a new image of Milpitas for the 21st century (Figures 3 & 4). It embodies a multi-dimensional transition from gray to green, focusing on technology, sustainability, and community providing desirable amenities for patrons, Milpitas residents, and visitors. This project will establish Milpitas as a leader in forward-thinking development and signify the start of a new history for the city. This proposal retains the gas station and hotel currently located next to the off-ramp from Interstate 880, and brings in a new waterpark next to the existing creek as the most significant element at the site’s entrance. Most of the area will become an environmentally friendly technology park

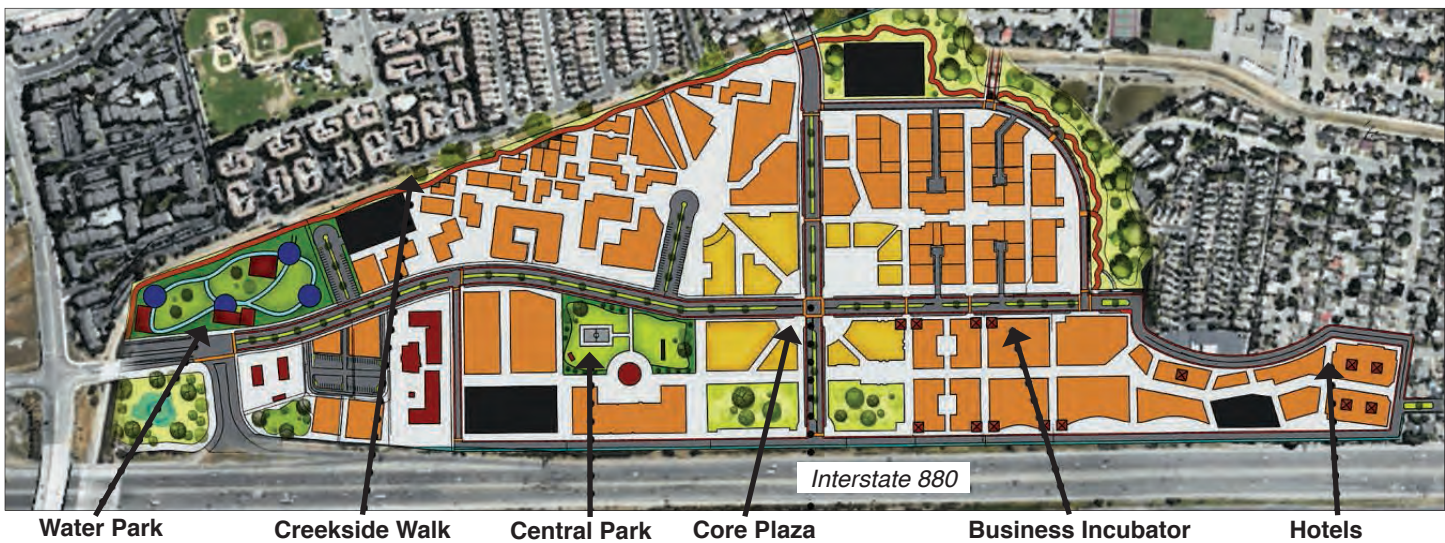


Figure 3: Illustrative site plan showing the major elements of the Waterview Plaza at California Circle.

with mixed-use components. The design highlights a central plaza surrounded by retail-oriented uses, a business incubator, a creek walk with a linear park, and a new hotel.

The Cosmo Center (by J. Bonilla, S. Coleman, J. Ha and M. Sheikhal) is a pedestrian-friendly mixed-use development located at the “crossroads of Silicon Valley” (Figures 5 & 6). It augments the surrounding community by providing inviting features, landmarks, housing, and space for commercial, hi-tech, and recreational uses. The project provides an accessible, culturally rich, and a livable environment that is a destination for both visitors and Milpitas residents by creating a live-work-play complex attractive to the local multicultural, technology rich community. This proposal’s major design features are: an open air amphitheater as a gateway; a central roundabout with a sculpture/fountain; a cultural complex; parking structures with animated facades as buffers from the freeway; the Milpitas Tech Museum; residential over platforms with retail and parking; townhomes along the creek park; a planted median and bike lanes along California Circle; and parking structures along a frontage road with access and egress from the freeway.

The Circle (by T. Bertwistle, A. Perez, S. Severon and Y. Way) is a vibrant community bustling with recreational, educational, and culturally rich venues to explore (Figures 7 & 8). It will serve as a premiere destination for ethnic cuisine, artistic expression, shopping, and entertainment. The Circle will continually transform itself to resonate the spirit of its diverse community setting at any given time. Designed to fit the needs of nearby residents and tourists, California Circle will offer plenty of unique experiences and be an attractive destination to visit. The most important design features of The Circle are: a large central plaza with an amphitheater, space for community events, and a farmers market; terraced parks radiating from the central plaza up to the height of the levy along the creek; a creek walk.

Figure 4: Entrance to the water park in the Waterview Plaza.



Figure 5: The mixed-use boulevard at the Cosmo Center.





Figure 6: Illustrative site plan of the Cosmo Center proposal for the California Circle area.

Figure 7: 3D model showing land-uses in The Circle project.

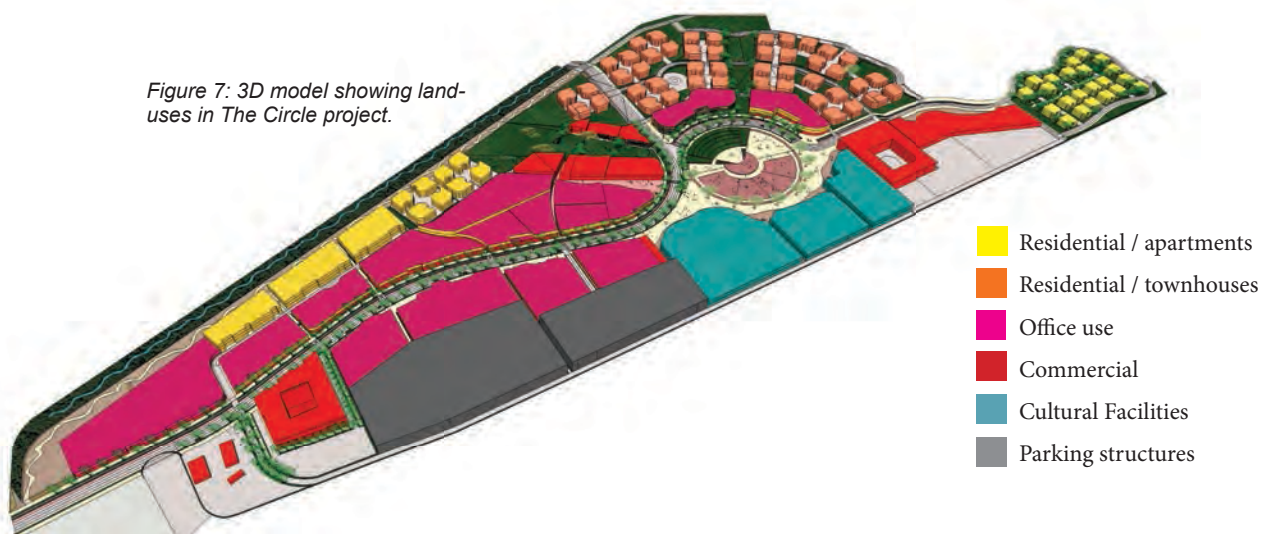


Figure 8: View of the townhouses, retail, and park in The Circle.



Main at Serra Area

The Main Connection (by C. Caruso, E. Granger, E. Merino and K. Van Leeuwen) celebrates the history of Milpitas and its cultural richness while focusing on the creation of a cohesive downtown area (Figure 9). A semi-circular plaza will mark a gateway into Serra Way from the freeway, bordered by an international movie theater and a cultural history museum. The project has an emphasis on the pedestrian scale with traffic calming measures, friendly streetscapes, and outdoor public spaces. At the terminus of Serra Way at Main Street are a traffic circle and a plaza. A mural depicting the history of Milpitas will mark the core of the Midtown District. A new pedestrian bridge over the train tracks connects the currently divided East and West Milpitas. Zoning will emphasize mixed-use development with various forms of housing, commercial, and office uses.



Figure 9: 3D view of land-use volumes at The Main Connection. In the foreground the Cultural Museum and the semi-circular plaza with retail and the international movie theatres.

The Core (by K. Alcantara, C. Bedekovic, J. Kim and D. Tran) is a mixed use, LEED certified neighborhood development in the heart of Milpitas (Figure 10). The project will give Milpitas a sense of identity and community by creating a walkable and aesthetically pleasing environment. The project focuses on increasing and maximizing the pedestrian experience through linkages and the permeability of ground floor uses. The very connected new grid will feature the following major design elements: restoring the creek and implementing linear park features; a gateway at Serra Way; a state-of-the-art convention center and hotel at West Calaveras Boulevard with easy access from I-880; an Art District with a plaza and an art center; a residential hotel; an iconic building with a multi-screen movie theater at the terminus of Serra Way at Main Street.

The Hotspot (by A. Marston, D. Oreizi, M. Paul, and S. Wood) is a retail-based district that emphasizes walkability and connectivity, attracting both the Milpitas community and those living in the surrounding cities (Figures 11 & 12). It

provides for a strong commercial anchor, a state-of-the-art performing arts center, a community center, a “high-tech walk” over commercial and retail buildings between Main Street and the railroad tracks, residential buildings and open space public facilities on a platform over commercial and retail uses at the sidewalks level, and a system of open public spaces, wide sidewalks, and pedestrian promenades.

Milpitas Main (by M. Ammari, C. Carlucci, R. Kramer, and L. Osterhus) is a tech savvy and cultural hub conveniently located within Silicon Valley for residents and visitors to experience a rich cultural environment (Figure 13). The three catalysts of the proposal are a hotel and convention center, an interactive cultural center, and a restaurant row. The hotel and the convention center are connected by a bridge over Serra Way, providing a visual gateway for those exiting the I-880 into West Calaveras. An interactive cultural center, directly across from a new movie theatre, provides educational opportunities for residents and visitors. A restaurant row along Main Street will

Figure 10: 3D model of land-uses and volumes in The Core proposal. Note the convention center and hotel at the foreground and linear park along a revitalized creek.





Figures 11 & 12: Conceptual views of a pedestrian row (above) and the Performing Arts Center (below), the major anchor proposed for The Hot Spot. Project by by A. Marston, D. Oreizi, M. Paul, and S. Wood.

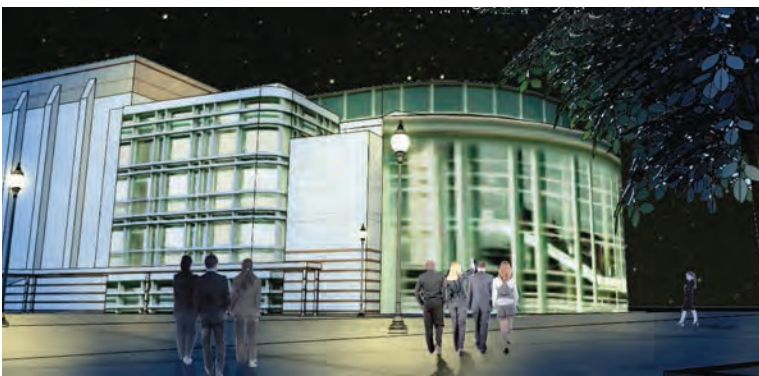
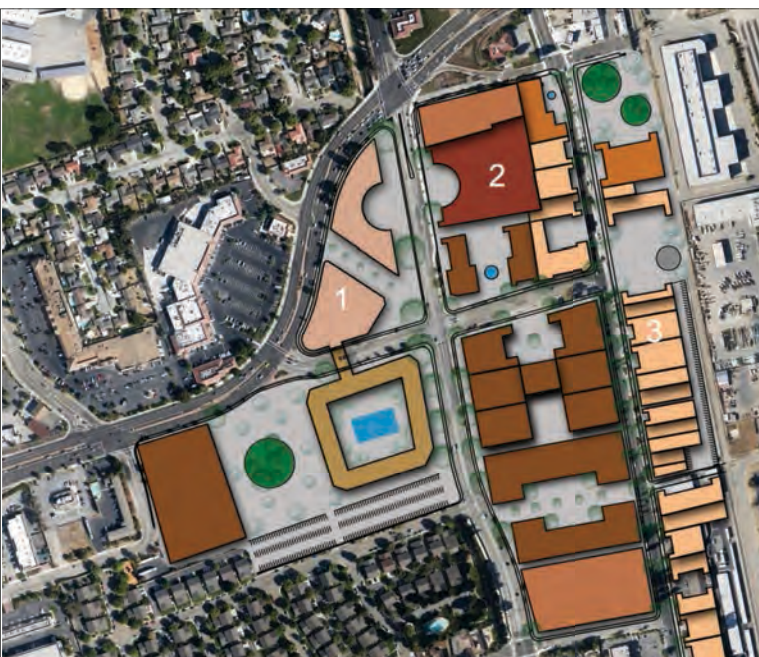


Figure 13: Milpitas at Main project showing the hotel and convention center (1), the cultural center (2) and the Restaurant Row (3).



concentrate an array of ethnic cuisines, groceries stores, and public open spaces in a walkable environment, celebrating Milpitas' history and diversity.

Final Remarks

The final step in the process was taken over by instructors Vicente del Rio and Hemalata Dandekar, who combined all the material from the various phases into a final report and PowerPoint presentation; which they delivered to the Milpitas City Council at their normal public session on January 21, 2014. All levels of city officials praised the hard work and creativity of this third year undergraduate studio.

Planning Director Steve MacHarris was very happy with the quality of the final work, the many possibilities explored for both sites, and what the possibilities represent for Milpitas. City Manager Tom Williams thanked the class and the city staff for the outstanding work done generating great ideas for the city's future. Mayor Esteves was grateful for the students' efforts. He noted how all visions maximized the land use on both sites, making it easier to work with both owners and developers, and appreciated information about how to fund the specific projects. Councilmember Giordano remarked on the innovation, freshness, and newness that she witnessed in the presentation.

For Milpitas, one of the biggest advantages of having students work on these projects was that they brought in fresh eyes that were uncompromised with any particular stakeholder's view, although cognizant of them. Students were able to gather these different views into creative urban design visions with innovative solutions and possibilities for consideration by the city planning staff, policy makers, and investors alike when exploring development in the California Circle and Main Street at Serra areas. The seven project alternatives provided a rich tapestry of possible interventions that can, with creative mixing and matching, lead Milpitas into feasible, successful scenarios that are walkable, sustainable, and generate new identities for the city.

The students' Urban Design Visions for Milpitas were accepted by the city for further consideration as the two sites are soon going to be the object of specific and precise plans that will define their future development. All the material that resulted from this work process has been uploaded to the "special projects" section of the Planning and Neighborhood Services Department webpage. The Milpitas planning staff decided to take into their hands the task of submitting our work to the 2014 American Planning Association Awards, resulting in Academic Awards of Excellence from both the Northern and the Central Coast sections, and an Award of Merit at the state level.

Senior-Year Community Planning Studio 2013/14: Land Use and Circulation Concepts for the Broadway Corridor in Redwood City, CA

Zeljka Pavlovich Howard

MCRP; Faculty Emeritus,
CRP Department, Cal Poly.

Shelby Messner

Senior, BCRP, Cal Poly.

The Broadway Corridor Study is a product of CRP's "learn-by-doing" pedagogy and community outreach efforts. This planning study was conducted by the senior-year Community Planning Studios under the guidance of Professor Zeljka Pavlovich Howard, and in close cooperation with the Redwood City Community Development Department and the assistance from other City departments.

As the capstone courses in the undergraduate program of the City and Regional Planning Department, Community Planning Studios I and II are designed to expose students to the realities of the planning practice and to allow them to test and solidify their knowledge and understanding of the issues, the process, and the scope of planning at community scale. In these studios students are engaged in community-based projects that offer opportunities for creative problem solving through cooperative work with community members, professional staff, advisory bodies, and government officials.

To provide an added dimension of reality to the process and the product, the projects are often conducted under a contractual agreement with the community and have a scope of work that is carefully tailored to address both the educational objectives of the course and the "client's" needs. Working under a contractual agreement with a community gives students more credibility in the eyes of the community members and often leads to a more meaningful interaction with professional staff and government officials. The community, at the same time, gives more attention to the project and is more likely to be constructively engaged in the planning process, which is crucial for developing a product that successfully addresses community challenges and aspirations.

Project Overview

Broadway Corridor Study was conducted under a contractual agreement with Redwood City, California. The purpose of the study was to assist the City in developing alternative concepts for land use and roadway use in the Broadway Corridor.

Broadway Corridor is an important development spine in Redwood City which is anchored in Downtown by the Caltrain Station and by the Stanford in Redwood City development at Second Street, in the eastern end of the City. Stanford University plans to convert the existing development on that 35 acre site to over one million square feet of new development during

the next 30 years. Several projects located between these two employment centers are likely to affect Broadway Corridor over the next decade. The most prominent among them is the City's Corporation Yard located at the Woodside Road entrance into Broadway, and Redwood Plaza shopping center, directly across the street from the Yard. The City had recently embarked on the design of a reconstruction of the U.S. 101/Woodside Road interchange, which will also have profound impacts on the way Broadway Street functions and the entire Corridor develops in the near future.

In anticipation of the future development within and adjacent to the Broadway Corridor, the City staff directed the class to develop two alternative concepts for the roadway use of Broadway between the Caltrain Station and Second Street, and to generate ideas for land use options within the one mile section of the Corridor between the eastern edge of Downtown and the western edge of the Stanford in Redwood City development.

The Study Area, encompassing approximately 100 acres, contains primarily low to medium intensity light industrial and commercial developments, with residential uses concentrated in the historic Stambaugh-Heller neighborhood in the southwest portion of the Corridor. Structures in the area are oriented toward automobile traffic, with very little attention to the needs of pedestrians and bicycles. Broadway/Woodside Road intersection, located at the center of the Corridor brings most of the traffic into the area as it feeds traffic to the Downtown as well as to the Stanford in Redwood City development.

The Process

This planning study was conducted over a period of approximately six months, during two academic quarters: Fall Quarter 2013 (late September to early December), and Winter Quarter 2014 (January to mid March).



Figures 1 & 2: Different moments of community involvement.
Top: initial surveys; bottom: discussion of concepts.



Phase I focused on obtaining the background information and initiating a public outreach program. The work included intensive research of secondary data sources, and numerous field trips and surveys to conduct Synoptic Survey and record parcel-by-parcel land uses, take roadway and intersection measurements, and observe the general characteristics of the Study Area. During this phase students met with the City staff to discuss current issues and obtain supplemental information, held interviews with stakeholders, and engaged in extensive public outreach efforts. The public outreach process included a community workshop, mobile workshops at key public meeting places, discussions with several community organizations, and an interactive workshop with high school students. In addition, the students conducted community opinion surveys at each public meeting as well as online in order to extend the outreach efforts to the general public across Redwood City. The comments and suggestions offered by Redwood City community members at these outreach events provided

valuable insight on the community needs and helped guide the next phase of the planning process.

Phase II entailed analyzing the background information and results of the community input, conducting case studies, and formulating an overall vision and goals to guide creation of alternative concept plans for the future development of the Corridor. Students developed and evaluated several alternative concept plans, and, following extensive discussions, formulated a preferred concept proposal for the entire Corridor, two alternatives for the Gateway District (the area at each corner of the Broadway and Woodside Road intersection), and two alternatives for the circulation system (one using the street car and one the Bus Rapid Transit). These concept proposals were presented and discussed at an Open House held in Redwood City, where City staff and stakeholders provided feedback on key features of the alternative proposals. Based on that feedback the students refined the concept features and prepared the proposals summarized in the Broadway Corridor Study document.

