

### Feasibility Analysis III: Financing and Investment Potential

**Objective:** The goal of this assignment is pencil out the construction financing for the project and the anticipated investment performance using ARGUS once the project has been completed.

**Background:** Mekong Plaza (<http://www.mekongplaza.com/>) is a large 100,000-square-foot indoor Asian shopping area on approximately 9 acres of land that is scheduled to open in 2007 at the southwest corner of Dobson Road and Main Street in Mesa (66 S Dobson Street, Mesa, AZ 85201) along the Dobson Road's "Asian corridor" between Mesa and Chandler. The Manila Oriental Market<sup>1</sup>, a 38,000-square-foot grocery store, will serve as the anchor store. According to Mekong Plaza's Web site, 60 percent of the shops are already pre-leased.



Tenants thus far include gourmet restaurants, bakery, international food court, sandwich shops, juice bars, jewelry showrooms, cellular store, gift & fashion boutiques, beauty shop, nail supply, and professional offices (optometry, mortgage, real estate, insurance, travel agency). Available remaining units range in size from 800 to 4,500 square feet. An interview with Russell Rohr, leasing agent for Mekong Plaza, reveals that the rents are expected to be around \$31 per square foot per year since it is an upscale indoor mall (this includes the load/loss factor<sup>2</sup>). Operating expenses on a triple net lease are anticipated to be around \$4.20 per square foot per year (35 cents per square foot per month). **Note: Please do not call Mr. Rohr or the developer regarding this case.** Our continuing assumptions and new assumptions are as follows:

- Construction costs (see "Construction Cost" worksheet) remain the same as in our last case
- Tenant Improvement (TI) costs are \$30 per square foot (these are in addition to Construction costs)
- Permanent financing can be obtained for a loan fee of 2.5% at 6.27% amortized over 30 years with a balloon payment due in 10 years on a 75% LTV and a 1.4 debt service coverage ratio<sup>3</sup> (DSCR)
- Depreciation: Straight line method with a useful life of 39 years. Use the building cost (construction cost + TI) for the depreciable basis. The construction cost does NOT include construction period interest for purposes of calculating depreciation.

<sup>1</sup>There are four Manilla Oriental Markets in California. This is the first in Arizona.

<sup>2</sup>Recall that Rent per Gross Foot = Rent on Leasable Space \* (1 – Loss Factor)

<sup>3</sup>The debt service coverage ratio a.k.a. debt coverage ratio for retail is obtained from <http://www.realtyrates.com>

- Amortize Construction Interest: Interest incurred during the construction and development of most real estate (but not a personal residence) must be capitalized, and deducted over its depreciable life beginning when the property is ready to be placed in service or sold. In the year of sale, deduct the remaining (unamortized) construction period interest left, if any.
- Investor's tax rates: Ordinary income tax rate is 35%, capital gains tax rate is 20%, and the depreciation recapture tax rate is 25%
- Operating Expenses (NNN): Even though the developer expects NNN expenses of \$4.25 psf initially, based on comparables, we will assume \$5 psf per year to be more realistic.
- Growth rates: 3% annual bumps in rent starting in year 6. Operating expenses are anticipated to increase by 3.6% per year based on the most recent forecast from the University of Arizona<sup>4</sup>.
- Vacancy rate: vacancy remains at 40% in Year 1, then declines to 35% in Year 2. From year 3 onwards the vacancy rates are respectively 33%, 30%, 25%, 20%, 15%, 10%, 5%, and 5% thereafter. Vacancy rate is based on gross scheduled income (excludes CAM reimbursement)
- Discount rate: 8.5% (based on Korpacz investor expectation survey<sup>5</sup> 2006Q2; investors expect a 8.5% IRR on equity from community/neighborhood centers)
- Holding Period: 10 years
- Sale Price: Sale Price in Year 10 is based on "capping out" expected NOI in Year 11 e.g.  $Price_{10} = NOI_{11}/\text{going-out cap rate}$ . Going-out (terminal) cap rate is 7.5%.
- Selling expenses: selling expenses are 6% of the sale price.

