

Eskilson, John

From: Biuso, Joe
Sent: Monday, August 16, 2010 3:35 PM
To: Tappan, Ron; Eskilson, John
Cc: Re , Bernard; Bailey, Patrick
Subject: FW: Capital Improvement Program Long-Term Care Facility (Homestead)

Ron:

Per your request, please find below an initial listing of projects that could reasonably be expected to occur at the nursing home out to the next ten years or less. Rough probable costs are based on conceptual scopes of work and can vary dramatically based on the final scope ergo; pricing ranges approximately 1.25 times higher than the lower range of cost expressed. Also, this listing doesn't include the random projects associated with changes (balance center, resident restroom upgrades, etc.) that sometimes occur with/without coordination between the two Divisions.

JJB

Roofing:

Description of need:

Full replacement of upper and lower roofs (lower roofing requires pitched insulation and additional roof drains to correct ponding water problems and new side-wall flashing due to the over-spilling that occurs (flashing too low to waterline.) All copings and other penetrations shall be replaced as needed with roofing project(s). Small out-buildings associated with Homestead also will need roofing including – Walk in cooler and Fire Pump bldg.

Conceptual cost estimate: Upper roof -\$207K - \$212K Lower roof - \$112K - \$117K Out-buildings -\$35K

Useful lifespan remaining: Upper roof – 8-10 years, Lower roof – 2-3 years, Outbuildings – 2-4 years

Elevator:

Description of need:

The second elevator will need to be replaced (next year) as part of the renovations to the building's out-dated equipment. There is also a justification for an additional elevator servicing the proposed addition, which would improve the facility's ability to move residents, possibly serve to define (branding) the addition as a more hospitable environment and help have greater redundancy if/when an elevator is off-line

Conceptual cost estimate: Elevator – B \$230K (based on previous bid) Proposed new elevator for 18-bed addition \$262K - \$314K

Useful lifespan remaining: Elevator – B (back elevator) – 0 years (needs to be done during 2011 CIP)
Possible elevator for proposed addition 2-3 years (timed to be installed with proposed addition)

HVAC:

Description of need:

The chiller is in the second half of its life expectancy. Poor maintenance during the first 5-6 years of its use has diminished the expectation of long-term

serviceability and therefore it is necessary to plan for its replacement in a proactive manner avoiding the extremely high-cost due to a catastrophic failure. The associated cooling tower has also begun to show deterioration with portions of the spray unit no longer functioning (loss of efficiency). Repairs could be made to the cooling tower to extend its life, however the proposed chiller-type replacement would not require a cooling tower. The general distribution system for chilled and hot water, which includes the pumps, controls, valves, piping, insulation, and fan-coil are as old or older than the chiller/cooling tower. Insulation is gone or heavily damaged in many places throughout the ceiling cavity, its replacement is hampered by the occurrence of asbestos in these areas limiting access. As recently experienced, the fan-coil units are beginning to show signs of aging and will require more frequent replacements of their major components (motor, fan, valves, damper, and coils) which eventually will suggest a wholesale replacement of all these units. General ventilation seems inadequate (odors, poor exchange of fresh air, and no energy recovery) which should be addressed going forward. The installation of an Energy Recovery-Ventilation unit (ERV) will address these needs and save money on operating expense. The most difficult problem with this is to install new duct work in the ceiling space with the occurrence of asbestos there.

Conceptual cost estimate:

Two new DX-type chillers/pumps/piping/controls/valves/removal of existing equipment – \$500K - \$600K

Replace existing fan-coil units/unit ventilators/piping/controls/insulation/removal of existing equipment – \$1.300K - \$1.560K

Install new ERV (Energy Recovery & Ventilation) unit and associated ductwork in the presence of asbestos - \$800K – \$1,060K

Useful lifespan remaining: Chiller/cooling tower <10 years. Fan-coil units 8 - 10 years. Install ERV (should be done in) <10 years

Electrical Service:

Description of need:

The existing electrical service and its main distribution have reached the end of their useful life expectancy and should be planned for replacement especially in light of the possibility of a (proposed) addition. However; this should not be the criterion for a replacement. The current system is maxed-out on the distribution side of power and the main breakers feeding the panels are no longer readily available and could require custom re-manufacture in order to replace if one were to fail. The residents rooms are today serviced by a single twenty-amp breaker shared between pairs of rooms. With the proliferation of energy-consuming devices like LCD television screens within more and more resident's rooms, power supply and distribution is becoming a problem. The main service should be increased after an analysis to properly size it to the current and anticipated load if an addition is made to the building. Likewise; the emergency power system needs to be assessed and decisions made on how best to distribute the e-panels. Currently an analysis is being performed by S. Gruchacz and staff to determine how they prefer to use this resource. There will likely be costs associated with the re-distribution of this e-power and associated asbestos cost.

