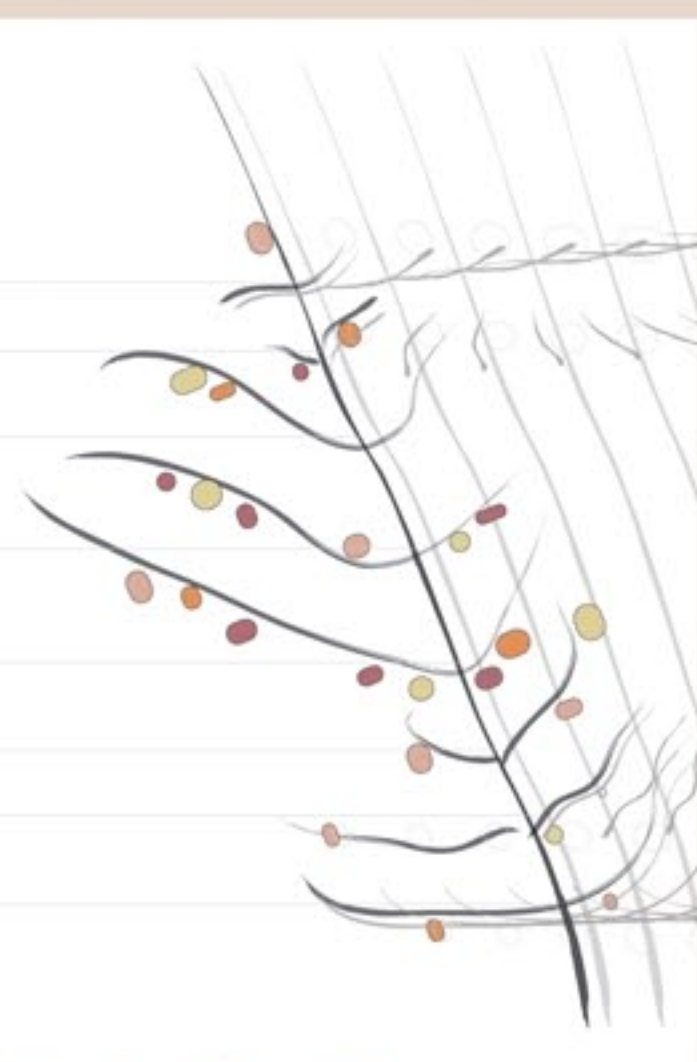
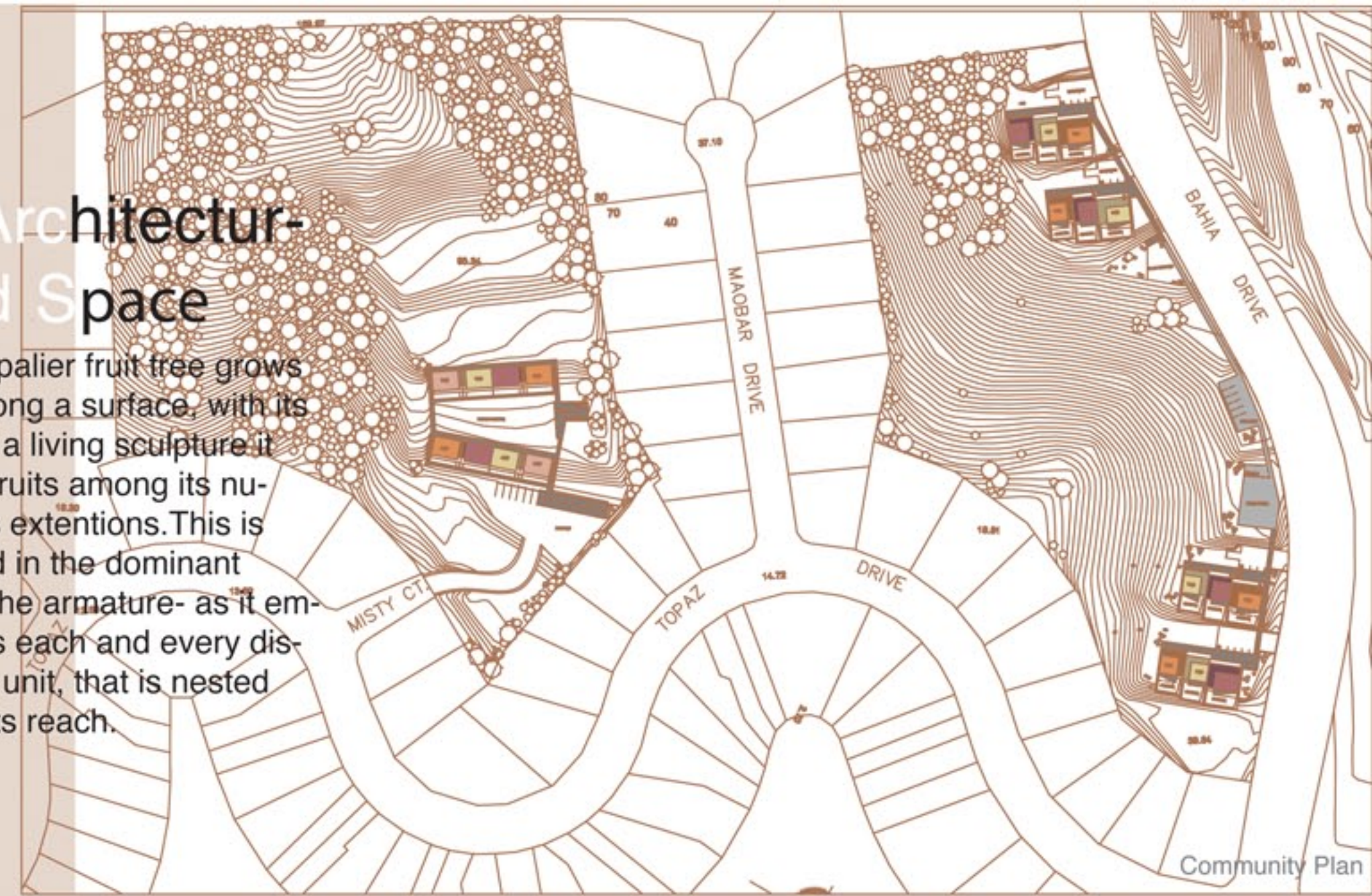


