Appendix B

Sample ROI Building Prototype Spreadsheet

ROI Building Prototype Spreadsheet includes various physical and fiscal tabs and allows user to model any type of building. The input tabs in the ROI Model is presented in next pages and the remaining tabs which are output tabs are listed as follows:

* Advanced Financial
* Gap Financing Options
* Gap Financing definitions
* Residential Owner
* Residential Rental
* Retail
* Office
* Industrial
* Hotel
* Mixed-Use Summary
* Building Envelope Calculator
* Development Costs
* Scenario Spreadsheet
* Print Summery

ENVISION Tomorrow

FREGONESE ASSOCIATES

suite of urban and regional planning tools

Envision Tomorrow™ Return on Investment Model

Version 4.0 BETA, Updated March 20, 2012

What is the ROI Model?

Do you want to examine redevelopment potential in your city? Do you want to study the relationship between land use regulations and the current development market?

The ROI Model is a versatile, easy-to-use tool that can be used to test the physical and financial feasibility of a proposed development or existing development regulations. The ROI Model considers a range of factors including parking, height and use requirements, costs associated with construction, fees, rents and subsidies. The ROI Model allows you to model single-use and mixed-use buildings at a range of scales.

Quick Start Guide

A few quick and easy steps will get you started at modeling prototype buildings and testing land use regulations.

1. Save this file with a new name.

2. Gather data for use in the ROI Model.

- Existing land use regulations (e.g. parking requirements, height limits, landscaping, setbacks)
- Local estimates for construction costs, rents, sales prices, and land values
- Local tax rates

3. Work through the Physical and Financial tabs.

Using the data you have gathered, enter data into the pink Input Cells of each Input Tab in the ROI Model. If you have questions, the Envision Tumorrow user manual as well as embedded comments (hover over cells with a red corner for more information) are available to provide answers to common questions.

TAB Color Definition	
Input Tab	
Output Tab	
Reference Tab	

CELL Color Definition	
Input Cell	
Header Cell	
Subheader Cell	
Output Cell	[white]

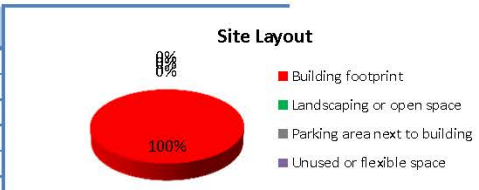
4. Make adjustments to create a building that meets your goals.

Completing the ROI Model is an iterative learning process, and you will likely go through several iterations of each prototype building in order to test a variety of assumptions about market conditions, achieveable rent, desired building types and sizes, ownership schemes, financing, and regulatory conditions, among many other factors. It is helpful to have a goal or a question to guide your testing.

What building types are feasible in the current market?
What would X (e.g. rent, land cost, financing) need to be in order to achieve a desired building type?
If certain regulatory constraints (e.g. height restrictions, high parking requirements or setbacks) were relaxed or removed, what new building types become possible?

Physical Inputs Tab

Physical Stats	
Housing Units / Hotel Rooms	-
Jobs	1,899
Housing / Hotel Room Density (Per Acre)	-
Job Density (Per Acre)	1,887.1
FAR	16.19
Net Rentable/Sellable Square Feet	459,850



Financial Stats

Rental (Residential and Commercial)	Target Return	Actual Return
Cash-on-Cash (After Year 3)	10.0%	17.7%
IRR on Project Cost (Unleveraged Return)	12.0%	14.5%
IRR on Investor Equity (Leveraged Return Before Tax)	25.0%	24.7%
Debt Service Coverage Ratio (Year 3)	1.25	3.04
IRR on Public Participation	5.0%	0.0%
Owner Residential	**Target Return**	**Actual Return**
Project Rate of Return	25.0%	0.0%
Return to Equity	75.0%	0.0%

