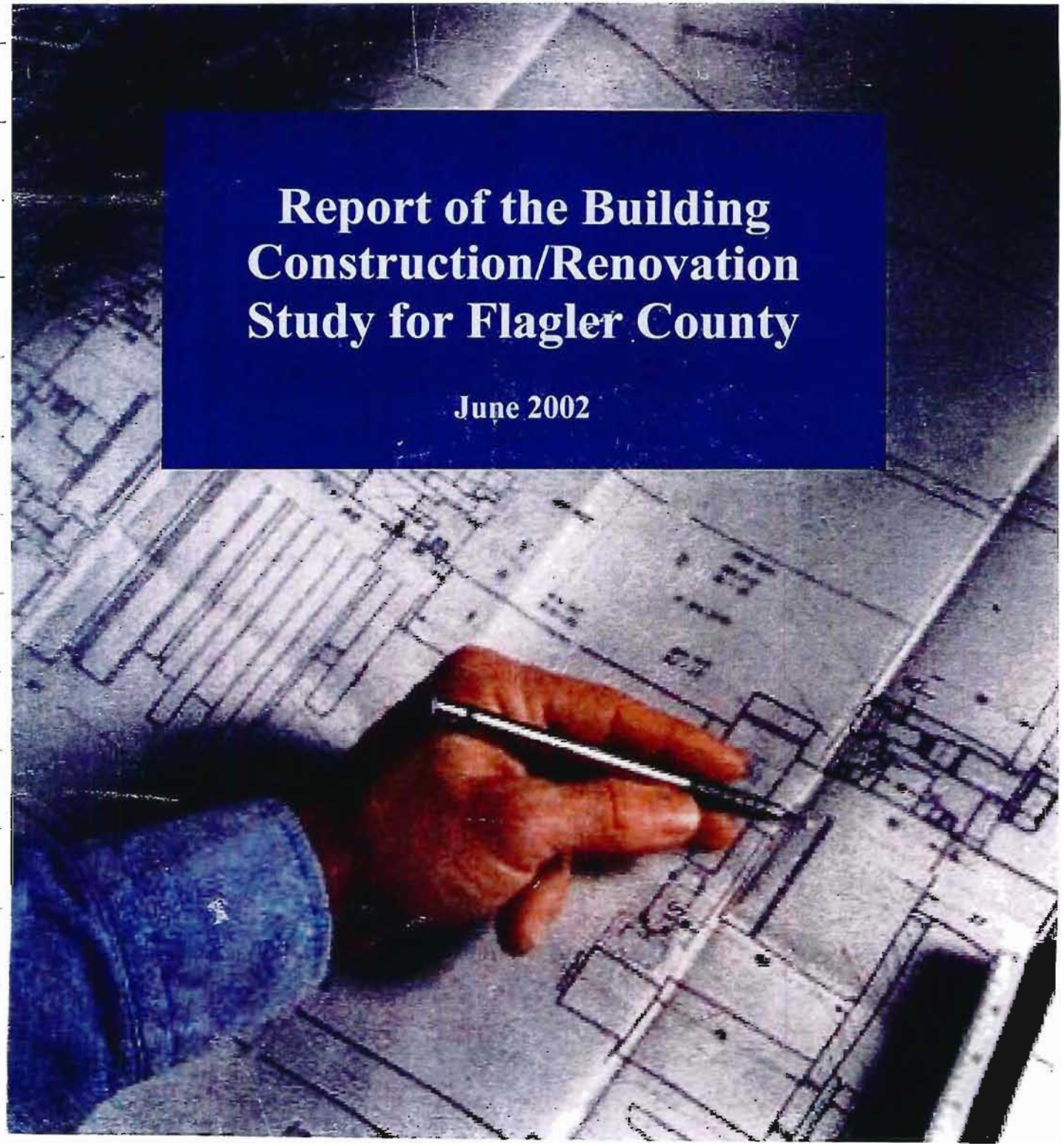


Report of the Building Construction/Renovation Study for Flagler County

June 2002

Flagler
Flagler County Florida

GIBRALTAR
DESIGN
ARCHITECTURE • ENGINEERING • INTERIOR DESIGN

AA-0002911 IB-0000937 EB-00007728

475 West Town Place
Suite 100
St. Augustine, FL 32092
904.940.1510

8. Memorial Hospital

Moody Boulevard, Bunnell

Ownership: Adventist Hospital Group
Sale Price: $2,000,000

Building Information

a) The Hospital totals 46,051 square feet, which includes four wings with approximately 60 patient rooms equaling 16,540 square feet. The Hospital is located on the east side of the property. Each room is sized at 12' x 18'. Each room includes a bathroom and an individual AC unit; and each room is currently wired for cable and telephone. The nurse's station adjoining the rooms is 1,161 square feet and is designed so that each department can staff to handle client questions. This total ward area is 19,416 square feet with approximately 3,000 square feet of corridors.
b) The cafeteria area totals 4,650 square feet, which includes the spaces of the dining room, kitchen, and storage area.
c) Administration, lobby, business offices and records areas total 11,799 square feet and are located in the north main entrance facing the parking lot and SR-100.
d) The remaining areas of emergency room, operating rooms, X-Ray, central services and laboratories total 6,771 square feet and are located in the west area of the building with an entrance off the side parking lot.
e) The rear of the building houses a loading dock.

Front entrance to Hospital

Hospital Existing Space Per Section

Description	Area (sq. ft.)
Wing – Rooms 101 thru 113	4,080
Wing – Rooms 201 thru 212	3,936
Wing – Rooms 301 thru 312	3,936
Wing – Rooms 401 thru 414	4,588
Nurses Station & Adjoining Rooms	1,161
Offices CCU/ICU & Nurses	1,715
CCU/ICU, Administration & Lobby	6,498
Business Office & Records	5,301
Material Management/PT & Labs	5,175
X-ray, Central Supply, Operating Room	6,771
Corridors Areas (4,664)	4,664
Cafeteria Area (4,650)	4,650
Maintenance Area	2,890
Total Area	**46,051**

55,365

5

Site

General Site Description:

The hospital is located on Moody Boulevard (State Road 100) near the business district of Bunnell, approximately one-half mile west of the existing County annex buildings and one-half mile east of the Flagler County Courthouse. State Road 100 is in the process of being widened by the Department of Transportation in the 2003 – 2005 time line. This two-lane road, the town's main street heading east and west, will be expanded to three lanes. Entrance to the site is gained from several locations. The north entrance off State Road 100 (Moody Boulevard) has a separated ingress and egress service road. This entrance has a median with ground cover and shrubs with an identity sign at the SR-100 entrance. Along both sides of this entry are the general public and staff parking areas with 110 parking spaces. The other entranceways, either east or west, are from the side street of Court Avenue.

Hospital parking lot

The hospital, built in the late 70's, is a simple single-story ±50,000 square foot stucco-finished masonry facility that appears in good shape– painted, landscaped and maintained through a quality program. The campus sits on ± five acres of land surrounded by residential on the south, commercial on the west and north, and mixed use on the east. We observed that the site has no permitted storm water management treatment facilities, but has a drainage canal on the south fence line. The parking lot to the west, located at the entrance to the emergency room, has 40 parking spaces and includes a helicopter pad. In the rear of the building, a service driveway provides access with an entrance to the cafeteria and loading docks for general deliveries. There is grass area to the west that, if required, could be used for additional parking.

Entry to hospital from SR-100

Hospital maintenance facility

Field Observations:

Our firm visited the site on March 22, 2002, and performed a cursory review. The site is in generally good condition. Groundcover, landscaping and trees have been well maintained. We observed a functional sprinkler system currently used by the hospital in the front area of the facility. The aesthetics and functionality of the parking lot could be improved by resurfacing and restriping.

Conclusions:

The general conditions of the site would require little capital improvement for the County to move in.

Hospital front entrance

Structural

McVeigh & Mangum Engineering, Inc., consulting firm to Gibraltar Design, conducted the Hospital Facility Structural Analysis. Their report is as follows:

A. General Structural System Description

Information presented herein has been developed from a review of the architectural and structural drawings of the building's original construction documents and a site visit performed on March 21, 2002. The architectural and structural project drawings provided are dated December 1977 and July 1978. The firm of Willis & Veenstra prepared the architectural drawings, and the firm of Bowen, Joshi and Associates prepared the engineering drawings.

