Bad River
Elders Center

Predesign Study for a
Community Facility for
Bad River Tribal Edlers

Design Charrette
February 6 & 7, 2001

AmerINDIAN
2001

Contents

Project Approach

Native North American Indigenous Nations face the ultimate challenge of restoring, maintaining and passing on their Tribal heritage. Our design team will work with the Tribe and use all our experience and energies to find a creative solution to the challenge. This challenge has been a personal and professional objective of Dennis Sun Rhodes. He designed the Arapahoe Cultural Museum on the St. Michaels Mission grounds at Ethete, Wyoming on the Wind River Indian Reservation and the Native American Center for the Living Arts, "The Turtle."

AmerINDIAN Workshops

We work closely with our clients to assure that they get what they want, with a series of workshops that start with the Tribes vision for the center and continuing with more detailed work on the organization of the Center. Our client's involvement doesn't end until all the details are worked out.

The Design Team

We have assembled a team of highly qualified elder center design professionals. Our team is familiar with working for American Indian clients and we have all worked together before.

Elders Center

Your Elders Center will represent the heart and spirit of the Bad River Tribal identity. The Center will be much more than just a place for the elders to visit. It will be a living institution where Tribal history and culture are celebrated and passed on from one generation to the next.

As more information is gathered, educational programs can be developed that allow tribal members to enter into total immersion cultural recall programs with the elders.

Predesign Process

Predesign Phase

As elder center center designers, we believe in an organized and orderly project development process. We know that the design process is more efficient when the project challenges are thoroughly described and commonly understood by the client/user group and the design team before final design phases begin.

Objectives

For these reasons, we advocate beginning the project with the predesign phase. In simple terms, this process can be thought of as "creating the project" or "problem definition." The main objectives in predesign are: to insure the client and design team are on the same wavelength; to troubleshoot the project early, looking for issues that may affect the project's success; to define and confirm the building program; to establish mutual and individual responsibilities for the project; to confirm and define the programmatic goals; to reconcile the programmatic desires of the user group with the financial resources of the project; and to develop a framework for receiving "go ahead" approvals for the project from the client's leadership group.

Analysis/Synthesis

Architects have described predesign as the first step of analysis and discovery. This first step lays the groundwork for design as the phase of synthesis and summary.

Agenda
Design Charrette

AGENDA

February 6, 2001

MORNING

8:30-9:15	Introductions, agenda and goals
9:15-10:30	"Ignite the Dream" cultural design presentation • Dennis
10:30-10:45	Break
10:45-12:00	Ecological design presentation • Patricia Break
12:00-1:00	Bag lunch & tour of site(s) • All

AFTERNOON

1:00-2:30	Develop architectural program & discuss site issues • Dennis, Dan
2:30-2:45	Break
2:30-5:30	Design Charette • All

February 7, 2001

MORNING

8:30-10:00	Review and discuss charette results
10:00-10:15	Break
10:15-12:00	Develop next steps (process & schedule)

Workshop Notes

The *design charrette* for the new Bad River Tribal Elders Center was held on February 6, 2001. It was a one-day event consisting of presentations on ecological design and Native American cultural design in the morning, and the *design charrette* session in the afternoon. The following day the results of the charrette, along with preliminary design sketches, were presented to a group of tribal department directors and Barb Brewster, a representative from the USDA Rural Development. The charrette was funded under an EPA grant that began with a two-day regional tribal workshop on ecological design and sustainable development in October of 2000. The goal of this second phase was the development of a preliminary design for the proposed new Elder Center. The emphasis was on community design input and creating an ecologically-responsible and culturally-sensitive design. The technique used for beginning the development of this type of design was a community *design charrette*.

A *design charrette* is an intensive design workshop involving a group of people working together in a short period of time to brainstorm, visualize design alternatives, and discuss the best choices. This design charrette was held at the existing Bad River elders' housing and community center facility. All in the community were invited to attend the charrette, especially the elders, and approximately 20-30 participated throughout the day. Patricia Olson of *Ecological by Design* presented information on ecological design guiding principles, and case study examples of components and applications of ecological design. Ecological design is defined as creating a built environment that is in harmony with the cultural and natural environment. The guiding principles are as follows:

PROTECT THE NATURAL ENVIRONMENT
- Preserve large pristine areas
- Restore damaged areas
- Learn from and integrate with natural environment

DESIGN RESPONSIVELY WITH THE LAND CULTURE
- Build on disturbed areas
- Integrate the built environment with the natural environment
- Use cultural and natural forms (integrated)
- Work with natural systems
- Natural landscaping
- Biological wastewater treatment
- Rain water harvesting
- Gray water use

Workshop Notes

USE ENERGY AND RESOURCES EFFICIENTLY
- Climate-responsive design
- Passive solar heating and cooling
- Day-lighting
- Natural ventilation
- Shading
- Use solar and renewable energy
- Active solar, wind, micro-hydro and geothermal
- Be a net energy producer, if possible
- Appropriate use of materials
- Reduce, reuse, recycle
- Minimize and recycle construction waste
- Build for durability
- Use renewable reclaimed, and recycled materials

ENHANCE HEALTH AND COMMUNITY
- Non-toxic materials and thermal energy systems
- Extend health to the larger community
- Landscaping
- Street vegetation
- Use of local materials
- Enhance community
- Pedestrian oriented
- Public spaces
- Human vs. automobile scale
- Public transit systems

CREATE BEAUTIFUL AND ECONOMICAL ENVIRONMENTS
- Incorporate natural features
- Design with light, color and pattern
- Economy by design

Dennis Sun Rhodes of *AmerINDIAN Architecture* described his philosophy of Native American cultural design. He shared his research on Ojibwe cultural history and described his approach of "looking for cultural clues" in creating an appropriate cultural design. He also shared examples of his firm's architectural designs for other tribal communities. These presentations were followed by a lunch with the charrette attendees and other elders which led to informal discussions of individual and community goals and desires for the new Elder Center. The afternoon charrette session was led by Dan Feidt of *AmerINDIAN Architecture*. Dan provided an overview of the charrette process and the parameters of the Elder Center project, including the proposed site. A number of sites were looked at prior to selection of the site adjacent to the casino and new retail facilities. This particular site was selected for its location close to the heart of the Bad River community and its access to existing utilities.

