L Y R A

SAMPLE STUDY — DEMONSTRATION SITE, REPRESENTATIVE ASSUMPTIONS

Pilot Feasibility Memo — Self-Storage

2.50-acre pad · single-story self-storage

North DFW growth corridor · demonstration site

Prepared July 31, 2026 · 72-hour pilot tier

RENTABLE AREA	TOTAL DEV COST
32,234 sf	$3,855,060
43,560 gross · 323 units	$120 / rentable sf

UNTRENDED YIELD ON COST	LEVERED IRR (5-YR)
7.03%	11.0%
7.50% target · misses	Seeded p50 10.0%

EXECUTIVE ANSWER

Do not pursue at the modeled land basis. At $9.00/land sf the concept returns 7.03% untrended yield-on-cost against a 7.50% target, and the seeded band spans 6.19% to 7.68% — it clears the target in only 16% of 5,000 trials. Two levers close the gap: land at $738,412 ($7/sf, 25% below the modeled basis), or a blended achievable rent of $15.69/rentable sf/yr versus the $14.70 modeled.

LENDER SCREEN (STABILIZED)

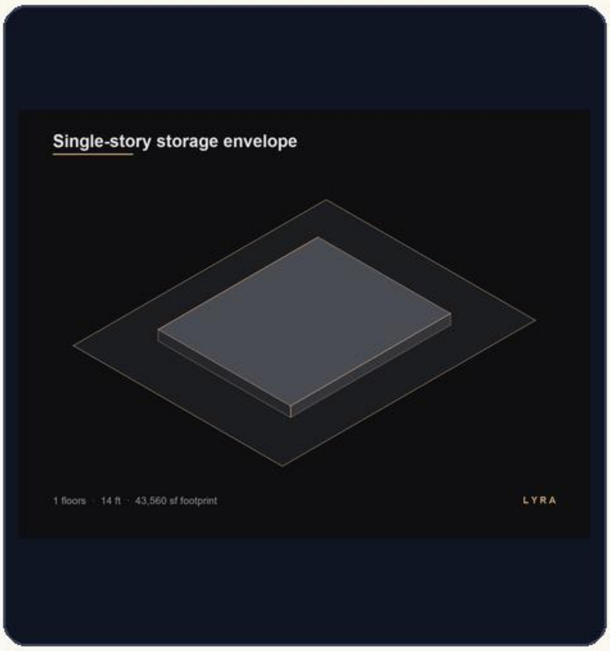
DSCR 1.46x · debt yield 11.7% · LTV 53% at 60% LTC. The stabilized asset finances; the development margin is what fails.

Concept-grade feasibility — not investment advice. Verify zoning + costs locally.

Pilot Feasibility Memo · pre-LOI / IC grade · NOT prepared for lender submission

Site and buildable envelope

A demonstration 2.50-acre commercial pad. Every control below is a stated representative assumption — there is no parcel record, survey, or municipal determination behind it.



SITE RECORD

LOCATION

Suburban arterial pad, north DFW growth corridor — DEMONSTRATION SITE

PARCEL

2.5 acres (108,900 sf); assumed 300 ft x 363 ft

DISTRICT

Representative suburban commercial corridor; storage assumed permitted

USE

Single-story self-storage — mixed drive-up + climate-controlled

ZONING SOURCE

NONE — representative controls, not a municipal record

CONTROL	VALUE	RESULT	BASIS / STATUS
Lot area	108,900 sf	—	Assumed 2.50-acre pad
FAR	0.5	54,450 sf	Representative · not binding
Coverage	40%	43,560 sf	After aisles/setbacks/detention
Design height	14 ft	1 floor	District max 35 ft — see appendix
Coverage x floors	—	43,560 sf	The binding capacity
Concept envelope	—	43,560 sf	height/coverage binds

VERIFY LOCALLY

Self-storage is a conditional or special-permit use in many suburban commercial districts, and several Sunbelt jurisdictions impose storage-specific moratoria, spacing rules, frontage/architectural standards, or outright corridor bans. None of that is modeled here. Before this envelope means anything, confirm use permission, the storage-specific overlay, buffer and screening rules, detention sizing, fire access, and the actual district height and coverage maxima with the municipality. The massing image is diagrammatic — a single extruded footprint on an assumed rectangular pad, not a site plan.

Rentable program and unit mix

One single-story building sized to the coverage envelope, merchandised to a representative Sunbelt unit mix.

