

City Sense and Suburban Design

Planners' Perceptions of the Emerging Suburban Form

Ajay Garde

Problem: As suburbs have grown, become more racially diverse, and become denser in recent years, the planning and design of suburban development has been fundamentally transformed. Is urban design influencing contemporary suburban form, and does this have implications for public policy?

Purpose: This article examines how certain urban design ideas, images, and values, that I call *city sense* because they previously influenced the planning and design of cities rather than suburbs, are now influencing suburban design.

Methods: I surveyed and interviewed senior planners in Southern California suburbs, asking them to compare urban design values and physical design elements in both *innovative* and *typical* development and re-development projects in their municipalities.

Results and conclusions: I find considerable agreement among planners that innovative projects are more likely than typical projects to introduce city sense into suburban design and to have a positive impact on suburban form. The surveyed planners believe that innovative projects contribute most significantly to improving visual quality and sense of place, and least significantly to addressing inequities.

Takeaway for practice: Planners' views on innovative projects in Southern California indicate that they use urban design values and physical design elements to address some of the problems of growing metropolitan regions, and these design values and elements have potential to influence suburbs positively.

Keywords: urban design, suburban form, Southern California

How might the planning and design of new developments influence contemporary suburban form, and what are the implications for public policy? Suburbs are not just growing faster and becoming more racially diverse and denser; the planning and design of suburban development has experienced a fundamental transformation in recent years. Using a survey of planners, this article examines the characteristics of contemporary suburban form, how it is changing, and how policy might positively influence this transformation. I focus on new development projects in suburban jurisdictions in Southern California and consider how certain urban design¹ ideas, images, and values that I refer to as *city sense*² are now influencing suburban design.

Many rapidly growing suburbs are socially and spatially segregated, and offer little choice in housing, few urban amenities, a deficient public realm³, and little or no sense of place⁴ (Banerjee, 2001; Blakely & Snyder, 1997; Myers & Gearin, 2001; Southworth & Owens, 1993). Such places also often suffer from traffic congestion aggravated by increasing travel needs, and deteriorating environmental quality intensified by exurban sprawl (Berke et al., 2003; Brookings Institution, 2001; Calthorpe & Fulton, 2001). To address these problems and to encourage development, some suburbs are promoting innovative projects that combine mixed uses with higher-than-usual densities and pedestrian-oriented built environments organized around public amenities (Dunham-Jones, 2005; Shigley, 2006; Smart Growth Network, 2006). These

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projects incorporate urban design values and physical design elements expected to reduce social and spatial segregation, improve the quality of the public realm, generate an enhanced sense of place, and lead to what Peattie (1998) has identified as “convivial” cities. Such values and elements were not historically part of suburban development (Duany & Plater-Zyberk, 1991; Fishman, 1994; Jacobs, 1993; Lynch, 1981).

Suburbs that were initially developed as low-density neighborhoods are growing denser, and many of these jurisdictions now include high-density, mixed-use developments and even high-rise residential buildings (Leinberger, 2005; Schmitz et al., 2003; Planning Center, 2006). This transition, which is noticeable in many places that have experienced strong growth, is particularly evident in Southern California suburbs. Examples include a design proposal for the Irvine Business Complex in Irvine, California, a recently approved master plan for the Platinum Triangle project in Anaheim, California, and a mixed-use proposal for the Piemonte project in Ontario, California. Similar projects are being promoted in other suburbs.

Although there is considerable literature on the planning and design of suburbs, most of it criticizes sprawl or evaluates new urbanism (for example, Duany, Plater-Zyberk, & Speck, 2000; Garde, 2004). Little of it has focused on the urban design ideas, images, and values that are being incorporated into recent development projects in suburbs. Thus, in this article, I examine how the planning and design of new Southern California development projects is influencing contemporary suburban form, and whether it is introducing city sense into suburban design.

Research Method

I conducted a mail survey of the senior planners⁵ in each of the 180 cities⁶ located within the five counties making up the Southern California region (Los Angeles, Orange, San Bernardino, Riverside, and Ventura Counties). I mailed the first round of surveys in September 2006, and received an overall response rate of 34.5% by November 2006. The follow-up mailings of the same survey, which included a letter of support from the chairs of the planning departments of the region’s four universities (University of California, Irvine; University of California, Los Angeles; University of Southern California, and California State University, Pomona), was mailed in November 2006 and resulted in a response rate of 63.9% by March 2007.

My surveys asked these planners about new developments and redevelopment projects approved, under construction, or built between January 1995 and March

2007. The questionnaire was divided into three sections. The first section asked respondents to provide their contact information. Sections two and three were designed to collect information about one *innovative* project and one *typical* project, respectively⁷. Respondents were first asked to identify the most recent innovative project approved, under construction, or built in their jurisdiction since January 1995. Such a project was to include housing as an essential component and to incorporate planning and design ideas not found in conventional suburban subdivisions. The survey offered the proposal for the Irvine Business Complex in Irvine (see Figure 1), and the master plan for the Platinum Triangle in Anaheim (see Figure 2), both well known among planners in Southern California, as examples of innovative projects. I hoped this would help respondents identify similar projects in their own municipalities. The mixed-use proposal for the Piemonte project in Ontario, California is another example of an innovative project (see Figure 3). The survey then asked questions about the innovative project the planner identified.

Similarly, respondents were asked to identify one typical project in their jurisdiction. This typical project could be a standard suburban subdivision or a mixed-use project. The survey then asked questions about this typical project. Figures 4 and 5 show examples of two typical projects.

The survey asked two sets of questions about both the innovative and the typical projects: 14 items about *urban design values* (values associated with large-scale projects, like the quality of the public realm, rather than the design of individual buildings), and 35 items about *physical design elements* (elements present at both neighborhood and building scales, like affordable housing). I derived these urban design values and physical design elements from authoritative sources such as Appleyard (1981), Banerjee (2001), Jacobs (1993), Lynch (1981), Peattie (1998), and Southworth and Owens (1993), as well as the urban design literature summarized in Carmona, Heath, Oc, and Tiesdell (2003) and in Watson, Plattus, and Shibley (2003). Most of the urban design values are traditionally associated with urban rather than with suburban built environments.

