Variance Application

1836-38-40 Columbia Rd. NW Washington D.C. 20009

Financial Analysis & Feasibility Study

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Prepare for:
Board Of Zoning Adjustments
Office Of Planning

Prepared by:
Cadence Management Llc.
1700 Myrtle Rd.
Silver Spring, MD 20902

BZA
Case No. 16937
Exhibit No. 6

Board of Zoning Adjustment
District of Columbia
CASE NO.16937
EXHIBIT NO.6

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1836 - 38 - 40 Columbia Rd. NW Washington, D.C. 20009

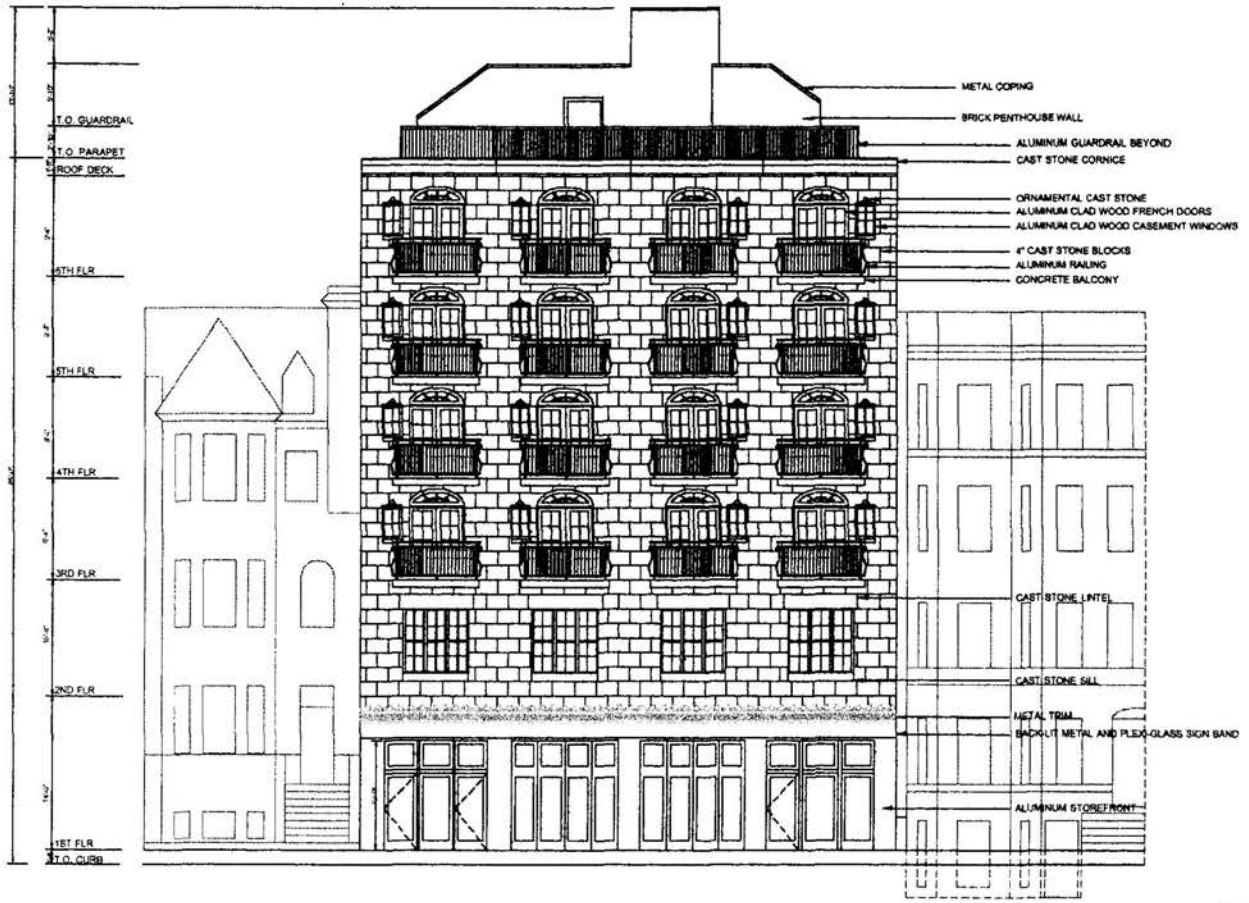
Introduction

The following analysis had been produced for the Board Of Zoning Adjustments. Included are the detailed plans to raze an existing one story structure, and replace it with one, mixed use building, to accommodate both residential and commercial tenants.

We, the representatives of Cadence Management respectfully request the addition of .89 FAR to the existing proposed project. The project to be located on Columbia Rd. in Washington D.C.. It is our position, that the current FAR is not sufficient enough to meet the financial burden of such construction. Also, that both equity, and income levels fall short of local lending institution standards.

The existing property is in disrepair, most of which is not suitable for use in its current condition. Many years of water damage have made the ceiling and floors unstable. Also, as the only one story structure, the property does not conform visually with the rest of the block. Many surrounding buildings are know for their architectural detail, and beauty. Our intentions are to incorporate similar characteristics, and create a building that will comfortably take its place in the neighborhood, as well as provide an overall benefit to the community.

Section 1



WEST ELEVATION (A8)
3/16" = 1'-0"

CAUTION: SCALES NOTED ARE FOR FULL-SIZE 24x36 SHEET. IF DRAWING IS A REDUCTION, USE GRAPHIC SCALES. SCALE FOR REFERENCE ONLY. COORDINATE CRITICAL DIMENSIONS WITH ARCHITECT.

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CHARTERED

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PROJECT:

1836 COLUMBIA RD, NW

WASHINGTON, DC 20009

DRAWING:

WEST ELEVATION

SEAL:

DATE: 07/19/02

DWG No.

A8

Zoning Overview 1836-38-40 Columbia Rd. NW Washington, D.C.

ZONE: C-2B LOT 85; SQUARE 2551			COMMERCIAL	RESIDENTIAL	REMARKS
	LOT AREA (SF)	5,709.75			
FAR	Commercial (hotel function rooms, exhibit space, commercial adjuncts)	1.50	8,564.63		
	Residential (apartments, inn, hotel guest room & service areas, community based residential facility)	3.50		19,984.13	Residential recreation space (active or passive)= 15 % GSF Residential Use (located on ground, roof with 5' parapets & min 25' dimention or within building; 50 % min outdoors)
MAX HEIGHT (FEET)		65.00			
MAX # STORIES		NO LIMIT			
80% MAX LOT OCCUPANCY (GSF)		4,567.80			
YARDS					
MINIMUM DEPTH REAR YARD		15 FEET	For that portion of the structure below horizontal plane of 20' depth measure from center line of alley at the middle of the rear of the structure; For that portion of the structure above 20' plane depth measured from rear lot line to rear wall of that portion immidiatley above the 20' horizontal plane.		
MINIMUM DEPTH SIDE YARD		None Required	If provided: minimum 2" wide for each foot of building height but not less than 6 feet.		
PARKING					
Apartment House or Multiple Dwelling		1 per 3 dwellings			
Retail or Service Establishment		1 per 750 gsf	In excess of first 3,000 gsf		
LOADING		BERTH	DOCK	REMARKS	
Retail or Service Establishment (other than Grocery Store or Drug Store)		not required	not required	If less than 5,000 gsf	
		1 @ 30'	1 @ 100sf	5,000 - 20,000 gsf; no service / delivery space required	
Apartment House less than 50 units		not required	not required		

1836 COLUMBIA ROAD
AREA BREAKDOWN

Prepared By: Balodemas Architects, Chtd.

		Retail Area (SF)	Apartment Area* (SF)	Common Area (SF)	Gross Area (SF)
Above Grade Finished	Sixth Floor	N/A	3660	506	4166
	Fifth Floor	N/A	3660	506	4166
	Fourth Floor	N/A	3660	506	4166
	Third Floor	N/A	3660	506	4166
	Second Floor	3748	N/A	418	4166
	First Floor	3372	N/A	850	4222
	Total	7120	14640	3292	25052
Other	Penthouse				415
	Garage 1				4927
	Garage 2				5658
* Unit A = 1212, Unit B = 1168, Unit C = 1280					

FAR = 25052 / 5710 = 4.39

Residential FAR = (4166 x 4) + 655) / 5710 = 3.033

Commercial FAR = (4166 + 4222) - 655) / 5710 = 1.354

Lot Occupancy = 4525 / 5710 = 79.2%

Recreation Space Required = 15% of (4166 x 4) = 2500 SF

Recreation Space Provided = 2562 SF Roof plus 154 SF Front Stoop = 2716 SF Total

Parking Required: 12 Apartments at 1 per 3 = 4 Spaces
Retail = (6940 - 3000) / 750 = 5.25 = 6
Total Required = 10 Spaces

Parking Provided: 14 Spaces

ESTIMATE OF STABILIZED NET OPERATING INCOME "AS IF STABILIZED "
1836, 1838 & 1840 COLUMBIA RD., NW; WASHINGTON D.C.

RENT

						% of EGI
Potential Gross Rent:						
First Floor Retail Unit	3,378 SF	@	$ 30.00 Per Square Foot	$ 101,340		
Second Floor Retail Unit	3,748 SF	@	$ 15.00 Per Square Foot	$ 56,220		
2B / 2B with Study Residential Units	8 Units	@	$ 2,600 Per Unit / Month	$ 249,600		
2B / 2B Residential Units	4 Units	@	$ 2,500 Per Unit / Month	$ 120,000		
Parking	14 Spaces	@	$ 175.00 Per Month	$ 29,400		
Subtotal - Potential Gross Income (PGI)	25,052 SF			$ 556,560		
Expense Reimbursments - Retail Tenants				$ 19,880	$ 576,440	
Less Vacancy & Collection Loss	7.00%			($ 40,350)		
Effective Gross Income (EGI)				$ 536,090	$ 536,090	100%

EXPENSES

	Per SF			
Real Estate Taxes	$ 1.13	$ 28,308		
Insurance	$ 0.53	$ 13,277		
Utilities	$ 1.25	$ 31,315		
General Maintenance and Repairs	$ 0.50	$ 12,526		
Management Fees at 5% of EGI	$ 0.97	$ 26,134		
Reserves for Replacement at $ 0.25/SF	$ 0.25	$ 6,263		
Leasing Commissions	$ 0.60	$ 15,031		
	$ 5.23		$ 132,854	28%
NET OPERATING INCOME (NOI)			**$ 403,236**	72%

LENDER REQUIREMENTS & CONSTRUCTION BUDGET
1836, 1838 & 1840 COLUMBIA RD., NW; WASHINGTON D.C.

Net Operating Income (NOI)				$ 403,236	100%
Direct Capitalization Rate	(9%)			$ 4,475,000	
Loan To Value (LTV)	**(80%)**			**$ 3,580,000**	
Cost Analysis					
Above Grade	25,052 sq. ft.	@	$ 90.00 per ft.	$ 2,254,680	
Sub Grade	10,585 sq. ft.	@	$ 40.00 per ft.	$ 423,400	
Land				$ 965,000	
Interest Reserve				$ 120,000	
Cost To Construct				**$ 3,763,080**	
Loan To Value (LTV)				$ 3,580,000	80%
Cost To Construct				$ 3,763,080	83%
Actual Loan To Value				**83 %**	
LTV Deviation				**- 3 %**	
Deviation Value				**- $ 183,080**	

DEBT SERVICE VS. FEASIBILITY
1836, 1838 & 1840 COLUMBIA RD., NW; WASHINGTON D.C.

Cost To Construct	$ 3,763,080	83% LTV
Debt Service 1		
Net Operating Income (NOI)	$ 403,236	100%
Debt Service @ 7.5 %	$ 333,696	83%
(5 yr. Constant Treasuries + 2.75)		
NOI after Debt Service	+ $ 69,540	17%
Debt Service 2		
Net Operating Income (NOI)	$ 403,236	100%
Debt Service @ 8.00 %	$ 348,528	86%
(5 yr. Constant Treasuries + 2.75)		
NOI after Debt Service	+ $ 54,708	14%
Debt Service 3		
Net Operating Income (NOI)	$ 403,236	100%
Debt Service @ 8.50 %	$ 363,612	90%
(5 yr. Constant Treasuries + 2.75)		
NOI after Debt Service	+ $ 39,624	10%

Overview Analysis 1836, 1838 & 1840 COLUMBIA RD., NW; WASHINGTON D.C.			
Zoning			
	Poor	Fair	Acceptable
FAR	X		
Lot Occupancy			X
Setbacks			X
Loading			X
Parking			X
Recreation Area			X
Number Of Stories			X
Lot Occupancy			X
Height			X
Use			X
Financial			
	Poor	Fair	Acceptable
Loan To Value (LTV)		X	
LTV Deviation			X
Debt Service			X
NOI after Debt Service			X

Section 2

ESTIMATE OF STABILIZED NET OPERATING INCOME "AS IF STABILIZED "
1836, 1838 & 1840 COLUMBIA RD., NW; WASHINGTON D.C.

RENT						% of EGI
Potential Gross Rent:						
First Floor Retail Unit	3,100 SF	@	$ 30.00 Per Square Foot	$ 93,000		
Second Floor Retail Unit	3,600 SF	@	$ 15.00 Per Square Foot	$ 54,000		
2B / 2B with Study Residential Units	6 Units	@	$ 2,600 Per Unit / Month	$ 187,200		
2B / 2B Residential Units	3 Units	@	$ 2,088 Per Unit / Month	$ 75,168		
Parking	14 Spaces	@	$ 175.00 Per Month	$ 29,400		
Subtotal - Potential Gross Income (PGI)	19,981 SF			$ 438,768		
Expense Reimbursments - Retail Tenants				$ 18,827	$ 457,595	
Less Vacancy & Collection Loss	7.00%			($ 32,031)		
Effective Gross Income (EGI)				$ 425,564	$ 425,564	100%
EXPENSES		Per SF				
Real Estate Taxes		$ 1.13	$ 22,578			
Insurance		$ 0.53	$ 10,589			
Utilities		$ 1.25	$ 24,976			
General Maintenance and Repairs		$ 0.50	$ 9,990			
Management Fees at 5% of EGI		$ 0.97	$ 20,796			
Reserves for Replacement at $ 0.25/SF		$ 0.25	$ 4,995			
Leasing Commissions		$ 0.60	$ 11,988			
		$ 5.23			$ 105,914	28%
NET OPERATING INCOME (NOI)					**$ 319,650**	72%

LENDER REQUIREMENTS & CONSTRUCTION BUDGET WOV
1836, 1838 & 1840 COLUMBIA RD., NW; WASHINGTON D.C.

Net Operating Income (NOI)				$ 319,650	100%
Direct Capitalization Rate	(9%)			$ 3,550,000	
Loan To Value (LTV)	**(80%)**			**$ 2,840,000**	
Cost Analysis					
Above Grade	19,981 sq. ft.	@	$ 90.00 per ft.	$ 1,798,290	
Sub Grade	10,585 sq. ft.	@	$ 40.00 per ft.	$ 423,400	
Land				$ 965,000	
Interest Reserve				$ 99,200	
Cost To Construct				**$ 3,285,890**	
Loan To Value (LTV)				$ 2,840,000	80%
Cost To Construct				$ 3,285,890	93%
Actual Loan To Value				**93 %**	
LTV Deviation				**-13 %**	
Deviation Value				**- $ 466,690**	

DEBT SERVICE VS. FEASIBILITY
1836, 1838 & 1840 COLUMBIA RD., NW; WASHINGTON D.C.

