La Cascada II

Written & Edited Jeffrey W. Anderzhon, FAIA

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Photography: Richard Abrams;
Courtesy of Todd & Associates, Inc.

AIA Design for Aging

Project Information

EVALUATION SITE: La Cascada II

COMMUNITY TYPE: Affordable Senior Independent Living Apartments

REGION: Southwest

ARCHITECT: Todd & Associates

OWNER: City of Phoenix, Arizona

COMMUNITY TYPE: Affordable Senior Independent Living Apartments
36 Affordable Senior Living Apartments

DATA POINTS:

Resident Room:	798 gsf
Total Area:	1,219gsf/ apartment
Overall Total Area:	43,888 gsf
Project Cost:	$93.42/gsf
Total Project Cost:	$4,100,000
Investment/apartment:	$113,889
Occupancy:	100% as of May 2007

FIRST OCCUPANCY: October 2001
DATE OF EVALUATION: May 2007
EVALUATION TEAM: Jeffrey Anderzhon, FAIA, Barrie Robinson, Ph.D, KJ Langlais, Mike Kolejka, AIA

Photography: Richard Abrams;
Courtesy of Todd & Associates, Inc.

Introduction

Phoenix, Arizona is one of the fastest growing cities in the United States, and one of the newest. Its phenomenal population expansion, beginning in the mid-twentieth century, has brought on all the growing pains a city experiences when rapid expansion occurs. Not least of these is an increasing population who are economically disadvantaged. In the late years of the twentieth century and early twenty-first, the City of Phoenix embarked on an initiative to provide decentralized affordable apartments for elderly residents who were in need of economic assistance with their housing costs. A part of this initiative was to locate these apartments in neighborhoods where they could be a catalyst for transition and revitalization into a more stable and desirable area in which to live. La Cascada was one of the first developments to be completed as a part of this initiative.

Located northwest of downtown Phoenix, La Cascada is in a mixed neighborhood of mid-rise subsidized apartments and small single family residences and a commercial strip only a few blocks away. The area is typical of the sprawl resulting from Phoenix's rapid growth and, over the few years of its existence, the neighborhood has become one of inexpensive rents and transitory residents. Aside from the availability of the property, it was the Owner's desire that the development of La Cascada act as both symbolic and real indication of redevelopment and that the residents act as a stabilizing force for the surrounding community.

While the project is not large, only 36 one bedroom apartments on three levels of building, it does exude a new energy in the neighborhood both in citizenry and in aesthetic. The building design does not rely on an over-used southwestern style, but provides a contemporary take on the vernacular volume arrangements and colors to make the statement that it is leading the way in revitalization, both physically and aesthetically, of the neighborhood. The combination of baked-brown adobe brick intermixed with brightly colored stucco volumes not only attracts the eye of the passersby, but adds considerable character to what could easily have been a boring and ordinary box.

Perhaps as a reminder to the residents of the transitional neighborhood or perhaps as a reference to the Spanish villas that so many Phoenix homes replicate, the building's massing provides an interior courtyard that is secured for only resident use. This is a very private and fairly large courtyard surrounded in plan by the resident apartment units which are, in turn, accessed by means of open balconies overlooking the courtyard. It is a clever arrangement that, in theory, provides opportunity for serendipitous socialization between residents and, at least in part, protects the residents from the outside world. It also clearly establishes a "resident-only" area that is tastefully landscaped in a Southwestern, low-water tradition and where residents can hold larger social events that include the entire development. However, the courtyard receives morning sun which, particularly in summer months, renders it unusable due to the heat.

Overlooking this courtyard is a continuous open and large balcony that serves as circulation to the resident apartments. This already wide balcony has several locations which increase to depths that would allow nicely shaded seating areas and would provide locations where residents could comfortably socialize with their neighbors just outside their front doors. While this may have been intentional, there has been no furniture provided for this purpose and residents have yet to undertake the furnishings themselves, thus an opportunity to promote community interaction has been squandered.

All of the 36 apartment units are identical with one bedroom, a small kitchen, living room and balcony accessed from the living room. The entry doors are slightly recessed providing a sense of privacy from the circulating balcony space. The apartment units on the ground level are designed to provide handicapped accessibility, although the building is furnished with an elevator and any unit on the three levels could be accessible.

