

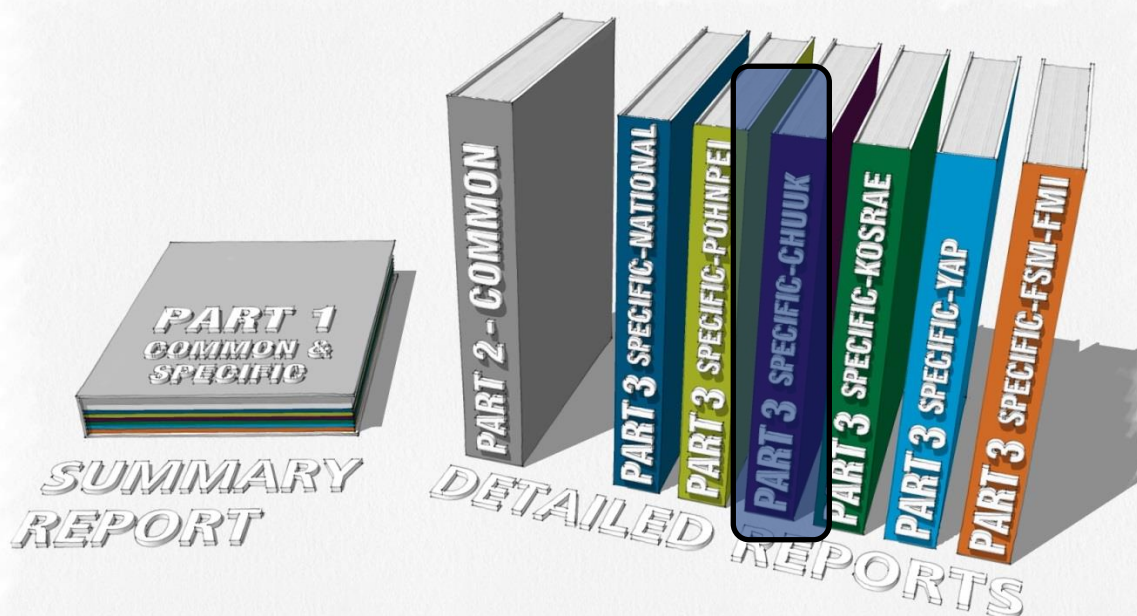
Report

College of Micronesia - FSM Space Utilization and Facilities Master Plan Study, Part 3 - Detailed Report for the Chuuk Campus

Prepared for the College of Micronesia - FSM

Prepared by Beca International Consultants Ltd (Beca)





28 February 2014



Revision History

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Document Acceptance

Action	Name	Signed	Date
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Reviewed by	Fraser Vickers Joe Briffa – Energy Audit Mark Wilson – Condition Assessment	  	28/02/2014
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on behalf of	Beca International Consultants Ltd		

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Contents

1	Chuuk Campus Development.....	1
1.1	Chuuk Campus 2013	1
1.3	5 year period – to 2018.....	7
1.4	10 year period – to 2023.....	10
1.5	Development Staging and Program – Implementation.....	11
2	Educational Component	12
2.1	Key Considerations.....	12
2.2	Space Utilisation	12
3	Spatial Review.....	15
3.1	Design Concept Plans	15
3.2	Focus Group Summary.....	17
3.3	Spatial Analysis	23
3.4	Accommodation Review	36
4	Condition Assessment.....	42
4.1	Chuuk Campus Building Condition Review	42
5	Energy Audit	52
5.1	Energy Efficiency Recommendations.....	52

Appendices

Appendix B

Building Condition Assessments

Appendix B

Building Condition Assessments

Appendix C

Indicative Asset Renewal and Maintenance Cost Plan

Appendix D

Energy Use Analysis

1 Chuuk Campus Development

1.1 Chuuk Campus 2013



The Chuuk campus is located on a 2.0 acre leased site close to the center of Weno and on the coastal edge of the island of Weno. A CRE research facility is included on the site.

The Fall 2013 Chuuk campus enrolment (headcount) is 319. The maximum number enrolled occurred in Fall 2004 at 690 with this figure not reached since then.

A headcount of 296 has been provided by the space utilization study as the projected headcount in 2018. This 5 year projection figure has been used as the basis for the design figure for assessing future facilities requirements.

No.	Building Description
A	Administration/Faculty Office
B	Classroom Building B
C	Classroom Building C

No.	Building Description
D	Campus Dean’s Office
E	Restrooms
F	CRE Building
G	Generator House
H	Student Services Building
I	Computer Lab
J	Student Center
K	Learning Resources Center

1.2 Long Term Vision

The Chuuk campus will have facilities to support the following:

- A campus that provides permanence and certainty long term. Based on the identification of further vocational education courses and dependent on an increase in the student roll plan review and plan for additional facilities on the Nantaku site.
- A campus that enables expansion of facilities to occur over time
- Renewable energy and incorporates sustainability measures
- Buildings that have a reduced maintenance and operational cost through design and selection of materials

Key Moves

1. Implement a move to a permanent site based on tangible benefits. These include providing long term safety from typhoon and tidal surge, ability to expand to provide a wider range of courses to meet the Chuuk state educational aims and an ability to reduce the current operational cost with the location on the current leasehold site.
2. Review the previous engineering assumptions contained in the April 2001 Master Plan for the Nantaku site including ground conditions, water availability, timing of the road upgrade to the site and availability of public services connections.
3. In the interim implement low cost facilities upgrades on the Weno site to meet existing safety and site factors limiting delivery of education and student learning outcomes.



Existing Weno site with new study huts and carpark

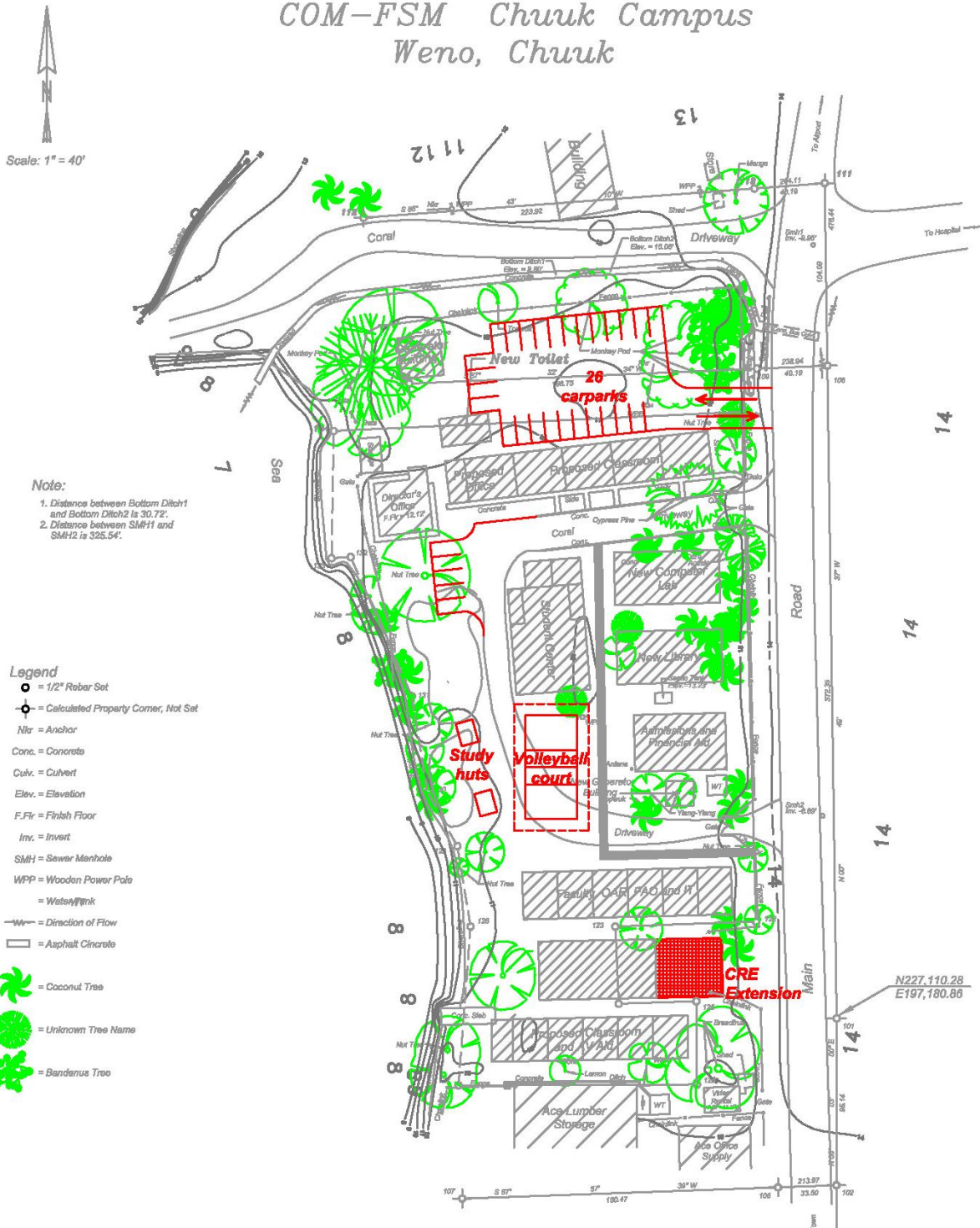


Full development of the Nantaku site

The following plans depict the proposed layout with the new buildings identified in red. The accommodation schedules listing the functions and areas for the spaces within these buildings are contained in Chapter 3.4.2 for the current site and 3.4.3 for the Nantaku site.

The stages to reach this long term vision are described in the staging plans and the program at the end of this chapter.

Property and Topo Survey for COM-FSM Chuuk Campus Weno, Chuuk



1.3 5 year period – to 2018

During the next 5 years there are a series of small upgrades that can be made to the existing site to address current issues. At the same time an engineering review needs to be conducted of the Chuuk site to confirm the assumptions made in the Master Plan dated April 2001.

5 year period to 2018

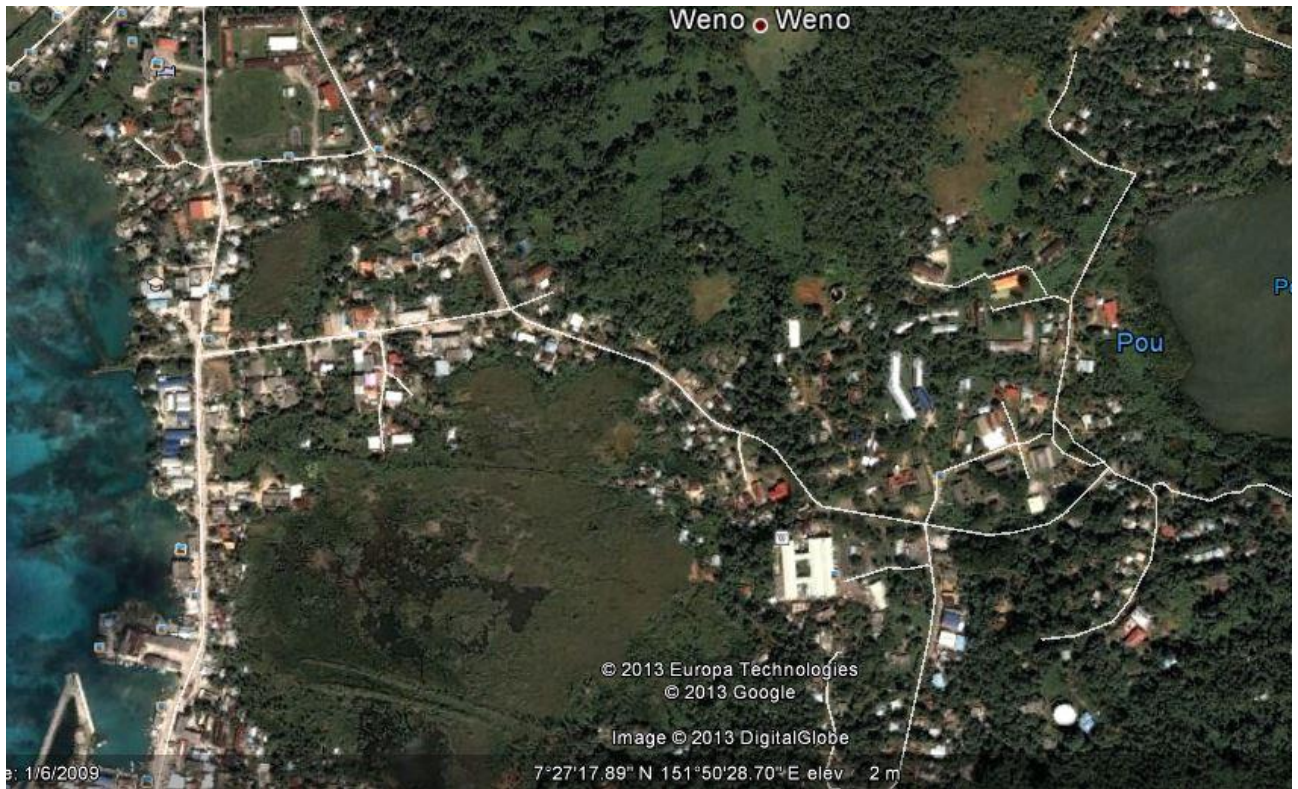
- assumes interim upgrades prior to move to a permanent site

- 01 Extend campus to the north, fence perimeter and create a coral base carpark area with an entry and exit onto the main road
- 02 Restrict cars to campus, designate carpark area for visitors, create a central grassed area, 2 study huts on the coastal edge
- 03 Retrofit a classroom with a science bench and plumbing
- 04 Reroof student covered area and add roof ventilation
- 05 Upgrade wi fi
- 06 Extend CRE - extension building to main road
- 07 Landscaping (continuous line of hedges) along the road frontage and upgrade signage
- 08 Meeting room for student body meetings - review classroom use and retrofit within existing building footprint
- 09 Staff lounge - meeting place for all faculty - review classroom/ faculty space and consider conversion of one faculty office
- 10 Conference space set up with conferencing remote learning - review classroom utilization and convert classroom space to new function



Implement planning for the development of the Nantaku site including:

1. Review of the previous geotechnical studies and recommendations for further investigation
2. Establish when and how a two way access road to the site will be constructed as part of the State roading plans
3. Confirm the services required to be connected to public services versus independent services
4. Establish any water available on site



The current site is 1/3 of a mile from the central area in town. The Nantaku site is approximately 1.5 miles from the center of town. It is located in the area called Pou on the map above. The main road is in the process of being upgraded in 2013 however the final ½ mile remains unsealed and single lane access.



Looking up the hill to the bottom of the Nantaku site



Looking down from the flat area below the bottom of the Nantaku site



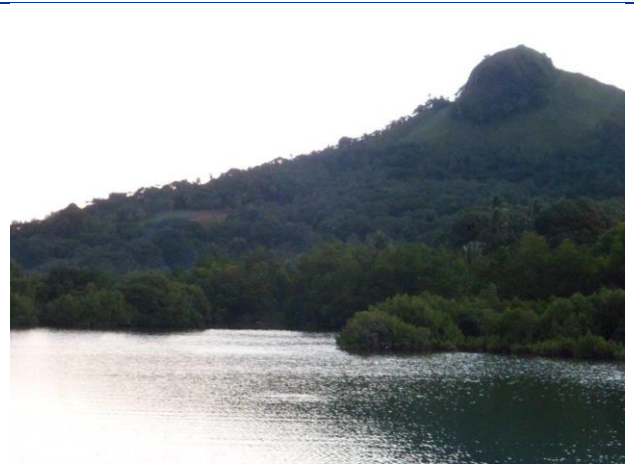
Looking south from the mid-point in the site



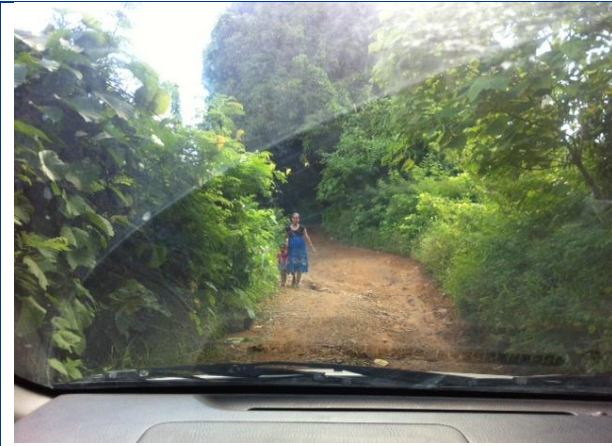
Looking up east towards to the ridgeline from the center of the site



View to the east



View to the site (brown cleared area on the hill) from the causeway



Access on a slope on leaving Pou to reach the Nantaku site – single lane unsealed road, susceptible to rutting due to lack of drainage

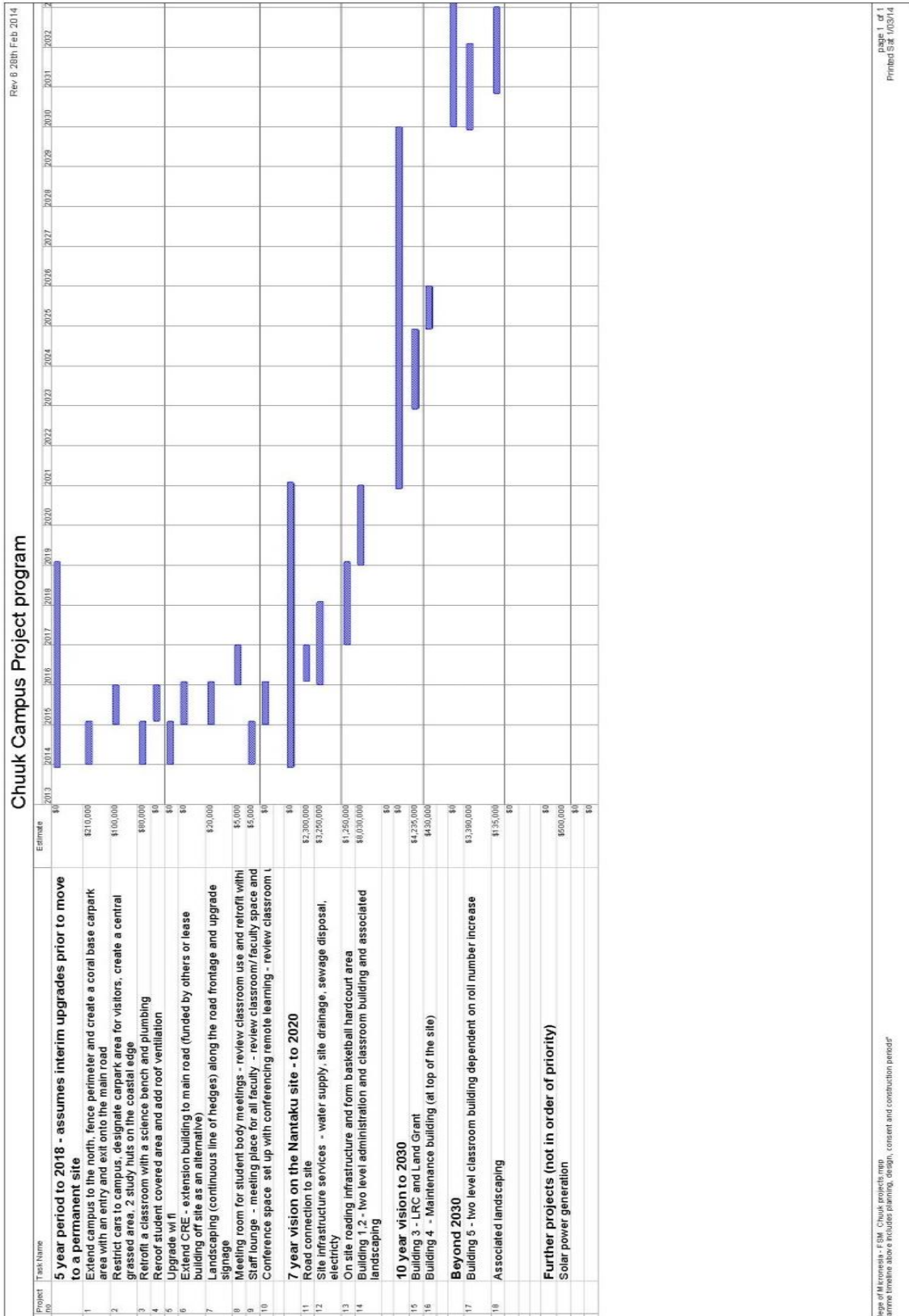


Area and unsealed road at the base of the hill in Pou

1.4 10 year period – to 2023

Implement a development plan on the Nantaku site

1.5 Development Staging and Program – Implementation



2 Educational Component

2.1 Key Considerations

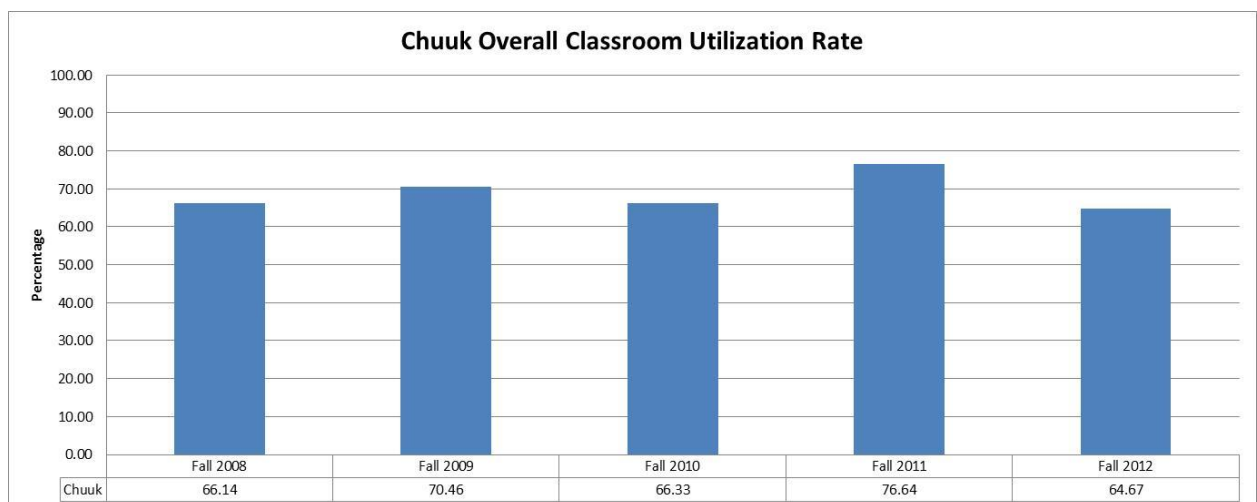
- Classroom utilization levels are in the low range and utilization rates are in the moderate-to-low range, together indicating adequate overall capacity (see Tables 2.2.1 and 2.2.2).
- Enrolment projections suggest a declining enrolment trend (see Chart 2.2.3). Classroom utilization may reach the underutilized range by 2023.
- Chu'uk's enrolment projections are the most problematic of all COM-FSM campuses. Given the lease status of the Chu'uk facility, careful thought should be given to the size and scope of projected new or renovated construction.
- The Chu'uk Campus has great capacity to serve as an alternative resource for the six-campus system during unanticipated periods of enrolment growth.

2.2 Space Utilisation

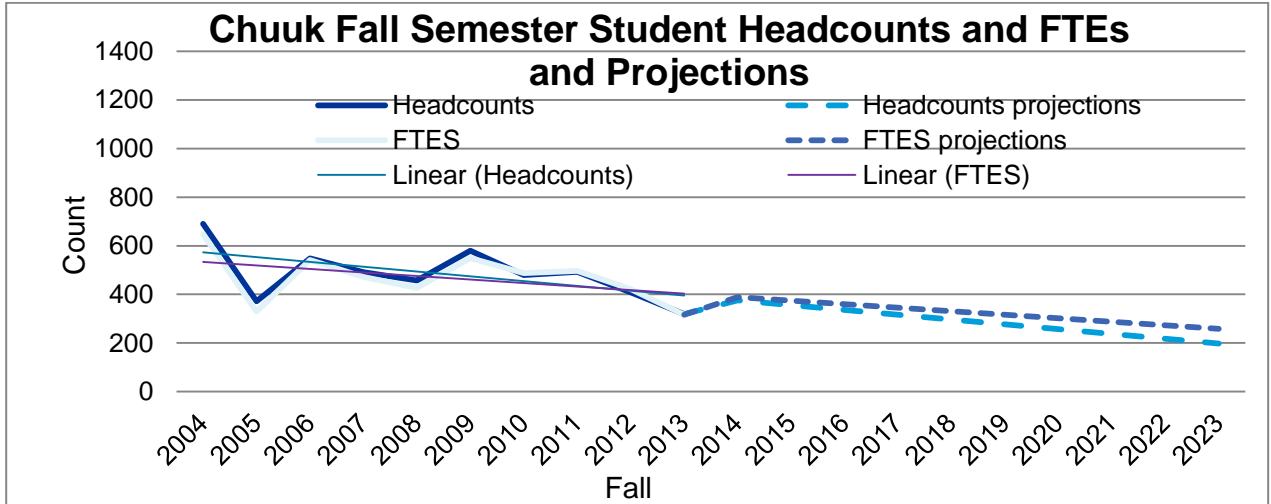
2.2.1 Chu'uk Campus Utilization Levels (2008-2012)

High (>75%)	0%
Moderate (>66%)	36%
Low (>50%)	55%
Underutilized (<=50%)	9%
Total	100%

2.2.2 Chu'uk Overall Classroom Utilization Rate



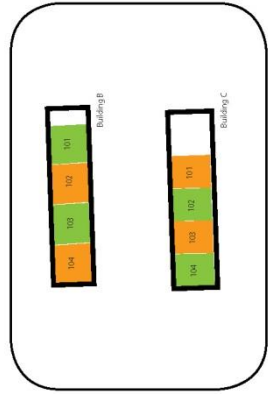
2.2.3 Chu'uk Campus Historic and Projected Enrolment Trends



Actual Values										
Semester	Fall 2004	Fall 2005	Fall 2006	Fall 2007	Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
Headcount	690	371	548	491	457	580	479	493	409	319
FTE	647	330	541	471	426	549	487	496	422	316
Projections										
Semester	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022	Fall 2023
Headcount	375	355	335	316	296	276	256	237	217	197
FTE	389	374	360	345	331	316	302	287	273	258

2.2.4 Space Utilisation Summary Plan

Chuuk Campus



Classroom Buildings B and C detail



Chuuk Campus - Teaching Space Utilization Summary Plan - Data up to Summer 2012

No.	Building Description
A	Administration / Faculty Office
B	Classroom Building B
C	Classroom Building C
D	Campus Dean's Office
E	Restrooms
F	CBE Building
G	Generator House
H	Student Services Building
I	Computer Lab
J	Student Center
K	Learning Resources Center

- Campus
- - Building D, Vocational Room 1
- - Midtown - CMT Room 101



3 Spatial Review

Key Points for the Facilities Development Plan for the existing site

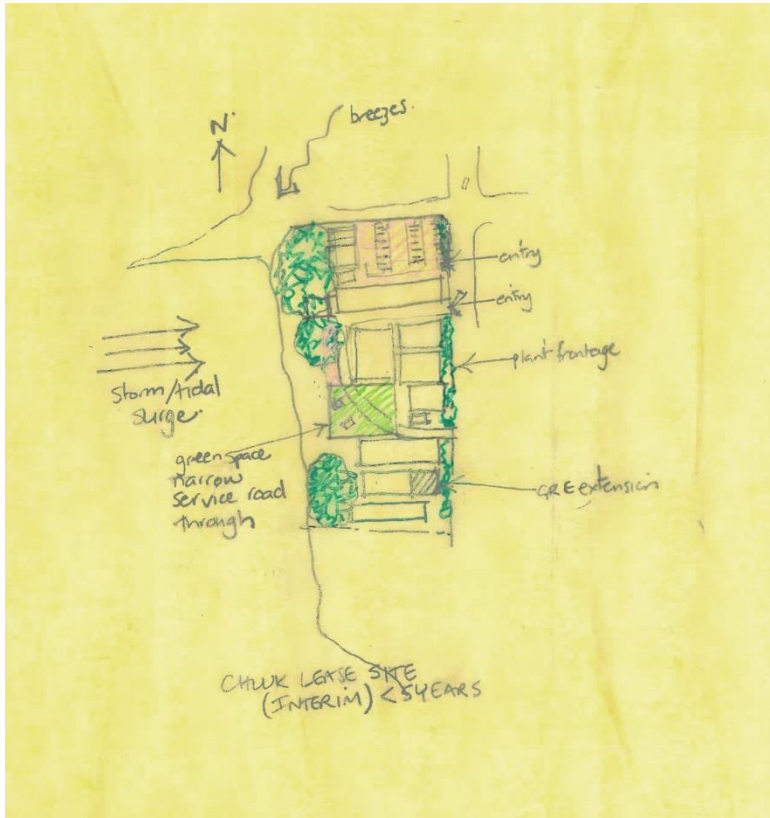
1. Remove the car park area from the center of the campus
2. Provide for active recreation areas
3. Implement improvement projects over the next five years

3.1 Design Concept Plans

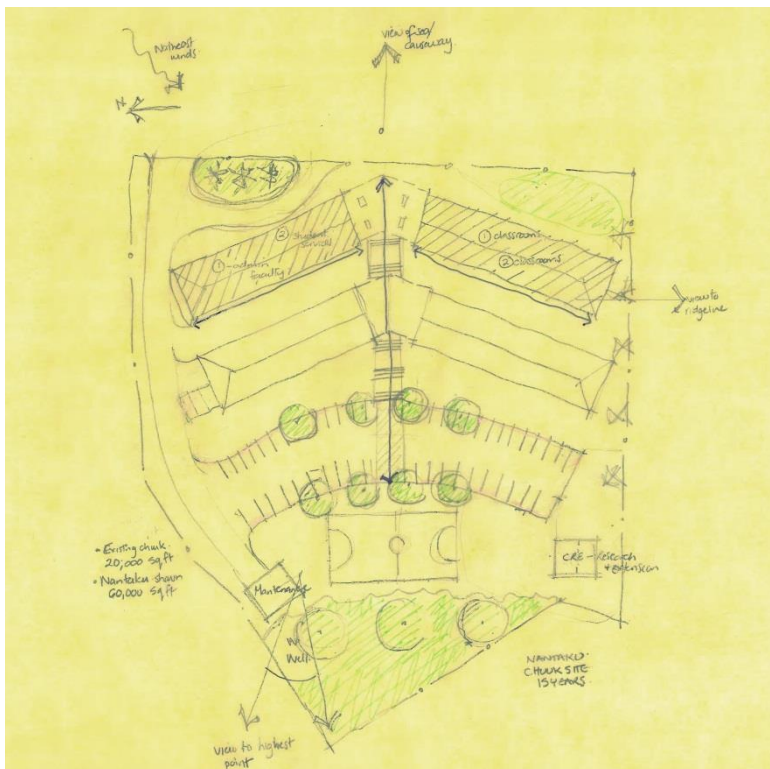
The design concept plans prepared during the site visit in August/September illustrate the option developed. They have been derived from a combination of the input received from students, faculty and staff, the site visit observation and key messages from the utilization study. These broad concepts show the design moves prior to project costing and evaluation against projects identified for all other campuses. Refer to Part 2 – Common Report for the full schedule of projects across all campuses.