The results of this planning effort are summarized in two interrelated documents: Broadway Corridor Study: Public Outreach Report describing the community engagement process with comments and suggestions received from that process, and Broadway Corridor Study: Land Use and Circulation Concepts. The latter document contains a summary of the background information and recommendations for alternative land development and circulation options in the Broadway Corridor. These recommendations were informed by the ideas offered by the City staff and community members during the planning process, which included background research and an extensive public outreach program comprised of community discussions, interviews, and opinion surveys.

Recommendations

Project recommendations address land use options and strategies for future development in the Study Area, and offer proposals for two alternative circulation systems.

Land Use Concepts

The Broadway Corridor Concept Plan proposes creation of a vibrant and welcoming destination in Redwood City that provides a wide range of land uses needed to accommodate commercial, office, industrial, entertainment, and housing activities serving the needs of residents, commuters and visitors. The proposal also addresses options for public transit, movement of vehicles, bicycles, and pedestrians. Greenway, a new thoroughfare for bicyclists and pedestrians, interconnects various developments along the Study Area. The concept calls for the creation of three unique districts: Village District, Gateway District, and Business District.

The Village District, located at the western end of the Study Area, is seen as a transition from Downtown. The District

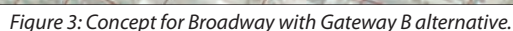


Figure 4: Street section concept for Broadway at Beech showing the dedicated bus lanes and the median with a transit stop.

The diagram illustrates a cross-section of a transit station with the following lanes and widths from left to right:

- 10.5' Sidewalk
- 5' Bike Lane
- 10' Auto Lane
- 10' Share Lane
- 9' Transit Stop
- 10' Share Lane
- 10' Auto Lane
- 5' Bike Lane
- 10.5' Sidewalk

The diagram also shows various vehicles and infrastructure, including cars, buses, a train, and bicycles, as well as trees and buildings in the background.

Both alternatives incorporate “complete streets” principles and treat Broadway as a “transit street”, as designated by the City’s General Plan. The Streetcar System proposes creating a connection between the Sequoia Caltrain Station in Downtown and the future Stanford in Redwood City development via Broadway Street, creating an approximately 3-mile long loop. The streetcar would provide a new mode of transportation along the Broadway Corridor with the possibility of expansion into surrounding areas in the future. The Bus Rapid Transit System proposal focuses on integrating a new transit system into the Corridor to enhance transit accessibility by increasing

The circulation proposal includes recommendations for street infrastructure improvements and two alternatives for public transit system: A Streetcar System and a Bus Rapid System.

linkages to the existing local and regional transit systems. Both systems would enhance mobility, safety, and convenience for pedestrians and cyclists, as well as improve sidewalks and bicycle lanes to increase connectivity. Both circulation alternative proposals address route alignment, transit stations, system feasibility, and potential funding sources.

Conclusion

This project provided viable planning assistance to Redwood City and was a valuable service learning experience for the students in preparation for entering the professional planning practice. Immersion in the community planning issues helped the students understand how to apply theoretical knowledge to addressing these issues, opened their eyes to the workings of local government, and helped them understand the role

of community resources and market forces in accommodating community wishes. Their work facilitated informed discussions about the issues and expectations of community members and City staff, which led to the formulation of ideas the City could use as a guide to coordinate investment and phasing of development in this important Redwood City corridor.

This project also provided background information for several senior projects that addressed potential mechanisms for implementing the project proposals including: Form Based Code for the Corridor, public space design and landscaping, and Transit Oriented Development policies. Selected senior projects were submitted to the City as supplements to the two documents prepared by the Community Planning Studio.



Figure 5: Concept for the intersection of Broadway Street & Douglas Avenue, Bay Road & Barron Avenue, and Barron Avenue & Broadway Street.

Project Participants

Dianne Acevedo, Kyle Bell, Kelly Cheung, Jonathan Chiu, Nuri Cho, Erin Murphey, Shelby Messner, Elizabeth Day, Lisa Elgin, Malia Faasua, Fernando Herrera, Julia Hill, Shanna Hurley, David Leong, Andrew Levins, Timothy McGarvey, Peter Minegar, Sara Muse, Bailey Randall, Januar Saptono, Hillary Tung, Gregory Vine, Thomas Vogt, and Nicholas Wong.

Increasing Diversity Education at Cal Poly Through Intergroup Dialogues

W. David Conn

PhD; professor emeritus,
CRP Cal Poly.

Jennifer Teramoto Pedrotti

PhD; professor Psychology Dept., Cal Poly.

Alice Zannmiller

Senior; BCRP, Cal Poly.

While serving previously as a senior university administrator and more recently as a CRP faculty member, David Conn introduced to Cal Poly an approach to diversity education known as Intergroup Dialogues (IGD). In writing about the experience to date, he is joined by psychology professor Jennifer Teramoto Pedrotti, who teaches an IGD course, and Alice Zannmiller, a CRP student who trained and participated as an IGD peer facilitator.

Based on compositional data (i.e., numbers of non-White students, faculty, and staff), Cal Poly is not a racially diverse campus, certainly not representative of the California population in this regard. For a variety of reasons, the university continues to struggle to attract and retain people of color, especially African Americans. Irrespective of the compositional makeup, however, as educators the faculty have a responsibility to prepare students to live and work effectively and harmoniously in an increasingly diverse world. Consequently, in 2008 the faculty adopted a set of "Diversity Learning Objectives" (DLOs) setting out what every student should know and be able to do upon graduation. The DLOs are stated as follows:

"All Students who complete an undergraduate or graduate program at Cal Poly should be able to make reasoned decisions based on a respect and appreciation for diversity.

Students should be able to:

1. Demonstrate an understanding of relationships between diversity, inequality, and social, economic, and political power both in the United States and globally
2. Demonstrate knowledge of contributions made by individuals from diverse and/or underrepresented groups to our local, national, and global communities
3. Consider perspectives of diverse groups when making decisions
4. Function as members of society and as professionals with people who have ideas, beliefs, attitudes, and behaviors that are different from their own." (California Polytechnic State University, San Luis Obispo, n.d.).

Although presently available evidence is not conclusive, there is reason to suppose—based on an assessment of the more broadly-based University Learning Objectives (ULOs) and findings from the National Survey of Student Engagement—that students' attainment of the DLOs upon graduation is

generally at the "basic" level rather than at the sought-after "moderate" or "complex" levels which would indicate that significant learning had taken place during their college experience at Cal Poly. Although every student is required to meet a one course "U.S. Cultural Pluralism" requirement, the assessment results do not indicate that having done so makes a large positive contribution to diversity learning as defined by the DLOs.

Diversity learning is important not only for preparing culturally competent graduates but also for its potential impact on campus climate, and thus recruitment and retention. As reported in the University's 2012 self-study (prepared for the Western Association of Schools and Colleges), available evidence suggests that while most students do not believe that the campus climate is a problem, there is a fraction that does (California Polytechnic State University, San Luis Obispo, 2012). These data are somewhat confounded, however, by the large numbers of students at Cal Poly who identify as White or Caucasian American, heterosexual, and/or Christian in terms of religion, and the fact that these are not generally groups discriminated against. Looking specifically at the experiences of racial, ethnic, sexual, and/or other types of minority groups may tell a different story.

Though mostly informal, anecdotes and observations made by students of color, members of the LGBTQ community, and others suggest that microaggressions are not unusual, both on campus and in the surrounding community. Microaggressions are "brief and commonplace, daily, verbal, behavioral, and environmental indignities, whether intentional or unintentional, which communicate hostile, derogatory, or negative racial, gender, sexual orientation, and religious slights and insults to the target person or group" (Sue, 2010, p. 5). Other survey data as well as less formal observations contribute to a sense that Cal Poly is not as welcoming as it might be to students who are different from the majority.

Intergroup Dialogues at Cal Poly

As one of many possible approaches to increasing diversity learning at Cal Poly, in 2009 a small group of Student Affairs professionals together with a few faculty looked to a model that was developed over twenty years previously at the University of Michigan and subsequently adopted at many universities and colleges nationwide. Intergroup Dialogues (IGD) courses bring together members of two different social identity groups (e.g., People of Color and White people, women and men, individuals of high and low socioeconomic status, Christians and Jews, heterosexuals and non-heterosexuals). A guided and structured curriculum is used to engage members of different groups in face-to-face interactions, with the following objectives (Nagda, Gurin, Sorensen, & Zúñiga, 2009):

- To develop intergroup understanding by helping students explore their own and others' social identities and statuses, and the role of social structure in relationships of privilege and inequality;
- To foster positive intergroup relationships by developing students' empathy and motivation to bridge differences of identities and statuses; and
- To foster intergroup collaboration for personal and social responsibility toward greater social justice.

In the Michigan model, for the identity being examined, IGD courses include equal numbers of students (6–8) from each social identity group (12–16 in total). They usually meet weekly, for one 2 to 3 hour session, across a 10 to 12 week period. Two trained facilitators, preferably one from each identity group, guide the dialogues. Although students are often eager to jump into controversial hot topics, anticipating provocative discussions, IGD is not merely a space to talk about issues, opinions, and perspectives. It is an educational program that provides students with opportunities to learn how to communicate effectively across different perspectives in order to prevent the fatal pitfalls that can characterize intergroup interactions while promoting positive relationships, understanding, and collaboration. Consequently, IGD progresses through a series of stages, each building on prior learning and experiences (see Zúñiga, Nagda, Chesler, & Cytron-Walker, 2007, for a detailed description of the IGD curriculum, and Maxwell, Nagda, & Thompson, 2011, for an examination of the training and role of facilitators).

In spring 2009, an IGD training team from the University of Michigan offered a 2-day workshop at Cal Poly that was a shorter but similar experience to the IGD courses taken by students. Approximately 35 faculty and staff (from Academic and Student Affairs) attended the training, giving it a very positive evaluation.

Throughout fall quarter 2009, about a dozen faculty and staff, including Counseling Center interns, participated in an IGD program in order to try out the materials and approach, and to undergo training as facilitators. In winter and spring quarters

2010, Dr. Sema Alptekin, then-University Honors Program Director, and Dr. Herlina Pranata, a member of the Counseling Services staff who had attended the two-day and quarter-long programs in 2009, partnered in piloting sections of HNRS 299 that employed the IGD approach. Subsequently, a group consisting mostly of Student Affairs professionals developed a proposal for implementing IGD on a continuing basis and submitted the proposal to Dr. David Conn, a professor in City & Regional Planning, who was then serving as the associate vice president spearheading the university's efforts (among other things) to promote diversity learning. Dr. Conn was concerned that the proposal would likely encounter resistance from both faculty (who, for the most part, had not been involved in its development) and the provost (since, as written, it would be very costly, requiring a large amount of faculty assigned time for implementation); consequently, following further consultation, he recommended a slightly different way of proceeding.

Following the submittal of a more limited, preliminary proposal to the provost, the group received funds under the auspices of Cal Poly's Inclusive Excellence initiative to bring a qualified consultant (Dr. Anna Yeakley) to campus to help address the issues involved in implementing IGD. During her daylong visit, Dr. Yeakley met with 27 members of the faculty and staff, including two deans, as well as the ASI president. Building on the visit, further discussions were held between individuals and groups on campus as well as with Dr. Yeakley and Dr. Jesús Treviño, another nationally recognized expert on IGD.

In winter 2011, with additional funds from the provost, Dr. Yeakley was hired to conduct an IGD "train-the-trainer" for 7 faculty and staff and 16 graduate students in Counseling & Guidance. She also conducted an abbreviated five-week training for nine other faculty and staff.

Graduate students in Counseling & Guidance and doctoral interns in the Counseling Center facilitated pilots of two models of IGD during fall quarter 2011. In the first model, two five-week IGD sections were offered as a mandatory component of AGB 401-03 *Managing Cultural Diversity in Agricultural Labor Relations*, taught by Dr. Elvis Qenani. In the second model, five nine-week sections were offered as an option for 15 percent of the grade in courses offered by Dr. Denise Isom and Dr. Jane Lehr (ES 112 *Race Culture and Politics in the United States*), Shohreh Niku and Dr. Doris Derelian (FSN 250 *Food and Nutrition: Customs and Culture*), and Dr. Clare Battista (ECON 303 *Economics of Poverty, Discrimination, and Immigration*). All of the courses involved in the pilot met the university's U.S. Cultural Pluralism requirement.

Intergroup Dialogues Becomes a Permanent Course

Following a positive assessment of the pilot and a follow-up workshop conducted by the Center for Teaching & Learning in winter 2012, Dr. Jennifer Teramoto Pedrotti in the Psychology & Child Development Department, working in collaboration with Dr. Conn, developed a proposal for a new, permanent IGD

course. The proposal was for a stand-alone four-unit course comprising two units of lecture/discussions and two units of dialogue, with the following catalog description:

Weekly semi-structured meetings of students from two distinct identity groups, with trained peer facilitators, in which readings, experiential activities, informed dialogue, and reflective writing are integrated as a means of encouraging self and group awareness and exploring ways to promote just community across difference. Supplemented by weekly lecture/discussions.

The proposal called for Dr. Pedrotti, who would serve as the course's instructor of record, to do some of the lecturing; to hold weekly debriefing sessions with the facilitators regarding the material, topics, and ensuing discussion; and to assign grades. Each section of the course would be peer facilitated by two students, initially graduate students from the Master's program in Psychology for Marriage and Family Therapists [MFTs]). These students would be trained extensively in advance of serving as facilitators, and would receive credit for this training via other application-based courses available in both undergraduate and graduate programs (e.g., Independent Study courses PSY 400 or PSY 500).

In addition to Dr. Pedrotti, those delivering lectures in the course would include various invited staff/faculty/community experts as appropriate, based on the topic(s) being discussed in a particular week. Guest lecturers might include, for example, a Communication Studies faculty member, a Multicultural Center representative, a Pride Center representative, a Gender Equity Center representative, an Ethnic Studies faculty member, and/or a member of the 5 Cities Diversity Coalition.

Course learning objectives and assessment methods were listed in the proposal as follows:

Course Learning Objectives	Assessment Methods
Know more about their own and others' cultures, histories, and experiences	Journal assignments
Participate effectively in the four stages of an intergroup dialogue	Facilitator observation
Explain how dialogue is differentiated from debate or discussion	Journal assignments
Communicate with others about controversial subjects in a supportive and nonjudgmental way	Facilitator observation
Build alliances and address injustice	Journal assignments

Journal assignments would normally be expected to be 1-2 pages, single-spaced, reviewed initially by the facilitators, and graded on a rubric of several points based on their demonstration of attainment of the week's process/content goals, as applicable. After the facilitators' review, the instructor

would herself review a sample of the journal assignments each week, and would discuss these as appropriate in the weekly facilitator debriefing sessions. The instructor would review all of the final journal assignments.

Facilitators would also grade students' participation in the lecture and dialogue sessions based on a rubric. An unsatisfactory score on the rubric would reflect a student's absence or failure to contribute in a significant way to a dialogue or discussion (one of the roles of the facilitators is to ensure that all students have the opportunity to be engaged), while a satisfactory score would reflect active participation and clear understanding of the readings. However, it was made absolutely clear that grades would not depend on the particular values or opinions expressed by the students.

Following review at department, college, and university levels, the course was approved and the head of Psychology agreed to assign Dr. Pedrotti to teach it for the first time in spring 2013.

In preparing to launch the new course, the organizers faced something of a chicken and egg situation with regard to peer facilitators. The hope was that, in the long term, students who had already taken the IGD course would be recruited to participate in training to become peer facilitators. At this point, however, few, if any, students were still around who had taken the IGD pilot in fall 2011. Furthermore, the question of who might provide the facilitator training on an ongoing basis was not yet decided. The immediate issue was resolved for the time being by recruiting as would-be facilitators four graduate students in Psychology and four newly hired members of the Student Affairs staff, none of whom had participated previously in IGD courses although several had some experience with diversity learning, including the use of dialogues.

Two faculty members (Dr. Dianne deTurris and Dr. Conn) and an administrator (Dr. Cornel Morton) who had participated in the original—winter 2011—training by Dr. Yeakley volunteered to train the facilitators, and did so over a ten week period in winter 2013. All four of the Psychology graduate students and two former Counseling & Guidance graduate students (previously trained) went on to facilitate (in pairs) in PSY 303 during the following quarter.

Once enrolment had settled down (after the drop/add period), a total of 36 students took the class. The majority of the class were Psychology majors (n=22), though majors from Ag-Business, Business, Child Development, Economics, Electrical Engineering, English, Journalism, Kinesiology, Nutrition, and Wine and Viticulture were also represented. There was no pre-selection, meaning that there was no control over the mix of social identities. As it turned out, it was only possible to have two groups with mixed social identities (half White, half People of Color) while the third group was all-White. The topic for all three groups was Race. Four of the six facilitators identified as White, one as Biracial (Latina/White), and one as Latino.

An assessment of the course provided evidence that the students' knowledge, awareness, skills, and commitment/passion all increased from pre to post test. Furthermore, IGD was effective regardless of both the type of group (intergroup vs. intragroup) and a student's racial status (White vs. Person of Color).

In light of these encouraging results, plans were then made to offer PSY 303 again in spring 2014. This time, two former Counseling and Guidance graduate students (now Cal Poly staff members) who had previously served as facilitators themselves offered facilitator training in the winter quarter. Sixteen Psychology students (undergrads/grads) and one undergraduate in City & Regional Planning took the training. Of these, seven applied to serve as facilitators in PSY 303 and, following interviews, all were appointed to do so. Enrollment in the spring course grew to 42, allowing for three groups of approximately 15. Once again, the topic for all groups was Race and the breakdown was similar to the previous year as well, with two groups having approximately equal numbers of Students of Color and White students, and the third group being entirely White. This year two of the seven facilitators identified as Asian American, two as Biracial (Asian American/White), and three as White. Majors were again primarily from Psychology ($n=34$), but with 13 other majors represented this time (Child Development, City and Regional Planning, Communication Studies, English, Ethnic Studies, Graphic Communications, History, Liberal Studies, Mathematics, Modern Languages and Literature, Philosophy, Recreation, and Theatre).

Looking to the Future

The vision of the authors of this article, which some (and perhaps many) other faculty, staff, and students seem to share, is that all students at Cal Poly should have the opportunity to take degree-applicable IGD classes, and that they should be encouraged—and maybe even ultimately required—to do so!

Consideration is already being given to the next steps needed to expand access throughout the campus. One obstacle is the fact that students can count PSY 303 toward earning a degree in certain majors (including Psychology, Child Development, Ethnic Studies, and City & Regional Planning) but not in others (such as majors in Engineering, which allow no free electives). The possibility of seeking credit toward meeting the university's U.S. Cultural Pluralism requirement has been considered but not pursued (at least for the time being) in part because IGD is seen as a complement to (not a substitute for) existing USCP courses. Instead, in the curriculum review for the next (2015-17) catalog, application has been made—and is pending, as of July 2014—for the course to count toward the Area D5 (Society & the Individual) upper division requirement in General Education. Another means of expanding access would be to increase the pool of faculty offering IGD courses. To this end, approval is also being sought for Dr. Pedrotti's course (now re-numbered PSY 304) to be cross-listed with CRP

304, to be newly established and offered by Dr. Kelly Main in City & Regional Planning.