Conceptual cost estimate: New electric service – design, abate ACM in adjoining locker room and provide temporary electrical service build, cross-over from old/new, remove old service - \$500K - \$650K. Re-distribute emergency power from e-panels and install associated conduit and conductors as necessary \$50K - \$62K

Useful lifespan remaining: <10 years

Fire Protection System(s):

Description of need:

The existing fire protection (sprinklers) system is approaching the end of its useful life expectancy. Recent problems with sub-components (dry-system pumps/valves) indicate potential added problems with that part of the system going forward. Last year a major repair was performed on the pumping equipment (bowls, impellers, main shaft, bearings, and inlet screen) at more than twenty-thousand dollars. Piping in the dry portion of the system is subject to corrosion due to there being moisture in the pipes after water has been drained. The dry system covers the entire fourth floor of the building. A reasonable scope of work for the system should include the planned replacement of the engine and pump, limited piping replacements in the dry system and flapper valves and compressor pumps.

It should also be noted that the prospect of a (proposed) addition will require that the system be closely examined for compliance with NFPA and State DCA requirements before any modifications are considered. It should also be noted that the drafting-type system (that pulls water from the pond) is no longer considered a viable source for firefighting water under present NFPA codes. If substantial additions are made to the system (e.g. thru an addition) and a full refurbishment or replacement is necessary, it could compel the need for a replacement source (Above Ground Tank and associated pumping/wells/etc.) of firefighting water, which would be very costly, and which cost is NOT estimated herein.

Currently the fire detection system is in the process (contract awarded/submittals completed/to DCA for review) of being replaced. This system's life expectancy will exceed the time period (10 yrs or less) of this improvement program and as such is excluded from the report

Conceptual cost estimate: Limited to the scope of work described above \$150K - \$180K. Possible new system associated with 18-bed (proposed) addition (see below)

Useful lifespan remaining: <10 years with investments made over most of the latter half of the time period

Other: If it proves necessary to design and build a replacement for the fire protection supply system in order to protect the (proposed) addition, a significant investment will need to be made for a large (>100K gal.) above ground storage tank, pump/building, piping and supply well(s) to provide sufficient firefighting water to supply the building's fire suppression system. A DCA review should be considered before any investment is made into this work to ascertain their opinion on whether the NFPA (current version) prevails based upon the cost or square footage. Rough Probable Cost to replace source water part of system

\$600K - \$800K is not included in the summary of conceptual costs (below.)

Walk-in cooler (WIC)

Description of need:

The present WIC is in a poor state with numerous leaks in its roof, door openings, and an antiquated refrigeration system. The size of the unit is inadequate to the kitchen's needs and must be supplemented with other refrigeration (free-standing) that could possibly be replaced if the WIC were re-sized. This would reduce the number of fixtures in the kitchen that require individual service contracts/periodic replacement. If the proposed (18-bed) addition is constructed it will place the need for added capacity on the kitchen for another 54-meals/day and the associated storage of dry goods, canned, and refrigerated foodstuffs. Conversely the WIC is aged and will require replacement whether or not an addition is built.