PROGRAM

43,560 gross sf · 32,234 rentable sf · 74% rentable ratio · 324 units · 100 sf average · blended $14.70/rentable sf/yr

UNIT TYPE	COUNT	SIZE SF	NET SF	SHARE	$/SF/YR	$/MO
5x5 · climate	52	25	1,300	4%	$24.96	$52
5x10 · climate	90	50	4,500	14%	$19.20	$80
10x10 · climate	84	100	8,400	26%	$16.20	$135
10x15 · drive-up	52	150	7,800	24%	$13.20	$165
10x20 · drive-up	35	200	7,000	22%	$11.70	$195
10x30 · drive-up	11	300	3,300	10%	$10.60	$265
Total / blended	324	100 avg	32,300	100%	$14.70	—

ASSUMPTION REGISTER (SUMMARY — FULL APPENDIX ON PAGE 6)

ASSUMPTION	BASE CASE	TYPE / NOTE
Rentable ratio	74%	Representative · industry 70–75% climate-controlled
Hard cost	$55 / gross sf	Representative turnkey incl. sitework
Soft costs	20% of hard	Representative assumption
Land	$980,100	$9.00 / land sf — modeled basis
Economic vacancy	12%	Stabilized, incl. concessions + delinquency
Operating expense	35% of EGI	Representative · industry 30–38%
Cap / exit	6.25%	Representative Sunbelt suburban storage
Lease-up	12 units / mo	~27 months to stabilize

Storage has no per-unit parking requirement; the engine's parking ratio is set to zero and the small fixed office/loading count is a site-plan item, not a feasibility driver.

Concept-grade pro forma

Sources, uses and lender screen straight from Lyra's developer pro forma and IRR modules.

USES

Land	$980,100
Hard costs	$2,395,800
Soft costs	$479,160
Construction interest	$101,774
Total project cost	$3,956,834

SOURCES + LENDER SCREEN

Debt · 60% LTC	$2,313,036
Equity	$1,643,798
Debt service (IO @ 8.00%)	$185,043
DSCR / debt yield	1.46x · 11.7%
LTV on stabilized value	53%

STABILIZED NOI
$271,016
$8 / rentable sf

YIELD ON COST
7.03%
7.50% target · misses

EQUITY MULTIPLE
1.65x
5-yr hold · IRR 11.0%

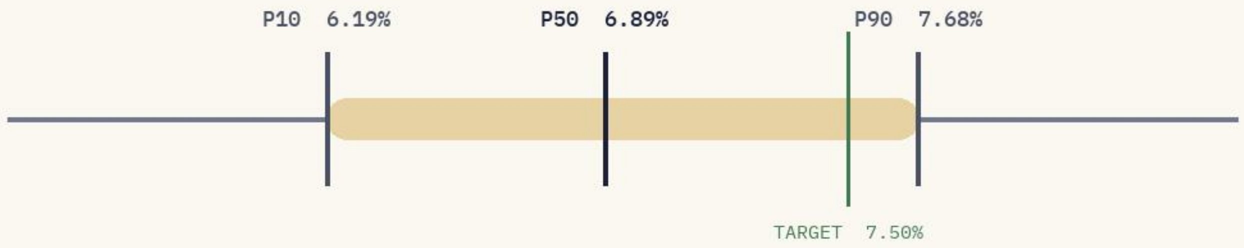
LEVERED CASH FLOW	AMOUNT	NOTE
Equity in	-$1,643,798	Sponsor equity at risk
Year 1	-$119,596	Lease-up — partial occupancy, full debt service
Year 2	$5,885	Lease-up — partial occupancy, full debt service
Year 3	$97,195	Stabilized operations
Year 4	$106,811	Stabilized operations
Year 5	$2,707,143	Operations + sale at exit cap, loan repaid

Lease-up of ~27 months at 12 units/month is modeled explicitly: debt service is owed in full while income ramps, which is where storage development returns are actually won or lost. The stabilized asset screens well for a lender (1.46x DSCR, 11.7% debt yield); the problem is the basis, not the operation.

Risk band and decision conditions

Seeded Monte-Carlo over rent and construction cost; 5,000 trials, seed 42.

YIELD-ON-COST DISTRIBUTION



PROB. OF CLEARING TARGET

16%

5,000 seeded trials

IRR P10 / P50

4.6% / 10.0%

Same seeded ranges

IRR P90

15.2%

Upside range

SCENARIO	YIELD ON COST	DRIVER MOVEMENT	CLEARS TARGET
Downside	5.69%	Rent -10%, hard cost +15%	No
Base	7.03%	As modeled	No
Upside	8.36%	Rent +10%, hard cost -10%	Yes

RUN RECORD

Independent uniform ranges: rent 90–110% of the modeled blend; hard cost 90–115% of the modeled $/gross sf. The band describes those two inputs only — it does not price entitlement risk, a storage moratorium, a competing facility opening inside the trade area, or a lease-up slower than modeled.