The main building entry is clearly identifiable with its distinctive curving glass wall opening into the adjacent community meeting and activity room and its distinctive red stucco wall that leads into the resident lobby and to the manager's office. The community room is large enough for substantial community activities and gatherings and has convenient public restrooms nearby, but is only available to residents when the manager is on site and there is no program provided by the City for structured activities.

Following by approximately four years the initial building occupancy, permanent carports were added to the property to both the south and west of the building. Providing a shaded parking space for any resident of this climate is almost a necessity as automobiles can become dangerously heated when left in the summer sun. While it was almost certainly a budgetary decision, not including some sort of automobile protection in the original design was somewhat short-sighted.

Most of the residents at La Cascada are single and female. In fact, at the time of the site evaluation, a full 80% were women. Residency requires a minimum income of (at the time of evaluation) $701 monthly and a maximum of $1,930 monthly from all sources of income. Residents must also be able to function and complete all activities of daily living (ADL) as there is no care service provided with this housing.

La Cascada has provided both a visual and real difference by bringing comfortable and affordable housing for seniors to the neighborhood and a more stable resident to the community. The contemporary building design with a reverence to the Southwest vernacular is a statement to the community that they are an important part of the City of Phoenix both now and in the future.

Architect's Statement

This is an age restricted community developed by the municipal government as affordable, long-term housing for seniors. Located in a transitional neighborhood, its powerful appearance provides security for the 36 residents who call it home, while also acting as an anchor for the neighborhood.

The approximately one-acre site utilizes an inward oriented courtyard with a water feature, grills and seating as the central feature for community gathering and individual use. The architecture, designed to complement and enhance the surrounding neighborhood, adheres to an affordable construction budget. Units are one-bedroom and feature private patios, storage areas, full kitchens, living rooms, bathrooms and bedrooms with walk-in closets.

Designers' and Operators' Stated Objectives and Responses

Objective: Complement and enhance the local area.

Design Intent: Both colors and materials were selected to compliment the surrounding neighborhood. Masonry, used throughout the community, provides a pleasant scale that neither overpowers nor dwarfs neighboring materials. The community provides a sense of permanence and elevates the level of design and construction, beginning the revitalization process.

Objective: Create a sense of security, both perceived and actual.

Design Intent: The community fosters a sense of security among residents by establishing a secured perimeter. Resident units are oriented toward an internal circulation system which in turn encompasses a community courtyard, enclosing all public spaces inside a secure sanctuary. Smoke detectors and sprinkler systems were built into the community, however, the use of concrete and masonry provide excellent protection from fire.

Objective: Focus on long-term durability and costs.

Design Intent: Masonry and steel are the primary materials used to construct the community. These materials are extremely durable and provide genuine value by decreasing the cost of maintenance over time.

Objective: Foster a sense of community within the facility.

Design Intent: Accessibility considerations throughout the community create the opportunity for residents to interact with each other both in their suites and in the community's common spaces. A central courtyard with radial benches, grills and a water feature, as well as a multi-use room with a kitchen provide areas for residents to gather and socialize.

Objective: Reduce solar exposure on a predominantly east/west site in order to minimize energy costs and maintain a comfortable environment for residents.

Design Intent: Units were strategically oriented to minimize the solar exposure to internal spaces and appropriate windows/openings were provided for shading and ventilation. Masonry walls not only shade the community, but also absorb heat, allowing air conditioners to function at normal levels. Punched openings throughout the community promote air circulation.

Objective: Maximize usage of space on a relatively small (roughly 1 acre) site.

Design Intent: The community was able to rise up three stories while still fitting into the surrounding neighborhood. By building vertically and strategically laying out units we were able to conserve space. In addition, the community was able to share a driveway and parking lot with the existing community.

Objective: While not all residents have special needs, those with disabilities are capable of visiting any area of the community, including their neighbor's suite.

Design Intent: Wide walkways and an elevator allow all residents to circulate freely throughout the community. Grab bars, hand-held accessible shower heads, turning radius in kitchens and baths, 3 ft. doors and no thresholds at entries were incorporated throughout all units.

Objective: Establish a building in a transitional neighborhood that begins the revitalization process.