Conceptual cost estimate: WIC design and construction administration \$10K Construct new WIC/Dispose of existing \$150\$ - \$180K

Useful lifespan remaining: <10 years

Glazed curtain wall system

Description of need:

The exterior areas of the building associated with the Residents rooms and all first floor spaces are comprised of a glazed curtain-wall system that holds the windows and exterior surfaces in all the resident rooms and first floor office areas. The system is as old as the building (38 years) and leaks both water and air substantially into and out of the space. The glazing are single-pane and allow significant heat/cooling loads into the spaces, which add to the operating costs of the building and tax the equipment on the hottest/coldest days to keep up with the unnecessary added loads. A replacement would cause significant disruption to the facility due to the interference with the resident's rooms, that would require a partial un-loading of the building and moving residents from one area to another as work progressed. The bed rate that would be lost is unknown and is not a part of this estimate. I suggest though at least twenty percent of the exterior wall surface would be done in each stage, which means half the length of the building by four stories high so that work can progress rapidly. I estimate that actual construction will take 6 months, with each 25% of the surface area 1.5 months of un-occupied by residents. There is also the occurrence of asbestos on the structural steel where the curtain wall is attached to the building's structure or skeleton that requires abatement before the wall(s) can be removed. This work would take place in conjunction with the curtain wall project but has to be done before each phase, so it necessary to add another 2-3 weeks or combined conservatively into 2 months for each 25% of the project or; eight months total.

Conceptual cost estimate:

Based on full replacement of curtain wall system on all floors (+/-10K sq. ft.) and NOT inclusive of the 25% effect upon resident open occupancy (bed-rate) necessary to the abatement and curtain-wall system replacement - \$840K - \$1,008K. Abatement is inclusive of design/monitoring/replacement of fire-proofing with non-ACM materials - \$900K - \$1,080K. It should be noted, there may be a less costly method to restore or replace the system that doesn't affect the ACM

and may yield less interference in the resident's rooms.

Useful lifespan remaining:

The curtain-wall system has exceeded its useful life expectancy and is wasteful of energy due to the single-glazed windows, a lack of thermal-break in the metal frames and poorly insulated panels in the remaining non-glazed areas. These each contribute to a high solar gain and greater thermal loss and the cost associated therewith making it more expensive to cool/heat the building space and keep the residents comfortable.

Fourth floor improvements

Description of need:

All structural steel on the fourth floor is exposed and unprotected from fire. Although there is a fire protection (sprinkler) system on the floor a code-analysis should be completed to verify if fire proofing is necessary. The original roofing materials are in-place and heavily deteriorated, which should be removed and replaced with appropriate flooring for the storage-type function the space is used as. If/when electrical distribution is improved there should be an enhancement of emergency and exit signage, as well lighting/convenience receptacles and distribution panels for other improvements as noted. Consideration should be given to either insulating the floor (3rd floor ceiling) or the installation of insulating systems in the space to help control heat/cooling on the third floor.

Conceptual cost estimate:

Without an actual scope of work it is difficult to predict a rough probable cost. A budget of \$400K - \$480K is suggested until definition can be provided.

Useful lifespan remaining:

All of the items mentioned have either exceeded their useful expectancy or have never existed.

Asbestos abatement (general)

Description of need:

It is not unreasonable to expect continued asbestos abatements in the Nursing Home as we've been doing for the past few years. This estimated cost of work is based on a minor scope (akin to 2010 @ \$168K) and does not include major projects like the glazed curtain-wall system and its associated ACM abatements.

Proposed addition to 2nd and 3rd floor

Description of need:

No cost information is provided in this project listing regarding the proposed addition as this information was developed separately from the Facilities office and is subject to individual interpretation regarding the scope and probable costs i.e. related systems in the existing building shall require upgrading, which do not appear to be included in the analysis of cost by the consultant.

Summary of conceptual cost:

Roofing;	\$354K - \$364K
Elevator; w/proposed addition)	\$230K - \$262K - \$314K (3 rd elevator assoc.

HVAC:	\$2,600K - \$3,220K
Electrical Service:	\$500K - \$650K
Fire Protection System(s): addition or a complete renovation)	\$150K - \$180K (Note: doesn't inc. either the (prop.)
Walk-in cooler (WIC)	\$160K - \$190K
Glazed curtain wall system	\$1,740K - \$2,088K
Fourth floor improvements	\$400K - \$480K
<u>Asbestos abatement (general)</u>	<u>\$175K - \$225K</u>
Range of Conceptual Cost	~\$6.3M - \$7.8M

Other potential costs associated with previous recommendations for capital improvement by the consultant Parente-Randolph were not included. This information was not available at the time of writing. If these materials arrive shortly, I will append any important projects to the list that are missing to this report.