Also assume that the developer, Philip Ta, can obtain a construction loan for the hard costs, soft costs including interest carry<sup>6</sup>, and tenant improvements (but not the cost of the site) on the following terms:

Construction Loan Fee: 2.5% (to be paid by developer)  
 Interest Rate: Prime + 2% (see "Interest Rate" worksheet)  
 Amortization: Interest only  
 Term: 18 months  
 Loan to Value (LTV): 75%-80% Loan to Cost (LTC)  
 Pre-lease: Minimum of 50% pre-leasing for retail properties  
 Recourse: Yes; non-recourse construction financing is available for experienced developers

Although the interest rate on the construction loan in practice will vary each period since it floats at a spread above prime, we assume for purposes of our calculations that the prime rate remains constant over our construction period. The cost of the site as well as any loan fees associated with obtaining the construction and permanent take-out financing is assumed to be part of the developer's equity down payment.

<sup>4</sup><http://ebr.eller.arizona.edu/azeconomy//indicators/regions.aspx#monthly>

<sup>5</sup>[www.colliers.com/Content/Attachments/Denver/reports/2Q06KorpaczSurvey.pdf](http://www.colliers.com/Content/Attachments/Denver/reports/2Q06KorpaczSurvey.pdf)

<sup>6</sup>Interest carry is also known as construction period interest excluding any loan fees

**Assignment:** Please prepare your report as a formal presentation to your boss complete with maps and charts. This is an individual project.

1. Development Costs: Using the “1. Development Cost” worksheet template, calculate the total development costs, the loan to cost ratio, the construction interest rate, and the dollar amount of the total construction loan. To calculate the total interest carry (construction interest), you will first have to complete question 2.

2. Draw Schedule: Using the “2a. IntCarry (Low)” worksheet template, calculate the loan balance at the end of each month (EOM), interest accrual (interest carry), loan draw (EOM), cash flow to the bank (EOM), and cash flow savings to the developer (EOM). The columns in the template are as follows:

Percent of Construction cost (Pct of Constr Cost): This is the percent of construction cost that is "put in place" in each month. The total of this column is equal to 100%.

Construction Cost (Low): This is the dollar amount of building cost or construction cost that is "put in place" in each month. It is calculated as Construction Cost (Low) = Building Cost (Low)\*Pct of Construction Cost.

Interest Rate: This is the construction interest rate = prime rate + spread (2%)

Loan Balance at End of the Month (EOM): Loan Balance at end of Month 1 is equal to Construction Cost (Low) in Month 1 e.g. cell C4. After Month 1, the Loan Balance at the end of Month T =  $LoanBal_{T-1} + LoanBal_{T-1} * Monthly\ Interest\ Rate + Construction\ Cost(Low)_T = (1 + Interest\ Rate/12) * LoanBal_{T-1} + Construction\ Cost(Low)_T$  where T-1 represents the previous month and T is the current month. Intuition: the ending loan balance is the beginning loan balance (ending loan balance in the previous month), monthly interest based on the previous loan balance and the construction cost “put in place” in the current month.

Interest Accrual (also known as Interest Carry): Interest accrual in Month 1 is zero (leave the cell blank). Interest accrual in month T e.g.  $Interest\ accrual_T = (Interest\ Rate/12) * LoanBal_{T-1}$ .

Loan Draw (End of Month): The loan draw at the end of the first month is equal to Construction Cost (Low) in Month 1 e.g. cell C4. Starting in the second month,  $Loan\ Draw_T = Construction\ Cost\ (Low)_T + (Interest\ Rate/12) * LoanBal_{T-1}$ .

Payments (End of Month): This refers to the “payment” that the developer makes. The developer will make 2 payments. The first payment which the developer pays in first month is the construction loan fee (Loan fee\*Total Construction Loan = cell G2\* cell E21). The developer makes the second payment in month 18. This payment is the Total Construction Loan = total Building Cost including the total Interest Carry. This is the amount that will be “taken out” by permanent financing e.g. the permanent lender will pay the construction lender the total construction loan thereby “taking-out” the construction lender.

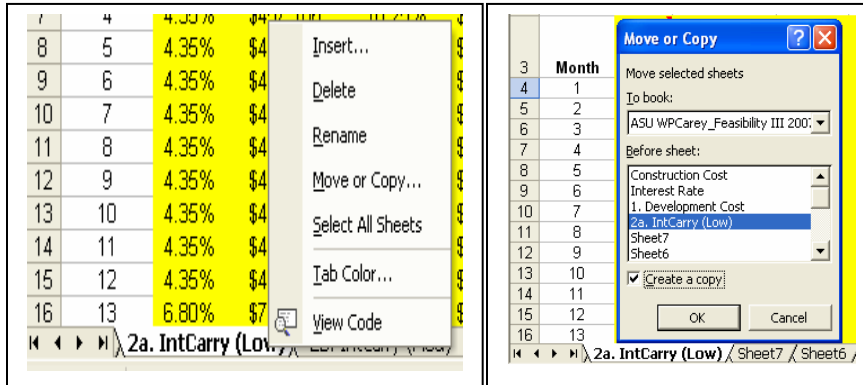
Bank CF (End of Month): This is the cash flow that the bank receives at the end of each month.  $Bank\ CF_T = -1 * Construction\ Cost\ (Low)_T + Payments\ (End\ of\ Month)_T$ .