The concept drawing considers the following inputs from the spatial review:

- Activity zones
- Range of people spaces on campus
- Circulation - pedestrian and vehicular
- Building and landscape character
- Infrastructure including energy efficiency



Concept plan for the existing site



Concept plan for the Nantaku site

3.2 Focus Group Summary

3.2.1 Student focus group

A student focus group was held between 12pm and 1pm on Monday the 27th of August. This session provided an opportunity for students to discuss positive features of the campus and any issues with regard to facilities on site. Seventeen student representatives attended the meeting.

A one page question outline was provided as a prompt for discussion. This sheet provided an opportunity for students to leave any further comments. Twenty nine questionnaires were received.

Positive attributes commented on was the there was a good campus feeling on site and both female and male students felt safe on campus.

Issues raised in order of priority for the current site were:

1. Provision of covered access and wider paths. When it rains everyone crowds onto the central path
2. Student learning center space is too small
3. Provision of a toilet block in the center of the campus – current toilet facilities are on either end of the campus – an issue when it rains
4. Lack of ventilation in the open student center and the dust that blows off the roadway into the area on a hot day
5. Lack of ventilation in the classrooms
6. Car park availability is limited and cars take precedence over pedestrians
7. More seating areas required on the foreshore
8. Provide somewhere to recreate - a basketball court would be good
9. Would like to have a student body meeting room again
10. *Water dispensers*
11. Cafeteria

Concerns raised by the students in the questionnaires:

- Gymnasium – particularly for basketball and volleyball. Also showers for after using the gym
- Covered footpaths – rain and sun
- Noise levels in the buildings – poor acoustics
- *Transport to and from the campus from far side of the island.*
- Taxis used a lot by students and no taxis allowed in the gates. Need for a pick up drop-off area
- More toilets
- No cafeteria currently provided
- More maintenance of buildings
- Seating around the campus for relaxing and studying in the open.

- Traffic jams at gate during the start of the day
- More space – in buildings and around buildings
- Footpaths are too narrow
- Seating is minimal so the seawall is an informal student hang-out
- Toilets are often locked and boys hang out around the girls toilets which puts the girls off.
- Bigger library needed
- More classrooms
- More parking – cars are parking all over the campus currently
- More 'study only' areas rather than having to use counselling offices
- An area to meet and gather with other students
- More computers and a bigger computer lab.
- Air-conditioning
- Student center (Common room)
- Very dusty campus
- Too small an area for pick-up / drop-offs
- Places to gather when it is raining or too hot outside
- *Stop betel nut chewing and smoking on campus*
- Campus doesn't look very good
- Bad acoustics
- Toilets needed outside the library
- Need more places to study

Note: Items in italics are noted but sit outside of the facilities development plan

The alternative green field site was discussed and the issue of the quality of the access road and the personal safety of students was raised. If the road was improved then it was commented that this would alleviate some concerns.

3.2.2 Staff focus group

A staff focus group meeting was held between 3pm and 4pm on Monday the 27th of August. A similar format was followed to the student focus group. Seventeen staff attended and fifteen completed questionnaires were received.

Positive attributes commented on were having the option for a permanent site and the potential for an increase in students with the capacity building in the secondary school education system anticipated to feed through to greater enrolments.

The meeting discussed two areas the current site issues and potential and what facilities could be provided on a green field site.

Issues raised for facilities development plan on the current site for consideration in order of priority were:

1. The potential fire hazard with cars parking through the middle of the campus in close proximity to buildings
2. Lack of cover in the rain walking between buildings
3. Nowhere for the whole campus to meet for the monthly campus meetings – up to 350 attending

4. Need for toilets in the center of the campus
5. The conference space is often double booked with the number of committees and campus meetings that require a space like this to meet
6. There is a need for a teaching laboratory that can be used by environmental science, physical science and nursing – this is an immediate need
7. The poor condition of the Deans office was commented on
8. The small size of the staff kitchenette and the area being shared with the staff toilet
9. Make the campus more attractive - implement a landscape plan

A summary of key points received in the questionnaire are:

- The campus is very small
- Larger classrooms needed
- Larger library
- Larger student center
- Larger computer lab
- More parking needed
- Parking and drop-off areas should be separated as the existing area serves both purposes and becomes very confusing and crowded in the mornings and evenings.
- Fencing needs repairing
- Buildings need painting
- Air-conditioning
- Wet weather makes waiting for buses, etc. uncomfortable
- More entertainment inside – TV, music etc.
- *Washable writing boards*
- Power points in all classrooms
- TV sets for each class room
- Covered walkways
- Separate entry and exit points into the campus
- Dorms
- One on one staff-student counselling rooms/offices
- More storage capacity for student files
- Staff lounge
- More sports facilities including tennis courts
- Business office larger – to accommodate books, supplies, etc.
- Water comes in under doors during heavy rain events
- More space needed for staff work areas and offices
- More computers needed for students
- Open areas can become very dusty
- Some flooding in areas of the campus
- Science lab needed
- Improvements for doing vocational study programmes
- More seating
- Areas inside the building have good light and ventilation

Further meetings were held with Kind Kindo (Campus Dean), (IT), (Library), (CRE) (Maintenance)

A summary of points relevant to the facilities development plan are outlined below:

- Need for a quiet study area in the student learning center, area for small group work and computer research. Currently trying to provide for all these activities in one space
- Need for a dedicated evacuation area away from buildings
- The consistent amount of termite damage
- Need for screens to protect the windows being broken by rocks thrown from the road
- Concern raised over the flooding in a tidal surge combined with an extreme rain event
- The floor level of the Dean's office building as the closest and most exposed building to the foreshore
- The deterioration of the campus due to the proximity to the coastal edge
- The limited ability to expand the existing campus either in site area or by building up due to the ground condition – reclaimed area, sand below
- The lack of airflow through the campus as the buildings are so close together
- Need to coordinate and consult over issues to do with the property and changes i.e. trimming of trees
- Need to replace the rooves frequently due to corrosion
- Concern over the increasing number of high winds with climate change and how this will impact on this site

3.2.3 Faculty focus group

A staff focus group meeting was held between 12pm to 1pm on Tuesday the 28th of August. A similar format was followed to the staff focus group. Thirteen staff attended and six completed questionnaires were received.

Francisco Mendiola, Director of Maintenance and Security provided an overview of the history of facilities on the current site along with the work that has been completed to date on the site in Nantaku. This outline provided context for the following discussion of issues on the current site and pros/cons for relocating.

The largest concern voiced by attendees at the start of the meeting was the lack of a permanent site for the campus. This was closely followed by the lack of space on the current campus which has resulted in buildings being located close to each other and reduced amenity for students and staff.

The amenities able to be provided and the features of the proposed alternative site compared to the existing site were discussed, and were:

- Space for recreation facilities
- Ability to provide for public health and more science courses
- Ability to have space for expansion in the future
- Reduced energy costs due to purpose designed buildings incorporating natural ventilation features as well as a location that could capture the north-east breeze
- Located away from the front face of the typhoon - originate from a westerly direction
- A location away from dust generated in the town due to the tree cover and vegetation
- Potential for drinking water
- Potential to design a facility that demonstrates the value placed on education by the Chuuk state and the benefit of attracting further students. This is anecdotally the effect the building of the Palikir campus had on student numbers after it was completed.

Acknowledging that any move off the current site would require a period to implement there were a range of issues raised for facilities development plan on the current site. These are not listed in any order of priority:

- Car parking issue with cars parked next to the buildings limiting open space
- Lack of a pickup/drop off area
- Lack of a meeting area for all faculty – this is seen to limit cross faculty discussion and impacts on collegiality
- Shower stalls for students commuting from the outer islands especially in choppy seas. The inclusion of taps for feet washing has had a positive impact
- IT speed
- Toilets located on the edge of the campus and lack of toilets in every teaching building
- Lack of drinking water other than intermittent bottled water supply
- Lack of a place for students to meet - often wait along the walkways which interrupts teaching
- Nowhere with a large enough covered area for all campus monthly meetings

A summary of key points received in the questionnaire are:

- Outdoor areas need landscaping, not always clean, noisy
- Crowded parking lot in the center of the campus is a drawback
- Lack of facilities for educational videos
- Need for a science room
- Faculty / staff lounge
- Classrooms are too hot
- Need to improve the vocational course facilities
- Need to have both gates open to reduce traffic jams on site when arriving and leaving
- Campus sign at the entrance gate
- Paths (unformed) are very muddy in the wet and dusty in the dry weather
- Covered walkways needed
- Campus conference-meeting hall area/building
- Drinking fountain needed
- More toilets in general but particularly for the library, computer lab
- More opportunities for buying food
- Car parking, roads need to be paved
- Entry and exit points into the campus need to be open all day
- Need for a guard house and waiting area for students - pick up/drop off
- Office spaces too small and crowded with books
- Walking between buildings needs improvement
- Very limited opportunities for students to study

Key issues raised in the Focus Groups to inform the development strategy:

1. Planning issue – Need for certainty for future and decision on the future location of the campus
2. Safety issue – Car parking in the center of the campus is an issue with proximity to buildings in case of fire
3. Site layout issue - Making the most of the current setting of the campus with clear entry points, pedestrian access and small group study or gathering spaces
4. Recreation issue – no area on site for active recreation was raised by more than one group – this is important as it is part of a whole campus life experience
5. Site location issue – exposure of the current site to storm surges



3.3 Spatial Analysis

A review of the existing components that contribute to the physical environment and the look and feel of the campus are outlined in the following tables. Divided into different aspects these include the contextual response to the site, activity zones, building function and form, open space and circulation. This analysis forms one of the inputs into the concept development and project identification.

Context and response – Identifying the existing site features

Key attributes:

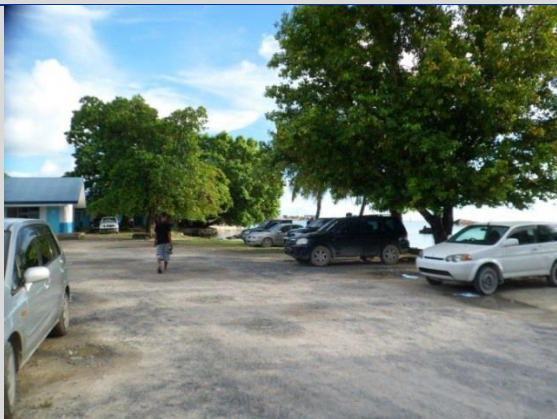
- Chain-link fences delineate the campus edges
- View out over the sea
- Compact level site
- Exposure to storm surges
- Large existing trees to be retained



Exposure of the current site to storm surges with flooding of the buildings close to the sea frontage



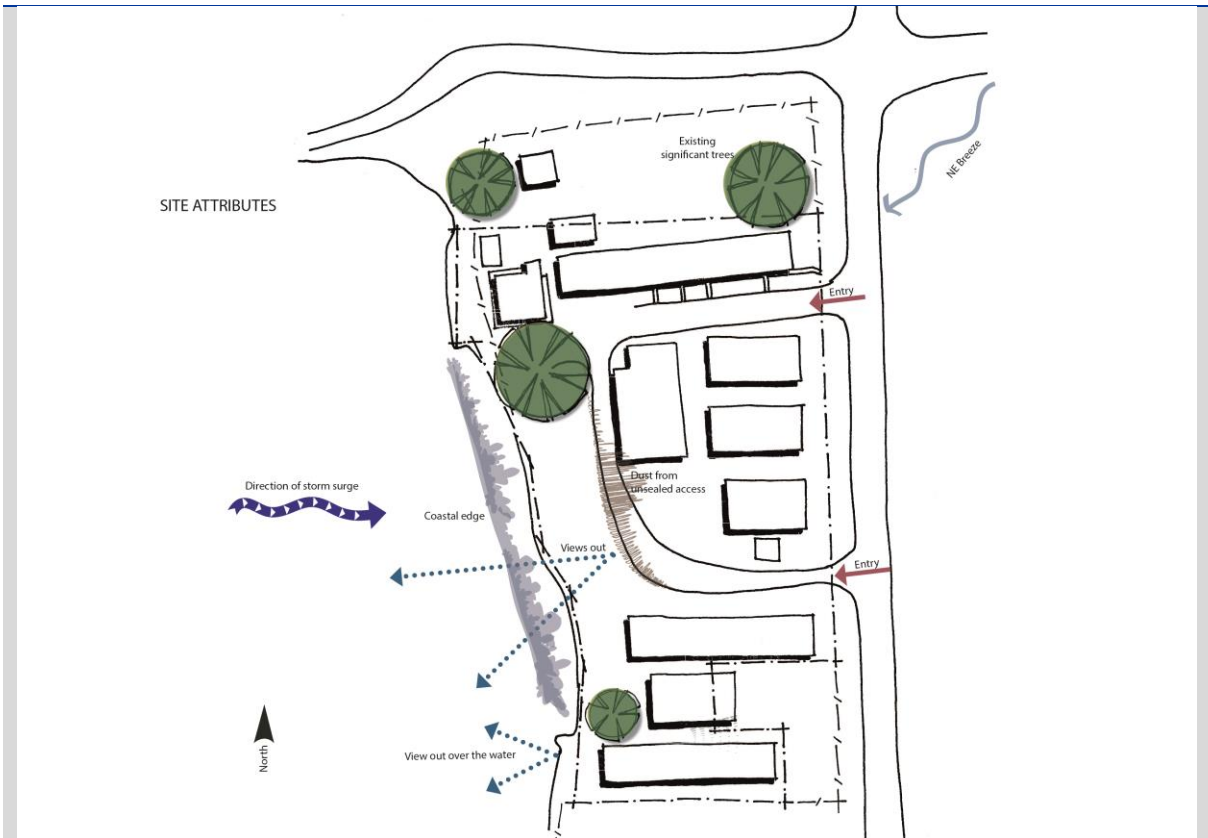
Exposure of the current site to storm surges with flooding of the buildings close to the sea frontage



Large significant trees on site



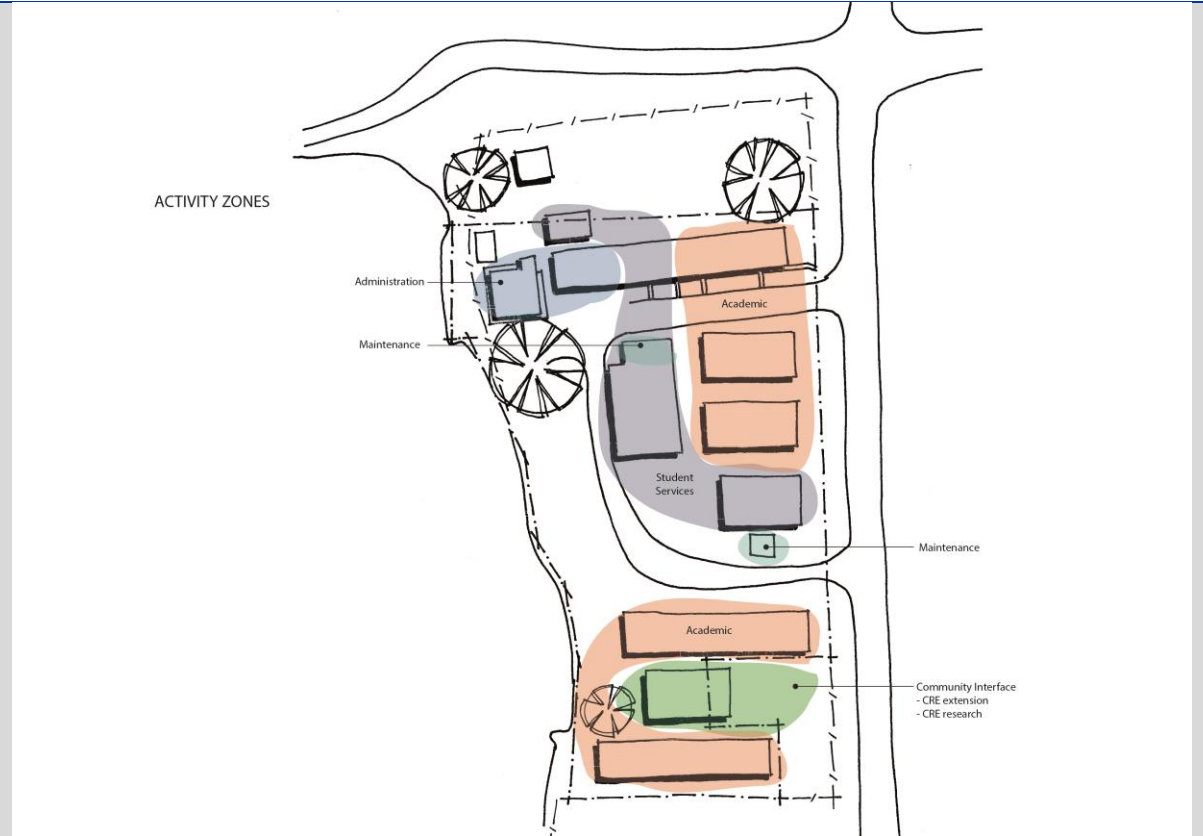
Chainlink fence around the perimeter



Activity zones – grouping areas with common functions together

Existing

- Student services located in a good position in the center of the site surrounded by the academic and administration zone



Cars park through the campus in a space that should be a pedestrian area



The student center is the focal point of the campus

Points to consider for future planning

- Relocate the car parking zone from the center to the edge of the campus
- With the removal of cars from the campus provide seating and recreation spaces

Types of people spaces – individual, small groups or communal gathering spaces



Waiting spaces along the building edges



Small shaded gathering spaces are popular

Circulation – the way vehicles access the site and how pedestrians move around the site

- Narrow walkways alongside the existing buildings
- Car parking dominates the center of the site
- There is a clear access in and out with two gates, however one gate is often closed compromising the ability for through flow
- There is no dedicated area for pick up and drop off



Walkways alongside the buildings – waiting places and used for circulation



Pedestrian and vehicle entry from the main road onto the campus

Points to consider for future planning

- Provide a dedicated car park area on the edge of the campus
- Provide clear entries onto site through signage, landscaping

Building and landscape character – look and feel of the campus

- Compact site will little separation between buildings
- Trees on the coastal edge are an asset
- Views out across the water from the coastal edge
- Front campus boundary onto the main road understates the significance of the campus
- Central area with the student center in the middle of the campus is an asset
- Simple gable ended single storey buildings



Eaves form cover over length of the main buildings




Space in front of buildings that could be used by students is occupied parked cars

Infrastructure - the services that enable the campus to operate

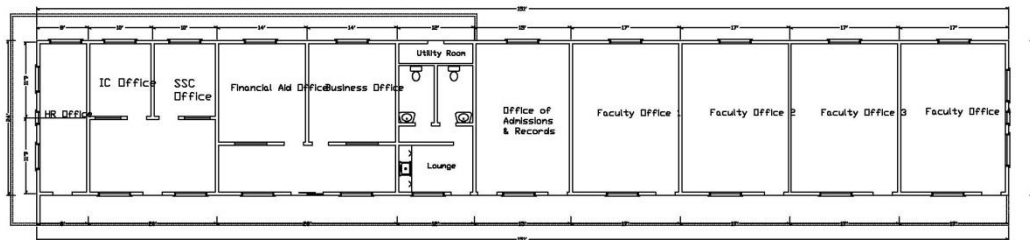
- Generator needs upgrading
- Areas of ponding and flooding particularly on low lying areas adjacent to sea wall
- Site drainage issues in a storm event




3.3.1 Existing building profile and future planning considerations

Building	Outline
<p>A – Administration/ Faculty office</p> 	<p>Building A is the faculty offices with a mix of student service or administrative programs</p> <p>Location for its function – well located at the entry of the campus</p> <p>Quality and suitability of spaces for its function – The faculty rooms are a good size, additional space for storage of files would be beneficial. Considering using long desks instead of L shaped workstations to free up space</p> <p>Disabled access - Ramp access</p> <p>Teaching spaces - Nil</p> <p>Amenities, toilets - Single toilet for staff and a small kitchen bench. A lounge area attached to this space would enable staff to meet outside of the faculty rooms assisting collaborative work practices.</p> <p>Building condition points - Targeted regular maintenance and cleaning. Treat or replace rusted rainwater heads immediately. Repair decay (and any leaks) in soffit lining immediately.</p> <p>Building age – 7 years (mid 2000's)</p>

Building A - Faculty Offices

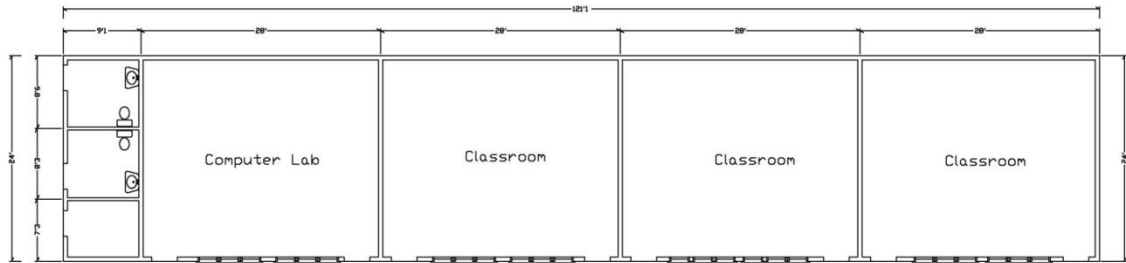


<p>B – Classroom Building B</p> 	<p>Building B is a classroom block with four large classrooms</p> <p>Location for its function – well located but due to its proximity to other buildings limits cross ventilation through the site</p> <p>Quality and suitability of spaces for its function – Adequate. Increased ventilation is required.</p> <p>Disabled access - Ramp access</p> <p>Teaching spaces – Four classrooms 670sqft</p> <p>Amenities, toilets - Two toilets</p> <p>Building condition points - Targeted regular maintenance and cleaning. Treat and spot prime rusted gutters immediately. Review roof and consider re-painting. Treat and repair termite damage to doors.</p> <p>Building age – 7 years (mid 2000's)</p>
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Building

Outline

Building B - Classroom



C – Classroom Building C



Building C is another classroom block with four classrooms and film viewing facilities

Location for its function – well located but its proximity to other buildings limits the cross ventilation through the site

Quality and suitability of spaces for its function - Adequate

Disabled access - Ramp access

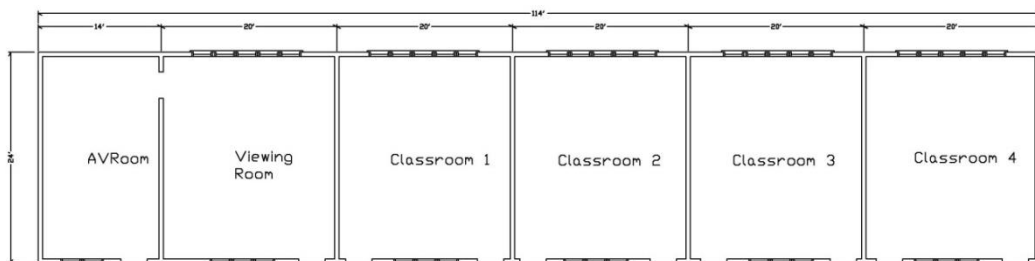
Teaching spaces – Four teaching spaces at 480sqft


Amenities, toilets - Nil

Building condition points - Targeted regular maintenance and cleaning. Treat and spot prime rusted roofing immediately. Review roof and consider re-painting. Treat and repair termite damage to windows.