The building is single story. All of the building's roof surface slopes from an interior ridge line to exterior walls at the perimeter of the building. The composition of the roof consists of built-up roofing over 2" of lightweight fill, over 2" of rigid insulation. The roofing system is supported by 24 gage galvanized metal roof deck, which spans between steel roof joists, spaced at 4 feet on center. The roof joists span between steel beams and load bearing concrete masonry unit walls. Steel columns at the interior of the building and concrete columns, constructed integrally with the exterior concrete masonry unit walls, support the steel roof beams.

It appears that the concrete masonry unit walls of the building provide the building's lateral support and carry wind loads applied to the building.

The building's slab on grade is 4" thick over the majority of the building. At the Mechanical Equipment Room, located at the west end of the building, the slab thickness is increased to 5". All of the slabs on grade are reinforced with welded wire fabric, placed on a vapor barrier over compacted fill. The foundation system of the building consists of shallow concrete spread footings and strip wall footings.

B. Field Observations

On March 21, 2002, our firm performed a cursory inspection of the building. During this inspection, the building was inspected for signs of structural distress or deterioration. At the time of our visit, the majority of the structure was not exposed to view. In order to examine the roof, ceiling tiles were temporarily removed at various locations throughout the building. Our inspection of the roof deck and framing focused on areas that may have previously experienced roof leaks, as identified by hospital maintenance personnel and locations where new or stained roof tiles were observed.

The exterior of the building was also examined. The exterior walls of the building are finished with a spray coating. An attempt was made to identify any significant cracking in the walls of the spray coating finish of the walls.

The building appears to have been well maintained, with no signs of distress or deterioration observed. The areas of the roof and floor decks and roof and floor framing, which were observed through temporary openings in the ceiling grid, were in good condition, displaying no signs of corrosion or deterioration. The exterior finish system of the building also appeared to be in good condition with minimal visible cracking at a few locations, which appear to be non-structural in nature.

C. Structural Analysis

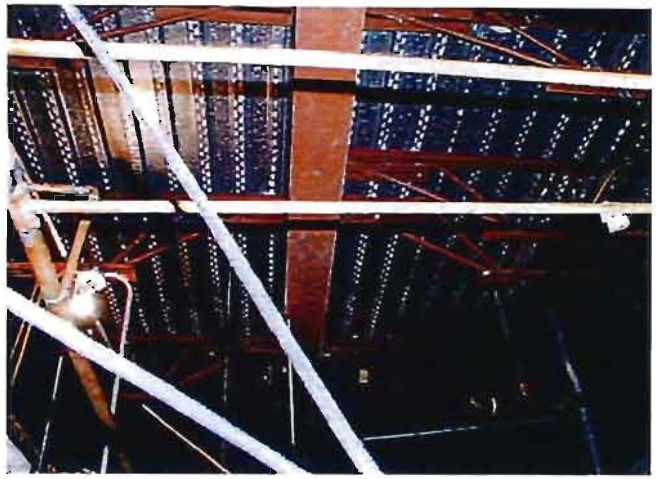
As part of our structural evaluation of this building, we have performed calculations in an attempt to verify the adequacy of various typical framing elements specified on the construction documents provided. Our analysis was limited to the building's typical joist, beam, column, and foundation sizes, and typical exterior concrete masonry unit wall reinforcing. This analysis should not be interpreted to be a comprehensive check of all of the structural elements specified on the drawings provided. Also, we do not certify that the building's structural elements were constructed in accordance with the construction documents..

We discovered two potential deficiencies through our cursory structural analysis. These deficiencies are the lack of concrete masonry unit vertical wall reinforcing and the lack of bottom flange bracing of the structural steel beams of the roof. According to the notes on the structural drawings, vertical reinforcing was only provided at door and window openings and at the corners of the building. With the use of this limited amount of reinforcing, for analysis purposes, the walls are essentially unreinforced. The current building codes do not allow non-reinforced masonry to be used for walls of the height of this building. Cursory calculations suggest that a minimum of #5 bars in grout filled cells @ 48" would be required to satisfy the

current code. More reinforcing would be required at the higher walls of the building's gable ends.

The second potential structural deficiency, which we discovered, is the lack of bottom flange bracing of the structural steel beams of the roof. The beams are articulated, or extend over the interior columns. This beam configuration generates a compressive stress in the beams bottom flange near the column when the beam is subjected to downward roof loads. Likewise, when wind uplift is applied to the building's roof, the bottom flange of the beams– between columns–experiences compressive stresses. It is necessary that the bottom flanges of beams in compression be braced. Without these braces there is a possibility that the bottom flanges of these beams would buckle under the compressive stresses experienced. The required spacing of the bracing would vary, depending upon the size of the beam and the load imposed. Our firm typically specifies that a 2x2x1/4 angle be installed at each joist, from the beam bottom chord to the top chord of the joist. I would assume that bracing similar to this would be necessary for several beams of this project.

In summary, our cursory structural analysis revealed no deficiencies, except for the lack of concrete masonry unit vertical wall reinforcing and the lack of bottom flange bracing of the structural steel beams of the roof. The loads used in the preparation of the structural construction documents appear to be appropriate, and the structural member sizes specified are adequate to support the imposed loads.



Existing roof structure

Existing rated wall

D. Conclusions

Our site visit and review of the architectural and structural drawings of the building's original construction documents have revealed no general deficiencies or matters of concern, except for the two potential structural deficiencies described above, related to the concrete masonry unit wall reinforcing and steel beam bottom flange bracing. These deficiencies may not be apparent in the building's performance unless the building is subjected to a hurricane force design wind pressure.

With the exception of these two items, the building's structural design appears to be in compliance with current codes and the structural elements of the building appear to be in good condition.

This evaluation has been based on a cursory visual inspection with minimal engineering calculations. A detailed structural analysis and visual investigation of each structural member could not be performed within the scope of this project, and without disruption of the operations of current users of this building. However, an attempt has been made to identify any general problems and document matters of structural concern that warrant further investigation and evaluation.

Building Exterior

- The glass and window frame system is in good condition.
- The operable windows are all functional; however, some require minor adjustments for smoother operation.
- All entry doors and hardware are functional.
- All hollow metal doors show signs of use. All hollow metal doors and frames should be sanded and repainted.
- All aluminum storefront doors and frames are functional and in good condition.
- The exterior walls are covered with an EIFS (exterior insulation and finish system). Overall this system is in good condition. There are a number of areas at ground level that have been penetrated with mowing equipment, which should be patched and repaired.

Hospital building exterior

- The roof is an approximately 2/12 pitch. The roof is a modified bitumen with a gutter system tied into subsurface drainage. The roof is in very good condition with no sign of leaks. (See Exhibit "A", roofing contractor's report.)

Hospital building exterior

Building Interior

1) Carpet
   a) The carpet in some areas appears to be relatively new, and may only require steam cleaning.
   b) There are several areas of old/worn carpet that should be replaced.

2) Doors
   a) All interior doors and hardware are functional.
   b) All interior doors are plastic laminate, show signs of use and need repair.

Corridor

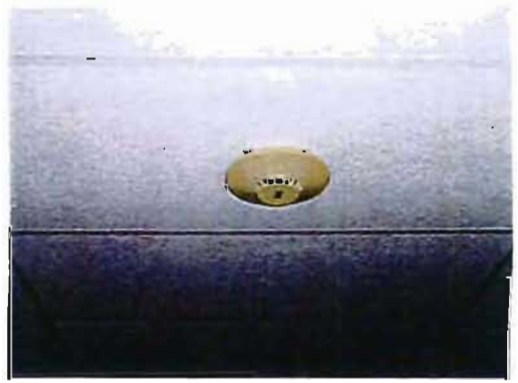
3) Walls
   a) All interior walls are in good condition with only minor patchwork required before painting.
   b) Painting in many areas shows sign of wear. The building should be painted throughout.
   c) In the administration area, the walls are metal stud with drywall or metal stud with paneling. The paneling is dark in color, which decreases the lighting level. Paneling should be replaced upon renovation of the building.
   d) The scope of our study did not include research on evidence of lead.

