**CALIFORNIA COLLECTION / PAPER 02**

# The $0 Land Test

## If land were free, would a California apartment building still fail?

**INFINITY DEVELOPMENT | November 2026**

## The finding

For the illustrative project tested here, yes. A hypothetical 100-apartment Los Angeles rental development costs $55 million to deliver with land at zero. At $3,500 average monthly apartment rent, stabilized annual net operating income is $2.558 million: a 4.65% unlevered yield on cost (UYOC), below the selected 7.00% hurdle.

Meeting that hurdle requires approximately $4,645 average monthly apartment rent, with all other operating assumptions held constant. At a separate assumed 5.00% capitalization rate, the completed building is worth $51.16 million, or $3.84 million less than development cost before selling expenses.

| LAND COST | TOTAL COST | BASE UYOC | HURDLE |
|---|---|---|---|
| $0 | $55.0 million | 4.65% | 7.00% |

### What this establishes

Free land does not necessarily close the gap between housing delivery cost and supportable income. Construction is the largest contributor; parking, services, fees, financing carry and operating costs widen the gap. This is a defined scenario, not a finding that every California project fails.

### Scope and evidence

All original model inputs are author-selected November 2026 assumptions, not bids, appraisals or commitments. No actual Infinity property is analyzed. Published benchmarks provide context; source notes and limitations appear at the end. This paper belongs within the California Collection.

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# 01 / The project and its development budget

| PARAMETER | ILLUSTRATIVE SPECIFICATION |
|---|---|
| Location / housing | Los Angeles / 100 market-rate rental apartments |
| Building | Five residential stories over a parking podium |
| Apartment area | 80,000 net rentable sf; 800 sf average apartment |
| Residential gross area | 100,000 sf excluding parking; 80% efficiency |
| Parking | 100 structured spaces; approximately 35,000 sf |
| Land / commercial space | $0; no ground rent or participation / none |

| COST ITEM | TOTAL | PER UNIT |
|---|---|---|
| Land | $0 | $0 |
| Residential construction | $32,000,000 | $320,000 |
| Structured parking | $4,000,000 | $40,000 |
| Site and off-site work | $2,000,000 | $20,000 |
| Hard-cost contingency | $1,900,000 | $19,000 |
| Architecture, engineering and consultants | $3,000,000 | $30,000 |
| Legal, entitlement and accounting | $1,000,000 | $10,000 |
| Permits, impact fees and utility connections | $3,000,000 | $30,000 |
| Construction-period taxes, insurance and administration | $800,000 | $8,000 |
| Developer fee | $1,500,000 | $15,000 |
| Marketing, lease-up and operating-deficit reserve | $800,000 | $8,000 |
| Construction interest reserve | $4,400,000 | $44,000 |
| Lender fees, closing and third-party reports | $600,000 | $6,000 |
| TOTAL | $55,000,000 | $550,000 |

Budget basis: $320 per gross residential sf, including contractor general conditions, overhead and profit; $40,000 per parking space; 5% contingency on $38 million hard costs. Public fees and utilities are a $30,000-per-unit allowance, not an actual municipal calculation. Pricing is assumed at modeled construction start; no separate escalation is added.

Favorable assumptions: no subsidy, existing tenants, major demolition, extraordinary remediation, unusual ground conditions or additional affordability obligation. The program is assumed approvable; this is not a parcel-specific entitlement conclusion.

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# 02 / Timeline, financing and operating income

| DELIVERY PHASE | MODELED PERIOD |
|---|---|
| Design, approvals and construction documents | Months 1-16 |
| Construction | Months 17-40 |
| Final lease-up and stabilization | Months 41-48 |

## Construction financing

The model assumes 65% loan-to-cost: a $35.75 million construction commitment and $19.25 million initial equity. At 7.50% annual interest, an average $22 million drawn balance over 32 months produces the $4.4 million interest reserve. This is a simplified draw-and-carry allowance, not a monthly draw schedule or loan offer. No preferred return or separate equity-carry charge is added to development cost.

## Stabilized annual operating pro forma

| OPERATING ITEM | ANNUAL AMOUNT |
|---|---|
| Gross apartment rent: 100 x $3,500 x 12 | $4,200,000 |
| Vacancy and collection loss: 6% | ($252,000) |
| Other income, net of associated loss | $120,000 |
| Effective gross income | $4,068,000 |
| Operations excluding property taxes | ($850,000) |
| Property-tax allowance: 1.20% of modeled cost | ($660,000) |
| Net operating income before reserves | $2,558,000 |
| Replacement reserve: $300 per apartment | ($30,000) |
| Cash flow available for debt service | $2,528,000 |

Operations include management, payroll, repairs, turnover, owner-paid utilities, insurance and administration. Property tax is an illustrative allowance, not a prediction of assessment or a verified local rate. Free land does not necessarily mean zero taxable land value. No future rent growth is assumed.

## Permanent financing

Illustrative terms: 6.25% interest, 30-year amortization, 1.25x minimum debt-service coverage and 65% maximum loan-to-value. Coverage supports approximately $27.37 million; leverage against modeled value supports $33.25 million. The lower amount controls. Repaying a fully drawn construction loan requires approximately $8.38 million additional equity, before refinancing costs. All terms require lender validation.