Attention is being given to other issues, such as those surrounding the ongoing provision of facilitator training (e.g., by whom, with what funding, and with what incentive—if any—for participants). It is recognized that the vision will not be accomplished overnight. Instead, the strategy is to continue to take small steps in the right direction until IGD is permanently established as a major contributor to diversity learning at Cal Poly.

A Peer Facilitator's View of Intergroup Dialogues

Alice Zanmiller

When Dr. Conn sent out a solicitation for City and Regional Planning students to enroll in a facilitator training for Intergroup Dialogues during winter 2014, I didn't think twice about signing up. The training was advertised to help participants gain "multicultural competence, diversity experience, and insight from others who are different from you," which to me sounded like a fun, engaging way to spend Tuesday evenings. I became slightly more tentative about this notion on the first night, when I discovered I was the only student in the training without prior experience in Intergroup Dialogues, psychology, or both. Nonetheless, I was greeted with kind smiles and earnest encouragement from my peers and the group trainers. Every week, we spent two hours discussing the role of race and social identity in our own lives and in the world around us. We carefully crafted ground rules as a group, such as agreeing to confidentiality and being open to constructive criticism when we made mistakes. While I initially feared that my lack of prior experience would make me irrelevant in the conversation, I found myself reveling in the eye-opening stories and mature insights shared by my peers and the welcoming environment for me to process my own emotions and gaps in understanding without fear of taboo or judgment.

As the quarter came to close, I felt my understanding of topics and issues I had never heard of before Intergroup Dialogues had flourished, but still felt entirely under-qualified to lead a similar group in the upcoming class (PSY 303). I was in such constant awe of the eloquent parallels my group mates studying psychology could draw that I couldn't imagine being able to do the same. It was only after kind encouragement by the trainers and my peers that I decided to interview for a facilitator

position. When I was accepted to lead a group for spring quarter I was still tentative about my ability to be successful. However, paired with a brilliant and compassionate peer from the winter training, a well-crafted curriculum, and weekly check-ins with other group leaders and Dr. Pedrotti (the class instructor), I had one of the most transformative, fun, and inspiring quarters of my college career. The structure of the course allows for both academic and personal growth, and the split between lectures and dialogue mirrors this. I was constantly amazed by the insights of the students in my group, and watching them transform was as equally rewarding as the growth I was experiencing. In addition to my increased understanding of social inequality, being an IGD facilitator has taught me invaluable lessons in leadership, especially by increasing my experience in being an empathetic listener and fostering patient, intentional dialogue.

I believe that the implementation of Intergroup Dialogues is an essential step for Cal Poly to take in the pursuit of fulfilling the Diversity Learning Objectives. The course provides a phenomenal opportunity to teach students about inequality while encouraging them to include themselves in the discussion of the problem. The ivory tower can serve as an effective way to shield us from the harsh reality of how the world really is, but by providing students with reputable academic infrastructure as well as room to discuss and explore these deeply personal topics, we can begin moving towards conversations on race and social identity that are smart and compassionate without impersonally intellectualizing the issue. The training that IGD provides is, in my opinion, essential for everyone. Teachers, parents, professionals, and students all must interact with a wide range of people, and encouraging identity development and respect for diversity is essential for improving the lives of all. By encouraging students to view discrimination as an issue that belongs to everyone, not just minorities, widespread implementation of this program would ensure that Cal Poly's graduates are not just technically adept in their fields, but also emotionally and socially equipped to serve as neighbors, allies, and leaders.

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Community Sustainability Planning as a Tool for Increased Environmental Sustainability: The Case of Two California Cities

William Riggs

PhD; Assistant Professor, CRP Cal Poly.&

Henry Pontarelli

Principal, Lisa Wise Consulting.

Based on their professional work, William Riggs and Henry Pontarelli argue that Community Sustainability Plans can achieve community reliance through a balance of social, economic, and ecological factors. They discuss their approach and take lessons from case studies in two California cities, Morro Bay and Monterey.

Since the publication of the Bruntland Report (1987) and subsequent passing of greenhouse climate change regulations (such as AB32 and SB375 in California) cities around the globe have been keenly focused on achieving triple bottom line sustainability. Such analysis evaluates the economic, social and environmental implications of development (Brown, Marshall, & Dillard, 2006). While in theory such a balance between social equity, economic prosperity, and ecological health presents a new paradigm for planning (Beatley, 1995; Berke, 2002; Knight & Riggs, 2010), it also presents serious challenges in developing and applying innovative approaches to balancing the nexus.

This difficulty in implementing frameworks that support this dichotomy is especially important in coastal areas (Hilborn, 2007). Such areas have a reliance on the ecology fisheries as a part of the local economy and cultural identity, and therefore the balance among social, ecological, and economic factors is acute. Indicators and metrics have been established in recent years to measure and benchmark this relationship over time (Sethi, Riggs, & Knapp, 2014) presenting data from 324 Alaskan communities over 1980–2010. These metrics provide an initial data set for descriptive analyses of fishing community status and for exploratory analyses to identify hypotheses for subsequent in-depth study of the socioecological dynamics of Alaskan fishing communities. Metrics were derived by collating information from publicly available databases and including information on fishing portfolios, fishing revenues, fishermen demographics, and fleet characteristics. As demonstration of the community metrics, we examine metric trends in detail for three communities but from a policy standpoint, there have been few frameworks established to achieve this balance (Evans, Joas, Sundback, & Theobald, 2005; Lang et al., 2012).

This article argues that Community Sustainability Plans (CSPs) can be a tool to provide tangible policy that operationalizes the triple-bottom line approach. After a short introduction of our methodology, we provide an overview of how CSPs have developed. We then explore two California case studies

that show how CSPs can offer a method of better achieving community resilience. These are discussed in the context of the aforementioned Bruntland framework, and offer lessons for practicing planners in moving toward such sustainability planning in their own cities.

Community Sustainability Plans

Community Sustainability Plans (CSP) are cited in the Magnuson-Stevens Fishery Conservation and Management Act ([MSA], 2007) as a requirement for communities that wish to remain eligible to participate in programs such as Individual Transferable Quota (ITQ) that was instituted in the federal trawl groundfish fishery in 2011. ITQ is considered a Limited Access Privilege Protocol (LAPP) program. The MSA is the overriding law for all federal fisheries in the United States. The groundfish fishery is valued at hundreds of millions of dollars on the West Coast and represents thousands of jobs, investment in physical infrastructure as well as a source of fresh, locally sourced seafood. Morro Bay and Monterey were heavily reliant on the trawl fishery beginning in the 1970s through the mid 2000s. Statewide drops in the trawl fishery began in the late 1990s and dropped to almost zero in both communities by 2006 and 2007 primarily due to regulation, rising costs, competition from inexpensive foreign imports, and loss and consolidation of processors. Some of the regulations that contributed to the decline of the Monterey and entire California trawl industry include:

- Federal Buy Back Program (1987) aimed at reducing effort by buying boats and permits back from willing sellers.
- Limited Entry Program (1994) that capped the number of vessels allowed to participate in the trawl fishery and imposed restrictions on the use and transfer of permits.
- Rockcod Conservation Area and Trawl Rockcod Conservation Area (2002) that extended the length of the West Coast and restricts activity on traditional trawl grounds.

- Essential Fish Habitat (2006) restricted trawling in over 3.8 million acres off the Central Coast.

The decline of the trawl fishery was in many ways evidence of a high volume, large-scale business model that was no longer viable in the modern market. One of the key factors of the ITQ trawl program is that it allows fishermen to target groundfish using hook and line or traps, where in the past they had to use a trawl net. The modern trawl fleet has made great environmental advances, these methods are seen as generating less habitat disturbance and less bycatch. This enables a higher quality, lower volume approach. Such environmental accomplishments have not gone unnoticed, this summer (2014), the Marine Stewardship Council certified 12 species of groundfish, all traditionally landed in Morro Bay and Monterey. Also, the Monterey Bay Seafood Watch Program is moving several groundfish species from “Red” designation (avoid) to “Yellow” (good alternative) or “Green” (best choice).

While CSPs are required, the exercise was seen by the Cities of Morro Bay and Monterey as an opportunity to continue strategic planning for their working waterfronts and to better capitalize on their commercial fishing industries. These communities are keenly aware of the unique nature and value of their waterfronts that provide jobs, spur investment, fuel tourism, engage in marine stewardship, and provide a rich cultural heritage and identity.

CSPs are required for communities that wish to remain eligible to participate in ITQ, but the language in MSA is vague as to their construct and the specific information that Federal regulators are seeking,

“... to be eligible to participate in a limited access privilege program to harvest fish, a fishing community shall . . . develop and submit a community sustainability plan to the Pacific Fisheries Management Council (PFMC) and the Secretary that demonstrates how the plan will address the social development needs of coastal communities, including those that have not historically had the resources to participate in the fishery, for approval based on criteria developed by the Council that have been approved by the Secretary and published in the Federal Register” (MSA, 2007).

The language calls on communities to consider the dynamics of social performance, and Morro Bay and Monterey clearly achieved that objective, both devoting one full chapter to social dynamics and including social scientists on the CSP team, yet the passage does little to guide authors on details. It was the opinion of project managers in Morro Bay and Monterey that this may have been part of a more bottom-up approach that federal regulators have recently adopted in the groundfish ITQ fishery.

In the best case scenario, communities would use their CSP as a platform by which to help shape policy through the regional councils, in this case the Pacific Fisheries Management Council

(PFMC)— one of nine in the United States. For example, one of the communities, or Morro Bay, Monterey, and Half Moon Bay, which is currently working on a CSP, could provide a more compelling argument in support of electronic monitoring as an alternative to 100% human observer coverage or that bond-scale funding was needed to address critical infrastructure needs if they approached the PFMC as a group and cited key CSP recommendations rather than a community without a formal “plan” or group of fishermen alone. In this case, federal regulators might also have a better picture of the more generalized needs of small communities in the ITQ program.

On one hand, a more bottom-up approach gives communities greater access in shaping policy, on the other hand, the ITQ program pushes responsibility and costs to the vessel and community level through 100% accountability, zero discards of rockfish and requirements of carrying a NMFS-trained observer on each trip and offloading at a NMFS-approved facility as well as requiring vessel owners to create and manage quota accounts. These responsibilities take a greater significance in small communities and for smaller operations, with less access to capital and other resources.

In the best sense, a flexible approach to the structure of a CSP bespeaks a more bi-directional approach to management by the Federal Government, enabling each community to fashion a CSP to meet their own unique objectives and giving communities a greater voice and vehicle for codifying needs and impacts. This may be more significant for smaller communities that are taking on a relatively greater burden and have less resources to express their needs to policy makers.

Methodology

We use a case approach to investigate CSPs as a model for sustainable coastal urbanism. The work relied heavily on input from the commercial fishing community and waterfront stakeholders, City staff and public officials in each jurisdiction, as well as historic data. These data include indicators, or categories of performance such as production and gross revenue, and metrics are the measures within the categories such as the landings by weight (pounds or tons), and earnings at the dock by dollar value. Such variables are consistent with the literature that supports adaptive use of sustainability indicators (Reed, Dougill, & Baker, 2008; Reed, Fraser, & Dougill, 2006). An example of indicators and metrics is provided in Table 1.

At the direction of the individual communities, we also evaluate critical infrastructure and services, as well as rents and wharfages.¹ This is in contrast to more rigid regional approaches which may have arisen to certify sustainability practices for the financial marketplaces (Ballou, Heitger, & Landes, 2006; Manetti & Becatti, 2009; Nitkin & Brooks, 1998).

¹ Wharfage is a fee levied by the City based on the amount of seafood landed or trucked to a tenant's facility.

Indicator	Metric
Production	Landings by Weight
Revenue	Earnings at the Dock, Ex-Vessel Value, Price per Pound
Diversity	Relative Species Mix
Activity	Trips, Vessel IDs
Employment	Number and Job Types
Industry Landscape	Presence and Condition of Critical Infrastructure and Services
Synergies	Resource Sharing Within and Across Industries
Awareness	Level of Waterfront Tourism, Demand for Product
Trends	Change in Metrics Over Time

Table 1: Community Sustainability Indicators

This is important since we use the cities Morro Bay and Monterey in California as our case studies. Morro Bay and Monterey are unique in that they provide a contextual look at a coastal village with reliance on a productive fishery and tourism in addition to other economic sectors, which balance the local economy. Both are extremely productive and have parallels in San Diego, Santa Barbara, Port San Luis, Half Moon Bay, and Fort Bragg in California and in Coos Bay and Newport in Oregon as well as in Seattle and Tacoma in Washington State. Both examples provide for differed levels of critical supportive services but also policy and community engagement that provide important lessons for sustainability planning in coastal communities.

In response to the requirements in the MSA, the CSPs also focused on social performance measures and relied on direct contact with commercial fishermen, related industry stakeholders, waterfront business owners, and civic leaders through personal interviews, site visits, and public meetings. The Consultant Team included two experts in social sciences with years of experience working in coastal communities. Given the unanimous approval by the Morro Bay and Monterey City Councils, the support from the commercial fishing communities and working waterfront stakeholders, the social component brought more tangibility and credibility to the work. In both cases, the communities began working on key recommendations; in Morro Bay a collaborative pursuit (City of Morro Bay and MBCFO) of the market demand of a boatyard and haulout facility and in Monterey, efforts at forming a community quota fund were initialized.

A robust analysis of the social dynamics of the commercial fishing industry within the working waterfront as well as the assessment of economic and environmental factors was also driven by the National Fish and Wildlife Foundation (NFWF), Fishery Innovation Fund grant. The grant also prioritizes the inclusion of fishermen in the sustainability planning process. NFWF is a public private partnership between NOAA and the Moore and Walton Family Foundations that, with some effort in the qualification and pursuit of the grant, provided the means to address an unfunded mandate in the MSA. NOAA makes policy for U.S. federal fisheries and is advised by NMFS which works closely with regional councils.

The Case of Morro Bay and Monterey

Economic Performance

Commercial fishing generates approximately \$7 million at the dock for fishermen in Monterey and Morro Bay every year (California Department of Fish & Wildlife, 2014). In the State of California, commercial fishing generates approximately \$200 million annually and the West Coast of the United States (excluding Alaska) represents \$500 million at the docks and generates tens of thousands of jobs (NOAA-National Marine Fisheries Service, 2014).

In both communities, one of the strongest economic impacts of a working waterfront and commercial fishing industry was the synergy with tourism. In Monterey County, tourism generates \$2 billion in spending annually and over 22,000 jobs. More than half of the eight million tourists who come to Monterey County each year visit Fisherman's Wharf (Monterey County Business Council, 2012).

A 2007 opinion poll of over 800 California residents found that 71% "seek out and enjoy going to working waterfronts"

Figures 1 & 2: Monterey facilities integrated with sales and tourism.



(Responsive Management, 2007, p. 57). Furthermore, in a 2008 survey of over 140 tourism professionals in Morro Bay, Monterey, and Crescent City, respondents gave, “tourism from having an active waterfront,” a mean rating of 8.82 out of 10 in importance (Responsive Management, 2008, p. 17). In that same survey, tourism professionals indicated that, “having local, fresh seafood available was of great importance in attracting business to their community.” Interviews conducted for the CSP effort suggest that the sentiments expressed in these reports have remained, and perhaps grown stronger, in favor of the interest in a working waterfront and access to fresh, local, sustainable seafood.

Another significant economic indicator of commercial fishing and working waterfront performance is employment. It is estimated that in Morro Bay approximately 195 jobs are generated on the boats, on the docks and in the County’s only fish processing plant as a direct result of the commercial fishing industry. In Monterey County, approximately 720 jobs are generated processing squid and sardines from landings in Monterey and in Moss Landing. The processing plants in Monterey County were originally intended to process apricots and strawberries and would otherwise be idle and the workers, typically farmhands, benefit from the commercial fishing activity that is concentrated in the winter months when work in the field is slower. The synergies across industries, agriculture and commercial fishing, represent significant economic and social capabilities, the ability to form alliances with diverse partners as well as better access to inputs and improved profitability.

Environmental Performance

Environmental performance is one of the foundational components of a sustainable system. Of the thousands of species off the Central Coast, each of the approximately 25 species landed in Morro Bay and Monterey is regulated by state or federal law and carries strict reporting requirements. Upon each landing and the sale of fish, commercial fishermen and buyers are required to submit information, through a fish ticket, on the catch location, date, type of gear used, skipper

name, vessel identification number, permit numbers, as well as weight, price and total earnings for each species. All of this data is aggregated and posted on the California Department of Fish and Wildlife website for public access. Transparency of activity on the water, as divulged through fish tickets, is prerequisite for sustainable outcomes.

Management measures for the top species landed in Morro Bay and Monterey are illustrated in Table 2.

Another indicator of environmental performance is improving stock status of key species as reported by federal and state agencies, which include Pacific swordfish, Chinook salmon, Widow rockfish, Bocaccio rockfish, Pacific cowcod, Petrale sole, Sablefish and Dover sole. Certification from third parties such as the Marine Stewardship Council (MSC) should also be considered as indicators of environmental performance. According to a recent study, in 2014, twelve groundfish species were certified by the MSC, all of which are currently and historically landed in Morro Bay and Monterey (NOAA Fisheries - West Coast Region, 2014).

The commercial fishing communities in Morro Bay and Monterey exhibit key environmental performance capabilities by engaging is a diversity of fisheries on a diversity of habitats with a diversity of gear types, reducing impacts on any single fish stock or habitat, as well as transparency through strict reporting requirements, regulatory measures that are guided by science and evaluated periodically, strict and extensive spatial closures, gear restrictions, and quota based management, all considered hallmarks of sustainability. Although many vulnerable species still require reduced exploitation to recover, the exploitation rates in a number of well studied ecosystems [like California] are below levels the models predict to be sustainable (Worm et al., 2009).

Social Equity and Community

Sustainability within coastal communities and their working waterfronts has frequently been examined in terms of economic

Table 2: Species in Morro Bay and Monterey.

	CPS	Crab	Nearshore	Salmon	White Seabass	Groundfish	California Halibut	Pacific Hagfish	Highly Migratory Species	Spot Prawn
Management Level	State/Fed	State	State/Fed	State/Fed	State/Fed	State/Fed	State	State	Fed	State
Stock Assessment	•		•	•	•	•	•		•	
Reporting Requirements	•	•	•	•	•	•	•	•	•	•
Spatial Closures			•			•	•		•	•
Catch Limits	•		•	•		•	•			
Seasonal Closures	•	•		•	•		•		•	•
Gear Restrictions		•	•	•	•		•	•		
Sex/Size		•	•	•	•		•			
Number of Vessels	•		•			•	•			•
Trap Limits		•						•		•
Quota-Based Management						•				

or environmental standards. Less frequent are discussions of the role that relationships, communication, respect, social cohesion, trust, leadership, organization and perspective of the future play in determining the long-term viability of a commercial fishing community. Yet, the more cohesive and effective the leadership (respect, communication, shared knowledge), the larger and more capable a group can grow and the more complicated and sophisticated tasks it can accomplish. Specifically Morro Bay provides a window into how social performance can sustain or contribute to coastal communities.

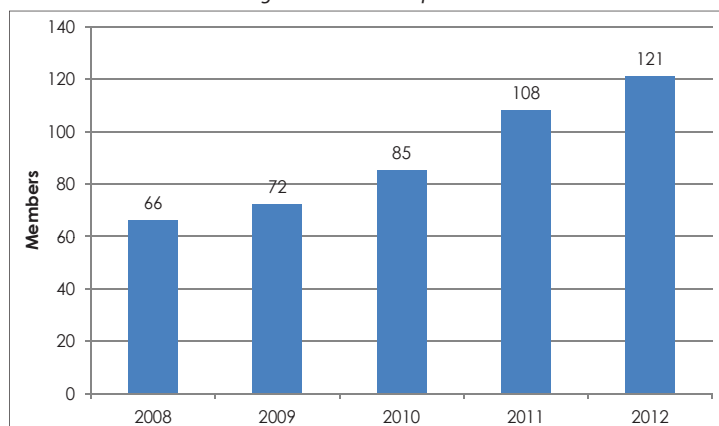
Based on community input under the direction of a cultural anthropologist, the following social sustainability metrics have been identified as playing a significant role in Morro Bay and Monterey.