Nurses' Station

4) Ceilings and Floors
   a) The ceiling is a 2 x 4, lay-in acoustical grid system. All ceiling tiles are in place.
   b) Ceiling grid and tiles are old and discolored throughout the building. Ceiling tiles have been replaced in many areas and do not match. Ceiling grid and tile should be replaced upon renovation of the building.
   c) In the kitchen area, the floor is quarry tile and is in good condition. The ceiling is a plastered ceiling with several water-damaged areas that have been patched. The kitchen ceiling should be removed and replaced with an acoustical grid system.
   d) The receiving room area is in very good condition. The floors are exposed concrete. The ceiling is exposed. One overhead roll-up door is in place; however, the opening has been closed with masonry. This area could be re-opened for deliveries.
   e) The scope of our study did not include research on evidence of asbestos. (See Exhibit "B", Limited Asbestos Survey provided by Owner.)

Kitchen floor

Water stains on ceiling



Smoke detector

Kitchen

Accessibility

Based on the current Florida Accessibility Code, buildings, structures or facilities that were existing, under construction or under contract for construction prior to the prevailing date of January 26, 1992, are exempt from compliance with this Code. The Flagler Memorial Hospital Building was constructed in the late 1970"s and, therefore, exempt. Any future additions and/or alterations should be evaluated individually to determine the extent of accessibility required to meet the current Code. In general, any portion of the building that is altered would be required to meet the current Florida Accessibility Code.

Mechanical & Electrical

The Mechanical & Electrical Analysis was conducted by McVeigh & Mangum Engineering, Inc., consulting firm to Gibraltar Design. Their report is as follows:

On Wednesday, March 20, 2002, representatives of our firm performed a cursory inspection of the mechanical, plumbing and electrical systems serving the existing facility. Our observations and findings are outlined in the following paragraphs. Included is information obtained through review of original construction documents as well as obtained verbally from mechanics responsible for maintenance of the existing systems. This firm is not certified in the investigation of hazardous materials and any reference to such materials (asbestos, polychorinatedbiphenyl, etc.) is made to prompt further investigation by others as may be necessary.

Mechanical equipment

I. MECHANICAL

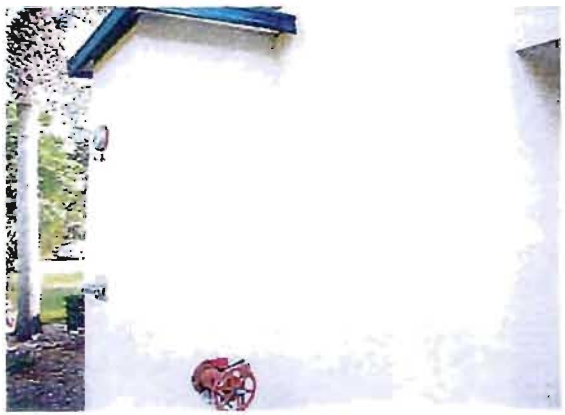
A. General Mechanical System Description

The common areas and administrative areas of the existing hospital facility are mechanically cooled by two air-cooled water chillers piped in parallel and located on the ground outside the central plant. From the manufacturer's nameplate data, each chiller has an approximate capacity of 100 tons. Chilled water from the two chillers is circulated by way of a single, constant-speed chilled water pump to several central station air handling units located throughout the building. Each air-handling unit is equipped with a three-way chilled water valve with bypass. Supply air is distributed from the central station air handling units through externally insulated sheet metal ductwork to ceiling and sidewall air terminal devices. The patient rooms are heated and cooled by packaged terminal air conditioners with electric resistance heat located in the exterior walls. However, the packaged terminal units have been removed and a packaged rooftop direct-expansion cooling unit has been added to serve Wing C. According to hospital facilities maintenance staff, all packaged terminal air conditioners were replaced approximately one year ago.

Mechanical equipment

Rooftop exhaust fans

The common areas and administrative areas of the existing facility are heated by two gas-fired hot water boilers located in the central plant. Hot water is circulated from the two boilers by way of a single, constant-speed hot water pump to central station air handling units located throughout the building. Each air-handling unit is equipped with a three-way hot water valve with bypass.



Shut-off valve

B. Field Observations

Air-cooled chillers: One chiller appears to be the original equipment installed when the building was initially constructed. The other chiller appears to have been installed five or six years ago. Both chillers were running at the time of our inspection and appeared to be operating properly. The newer chiller is a McQuay Model ALR080E (Serial #57B8128101) manufactured in 1997 and appears to be in good condition. The other chiller is a McQuay Model ALR085AD (Serial #3HK00420 05) and appears to be in fair condition with some minor deterioration.

Gas-fired hot water boilers: Each boiler is a Cleaver-Brooks Model M4W-2500 (Serial #G-J2044-M4 & #C-12043-M4) with 2,500,000 Btu/hr input rating and 2,000,000 Btu/hr output rating. Both manufactured in 1978, the boilers appear to be the original equipment installed when the building was initially constructed and appear to be in good condition. Propane gas is supplied to the boilers from two above-ground tanks located adjacent to the existing Shop building. Hot water from the boilers is piped to a Patterson-Kelley hot water tank (Serial #249368), which has recently been replaced and appears in good condition.

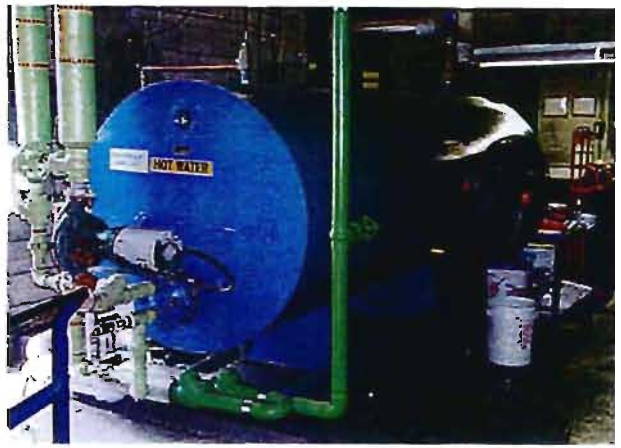
Chilled water pump: The constant-speed chilled water pump is manufactured by Taco, but the nameplate is illegible. The pump shows signs of severe deterioration and appears in poor condition.

Hot water pump: The 7.5 hp, constant-speed hot water pump is a Taco Model BB3010 (Serial #C5B2F2TLO) manufactured in 1980 and appears to be in fair condition.

Central station air handling units: The central station air handling units are McQuay Series LSL and appear to be the original equipment installed when the building was initially constructed. Nearly all of the air handling unit coils and condensate drain pans show signs of severe deterioration and appear in poor condition. Many of the air handling units have inadequate traps in the condensate drain lines resulting in inadequate condensate drainage while the units are running. According to the facilities maintenance staff, the air handling unit coils are scheduled to be cleaned in the near future.

Chilled water and hot water piping systems: The portions of the chilled water and hot water piping systems and associated insulation, which were observed during our cursory investigations, appeared to be in good condition.

Air distribution systems: The portions of the existing sheet metal ductwork observed during our cursory investigations appeared to be in fair to good condition. Portions of the ductwork and connected air terminals appeared somewhat dirty and need to be professionally cleaned.



Hot water tank

C. Conclusions & Recommendations

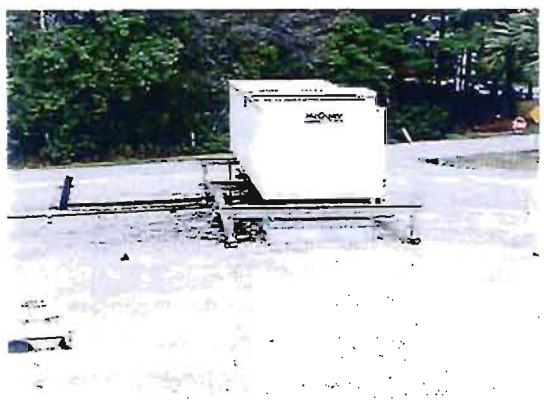
As indoor air quality becomes an increasingly significant issue, more attention should be given to the condition and maintenance of air handling equipment. The existing air handling unit coils and drain pans are extremely dirty, rusted and corroded. Also, the inadequate condensate pan drainage mentioned above could result in the growth of bacteria, mold and mildew inside the unit casings. These volatile organic compounds (VOC's) could then migrate into the supply airstreams and be transmitted to the building occupants. The existing central station air handling units are approximately 22 years old, in poor condition and are due to be replaced. New double-walled, central station air handling units with sloped, stainless steel drain pans

Mechanical, continued

should be considered. New air handling units should utilize 2" pleated pre-filters and 4"-6" cartridge filters similar to those used in the existing units.