Workshop Notes

Dan led the brainstorming and discussion which involved gathering information on a variety of topics to obtain the community input necessary in developing an ecologically and culturally appropriate design. The ideas discussed fell into seven overall categories. They include: Cultural Design, Ecological Design, Site Issues, Housing, Elders Community Center, Support Services and Other Issues. Comments shared by the community members in each of these areas are as follows:

CULTURAL DESIGN

Ojibwe culture
- Pole lodge structure
- Reeds for summertime
- Bark for wintertime

Canoe (to function in shallow tributaries)
Says a lot about their technology
Canoe form as way to give shelter
Developed good symbolic language
Cultural Clues: Birds, plants, trees
Chippewa/Sioux conflicts created the name Bad River because it was running red with blood
Archeological survey may have been done but not sure
Need to be cognizant of the history of the community. This is now a center of thecommunity (Odanah). This is where the activity is
Symbolism can be a factor in the configuration, but also needs to be functional
Space for outdoor cultural activities such as sweat lodge, maple syrup and fish cleaning

ECOLOGICAL DESIGN

What happens with the sun?
- Low in the winter – heats/comes in
- High in the summer – keep it out with overhangs

Wind?
- North wind in March
- Lower elevation but close to lake
- Find out what wind speeds are (tables/internet)
- Run analysis_.next step

Lighting/ceiling height to increase sense of spaciousness
- Size of window on feeling space
- Sunlight throughout the day

SITE ISSUES

Is site too close to the casino?
- May want to have a forest buffer to casino by moving north
- Variety of housing
- Maybe separate main walk/bikes from housing area
- Separate pedestrian and walking
- East access to the building?

Workshop Notes

Burial sites or other cultural artifacts would be a problem if found.
Run-off from casino parking lot could also be a problem
What about reflection/opening to natural sounds – such as roar of Lake Superior?
Site to "reflect native world view" (environmentally-specific in a cultural context)
Others: Ravine
- Plants/flowers
- Seasonal context

Landscape that reflects ecological cultural context
Richard doesn't feel eastern aspect as important as aspects of this unique site's character or original)?
Proximity to services and facilities
Near lake is less accessible
Utility issues: water, sewer
Build upon capacity already available – cost
Flooding may be an issue
Put bridges high enough – not to be flooded
Environmental services have GIS information
Area should be secure, yet not gated.
Walkways should be adjacent to the main building.
Natural Elements
- Fish pond
- Aquarium
- Bird sanctuary

Provide auto access for residents and visitors
Buffer from houses and casino
Knit together with path system "by" it to store, casino and rest of community
Take advantage of environmental uniqueness - sun, wind
Some like site, some don't
Grease tank/trap on facility to eliminate problems and treatment plant
WI has restrictive codes
Need to consider all aspects of the site
- GIS
- Engineering
- Soils
- Drainage
- Forests

Outdoor communal areas (sweat lodge)
Maple syrup in the springtime (prep area) outside
Fish cleaning station

HOUSING
Couples housing
Domestic partner
Handicapped housing
Laundry hook-ups or Laundry room
Walkway to grocery store and casino (maybe covered)

Workshop Notes

Room for company (multi-use): A single person will have overnight guests
- Grandchildren

Nursing home/assisted living (with nursing staff)
Who oversees the nursing care? Health Department?
Don't put all units near the nursing home (psychological impact)Design variety of living for units for variety of needs
Independent and assisted living, hospice (the goal to keep out of nursing home)
Need to know how many elders
What type of units?
- One or two bedroom (no efficiency)

Storage
- Adequate storage in the smaller units
- Built-in storage

Indoor connection from housing to community center
40-60 units appropriate starting place - combination of one and two bedroom
Majority of two bedrooms (35-2 bedroom; 7- 1 bedroom)

ELDERS COMMUNITY CENTER
Physical therapy/rehab (necessity to keep people moving) combined with recreation area
Ping-pong
Larger kitchen and storage with walk-in cooler
Van/ and bus for trips
Garage
Maintenance
Bowling alley
Interior courtyard (open and closed potential)
Non- smoking
A/C – air purifier
Security
Parking spaces
Community meeting rooms
- Large for workshops
- Family meeting room
- Bingo

Beauty shop
Recreational director
Separate cars away and walk in or variety or allow them to walk
Pedestrian walkways a priority Note: don't think of highways as the only way_Elders could ride 3-wheeled bikes
What to do about kids running through the site?
- Tribe has to define respect
- Positive interaction with youth

Enough space for elders to walk and bike
Could be gated/landscaped

Workshop Notes

Kitchen/Dining
- Food brought in from elsewhere or good custom kitchen
- More food storage capacity
- Walk-in cooler and freezer (large)
- Meals for off-site facility will continue
- Good ventilation
- Space center work surface/butcher block
- Serving counter with steam table
- Cabinets
- Not much baking/bread making – may provide economic benefit to sell (bake sales, pie socials, etc)
- Can possibly do cooking education (nutrition)
- Kitchen to be large enough to gather around (community kitchen
- Dining needed to serve 80? - could handle 120 without tables

Place for socializing - one near greenhouse, one connecting visually to the outside, one connected to the entry
Meeting area
Office space (director and helper)
Bathroom
Area for visiting nurse to do screening
Craft area/storage/sink/quilting room
Separation between dry and wet functions
Some activities need to left out
Comfortable security and enough space
Jam making/canning
Needs assessment for men's activities
- Crafts
- Wood shop
- Maple syrup in the springtime (prep area) outside
- Fish cleaning station

Quiet space
- Library
- Den

Could put communal facility close to activity and housing farther away
Zone the site for active to less active
Fitness center/health center/exercise room
- Talk to gerontologist for specific needs
- Exercise, but with privacy
- Aerobics class for older ladies
- Whirlpool for rehab/pool
- Out door exercise space/activities
- Circle of landscape and walking around the building (celebrate the site)
- Locker room

Greenhouse
- Gardening
- Quiet space
- Garden outside the facility

Workshop Notes

Number of people?
- 80/day now
- 30 here/50 go out
- 4X existing (Currently 10 rooms here) = 40

One or two story?
- 2 story will require an elevator

Heat loss cost (like the idea of going up)
Two story may allow more use of connecting spaces
If second floor – a balcony helps
Screened porches and outdoor spaces need to be celebrated
Second floor could be day
Indoor seminar/classrooms
Main point is not to feel too closed in a square space
"Culture camp" connected to the outdoors/feeling

SUPPORT SERVICES
What will serve elders as community? – services
Professional office to conduct business
Note: do double-duty
Moveable partition/drop-down screen?