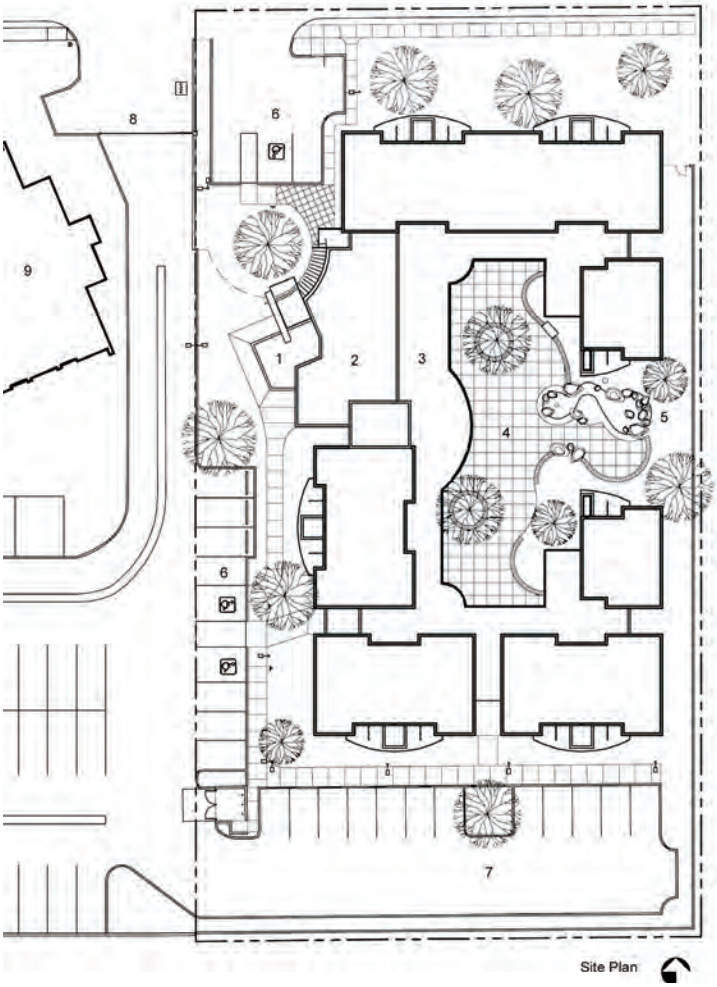
Design Intent: By using materials existing in the local area, masonry and steel, it establishes itself as a member of the neighborhood. Its strong materials provide a sense of permanence, while the massing and color improve the quality of architecture within the community.

Field Observations: Meeting the Objectives

Objective: Complement and enhance the local area.

Field Observations: The objective of complementing the surrounding community with the building's design is a little counter-intuitive as the result would be non-descript architecture. The fact is that the building's design pays homage to the Southwestern vernacular prevalent in Phoenix without being either contrived or dully repetitive. The design provides new character, and perhaps even hope, to the community without being obnoxiously modern or self-serving for a designer's ego. This building does, indeed, enhance the surrounding area and offers a glimpse for its neighbors of what community revitalization can be.

Site Plan



First Floor Plan

Objective: Create a sense of security, both perceived and actual.

Field Observations: Because the community is one that is either transitional or that the City wishes to become transitional, the building site was consciously selected as a location which could significantly affect the neighborhoods development. Whether it is a response to the "yet to be changed" nature of the community or a response to a perception that the residents required security due to their age, the building design steps right to the line between being a home and being a compound bracing itself against the neighborhood realities. But that line is not crossed by the design and the result is an attractive building and residence without overtly locking out the community.

The organization of the building contributes to the perceived security by being inwardly focused. One must pass through a secured entry to the building and then is greeted by the central courtyard and balconies from which entry into individual units is gained. The courtyard is physically secured from the neighborhood and thus becomes something of a safe haven for the residents. It is a comfortable relationship for the residents and as a trade-off to the neighborhood, the building offers a pleasant and encouraging aesthetic without being overtly security conscious.

Objective: Focus on long-term durability and costs.