Cost To Construct	$ 3,285,890	93% LTV
Debt Service 1		
Net Operating Income (NOI)	$ 319,650	100%
Debt Service @ 7.5 %	$ 291,384	91%
(5 yr. Constant Treasuries + 2.75)		
NOI after Debt Service	+ $ 28,266	9%
Debt Service 2		
Net Operating Income (NOI)	$ 319,650	100%
Debt Service @ 8.00 %	$ 304,332	95%
(5 yr. Constant Treasuries + 2.75)		
NOI after Debt Service	+ $ 15,318	5%
Debt Service 3		
Net Operating Income (NOI)	$ 319,650	100%
Debt Service @ 8.50 %	$ 317,496	99%
(5 yr. Constant Treasuries + 2.75)		
NOI after Debt Service	+ $ 2,154	1%

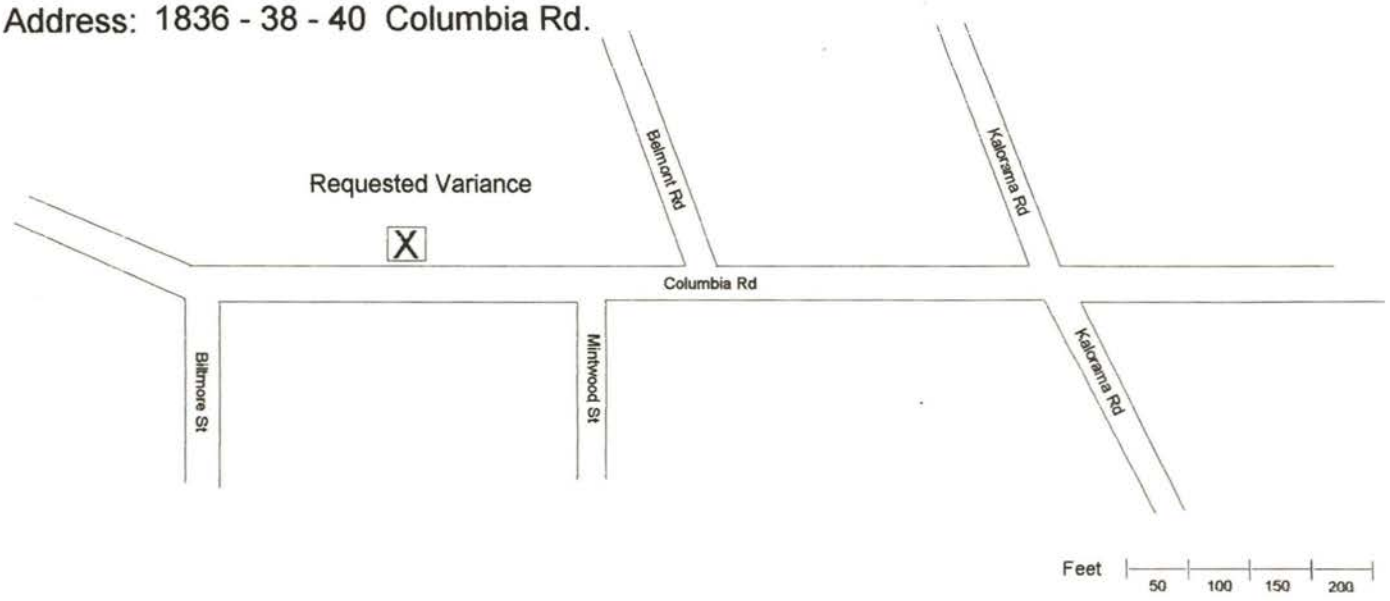
Overview Analysis 1836, 1838 & 1840 COLUMBIA RD., NW; WASHINGTON D.C.			
Zoning			
	Poor	Fair	Acceptable
FAR			X
Lot Occupancy			X
Setbacks			X
Loading			X
Parking			X
Recreation Area			X
Number Of Stories			X
Lot Occupancy			X
Height			X
Use			X
Financial			
	Poor	Fair	Acceptable
Loan To Value (LTV)	X		
LTV Deviation	X		
Debt Service	X		
NOI after Debt Service	X		

Section 3



Location:Requested Variance

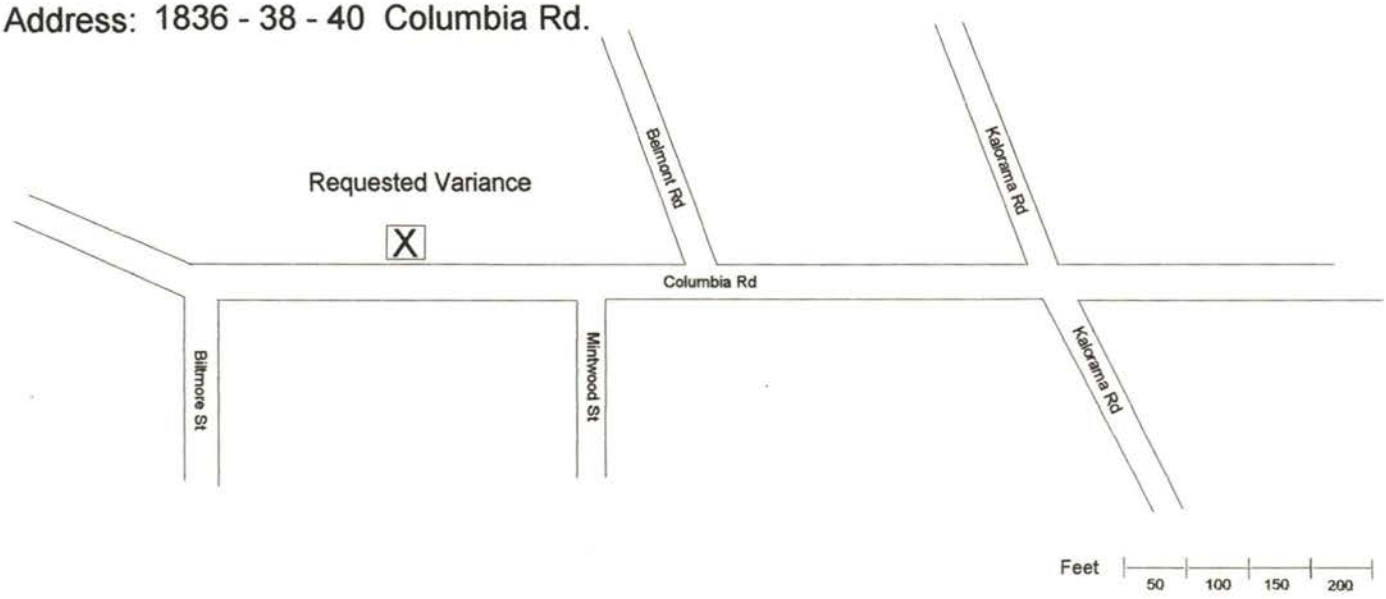
Address: 1836 - 38 - 40 Columbia Rd.





Location:Requested Variance

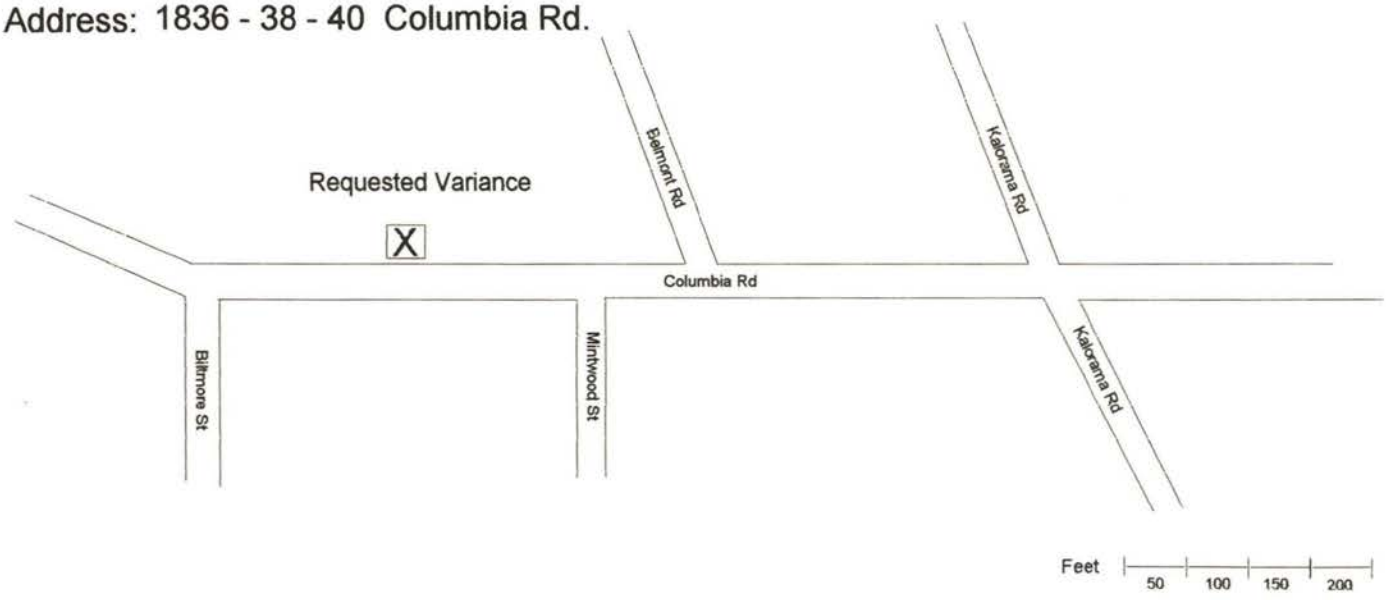
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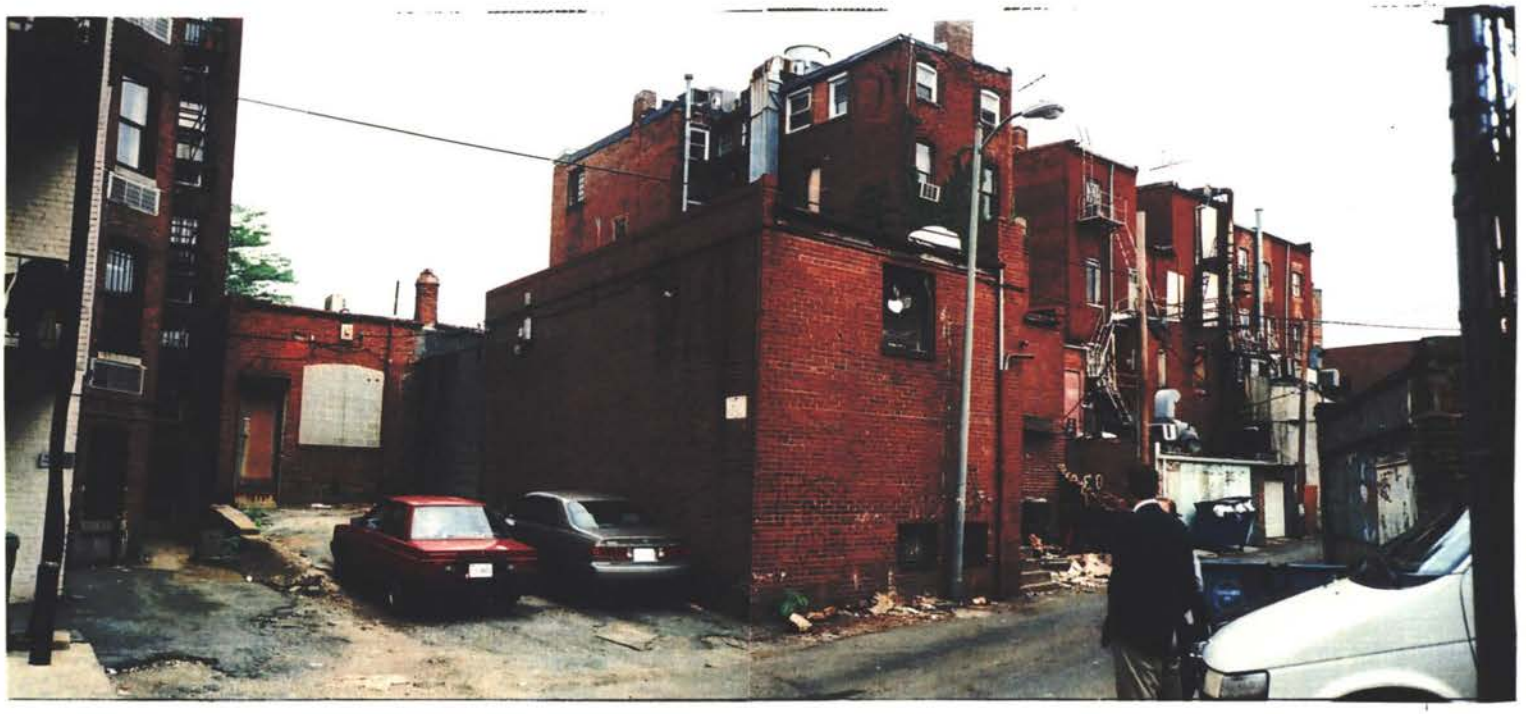




Location:Requested Variance

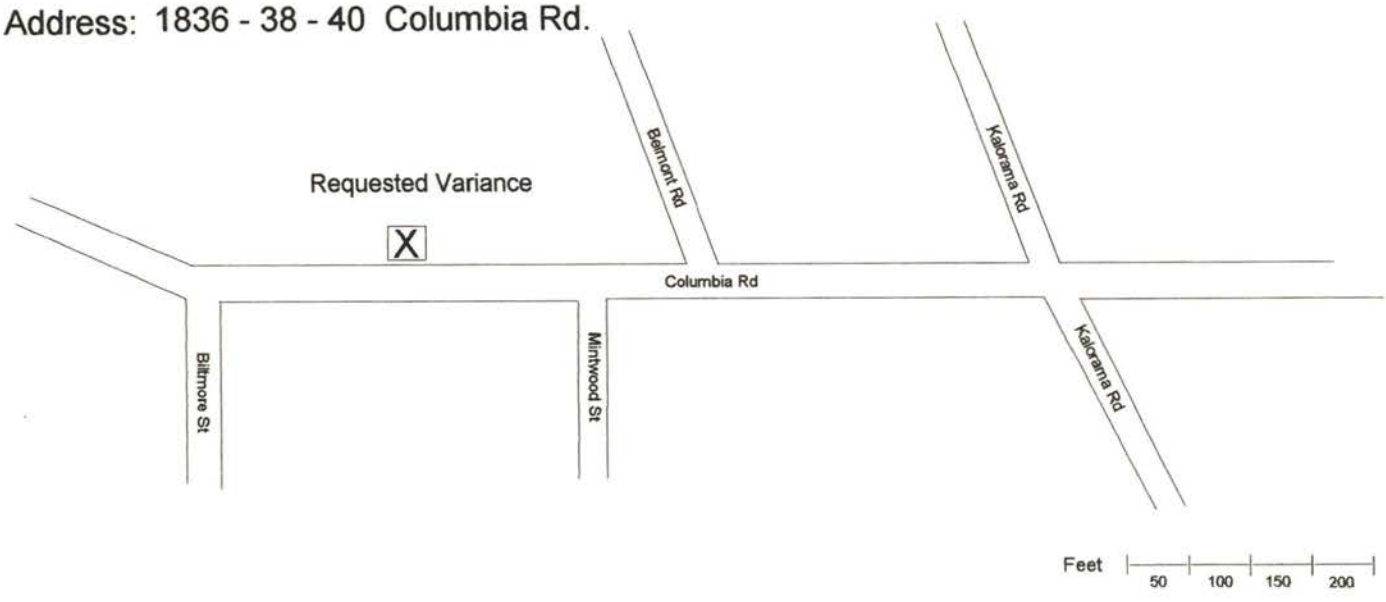
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Location:Requested Variance

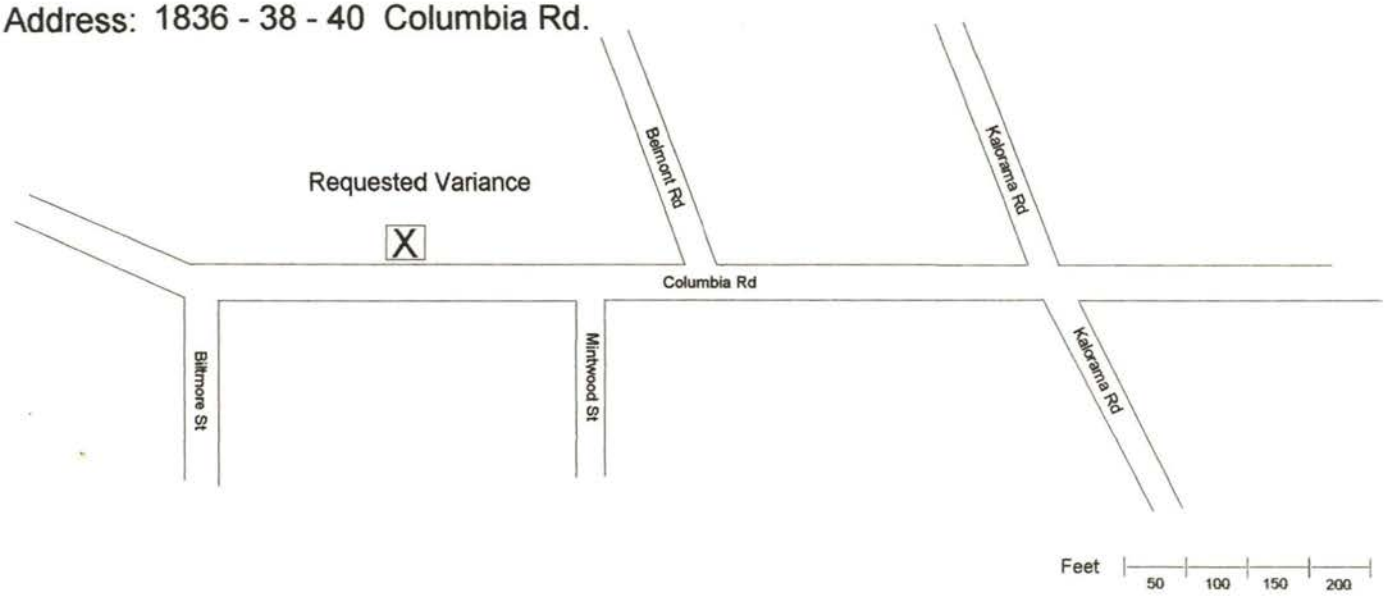
Address: 1836 - 38 - 40 Columbia Rd.