OTHER ISSUES
Funding
Where will it come from (to realize this dream)?
- Mary: $multi-million funding for wastewater
- Let's dream at this point

Explain funding
Right now conceptualizing to create a plan to use for getting funding
Community should be involved in development
Dollars could come from a number of sources
Three types of funding-for community facilities program
- Guaranteed Program-loan funds from bank, rural development insurance.
- Direct Loan-US Treasury direct loan.
- Grant Program-$174,000.00 for WI for fiscal year.

USDA, Housing construction support
HUD
CDBG grant
Block grant (up to $500,000.00)
Reduce energy costs
Rent space, storage
Other revenue generators to be decided by elders.

Construction
Phased construction
- Elder community building
- Housing in stages
- Know how they will grow/connect together

Workshop Notes

Maybe a combination one and two story in both community building and residential

Other Concerns
Inter-generational Connections
Respect diversity of spiritual traditions.
Child care
General maintenance
Heating
Lighting
Janitorial services
Grounds keeper services
Waste disposal service
Water service
Sewer
Staffing:
5-10 staff to support the elderly
What about immediate needs?
How to deal with existing facility
Do both? Are there funds available?
Existing building not accessible

THE PRELIMINARY DESIGN FOR THE ELDERS CENTER

From the information gathered at the *design charrette*, a preliminary design was created for the Elder Center. The design requires further development, but provides a context for continued discussion, review and refinement. The site plan is configured to provide a central Elder Center building with eight radiating fourplex housing units along enclosed corridors. This configuration permits the housing to be connected to the Elder Center facility, while maintaining privacy and views of the surrounding forest. The housing unit corridors are daylit, and will include as much passive solar heating and cooling as possible. The configuration of the housing units also allows for natural ventilation and access to outdoor gardens and covered spaces. Sustainable development principles will be emphasized in the siting of the buildings and other site infrastructure and amenities. The building will be located to protect and preserve the natural wetland area on the site. Tree cutting will be kept to a minimum and natural drainage patterns will be maintained. An environmental assessment will be conducted to determine the most environmentally-sound location for the buildings, roads, parking areas, and walkways.

Based on the needs identified in the *design charrette*, the Elder Center will include a variety of services for the elders and the larger community. Health care and maintenance will be a primary element. A nurse's office, workout rooms, a whirlpool, locker rooms, and outdoor walkways are provided to assist with medical

needs and encourage walking and other forms of regular exercise. There are rooms for leisure activities such as arts and crafts, gardening (in the greenhouse and outdoor gardens), reading, visiting with friends and relatives, and quiet reflection. Outdoor areas will be provided for fish cleaning, and maple syrup and wild rice processing, which are important woodland tribal cultural activities. A business office and conference room are provided for use by residents and the Bad River community. In addition, a daycare facility is proposed to be located adjacent to the Elder Center to encourage intergenerational interaction. It has been shown that this type of contact can have a positive effect on both elders and children. The current daycare facility is very small and the new daycare will provide an opportunity to enlarge it to a capacity which can generate revenue for the Tribe. The large common area and kitchen will serve as a dining room, expanded arts and crafts room, tribal community meeting room, and can provide revenue generation through rental to the larger community.

The Elder Center facility dining/meeting space has a fireplace and south-facing windows for passive solar heating and natural daylighting. This space is directly connected to an outdoor patio that extends the indoor space out into the surrounding landscape leading to the gardens, cultural activity areas and outdoor walkways. A greenhouse is located at the southeast corner of the building for food production, recreation and lounge use. Arts and crafts rooms are located adjacent to the meeting room and open directly onto that space. The north side of the facility includes office, recreation, and support service spaces. Good cross-ventilation is provided for summertime cooling. North, east and west windows will be minimized and south windows maximized for energy conservation and natural heating and cooling of the building. Non-toxic floor finishes, paints and cabinetry are proposed for interior construction. Locally available and recycled building materials will be specified wherever possible to minimize energy use for transportation and processing, along with supporting the local economy. The housing units are designed to be very flexible. They include a main living area with two adjacent rooms that can be used in a variety of ways as either bedrooms, a den, guest room, dining room, etc. Each unit can be utilized as best suits the elders and others living with or visiting them.

Building materials will be selected for their durability and construction waste shall be minimized through utilization of standard material dimensions and construction site recycling. The building heating system will preferably be radiant heating, which improves overall health, decreases energy use, and provides a greater level of thermal comfort than forced air heating. It is likely that active solar systems such as solar electricity or solar heated hot water will not be an option due to the wooded site. Instead, overall energy conservation will be emphasized in the design of the

Workshop Notes

building envelope through the use of high levels of insulation and tight construction (including a ventilation heat recovery system). This approach will optimize energy savings and improve overall thermal comfort.

Since this a preliminary design, the final site plan, heating, cooling and utility systems, materials choices, and exterior aesthetic have yet to be developed, but will include ecological design features and cultural design elements and materials as appropriate to the Bad River Tribe and Ojibwe woodland culture. The goal will be to create a unique and appropriate aesthetic; one that expresses the cultural and environmental values of the Bad River community, and will be a place that meets the needs of the elders now and in future generations..

