

Remaining Useful Life Determination for

Uncle Billy's Hilo Bay Hotel

Hilo, Hawaii

TMK: (3) 2-1-005: 033,034,035

Submitted By

SSFM INTERNATIONAL, INC.

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Final Report
June 2014

Statement of SSFM International, Inc.'s Quality Process

It is the policy of SSFM to have a consistent and systematic approach to the development and review of its reports and other project deliverables.

All projects and products of our service are subject to a quality process and in no case will the quality review be eliminated. The main purpose of this process is to assure:

- ❖ Clarity, completeness, coordination, and accuracy of documents.
- ❖ That the project, study or investigation meets the Client's objectives.
- ❖ That the requirements of our Agreement with the Client have been met, and the Client has received the value of the fee to be paid.

The Preparation of This Report Was The
Responsibility of and Completed By:


signature

6/10/2014
date

The Quality Review of This Report Was The
Responsibility of and Completed By:


signature

6/12/2014
date

I. Scope of Work

The scope of work is to estimate the Remaining Useful Life (RUL) of the Building Facilities and Physical Plant for Uncle Billy's Hilo Bay Hotel. This report is intended to be used as part of decision making on the future utilization of this property.

The Study was based on the examination of the property through meetings, interviews and on-site inspections by a team of experienced and knowledgeable professionals.

Location and Vicinity Maps, along with aerial views of the property are provided in Appendix A.



Uncle Billy's Hilo Bay Hotel located at 87 Banyan Drive, Hilo, Hawai'i.

II. Existing Conditions

This Property is currently being used as a Hotel. There are five (5) buildings and wings to include:

- 1 Hotel wing identified as the Kitchen Wing
- 1 Hotel wing identified as the Main Wing
- 1 added Hotel wing identified as the Shop Wing



- The Lobby/Office area
- The Restaurant

The current lease will expire on March 14, 2015. The future use of this property and potential terms and conditions for lease renegotiations will be determined as part of the process with the Hawaii State Department of Land and Natural Resources.

BACKGROUND INFORMATION:

- Name of Property: UNCLE BILLY'S HILO BAY HOTEL
- Address: 87 Banyan Drive, Hilo, HI 96720
- TMK of Property: 3-2-1-005:033, 034, 035
- Lease Agreement Info: No. 3265, 3266, 3267
 - o Lessee: HILO BAY HOTEL, INC.
 - o Duration: Expires on March 14, 2015
- General Description of Property:
 - o Number of Buildings: Five (5) Buildings. 145 Hotel Rooms.
 - o Type of Construction: Cast in Place Concrete, Concrete Masonry, Wood
 - o Year Constructed: 1966 - 1970
- Grounds Information:
 - o Pavement & Parking: Asphaltic Concrete
 - o Walkways: Concrete & Asphaltic Concrete
 - o Miscellaneous: Swimming Pool & Grounds Areas
- Utility Type & Construction:
 - o Electrical: Typical Pre-Current Building Code; In need of upgrading
 - o Plumbing: Cast Iron & Copper
 - o Air Conditioning: None
- Miscellaneous:
 - o Elevators: One (1) – located in the Main Wing.
 - o Swimming Pool – located at ground level between the Kitchen and Main Wings.

III. Site Visit

On March 4, 2014, a site visit was performed by a civil engineer, a structural engineer, a mechanical engineer, an electrical engineer and Mr. Aaron Whiting, Assistant Manager, to assess the general condition of the buildings and physical plant components of the Hilo Bay Hotel.

An interview was first conducted with Mr. Whiting to discuss the history of the property improvements, as well as to gain insight on recent repairs and known issues. After the interview, the site visit and evaluation inspection were performed during which the major building and physical plant components were evaluated. A follow up site visit was performed on March 8, 2014.

The condition of the major components observed is documented in Appendix B.

IV. Discussion

The structural, electrical and water heating elements are the most important factors in determining the RUL. The condition of major equipment related to these systems, such as large capacity water heaters, transformers, electrical service components, etc. are also considered, but have less of an impact since they can be replaced with less disruption to the use of the building. Items such as furnishings are not considered to impact the RUL. Isolated conditions, including but not limited to the fire exit stairway, continuing as needed repair of balcony railings and spalling concrete at the Kitchen Wing and on the elevator tower, may require repair or replacement to achieve the RUL, but this can be achieved without significantly impacting the current operations and usage of the facility.

