Working Paper 624

Comparison of Rents at Transit-Based Housing Projects in Northern California

Michael Bernick, Robert Cervero, and
Val Menotti

University of California Transit Research Program

This paper was produced with support from the California Department of Transportation through the University of California Transportation Center.

University of California at Berkeley
Institute of Urban and Regional Development

COMPARISON OF RENTS AT TRANSIT-BASED HOUSING PROJECTS IN NORTHERN CALIFORNIA

1. TRANSIT-BASED HOUSING IN CALIFORNIA AND THE INQUIRY INTO RENTS

Increasingly, transit-based housing is finding favor among planners, transit officials, and even local politicians in California (Bernick, 1993). But do many Californians want to live near rail transit stations? If major residential projects are built near transit stations, will developers be able to charge rents equal to or above those of similar projects not near transit? The purpose of this report is to begin to probe such questions.

There is a significant literature in America on the influence of rail transit systems on land values and urban form. In an influential 1977 article, Knight and Trygg analyzed the leading work up to that point on recent-generation rail systems in the San Francisco Bay Area and Washington, D.C., as well as the more established rail systems in Philadelphia, Chicago, Toronto, and Cleveland. They concluded that rail transit by itself would neither create land value nor increase residential densities without supportive public policies and a favorable real estate market for development. Knight and Trygg (1977: 237) concluded:

> Evidence suggests that local government policies are important factors affecting development, with transit being an important but not sufficient condition for such development. For instance, policies such as allowance of liberal floor area ratios, density bonuses at designated locations, changes in zoning plans, marketing of air rights, sale of excess land parcels, and urban renewal — all implemented at strategic locations near a transit station or along the corridor — may have a very significant impact on development.

Subsequent studies of rail systems in Philadelphia, Washington, D.C., Miami, and the San Francisco Bay Area have been mixed in their conclusions on transit's effects on land values. A 1981 study of the Metrorail in Washington, D.C., concluded that townhouses within 1,000 feet of the Pentagon City station sold for $12,300 more than comparable units far from Metro service (Committee on Banking, Finance and Urban Affairs, 1981). A more recent study of residential properties near the 14.5-mile Lindenwold Line in Philadelphia concluded that access to rail transit created a significant housing value premium of 6.4 percent (Voith, 1991). Using 1990 sales transaction data, Landis et al. (1994) found for every meter a home is closer to the nearest BART station in Alameda and Contra Costa counties, its selling price increases in the range of $1.96 to $2.29, all else being equal. Proximity to highways, on the other hand, had a depressing effect on home prices.

Other studies have found rail transit systems to exert far weaker impacts. A recent study of residential values near the Miami Metrorail system concluded that proximity to the rail stations induced little or no relative increase in housing values (Gatzlaff and Smith, 1993). Additionally, some have found a disamenity effect with being "too close" to BART. Dornbush (1975) and Burkhardt (1976) recorded lower values

for residential properties immediately adjacent to BART due to such nuisances as noise and vibration, increased automobile traffic, and the perceived accessibility of different social classes and ethnic groups to otherwise homogeneous neighborhoods. Collectively, these studies suggest the capitalization effects of rail investments to be highly localized and not easily generalizable.

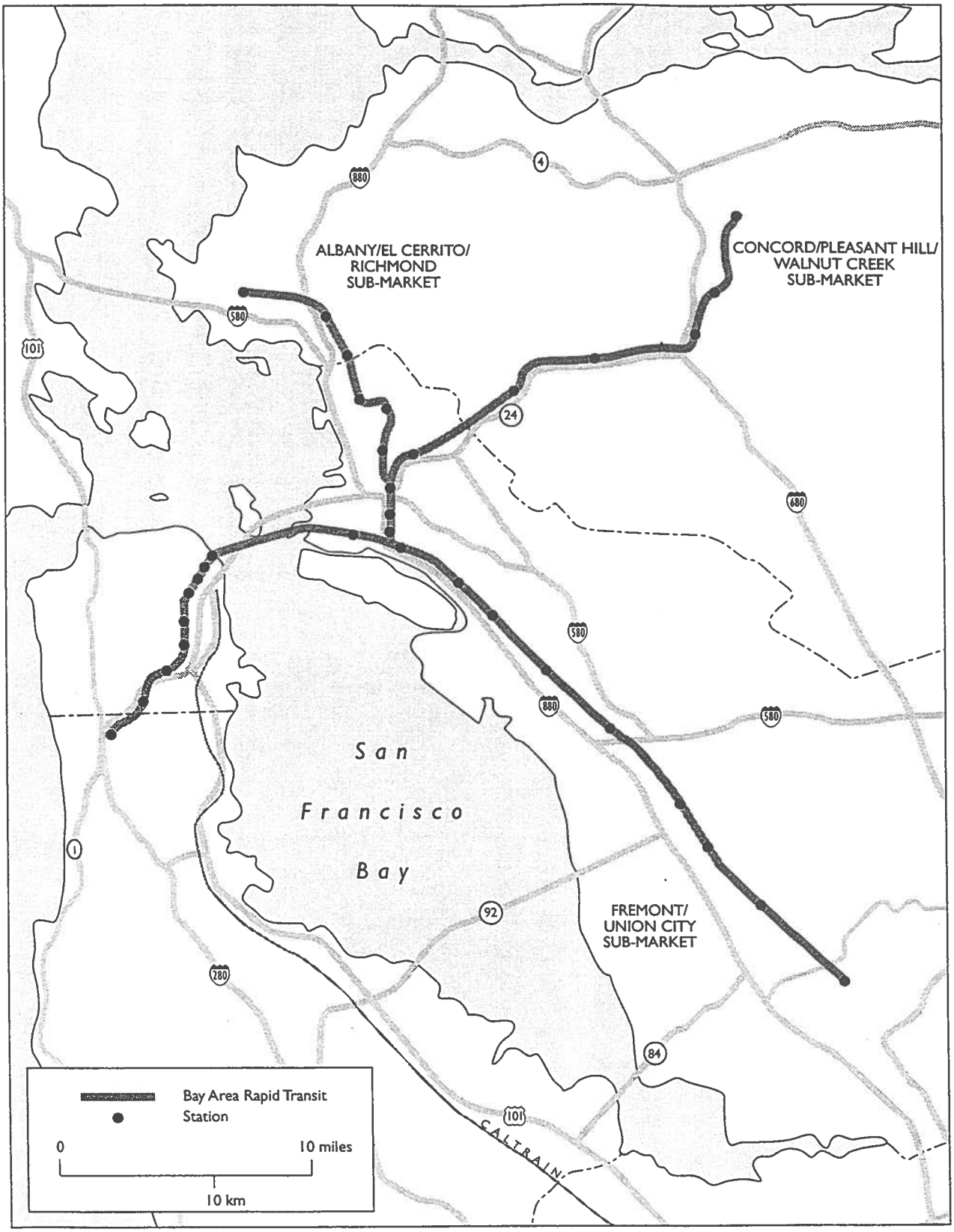
None of these previous studies focused on multi-unit residential and mixed-use projects, the kind of projects that constitute much of the transit-based housing in California. In particular, no earlier work could be found that measured a monthly premium for rental units close to transit; virtually all work done to date on capitalization effects of rail transit has measured impacts on single-family housing values. Nor have many previous studies used a matched-pairs comparison approach — i.e., comparing rents of multi-unit projects with those of similar projects away from transit stops so as to approximate a rent premium or discount.

