Actuarial Study Of

Friendship Village of Waterloo

as of June 30, 1990

Milliman & Robertson, Inc.
8990 West Dodge Road, Suite 308
Omaha, Nebraska 68114

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I. Introduction

Milliman & Robertson, Inc., Consulting Actuaries was requested to prepare an actuarial study as of June 30, 1990 of the Friendship Village of Waterloo (The Village). This study is to update the previous one which showed results as of March 31, 1986 and March 31, 1987. These studies demonstrate actuarially based financial accounting. They are prepared in accordance with Generally Accepted Actuarial Principles and Practices (GAAPP). Objectives of this actuarial study are:

1) Generate
   - a population projection
   - a cash flow statement
   - an actuarial balance sheet
   - a pricing analysis for new entrants

2) Present a Summary of Findings, explaining the significant conclusions drawn from the population projections and the financial reports

3) Describe the actuarially based financial statements, their uses and their differences from traditional and GAAP accounting.

This study is divided into sections which:

- Project the resident population of The Village over the next thirty years;

- Display projected cash flows over the next ten year period based on the population projection and financial assumptions;

- Present the actuarial balance sheet and explain how it is used to evaluate the Community's ability to satisfy its obligations to current residents.

- Present an analysis of the adequacy of the current pricing structures;

- Include an appendix detailing assumptions used and calculations made during the preparation of this study.

II. Summary of Findings

The following is a summary of the significant findings of this actuarial study of The Village:

Population Projection

- Prior experience has shown that the assumption of 97% occupancy is realistically attainable. This is one of the most critical assumptions in the projections, which are the basis for this study.

- To date The Village has experienced mortality rates more favorable than industry standards. Consequently, industry standard experience, as observed by Milliman & Robertson, has been modified to reflect The Village's experience in the projection of expected future mortality.

- Rates of permanent transfer to the health care center (morbidity rates) have been fairly low, generally reflecting the favorable health status of residents of the community. The number of residents projected to be permanently assigned each year is about the same in this study as in the previous one.

- The number of residents permanently assigned to the health center should stabilize at a level less than the number of available beds. However, it is possible on occasion that the number of beds required for residents will exceed the number of available beds.

Cash Flow

- The cash flow in this report is essentially the same as the one prepared by The Village, except for showing a larger attrition income and a debt service for bonds, rather than the mortgage.

Actuarial Balance Sheet

- The actuarial balance sheet for current residents develops a positive surplus thereby demonstrating that The Village has sufficient revenues and funds to continue as a viable operating concern.

- The dollar amount of actuarial surplus is a result of applying a number of assumptions concerning uncertain future events. Therefore, it has more meaning as a "best estimate" of a probable range of values rather than as a precise figure. A test was made to demonstrate the effect of a 7% annual increase in health center expenses, rather than 5%. This change in rate of increase causes a decrease of $1.5 million in the $1.9 million surplus. This result underscores the importance of regular reviews of charges to be sure they keep pace with health center expense increases.

- The size of the actuarial surplus indicates that if actual future investment return, inflation rates for expenses or increases in monthly fees are not as favorable as assumed, the actuarial surplus may decrease but is unlikely to become negative. The Village's history of positive cash flow and favorable pricing reinforce the concept that a negative surplus is unlikely.

- The combination of the positive surplus for current residents, the positive surplus for new residents and the positive cash flow projection demonstrates that the long term relationship between the community's assets and liabilities will result in a positive surplus. Additionally, any positive arbitrage realized from financing activities such as those being contemplated to replenish The Village reserves will serve to increase the positive surplus.

Pricing Analysis for New Entrants

- The section of this actuarial study demonstrating the pricing analysis shows a positive actuarial surplus for new residents. This together with the positive actuarial surplus for the current residents and the positive cash flow lead to the conclusion that The Village has an adequate current pricing structure.

III. Reliance

For this actuarial study, Milliman & Robertson, Inc. has relied upon the following:

- Copies of the two residency agreements supplied by The Village
- Resident profile information maintained by Life Care Services, as revised and updated to June 30, 1990 by The Village's staff
- Expected future occupancy rate estimated by Life Care Services
- Financial data pertaining to The Village as follows:
  - Carney, Alexander, Marold and Co. audit report for March 31, 1989 and March 31, 1990
  - Financial Statements prepared by The Village as of March 31, 1990 and June 30, 1990
  - A ten year cash flow projection prepared by The Village for fiscal years 1991 through 2000
  - Schedule of current monthly service fees and entry fees supplied by The Village
  - Information obtained by phone from The Village

In accordance with the scope of this project, we performed no audits or independent verification of the information furnished.

NOTE: All reference to accounting years refer to fiscal years ending March 31, of the calendar year referenced.

IV. Actuarial Methodology

The actuarial methodology used in this study is based on the comprehensive approach described in the "Actuarial Standards of Practice Relating to Continuing Care Retirement Communities" adopted May 18, 1987 by the Interim Actuarial Standards Board. Recent professional review has extended the concepts to a revised methodology for valuing fixed assets.

The steps Milliman & Robertson, Inc. used to implement this methodology for this study were as follows:

(1) Use data on current and former residents available from The Village.

(2) Select appropriate assumptions for actuarial decrements in future years.

(3) Combine current population data and actuarial projection assumptions to create a closed group projection of current residents.

(4) Create a closed group population projection representing a typical cohort of new residents. This projection was made on the basis of 295 apartments. However, it is understood only the appropriate number of new residents will be entering each year to replace vacated apartments and to fill unoccupied apartments.

(5) Combine the two closed group populations to form an open group population projection representing the expected future demographics of the facility.

(6) Use financial assumptions based on the financial data received from The Village, to calculate the actuarial present value of future income and expenses, and the actuarial present value of debt service, refundable entry fees, allocated depreciation charges and fixed assets.

(7) Restate the June 30, 1990 balance sheet prepared by The Village to an actuarial balance sheet basis.

(8) Make an actuarial pricing analysis using the financial assumptions applied to the closed group population projection of a typical cohort of new residents.

(9) Prepare a cash flow projection derived from the cash flow projection prepared by The Village together with the open group population projection, financial actuarial assumptions and financial projections prepared by Milliman & Robertson.

Actual vs. Expected

1990 – 1994

V. Population Projection

The first step in this actuarial study was to prepare a population projection to demonstrate the expected movement of residents through the Community's apartments and health center. Beginning with the current population, a closed group projection was prepared demonstrating apartments released by the occupant's death, withdrawal or permanent transfer to the health center. The present residents include couples, one or both of whom may continue living in the apartment, die or become transferred to the health center. A couple's apartment is not released until the death or permanent transfer of the last surviving occupant.

multiple decrement model

Assumptions of rates of death and permanent transfer were based on the historic demographics of The Village together with Milliman & Robertson's past experience with other retirement communities. The rates used are shown in Appendix A.

A model population was prepared representing expected typical new residents to The Village. A closed group projection was prepared of this model to demonstrate the expected future movements of these new residents.

An open group projection was then prepared combining the two closed group projections. This open group projection represents the anticipated demographics of The Village based on the assumptions made. The detailed projections are included in Appendix D of this report. However, a summary of the projections compared to actual historic experience for the apartments and for the health center are shown on the next two pages.