Location:Requested Variance

Address: 1836 - 38 - 40 Columbia Rd.



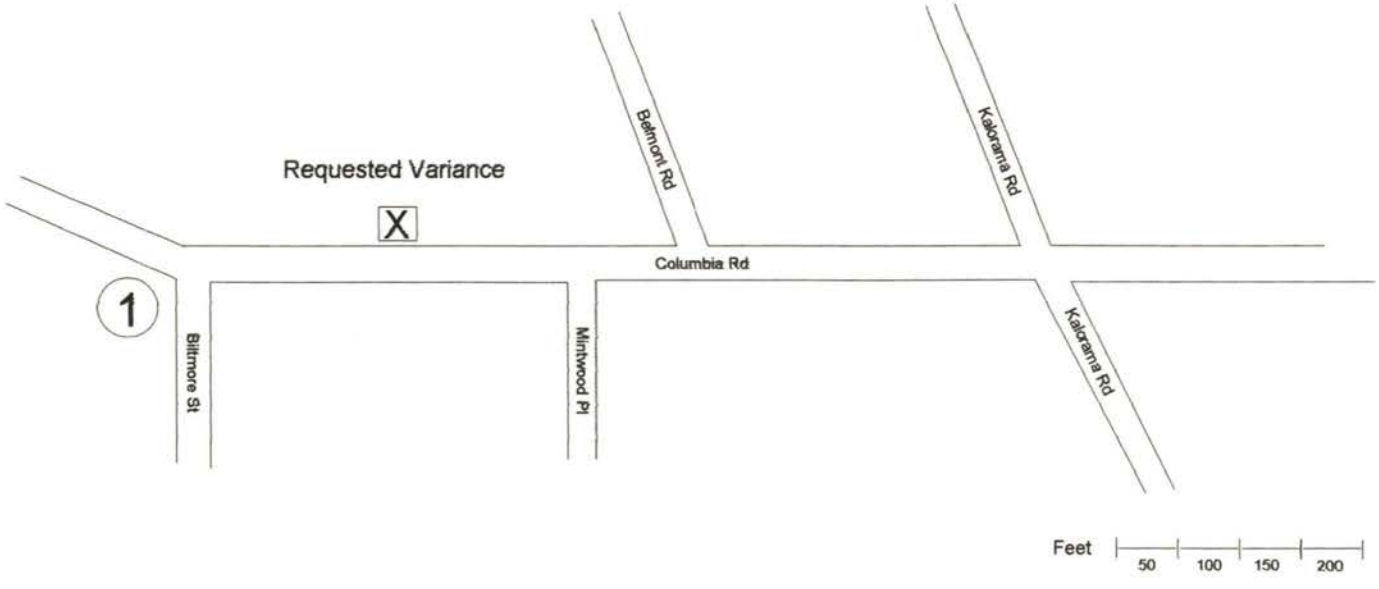
Neighborhood Comparables

By: Location



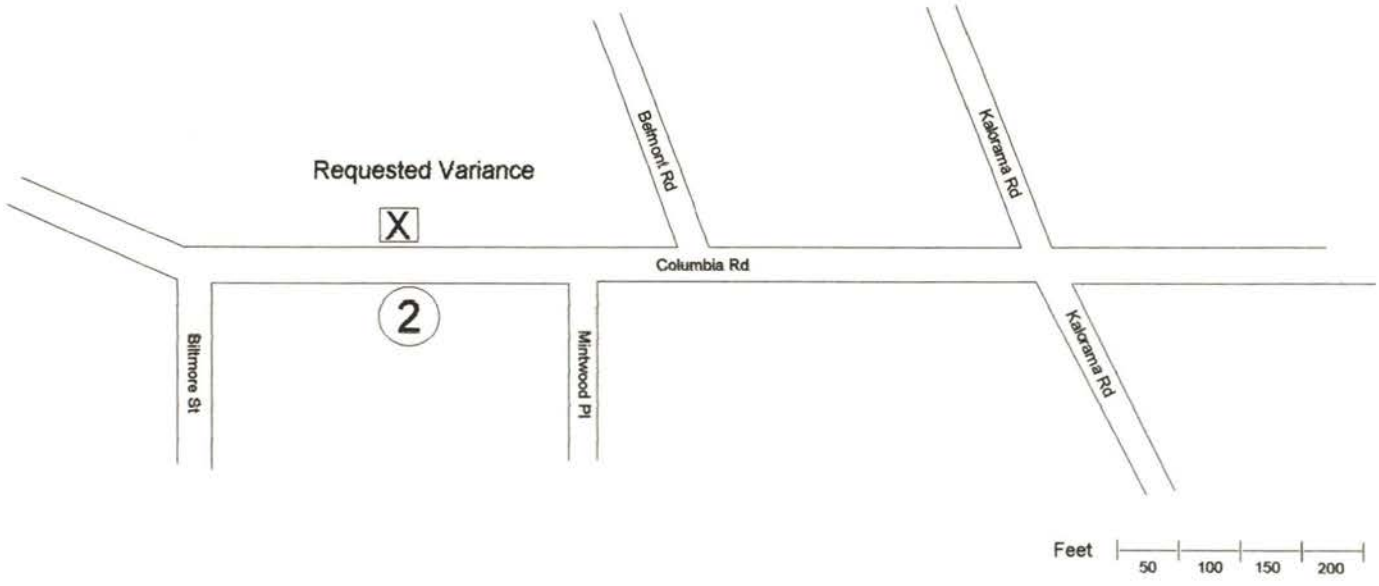
Location: The Melwood

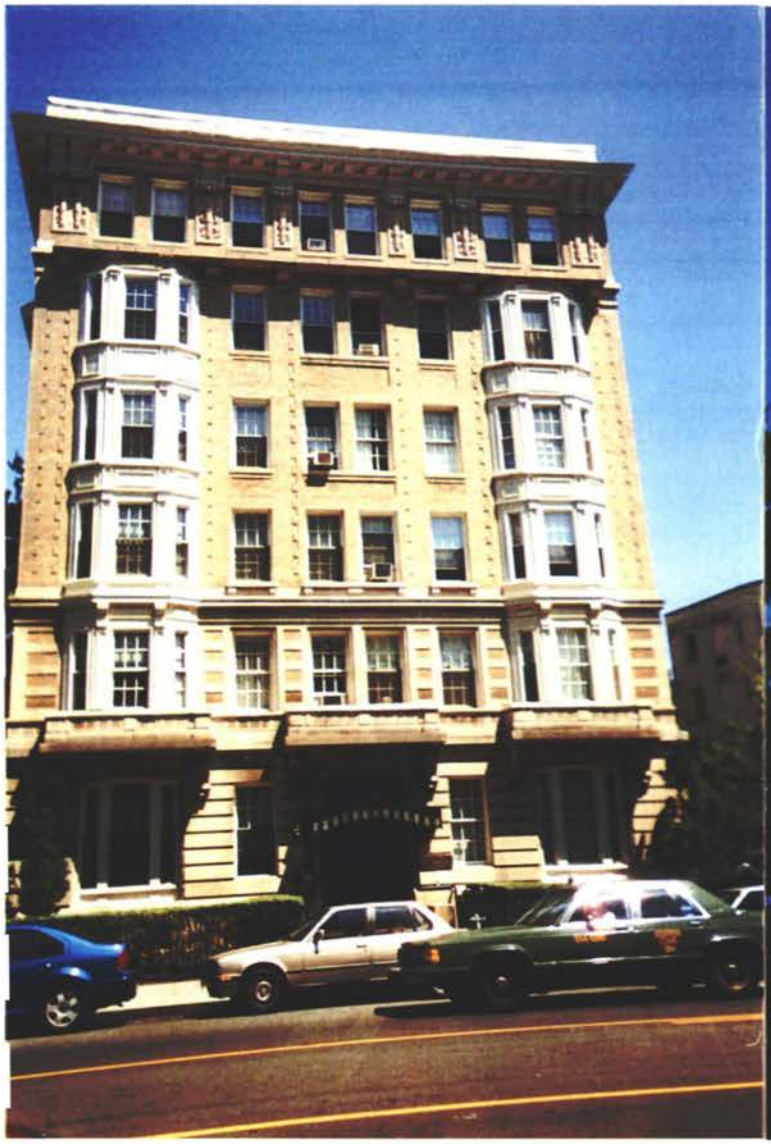
Address: 1803 Columbia Rd.





Address: 1841 Columbia Rd.

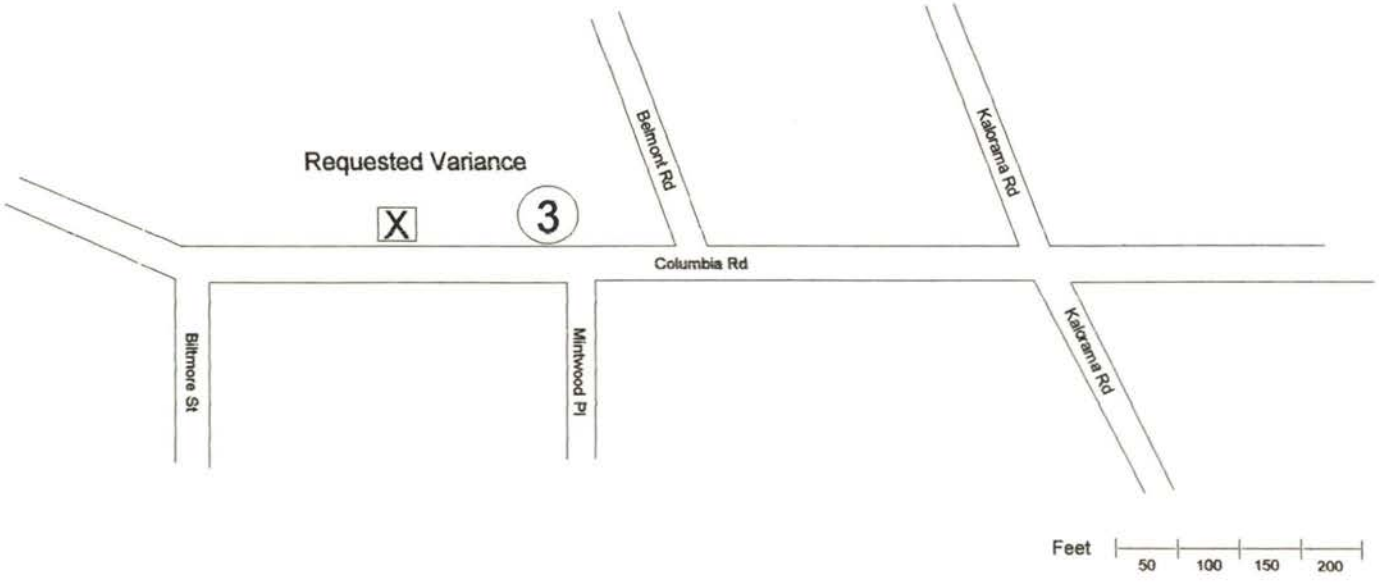






Location: The Netherlands

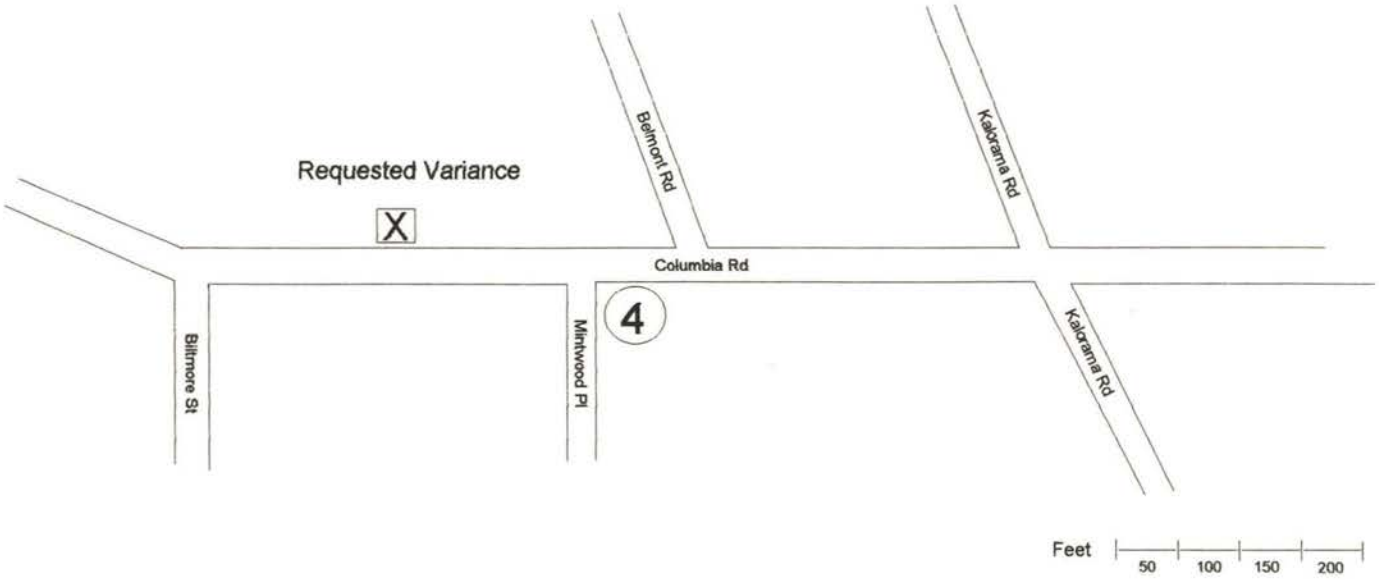
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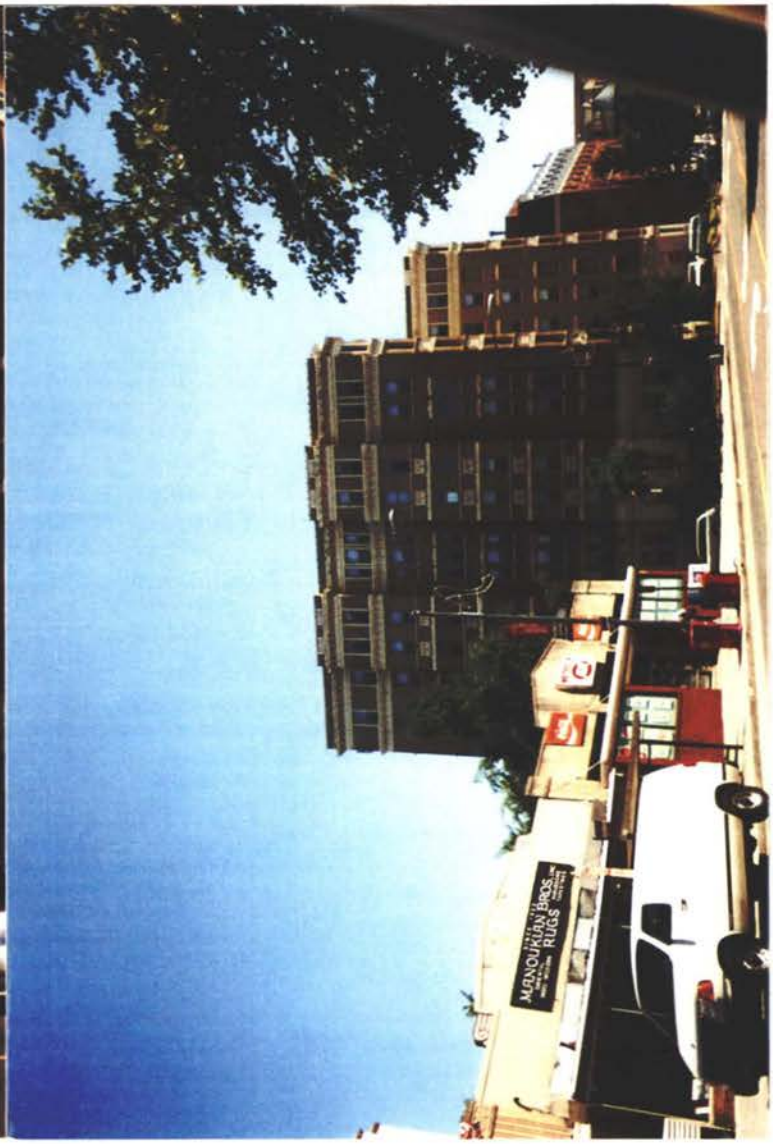