As a starting point for such analysis in California, we compared rents at major multi-unit residential projects near BART stations in the East Bay. As shown on Map 1, three geographic submarkets with significant clusters of housing within a quarter-mile radius of BART were identified in the East Bay: Pleasant Hill-Walnut Creek-Concord; Albany-El Cerrito-Richmond, and Union City-Fremont. For each submarket, major multi-unit residential projects built in the past ten years near BART stations were identified. Also identified were other major multi-unit residential projects built in the past ten years beyond a quarter-mile of a BART station. Information on each of these projects was obtained, including such indices of rent structure as average monthly rent and average monthly rent per square foot. Comparisons were then made between rents at projects proximate to BART and similar projects not near BART, stratified by age of project and the type of housing unit (e.g., one bedroom/one bath, two bedroom/two baths). Thus, this study uses matched-pair comparisons in estimating rent premiums, with geographic location, age of buildings, and type of units serving as the chief control variables. Other factors such as differences in amenity factors are initially handled more qualitatively, relying on interpretive judgements of experts in the field. Comparisons are drawn for both 1990 and 1994, thus providing a timeline for studying changes in rent levels. All units studied were rental versus owner-occupied (condominiums).

The results of the matched-pair comparisons are presented in Sections 2 and 3. This is followed by a more sophisticated hedonic price model that statistically controls for factors other than BART proximity in estimating rent premiums.

Before turning to these results, it is instructive to look at the characteristics of transit-based housing in the Bay Area and throughout California. Table 1 lists 26 major transit-based residential projects that have already been built in California, plus nine proposed projects. All of these projects were designed to tie into rail stations through easy walking or shuttle access. Moreover, all of these projects meet the following criteria of "large-scale transit-based housing projects":

- They lie within a one-quarter-mile radius of a rail transit station, or are connected to a station by regular shuttle service.



Map 1. Three Geographic Submarkets Studied in the San Francisco Bay Area

Table 1.
Major Transit-Based Residential Development in California

BUILT PROJECTS

Rail System	Station Name	Property Name	City	Units	Year Built	Density (Units/ Acre)	Type of Units	Developer
BART	El Cerrito Del Norte	Del Norte Place	El Cerrito	135	1992	30	rental	Ibex Group
BART	Pleasant Hill	Park Regency	Pleasant Hill	892	1992	43	rental	GBW Properties
BART	Pleasant Hill	Treat Commons	Pleasant Hill	510	1987	40	rental	Trammel Crow
BART	Pleasant Hill	Bay Landing	Pleasant Hill	360	1986-1988	37	rental	Oewel Partners
BART	Pleasant Hill	Wayside Plaza: Phase 1	Pleasant Hill	36	1985-1986	24	ownership	Desco Group
BART	Pleasant Hill	Wayside Plaza: Phase 2	Pleasant Hill	60	1986-1987	60	ownership	Desco Group
BART	Pleasant Hill	Wayside Plaza: Phase 3	Pleasant Hill	60	1987-1988	60	rental	Desco Group
BART	Union City	Verandas	Union City	360	1988-1989	36	rental	Oewel Partners
BART	South Hayward	The Foothills	Hayward	188	1986-1987	33	rental	M.H. Podell
BART	Fremont	Mission Wells	Fremont	392	1989-1991	35	rental	A.F. Evans
SCCLRT	Almaden	The Homes at Almaden Lake	San Jose	84	1993	12	ownership	Martin Group/ Devcon Investments
SCCLRT	Almaden	The Apartments at Almaden Lake	San Jose	144	1994	37	rental	Martin Group/ Devcon Investments Bridge Developmt. Corp.
SCCLRT	Almaden	Park Almaden	San Jose	370	1989-1994		ownership	
SCCLRT	Civic Center	Ryland Mews	San Jose	132	1993	33	rental	Barry Swenson Builders
SCCLRT	River Oaks	Villagio	Santa Clara	273	1989	25	ownership	Shea Homes
SCCLRT	River Oaks	Elan	Santa Clara	941	1991	25	rental	Shea Homes
SCCLRT	River Oaks	The Fountains	Santa Clara	226	1993	NA	rental	Shea Homes
CalTrain	Mt. View	Park Place	Mt. View	370	1989	49	rental	Prometheus
CalTrain	Mt. View	Villa Mariposa	Mt. View	248	1985-1986	28	rental	Greenbrier Development Co.
CalTrain	California Ave.	Palo Alto Central	Palo Alto	74	1985	18	ownership	SummerHill Homes
CalTrain	California Ave.	California Park Apartments	Palo Alto	45	1989	NA	rental	Palo Alto Housing Corporation
SDTrolley	Amaya	Villages of La Mesa	La Mesa	384	1989	20	rental	Douglas Allred Company
SDTrolley	La Mesa	La Mesa Village Plaza	La Mesa	95	1991	NA	ownership	
SDTrolley	Barrio Logan	Mercado del Barrio	San Diego	144	1994	NA	rental	MAAC
SDTrolley	47th Street	Creekside Villas	San Diego	144	1989	NA	rental	
SRT	Butterfield	Windsor Ridge	Sacramento	112	1988	NA	rental	
LA-Blue Line	Pacific @5th	Bellamar	Long Beach	160	1990	NA	rental	Wesco Realty
LA-Blue Line	Transit Mall	Pacific Court	Long Beach	142	1992	NA	rental	Janss Corporation

PROPOSED PROJECTS

Rail System	Station Name	Property Name	City	Units	Year Built	Density (Units/ Acre)	Type of Units	Developer
BART	El Cerrito Del Norte	Grand Central Apartments	El Cerrito	210	1995	78	rental	Oewel Properties
BART	Fremont	The Gardens	Fremont	1,100	NA	NA	NA	NA
SCCLRT	Almaden	Almaden Lake Village	San Jose	250	1995	48	rental	Denhart Prop./F.P.I. Real Estate Group
SCCLRT	Oakridge	Fior Di Monte	San Jose	284	NA	50	ownership	Holland Properties
SCCLRT	Vista Montana	Renaissance Village	San Jose	644	1994	43	rental	Forest City
SCCLRT	Vista Montana	Renaissance Village	San Jose	498	1997	43	rental	Forest City
CalTrain	San Mateo	San Mateo Center	San Mateo	294	NA	172	ownership	William Meyer
SDTrolley	Mission Valley	Rio Vista West	San Diego	1,070	NA	NA	NA	CalMat Properties Co.
SDTrolley	Mission Valley	River Walk	San Diego	2,500	NA	NA	NA	Chevron Land and Dev. Co.
LA-Blue Line	Proposed	Holly Street Village	Pasadena	374	1994	72	rental	Janss Corporation

Note: BART = Bay Area Rapid Transit; SCCLRT = Santa Clara County Light Rail Transit; CalTrain = CalTrain Commuter Rail Service; SD Trolley = San Diego Trolley; SRT = Sacramento Regional Transit; LA-Blue Line = Los Angeles Metrorail Blue Line Light Rail Transit; NA = not available or not known.

Source: NTRAC Project Database, 1994.

- They were built subsequent to the opening of the transit system, and were designed to tie into the station.
- They contain at least 40 units.

Nearly all of these projects are within the one-quarter-mile radius, and a number are immediately adjacent to a station. In the past few years, both Santa Clara County Light Rail and BART have launched programs to convert surface parking lots into residential/retail developments, exemplified by such new housing developments as Almaden Lake Village (at the Almaden station) and Grand Central Apartments (at the El Cerrito del Norte station). Among the 35 existing and proposed transit-based housing projects in California, densities range from 12 units per acre at the Homes at Almaden Lake (Santa Clara County

Light Rail) and 18 units per acre at Palo Alto Central (CalTrain station) to 78 units per acre at Grand Central Apartments, being built at the El Cerrito del Norte BART station.

Finally, it is worth noting that no single developer has dominated the transit-based housing market. In fact, of the 35 major built and proposed projects, only the Janss Corporation, Shea Homes, and the Martin Group have more than one project (and each has only two projects). To date, transit-based housing projects have been spread among the development industry, with local and regional firms being the most active.