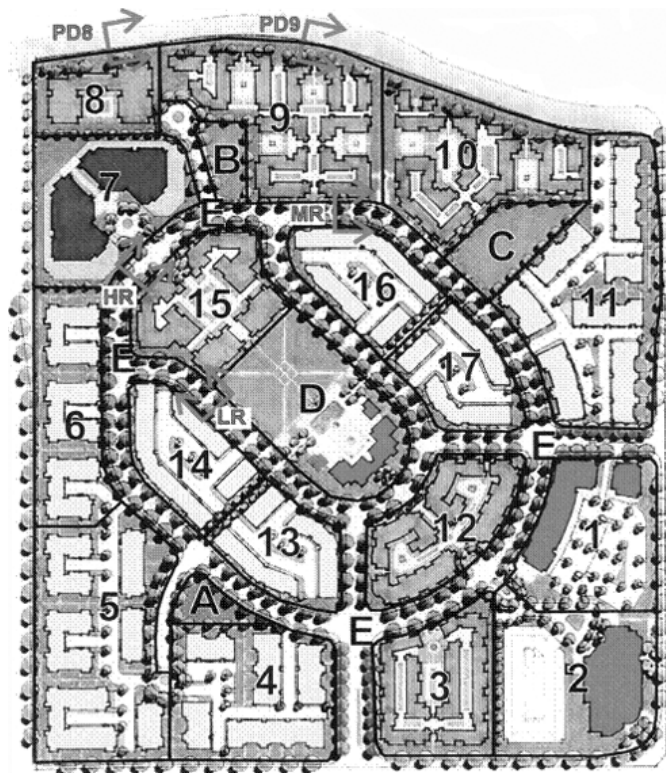
The questions I asked about physical design elements related to neighborhood design (“mixed-use development”) building design (“visual aesthetic appeal in the architectural style of buildings”) and street design (“streets with cul-de-sacs”). Some, like “retail stores within walking distance of housing” and “public plazas” were traditionally associated with urban built environments. Other physical design elements such as “cul-de-sacs” and “freestanding buildings surrounded by large parking lots” were traditionally associated with suburban built environments, while a few items, such as “visual aesthetic appeal in architectural



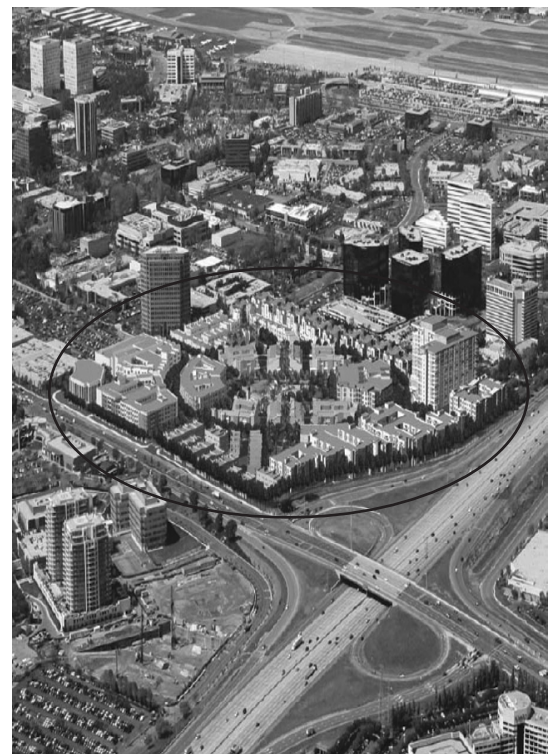
Aerial photograph of the area in the 1980s.



A recent aerial photograph of the IBC area with Central Park project circled.



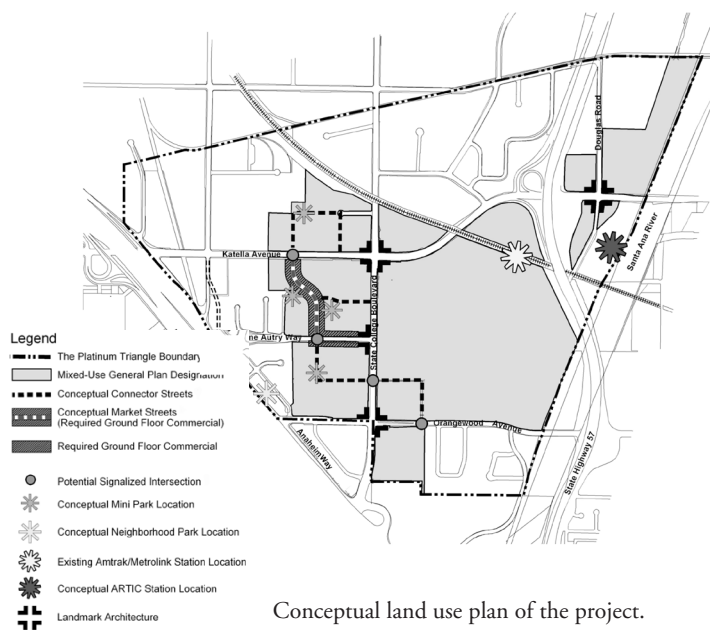
Plan of the Central Park project, with four parks identified as A, B, C, and D.



Rendering of the Central Park project (circled).

Figure 1. The Central Park project in the Irvine Business Complex.

Sources: Starpointe Ventures, City of Irvine, California; and aerial photo courtesy EDAW Inc., 2006, all rights reserved. All images used with permission.



Conceptual land use plan of the project.



Three-dimensional rendering of part of the project.



Sketch showing mixed-use development.



Aerial photograph of the project area.

Figure 2. The Platinum Triangle project.

Sources: City of Anaheim, IBI Group, and Windstar. All images used with permission.

style of buildings” and “residential neighborhood with a distinct image,” have been associated with both urban and suburban built environments.

I also conducted 11 interviews with planners in these jurisdictions. I selected interviewees from different parts of the five-county Southern California region, choosing at least one planner from each of the five counties. The interviews focused on specific issues pertinent to these jurisdictions. The interviewees were well informed and provided insights about planning and design issues that were difficult to obtain through the questionnaire. I recorded the interviews

and obtained permission to quote from them at the end of the interviews.

I report which urban design values and physical design elements planners said were contributed by typical and which by innovative projects. I used nonparametric statistical tests to determine whether there were significant differences between responses on innovative and typical projects overall. I also report the percentage of planners whose responses to their local innovative and typical projects differed significantly.