The following preliminary design program information and drawings are provided for the Elder Center and Housing:

Site Photo
Site Context
Architectural Program/Cost Estimate
Site Plan Sketch
Elders Center Floor Plan Sketch
Typical Housing Sketch and Light Monitor Alternatives
Site Plan
Elders Center Floor Plan/3-D View
Elders Housing Floor Plan/3-D Interior and Exterior Views

Ecological Design Principles

By Patrica Olson

PROTECT THE NATURAL ENVIRONMENT
- Preserve large pristine areas
- Restore damaged areas
- Learn from and integrate with natural environment

DESIGN RESPONSIVELY WITH THE LAND CULTURE
- Build on disturbed areas
- Integrate the built environment with the natural environment
- Use cultural and natural forms (integrated)
- Work with natural systems
- Natural landscaping
- Biological wastewater treatment
- Rain water harvesting
- Gray water use

USE ENERGY AND RESOURCES EFFICIENTLY
- Climate-responsive design
- Passive solar heating and cooling
- Day-lighting
- Natural ventilation
- Shading
- Use solar and renewable energy
- Active solar, wind, micro-hydro and geothermal
- Be a net energy producer, if possible
- Appropriate use of materials
- Reduce, reuse, recycle
- Minimize and recycle construction waste
- Build for durability
- Use renewable reclaimed, and recycled materials

ENHANCE HEALTH AND COMMUNITY
- Non-toxic materials and thermal energy systems
- Extend health to the larger community
- Landscaping
- Street vegetation
- Use of local materials
- Enhance community
- Pedestrian oriented
- Public spaces
- Human vs. automobile scale
- Public transit systems

CREATE BEAUTIFUL AND ECONOMICAL ENVIRONMENTS
- Incorporate natural features
- Design with light, color and pattern
- Economy by design

Tribal Staff & USDA Meeting Notes

Site Issues

Area should be secure, yet not gated.
Walkways should be adjacent to the main building.
Natural Elements
- Fish pond
- Aquarium
- Bird sanctuary

Inter-generational Connections

Outdoor communal areas (sweat lodge.)
Indoor seminar/classrooms.
Respect diversity of spiritual traditions.
Child care

Maintenance Concerns

General maintenance
Heating
Lighting
Janitorial services
Grounds keeper services
Waste disposal service
Water service
Sewer

Financial

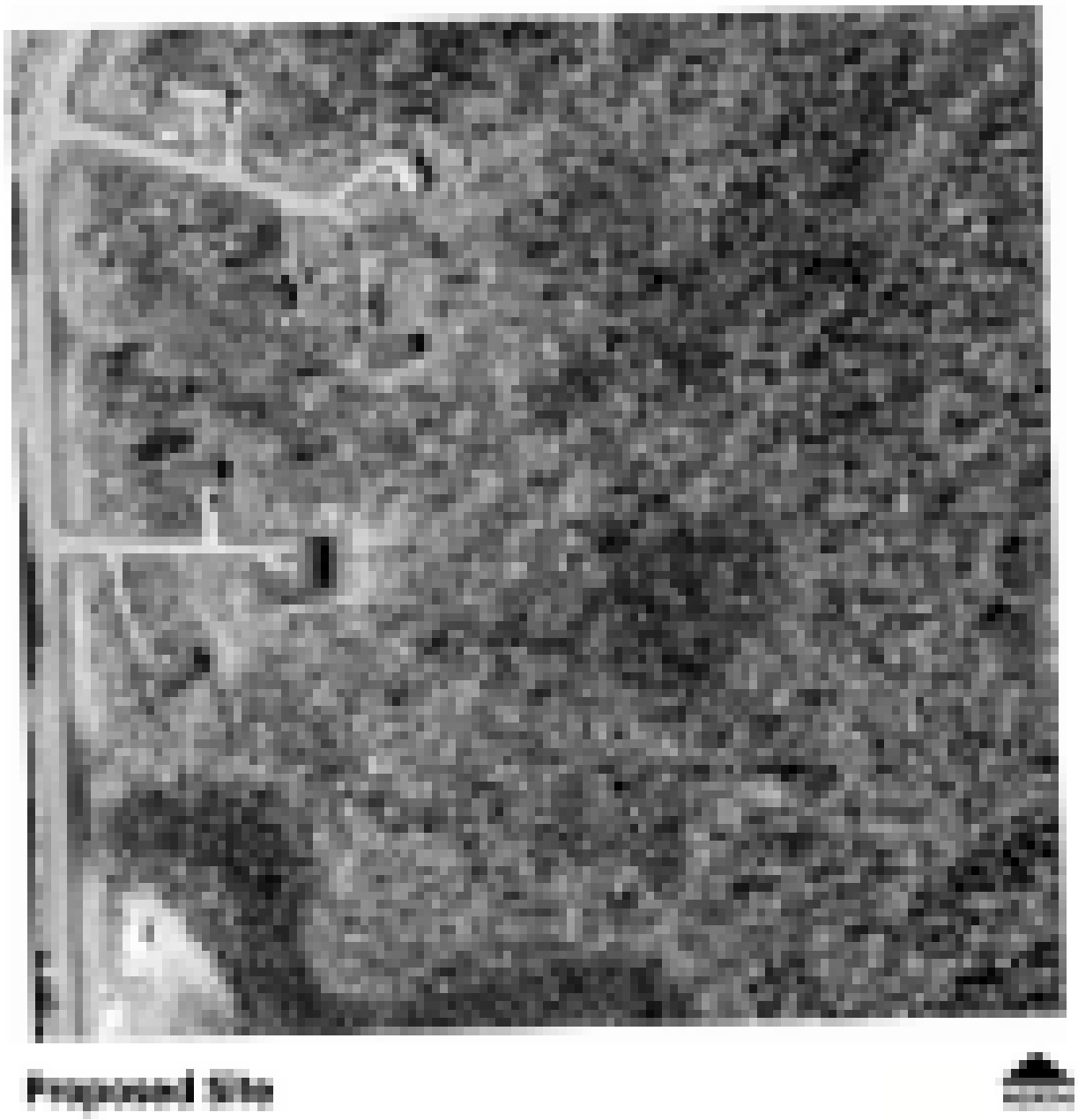
Three types of funding-for community facilities program
- Guaranteed Program-loan funds from bank, rural development insurance.
- Direct Loan-US Treasury direct loan.
- Grant Program-$174,000.00 for WI for fiscal year.

USDA, Housing construction support
HUD
CDBG grant
Block grant (up to $500,000.00)
Reduce energy costs
Rent space, storage
Other revenue generators to be decided by elders.