The primary objective was to inspect and examine the elements of the building structure and physical plant, including the grounds, which are controlling elements in determining the RUL in terms of a range of years.

Significant Findings are itemized below (See Appendix B for Element Numbers):

- Element No. G 1.a – The Ground to the West of the Kitchen Wing has risen due to trees planted along that Western face of the building. Walkways are showing signs of significant deformation due to the tree roots.
- Element No. S 5.a – Roof framing over the Shop & Lobby Wings is sagging.
- Element No. S 6.a – Fire escape stairways were observed to need significant repair and maintenance.
- Element No. E 1 – Electrical system, wiring & breakers are out dated. Continued use will require the upgrade of this system to meet current codes.
- Element No. U 2.a – Boiler system consists of 7 separate water heaters. Remaining useful life for this would be 3-5 years. Although not a necessary element to RUL, replacement of this element would be required with continued use.

In addition, we note the items disclosed as part of the Pre-Inspection Meeting w/ the Lessee and our own visual inspection.

- No noticeable erosion or drainage-flooding has occurred.
- Parking available is limited to approximately 50 stalls and is not adequate for this facility. However, street parking is often available.
- There is evidence of concrete spalling in various locations including floor slabs, walls, columns and beams. None were considered serious but should be repaired with continued use.
- In general, the quality of cast-in-place concrete at the time of construction does not appear to be of the material quality that meets today's standards. There appears to be aggregate/cement separation and deterioration.
- Termite damage was noted in various locations, none of which appear to be serious deficiencies. One timber column in the Lobby electrical room will need repair with continued use. An in depth termite damage survey is recommended should the current use continue.

- Plumbing has been operational with no significant problems aside from normal preventative and repair maintenance.
- Electrical source by HELCO is satisfactory.
- Water and Wastewater by the County of Hawaii have performed satisfactorily with no significant disruptions.
- Wastewater Internal Disposal System – Property has one (1) lift station which operates to move sewer waste from the property into the County of Hawaii Sewer system. This lift station has been routinely maintained in accordance with Department of Health standards.
- ADA requirements were met during an evaluation approximately 10 years ago. Lessee believes they are in compliance with the exception of the pending installation of the pool lift. Continued use would require re-assessment of this element.
- One (1) Elevator is located in the Main Wing and is the only elevator in this facility. Elevator in satisfactory condition and operable.

V. Conclusion

Based on the documentation available, meeting with the Lessee and the Site Evaluation/Inspection performed on March 4, 2014, the Remaining Useful Life (RUL) is determined to be **5 - 10 years** assuming the current usage is continued. This RUL is based on deficiencies noted on both structural and non-structural elements.

VI. Conditions and Limitations

The scope of work is limited to general visual observation of accessible major structural, architectural, mechanical, electrical, plumbing and sewer components of the facility in order to estimate remaining useful life of the facility. This Evaluation and Inspection was prepared based on examination of available records, interview meetings w/ the Lessee and visual on-site inspection of the Physical Plant & its operation.

This report does not address any furnishings or non-permanent equipment. We have not verified the structural integrity of all members to support present or code required gravity or lateral loads, or performed any testing of the various building components. We did not perform any testing or investigations to confirm the accuracy of any drawings, calculations or documentation provided for review as a part of this evaluation. It is beyond the scope of this report to determine what deficiencies would need to be remediated in order to bring the current facility up to code. This report does not address any other portions or aspects of the existing facility other than those areas mentioned, nor does it provide warranty, either expressed or implied, for any portion of the existing facility.

Remaining Useful Life is the duration for which the facilities will be useful to the business, not how long they will actually last. It is based on many factors and can change over time depending on factors such as improvements made to the property, economic changes and changes to laws. The remaining useful life estimates, assume basic maintenance and isolated critical repairs. The facilities may remain functional past these estimated spans, however, it is expected that widespread, more costly repairs and upgrades would begin to compound and it may no longer be feasible to operate at the status quo.

VII. Personal Background

HUGH Y. ONO, P.E.

Hugh Ono is a Civil Engineer with background in Construction, Construction Management, Engineering Management and Administration and Building & Grounds Maintenance Management.

RENEE ISHISAKA, P.E.