Field Observations: The selections of materials for the building's construction are indeed durable and tend to be long-lasting. This is a relatively simple objective that can be accomplished by even the most inexperienced designer. However, using these materials, brick, stucco on masonry block and steel, in a combination that is both economical and that provides visual appeal is something that only comes with the experience and talent of the designer. This

experienced combination has been achieved at La Cascada and provides a welcoming image to both the residents and the neighborhood and announces itself as being born from the Southwest architectural vernacular. In the end, only time can be the judge of whether these materials will provide long-term durability and low maintenance costs, but they were certainly the choices that promised to do so while also providing a design that was well conceived.

The community room is somewhat sterile but widely used

Photo by Jeffrey Anderzhon, FAIA

Objective: Foster a sense of community within the facility.

Field Observations: A building's design can provide all the elements for the promotion of social interaction, but those elements included in the design cannot force this interaction without the interaction of both the occupants and operators. The apartment units are very compact and, with the furniture that residents bring to the apartments, there is little room for guests of residents. Additionally, there is but one bathroom that must serve both as the resident and guest bath. This bathroom is only accessible through the bedroom door. Although there is a small corridor between the bedroom and the bath, it remains a distinct part of the bedroom and guest use of this bathroom becomes awkward.

The central courtyard is theoretically a natural location for resident socialization as all the resident unit entry doors face this courtyard. The courtyard, however, has no shaded areas save for the covering provided by the balconies, and in the summer months the heat renders it unusable. Additionally, there was no appropriate furniture in this courtyard that would encourage resident use. The access balconies that surround and overlook the courtyard are large enough to provide nicely shaded areas for resident use, but again, there was no appropriate furniture in these areas that would encourage use.

The inclusion of a community meeting and activity room for the residents' use is commendable, and, in fact, residents do use the space, although its furnishings are rather institutional in nature and somewhat uninviting. Unfortunately, the space can only be utilized by residents when the apartment manager is on site, and at other times, perhaps more convenient for the residents, the space remains locked. During interviews held with residents at the time of the evaluation, residents almost unanimously expressed their desire to have access to this room at all times. This policy is a significant hurdle to the spontaneous socialization of residents.

Objective: Reduce solar exposure on a predominantly east/west site in order to minimize energy costs and maintain a comfortable environment for residents.

Field Observations: There are always trade-offs that must be executed when it comes to designing a residential building and at the same time trying to reduce solar exposure for that building. Within the constraints and orientation of the site, the design does its best to address the reduction of solar exposure in this sometimes harsh climate. There was really the one choice of orienting the resident apartments along the west, south and north property lines as the only site access is achieved in cooperation with the western adjacent apartment property. This building organization places the majority of apartment units facing west and south and, of course, exposes these apartment exterior walls to significant solar exposures. However, this design does provide afternoon shade for the enclosed courtyard and access balconies, notwithstanding the fact that the finishes of these elements absorb and retain heat.

Attention was paid to the shading of the resident balconies. While these are not large in size, they are covered with either a roof at the third level, or by the balcony above at the other two levels. Combined with the slightly inset patio doors, the solar heat gain from this resident apartment area is minimized. Unfortunately, this diminished heat gain is offset by the exposed and unshaded apartment bedroom windows where heat gain is quite significant. In fact one resident resorted to the placement of aluminum foil on the inside of one window in an attempt to reduce the solar heat gain through that window.

Objective: Maximize usage of space on a relatively small (roughly 1 acre) site.

Field Observations: This urban site is indeed quite small, but the ability of the Owner to utilize the automobile access already created on the adjacent apartment site provides a great deal of design freedom for site utilization. The design takes full advantage of this freedom by locating the building near the street at the north and providing the parking for the building to the south and west. This places the automobiles out of site from the street, and, combined with the building organization, provides for the enclosed courtyard and access balconies that, in many ways, end up defining the "community" of La Cascada.

The choice to make the building one of three stories in height can either be attributed to the Owner's requirement for apartment yield or to the fact that placement of apartments in a footprint that covered the entire site would introduce irresolvable circulation problems within the building itself. While the volume of the three story building is not out of place with the surrounding buildings, it does present a sort of maximum visual height that the neighborhood can absorb. To the east, south and partially to the north of La Cascada, the structures are single story. The design of La Cascada breaks up the volume of the building into more residential scale and this provides a very acceptable presentation to the surrounding community.