The Nature



The Architecturalized Space

The Espalier fruit tree grows flat along a surface, with its form of a living sculpture that grows fruits among its numerous extensions. This is realized in the dominant piece; the armature as it embraces each and every distinctive unit, that is nested within its reach.



CALIFORNIA SENIOR HOUSING

>> design competition

Novato, CA

The Green Initiative

Our design for the project has been elaborated to provide a three-dimensional, real-life example of a functional cutting-edge senior housing that uses as little energy as possible, conserves water and minimizes any negative affects on existing ecosystems - all without sacrificing the design aesthetic. Our proposal is proof that a home, its inhabitants and its relationship to the ground on which it sits are all interrelated.

The design outcome provides a complex with semi-public and semi-private spaces, which enhances the human scale, maximizes a connection with the best views and further promotes social interaction of shared and defensible spaces. Following all Green Initiatives, the site has been designed to minimize building footprints by grouping dwelling units and common areas.

The whole complex is inter-connected through circulation elements that are not merely monotonous linkages, but have independent spatial characteristics in dialogue with nature to promote human activities. It is these interstitial zones that encourage people to be participants rather than just being occupants of functionally prescribed spaces. These transitional spaces are intended as places of encounter between residents and as a means of providing calm, secure spaces but also introducing natural light and cross ventilation to all units. These open-minded places give the residents something in common: they bring diverse of society together and breed a sense of tolerance, awareness, identity and mutual respect.

The green armature works as the support of photovoltaic or solar panels and as well as the collector of water, electrical and gas lines that connect throughout the site, drainage excluded. The green armature will consist of recycled electrical conduits as a support for drought tolerant vines to grow.

Fulfilling the client's vision to set the standard for future affordable housing projects, celebrates its assemblage with the environment through the articulation and architectural integration of sustainable principles, clearly demonstrating that energy efficiency is an attainable goal in concert with design excellence, economy of means, and livability.

Each unit is equipped with radiant heating, in which warm water heated by the sun is pumped through pipes in the floor. It is a healthy way to heat a home, since no dry air is pumped through ductwork, and it's high energy efficient. On sunny days, solar water pre-heat systems on the roof heat the water and a different set of solar panels provide the electricity to pump the warmed water throughout the units, where it is used as potable water and for heating.