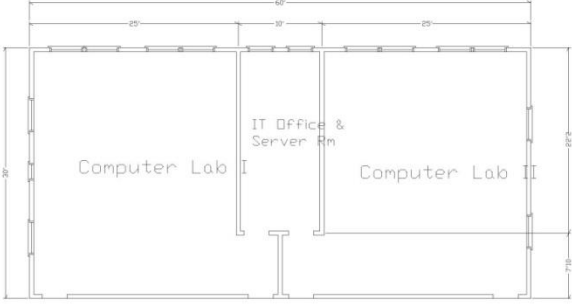
Building age -7 years (mid 2000's)

Building C - MITC & Classroom



Building	Outline
<p>D – Dean’s office</p> 	<p>Building D is the director’s office with lobby and conference room</p> <p>Location for its function – Located in a good position with regard to function , however , affected by storm surges due to its proximity to the coastal edge</p> <p>Quality and suitability of spaces for its function – Issues with flooding</p> <p>Disabled access – ramp access</p> <p>Teaching spaces - nil</p> <p>Amenities, toilets - nil</p> <p>Building condition points – Targeted regular maintenance and cleaning. Rust treat, repaint and clean roof, or replace corroded roof immediately.</p> <p>Building age – not available</p> 
<p>E – Restrooms</p> 	<p>Building E is the toilet block with male and female facilities</p> <p>Location for its function – well located on the edge of the site away from the classrooms, however were comments on distance from classrooms</p> <p>Quality and suitability of spaces for its function – well laid out and designed</p> <p>Disabled access – ramp access</p> <p>Amenities, toilets - 6 toilets; 3 male and 3 female</p> <p>Building condition points – Targeted regular maintenance and cleaning to extend asset life.</p> <p>Building age – 8 years (mid 2000’s)</p>

Building	Outline
	<p style="text-align: center;">Toilet Facility</p>
<p>F – CRE research office</p>	<p>Building F is the CRE research office</p> <p>Location for its function – well located but its proximity to other buildings limits cross ventilation through the site</p> <p>Quality and suitability of spaces for its function – adequate, standard design template</p> <p>Disabled access - ramp access</p> <p>Teaching spaces - nil</p> <p>Amenities, toilets - 2 toilets</p> <p>Building condition points – Targeted regular maintenance and cleaning. Rust treat, repaint and clean roof, gutters and wall flashings immediately.</p> <p>Building age - 8 years (mid 2000's)</p>
<p>G – Generator house</p>	<p>Building G is a generator house near the rest rooms</p> <p>Location for its function – located away from classrooms with</p> <p>Quality and suitability of spaces for its function - adequate</p> <p>Building condition points - adequate (roof)</p> <p>Building age - 7 years (mid 2000's)</p>

Building	Outline
<p>H – Student Services building</p> 	<p>Building H is the student services building</p> <p>Location for its function – well located but proximity to other buildings limits cross ventilation on site</p> <p>Quality and suitability of spaces for its function – open area is a good size but there is compromised space for quiet and group study to occur at the structure</p> <p>Disabled access - ramp access</p> <p>Teaching spaces - nil</p> <p>Amenities, toilets - nil</p> <p>Building condition points – Targeted regular maintenance and cleaning. Rust treat, repaint and clean roof and structural steel frame immediately.</p> <p>Building age - 9 years (early 2000's)</p>
<p>I - Computer Lab</p> 	<p>Building I is a computer lab</p> <p>Location for its function – well located but its proximity to other buildings limits cross ventilation through the site</p> <p>Quality and suitability of spaces for its function – more space is required for the services provided; repair/the office/storage</p> <p>Disabled access - ramp access, hand rails</p> <p>Teaching spaces – computer lab, 750 sqft</p> <p>Amenities, toilets - nil</p> <p>Building condition points - Targeted regular maintenance and cleaning. Rust treat, repaint and clean roof and gutters immediately, or review replacement of roof and gutters. Repair boarded up windows and install security louvers.</p> <p>Building age – 5 years (late 2000's)</p> <div style="text-align: center;"> <p>Computer Lab</p>  </div>

Building	Outline
<p>J - Student Center</p>  <p>Points to consider for future planning – Roof top ventilation when re-roofing</p>	<p>Building J is a central open student center used at lunch times and throughout the day</p> <p>Location for its function – well located in the center of the campus</p> <p>Quality and suitability of spaces for its function – need increased ventilation</p> <p>Disabled access - ramp access</p> <p>Teaching spaces - nil</p> <p>Amenities, toilets - nil</p> <p>Building condition points - Asset is run-down. Replace roof and gutters immediately. Provide ridge ventilation to roof. Immediate localised patching of wall cladding.</p> <p>Building age - 8 years (mid 2000's)</p>
<p>K - Learning Resource Center</p> 	<p>Building K is a library with an office, reading room and an archives room</p> <p>Location for its function – well located in the center of the campus near the student center however proximity to other buildings limits cross ventilation through the site</p> <p>Quality and suitability of spaces for its function – not enough space for both quiet study and computer research</p> <p>Disabled access – ramp access</p> <p>Teaching spaces - nil</p> <p>Amenities, toilets - nil</p> <p>Building condition points - Targeted regular maintenance and cleaning. Rust treat, repaint and clean roof and gutters immediately, or review replacement of roof and gutters.</p> <p>Building age – 5 years (late 2000's)</p> 

3.4 Accommodation Review

A review of the COM-FSM standard spatial target has been completed. Where this COM-FSM target figure differs from the American Institute of Architects standard this is noted.

The spatial assessment summary in the shaded box at the end of the table outlines the additional space required. This area is incorporated into the new building accommodation schedules at the end of the chapter.

3.4.1 Facilities ratios

Item	Number
Number of students - Fall 2013 enrolment	319
Number of faculty and staff (from general catalogue 2013 - 2014)	44
2018 design figure (informed by the projected headcount in the space utilization review – Chapter 2 of this report)	296

Item	COM-FSM standard target	Provided on Kosrae campus
Parking stalls	1 stall for each faculty member, 1 stall for each staff member and 10% of students	Aim is up to 44 faculty and staff parks and 30 student parks. Current site - 30 stalls are shown on the layout. There is a shortfall of 44 parks. Nantaku site - 57 stalls are shown on the layout. There is a shortfall of 20 parks.
Toilets	Two indicators 1. Aim is for toilet block at each teaching building 2. From 2006 – 2012 strategic plan – 1 female toilet for every 30 students, 1 male toilet for every 40 students. Reference taken from American Institute of Architects 10 th edition.	Assumption: no dedicated staff facilities so toilets are considered for staff and student use Assume 350 staff and students require 6 women's toilets and 5 men's toilets Number currently provided: 8 men, 6 women, one toilet of each sex accessible. Adequate toilet facilities provided
Drinking water	Accessible drinking water	Provided as bottled water
Teaching space per	25ft ² per student (AIA is 30ft ²)	5 medium sized classrooms area 650ft ² (60msq)

Item	COM-FSM standard target	Provided on Kosrae campus
person		4 classrooms 460ft ² (60msq)
Computer Laboratory	25ft ² per student (AIA is 40ft ²) (2.4msq)	Computer lab is approximately 720ft ² (room for 28 students), require space for at least 30 students to study (ratio of 1:10). Target is 1:5 ratio Require space up to double this size
Small group study / study carrels	25ft ² per student (AIA is 50ft ² for reading rooms)	LRC is approximately 1200ft ² . Assume 50% area for stacks = 600ft ² (room for 24 students), require space for at least 30 students to study and target is 1:5 ratio Require space up to double this size
Shops/ vocational rooms	50ft ² per student (4.7msq)	nil
Private office	100ft ² per person (9.3msq)	A schedule of offices needs to be completed to ascertain parity across faculties. The strategy is to occupy current spaces or spaces vacated by functions moving to new buildings.
Private office with meeting area	150ft ² per person (14msq)	Dean's office is currently around 340sqft , any move should consider the standard size requirement
Work station	60ft ² per person (5.6msq) Common filing area 60ft ² per person (5.6msq)	Open workstation area for administration in Building A is currently around 200ft ² . Allowing for common filing and circulation the area for three staff requires additional 160ft².
Faculty work station with side chair	80ft ² per person (7.43msq)	Faculty area is divided into rooms and each room is approx. 400ft ² . 4 faculty Rooms providing for 16 faculty. Adequate facilities for the projected headcount
IT space, server room and area to fix machines	Require 500sqft for a state campus - separate secure server room, IT office and area to fix computer equipment. Ideally an additional storage area adjacent if space allows	Area is 210sqft including the separate server area. Additional 300sqft required.
Spatial assessment		Computer lab and LRC combined require an

Item	COM-FSM standard target	Provided on Kosrae campus
summary		additional 1200sqft IT/office server room requires an additional 300sqft Require an additional conference/ meeting room 300sqft

3.4.2 Existing campus site

Building A – New CRE building		
No	Room name	Area
A1	Separate wing for CRE - extension (separate entity)	
A2	Extension area	500
A3	Storage area for extension equipment	300
A4	Office	200
	Subtotal	1000
	Circulation and wall thickness @25%approx	250
	TOTAL	1250

3.4.3 Nantaku site

Building 1 – Administration, Faculty and Student Services		
No	Room name	Area (sqft)
	Ground Floor	
1.1	Director's Office	200
1.2	Secretary/Waiting room	400
1.3	HR Office	200
1.4	IT Office	200
1.5	IT Workshop	200
1.6	Server Room	100
1.7	Conference Room	400
1.8	Financial Aid Office	400
1.9	Fiscal Officer & Account Clerk	400
1.10	Bookstore	300
1.11	Snack Shop	150
1.12	Nurse Station	300
1.13	Rest Rooms	600
1.14	Electrical Cpd	150
1.15	Cleaner	40
1.16	Store	60
	2nd. Floor	

Building 1 – Administration, Faculty and Student Services		
No	Room name	Area (sqft)
1.17	Faculty Office (4 person unit)	2000
1.18	Faculty & Staff Lounge/Restrooms	300
1.19	Instructional Coordinator & Secretary	400
1.20	Student Services Coordinator	150
1.21	Counsellors Offices	450
1.22	Tutoring Services	400
1.23	Admission and Records	400
	Subtotal - rounded	8200
	Circulation and wall thickness @20%	1600
	TOTAL (rounded)	9,800

Building 2 – New Classroom Building		
No	Room name	Area(sqft)
	Ground Floor	
2.01	25 seats Classrooms (4 off)	2600
2.02	Physical Science Laboratory/Classroom	900
2.03	Electrical Cpd	150
2.04	Rest Rooms with showers (2 off)	700
2.05	Locker room	350
	2nd. Floor	
2.06	25 seats Classrooms	650
2.07	30 seats Classrooms (3 off)	2250
2.08	Computer Lab (2 off)	1800
2.09	Lab Monitoring Office	200
	Subtotal	9400
	Circulation and wall thickness @20%	1900
	TOTAL (rounded)	11,300

Building 3– New LRC and Land Grant		
No	Room name	Area(sqft)
	Ground Floor	
3.01	CRE Offices and Training Room	1200
3.02	Research Lab	2200
3.03	Male/Female Rest room	300
3.04	Store	60
3.05	Cleaner	40
3.06	Electrical cpd	150
	2nd. Floor	
3.07	LRC-Circulations, Reference and Study Area	2000
3.08	Office	200

Building 3– New LRC and Land Grant		
No	Room name	Area(sqft)
3.09	Computer Lab	1000
3.11	AV room Office and Equipment room	400
3.12	Viewing Room	750
	Subtotal	8300
	Circulation and wall thickness @20%	1660
	TOTAL (rounded)	10,000

Building 4 – New Maintenance facility		
No	Room name	Area(sqft)
4.1	Office Space	300
4.2	Shop	600
4.3	Shop Storage	300
4.4	IT Storage and others	600
4.5	Male toilet	50
4.6	Female toilet	50
	Subtotal	1900
	Circulation and wall thickness @15%	300
	TOTAL	2,200

3.4.4 Building area changes over five year periods

Weno site

Existing square feet (Fall 2013)	Remove buildings to 2018 (sqft)	Add buildings to 2018 (sqft)	Area in 2018
21,400		CRE extension (1250)	22,650

Nantaku site

	Add buildings to 2018 (sqft)	Area in 2018
	Building 1- Admin/ Faculty/ Student Services (9800) Building 2 - Classroom (11300) Maintenance temporarily located under building. CRE offsite	21,100

Existing square feet (Fall 2018)	Remove buildings 2018 – 2023 (sqft)	Add buildings 2018 – 2023 (sqft)	Area in 2023
21,100		Building 3 – LRC and Land Grant (10000)	33,300

Existing square feet (Fall 2018)	Remove buildings 2018 – 2023 (sqft)	Add buildings 2018 – 2023 (sqft)	Area in 2023
		Building 4 - Maintenance (2200)	

Existing square feet (Fall 2023)	Remove buildings post 2023 (sqft)	Add buildings post 2023 (sqft)	Area beyond 2023
33,300		Additional teaching building (8000)	41,300

4 Condition Assessment

Key Points

The Operational budget for Years 1-10 for the Chuuk campus is recommended to be in the order of \$US2.835M (\$283,500 average per annum). The operational cost equates to 4.85% of the estimated 2013 replacement value which is higher than expected. If the Midtown (off campus) building is not required then operational costs would reduce by approximately 20% (approx. \$56,000) to approximately \$227,500 per annum, which is more in line with expectations.

4.1 Chuuk Campus Building Condition Review

4.1.1 Introduction

Beca International Consultants Limited (Beca) carried out an Asset Condition Assessment of the existing buildings and site infrastructure located on the Chuuk campus for COM in June 2013.

The purpose of this Asset Condition Assessment Report is to record the existing condition of the COM-FSM assets (buildings and site infrastructure) so that:

1. The indicative cost of operating the COM-FSM assets through a 10, 20 and 30 year life cycle is identified and,
2. Decisions to either renew/upgrade or to demolish/replace the existing assets can be made.

This Asset Condition Assessment chapter gives each asset an indicative condition grade, identifies the asset replacement cost, and the cost of operating (renewing and maintaining) them. This chapter read as part of the overall Facilities Study is intended for use as the base reference for campus planning decisions. It should be noted that the costs presented in this Asset Condition Assessment chapter assume that the existing assets will be renewed, refurbished and maintained (with the exception of some buildings which are demolished). Any buildings which are replaced by the current campus planning process (and subsequent changes in annual operating costs) are not included in this Asset Condition Assessment Report

The findings of this report are based on the on-site Condition Assessment conducted by Beca in June 2013. It should be noted that a visual assessment only has been carried out and that no in-depth investigations have been possible. No detailed structural or seismic strength investigations have been undertaken.

4.1.2 Scope of Condition Assessment and Key Outputs

The scope of the Condition Assessment covers 10 No. existing buildings (excluding minor support structures and buildings) and site infrastructure located within the Chuuk COM-FSM campus, plus 1No. off-site building (Midtown). The key tasks undertaken to complete this report include:

- The Chuuk campus was visited in June 2013 to photograph and record visual defects in the buildings and site infrastructure.
- Data gathering and making observations.
- Grading the condition of each building asset (against a pre-determined set of criteria) and collating this to establish an overall condition grade for each asset.
- Assess the physical condition of the built assets (i.e. buildings and site infrastructure). Establish baseline condition to enable Life Cycle cost analysis.

The key outputs of this report include:

- A general overview of the current condition of the assets.
- A condition appraisal of each building (with the exception of minor structures) and the site wide infrastructure – Refer Appendix ‘B’ – Asset Condition Assessment Dashboard.
- Site observations and records of the existing site infrastructure
- Estimate of the potential replacement cost of each asset.
- Estimate the Operational Cost (Asset Renewals plus maintenance) of the assets as they currently exist. NOTE: the Operational Cost contained in this Condition Assessment assumes that all current assets are retained and maintained. Alternative Operational Costs for the proposed campus re-development are noted separately in this overall report
- Provision of an indicative Maintenance and Asset Renewal Plan. This gives indicative regular maintenance activities, timeframes for asset renewals and estimated costs (Note: costs indicated for maintenance and asset renewals exclude escalation and should not be used for budgeting purposes). Refer to Appendix ‘C’ for details on the Indicative Maintenance and Asset Renewal plans.

4.1.3 Reference to Part 2 Detailed Report – Common to all campuses

Additional (and more general) information pertaining to the Chuuk Campus Asset Condition is contained in the “College of Micronesia – FSM Space Utilization and Facilities Master Plan Study, Part 2 Detailed Report – Common to all Campuses”. This report contains (but is not limited) to the following information;

- Scope of condition assessment and key outputs,
- Definitions,
- Methodology of condition assessment and information collection,
- Condition grading system and building elements assessed,
- Forecast operational costs,
- Escalation and economic assessment
- Results/findings and conclusions/recommendations.

4.1.4 Forecast of Operational Costs

The forecast Operational Costs have been prepared as follows;

1. Develop the Maintenance Cost Plan. This is the cost of annual routine maintenance and includes building washing, painting, repairs and maintaining building services (mechanical, electrical fire etc.). This cost has been established by multiplying quantities (e.g. wall area) by an appropriate \$/ft² rate for washing or painting. To this an allowance for general overheads (e.g. supervision, vehicle running expenses etc.) has been added.
2. Develop the cost of periodic element Renewals. From the condition grade assessment and amount of remaining life in the building element the date and cost of renewal is determined

(e.g. a roof with 10 years life remaining has been budgeted for replacement in 2023). For the COM-FSM campuses the cost of renewals has been viewed over 10, 20 and 30 year periods.

3. The forecast Operational Cost is established (by adding annual maintenance and periodic element renewal costs). This is annualised or averaged over a 30 year period (i.e. the total operational cost over 30 years divided by 30. It should be recognized that for cash-flow purposes actual operational costs will vary from year to year (depending on the amount of actual renewals required in that specific year). Detailed monitoring and management of the operational cost cash flow on an annual basis will be required by COM-FSM.

4.1.5 Escalation

Escalation over a 30 year period of asset renewals and maintenance is a significant cost. Because of the significant impact of escalation two sets of cost, one which excludes escalation (i.e. present day 2013 costs) and the other which includes escalation have been presented at the main summary level. Escalation has been assumed to be 3.4% per annum for the next 30 years. This is based on an assessment of historical data provided by Mundi (refer web-site address below);

http://www.indexmundi.com/federated_states_of_micronesia/#Economy

It is critical for long term funding purposes that the allowances for escalation are included in all budgets and funding applications.

4.1.6 Results/Findings, Conclusions and Recommendations

4.1.6.1 Condition Grade Assessment Results

The following is a summary of the condition grade of the building assets across the Chuuk campus.

Asset	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
A – Administration/Faculty			✓		
B- Classroom Building 'B'			✓		
C – Classroom Building 'C'			✓		
I - Computer Laboratory			✓		
K – Learning Resources Center			✓		
H – Student Services Building				✓	
F – CRE Building			✓		
J – Student Center				✓	
D – Campus Dean’s Office				✓	
E – Restrooms			✓		
M – Midtown (off-Campus)					✓
Site Infrastructure	N/A	N/A	N/A	N/A	N/A
Total	0	0	7	3	1

4.1.6.2 Campus condition grading summary plans

Chuuk Campus



LEGEND
(Summary of Building and Element Condition Grades)

- Very Good (0-20%)
- Good (20-50%)
- Average (40-60%)
- Poor (50-80%)
- Very Poor (>80%)
- ⊠ Buildings shown crossed have a poor structural condition grade

Chuuk Campus - Building Condition Assessment Summary

No.	Building Description
A	Administration / Faculty Office
B	Classroom Building B
C	Classroom Building C
D	Campus Dean's Office
E	Restrooms
F	CFE Building
G	Generator House
H	Student Services Building
I	Computer Lab
J	Student Center
K	Learning Resources Center

From our condition assessment of the Chuuk campus we observe the following:

1. Midtown (off-campus) Building. 20% of the operational cost is dedicated to this off-campus building that is not owned by COM-FSM and is showing signs of significant structural and elemental failure. The use of this asset must be considered and if it is no longer required then operational costs could be reduced by diverting them to other facilities.
2. Refer to Appendix B – Asset Condition Assessment Dashboards for a summary of the asset renewal costs and the top five items, on each building or site infrastructure element, needing urgent maintenance, renewal or replacement
3. The majority of the buildings are rated as condition grade 3 which means that these assets are reaching the end of their serviceable life, but they are still functioning as intended. Targeted regular maintenance on all of the assets is required to extend their life. A clear, well organised asset renewal and routine maintenance plan needs to be developed and this needs to be implemented. An indicative maintenance and asset plan has been included in Appendix C.
4. Maintenance is being carried out but the current Operational budget (\$150,000 per annum for all of the six COM-FSM campuses) is insufficient to meet both maintenance and the periodic renewal of building element requirements. There is a significant amount of deferred asset renewals and maintenance which is increasing the amount of deterioration in the assets.
5. Unless the current Operational budget is increased the condition of the assets will continue to deteriorate and the number of buildings requiring replacement (and consequently additional capital replacement funding) will increase.
6. The Operational budget for Years 1-10 for the Chuuk campus is recommended to be in the order of \$US2.835M (\$283,500 average per annum). The operational cost equates to 4.85% of the estimated 2013 replacement value which is higher than expected. If the Midtown (off campus) building is not required then operational costs would reduce by approximately 20% (approx. \$56,000) to approximately \$227,500 per annum, which is more in line with expectations.
7. Regular monitoring and review of the asset renewal and routine maintenance plan needs to be carried out

4.1.6.3 Forecast Operational Costs Results

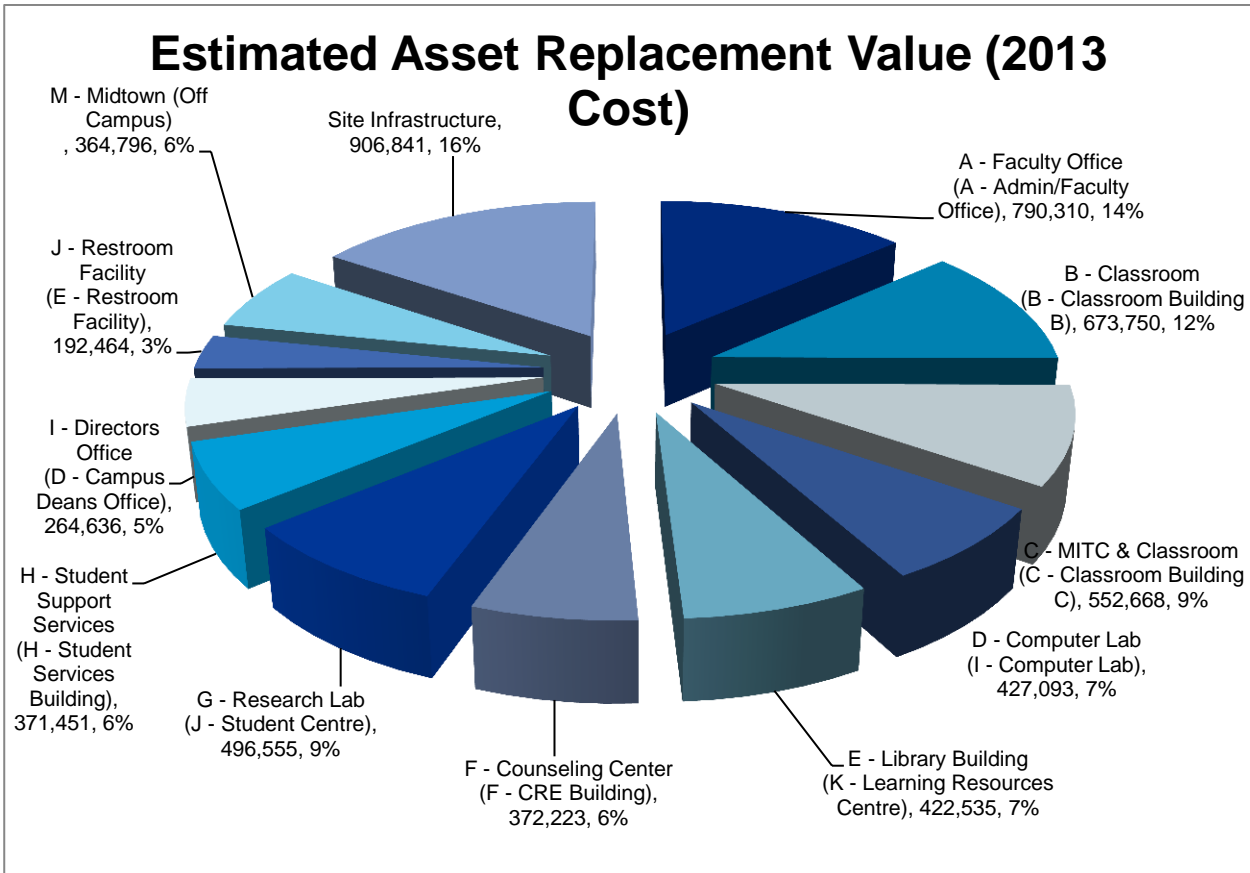
Outlined below are forecast operational costs split into 10 year sections over a 30 year period. Note that costs including and excluding escalation are identified. Funding of the operational costs should be based on the costs that include escalation.