Location: The Woodley

Address: 1851 Columbia Rd.

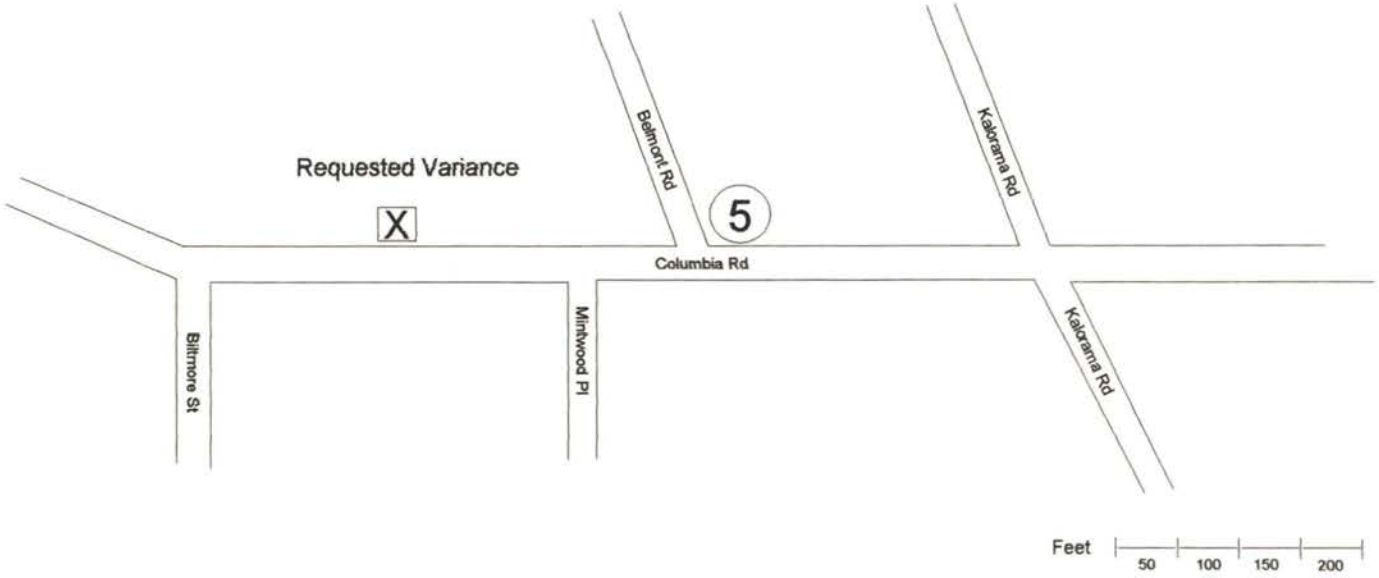


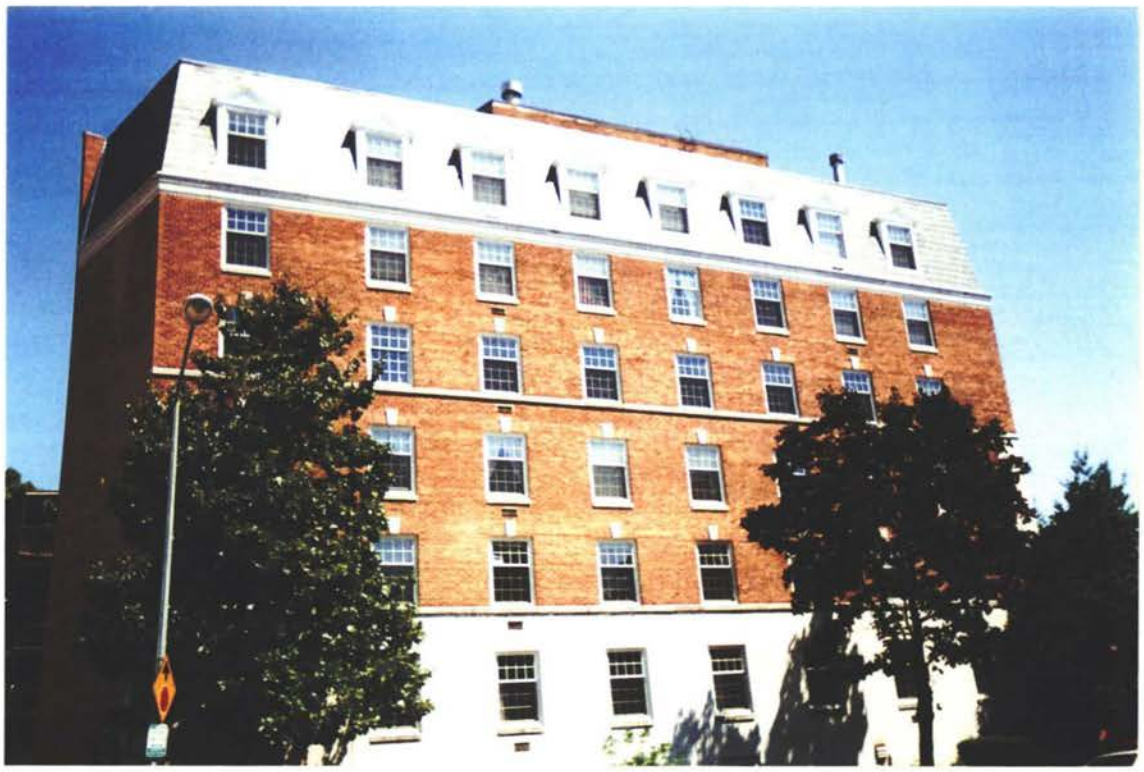




Location: The Norwood

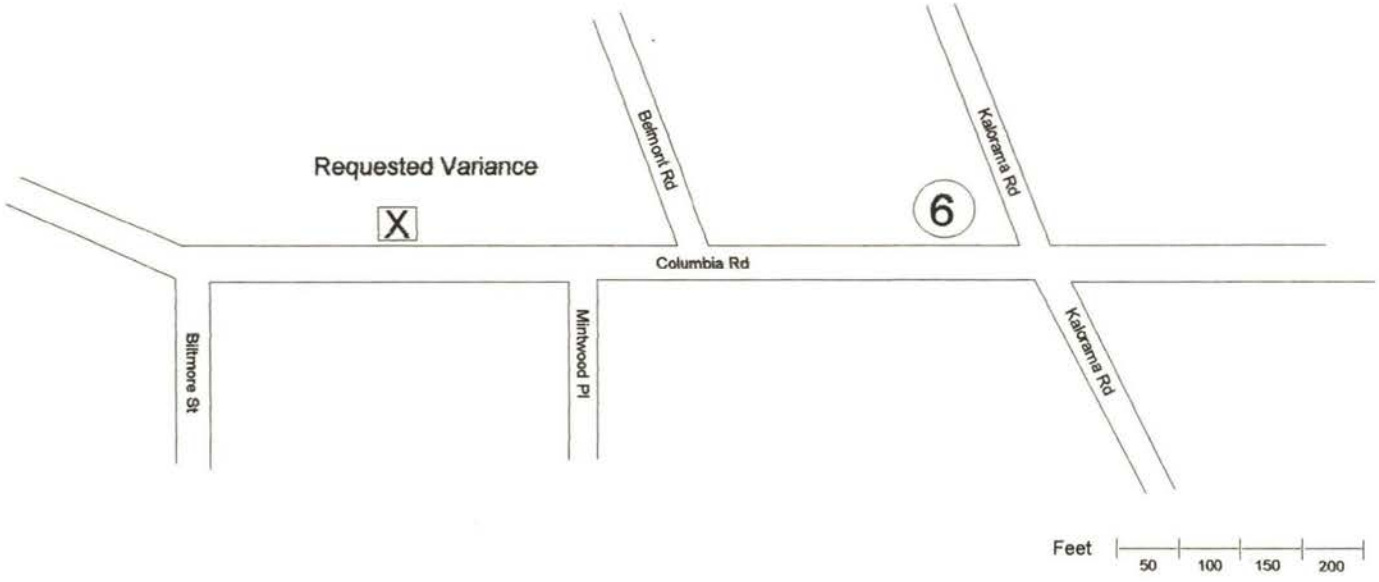
Address: 1868 Columbia Rd.





Location: The Georgian

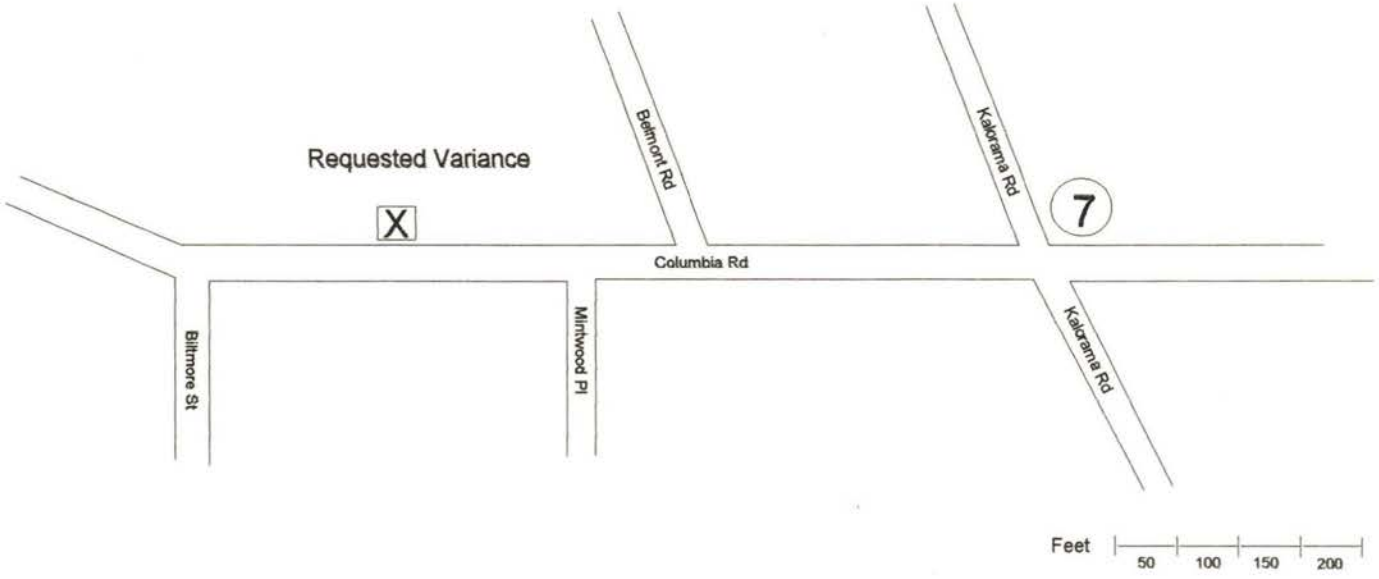
Address: 1880 Columbia Rd



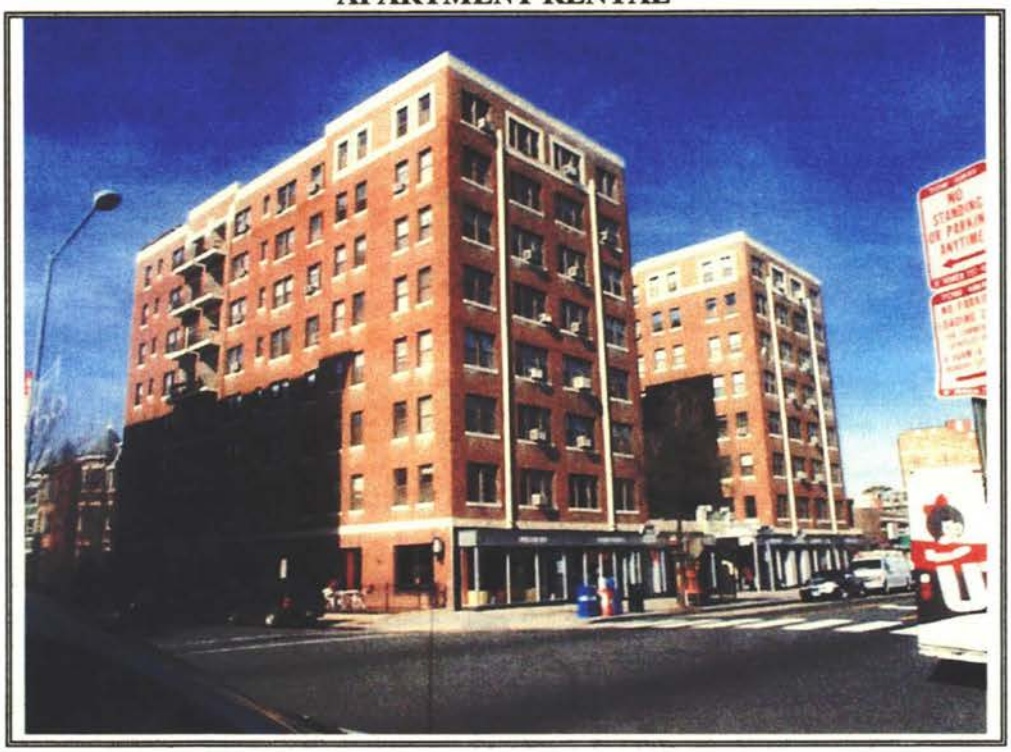


Location: The Kalorama

Address: 1882 Columbia Rd.



COMPARABLE RENTAL
APARTMENT RENTAL



Property Address: 1841 Columbia Road, N.W.
Washington, D.C.

Building Size: 112 Units

Lease Type: Landlord pays water and sewer

Rental Information:

TYPE	SQUARE FEET	MO. RENT	RENT PSF/YR
Studio	399 SF	$854	$25.69
1 Bedroom	598 SF	$1,186	$23.80
1 Bedroom	832 SF	$1,501	$21.64
2 Bedrooms	951 SF	$2,016	$25.44

Comments: This property is located across the street from the subject property. It is a high rise apartment building with ground level retail. It is in average overall condition.