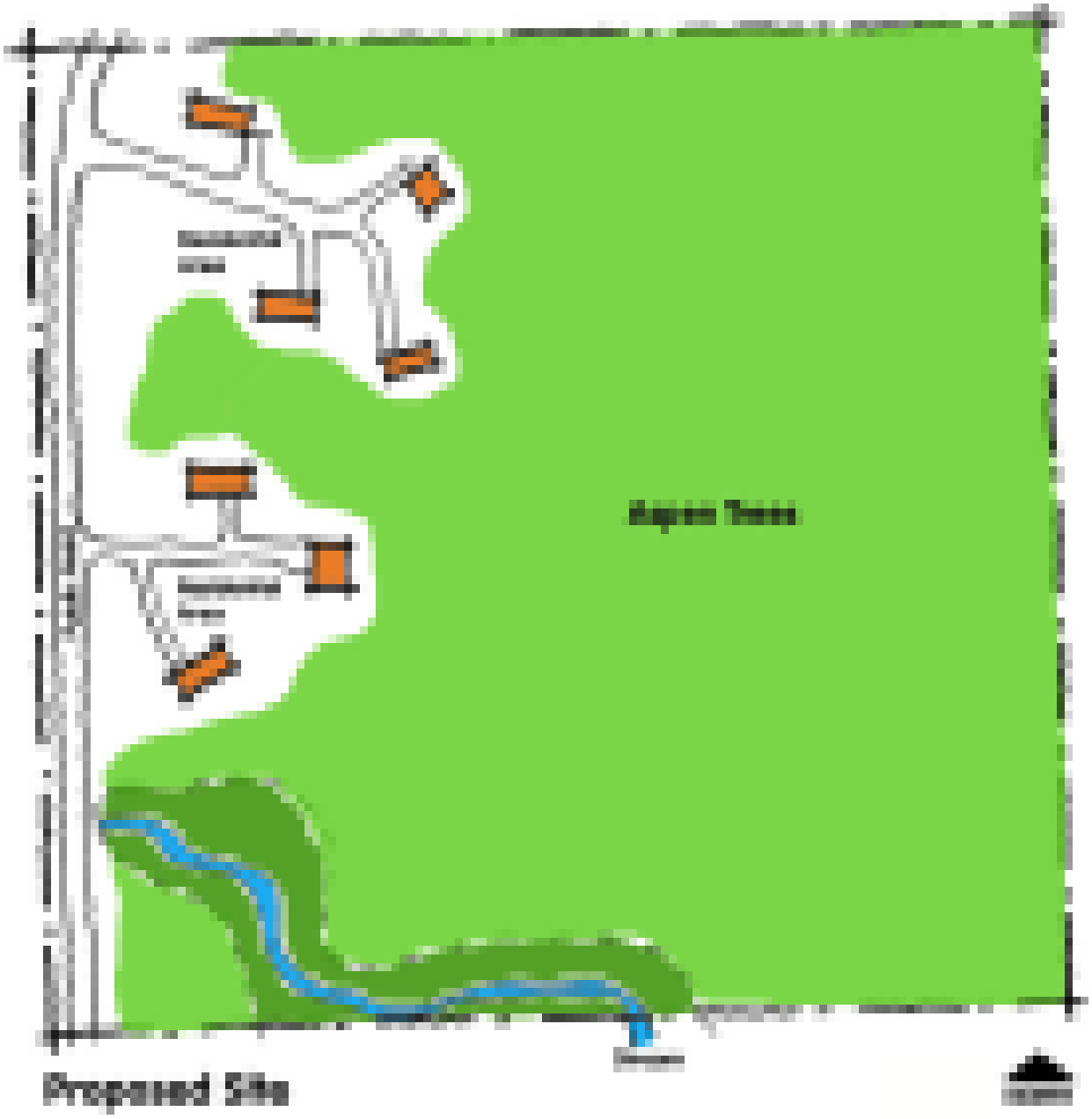
Staffing

5-10 staff to support the elderly

Site Photo



Site Context



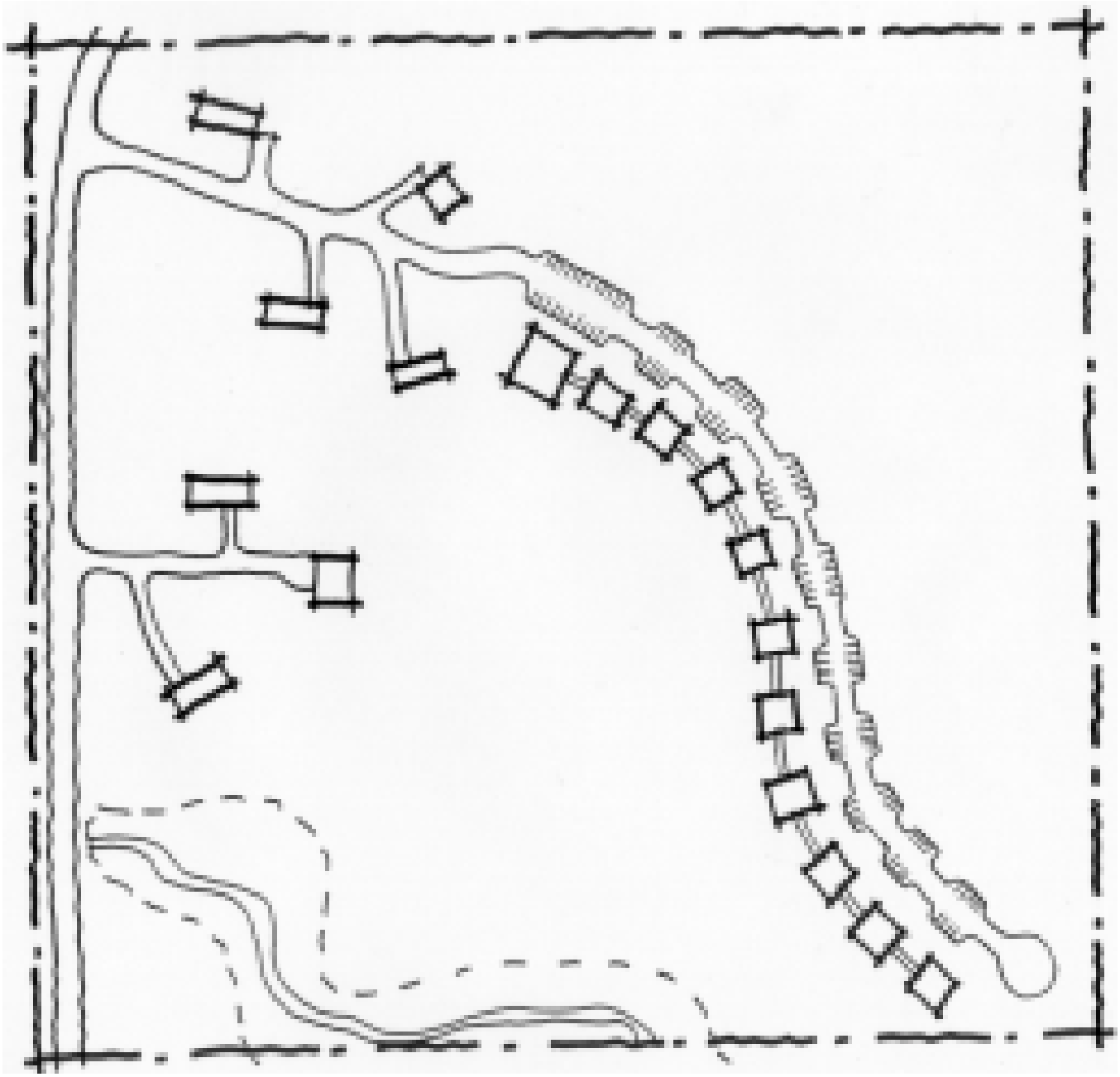
Architectural Program & Cost Estimate

Entry lobby/mail		400
Dining/meeting commons		1,200
kitchen		400
Crafts (wet)		500
Crafts (dry)		600
Library/lounge		400
Open office		120
Private office		150
Business center		150
Conference room		80
Fitness center		1,350
Workout area	300	
Aerobics	300	
Whirlpool	150	
Men's locker/shower/toilet	300	
Women's locker/shower/toilet		300
Greenhouse		600
Nurse's office		150