Renee Ishisaka is a Structural Engineer with over 5 years of experience in a wide variety of both design and construction projects. Projects have involved reinforced, prestressed and post-tensioned concrete; structural steel; masonry; and timber construction. Ms. Ishisaka has experience with the following types of projects: Hospitals, Department of Defense projects, airport facilities, commercial/office buildings, residential buildings, educational facilities, and hotels.

NIMR TAMIMI, P.E.

Nimr Y. Tamimi, P.E., LEED AP, is a Principal at Engineering Partners Inc. with 26 years of experience as a design mechanical engineer in Hawaii. Mr. Tamimi's experience relevant to this project include the design of new mechanical systems and renovations of existing systems for Hotels, Resorts, Multifamily residential, restaurants, swimming pools, domestic water heating systems, fuel gas distribution systems, and HVAC systems. Included as part of those projects are payback analysis, usable life analysis, due diligence, and trouble shooting.

CHRISTOPHER LOVETT, P.E.

Christopher Lovett, P.E., is a Principal at Engineering Partners Inc. with over 16 years of experience in the design, specification and construction of commercial electrical and telecommunications systems. Mr. Lovett's experience ranges from designing power and lighting distribution systems for both medium and low voltages and telecommunications infrastructure design. Projects include extensive Electrical Engineering designs for hotels/casinos, high-rise residential, hospital, educational facilities and commercial/office buildings. Mr. Lovett provides extensive experience in project management, construction administration, scheduling and cost estimating.

Appendix A

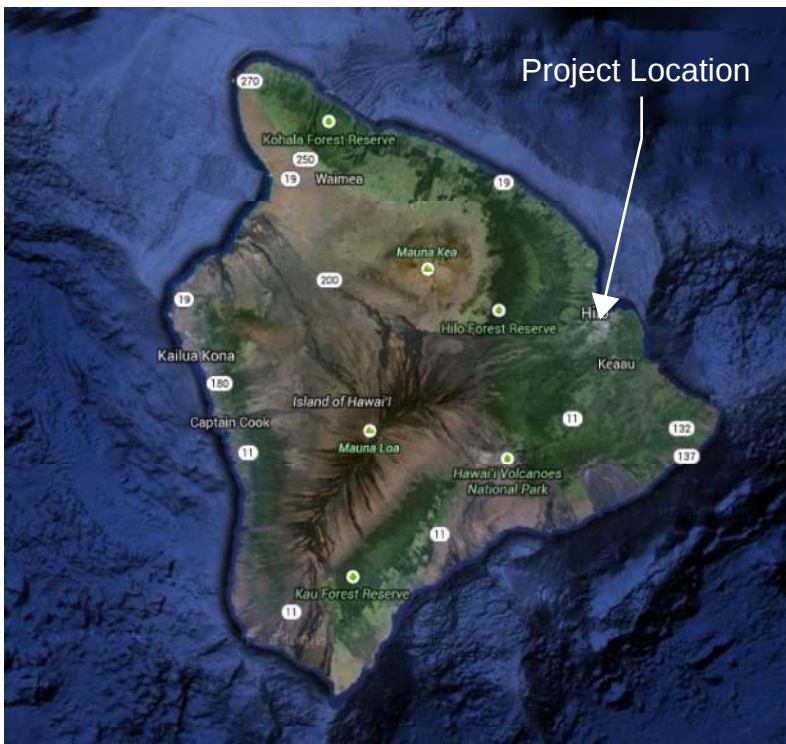


Figure 1: Location Map
(Images from Google Earth)
Not to Scale



Figure 2: Vicinity Map
(Images from Google Earth)
Not to Scale

Aerial Views of Uncle Billy's Hilo Bay Hotel



View from South



View from West



View from North



View from East

Appendix B

Property N/Ame: UNCLE BILLY'S HILO BAY HOTEL
Date: 1:30pm, Tuesday, March 4, 2014

EVALUATION SITE INSPECTION TEAM:
* SSFM INTERN/ATION/AL - Hugh Ono, P.E. & Renee Ishisaka, P.E.
* UNCLE BILLY'S HILO BAY HOTEL - Mr. Aaron Whiting
* ENGINEERING PARTNERS, INC. - Nimr Tamimi, P.E. & Chris Lovett, P.E.

Element Codes: G - Grounds; S - Structural, P - Plumbing, M-Mechanical, U - Utility, O - Other/Misc.