2. COMPARISON OF RENTS: PLEASANT HILL-WALNUT CREEK-CONCORD SUBMARKETS

The Pleasant Hill-Walnut Creek-Concord submarket is in the central/eastern part of Contra Costa County, with BART stations prominently located in each of the three communities. This submarket straddles the Interstate 680 corridor, a stretch that experienced rapid population and employment growth during the 1980s. The Pleasant Hill station area has seen the most concentrated development near BART to date. Over 1,600 residential units have been built within a one-quarter mile radius of the station over the past ten years. In contrast, while several major multi-family residential projects have been built in Walnut Creek and Concord over the past decade, none are within easy walking distance of a BART station. In Concord, plans for transit-based housing have not moved off the drawing board. Walnut Creek's BART station has witnessed extensive commercial development nearby, but no significant residential development.

In order to obtain rent comparisons, we started with 1990 data gathered for the city of Concord on multi-family residential developments in the Pleasant Hill-Walnut Creek- Concord submarket. Data on 23 major residential projects built between 1985-1992 were available: ten in Concord; eight in Pleasant Hill (three in the Pleasant Hill BART station area); and five in Walnut Creek. For purposes of assessing possible rent premiums, rents for the three projects close to the Pleasant Hill BART station were compared to those beyond a quarter-mile of a station in the three submarkets, stratified by size of rental unit.

Table 2 presents data on the size, density, amenities, and rent structure for the 23 projects studied in this East Bay submarket. Table 3 presents updated data for 1994 for a subsample of these projects. Rents for the 1-bedroom/1-bath units with at least 575 square feet are presented in Table 4. These units cater mainly to singles and young, childless couples.

An examination of the rents per square foot in Table 4 shows considerable variation among the projects, from $0.79 per square foot at Birch Tree to $1.13 at Treat Commons (phase 1) and $1.13 at The Gate. Further, within each of the three municipalities — Pleasant Hill, Walnut Creek, Concord — rents also vary quite noticeably. Among projects in Concord, rents vary from $0.79 per square foot to $1.10 per square foot, and from $590 to $663 per unit; among projects in Pleasant Hill, from $.99 to $1.13 per square foot, and from $670 to $860 per unit; and among projects in Walnut Creek, from $0.99 to $1.08 per square foot, and from $698 to $860 per unit. Such wide variations suggest that factors other than size of unit and general location, such as level of amenities and quality of the neighborhood, are influencing price levels.[1]

Table 2.
Characteristics of Rental Units in the Concord/Pleasant Hill/Walnut Creek Submarket Built Mainly During the 1980s, as of 1990

Project	Total Units	Density (Units/ Acre)	Year Built	Unit Mix	No. of Bed-rooms	No. of Baths	Avg. Unit Size (sq.ft.)	Avg. Monthly Rent	Rent per sq.ft.	Communal Amenities
CONCORD										
Broadway Towers	72	100.0	1989	4	Studio	1	449	$518	$1.15	L
				44	1	1	620	$625	$1.01	
				20	2	2	760	$707	$0.93	
				4	2	2	990	$835	$0.84	
Park Terrace	45	85.0	1986	10	Studio	1	509	$575	$1.13	L
				35	1	1	612	$625	$1.02	
Birch Tree Apts.	43	NA	1986	39	1	1	750	$590	$0.79	
				4	2	1	850	$695	$0.82	
Limeridge	70	10.0	1987	54	2	2	973	$825	$0.85	P PG
				15	2	2	985	$835	$0.85	
				1	3	2	1,300	$870	$0.67	
Greentree Terrace	54	18.2	1990	54	2	2	1,000	$745	$0.75	
Bel Air	86	21.9	1987	NA	1	1	693	$663	$0.96	P SP RB
				NA	2	2	848	$768	$0.91	
Cowell Terrace	112	NA	1988	22	2	1	850	$715	$0.84	L
				54	2	1.5	950	$775	$0.82	
				36	3	2.5	1,040	$965	$0.93	
Arcadian	192	25.6	1986	64	1	1	560	$665	$1.19	SP PG RB S L WR
				48	2	1	825	$767	$0.93	
				80	2	2	825	$806	$0.98	
Clayton Creek	208	20.8	1987	72	1	1	589	$650	$1.10	T P SP RB WR
				64	2	1	705	$725	$1.03	
				72	2	2	832	$775	$0.93	
Crossroads	130	22.5	1987	40	1	1	625	$610	$0.98	P SP PG L
				10	1	1	660	$620	$0.94	
				40	2	2	852	$725	$0.85	
				40	2	2	900	$750	$0.83	
PLEASANT HILL										
The Gate	112	4.0	1979	16	Studio	1	417	$575	$1.38	P SP PG L
				32	1	1	600	$675	$1.13	
				48	2	1	800	$760	$0.95	
				16	2	2	850	$790	$0.93	
Wood Creek	256	17.1	1987	76	1	1	797	$860	$1.08	P SP WR
				76	2	1	1,090	1,012	$0.93	
				44	2	2	1,029	$1,038	$1.01	
				22	2	2	1,019	$1,120	$1.10	
				38	2	2	1,212	$1,185	$0.98	
Brookside	144	9.6	1985	16	Studio	1	417	$575	$1.38	P SP RB
				64	1	1	617	$670	$1.09	
				28	2	1	817	$765	$0.94	
				36	2	1	880	$788	$0.90	
Spring Meadows	110	NA	1971	24	Studio	1	528	$495	$0.94	P SP RB L
				48	1	1	690	$585	$0.85	
				14	2	1	878	$675	$0.77	
				24	2	1.5	1,056	$700	$0.66	
Centerre Place *	60	51.3	1988	24	1	1	775	$825	$1.06	P SP L
				36	2	2	975	$1,012	$1.04	
Bay Landing *	360	45.0	1989	54	Studio	1	510	$587	$1.15	P SP S WR
				252	1	1	690	$748	$1.08	
				54	2	2	955	$1,022	$1.07	
Treat Commons *										
Phase I	350		1987	206	1	1	601	$680	$1.13	P SP L
				96	2	1	933	$880	$0.94	
				48	2	2	996	$980	$0.98	
Phase II	160		1988	160	1	1	740	$735	$0.99	
Total	510	20.4								
Bridgeport	78	27.9	1988	24	1	1	777	$870	$1.12	P SP RB WR
				54	2	1	1,000	$1,050	$1.05	

* Within one-quarter mile of a BART station.

Note: T = Tennis, P = Pool, SP = Spa, PG = Playground, RB = Recreational Building, S = Sauna, L = Laundry Room, WR = Weight Room, NA = not available.

Source: "Assessment of Downtown Housing Development Opportunities," City of Concord/Keyser Marston Associates, Inc., September 1990.

Table 2. (continued)
Characteristics of Rental Units in the Concord/Pleasant Hill/Walnut Creek Submarket
Built Mainly During the 1980s, as of 1990

Project	Total Units	Density (Units/ Acre)	Year Built	Unit Mix	No. of Bed-rooms	No. of Baths	Avg. Unit Size (sq.ft.)	Avg. Monthly Rent	Rent per sq.ft.	Communal Amenities
WALNUT CREEK										
Shadow Oaks	164	25.2	1970	20	Studio	1	505	$550	$1.09	P RB S L
				20	Studio w/Loft	1	605	$605	$1.00	
				40	1	1	650	$645	$0.99	
				32	1+	1	732	$715	$0.98	
				24	2	1	810	$760	$0.94	
				28	2	1	890	$780	$0.88	
Ygnacio Village	56	24.3	1987	32	1	1	539	$660	$1.22	P L
				10	2	1	719	$760	$1.06	
				14	2	2	770	$810	$1.05	
Park Place	148	111.0	1989	24	Studio	1	518	$670	$1.29	P SP S L WR
				10	Junior 1	1	865	$820	$0.95	
				77	1	1	865	$865	$1.00	
				6	2	1	808	$930	$1.15	
				31	2	1	1,065	$1,075	$1.01	
Villas II	105	42.0	1989	18	1	1	676	$750	$1.11	P SP
				28	1+	1	764	$815	$1.07	
				10	1	1.5	859	$950	$1.11	
				20	1+	1.5	965	$965	$1.00	
				29	2	2	914	$1,025	$1.12	
Four Seasons	176	NA	1986	8	Studio	1	462	$600	$1.30	P SP RB L
				88	1	1	653	$698	$1.07	
				36	2	1	857	$805	$0.94	
				44	2	2	921	$908	$0.99	

Note: T = Tennis, P = Pool, SP = Spa, PG = Playground, RB = Recreational Building, S = Sauna, L = Laundry Room, WR = Weight Room, NA = not available.