Large shaded and secured balconies without furnishings are a missed opportunity for socialization

Photo by Jeffrey Anderzhon, FAIA

Objective: While not all residents have special needs, those with disabilities are capable of visiting any area of the community, including their neighbor's suite.

Field Observations: With the inclusion of a resident elevator that services all of the levels of La Cascada, there is no reason why all of the apartments could be handicapped accessible, or certainly very adaptable to accessibility. From a purely technical perspective, this is probably true. However, with some of the residents utilizing wheelchairs or electrically powered "scooters," the apartment entry door size and maneuverability within the compact apartments has become an issue. In the case of electrically powered "scooters," another issue that has arisen with the residents is the storage and ability to recharge these devices in the units without taking up valuable floor space.

One resident interviewed by the evaluation team who was confined to a wheel chair had a number of issues with the accessibility convenience of the apartment unit. The carpeting in the living and bedroom areas was installed with padding and thus became more difficult for a wheel chair to travel over. The light switch locations in the kitchen are difficult to reach while in a wheel chair, and many of the upper kitchen cabinets are completely unreachable. The balcony and patio sliding doors are quite heavy because of the thermally insulating glass and are nearly impossible for a person in a wheel chair to operate. Once open, the threshold of these doors doesn't allow a wheel chair to roll comfortably over. These are all issues which may be fully compliant with applicable accessibility codes, but do not allow true accessibility and attention to these details during the design phase of the project would have eliminated the complaints.

The common laundry room on each floor is also difficult for residents with assistive devices to utilize, particularly while trying to carry a laundry basket full of clean or dirty clothes. The second and third floors have access to a trash chute where residents can simply drop their bags of refuse through a door. While this door is very difficult for those in a wheelchair to use, the ground level residents do not have the same convenience for disposing of their refuse. The residents of this level, which is ideally the one with the best accessibility, must fully exit the building and maneuver around the building to the trash room and deposit their refuse directly into the trash dumpster.

Objective: Establish a building in a transitional neighborhood that begins the revitalization process.

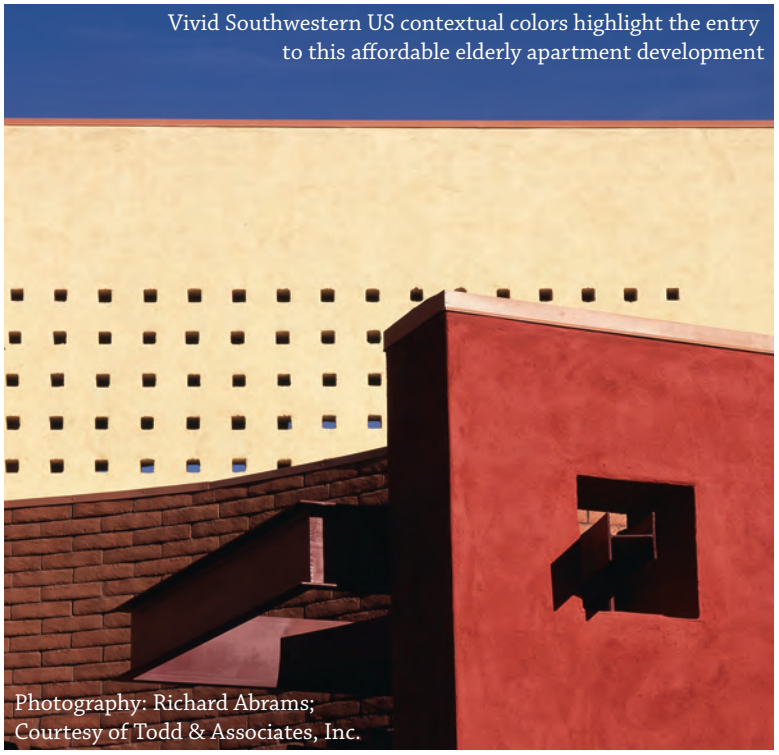
Field Observations: Of all the design objectives, this is one that is clearly met in the opinions of the evaluators. The introduction of this building and the residents of this building provide a seed from which revitalization of the neighborhood can grow. The building is a statement by the City of Phoenix that it is committed both to the community in which it resides and to the underserved and economically challenged seniors living in the City. The design response is one that simply provides a statement which is visually harmonious to the surrounding community, but also sets a standard of quality that challenges the community. The building is not overwhelming in its volume or presumptuous in its design. But its design approach provides a statement that good design can fit well into a community where design has not been a priority, and by that good design, an economic difference for the entire community can begin to take shape.