Element Code	Element	Location of Deficient Elements Noted:	Description of Finding:	RUL Weight: (1 High to 3 Low)	Estimated Age: If Available (Years)	Condition Rating: A to F	Estimated Useful Life (Years)	Remaining Useful Life (Years)	Photos Referenced:	Comments & Major Deficiencies Noted:
G1	Grounds - Settlement & Erosion	a. Kitchen Wing b. Lobby near Restrooms	a. Tree roots along West side lifting concrete walkway. b. Cracking through ceiling finishes in Lobby near restrooms.	2	43 -48	D B	15	4 15	a. DSCN0529 b. IMG_2528	a. In need of tree or tree root removal and reconstruction of Walkway. b. Cause of cracking cannot be determined due to inaccessibility of area.
G2	Grounds - Drainage & Runoff	BUILDING GROUNDS	NO KNOWN PROBLEMS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
G3	Grounds - Parking & Paved Areas	a. Parking Area	a. Parking with 50 or so stalls is inadequate for usage.	2	Unknown	C	15	10	a. DSCN0508, DSCN0519	N/A
S1	Structural - Foundation	BUILDING STRUCTURE	NO KNOWN PROBLEMS	1	43 -48	C	25	20	N/A	N/A
S2	Structural - Floor Slabs	BUILDING STRUCTURE	Isolated minor cracking observed. Many locations unable to be observed due to floor coverings and ceiling finishes.	1	43 -48	C	25	20	N/A	N/A
S3	Structural - Walls	a. Various locations at Kitchen and Main Wings	a. Spalling, delamination and cracks noted in various walls.	2	43 -48	D	25	15	a. DSCN0488, DSCN0490, DSCN0496, DSCN0501	a. Spall repair or rehab needed with continued use. Textured finish covers many of the concrete surfaces and is cracking and delaminating, making it difficult to assess the condition of the structural elements beneath it.
S4	Structural - Columns & Beams	a. Electrical Room b. Lobby c. Kitchen Wing and Main Wing	a. Termite Damage noted on 1 column; Cracking noted in beam at top of concrete column. b. Widespread evidence of termited damage noted. Does not appear significant, however, a closeup inspection was not possible due to location. c. Various cracking and spalling observed.	2 1 2	43 -48	C C C	20	15	a. DSCN0487, DSCN0486 b. IMG_2561	a. Further investigation into extent of cracking and repair is recommended for continued use. a, b. Detailed survey of termite damage is recommended with continued use. c. Repair and refinish. Textured finish covers many of the concrete surfaces and is cracking and delaminating, making it difficult to assess the condition of the structural elements beneath it.
S5	Structural - Roof Framing	a. Lobby, Restaurant & Shop Wood Frame b. Kitchen, Main, Shop Buildings	a. Sagging noted with some termite damage. Collision damage at porte cochere roof. b. Cast in Place Concrete - Inaccessible.	2 N/A	43	D N/A	10 25	7 N/A	a. DSCN0511, DSCN0512	a,b. Repair & Rehab recommended with continued use.
S6	Structural - Stairs	a. Fire Escape Stairway	a. In need of maintenance and rehab.	1	43 -48	F	15	3	a. DSCN0491	a. Repair or Replacement needed.
S7	Structural - Balconies	a, b. Various locations throughout property	a. Ends of hollow core planks are exposed in a few locations and minor cracking and spalling of the concrete parapets and balcony slabs was observed. b. Minor deterioration of some wooden balcony rails.	2	43-48	C	25	15	a. IMG_2552 b. IMG_2555	a. Recommend repairing of cracks and spalls and patching the exposed ends of the hollow core planks with continued use. b. Routine repair and replacement of wooden railing components should be expected with continued use.
P1	Plumbing - Distribution System	Not Accessible	a. Copper lines with routine repairs and maintenance.	2	40+	C	N/A	N/A	N/A	N/A
P2	Plumbing - Waste System	a. Wastewater Disposal System - Not accessible b. Lift Station located on the North East side of the Main Wing	a. Cast Iron & ABS - Satisfactory with only routine Repair and Maintenance. b. Lift Station operational with routine Maintenance per DOH Standards.	2 2	40+ 10+	C	N/A 15	N/A 15	N/A	N/A
E1	Electrical - Wiring & Distribution	BUILDING PHYSICAL PLANT	a. Adequate, but will need upgrade with continued use.	2	43 -48	D	10	5	N/A	a. Upgrade of System to meet current code requirements recommended for continued use.
E2	Electrical - Solar Systems	NONE NOTED	NOT APPLICABLE	N/A	N/A	N/A	N/A	N/A	N/A	N/A
M1	Mechanical - Air Conditioning Plant	NONE NOTED	a. No Central Air Conditioning System; rooms have individual window type air conditioning units.	N/A	N/A	N/A	N/A	N/A	N/A	N/A
M2	Mechanical - Air Conditioning Ducts	NO CENTRAL AIR CONDITIONING	NOT APPLICABLE	N/A	N/A	N/A	N/A	N/A	N/A	N/A
U1	Utility - Electrical Power Supply	a. Main Power Supply w/ Transformer in Lobby Area	a. Operational and in satisfactory condition.	1	N/A	C	15	12	a. DSCN0483, DSCN0484	
U2	Utility - Heater & Flue, Commercial Size	a. Seven (7) Gas Water Heaters in various locations throughout the Hotel	a. Operational	2	3-10	D	10	5	a. IMG_2547	a. Necessary to assess condition of heaters and appropriate repair or replacement.
U3	Utility - Water Supply System	a. Meter & Main	a. Provided by County of Hawaii DWS.	2	N/A	C	20	15	N/A	N/A
U4	Utility - Wastewater System	a. Connection to Sewer System b. On site Lift Station - See Item P2 above	a. Provided by County of Hawaii Wastewater Division. Clay Pipe from facility to sewer system connection clay pipe, reported by Lessee to be in good condition observed recently through camera observation. b. See item P2 above.	2	N/A	C	N/A 15	N/A 15	N/A	N/A
U5	Utility - Gas Supply System	GAS PROVIDED UP TO SERVICE METER by THE GAS COMPANY	Provided by the Gas Company. No Known Problems.	2	N/A	C	15	15	N/A	N/A
O1	ADA COMPLIANT	BUILDING PHYSICAL PLANT	a. Compliant in most areas, have not yet installed pool lift.	1	N/A	D	N/A	N/A	N/A	a. ADA improvements needed with continued use.
O2	Elevator System	a. One (1) located in the Main Wing off of the Lobby Area	a. Operational	2	40+	C	15	15	a. DSCN0522, DSCN0524	N/A
O3	Fire Protection	a. Fire Alarm System b. Sprinkler System	a. Operational b. NONE	2	Unknown	C	15	10	N/A	N/A
O4	Swimming Pool	a. Makai between the Kitchen Wing and the Main Wing	a. Good condition including pumps & filters.	2	40+	C	20	15	a. IMG_2546	N/A