Source: "Assessment of Downtown Housing Development Opportunities," City of Concord/Keyser Marston Associates, Inc., September 1990.

Comparisons of rents among the four projects near Pleasant Hill BART and projects elsewhere show the BART projects average higher rents than any of the Concord and Walnut Creek projects. The four projects near Pleasant Hill BART — Centerre Place, Bay Landing, Treat Commons (phase 1), and Treat Commons (phase 2) — range in price from $680 to $825 per unit, or $.99 to $1.13 per square foot. The average rent of BART-served projects, $1.07 per square foot, is higher than the average rent among Concord projects, and slightly above the average rent among the Walnut Creek projects. Also, Pleasant Hill's BART-served projects average about the same rents as other multi-unit projects in Pleasant Hill: $1.07 versus $1.09 per square foot.

Part of the difference in rents between the BART-served projects and others is likely attributable to differences in amenity levels. For instance, all four apartment complexes near the Pleasant Hill BART station have a pool and spa; only two of the eight complexes in Concord, by contrast, have a pool and a spa, though several feature other amenities not found at the projects near the Pleasant Hill BART stations, such as tennis courts and recreational buildings. The three Concord projects that contain a pool and spa leased one-bedroom units for around $1.02 per square foot, fairly close to the $1.07 per square foot monthly average rent for the four complexes near Pleasant Hill BART. Controlling for differences in amenity packages, the BART proximity premium appears more modest. This is further supported by the finding that per-square-foot rents were nearly identical between sites near BART and those away from BART but still

Table 3.
Characteristics of Rental Units in the Concord/Pleasant Hill/Walnut Creek Submarket Built Mainly During the 1980s, as of 1994

Project	Total Units	Density (Units/ Acre)	Year Built	Unit Mix	No. of Bed-rooms	No. of Baths	Avg. Unit Size (sq.ft.)	Avg. Monthly Rent	Rent per sq.ft.	Communal Amenities
CONCORD										
Broadway Towers	72	100.0	1989	4	Studio	1	530	$560	$1.06	L
				44	1	1	675	$675	$1.00	
				20	2	2	1,200	$975	$0.81	
Birch Tree Apts.	43	NA	1986	39	1	1	900	$625	$0.69	
				4	2	1	950	$950	$1.00	
Limeridge	70	10.0	1987	54	2	2	985	$825	$0.84	P PG
				16	3	2	1,100	$1,000	$0.91	
Clayton Creek	208	20.8	1987	72	1	1	589	$655	$1.11	T P SP RB WR
				64	2	1	832	$780	$0.94	
PLEASANT HILL										
Wood Creek	256	17.1	1987	NA	1	1	800	$915	$1.14	P SP WR
					2	1	1,020	$995	$0.98	
					2	2	1,200	$1,195	$1.00	
Brookside	144	9.6	1985	NA	Studio	1	445	$595	$1.34	P SP RB
					1	1	617	$695	$1.13	
					2	2	880	$825	$0.94	
Bay Landing *	360	45.0	1989	54	Studio	1	510	$690	$1.35	P SP S WR
				252	1	1	603	$795	$1.32	
					1	1	777	$895	$1.15	
				54	2	2	955	$1,050	$1.10	
Treat Commons *										
Phase I	350		1987	206	1	1	601	$695	$1.16	P SP L
				96	2	1	933	$950	$1.02	
				48	2	2	996	$1,070	$1.07	
Phase II	160		1988	160	1	1	746	$805	$1.08	
Total	510	20.4								
Park Regency *	892	43.0	1992	NA	Studio	1	475	$640	$1.35	P SP RB WR
					1	1	700	$765	$1.09	
					2	1	975	$985	$1.01	
WALNUT CREEK										
Park Place	148	111.0	1989	24	Studio	1	560	$700	$1.25	P SP S L WR
				87	1	1	832	$850	$1.02	
				37	2	1	1,000	$1,020	$1.02	
Villas II	105	42.0	1989	56	1	1	764	$830	$1.09	P SP
				49	2	2	914	$970	$1.06	
Four Seasons	176	NA	1986		1	1	667	$730	$1.09	P SP RB L
					2	2	953	$915	$0.96	

Note: T = Tennis, P = Pool, SP = Spa, PG = Playground, RB = Recreational Building, S = Sauna, L = Laundry Room, WR = Weight Room, NA = not available.

Source: "Assessment of Downtown Housing Development Opportunities," City of Concord/Keyser Marston Associates, Inc. September 1990; updated by NTRAC Survey 1994.

within Pleasant Hill, all of which contained a pool and a spa. Additionally, rents could be lower in Concord because the city lies farther from San Francisco and the metropolitan core than both Pleasant Hill and Walnut Creek. Section 4 presents a hedonic price model that directly controls for differences in these kinds of attributes in assessing premiums associated with matched pairs.

Table 5 compares rents updated to 1994 for one-bedroom, one-bath apartments at least 575 square feet in size and built between 1985-1992. In 1994, the monthly rent for one-bedroom/one-bathroom units increased to the $1.02 to $1.32 per square foot range. This is a substantial jump from four years earlier, faster than the increase in the Bay Area's price index, and likely reflects a tightening apartment rental market along Contra Costa County's I-680 corridor. Concord's apartment units continue to lease at the lowest rate. However, by 1994, rents per square foot in the Pleasant Hill BART station area rose above those

Table 4.
Comparison of Rent Structures for One Bedroom-One Bathroom Units in the Concord/Pleasant Hill/Walnut Creek Submarket, 1990

Project	Avg. Unit Size (Sq. Ft.)	Avg. Monthly Rent	Rent per Sq. Ft.
CONCORD			
Broadway Towers	620	$625	$1.01
Park Terrace	612	$625	$1.02
Birch Tree Apts.	750	$590	$0.79
Bel Air	693	$663	$0.96
Clayton Creek	589	$650	$1.10
Crossroads	632	$612	$0.97
Sub-Total *	633	$624	$0.99
WALNUT CREEK			
Villas II	730	$790	$1.08
Four Seasons	653	$698	$1.07
Park Place	865	$860	$0.99
Sub-Total	752	$781	$1.04
PLEASANT HILL NON-BART			
The Gate	600	$675	$1.13
Wood Creek	797	$860	$1.08
Brookside	617	$670	$1.09
Sub-Total	693	$755	$1.09
PLEASANT HILL BART			
Centerre Place	775	$825	$1.06
Bay Landing	690	$748	$1.08
Treat Commons Phase I	601	$680	$1.13
Treat Commons Phase 2	740	$735	$0.99
Sub-Total	677	$726	$1.07
TOTAL *	684	$720	$1.05

Note: *Projects with insufficient data have been omitted.
Source: "Assessment of Downtown Housing Development Opportunities," City of Concord/Keyser Marston Associates, Inc., September 1990.

for similar size units in Walnut Creek and the other Pleasant Hill projects. Most notable in 1994 was the following:

- One-bedroom units near the Pleasant Hill BART station rented between $1.09 and $1.22 per square foot, considerably above the range of $1.00 -$1.14 for the Concord projects, and $1.02-$1.09 for the Walnut Creek projects.
- The four complexes near the Pleasant Hill BART station have a larger range of rents and a higher average rent than the other Pleasant Hill projects. Near the Pleasant Hill BART, monthly rents go for $1.09-$1.22 per square foot, higher than the $1.13-$1.14 per square foot for the other Pleasant Hill projects. The average rent of $1.20 per square foot for these four station-area projects is a bit higher than the $1.14 per square foot average for the non-BART Pleasant Hill projects.