- Social cohesion
- Sense of identity
- Self organization
- Leadership
- Communication and education
- Intergenerational employment

For example, in Morro Bay, the fishing community has maintained a strong sense of social cohesion, self organization and leadership, as evidenced by the formation of the Morro Bay Commercial Fisherman's Organization (MBCFO) in 1974 and its current membership of over 100 members (Figure 3).

Social cohesion is also evidenced by the commercial fishing industry's strong relationships with City of Morro Bay staff and civic leaders, the aquaculture industry, local merchants, and with the Commercial Passenger Fishing Vessel (CPFV) fleet, skippers and deckhands switching back and forth. The fishing fleet also has strong ties to the academic community and has engaged in several collaborative research projects with California Polytechnic State University and the Bren School at University of California, Santa Barbara.

Figure 3: Membership in MBCFO.



The fishing community has also shown effective communication capabilities, attracting support in the form of grant funding from the California Coastal Conservancy, National Fish and Wildlife Foundation, the Central Coast Joint Cable Fishery Liaison Committee, as well as Environmental Defense Fund and The Nature Conservancy. The recent formation and successes of the Central Coast Women for Fisheries, which includes the distribution of approximately 85 scholarships, is further evidence of the community's ability to self organize, attract funding, support fishermen and fishing families, and educate the general public. All of these factors enrich the lives of the participants and contribute to the identity of the community. Social performance sustains and is sustained by economic and environmental performance. The economic, social, and environmental systems are dependent on each other.

Lessons for Policy and Practice

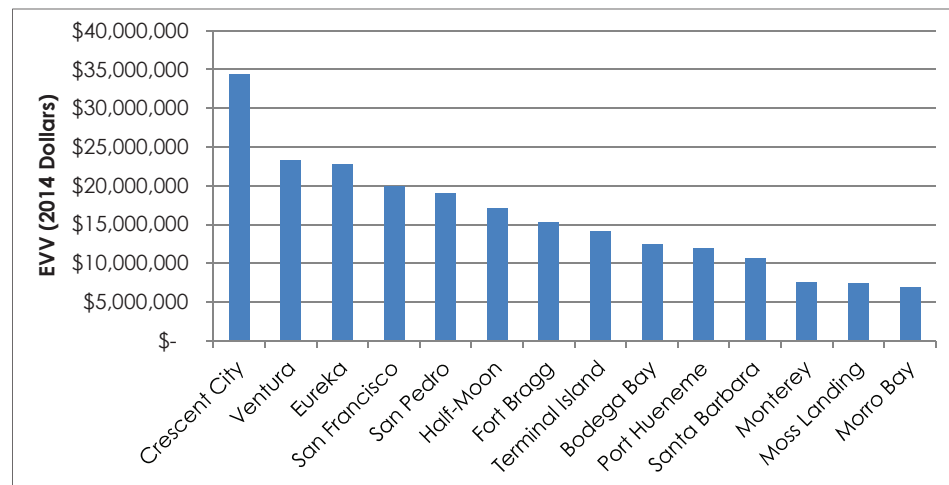
Our work shows that value of using CSPs to improve total sustainability. For example in Morro Bay, at the behest of project managers and the fishing community, we focused on a handful of the highest priority needs of commercial fishermen. Those included, for example, a Boatyard and Haulout Facility with economic implications of potential increased employment opportunities and an income stream for the City, environmental implications of a greater ability for the City to remove derelict vessels that pose "spill" risks and threaten the fragile estuary as well as reduced greenhouse gas emissions as vessel owners can stay closer to home for their annual haulout and maintenance. Social implications include the community's greater control of outcomes, security for vessel owners that critical services are near, and an important connection of diverse user groups through a service required universally by vessel owners, fishermen, sailors, Coast Guard, and Harbor Patrol.

These findings however indicate another key lesson—flexibility and adaptability in sustainability planning is important. Community performance measures are "messy," as demonstrated in Figure 4, which shows gross earnings for the top 9 ports in California. If extended over time for a selection of fishing communities of different sizes and geographic locations, this would likely yield significant variability. Communities also have entropy based on size, scale, and stocks, and while they can be 'profiled' this snapshot can change with time, and economic or environmental shocks. Our goal is to use CSPs to mitigate the risk and create more resilience to these system shocks.

Furthermore we also show that indicators alone do not tell the story of sustainability. Consistent with what many social scientists have hypothesized, our cases illustrate a situation where community partnership can not only strengthen a fishery, it can improve the quality of indicators that benchmark it. Both of our cases illustrate this second factor.

Finally, we offer that if jurisdictions and industries can improve the quality of indicators while pursuing sustainability, then it can also lead to future projection. Understanding of the factors

Figure 4: Gross Earnings for the Top 9 Fishing Communities in California Based on Estimated Vessel Value in 2013 (EVV).



contributing to resilience can potentially suggest future policy actions to promote these factors if possible. A focal hypothesis this leads to is: communities with access to a greater diversity of fishing opportunities demonstrate less landings gross revenues variability and increased annual gross revenues, and the number of different fisheries for which citizens in a community own permits is related to land use growth.

To address this hypothesis, future research should extend our work and the work of others on metrics of association using geographic-based regression with Quantum GIS and other simulation tools. This will allow for the exploration of how land use changes and economic prosperity can contribute to downward trends in ecological productivity. Parallel research has been done on urban ecosystems and transportation choices but not focused on the economic and land use factors as they relate to coastal ecology (Waddell, 2002; Waddell, Ulfarsson, Franklin, & Lobb, 2007). We hypothesize that there is a 'tipping point' at which communities experience a 'tragedy of the commons' and the economic productivity of the fishery begins to suffer based on the negative impacts of land use growth. It could lead to better tools for risk management and future fisheries policy.

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Lessons in Leading: Developing a Culture of Innovation in Public Sector Planning and Governance

William Riggs

PhD; Assistant Professor, CRP Cal Poly.

In this thought provoking article, William Riggs discusses the importance and principles of leadership, and how they can help efficiency, community satisfaction, and innovation in public planning and governance. Leadership in the public sector is more about creating an environment for success and unleashing the power of others.

Most of us would agree that effective leadership is vital to any organizational efficiency in business. Great leaders communicate the mission and objectives of an organization, inspire motivation, and lead teamwork to more efficient and productive outcomes (Northhouse, 2014). But what about in the public sector; does visionary leadership matter? Academics would tell us that effective leadership is obviously not only a priority for the private sector and that leadership in the public sector is a critical part of developing a culture of innovation in government (Ingraham & Getha-Taylor, 2004; Ingraham, Joyce, & Donahue, 2003; Newman, Raine, & Skelcher, 2001; Wright & Pandey, 2010; Zien & Buckler, 1997).

Since leadership plays a crucial role in two factors believed to drive employee satisfaction, utilizing employee skills and teamwork, developing and sustaining effective leaders for the government of the 21st century is fundamental (Ingraham & Getha-Taylor, 2004). An analysis of management capacity and the “potential for performance” in federal agencies and state and local governments reported that in each case where strong management capacity was developed, strong leadership was also present (Ingraham, Joyce, & Donahue, 2003). But, what traits make up a great public sector leader?

Scholars have researched many different models of what constitutes effective leadership. These include trait-based or personal characteristic theories (Northhouse, 2014), or relational ones that deal with the leaders and subordinates, or leader-member exchanges, and visionary organizational change and integrative approaches (Moynihan & Ingraham, 2004). The field has focused on the role of the strategic leader, a leader “of” individuals (Bryman, 2013) focused on developing shared vision and meaning (Boal & Schultz, 2007), and developed more of a shared leadership style that focuses on the idea of culture (Carson, Tesluk, & Marrone, 2007; Manz, Pearce, Mott, Henson, & Sims, 2013; Pearce & Conger, 2002; Sarros, Cooper, & Santora, 2008), and four principles of leadership including confidence, questioning, learning, and service (Lyons, 2012).

These factors can create a culture of innovation (Lyons, Chatman, & Joyce, 2007) founded on guiding principles that can help reframe leadership. The guiding principles are what former Mayor of New York Rudy Giuliani would see as a defining rudder that can help managers cope with the workload demands and public scrutiny of their jobs. In his opinion, “having strong beliefs [principles], being able to stick with them through popular and unpopular times, is the most important characteristic of a great leader” (Giuliani & Kurson, 2003).

Giuliani’s example provides muster to the argument that the four principles of leadership apply in the public sector and are essential for public agency management. These principles have been discussed prominently by Lyons (2011) and include:

Confidence – Being confident in your skills without pretense or attitude;

Questioning – Questioning the norm, the status quo / the mainstream and standing up for what you know to be true;

Learning – Learning from anyone and to never stop learning;

Service – Serving something greater and thinking beyond yourself.

Using a series of case studies and interviews this article illustrates the opportunities and challenges of leading and managing in the public sector. This is framed by a central assumption—that leadership and management are not dichotomous—and that leadership is a critical trait for public sector managers. It also relies on the idea that the areas of confidence, questioning, learning, and service can be seen as hierarchical with service and learning underscoring the core of public sector planning. This is depicted in Figure 1 and used to frame discussion and application to government in each of these areas.

Confidence - Confidence Without Pretense

Of these factors that are path-bending with regard to organizational management, confidence without pretense provides a



Figure 1: Hierarchy of public sector leadership traits.

first lesson. For example, in a recent discussion with students of CRP 530, Dr. Robert Bertini, Professor at Portland State University and Former Deputy Administrator for the U.S. Department of Transportation (USDOT), encouraged outright ambitiousness: “Big projects take a long time. I have very simple advice; be ambitious but patient.”¹

Dr. Bertini became a member of the Obama administration in 2008 as the director of the Research and Innovative Technology Administration (RITA). He saw large projects come to fruition through the themes of coordination and coercion. According to him, in the United States congestion leads to 4.8 billion hours in travel delay for auto commutes and there is no easy solution for this especially in governance. Therefore, it takes confidence to re-envision the way things are organized and prioritized.

Dr. Bertini described his first day as one where he had to be both inventive and receptive—projecting a vision and new strategic plan for policy but also being open and receptive to the best ideas from anybody—from people who may have been with an organization for thirty minutes to those who had been there thirty years. This involves shedding one’s ego at the door—having confidence without attitude.

Questioning - Questioning the Norm

In the same way questioning the norm is important. This is something that is reinforced as far and wide as Chief William (Bill) Bratton who revolutionized policing in New York City, and in California by City of San Luis Obispo Mayor, Jan Marx and City of Berkeley Planning Director, Eric Angstadt, both of whom have spent decades in planning and city government. Each of these individuals has taken a unique perspective on thinking about and responding to the status quo in their respective organizations.

In New York City, Bill Bratton gained notoriety in the late 1990s by questioning the traditional methods of law

enforcement and using new ideas and technology to reduce crime (Sugarman, 2010). He replaced a number of senior staff members and implemented what he called a “COMPSTAT” meeting where leadership would strategize approaches to crime fighting (Willis, Mastrofski, & Weisburd, 2004). At these meetings, different personnel of the New York Police Department (NYPD) were able to communicate to develop effective strategies—one of the most simple being changes in the police uniforms and equipment that made beat cops look more professional and official giving them pride in how they looked that translated internally and externally.

Likewise, in a 2013 discussion with CRP students Mayor Marx and Planning Director Angstadt talked about how great managers are leaders, and leaders set the agenda and lay out not only a policy vision but the political process to achieve it. In Mayor Marx’s mind this concept is the key way to establish power in government, but she advises students to remember that while you are questioning the status quo and being dynamic, you need to stay in touch with what your community wants. According to Mayor Marx, “If you look in back of you and no one is following you then you are doing something wrong.”

To stay focused she advises students to pay attention to details and respect everyone. Sometimes the public can say silly things that can make her want to laugh but she advises students not to laugh. Instead, students should take public comments to heart and see where there are things you can question and take action on. Complimenting this, Director Angstadt uses this data as a filter for looking at the municipal budget, which he saw as the keystone to questioning what works and does not work, and then meeting city goals.

Learning - Never Stop Learning

These examples of questioning and inquiry get at a larger foundational issue that deals with learning. True leaders never stop learning (Argyris, 1976; Copland & Knapp, 2007; Sosik, Godshalk, & Yammarino, 2004). As John F. Kennedy is quoted as saying, “Leadership and learning are indispensable to each other.” A widely known example of this is Coach Mike Krzyzewski, or Coach K, who has led the Duke University Basketball team to multiple NCAA championships during his career. Coach K, has been able to accomplish much of this by his unique approach to leadership which is not to let “Too many rules get in the way of leadership . . .” which can “. . . put you in a box” and keep you from learning and making decisions (Snook, Perlow, Delancy, & Coach, 2005). He is known for saying, “I don’t want to be a manager or dictator. I want to be a leader—and leadership is ongoing, adjustable, flexible, and dynamic.”

Likewise, City of San Luis Obispo planner, James David, has spoken with Cal Poly students about learning from the public as he engages them. James has the perspective that as a civic manager you can foster civic empowerment and be credible by being in front of your constituency as much as possible, and learning as much as possible, using creative tools to seek

¹ Dr. Bertini will be joining Cal Poly’s Department of Engineering in the fall of 2014.

real feedback. One of his most significant memories was from working local transportation planning issues and learning from elementary school students about what the city could do to make riding the transit cooler. To this they gave him a surprising, and yet not so surprising, comment: “Put Fergie on the bus!”

Service - Serving Something Greater

Finally, as a capstone for public sector management, comes the idea of service and serving something greater. This is a topic of high import that both David Storms, who works as Division Director for the Office of Public Housing of the federal Department of Housing and Urban Development (HUD), and Daryll Grigsby, the Public Works Director for the City of San Luis Obispo, espouse. Both individuals spoke with CRP students in the spring of 2013 and encouraged those entering into (and in) the planning and policy fields to keep a service mindset and let this be the foundation of their careers. Storms explained that HUD’s mission has changed in recent years: “We used to be housing ‘cops’ waiting to say ‘gotcha’. Now I view our relationship as a partnership with our customers.”

He uses this principle of partnership for service to motivate his federal employees. There are many stereotypes of government employees, but he thinks by-and-large most people go into government wanting to make the world a better place. He tries to tap into that, especially for employees who are older and may feel isolated or out of touch with younger leaders. “Remind them of their personal values and how they are related to institutional goals,” he says. Remind them that they serve something greater.

Grigsby taps into a similar ethos. While his number one lesson to serve communities is to “have a handle on the budget” so that you can respond with tangible solutions and improvements, he is especially sensitive to dealing with public service employees. Having worked through numerous economic cycles of prosperity and scarcity in government his advice is to be stable.

“Don’t take the lows too low, or the highs too high. Both will balance out. You will need to keep people’s morale and focus when things are low. Even if there are no lay-offs or jobs lost, there is a vibe of scary. . . . Ultimately the workplace is like a family. You see them more. You are walking down life’s path with them; babies, death, and the family. Everyone has the same desires: live life, have family, have balance.”

He reminds us that two key lessons are remembering that none of us ‘live to work’ and that being a service-oriented public servant is not complex but simple, and instilled in most of us at a very early age:

“One trick to management is remembering the things that my grandmother taught me when I was a child: respecting people; communicating; listening; and treating human beings like the adults they are.”

Conclusions

These lessons in leading provide both a guidebook and reminder for those entering public sector leadership positions. As this article indicates, leadership in the public sector is malleable and dynamic—more about creating an environment for success and unleashing the power of others than about being powerful in your own right. This is not magic or a special sauce, and may be more heartfelt and organic than we all imagine, but there are tangible things we can do to create a culture of innovation, one thing that some have described as the intangible passion and excitement for tasks and responsibilities.

Keying in on the ideas of confidence, questioning, learning, and service can be one way to move toward this and to begin creating path-bending environments where public sector employees can thrive. We can be leaders who, in the words of Emerson (2006):

“Do not go where the path may lead, go instead where there is no path and leave a trail.”

7 Path-Bending Ideas for Planning & Governance

Ideas you may or may not have thought of to reshape your organization.

- Serve coffee or start a snack bar. Think of simple gestures that can bring about informal interactions that foster culture.
- Create a big idea wall in the office to encourage innovation and risk taking.
- Express gratefulness. Write an email or a note of thanks. The message can be as simple as “Your performance was among the very best. I appreciate the effort.” and can be a low cost, high impact way recognize your top performers.
- Make your website mobile friendly and stream public meetings online.
- Create a way for the public to be creative and outlets for employees to do hands-on service. This could include things like street art or helping install or maintain landscaping.
- Borrow from the airlines and use a kiosk and concierge model for over-the-counter planning that provides a human touch and reduces workload.
- Do away with ‘the snake’ and use an online ‘BuzzFeed’-style quiz to improve understanding of the permitting process. Integrate this with an e-permitting system.

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FOCUS II

International



Learning from Germany

Kirsten Harrison

Junior, BCRP, Cal Poly.

The CRP Department believes that international exchanges and cross-cultural studies are fundamental for a planner's education. Our students are exposed to international case studies, are encouraged to travel and study abroad, and share classrooms with international students and research fellows visiting Cal Poly. In this article, Kirsten Harrison tells us about her life-changing experience studying in Germany.

As a junior in the City and Regional Planning Department at Cal Poly San Luis Obispo I studied abroad in Berlin, Germany. Studying abroad was something I always wanted to do and it was even better than I thought it would be. I didn't know I would end up in Berlin, but I am so glad that I did. Looking back, it was the perfect city for me to be in. An interestingly fused city of past, present and future, with so much understanding and hope. I like to think there is magic there in Berlin. I cannot wait to go back.



Kirsten and her host at Berlin's zoo.

In particular, I was in the Metropolitan Studies program, which complemented the City and Regional Planning program at Cal Poly nicely. I learned so much! My classes specifically looked at metropolitan issues in comparative and interdisciplinary approaches. My classes ranged from visual culture to literature and film to metropolitan development. Each class brought something different to my educational experience. Overall, I learned a lot and the coursework was very similar to my Cal Poly workload, which made it challenging, but also very stimulating and engaging.

My living situation was wonderful while in Berlin. I chose to stay in a homestay and was placed with a local Berlin resident. The process was therefore very easy for me. I simply took a questionnaire before I arrived in Berlin and my program placed me with a suitable host. My host was great. She was a young girl about my age who had a great deal in common with me. It was just the two of us living in an apartment really close to school and the center of the old city of Berlin. We would often go shopping together, or to the park, or even the zoo. She spoke English very well and would help me with my German. I was very lucky with this homestay. Others in my program lived further away from school or things to do.

Possibly the coolest thing about my Study Abroad program itself was the included field trips. When I was choosing a

program, the field trips included in this program are really what sold me on IES Abroad. We went to St. Petersburg, Russia for a week and to Paris, France for a week. On each one of these weeklong field trips the hotels were included, two meals a day were included, and most of the activities in a day were included: the best museums, shows, churches, and tours. It was outstanding.