As stated above, the existing chilled water pump appears to be original equipment. The pump appears in poor condition and is due to be replaced.

In summary, the existing mechanical systems appear to be in good condition, with the few exceptions mentioned above. According to the facilities maintenance staff, a comprehensive equipment maintenance program has been implemented over the last six months. It is highly recommended that this maintenance program be continued.



Rooftop AHU

II. ELECTRICAL

A. Power Distribution

The hospital's utility power is served from a Florida Power & Light 277/480V, 3-phase, 4-wire, 700-kVA transformer. According to Florida Power & Light, the past maximum power demand for the facility is approximately 480 kW or approximately 600 kVA. Electrical service is brought into a 480V, 4000A main switchboard. The maximum 600 kVA demand translates to 722 amps, thus the switchboard has seen less than 20% of it maximum capability. From the main service entrance equipment, distribution is extended throughout via electrical closets in each wing/area.

Emergency power is provided for the hospital by way of a 300 kW, diesel-driven engine-generator set manufactured by Onan. The 2000 gallon concrete encased "Convault" fuel tank will provide a minimum of 90 hours run time, assuming the system is fully loaded. Emergency power is split into 4 branches: life safety, critical equipment and HVAC. This is typical of hospital design requirements and affords some protection against a fault in one branch causing all emergency power to fail. The generator has been maintained fairly well under a typical service contract and has been

Electrical, continued

exercised regularly. Accordingly, the system should continue to provide adequate service with normal routine maintenance.

Generator

B. Lighting

Lighting for the hospital is typically provided by fluorescent 2 x 4 troffers. Lamping is energy-saving T12 (34W) lamps driven by energy – saving magnetic ballasts. Normal maintenance on an "as-needed" basis has been provided for the lighting systems. The author is not an expert in ballast manufacturing, but the late 1970s original construction date indicates there should be no ballasts containing olychorinatedbiphenyl (PCBs). A more thorough investigation of this issue may be warranted.

The life safety emergency system branch distribution serves exit and emergency egress lighting. Exit lights are typically white with green letters and provided with long-life incandescent lamps. There is a program in place to replace these lights with new L.E.D. lamped exit lights. Selected fluorescent light fixtures along paths of egress provide the necessary emergency illumination. The critical brand emergency system also serves other selected lights (in patient rooms and other non-egress areas). This critical lighting is typically controlled in local switches whereas life safety lighting is not switched and is always on.

C. Special Systems

The fire alarm system is served by a Simplex Time Recorder Company (currently owned by Tyco) control panel believed to be installed under original construction. Smoke detection is provided throughout the facility (though no smoke or heat detectors were observed in the kitchen). Only one wing (TCU or "C" Wing) is provided with full fire sprinkler protection. Other selected areas such as storage closets are provided with fire sprinkler protection. Alarm annunciation is sounded by a chime system. Though this system appears to be serviceable, its age and arrangement make it a likely system for upgrade/renovation by a new owner.

Electrical, continued

Telephone service is brought in by (3) 2" conduits to a main telephone room, and then distributed to sub-closets located in each wing. Obviously service has been adequate for the hospital's needs to date. Any new owner would have to review the system in place against new requirements. Similarly, the hospital is provided with a limited security system that is monitored in the main telephone. This system may not be adequate for a new owner's demands, especially in light of 9/11.

D. Conclusions & Recommendations

In summary, the electrical systems appear in good condition at this time and we see no reason they shouldn't continue to be serviceable. Service size is more than adequate for new office loading. The original construction is neat and workmanship like and has been well maintained. Part of the maintenance program has been to thermo-scan all distribution gear, looking for any hidden evidence of heat degradation. We've been told that the very few problems detected have been remedied. Generally, light fixtures are in acceptable condition with scattered minor blemishes and discoloration of lenses as would be expected of a facility of this age. Any new owner would have to perform a detailed survey of existing telephone and security systems for evaluation against new needs. Fire alarm system renovation would be "optional" but, depending on the extent of interior renovations and future needs, may be prudent.

Architectural Evaluation of Memorial Hospital

The chart on the following page provides options of renovation from simply painting the walls and moving in to complete renovation. With the given size and layout of the existing hospital, the space would not function very efficiently.

If 50 percent of the area were remodeled, your efficiency would be greatly improved. The most effective solution to meet your needs in the existing structure would be to demo all non-load bearing walls and design the interior space to your specifications. The only solution that would be more efficient is to design a new building.

Memorial Hospital Evaluation
Estimated Construction Costs

OPTION #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST	REMARKS
1	Patch & paint existing walls.	51,485	SF	$1.35	**$69,505**	Includes $.25 s.f. for wall patch/repair.
2	Demo 50% of interior walls.	3,268	LF	$7.74	$25,294	
	Patch & paint existing walls.	25,743	SF	$1.35	$34,752	Includes $.25 s.f. for wall patch/repair.
	Replace interior demo.	25,743	SF	$69.65	$1,793,000	Includes basic cabinetry for offices.
	Demo all flooring.	5,721	SY	$1.01	$5,778	
	Total for Option #2				**$1,858,824**	
3	Demo 100% interior.	6,536	LF	$7.74	$50,589	
	Replace interior.	51,485	SF	$71.00	$3,655,435	Includes basic cabinetry for offices.
	Total for Option #3				**$3,706,024**	
Optional Costs:						
	Replace exterior stucco.	24,290	SF	$4.25	$103,233	Includes minimum wall repair.
	Replace air handlers per recommendations.	1	LS	$46,883.00	$46,883	Per fan coil schedule.
	Price to resurface/restripe parking.	3000	SY	$6.78	$18,300	
	Total demo of existing building.	51,485	SF	$5.05	$259,999	Includes dumpster.
	Replace existing window & doors.	1		$54,915.00	$54,915	Includes minimum wall repair.
General Notes:						
	Air handler pricing assumes connection points are reusable.					
	Total demo of existing building assumes easy access to building without occupancy.					
	No asbestos, lead paint, or other hazardous materials figured in demo pricing.					

C. Options and Recommendations

Comparison of Options:

There are advantages and disadvantages to the various options. Gibraltar Design has identified four areas of comparison that will provide relevant focus and assist the County Commissioners to determine which option is the best for Flagler County. The points of comparison are:

1. The **initial costs** associated with the purchase of property, design and construction of the needed space.
2. The **ability to expand** and meet future space requirements for the County.
3. **Parking** is a major issue; options vary greatly in their impact on parking.
4. **Public acceptance of the location and facility** cannot be overlooked. Public acceptance will vary greatly between the various options.

Estimated Property and Construction Costs:

Option #1, The Justice Lane (Sheriff's Operation Center/County Inmate Facility parcel), is owned by Flagler County. The property cost would be that associated with determining the uplands available to construct a 46,000 square foot single-story administration building. A wetland delineation and agency review would be required. This study did not address wetland delineation, soil borings and ecological.

Total Cost = $4,600,000

Option #2, The Bunnell Wastewater Treatment Plant parcel, is owned by the City of Bunnell. This site does not have the sufficient vacant property available for development.

Total Cost = N/A

Option #3 assumes (1) the purchase of the First Baptist Church for $900,000 asking price or best-negotiated price, that all existing buildings on this property are demolished; (2) use of the Flagler County Parking Lot property; (3) purchase of Dr. John Canakaris' multiple parcel site for $400,000 (vacant property with frontage on SR-100) and $500,000 (vacant building and property corner of Bracher Street and Court Street) for these asking or best negotiated prices; and (4) construction of a new 46,000 square foot single-story administration building.

Total Cost = $6,451,000

Option #4, Flagler County Annex Property, owned by Flagler County. The remaining easterly property available after DOT planned purchase and determination of its retention ponds along with existing wetland would add approximately $1,100,000 to this site for construction of a new 46,000 square foot single-story building. A wetland delineation and agency review would be required.

Total Cost = $5,700,000

Option #5 assumes the purchase of CGII LLC Property for $527,500, its asking price or best-negotiated price. Additional analysis will be required to determine wetlands and additional fill requirements. This site meets the project land requirements; however, it is located approximately 1.25 miles from downtown Bunnell. This study did not address the cost of wetland impact or site preparation requirements; however the construction of the new 46,000 square foot single story building with adequate parking could be accommodated on this property. $100,000 estimated to provide city water and utilities to site for direct underground bore.