Differences in 1990 rents for two-bedroom/two bath apartments with at least 750 square feet are shown in Table 6 for this same submarket. Some of these units cater to young families, featuring playgrounds and laundry facilities. Others are targeted more at young professionals, replete with pools, spas, saunas, and weight rooms (and noticeably no playgrounds).

As with the single-bedroom apartments, there is considerable variation among project rents for two-bedroom units, from $0.75 to $1.12 per square foot. In general, the rent structure closely mirrors the findings found for one-bedroom, one-bath apartments. Most notable from Table 6 are the following:

Table 5.
Comparison of Rent Structures for One Bedroom-One Bathroom Units in the Concord/Pleasant Hill/Walnut Creek Submarket, 1994

Project	Avg. Unit Size (Sq. Ft.)	Avg. Monthly Rent	Rent per Sq. Ft.
CONCORD			
Broadway Towers	675	$675	$1.00
Clayton Creek	589	$655	$1.11
Sub-Total	622	$663	$1.07
WALNUT CREEK			
Villas II	764	$830	$1.09
Park Place	832	$850	$1.02
Sub-Total	805	$842	$1.05
PLEASANT HILL NON-BART			
Wood Creek	800	$915	$1.14
Brookside	617	$695	$1.13
Sub-Total	716	$814	$1.14
PLEASANT HILL BART			
Bay Landing	690	$845	$1.22
Treat Commons Phase I	601	$695	$1.16
Treat Commons Phase 2	746	$805	$1.08
Park Regency	700	$765	$1.09
Sub-Total *	639	$764	$1.20
TOTAL *	797	$914	$1.15

Note: *Projects with insufficient data have been omitted.

Source: "Assessment of Downtown Housing Development Opportunities," City of Concord/Keyser, Marston Associates, Inc., September 1990; updated by NTRAC Survey 1994.

Table 6.
Comparison of Rent Structures for Two Bedroom-Two Bathroom Units in the Concord/Pleasant Hill/Walnut Creek Submarket, 1990

Project	Avg. Unit Size (Sq. Ft.)	Avg. Monthly Rent	Rent per Sq. Ft.
CONCORD			
Broadway Towers	798	$728	$0.91
Limeridge	976	$827	$0.85
Greentree Terrace	1,000	$745	$0.75
Bel Air	848	$768	$0.91
Arcadian	825	$806	$0.98
Clayton Creek	832	$775	$0.93
Sub-Total *	891	$786	$0.88
WALNUT CREEK			
Ygnacio Village	770	$810	$1.05
Villas II	914	$1,025	$1.12
Four Seasons	921	$908	$0.99
Sub-Total	894	$931	$1.04
PLEASANT HILL NON-BART			
The Gate	850	$790	$0.93
Wood Creek	1,094	$1,109	$1.01
Sub-Total	1,061	$1,067	$1.00
PLEASANT HILL BART			
Centerre Place	975	$1,012	$1.04
Bay Landing	955	$1,022	$1.07
Treat Commons Phase I	996	$980	$0.98
Sub-Total	974	$1,005	$1.03
TOTAL *	941	$905	$0.96

Note: *Projects with insufficient data have been omitted.

Source: "Assessment of Downtown Housing Development Opportunities," City of Concord/Keyser Marston Associates, Inc., September 1990.

- The rent ranges and average rents for the Concord projects are below those for the two other communities. Between Walnut Creek and Pleasant Hill, the rent ranges and average rents show little variation.
- The projects at Pleasant Hill BART have considerably larger rent ranges and higher average rents than the Concord projects. Rents for two-bedroom, two-bathroom units at the four complexes near Pleasant Hill BART range from $0.98 to $1.07 per square foot, with an average rent of $1.03. At Walnut Creek, the three projects range from $0.99 per square foot to $1.12 per square foot, with an average rent of $1.04 per square foot. For non-BART Pleasant Hill sites, the average was $1.00 per square foot. As with the one-bedroom units, rental differences could reflect differences in amenity levels in addition to the BART proximity factor.

By 1994, average rents for two-bedroom, two-bath apartments in the Concord/Pleasant Hill/Walnut Creek submarket had risen substantially, as shown in Table 7 (for those projects with available 1994 rental data). On a square footage basis, two-bedroom apartments near the Pleasant Hill BART station rented for $1.07-$1.10 versus $0.94-$1.00 at the other two Pleasant Hill properties, $0.96-$1.06 at the Walnut Creek projects, and $0.81-$0.84 in Concord. Thus, the rental premium for two-bedroom units near BART appeared to hold throughout the first part of the 1990s.

3. COMPARISON OF RENTS: UNION CITY-FREMONT SUBMARKET AND ALBANY-EL CERRITO-RICHMOND SUBMARKET

The two other submarkets studied—Union City-Fremont, and Albany-El Cerrito-Richmond—have fewer large-scale residential rental projects than Pleasant Hill-Walnut Creek-Concord. However, in both of these submarkets, major apartment complexes were built in the mid- and late 1980s, both near to and away from BART stations, allowing some comparisons to be drawn.

Table 7.
Comparison of Rent Structures for Two Bedroom-Two Bathroom Units in the Concord/Pleasant Hill/Walnut Creek Submarket, 1994

Project	Avg. Unit Size (Sq. Ft.)	Avg. Monthly Rent	Rent per Sq. Ft.
CONCORD			
Broadway Towers	1,200	$975	$0.81
Limeridge	985	$825	$0.84
Sub-Total	1,043	$866	$0.83
WALNUT CREEK			
Villas II	914	$970	$1.06
Four Seasons	953	$915	$0.96
Sub-Total	932	$944	$1.01
PLEASANT HILL NON-BART			
Wood Creek	1,200	$1,195	$1.00
Brookside	880	$825	$0.94
Sub-Total *	1,200	$1,195	$1.00
PLEASANT HILL BART			
Bay Landing	955	$1,050	$1.10
Treat Commons Phase I	996	$1,070	$1.07
Sub-Total	974	$1,059	$1.09
TOTAL *	1,010	$998	$0.99

Note: *Projects with insufficient data have been omitted.
Source: "Assessment of Downtown Housing Development Opportunities," City of Concord/Keyser, Marston Associates, Inc., September 1990; updated by NTRAC Survey 1994.

3.1. Union City-Fremont

The Union City-Fremont submarket lies in southwestern Alameda County, toward the border of Alameda and Santa Clara Counties. Two BART stations serve this area: Union City and Fremont. And since 1986, two large-scale residential complexes have been built near these stations: the Verandas, a block from the Union City BART station, and Mission Wells, a block from the Fremont BART stations.

With the assistance of Oewel Properties, an experienced developer of East Bay multi- family projects, NTRAC gathered data on rents at these and similar projects in the Fremont-Union City area, built (with the exception of Parkside in Union City) between 1986-1990. Table 8 presents the data compiled for eight large-scale multi-family projects constructed during this period.[2] Each of these projects is aimed at the area's luxury apartment market. Mission Wells has a swimming pool, spa, and two tennis courts, while Creekside Village in Fremont boasts two swimming pools and two spas. All of the projects have occupancy levels above 96 percent.