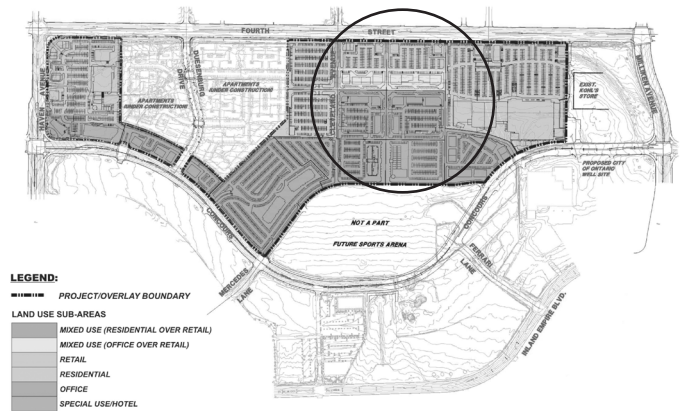
Part elevation showing a mixed-use block (residential over retail).



Three-dimensional rendering.



Part plan.



Land use plan.

Figure 3. The Piemonte project.

Sources: Panattoni Development and the City of Ontario, California. All images used with permission.

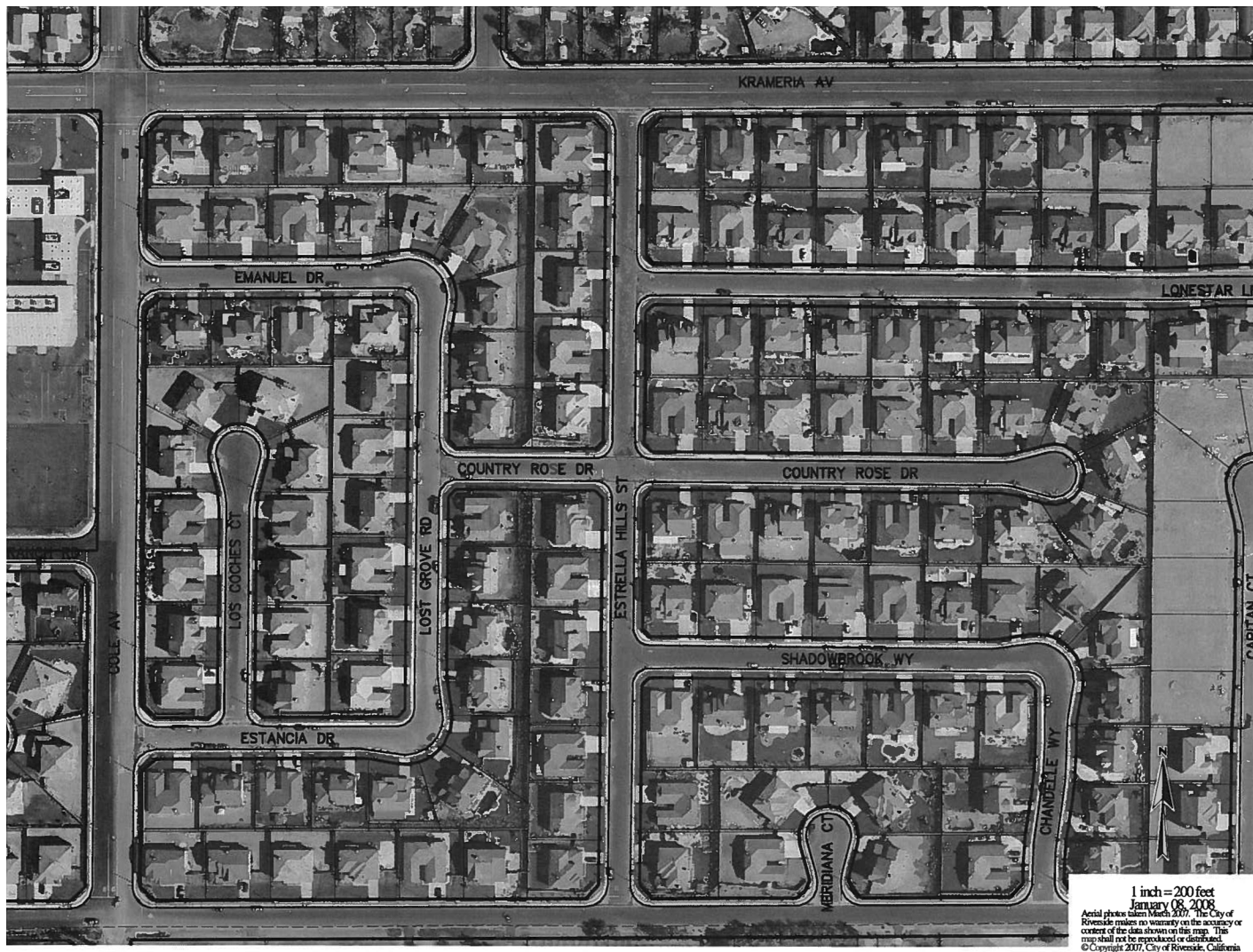


Figure 4. Aerial photograph of a typical project in Riverside, California.

Source: City of Riverside, California. Used with permission.

Survey Results

Planners' responses suggest that innovative projects are introducing city sense into suburban design by incorporating an increasing number of urban design values and physical design elements that were traditionally associated with urban built environments. I present the results of the survey in nine tables.

The results of this study suggest that innovative projects constitute a significant proportion of all new developments and redevelopment projects in the five-county Southern California region, even though Tables 1, 2, and 3 show that these types of projects are not being built in all of the cities in the region. I received responses from 114 of the 179 suburban cities in the region. Of these, 69 reported at

least one innovative project, and 98 reported at least one typical project.

Innovative projects have not been approved or have not been built in all 179 suburban jurisdictions, however. For instance, a mixed-use redevelopment project proposed by the city in central Mission Viejo has been facing opposition despite considerable support from planners (City of Mission Viejo, 2005). A planner at the City of Moreno Valley (personal correspondence, January 3, 2007) observed that no innovative project is likely to be built in the near future in this city, although more than 50 typical projects have been approved or built in the last 12 years.



Aerial photograph of the site.



Completed single-family homes in the project.



Completed townhomes in the project.

Figure 5. An example of a typical project in Anaheim, California.

Source: City of Anaheim, California. All images used with permission.