The entire frame will be built with FSC certified lumber to lessen the impact on the world's dwindling forest resources. All the windows contain double, Low-E glazing to achieve maximum energy efficiency, acting as both an insulation barrier and a light source while maintaining a seamless indoor-outdoor type of living environment with a modern design. Besides solar panels and solar water pre-heat systems, the roof will be covered by light-colored, reflective single ply cool roof to reduce heat islands and minimize impact on microclimate while offering building occupants a significant reduction in energy use.

HARD COST/ UNIT ESTIMATIONS SUMMARY

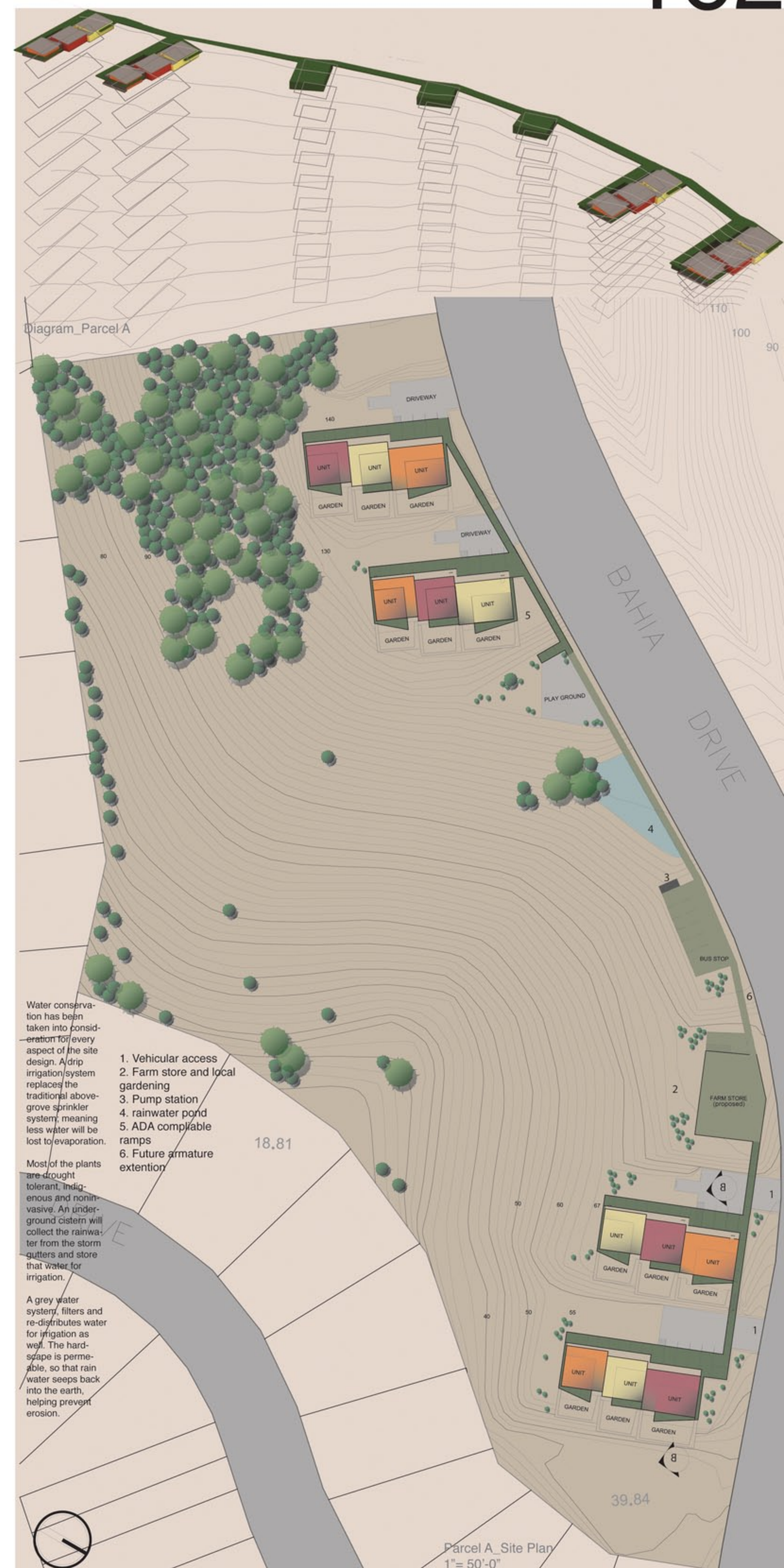
PARCEL A	AREA	
a) Enclosed spaces:		
8-studio apartments @ 900 sq ft. each	= 7200sq. ft.	
4-2 bed apartments @ 1,100 sq ft. each	= 4400 sq. ft.	
Laundry	= 200 sq. ft.	
Total enclosed area	= 11800 sq. ft.	
b) Semi-covered Green armature:		
Corridors and parking areas	= 4000 sq. ft.	
c) Outdoor paved areas:		
Including rough and fine grading	= 5000 sq. ft.	
d) Other site development improvements:		
Sewage, drainage, water, gas, dry utilities, power, minimum grading and retaining walls.		
e) Landscaping and public lighting		
f) Proposed farm store	COST	= \$3500
a) 11800 sq. ft. @ \$ 104 sq. ft.		= \$ 1,227,200.00
b) 4000 sq. ft. @ \$ 38 sq. ft.		= \$ 152,000.00
c) 5000 sq. ft. @ \$ 10 sq. ft.		= \$ 50,000.00
d) Total	= \$ 149,000.00	
e) Total	= \$ 110,000.00	
f) 3500 sq. ft. @ \$ 120 sq. ft.		= \$ 420,000.00
Total Parcel A Cost = \$ 1,638,200.00		