Outdoor areas		
Elders walk		
Garden		
Outdoor culture/crafts area (Maple syrup, fish cleaning, wildrice making)		

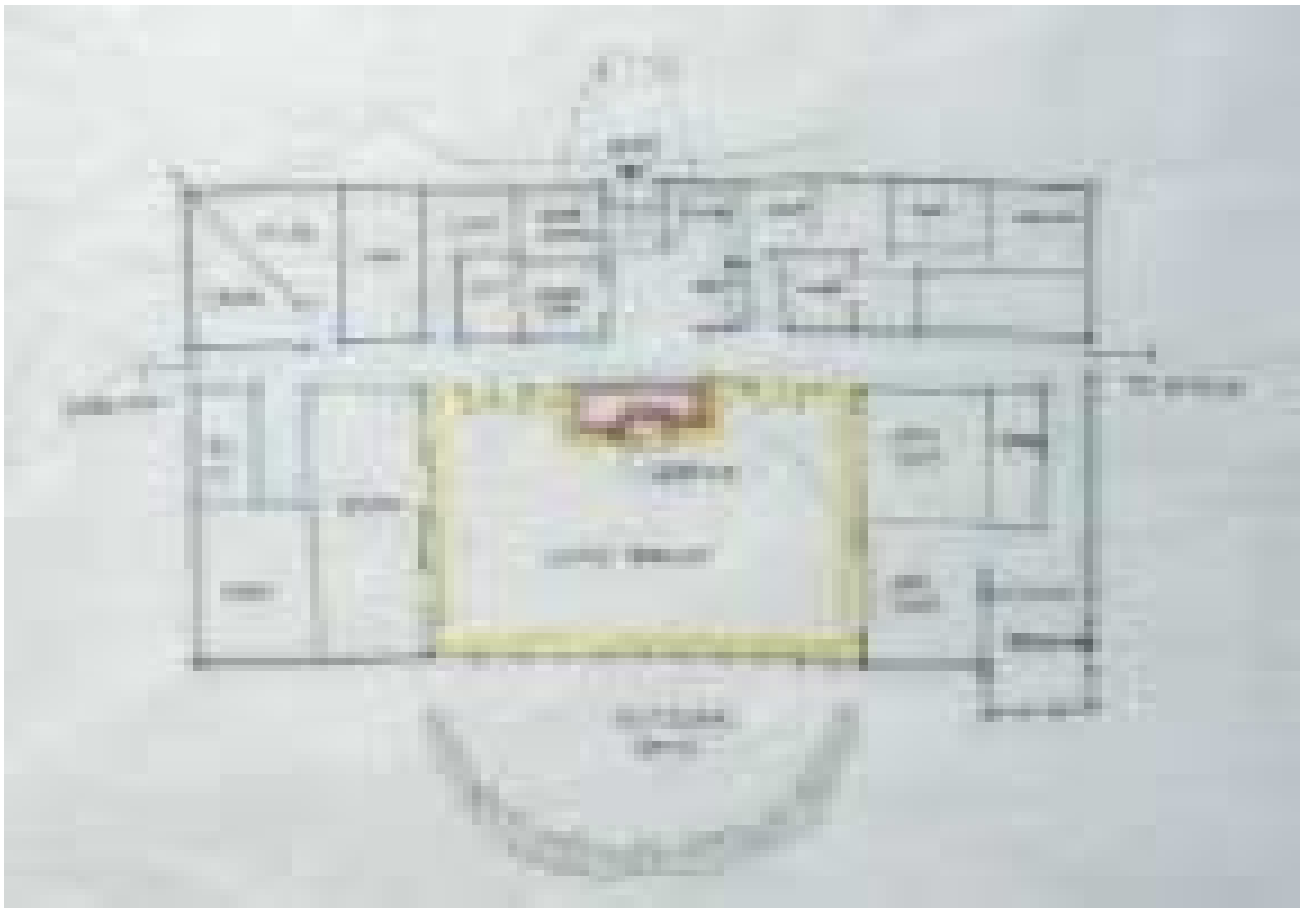
Estimated total net sq. Ft.	6,100
Estimated total gross sq. Ft. @1.2 x net	7,320
Building Construction Cost 2002 @ $120/sf	$878,400
Site Development Costs (Allowance)	$85,000
Contingency at 12%	$115,608
Environmental Assessment Services	$20,000
Testing & fees at 10%	$99,401
Development expenses at 5%	$43,920
TOTAL PROJECT COST 2002	$1,242,329

NOTE:
Housing units to be funded in a future phase.