We also went to guest lectures and visited with partner universities and students to talk about relevant metropolitan issues

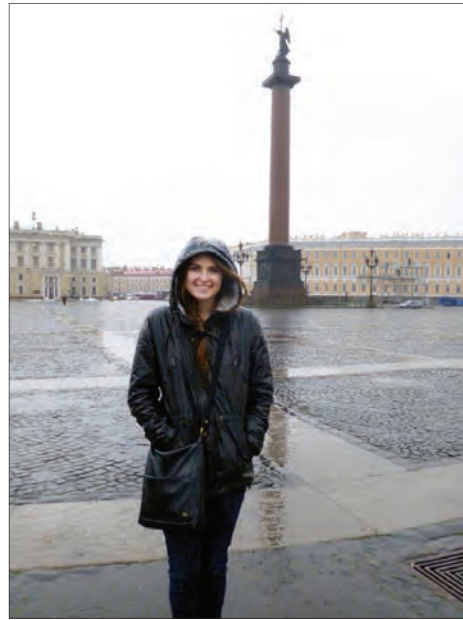
in each city. It was such a good traveling experience and we did all of these amazing things in a safe and well-planned way with guides that had done it before. We did have homework on these trips from our teachers at our home school in Berlin, but that was okay because it tied it in nicely to our curriculum. It did make it a nice comparison to Berlin.

Kirsten with the IES Abroad Berlin Metropolitan Studies Fall 2013 group in Berlin.



In addition to these weeklong field trips, we went on a couple weekend field trips with our program to Dresden and Potsdam for academic purposes, which was great as well. Then, of course, there was private traveling. With my friends that I made abroad I traveled all over! It was such a confidence boost to be able to travel! It broadened my perspective about the world around me to be able to travel to different countries and see the different ways of living and learning, but it also made me learn about myself and see how big the world really is. It really just made me want to travel more.

I can't wait for my next trip!



Kirsten in front of the Hermitage Museum, at the Palace Square in St. Petersburg, Russia.



Kirsten with a colleague in front of the Konzerthaus (the Concert Hall) for the Berlin Symphony Orchestra. The building was designed by the famous German architect Karl Schinkel in the early 1800s, destroyed during World War II and rebuilt in the early 1980s.

Berlin's new Central Station, Europe's largest and newest train station, designed by von Gerkan, Marg and Partners. (source: <http://en.wikiarquitectura.com>)



Townscape and Urban Planning: My Research Agenda at Cal Poly

Lorenza Pavesi

PhD Candidate, University of São Paulo, Brazil;
Visiting Researcher, CRP Department, Cal Poly.

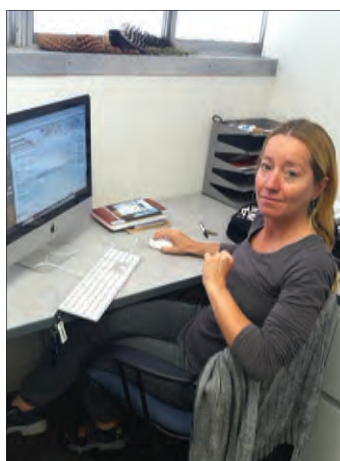
Continuing its tradition of supporting visiting researchers, this last academic year the CRP Department received Lorenza Pavesi, a doctoral study at the University of São Paulo, Brazil. She spent a busy year studying the impact that the British Townscape approach to urbanism had on American education and practice, by visiting places and diving deep into books and library archives. In this article she writes about her experience.

I arrived at the City and Regional Planning (CRP) Department in July 2013, as a Visiting Scholar with a twelve-month scholarship from FAPESP, a research sponsoring foundation from the State of São Paulo, Brazil. Now it is August 2014 and I am back in Brazil. These lines serve as an account of my activities during this period, but also as a thankful note to all (faculty, staff, students, and friends) who contributed to making my stay in Cal Poly so special. I hope my account will inspire students to spend time abroad and be open to new experiences.

My Trajectory and Why Cal Poly

This is my story. I am a PhD candidate at FAU-USP, the University of São Paulo's School of Architecture and Urbanism. If rankings are to be trusted, USP ranks among the world's top seventy universities and the best in Latin America. In my opinion FAU-USP is a great place to study and I am extremely lucky to have professor Paulo Bruna as my advisor. A well respected academic and successful professional, he runs one of the most important architecture firms in Brazil and is definitely one of the best lecturers I have ever had.¹

Since I don't really have a very traditional or linear professional trajectory I'll write a few words about my background. I was born in a tiny medieval town near Venice, Italy and when I was a teenager I moved to Brazil with my family. I have travelled the world both with my family and alone, working as a translator and in other capacities. In the early nineties I enrolled at the Free University of Berlin, Germany and witnessed the fall of the infamous wall. My interests in history, town planning, architecture, and design definitely intensified then. Subsequently,



I spent some time back in Brazil and then in Ireland. I ended up enrolling at Coventry University, England, where I received a first class degree in Visual Communication.

I am neither an architect nor a planner but quickly realized that Coventry—a British industrial city that was devastated by German bombs in 1940—is an interesting case to study. Coventry is not famous for being a pretty city but it is definitely the place to be if you, like me, have a strong interest in second post-war reconstruction in Europe, and in architectural and historical preservation in general. In Coventry I met a very kind antiquarian, historian, and book dealer who introduced me to some of the most important titles on

City Planning and post-war reconstruction. One title attracted me most. At first it was the book as an artifact itself: big, bold, printed in different types of paper due to the post-war rationing, great black and white photos with splashes of red arrows and text, and fantastic drawings. Then, I was literally overwhelmed by the text. The book was *Outrage*, authored by the British critic Ian Nairn, beautifully illustrated by Gordon Cullen, and published as a special edition by the influential London based *Architectural Review* magazine.

And since I was about to graduate at the time I chose to write my final work on visual perception and psychology. My main references were the Gestalt theories: the work of J.J. Gibson and the theory of "affordances", as well as Gordon Cullen's "serial vision" from his Townscape method. That's when my love affair with urban design started, although at the time I had no idea where it was going to take me. Long story short: I went back to Brazil and received a Masters degree at FAU-USP with a thesis on the British critic Ian Nairn and the birth of Townscape as an urban design methodology, which Nairn strongly de-

¹ See Paulo Bruna's work at <<http://www.paulo-bruna.com.br>>

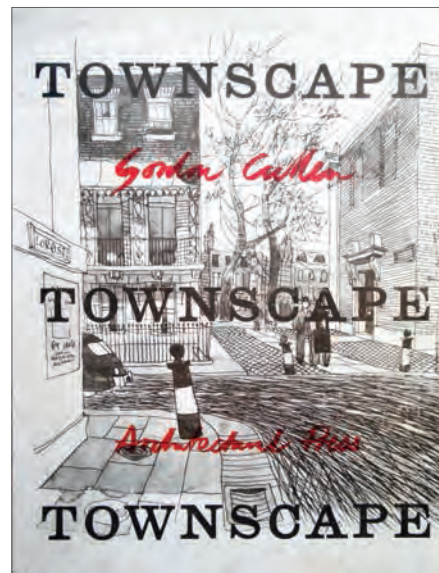
fended.² Fascinated by Nairn's remarkable writing skills and eccentric personality, I discovered how far Townscape principles had resonated outside Great Britain.

I decided that this topic deserved a deeper analysis and started my PhD studies, also at FAU-USP, pursuing a thesis on the flow of urban planning principles across England, the United States, Italy, and Brazil with special reference to the diffusion of Townscape as an urban design methodology: how did it spread, through which instruments, who were the main authors and planners involved in this diffusion, and what were the results? This led me to apply for a scholarship to spend a year in the United States, at Cal Poly's CRP Department, and study under the supervision of professor Vicente del Rio, whose work I had studied and admired for years. I share Vicente's passion for travelling, literature, history, and urban design, and he couldn't have been more generous with his time and knowledge. All the CRP faculty was always very supportive and welcoming, as was everybody I met at the College of Architecture and Environmental Design (CAED).

About my research

One of the main objectives of my research period in the United States was to gain access to publications, archives and correspondence (and of course to pick Vicente's brain on Urban Design) in order to examine the exchange of ideas between British and American planners and the interest of theorists and planners in the Townscape methodology. I cannot publish definitive results yet but during this amazing year at Cal Poly I came across more than I was looking for. I discovered authors that are, in my opinion, definitely underestimated by historiography such as Grady Clay, David Crane, and Peter Blake, and found out more about well-known authors such as Victor Gruen, Jane Jacobs, and William H. Whyte. The last two had a clear interest in the Townscape theories and were in contact with Townscape authors such as Gordon Cullen and Ian Nairn.

The evidence of a strong connection between Townscape advocates and American planners is not always clear, sometimes the proximity is very subtle and not directly acknowledged, and it's not easy to find a project in the United States that was built entirely according to Townscape principles. However, some of its core principles did clearly strike a chord in the United States during the second post-war period, such as the anti-suburb discourse and the call for compact and walkable cities. As we all know, the term "Urban Design" was first used in 1956 when Harvard University held the first conference on urban design, organized by José Luis Sert with the participation of prominent architects, historians, and critics including Louis Mumford, Jane Jacobs, and Victor Gruen. At this conference Sert announced Urban Design as a new academic field concerned with the physical form of the city, and added that the urban designer should above all



Cover of the first edition (1961) of Gordon Cullen's influential book.

believe in cities and their importance and value to human progress and culture. This provided a platform for the launch of Harvard's Urban Design Program in 1959-60, a model later adopted by other Anglo-Saxon universities.

Another genealogy can be found in the mid 1950s with the efforts by the Rockefeller Foundation to respond to the United States housing crisis through research initiatives such as a program called "Studies in Urban Design." Between 1955 and 1965 they sponsored research projects on urban design by scholars such as Kevin Lynch, Gyorgy Kepes, Jane Jacobs, Edmund Bacon, Christopher Alexander, Christopher Tunnard, Ian McHarg, Edward Gutkind, and Townscape advocate Ian Nairn.

The Foundation's first grant in urban design studies in April 1954 was for a basic research project formulated by Gyorgy Kepes and Kevin Lynch at MIT to study the fundamentals of human perception and understanding of the urban environment. Its goal was to feed the center's main research and take a more scientific approach to urban aesthetics. In fact, this project was born of a seminar on "visual form of the city", organized by Lynch in 1951 (Lawrence, 2006). According to Orillard (2009), although the seminar's bibliography was almost entirely composed of articles from the British magazine *Architectural Review*, cradle of the Townscape philosophy, there was a clear attempt to transform the magazine's writing into a more academic discourse, for example, by converting the word "vision" to "perception" and by referring to environmental psychology and anthropology. This research led to the establishment of a new field of investigation, which clearly fed the recently formed field of Urban Design in which Lynch and his collaborators worked until the 1980s.

Another research project funded by the Rockefeller Foundation between 1957 and 1961 was developed at Yale University by

² See Lorenza Pavesi's article on Ian Nairn in FOCUS 10, 2013.

Canadian landscape architect Christopher Tunnard. It focused on aesthetic issues at the boundaries between urban and rural areas, and proposed to develop new standards for suburban sprawl and urbanization in rural areas.

For my research I also went to UCLA's Charles E. Young Research Library where I found Victor Gruen's papers and other useful publications in the special collections archive. I also took a fantastic walking tour of downtown Los Angeles with the L.A. Conservancy, which I strongly recommend to students.

A Little Beyond Research

Beyond the research itself, another reason why the University of São Paulo and FAPESP encourage their PhD students to spend study periods at international institutions is the opportunity to interact with other researchers and get to know the culture of other institutions. Being used to historiographical and theoretical approaches, it was particularly useful to experience Cal Poly's "learning by doing" approach. I took professors Vicente del Rio's, William Siembieda's, and Kelly Main's wonderful courses, and used every opportunity to chat and exchange information with faculty. I was also very impressed by the students' enthusiasm and participation both in class and in the many activities offered on campus. It was refreshing and very endearing that, despite the age difference, young undergraduate and graduate students were always keen to know about my experience and asked about my research. I attended countless talks and lectures and tried hard to make the most out of my time. I travelled, volunteered, explored every corner of the city, and talked to everyone who was willing to lend me an ear.

I had the opportunity to travel California; a very valuable and revealing experience (and very enjoyable too of course). For most of my trips I used public transport and although California's love affair with the car and the freeways is well known, I was surprised at the ease with which I was able to move from one place to the other by transit. Encouraged by Professor

Siembieda, I visited Santa Barbara and read about its urban design guidelines while sipping a coffee and looking at the beautiful coast from the Pacific Surfliner's window. I toured Los Angeles by bus with only a paper map and no smartphone or gps device. I obviously got lost but found my way again thanks to the kindness of strangers (Californians are the most generous and kind people I have ever met).

The long distances were often overwhelming and the pre-exposure generated by cinema and literature obviously played a role in turning places, even the dreariest ones, into a thrilling experience for me. But from a European or Latin American perspective Los Angeles is crazy, vibrant, creative, energetic, chaotic, and absolutely exciting. Even being stuck in the traffic was exciting. I travelled south, always by bus, to lovely San Clemente but left out San Diego for my next visit. Big Sur, camping, hiking, surfing, wine tasting, and dancing in the Mission plaza. It was exhilarating. I visited Carmel and Monterey (I am a big fan of Steinbeck and was curious how the city recreated the landscape described in the Cannery Row). And of course I visited San Francisco: trolley, bus, underground, and car. I was, at the same time, outraged and fascinated by gentrified areas such as the Dogpatch, Hayes Valley, and Mission, and by the invasion of tourists (and seals) in Fisherman's Wharf. As I have a special interest in the architect and town planner Victor Gruen, I visited some of his projects in Los Angeles and also the Fullton Mall in Fresno.

Despite the hard work and the huge amount of bureaucracy involved (it took me almost 4 months to obtain the scholarship and all the necessary documents for the visa) I can say that it was definitely worth it. I encourage every student to spend time abroad. Go with your mind (and your heart) open to new experiences and embrace local culture and way of life: talk to people, learn a new language, learn new skills and get involved, observe, and increase your repertoire. This will be part of who you are and nobody will ever take this back from you. If there is anything I can do to help planning students to travel abroad, or anything else, please feel free to contact me at <lore.pavesi@gmail.com>. And if you come across information that could help me with my thesis, I'll be eternally grateful. Thank you CRP for the warm welcome and for making my time in SLO so special.

Unfortunately neglected, the Fullton Mall in Fresno was an important project by Victor Gruen (architect) and Garrett Eckbo (landscape architect), possibly influenced by the Townscape theory. (photo by Brian Harley; www.creativecommons.com)



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FOCUS II

Spotlight



Learning from California: Highlights of CRP Studios Fall 2013/Spring 2014

Hemalata Dandekar

PhD; Professor and Department Head, CRP, Cal Poly.

CRP Department Head Hemalata Dandekar writes about the 2013-14 studio projects. By highlighting their objectives and accomplishments, she notes how important community outreach and learn-by-doing studio pedagogy are in shaping students into professionals who will be fully engaged in the field.

Earlier volumes of FOCUS spotlighted the variety, diversity, and locational distribution of the California communities that host and support the CRP planning studios. Intensive curriculum studios are a key element of the CRP program offered at all levels of the graduate and undergraduate curriculums. FOCUS Volume 7 (p. 81) elaborated on the concept of "learning from California" and the program's underlying mission of serving community and how this is practiced in studios at all levels of the curriculum. FOCUS Volume 8 (p.72) charted the studio sequence for both programs to identify the graphic, analytic and conceptual skills that are taught at various levels. And FOCUS Volume 9 (p. 96) described the ways in which learning from California is tempered in our program with opportunities to experience a comparative frame of reference by exposure to

international practice. FOCUS Volume 10 (p. 131) noted the fact that CRP studios are contacted with, and supported financially by, host cities as a demonstration of the utility that student work brings to California communities.

In addition to describing the studio work completed in the recent academic year, this volume elaborates on the key areas of community-desired impacts that guide each studio exercise. This analysis reflects the department efforts to clarify the outcomes of planning and the learning goals for each level of our studio sequence. Given the significant investment in studio-based pedagogy in our program this will clarify how the communities served and the students trained benefit from our integrated, community-service oriented approach to studio



instruction. The underlying premise of our studios is that student learning in core and support classes of our curriculum is applied to specific planning situations in an integrative, holistic, and hands-on fashion. And, that the solutions are subject to the assessment of the communities served. This latter premise adds an additional layer of complexity and accountability to the effort.

In the 2013-14 academic year once again a range of California communities (Figure 1) hosted our studios. Most studios received financial support from the host client-communities, bringing a heightened accountability to the end product expected and increasing the responsibility of the supervising faculty. Host communities ranged from the City of Milpitas (the work for which won the CalAPA Award of Merit and awards of excellence from the Northern and Central Coast divisions), to the smaller, central coast cities of Cayucos and Morro Bay that compete to attract tourists yet sustain a high quality of life for their residents. In the 2013-14 academic year CRP studios engaged in the projects described next.

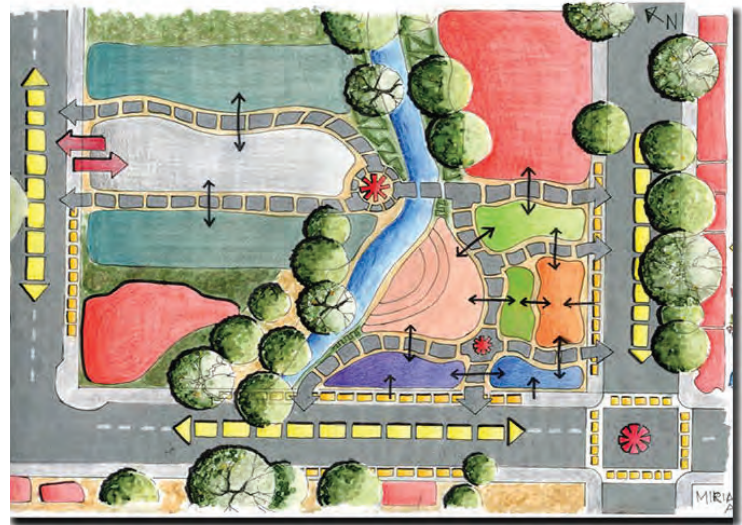
Undergraduate Studios

*Basic Graphic Skills CRP 201 (Fall 2013),
Urban Design Studio 1 CRP 202 (Winter 2014)
Instructors Umut Toker and Dennis Combrink*

In CRP 201, a series of applied in-studio and field assignments introduce students to basic graphic communication methods and urban design concepts. They learn freehand sketching, orthographic drawing, and layouts using traditional drafting techniques, as well as basic computer-based graphic techniques. In CRP 202, students apply these skills to a small urban design project, and articulate the rationale behind their design decisions as they relate to a specific client program, environmental concerns, regulations and ordinances, economic factors, site opportunities and constraints, circulation, and creating a pedestrian friendly environment. This year CRP 202 addressed a strategic gateway site in San Luis Obispo at the intersection of Monterey and Santa Rosa streets.

*A Vision for the Power Plant Area, Morro Bay, CA
Urban Design Studio 2 CRP 203 (Spring 2014)
Instructors Vicente del Rio and Dennis Combrink*

Morro Bay's Power Plant was officially shut down in 2014, and the fate of the imposing three-stack building and of the surrounding land remains unclear. With the City of Morro Bay's interested support, both sessions of CRP 203 explored urban design ideas for the redevelopment of the site, including the functional adaptation of the old Power Plant building and careful redesign of the waterfront facilities. The students exchanged information and ideas with students in parallel studios in Architecture and Landscape Architecture. The final proposals turn the site into an integral part of the city, respond to regional recreational needs, and take advantage of the beautiful California Coast. At the end of the quarter, posters depicting



Figures 1 & 2: Work by students in the CRP 201 Basic Graphic Skills studios this year. Top, site concept diagram by Miriam Arias. Below, hand-colored detail of SketchUp model by Rachel DuMont.