Table 9 compares 1994 rents for one-bedroom, one-bathroom units. The Verandas, one of the two projects near BART, rents for $1.29 per square foot, more than any other project in the area. This is despite the fact that the Verandas has no swimming pool or spa, unlike four of the other projects. The other BART project, Mission Wells, has the fourth highest rent at $1.21 per square foot. Overall, there

Table 8.
Characteristics of Rental Units in the Union City/Fremont Submarket, Built Mainly During 1980s, as of 1994

Project Name and Location	Total Units	Year Built	No. of Bedrooms	No. of Baths	Avg. Unit Size (Sq. Ft.)	Avg. Monthly Rent	Rent per Sq. Ft.	Current Occupancy	Communal Amenities
Sun Pointe Village	336	1989	1	1	704	$794	$1.13	100%	
39451 Gallaudet Drive			2	1	906	$925	$1.02		
Fremont, CA			2	2	1,108	$1,020	$0.92		
Creekside Village	480	1986	1	1	640	$810	$1.27	97%	Two swimming pools, two spas.
2999 Sequoia Terrace			1	1	720	$850	$1.18		
Fremont, CA			2	2	870	$900	$1.03		
			2	2	910	$1,010	$1.11		
Ardenwood Forest	650	1986	1	1	564	$690	$1.22	96%	Washer/dryer and microwave in unit.
6016 Paseo Padre Parkway			2	1	768	$790	$1.03		Single car attached garage.
Fremont, CA			2	2	862	$835	$0.97		Fireplace at $15-$20 premium.
			2	2	961	$875	$0.91		
Skylark	174	1986	1	1	716	$680	$0.95	100%	Full recreation facility
34655 Skylark Drive			2	1	850	$770	$0.91		
Union City, CA			2	2	913	$820	$0.90		
			2	2	946	$870	$0.92		
			3	2	1,056	$990	$0.94		
Mission Wells	226	1987	1	1	693	$840	$1.21	96%	Washer/dryer and fireplace in
39115 Guardino Drive			2	1	850	$920	$1.08		all units. Underground parking.
Fremont, CA			2	2	870	$980	$1.13		Swimming pool, spa, exercise
			2	2	1,053	$1,075	$1.02		room, and two tennis courts.
			2	2	1,077	$1,175	$1.09		
Mission Sierra	152	1986	1	1	615	$685	$1.11	98%	One swimming pool, spa, and rec
34864 Mission Blvd.			2	1	785	$775	$0.99		room.
Fremont, CA			2	2	895	$825	$0.92		
Parkside	208	1979	Studio	1	410	$540	$1.32	99%	Swimming pool, sauna, rec room.
1501 Decoto Road			1	1	600	$640	$1.07		
Union City, CA			2	1	800	$695	$0.87		
			2	2	850	$745	$0.88		
Verandas	360	1988	1	1	603	$778	$1.29	97%	Fireplace, washer/dryer, self clean
33 Union Square			2	2	955	$1,007	$1.05		oven, enclosed garage.
Union City, CA									

Source: UC Berkeley NTRAC, 1994 Rental Survey; Oewel Properties, Ltd., 1994, "BART Locational Premium Analysis," unpublished.

Table 9.
Comparison of Rent Structures for One Bedroom-One Bathroom Units in the Fremont/Union City Submarket, 1994

Project	Avg. Unit Size (Sq. Ft.)	Avg. Monthly Rent	Rent per Sq. Ft.
FREMONT			
Sun Pointe Village	704	$794	$1.13
Creekside Village	640	$810	$1.27
Creekside Village	720	$850	$1.18
Ardenwood Forest	564	$690	$1.22
Mission Sierra	615	$685	$1.11
Mission Wells	693	$840	$1.21
Sub-Total	656	$778	$1.19
UNION CITY			
Skylark	716	$680	$0.95
Parkside	600	$640	$1.07
Verandas	603	$778	$1.29
Sub-Total	640	$699	$1.09
TOTAL	651	$752	$1.16

Note: Some projects were omitted because of insufficient data.
Averages computed in this table are not weighted for each project based on number of units because of missing data.
Source: UC Berkeley NTRAC, 1994 Rental Survey; Oewel Properties, Ltd., 1994, "BART Locational Premium Analysis," unpublished.

appears to be a small rent premium associated with proxminity to BART for one-bedroom units in southern Alameda County.

For two-bedroom, two-bathroom apartments, the projects closest to BART, Mission Wells and the Verandas, are also at the high end of the rental market, as shown in Table 10. Again, even though The Verandas lacks many of the amenities of other projects, it generally rents for more on a square-footage basis.

3.2. Albany-El Cerrito-Richmond

The Albany-El Cerrito-Richmond submarket lies in the western portion of Contra Costa County, and is well-served by BART's Richmond line, with stations at El Cerrito Plaza, El Cerrito del Norte, and Richmond.

Table 10.
Comparison of Rent Structures for Two Bedroom-Two Bathroom Units in the Fremont/Union City Submarket, 1994

Project	Avg. Unit Size (Sq. Ft.)	Avg. Monthly Rent	Rent per Sq. Ft.
FREMONT			
Sun Pointe Village	1,108	$1,020	$0.92
Creekside Village	870	$900	$1.03
Creekside Village	910	$1,010	$1.11
Ardenwood Forest	862	$835	$0.97
Ardenwood Forest	961	$875	$0.91
Mission Sierra	895	$825	$0.92
Mission Wells	870	$980	$1.13
Mission Wells	1,053	$1,075	$1.02
Mission Wells	1,077	$1,175	$1.09
Sub-Total	956	$966	$1.01
UNION CITY			
Skylark	913	$820	$0.90
Skylark	946	$870	$0.92
Parkside	850	$745	$0.88
Verandas	955	$1,007	$1.05
Sub-Total	916	$861	$0.94
TOTAL	944	$934	$0.99

Note: Some projects were omitted because of insufficient data.
Averages computed in this table are not weighted for each project based on number of units because of missing data.
Source: UC Berkeley NTRAC, 1994 Rental Survey; Oewel Properties, Ltd., 1994, "BART" Locational Premium Analysis," unpublished.

Several major transit-based residential projects have been proposed for this corridor, but only two have been built to date: Del Norte Place, a mixed-use residential development at El Cerrito del Norte BART station, and the first phase of Richmond City Center a block from the Richmond BART station. The first phase of Richmond City Center is not a good candidate for rent comparisons since it is a completely subsidized development. Further project phases will include a market rate section; however, phase one has no market-rate apartments.

Del Norte Place is a mixed residential/retail project that has been featured in articles in the *New York Times*, *Los Angeles Times*, and *Urban Land*, as an example of emerging transit-based housing. Its 135 rental units sit atop ground-floor retail. It was built on land owned by El Cerrito's redevelopment authority, and includes 20 percent below-market rate housing. The remaining units lease at market rates.

In order to obtain market-rate rent comparisons for Del Norte Place, three other projects in the corridor were chosen: Bayside Commons, Marina Shores, and Civic Plaza. Like Del Norte Place, each is relatively new. Civic Plaza was built in 1986, Marina Shores in 1989, and Bayside Commons in 1990. Each is also a fairly large apartment complex, ranging from the 162 units at Civic Plaza, 235 units at Bayside Commons, and 245 units at Marina Shores.

Table 11 presents summary data on Del Norte Place and the three comparison projects. All four projects are nearly completely occupied. All are aimed at a middle-income population, with Bayside Commons targeted more toward upper middle-income range. Bayside Commons advertises apartments with a fireplace, microwave, self-clean oven, and bay views. Marina Shores advertises fireplaces, washer-dryers, health club, and tennis courts. Civic Plaza has no fireplaces, but it does have a pool, sports court, and gas barbecues. Del Norte place offers its tenants the fewest amenities. Since both Del Norte Place and Civic Plaza lie in the same community and front the same boulevard (San Pablo Avenue), these two projects are perhaps most comparable.

Table 12 compares rent at the four projects (excluding subsidized units). Three of the four projects have one-bedroom, one-bathroom apartments that are 652 to 773 square feet in size. Rents per square foot are very similar for these units: $1.05-1.09 at Del Norte Place, $1.01 at Marina Shores, and $1.08 at Civic Plaza. Also, three of the four projects have two-bedroom, two-bathroom apartments in the range of 841971 square feet. The rents-per-square foot are also similar for these units: $1.05 at Del Norte Place, $0.99 at Marina Shores, and $1.00 at Civic Plaza. The fourth project, Bayside Commons, has a larger two-bedroom, two-bath apartment, at 1,150 square feet, with a slightly higher per square foot of $1.09. Notably, it has the most extensive amenity package of the projects in this submarket.