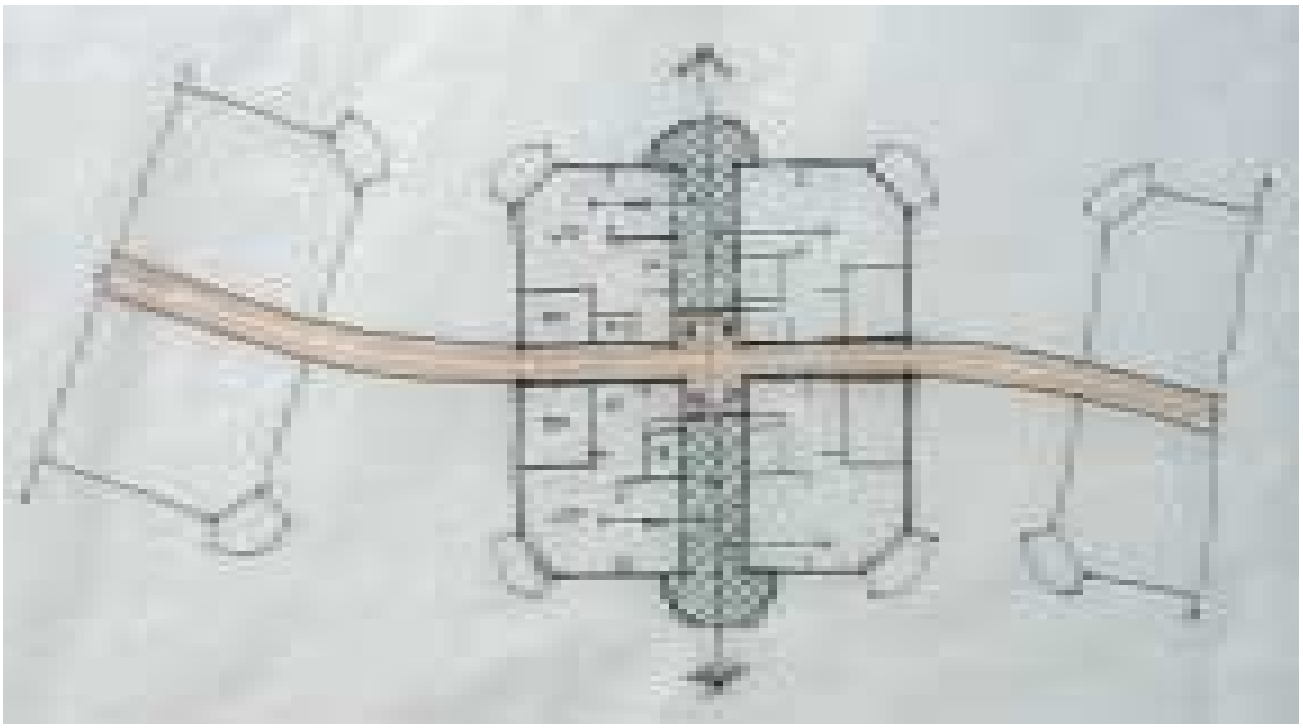
Site Plan Sketch



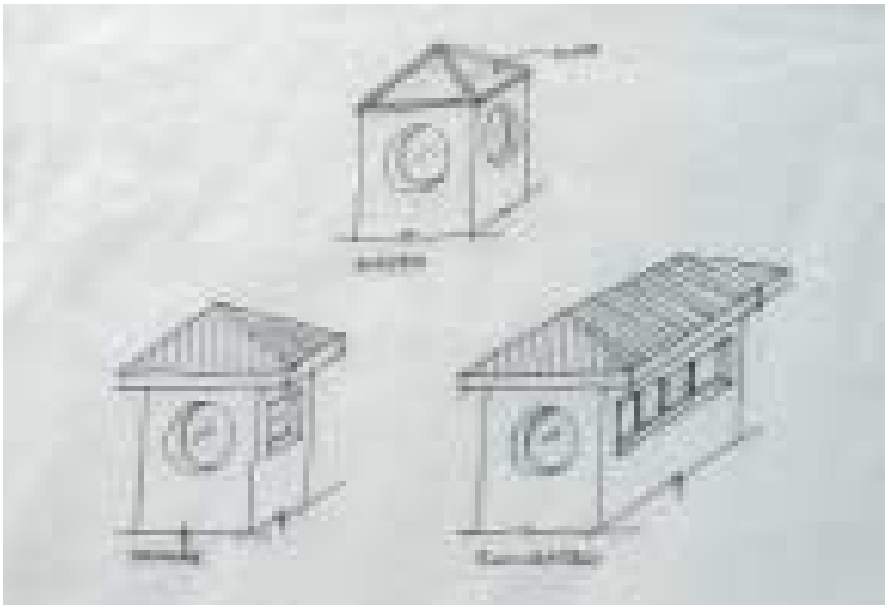
Elders Center Sketch



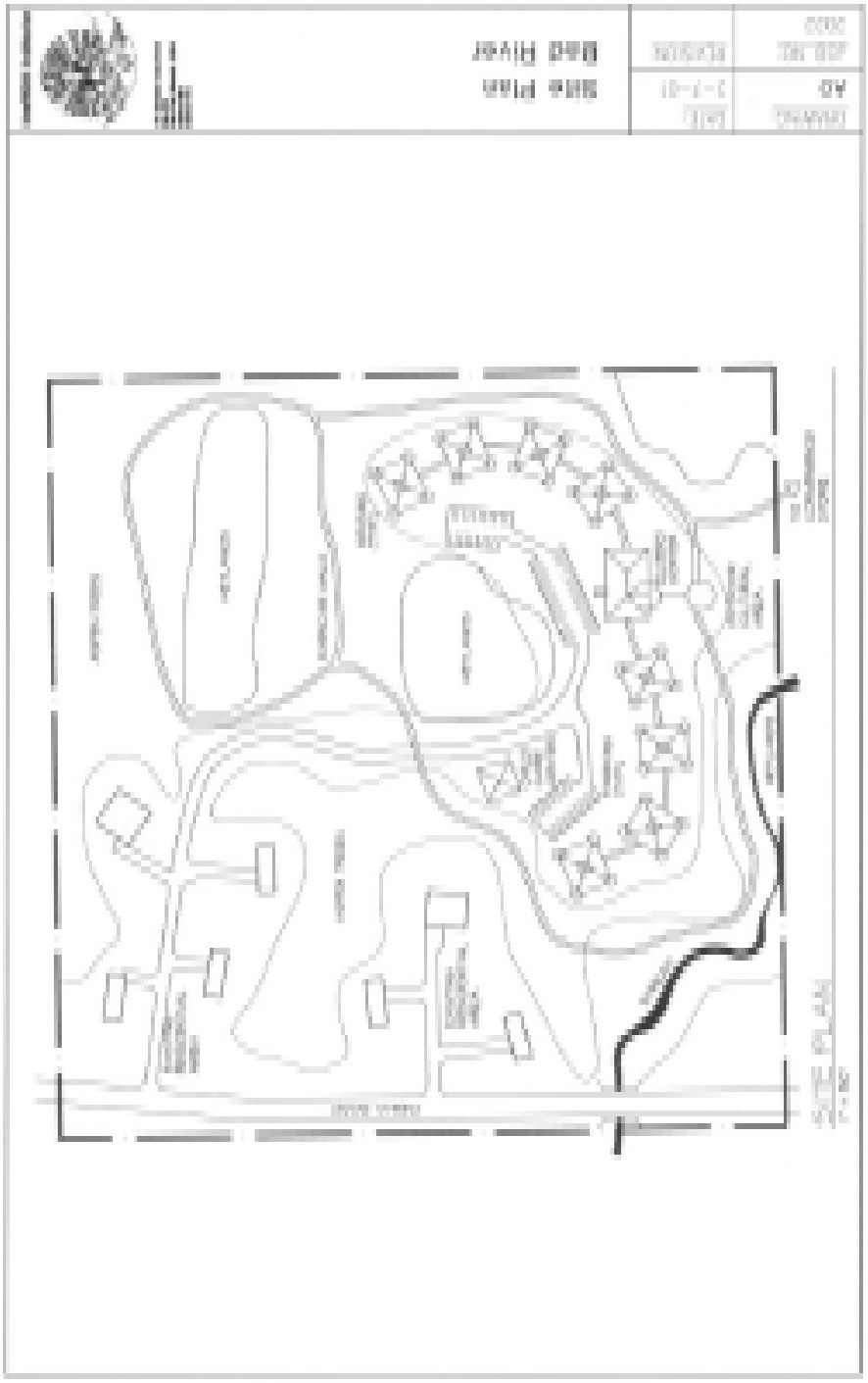