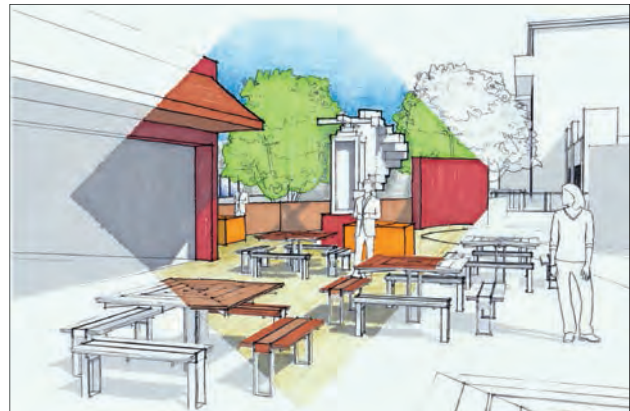


Figure 3: From CRP 202 Urban Design Studio I, a SketchUp Bird's-eye-view of Plaza Nueva, by Rachel DuMont and Steven Orosco. A block-sized mixed-use development including a bus terminal proposed as a gateway to San Luis Obispo's downtown.



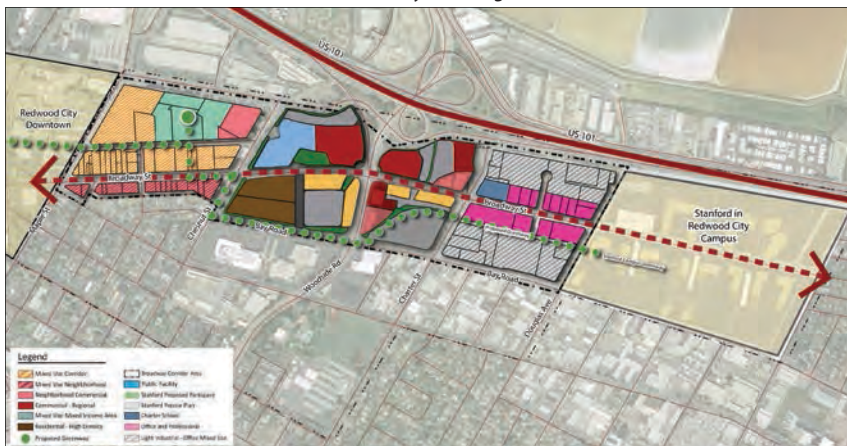


Figure 4: SketchUp view of a proposal for redevelopment of Morro Bay's Power Plant site, by Miriam Arias, Alan Ayon, Gustavo Castro, Steven Orosco, and Jayeong Kim. From CRP 203 Urban Design Studio II.



Figure 5: From CRP 341 Urban Design Studio III, proposed redevelopment in Milpitas's old downtown by Kevin Alcantara, Chris Bedekovic, Jane Kim and Diane Tran.

Figures 6 & 7: Concepts from the Broadway Corridor Plan for Redwood City, by CRP 410/411 Community Planning Laboratories I & II.



the proposals were exhibited for public review at the Morro Bay Community Center.

Urban Design Visions for Milpitas, CA

Urban Design Studio III CRP 341 (Fall 2013)

Instructors Vicente del Rio and Hemalata Dandekar

The City of Milpitas Planning and Neighborhood Services Department challenged our class to develop land use and urban design studies, pre-planning insights, visions, and urban design concepts for two catalyst areas in Milpitas: California Circle, which had the potential to become a "billboard" development on highway 880, and an area around Main Street and Serra Way with the potential to become a gateway to both the historic downtown and the newer civic center plaza. This broad-ranging visioning exercise turned the youthful energy of 29 third-year undergraduate CRP students to imagining creative and dynamic futures that would have a transformative effect and announce what Milpitas aspired to become in the 21st Century. The expectation was that students would develop visual and physical imagery to inspire development of new identities for both sites, creating activity nodes that could contribute to the city's economy. Guided by Professors Vicente del Rio and Hemalata Dandekar, the students developed posters, fly-through computer scenarios, and a report containing seven alternatives. This work won the 2014 Academic Award of Merit from the California Chapter of the APA, and Awards of Excellence from its Northern and the Central Coast divisions. See also the article by Caruso and del Rio in this issue of FOCUS (pages 81 to 87).

Broadway Corridor Plan, Redwood City, CA

Community Planning Laboratory I & II CRP 410/411

(Fall 2013 and Winter 2014)

Instructor Zeljka Howard

The fourth-year undergraduates, under contract with the City of Redwood and under the guidance of Professor Howard, developed a land use and circulation plan for a section of Broadway Corridor in Redwood City, CA linking Downtown to Stanford. See also the article by Howard and Messner in pages



88-91 of this FOCUS. A two-phased planning process involved the following interrelated phases and documents:

Phase I (Fall Quarter): research on the regional context, the study area, and the community including field surveys to record parcel-by-parcel land uses, roadway and intersection measurements, and mapping. Public outreach efforts included City staff and stakeholders interviews, public workshops, and focus discussions with community organizations and high school students. An online community opinion survey extended the outreach effort to the general public. Phase I is summarized in the final report *Broadway Corridor Study: Public Outreach*.

Phase II (Winter Quarter): analysis of background information and community input, case study development, and formulation of overall vision and goals to guide alternative concept plans for circulation and land development. Alternative concepts included two for the entire Corridor, two for the Gateway District, and two alternative circulation concepts. All were displayed and discussed at an Open House held in Redwood City attended by City staff and stakeholders. The final report and recommendations were refined based on feedback received from the community. Phase II is summarized in *Broadway Corridor Study: Land Use and Circulation Concepts*.

Graduate Studios

Vision for Embarcadero North, Morro Bay, CA

Project Planning Laboratory CRP 553 (Spring 2013)

Instructors Vicente del Rio and Hemalata Dandekar

Embarcadero North in the City of Morro Bay is an area directly north of the iconic but now closed Power Plant and its three towering smoke stacks. Dominated by an astounding view of Morro Rock, the area has direct access to the beach and is accessed through Highway 41 thus serving as a terminus to a link to Yosemite National Park and California's Central Valley. Embarcadero North contains Morro Bay High School, a teen center, the Lila Keiser Park, four RV parks that are mostly used seasonally but have no amenities and are physically disconnected from Morro Bay's waterfront and downtown with their unique setting of working and touristic boats and piers, local retail, and eateries. City officials challenged the students to develop alternative visions for circulation and transit, land use development, tourism, and economic development, and to do this with an eye to augmenting and amplifying rather than competing with the existing resources and economic activity of the city. The final report, which students presented to the City Planning Commission, is available at: <<http://www.morrobay.ca.us/index.aspx?nid=787>>

Connecting Cayucos: Visions and Actions for Public Space

Project Planning Laboratory CRP 553 (Spring 2013)

Instructor Kelly Main

The City of Cayucos charged students to develop site-specific recommendations for public space to address several goals for the community that were established in San Luis Obispo

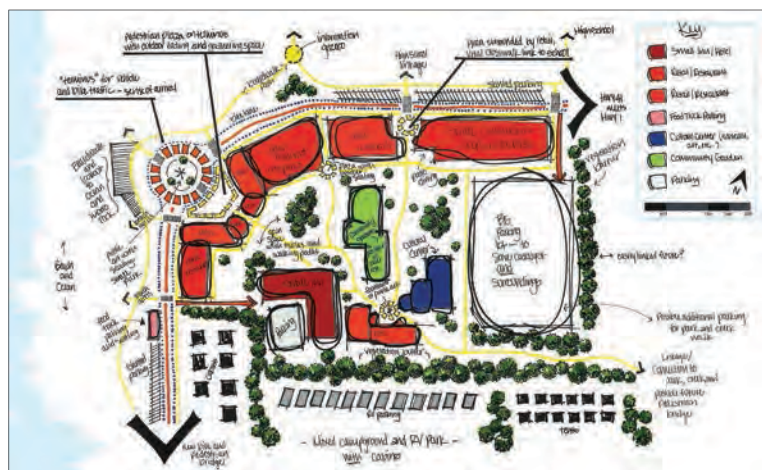


Figure 8: Site design diagram of the proposed Catalyst Project from the Vision for Embarcadero North, Morro Bay, CA. From CRP 553 Project Planning Laboratory.

County's Estero Plan (2009)—a beachfront walkway, economic vitality, additional parking, connectivity as well as community identity, health, and sustainability. A Senior Planner in San Luis Obispo County and the Cayucos Citizens Advisory Council guided the student effort. Given a focus on public spaces, community outreach was a top priority and included participation at community events and meetings—such as the annual Easter Egg Hunt/Dog Parade, the weekly Farmer's Market, and local Rotary Club—along with working with 8th graders at Cayucos Elementary School and interviewing community residents and visitors in public spaces. The work culminated in students presenting their ideas, which included the creation of a community garden and the conversion of a beachfront parking lot into a community plaza, to the Cayucos Advisory Council.

General Plan Update, City of Guadalupe, CA

Community and Regional Planning Studios I & II CRP 552/554 (Fall 2013 & Winter 2014)

Instructor Chris Clark

The City of Guadalupe asked Professor Clark's session of the graduate studio to update its General Plan. Guadalupe is a small mostly farming community close to the northern Santa Barbara County line. Once a thriving agricultural center served by the Union Pacific line and Highway 1, the construction of Highway 101 and the expansion of the City of Santa Maria to the east caused Guadalupe to slip into the shadow of larger economies, but it remains an agricultural hub and hosts two large produce packing plants. It is a quiet community of families with modest economic means, and home mostly to farmworkers.

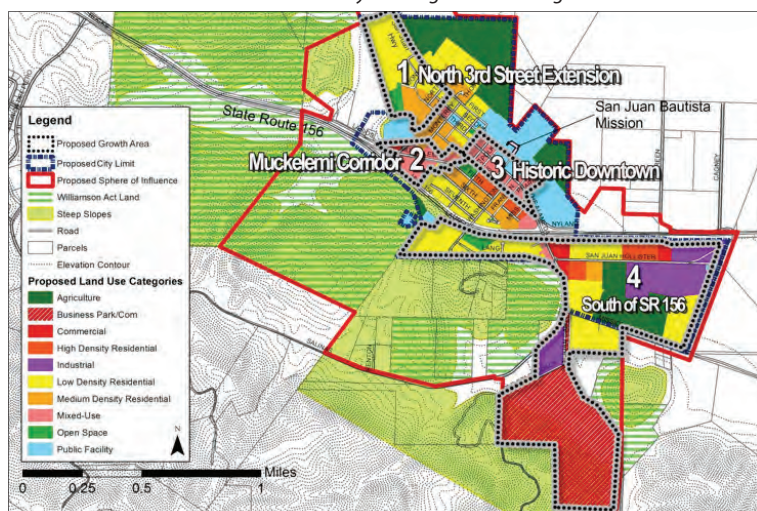
A varied outreach program sent the class to many activities throughout the community. Students surveyed businesses, school students, and residents about their town and asked where they thought it could go. Students completed technical studies including a full land use survey and a Complete Streets



Figures 9 & 10: Guadalupe's old movie theatre announcing the students led workshop for the updating of the General Plan (top), and an image of a working table during the event. From CRP 552/554 Community and Regional Planning Studios I & II.



Figure 11: Proposed Land Use Plan for San Juan Bautista General Plan update. From CRP 552/554 Community and Regional Planning Studios I & II.



inventory. In developing policies the focus was on economic development, alternative transportation, and future land uses. The latter investigation stimulated considerable discussion around approaches to bring new businesses and shopping to Guadalupe. The housing element was updated, and in the process discussions were held with people interested in affordable housing and accommodation for farmworkers. The Complete Streets plan identified several opportunities to improve transit and the pedestrian experience particularly for routes to school. The students presented to the City Council twice, first to discuss the program and, at the conclusion of work, to present their findings to the community.

*General Plan Update, City of San Juan Bautista, CA
Community and Regional Planning Studios I & II CRP 552/554
(Fall 2013 & Winter 2014)*

Instructor Cornelius Nuworsoo

Professor Nuworsoo's session of the graduate planning studio prepared an administrative draft General Plan for the City of San Juan Bautista. Located in rural San Benito County thirty miles from the City of Monterey and just south of the fertile San Juan Valley, the city sits on 0.7 square miles and had 1,862 residents in 2010. In 2010, the median household income was \$53,077 compared to the County and California state median incomes of \$65,771 and \$60,883 per household, respectively.

The students collaborated with residents, advisory committees, and city leaders to formulate a development scenario to accommodate projected population, jobs and housing needs by 2035. Comprehensive research on the community and on development opportunities and constraints as well as public feedback guided the work. The class presented three distinct alternative growth scenarios to the City. The Preferred Growth Scenario for 2035 reflects a combination of features from all three scenarios and captures community desires for: a vibrant, walkable, and attractive downtown; to maintain the City's Historic nature; to provide an adequate supply of housing; and to increase the number of jobs within the City. The Proposed Land Use Map (Figure 11) focuses development in four key areas: (1) medium-density and single-family housing in the 3rd Street extension area, (2) mixed-use commercial and retail development in the Muckelemi Street Corridor, (3) infill commercial and residential development in the Historic Downtown, and (4) residential, light-industrial and commercial development south of SR 156.

The General Plan update included long-term goals, objectives, policies, and programs to inform future development on twelve Elements: Economic Development, Land Use, Circulation, Conservation, Housing, Public Facilities, Safety, Health, Open Space, Noise, Historic Preservation and Community Design, and Strategic Planning. The plan positions the City to improve the residents' quality of life, provide diverse housing options, generate economic vitality for the city, and enhance its attraction as a tourist destination with additions in and around its popular Mission San Juan Bautista.

Introduction to the M-Group

Geoff I. Bradley

BSCR (1992), MS Arch (2005); AICP.

Principal, Metropolitan Planning Group.

In a few years, the Metropolitan Planning Group has become one of the busiest and most respected planning firms in the Bay Area. Operating from offices in five cities, the M-Group offers staffing and services in policy planning, urban design, environmental planning, and historic preservation. In this article, CRP alumnus and founding principal Geoff Bradley shares the firm's trajectory and describes some of their major projects.

The Metropolitan Planning Group (M-Group) was founded in July 2006 to provide planning services to both public and private sector clients in the San Francisco Bay Area. The founders of the firm had deep roots in the city planning community of the South Bay, having worked for cities in Santa Clara County since the mid-1990s. The three founding principals were Geoff I. Bradley (BSCR 1992 and MS ARCH 2005), Heather Bradley (BSCR 1992) and Whitney McNair. Before joining M-Group, Geoff worked for the cities of Sunnyvale and Campbell; Heather worked for the cities of Sunnyvale, Milpitas, and Saratoga; and Whitney worked for the City of Mountain View.



Geoff I. Bradley.

From the three founding planners we grew to twelve planners by 2009 and twenty planners by 2012. There was a significant transition in 2012 when Whitney McNair left the firm to join the Stanford University Planning Office. In early 2013, Heather Hines became a principal owner due to her significant progress in managing and growing the North Bay operations.

M-Group currently operates out of five offices located in Mountain View, Half Moon Bay, San Rafael, Petaluma, and Napa. The long term goal is to have at least one office in every Bay Area county in order to most effectively serve the needs of all the Bay Area cities. The firm currently employs 35 staff members including 30 full- and part-time city planners. The firm is currently engaged on a variety of projects and assignments for 25 Bay Area cities. We have worked for over 40 Bay Area cities since 2006—in all nine Bay Area counties.

M-Group Development

Originally, our goal was to provide planning services to Bay Area cities as well as assist private sector applicants with planning related due diligence and land use approvals. The private sector work involved several entitlement projects, including a rezone and use permit for a Sunnyvale church, a senior housing mixed-

use project in Campbell, and a Lowe's anchored shopping center in San Jose.

The private sector work was interesting and challenging; however, it presented a potential conflict of interest with M-Group's public sector work. City planners are so closely involved with sensitive land use issues, it is almost always necessary to "pick a side" in terms of working for either the private or public sector. Over the next two years, the firm evolved to working solely for Bay Area municipalities in order to avoid potential conflicts of interest. The firm is operated under the AICP code of ethics which leads off with this inspiring language:

"Our primary obligation is to serve the public interest and we, therefore, owe our allegiance to a conscientiously attained concept of the public interest that is formulated through continuous and open debate. We shall achieve high standards of professional integrity, proficiency, and knowledge."

M-Group has a new design on urban planning that involves several factors, including a focus on customer service, planning with the uniqueness of each client city in mind, innovation, and best practices—expressed in the M-Group Manifesto. This focus has allowed us to grow as a firm and as individuals. From the beginning, M-Group has strived to hire planners whose experience provides the best fit for its client cities. We encourage a healthy work-life balance for all staff.

We are focused on providing a full-service city planning firm that includes the full range of urban planning services required by Bay Area cities in a way that is efficient, innovative, and effective, as described in our Manifesto:

The M-Group Manifesto

M-Group is committed to creating a new design on urban planning. This takes many forms and is an important part of what makes us unique and allows us to grow both as individuals

and as a firm. We create this new approach to city planning by:

- Working in a very open, mutually supportive and collaborative manner;
- Treating everyone with respect and with a high degree of professionalism;
- Being both creative and detail-oriented;
- An emphasis on problem-solving and teamwork;
- Being flexible and open to new ideas;
- Working for both private and public clients;
- Treating part-time and full-time employees fairly;
- Creating an employee-friendly firm that strives to promote employee retention, job satisfaction and career growth;
- Having a goal of working in the full range of city planning and related fields;
- Hiring the best planners and working with the most qualified sub-consultants to offer the highest quality planning services;
- Very clear and direct communication within M-Group, with clients and the public;
- An enthusiastic and fun approach to planning;
- Maintaining a commitment to continuous improvement and accountability;
- Creating a long-lasting, employee-centered, client-focused company;
- Respecting natural and man-made environments.

M-Group Projects

Sustainability Services

Since mid-2008 M-Group has focused on offering Bay Area cities four core services: Policy Planning, Urban Design, Sustainability, and Staffing Solutions. Sustainability includes Environmental Review, Historic Preservation, and Climate Action Planning. During this time we provided development review services for a number of significant projects including the following:

Stanford University Medical Center Expansion, Palo Alto

The City of Palo Alto engaged M-Group to provide project management of the largest development in the City's history, the Stanford University Medical Center Facilities Renewal and Replacement project (Figure 1). M-Group coordinated a multitude of consultants including an environmental team, legal counsel, fiscal consultants, a housing specialist, a medical facility reviewer, an urban design consultant, and multiple architects. M-Group facilitated discussions between Stanford and the City, wrote staff reports and helped with the presentations for approximately one hundred public meetings, coordinated community outreach, reviewed

technical documents for the environmental impact report, and reviewed the architectural plans for all of the project components. M-Group also reviewed design applications for compliance with City codes.