Uncle Billy's Hilo Bay Hotel – Referenced Photos



Photo 1: DSCN0529 – Trees causing displacement of the ground floor of the Kitchen Wing



Photo 2: IMG_2528 – Cracking of ceiling finishes near the restrooms in the Lobby



Photo 3: DSCN0508– Parking Lot



Photo 4: DSCN0519– Aerial view of Parking Lot



Photo 5: DSCN04888 – Crack with delamination at wall in Kitchen Wing



Photo 6: DSCN0490 – Crack with delamination at wall in Kitchen Wing



Photo 7: DSCN0496 – Cracking and spalling near elevator room



Photo 8: DSCN0501 – Cracking at Exterior Balcony Wall



Photo 9: DSCN0487 – Termite damage in wood column in Electrical Room



Photo 10: DSCN0486 – Cracking in beam at top of column in Electrical Room



Photo 11: IMG_2561 – Termite damage in Lobby



Photo 12: DSCN0511 – Sagging at roof areas



Photo 13: DSCN0512 – Termite damage and sagging at Shop Wing



Photo 14: DSCN0491- Emergency Exit stairwell



Photo 15: IMG_2552 – Area with exposed hollow core plank edges



Photo 16: IMG_2555 – Deteriorating timber railing and balcony cracking



Photo 17: DSCN0483 – Electrical Room



Photo 18: DSCN0484 – Electrical Room



Photo 19: IMG_2547 – Gas Heater Enclosure



Photo 20: DSCN0522 – Elevator room



Photo 21: DSCN0524 – Elevator in Lobby



Photo 22: IMG_2546 – Swimming Pool