

Attachment 5

San Diego Housing Commission Inclusionary Housing 2001 Parking Construction Cost Prototypes

<i>Parking Prototypes</i>	<i>Prototype 1</i>	<i>Prototype 2</i>	<i>Prototype 3</i>	<i>Prototype 4</i>	<i>Prototype 5</i>	<i>Prototype 6</i>
<i>Category</i>	Garden Apartments	Infill Apartments	Townhome	Stacked Flat	Stacked Flat	Midrise
<i>Construction Type</i>	2-3 stories, type V - woodframe	3-4 stories, type V - woodframe	2 stories, type V - woodframe	4 stories, type V - woodframe	3 stories, type V - woodframe	8 stories, type II - steel frame
<i>Parking Type</i>	surface parking	semi-subterranean parking	attached garage	parking podium	parking podium	structure parking
<i>Units</i>	100	22	60	75	45	100
<i>Density</i>	25 du/ac	44 du/ac	20 du/ac	75 du/ac	45 du/ac	125 du/ac
<i>Parking construction costs per space (does not include land costs)</i>	Not separated from on-sites/landscaping costs	\$10,000	Not separated from other construction costs	\$15,000	\$12,500	\$18,000
<i>Parking spaces per unit</i>	2.3	1.25	2	1.75	2	2
<i>Parking construction costs per unit (does not include land costs)</i>	Not separated from on-sites/landscaping costs	\$12,727	Not separated from other construction costs	\$30,253	\$30,556	\$39,130

Data compiled from proformas prepared by Keyser Marston Associates, Inc.

Attachment 6

Parking Cost Studies Summary

Title	Author	Publication	Cost Estimates	Notes
City of San Diego Visitor Oriented Parking Facilities Study of the Old Town Community	Wilbur Smith Associates	Report prepared for the City of San Diego, June 18, 2002	Estimated the cost of a space in a 5 level parking structure with 2.5 levels below grade to be \$25,205 per space and with 3 levels below grade to be \$31,181 per space.	
City of San Diego Visitor Oriented Parking Facilities Study of the La Jolla Community	Wilbur Smith Associates	Report prepared for the City of San Diego, May 23, 2002	Estimated the cost of a space in a 5 level parking structure, with varying number of levels below grade, to range between \$48,839 and \$120,715 per space.	
Prototype Development Costs	Keyser Marston Associates, Inc.	Report prepared for the San Diego Housing Commission 2001	Estimated the construction cost of a spaces in a residential parking facilities to be between \$10,000 and \$18,000 per space, depending on the type of facility.	These figures are construction costs only. They do not include land costs. See also Attachment 5.
Transportation Cost and Benefit Analysis (Chapter 5.4)	Todd Litman	Victoria Transport Policy Institute, June 2002, www.vtppi.org	Expresses typical parking facility costs including land, construction, and operation and maintenance in terms of a montly cost: urban , aboveground 3-level structure is \$89 per space; and an urban underground structure is \$186 per space. Both examples assume land costs of \$250,000 per acre.	States that parking demand studies based on free parking is "equivalent to predicting the number of meals a restaurant can give away for free."
Parking Requirements Impacts on Housing Affordability	Todd Litman	Victoria Transport Policy Institute, November 28, 1999, www.vtppi.org	Estimates that in typical affordable housing development providing one space per unit increases costs by about 12.5% and two space increases costs by more than 25% compared to providing no off-street parking.	
Rethinking Residential Parking	Ryan Russo	Non-Profit Housing Association of Northern California, April 2001	Using San Francisco Bay Area market conditions, in urban areas an additional parking space per unit increases the development cost per unit by 21% or \$29,000.	
Location Efficiency: Neighborhood and Socio-Economic Characteristics Determine Auto Ownership and Use	John Holtzcalw, Robert Clear, Hank Dittmar, David Goldstein and Peter Haas	Transportation Planning and Techology, 2002, Vol. 25, pp. 1-27	Found that auto ownership is primarily a function of the neighborhood's residential density, average per capita income, average family size and the availability of public transit. Over a threshold level, each doubling in residential density reduces household auto ownership by about 35% in Los Angeles and 40% in San Francisco.	The study supported the Location Efficient Mortgage program, where households qualify for larger mortgages based on reduced transportation expenses.

Title	Author	Publication	Cost Estimates	Notes
Parking Alternatives: Making Way for Urban Infill and Brownfield Redevelopment	United States EPA, Urban and Economic Development Division	EPA 231-K-99-001 December 1999	Identified three key factors in the cost of providing parking: the number of spaces required, the opportunity cost of land used for parking, and the cost per parking space. Smaller, infill sites must pay a higher cost per space, increasing the cost of brownfields redevelopment in comparison to greenfields development.	Quotes Donald Shoup that "Parking requirements hide the cost of parking by bundling it into higher housing prices, higher consumer prices, lower urban density, and lower land values."
The Trouble With Minimum Parking Requirements	Donald C. Shoup	Transportation Research Part A, Vol. 33 (1999), pp. 549-574	Estimated the cost of a space in an aboveground parking structure to be \$10,000 per space and an underground space to be \$25,000 per space.	"Ignoring both the cost of providing parking spaces and the price charged for parking in them, urban planners thus set minimum parking requirements to satisfy maximum parking demand."
Parking in the Bay Area	Michael D. Hitchcock	APA California Planner November/December 1999	Estimated that the cost of a garage and car access is \$34,000 per house in the San Francisco Bay Area, which can be expressed as \$250 per month in increased mortgage costs.	We "require the housing sector of our economy to subsidize the auto sector." If parking costs were to be paid upon purchase of a car, cars would cost \$17,000 more.
Chicago: City in a Garden...or a Traffic Jam?	Zoning for Transportation Equity Coalition	Zoning for Transportation Equity Coalition, 2003	Estimates that the cost of a space in a garage in Chicago is \$35,000 and adds 17% to the sales price of an average Chicago home. Estimates that a 1 for 1 parking requirement in San Francisco raises rents by 20% and reduces allowable densities by 20%.	