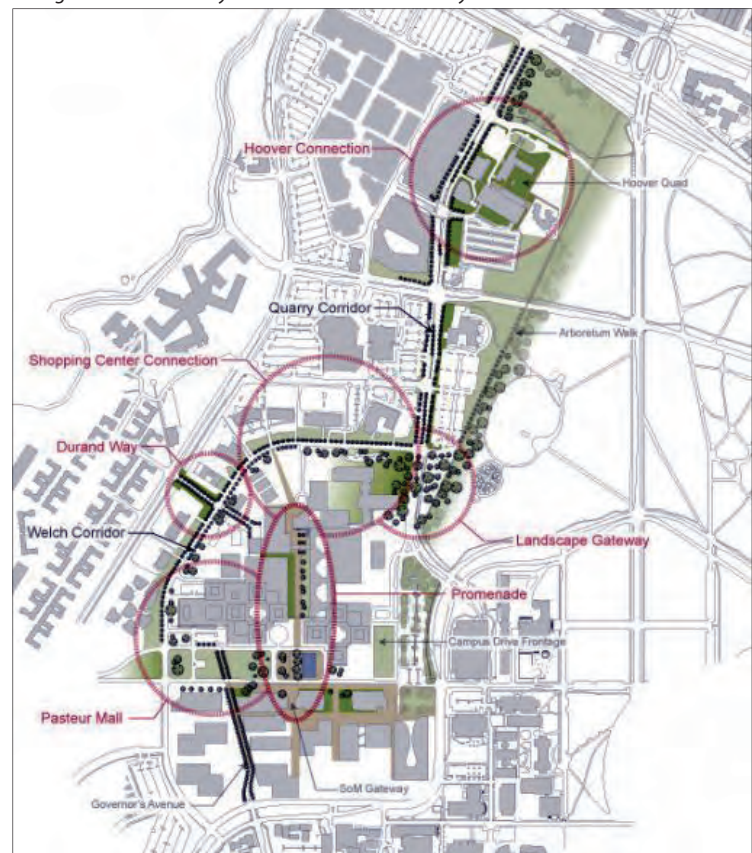
Moffett Towers EIR Management, Sunnyvale

The City of Sunnyvale engaged M-Group to process the EIR and land use approvals for a 79-acre parcel in the Moffett Park Specific Plan area. The project included development of 1.7 million square feet of new research and development/office space in seven 8-story structures, a pedestrian network to connect the office buildings to the Moffett Park Light Rail Station, and construction of approximately 4,600 parking spaces (Figure 2). The project had an accelerated timeline and construction schedule. M-Group was able to keep the project on track and it is seen as one of the most significant new office developments in the Bay Area.

Staffing and Full Service Planning

In 2009, M-Group began providing full planning services to the City of Petaluma, a city of over 60,000 people in Sonoma County with a rich city planning history. Our team of seven planners in Petaluma delivers outstanding customer service and highly responsive planning services for the community. In order to become familiar with the community, we hosted a well-attended Open House after our first few months in Petaluma (Figure 3). We also conducted a training session

Figure 1: Sustainability services - Stanford University Medical Center.



with 50 local realtors to enable them to research basic zoning and land use information using the City's online GIS system. M-Group worked hard to become acquainted with all sectors of the community by attending meetings and helping local non-profits. Planning staff attended Chamber of Commerce meetings to provide development updates. Planning work was donated to local non-profits including assisting Petaluma Bounty, a group committed to providing fresh local produce to low-income families, in attaining a Use Permit.

In 2013, M-Group was selected to provide full planning services to the City of Half Moon Bay in San Mateo County. Our team of three planners and one support staff in Half Moon Bay provides all day-to-day planning services and is responsible for implementing a comprehensive set of best practices recommendations prepared by a management consulting firm prior to M-Group starting. The city has a high level of community involvement and is located almost entirely in the Coastal Zone, which adds another layer of complexity to local planning efforts. M-Group staff is currently reviewing a variety of development projects as well as city projects and providing staff support for the recently started General Plan Update.

Policy Planning

In addition to our extensive staffing services M-Group has prepared numerous policy planning projects including General Plan Updates, Downtown Plans, and Zoning Ordinance Updates. Notable policy planning projects included the Belvedere General Plan Update, the Burlingame Downtown Plan, and the Coalinga Zoning Code Update. M-Group donated planning staff time to the City of Coalinga to pursue a Round 2 Sustainability Community Grant in 2012 made possible by the passage of Proposition 84 in 2006. M-Group collaborated closely with city staff to complete the \$100,000 grant application, which allowed for the completion of the project which had initially been delayed due to budget limitations. The Zoning Code Update is meant to bring sustainable planning principles to a small rural town and could be used as a template for other rural towns.

Burlingame Downtown Specific Plan

M-Group led a multi-disciplinary consultant team in preparing a new specific plan for historic Downtown Burlingame (Figure

Figure 3: The Petaluma staff.



Figure 2: Sustainability services - Moffett Towers, Sunnyvale CA.

4). Downtown Burlingame is an undeniable success, but like all downtowns it is subject to ever-changing lifestyles and consumer preferences. The plan called for a highly involved program for civic engagement informed by thoughtful analysis and evaluation, allowing the community to develop a vision and ultimately a plan that is realistic and compelling for the future while being "uniquely Burlingame."

Belvedere General Plan + Housing Element Update

M-Group partnered with Plan B Municipal Consulting to plan for the future of the City of Belvedere, completing a comprehensive update of Belvedere's General Plan. The project included a robust public outreach program to achieve community consensus on how to embrace the future. Our role was to provide Belvedere with a multifaceted, living-working document, which articulates the community vision and provides guidance for the future. We were engaged to conduct background research of land use elements, study existing conditions, assist with research for the Housing Element Update, evaluate various policies and programs, assist with community outreach meetings, facilitate the General Plan visioning process, and prepare the General Plan Elements. The General Plan Update was completed in 2010.

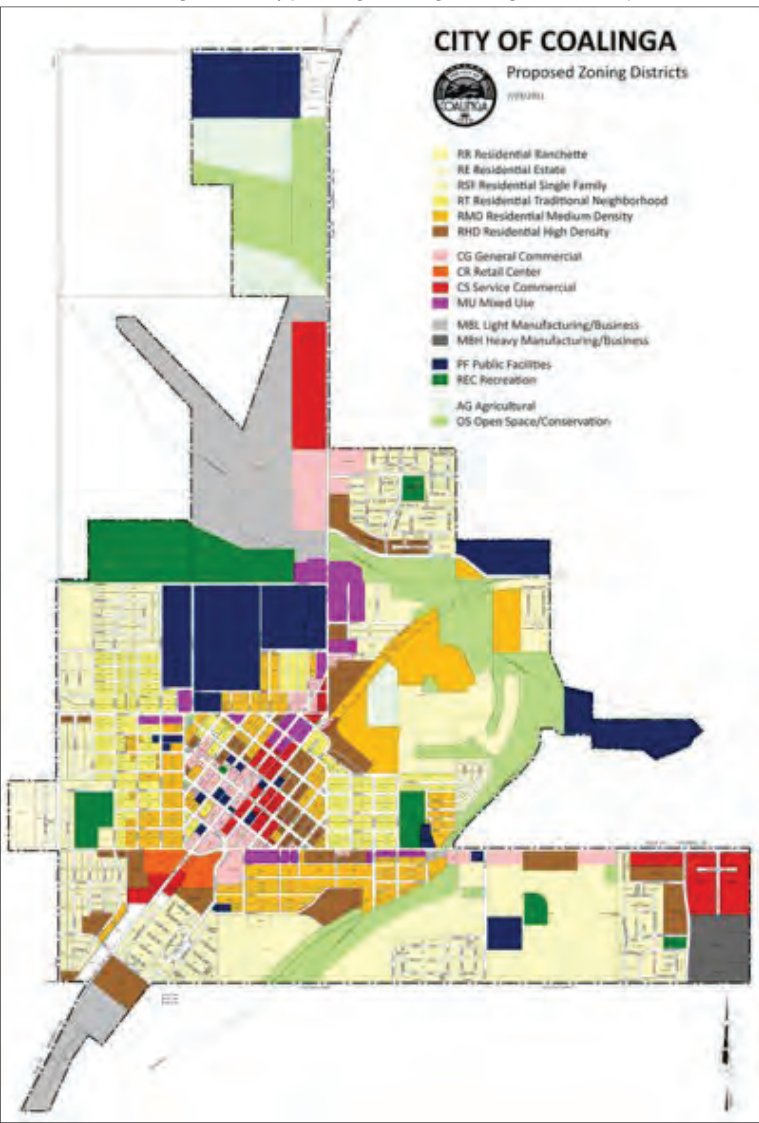
Coalinga Zoning Ordinance Update

M-Group is working with the City of Coalinga to develop an entirely new citywide zoning code (Figure 5). The goal is to include all development regulations in a clear, concise document that is easy to use and enforce, and that incorporates state-of-the-art planning practices. In Coalinga, the co-existence of both agricultural and urban land uses have helped to define the City's



Figure 4: Policy planning - Burlingame Downtown Specific Plan.

Figure 5: Policy planning - Coalinga Zoning Ordinance Update.



unique character. A key challenge and opportunity of the Zoning Ordinance Update project has been to develop a thorough and detailed understanding of the various opportunities that this mixture of land use creates, extending the tradition of making the City a unique place in the Central Valley.

Design

A special niche that brings us back to our roots of sketching and drawing has been the completion of several Design Guideline projects. We have completed these types of projects for Redwood City, Santa Clara, Monte Sereno, and Saratoga. Design Guidelines are fun to prepare and have relatively short timelines compared to the other types of planning projects. Our work at the cities gives us an ideal perspective to produce easy to understand and easy to implement design guidelines.

During the 2009-2014 Housing Element cycle, M-Group completed or managed twelve Housing Elements. In the current 2013-2015 cycle we are working on eight Housing Elements. Urban design efforts have focused on design guidelines and Downtown Plans. Sustainability related projects included environmental review, climate action planning, and green building review utilizing the LEED certification system.

M-LAB

For M-Group's five year anniversary in 2011 we established M-LAB as the research and development arm of M-Group. M-LAB brings together the numerous educational, research and best practices efforts that M-Group supports. Staff members have shown a strong interest in planning related education, providing educational outreach to all ages of future planners:

- Argonaut Elementary School, Saratoga, California – City Planning program by Junior Achievement delivered by Geoff and Heather Bradley.
- La Paz Middle School, Salinas, California – City planning presentation by Geoff Bradley to over 300 middle school students participating in the AVID program (Advancement via Individual Determination) with comments like: "One thing that I learned is that being a city planner is not boring. I will use this experience and use it by not making fun of city planners and have respect for them".
- Emiliano Zapato Street Academy (High School), Oakland, California – Former M-Group staff member Lauren Mattern wrote a planning curriculum and taught a 9th grade class on urban planning and the difference a person can make.

Several M-Group staff members have taught or provided guest lectures at the San Jose State University Urban Studies program.

M-Group Principal Geoff Bradley has been involved with the ULI UrbanPlan program. Geoff participated in a recent session at San Mateo Middle College High School.

M-Group staff has researched and written 20 articles on a wide

variety of topics including: housing elements, complete streets, French EcoDistricts, Reinventing Regional Malls, Reworking Business Parks, Rebuilding Ground Zero, A Primer on Cultural Landscapes, and Planning as Play: A fun approach to planning. This ability to look up from our work on occasion and focus on an area of personal and professional interest allows us to recharge and stay passionate about our work.

Ideals

Sustainability

Our belief in the future means we work hard to make our communities sustainable. M-Group staff has experience managing complex environmental analyses for large-scale projects. We are able to identify and anticipate relevant issues early on in projects, work with environmental consultants, and manage the Environmental Impact Report process from beginning to the end. We also conduct environmental review for projects, including categorically exempt projects, Initial Studies, and Mitigated Negative Declarations. We have completed numerous CEQA documents for both private and public projects from in-fill housing projects to pedestrian bridges and Housing Elements.

M-Group has been a certified green business since August 2008. This involves a commitment to green principles for the operation of the firm. Some measures the firm takes to accomplish this are: the use of 100% recycled paper and green cleaning products, an effort to reduce vehicle miles travelled, and encouraging walking, biking, and transit use. The handbook provides further guidelines for sustainable practices. As a planning firm, this commitment to green principles extends to the core sustainability values that infuse all its work.

In 2013 M-Group added Environmental and Historic Preservation to our services offered to Bay Area cities and grew to over 30 planners serving 25 cities. With the realization that sustainability informs all the work we do, we updated our list of services in early 2014 to include: Policy Planning – Urban Design – Environmental – Historic Preservation – Staffing.

Quality

M-Group has always strived to produce very high quality work, which has earned us many repeat customers and a solid reputation. We have received positive feedback for the quality of our staffing work from numerous cities including Petaluma, Milpitas, Sunnyvale, Palo Alto, Foster City, San Mateo, and Half Moon Bay. As noted by former Petaluma City Council member and current Sonoma County Supervisor David A. Rabbit, “M-Group staff were without exception a pleasure to work with and clearly committed to finding creative solutions to difficult issues.”

Policy planning efforts have resulted in high quality efforts for cities such as Belvedere, Daly City, Mill Valley, Sausalito, Sonoma,



Figure 6: Education - M-Group members get involved in several school projects.

Campbell, and Mountain View. As a firm, we have sought to create user friendly documents that provide a visual sense of the community. We also seek to communicate complex information using infographics as well as conventional charts and tables.

The Mill Valley General Plan, for which M-Group completed the Housing Element, received a 2014 Northern California APA Award of Merit for Small Jurisdiction Comprehensive Plans. M-Group utilized innovative GIS mapping strategies to identify the most sustainable sites for the housing sites inventory. M-Group collaborated with the city and a local GIS provider to utilize access to services, transit, and solar orientation to map the sites.

Influence

The firm has been active in supporting local planning institutions including Northern Section APA, Bay Area Planning Director's Association, San Jose State University, and Cal Poly San Luis Obispo. M-Group planners have provided planning related education at all levels including elementary school, middle school, high school, and university. As a student from La Paz Middle School in Salinas wrote after a city planning presentation: “One thing I liked about your presentation was all the illustrations, because it made the presentation more interesting and enjoyable to see. I also liked how everything you explained was easy to understand and interpret. I learned what a city planner does and I also learned what I should do to become one, which will be very useful.”

M-Group has also been active in the ULI UrbanPlan program, which provides hands on planning and real estate development experience for thousands of high school and college students. The firm fully supports educational outreach, up to and including providing paid leave time for planners interested in planning education. The firm also regularly provides paid

internships for university students.

M-Group uses new technologies to support our city planning efforts. This takes many forms including utilizing online platforms to support community wide planning efforts such as General Plan Updates.

Ethical Practice

The firm has a strong commitment to ethical practice at all times. We are only as good as our reputation and one wrong decision can greatly damage a reputation. As a result, we take ethical issues very seriously and always err on the side of caution when evaluating possible ethical issues such as potential conflicts of interest. If we identify a possible conflict of interest, our practice is to immediately notify our client. This allows for full disclosure and discussion early in the process where possible conflicts of interests can more easily be disclosed or resolved.

The firm is operated based on the AICP Code of Ethics. This document provides a roadmap for dealing with ethical issues and removes much of the uncertainty and confusion that normally surrounds this subject. We believe that having a large number of AICP certified planners and APA members instills the professional planning values, including ethical values, deeply into our firm.

Outreach and Engagement

M-Group has a wide variety of experience providing effective community outreach and engagement. As a new firm, we have been able to experiment to discover what works best for different communities and different situations.

For larger, community wide planning efforts we have combined traditional large format community meetings with smaller focus groups and online platforms such as MindMixer and city hosted web pages. For community meetings, we always strive to create an interactive experience so that attendees can take an active role in the meeting and not just be passive observers. We have done voting and ranking exercises that are effective in gathering a true cross section of input.

Small-group focus-groups have been an important part of our work. We have been able to organize and conduct focus groups from a variety of groups including homeowners, property owners, developers, seniors, teenagers, environmental advocates, and high-tech business owners.

We have found that focus groups allow for a more relaxed, in depth exploration of community issues. Information gained from focus groups has led to specific policy recommendations that have been implemented.

Final Remarks

One of the known strengths of the firm is its ability to bring

practical solutions to solve complex problems. This requires a commitment to basing solutions and recommendations on clearly identified facts and assumptions. The practical, educational philosophy of Cal Poly has clearly played a role in this approach. The firm has benefited from the Cal Poly background of two of the firm founders as well as the ongoing hiring of Cal Poly City & Regional Planning graduates, who compose one third of the staff.

Advice from Geoff

The Cal Poly educational experience is founded on the idea of “Learn by Doing”. This mantra has true meaning in the world of planning practice as the only way to truly learn something new is by doing it. With our work in over 40 Bay Area cities, we have repeatedly utilized this approach to quickly familiarize ourselves with our client cities by launching into the planning work in a true “Learn by Doing” manner.

The most important lesson I have learned from working in the planning field for the past 22 years is to treat people with respect, kindness and empathy. Regardless of the situation or circumstances—whether working with residents, co-workers, employees, or clients—giving everyone thoughtful consideration will encourage others to do the same for you in the future. City planning can be controversial, contentious, and sometimes adversarial. In spite of this, if you can treat people well, issues will usually be successfully resolved.

Conversations with Alumni

Spotlight on Sierra Russell

Bachelor of Science in City and Regional Planning, Cal Poly, 2004;
J.D. Law, Sturm College of Law, University of Denver, 2011.

FOCUS: *When did you graduate from CRP? Can you talk a little about your time with us?*

I graduated in June 2004. My graduating class was very close with each other as well as the faculty in the CRP program. I was the first CRP student to study abroad in Rio de Janeiro thanks to Professor Vicente del Rio's encouragement. I had an incredible time and it was the highlight of my undergraduate experience. I also was a planning intern for the City of Paso Robles Community Development Department during my CRP studies, which was memorable due to the relationships I made with City staff, and the interesting downtown development and planning projects occurring throughout the City.

FOCUS: *Were there any special moments or any "career changing" revelations during that time?*

I remember a land use attorney visiting my land use law class and talking about the legal issues she dealt with on a daily basis. She was incredibly sharp and I remember thinking I would like to do what she did. However, I didn't want to go to law school at the time because I was excited to work in planning and start a career. I wanted to explore my options in planning before turning to a graduate program. I'm glad I didn't go straight to law school and worked professionally for a number of years first. I use my planning education and planning work experiences on a daily basis and they have helped me be successful in my current career.

FOCUS: *You have had an exemplar career both at Cal Poly and after you graduate. What was your trajectory after you received your planning degree? When did you realize that you wanted to pursue a law degree?*

After graduating from Cal Poly, I worked as a planner for a company in San Francisco known as EDAW, which later merged and now is AECOM. I helped develop and write Specific Plans, TOD plans, and other types of policy plans and completed urban design work such as designing master planned communities and streetscapes. I decided the design world was not the best fit for me and wanted experience



Sierra Russell.

working in the public sector, so I applied for and got a position as Associate Planner for the City of Sausalito. It was extremely rewarding and eventually led me to decide to go to law school. As the Associate Planner, I frequently interacted with lawyers and worked closely with the City Attorney. Working with her and helping manage controversial disputes between neighbors, I realized that I wanted to be advocating for one side or the other rather than being the neutral planner helping manage the dispute.

I applied for law school and selected the University of Denver. At the time, it was a tough decision to leave the Bay Area and a career that I really enjoyed, but it turned out to be the right move. I went to law school with a very directed goal to work in land use and real estate law. I knew I wanted to use my planning degree and experiences, and in hindsight, this direction helped me be more successful in finding a job in a difficult economic time. Employers liked that I had solid work experience, and even more that my prior work experience was directly applicable and would help me be a better real estate practitioner. I was a summer associate for the Denver firm Faegre & Benson (that later merged and now is Faegre Baker Daniels LLP). After graduation, I worked at Faegre Baker Daniels for almost two years in the Denver and Boulder offices. I changed firms at the end of last year and now I am working at Hogan Lovells US LLP.