Developer CF Savings vs. All Equity (EOM): The cash flow savings to the developer,  $Developer\ CF\ Savings_T = -1 * Bank\ CF_T$ .

Bank's Expected Yield (BankExptdYld): Is the annualized internal rate of return (IRR) e.g., monthly IRR \* 12 calculated using the cash flow that the bank receives at the end of each month (Bank CF(EOM)).

Developer's Effective Cost of Funds (DevlprEffectiveCostofFunds): This is the true "borrowing cost" of the developer and is annualized IRR on the cash flow savings to the developer.

Once you have completed the "2a. IntCarry (Low)" worksheet, make 2 copies of it. To make a copy, move your cursor to the "2a. IntCarry (Low)" tab and then right-click on your mouse. Next, select the **Move or Copy ...** option. When the Move selected sheets box appears, click on 2a.



IntCarry(Low) -> click on the box **Create a copy** -> then click on the **OK** button. This will result in a copy of the worksheet. To put a new label on the copied worksheet, simply double click on the tab associated with the copied worksheet and then type in a new label. Name the newly copied worksheet

**2b. IntCarry (Med).** Make another copy of your finished "2a. IntCarry (Low)" worksheet and label this worksheet **2b. IntCarry (High)**. For the two worksheets – **2b. IntCarry (Med)** and **2b. IntCarry (High)**, recalculate the loan balance at the end of each month (EOM), interest accrual (interest carry), loan draw (EOM), cash flow to the bank (EOM), and cash flow savings to the developer (EOM). This will be a fairly simple procedure since you have to merely change the building cost in each worksheet.

3. Debt and Equity Contribution: Using the "3. Debt & Equity Contribution" worksheet, calculate the developer's equity contribution and the amount that has to be financed. Will the developer be able to meet the LTV on the permanent loan of 75%?

4. Amortization Table: Using the "3. AmortTable" worksheet template, calculate the amortization table as well as the Annual Percentage Rate (APR) for the permanent loan for the 3 different construction cost scenarios (Low, Med, and High). Recall that the APR represents the borrower's "true" borrowing cost. The loan amount for the permanent loan is equal to the construction loan balance at the end of the construction period (18<sup>th</sup> month). The construction loan balance includes interest on the construction loan.

5. Financial Performance: Calculate the before tax cash flow (BTCF), after tax cash flow (ATCF), before tax equity reversion (BTER) and the after tax equity reversion using the worksheet labeled "5a. CashFlow (Low)". Also, partition the IRR and calculate the various measures of performance including before tax cash on cash, IRR, NPV, and Profitability Index. Next, make 2 copies of your completed worksheet and label these two copies 5b. CashFlow (Med) and 5c. CashFlow (High). Redo your analysis with the Med and High building costs, mortgage amounts, debt service payments etc.

6. Two Tiered Pricing: We have thus far assumed that all tenants pay the same rent and operating expenses. However, it is more realistic to assume that a two tier pricing structure exists with the anchor tenant(s) enjoying a “haircut” on the rent and receiving landlord concessions in terms of CAM charges and other operating expenses. As such, we will assume the following for the anchor tenant:

- Rent: Pays rent of \$20 per square foot per year
- Expenses (CAM): Landlord pays all CAM and other operating expenses for the anchor. CAM charges on a per square foot per year are as given in the case.
- GLA: Out of 100,000 total gross leaseable area, anchor tenant occupies 38,000 square feet. The remaining 62,000 square feet is occupied by other tenants (non-anchor). We assume that the anchor tenant will occupy the space over our expected holding period. This means that the vacancy rate now refers to the total GLA (62,000 square feet) that will be occupied by non-anchor tenants. For example, the vacancy rate is 40% in year 1. This means that 24,800 square feet ( $40\% * 62,000 \text{ sqft}$ ) is vacant in year 1 for a dollar vacancy of \$768,800 ( $\$31 \text{ psf} * 24,800 \text{ sqft}$ ).