COMPARABLE RENTAL

APARTMENT RENTAL



Property Address: Park Plaza
1629 Columbia Road, N.W.
Washington, D.C.

Building Size: 276 Units

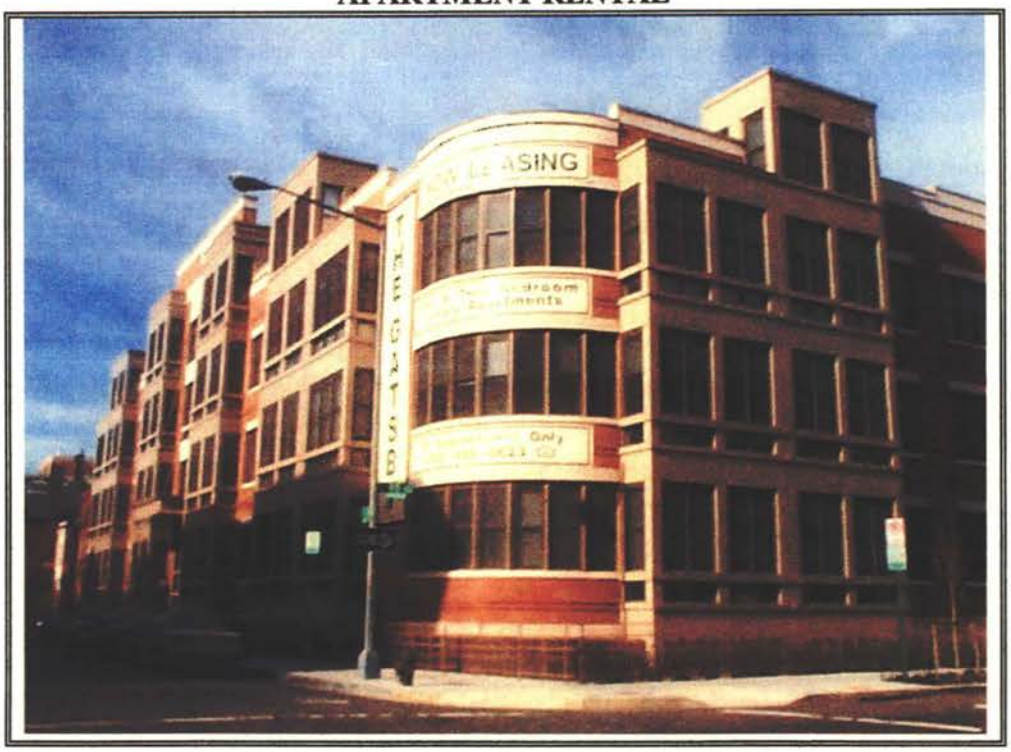
Lease Type: Landlord pays all utilities

Rental Information:

TYPE	SQUARE FEET	MO. RENT	RENT PSF/YR
Studio	400 SF	$850	$25.50
1 Bedroom	600 SF	$1,275	$25.50
2 Bedrooms	800 SF	$1,850	$27.75

Comments: This property is located approximately 2 blocks north of the subject in Adams Morgan. It is in average condition with good visibility. There is street parking only.

COMPARABLE RENTAL
APARTMENT RENTAL



Property Address: The Gatsby
1515 O Street, N.W.
Washington, D.C.

Building Size: 52 Units

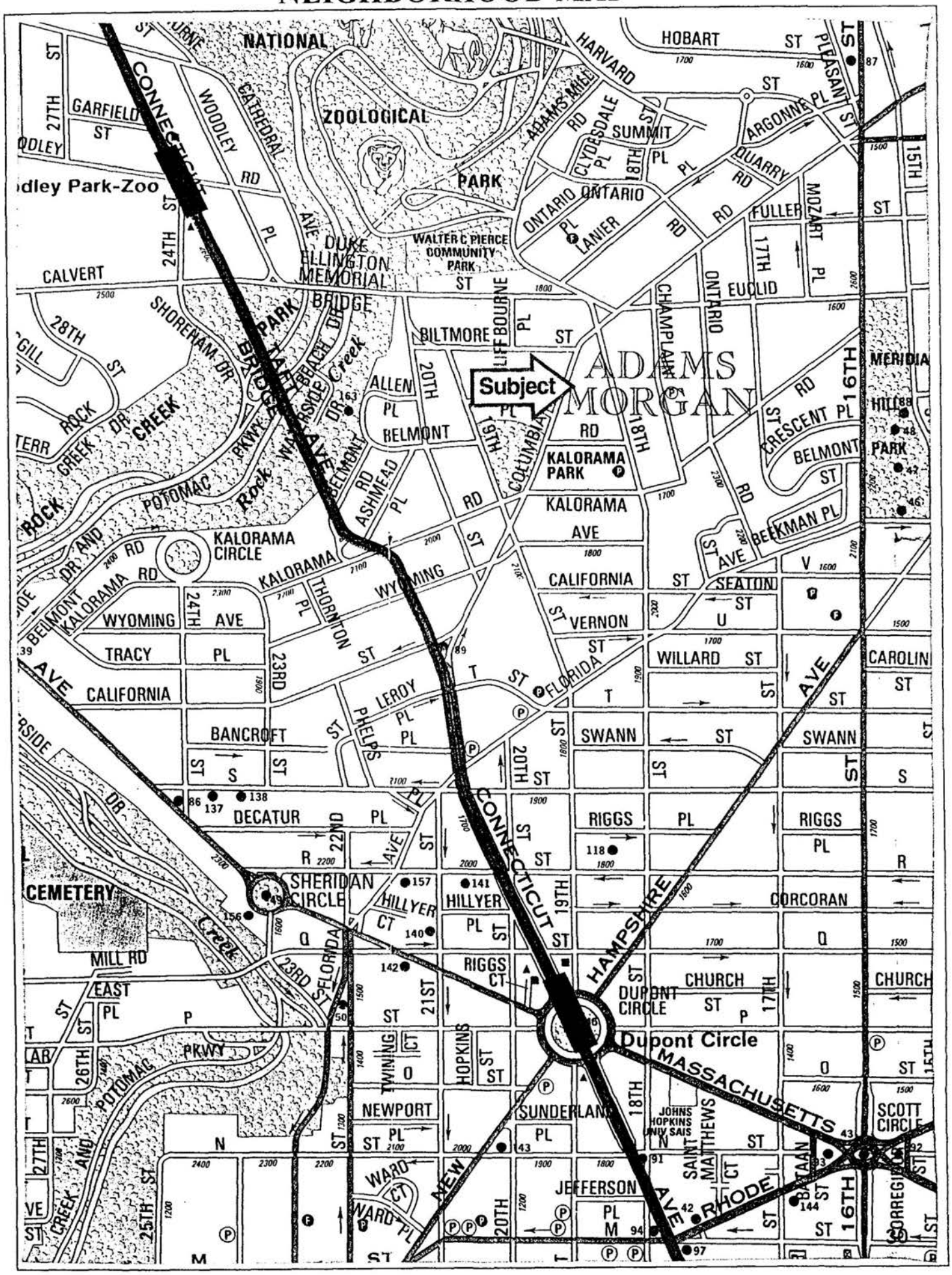
Lease Type: Landlord pays all utilities except electricity

Rental Information:

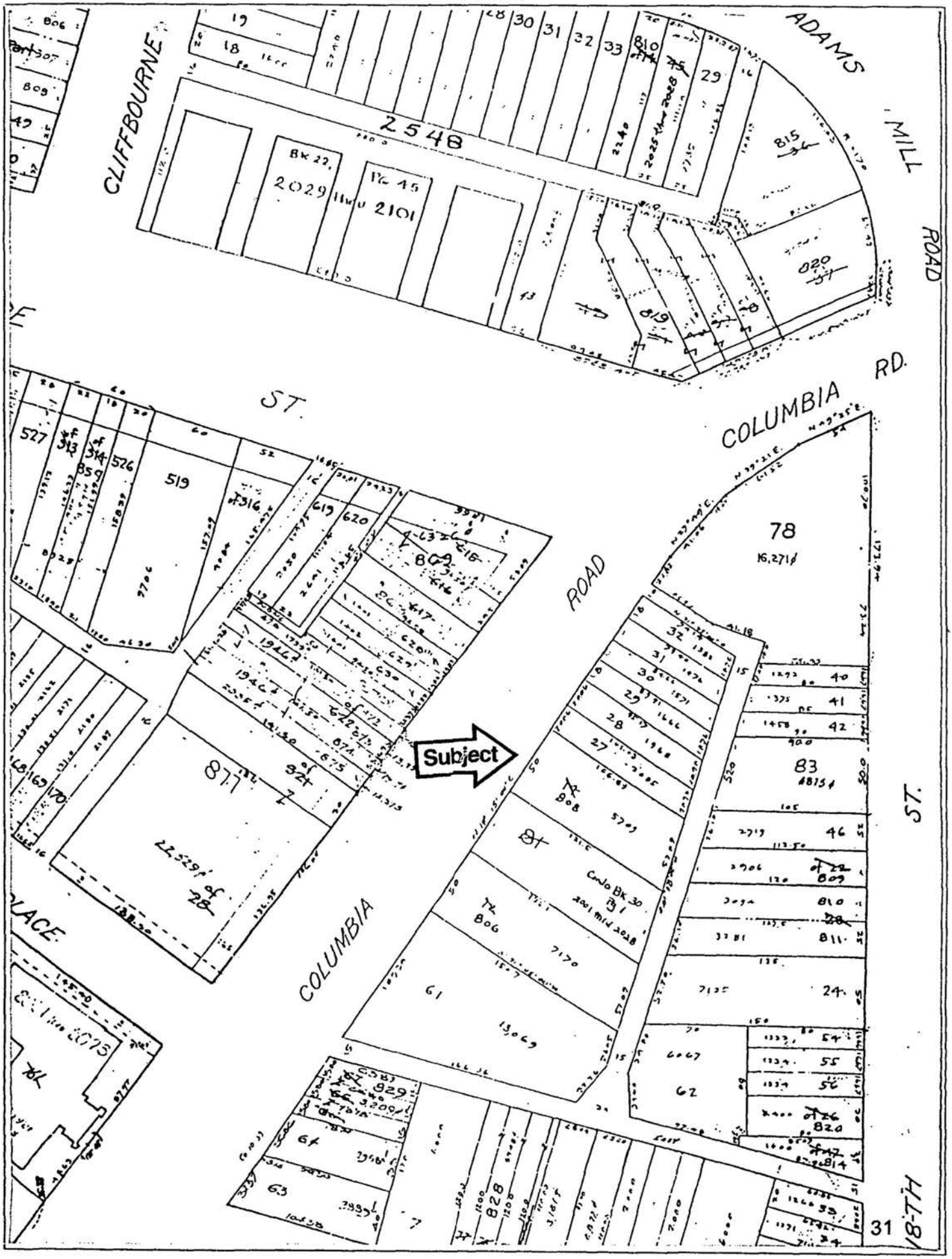
TYPE	SQUARE FEET	MO. RENT	RENT PSF/YR
1 Bedroom	520 SF	$1,300	$30.00
1 Bedroom	905 SF	$2,300	$30.50
2 Bedrooms	1,040 SF	$2,400	$27.69
2 Bedrooms w/study	1,020 SF	$2,500	$29.48
2 Bedrooms	1,290 SF	$2,600	$24.19

Comments: This property is a newly constructed, 4-story apartment building located approximately 16 blocks southeast of the subject. It is in good (new) condition with average-to-good visibility.

NEIGHBORHOOD MAP



TAX MAP


CLIFFBOURNE
ADAMS MILL ROAD
COLUMBIA RD.
COLUMBIA ROAD
COLUMBIA ST.
18TH ST.
2548
2029
2101
Subject
78
16,271sf
83
48154sf
87
22,529sf
61
19069
62
6067
63
828
829
31

DEMOGRAPHIC AND MARKET REPORTS

Geocode Search Result for 2001 HMDA/CRA Reporting			
Street Address	1836 NW COLUMBIA RD	**MSA Code**	**8840**
City Name	WASHINGTON	**State Code**	**11**
State Abbreviation	DC	**County Code**	**001**
Zip Code	20009	**Tract/BNA Code**	**0040.02**

Census Population Information

Tract/BNA Population	3181	**Tract/BNA Minority Population**	1121
Tract/BNA Minority %	35.24	**American Indian Population**	7
Number of Families	472	**Asian Population**	168
Number of Households	1870	**Black Population**	571
White Population	2060	**Hispanic Population**	375
		Other Population	0

Census Income Information

Tract/BNA Income Level	Moderate Income	**Tract/BNA Median Family Income %**	63.73
1990 MSA/statewide non-MSA Median Family Income	$52,807	**1990 Tract/BNA Median Family Income**	$33,654
2001 HUD Estimated MSA/non-MSA Median Family Income	$85,600	**2001 Tract/BNA Estimated Median Family Income**	$54,552
% below Poverty Line	8.19	**1990 Tract/BNA Median Household Income**	$33,851

Census Housing Information

Total Housing Units	1966	**Owner-Occupied Units**	590
1- to 4- Family Units	300	**Renter Occupied Units**	1242
Median Age of Housing Stock (in years)	51	**Vacant Units**	134
Inside Central City?	Yes	**Owner Occupied 1- to 4- Family Units**	126

Neighborhood Information

Save Neighborhood

Location: Washington, DC 20009

Demographics

	Washington, DC 20009	National Average
Population of Washington:	41986	9184
Median Age:	33.13 years	35.29 years
Median Household Income:	$42809	$36766.47
Percentage of Single Households:	81.41%	39.34%
Percentage of Married Households:	18.59%	60.38%
Percentage Families (households with children):	36.05%	72.79%
Average Household Size:	1.89 people	2.63 people
Percentage College or Better:	49.45%	20.90%
Percentage White Collar:	66.78%	45.40%

Cost of Living

	Washington, DC 20009	National Average
Cost of Living Index:	120	100
Average Yearly Utility Cost:	$3169.65	$2595.57
Average Household Total Consumer Expenditures:	$45089.92 per year	$37656.69 per year
Average Household Education Expenditures:	$509.73 per year	$362.83 per year
Average Household Entertainment Expenditures:	$2337.14 per year	$2001.63 per year
Average Household Transportation Expenditures:	$8683.00 per year	$7602.91 per year
Average Household Retail Expenditures:	$21017.14 per year	$17229.91 per year
Average Household Non-Retail Expenditures:	$24072.78 per year	$20426.77 per year

Housing Characteristics

	Washington, DC 20009	National Average
Single Family Home Sale Price Index:	291	100
Percent Homes Owner Occupied:	21.71%	62.31%
Average Dwelling Size:	3 rooms	4.49 rooms

MARSHALL & SWIFT SCHEDULES

STORES AND COMMERCIAL BUILDINGS

(CALCULATOR METHOD)

GENERAL INFORMATION

Calculator Costs are averages of final costs including architects' fees and contractors' overhead and profit, sales taxes, permit fees and insurance during construction. Interest on interim construction financing is also included, but not financing costs, real estate taxes or brokers' commissions (see Section 1 for complete list). These costs do not represent any building illustrated, except as the building is included in the averages. Refinements to the average costs for type of heating, sprinklers, basement elevator stops, area/perimeter ratio and story height are given at the end of the section, and adjustments for elevators and number of stories are on the cost pages. Exterior balconies are not included in the basic building costs and must be added separately. For buildings with solid rustic log walls, it is advisable to use Section 43, as the costs of these buildings may be 5% to 15% higher than the standard Class D costs contained in the Calculator Section. Current and Local Cost Multipliers are given in Section 99.

DESCRIPTIONS

The abbreviated descriptions given in the tables show some of the items generally found in buildings of the class, quality and occupancy listed. They are merely indicative of many buildings in this cost classification, and are not meant to be building specifications.