As noted, even within a single submarket corridor, projects differ by more than just age and size: the presence or absence of washer/dryer, self-clean oven, security parking, and elevator; quality of the surrounding neighborhoods; and such project amenities as tennis courts, pool, or outdoor barbecue. In order to control for the effects of such differences, we asked principals with Oewel Properties, one of the major housing developers in this submarket, to adjust the rents at these four projects to take into account pro-

Table 11.
Characteristics of Rental Units in the Albany/El Cerrito/Richmond Submarket, Built Since 1986, as of 1994

Del Norte Place

11720 San Pablo, El Cerrito, CA
Age: 1992 Size: 135 Units 4 Floors, parking on grade

Type	Unit Size (sq.ft.)	Description	Avg. Monthly Rent	Rent per sq.ft.
1BR/1B	652	Upper Floor	$695	$1.07
	652	Lower Floor	$650	$1.00
1BR/1B	704	Upper Floor Fireplace	$785	$1.12
	704	Lower Floor	$850	$1.21
2BR/2B	866	Lower Floor	$850	$0.98
2BR/2B	877	Lower Floor	$880	$1.00
2BR/2B	904	Lower Floor	$905	$1.00
2BR/2B	927	Upper Floor Fireplace	$995	$1.07

Concessions: None Deposit $400 to $500
Occupancy: 100%
Amenities: Restricted access, fire sprinklers, elevator, seniors' social room, somefireplaces, walk to BART, mixed use with retail.
Negatives: No washer/dryer or hookups, no self-cleaning oven, no secured parking, no pool, no tennis court.

Bayside Commons

535 Pierce Street, Albany, CA
Age: 1990 Size: 235 Units 3 Floors above parking

Type	Unit Size (sq.ft.)	Description	Avg. Monthly Rent	Rent per sq.ft.
2BR/2B	1,152	Upper Floor	$1,300	$1.13
	1,167	Lower Floor	$1,000	$0.86
2BR/2B	1,175	Upper Floor	$1,400	$1.19
	1,190	Lower Floor	$1,100	$0.92
2BR/2B	1,150	Upper Floor	$1,400	$1.22
	1,188	Lower Floor	$1,100	$0.93

Concessions: None Deposit $500
Occupancy: 99%
Amenities: Fireplace, microwave, self-clean oven, washer/dryer, secured enclosed garage, restricted access, fire sprinklers, elevator, pool, Albany location, bay views"
Negatives: Freeway noise, difficult access, no tennis court.

Marina Shores

One Shoreline Court, Richmond, CA 94804
Age: 1989 Size: 245 Units 2-Story Buildings

Type	Unit Size (sq.ft.)	Description	Avg. Monthly Rent	Rent per sq.ft.
1BR/1B	559	-	$680	$1.22
1BR/1B	773	-	$830	$1.07
1BR/1B	927	-	$920	$0.99
2BR/1B	873	-	$870	$1.00
2BR/2B	971	-	$960	$0.99
2BR/2B	995	-	$965	$0.97
2BR/2B	1,019	-	$1,045	$1.03

Concessions: $300 off first month's rent on 2-bedroom, Deposit: $500 1 br; $600 on 2 br.
Occupancy: 98%
Amenities: Fireplace, washer/dryer, lap pool, space, health club, tennis, views, water oriented location, gated access.
Negatives: None

Civic Plaza

10944 San Pablo Ave., El Cerrito, CA
Age: 1986 Size: 162 Units 3 Floors, parking on grade

Type	Unit Size (sq.ft.)	Description	Avg. Monthly Rent	Rent per sq.ft.
1BR/1B	671	Upper Floor	$735	$1.10
	671	Lower Floor	$720	$1.07
2BR/1.25B	821	Upper Floor	$815	$0.99
	821	Lower Floor	$800	$0.97
2BR/2B	841	Upper Floor	$850	$1.01
	841	Lower Floor	$835	$0.99

Concessions: None Deposit $450 to $500
Occupancy: 98%
Amenities: Some fireplaces (3rd floor), some washer/dryer hookups (1st floor), pool, sport court, gas barbecues.
Negatives: No washer/dryer or hookups, no self-cleaning oven, no secured parking, no pool, no restricted access, no tennis court, no fire sprinklers, no elevators.

Source: Oewel Properties, Ltd., unpublished, "Grand Central Rental Comparison," 1994; UC Berkeley NTRAC.

Table 12.
Comparison of Rent Structure in the Albany/El Cerrito/Richmond Submarket, 1994 Rents

Projects	No. Bed-rooms	No. Baths	Avg. Unit Size (sq.ft.)	Avg. Monthly Rent	Rent per sq.ft.	Adjustment Factors: Washer/ Dryer	Project Amenities	Self-Clean Oven	Bath	Sec .Unit Parking	Age	Elevator	Adjusted Rent
Del Norte Place	1	1	652	$685	$1.05	$40	$50	$10	$0	$20	$0	$0	$805
	1	1	704	$770	$1.09	$40	$50	$10	$0	$20	$0	$0	$890
	2	2	904	$950	$1.05	$40	$50	$10	$0	$20	$0	$0	$1,070
Bayside Commons	2	2	1,150	$1,250	$1.09	$0	$0	$0	$0	$0	$0	$0	$1,250
Marina Shores	1	1	773	$780	$1.01	$0	$0	$0	$0	$20	$0	$15	$815
	2	1	873	$870	$1.00	$0	$0	$0	$25	$20	$0	$15	$930
	2	2	971	$960	$0.99	$0	$0	$0	$0	$20	$0	$15	$995
Civic Plaza	1	1	671	$727	$1.08	$40	$25	$10	$0	$40	$25	$15	$882
	2	2	841	$842	$1.00	$40	$25	$10	$0	$40	$25	$15	$997

Source: Oewel Properties, Ltd., 1994, "Grand Central Rental Comparison," unpublished; UC Berkeley NTRAC field surveys.

ject differences. Oewel Properties is currently developing a mixed-use project adjacent to the El Cerrito del Norte BART station and one block from Del Norte Place. They have developed three other major residential projects in the East Bay during the past decade.

Based on experience and knowledge of the monthly premium for various add-on features, Oewel Properties recommended using the adjustments shown in Table 12 in making comparisons.[3] These adjustments assume all units have identical amenities: washer/dryer, project amenities, self-cleaning ovens, extra baths, one parking stall, an elevator, and were built in 1989 or 1990.[4]

Adjusted monthly rents are shown in the final column of Table 12. A one-bedroom, one-bath at Del Norte Place increases to between $805-$890 per month or $1.25 per square foot per month, while a one-bedroom, one-bath at Marina Shores increases to $815 or $1.25 per month. And a one-bedroom, one-bath at Civic Plaza increases to $882 or $1.31 per month. For a two-bedroom, two-bath unit, the adjusted rent increases at Del Norte Place to $1,070, or $1.18 per square foot; at Bayside Commons to $1,250, or $1.09 per square foot; at Marina Shores to $995, or $1.02 per square foot; and at Civic Plaza to $997, or $1.19 per square foot.

When adjustments are made for differences in factors other than age and size, considerable rent differences emerge. The transit-based project, Del Norte Place, shows higher rents than Marina Shores. Its adjusted rents seem on a par with those of Bayside Commons. Civic Plaza, the project closest to Del Norte Place that fronts the same boulevard, has a higher per-square-foot rent in adjusted terms. Overall, these findings suggest that in Albany-El Cerrito-Richmond submarket, the premium associated with proximity to rail transit is negligible.

4. HEDONIC PRICE MODEL ESTIMATES OF RENT PREMIUM

The analyses in the previous two sections relied on comparing rental rates between multi-unit projects matched on the basis of three basic criteria: geographic submarket, unit type, and age of structure. Differences in other factors, in particular amenity packages, were treated more qualitatively. In the case

of the Albany-El Cerrito-Richmond submarket, expert judgements by one of the area's major housing developers were relied on to adjust rents so as to make amenity add-ons similar.