Forecast Operational Costs

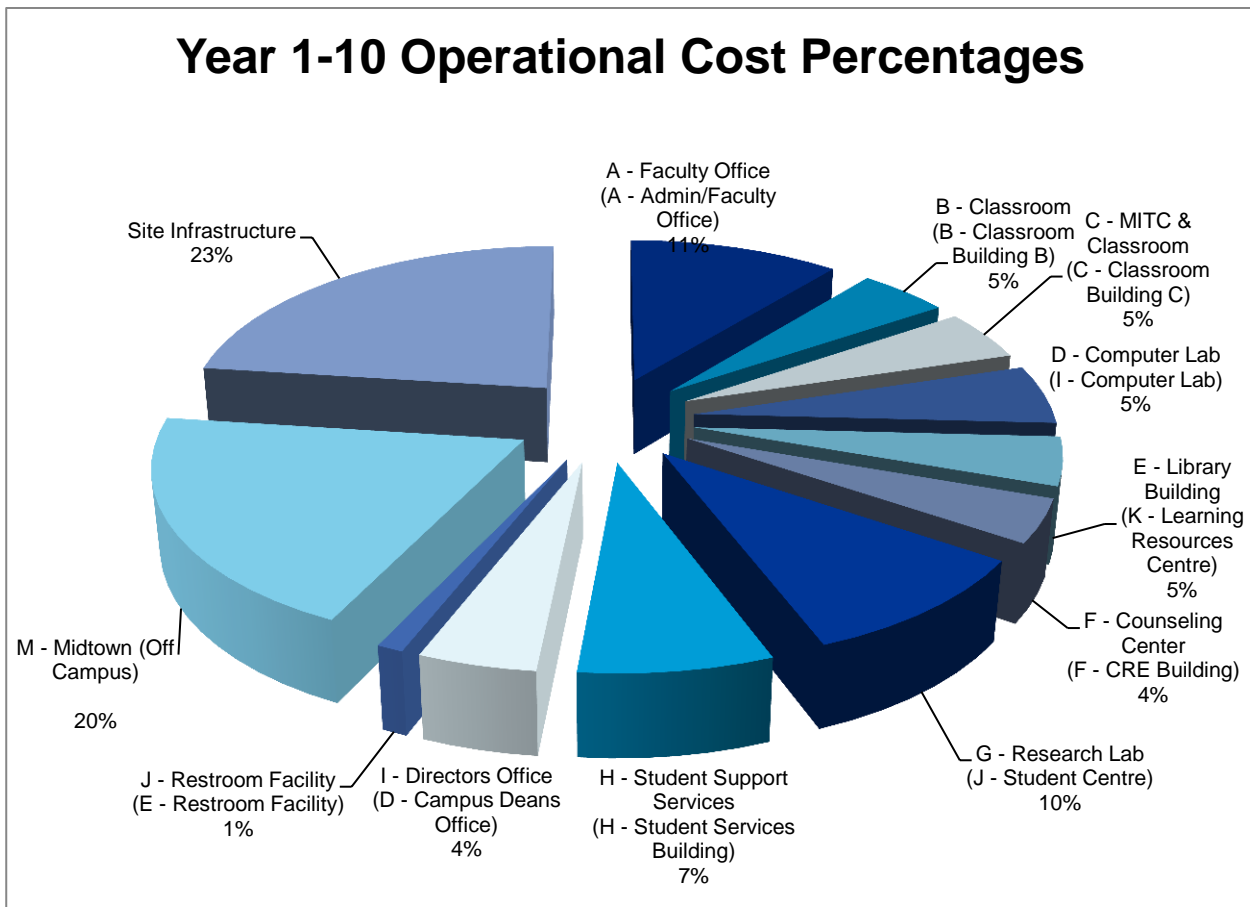
Ref	Asset Description	Replacement Cost Cost (\$ USD)	Year 1 - 10 Asset Renewal Cost (\$ USD)	Year 11 - 20 Asset Renewal Cost (\$ USD)	Year 21 - 30 Asset Renewal Cost (\$ USD)	Total 30 Year Asset Renewal Cost (\$ USD)	Annualised Total Operational Cost	Total Year 1-10 Operational Cost (\$USD)	Total Year 11-20 Operational Cost (\$USD)	Total Year 21-30 Operational Cost (\$USD)
1.00	A - Faculty Office	790,310	129,443	292,901	203,663	626,007	26,546	186,237	349,695	260,457
2.00	B - Classroom	673,750	37,887	106,438	305,557	449,882	19,160	79,529	148,080	347,200
3.00	C - MITC & Classroom	552,668	43,881	126,726	198,742	369,348	15,968	80,444	163,288	235,304
4.00	D - Computer Lab	427,093	64,383	114,234	93,135	271,753	11,997	93,767	143,618	122,519
5.00	E - Library Building	422,535	45,423	132,383	87,873	265,679	11,969	76,749	163,709	119,200
6.00	F - Counseling Center	372,223	37,791	58,070	169,870	265,731	11,980	69,011	89,291	201,090
7.00	G - Research Lab	496,555	126,864	177,678	169,481	474,024	19,783	166,683	217,496	209,299
8.00	H - Student Support Services	371,451	97,884	100,005	61,075	258,964	11,411	125,671	127,792	88,863
9.00	I - Directors Office	264,636	52,016	84,776	118,061	254,853	10,965	76,717	109,477	142,762
10.00	J - Restroom Facility	192,464	0	78,524	17,171	95,695	4,917	17,276	95,800	34,447
11.00	M - Midtown (Off Campus)	364,796	316,098	0	101,604	417,702	16,279	339,652	23,555	125,159
12.00	Site Infrastructure	906,841	274,568	113,281	290,187	678,036	34,267	391,226	229,939	406,845
	TOTALS EXCLUDING ESCALATION	5,835,321	1,226,237	1,385,016	1,816,420	4,427,673	195,262	1,702,962	1,861,741	2,293,145
			298,022	998,116	2,464,098	3,760,236	208,781	1,132,417	1,832,511	3,298,493
	TOTALS INCLUDING ESCALATION (3.4% per annum assumed)		1,524,259	2,383,132	4,280,518	8,187,909	404,042	2,835,380	3,694,252	5,591,638

The forecast Operational Costs (including escalation) as outlined in the above table are suggested for funding and budgeting purposes. Annualised costs are the total operational costs spent over a 30 year period (divided by 30).

The estimated replacement cost (2013 costs) of the COM-FSM assets on the Chuuk campus is approximately \$US5.835M (excluding land, loose furniture and equipment). Outlined below is the breakdown of the estimated asset replacement cost for the campus.



The Operational Cost and Percentages table (below) highlights where COM-FSM needs to invest in asset renewal and routine maintenance to maximise the life of the existing capital assets, to prevent deterioration and to avoid additional capital replacement expenditure.



The Operational Cost percentages diagram above that the M - Midtown building and Site Infrastructure takes a total of 43% of the Chuuk Operational cost budget, but together they only amount to 22% of the estimated replacement value of the Chuuk assets. The operational cost to estimated replacement value ratio highlights that these two asset are uneconomic and should be either replaced or targeted for asset renewal as soon as possible to reduce high on-going operational costs.

The forecast operational costs (\$US2, 835,380 for Years 1-10) equates to approximately \$US283, 500 per year average) identified above are significantly higher than what is currently being budgeted for maintenance by COM-FSM (\$150,000 per annum total for all 6 campuses). We consider that the forecast operational costs as outlined above are necessary to operate and maintain the capital investment already made by the COM-FSM on the Chuuk campus.

4.1.7 Limitations of the Condition Assessment

The life cycle and renewal/replacement projections used in our report are indicative only as they are predictions of future circumstances, which cannot be assured. Actual results may vary from the projections and these variations may be significantly more or less favorable than assumed herein. The findings in this report are current as at the date of inspection (June 2013) and not as the date of this report.

All estimated asset/capital replacement costs are high-level and indicative with an accuracy range of +/- 30%. Please note that these costs exclude all Government Goods and Services Taxes, Import/Customs Duties, Design/Procurement Costs, etc.

All estimated operational costs reflect capital replacement and maintenance works only of the buildings and site infrastructure.

All costs are detailed in the data sheets and spreadsheets (refer appendices) are current as at June 2013. Escalation of the Operational Costs have been added to the overall cost summaries. Escalation is assumed to be 3.4% per annum.

This assessment is not a health and safety audit. Beca does not accept liability for any client health and safety issues whether reported or not. Any issues arising from the possible presence of contaminated or potentially toxic materials onsite, (i.e. asbestos) are excluded from this report. This report does not constitute an environmental audit and no allowance has been made for the presence of any such materials should they exist at the subject property.

Our building condition audit is based on a visual assessment of the buildings and site infrastructure only. Furthermore the visual assessment was not a detailed engineering survey of the assets. cursory observations have been made of the following specialist elements however our report will not include for detailed investigation reports such as:

- Building Code of Compliance issues
- Building structures (e.g. Structural integrity, building subsidence, structural decay, etc.)
- Health and safety issues (e.g. asbestos, contaminated fill, leaky buildings, etc.)
- Mechanical services such as heating and ventilation
- Electrical services such as power, lighting and building management systems
- Information & technology and communication systems
- Sanitary plumbing and drainage
- Water reticulation
- Fire services
- Vertical transportation such as lifts and escalators
- Security

Whilst each building's structure was inspected for defects such as settlement, spalling, cracking and bowing, etc. it should be noted that this was an exterior visual assessment of the exposed parts of the building structures for the purpose of assigning condition grades and was not a structural engineering assessment of the buildings.

The building condition audit does not include for the inspection of sub-floor voids, roof/ceiling voids, plenum spaces or other areas that are difficult to access or could trigger health and safety issues. Our report will include a condition assessment of the roof surfaces, however these will be observed from ground level. No underground services have been able to be assessed, No detailed inspections (e.g. removal of wall linings etc.) have been carried out.

The building condition audit will not include for destructive testing of building elements which is normally associated with identifying extensive damage as a result of weather tightness issues. Problems potentially relating to leaky buildings and weather tightness will be flagged for further investigation.

The preparation of this report does not imply in any way that Beca has audited the financial statements, management accounts, engineering or other records of the COM-FSM Where another party has supplied information for use in this report, it is assumed to be reliable.

This report should not be reproduced or used for any other purpose without Beca's prior written permission in each instance.

Beca reserves the right, but not the obligation, to review all calculations included or referred to in this report and, if considered necessary, to revise its opinion in the light of any information existing at the site visit which becomes known after

4.1.8 Assumptions Made in the Condition Assessment

It has been assumed that:

- The rate of escalation over the next 30 years will be an average of 3.4% per annum.
- The existing buildings will be retained (this ignores the possible re-development of buildings as proposed by the current facilities development plan)

4.1.9 Exclusions from the Condition Assessment and Forecast Operational Costs

The following has been excluded from the Condition Assessment and forecast Operational Costs:

- Replacement of loose furniture, fittings and equipment has been excluded.
- The cost of renewal or maintenance of buildings that are leased is excluded (it is assumed that the building owners will carry out renewals and maintenance)
- This assessment excludes all other College operating costs such as energy bills, teaching & administration staff salaries and expenses, disposables, vehicles, tools, machinery, rental equipment, property/building leasing costs, travel costs, insurances etc.
- Taxes, duties and government charges.

5 Energy Audit

Key Points

The figures presented above are based on figures available for 4 months in 2012, and hence is a snapshot view and not necessarily representative of average energy use. If further records were available a more detailed analysis of the energy usage can be conducted and more targeted recommendations produced.

The Chuuk campus is using slightly less energy than average across the sites based on the 3 months of energy readings from 2012 provided. It is hard to see a trend from this data, but the computer lab and faculty office account for almost 50% of the electricity usage on site. Energy saving measures should start with these areas.

5.1 Energy Efficiency Recommendations

1. Ensure the set point of the units are around 24°C
2. Turn units off when spaces are un-occupied
3. Ensure units are free from obstructions, filters are clean, and pipework runs are straight to reduce loads on units
4. Close windows when systems are operating
5. Seal holes and penetrations into the building in areas that are air conditioned
6. Keep doors leading to AC spaces closed
7. Turn off lights when leaving a room
8. Replace ceiling insulation where missing

Appendix B

Building Condition Assessments



Property and Topo Survey for COM-FSM Chuuk Campus Weno, Chuuk

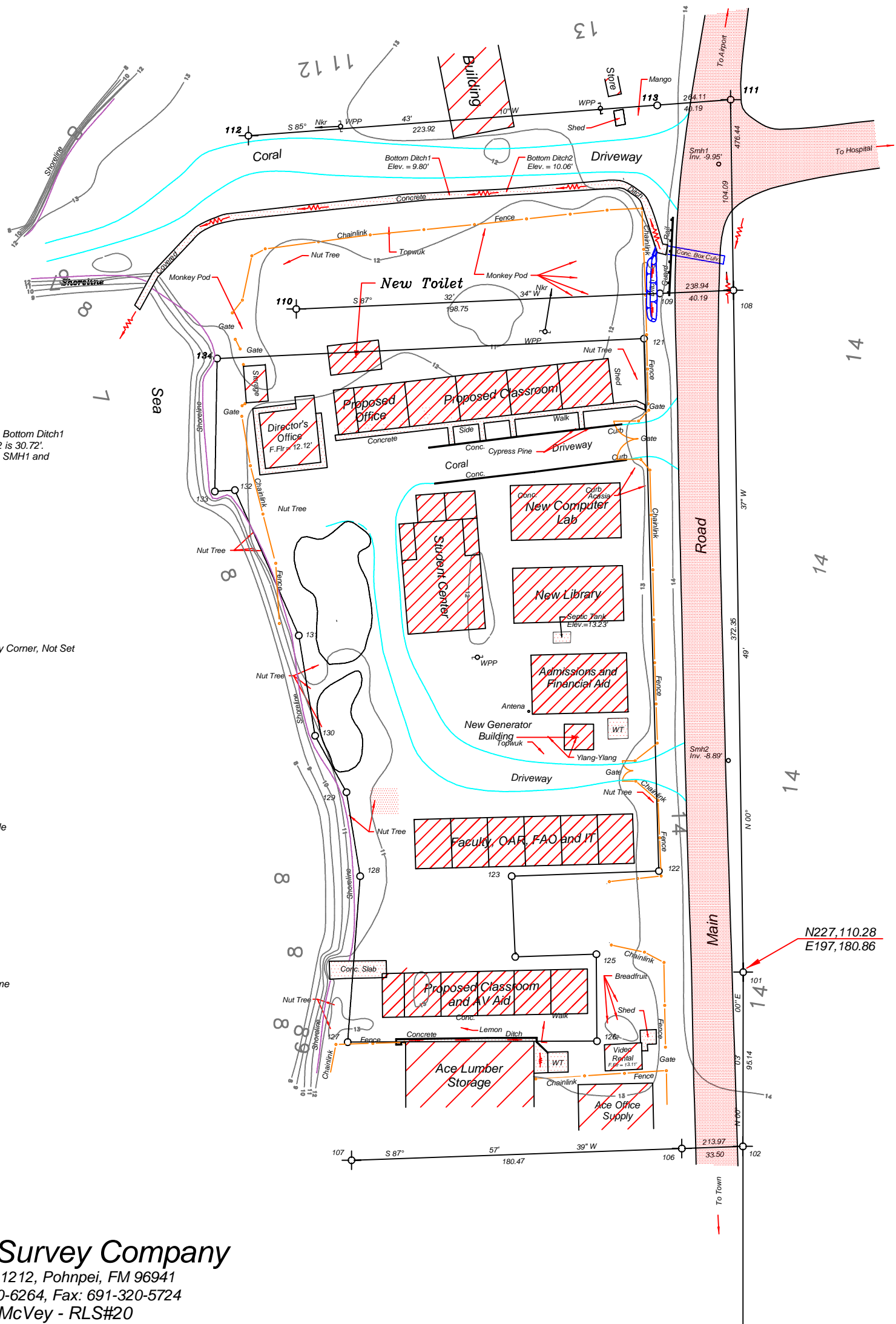
Scale: 1" = 40'

Note:

1. Distance between Bottom Ditch1 and Bottom Ditch2 is 30.72'.
2. Distance between SMH1 and SMH2 is 325.54'.

Legend

- = 1/2" Rebar Set
- ⊙ = Calculated Property Corner, Not Set
- Nkr = Anchor
- Conc. = Concrete
- Culv. = Culvert
- Elev. = Elevation
- F.Flir = Finish Floor
- Inv. = Invert
- SMH = Sewer Manhole
- WPP = Wooden Power Pole
- = Water Tank
- = Direction of Flow
- = Asphalt Concrete
- = Coconut Tree
- = Unknown Tree Name
- = Bandanus Tree

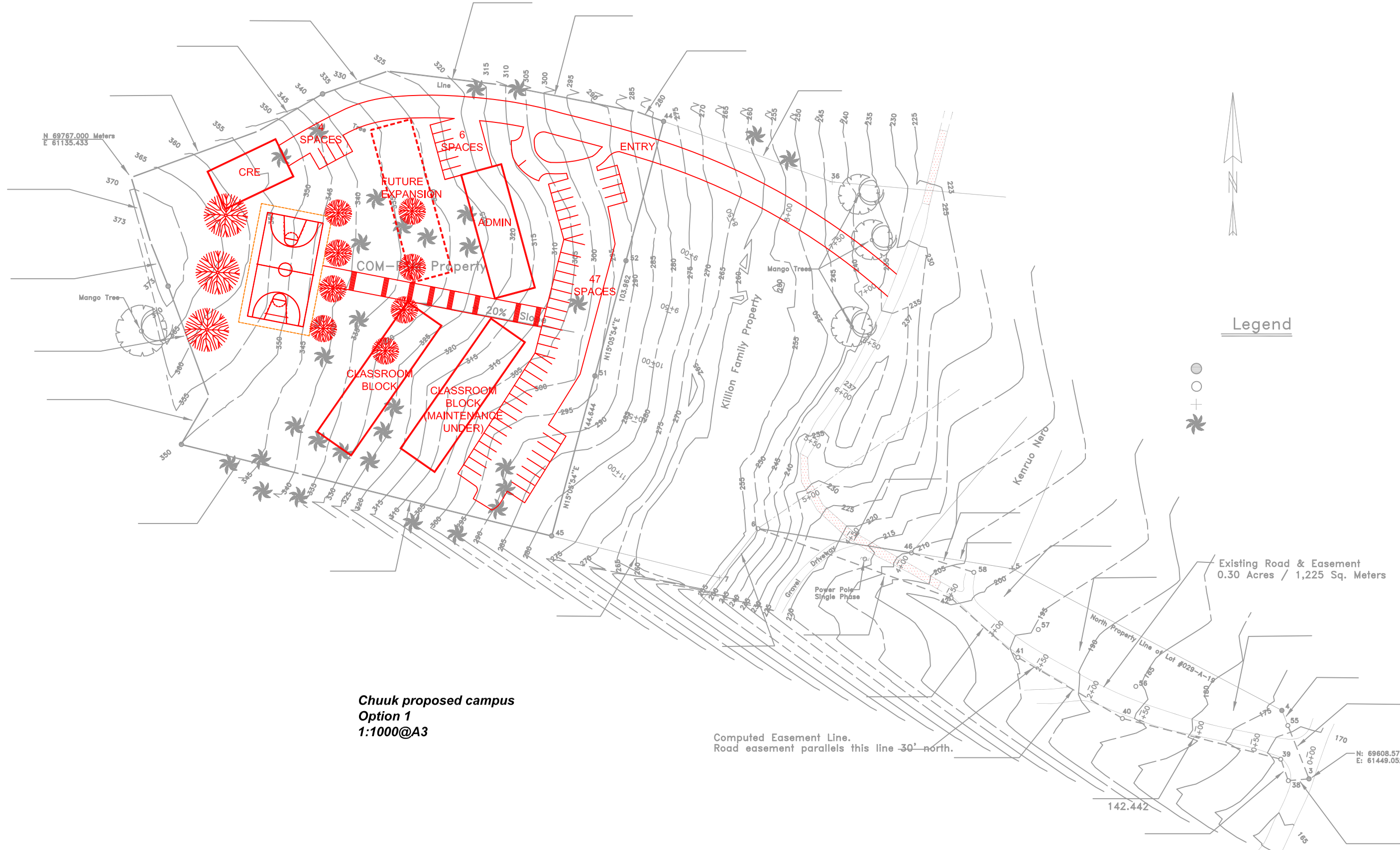


Pacific Survey Company

P. O. Box 1212, Pohnpei, FM 96941
 Tel: 691-320-6264, Fax: 691-320-5724
 Tim McVey - RLS#20
 Briner Sam - Party Chief
 Date: 27 August 2002

I certify that this Survey was Performed by me or under my Supervision in Accordance with Existing Laws and Regulations.

N 69767.000 Meters
E 61135.433



Legend

-
-
- +
- ✿

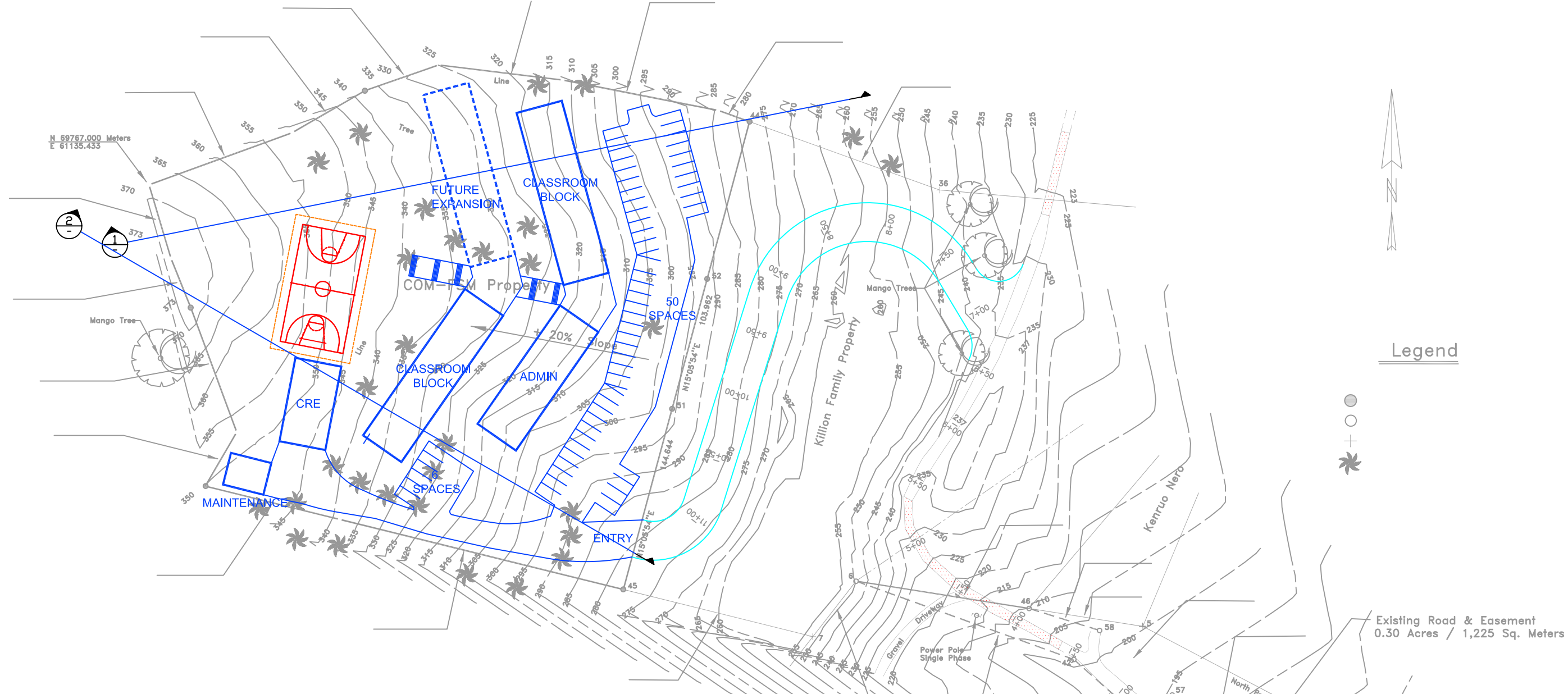
Existing Road & Easement
0.30 Acres / 1,225 Sq. Meters

**Chuuk proposed campus
Option 1
1:1000@A3**

Computed Easement Line.
Road easement parallels this line 30' north.

N: 69608.576 Meters
E: 61449.052

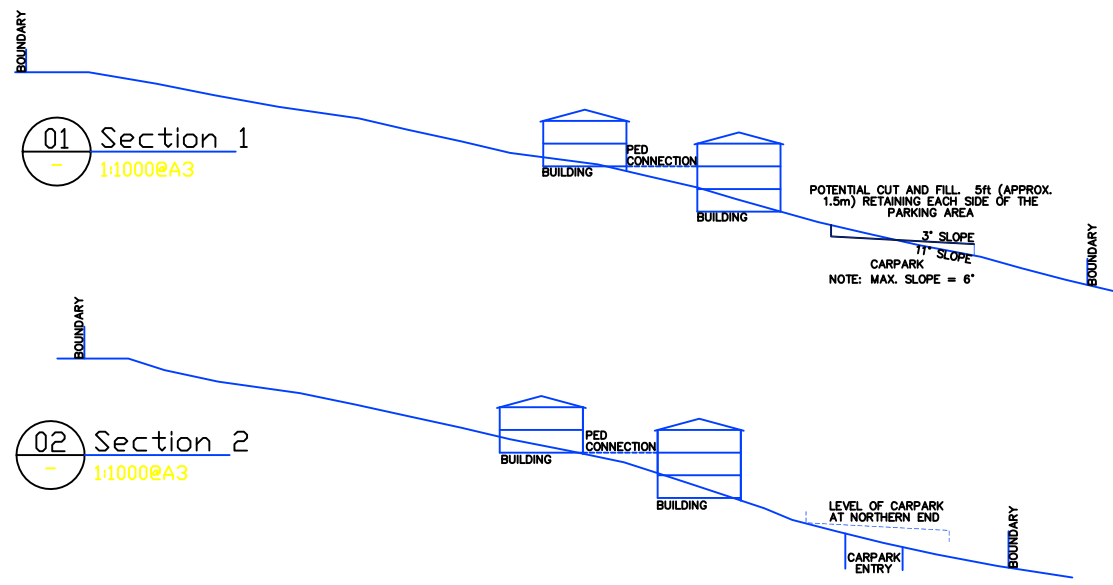
142.442



Legend

Existing Road & Easement
0.30 Acres / 1,225 Sq. Meters

**Chuuk proposed campus
Option 2
1:1000@A3**



Appendix B

Building Condition Assessments



CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE

A – ADMINISTRATION/FACULTY OFFICES



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost				Full Replace		Observed Deterioration/Recommendations	
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	%	% Full Replace		
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %								
1.00	Total Sub-Structure	2	30%						0	0	0	0	89,053	0.0%	Metal Rain Water Heads	Rusted out in parts
2.00	Total Frame	2	30%						0	0	0	0	94,762	0.0%		
3.00	Total Structural Walls	2	30%						0	0	0	0	53,452	0.0%	Profiled Metal Sheet Roof Cladding (Pre-Finished)	Faded paint to roof
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%		
5.00	Total Roof	3	50%						949	89,596	0	90,545	90,545	100.0%	PVC Downpipes	Algae growth, loose connections at downpipe droppers
6.00	Total External Walls & Finishes	2	30%						0	0	0	0	58,023	0.0%		
7.00	Total Windows & Doors	3	50%						0	0	64,384	64,384	64,384	100.0%	Vinyl Floor Finishes	Minor damage to tiles around exterior doors due to high traffic area
A	TOTAL STRUCTURE	3	50%						949	89,596	64,384	154,929	450,219	34.4%		
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%	Overall Recommendation/Action	Targeted regular maintenance and cleaning. Treat or replace rusted rainwater heads immediately. Repair decay (and any leaks) in soffit lining immediately. Refurbish floor and wall finishes by 2023. Regularly maintain and replace mechanical, fire and special services by 2023.
9.00	Total Internal Walls/Partitions	2	30%						0	0	0	0	28,500	0.0%		
10.00	Total Internal Doors	3	50%						0	0	9,108	9,108	9,108	100.0%		
11.00	Total Floor Finishes	3	50%						32,368	3,771	32,368	68,508	36,139	189.6%		
12.00	Total Wall Finishes	3	50%						52,539	17,216	52,539	122,293	69,755	175.3%		
13.00	Total Ceiling Finishes	3	50%						0	48,420	0	48,420	48,420	100.0%		
14.00	Total Fixed Joinery Units	2	30%						0	0	2,941	2,941	2,941	100.0%		
B	TOTAL INTERNAL FIT-OUT	3	50%						84,907	69,407	96,956	251,270	194,862	128.9%		
15.00	Total Sanitary Plumbing	2	30%						0	10,120	1,265	11,385	11,385	100.0%		
16.00	Total Mechanical Services	3	50%						21,505	38,962	21,505	81,972	34,535	237.4%		
17.00	Total Fire Services	1	10%						5,060	5,060	2,530	12,650	2,530	500.0%		
18.00	Total Electrical Services	3	50%						0	79,756	0	79,756	79,756	100.0%		
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%		
20.00	Total Special Services	3	50%						17,022	0	17,022	34,044	17,022	200.0%		
C	TOTAL BUILDING SERVICES	3	50%						43,587	133,898	42,322	219,808	145,228	151.4%		
	TOTAL BUILDING	3	50%						129,443	292,901	203,663	626,007	790,310	79.2%		

CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE

B – CLASSROOM BUILDING B



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost				Full Replace		Observed Deterioration/Recommendations
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace	
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %							
1.00	Total Sub-Structure	2	30%						0	0	0	0	72,321	0.0%	
2.00	Total Frame	2	30%						0	0	0	0	136,612	0.0%	
3.00	Total Structural Walls	2	30%						0	0	0	0	49,302	0.0%	
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%	
5.00	Total Roof	3	50%						0	17,209	57,283	74,492	74,492	100.0%	
6.00	Total External Walls & Finishes	3	50%						0	0	28,349	28,349	28,349	100.0%	
7.00	Total Windows & Doors	3	50%						0	20,873	58,781	79,653	79,653	100.0%	
A	TOTAL STRUCTURE	3	50%						0	38,082	144,413	182,494	440,729	41.4%	
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%	
9.00	Total Internal Walls/Partitions	2	30%						0	0	0	0	23,661	0.0%	
10.00	Total Internal Doors	0	0%						0	0	0	0	0	0.0%	
11.00	Total Floor Finishes	2	30%						0	0	3,135	3,135	20,944	15.0%	
12.00	Total Wall Finishes	2	30%						0	0	41,598	41,598	41,598	100.0%	
13.00	Total Ceiling Finishes	3	50%						0	7,844	22,179	30,023	30,023	100.0%	
14.00	Total Fixed Joinery Units	1	10%						0	0	3,036	3,036	3,036	100.0%	
B	TOTAL INTERNAL FIT-OUT	2	30%						0	7,844	69,948	77,792	119,262	65.2%	
15.00	Total Sanitary Plumbing	3	50%						0	3,795	8,602	12,397	12,397	100.0%	
16.00	Total Mechanical Services	3	50%						35,357	35,420	35,357	106,134	35,357	300.2%	
17.00	Total Fire Services	1	10%						2,530	2,530	1,265	6,325	1,265	500.0%	
18.00	Total Electrical Services	3	50%						0	13,649	45,973	59,622	59,622	100.0%	
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%	
20.00	Total Special Services	2	30%						0	5,118	0	5,118	5,118	100.0%	
C	TOTAL BUILDING SERVICES	3	50%						37,887	60,512	91,197	189,595	113,759	166.7%	
	TOTAL BUILDING	3	50%						37,887	106,438	305,557	449,882	673,750	66.8%	

TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT

Element	Observed Deterioration/Recommendations
Timber Doors (Solid/No Glazing)	Evidence of termite damage + normal wear and tear
Metal Gutters	Some minor rust at ends
Solid Plaster Wall Lining with Painted Finishes	Impact damage, dust and grit build up + general wear and tear
WHB (Single)	Good condition - Early signs of corrosion
Profiled Metal Sheet Roof Cladding (Pre-Finished)	Faded paint to roof
Overall Recommendation/Action	Targeted regular maintenance and cleaning. Treat and spot prime rusted gutters immediately. Review roof and consider re-painting. Treat and repair termite damage to doors. Regularly maintain and replace mechanical and fire services by 2023.

CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE

C – CLASSROOM BUILDING C



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %						
1.00	Total Sub-Structure	2	30%						0	0	0	0	68,377	0.0%
2.00	Total Frame	2	30%						0	0	0	0	74,553	0.0%
3.00	Total Structural Walls	2	30%						0	0	0	0	41,792	0.0%
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%
5.00	Total Roof	3	50%						0	62,663	9,399	72,061	72,061	100.0%
6.00	Total External Walls & Finishes	3	50%						0	0	8,742	8,742	40,648	21.5%
7.00	Total Windows & Doors	2	30%						0	0	49,807	49,807	68,965	72.2%
A	TOTAL STRUCTURE	3	50%						0	62,663	67,949	130,611	366,397	35.6%
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%
9.00	Total Internal Walls/Partitions	2	30%						0	0	0	0	7,172	0.0%
10.00	Total Internal Doors	2	30%						0	0	0	0	4,483	0.0%
11.00	Total Floor Finishes	3	50%						0	3,151	15,507	18,658	18,658	100.0%
12.00	Total Wall Finishes	3	50%						18,581	0	34,096	52,677	34,096	154.5%
13.00	Total Ceiling Finishes	3	50%						0	35,852	0	35,852	35,852	100.0%
14.00	Total Fixed Joinery Units	2	30%						0	0	3,036	3,036	3,036	100.0%
B	TOTAL INTERNAL FIT-OUT	3	50%						18,581	39,003	52,639	110,223	103,297	106.7%
15.00	Total Sanitary Plumbing	0	0%						0	0	0	0	0	0.0%
16.00	Total Mechanical Services	3	50%						22,770	17,710	22,770	63,250	22,770	277.8%
17.00	Total Fire Services	1	10%						2,530	2,530	1,265	6,325	1,265	500.0%
18.00	Total Electrical Services	2	30%						0	0	54,119	54,119	54,119	100.0%
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%
20.00	Total Special Services	2	30%						0	4,820	0	4,820	4,820	100.0%
C	TOTAL BUILDING SERVICES	3	50%						25,300	25,060	78,154	128,514	82,974	154.9%
	TOTAL BUILDING	3	50%						43,881	126,726	198,742	369,348	552,668	66.8%

TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT

Element	Observed Deterioration/Recommendations
Profiled Metal Sheet Roof Cladding (Pre-Finished)	Faded paint to roof, rust patches occurring
Solid Plaster Cladding with Painted Finishes	Minor paint flaking
Aluminium Louver with Timber Frame Windows	Evidence of termite damage to frames
Plasterboard Ceiling Lining with Painted Finishes	Evidence of leaks, Blistering of some paintwork
Plasterboard Wall Linings with Painted Finishes	Good condition, some minor impact damage
Overall Recommendation/Action	Targeted regular maintenance and cleaning. Treat and spot prime rusted roofing immediately. Review roof and consider re-painting. Treat and repair termite damage to windows. Refurbish wall finishes by 2023. Regularly maintain and replace mechanical and fire services by 2023

CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE

I - COMPUTER LAB



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT		
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace			% Full Replace
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %								
1.00	Total Sub-Structure	2	30%						0	0	0	0	44,851	0.0%	Element	Observed Deterioration/Recommendations
2.00	Total Frame	2	30%						0	0	0	0	83,010	0.0%		
3.00	Total Structural Walls	2	30%						0	0	0	0	62,927	0.0%	Aluminium Framed Windows	25% of windows appear to be boarded up, otherwise windows in ok condition
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%	Metal Gutters	Gutters corrosion around downpipes, minor impact damage
5.00	Total Roof	3	50%						2,313	34,768	0	37,081	37,081	100.0%	Air-Conditioning - DX/Split System	Tired by appearance. Functionality not tested
6.00	Total External Walls & Finishes	2	30%						0	0	0	0	23,326	0.0%	Profiled Metal Sheet Roof Cladding (Pre-Finished)	Rust present on topside of roof cladding
7.00	Total Windows & Doors	3	50%						0	18,444	8,516	26,960	43,536	61.9%	Metal Down Pipes	Downpipes corrosion around gutters
A	TOTAL STRUCTURE	3	50%						2,313	53,212	8,516	64,041	294,731	21.7%	Overall Recommendation/Action	Targeted regular maintenance and cleaning. Rust treat, repaint and clean roof and gutters immediately, or review replacement of roof and gutters. Repair boarded up windows and install security louvres. Refurbish floor finishes by 2023. Regularly maintain and replace mechanical, fire and special services by 2023
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	5,123	0.0%		
9.00	Total Internal Walls/Partitions	2	30%						0	0	0	0	571	0.0%		
10.00	Total Internal Doors	3	50%						0	0	3,036	3,036	3,036	100.0%		
11.00	Total Floor Finishes	3	50%						16,923	0	16,923	33,846	16,923	200.0%		
12.00	Total Wall Finishes	2	30%						0	1,307	14,369	15,676	15,676	100.0%		
13.00	Total Ceiling Finishes	2	30%						0	0	22,728	22,728	22,728	100.0%		
14.00	Total Fixed Joinery Units	2	30%						0	0	759	759	759	100.0%		
B	TOTAL INTERNAL FIT-OUT	3	50%						16,923	1,307	57,815	76,046	64,817	117.3%		
15.00	Total Sanitary Plumbing	0	0%						0	0	0	0	0	0.0%		
16.00	Total Mechanical Services	4	70%						35,420	17,710	17,710	70,840	17,710	400.0%		
17.00	Total Fire Services	2	30%						1,265	1,265	633	3,163	633	500.0%		
18.00	Total Electrical Services	3	50%						0	40,740	0	40,740	40,740	100.0%		
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%		
20.00	Total Special Services	3	50%						8,462	0	8,462	16,923	8,462	200.0%		
C	TOTAL BUILDING SERVICES	3	50%						45,147	59,715	26,804	131,666	67,544	194.9%		
	TOTAL BUILDING	3	50%						64,383	114,234	93,135	271,753	427,093	63.6%		

CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE

K – LEARNING RESOURCES CENTER



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT															
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace			% Full Replace													
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %																					
1.00	Total Sub-Structure	2	30%						0	0	0	0	45,747	0.0%	<table border="1"> <thead> <tr> <th>Element</th> <th>Observed Deterioration/Recommendations</th> </tr> </thead> <tbody> <tr> <td>Metal Gutters</td> <td>Gutters corrosion around downpipes, minor impact damage</td> </tr> <tr> <td>Profiled Metal Sheet Roof Cladding (Pre-Finished)</td> <td>Rust present on topside of roof cladding</td> </tr> <tr> <td>Metal Down Pipes</td> <td>Downpipes corrosion around gutters</td> </tr> <tr> <td>Timber Doors (Solid/No Glazing)</td> <td>Minor damage to frame</td> </tr> <tr> <td>Vinyl Floor Finishes</td> <td>Minor damage to tiles around exterior doors due to high traffic area</td> </tr> <tr> <td>Overall Recommendation/Action</td> <td>Targeted regular maintenance and cleaning. Rust treat, repaint and clean roof and gutters immediately, or review replacement of roof and gutters. Refurbish floor finishes by 2023. Regularly maintain and replace mechanical and fire services by 2023</td> </tr> </tbody> </table>	Element	Observed Deterioration/Recommendations	Metal Gutters	Gutters corrosion around downpipes, minor impact damage	Profiled Metal Sheet Roof Cladding (Pre-Finished)	Rust present on topside of roof cladding	Metal Down Pipes	Downpipes corrosion around gutters	Timber Doors (Solid/No Glazing)	Minor damage to frame	Vinyl Floor Finishes	Minor damage to tiles around exterior doors due to high traffic area	Overall Recommendation/Action	Targeted regular maintenance and cleaning. Rust treat, repaint and clean roof and gutters immediately, or review replacement of roof and gutters. Refurbish floor finishes by 2023. Regularly maintain and replace mechanical and fire services by 2023
Element	Observed Deterioration/Recommendations																												
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2.00	Total Frame	2	30%						0	0	0	0	89,592	0.0%															
3.00	Total Structural Walls	2	30%						0	0	0	0	41,162	0.0%															
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%															
5.00	Total Roof	3	50%						4,665	37,831	949	43,446	43,446	100.0%															
6.00	Total External Walls & Finishes	2	30%						0	0	0	0	23,668	0.0%															
7.00	Total Windows & Doors	3	50%						0	0	3,977	3,977	29,935	13.3%															
A	TOTAL STRUCTURE	3	50%						4,665	37,831	4,926	47,423	273,550	17.3%															
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%															
9.00	Total Internal Walls/Partitions	2	30%						0	0	0	0	3,852	0.0%															
10.00	Total Internal Doors	3	50%						0	0	3,036	3,036	5,768	52.6%															
11.00	Total Floor Finishes	3	50%						17,355	0	17,355	34,710	17,355	200.0%															
12.00	Total Wall Finishes	2	30%						0	0	14,494	14,494	26,049	55.6%															
13.00	Total Ceiling Finishes	2	30%						0	0	20,384	20,384	20,384	100.0%															
14.00	Total Fixed Joinery Units	1	10%						0	1,113	4,908	6,021	4,908	122.7%															
B	TOTAL INTERNAL FIT-OUT	2	30%						17,355	1,113	60,177	78,645	78,317	100.4%															
15.00	Total Sanitary Plumbing	0	0%						0	0	0	0	0	0.0%															
16.00	Total Mechanical Services	3	50%						22,138	44,275	22,138	88,550	22,138	400.0%															
17.00	Total Fire Services	1	10%						1,265	1,265	633	3,163	633	500.0%															
18.00	Total Electrical Services	3	50%						0	39,221	0	39,221	39,221	100.0%															
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%															
20.00	Total Special Services	2	30%						0	8,677	0	8,677	8,677	100.0%															
C	TOTAL BUILDING SERVICES	3	50%						23,403	93,438	22,770	139,611	70,668	197.6%															
	TOTAL BUILDING	3	50%						45,423	132,383	87,873	265,679	422,535	62.9%															

CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE

H – STUDENT SERVICES BUILDING



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %						
1.00	Total Sub-Structure	3	50%						0	0	0	0	77,017	0.0%
2.00	Total Frame	4	70%						12,650	0	0	12,650	82,295	15.4%
3.00	Total Structural Walls	4	70%						0	21,233	0	21,233	21,233	100.0%
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%
5.00	Total Roof	4	70%						47,109	0	0	47,109	47,109	100.0%
6.00	Total External Walls & Finishes	4	70%						13,121	0	0	13,121	13,121	100.0%
7.00	Total Windows & Doors	3	50%						0	9,488	6,575	16,062	16,062	100.0%
A	TOTAL STRUCTURE	4	70%						72,880	30,721	6,575	110,176	256,837	42.9%
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%
9.00	Total Internal Walls/Partitions	3	50%						0	0	0	0	949	0.0%
10.00	Total Internal Doors	3	50%						0	0	3,036	3,036	3,036	100.0%
11.00	Total Floor Finishes	4	70%						14,883	0	14,883	29,767	14,883	200.0%
12.00	Total Wall Finishes	4	70%						0	12,706	0	12,706	12,706	100.0%
13.00	Total Ceiling Finishes	3	50%						0	0	27,726	27,726	27,726	100.0%
14.00	Total Fixed Joinery Units	3	50%						0	5,693	0	5,693	5,693	100.0%
B	TOTAL INTERNAL FIT-OUT	4	70%						14,883	18,398	45,646	78,927	64,993	121.4%
15.00	Total Sanitary Plumbing	0	0%						0	0	0	0	0	0.0%
16.00	Total Mechanical Services	4	70%						7,590	7,590	7,590	22,770	7,590	300.0%
17.00	Total Fire Services	1	10%						2,530	2,530	1,265	6,325	1,265	500.0%
18.00	Total Electrical Services	3	50%						0	35,124	0	35,124	35,124	100.0%
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%
20.00	Total Special Services	0	0%						0	5,642	0	5,642	5,642	100.0%
C	TOTAL BUILDING SERVICES	3	50%						10,120	50,886	8,855	69,861	49,621	140.8%
	TOTAL BUILDING	4	70%						97,884	100,005	61,075	258,964	371,451	69.7%

TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT

Element	Observed Deterioration/Recommendations
Vinyl Floor Finishes	Minor damage to tiles around exterior doors due to high traffic area, gaps between tiles, dust build-up
WHB (Single)	General wear and tear, corrosion to taps
Air-Conditioning - Window Mounted Unit	Tired by appearance.
Structural Steel Frame Truss and columns for outside canopy	Good condition, Minor rust due to paint loss
Profiled Metal Sheet Roof Cladding (Pre-Finished)	Faded paint to roof, rust patches starting to appear
Overall Recommendation/Action	Targeted regular maintenance and cleaning. Rust treat, repaint and clean roof and structural steel frame immediately. Refurbish floor finishes by 2023. Regularly maintain and replace sanitary plumbing, mechanical, fire and special services by 2023

CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE

F – CRE BUILDING



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					Full Replace		Observed Deterioration/Recommendations
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace		
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %								
1.00	Total Sub-Structure	2	30%						0	0	0	0	49,277	0.0%	TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT Element Observed Deterioration/Recommendations Metal Rain Water Heads Corrosion at top. Some steel not protected Metal Gutters Corrosion to gutters Plywood Shadowclad with Painted Finishes Ok condition. Rusted flashings apparent and joints at front gable end needs attention Vinyl Floor Finishes - Tiled Minor damage to tiles around exterior doors due to high traffic area, gaps between tiles, dust build-up Fibre Cement Soffit Lining with Painted Finishes Damage to some corners Overall Recommendation/Action Targeted regular maintenance and cleaning. Rust treat, repaint and clean roof, gutters and wall flashings immediately. Refurbish floor, wall and ceiling finishes by 2023. Regularly maintain and replace mechanical, fire and special services by 2023	
2.00	Total Frame	3	50%						0	0	0	0	62,498	0.0%		
3.00	Total Structural Walls	2	30%						0	0	0	0	34,437	0.0%		
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%		
5.00	Total Roof	3	50%						4,627	42,254	949	47,830	47,830	100.0%		
6.00	Total External Walls & Finishes	4	70%						0	32,123	4,409	36,532	36,532	100.0%		
7.00	Total Windows & Doors	3	50%						0	0	29,838	29,838	30,203	98.8%		
A	TOTAL STRUCTURE	3	50%						4,627	74,377	35,196	114,200	260,777	43.8%		
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%		
9.00	Total Internal Walls/Partitions	2	30%						0	0	0	0	11,793	0.0%		
10.00	Total Internal Doors	3	50%						0	0	18,216	18,216	18,216	100.0%		
11.00	Total Floor Finishes	4	70%						18,196	2,200	18,196	38,592	20,396	189.2%		
12.00	Total Wall Finishes	3	50%						37,152	3,915	37,152	78,219	41,067	190.5%		
13.00	Total Ceiling Finishes	4	70%						10,434	15,579	0	26,013	26,013	100.0%		
14.00	Total Fixed Joinery Units	2	30%						0	0	21,027	21,027	21,027	100.0%		
B	TOTAL INTERNAL FIT-OUT	3	50%						65,782	21,693	94,591	182,066	138,512	131.4%		
15.00	Total Sanitary Plumbing	3	50%						0	16,445	6,325	22,770	22,770	100.0%		
16.00	Total Mechanical Services	4	70%						44,971	22,138	22,833	89,942	22,833	393.9%		
17.00	Total Fire Services	1	10%						1,898	1,898	949	4,744	949	500.0%		
18.00	Total Electrical Services	3	50%						0	41,128	0	41,128	41,128	100.0%		
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%		
20.00	Total Special Services	3	50%						9,587	0	9,587	19,174	9,587	200.0%		
C	TOTAL BUILDING SERVICES	3	50%						56,455	81,608	39,694	177,757	97,267	182.8%		
	TOTAL BUILDING	3	50%						126,864	177,678	169,481	474,024	496,555	95.5%		

CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE

J - STUDENT CENTER



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					Full Replace		Element	Observed Deterioration/Recommendations
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace			
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %									
1.00	Total Sub-Structure	3	50%						0	0	0	0	77,017	0.0%	PVC Downpipes	Missing	
2.00	Total Frame	4	70%						12,650	0	0	12,650	82,295	15.4%			
3.00	Total Structural Walls	4	70%						0	21,233	0	21,233	21,233	100.0%	Metal Gutters	To unenclosed area only, No end on gutters, missing portions	
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%			
5.00	Total Roof	4	70%						47,109	0	0	47,109	47,109	100.0%	Shipping Containers	Rusted out at base due to proximity to ground and area prone to flooding	
6.00	Total External Walls & Finishes	4	70%						13,121	0	0	13,121	13,121	100.0%			
7.00	Total Windows & Doors	3	50%						0	9,488	6,575	16,062	16,062	100.0%	Timber Framed Walls	Poor workmanship/ construction, Framing damaged at base due to water damage	
A	TOTAL STRUCTURE	4	70%						72,880	30,721	6,575	110,176	256,837	42.9%			
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%	Profiled Metal Sheet Wall Cladding (Pre-Finished)	Poor workmanship/ construction, corrosion and paint faded/ warn off	
9.00	Total Internal Walls/Partitions	3	50%						0	0	0	0	949	0.0%			
10.00	Total Internal Doors	3	50%						0	0	3,036	3,036	3,036	100.0%	Overall Recommendation/Action	Asset is run-down. Replace roof and gutters immediately. Provide ridge ventilation to roof. Immediate localised patching of wall cladding. Review asset condition in 2018.	
11.00	Total Floor Finishes	4	70%						14,883	0	14,883	29,767	14,883	200.0%			
12.00	Total Wall Finishes	4	70%						0	12,706	0	12,706	12,706	100.0%			
13.00	Total Ceiling Finishes	3	50%						0	0	27,726	27,726	27,726	100.0%			
14.00	Total Fixed Joinery Units	3	50%						0	5,693	0	5,693	5,693	100.0%			
B	TOTAL INTERNAL FIT-OUT	4	70%						14,883	18,398	45,646	78,927	64,993	121.4%			
15.00	Total Sanitary Plumbing	0	0%						0	0	0	0	0	0.0%			
16.00	Total Mechanical Services	4	70%						7,590	7,590	7,590	22,770	7,590	300.0%			
17.00	Total Fire Services	1	10%						2,530	2,530	1,265	6,325	1,265	500.0%			
18.00	Total Electrical Services	3	50%						0	33,024	0	33,024	33,024	100.0%			
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%			
20.00	Total Special Services	0	0%						0	3,542	0	3,542	3,542	100.0%			
C	TOTAL BUILDING SERVICES	3	50%						10,120	46,686	8,855	65,661	45,421	144.6%			
	TOTAL BUILDING	4	70%						97,884	95,805	61,075	254,764	367,251	69.4%			

CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE

D – CAMPUS DEAN’S OFFICE



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT		
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace	Element	Observed Deterioration/Recommendations
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %								
1.00	Total Sub-Structure	3	50%						0	0	0	0	35,886	0.0%		
2.00	Total Frame	3	50%						0	0	27,618	27,618	27,618	100.0%		
3.00	Total Structural Walls	4	70%						0	0	40,020	40,020	40,020	100.0%		
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%		
5.00	Total Roof	5	90%						19,727	1,249	0	20,976	20,976	100.0%		
6.00	Total External Walls & Finishes	3	50%						0	15,765	0	15,765	15,765	100.0%		
7.00	Total Windows & Doors	3	50%						0	0	17,548	17,548	17,548	100.0%		
A	TOTAL STRUCTURE	4	70%						19,727	17,014	85,186	121,928	157,813	77.3%		
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%		
9.00	Total Internal Walls/Partitions	3	50%						0	0	0	0	1,266	0.0%		
10.00	Total Internal Doors	3	50%						0	0	6,072	6,072	6,072	100.0%		
11.00	Total Floor Finishes	5	90%						13,301	0	12,176	25,477	13,301	191.5%		
12.00	Total Wall Finishes	3	50%						0	22,859	3,798	26,657	26,657	100.0%		
13.00	Total Ceiling Finishes	3	50%						0	10,726	0	10,726	10,726	100.0%		
14.00	Total Fixed Joinery Units	1	10%						0	0	380	380	380	100.0%		
B	TOTAL INTERNAL FIT-OUT	4	70%						13,301	33,585	22,426	69,311	58,401	118.7%		
15.00	Total Sanitary Plumbing	5	90%						8,223	3,795	0	12,018	12,018	100.0%		
16.00	Total Mechanical Services	3	50%						3,795	3,795	3,795	11,385	3,795	300.0%		
17.00	Total Fire Services	1	10%						633	633	316	1,581	316	500.0%		
18.00	Total Electrical Services	3	50%						0	25,955	0	25,955	25,955	100.0%		
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%		
20.00	Total Special Services	4	70%						6,338	0	6,338	12,676	6,338	200.0%		
C	TOTAL BUILDING SERVICES	4	70%						18,988	34,178	10,449	63,615	48,422	131.4%		
	TOTAL BUILDING	4	70%						52,016	84,776	118,061	254,853	264,636	96.3%		
															Overall Recommendation/Action	Targeted regular maintenance and cleaning. Rust treat, repaint and clean roof, or replace corroded roof immediately. Refurbish floor, finishes by 2023. Regularly maintain and replace sanitary plumbing, mechanical, fire and special services by 2023

CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE

E - RESTROOMS



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					Full Replace		Element	Observed Deterioration/Recommendations
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace			
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %									
1.00	Total Sub-Structure	2	30%						0	0	0	0	16,178	0.0%	TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT	Element Observed Deterioration/Recommendations	
2.00	Total Frame	2	30%						0	0	0	0	32,070	0.0%			
3.00	Total Structural Walls	2	30%						0	0	0	0	19,609	0.0%			
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%			
5.00	Total Roof	3	50%						0	13,177	0	13,177	13,177	100.0%			
6.00	Total External Walls & Finishes	3	50%						0	0	11,858	11,858	11,858	100.0%			
7.00	Total Windows & Doors	2	30%						0	0	0	0	9,799	0.0%			
A	TOTAL STRUCTURE	3	50%						0	13,177	11,858	25,035	102,691	24.4%			
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%			
9.00	Total Internal Walls/Partitions	2	30%						0	0	0	0	6,913	0.0%			
10.00	Total Internal Doors	3	50%						0	0	5,313	5,313	5,313	100.0%			
11.00	Total Floor Finishes	3	50%						0	8,682	0	8,682	8,682	100.0%			
12.00	Total Wall Finishes	3	50%						0	16,169	0	16,169	16,169	100.0%			
13.00	Total Ceiling Finishes	3	50%						0	8,102	0	8,102	8,102	100.0%			
14.00	Total Fixed Joinery Units	3	50%						0	3,932	0	3,932	3,932	100.0%			
B	TOTAL INTERNAL FIT-OUT	3	50%						0	36,884	5,313	42,197	49,110	85.9%			
15.00	Total Sanitary Plumbing	3	50%						0	28,463	0	28,463	28,463	100.0%			
16.00	Total Mechanical Services	0	0%						0	0	0	0	0	0.0%			
17.00	Total Fire Services	0	0%						0	0	0	0	0	0.0%			
18.00	Total Electrical Services	0	0%						0	0	0	0	12,199	0.0%			
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%			
20.00	Total Special Services	0	0%						0	0	0	0	0	0.0%			
C	TOTAL BUILDING SERVICES	2	30%						0	28,463	0	28,463	40,662	70.0%			
	TOTAL BUILDING	3	50%						0	78,524	17,171	95,695	192,464	49.7%			
															Overall Recommendation/Action	Targeted regular maintenance and cleaning. To extend asset life	

CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE

M - MIDTOWN (OFF CAMPUS)



ID Code	Element	Condition Grading		Condition Gauge					Asset Renewal Cost					
		Condition Grade	% Deterioration	VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
				0-20 %	20-40 %	40-60 %	60-80 %	80-100 %						
1.00	Total Sub-Structure	4	70%						0	0	48,699	48,699	48,699	100.0%
2.00	Total Frame	0	0%						0	0	0	0	0	0.0%
3.00	Total Structural Walls	5	90%						61,763	0	0	61,763	61,763	100.0%
4.00	Total Upper Floors	0	0%						0	0	0	0	0	0.0%
5.00	Total Roof	5	90%						87,087	0	28,270	115,357	87,087	132.5%
6.00	Total External Walls & Finishes	5	90%						20,784	0	0	20,784	20,784	100.0%
7.00	Total Windows & Doors	5	90%						26,945	0	0	26,945	26,945	100.0%
A	TOTAL STRUCTURE	5	90%						196,578	0	76,968	273,547	245,277	111.5%
8.00	Total Stairs Balustrades & Handrails	0	0%						0	0	0	0	0	0.0%
9.00	Total Internal Walls/Partitions	0	0%						0	0	0	0	0	0.0%
10.00	Total Internal Doors	0	0%						0	0	0	0	0	0.0%
11.00	Total Floor Finishes	4	70%						19,070	0	19,070	38,140	19,070	200.0%
12.00	Total Wall Finishes	5	90%						37,136	0	0	37,136	37,136	100.0%
13.00	Total Ceiling Finishes	5	90%						21,454	0	0	21,454	21,454	100.0%
14.00	Total Fixed Joinery Units	0	0%						0	0	0	0	0	0.0%
B	TOTAL INTERNAL FIT-OUT	5	90%						77,660	0	19,070	96,729	77,660	124.6%
15.00	Total Sanitary Plumbing	0	0%						0	0	0	0	0	0.0%
16.00	Total Mechanical Services	5	90%						5,566	0	5,566	11,132	5,566	200.0%
17.00	Total Fire Services	0	0%						0	0	0	0	0	0.0%
18.00	Total Electrical Services	5	90%						36,294	0	0	36,294	36,294	100.0%
19.00	Total Vertical Transportation	0	0%						0	0	0	0	0	0.0%
20.00	Total Special Services	0	0%						0	0	0	0	0	0.0%
C	TOTAL BUILDING SERVICES	5	90%						41,860	0	5,566	47,426	41,860	113.3%
	TOTAL BUILDING	5	90%						316,098	0	101,604	417,702	364,796	114.5%

TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT	
Element	Observed Deterioration/Recommendations
Reinforced Concrete Slab - Roof	Poor condition
External Structural Walls - Solid Plaster Cladding with Painted Finishes	Poor condition. Evidence of cracking, concrete spalling and exposed reinforcing steel
Timber Doors (Solid/No Glazing)	Very poor condition
Solid Plaster Wall Lining with Painted Finishes	Assumed poor condition from exterior (unable to view interior of building)
Reinforced Concrete Foundations Beams	Poor condition
Overall Recommendation/Action	Asset is showing significant structural and elemental failure. Consider if this off-campus facility is required by CoM. If it is required consider cost of renewal/upgrade verses demolition and replacement. If asset is no longer required run it down and divert funds to on-campus maintenance/renewal costs.

CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE **SITE INFRASTRUCTURE**

		Condition Gauge					Asset Renewal Cost					TOP 5 MAJOR ELEMENTS REQUIRING URGENT MAINTENANCE, RENEWAL OR REPLACEMENT				
ID Code	Element	Condition Grading		VG	G	A	P	VP	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Total	Full Replace	% Full Replace	Element	Observed Deterioration/Recommendations
		Condition Grade	% Deter.	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %								
1.00	Total Roothing	3	50%						2,593	2,593	1,297	6,483	1,297	500.0%	Concrete footpaths and gravel roads	Some areas of damage to footpaths observed. Replace damaged sections. Trim and grade gravel roads to falls, fill pot holes and ruts
2.00	Total Car Parks	0	0%						0	0	0	0	0	0.0%	Metal balustrades	Some areas of corrosion – treat and re-paint
3.00	Total Foot Paths & Collection Areas	3	50%						0	0	51,713	51,713	82,741	62.5%	Drainage	Monitor and clean swales, sumps and septic tanks. Underground pipework not assessed.
4.00	Total Fences & Gates	3	50%						0	0	27,415	27,415	29,237	93.8%	Electrical	Review tangled overhead power lines and make safe. Replace existing(over-sized) 300kW generator with 150-200kW generator within 5 years.
5.00	Total Structures	3	50%						0	0	70,929	70,929	186,050	38.1%	Water pumps	Some corrosion observed. Treat corrosion and service / maintain pumps regularly
6.00	Total Retaining Walls	3	50%						0	0	0	0	53,130	0.0%	Overall Recommendation/Action	Targeted regular maintenance and cleaning to extend asset life. Make safe low tangled overhead power lines. Replace existing generator within 5 years
7.00	Site Drainage	3	50%						0	0	81,909	81,909	118,594	69.1%		
8.00	Total Electrical Infrastructure	4	70%						253,000	110,688	0	363,688	363,688	100.0%		
9.00	Total Water Services	3	50%						18,975	0	56,925	75,900	72,105	105.3%		
10.00	Total Site Furniture	0	0%						0	0	0	0	0	0.0%		
TOTAL SITE INFRASTRUCTURE									274,568	113,281	290,187	678,036	906,841	74.8%		

Appendix C

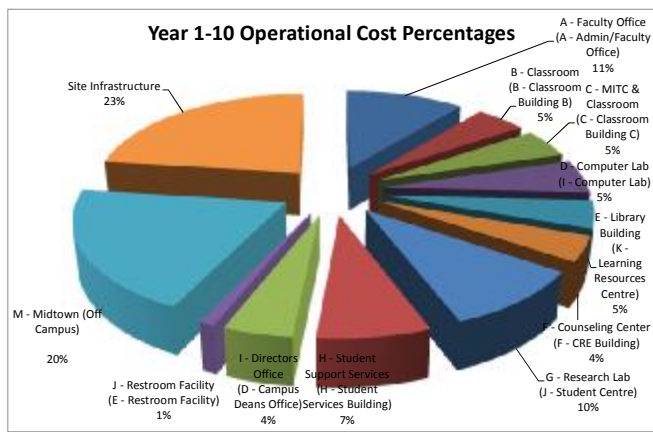
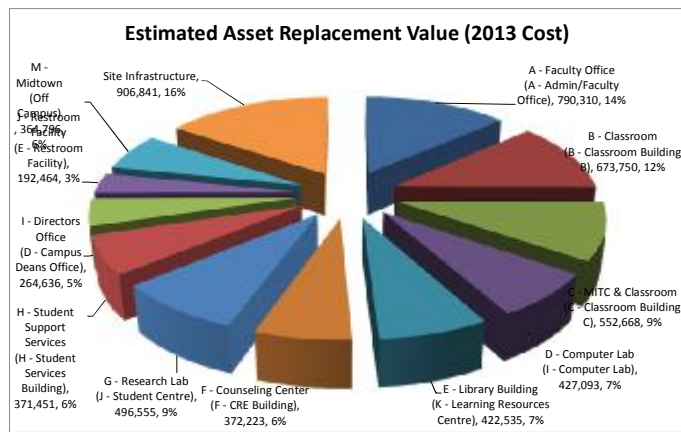
Indicative Asset Renewal and Maintenance Cost Plan





Audit Date: October 2013
 Revision: Final

Ref	Asset Description	Condition Grade	Key Metric Data				Replacement Cost		Year 1 - 10 Asset Renewal Cost vs Full Replacement Cost		Year 11 - 20 Asset Renewal Cost vs Full Replacement Cost		Year 21 - 30 Asset Renewal Cost vs Full Replacement Cost		Operational Cost (Cost of Renewal and Maintenance)											
			Rank 1 - 5	GFA (ft2)	GFA (m2)	Build Rate (ft2)	Build Rate (m2)	Cost (\$ USD)	Year 1 - 10 Asset Renewal Cost (\$ USD)	% of Full Replacement Cost	Year 11 - 20 Asset Renewal Cost (\$ USD)	% of Full Replacement Cost	Year 21 - 30 Asset Renewal Cost (\$ USD)	% of Full Replacement Cost	Total 30 Year Asset Renewal Cost (\$ USD)	% of Full Replacement Cost	Annualised Asset Renewal Cost	Annualised Maintenance Cost	Annualised Total Operational Cost	Total Year 1-10 Operational Cost (\$USD)	Total Year 11-20 Operational Cost (\$USD)	Total Year 21-30 Operational Cost (\$USD)				
1.00	A - Faculty Office (A - Admin/Faculty Office)	3	3,621	336	218	2,349	790,310	129,443	16%	292,901	37%	203,663	26%	626,007	79%	20,867	5,679	26,546	186,237	349,695	260,457					
2.00	B - Classroom (B - Classroom Building B)	3	2,903	270	232	2,498	673,750	37,887	6%	106,438	16%	305,557	45%	449,882	67%	14,996	4,164	19,160	79,529	148,080	347,200					
3.00	C - MITC & Classroom (C - Classroom Building C)	3	2,734	254	202	2,176	552,668	43,881	8%	126,726	23%	198,742	36%	369,348	67%	12,312	3,656	15,968	80,444	163,288	235,304					
4.00	D - Computer Lab (I - Computer Lab)	3	1,800	167	237	2,554	427,093	64,383	15%	114,234	27%	93,135	22%	271,753	64%	9,058	2,938	11,997	93,767	143,618	122,519					
5.00	E - Library Building (K - Learning Resources Centre)	3	1,846	171	229	2,464	422,535	45,423	11%	132,383	31%	87,873	21%	265,679	63%	8,856	3,133	11,989	76,749	163,709	119,200					
6.00	F - Counseling Center (F - CRE Building)	3	1,440	134	259	2,783	372,223	37,791	10%	58,070	16%	169,870	46%	265,731	71%	8,858	3,122	11,980	69,011	89,291	201,090					
7.00	G - Research Lab (J - Student Centre)	3	2,039	189	243	2,621	496,555	126,864	26%	177,678	36%	169,481	34%	474,024	95%	15,801	3,982	19,783	166,683	217,496	209,299					
8.00	H - Student Support Services (H - Student Services Building)	4	1,200	112	309	3,331	371,451	97,884	26%	100,005	27%	61,075	16%	258,964	70%	8,632	2,779	11,411	125,671	127,792	88,863					
9.00	I - Directors Office (D - Campus Deans Office)	4	1,348	125	196	2,113	264,636	52,016	20%	84,776	32%	118,061	45%	254,853	96%	8,495	2,470	10,965	76,717	109,477	142,762					
10.00	J - Restroom Facility (E - Restroom Facility)	3	410	38	469	5,048	192,464	0	0%	78,524	41%	17,171	9%	95,695	50%	3,190	1,728	4,917	17,276	95,800	34,447					
11.00	M - Midtown (Off Campus)	5	2,028	188	180	1,936	364,796	316,098	87%	0	0%	101,604	28%	417,702	115%	13,923	2,355	16,279	339,652	23,555	125,159					
12.00	Site Infrastructure						906,841	274,568	30%	113,281	12%	290,187	32%	678,036	75%	22,601	11,666	34,267	391,226	229,939	406,845					
TOTALS EXCLUDING ESCALATION								21,371	1,985			5,835,321	1,226,237	21%	1,385,016	24%	1,816,420	31%	4,427,673	76%	147,589	47,673	195,262	1,702,962	1,861,741	2,293,145
												298,022		998,116		2,464,098		3,760,236		125,341	83,440	208,781	1,132,417	1,832,511	3,298,493	
TOTALS INCLUDING ESCALATION (3.4% per annum assumed)													1,524,259		2,383,132		4,280,518		8,187,909		272,930	131,112	404,042	2,835,380	3,694,252	5,591,638



Project: **COLLEGE OF MICRONESIA - FSM**
 Campus: **CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE**
ASSET RENEWAL DETAILED EXPENDITURE
 Document: **CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN**



Audit Date: October 2013
 Revision: Final

Ref	Asset Description	Cost Split Summary	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total (\$ USD)	
			2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)	2023 (\$ USD)	2024 (\$ USD)	2025 (\$ USD)	2026 (\$ USD)	2027 (\$ USD)	2028 (\$ USD)	2029 (\$ USD)	2030 (\$ USD)	2031 (\$ USD)	2032 (\$ USD)	2033 (\$ USD)	2034 (\$ USD)	2035 (\$ USD)	2036 (\$ USD)	2037 (\$ USD)	2038 (\$ USD)	2039 (\$ USD)	2040 (\$ USD)	2041 (\$ USD)	2042 (\$ USD)		
1.00	A - Faculty Office (A - Admin/Faculty Office)	Annual Asset Renewal Cost	0	0	0	4,428	19,608	0	0	0	949	104,459	4,428	0	0	1,898	188,730	0	0	4,428	0	93,418	2,941	0	0	0	97,527	0	0	0	0	103,194	626,007	
		Year 1 - 10 Asset Renewal Cost	129,443										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Year 11 - 20 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Year 21 - 30 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.00	B - Classroom (B - Classroom Building B)	Annual Asset Renewal Cost	0	0	0	0	18,975	0	0	0	0	18,912	0	17,710	0	5,118	50,986	0	0	0	17,710	14,914	132,797	0	0	0	88,394	17,710	3,036	45,973	0	17,647	449,882	
		Year 1 - 10 Asset Renewal Cost	37,887										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Year 11 - 20 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Year 21 - 30 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.00	C - MITC & Classroom (C - Classroom Building C)	Annual Asset Renewal Cost	0	0	0	8,855	1,265	0	0	0	0	33,761	8,855	0	0	7,972	99,779	0	0	8,855	0	1,265	18,897	0	0	0	93,230	0	0	54,119	0	32,496	369,348	
		Year 1 - 10 Asset Renewal Cost	43,881										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Year 11 - 20 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Year 21 - 30 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.00	D - Computer Lab (I - Computer Lab)	Annual Asset Renewal Cost	0	0	17,710	0	633	0	0	0	2,313	43,727	0	0	0	1,307	53,844	0	17,710	0	0	41,373	37,856	0	0	17,710	12,184	0	0	0	0	25,385	271,753	
		Year 1 - 10 Asset Renewal Cost	64,383										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Year 11 - 20 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Year 21 - 30 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.00	E - Library Building (K - Learning Resources Centre)	Annual Asset Renewal Cost	0	0	0	22,138	633	0	0	0	4,665	17,987	22,138	0	0	9,791	38,464	0	0	22,138	0	39,853	35,827	0	0	0	29,783	0	3,795	0	1,113	17,355	265,679	
		Year 1 - 10 Asset Renewal Cost	45,423										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Year 11 - 20 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Year 21 - 30 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.00	F - Counseling Center (F - CRE Building)	Annual Asset Renewal Cost	0	0	5,693	4,428	633	11,667	0	0	3,795	11,576	4,428	0	5,693	0	31,045	0	0	4,428	0	12,478	74,958	0	5,693	0	44,281	11,667	380	21,948	0	10,943	265,731	
		Year 1 - 10 Asset Renewal Cost	37,791										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Year 11 - 20 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Year 21 - 30 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.00	G - Research Lab (J - Student Centre)	Annual Asset Renewal Cost	0	0	22,138	0	949	18,196	0	0	15,061	70,521	0	0	0	0	113,464	0	22,138	0	0	42,077	27,162	0	0	22,138	45,822	25,786	1,139	0	0	47,435	474,024	
		Year 1 - 10 Asset Renewal Cost	126,864										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Year 11 - 20 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Year 21 - 30 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8.00	H - Student Support Services (H - Student Services Building)	Annual Asset Renewal Cost	0	0	13,732	0	1,265	8,761	0	12,650	54,089	7,388	0	0	7,590	0	50,384	0	0	0	0	42,031	0	0	7,590	0	38,602	8,761	0	0	0	6,123	258,964	
		Year 1 - 10 Asset Renewal Cost	97,884										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Year 11 - 20 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Year 21 - 30 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.00	I - Directors Office (D - Campus Deans Office)	Annual Asset Renewal Cost	0	12,176	29,075	0	4,111	6,338	0	0	0	316	0	0	0	0	58,505	0	0	0	0	26,271	0	12,176	0	0	59,148	6,338	380	0	0	40,020	254,853	
		Year 1 - 10 Asset Renewal Cost	52,016										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Year 11 - 20 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Year 21 - 30 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.00	J - Restroom Facility (E - Restroom Facility)	Annual Asset Renewal Cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	78,524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	95,695	
		Year 1 - 10 Asset Renewal Cost	0										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Year 11 - 20 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Year 21 - 30 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Project: COLLEGE OF MICRONESIA - FSM
 Campus: CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE
 Document: ASSET RENEWAL DETAILED EXPENDITURE
 CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN

Audit Date: October 2013
 Revision: Final



Ref	Asset Description	Cost Split Summary	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total (\$ USD)
			2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)	2023 (\$ USD)	2024 (\$ USD)	2025 (\$ USD)	2026 (\$ USD)	2027 (\$ USD)	2028 (\$ USD)	2029 (\$ USD)	2030 (\$ USD)	2031 (\$ USD)	2032 (\$ USD)	2033 (\$ USD)	2034 (\$ USD)	2035 (\$ USD)	2036 (\$ USD)	2037 (\$ USD)	2038 (\$ USD)	2039 (\$ USD)	2040 (\$ USD)	2041 (\$ USD)	2042 (\$ USD)	
11.00	M - Midtown (Off Campus)	Annual Asset Renewal Cost	0	33,836	60,867	36,294	47,729	19,070	0	0	0	118,303	0	0	0	0	0	0	0	0	0	0	0	33,836	0	0	0	19,070	0	0	0	48,699	417,702
		Year 1 - 10 Asset Renewal Cost	316,098										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Year 11 - 20 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	0																			
		Year 21 - 30 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	101,604									
12.00	Site Infrastructure	Annual Asset Renewal Cost	0	0	254,297	0	0	0	0	1,297	0	18,975	0	0	1,297	0	110,688	0	0	1,297	0	0	0	0	1,297	0	250,700	0	0	0	0	38,190	678,036
		Year 1 - 10 Asset Renewal Cost	274,568										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Year 11 - 20 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	113,281																			
		Year 21 - 30 Asset Renewal Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	290,187									
Total Campus Annual Asset Renewal Cost (Excluding Escalation)			0	46,012	403,510	76,141	95,799	64,032	0	13,947	80,872	445,925	39,848	17,710	14,579	26,085	874,412	0	39,848	41,144	17,710	313,680	330,438	46,012	14,579	39,848	776,845	89,332	8,729	122,039	1,113	387,486	4,427,673
Year 1 - 10 Asset Renewal Cost (Excluding Escalation)			1,226,237										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Year 11 - 20 Asset Renewal Cost (Excluding Escalation)			-	-	-	-	-	-	-	-	-	-	1,385,016																				
Year 21 - 30 Asset Renewal Cost (Excluding Escalation)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,816,420										
Total Campus Annual Asset Renewal Cost (Including Escalation)			0	49,194	446,083	87,037	113,230	78,257	0	18,224	109,266	622,970	57,561	26,452	22,516	41,657	1,443,857	0	70,348	75,107	33,428	612,207	666,840	96,011	31,456	88,898	1,792,039	213,080	21,528	311,225	2,935	1,056,505	8,187,909
Year 1 - 10 Asset Renewal Cost (Including Escalation)			1,524,259										-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Year 11 - 20 Asset Renewal Cost (Including Escalation)			-	-	-	-	-	-	-	-	-	-	2,383,132																				
Year 21 - 30 Asset Renewal Cost (Including Escalation)			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,280,518										

Project: COLLEGE OF MICRONESIA - FSM
 Campus: CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE

SUMMARY OF BUILDING & ELEMENT RENEWAL COSTS

Document: **CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN**

Audit Date: October 2013

Revision: Final



Ref	Building	Cost Period	Sub-Structure	Frame	Structural Walls	Upper Floors	Roof	External Walls & Finishes	Windows & Doors	Structure	Stairs Balus. & Handrails	Internal Walls & Partitions	Internal Doors	Floor Finishes	Wall Finishes	Ceiling Finishes	Fixed Joinery Units	Internal Fit-Out	Sanitary Plumbing	Mech. Services	Fire Services	Electrical Services	Vertical Transport	Special Services	Building Services	Building	
1.00	A - Faculty Office (A - Admin/Faculty Office)	Year 1 - 10 Asset Renewal Cost (\$ USD)	0	0	0	0	949	0	0	949	0	0	0	32,368	52,539	0	0	84,907	0	21,505	5,060	0	0	17,022	43,587	129,443	
		Year 11 - 20 Asset Renewal Cost (\$ USD)	0	0	0	0	89,596	0	0	89,596	0	0	0	3,771	17,216	48,420	0	0	69,407	10,120	38,962	5,060	79,756	0	0	133,898	292,901
		Year 21 - 30 Asset Renewal Cost (\$ USD)	0	0	0	0	0	0	64,384	64,384	0	0	9,108	32,368	52,539	0	2,941	96,956	1,265	21,505	2,530	0	0	17,022	42,322	203,663	
		Total (\$ USD)	0	0	0	0	90,545	0	64,384	154,929	0	0	9,108	68,508	122,293	48,420	2,941	251,270	11,385	81,972	12,650	79,756	0	34,044	219,808	626,007	
2.00	B - Classroom (B - Classroom Building B)	Year 1 - 10 Asset Renewal Cost (\$ USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35,357	2,530	0	0	0	37,887	37,887	
		Year 11 - 20 Asset Renewal Cost (\$ USD)	0	0	0	0	17,209	0	20,873	38,082	0	0	0	0	0	7,844	0	7,844	3,795	35,420	2,530	13,649	0	5,118	60,512	106,438	
		Year 21 - 30 Asset Renewal Cost (\$ USD)	0	0	0	0	57,283	28,349	58,781	144,413	0	0	0	3,135	41,598	22,179	3,036	69,948	8,602	35,357	1,265	45,973	0	0	91,197	305,557	
		Total (\$ USD)	0	0	0	0	74,492	28,349	79,653	182,494	0	0	0	3,135	41,598	30,023	3,036	77,792	12,397	106,134	6,325	59,622	0	5,118	189,595	449,882	
3.00	C - MITC & Classroom (C - Classroom Building C)	Year 1 - 10 Asset Renewal Cost (\$ USD)	0	0	0	0	0	0	0	0	0	0	0	0	18,581	0	0	18,581	0	22,770	2,530	0	0	0	25,300	43,881	
		Year 11 - 20 Asset Renewal Cost (\$ USD)	0	0	0	0	62,663	0	0	62,663	0	0	0	3,151	0	35,852	0	0	39,003	0	17,710	2,530	0	0	4,820	25,060	126,726
		Year 21 - 30 Asset Renewal Cost (\$ USD)	0	0	0	0	9,399	8,742	49,807	67,949	0	0	0	15,507	34,096	0	3,036	52,639	0	22,770	1,265	54,119	0	0	0	78,154	198,742
		Total (\$ USD)	0	0	0	0	72,061	8,742	49,807	130,611	0	0	0	18,658	52,677	35,852	3,036	110,223	0	63,250	6,325	54,119	0	4,820	128,514	369,348	
4.00	D - Computer Lab (I - Computer Lab)	Year 1 - 10 Asset Renewal Cost (\$ USD)	0	0	0	0	2,313	0	0	2,313	0	0	0	16,923	0	0	0	16,923	0	35,420	1,265	0	0	8,462	45,147	64,383	
		Year 11 - 20 Asset Renewal Cost (\$ USD)	0	0	0	0	34,768	0	18,444	53,212	0	0	0	0	1,307	0	0	1,307	0	17,710	1,265	40,740	0	0	59,715	114,234	
		Year 21 - 30 Asset Renewal Cost (\$ USD)	0	0	0	0	0	0	8,516	8,516	0	0	3,036	16,923	14,369	22,728	759	57,815	0	17,710	633	0	0	8,462	26,804	93,135	
		Total (\$ USD)	0	0	0	0	37,081	0	26,960	64,041	0	0	3,036	33,846	15,676	22,728	759	76,046	0	70,840	3,163	40,740	0	16,923	131,666	271,753	
5.00	E - Library Building (K - Learning Resources Centre)	Year 1 - 10 Asset Renewal Cost (\$ USD)	0	0	0	0	4,665	0	0	4,665	0	0	0	17,355	0	0	0	17,355	0	22,138	1,265	0	0	0	23,403	45,423	
		Year 11 - 20 Asset Renewal Cost (\$ USD)	0	0	0	0	37,831	0	0	37,831	0	0	0	0	0	0	0	1,113	1,113	0	44,275	1,265	39,221	0	8,677	93,438	132,383
		Year 21 - 30 Asset Renewal Cost (\$ USD)	0	0	0	0	949	0	3,977	4,926	0	0	3,036	17,355	14,494	20,384	4,908	60,177	0	22,138	633	0	0	0	22,770	87,873	
		Total (\$ USD)	0	0	0	0	43,446	0	3,977	47,423	0	0	3,036	34,710	14,494	20,384	6,021	78,645	0	88,550	3,163	39,221	0	8,677	139,611	265,679	
6.00	F - Counseling Center (F - CRE Building)	Year 1 - 10 Asset Renewal Cost (\$ USD)	0	0	0	0	0	0	0	0	0	0	0	11,667	0	0	0	11,667	3,795	14,295	1,265	0	0	6,769	26,123	37,791	
		Year 11 - 20 Asset Renewal Cost (\$ USD)	0	0	0	0	0	0	0	0	0	0	0	4,208	8,880	10,999	0	24,087	6,325	14,548	1,265	11,845	0	0	33,983	58,070	
		Year 21 - 30 Asset Renewal Cost (\$ USD)	0	0	0	0	39,025	0	25,142	64,167	0	0	14,079	11,667	23,344	8,161	380	57,631	4,428	14,295	633	21,948	0	6,769	48,071	169,870	
		Total (\$ USD)	0	0	0	0	39,025	0	25,142	64,167	0	0	14,079	27,543	32,224	19,160	380	93,386	14,548	43,137	3,163	33,793	0	13,538	108,177	265,731	
7.00	G - Research Lab (J - Student Centre)	Year 1 - 10 Asset Renewal Cost (\$ USD)	0	0	0	0	4,627	0	0	4,627	0	0	0	18,196	37,152	10,434	0	65,782	0	44,971	1,898	0	0	9,587	56,455	126,864	
		Year 11 - 20 Asset Renewal Cost (\$ USD)	0	0	0	0	42,254	32,123	0	74,377	0	0	0	2,200	3,915	15,579	0	21,693	16,445	22,138	1,898	41,128	0	0	81,608	177,678	
		Year 21 - 30 Asset Renewal Cost (\$ USD)	0	0	0	0	949	4,409	29,838	35,196	0	0	18,216	18,196	37,152	0	21,027	94,591	6,325	22,833	949	0	0	9,587	39,694	169,481	
		Total (\$ USD)	0	0	0	0	47,830	36,532	29,838	114,200	0	0	18,216	38,592	78,219	26,013	21,027	182,066	22,770	89,942	4,744	41,128	0	19,174	177,757	474,024	
8.00	H - Student Support Services (H - Student Services Building)	Year 1 - 10 Asset Renewal Cost (\$ USD)	0	12,650	0	0	47,109	13,121	0	72,880	0	0	0	14,883	0	0	0	14,883	0	7,590	2,530	0	0	0	10,120	97,884	
		Year 11 - 20 Asset Renewal Cost (\$ USD)	0	0	21,233	0	0	0	9,488	30,721	0	0	0	0	12,706	0	5,693	18,398	0	7,590	2,530	35,124	0	5,642	50,886	100,005	
		Year 21 - 30 Asset Renewal Cost (\$ USD)	0	0	0	0	0	0	6,575	6,575	0	0	3,036	14,883	0	27,726	0	45,646	0	7,590	1,265	0	0	0	8,855	61,075	
		Total (\$ USD)	0	12,650	21,233	0	47,109	13,121	16,062	110,176	0	0	3,036	29,767	12,706	27,726	5,693	78,927	0	22,770	6,325	35,124	0	5,642	69,861	258,964	

Project: COLLEGE OF MICRONESIA - FSM
 Campus: CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE
 Document: SUMMARY OF BUILDING & ELEMENT RENEWAL COSTS
 CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013
 Revision: Final