Using the worksheet labeled “6a. Two Tier Pricing (Low)”, calculate the anticipated financial performance for the proposed center. Intuitively, would you expect the financial performance to increase, decrease, or remain constant given this two-tiered pricing structure? Please explain.

Next, using **ARGUS** software, calculate the anticipated financial performance for the proposed center for the Med and High scenarios. Remember that most of your assumptions will remain the same but that certain items such as the building costs, mortgage amounts, debt service payments etc. will change. Please printout all applicable output including the assumptions page. For presentation purposes, put your report in a Wall Street format.

- **Appendix A** (All comparables are from LoopNet.com)

### **Lease Comparables**

Lease Comparable 1: New shops built in 2006 located at 22 South Dobson Road, Mesa, AZ 85201 on the corner in front of the New Mekong Plaza with rent per square foot (sf) per year between \$20 to \$24. The minimum available space is 1,200 (\$24/sf/year) to 2,000 (\$20/sf/year). All leases are triple net (NNN). Triple net expenses are \$3 per square foot per year.

Lease Comparable 2: Barcelona Retail Center, 111 S. Dobson Rd, Mesa, AZ 85202. The strip shopping center, built in 2006, is located close to downtown Mesa just south of the southeast corner of Main Street and Dobson Road. It is across the street from the future Mekong Plaza (New Asian Center). The center has 20,414 square feet of GLA available (divisible to 1,018 square feet). Date Last Verified is 9/16/2006. Rents vary from \$14/sf/year (9,362 sqft) to \$26/sq/year (1,018 sqft). All leases are triple net.

Lease Comparable 3<sup>7</sup>: Dobson Park Plaza, Phase II located at corner of Dobson & Warner in Chandler, AZ 85224. Center has 30,975 square feet GLA with 10,320 square feet vacant. Rent is \$27.00/sqft/year with triple net expenses estimated at \$5 per square foot per year. Dobson Park Plaza is adjacent to an Asian grocery store and shares the same parking lot.

### **Land Comparables**

Land Comparable 1: Soon to be Vacant Wal-Mart, 1305 West Main Street, Mesa, AZ 85202 Building size is 129,300 square feet with a lot size of 14.55 acres (1 acre = 43,560 square feet). The list price is \$7,100,000 or \$54.91 per square foot of building area (\$7,100,000/129,300). Property is located near the SWC of Alma School and Main in the City of Mesa, Arizona.

### **Listing Comparables**

Listing Comparable 1: Walgreens, 2024 W. Main Street, Mesa, AZ 85201. Free standing retail building consisting of 14,142 square feet GLA on a 1.29 acre site. List price is \$5,585,000 or \$394.92 per square foot of GLA. Current cap rate is 5.85%. Walgreens was built in 2003. Lease is triple net. Walgreens is located at the hard corner of W. Main St. & N. Dobson Road. Last verified on 8/30/2006.

Listing Comparable 2: Jack in the Box NNN lease, 1945 W. Main Street, Mesa, AZ 85201. Free standing triple net lease retail restaurant with 4,000 square feet GLA on a 38,000 square foot lot. It is 100.00% occupied. List price is \$1,705,008 or \$426.25 per square foot GLA. Current cap rate is 6.25% with a cash on cash of 6.25%. Last verified on 9/16/2006. Located at southeast corner of Dobson and Main Street in Mesa. Actual net operating income is \$106,563.

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<sup>7</sup><http://www.rbiaz.com/>. According to the May 1999 issue of tenantsearch.com, Praedium Advisors, (<http://www.tenantsearch.com/dealmakers/1999%20Issues/May%201999/DM050799.htm>), had the listing to sell Dobson Park Plaza in Chandler, AZ. The project is being sold in two phases. Phase I is the Lee Lee Oriental Supermarket, a neighborhood grocery anchored project of 67,241 sq.ft. The current plan allows for an additional 15,000 sq.ft. to be built that can be shifted to phase II subject to a lot line adjustment. The asking price is \$5 million. Phase II is 7.32 acres of vacant land with fully developed infrastructure. The city of Chandler has approved the site plan for an additional 61,300 sq.ft. of retail space. The asking price is \$2.075 million.

Tenant signed new 10 year lease commencing October, 2005. No landlord maintenance obligations as true NNN lease. CPI increases every 5 yrs., max of 8% every 5.