Table 1. Survey response rates by county.

	Los Angeles County	Orange County	Riverside County	San Bernardino County	Ventura County	Total
Total number of cities in the county (total number of surveys mailed)	88	34	24	24	10	180
Total number of survey responses	49	25	15	17	9	115
Response rate	55.7%	73.5%	62.5%	70.8%	90.0%	63.9%

Note:

Data include responses from the City of Los Angeles.

Table 2. Cities reporting different types of projects, by county.

	Los Angeles County	Orange County	Riverside County	San Bernardino County	Ventura County	Total
Survey responses (cities)	48	25	15	17	9	114
Cities reporting innovative projects	26	16	10	11	6	69
Cities reporting typical projects	42	20	12	16	8	98
Cities reporting innovative projects, but no typical projects	2	3	2	0	0	7
Cities reporting neither typical nor innovative projects	4	2	1	1	1	9

Note:

Data do not include responses from the City of Los Angeles.

Table 3. Cities, by numbers of innovative and typical projects approved, under construction, or built from January 1995 to March 2007.

Project type	Cities reporting 1-10 projects	Cities reporting 11-20 projects	Cities reporting over 20 projects
Innovative	50	0	1
Typical	46	21	29

Note:

Data do not include responses from the City of Los Angeles.

Urban Design Values

Table 4 shows that that innovative projects received higher scores than typical projects on all urban design values included in the questionnaire, and the differences were statistically significant. For instance, 73.9% of planners indicated that these innovative projects contribute significantly to improving the sense of place, as compared to only 24% of planners who indicated that the typical projects contribute in this way.

Table 5 suggests that respondents ranked a majority of urban design values similarly for both innovative and typical projects. For instance, four urban design values, "improving overall visual quality of project area," "improving sense of place," "improving the overall urban design quality of project area," and "improving the quality of the public realm," were among those rated highly for contributing to the area. My statistical tests support this, indicating that there is a strong correlation in the rank order of urban design values between both project types.

Table 4. Percentage of innovative and typical projects receiving each rating for contribution to urban design values and significance of the difference.

Urban design value	Significance of the difference between ratings of innovative and typical projects	Ratings of innovative projects (n = 69)				Ratings of typical projects (n = 98)			
		Percentage receiving each rating ^a				Percentage receiving each rating ^a			
		3	2	1	0	3	2	1	0
Improve the overall visual quality of the project area	**	75.4	23.2	1.4	0.0	37.1	38.1	20.6	4.1
Improve the sense of place (for instance, enhance its identity and make it more distinctive)	**	73.9	26.1	0.0	0.0	24.0	28.1	36.5	11.5
Improve the overall urban design quality of the project area	**	72.1	26.5	1.5	0.0	24.7	36.1	29.9	9.3
Improve the quality of the public realm	**	58.0	36.2	4.3	1.4	25.0	36.1	29.9	9.3
Contribute to changing the overall character of the project area from suburban to urban	**	49.3	24.6	15.9	10.1	13.3	26.5	24.5	35.7
Improve the morphological quality of place by creating well-connected buildings, streets, and public open spaces	**	47.8	40.6	10.1	1.4	16.5	27.8	40.2	15.5
Improve the imageability and legibility of the project area	**	47.1	45.6	4.4	2.9	11.5	39.6	36.5	12.5
Improve opportunities for outdoor social activities	**	39.1	36.2	23.2	1.4	13.5	21.9	36.5	28.1
Improve the economic vitality of your jurisdiction (improve tax revenue, etc.)	**	37.7	39.1	15.9	7.2	23.5	28.6	35.7	12.2
Improve opportunities for activities at different times of the day (daytime, evening, and night)	**	37.7	36.2	21.7	4.3	6.2	20.6	33.0	40.2
Improve opportunities to use alternative modes of transportation (walking, biking, etc.)	**	31.9	36.2	21.7	10.1	12.2	14.3	43.9	29.6
Improve the conviviality of the place	**	30.8	50.8	15.4	3.1	6.6	25.3	45.1	23.1
Improve opportunities for women, children, and the elderly to use/enjoy the place	**	29.0	30.4	29.0	11.6	10.3	10.4	32.3	25.0
Improve the social equity and equality (improve opportunities for different income groups to live there)	*	26.5	19.1	36.8	17.6	11.3	20.6	38.1	29.9

Notes:

Urban design values in rank order by responses for innovative projects. Data do not include responses from the City of Los Angeles.

a. Ratings were: 3 = significant contribution; 2 = somewhat significant contribution; 1 = nominal/token contribution; 0 = no contribution.

* $p < .05$ ** $p < 0.01$

Table 5. Rank order of the urban design values respondents say innovative and typical projects contribute to the area.

Urban design value	Innovative projects (<i>n</i> = 69)	Typical projects (<i>n</i> = 98)
Improve the overall visual quality of the project area	1	1
Improve the sense of place (for instance, enhance its identity and make it more distinctive)	2	4
Improve the overall urban design quality of the project area	3	3
Improve the quality of the public realm	4	2
Contribute to changing the overall character of the project area from suburban to urban	5	8
Improve the morphological quality of place by creating well-connected buildings, streets, and public open spaces	6	6
Improve the imageability and legibility of the project area	7	10
Improve opportunities for outdoor social activities	8	7
Improve the economic vitality of your jurisdiction (improve tax revenue, etc.)	9	5
Improve opportunities for activities at different times of the day (daytime, evening, and night)	10	14
Improve opportunities to use alternative modes of transportation (walking, biking, etc.)	11	9
Improve the conviviality of the place	12	13
Improve opportunities for women, children, and the elderly to use/enjoy the place	13	12
Improve the social equity and equality (improve opportunities for different income groups to live there)	14	11
Spearman rank-order correlation coefficient	<i>r_s</i> = 0.837	<i>p</i> < .01
Kendall rank-order correlation coefficient	<i>T</i> = 0.604	<i>p</i> < .01

Notes:

Urban design values are in rank order by responses for innovative projects. Data do not include responses from the City of Los Angeles.

Table 6 summarizes differences in planners' responses to each attribute across project types. Examples of items for which the responses were the most different included "improving opportunities for activities at different times of the day" and "improving opportunities for outdoor social activities." Examples of items for which the responses were the least different included "improving opportunities for women, children, and the elderly to use the place" and "improving the economic vitality of the jurisdiction."