Field Observations: Themes and Hypothesis

Creating Community

La Cascada is an interesting study in contrasts when it comes to creation of community. The building design lends itself to a sort of spontaneous community interaction, but this design is hampered by no provision of shade in the courtyard and no appropriate furnishings on the balconies. The inclusion of a nicely sized community meeting room can contribute to community interaction, but the fact that it is often inaccessible to the residents and that the furnishings are sterile and unwelcoming diminishes its effectiveness. The design objective of this project initiating a revitalization of the surrounding community has been addressed, but the building's security certainly would put off any community resident who may want to visit one of their neighbors in the building.

Perhaps with time, with the acceptance of this development into the community fabric and with a modification of management decisions, La Cascada will create a community that is more than simply its own residents. The building's design has the necessary elements, with only superficial modification, for this to occur. In the true sense of "creating" a community, La Cascada has initiated a process that should provide a more cohesive larger community.



Vivid Southwestern US contextual colors highlight the entry to this affordable elderly apartment development

Photography: Richard Abrams; Courtesy of Todd & Associates, Inc.

Making a Home

For the economically disadvantaged elderly who live at La Cascada, this may be one of the best "homes" they have had. In fact, in discussions with the residents, the evaluation team found that with some minor complaints, the residents were well pleased with the facility and with the freedom the facility offers them. Each resident has freedom in making their own unit a home with familiar furniture and furnishings. Each resident has a sense of security but is comfortable within the facility. Each resident has a sense of community, some strong, some less so, from living in the facility. Making this building a home was only initiated by the building's design; the residents have completed that task and each one feels it is now their own home.

Regional and Cultural Design

As mentioned several times previously, the design of this structure complies with what one may intuitive feel is a Southwestern style of architecture. However, it is its own design that pays respect to a Southwestern style through appropriate selection and use of materials and finishes, but takes on a refreshing character without being derivative or contrived. The building clearly states its location through its design, but that statement is one that invites viewing over and over again and one that exudes a comfort in where it is located and who it may be speaking to.

Environmental Therapy

The apartments in La Cascada are meant to be for residents who may be elderly, but can still function in their activities of daily living. The built environment is intended to provide accessibility and comfort for an independent individual and one who does not require care provision. Thus the building's contribution to environmental therapy could be summarized as allowing for that independence. To this end, the building's design generally works although there are several minor design issues which detracts from ease of resident use and comfort, including the design and operation of the trash collection chute, the restricted use of the community room, the missed opportunity with using the balconies and courtyard as social space and the compliant but inconvenient apartment unit details for handicapped accessibility.

Outdoor Environment

The building organization has provided a very well conceived courtyard that is secured for use by the residents. Within this courtyard there are raised planting areas at a height that the masonry for the planting bed can also be used for seating, albeit very hard seating. Around the raised planters there is a series of spotlights, as well as lighting bollards, that are anchored in the courtyard surface but some distance away from the planter. These are seemingly just "stuck" in the middle of the courtyard and present a very real tripping hazard.

There is also a barbeque grill and a small water feature in the courtyard. The remainder of the courtyard surfacing is poured concrete which absorbs and retains solar heat. This renders the courtyard unusable during the summer months, and is exacerbated by the fact that there has been no appropriate shade provided either through planting material or constructed design. Additionally, the preponderance of hard surfacing of both the courtyard and the surrounding building provides for very uncomfortable acoustics, particularly for the elderly ear.

The balconies which provide access to the resident units are quite wide and are completely shaded providing a nice, exterior circulation space for the building that overlooks the courtyard and become somewhat a part of that defined space. These balconies also have expanded areas at the building's corners which simply beg to be furnished for resident use when the courtyard becomes too heated. Unfortunately, there is no appropriate furniture to encourage resident use of these "nooks."