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# 03 / Investor returns and the feasibility test

UYOC equals stabilized annual NOI before debt service divided by total development cost, including modeled construction financing costs. It is not cash-on-cash return, preferred return or investor IRR. Practitioner guidance describes multifamily development yields around 6.5%-7.5%, with related build-to-rent guidance around 7%-8%. These are directional references, not a universal investor requirement or systematic survey. [4, 5]

This paper selects 7.00% as its minimum screen, with 7.50% and 8.00% sensitivities. Against the selected 5.00% capitalization rate, 7.00% implies a 200-basis-point development spread. These are model choices, not quoted Los Angeles market averages.

| TEST | RESULT |
|---|---|
| Total development cost / annual NOI | $55.00m / $2.558m |
| Base UYOC / selected hurdle | 4.65% / 7.00% |
| Annual NOI required / annual shortfall | $3.850m / $1.292m |
| Stabilized value at 5.00% capitalization | $51.160m |
| Value less cost before selling expenses | ($3.840m) |
| Conclusion | Fails value and development-yield tests |

| RETURN OBJECTIVE | ANNUAL NOI | MONTHLY RENT |
|---|---|---|
| Value equals cost at 5.00% cap | $2,750,000 | $3,670 |
| 7.00% UYOC | $3,850,000 | $4,645 |
| 7.50% UYOC | $4,125,000 | $4,889 |
| 8.00% UYOC | $4,400,000 | $5,133 |

Required monthly rent = (target UYOC x $55,000,000 + $1,510,000 operating expenses - $120,000 other income) / (100 x 12 x 94%). These are mathematical requirements, not achievable-rent forecasts. At 7.00%, required rent is approximately 33% above the base case.

## Which costs constrain feasibility?

Hard costs total $38 million, approximately 69% of development cost before contingency. Parking contributes $4 million within that subtotal. Professional services, public charges and construction-period administration add $7.8 million. Interest and lender costs add $5 million. Operating expenses and taxes absorb $1.51 million annually.

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# 04 / Sensitivities and finding

| ISOLATED CHANGE | COST | UYOC | PASS 7%? |
|---|---|---|---|
| None | $55.00m | 4.65% | No |
| Hard costs reduced 15% | $49.30m | 5.33% | No |
| Public-fee allowance removed | $52.00m | 4.99% | No |
| Developer fee removed | $53.50m | 4.81% | No |
| Construction interest removed | $50.60m | 5.16% | No |

Cost sensitivities change only the named cost and the cost-linked tax allowance; other lines remain fixed. They are not fully redesigned projects. Removing interest is a diagnostic counterfactual, not an available financing offer.

| MONTHLY RENT | ANNUAL NOI | UYOC | PASS 7%? |
|---|---|---|---|
| $3,000 | $1,994,000 | 3.63% | No |
| $3,500 | $2,558,000 | 4.65% | No |
| $4,000 | $3,122,000 | 5.68% | No |
| $4,500 | $3,686,000 | 6.70% | No |
| $5,000 | $4,250,000 | 7.73% | Yes |

### The finding

For this illustrative Los Angeles rental building, free land is not enough. At $3,500 average monthly rent, the project misses the selected 7.00% UYOC hurdle, carries a modeled value below cost, and faces a permanent-financing shortfall.

The binding constraint is the relationship between non-land delivery cost and supportable operating income. The same cost structure can fail at one achievable rent and pass at another. Different building types, parking programs, subsidies, financing structures or required returns can change the result. Passing a yield screen alone does not establish investability.

### A note on condominiums

A condominium project requires a separate sellout schedule, commissions, concessions, insurance, warranty, financing carry and profit analysis. Dividing this rental budget by 100 does not establish defensible condominium pricing.

### Publication boundary

Before presenting these construction allowances as locally representative, obtain independent California multifamily estimator review. Actual rents require a comparable-property study; fees, taxes and entitlement obligations require parcel-specific verification.

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# 05 / Sources and legal disclaimer

1. RAND (2025), The High Cost of Producing Multifamily Housing in California. Historical production-cost research, not a 2026 bid. View source.

2. Colliers (Q3 2026), Greater Los Angeles Multifamily Market Report. Regional rental context, not a new-building rent study. View source.

3. Skylatus (2026), Multifamily Construction Financing guide. Directional leverage and interest-rate context, not a commitment. View source.

4. RE Modeler (March 2026), Real Estate Return Benchmarks by Property Type. Practitioner guidance, not an investor survey. View source.

5. AHL (July 2026), Build-to-Rent 2026: Where the Economics Still Work. Related residential guidance, not a direct Los Angeles podium benchmark. View source.

## Evidence boundaries

RAND supplies historical cost and fee context, not project pricing. Colliers supplies regional rental context, not support for this hypothetical building's $3,500 rent. Construction financing guidance supplies directional context only. Every budget, schedule, tax, operating and financing input in the model is an author-selected November 2026 assumption unless expressly attributed; calculated outputs are not observed market transactions. Figures are rounded.

## Legal disclaimer

Prepared for Infinity Development for informational and educational purposes only. This paper is not an offer to sell or solicitation to purchase securities, an investment recommendation, or legal, tax, accounting, engineering, appraisal or financing advice. No actual Infinity project, ownership interest, investor commitment, lender approval or ability to execute is represented.

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