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Real Estate Case Study – 90-Minute Industrial Development Modeling Test

You are considering investing in the development of a new 337,154-square-foot industrial property in Calgary, Alberta (Canada). The property is located in the Southeast of the city (4216 61 Ave SE), and the land, construction costs, and reserves will cost approximately \$30 million CAD.

The Loan-to-Cost (LTC) Ratio for the initial development will be 50%, and you will work with a Developer who will contribute 10% of the required equity funding; your firm will contribute 90% of the required equity.

The returns to equity investors will be split pari passu up to a 10% IRR, with an 80% / 20% split above 10% and a 70% / 30% split above a 20% IRR.

You plan to rent the property to two major corporate clients, both of whom will sign 4-year leases initially and then switch to 5-year leases. You plan to hold the property for eight years (one year for the construction and seven for operations) and then sell it based on prevailing Cap Rates. In addition, you will sell the excess land in FY 22.

Please use the following assumptions and complete the provided Excel template. You have **90 minutes** to make the calculations and respond to the case study questions:

Part 1 – Construction, Financing, and Exit Assumptions

Use the following figures to set up the key model assumptions:

- **Number of Acres to Purchase:** 18.0
- **Estimated Price per Acre:** \$700,000
- **Percentage of Acreage Required for Property:** 43.0%
- **Rentable to Gross Square Feet Ratio:** 95.0%
- **Construction Costs per Gross Square Foot:** \$50.00

The average price per acre for undeveloped industrial land in Calgary is \$600,000 – \$750,000, and most new developments use between 40% and 50% of the available land.

The initial development will be funded by a Construction Loan and Investor/Developer Equity:

- **Loan-to-Cost (LTC) Ratio:** 50.0%
- **Annual Interest Rate:** 6.25% (fixed)



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- **Issuance Fees:** 1.00% (capitalized)
- **Amortization Period:** N/A – Interest-only (capitalized)
- **Loan Draws:** Draw on the loan to cover construction and land acquisition costs *after* the maximum amount of equity has been drawn
- **Maturity:** Refinanced upon property completion

In addition to the Land Acquisition and Construction Costs, **\$600,000** will also be allotted for the Replacement Reserves during the lease-up period in the first two years.

For the Permanent Loan refinancing upon construction completion, please assume:

- **Loan-to-Value (LTV) Ratio:** 55.0% (Based on the *stabilized* NOI – be careful!)
- **Annual Interest Rate:** 4.75% (fixed)
- **Issuance Fees:** 1.00%
- **Amortization Period:** 30 years
- **Maturity:** 10 years (past the end of the holding period)
- **Prepayment Penalty:** 1.00%

You can use a 15% discount rate to determine the proper loan amount (if necessary).

The lenders are seeking a minimum Interest Coverage Ratio of 1.50x and a minimum Debt Service Coverage Ratio (DSCR) of 1.25x.

Assume property selling costs of 1.50% and Cap Rates that decline from 5.80% to 5.50% and then rise to 5.75% by the end of the period. Historically, Class A Industrial Cap Rates in Calgary have fluctuated between 5.00% and 6.50%.

Finally, assume that the excess land's value increases by 3% per year and that we sell it in FY 22.

Part 2 – Construction Timeline and Equity and Debt Draws

You must submit a deposit for **20%** of the land's value in January 2018 (the first month of construction), with the remaining **80%** following in June.

Use the following percentages for the Construction Costs, which include Hard Costs, Soft Costs, and FF&E: January (20%), February (10%), March (10%), April (5%), May (5%), June (5%), July (10%), August (10%), September (5%), October (10%), November (5%), and December (5%).



Assume that all interest and loan fees are capitalized during this construction period. To avoid circular references, link the monthly interest expense to the *beginning* loan balance each month, and assume that loan draws and issuance fees happen on the 1st of each month.