Physical Inputs

Site Inputs

Building name	DAP Core-2 Ofice Bonus	
Project City/State	Austin TX	
Site area	43,827	square feet
	1.01	acres
Site gross-to-net ratio	100%	(enter percentage)
Landscaping or open space	0%	(enter percentage)
Building height (stories)	19	stories
Under-build	85%	(enter percentage)

FAR & Density Checks

Maximum FAR (if applicable)		FAR
Percent of Allowed FAR Used		
Maximum residential density (if applicable)		units/acre
Percent of Allowed Density Used		

Building Uses

Residential	Multifamily	select single family, townhome, multifamily or none
	Owner	select owner, renter or none
	0%	
Retail	3%	
Office	97%	
Industrial	0%	
Public	0%	
Education	0%	
Hotel/Motel	0%	
Total (Check)	100%	

Residential Unit Size Estimator	Avg. Unit Size (Net Sq Ft)	% of Units in Building	# of Units by Type
4+ Bedroom	2,000	10%	-
3 Bedroom	1,600	10%	-
2 Bedroom	1,000	20%	-
1 Bedroom	800	30%	-
Studio	550	30%	-
Calculated Residential Unit Size	965	100%	-

Residential Unit Size (Avg. Sq Ft)

User-defined Avg. Residential Unit Size	1,000	/ sq ft

Gross Square Footage per Employee by Sector (Average)

Retail	1,000	gross square feet/employee
Office	250	gross square feet/employee
Industrial	972	gross square feet/employee
Public	1,000	gross square feet/employee
Educational	800	gross square feet/employee
Hotel/Motel (Sq Ft per Employee)	1,152	gross square feet/employee
Hotel/Motel (Room Size)	600	net square feet/unit

Parking Requirements

Parking Spaces Per Dwelling Unit, Room or 1,000 sf of Commercial

Residential	1.00	space(s)/dwelling unit
Retail	4.00	space(s)/1000 sf
Office	2.13	space(s)/1000 sf
Industrial	2.00	space(s)/1000 sf
Public	1.00	space(s)/1000 sf
Educational	0.00	space(s)/1000 sf
Hotel/Motel	0.61	space(s)/room

Parking Type

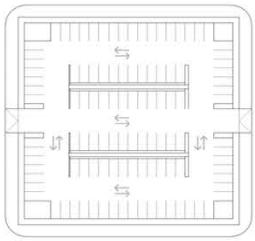
Surface or Structured Parking	0.00	(number of levels)
Shared/Public Garage?	no	
Internal Parking (Tuck Under or Sandwich)	6.00	(number of levels)
	70%	Percent internal parking supply vs. demand
	100%	used (internal parking check, if only parking type)
Underground Parking	3.00	(maximum number of levels to test)
	14.53	levels will maximize site without surface or structured parking
	2.15	actual underground levels after factoring underbuild
Mechanical parking?	no	

Parking Layout

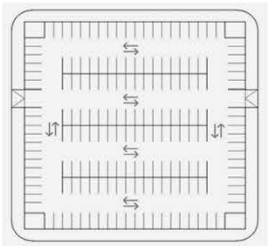
	Mark choice with "X"	Square feet per space	
Suburban Perpendicular		400	sf
Urban Perpendicular		315	sf
Structured		260	sf
Mechanical		125	sf
Custom	x	300	sf
Parking Square Footage		300	

Parking Layout Diagrams

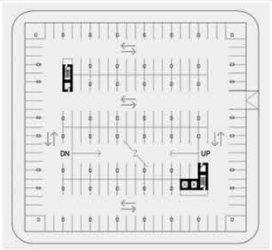
Suburban Perpendicular



Urban Perpendicular



Structured



Physical Outputs Tab

Physical Stats	
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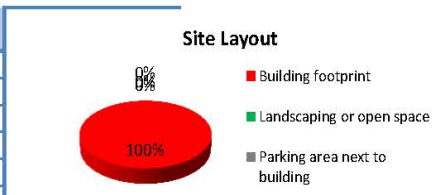