The landscaping of the courtyard, and the remainder of the property, is done in appropriate planting material that is indigenous to the geographic area and climate. There is no attempt to propagate sod and the ground cover is predominately native stone. Thus the landscaping is not only low maintenance but sustainable in nature.

Parking for the building residents is minimal but adequate for their needs. Originally designed as simply surface and exposed parking, the Owner, subsequent to occupancy, constructed a shading structure for all the parking spaces. While this detracts from the exterior appearance, it is much appreciated by the residents.

Quality of Workplace and Physical Plant

Because this facility is an independent living apartment building, there are few staff who are employed by the Owner. However, there is a small maintenance staff and a manager. This staff is shared by La Cascada and another nearby similar facility. Following an initial period after opening when operational issues, primarily mechanical, were discovered and addressed, there have been few building items that needed attention aside from routine maintenance.

Carports were added following initial occupancy
Photo by Jeffrey Anderzhon, FAIA

The central courtyard should be a natural location for socialization

Photo by Jeffrey Anderzhon, FAIA

Operator Perspectives

The operation of La Cascada is not burdensome as it is not a large facility, it is relatively new and it has been constructed of durable, low maintenance materials. While the City of Phoenix intended this facility to be a catalyst for community revitalization and for it to be affordable but distinctive, they have subsequently determined that the cost of the facility was excessive and have thus determined not to provide similar facilities in other transitional neighborhoods. This was disappointing news to the evaluation team because they felt the project generally serves the community of its residents well and serves as an aesthetic anchor for the surrounding community.

General Project Information

Project Address:

La Cascada II
229 East Ruth Avenue
Phoenix, AZ 85020

Project Design Team:

Architect:	Todd & Associates
Landscape Architect:	Todd & Associates
Structural Engineer:	The ENG Partnership
Mechanical Engineer:	NP Mechanical
Electrical Engineer:	NP Mechanical
Civil Engineer:	Hoskin Engineering
Contractor:	Woods Construction Company

Project Status: Completion date: October 2002

Occupancy levels:

At facility opening date:	55%
At date of evaluation:	100%

Resident age (yrs):

At facility opening date average: 65
May 2007 average: 71

Project Areas

Overall Project:

Project Element	Units,Beds, or Clients	New GSF	Included in this Project Total Gross Area	Total on Site
Apartments (units)	36	28,728	28,728	28,728
Common social areas (people)	36	15,160	15,160	15,160

Residential Facilities:

	No.	Typical Size (GSF)	Size Range (GSF)
One Bedroom Units	36	798	798
Total (all units)	36		28,728 GSF
Residents' social areas (lounges, dining and spaces)			15,160 GSF
Total gross area			43,888 GSF
Total net usable area (per space program)			43,888 NSF
Overall gross/net factor (ratio of gross area/net useable area)			1.0

Site and Parking

Site Location: Urban
Site Size:
Acres: 1.08
Square feet: 47,045

Parking:

Type of Parking	For this facility			Totals
	Residents	Staff	Visitors	
Open surface lot(s)	21	0	3	24
Carports or garages*	21*	0	0	21*
Totals	24	0	0	24

*All parking was designed as open surface parking. Carports were added over the 21 parking spaces following initial occupancy.

Construction Costs

Source of Cost Data: Final construction cost as of December 2002

Soft Costs:

Land cost or value	$84,361.25
All permit and other entitlement fees	N/A
Legal	N/A
Appraisals	N/A
Marketing and pre-opening	$1,300.00
Other	$93,801.67
Total soft costs	$373,446.92

Building Costs:

New construction except FF&E, special finishes, floor and window coverings, HVAC and electrical	$2,999,500.00
Renovations except FF&E, special finishes, floor and window coverings, HVAC and electrical	N/A
FF&E, and small wares	$127,500.00
Floor coverings	$37,000.00
Window coverings	$5,830.00
HVAC	$88,000.00
Electrical	$360,000.00
Total building costs	$3,617,830.00

Site Costs:

New on-site	$142,000.00
New off-site	N/A
Renovation on-site	N/A
Renovation off-site	N/A
Landscape	$36,500.00
Special site features or amenities	N/A
Total site costs	$178,500.00

Total Project Costs: $4,169,777.00

Financing Sources: City of Phoenix General Obligation Bond Funds