CONSTRUCTION

Buildings are divided into five construction classes: A, B, C, D and S, as described in Section 1. In each class there will be variations and subclasses, but for purposes of pricing, the major elements of the building should be considered in entering the tables. Thus, if a building which is otherwise a Class B has a steel truss roof, the costs for the Class B building will still be representative. Interpolations may be made if the appraiser feels the building overlaps two classes, or the segregated costs in Section 43 may be used for adjustments.

OCCUPANCY VARIATIONS

Care should be taken to use proper costs for varying types of occupancy. For example, compute separately a floor or section of a building constructed for a use differing from that of the building generally, i.e., compute the basement as a basement.

As an example, a building is a multistory office building with the first floor occupied by a retail store and the other floors by offices. In addition, there is a basement below grade. In this case three different divisions of the building should be computed separately: the office portion (Section 15), the retail store, and the basement. Each of these is subject to refinements based on its own individual characteristics except that all, including the basement, is subject to the same multiplier for the number of stories above grade in the building when applicable. A further explanation on multistory adjustments can be found in Section 10.

OCCUPANCY

Restaurants are constructed for the purpose of preparation and sale of food and/or beverages, and include cafeterias, bars and taverns where the design is of restaurant type. The costs include all necessary plumbing, built-in refrigerators and electrical connections to provide for these services but do not include the restaurant and bar fixtures or equipment or signs. **Bars** or **taverns** are designed primarily for the service and consumption of beverages, with the better qualities having limited food preparation areas and service. **Cocktail lounges** are typically larger facilities with entertainment floors and stages, with the better qualities containing full kitchens. **Cafeterias** will have large, open dining rooms for self-service of large groups, and include commercial as well as institutional facilities. **Truck stop** restaurants are of multipurpose design to include convenience store, food service, shower and toilet, game and rest facilities for truckers. **Fast food** or small limited-menu outlets will contain limited seating in relation to preparation area, including drive-up windows commensurate with the quality. Site costs outside the building line are not included. **Dining atriums** and **playrooms** are open-shell extensions for enclosed extra seating or game/play areas. **Snack bars** or **concession stands** have no seating area and include the very marginal seasonal camp-type facility to the best municipal structure with completely finished food preparation area. Separate shower and restroom buildings can be priced from Section 18.

Markets are retail food stores which often handle limited lines of other merchandise. The costs include built-in refrigerators, cold rooms and ancillary cooling equipment which are usually classed as real estate, but do not include display freezers and coolers or other equipment generally classed as personal property or trade fixtures. **Convenience markets** are small food stores with limited interior facilities. The better qualities will include the small specialty or gourmet food shops. **Mini-mart** food stores are small convenience outlets that cater primarily to a transient trade for self-service snack foods and beverages. The better stores will have public restrooms and limited hot or deli food preparation and service areas. **Dairy sales** buildings are drive-up store buildings designed for sale and limited storage of dairy products. **Florist shops** are convenience stores for the sale of cut flowers, with the better stores containing finished display areas for other gift merchandise. **Roadside** or **farmers' markets** are typically rural structures for the sale of fresh produce, from the simple open stand to the enclosed, full retail market barn with refrigerated storage.

Drugstores include both the small neighborhood pharmacy and the large chain discount-type store with a variety of merchandise departments including convenience foods. Costs include built-in refrigerators, but do not include display freezers and coolers or other trade fixtures.

Discount stores are typically large open shells with some partitioning for offices and storage areas. Often called department stores, the best quality approaches the low-quality department store in cost. This category will also include the large off-price center and furniture- and home-improvement-type shell outlets. **Warehouse discount stores** are of warehouse construction with minimal interior partitioning. Membership stores typically fall into this category. **Warehouse showroom stores** are typical of the large walk-through furniture outlets with a semifinished showroom and large carry-out warehouse as one complete facility. **Warehouse food stores** are large markets of warehouse construction, offering limited perishable products, excluding any built-in coolers or refrigerated storage. The better qualities will merge into the market occupancy, with a number of finished major product departments, but excluding any storage/display walk-in boxes.

Retail stores are buildings designed for retail sales and display and usually have display and/or decorative fronts. Both one- and two-story stores are included in the averages. They will include stores occupied by so-called secondary or junior department stores with limited merchandise lines, specialty shops and commercial buildings designed for general occupancy.

Department stores are buildings of two or more stories, typically found in large cities and regional shopping centers and handling multiple lines of merchandise, for which they are subdivided into departments. **Mall anchor stores** are the modern regional anchors that are a transition between the pure discount store and the old full-line department store.

Basement costs include finish compatible with the type of basement, including stairs and ramps as necessary, and must be refined for size, shape and height. Add elevator stops from the refinement page.

Mezzanine costs include floor structure, soffit, stairs and flooring, as well as typical partitions and lighting for the type of mezzanine, but none of the exterior building walls, which are included in the building cost. Elevator stops can be added from the refinement page.

Barber shop or **beauty salon** costs include sinks, plumbing and electrical fixtures necessary for operation but do not include the mirrors, chairs and barber cabinets, which are usually tenant-owned. The good quality includes more plumbing associated with numerous work stations found in better beauty parlors or shops.

Laundromats are constructed to hold automatic self-service washing machines, dryers, and dry cleaning machines, and the costs include the plumbing and electrical fixtures necessary for operation but not the laundry or cleaning equipment, which is usually tenant-owned.

Laundry and **dry cleaning stores** are designed for full-service laundry cleaning including typical retail storefront and laundry work space commensurate with the quality level.

Shopping centers are buildings designed for a group of commercial enterprises developed as a unit. Complete centers are broken down into specific pricing categories, which are described in detail on Page 28.

TRADE FIXTURES AND EQUIPMENT

Some fixtures and equipment costs for buildings in this section are listed in Section 65.

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NEIGHBORHOOD SHOPPING CENTERS

(CALCULATOR METHOD)

CLASS	TYPE	EXTERIOR WALLS AND FRONTS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	HEAT	COST Sq. M.	COST Cu. Ft.	COST Sq. Ft.
C	Good	Stucco or brick on block, light frame, good roof, mansard and storefronts	Drywall, some paneling, good VCT and acoustic tile, carpet	Good lighting and outlets per unit, small restrooms	Package A.C.	$693.52	$5.37	$64.43
	Average	Good block, tilt-up, bearing or light frame, plain fronts, some trim	Drywall, acoustic tile, VCT, some carpet and masonry partitions	Adequate lighting and outlets per unit, small restrooms	Package A.C.	577.27	4.47	53.63
	Low cost	Low-cost fronts, block, tilt-up panels, bearing walls	Painted walls, drywall or acoustic tile, asphalt tile, few partitions	Minimum lighting, outlets and plumbing per unit	Forced air	456.72	3.54	42.43
CMILL	Average	Mill-type construction, heavy brick walls, trusses, good wood sash	Plaster, VCT, wood, some carpet, wainscot and trim	Adequate lighting and outlets per unit, small restrooms	Hot water	652.84	5.05	60.65
D	Good	Stucco or brick veneer, light frame, good roof, mansard and storefronts	Drywall, some paneling, good VCT and acoustic tile, carpet	Good lighting and outlets per unit, small restrooms	Package A.C.	664.57	5.15	61.74
	Average	Pipe columns, web or bar joists, stucco or siding, plain fronts	Drywall, acoustic tile, vinyl composition, some carpet and trim	Adequate lighting and outlets per unit, small restrooms	Package A.C.	551.55	4.27	51.24
	Low cost	Low-cost wood or stucco, very plain, small fronts	Low-cost acoustic tile, asphalt tile, few partitions	Minimum lighting, outlets and plumbing per unit	Forced air	434.33	3.36	40.35
DPOLE	Low cost	Pole frame, metal siding, finished interior, small fronts	Drywall, low-cost tile, few partitions	Minimum lighting, outlets and plumbing per unit	Forced air	403.00	3.12	37.44
S	Average	Good metal panels, some trim, plain fronts	Acoustic tile, vinyl composition, some carpet and interior trim	Adequate lighting and outlets per unit, small restrooms	Package A.C.	527.87	4.09	49.04
	Low cost	Metal siding, finished interior, small fronts	Drywall, low-cost tile, few partitions	Minimum lighting, outlets and plumbing per unit	Forced air	414.31	3.21	38.49

MIXED RETAIL CENTERS WITH RESIDENTIAL UNITS

C	Good	Face brick, best block, some mansard trim, good display fronts	Above-average retail finishes, good residential units above	Good lighting and outlets, standard fixtures per unit	Package A.C.	$712.58	$5.52	$66.20
	Average	Brick or block, bearing or light frame, plain storefronts	Average retail mix and finishes, few extras, standard residential above	Adequate lighting and plumbing per unit	Package A.C.	570.06	4.41	52.96
	Low cost	Brick or block, bearing walls, very plain fronts, simple design	Low-cost general retail and basic residential above, no extras	Minimum lighting and plumbing per code	Forced air	433.25	3.35	40.25
CMILL	Average	Mill-type construction, heavy brick walls, trusses, good wood sash	Average retail mix and finishes, few extras, standard residential above	Adequate lighting and plumbing per unit, tiled baths	Hot water	662.95	5.13	61.59
D	Good	Best siding, EIFS, masonry veneer, good trim and display fronts	Above-average retail finishes, good residential units above	Good lighting and outlets, standard fixtures per unit	Package A.C.	686.96	5.32	63.82
	Average	Stucco, siding, plain storefronts, minimum fenestration	Average retail mix and finishes, few extras, standard residential above	Adequate lighting and plumbing per unit	Package A.C.	546.27	4.23	50.75
	Low cost	Low-cost wood or stucco, very plain, small fronts, simple design	Low-cost general retail and basic residential above, no extras	Minimum lighting and plumbing per code	Forced air	411.72	3.19	38.25

Note: Add for fireplaces and appliances from Section 12. For unfinished storage floors, decrease costs by 40% to 60%.

PERIMETER - Use total length of all exterior walls of entire attached center as the perimeter in the Floor Area/Perimeter table.

MULTISTORY BUILDINGS - Add .5% (1/2%) for each story over three, above ground, to all base costs of the building, including basements but excluding mezzanines.

BASEMENT STORES - Use 80% of comparable aboveground center cost.

ELEVATORS - Add for elevators from Page 36.

EXTERIOR BALCONIES - Balconies generally cost 1/4 to 1/2 of the final base cost per square foot of the building, or they may be computed from Section 43, or from the Unit-in-Place Costs.

SPRINKLERS - Sprinkler systems are not included. Costs should be added from Page 36.

ROOFTOP PARKING - Load-bearing roof, add $3.80 per square foot ($40.90 per square meter). For access ramps, add $13.50 - $24.00 per square foot ($145.31 - $258.34 per square meter).

STORES AND COMMERCIAL BUILDINGS

(CALCULATOR METHOD)

REFINEMENTS

On this page and the next are means of making adjustments to the base costs given in this section. The component parts which are not defined, such as the roof or foundation, are considered to be commensurate with the general quality of the building. If further refinements are required or the construction is unusual, either price entirely or partially by the Segregated Cost System, Section 43. Special items which should be added to the total cost may be added from the Unit-in-Place cost sections.

HEATING AND COOLING

These costs are averages of the total installed costs of the entire heating or cooling installation including its prorated share of the contractor's overhead and profit and architects' fees. If the heating found in the building being appraised is different from that indicated for the base being used, take the difference between the costs of the two and add to or subtract from the base square foot or meter cost. If a cubic foot cost is used, use one-twelfth the difference shown to adjust the base cubic foot cost. All of the heating costs included in the base costs are those listed under "Moderate Climate." For specific systems costs not found below, see Section 43 or 53.

COOLING ONLY

Cooling costs in commercial buildings are dependent on the summer heat load, types of walls and roof, traffic, density of occupancy, etc. In general, the following figures will serve as a guide for picking the proper cost of separate cooling.

TYPE	SQUARE METER COSTS			SQUARE FOOT COSTS		
	Mild Climate	Moderate Climate	Extreme Climate	Mild Climate	Moderate Climate	Extreme Climate
Central refrigeration with ducts and zone control	$38.21	$52.21	$71.04	$3.55	$4.85	$6.60
Package refrig. (short ductwork)	25.83	34.98	47.36	2.40	3.25	4.40
Central evaporative (with ducts)	19.38	24.22	29.60	1.80	2.25	2.75
Package refrigeration	$1,100.00 to $1,425.00 per ton of rated capacity					
Evaporative coolers	$150.00 to $250.00 per thousand CFM of rated capacity					

VENTILATION ONLY

Ventilation (blowers and ducts)	$6.67	$8.83	$11.73	$.62	$.82	$1.09

ELEVATORS

Lump-sum cost per elevator plus the cost per stop or landing including the ground level. Use the cost per stop for basement and mezzanine stops. See Section 58 for more detailed costs, observation cars and moving-walk or dumbwaiter costs.

TYPE	COST RANGE
Passenger, base cost, two to three stories	$ 26,000 - $ 42,250
four stories and over	45,000 - 67,750
add, cost per stop	3,750 - 5,750
Freight, base cost, two to three stories	20,250 - 46,250
four stories and over	39,500 - 79,500
add, cost per stop, manual doors	5,050 - 6,550
power doors	8,800 - 11,350
Escalators, each stairway	105,000 - 124,000
Vertical wheelchair lifts, each	6,500 - 15,000

HEATING ONLY

TYPE	SQUARE METER COSTS			SQUARE FOOT COSTS		
	Mild Climate	Moderate Climate	Extreme Climate	Mild Climate	Moderate Climate	Extreme Climate
Electric, baseboard or cable	$20.45	$27.99	$38.75	$1.90	$2.60	$3.60
radiant panel	19.38	23.14	27.99	1.80	2.15	2.60
Electric wall heaters (inc. FWA)	9.69	12.38	15.61	.90	1.15	1.45
Forced-air furnace	21.53	30.14	41.98	2.00	2.80	3.90
Hot water, baseboard/convector	36.06	53.28	78.04	3.35	4.95	7.25
radiant floor or ceiling	34.44	53.82	83.42	3.20	5.00	7.75
Space heaters, w/ fan	8.07	12.92	20.99	.75	1.20	1.95
radiant	10.23	15.61	24.22	.95	1.45	2.25
Steam (including boiler)	33.91	46.29	62.97	3.15	4.30	5.85
(without boiler)	26.91	38.21	53.82	2.50	3.55	5.00
Wall or floor furnaces	10.76	13.99	17.76	1.00	1.30	1.65

HEATING AND COOLING - EXCEPT RESTAURANTS AND MALLS

Package A.C. (short ductwork)	$36.06	$ 55.43	$ 85.04	$3.35	$ 5.15	$ 7.90
Warm and cool air (zoned)	51.67	76.42	112.48	4.80	7.10	10.45
Hot and chilled water (zoned)	92.03	124.86	170.07	8.55	11.60	15.80
Heat-pump system	40.37	62.97	97.95	3.75	5.85	9.10
add for ground-loop heat source	10.23	18.30	32.29	.95	1.70	3.00
Individual thru-wall heat pumps	17.76	29.60	48.98	1.65	2.75	4.55

Small individual heat pumps cost $975 to $1,350 per ton of rated capacity.

Note: For reclaim heat systems, use mild to moderate climate costs.

SPRINKLERS

Sprinkler costs include all costs for the system and supply lines, but not tanks, towers, or high-pressure pumps. The square foot costs listed are based on the total area of sprinkler system installation on a single main connection including its prorated share of the contractors' overhead and profit and architects' fees. For a more specific cost, see Section 43 or 53. Sprinklers should not be modified for size or shape.

COVERAGE	WET SYSTEMS		DRY SYSTEMS	
Square Feet (Sq. M.)	Sq. M.	Sq. Ft.	Sq. M.	Sq. Ft.
under 10,000 (929)	$21.64 - $34.77	$2.01 - $3.23	$27.56 - $44.13	$2.56 - $4.10
10,000 to 100,000	16.04 - 24.65	1.49 - 2.29	19.91 - 30.57	1.85 - 2.84
over 100,000 (9,290)	11.52 - 16.68	1.07 - 1.55	13.78 - 20.13	1.28 - 1.87

Note: For fireplaces and built-in appliances, see Section 11.