FOCUS: *Can you describe briefly the most interesting planning works you were involved with?*

In San Francisco, I worked on a number of interesting planning projects including a redevelopment proposal for Japantown, a transit-oriented development in Pleasanton, and developing a master development plan for a 100,000 acre project in Florida. In Sausalito, my most rewarding project was leading a project to install solar panels on city hall and another city building. It was rewarding to work with a diverse group of community residents and leaders through difficult negotiations to achieve a positive result.

FOCUS: *What is your current job. What is your title and position*

in the organization? What are your primary responsibilities, and what type of work do you get involved with?

Currently I am an Associate for Hogan Lovells US LLP, which is the seventh largest law firm in the world and has 47 offices worldwide. I practice commercial real estate and land use law as part of the firm's Corporate Group. I work on commercial leasing, acquisitions and divestments, real estate finance, brokerage issues, construction and development contracts, and local government entitlement and permitting issues. Essentially I work on anything related to land so the types of projects I work on are diverse. My practice is very Colorado focused, which is great given the interesting and rapid development occurring throughout Colorado, and in particular, in Denver. We represent a number of governmental entities and developers in Denver, so I work on interesting local redevelopment and new development issues. I am also working on a pro bono matter for the Children's Museum in Denver by assisting with real estate issues related to its expansion.

FOCUS: *Can you talk about some of the most exciting works you have been involved with lately?*

A large portion of my work is for our energy clients. Right now I am helping manage the development of four large wind farm projects in Colorado that in total cover over 130,000 acres. We assist with everything from the initial corporate acquisition of the project to obtaining all necessary entitlements through the local County government. Once completed, the projects will collectively produce more than 1,000 MW of energy, so it is exciting to be a part of something that is advancing renewable energy in Colorado. While at Faegre Baker Daniels last year, I participated in a pro bono human rights project and traveled to Morocco to complete interviews with NGOs in Rabat and Casablanca. It was fascinating working with translators to conduct the interviews and to learn about the various social issues facing Morocco.

FOCUS: *How did your BCRP education reflect in your career? Do you feel that the classes you took and the skills you learned at Cal Poly were useful?*

Yes, every day I use my planning degree and apply things I learned in the CRP program. The CRP program provided a number of practical skills that I still use to this day, such as negotiating, understanding how to read maps and surveys, navigating the structure of local government zoning, codes, and plans, efficiently completing research on real property, and understanding the various players in land use development. These are all things I was first exposed to as a CRP major and are integral to my job.

FOCUS: *What do you think are the strengths and weaknesses of our program?*

I think the strength of the CRP program is it provides practical skills that are immediately useful after graduation. There are

very few universities where you can graduate already able to efficiently complete day-to-day tasks in a professional planning position. The CRP program prepared me to be useful immediately, which is why I was able to get a job right out of college at a competitive firm in San Francisco. Perhaps a weakness is not having a strong alumni program that engages alumni with current students. I think it would be interesting to pair up alumni with students that have matching goals. These relationships could even be long distance as communications could occur through email, Skype, or otherwise. Another way the CRP program could improve is to focus on writing skills such as through advanced writing classes (although perhaps the CRP program does this now). I think writing skills are important and often overlooked at the college level when advanced writing can make students more competitive in graduate programs and in their careers.

FOCUS: *From your experience, which are the critical knowledge areas for young planners? And for those particularly interested in following your steps into law?*

For young planners, I think the critical areas of knowledge are strong writing and oral communication skills, being able to read maps and drawings, working on actual projects or doing internships to gain tangible experience that will translate to a future job, and of course, how to read a zoning code. For any young planner interested in law, writing and oral communication skills are extremely important, so I would suggest doing whatever you can to improve these during your undergraduate coursework to help prepare you for law school. Also, analytical skills are important, so take courses that require you to review complicated fact patterns and write organized analyses.

FOCUS: *What was the most challenging aspect of moving from the academic to the professional environment?*

I don't remember this being too challenging, perhaps because I had already worked quite a bit during college, so being in an office environment was not new to me. I would say learning how to navigate office dynamics and/or internal bureaucracies is probably the most challenging thing as a young professional new to his or her career. This obviously can't be taught in school, but doing internships will really prepare you to transition into a full time professional environment.

FOCUS: *What do you see as planning's big challenges over the next 5-10 years, and what does Cal Poly need to teach students so that they may be successful and contribute to the community?*

I think one challenge is promoting women. While this may be more of an issue in the legal field than in the planning field, in general (from what I have seen in my experiences) there are few women in development and real estate. I see this changing now with younger generations moving into real estate professions and older generations leaving, but there is still a lot that universities and companies can do to promote women to achieve higher level positions. There is still clearly a gap when

the majority of college students are women, but these numbers are not translating through in the professional world.

Another challenge for planning is continuing to advance denser mixed-use development and creating affordable housing options. In Denver, one of our biggest problems is the lack of willingness of developers to build multi-family condominium housing. This leads to a lack of affordable housing and drives up the price of housing to unaffordable levels. There is a coalition working on this issue in Denver that has identified that Colorado laws related to owners' associations and the prevalence of construction defect litigation are two factors contributing to this problem, which is an interesting example of when legal reform can help solve planning problems. The need to promote dense multi-family and mixed use development is an issue throughout the U.S., not just in Colorado, and this problem has to be addressed on multiple levels. Anything we can do to reduce our footprint by creating denser urban environments with greater public transit options is extremely important.

FOCUS: *Is there anything else you would like to add that could inspire students and young professionals?*

Being a CRP major at Cal Poly looks great on your resume and will open doors for you because of the solid skills that you will develop if you work hard in the program. As is everything in life, what you do with your career after school is up to you and how well you take advantage of opportunities that come your way. One way that you can create opportunities for yourself is to reach out to alumni to gain advice and mentoring on your career path. I would also suggest creating as many professional connections as you can while in school, as you never know when a certain connection will lead to an opportunity. I know finding a job that you enjoy and is a good fit can seem daunting, but if you continue following your true interests, work on building a network and gain as many work experiences as you can, you will find success. College, whether undergraduate or graduate, is one of the only times in your life when it is acceptable to jump from position to position, so take advantage of this and seek out as many work, travel, and education experiences as you can. It took me a long time to find the right place for me professionally, and even now, while I feel very fulfilled professionally and love my current job and the work I do, I never stop thinking about what are my next steps for my career.

Theses and Professional Projects Abstracts

Master of City and Regional Planning

City and Regional Planning Department, Cal Poly San Luis Obispo

For fulfilment of the MCRP degree, the CRP department offers the student a choice between a final comprehensive planning studio, a thesis, or a professional project. The following abstracts represent master's theses and projects approved during the 2013/2014 academic year. The complete works are available from Cal Poly's Kennedy Library at <http://digitalcommons.calpoly.edu/theses>.

City of San Luis Obispo Open Space Vegetation Management Plan

Danielle Rose Althaus

This Master's Professional Project is focused on the development of a draft Vegetation Management Plan for the City of San Luis Obispo Open Space properties. The purpose of the plan is to provide a comprehensive document which identifies how the city is addressing wildfire preparedness in city-owned open space properties. Methods used in plan development include a literature review, content analysis, geographic information systems (GIS), a course audit, and consultation with city staff and other stakeholders. Each open space property is identified in the plan, describing its location, vegetation, topography, assets, access points, water supply, evacuation routes, historical fire data, predominant risk exposure, current wildfire preparedness plan, priority ranking, and a proposed implementation plan.

URL: <http://digitalcommons.calpoly.edu/theses/1235>

City of Los Angeles Arts District Form-Based Code

Ryan Jupiter Banuelos

Los Angeles is experiencing a loss of inventory with Industrial land due to adaptive reuse and property conversion. The primary factors behind the conversions are inconsistent land use regulations and a strong market demand for residential property. In an effort to streamline land use regulation, the city will create a new zoning code. In conjunction with the zoning update, the purpose of this project will be to develop a form-based code for the Los Angeles Arts District.

This project proposes new land use regulation to preserve job producing industrial space and accommodate the growing residential market. The assessment of the Arts District includes an investigation of circulation patterns, economic factors, development profile, community input, and an investigation of its history, land use policies, and regulations. The study indicates that the Arts District, though primarily industrial, contains multiple residential nodes. It also reveals that industrial jobs and building stock are at risk from new development. The

purpose of The Arts District Form-Based Code is to create a predictable development pattern that improves the quality of the built environment.

URL: <http://digitalcommons.calpoly.edu/theses/1226>

Draft Environmental Impact Report: City of Clearlake General Plan Update

Hannah Cha

The City of Clearlake in northern California initiated its first General Plan update in 2012 and decided to do an Environmental Impact Report (EIR) in order to fulfill California Environmental Quality Act (CEQA) requirements. The author wrote the Agriculture and Biological Resources sections of the EIR. She explains the CEQA process for a programmatic-level EIR, and summarizes the lessons learned and recommendations for CEQA.

General CEQA issues include fear of litigation and vague requirements for thresholds of significance. Additional CEQA issues include difficulty applying the same level of analysis to programmatic projects when the Environmental Checklist is more applicable for small-scale projects, difficulty identifying the extent of analysis needed, and the cost and time burdens of preparing programmatic-level EIRs. Recommendations for future programmatic-level EIRs and CEQA reform conclude the work.

URL: <http://digitalcommons.calpoly.edu/theses/1198>

Cayucos Community Health Plan

Jennifer Joyce Franich

This project examines the relationship between the built environment and public health, and explores ways planning professionals are beginning to address health issues through infrastructure, land use, creative zoning, and planning strategies that promote health and active living in policy. In collaboration with the SLO County Health Agency and the Health Commission, we have written a Healthy Community Plan for the unincorporated communities of Cayucos, California. This research and the accompanying plan were greatly informed by the community through input from outreach, interviews, surveys, and personal interactions.

The planning documents, modeled after health elements currently included in general plans throughout California, have integrated the fields of planning and public health to provide Cayucos an assessment of its residents' health, a description of the current built environment conditions that may be helping or hindering physical activity and access to nutritious food sources, as well as establish goals, policies, and implementation strategies that will set a course of action toward healthier communities.

URL: <http://digitalcommons.calpoly.edu/theses/1249>

Climate Planning in Politically Conservative Cities: A Case Study of Seven Climate Action Plans

Coleman Moore Frick

The potential risks associated with human-induced climate change are likely to increase in frequency and intensity. In the past decade in the US, local climate action plans (CAPs) have emerged as a planning solution designed to reduce greenhouse emissions (GHGs). Previous studies have examined CAP attributes, but no research has focused solely on climate planning in politically conservative jurisdictions. This research finds that of 245 CAPs completed to date nationally, approximately 90 percent are in communities identified as politically Democratic. In order to expand climate planning in politically conservative communities, it is important evaluate the characteristics of CAPs in these communities.

This thesis analyzes CAPs and conducts stakeholder interviews in seven conservative communities. The findings indicate that CAPs created in these communities do not differ substantially from CAPs in general. However, political opposition is heightened in these communities. In addition, in conservative communities economic co-benefits are stressed, cost-saving measures are overemphasized, CAP terminology is altered, business community involvement is crucial, and state mandates motivate CAP creation. The results of this research are distilled into 12 lessons and best practices for planning practitioners, and establish a basis for future research focusing on the political nature of climate action planning.

URL: <http://digitalcommons.calpoly.edu/theses/1221>

Quantifying the Greenhouse Gas Emissions of Hazards: Incorporating Disaster Mitigation Strategies in Climate Action Plans

Michael Germeraad

Reconstruction after natural disasters can create large peaks in a community's greenhouse gas emission inventory. Though the hazard itself does not release greenhouse gasses, the demolition and rebuilding process does, and these are the emissions we can quantify to better understand the climate impacts of disasters.

This thesis proposes a methodology that draws data from existing emission and hazard resource literature and combines the information in a community scale life cycle assessment.

Case studies of past disasters are used to refine the methodology and quantify the emissions of single events. The annualization of greenhouse gases caused by hazard events provides a baseline which reduction strategies can be measured against. Hazard mitigation strategies can then be quantified as greenhouse gas reduction strategies for use in Climate Action Plans.

The methodology combines the fields of climate action, hazard mitigation, and climate adaptation. Each field attempts to create sustainable and resilient communities, but most plans silo each discipline, missing opportunities that are mutually beneficial. Quantifying the greenhouse gases associated with recovery following a disaster blends these fields to allow development of comprehensive resilience and sustainability strategies that lower greenhouse gases and decrease risk from existing or projected hazards.

URL: <http://digitalcommons.calpoly.edu/theses/1173>

An online supplement to this thesis is available online at <www.disasterghg.wordpress.com>

City of Merced Bellevue Community Plan

Patrick Gary Gilster

The Bellevue Community Plan (BCP) was developed to be consistent with the Merced Vision 2030 General Plan, and is highly reflective of its policies, illustrative plans, and guiding features, such as providing significant employment generating uses that would benefit from being in close proximity to the UC Merced campus. The BCP establishes a high-level planning framework that strikes a balance between certainty and flexibility by anchoring key land uses while allowing their size to adapt to changing market conditions in response to economic growth and the expansion of UC Merced. While the BCP provides a broad range of uses and densities that could occur throughout the plan area, it emphasizes the foundational building blocks of street connectivity, functional mobility choices, active and passive recreation open space corridors and bikeways, gateway street designs, and attractive business park settings to create a great sense of place with investment certainty.

URL: <http://digitalcommons.calpoly.edu/theses/1274>

Latino Rhythms in Downtown Los Angeles: A Case Study of the Social, Physical, and Economic Environment of "La Broadway"

Ulises Antonio Gonzalez

Broadway Avenue between Second Street and Olympic Boulevard in downtown Los Angeles is known as Broadway's Latino commercial strip. *Barrios* have unique physical, social, economic, and political attributes. A new aesthetic, art, symbols, type of businesses, music, community events, and vendors all add to social ambiance and physical design of the neighborhood. In an attempt in inclusive planning, this project explores whether it functions as an ethnic commercial strip, identifies the social, physical, and economic components that contribute to the Latino neighborhood/barrio, and provides recommen-

dations for the preservation of its cultural elements.

This thesis uses a single case study in addition to several research methods: 42 random surveys, literature review and analysis, site observations/pictures, and land use survey. The findings highlight that the majority of the people present at any given time on Broadway Avenue are Latino immigrants from a lower socio-economic background that come from across Los Angeles County to shop, work, and for leisure purposes. Many of the study participants are attracted to Broadway's diversity, architecture, aesthetics, culturally themed stores, and restaurants; showing that this Latino commercial strip possesses deep social, physical and economic significance. Survey results provide valuable information about what study participants would like to be preserved for Broadway's future. This information provides user-driven recommendations for preservation and change on Broadway Avenue.

URL: <http://digitalcommons.calpoly.edu/theses/1259>

The Use of Mobile Technology in Professional Planning and Local Government Practice

Kayla Gordon

Advances in web and mobile technologies have begun to change the way local governments understand and interact with their communities. In an effort to evaluate the use of online and mobile technology for government work, this thesis examines the use of mobile technology as a vehicle for local government practice, specifically looking at the field of urban planning. The introduction of Internet-enabled mobile devices has broadened these opportunities, as location-based information is used to increase awareness of user activity, movements, and behaviors in real-time conditions and specific contexts.

This work (1) explores how mobile technology is currently influencing planning practices, (2) defines a taxonomy for current mobile applications, and (3) hypothesizes how these technologies will influence the future of the planning profession. Findings from a survey of local planning agencies demonstrate that although many planners own a smartphone or tablet and are aware of existing mobile potential, they are not entirely dependent on those devices for work purposes. Many planners use basic productivity software but do not utilize planning specific mobile applications to support their work. Despite pressure from citizens, elected officials, and younger staff members to integrate more interactive technologies in planning work, there are often numerous barriers to implementing mobile technologies, especially for agencies in smaller jurisdictions.

URL: <http://digitalcommons.calpoly.edu/theses/1280>

Public Art: Context & Process in San Luis Obispo, CA

Kristin Ann Kiefer

Public spaces help bring the community together, and beautifying them with public art and good design encourages their use and to empower the users. While the means by which public art populates public spaces has changed, there is no doubt

that public art benefits the public good, acts as a civilizer, provides for a sense of "civic vitality," generates identity and character, and celebrates culture and the environment. The role public art plays in communities is unique in the marrying of two very different sectors of civic life: art and aesthetics with the political planning process. Establishing written policies and programs for the arts solidifies their place in communities, enacting a set of codes and a process by which artistic endeavors are woven into the city. This study examines how political decisions impact the installation of public artwork in cities through the study of the public art installation process in the City of San Luis Obispo, California. The conclusions lead to a series of recommendations to increase transparency, encourage artistic opportunities, and strengthen the already robust city's Public Art Program.

URL: <http://digitalcommons.calpoly.edu/theses/1263>

Addressing Childhood Obesity Through the Built Environment: The Guadalupe Case Study

Sophia Y. Lai

This project investigates the impacts of the built environment on obesity in children living in racial and ethnic communities in relation to city planning, using the City of Guadalupe as a case study. Located in Santa Barbara County, Guadalupe is mainly an agricultural town with over 85 percent of residents of Hispanic origin, almost half of them under 17 years of age. The city has complex social, economic, and environmental matters that can contribute to higher overweight and obesity rates among Latino children. Community Assessments and outreach efforts with school children and residents examined the food and physical environments. Responses from a variety of methods such as Community of Excellence (CX3) field surveys, walkability surveys, and a Photovoice project with school children were analyzed and compared to create a list of recommendations for improving children's health in Guadalupe. This project provides an in-depth understanding of the important relationships between children's health and the built environment and provides recommendations for Guadalupe.

URL: <http://digitalcommons.calpoly.edu/theses/1264>

Pismo Beach Public Art Program

Garrett Tyler Norman

Public art plays a significant role in communities around the world. It embodies a close relationship between the artist, the space in which it's being exhibited, and the public. The development of this project examined various literary sources that demonstrated the importance of public art and how cities, artists, and community members may benefit from the incorporation of public art. This project included the framework for development of a Public Art Program for the City of Pismo Beach, California, which outlined the critical steps of a planning process and implementation of the program.

URL: <http://digitalcommons.calpoly.edu/theses/1182>

Confused Spaces: Theatricality as a device for defining different types of public space*Danton Christopher Spina*

Theatricality can define different types of public space. A definition of theatricality based on theater, urban design, and architecture suggests a set of elements that include spectacle, transition, flexibility, and compactability. After attempting to define the validity of these elements the work tries to understand the experience they can create. Theatricality is studied through a historical and theoretical exploration as well as an analysis of three architectural competitions. Concluding principles lead to the exploration of a theoretical large-scale design. The design becomes the most complete visual representation of the core concept for theatricality. In conclusion, it is determined that the principles of theatricality clearly have a significant impact on the public and the pedestrian experience. It is encouraged for the concept to be used as a design device for creating pedestrian-friendly spaces in the future.

URL: <http://digitalcommons.calpoly.edu/theses/1136>

University Square Development Proposal*Tom Gregory Van Pelt*

This project (USDP) explores a redevelopment scenario for the underutilized University Square, an outdated commercial mall in the City of San Luis Obispo. Its proximity to Cal Poly's campus makes it an ideal location for student housing. The City's General Plan Land Use and Circulation Element has identified it as a "Special Planning Area" and proposes that the site includes a mixture of multi-family housing, retail services, entertainment, and recreation. The USDP explores a development option that accommodates both Cal Poly's objectives by providing student housing, and the City's by proposing mixed-use development. This project includes site assessment, programming, design vision, and financial analysis.

URL: <http://digitalcommons.calpoly.edu/theses/1275>