Matched-pair comparisons try to control for confounding factors mechanically. They presume that observations, in our case housing projects, have been matched so that they are virtually identical on all accounts except the variable of interest — proximity to rail transit. Clearly, the analyses in Sections 2 and 3 were unable to fully control for the effects of other factors, most notably project amenities, thus confounding interpretations. Because of the small number of projects in several of the submarkets, moreover, we could not build statistical models that controlled for other factors in all instances. Moreover, since the real estate industry generally relies on "comps" (i.e., simple comparisons) as a basis for valuing housing attributes, we felt it necessary to draw simple comparisons of rents within defined submarkets, regardless how loose the matching criteria. Hopefully, this has meant that the results of the analyses in Sections 2 and 3 are accessible to a larger audience.

Still, a more refined analysis is desirable in order to obtain a more accurate estimate of the rental premium associated with close proximity to BART for multifamily projetcs. This section presents the results of a hedonic price model estimated for multi-family units in the Concord-Walnut Creek-Pleasant Hill submarket. Using multiple regression analysis, a hedonic price model does what match-pair comparisons are unable to: statistically control for a large number of attributes of the "housing bundle," allowing the unique effects of each attribute to be partialed out.

A hedonic price model was estimated only for projects in the Concord-Walnut Creek-Pleasant Hill submarket, mainly because it had the most rental unit observations. Unfortunately, data from all three submarkets could not be combined since available variables differed across data sets. This might have been expected since data for each submarket were obtained from different proprietary sources. For the Concord-Walnut Creek-Pleasant Hill submarket, 1990 data were used. (Data were more complete for 1990 than for 1994.) In the analysis, each type of unit (e.g., one-bedroom/one-bathroom) was treated as an observation; since most projects had two or three different types of units, multiple observations were generated for most projects. In all, 60 cases of distinct rental units (by project and unit type) were used in the analysis.[5]

Table 13 presents the findings of the estimated model. Most notably, units within a quarter-mile radius of the Pleasant Hill BART station rented for around $34 more per month than otherwise comparable ones farther away from BART. Consistent with the general findings of the previous sections, it appears that proximity benefits to rail transit do get capitalized into rental projects, at least in the Pleasant Hill area. In addition to square footage, more baths, bedrooms, and such amenities as playgrounds and weightrooms likewise increase rents. Other project amenities, like the presence of pools, spas, and recreational buildings, were not included in the model because they were highly insignificant and thus added little to predicting rental values.

Table 13 indicates several factors had a depressing effect on rents. Rents fell with building age. A Concord location lowered rents considerably, possibly reflecting the city's more peripheral location

Table 13.
Hedonic Price Model for Multi-Family Rental Units in the Concord/Pleasant Hill/Walnut Creek Submarket, 1990

* Dependent Variable = Rent per month, in dollars, 1989

Variable	Coefficient	T-statistic	Significance
BART station within one-quarter mile (1=yes, 0=no)	34.101	1.526	.133
Size of unit (sq. ft.)	.427	6.497	.000
No. of bedrooms	29.488	1.497	.141
No. of bathrooms	42.039	2.657	.011
Playground on-site (1=yes, 0=no)	30.461	1.689	.097
Weight room on-site (1=yes, 0=no)	66.544	4.721	.000
Project density (units/acre)	.397	1.380	.174
Project age (in years, from 1991)	-10.971	-6.200	.000
Project in Concord (1=yes, 0=no)	-129.842	-8.878	.000
Proportion of total units in project of unit type	-44.545	-1.567	.124
Laundry room on-site (1=yes, 0=no)	-21.221	-1.105	.275
Summary Statistics:			
Number of observations =	60		
R-Squared =	.919		
F statistic =	49.331		
Significance F =	.000		

within the region. Interestingly, the presence of a laundry room was associated with lower rents. This could reflect the tendency of higher-rent units to contain their own washer and dryer rather than a central facility. Evidently being the dominant housing type in a complex with multiple types of units also has a depressing effect on rents.

In addition to the finding that there is a moderate premium associated with rail-based housing projects, Table 13 indicates that units in more compact projects rent for more than comparable units in lower-density projets. This measure of density, it should be stressed, reflects units per acre within the complex as opposed to the density of the surrounding neighborhood. The rental premium associated with compact projects could reflect the benefits of tenants being closer to pools, playgrounds, and other amenities, as well as to each other. The four transit-based housing projects used in this analysis, moreover, were comparatively dense, suggesting some interaction between these two factors— closeness to stations and project density. The finding that both proximity to transit and project density get capitalized into higher rents is an important one, and bodes well for the prospects for developing financially successful transit villages in the future.

5. CONCLUSION

From the review of transit-based housing rent levels in the Bay Area, the following three findings stand out:

1. To date, transit-based housing projects have been aimed primarily at a middle-income (and to some extent, upper-middle-income) market. More than half of the projects, though, include an affordable housing component, usually a mix of 80 percent market-rate and 20 percent subsidized, reflecting the role of the local redevelopment agency in financing.

2. Transit-based housing projects have rents at least comparable to those of similar projects in the local area that are not near a transit station. Being near a transit station does not appear to be a significant negative in the rent structure of these projects, and the possible perceived negatives of rail transit proximity —noise, security, congestion— do not appear to be negatives in practice.

3. Some transit-based housing projects show evidence of being able to command greater rents than similar projects not near transit. The hedonic price model revealed that, *ceteris paribus*, multiunit complexes near the Pleasant Hill BART station rented for around $34 more per month than projects not near BART. In the Union City-Fremont submarket, the two projects near BART showed higher rents than four of the six similar projects in the area not near BART, and one of the BART-proximate projects, the Verandas at Union City BART, had the highest rents. In the Albany-El Cerrito-Richmond submarket, rents at the one project near BART are equal to those of the other three projects surveyed. However, when adjustments are made for amenities, the rents at the BART project are higher than those of nearby projects.

In summary, this research indicates that those building multi-unit complexes near rail stations in the East Bay can likely command higher rents, all else being equal. This is consistent with theory, and suggests that, barring zoning restrictions or other barriers, more housing will be built near California rail stops in coming years as developers seek to capitalize on the opportunity to earn profits. In theory, the existence of a rent premium for multi-unit projects suggests value-capture mechanisms could be used to help finance rail systems, though this is something that is very difficult to implement in practice. As traffic congestion continues to worsen and as some households seek residential locations that reduce the need to own automobiles, the prospects for transit-based housing appear bright. The combination of a growing market demand and the potential for developers to reap handsome profits bodes well for the future of transit-based housing in California and elsewhere in the U.S.

NOTES

[1]Analysis of rent ranges and average rents suggest the following. Though a few projects in Concord boast higher rents than individual projects elsewhere, the range of rents in Concord is smaller than in Pleasant Hill and Walnut Creek. Additionally, the average rent among Concord projects is lower than the average of Pleasant Hill and Walnut Creek rents. Between Pleasant Hill and Walnut Creek, the range of rents and average rents show only slight variation.

[2]Available data varied among the three submarkets, since data were compiled from different proprietary sources. Accordingly, the information in this table differs from earlier tables.

[3]Techniques like multiple regression analysis could be used to statistically estimate the "hedonic" prices of such add-ons; however, such models could not be estimated because of the small sample size (four units). Thus, expert judgement was relied upon instead. Section 4 does present a hedonic price model, however, for the Concord/Pleasant Hill/Walnut Creek submarket.

[4]For Del Norte Place, for example, Oewel Properties added $40 per month rent to make up for the absence of a washer/dryer in each unit, $50 per month to compensate for the absence of secured parking, tennis court, and pool, and $10 per month to compensate for the absence of a self-clean oven. For Marina Shores, they added $20 per month to compensate for the absence of secured parking and $15 per month to compensate for the absence of an elevator. For Civic Plaza, they added $40 per month for the absence of a washer/dryer, $25 per month for project amenities, $10 per month for a self-clean oven, $15 per month for the absence of an elevator, $40 per month for the absence of parking, and $25 per month to compensate for its slightly older age.

[5]Only one- and two-bedroom units, which comprise over 95 percent of unit types in this submarket, were treated as observations. Studio units were not included in the analyses.

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