Total Cost: = $5,227,500

Option #6, Bunnell Water Treatment Plant, is owned by the City of Bunnell. This site does not have the sufficient vacant property available.

Total Cost = N/A

Option #7 assumes the purchase of George Lee's property for $342,000 assuming a 50% frontage at $80,000 per acre described as property 450 feet off SR-100 and 50% at $40,000 per acre non Hwy 100 frontage. The site meets the project land requirements; however, it is located approximately 1.5 miles from downtown Bunnell. This study did not identify specific wetland impacts; however, an upland site to accommodate the construction of the new 46,000 square foot single story building can be identified. This site is not platted, will need to be rezoned and changes made to the City's Comprehensive Land Use Plan. This property can be entered from east and west after the completion of Hwy 100 construction project.

Total Cost = $4,942,000

Option #8 assumes that the County does purchase the Memorial Hospital Bunnell site for $2,000,000 at its firm asking price. Also assumes that the County plans to remodel 100% of the interior section and replace interior with all new cabinetry, flooring, ceilings, replace exterior stucco, window and doors, resurface and restripe parking, and replace air conditions handlers per recommendations. The hospital site will become available after October 1, 2002. This site meets the land requirements and the existing building is 46,000 square feet with existing parking of 150 spaces.

Total Cost = $5,771,900

Comparison of Options

	Adequate Space	Estimated Property and Const. Cost	Expandability of Building by 50%	Parking	Potential for Wetland Mitigation Cost	Total
Option #1 Sheriff's Operation Center/ County Inmate Facility	10	6	10	10	1	37
Option #2 Bunnell Wastewater Treatment Plant	1	8	1	1	10	21
Option #3 First Baptist Church of Bunnell, Flagler County Parking Lot Property and Property of Dr. John Canakaris	10	1	10	10	10	41
Option #4 Existing Flagler County Courthouse Annex Property on SR 100	10	3	1	10	5	29
Option #5 CGIILLC Property	10	4	10	10	1	35
Option #6 Bunnell Water Treatment Plant	1	8	1	1	10	21
Option #7 Lee's Development	10	5	1	10	1	27
Option #8 Memorial Hospital	10	2	1	10	10	33

Key:

Adequate Space	1 too small	10 adequate space
Cost of acquisition	1 most expensive	8 least expensive
Expandability	1 no room to expand	10 space to expand building by 50%
Parking	1 no space for parking	10 adequate space with area to expand parking
Potential for Wetland Mitigation Cost	1 Greatest potential for cost	10 Least potential for cost

Ranking of Options

Rank	Options	Total
1	Option #3 First Baptist Church of Bunnell, Flagler County Parking Lot Property and Property of Dr. John Canakaris	41
2	Option #1 Sheriff's Operation Center/ County Inmate Facility	37
3	Option #5 CGIILLC Property	35
4	Option #8 Memorial Hospital	33
5	Option #4 Existing Flagler County Courthouse Annex Property on SR 100	29
6	Option #7 Lee's Development	27
7	Option #6 Bunnell Water Treatment Plant	21
8	Option #2 Bunnell Wastewater Treatment Plant	21

B·B·G CONTRACTING GROUP, INC.

10562 New Kings Road ♦ Jacksonville, Florida 32219
Telephone: (904) 766-5800 ♦ General Fax: (904) 766-1010 ♦ Estimating Dept. Fax (904) 766-8747

EXHIBIT "A"

June 4, 2002

Gibraltar Design
Towne Center #1 Office Building
75 West Towne Place
Suite #100
St. Augustine FL 32092

Attn: Rex Smith

Re: Flagler Hospital
Highway 100
Bunnell, FL

Dear Mr. Smith:

Upon your request, I conducted an on-site visit to the above referenced facility and inspected the roof. I found the roof to be in good condition. There were very few blisters and the gravel surfacing was well adhered. The base-flashing around the exhaust fans were tight and were showing very little sign of deterioration. I did observe some gravel stop stripping plies, sheet-metal coverplates and flashing around one air conditioning unit that was in need of some minor repairs. This work was minor in nature and could be repaired very easily. Overall, my visual inspection showed that this roof should give several more years of service if properly maintained.

Sincerely,

Judson B. Bennett
President

JBB/pm

LIMITED ACCESS SURVEY FOR ASBESTOS CONTAINING MATERIALS (ACM)
MEMORIAL HOSPITAL - FLAGLER
ROUTE 1 MOODY BOULEVARD
BUNNELL, FLORIDA

EXHIBIT "B"

Prepared for:

Mr. Frank Gidus
Hartman & Associates, Inc.
Suite 1000
Orlando, FL 32801

Prepared by:

PbO_3 Environmental Testing & Service Company
473 North Pine Meadow Drive
DeBary, Florida 32713
(407) 668-4545
#00A-09-214

Peter Swarr, PE No.44159
Licensed Asbestos Consultant No.63

TABLE OF CONTENTS

1.0) INTRODUCTION

Airborne asbestos contamination in a facility is a significant environmental problem. It has been determined and documented that inhalation of significant quantities of airborne asbestos fibers over an extended period of time can have serious health affects. In order to assess any potential health risks within a facility, it is necessary to conduct a survey of the facility to identify and locate any friable or non-friable asbestos-containing materials (ACM's) that may be located within it.

If and when ACM's are located within a facility, the ACM's must then be evaluated and assessed to determine whether any immediate health hazards are presented to the building occupants. It must be noted that the presence of asbestos does not necessarily mean that the health of the building occupants is endangered. As long as an ACM remains intact, in good condition and is not disturbed, damaged, or mutilated, exposure of asbestos fibers to the air is unlikely.

PbO₃ Environmental Testing & Services Co. (***PbO₃***) was contracted to perform a survey of the Memorial Hospital-Flagler, Bunnell, Florida.

PbO₃'s Asbestos Inspector(s), Mr. Kevin O'Malley and Mr. Joseph Frasher, conducted the inspection, which occurred September 5th through September 7th, 2000. The inspection identified areas where materials suspected of containing asbestos were located. Wherever such materials were found, data was collected regarding area quantities, conditions, and potential hazard concerns and deterioration factors. As necessary, samples of each type of material were taken in different locations to determine actual asbestos content.

All samples collected in this survey were analyzed for asbestos content. The analysis followed the Environmental Protection Agency's (EPA) recommended method of Polarized Light Microscopy (PLM), and the EPA-PLM protocol for the determination of asbestos fibers in bulk insulation materials.

2.0 REGULATORY REQUIREMENTS

Facility owners and operators are required to insure that employees or occupants of their facility are not exposed to unsafe levels of airborne asbestos. Allowable fiber levels are defined by the regulatory agencies and standards to be:

0.01 f/cc - Environmental Protection Agency (EPA) Clean Air Standard

-This standard was designed as a clearance criterion for asbestos removal projects in schools. This means that if a removal project occurs in a school, air testing must be conducted in the removal area after work is completed. The results of this sampling must be below this level in order to allow re-occupancy of this area.

0.10 f/cc - Occupational Safety and Health Administration (OSHA) Personal Exposure Level

-This is the OSHA permissible exposure limit (PEL) average over an 8-hour day. This means that this is the maximum level of asbestos that workers and/or employees can be exposed to without respirator protection and protective clothing. Should air sampling be at or near the PEL the employer will have to:

- Notify Workers
- Post Danger Signs
-Establish periodic air monitoring regulated areas, and decontamination facilities
-Provide respiratory protection and personnel protective clothing

For these reasons, it is important that the owner conduct a combination of a complete asbestos bulk survey and periodic air monitoring to determine what types of asbestos containing materials (ACM) are present in their building, what condition these materials are in and to what extent these materials have become airborne.

Although only schools are federally mandated to conduct asbestos surveys of their buildings, most private industry and governmental institutions are having asbestos surveys conducted to limit their liability with regards to ACM. Facility owner are also arranging for periodic air monitoring to be conducted in areas of the building where ACM exists and can not be immediately removed. These air results can be compared to current regulations as shown above to determine if the airborne concentrations are excessive.

3.0) HEALTH ASPECTS OF ASBESTOS

Asbestos is a generic term encompassing various fibrous mineral silicates, including chrysotile (hydrated magnesium silicate), amosite (iron magnesium silicate), crocidolite (sodium-iron silicate), tremolite (calcium-magnesium silicate), anthophyllite (another iron-magnesium silicate), and actinolite (calcium-magnesium-iron silicate).