Listing Comparable 3: Rancho de Tia Rosa (Mexican restaurant), 3129 East McKellips Road Mesa, AZ 85213. Retail restaurant has 8,014 square feet GLA on a 2.47 acre lot. List price is \$3,900,000 or \$486.65 per square foot of GLA. Cap rate is 6.50% and is based on a triple net lease. Last verified on 9/15/2006.

Listing Comparable 4: Fry's Plaza Shopping Center, 3116-3232 S. Mill Avenue, Tempe, AZ 85282. Fry's Plaza Shopping Center is a 87,555 square foot shopping center anchored by Fry's Food & Drug which is not a part of this offering (NAP). The Property is located at the northwest corner of Mill and Southern Avenues. The Property was built in 1976 and is currently 90% occupied with 40% being credit tenants. List price is \$6,630,000 for 31,000 square feet GLA or \$213.87 per square foot. Cap rate is 6.5%. Leases are triple net (NNN). Major tenants include Fry's Food & Drug (NAP), Hi-Health Supermarket, Great Clips, Jackson Hewitt Tax Service, Check N Go and UPS Store.

Listing Comparable 5: Stonebridge Center, 3614 & 3630 East Southern Avenue, Mesa, AZ 85206. Neighborhood shopping center is located on the northeast corner of Southern Avenue and Val Vista Drive in Mesa, Arizona. The subject property, built in 2000, has a 30,235-square foot of GLA and sits on 4.77 acres of land. List price is \$8,600,000 or \$284.44 per square foot. The property is 100% occupied with a cap rate of 6.2%. All leases are triple net. Tenants that are not a part of the offering (NAP) include Safeway Grocery, Safeway Gas, Del Taco, and Jack in the Box. Major tenants that are a part of the offering include Moki's Hawaiian Grill, Hungry Howie's Pizza, EBAY, Cost Cutters, and Sally Beauty. Date verified is 8/24/2006.

Listing Comparable 6: Valley East Plaza, 1530-50 West Southern Ave, Mesa, AZ 85202. Power shopping center on 9.08 acres with 141,400 square feet GLA located adjacent to Fiesta Mall. List price is \$18,500,000 or \$130.83 psf GLA. Current cap rate is 7.10% with triple net leases on below market rents. Power center was built in 1977. The Tenants are Bed, Bath, & Beyond, Petco, & Circuit City. Below Market Rents.

## References

Desert Ridge Marketplace (Phoenix, Arizona): Desert Ridge Marketplace is a 1.2 million-square-foot (111,480-square-meter), open-air regional shopping, dining, and entertainment center in a rapidly growing area of north Phoenix, Arizona. The 110-acre (45-hectare) development was the first major retail project developed in the large, master-planned community of Desert Ridge.

## DEVELOPMENT COST INFORMATION

Land cost: \$27,536,563  
Site improvement costs: \$20,204,537  
Other site costs: \$8,593,677  
Building improvements: \$57,201,677  
Tenant improvements: \$15,935,295  
Tenant reimbursements: -\$21,559

### Soft Costs

Permits/fees: \$2,461,538  
Architecture and engineering: \$8,255,338  
Loan extension fee: \$604,282  
Loan fees: \$2,133,625  
Leasing commissions: \$5,396,401  
Lender consulting fee: \$175,000  
Legal and accounting: \$1,444,152  
Property taxes/insurance: \$285,088  
Cart program: \$172,070  
Marketing and administration: \$757,081

Development fee: \$5,558,332  
Hard cost contingency: \$110,027  
Interest reserves: \$5,315,864

Total development cost: \$162,118,986

## ANNUAL OPERATING EXPENSES, 2002

Taxes: \$653,230  
Insurance: \$258,249  
Services: \$815,105  
Maintenance: \$740,206  
Janitorial: \$440,397  
Utilities: \$486,795  
Legal: \$44,078  
Management: \$520,556  
Miscellaneous: \$306,774

Total: \$4,265,390

## DEVELOPMENT SCHEDULE

Planning started: November 1998

Leasing started: March 1999  
Approvals obtained: October 1999  
Site acquired/leased: June 2000  
Construction started: July 2000  
Project opened: November 2001

SCOTTSDALE PAVILIONS (SCOTTSDALE, ARIZONA): A 1.1 million-square-foot power center with 16 anchor tenants and 69 smaller shops. Located on land leased from the Salt River Pimañ Maricopa Indian Community, Scottsdale Pavilions has pioneered the emerging regional power center concept and demonstrated the design and retailing possibilities of large-format discount centers.