RESIDENCES AND MOTELS

(CALCULATOR METHOD)

BUILT-INS

APPLIANCE	LOW	AVG.	GOOD	EXCL.
Appliance allowance (if not itemized) single family	$ 1,100	$ 2,100	$ 4,000	$ 7,625
high-value residence (excl. automation, security)	12,000	16,250	22,000	30,000
town houses	1,100	1,875	3,175	5,400
multiple residences, per unit	775	1,250	2,025	3,300
senior citizens'	775	975	1,250	1,600
Single unit (self-contained) kitchen	2,375	3,000	3,775	4,750
Garbage disposer	150	200	260	345
deluxe, heavy duty	345	405	470	550
Range and oven combination	535	720	965	1,300
residential, commercial quality	4,800	5,625	6,600	7,750
microwave combination	1,300	1,525	1,825	2,150
Range top	265	390	570	840
component top, per component	350	495	695	975
induction top	1,225	1,375	1,550	1,750
Ovens	485	725	1,075	1,600
custom double wall ovens	2,175	2,475	2,800	3,175
microwave combination	1,225	1,400	1,625	1,875
warming ovens	510	535	560	585
Oven, microwave	305	415	570	775
Exhaust fan and hood	125	220	365	580
custom, stainless steel or copper, etc.	1,775	2,400	2,350	4,400
Dishwasher	430	555	715	920
deluxe, built-in	975	1,300	1,725	2,275
Trash compactor, single family	435	505	585	675
Radio intercom, base system	315	405	515	660
add per satellite	70	85	95	115
Audio-video entry system	2,100	2,900	4,000	5,525
each extra monitor station	600	710	845	1,000
Refrigerator or freezer	410	775	1,350	2,175
deluxe, built-in, each	2,175	2,800	3,625	4,700
individual drawers, built-in, each	2,375	3,000	3,800	4,800
Mixer/blender (food center, processor)	385	495	635	815
deluxe, built-in	1,625	1,925	2,300	2,750
Can opener, built-in	85	110	140	180
Coffee maker, built-in	410	445	485	525
Toaster, built-in	140	165	190	225
Towel/food wrap dispenser, built-in	150	175	200	230
Wok or deep fryer, built-in	595	665	740	825
deluxe	1,600	1,850	2,125	2,450
Kitchen hot food heat lamps, each	280	320	360	410
Motorized pantries, 1' to 3'	3,400	4,050	4,825	5,750
Wine captains, undercounter	725	785	850	920
standing units	1,775	2,050	2,400	2,775
Ice machines, residential	450	535	640	765
deluxe, to 50# per day	1,175	1,300	1,450	1,600
Bathroom heater, electric	90	130	190	280
Hair dryer, wall mounted	160	195	235	285
Heated towel rack	560	900	1,400	2,175
Exhaust fan	90	120	165	225
Bathroom scale, built-in	155	175	195	215
Vacuum cleaner system, three inlets	1,225	1,350	1,500	1,675
add for extra inlets	140	165	200	235

APPLIANCE (Continued)	LOW	AVG.	GOOD	EXCL.
Ironing center	$ 455	$ 540	$ 645	$ 765
Clothes washer, single family	440	555	695	875
dryer	385	470	580	710
combination units	840	1,025	1,250	1,520
Water softener	1,000	1,325	1,750	2,300
complete filtration system	2,550	3,375	4,475	5,950
Closet carousels	2,525	3,050	3,650	4,400
Safe, built-in small wall or floor	325	495	750	1,125
deluxe	1,175	2,000	3,200	5,000
Residential security systems (wireless)	640	1,175	1,975	3,150
hard-wired	1,775	2,475	3,475	4,850
Home automation systems	2,050	2,575	3,250	4,100
custom (including security system)	7,675	10,500	14,750	20,500
Trash compactor, apartment or motel	3,775	9,000	16,750	28,500
Gas incinerator	715	820	940	1,075
House phone, located at entrance	410	480	560	650
add per door release	130	140	150	165
Intercom, master station, 20 – 30 stations	800	1,025	1,325	1,725
add per intercom outlet or remote station	95	110	125	140
add per door release	135	145	155	165
Television security, closed circuit:				
one camera and one monitor, base system	1,300	2,800	5,100	8,525
each extra camera	1,275	1,900	2,800	4,150
each extra monitor	360	450	565	705
video tape recorder	2,025	2,975	4,400	6,500
Home entertainment audio video systems:				
built-in and/or including cabinets	8,950	18,750	33,500	56,000
complete home (including security and automation system)	36,500	51,000	71,500	100,000
Home theater (screening room), wall and sound treatments, stage, screen, seating, audio and projection equipment:				
prefab. package units, complete	25,000	34,250	47,250	65,000
custom built theater and decor	165,000	196,750	234,750	280,000
Built-in aquarium (excl. fish and plants, etc.)	3,575	6,500	10,750	17,250
Bowling alley, reconditioned, with automatic pinsetter, (new, add 30%)	17,000	21,250	26,500	33,250
Golf course simulator, complete station, including projection equipment	35,750	41,500	48,250	56,250
Racquetball court, prefab., complete	28,500	32,500	37,250	42,500
add for spectator viewing, window/wall	8,500	16,250	34,500	44,750
Shooting range, indoor, per station, complete	9,250	10,500	12,000	13,750
Soda fountain, complete unit, per linear foot	1,050	1,200	1,350	1,525
Wine vaults, modular room, 15 to 75 sq. ft.	2,050	3,300	5,250	8,000
Sauna rooms, 15 to 100 sq. ft.	2,275	3,600	5,500	8,500
Chandeliers	6,375	10,000	15,500	24,000
add for winch, 200- to 300-lb capacity	1,100	1,225	1,375	1,550

For lobby equipment, telephone systems, commercial washers-dryers, exercise equipment, see Section 65. Satellite dishes can be found in Section 67.

Note: Fixtures classified by age or beauty as having antique or historical value, or designed by name artists, must be valued as art objects by fine arts specialists, where the costs can easily run seven to ten times the listed costs for chandeliers, and two to four times mantel costs.

STORES AND COMMERCIAL BUILDINGS

FLOOR AREA/PERIMETER MULTIPLIERS

AVERAGE FLOOR AREA		M.	AVERAGE PERIMETER															M.	AVERAGE FLOOR AREA	
Sq.M.	Sq. Ft.	FT.	15	23	30	38	46	53	61	76	91	107	122	137	152	183	213	244	FT.	Sq. Ft.	Sq. M.
			50	75	100	125	150	175	200	250	300	350	400	450	500	600	700	800			
46	500		1.183	1.376	1.566	1.753	—	—	—	—	—	—	—	—	—	—	—	—		500	46
70	750		1.042	1.183	1.322	1.445	1.566	—	—	—	—	—	—	—	—	—	—	—		750	70
93	1,000		.969	1.079	1.183	1.283	1.376	1.470	1.566	1.753	—	—	—	—	—	—	—	—		1,000	93
139	1,500		.892	.969	1.042	1.115	1.183	1.256	1.322	1.445	1.566	—	—	—	—	—	—	—		1,500	139
186	2,000		.854	.912	.969	1.025	1.079	1.130	1.183	1.283	1.376	—	—	—	—	—	—	—		2,000	186
232	2,500		.831	.878	.924	.969	1.011	1.054	1.097	1.183	1.270	1.351	—	—	—	—	—	—		2,500	232
279	3,000		.815	.854	.892	.931	.969	1.005	1.042	1.115	1.183	1.256	1.322	—	—	—	—	—		3,000	279
372	4,000		—	—	.854	.883	.912	.941	.969	1.025	1.079	1.131	1.183	1.232	—	—	—	—		4,000	372
465	5,000		—	—	—	.854	.878	.901	.924	.969	1.011	1.054	1.097	1.140	1.183	—	—	—		5,000	465
557	6,000		—	—	—	—	—	.873	.892	.931	.969	1.005	1.042	1.079	1.115	1.183	—	—		6,000	557
650	7,000		—	—	—	—	—	—	.870	.904	.937	.969	1.000	1.030	1.060	1.121	1.183	—		7,000	650
743	8,000		—	—	—	—	—	—	—	.883	.912	.941	.969	.997	1.025	1.079	1.131	1.183		8,000	743
836	9,000		—	—	—	—	—	—	—	—	.892	.917	.943	.969	.992	1.042	1.087	1.134		9,000	836
929	10,000		—	—	—	—	—	—	—	—	.878	.901	.925	.948	.969	1.011	1.054	1.097		10,000	929
1,115	12,000		—	—	—	—	—	—	—	—	—	.873	.892	.912	.931	.969	1.005	1.042		12,000	1,115
1,301	14,000		—	—	—	—	—	—	—	—	—	—	.870	.886	.904	.937	.969	1.000		14,000	1,301
1,486	16,000		—	—	—	—	—	—	—	—	—	—	.854	.868	.883	.912	.941	.969		16,000	1,486
1,672	18,000		—	—	—	—	—	—	—	—	—	—	—	.854	.866	.892	.917	.943		18,000	1,672
1,858	20,000		—	—	—	—	—	—	—	—	—	—	—	.843	.854	.878	.901	.924		20,000	1,858
2,323	25,000		—	—	—	—	—	—	—	—	—	—	—	—	.831	.850	.868	.887		25,000	2,323
2,787	30,000		—	—	—	—	—	—	—	—	—	—	—	—	—	.831	.847	.862		30,000	2,787
3,252	35,000		—	—	—	—	—	—	—	—	—	—	—	—	—	—	.831	.845		35,000	3,252
3,716	40,000		—	—	—	—	—	—	—	—	—	—	—	—	—	—	.820	.831		40,000	3,716
4,181	45,000		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	.821		45,000	4,181

AVERAGE FLOOR AREA		M.	AVERAGE PERIMETER															M.	AVERAGE FLOOR AREA	
Sq.M.	Sq. Ft.	FT.	274	305	335	366	396	427	457	488	518	549	579	610	671	731	792	914	FT.	Sq. Ft.	Sq. M.
			900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2200	2400	2600	3000			
836	9,000		1.183	1.230	1.276	—	—	—	—	—	—	—	—	—	—	—	—	—		9,000	836
929	10,000		1.140	1.183	1.223	—	—	—	—	—	—	—	—	—	—	—	—	—		10,000	929
1,115	12,000		1.079	1.117	1.153	1.183	—	—	—	—	—	—	—	—	—	—	—	—		12,000	1,115
1,301	14,000		1.030	1.060	1.090	1.121	1.150	—	—	—	—	—	—	—	—	—	—	—		14,000	1,301
1,486	16,000		.997	1.025	1.053	1.080	1.106	—	—	—	—	—	—	—	—	—	—	—		16,000	1,486
1,672	18,000		.969	.992	1.016	1.040	1.064	1.087	—	—	—	—	—	—	—	—	—	—		18,000	1,672
1,858	20,000		.948	.969	.990	1.011	1.032	1.054	—	—	—	—	—	—	—	—	—	—		20,000	1,858
2,323	25,000		.906	.925	.942	.959	.977	.995	1.011	—	—	—	—	—	—	—	—	—		25,000	2,323
2,787	30,000		.878	.894	.909	.925	.939	.954	.969	—	—	—	—	—	—	—	—	—		30,000	2,787
3,252	35,000		.859	.872	.884	.898	.912	.925	.937	.950	—	—	—	—	—	—	—	—		35,000	3,252
3,716	40,000		.843	.854	.866	.878	.890	.901	.913	.925	.936	—	—	—	—	—	—	—		40,000	3,716
4,181	45,000		.831	.842	.852	.862	.871	.881	.892	.903	.914	.925	—	—	—	—	—	—		45,000	4,181
4,645	50,000		—	.831	.841	.850	.859	.868	.877	.887	.897	.906	—	—	—	—	—	—		50,000	4,645
5,574	60,000		—	.815	.823	.831	.839	.847	.854	.862	.869	.876	.884	—	—	—	—	—		60,000	5,574
6,503	70,000		—	.803	.810	.817	.824	.831	.838	.845	.852	.858	.864	.872	—	—	—	—		70,000	6,503
7,432	80,000		—	—	.800	.807	.814	.820	.825	.831	.837	.843	.849	.854	.866	—	—	—		80,000	7,432
8,361	90,000		—	—	—	.799	.804	.810	.815	.821	.826	.831	.836	.842	.852	.861	—	—		90,000	8,361
9,290	100,000		—	—	—	.792	.797	.802	.807	.812	.816	.821	.826	.831	.841	.850	.859	—		100,000	9,290
11,613	125,000		—	—	—	—	—	.788	.792	.796	.800	.804	.808	.812	.820	.828	.836	.850		125,000	11,613
13,935	150,000		—	—	—	—	—	—	.781	.785	.789	.792	.796	.799	.806	.812	.819	.831		150,000	13,935
18,580	200,000		—	—	—	—	—	—	—	.767	.770	.773	.777	.780	.786	.792	.797	.807		200,000	18,580

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STORES AND COMMERCIAL BUILDINGS

(CALCULATOR METHOD)

*FLOOR AREA/PERIMETER MULTIPLIERS

AVERAGE FLOOR AREA		M.	AVERAGE PERIMETER															M.	AVERAGE FLOOR AREA	
Sq.M.	Sq. Ft.	FT.	488 1600	549 1800	610 2000	671 2200	792 2600	914 3000	1067 3500	1219 4000	1372 4500	1524 5000	1676 5500	1829 6000	1981 6500	2133 7000	2286 7500	2438 8000	FT.	Sq. Ft.	Sq. M.
20,903	225,000		.762	.767	.773	.779	.790	.799	.810	.821	—	—	—	—	—	—	—	—		225,000	20,903
23,226	250,000		.759	.762	.767	.772	.783	.792	.802	.812	.821	—	—	—	—	—	—	—		250,000	23,226
25,548	275,000		—	.760	.763	.767	.776	.786	.796	.805	.814	.822	—	—	—	—	—	—		275,000	25,548
27,871	300,000		—	—	.760	.763	.771	.780	.791	.799	.807	.815	.823	—	—	—	—	—		300,000	27,871
30,193	325,000		—	—	—	.760	.767	.775	.785	.794	.801	.809	.816	.824	—	—	—	—		325,000	30,193
32,516	350,000		—	—	—	.758	.764	.770	.780	.789	.796	.803	.811	.817	.824	—	—	—		350,000	32,516
34,838	375,000		—	—	—	—	.761	.767	.776	.785	.792	.799	.806	.812	.819	.825	—	—		375,000	34,838
37,161	400,000		—	—	—	—	.759	.765	.771	.780	.788	.795	.800	.807	.814	.820	.825	—		400,000	37,161
39,483	425,000		—	—	—	—	—	.762	.769	.776	.784	.791	.797	.802	.809	.814	.820	—		425,000	39,483
41,806	450,000		—	—	—	—	—	.760	.766	.773	.780	.787	.793	.799	.804	.810	.815	.821		450,000	41,806
44,129	475,000		—	—	—	—	—	—	.763	.770	.777	.784	.790	.795	.800	.806	.811	.816		475,000	44,129
46,451	500,000		—	—	—	—	—	—	.761	.767	.773	.780	.786	.792	.797	.802	.807	.812		500,000	46,451

***For larger centers, enter table with half the average floor area and half the average perimeter.**

STORY HEIGHT MULTIPLIERS

Multiply the base cost by the following multipliers for any variation in average story height from the base of 12 feet (3.66 meters). For extremely high-pitched roofs (see Section 10), use the height of the eaves plus one-half the height from the eaves to the ridge as the effective height. In some buildings it is better to compute the total volume and divide by the total square footage of floor area to obtain an effective height to use.