The potential health hazards associated with exposure to asbestos results from inhalation of airborne fibers; small asbestos fibers can pass readily through the upper respiratory tract and be deposited in the terminal bronchioles of the lung. There they can produce a local irritation, which the body attempts to neutralize by initiating a tissue response. The resulting body response is encapsulation of the fibers and consequent formation of "asbestos nodules." Asbestos fibers are the causative agents in cases of asbestosis.

In its most severe form asbestosis can contribute to, and result in, death due to the inability of the body to obtain oxygen because of the heart's ability to pump blood through scarred lungs. Exposure to airborne asbestos fibers has also been associated with bronchogenic carcinoma (a malignancy of the interior of the lung), mesothelioma (a diffuse malignancy of the lining of the chest cavity or abdomen), and cancer of the stomach, colon, and rectum. Cigarette smoking can enhance the incidence of bronchogenic carcinoma.

A NIOSH/OSHA committee concluded that "evaluation of all available human data provides no evidence for a threshold or for a safe level of asbestos exposure." The committee goes on to recommend "that, to the extent uses of asbestos cannot be eliminated or less toxic materials substituted for asbestos, worker exposure to asbestos must be controlled to the maximum extent possible."

In order to protect workers from such occupational hazards, OSHA has established a permissible exposure limit of 0.1 fibers (longer than 5 micrometers) per cubic centimeter of air (fibers/cc) with an 8-hour, time-weighted average (TWA) concentration limit.

4.0) COLLECTION OF DATA AND SURVEY OF FACILITY

All sample collection, analysis, and interpretation were completed in accordance with all federal, state, and local regulations affecting these procedures. The sampling and analytical techniques used during the survey are described below:

4.1) SAMPLING PROTOCOL

The Building and areas included within this contract were accessed and visually inspected for the presence of any ACM. This inspection included all electrical, mechanical and fireproofing systems and the materials thereof.

4.2) SITE INSPECTION

PbO3's Building Inspectors, Mr. Kevin O'Malley and Joseph Frasher, inspected the facility for ACM's. The site inspection involved three steps: (1) reviewing available blueprints, (2) arranging physical access and (3) conducting the actual inspection.

Inspection of available blueprints, building specifications, previous asbestos surveys, or floors plans to determine known or likely locations of asbestos. Copies of reproducible floor plans (if available) were made in order to mark the sample locations of suspected ACM's.

Arrangements for physical access. As necessary, arrangements were made to obtain keys, ladders, and access sites. If possible, time periods of low activity were selected to minimize interference with building users.

Initial Inspection. Mr. O'Malley and Mr. Frasher inspected the facility, according to a predetermined search scheme and prepared a list of potential sampling sites. Along with this, pertinent data such as material condition, location, friability, quantity and factors used to determine exposure were gathered. Assessments of all friable ACMs were made.

4.3 SAMPLE SITE SELECTION

Potential sampling sites were selected by their ability to characterize the building's asbestos content and by their estimated exposure potential. Large surfaces with high exposure potential were frequently sampled more than once. This was done to allow for the possibility that the surface, appearing homogeneous, is in fact composed of more than one construction material.

4.4) SEARCH PATTERN

In an effort to determine a pattern, several steps were taken. The ***PbO3*** Building Inspector relied on his own judgement as to whether more than one pipe or duct system supplied the site. When there was more than one system, the boundaries of those systems were inspected for changes in construction material.

In each room or area that was addressed, hidden locations were surveyed where possible. These included such locations as above suspended ceilings, crawlspaces and underground pipelines.

4.5 SAMPLE TYPES AND CONCERNS

Although asbestos is used for over 2000 commercial applications, only about ten of these forms are truly common. With these forms, a high degree of certainty can be obtained with a visual inspection. Other potential ACM's were selected for sampling based on the application for which they were used. These surfaces were selected from the following types:

1. Spray-on materials applied to surfaces in public places or in air plenums generally take top precedence. Those of a highly friable nature were considered highly appropriate for sampling. These surfaces typically included spray-on ceilings and beams with spray-on insulation.

2. Debris and dust, if found in great amounts and considered to be possible ACM (generally if found near a known ACM in poor condition), were given high priority for sampling. This is because dust and debris is generally cleaned up in a manner that encourages the creation of airborne asbestos dust, the very thing that should be avoided.

3. Pipe insulation, the most common of the ACM's.

4. Pipe joints associated with ACM pipe insulation but may also be found on fiberglass insulated pipelines.

5. Closely associated with pipes is boiler and tank insulation. These have the highest likelihood of being ACM's.

6. Duct insulation, where found, was commonly sampled.

7. Ceiling tile or panels.

8. Floor tiles are commonly asbestos particularly 9" x 9"" tiles.

9. Transite Panels for heat protection.

10. Roofing Material

11. Expansion Materials between concrete

12. Flexible connectors between Metal Ducting

4.6 SAMPLE ACQUISITION

All samples were taken according to the following methodologies:

1. First wetting the surface of the material to prevent the release of fibers during the sampling procedure.

2. Extracting the sample with a corer or other appropriate tool, being careful to collect a representative sample of all layers encountered.

3. Placing the sample in a sealed impermeable container.

4. Labeling the sample container with appropriate information and logging the information into a field notebook.

5. Sealing the surface of the sampled area with duct tape or other appropriate means to prevent the release of fibers as a result of sampling techniques.

6. Delivering the sealed sample to the laboratory for analysis.

In addition to taking samples of the friable materials encountered during the survey, ***PbO₃'s*** inspector also assessed the overall condition, friability, accessibility, types of damage, and factors affecting potential fiber release of each material.

5.0 ANALYSIS PROTOCOL

All bulk samples were analyzed using Polarized Light Microscopy (PLM). This is the method of choice, which was recognized by the Environmental Protection Agency (EPA). PLM serves several functions. Its main purpose is to identify fibrous asbestos in bulk samples. The PLM method is also used to distinguish between the various types of asbestos within the sample.

When a bulk asbestos sample is received, several representative portions of the sample are removed and put into a labeled petri dish. The sample parts are extracted using forceps. These extracted fibers are then placed on a microscopy slide and mounted using a liquid of similar refractive indices.

After mounting, the fibers are identified using Polarized Light Microscopy (PLM), supplemented by dispersion staining. After fiber identification by PLM, estimation is made as to the percent composition of asbestos. The estimated percentages are based on size, number, shape, density of each of the components, and on comparison to a standard set of samples previously quantitated by the interim Research Triangle Institute (RTI) method.

PbO3 uses a laboratory, which participates in several quality assurance programs, including the EPA Bulk Sample Rounds. Bulk samples are sent to participating laboratories quarterly, for microscopic identification of asbestos content. The results of this Quality Assurance program are available for public review. The laboratory also, participates in the NIOSH-PAT Program for Asbestos Air Analysis. These samples are sent to participating laboratories quarterly as well. The samples are analyzed using Phase Contrast Microscopy and compared to results from other laboratories. All laboratories receive a "Proficient" or "Non-Proficient" rating, and the results are available for public review.

As of September 11, 2000 a QA/QC review of the analytical results (verifications) has not been completed for this project.

6.0 SURVEY LIMITATIONS AND PROBLEMS

Throughout the course of any asbestos survey, there are a number of problems and limitations that affect the quality of the final report. These limitations may be caused by access concerns, materials with conflicting analytical results, materials that can not be sampled, materials that can not be quantified and/or materials that were not surveyed due to recent renovations or instruction from the client.

6.1 INACCESSIBLE AREAS

There are certain spaces within a building that can not be accessed during the course of a normal survey without demolition activities. Those areas would include, but are not limited to:

- Pipe and pipe joint insulation and other potential ACBM behind and within walls; above and within plaster ceilings; below and within floors - that do not have access either through doors or by the raising of ceiling panels.
- Tunnels which are enclosed, very small or unsafe.
- Boiler Breeching and ducts that are enclosed with steel or other materials without access doors or panels.
- Inaccessible interior boiler insulation or gasket material.
- Floor tile located underneath carpeting, other floor tile or other materials that can not be destroyed or damaged.
- Materials located at a height not accessible by ladders or other means.
- Underground pipe lines.

As these areas are inaccessible and can not be surveyed without destroying building materials, ***PbO3*** did not survey these areas. If at some future point, access is gained to these areas for maintenance or other purposes, they should be inspected for ACM's.