Part 3 – Operating and Rent Roll Assumptions

- **Property Management Fees:** 3.0% of Effective Gross Income
- **Expenses & Taxes per Rentable Square Foot:** \$2.35; 3% annual growth
- **Replacement Reserves per Rentable Square Foot:** \$0.30; 3% annual growth

The property can support only two tenants, so you will model the revenue and expenses on a lease-by-lease basis. Here is the lease information for each tenant:

Tenant #1 – 65% of Rentable Square Feet

- **Lease Type:** Triple Net (NNN) Lease (Tenant is responsible for Expenses & Taxes, but not Management Fees or Reserves)
- **Lease Start Date:** 2018-12-31
- **Lease Expiration Date:** 2022-12-31
- **Rent per Square Foot:** \$7.50; 3% annual growth

Tenant #2 – 30% of Rentable Square Feet

- **Lease Type:** Triple Net (NNN) Lease (Tenant is responsible for Expenses & Taxes, but not Management Fees or Reserves)
- **Lease Start Date:** 2019-12-31
- **Lease Expiration Date:** 2023-12-31
- **Rent per Square Foot:** \$8.00; 3% annual growth

You should model the possibility of a lease renewal or expiration for each tenant by using weighted numbers based on the renewal probability. Use the following figures:

- **New Lease Term:** 5 years upon expiration for each tenant
- **Renewal Probability:** 60%
- **Months of Downtime for Non-Renewals:** 6
- **Months of Free Rent:** 4 (New Tenants); 2 (Renewal Tenants)
- **Tenant Improvements (TIs) per RSF:** \$1.50 (New Tenants); \$1.00 (Renewal Tenants)
- **Leasing Commissions (LCs) % Total Lease Value:** 3.0% (New Tenants); 1.0% (Renewals)



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Asking Rents on industrial properties in Calgary have averaged between \$7.00 and \$9.00 per square foot over the past several years, with additional concessions worth between \$3.00 and \$4.00 PSF.

Part 4 – Property Pro-Forma

Use the figures above to calculate everything down to Adjusted NOI on the Pro-Forma. Pay special attention to the Vacancy and Expense Reimbursement assumptions as they relate to the lease start and expiration dates.

Also, make sure that you reflect the initial deal funding for the Replacement Reserves when calculating the annual capital costs.

Part 5 – Permanent Loan Refinancing, Excess Land Sale, and Equity Returns

Assume that the Construction Loan is refinanced with the Permanent Loan at the beginning of the first operational year (FY 19), that the Excess Land is sold in FY 22, and that the property is sold at the end of FY 25.

For simplicity, you may assume that all the equity draws happen at the end of the Construction Year (FY 18); you do **not** have to use the XIRR function to calculate the project-level equity IRR.

Part 6 – Waterfall Returns Schedule

The Developer in this deal will contribute **10%** of the required Equity, and your firm will contribute **90%**.

Up to a **10% project-level leveraged IRR**, the cash flows will be distributed “pari passu” (i.e., in proportion to the initial equity invested).

When the leveraged IRR exceeds 10%, the Developer will receive 20% of all cash flows, with the remaining 80% going to your firm. Above a 20% leveraged IRR, the Developer will receive 30% of all cash flows, with your firm receiving 70%. Assume no catch-up or lookback provisions.

Part 7 – Case Study Questions

Once you’ve completed the model, please respond to the following questions:

- 1) If your firm is targeting a 20% IRR, would you do this deal? Why or why not?



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- 2) Would the lenders be likely to approve of this deal? If not, how would you change the Permanent Loan to win their approval?
- 3) What are the approximate IRRs for the Construction Loan and Permanent Loan? If these figures are different from the interest rates, what accounts for the difference?
- 4) What additional analysis might a lender perform to decide on the Permanent Loan funding?
- 5) Are the operating assumptions in this model realistic? If not, which assumptions might you change to get a more reasonable view of this deal?
- 6) If you had more time and resources, which additional analyses might you look at to make a more informed investment decision?