PROCEED IF

- Land can be bought at or below $738,412 ($7/sf).
- Verified blended achievable rent reaches $15.69/rentable sf/yr.
- A GC bid confirms hard cost at or below the modeled $/gross sf.

PAUSE OR REPRICE IF

- Storage is conditional-use, restricted, or under moratorium in the district.
- Trade-area supply exceeds ~7 sf per capita or a competing facility is in permitting.
- Lease-up underwriting has to stretch beyond the modeled pace to work.

Assumptions appendix

Every economic input, the published range it sits inside, and where the engine was adapted for a storage typology. Nothing here is a verified site fact.

INPUT	MODELED	REPRESENTATIVE PUBLISHED RANGE / BASIS
Hard cost	$55/gross sf	$38–55/sf single-story climate-controlled shell; $80–120/GSF turnkey where sitework and
All-in basis	$120/rentable sf	$70–110/rentable sf single-story drive-up; to $160+ multi-story climate-controlled. This c
Blended rent	$14.70/rentable sf/yr	Phoenix metro annualized average $16.10/sf (Feb 2026) across all vintages and types; nati
Rentable ratio	74%	70–75% typical for interior-corridor climate-controlled; drive-up alone runs higher
Lease-up	12 units/mo (~27 mo)	24–36 months to stabilize in 2026 (was ~18 months); Sunbelt metros lead both population
Operating expense	35% of EGI	30–38% typical at stabilization
Cap / exit	6.25%	5.0–7.5% overall in 2026; 5.75–6.50% core-market climate-controlled, 6.50–7.50% tertia
Target yield on cost	7.50%	Development targets compressed from ~8.5% to ~7.5% in core markets
Land	$9.00/land sf	Modeled basis for a suburban arterial pad — NOT a listing, appraisal, or comp. The residual

ENGINE ADAPTATIONS — READ THIS

Lyra's feasibility engine is built around a multifamily vocabulary (units, average unit size, per-unit parking, lease-up per unit). Four honest adaptations were made rather than faking a storage-native model:

1. FLOOR COUNT. The engine derives floors as floor(height / floor-to-floor). To model a deliberately single-story building it is given the 14 ft DESIGN height, not the 35 ft district maximum. The district maximum is recorded on page 2 and is not binding; a two-story scheme is a separate study.

2. UNITS. 'Units' are storage units, and 'average unit size' is the area-weighted average of the modeled mix — so unit count is a merchandising output, not a program input.

3. PARKING. Set to zero per unit. Storage parking is a small fixed office/loading count driven by site plan and local code, not by unit count.

4. LEASE-UP. The engine's absorption model retires units at a constant monthly pace and holds debt service flat. Real storage lease-up is an occupancy S-curve with concessions and rate ramps; the constant-pace approximation is conservative early and

Sources for the ranges above: StorageCafe Phoenix market statistics (2026); RentCafe self-storage monthly reports (March and June 2026);

Limitations and next diligence

What this study can answer — and what it cannot.

STANDING LIMITATIONS

This is a concept-grade decision aid built on the stated assumptions and a demonstration site. Lyra is compliance-aware, never compliance-grade: this work does not certify zoning or code compliance and is not a survey, architectural or engineering service, appraisal, market study, legal or tax advice, lending commitment, or guarantee of project performance. It carries no third-party reviewer signature and is NOT prepared for submission to a lender or a credit committee as supporting documentation. Its job is to decide whether a site is worth the cost of real diligence.

VERIFY NEXT

01 Municipality / land-use counsel

Confirm that self-storage is permitted by right, the district's height and coverage maxima, storage-specific overlays, moratoria, spacing rules, and frontage or architectural standards.

02 Storage feasibility / market study

Trade-area supply per capita, competing facilities in permitting, achievable street rates by unit type, and a defensible lease-up curve. This is the single input most likely to reverse the verdict.

03 Civil engineer + storage GC

Detention sizing, grading, fire access and utility runs on the actual pad, then a hard-cost bid against the modeled $/gross sf including sitework.

04 Land seller + lender

Test the residual land number as an actual bid, and confirm construction terms, LTC, rate and the stabilized debt-yield threshold the lender will hold you to.

FINAL NOTE

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