HARD COST/ UNIT ESTIMATIONS SUMMARY

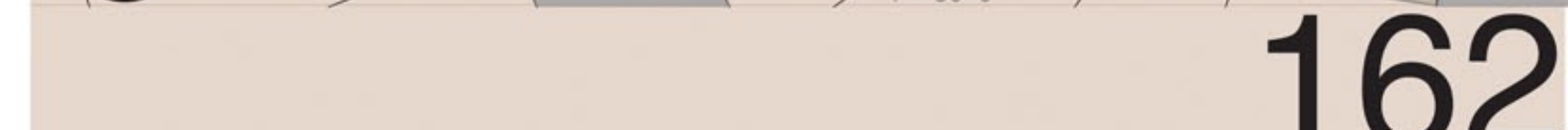
PARCEL B	AREA	
a) Enclosed spaces:		
8-1 bed apartments @ 900 sq ft. each	= 7200sq. ft.	
8 secondary units @ 750 sq ft. each	= 6000 sq. ft.	
Laundry	= 400 sq. ft.	
Total enclosed area	= 13600 sq. ft.	
b) Semi-covered Green armature:		
Corridors and parking areas	= 5000 sq. ft.	
c) Outdoor paved areas:		
Including rough and fine grading	= 10000 sq. ft.	
d) Other site development improvements:		
Sewage, drainage, water, gas, dry utilities, power, minimum grading and retaining walls.		
e) Landscaping and public lighting		
*the building cost includes the chair lift.	COST	
a) 11800 sq. ft. @ \$ 104 sq. ft.		= \$ 1,414,400.00
b) 5000 sq. ft. @ \$ 38 sq. ft.		= \$ 190,000.00
c) 10000 sq. ft. @ \$ 10 sq. ft.		= \$ 100,000.00
d) Total	= \$ 195,000.00	
e) Total	= \$ 128,000.00	
Total Parcel B Cost = \$ 2,027,400.00		



1. Pedestrian access
2. Vehicular access
3. Chair lift
4. ADA compliant ramp
5. Public garden
6. BBQ
7. Laundry area
8. Playground
9. Armature (covered space)



1. Vehicular access
2. Farm store and local gardening
3. Pump station
4. rainwater pond
5. ADA compliant ramps
6. Future armature exterior



For the environmental-conscious residents, indoor air quality is made a particular focus, addressed through abundant natural ventilation and the use of low-emissions materials. Careful, thorough consideration of environmental, livability, and aesthetic factors at every step of the design produce a true exemplar of sustainable design excellence.

Site Cross Section_Parcel B 1"=0"=1/16"