Collectively, these results indicate considerable agreement among planners that innovative projects incorporate these urban design values more than do typical projects. Responses suggest that innovative projects' most significant contributions are to enhance sense of place and provide opportunities for outdoor activities at different times of the day. Although a majority of planners indicated that innovative projects contribute significantly to improving the overall visual quality of the project area, their responses on this item were among those differing least between the two project types. Respondents said innovative projects were least likely to improve social equity, although they were still more likely than typical projects to do this.

Physical Design Elements

Planners' responses suggest that innovative projects include different physical design elements than typical

projects. The survey results indicate that innovative projects are incorporating an increasing number of physical design elements traditionally associated with urban built environments. Table 7 shows that a majority of innovative projects received the highest rating for contributing to mixed-use development, and retail stores within walking distance of housing. Innovative projects also received high ratings for contributing to multi-family housing, high-density development, and compact development. A small but significant proportion of typical projects was also rated highly for contributing to multi-family housing and compact development.

There are statistically significant differences between planners' responses to many questions about physical design elements for innovative and typical projects. However, in a few cases, planners' ratings of the contributions of particular physical design elements are quite similar for both project types. For instance, responses were not significantly different on public parks within walking distance from housing. Instead, many projects of both types received high ratings on this dimension.

Table 8 compares the rankings of the physical design elements associated with innovative and typical projects. Although some, like compact development, are similar, rankings of other physical design elements, such as mixed-use development, are quite different for the two project

Table 6. Percentage of respondents assessing local projects' contributions to urban design values very differently depending on whether the project type was innovative or typical.

Urban design value	Percentage of respondents assessing local projects' contributions very differently	
	Innovative exceeded typical	Typical exceeded innovative
Improve opportunities for activities at different times of the day (daytime, evening, and night)	38.1	0.0
Improve opportunities for outdoor social activities	35.0	1.6
Improve the sense of place (for instance, enhance its identity and make it more distinctive)	34.9	0.0
Improve opportunities to use alternative modes of transportation (walking, biking, etc.)	33.3	1.6
Contribute to changing the overall character of the project area from suburban to urban	33.3	3.2
Improve the morphological quality of place by creating well-connected buildings, streets, and public open spaces	33.3	0.0
Improve the overall urban design quality of the project area	30.7	1.6
Improve the conviviality of the place	30.5	0.0
Improve the imageability and legibility of the project area	24.2	1.6
Improve the social equity and equality (improve opportunities for different income groups to live there)	22.6	8.1
Improve the quality of the public realm	22.5	0.0
Improve the overall visual quality of the project area	19.1	0.0
Improve the economic vitality of your jurisdiction (improve tax revenue, etc.)	19.1	6.4
Improve opportunities for women, children, and the elderly to use/enjoy the place	16.1	4.8

Notes:

Reported differences are two or more rating categories apart. Data do not include responses from the City of Los Angeles.

types. My statistical tests suggest that the correlation between the rankings of these physical design elements for the two project types is not very strong.

Finally, Table 9 indicates which of these physical design elements were rated most differently for innovative and typical projects. Differences were greatest for items such as mixed use development and single-family detached housing, and least different for items such as big freestanding buildings surrounded by large parking lots.

Collectively, these results suggest that, although planners rated some typical projects as contributing significantly to multi-family housing and compact development, apparently most did not. Meanwhile, they said innovative projects were contributing mixed uses, multi-family housing, high-density development, and compact development, providing new exemplars in areas initially developed as low-density neighborhoods.

Discussion

Urban Design Values

The survey results indicate that: (a) planners gave innovative projects higher scores than typical projects for all urban design values; (b) there were statistically significant differences between planners' responses to innovative and typical projects; and (c) there is a strong correlation in planners' rankings of the contributions innovative and typical projects make to these urban design values. These results indicate that planners believe innovative and typical projects are likely to contribute to similar urban design values, but that innovative projects are more likely to exhibit these values, though this varies.

Taken together, these results show where innovative projects actually make a substantial difference. For instance, planners rated both innovative and typical projects highly for improving the visual quality of the project area. Because planners' responses differed little across project types on this item, I conclude that this is not where innovative projects make the most meaningful contribution. Instead,

Table 7. Percentage of innovative and typical projects receiving each rating for contribution to physical design elements, and significance of the difference.

Physical design element	Significance of the difference between ratings of innovative and typical projects	Ratings of innovative projects (<i>n</i> = 69)				Ratings of typical projects (<i>n</i> = 98)			
		Percentage receiving each rating ^a				Percentage receiving each rating ^a			
		3	2	1	0	3	2	1	0
Buildings designed with surface depth and relief (not flat building surfaces)	**	65.7	30.0	1.4	2.9	43.4	32.3	18.2	6.1
Mixed-use development	**	65.2	20.3	4.3	10.1	6.2	5.2	8.2	80.4
Buildings with active street frontage (buildings are closer to street, include doors and windows, and have few blank walls)	**	62.9	12.9	18.6	5.7	20.2	16.2	31.3	32.3
Retail stores within walking distance from housing	**	58.8	23.5	8.8	8.8	12.5	25.0	22.9	39.6
Visual aesthetic appeal in the architectural style of buildings	**	56.5	40.6	2.9	0.0	36.7	31.6	23.5	8.2
Multi-family housing (apartments, townhomes, etc.)	**	55.1	24.6	7.2	13.0	27.8	12.4	13.4	46.4
Unifying identity elements (consistent façades, etc.)	**	54.4	27.9	10.3	7.4	22.7	29.9	24.7	22.7
High-density development	**	47.8	36.2	8.7	7.2	15.5	23.7	17.5	43.4
Compact development	**	43.5	40.6	10.1	5.8	20.6	18.6	24.7	36.1
Public parks within walking distance from housing		43.5	17.4	10.1	29.0	25.8	17.5	34.0	22.7
Mix of building types (variety in size, shape, height, etc. of buildings—not look-alike buildings)	**	40.0	32.9	12.9	14.3	18.2	30.3	29.3	22.2
Cafés and restaurants with opportunities for outdoor seating	**	39.7	14.7	10.3	35.3	3.1	7.2	7.2	82.5
Public plaza, or public square, or a courtyard (any one or more of these elements)	**	36.2	23.2	17.4	23.2	11.3	9.3	12.4	67.0
Commercial district with a distinct image	**	33.3	24.6	13.0	29.0	7.2	7.2	6.2	79.4
A “Main Street” (or a commercial core)	**	31.9	23.2	10.1	34.8	4.1	9.2	8.2	78.6
Clearly identifiable landmarks	**	26.1	24.6	21.7	27.5	10.2	8.2	22.4	59.2
Buildings enclosing pedestrian-friendly spaces	**	25.0	38.2	17.6	19.1	6.3	14.6	25.0	54.2
Residential neighborhood with a distinct image		23.5	33.8	19.1	23.5	25.8	23.7	36.1	14.4
Mix of housing types (for instance, multi-family and single-family housing as a part of the same development)	**	21.7	13.0	11.6	53.6	7.1	5.1	11.2	76.5
Streets designed to provide opportunities for active social life—streets not designed solely for transportation	**	21.4	37.1	18.6	22.9	6.1	12.1	35.4	46.5
Affordable housing (or low-income housing)	*	19.4	16.4	26.9	37.3	9.2	8.2	34.7	48.0
Public art	**	17.4	13.0	24.6	44.9	5.2	8.2	16.5	70.1
Uninterrupted street patterns (more grids, few cul-de-sacs)		16.2	23.5	19.1	41.2	6.1	14.3	37.8	41.8
Transit-oriented development	**	16.2	20.6	26.5	36.8	3.1	5.1	18.4	73.5
Car-free streets (or clearly defined pedestrian areas) that are attractive to walk	**	11.6	20.3	17.4	50.7	3.1	9.2	16.3	71.4