AVERAGE WALL HEIGHT (M.)	(FT.)	SQUARE FOOT OR SQUARE METER MULTIPLIERS	CUBIC FOOT MULT.	AVERAGE WALL HEIGHT (M.)	(FT.)	SQUARE FOOT OR SQUARE METER MULTIPLIERS	CUBIC FOOT MULT.	AVERAGE WALL HEIGHT (M.)	(FT.)	SQUARE FOOT OR SQUARE METER MULTIPLIERS	CUBIC FOOT MULT.
2.44	8	.915	1.373	4.27	14	1.042	.893	7.31	24	1.255	.628
2.74	9	.936	1.248	4.57	15	1.064	.851	7.92	26	1.298	.599
3.05	10	.957	1.148	4.88	16	1.085	.814	8.53	28	1.340	.574
3.35	11	.979	1.068	5.49	18	1.127	.751	9.14	30	1.383	.553
3.66	12	1.000 (base)	1.000	6.10	20	1.170	.702	9.75	32	1.425	.534
3.96	13	1.021	.942	6.71	22	1.213	.662	10.36	34	1.468	.518

LOCAL MULTIPLIERS

Apply to costs brought up-to-date from preceding pages. Do not apply to Section 98 or any other indexes.

UNITED STATES

CLASS	A	B	C	D	S
CONNECTICUT	1.10	1.11	1.10	1.10	1.09
Bridgeport	1.18	1.18	1.19	1.17	1.16
Bristol	1.09	1.07	1.08	1.08	1.09
Danbury	1.17	1.17	1.18	1.18	1.19
Fairfield	1.15	1.15	1.18	1.16	1.13
Greenwich	1.28	1.26	1.24	1.27	1.30
Hartford	1.12	1.12	1.13	1.14	1.12
Meriden	1.08	1.08	1.07	1.09	1.07
Middletown	1.08	1.08	1.09	1.10	1.06
Milford	1.11	1.10	1.10	1.08	1.08
New Britain	1.10	1.09	1.09	1.10	1.07
New Haven	1.12	1.11	1.12	1.08	1.10
New London	1.04	1.04	1.04	1.08	1.03
Norwich	1.04	1.04	1.04	1.08	1.03
Stamford	1.28	1.26	1.24	1.27	1.30
Waterbury	1.11	1.09	1.07	1.06	1.08
Windsor Locks	1.10	1.10	1.09	1.10	1.10
DELAWARE	1.06	1.04	1.06	1.08	1.07
Dover	1.05	1.04	1.04	1.06	1.04
Wilmington	1.10	1.07	1.07	1.10	1.08
DIST. OF COLUMBIA	1.04	1.04	1.02	1.01	1.02
FLORIDA	.90	.90	.89	.91	.90
Bradenton	.96	.95	.92	.93	.94
Brevard Co.	.88	.88	.88	.89	.88
Broward Co.	.87	.86	.88	.89	.88
Dade Co.	.86	.85	.87	.88	.88
Daytona Beach	.89	.89	.89	.90	.89
Fort Myers	.93	.91	.90	.90	.93
Fort Pierce	.85	.84	.85	.85	.86
Gainesville	.89	.89	.90	.90	.89
Jacksonville	.90	.90	.90	.92	.90
Key West	1.01	1.02	1.05	1.03	1.00
Lakeland	.93	.93	.93	.92	.92
Marathon	.96	.97	.98	.98	.95
Miami	.86	.85	.87	.88	.88
Naples	.93	.93	.90	.90	.92
Ocala	.89	.88	.90	.90	.89
Orlando	.98	.98	.96	.95	.96
Palm Beach	.89	.87	.88	.90	.90
Panama City	.81	.81	.81	.82	.80
Pensacola	.83	.83	.83	.84	.83
Pinellas Co.	.97	.96	.94	.94	.95
Sarasota	.96	.96	.92	.95	.94
Tallahassee	.92	.93	.91	.92	.92
Tampa	.96	.95	.93	.93	.94
Vero Beach	.89	.88	.88	.87	.88

CLASS	A	B	C	D	S
GEORGIA	.91	.91	.89	.88	.89
Albany	.91	.91	.87	.87	.88
Athens	.95	.95	.91	.90	.91
Atlanta	.98	.98	.97	.98	.96
Augusta	.90	.91	.87	.87	.87
Columbus	.91	.91	.88	.87	.87
Macon	.92	.92	.91	.90	.90
Rome	.95	.95	.93	.92	.91
Savannah	.88	.88	.88	.89	.88
Valdosta	.86	.85	.84	.86	.85
HAWAII	1.40	1.40	1.39	1.44	1.42
Hilo	1.41	1.41	1.38	1.43	1.44
Kauai	1.41	1.42	1.41	1.46	1.44
Maui	1.41	1.41	1.40	1.45	1.44
Oahu	1.40	1.39	1.39	1.44	1.41
IDAHO	.99	.99	.99	.98	.99
Boise	1.02	1.01	1.04	1.02	1.01
Caldwell	1.00	.99	1.03	1.01	.99
Coeur d' Alene	1.01	1.00	.99	.98	1.00
Idaho Falls	.99	.98	.99	1.00	.99
Lewiston	.99	.98	.96	.95	.97
Moscow	1.00	.99	.96	.96	.98
Pocatello	.96	.95	.96	.96	.98
Twin Falls	1.00	1.00	1.02	1.00	1.00
ILLINOIS	1.07	1.07	1.05	1.06	1.07
Alton	1.06	1.07	1.08	1.08	1.08
Aurora	1.17	1.17	1.17	1.17	1.16
Belleville	1.12	1.12	1.12	1.11	1.10
Bloomington	1.05	1.04	1.05	1.06	1.06
Carbondale	1.03	1.04	1.02	1.01	1.02
Champaign	1.06	1.05	1.04	1.05	1.05
Chicago	1.20	1.20	1.19	1.19	1.20
Danville	1.06	1.05	1.04	1.05	1.05
De Kalb	1.16	1.16	1.15	1.15	1.15
Decatur	1.06	1.06	1.05	1.06	1.06
East St. Louis	1.11	1.11	1.11	1.12	1.12
Elgin	1.17	1.17	1.16	1.17	1.17
Evanston	1.18	1.18	1.17	1.17	1.17
Galesburg	1.07	1.06	1.04	1.05	1.06
Joliet	1.17	1.17	1.16	1.17	1.16
Kankakee	1.18	1.18	1.17	1.19	1.18
Marion	1.03	1.04	1.02	1.01	1.02
Moline	1.06	1.05	1.05	1.05	1.06
Normal	1.06	1.05	1.05	1.06	1.07
Peoria	1.07	1.06	1.05	1.06	1.05
Quincy	1.07	1.09	1.08	1.07	1.06
Rock Island	1.06	1.04	1.05	1.06	1.07
Rockford	1.14	1.13	1.12	1.12	1.13
Skokie	1.19	1.19	1.19	1.20	1.20
Springfield	1.07	1.07	1.06	1.07	1.07
Urbana	1.06	1.05	1.04	1.05	1.05
Waukegan	1.18	1.18	1.17	1.16	1.17

CLASS	A	B	C	D	S
INDIANA	1.01	1.00	1.00	1.00	1.01
Anderson	1.01	.99	1.00	1.00	1.00
Bloomington	1.03	1.03	1.03	1.04	1.03
Columbus	1.02	1.02	1.02	1.01	1.00
Elkhart	1.10	1.09	1.07	1.09	1.09
Evansville	1.01	1.01	1.01	1.02	1.02
Fort Wayne	1.02	1.01	1.02	1.02	1.02
Gary	1.17	1.17	1.16	1.16	1.17
Hammond	1.17	1.17	1.16	1.16	1.17
Indianapolis	1.02	1.02	1.03	1.03	1.02
Kokomo	1.02	1.02	1.00	1.02	1.00
Lafayette	1.02	1.02	1.02	1.02	1.02
Logansport	.98	.97	.96	.96	.97
Marion	.99	.99	.97	.97	1.00
Michigan City	1.16	1.16	1.15	1.15	1.15
Muncie	.99	.99	.97	.97	1.00
Richmond	.98	.97	.98	.98	.98
South Bend	1.10	1.09	1.09	1.08	1.08
Terre Haute	1.02	1.01	1.01	1.01	1.02
IOWA	1.01	1.02	1.00	1.01	1.01
Burlington	1.02	1.01	1.00	1.01	1.04
Cedar Rapids	1.01	1.00	1.00	1.00	1.01
Council Bluffs	.97	.98	.96	.94	.95
Davenport	1.05	1.05	1.05	1.05	1.07
Des Moines	1.00	1.00	1.00	.99	.99
Dubuque	1.06	1.05	1.04	1.06	1.08
Fort Dodge	1.01	1.01	1.00	.99	1.01
Iowa City	1.02	1.01	1.01	1.02	1.04
Mason City	1.03	1.03	1.02	1.04	1.02
Sioux City	.97	.97	.95	.95	.97
Waterloo	1.02	1.02	1.01	1.01	1.01
KANSAS	.91	.91	.92	.91	.91
Dodge City	.91	.91	.94	.93	.91
Fort Scott	.89	.90	.89	.90	.90
Garden City	.88	.88	.88	.88	.86
Goodland	.88	.86	.88	.88	.87
Hays	.88	.88	.89	.88	.88
Kansas City	1.05	1.05	1.05	1.06	1.06
Lawrence	1.01	1.01	1.01	1.02	1.02
Liberal	.87	.87	.87	.86	.85
Manhattan	.91	.92	.93	.93	.92
Olathe	1.05	1.05	1.06	1.06	1.06
Overland Park	1.05	1.05	1.06	1.06	1.06
Pittsburg	.89	.89	.89	.89	.89
Salina	.94	.93	.93	.92	.94
Topeka	1.00	.99	.98	.97	.99
Wichita	.93	.93	.93	.92	.93

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CURRENT COST MULTIPLIERS

These multipliers bring costs from preceding pages up to date. Also apply Local Multipliers, Section 99, Pages 5 through 10.

CALCULATOR COST SECTIONS

(Effective Date of Cost Pages)		11 (11/00)	12 (8/00)	13 (5/00)	14 (2/00)	15 (9/99)	16 (6/99)	17 (2/01)	18 (5/01)
EASTERN	A	.99	.99	1.00	1.03	1.05	1.07	1.01	1.00
	B	.99	1.00	1.00	1.03	1.05	1.07	1.01	1.00
	C	.99	1.00	1.01	1.03	1.05	1.07	1.02	1.01
	D	1.00	1.01	1.01	1.04	1.06	1.07	1.02	1.00
	S	.98	.99	1.00	1.01	1.03	1.06	1.00	.99
CENTRAL	A	.99	1.00	1.01	1.03	1.05	1.07	1.01	1.00
	B	.99	1.00	1.01	1.03	1.05	1.07	1.01	1.00
	C	.99	1.00	1.01	1.03	1.06	1.08	1.02	1.01
	D	1.00	1.03	1.02	1.04	1.08	1.09	1.03	1.02
	S	.97	.99	1.00	1.01	1.04	1.06	1.00	.99
WESTERN	A	.98	1.00	1.00	1.01	1.04	1.07	.99	.99
	B	.98	1.00	1.00	1.01	1.04	1.06	.99	.99
	C	.97	1.00	1.01	1.01	1.04	1.06	1.00	1.00
	D	.98	1.00	1.01	1.01	1.04	1.06	1.00	.99
	S	.96	.99	.99	1.00	1.03	1.05	.99	.99

SEGREGATED COST SECTIONS

(Effective Date of Cost Pages)		41 (12/00)	42 (9/00)	43 (6/00)	44 (3/00)	45 (11/99)	46 (8/99)	47 (3/01)	48 (6/01)
EASTERN	A	.99	.99	1.00	1.03	1.05	1.07	1.01	1.00
	B	.99	1.00	1.00	1.03	1.05	1.07	1.01	1.00
	C	.99	1.00	1.01	1.03	1.05	1.07	1.02	1.01
	D	1.00	1.01	1.01	1.04	1.06	1.07	1.02	1.00
	S	.98	.99	1.00	1.01	1.03	1.06	1.00	.99
CENTRAL	A	.99	1.00	1.01	1.03	1.05	1.07	1.01	1.00
	B	.99	1.00	1.01	1.03	1.05	1.07	1.01	1.00
	C	.99	1.00	1.01	1.03	1.06	1.08	1.02	1.01
	D	1.00	1.03	1.02	1.04	1.08	1.09	1.03	1.02
	S	.97	.99	1.00	1.01	1.04	1.06	1.00	.99
WESTERN	A	.98	1.00	1.00	1.01	1.04	1.07	.99	.99
	B	.98	1.00	1.00	1.01	1.04	1.06	.99	.99
	C	.97	1.00	1.01	1.01	1.04	1.06	1.00	1.00
	D	.98	1.00	1.01	1.01	1.04	1.06	1.00	.99
	S	.96	.99	.99	1.00	1.03	1.05	.99	.99

This page supersedes the June 2001 Green Supplement.

UNIT-IN-PLACE COST SECTIONS (51 - 67)

Sec. Page	Date		Eastern	Central	Western
51 - 2-3	(9/00)	Concrete Foundations	1.01	1.01	1.00
51 - 4	(9/00)	Pilings	1.01	1.02	1.00
51 - 7-8	(9/00)	Steel and Concrete Frame	1.00	1.01	1.00
51 - 7	(9/00)	Wood Frame	1.01	1.02	.99
52 - 1-4,6	(9/00)	Interior Construction	1.00	1.01	.99
52 - 5	(9/00)	Bank Vaults and Equipment	.99	1.00	.98
53 - 1-8	(12/00)	Heating, Cooling & Ventilating	.99	.99	.97
53 - 9-12	(12/00)	Plumbing, Fire Protection, etc.	.98	.98	.97
54 - 1-6	(12/00)	Electrical, Security	.98	.98	.97
55 - 3-7	(6/01)	Wall Costs	1.03	1.03	1.01
56 - 1-2	(6/01)	Stained Glass	1.02	1.02	1.00
56 - 3-6	(6/01)	Storefronts	1.02	1.02	1.00
56 - 7	(6/01)	Stonework	1.02	1.02	1.00
56 - 8	(6/01)	Columns, Stone & Concrete	1.02	1.03	1.01
56 - 8	(6/01)	Columns, Wood & Aluminum	1.02	1.03	1.01
57 - 1-6	(5/99)	Roofs	1.06	1.06	1.03
58 - 1	(5/99)	Cold Storage	1.05	1.07	1.03
58 - 2-8	(5/99)	Elevators, Conveying Systems	1.03	1.04	1.02

Sec. Page	Date		Eastern	Central	Western
61 - 1-8	(6/00)	Tanks	1.02	1.01	1.00
62 - 1	(6/00)	Industrial Pumps & Boilers	1.02	1.00	1.00
62 - 2-3,6	(6/00)	Piping	1.02	1.00	1.00
62 - 4	(6/00)	Electrical Motors	1.02	1.00	1.00
62 - 5	(6/00)	Steel Stacks, Chutes	1.02	1.00	1.00
62 - 5	(6/00)	Masonry & Concrete Chimneys	1.01	1.01	1.01
62 - 6	(6/00)	Compactors, Incinerators	1.02	1.00	1.00
63 - 1-4	(4/00)	Trailer and Mfg. Housing Parks	1.02	1.03	1.01
63 - 5-9	(4/00)	Manufactured Housing	1.03	1.02	1.04
64 - 1-6	(3/00)	Service Stations, Car Washes	1.02	1.02	1.01
64 - 7-9	(3/00)	Prefabricated Metal Structures	1.01	1.02	1.01
64 - 7-8	(3/00)	Prefab. Wood & Air Structures	1.02	1.03	1.01
65 - 1-12	(12/99)	Equipment Costs	1.03	1.03	1.01
66 - 1	(12/99)	Subdivision Costs	1.02	1.02	1.01
66 - 2-8	(12/99)	Yard Improvements	1.03	1.03	1.02
66 - 9-10	(12/99)	Demolition	1.03	1.02	1.01
67 - 1-2	(12/99)	Recreational Facilities	1.03	1.04	1.03
67 - 3-7	(12/99)	Recreational Facilities	1.03	1.04	1.03

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