Ref	Building	Cost Period	Sub-Structure	Frame	Structural Walls	Upper Floors	Roof	External Walls & Finishes	Windows & Doors	Structure	Stairs Balus. & Handrails	Internal Walls & Partitions	Internal Doors	Floor Finishes	Wall Finishes	Ceiling Finishes	Fixed Joinery Units	Internal Fit-Out	Sanitary Plumbing	Mech. Services	Fire Services	Electrical Services	Vertical Transport	Special Services	Building Services	Building	
9.00	I - Directors Office (D - Campus Deans Office)	Year 1 - 10 Asset Renewal Cost (\$ USD)	0	0	0	0	19,727	0	0	19,727	0	0	0	13,301	0	0	0	13,301	8,223	3,795	633	0	0	6,338	18,988	52,016	
		Year 11 - 20 Asset Renewal Cost (\$ USD)	0	0	0	0	1,249	15,765	0	17,014	0	0	0	0	22,859	10,726	0	33,585	3,795	3,795	633	25,955	0	0	34,178	84,776	
		Year 21 - 30 Asset Renewal Cost (\$ USD)	0	27,618	40,020	0	0	17,548	85,186	0	0	6,072	12,176	3,798	0	380	22,426	0	3,795	316	0	0	6,338	10,449	118,061		
		Total (\$ USD)	0	27,618	40,020	0	20,976	15,765	17,548	121,928	0	0	6,072	25,477	26,657	10,726	380	69,311	12,018	11,385	1,581	25,955	0	12,676	63,615	254,853	
10.00	J - Restroom Facility (E - Restroom Facility)	Year 1 - 10 Asset Renewal Cost (\$ USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Year 11 - 20 Asset Renewal Cost (\$ USD)	0	0	0	0	13,177	0	0	13,177	0	0	0	8,682	16,169	8,102	3,932	36,884	28,463	0	0	0	0	0	0	28,463	78,524
		Year 21 - 30 Asset Renewal Cost (\$ USD)	0	0	0	0	0	11,858	0	11,858	0	0	5,313	0	0	0	0	5,313	0	0	0	0	0	0	0	17,171	
		Total (\$ USD)	0	0	0	0	13,177	11,858	0	25,035	0	0	5,313	8,682	16,169	8,102	3,932	42,197	28,463	0	0	0	0	0	0	28,463	95,695
11.00	M - Midtown (Off Campus)	Year 1 - 10 Asset Renewal Cost (\$ USD)	0	0	61,763	0	87,087	20,784	26,945	196,578	0	0	0	19,070	37,136	21,454	0	77,660	0	5,566	0	36,294	0	0	41,860	316,098	
		Year 11 - 20 Asset Renewal Cost (\$ USD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Year 21 - 30 Asset Renewal Cost (\$ USD)	48,699	0	0	0	28,270	0	0	76,968	0	0	0	19,070	0	0	0	19,070	0	5,566	0	0	0	0	5,566	101,604	
		Total (\$ USD)	48,699	0	61,763	0	115,357	20,784	26,945	273,547	0	0	0	38,140	37,136	21,454	0	96,729	0	11,132	0	36,294	0	0	47,426	417,702	
Total - Year 1 - 10 Asset Renewal Cost (\$ USD)			0	12,650	61,763	0	166,477	33,906	26,945	301,740	0	0	0	143,764	145,408	31,888	0	321,060	12,018	213,406	18,975	36,294	0	48,177	328,869	951,669	
Total - Year 11 - 20 Asset Renewal Cost (\$ USD)			0	0	21,233	0	298,747	47,888	48,804	416,672	0	0	0	22,012	83,051	137,522	10,737	253,322	68,943	202,147	18,975	287,419	0	24,258	601,741	1,271,735	
Total - Year 21 - 30 Asset Renewal Cost (\$ USD)			48,699	27,618	40,020	0	135,875	53,358	264,569	570,138	0	0	61,896	161,282	221,390	101,179	36,466	582,213	20,620	173,558	9,488	122,039	0	48,177	373,882	1,526,233	
Grand Total (\$ USD)			48,699	40,268	123,015	0	601,099	135,152	340,317	1,288,550	0	0	61,896	327,058	449,849	270,588	47,203	1,156,595	101,580	589,111	47,438	445,752	0	120,612	1,304,492	3,749,637	

Project: COLLEGE OF MICRONESIA - FSM
 Campus: CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE
 Document: SUMMARY OF SITE INFRASTRUCTURE RENEWAL COSTS
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN

Audit Date: October 2013
 Revision: Final



Ref	Building	Cost Period	Roading	Car Parks	Foot Paths & Circulation Areas	Fences & Gates	Structures	Retaining Walls	Site Drainage	Electrical Infrastructure	Water Services	Site Furniture	Total
1.00	Site Infrastructure	Year 1 - 10 Asset Renewal Cost (\$ USD)	2,593	0	0	0	0	0	0	253,000	18,975	0	274,568
		Year 11 - 20 Asset Renewal Cost (\$ USD)	2,593	0	0	0	0	0	0	110,688	0	0	113,281
		Year 21 - 30 Asset Renewal Cost (\$ USD)	1,297	0	51,713	27,415	70,929	0	81,909	0	56,925	0	290,187
		Total (\$ USD)	6,483	0	51,713	27,415	70,929	0	81,909	363,688	75,900	0	678,036

Project: **COLLEGE OF MICRONESIA - FSM**
 Campus: **CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE**
SUMMARY OF BUILDING & ELEMENT CONDITION GRADES
 Document: **CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN**

Audit Date: October 2013
 Revision: Final



Ref	Building	Sub-Structure	Frame	Structural Walls	Upper Floors	Roof	External Walls & Finishes	Windows & Doors	Structure	Stairs Balus. & Handrails	Internal Walls & Partitions	Internal Doors	Floor Finishes	Wall Finishes	Ceiling Finishes	Fixed Joinery Units	Internal Fit-Out	Sanitary Plumbing	Mech. Services	Fire Services	Electrical Services	Vertical Transport	Special Services	Building Services	Building
1.00	A - Faculty Office (A - Admin/Faculty Office)	2	2	2	0	3	2	3	3	0	2	3	3	3	3	2	3	2	3	1	1	0	3	3	3
2.00	B - Classroom (B - Classroom Building B)	2	2	2	0	3	3	3	3	0	2	0	2	2	3	1	2	3	3	1	3	0	2	3	3
3.00	C - MITC & Classroom (C - Classroom Building C)	2	2	2	0	3	3	2	3	0	2	2	3	3	3	2	3	0	3	1	2	0	2	3	3
4.00	D - Computer Lab (I - Computer Lab)	2	2	2	0	3	2	3	3	0	2	3	3	2	2	2	3	0	4	2	3	0	3	3	3
5.00	E - Library Building (K - Learning Resources Centre)	2	2	2	0	3	2	3	3	0	2	3	3	2	2	1	2	0	3	1	3	0	2	3	3
6.00	F - Counseling Center (F - CRE Building)	2	3	2	0	2	2	3	3	0	3	3	4	3	3	1	3	3	4	2	3	0	3	3	3
7.00	G - Research Lab (J - Student Centre)	2	3	2	0	3	4	3	3	0	2	3	4	3	4	2	3	3	4	1	3	0	3	3	3
8.00	H - Student Support Services (H - Student Services Building)	3	4	4	0	4	4	3	4	0	3	3	4	4	3	3	4	0	4	1	3	0	0	3	4
9.00	I - Directors Office (D - Campus Deans Office)	3	3	4	0	5	3	3	4	0	3	3	5	3	3	1	4	5	3	1	3	0	4	4	4
10.00	J - Restroom Facility (E - Restroom Facility)	2	2	2	0	3	3	2	3	0	2	3	3	3	3	3	3	3	0	0	0	0	0	2	3
11.00	M - Midtown (Off Campus)	4	0	5	0	5	5	5	5	0	0	0	4	5	5	0	5	0	5	0	5	0	0	5	5

Condition Grade 0 = N/A	Not present or not applicable
Condition Grade 1 = Very Good	The building/element is new and is functioning as required.
Condition Grade 2 = Good	The building/element is functioning as required.
Condition Grade 3 = Average	The building element is approaching the end of its serviceable life but is still functioning as required. Maintenance is required to extend serviceable life.
Condition Grade 4 = Poor	The building element is showing signs of failure and deterioration. Extensive maintenance is required or the item should be considered for replacement.
Condition Grade 5 = Very Poor	The building element has failed and has deteriorated significantly beyond the point of repair. The item must be replaced

Project: **COLLEGE OF MICRONESIA - FSM**
 Campus: **CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE**
MAINTENANCE COST PLAN (BUILDINGS)
 Document: **CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN**

Audit Date: October 2013
 Revision: Final



Ref	Building	Gross Floor Area (GFA)		External Wall Area (EWA)		Roof Area (RA)		Door & Window Area (DWA)		Internal Wall Area (IWA)		Element	Structure							Internal Fit-Out				Services							Total	%						
		ft2	m2	ft2	m2	ft2	m2	ft2	m2	ft2	m2		ft2	m2	Building Wash	External Wall Painting	Protective Coatings to Roof	Wall Cladding Repairs	Roof Cladding Repairs	Door & Window Repairs	Misc Repairs	Floor Finishes Cleaning & Repairs	Internal Wall Painting	Ceiling & Soffit Painting	Internal Door Repairs	Misc Repairs	Fire Suppress. Detection & Alarm Systems	Mechanical Ventilation	A/C Systems	Hot Water Generation			Electrical Services	Hydraulic Services	Comm. Systems	Vertical Transport	Misc Repairs	
		Rate/Cost (\$ USD)	Frequency (Years)	ft2	m2	ft2	m2	ft2	m2	ft2	m2		ft2	m2	ft2	ft2	ft2	ft2	ft2	ft2	LS Allow	ft2	ft2	ft2	No.	LS Allow	ft2	LS Allow	No.	LS Allow			LS Allow	LS Allow	ft2	No.	LS Allow	LS Allow
1.00	A - Faculty Office (A - Admin/Faculty Office)	3,621	336	3,570	332	5,760	535	533	50	2,753	256	Quantity	9,330	3,570	5,760	3,570	5,760	533	1	3,621	9,076	5,480	6	1	3,621	2	10	0	3,621	5	1	0	1	Total	5,679	15.8%		
												Total Cost Per Occurrence (\$ USD)	93	2,322	5,351	179	288	133	250	109	5,059	3,564	150	250	181	200	500	0	181	125	250	0	250	Total	5,679	15.8%		
												Annualised Maint. Budget (\$ USD)	187	464	764	179	288	133	250	109	422	297	150	250	181	200	1,000	0	181	125	250	0	250	Total	5,679	15.8%		
												Budget (\$ USD)	2,265							1,227				2,187														
2.00	B - Classroom (B - Classroom Building B)	2,903	270	2,981	277	4,794	445	665	62	1,007	94	Quantity	7,775	2,981	4,794	2,981	4,794	665	1	2,903	4,994	3,606	0	1	2,903	1	4	0	2,903	5	1	0	1	Total	4,164	11.6%		
												Total Cost Per Occurrence (\$ USD)	78	1,939	4,453	149	240	166	250	87	2,784	2,345	0	250	145	100	200	0	145	125	250	0	250	Total	4,164	11.6%		
												Annualised Maint. Budget (\$ USD)	155	388	636	149	240	166	250	87	232	195	0	250	145	100	400	0	145	125	250	0	250	Total	4,164	11.6%		
												Budget (\$ USD)	1,984							765				1,415														
3.00	C - MITC & Classroom (C - Classroom Building C)	2,734	254	2,842	264	4,531	421	565	52	1,017	94	Quantity	7,374	2,842	4,531	2,842	4,531	565	1	2,734	4,877	4,075	1	1	2,734	0	2	0	2,734	0	1	0	1	Total	3,656	10.2%		
												Total Cost Per Occurrence (\$ USD)	74	1,848	4,210	142	227	141	250	82	2,718	2,650	25	250	137	0	100	0	137	0	250	0	250	0	250	Total	3,656	10.2%
												Annualised Maint. Budget (\$ USD)	147	370	601	142	227	141	250	82	227	221	25	250	137	0	200	0	137	0	250	0	250	Total	3,656	10.2%		
												Budget (\$ USD)	1,878							804				973														
4.00	D - Computer Lab (I - Computer Lab)	1,800	167	2,067	192	2,762	257	248	23	81	8	Quantity	4,829	2,067	2,762	2,067	2,762	248	1	1,800	2,229	2,130	2	1	1,800	0	4	0	1,800	0	1	0	1	Total	2,938	8.2%		
												Total Cost Per Occurrence (\$ USD)	48	1,344	2,566	103	138	62	250	54	1,242	1,385	50	250	90	0	200	0	90	0	250	0	250	0	250	Total	2,938	8.2%
												Annualised Maint. Budget (\$ USD)	97	269	367	103	138	62	250	54	104	115	50	250	90	0	400	0	90	0	250	0	250	Total	2,938	8.2%		
												Budget (\$ USD)	1,285							573				1,080														
5.00	E - Library Building (K - Learning Resources Centre)	1,846	171	2,092	194	2,822	262	295	27	546	51	Quantity	4,914	2,092	2,822	2,092	2,822	295	1	1,846	3,184	2,409	2	1	1,846	0	5	0	1,846	0	1	0	1	Total	3,133	8.7%		
												Total Cost Per Occurrence (\$ USD)	49	1,360	2,622	105	141	74	250	55	1,775	1,566	50	250	92	0	250	0	92	0	250	0	250	0	250	Total	3,133	8.7%
												Annualised Maint. Budget (\$ USD)	98	272	375	105	141	74	250	55	148	131	50	250	92	0	500	0	92	0	250	0	250	Total	3,133	8.7%		
												Budget (\$ USD)	1,314							634				1,185														
6.00	F - Counseling Center (F - CRE Building)	1,440	134	1,831	170	2,595	241	242	23	47	4	Quantity	4,426	1,831	2,595	1,831	2,595	242	1	1,440	1,924	2,171	8	1	1,440	0	4	0	1,440	7	1	0	1	Total	3,122	8.7%		
												Total Cost Per Occurrence (\$ USD)	44	1,190	2,411	92	130	61	250	43	1,072	1,412	200	250	72	0	200	0	72	175	250	0	250	0	250	Total	3,122	8.7%
												Annualised Maint. Budget (\$ USD)	89	238	344	92	130	61	250	43	89	118	200	250	72	0	400	0	72	175	250	0	250	Total	3,122	8.7%		
												Budget (\$ USD)	1,203							700				1,219														
7.00	G - Research Lab (J - Student Centre)	2,039	189	2,185	203	3,595	334	231	21	1,673	155	Quantity	5,780	2,185	3,595	2,185	3,595	231	1	2,039	5,530	2,974	12	1	2,039	0	5	0	2,039	11	1	0	1	Total	3,982	11.1%		
												Total Cost Per Occurrence (\$ USD)	58	1,421	3,340	109	180	58	250	61	3,082	1,934	300	250	102	0	250	0	102	275	250	0	250	0	250	Total	3,982	11.1%
												Annualised Maint. Budget (\$ USD)	116	284	477	109	180	58	250	61	257	161	300	250	102	0	500	0	102	275	250	0	250	Total	3,982	11.1%		
												Budget (\$ USD)	1,474							1,029				1,479														

Project: COLLEGE OF MICRONESIA - FSM
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 Revision: Final

Ref	Building	Gross Floor Area (GFA)				External Wall Area (EWA)				Roof Area (RA)				Door & Window Area (DWA)				Internal Wall Area (IWA)				Element	Structure								Internal Fit-Out				Services							
		ft2	m2	ft2	m2	ft2	m2	ft2	m2	ft2	m2	ft2	m2	ft2	m2	ft2	m2	ft2	m2	ft2	m2		Maintenance Task	Building Wash	External Wall Painting	Protective Coatings to Roof	Wall Cladding Repairs	Roof Cladding Repairs	Door & Window Repairs	Misc Repairs	Floor Finishes Cleaning & Repairs	Internal Wall Painting	Ceiling & Soffit Painting	Internal Door Repairs	Misc Repairs	Fire Suppress. Detection & Alarm Systems	Mechanical Ventilation	A/C Systems	Hot Water Generation	Electrical Services	Hydraulic Services	Comm. Systems
8.00	H - Student Support Services (H - Student Services Building)	1,200	112	1,204	112	3,486	324	58	5	135	13	Quantity	4,690	1,204	3,486	1,204	3,486	58	1	1,200	1,474	2,621	2	1	1,200	0	4	0	1,200	0	1	0	1	Total	2,779	7.7%						
												Total Cost Per Occurrence (\$ USD)	47	783	3,239	60	174	15	250	36	821	1,705	50	250	60	0	200	0	60	0	250	0	250									
												Annualised Maint. Budget (\$ USD)	94	157	463	60	174	15	250	36	68	142	50	250	60	0	400	0	60	0	250	0	250									
													1,212				547				1,020																					
9.00	I - Directors Office (D - Campus Deans Office)	1,348	125	1,513	141	1,679	156	155	14	180	17	Quantity	3,192	1,513	1,679	1,513	1,679	155	1	1,348	1,872	1,404	4	1	1,348	0	2	0	1,348	6	1	0	1	Total	2,470	6.9%						
												Total Cost Per Occurrence (\$ USD)	32	984	1,559	76	84	39	250	40	1,044	913	100	250	67	0	100	0	67	150	250	0	250									
												Annualised Maint. Budget (\$ USD)	64	197	223	76	84	39	250	40	87	76	100	250	67	0	200	0	67	150	250	0	250									
													932				554				985																					
10.00	J - Restroom Facility (E - Restroom Facility)	410	38	958	89	814	76	85	8	392	36	Quantity	1,771	958	814	958	814	85	1	410	1,742	747	6	1	410	0	0	0	410	11	0	0	1	Total	1,728	4.8%						
												Total Cost Per Occurrence (\$ USD)	18	623	756	48	41	21	250	12	971	486	150	250	21	0	0	0	21	275	0	0	250									
												Annualised Maint. Budget (\$ USD)	35	125	108	48	41	21	250	12	81	40	150	250	21	0	0	0	21	275	0	0	250									
													628				534				566																					
11.00	M - Midtown (Off Campus)	2,028	188	1,808	168	2,406	223	194	18	0	0	Quantity	4,214	1,808	2,406	1,808	2,406	194	1	2,028	1,808	2,028	0	1	2,028	0	0	0	2,028	0	1	0	1	Total	2,355	6.5%						
												Total Cost Per Occurrence (\$ USD)	42	1,176	2,235	90	120	48	250	61	1,008	1,319	0	250	101	0	0	0	101	0	250	0	250									
												Annualised Maint. Budget (\$ USD)	84	235	319	90	120	48	250	61	84	110	0	250	101	0	0	0	101	0	250	0	250									
													1,148				505				703																					
Total		21,371	1,985	23,052	2,142	35,242	3,274	3,271	304	7,829	727	Total Quantity	58,294	23,052	35,242	23,052	35,242	3,271	11	21,371	38,710	29,646	43	11	21,371	3	40	0	21,371	45	10	0	11	Total	36,007	100.0%						
												Total Annualised Maint. Budget (\$ USD)	1,166	2,998	4,677	1,153	1,762	818	2,750	641	1,798	1,607	1,075	2,750	1,069	300	4,000	0	1,069	1,125	2,500	0	2,750									
													15,324				7,871				12,812																					
												Labour Portion (%)	80%	50%	50%	60%	60%	50%	50%	80%	60%	60%	50%	50%	50%	70%	70%	70%	70%	70%	40%	50%										
												Labour Cost (\$ USD)	933	1,499	2,339	692	1,057	409	1,375	513	1,079	964	538	1,375	534	210	2,800	0	748	788	1,750	0	1,375	Total	20,976							
												Labour Hours (Based on \$3/Hour)	311	500	780	231	352	136	458	171	360	321	179	458	178	70	933	0	249	263	583	0	458									
												Number Maintenance Staff Required (Based on 1,800 Hours/PA)																							3.9							
												Plant Portion (%)	10%	10%	10%	10%	10%	0%	0%	10%	10%	10%	0%	0%	0%	10%	10%	10%	10%	10%	0%	20%	0%									
												Material Cost (\$ USD)	117	300	468	115	176	0	0	64	180	161	0	0	0	30	400	0	107	113	0	0	0	Total	2,230							
												Material Portion (%)	10%	40%	40%	30%	30%	50%	50%	10%	30%	30%	50%	50%	50%	20%	20%	20%	20%	20%	30%	40%	50%									
												Material Cost (\$ USD)	117	1,199	1,871	346	529	409	1,375	64	539	482	538	1,375	534	60	800	0	214	225	750	0	1,375	Total	12,801							

Project: COLLEGE OF MICRONESIA - FSM
 Campus: CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE
 MAINTENANCE COST PLAN (SITE INFRASTRUCTURE)
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN

Audit Date: October 2013
 Revision: Final



Ref	Location	Total Buildings No.	Total Building Area		Total Hard Surface Areas		Total Green Surface Areas		Site Area	
			ft2	m2	ft2	m2	ft2	m2	ft2	m2
1.00	Chuuk Campus, Nepukos Weno, Chuuk State	11	21,371	1,985	9,288	863	59,747	5,551	90,407	8,399

Element	Grounds Keeping				Car Parks, Roads & Pavements			Fences & Gates		Structures			Site Drainage			Electrical Infrastructure		Water Services	Site Furniture	Telecom Services	
	Mowing	Spraying	General Grounds Keeping	Pruning & General Tree Maint.	Regrade, Relevel & Compact Gravel Surface	Pot/Crack Fill Asphalt Surface	Pot/Crack Fill Concrete Surface	Repaint Fences & Gates	Fence & Gate Repairs	Minor Building Structures Wash	Minor Building Structures General Repairs	Minor Building Structures Repaint	Site Stormwater Drainage Maint.	Building Stormwater Drainage Maint.	Building Sewer Drainage Maint.	General Electrical Maint.	General Electrical Servicing	General Water Services Maint.	General Site Furniture Maint.	General Telecom Services	
Unit	LS Allow / Green Area	LS Allow / Green Area	LS Allow / Green Area	LS Allow.	LS Allow / Area	LS Allow / Area	LS Allow / Area	LS Allow.	LS Allow.	LS Allow / GFA	LS Allow / Building No	LS Allow / GFA	LS Allow.	LS Allow / Building	LS Allow / Building	LS Allow / Building	LS Allow	LS Allow / Building	LS Allow.	LS Allow / Building	
Rate/Cost (\$ USD)	0.00023	0.00012	0.00046	2,500.00	0.28	0.05	0.05	2,000.00	500.00	0.01	100.00	0.65	1,000.00	50.00	50.00	100.00	1,000.00	25.00	1,000.00	25.00	
Frequency (Years)	0.08	0.50	0.25	1.00	1.00	1.00	1.00	5.00	1.00	0.50	1.00	5.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Quantity	59,747	59,747	59,747	1	5,517	0	3,772	1	1	1,322	3	1,322	1	11	11	11	1	11	1	11	
Total Cost Per Occurrence (\$ USD)	14	7	28	2,500	1,538	0	189	2,000	500	13	300	859	1,000	550	550	1,100	1,000	275	1,000	275	
Annualised Maint. Budget (\$ USD)	167	14	111	2,500	1,538	0	189	400	500	26	300	172	1,000	550	550	1,100	1,000	275	1,000	275	
	2,791				1,726			900		498			2,100			2,100		1,550			
Labour Portion (%)	70%	35%	50%	70%	30%	30%	30%	70%	80%	70%	50%	60%	50%	50%	50%	50%	50%	50%	50%	50%	
Labour Cost (\$ USD)	117	5	56	1,750	461	0	57	280	400	19	150	103	500	275	275	550	500	138	500	138	
Labour Hours (Based on \$3/Hour)	39	2	19	583	154	0	19	93	133	6	50	34	167	92	92	183	167	46	167	46	
																				Number Maintenance Staff Required (Based on 1,800 Hours/PA)	1.2
Plant Portion (%)	30%	30%	25%	30%	50%	50%	50%	0%	0%	20%	20%	10%	30%	30%	30%	30%	30%	30%	0%	30%	
Material Cost (\$ USD)	50	4	28	750	769	0	94	0	0	5	60	17	300	165	165	330	300	83	0	83	
Material Portion (%)	0%	35%	25%	0%	20%	20%	20%	30%	20%	10%	30%	30%	20%	20%	20%	20%	20%	20%	50%	20%	
Material Cost (\$ USD)	0	5	28	0	308	0	38	120	100	3	90	52	200	110	110	220	200	55	500	55	



Audit Date: October 2013

Revision: Final

ID Code	Element	Condition Assessment		Condition Gauge					Asset Renewal Cost																		
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grading		VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
				Condition Grade	% Deterioration	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)							
15.00	Total Sanitary Plumbing			2	30%															11,385	0	10,120	1,265	11,385	11,385	100.0%	
16.00	Mechanical Services																			0	0	0	0	0	0.0%		
16.01	Air-Conditioning - DX/Split System	Tired by appearance.	Service, overhaul or consider replacement	3	50%								4,428	0	0	0	0	0	0	17,710	4,428	8,855	4,428	17,710	4,428	400.0%	
16.02	Air-Conditioning - Window Mounted Unit	Tired by appearance.	Service, overhaul or consider replacement	3	50%								17,078	0	0	0	0	0	0	51,233	17,078	17,078	17,078	51,233	17,078	300.0%	
16.03	Ventilation - W/C Extract	Good condition	Service and claen	2	30%								0	0	0	0	0	0	0	1,898	0	1,898	0	1,898	1,898	100.0%	
16.04	Ceiling Mounted Fan	Good condition	Service and claen	2	30%								0	0	0	0	0	0	0	11,132	0	11,132	0	11,132	11,132	100.0%	
16.00	Total Mechanical Services			3	50%								4,428	17,078	0	0	0	0	0	81,972	21,505	38,962	21,505	81,972	34,535	237.4%	
17.00	Fire Services																		0	0	0	0	0	0	0.0%		
17.07	9lb Carbon Dioxide Fire Extinguisher	Regulaly check expriry date	Replace when expired	1	10%								2,530	0	0	0	0	0	0	12,650	5,060	5,060	2,530	12,650	2,530	500.0%	
17.00	Total Fire Services			1	10%								2,530	0	0	0	0	0	0	12,650	5,060	5,060	2,530	12,650	2,530	500.0%	
18.00	Electrical Services																		0	0	0	0	0	0	0.0%		
18.01	Main Distribution Boards	Ok condition		3	50%								0	0	0	0	0	0	0	9,488	0	9,488	0	9,488	9,488	100.0%	
18.03	Electrical Wiring/Reticulation	Ok condition		3	50%								0	0	0	0	0	0	0	12,767	0	12,767	0	12,767	12,767	100.0%	
18.04	General Power Outlet	Ok condition	Repair loose outlets	3	50%								0	0	0	0	0	0	0	17,022	0	17,022	0	17,022	17,022	100.0%	
18.06	Lighting (External) - Incandescent	Ok condition		3	50%								0	0	0	0	0	0	0	1,898	0	1,898	0	1,898	1,898	100.0%	
18.09	Lighting (Internal) - Incandescent	Ok condition		3	50%								0	0	0	0	0	0	0	1,265	0	1,265	0	1,265	1,265	100.0%	
18.10	Lighting (Internal) - Fluorescant - Twin Tube	Ok condition		3	50%								0	0	0	0	0	0	0	37,318	0	37,318	0	37,318	37,318	100.0%	
18.00	Total Electrical Services			3	50%								0	0	0	0	0	0	0	79,756	0	79,756	0	79,756	79,756	100.0%	
19.00	Vertical Transportation																		0	0	0	0	0	0	0.0%		
19.01	None	None		0									0	0	0	0	0	0	0	0	0	0	0	0	0.0%		
19.00	Total Vertical Transportation			0	0%								0	0	0	0	0	0	0	0	0	0	0	0	0.0%		
20.00	Special Services																		0	0	0	0	0	0	0.0%		
20.01	Telecommunication/Data Network	Working order	Service and fix loose outlets and wiring	3	50%								0	0	0	0	0	0	0	17,022	34,044	17,022	0	17,022	34,044	17,022	200.0%
20.00	Total Special Services			3	50%								0	0	0	0	0	0	0	17,022	34,044	17,022	0	17,022	34,044	17,022	200.0%
C	TOTAL BUILDING SERVICES			3	50%								4,428	19,608	0	0	0	0	0	19,552	219,808	43,587	133,898	42,322	219,808	145,228	151.4%
	TOTAL BUILDING			3	50%								4,428	19,608	0	0	0	0	949	104,459	626,007	129,443	292,901	203,663	626,007	790,310	79.2%