Table 7 (continued).

Physical design element	Significance of the difference between ratings of innovative and typical projects	Ratings of innovative projects (<i>n</i> = 69)				Ratings of typical projects (<i>n</i> = 98)			
		Percentage receiving each rating ^a				Percentage receiving each rating ^a			
		3	2	1	0	3	2	1	0
Single-family detached housing	**	11.6	11.6	4.3	72.5	55.7	12.4	6.2	25.8
Arcades	**	11.6	10.1	21.7	56.5	2.0	6.1	10.2	81.6
Civic (or important) buildings at prominent locations	**	8.6	14.3	18.6	58.6	3.1	7.1	10.2	79.6
Pods (inward focused building complexes connected mainly to arterial streets— buildings not on a street grid)		5.9	19.1	16.2	58.8	12.2	16.3	14.3	57.1
Low-density development	**	5.8	13.0	8.7	72.5	26.5	23.5	15.3	34.7
Streets designed solely for transportation —streets not really designed for active social life	**	5.7	14.3	24.3	55.7	18.2	32.3	18.2	31.3
Streets with cul-de-sacs	**	4.4	7.4	11.8	76.5	17.2	32.3	16.2	34.3
Buildings certified by LEED		3.0	10.6	16.7	69.7	1.0	9.4	13.5	76.0
Buildings that look like “big boxes”	*	1.5	1.5	7.4	89.7	4.1	8.2	11.3	76.3
Big freestanding buildings surrounded by large parking lots		0.0	5.7	14.3	80.0	1.0	4.1	12.4	82.5

Notes:

Physical design elements in rank order by responses for innovative projects. Data do not include responses from the City of Los Angeles.

a. Ratings were: 3 = significant contribution; 2 = somewhat significant contribution; 1 = nominal/token contribution; 0 = no contribution.

* $p < .05$ ** $p < 0.01$

they contribute most meaningfully to improving opportunities for activities at different times of day, and to improving opportunities for outdoor social activities. I conclude this because planners' responses on these items were considerably different for the two project types, and because typical projects received significantly lower scores for these items than did innovative projects. These same criteria show that planners believe innovative projects contribute significantly to changing the overall character of project areas from suburban to urban, and contribute more significantly than typical projects to improving the sense of place. Items on which innovative projects rank low include: improving social equity; improving opportunities for women, children, and the elderly to use/enjoy the place; and improving the conviviality of the place. But typical projects also rank very low on these three urban design values.

Physical Design Elements

Results of the survey reveal that planners feel that: (a) innovative projects contribute a considerably different set of physical design elements than typical projects; (b) innovative projects frequently contribute design elements that are rare in typical projects; (c) innovative and typical projects contribute some of the same design elements; and (d) some design elements are rarely included in either innovative or typical projects. The survey indicates that while most typical projects in these jurisdictions still contribute to single-family detached housing, some rate high for compact development and multi-family housing. About one third (34.7%) of all typical projects make no contribution to low-density development, while a majority of innovative projects rate high on contributing to mixed-use development and having retail stores within walking distance of housing. A significant proportion of these innovative projects also get high ratings for high-density development, compact development, multi-family housing,

Table 8. Rank order of the physical design elements respondents say innovative and typical projects contribute to the area.

Physical design element	Innovative projects (<i>n</i> = 69)	Typical projects (<i>n</i> = 98)
Buildings designed with surface depth and relief (not flat building surfaces)	1	2
Mixed-use development	2	23
Buildings with active street frontage (buildings are closer to street, include doors and windows, and have few blank walls)	3	10
Retail stores within walking distance from housing	4	15
Visual aesthetic appeal in the architectural style of buildings	5	3
Multi-family housing (apartments, townhomes, etc.)	6	4
Unifying identity elements (consistent façades, etc.)	7	8
High-density development	8	14
Compact development	9	9
Public parks within walking distance from housing	10	7
Mix of building types (variety in size, shape, height, etc. of buildings—not look-alike buildings)	11	11
Cafés and restaurants with opportunities for outdoor seating	12	30
Public plaza, or public square, or a courtyard (any one or more of these elements)	13	17
Commercial district with a distinct image	14	20
A “Main Street” (or a commercial core)	15	27
Clearly identifiable landmarks	16	18
Buildings enclosing pedestrian-friendly spaces	17	22
Residential neighborhood with a distinct image	18	6
Mix of housing types (for instance, multi-family and single-family housing as a part of the same development)	19	21
Streets designed to provide opportunities for active social life—streets not designed solely for transportation	20	24
Affordable housing (or low-income housing)	21	19
Public art	22	26
Uninterrupted street patterns (more grids, few cul-de-sacs)	23	25
Transit-oriented development	24	29
Car-free streets (or clearly defined pedestrian areas) that are attractive to walk	25	32
Single-family detached housing	26	1
Arcades	27	33
Civic (or important) buildings at prominent locations	28	31
Pods (inward focused building complexes connected mainly to arterial streets—buildings not on a street grid)	29	16
Low-density development	30	5
Streets designed solely for transportation—streets not really designed for active social life	31	12
Streets with cul-de-sacs	32	13
Buildings certified by LEED	33	35
Buildings that look like “big boxes”	34	28
Big freestanding buildings surrounded by large parking lots	35	34
Spearman rank-order correlation coefficient	<i>r_s</i> = 0.481	<i>p</i> < .01
Kendall rank-order correlation coefficient	<i>T</i> = 0.382	<i>p</i> < .01

Notes:

Physical design elements are in rank order by responses for innovative projects. Data do not include responses from the City of Los Angeles.

and most of them (72.5%) make no contribution at all to single-family detached units.