<u>Inaccessible Areas within this project include but are not limited to:</u>

1. Pipe Chases Behind Walls, Ceilings, Basements
2. Tile under Rolled Flooring, Tile and/or Carpet
3. All Secured Rooms
4. Patient Occupied Rooms

6.2 MATERIALS WITH CONFLICTING ANALYTICAL RESULTS

Throughout the course of an asbestos inspection, samples are taken of materials that might possibly contain asbestos. The number of samples taken and the locations from which the samples are taken is largely dependent on the type and quantity of the materials.

Although the inspector constantly endeavors to place the materials into homogeneous groups, the analytical results often come back with conflicting results with some being positive and others being negative. When this occurs, the inspector will return to the area and attempt to take more samples of the material or define where the barrier between the positive material and negative material exists.

In some circumstances, it is impossible to determine a difference between the positive and negative materials with either building dates or physical appearance. When this dilemma occurs, the inspector must review the available data and make generalizations as to asbestos content. It is important that these materials be addressed on a case by case basis and be tested if they have been assumed to be positive.

Materials within the Project which have conflicting analytical results include but are not limited to:

1. NONE

6.3 MATERIALS THAT CAN NOT BE SAMPLED

In most asbestos survey projects, there are some materials that can not be sampled. These materials are either not able to be accessed (i.e. above plaster ceilings), would require significant damage to sample (i.e. roofing systems, fire doors) or are located behind, beneath or around other materials that are not to be disturbed (i.e. floor tile located beneath other floor tile or carpeting).

These materials that could not be sampled must be assumed to contain asbestos until they can be properly accessed and sampled. Once this follow up sampling has occurred, that facility should update the data regarding this material.

The materials within the project buildings that could not be sampled but must be assumed to be asbestos until tested otherwise include but are not limited to:

1. Roofing system
2. Multi-layer flooring

6.4 MATERIALS THAT WERE SAMPLED BUT NOT QUANTIFIED

During the course of this survey, there were materials, which ***PbO₃*** was able to sample but was not able to quantify. This occurred due to materials that were too extensive to quantify (i.e. mastics, glues, paints, etc.); materials that routinely do not contain asbestos (i.e. drywall, plaster, etc.) or materials that are not currently regulated (i.e. roofing, floor tile, etc.).

For the materials that were not quantified during the survey, the facility should follow the analytical results that are presented and treat each material accordingly. Should quantification be required at a future time, ***PbO₃*** will return to the site and quantify these materials as in the form of an Abatement Plan. All quantities in this survey are approximates and should not be used for abatement activities without field verification.

Sampled materials that were not quantified within the project include but are not limited to:

1. All Materials that were reported to be Non-Asbestos Containing
2. Duct Mastics
3. Flooring and most non-friable materials

6.5 STAIRWELLS & AREAS THAT COVER MORE THAN ONE FLOOR

Some areas are not simply categorized due to their locations. These materials usually encompass more than one floor or building within the facility. Given this, they are not easily grouped or sorted in the computerized program provided for this facility.

The facility must endeavor to acknowledge these materials and/or areas when determining which areas to address for removal, repair or encapsulation.

Materials encompassing a variety areas throughout the facility of within the project include but are not limited to:

1. Thermal System Insulation

2. Flooring

6.6 AREAS NOT SURVEYED (PER INSTRUCTIONS)

The survey for this project required ***PbO₃*** to survey all accessible areas; however, there were some areas, which were excluded due to recent renovation or instructions from the client not to survey these areas. These areas are not included in the hard copy of this report nor are they included within the computer program.

It is important to reiterate that ***PbO₃*** can not be held liable for asbestos containing materials that may be located with these areas as we were specifically instructed not to survey or include these areas within the survey.

Areas that were not surveyed within the project include but are not limited to:

1. Roofing System

6.7 AREAS WITH LIMITED ACCESS

There are some specific rooms and areas with the project, which could be initially accessed, but a full survey and sampling was not possible. This usually occurred in sensitive areas such as presidents' offices, accounting areas and personnel offices.

These areas have limited accuracy and all materials within these areas may not be properly identified. Each of these areas should be carefully reviewed and checked prior to renovation or removal activities.

Areas which could be accessed but could not be completely surveyed and addressed within the project buildings include but are not limited to:

1. They were a very large number of rooms that could not be accessed due to secured locks or patient occupied. It is assumed the rooms not sampled contained ACM identified in other areas accessed.

7.0 DATA COLLECTION FORM DESCRIPTION

The field inspection data collection sheets found in **Appendix I** contain information regarding the materials within the survey of each area. Each material sampled is listed by Sample ID Number, Sample Description and Sample Location. This allows ***PbO3*** to distinguish areas of the building where the same type of material may be found in different conditions or present different levels of concern. Every line of data pertains to one material within one room or functional area.

Appendix I provides the Data Collection Chain of Custody for the sampling conducted throughout the facility. Also, included in this appendix is the laboratory analysis report for all samples taken.

Appendix II provides a summary of all sample results.

Appendix III provides summary of positive sample results.

Appendix IV provides the building drawings (*if available*) indicating were each material sample was taken. These are general drawings and not drawn to scale. This will prove helpful when planning or scheduling renovation or repair projects.

8.0 BULK SAMPLE RESULTS FORM DESCRIPTION

Appendix II contains the results of the bulk samples taken during the survey.

9.0 FACILITY FINDINGS

Asbestos containing materials were found to be present in the sampled materials listed below.

Please see **Appendix III** for quantity, condition and fiber count.

1) ***Thermal System Insulation (TSI) Wrap-Non-Friable Asbestos- Boiler Room***

2) ***Duct Mastic (Black) -Non-Friable- Through-out***

10.0 SUMMARY, CONCLUSIONS and RECOMMENDATIONS

PbO_3 Environmental Testing & Service Co., Inc. was contracted by Hartman and Associates, Inc. to conduct an Asbestos Survey of the Memorial Hospital - Flagler. The property is located at Route 1, Moody Boulevard in Bunnell, Florida.

The Hospital is a (81) bed facility. The facility is mainly constructed of concrete and block with a peaked roof. The building was originally constructed in 1970 with no additions and minimal renovations.

PbO_3's Asbestos Inspector(s), conducted the inspection on September 5th through September 7th, 2000. The inspection identified areas where materials suspected of containing asbestos were located. Wherever such materials were found, data was collected regarding, conditions, and potential hazard concerns and deterioration factors. As necessary, samples of each type of material were taken in different locations (excluding the roofing system) to determine actual asbestos content.

All samples collected in this survey were analyzed for asbestos content. The analysis followed the Environmental Protection Agency's (EPA) recommended method of Polarized Light Microscopy (PLM), and the EPA-PLM protocol for the determination of asbestos fibers in bulk insulation materials. The samples were analyzed by a National Institute for Standards and Technology/National Voluntary Laboratory Accreditation Program (NIST/NVLAP) accredited laboratory.

There was a total of (18) bulk samples (excluding of all potential sub-samples) of suspect materials collected and (21) samples were analyzed by EPA 600/R-93/116 Method. Based upon our visual observations, bulk sampling of suspect materials and subsequent microscopic analysis, we have determined that regulated and non-regulated amounts of asbestos minerals were detected in (03) samples.

The following asbestos containing materials were identified in the building. (Reference-"Summary of Positive Asbestos Samples")

- ***Black Duct Mastic***
- ***TSI (Thermal System Insulation)- Non-Friable***

CONCLUSION:

This survey should be used to identify asbestos containing material and components prior to any planned demolition, renovation, and/or maintenance activities.

The asbestos containing materials (all non-friable) identified in this survey were observed to be *generally intact and in good condition.* (Reference - "Bulk Sample Analysis and Location Summary").

RECOMMENDATIONS:

- Operation and Maintenance Plan (for the management of asbestos in place) should be implemented to protect all occupants and maintenance/ service workers from the potential releases of asbestos. This plan should remain in effect until such time the asbestos containing material is abated. The Operation and Maintenance Plan shall be designed by a Florida Licensed Asbestos Consultant to comply with federal, state, and local regulatory requirements including but not limited to OSHA Standard (29CFR 1926.1101)
- Conduct Asbestos Awareness Training for all personnel working within areas of Asbestos containing Materials, in accordance with Asbestos Standard 29CFR 1926.1101.