Typical Elders Housing Sketch



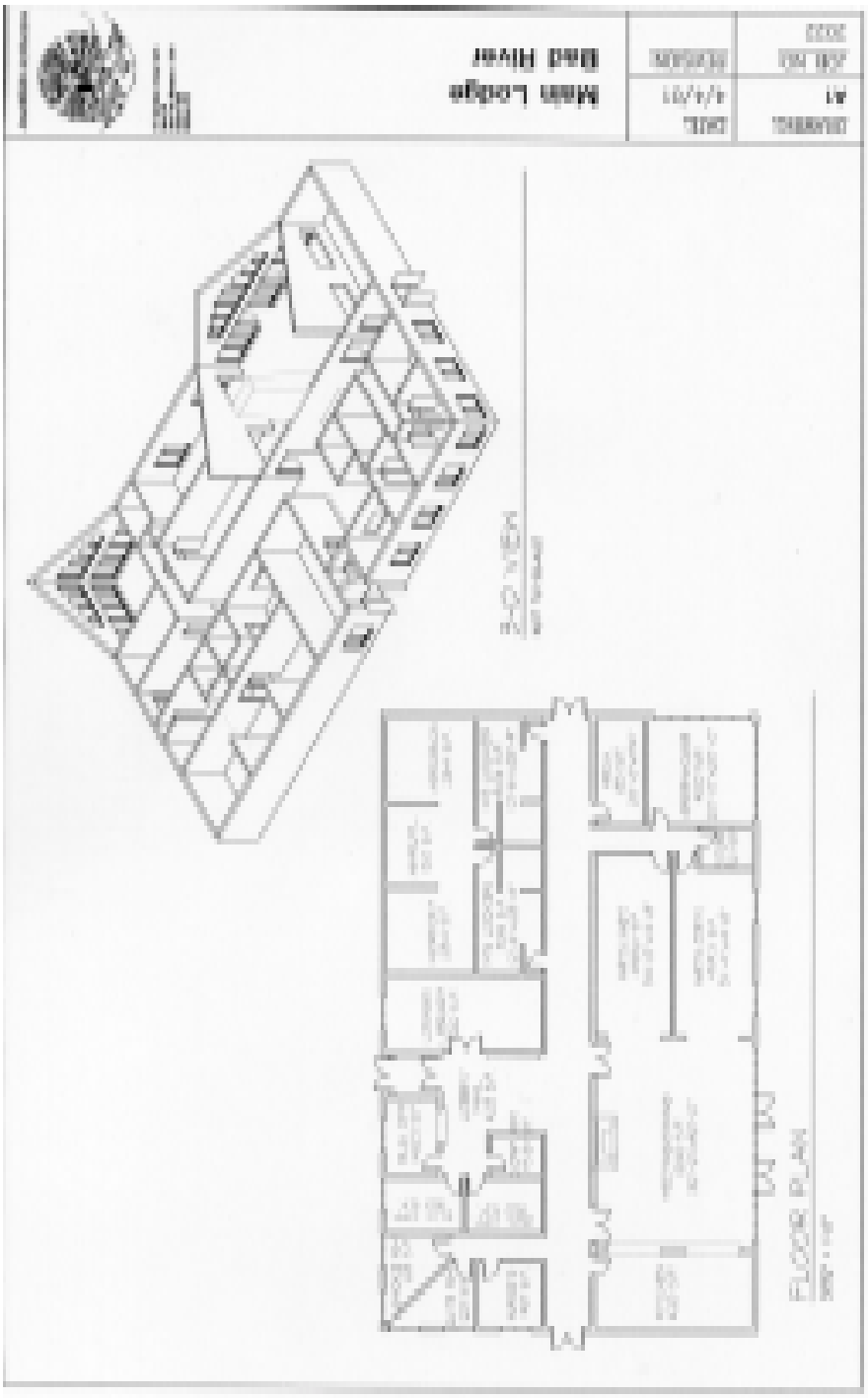
Light Monitor Alternatives



Work-up of Site Plan



Work-up of Elders Center Plan



Work-up of Elders Housing