Innovative projects frequently contribute cafés and restaurants with opportunities for outdoor seating, public open spaces such as a plaza, a square, or a courtyard, and buildings enclosing pedestrian-friendly spaces. Design

elements that they, but not typical projects, sometimes contribute, include Main Streets, streets designed to provide active social life (streets not designed solely for transportation), and transit-oriented developments (TODs). Innovative projects are only slightly more likely to incorporate some of the other items on the list, as com-

Table 9. Percentage of respondents assessing local projects' contributions to physical design elements very differently depending on whether the project type was innovative or typical.

Physical design element	Percentage of respondents assessing local projects' contributions very differently	
	Innovative exceeded typical	Typical exceeded innovative
Mixed-use development	77.4	0.0
Commercial district with a distinct image	47.6	1.6
Cafés and restaurants with opportunities for outdoor seating	46.8	1.6
Retail stores within walking distance from housing	45.2	1.6
High-density development	41.3	0.0
A "Main Street" (or a commercial core)	41.2	1.6
Multi-family housing (apartments, townhomes, etc.)	39.7	7.9
Buildings with active street frontage (buildings are closer to street, include doors and windows, and have few blank walls)	38.1	1.6
Public plaza, or public square, or a courtyard (any one or more of these elements)	33.8	1.6
Compact development	33.3	0.0
Buildings enclosing pedestrian-friendly spaces	31.7	0.0
Unifying identity elements (consistent façades, etc.)	27.9	3.3
Streets designed to provide opportunities for active social life—streets not designed solely for transportation	25.4	0.0
Mix of housing types (for instance, multi-family and single-family housing as a part of the same development)	25.4	8.0
Clearly identifiable landmarks	23.8	0.0
Affordable housing (or low-income housing)	23.0	3.3
Uninterrupted street patterns (more grids, few cul-de-sacs)	23.0	8.2
Transit-oriented development	22.6	0.0
Public parks within walking distance from housing	22.2	11.1
Car-free streets (or clearly defined pedestrian areas) that are attractive to walk	19.3	1.6
Mix of building types (variety in size, shape, height, etc. of buildings—not look-alike buildings)	19.0	4.8
Public art	16.1	1.6
Civic (or important) buildings at prominent locations	14.5	1.6
Visual aesthetic appeal in the architectural style of buildings	14.3	1.6
Arcades	14.3	3.2
Transit-oriented development	22.6	0.0
Buildings designed with surface depth and relief (not flat building surfaces)	9.5	0.0
Residential neighborhood with a distinct image	8.0	11.3
Buildings certified by LEED	3.4	3.4
Big freestanding buildings surrounded by large parking lots	3.3	3.3
Low-density development	3.2	38.1
Pods (inward focused building complexes connected mainly to arterial streets—buildings not on a street grid)	1.6	16.2
Streets with cul-de-sacs	1.6	39.3
Buildings that look like "big boxes"	0.0	11.5
Streets designed solely for transportation—streets not really designed for active social life	0.0	30.2
Single-family detached housing	0.0	50.8

Notes:

Reported differences are two or more rating categories apart. Data do not include responses from the City of Los Angeles.

pared to typical projects. According to planners' responses, innovative projects are slightly more likely than are typical projects to contribute affordable housing, and a mix of housing types.⁸

There are a few other items for which planners' responses across project types are not very different. For instance, innovative projects were rated only slightly higher than typical projects on contributing buildings with surface depth and relief (not flat building surfaces). Public parks within walking distance of housing were rated similarly across projects types.

Finally, planners' responses suggest that neither innovative nor typical projects tend to contribute big freestanding buildings surrounded by large parking lots, buildings that look like big boxes, or buildings certified by Leadership in Energy and Environmental Design (LEED) ratings. Since big freestanding buildings surrounded by large parking lots tend to erode the integrity of neighborhoods, and buildings that look like big boxes undermine visual appeal, it is good that these elements were rare (Carmona et al., 2003; Southworth & Owens, 1993). However, it is discouraging to observe that a very small proportion of these 167 projects include LEED-certified buildings. Though LEED certification is a fairly new idea, planners might promote sustainable development by waiving the impact fee for LEED-certified buildings.

Promoting Innovative Projects

Strong growth and demand for a variety of housing are influencing new development projects in this five-county metropolitan region (Brookings Institution, 2001; Southern California Association of Governments, 2006). Some cities are encouraging innovative projects with policy initiatives that allow mixed-use, high-density, compact housing developments in aging low-density commercial and/or industrial areas.

In some cities, planners are changing existing development standards to allow mixed-use projects in older downtown areas. Ventura's city council, for instance, adopted a downtown plan on March 19, 2007, endorsing the form-based codes that constitute an important part of the plan (City of San Buenaventura, 2007).⁹ These are being used to regulate the form and character of redevelopment projects, as well as to encourage new housing projects in existing commercial areas downtown. In a similar vein, according to a planner at the City of Glendale, a recently adopted "design-based plan" for the downtown allows mixed uses and places a strong emphasis on architectural design (personal communication, December 28, 2007).

Many cities, including some without downtowns, are revising existing zoning regulations in commercial and

industrial areas to encourage infill development. The City of Anaheim, for instance, recently approved the Platinum Triangle Master Land Use Plan, which will significantly change the character of the low-density industrial area near Angel Stadium, when it is built. The new vision for the Platinum Triangle project includes more than 9,000 dwelling units in addition to 5,000,000 square feet of office space and approximately 2,000,000 square feet of commercial uses (City of Anaheim, 2005).