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IRR on Project Cost (Unleveraged Return)	12.0%	14.5%
Owner Residential	**Target Return**	**Actual Return**
Project Rate of Return	25.0%	0.0%
Return to Equity	75.0%	0.0%

Physical Outputs

Site-Level Outputs

Building footprint	43,827	square feet
Landscaping or open space	-	square feet
Parking area next to building	-	square feet
Unused or flexible space	-	square feet
Useable building total	709,702	square feet

Land Use Outputs

Square Footage by Use	Gross Square Feet	Net Square Feet	Total Dwelling Units or Hotel/Motel Rooms	Total Jobs	DU/acre	Jobs/acre
Residential	-	-	-		-	
Retail	14,568	12,382		15		14.5
Office	471,018	447,467		1,884		1,872.6
Industrial	-	-		-		-
Public	-	-		-		-
Educational	-	-		-		-
Hotel/Motel	-	-	-	-	-	-
Internal Parking	*224,116*	*224,116*				
Total	709,702	683,966	-	1,899	-	1,887.1

Parking Outputs

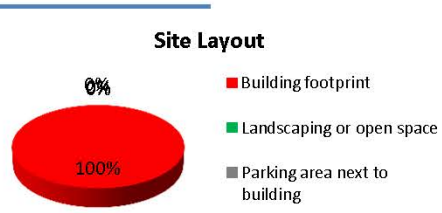
Parking spaces per 1,000 sf of development	3.72

Parking Spaces by Land Use	Spaces Required	Parking Area	
Market-Rate Residential	0	0	sf
Retail	58	17,481	sf
Office	1,003	300,981	sf
Industrial	0	0	sf
Public	0	0	sf
Educational	0	0	sf
Hotel/Motel	0	0	sf
Total	1,062	318,462	sf

Parking Spaces by Type		
Surface	0	
Structured (above ground)	0	
Underground	314	
Internal (Tuck Under or Sandwich)	747	
Total	1,062	spaces

Basic Financial Tab

Physical Stats	
Housing Units / Hotel Rooms	-
Jobs	1,899
Housing / Hotel Room Density (Per Acre)	-
Job Density (Per Acre)	1,887.1
FAR	16.19
Net Rentable/Sellable Square Feet	459,850



Financial Stats		
Rental (Residential and Commercial)	**Target Return**	**Actual Return**
Cash-on-Cash (After Year 3)	10.0%	17.7%
IRR on Project Cost (Unleveraged Return)	12.0%	14.5%
Owner Residential	**Target Return**	**Actual Return**
Project Rate of Return	25.0%	0.0%
Return to Equity	75.0%	0.0%

Basic Financial Inputs

Construction Costs Per Square Foot (Core, Shell and Improvements)		
Residential	$	100
Retail	$	155
Office	$	95
Industrial	$	95
Public	$	95
Educational	$	100
Hotel/Motel	$	155

Land / Site Cost			
Acquisition Costs (Land and Improvements)	$	1,746,000	$40 /Square Foot

Subsidy		
Test Subsidy	$	-
Detailed Subsidy (from Leveraging Tools tab)	$	-

Residential Rent Estimator	$ / Sq Ft		Unit Size		Rent
4+ Bedroom	$	2.00	2,000	$	4,000
3 Bedroom	$	2.00	1,600	$	3,200
2 Bedroom	$	2.00	1,000	$	2,000
1 Bedroom	$	1.25	800	$	1,000
Studio	$	1.00	550	$	550
Calculated Average Monthly Rent	$	1.48	965	$	1,423

Residential Rent (Rental)	$ / Sq Ft		Unit Size		Rent
Monthly Rent per Square Foot	$	1.57	1,000	$	1,573

Residential Sale Price (Owner)	$ / Sq Ft		Unit Size	Sales Price
Sale Price per Square Foot	$	200	1,000	$200,000

Commercial Rent per Square Foot (Except Hotel/Motel)			
Retail	$	20.00	Annual, Triple Net