APPENDIX I

APPENDIX I

DATA COLLECTION CHAIN OF CUSTODY SHEETS AND LABORATORY BULK ASBESTOS SAMPLE ANALYSIS REPORTS

CAROLINA ENVIRONMENTAL, INC.
102-H Commonwealth Court, Cary, NC 27511
Phone: (919) 481-1413 Fax: (919) 481-1442

LABORATORY REPORT
ASBESTOS BULK ANALYSIS

Client: **Pb03 Environmental Testing Service Co., Inc.**
473 N. Pine Meadow Drive
Debary , FL 32713

CEI Lab Code: A00-3491
Received: 09-08-00
Analyzed: 09-08-00
Analyst: Scott Minyard

Project: Memorial Hospital - Flagler

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS
FH-01	A42512	DRYWALL Off-white, Blue, Fibrous, Loosely Bound GYPSUM 75 % CELL 10 % BIND 5 % FBGL 5 % PAINT 5 %	ND
FH-02	A42513	ROOFDECK MATERIAL Tan, Beige, Non-fibrous, Loosely Bound BIND 75 % CELL <1 % MICA 25 %	ND
FH-03	A42514	CEILING TILE Grey, Off-white, Fibrous, Loosely Bound BIND 40 % CELL 25 % PAINT 5 % FBGL 15 % PERL 15 %	ND
FH-04	A42515	MASTIC Tan, Off-white, Fibrous, Bound MAST 90 % CELL 3 % PAINT 7 %	ND
FH-05	A42516	VINYL FLOORING AND MASTIC Beige, Off-white, Non-fibrous, Bound VINYL 90 % CELL <1 % BIND 5 % MAST 5 %	ND
FH-06	A42517	MASTIC Black, Fibrous, Bound CHRY 8 % MAST 92 % CELL <1 %	CHRY 8 %

CAROLINA ENVIRONMENTAL, INC.
102-H Commonwealth Court, Cary, NC 27511
Phone: 919-481-1413 Fax: 919-481-1442

Project: Memorial Hospital - Flagler

Lab Code: A00-3491

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION					% ASBESTOS
FH-07	A42518	WALL PENETRATION MASTIC					ND
		Red, Fibrous, Bound					
			MAST	85 %	SYNT	15 %	
FH-08	A42519	TSI WRAP					ND
		Tan, Silver, Fibrous, Loosely Bound					
			BIND	45 %	CELL	25 %	
			FOIL	20 %	FBGL	10 %	
FH-09	A42520A	FLOOR TILE					ND
		Off-white, Blue, Non-fibrous, Tightly Bound					
			VINYL	97 %	CELL	<1 %	
			MICA	3 %			
	A42520B	MASTIC					ND
		Yellow, Non-fibrous, Bound					
			MAST	100 %	CELL	<1 %	
FH-10	A42521	DUCT MASTIC					ND
		Off-white, Fibrous, Bound					
			MAST	80 %	SYNT	10 %	
					WOLL	10 %	
FH-11	A42522	DUCT MASTIC					ND
		Grey, Non-fibrous, Bound					
			MAST	100 %	CELL	<1 %	
FH-12	A42523	CEILING TILE					ND
		Grey, Off-white, Fibrous, Loosely Bound					
			BIND	45 %	CELL	25 %	
			PAINT	2 %	FBGL	15 %	
			PERL	13 %			
FH-13	A42524	VENT HOOD DUCT					ND
		Off-white, Fibrous, Loosely Bound					
			BIND	60 %	CELL	25 %	
					SYNT	15 %	

CAROLINA ENVIRONMENTAL, INC.
102-H Commonwealth Court, Cary, NC 27511
Phone: 919-481-1413 Fax: 919-481-1442

Project: Memorial Hospital - Flagler

Lab Code: A00-3491

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS
FH-14	A42525	DUCT MASTIC Off-white, Fibrous, Bound MAST 95 % CELL 5 %	ND
FH-15	A42526	DUCT MASTIC Black, Fibrous, Bound CHRY 8 % MAST 92 % CELL <1 %	CHRY 8 %
FH-16	A42527	DRYWALL AND JOINT COMPOUND Off-white, Beige, Fibrous, Loosely Bound GYPSUM 70 % CELL 15 % BIND 10 % PAINT 5 %	ND
FH-17	A42528	CEILING TILE Beige, Off-white, Fibrous, Loosely Bound BIND 43 % CELL 35 % PAINT 2 % FBGL 10 % PERL 10 %	ND
FH-18	A42529A	FLOOR TILE Beige, Tan, Non-fibrous, Tightly Bound VINYL 95 % CELL <1 % MICA 5 %	ND
	A42529B	MASTIC Yellow, Fibrous, Bound MAST 98 % CELL 2 %	ND
FH-20	A42530	WRAP Blue, Off-white, Fibrous, Bound CHRY 10 % BIND 70 % CELL <1 % PAINT 10 % PERL 10 %	CHRY 10 %

The following definitions apply to the abbreviations used in the ASBESTOS BULK ANALYSIS REPORT:

CHRY = Chrysotile	CELL = Cellulose	DEBR = Debris
AMOS = Amosite	FBGL = Fibrous Glass	BIND = Binder
CROC = Crocidolite	ORGN = Organics	SILI = Silicates
TREM = Tremolite	SYNT = Synthetics	GRAV = Gravel
ANTH = Anthophyllite	WOLL = Wollastonite	MAST = Mastic
ACTN = Actinolite	CERWL = Ceramic Wool	PLAS = Plaster
ND = None Detected	NTREM = Non-Asbestiform Tremolite	PERL = Perlite
NANTH = Non-Asbestiform Anthophyllite		RUBR = Rubber

CLIENT: Pb03 Environmental Testing Service Co., Inc.

PROJECT: Memorial Hospital - Flagler

CEI LAB CODE: A00-3491

Stereoscopic microscopy and polarized light microscopy coupled with dispersion staining is the analytical technique used for sample identification. The percentage of each component is visually estimated by volume. These results pertain only to the samples analyzed. The samples were analyzed as submitted by the client and may not be representative of the larger material in question. Unless notified in writing to return samples, Carolina Environmental, Inc. will discard all bulk samples after 30 days.

The EPA has no approved test method for the identification of asbestos in vinyl floor tiles. Many vinyl floor tiles have been manufactured using greater than 1% asbestos. Often the asbestos was milled to a fiber size below the detection limit of polarized light microscopy. Therefore, a "None Detected" (ND) reading on vinyl floor tile does not necessarily exclude the presence of asbestos. Transmission electron microscopy provides a more conclusive form of analysis for vinyl floor tiles.

It is certified by the signature below that Carolina Environmental, Inc. is accredited by the National Voluntary Accreditation Program (NVLAP) for the analysis of asbestos in bulk materials. The accredited test method is EPA / 600 / M4-82 / 020 for the analysis of asbestos in building materials. Procedures described in EPA / 600 / R-93 / 116 have been incorporated where applicable. Carolina Environmental, Inc.'s NVLAP accreditation number is #101768-0. This report is not to be used to claim product endorsement by NVLAP or any agency of the U. S. Government. This report and its contents are only valid when reproduced in full.

ANALYST _____

REVIEWED BY _____

Tianbao Bai, Ph.D.
Laboratory Director

CLIENT: Haetman & Assc.

PROJECT: Memorial Hospital - Flagler

SAMPLE DATE: 09/05/00

Flagler FH

Pb O

ENVIRONMENTAL TESTING & SERVICE

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SAMPLED MATERIAL

HA	Sample No.	Material/System ID	Location	Lab Results Asbestos Present
	FH-01	Drywall	Rm 102	
	02	roofdeck Material	hall by 102	
	03	2'X4' CT - drop - fisher	Rm 102	
	04	Base coat Mastic	" " bathroom	
	05	rolled flooring	" " bathroom	
	06	Duct Mastic - blk	hall by 101e	
	07	Wall Penetration Mastic - Red	hall by nurses station	
	08	TSI - 4" - wrap	hall by Rm 304	
	09	12"X12" FT	Rm 301	
	10	Duct Mastic - wht.	hall by 303	
	11	Duct Mastic - Grey metal	" "	
	12	2'X4' CT - drop - Fisher	hall by ICU	
	13	Vent hood Duct	Cafe	
	14	Duct Mastic - wht	hall by	
	15	" " - blk		
	16	Drywall/Mud System Composit	hall by ER	
	17	12"X12" FT.	X-Ray	
	18	2'X4' CT - drop - Fisher		