Site Area: 112 acres<sup>1</sup>  
Gross Building Area (GBA): 1,061,600 square feet  
Gross Leasable Area (GLA): 1,061,600 square feet  
Floor/Area Ratio (FAR): 0.22  
Total Parking Spaces: 6,227 (all surface)

Average Length of Lease: 5 to 10 years (shops)  
Annual Rents: \$14 to \$24 per square foot (shops); \$7 to \$10 per square foot (major tenants)  
Average Annual Sales: \$221 per square foot

#### DEVELOPMENT COST INFORMATION

Site Acquisition Cost: Ground lease

Site Improvement Costs (on- and off-site)

Excavation/grading	\$1,170,000
Sewer/water/drainage	1,260,000
Paving/curbs/sidewalks	2,170,000
Landscaping/irrigation	1,450,000
Fees/general conditions	1,250,000
Other	2,250,000
Total	\$9,550,000

Construction Costs

Superstructure	\$18,000,000
HVAC	5,000,000
Electrical	6,000,000
Plumbing/sprinklers	1,900,000
Fees/general conditions	4,000,000
Graphics/specialties	100,000
Tenant improvements	5,000,000
Total	\$40,000,000

Soft Costs

Architecture/engineering	\$2,496,500
Marketing	309,000
Legal/accounting	764,000
Taxes/insurance	175,000
Construction interest and fees	3,065,000

Other 1,951,000  
Total \$6,809,500

Total Development Cost \$56,359,500

Total Development Cost per Gross Square Foot: \$53.18

ANNUAL OPERATING EXPENSES FOR 1994  
(Per Square Foot Per Year)

Taxes \$0.45  
Insurance 0.05  
Maintenance 1.04  
Utilities 0.19  
Management 0.23  
Miscellaneous 0.50  
Total \$2.46

Note

1The site area the developers began with encompasses 146 acres, but the retail area itself encompasses only 112 acres. The remaining 34 acres are devoted to entertainment areas, the open space and lakes on the west side, and the main road crossing the property.

DEVELOPMENT SCHEDULE

Planning Started: January 1986  
Ground Lease Established: July 1987  
Approvals Obtained: February 1988  
Construction Started: February 1988  
Leasing Started: January 1987  
Project Opened: March 1989

The Avenue at White Marsh (Baltimore County, Maryland):

DEVELOPMENT COST INFORMATION

Site acquisition cost (based on appraisal): \$8,540,000

Site Improvement Costs

Excavation/grading: \$805,044  
Sewer/water/stormwater management: 806,708  
Off-site costs (utilities and road improvements): 684,733  
Overflow parking lot (all inclusive): 269,516  
Asphalt paving: 1,218,009  
Curb and gutter: 404,715  
Site concrete: 798,418  
Perimeter sidewalk: 115,000  
Brick pavers: 293,128  
Parking lot lighting and site electric: 636,694

Specialty and feature lighting: 698,903  
Gas, electric, and telephone service: 105,745  
Fountains: 301,074  
Site furnishings: 52,943  
Landscaping: 483,496  
Site signage and special graphics: 406,526  
Sound and security: 258,436  
Total: \$8,339,088

#### Building Construction Costs

Structure: \$7,388,286  
HVAC: 14,598  
Electrical: 368,657  
Plumbing/sprinkler: 435,513  
Fees, general conditions, and requirements: 1,258,166  
Total: \$9,465,220

#### Soft Costs

Architecture/engineering: \$1,386,180  
Project and development management: 814,040  
Marketing management, consulting, and lease commissions: 1,181,616  
Marketing and event costs: 412,556  
Legal/accounting: 498,591  
Construction interest and fees: 851,670  
Land entitling costs: 498,860  
Taxes and insurance: 50,567  
Operating cost and carry during lease-up: 227,610  
Total: \$5,921,690

Tenant fit-up/allowance: \$4,734,239  
Tenant reimbursement to landlord: \$1,725,000  
Total development costs: \$35,275,237

Total project cost does not include building cost for three buildings (88,211 square feet of GBA) that were built by tenants under ground lease.

#### DEVELOPMENT SCHEDULE

Site purchased: 1943  
Planning started: January 1993  
Sales/leasing started: March 1996  
Construction started: November 1996  
First tenant move-in: June 1998  
Project completed: November 1998