City planners and public officials are working with consultants and developers in developing these public policy initiatives. Interviews with planners suggest that, in some cities, planners have been taking a much more active role in facilitating innovative projects by updating development standards and revising existing zoning regulations to permit mixed-use projects. Planners in some cities indicated that, in recent years, they have been requiring better quality design from developers than previously. For instance, a planner at the City of Anaheim pointed out that not much attention was being given to the quality of design in Anaheim until the late 1990s. However, opposition from local residents and the poor quality of earlier infill projects changed the "culture of development" in Anaheim:

Of course, at that time [in the late 1980s], in Anaheim in particular, there really wasn't any emphasis on design at all. . . . We didn't even make staff recommendations on our staff reports to the Planning Commission. [However] in the early 1990s, the planning staff took a more active role in pushing the design and making recommendations in the staff report at about the time when we started getting a lot of that community pushback. (City of Anaheim planner, personal communication, December 28, 2006)

Cities differ in the opportunities they provide for development. For instance, a planner at the City of Banning stated, "the decision makers and the residents really want to maintain the low-density suburban feel" (personal communication, March 1, 2007). He added that because the city is located at the urban periphery and has a considerable amount of vacant developable land, most of the new projects in the city are low-density subdivisions. In contrast, a planner at the City of Ontario indicated that the city has an ambitious plan for the development of undeveloped land, and mentioned that it is "raising the bar" for all new development projects within its jurisdiction (personal communication, January 4, 2007). He said that the city of Ontario is able to attract innovative projects partly because of its location near Los Angeles and Orange Counties and partly because it is not fully developed.

Conclusions and Recommendations

Overall, planners' responses suggest that innovative new developments and redevelopment projects are introducing city sense into suburban design and are transforming the fundamental characteristics of suburban form in Southern California. These innovative projects involve planning and design strategies that set them apart from typical projects in the suburbs. Urban design ideas, images, and values in innovative projects have traditionally been associated with urban built environments.

This study suggests that planners believe that these changes are generally positive. Indeed, these innovative projects may influence nearby land values. According to the City of Anaheim (2005), the land values in the Platinum Triangle project area increased between five- and six-fold after the master plan was approved. Planners say innovative projects are more likely than typical projects to provide opportunities for activities during different times of day, to increase opportunities for outdoor social activities, and to improve the quality of the public realm. Innovative projects often contribute physical design elements such as public plazas and retail stores within walking distance that are rare in typical projects in the suburbs. But planners' responses also suggest that innovative projects contribute little to improving social equity. They rated few innovative projects as making "a significant contribution" to affordable housing.

Meanwhile, the Southern California region is expected to accommodate 5 million additional residents by the year 2030 (Southern California Association of Governments, 2006). Affordable housing is already in short supply in this region (Brookings Institution, 2001). As the demand for housing increases, the limited supply of land available for development in these suburbs will make it worse. Retrofitting the suburbs to make them more convivial and equitable places to live and work will be among the most serious challenges planners will face. These challenges are not limited to suburbs in the five-county Southern California region. Lang, Blakely, and Gough (2005) identified 50 fast-growing "suburban counties" in the United States, including Orange, San Bernardino, Riverside, and Ventura Counties in Southern California, that are growing in a similar fashion and are likely to face similar problems.

This study has shown that planners believe that innovative projects provide a new opportunity to address some of the problems of the growing metropolitan regions. However, they should go beyond endorsing innovative projects, to promote policies that encourage convivial and equitable places and to positively influence the transformation to a better suburban form. Planners in other fast-growing suburban counties can benefit from the experience of Southern California.

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Notes

1. I use the term "urban design" in a broad sense, considering it analogous to city design.
2. While some scholars draw a sharp contrast between the characteristics of urban and suburban environments (Sharpe & Wallock, 1994), others caution against stereotyping the suburbs (Fishman, 1994), or propose that urban and suburban built environments are not very different (Rybczynski, 1995). Yet urban and suburban built environments typically do have dissimilar land use patterns, street layouts, and levels of public amenity. Cul-de-sacs and freestanding buildings surrounded by parking lots are more common in suburbs (Carmona, Heath, Oc, & Tiesdell, 2003). The literature has traditionally associated a vibrant public realm, alternative modes of transportation, uninterrupted street patterns, higher densities, mixed uses, and accommodations for pedestrians with urban rather than suburban built environments (Appleyard, 1981; Jacobs, 1993; Loukaitou-Sideris & Banerjee, 1998; Moudon, 1987; Southworth & Owens, 1993; Watson, Plattus, & Shibley, 2003). It is these urban design values and physical design elements traditionally associated with urban built environments that I collectively call *city sense*.
3. Carmona et al., (2003) define *public realm* as the "sites and settings of public life."
4. A location with a sense of place has its own distinctive qualities (Carmona et al., 2003).
5. I sent a survey to the planning director, the community development director, or a planner or urban designer holding a senior position in each of these 180 cities. Although my research method does have limitations, including problems of reliability and interrespondent variability, these planners are involved in project approval and permitting on a regular basis, and their considerable experience with and knowledge of these types of projects should reduce variation among their responses.
6. The total of 180 cities includes the city of Los Angeles, which I consider to be the only urban municipality in this area, with the remaining 179 municipalities being suburbs. Since my interest is primarily in suburban form I do not include Los Angeles in most of the tables that follow.
7. I use Rogers' (1983) definition of an innovation as an idea, object, or practice that is perceived as new by an individual, whether or not it is objectively new. My classification here is binary, so projects that are not *innovative* are *typical*.
8. Of course a project's contribution to affordable housing would be affected by how the city has accommodated affordable or low-income housing units generally.
9. The City of Ventura is formally referred to as San Buenaventura.

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Comment on Garde:

Retrofitting Suburbia: Is It About Image or Form?

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The recent forecast that the U.S. built environment will double between 2000 and 2025 (Nelson, 2006) presents fundamental challenges and policy choices for planning and urban design. After decades of research and experience, we know how to address the development and design issues in the urban core. More recently, we also have developed the research insights and policy tools to manage and design growth on the urban fringe, though this may be difficult to implement. If urban cores continue to gentrify, and if the urban fringe is increasingly constrained

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