129,443
 Year 1 - 10 Consolidated Capital Replacement Cost

Project: COLLEGE OF MICRONESIA - FSM
 Campus: CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE
 B - CLASSROOM (B - CLASSROOM BUILDING B)
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013
 Revision: Final

ID Code	Element	Condition Assessment		Condition Grading					Condition Gauge										Asset Renewal Cost												
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace				
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)											
16.00	Total Mechanical Services			3	50%									17,710	0	0	0	0	0	17,647	106,134	35,357	35,420	35,357	106,134	35,357	300.2%				
17.00	Fire Services																														
17.01	9lb Carbon Dioxide Fire Extinguisher	Regulaly check exprity date	Replace when expired	1	10%									1,265	0	0	0	0	1,265	6,325	2,530	2,530	1,265	6,325	1,265	500.0%					
17.00	Total Fire Services			1	10%									1,265	0	0	0	0	1,265	6,325	2,530	2,530	1,265	6,325	1,265	500.0%					
18.00	Electrical Services																														
18.01	Main Distribution Boards	Good condition		2	30%									0	0	0	0	0	0	9,488	0	0	9,488	9,488	9,488	100.0%					
18.03	Electrical Wiring/Reticulation	Good condition		2	30%									0	0	0	0	0	0	10,237	0	0	10,237	10,237	10,237	100.0%					
18.04	General Power Outlet	Good condition		3	50%									0	0	0	0	0	0	13,649	0	13,649	0	13,649	13,649	100.0%					
18.06	Lighting (External) - Incandescent	Energy saving bulbs, 1Not present	Replace missing bulb	2	30%									0	0	0	0	0	0	2,530	0	0	2,530	2,530	2,530	100.0%					
18.09	Lighting (Internal) - Incandescent	Toilets/ store room - Good Condition		2	30%									0	0	0	0	0	0	949	0	0	949	949	949	100.0%					
18.10	Lighting (Internal) - Fluorescent - Twin	Good condition	Clean diffusers and monitor	2	30%									0	0	0	0	0	0	22,770	0	0	22,770	22,770	22,770	100.0%					
18.00	Total Electrical Services			3	50%									0	0	0	0	0	0	59,622	0	13,649	45,973	59,622	59,622	100.0%					
19.00	Vertical Transportation																														
19.03	None	None		0	0%									0	0	0	0	0	0	0	0	0	0	0	0	0.0%					
19.00	Total Vertical Transportation			0	0%									0	0	0	0	0	0	0	0	0	0	0	0	0.0%					
20.00	Special Services																														
20.01	Telecommunication/Data Network	Only to Computer lab	Monitor and repair as necessary	2	30%									0	0	0	0	0	0	5,118	0	5,118	0	5,118	5,118	100.0%					
20.00	Total Special Services			2	30%									0	0	0	0	0	0	5,118	0	5,118	0	5,118	5,118	100.0%					
C	TOTAL BUILDING SERVICES			3	50%									0	0	0	0	0	0	18,912	189,595	37,887	60,512	91,197	189,595	113,759	166.7%				
	TOTAL BUILDING			3	50%									0	0	0	0	0	0	18,912	449,882	37,887	106,438	305,557	449,882	673,750	66.8%				
																				37,887											
																				Year 1 - 10 Consolidated Capital Replacement Cost											

Project: COLLEGE OF MICRONESIA - FSM
 Campus: CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE
 C - MITC & CLASSROOM (C - CLASSROOM BUILDING C)
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013
 Revision: Final

ID Code	Element	Condition Observations	Recommended Course of Action & Maintenance	Condition Grading		Condition Gauge					Asset Renewal Cost																
				Condition Grade	% Deterioration	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
16.00	Total Mechanical Services			3	50%						0	0	0	8,855	0	0	0	0	0	13,915	63,250	22,770	17,710	22,770	63,250	22,770	277.8%
17.00	Fire Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
17.01	9lb Carbon Dioxide Fire Extinguisher	Regularly check expiry date	Replace when expired	1	10%						0	0	0	0	1,265	0	0	0	0	1,265	6,325	2,530	2,530	1,265	6,325	1,265	500.0%
17.00	Total Fire Services			1	10%						0	0	0	0	1,265	0	0	0	0	1,265	6,325	2,530	2,530	1,265	6,325	1,265	500.0%
18.00	Electrical Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
18.01	Main Distribution Boards	Ok condition		2	30%						0	0	0	0	0	0	0	0	0	0	9,488	0	0	9,488	9,488	9,488	100.0%
18.02	Electrical Wiring/Reticulation	Ok condition		2	30%						0	0	0	0	0	0	0	0	0	0	9,640	0	0	9,640	9,640	9,640	100.0%
18.03	General Power Outlet	Ok condition		2	30%						0	0	0	0	0	0	0	0	0	0	12,854	0	0	12,854	12,854	12,854	100.0%
18.04	Lighting (External) - Incandescent	Ok condition		2	30%						0	0	0	0	0	0	0	0	0	0	1,265	0	0	1,265	1,265	1,265	100.0%
18.05	Lighting (Internal) - Fluorescant - Twin	Ok condition		2	30%						0	0	0	0	0	0	0	0	0	0	20,873	0	0	20,873	20,873	20,873	100.0%
18.00	Total Electrical Services			2	30%						0	0	0	0	0	0	0	0	0	0	54,119	0	0	54,119	54,119	54,119	100.0%
19.00	Vertical Transportation										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
19.01	None	None		0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
19.00	Total Vertical Transportation			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.00	Special Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.01	Telecommunication/Data Network	Good condition - AV room only	Repair loose wiring	2	30%						0	0	0	0	0	0	0	0	0	0	4,820	0	4,820	0	4,820	4,820	100.0%
20.00	Total Special Services			2	30%						0	0	0	0	0	0	0	0	0	0	4,820	0	4,820	0	4,820	4,820	100.0%
C	TOTAL BUILDING SERVICES			3	50%						0	0	0	8,855	1,265	0	0	0	0	15,180	128,514	25,300	25,060	78,154	128,514	82,974	154.9%
	TOTAL BUILDING			3	50%						0	0	0	8,855	1,265	0	0	0	0	33,761	369,348	43,881	126,726	198,742	369,348	552,668	66.8%

43,881
 Year 1 - 10 Consolidated Capital Replacement Cost

Project: COLLEGE OF MICRONESIA - FSM
 Campus: CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE
 F - COUNSELING CENTER (F - CRE BUILDING)

Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN

Audit Date: October 2013

Revision: Final



ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					Asset Renewal Cost																
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace	
16.04	Air-Conditioning - Window Mounted Unit	Tired by appearance.	Service, overhaul or consider replacement	4	70%						0	0	5,693	0	0	0	0	0	0	0	17,078	5,693	5,693	5,693	17,078	5,693	300.0%
16.10	Ceiling Mounted Fan	Tired by appearance. Working order	Service and maintain	3	50%						0	0	0	0	0	0	0	0	0	4,175	8,349	4,175	0	4,175	8,349	4,175	200.0%
16.00	Total Mechanical Services			4	70%						0	0	5,693	4,428	0	0	0	0	0	4,175	43,137	14,295	14,548	14,295	43,137	14,295	301.8%
17.00	Fire Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
17.01	9lb Carbon Dioxide Fire Extinguisher	Regulaly check expiry date	Replace when expired	2	30%						0	0	0	0	633	0	0	0	0	633	3,163	1,265	1,265	633	3,163	633	500.0%
17.00	Total Fire Services			2	30%						0	0	0	0	633	0	0	0	0	633	3,163	1,265	1,265	633	3,163	633	500.0%
18.00	Electrical Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
18.01	Main Distribution Boards	Approximate Age (8 years) Condition: Good	Good condition, no issues	2	30%						0	0	0	0	0	0	0	0	0	0	9,488	0	0	9,488	9,488	9,488	100.0%
18.02	Electrical Wiring/Reticulation	Approximate Age (8 years) Condition: Loose connections and outlets	Refix outlets	3	50%						0	0	0	0	0	0	0	0	0	0	5,077	0	5,077	0	5,077	5,077	100.0%
18.03	General Power Outlet			3	50%						0	0	0	0	0	0	0	0	0	0	6,769	0	6,769	0	6,769	6,769	100.0%
18.04	Lighting (External) - Incandescent	Operating	None	2	30%						0	0	0	0	0	0	0	0	0	0	1,581	0	0	1,581	1,581	1,581	100.0%
18.05	Lighting (Internal) - Incandescent	Operating	None	2	30%						0	0	0	0	0	0	0	0	0	0	949	0	0	949	949	949	100.0%
18.06	Lighting (Internal) - Fluorescent - Single tube	Operating	None	2	30%						0	0	0	0	0	0	0	0	0	0	443	0	0	443	443	443	100.0%
18.07	Lighting (Internal) - Fluorescent - Twin Tube	Operating	None	2	30%						0	0	0	0	0	0	0	0	0	0	9,488	0	0	9,488	9,488	9,488	100.0%
18.00	Total Electrical Services			3	50%						0	0	0	0	0	0	0	0	0	0	33,793	0	11,845	21,948	33,793	33,793	100.0%
19.00	Vertical Transportation										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19.03	None	None		0							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19.00	Total Vertical Transportation			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.00	Special Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.01	Telecommunication/Data Network	Some loose outlets	Refix outlets, conduit missing/ damages	3	50%						0	0	0	0	0	0	0	0	0	6,769	13,538	6,769	0	6,769	13,538	6,769	200.0%
20.00	Total Special Services			3	50%						0	0	0	0	0	0	0	0	0	6,769	13,538	6,769	0	6,769	13,538	6,769	200.0%
C	TOTAL BUILDING SERVICES			3	50%						0	0	5,693	4,428	633	0	0	0	3,795	11,576	108,177	26,123	33,983	48,071	108,177	70,036	154.5%
	TOTAL BUILDING			3	50%						0	0	5,693	4,428	633	11,667	0	0	3,795	11,576	265,731	37,791	58,070	169,870	265,731	372,223	71.4%
										37,791																	
										Year 1 - 10 Consolidated Capital Replacement Cost																	



ID Code	Element	Condition Observations	Recommended Course of Action & Maintenance	Condition Grading		Condition Gauge					Asset Renewal Cost																
				Condition Grade	% Deterioration	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
15.01	WC	Not used due to water pressure being to low	Low pressure to toilets need checking	3	50%						0	0	0	0	0	0	0	0	0	0	6,325	0	6,325	0	6,325	6,325	100.0%
15.02	WHB (Single)	Good condition		3	50%						0	0	0	0	0	0	0	0	0	0	1,898	0	1,898	0	1,898	1,898	100.0%
15.03	Shower - Emergency	Not used, Currently used as a place to store stuff	Remove stored stuff and service	2	30%						0	0	0	0	0	0	0	0	0	0	6,325	0	0	6,325	6,325	6,325	100.0%
15.05	Cold Water	Low pressure to toilets need checking	Low pressure to toilets need checking	3	50%						0	0	0	0	0	0	0	0	0	0	6,325	0	6,325	0	6,325	6,325	100.0%
15.06	Cold Water Pump - External	Good condition but needs some attention	Service pume	3	50%						0	0	0	0	0	0	0	0	0	0	1,898	0	1,898	0	1,898	1,898	100.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
15.00	Total Sanitary Plumbing			3	50%						0	0	0	0	0	0	0	0	0	0	22,770	0	16,445	6,325	22,770	22,770	100.0%
16.00	Mechanical Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
16.01	Air-Conditioning - DX/Split System	Tired by appearance.	Service, overhaul or consider replacement	4	70%						0	0	22,138	0	0	0	0	0	0	22,138	88,550	44,275	22,138	22,138	88,550	22,138	400.0%
16.02	Ceiling Mounted Fan	Tired by appearance. Working order	Service and maintain	3	50%						0	0	0	0	0	0	0	0	0	696	1,392	696	0	696	1,392	696	200.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
16.00	Total Mechanical Services			4	70%						0	0	22,138	0	0	0	0	0	22,833	89,942	44,971	22,138	22,833	89,942	22,833	393.9%	
17.00	Fire Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
17.01	9lb Carbon Dioxide Fire Extinguisher	Regulaly check expiry date	Replace when expired	1	10%						0	0	0	0	949	0	0	0	949	4,744	1,898	1,898	949	4,744	949	500.0%	
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
17.00	Total Fire Services			1	10%						0	0	0	0	949	0	0	0	949	4,744	1,898	1,898	949	4,744	949	500.0%	
18.00	Electrical Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
18.01	Main Distribution Boards	Approximate Age 8 years Condition: OK	Ok condition check wiring	3	50%						0	0	0	0	0	0	0	0	0	9,488	0	9,488	0	9,488	9,488	100.0%	
18.02	Electrical Wiring/Reticulation		Ok condition check wiring	3	50%						0	0	0	0	0	0	0	0	0	7,190	0	7,190	0	7,190	7,190	100.0%	
18.03	General Power Outlet		Ok condition check wiring	3	50%						0	0	0	0	0	0	0	0	0	9,587	0	9,587	0	9,587	9,587	100.0%	
18.04	Lighting (External) - Incandescent	Good condition	Check all are in working order	3	50%						0	0	0	0	0	0	0	0	0	1,265	0	1,265	0	1,265	1,265	100.0%	
18.05	Lighting (Internal) - Incandescent	Good condition	Check all are in working order	3	50%						0	0	0	0	0	0	0	0	0	949	0	949	0	949	949	100.0%	
18.06	Lighting (Internal) - Fluorescant - Twin Tube	Good condition	Check all are in working order, clean diffusers	3	50%						0	0	0	0	0	0	0	0	0	12,650	0	12,650	0	12,650	12,650	100.0%	
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
18.00	Total Electrical Services			3	50%						0	0	0	0	0	0	0	0	0	41,128	0	41,128	0	41,128	41,128	100.0%	
19.00	Vertical Transportation										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
19.01	None	None		0							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
19.00	Total Vertical Transportation			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.00	Special Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.01	Telecommunication/Data Network	Good condition	check points and wiring	3	50%						0	0	0	0	0	0	0	0	9,587	19,174	9,587	0	9,587	19,174	9,587	200.0%	
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.00	Total Special Services			3	50%						0	0	0	0	0	0	0	0	9,587	19,174	9,587	0	9,587	19,174	9,587	200.0%	
C	TOTAL BUILDING SERVICES			3	50%						0	0	22,138	0	949	0	0	0	33,369	177,757	56,455	81,608	39,694	177,757	97,267	182.8%	
	TOTAL BUILDING			3	50%						0	0	22,138	0	949	18,196	0	15,061	70,521	474,024	126,864	177,678	169,481	474,024	496,555	95.5%	

126,864
 Year 1 - 10 Consolidated Capital Replacement Cost

Project: COLLEGE OF MICRONESIA - FSM
 Campus: CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE
 H - STUDENT SUPPORT SERVICES (H - STUDENT SERVICES BUILDING)

Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN

Audit Date: October 2013

Revision: Final



ID Code	Element	Condition Observations	Recommended Course of Action & Maintenance	Condition Grading		Condition Gauge					Asset Renewal Cost																		
				Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace		
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	
9.01	Timber Framed Partition Walls	In containers - Water damage at base		3	50%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	949	0.0%	
9.00	Total Internal Walls/Partitions			3	50%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	949	0.0%	
10.00	Internal Doors										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
10.01	Timber Door - Single	In containers - Water damaged at base but otherwise in good condition	Clean and repaint	3	50%						0	0	0	0	0	0	0	0	0	0	0	3,036	0	0	3,036	3,036	3,036	100.0%	
10.00	Total Internal Doors			3	50%						0	0	0	0	0	0	0	0	0	0	0	3,036	0	0	3,036	3,036	3,036	100.0%	
11.00	Floor Finishes										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
11.01	Plywood floor with vinyl floor finish	To containers only - Ok condition		3	50%						0	0	0	0	0	0	0	0	0	0	6,123	12,245	6,123	0	6,123	12,245	6,123	200.0%	
11.02	Vinyl Floor Finishes	Poor condition - Tiles lifting	Remove and replace	4	70%						0	0	0	0	0	8,761	0	0	0	0	0	17,522	8,761	0	8,761	17,522	8,761	200.0%	
11.00	Total Floor Finishes			4	70%						0	0	0	0	0	8,761	0	0	0	0	6,123	29,767	14,883	0	14,883	29,767	14,883	200.0%	
12.00	Wall Finishes										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
12.01	Plywood Wall Linings with Painted Finishes	Impact damage and loose fixings	Refix and paint	4	70%						0	0	0	0	0	0	0	0	0	0	0	12,706	0	12,706	0	12,706	12,706	100.0%	
12.00	Total Wall Finishes			4	70%						0	0	0	0	0	0	0	0	0	0	0	12,706	0	12,706	0	12,706	12,706	100.0%	
13.00	Ceiling Finishes										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
13.01	Plywood Ceiling Lining with Painted Finishes	Leak damage + movement joints	Wash and refix	3	50%						0	0	0	0	0	0	0	0	0	0	0	27,726	0	0	27,726	27,726	27,726	100.0%	
13.00	Total Ceiling Finishes			3	50%						0	0	0	0	0	0	0	0	0	0	0	27,726	0	0	27,726	27,726	27,726	100.0%	
14.00	Fixed Joinery Units										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
14.01	Built-in Joinery - Bench Unit	To snack bar only		3	50%						0	0	0	0	0	0	0	0	0	0	0	5,693	0	5,693	0	5,693	5,693	100.0%	
14.00	Total Fixed Joinery Units			3	50%						0	0	0	0	0	0	0	0	0	0	0	5,693	0	5,693	0	5,693	5,693	100.0%	
B	TOTAL INTERNAL FIT-OUT			4	70%						0	0	0	0	0	8,761	0	0	0	0	6,123	78,927	14,883	18,398	45,646	78,927	64,993	121.4%	
15.00	Sanitary Plumbing										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
15.01	None	None		0							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
15.00	Total Sanitary Plumbing			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
16.00	Mechanical Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
16.01	Air-Conditioning - Window Mounted Unit	Poor condition	Remove rusted units and service usable unites	4	70%						0	0	7,590	0	0	0	0	0	0	0	0	0	22,770	7,590	7,590	7,590	22,770	7,590	300.0%
16.00	Total Mechanical Services			4	70%						0	0	7,590	0	0	0	0	0	0	0	0	0	22,770	7,590	7,590	7,590	22,770	7,590	300.0%
17.00	Fire Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
17.07	9lb Carbon Dioxide Fire Extinguisher	Regulaly check expiry date	Replace when expired	1	10%						0	0	0	0	1,265	0	0	0	0	0	1,265	6,325	2,530	2,530	1,265	6,325	1,265	500.0%	
17.00	Total Fire Services			1	10%						0	0	0	0	1,265	0	0	0	0	1,265	6,325	2,530	2,530	1,265	6,325	1,265	500.0%		
18.00	Electrical Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
18.01	Main Distribution Boards	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	0	9,488	0	9,488	0	9,488	9,488	100.0%	
18.03	Electrical Wiring/Reticulation	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	0	9,242	0	9,242	0	9,242	9,242	100.0%	

Project: COLLEGE OF MICRONESIA - FSM
 Campus: CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE
 H - STUDENT SUPPORT SERVICES (H - STUDENT SERVICES BUILDING)
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013

Revision: Final

ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					Asset Renewal Cost																
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)							
18.04	General Power Outlet	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	5,642	0	5,642	0	5,642	5,642	100.0%
18.06	Lighting (External) - Incandescent	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	3,163	0	3,163	0	3,163	3,163	100.0%
18.09	Lighting (Internal) - Incandescent	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	1,265	0	1,265	0	1,265	1,265	100.0%
18.10	Lighting (Internal) - Fluorescent - Twin	Operating	None	3	50%						0	0	0	0	0	0	0	0	0	0	6,325	0	6,325	0	6,325	6,325	100.0%
		Operating	None								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
18.00	Total Electrical Services			3	50%						0	0	0	0	0	0	0	0	0	0	35,124	0	35,124	0	35,124	35,124	100.0%
19.00	Vertical Transportation										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19.03	None	None		0							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19.00	Total Vertical Transportation			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.00	Special Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.01	Telecommunication/Data Network	To office only			0%						0	0	0	0	0	0	0	0	0	0	5,642	0	5,642	0	5,642	5,642	100.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
20.00	Total Special Services			0	0%						0	0	0	0	0	0	0	0	0	0	5,642	0	5,642	0	5,642	5,642	100.0%
C	TOTAL BUILDING SERVICES			3	50%						0	0	7,590	0	1,265	0	0	0	0	1,265	69,861	10,120	50,886	8,855	69,861	49,621	140.8%
	TOTAL BUILDING			4	70%						0	0	13,732	0	1,265	8,761	0	12,650	54,089	7,388	258,964	97,884	100,005	61,075	258,964	371,451	69.7%
										97,884																	
										Year 1 - 10 Consolidated Capital Replacement Cost																	

Project: COLLEGE OF MICRONESIA - FSM
 Campus: CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE
 I - DIRECTOR'S OFFICE (D - CAMPUS DEANS OFFICE)
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013
 Revision: Final

ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					Asset Renewal Cost																
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)							
17.01	9lb Carbon Dioxide Fire Extinguisher	Regulaly check expriry date	Replace when expired	1	10%						0	0	0	0	316	0	0	0	0	316	1,581	633	633	316	1,581	316	500.0%
17.00	Total Fire Services			1	10%						0	0	0	0	316	0	0	0	0	316	1,581	633	633	316	1,581	316	500.0%
18.00	Electrical Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
18.01	Main Distribution Boards	2No, 1No not in use	Service and clean	3	50%						0	0	0	0	0	0	0	0	0	0	9,488	0	9,488	0	9,488	9,488	100.0%
18.02	Electrical Wiring/Reticulation		Ok condition check wiring	3	50%						0	0	0	0	0	0	0	0	0	0	4,753	0	4,753	0	4,753	4,753	100.0%
18.03	General Power Outlet		Ok condition check wiring	3	50%						0	0	0	0	0	0	0	0	0	0	6,338	0	6,338	0	6,338	6,338	100.0%
18.04	Lighting (External) - Incandescent	Good condition	Check all are in working order	3	50%						0	0	0	0	0	0	0	0	0	0	316	0	316	0	316	316	100.0%
18.05	Lighting (Internal) - Incandescent	Good condition	Check all are in working order	3	50%						0	0	0	0	0	0	0	0	0	0	633	0	633	0	633	633	100.0%
18.06	Lighting (Internal) - Fluorescant - Twin Tube	Good condition	Check all are in working order, clean diffusers	3	50%						0	0	0	0	0	0	0	0	0	0	4,428	0	4,428	0	4,428	4,428	100.0%
18.00	Total Electrical Services			3	50%						0	0	0	0	0	0	0	0	0	0	25,955	0	25,955	0	25,955	25,955	100.0%
19.00	Vertical Transportation										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
19.03	None	None		0							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
19.00	Total Vertical Transportation			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.00	Special Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.01	Telecommunication/Data Network	Needs attention	Servise and replace wiring	4	70%						0	0	0	0	0	6,338	0	0	0	0	12,676	6,338	0	6,338	12,676	6,338	200.0%
20.00	Total Special Services			4	70%						0	0	0	0	0	6,338	0	0	0	0	12,676	6,338	0	6,338	12,676	6,338	200.0%
C	TOTAL BUILDING SERVICES			4	70%						0	0	8,223	0	4,111	6,338	0	0	0	316	63,615	18,988	34,178	10,449	63,615	48,422	131.4%
	TOTAL BUILDING			4	70%						0	12,176	29,075	0	4,111	6,338	0	0	0	316	254,853	52,016	84,776	118,061	254,853	264,636	96.3%

52,016
 Year 1 - 10 Consolidated Capital Replacement Cost

Project: COLLEGE OF MICRONESIA - FSM
 Campus: CHUUK CAMPUS, NEPUKOS WENO, CHUUK STATE
 M - MIDTOWN (OFF CAMPUS)
 Document: CONDITION ASSESSMENT & ASSET MANAGEMENT PLAN



Audit Date: October 2013
 Revision: Final

ID Code	Element	Condition Observations	Recommended Course of Action & Maintenance	Condition Assessment		Condition Gauge					Asset Renewal Cost																
				Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)	(\$ USD)					
1.00	Sub-Structure																		0	0	0	0	0	0	0.0%		
1.01	Reinforced Concrete Foundations Beams	Poor condition		4	70%														17,710	0	0	17,710	17,710	17,710	100.0%		
1.02	Reinforced Concrete Slab on Grade	Poor condition		4	70%														30,989	0	0	30,989	30,989	30,989	100.0%		
1.00	Total Sub-Structure			4	70%														48,699	0	0	48,699	48,699	48,699	100.0%		
2.00	Frame																		0	0	0	0	0	0.0%			
2.04	None	None - Note Roof reinforced concrete, walls block masonry		0															0	0	0	0	0	0.0%			
2.00	Total Frame			0	0%														0	0	0	0	0	0.0%			
3.00	Structural Walls																		0	0	0	0	0	0.0%			
3.01	Reinforced Concrete Block Masonry Walls	Poor condition		5	90%														61,763	61,763	0	0	61,763	61,763	100.0%		
3.00	Total Structural Walls			5	90%														61,763	61,763	0	0	61,763	61,763	100.0%		
4.00	Upper Floors																		0	0	0	0	0	0.0%			
4.03	None	None		0															0	0	0	0	0	0.0%			
4.00	Total Upper Floors			0	0%														0	0	0	0	0	0.0%			
5.00	Roof																		0	0	0	0	0	0.0%			
5.01	Reinforced Concrete Slab	Poor condition - Evidence of concrete cracking and spawing		5	90%														56,540	56,540	0	0	56,540	56,540	100.0%		
5.02	Membrane Roof Cladding	None	Will require new membrane roof if repaired or rebuilt	5	90%														56,540	28,270	0	28,270	56,540	28,270	200.0%		
5.09	Metal Down Pipes	Poor condition		5	90%														2,277	2,277	0	0	2,277	2,277	100.0%		
5.00	Total Roof			5	90%														115,357	87,087	0	28,270	115,357	87,087	132.5%		
6.00	External Walls & Finishes																		0	0	0	0	0	0.0%			
6.01	Solid Plaster Cladding with Painted Finishes	Poor condition		5	90%														20,784	20,784	0	0	20,784	20,784	100.0%		
6.00	Total External Walls & Finishes			5	90%														20,784	20,784	0	0	20,784	20,784	100.0%		
7.00	Windows & Doors																		0	0	0	0	0	0.0%			
7.01	Timber Framed Windows	Poor condition		5	90%														19,355	19,355	0	0	19,355	19,355	100.0%		
7.02	Timber Doors (Solid/No Glazing)	Very poor condition		5	90%														7,590	7,590	0	0	7,590	7,590	100.0%		
7.00	Total Windows & Doors			5	90%														26,945	26,945	0	0	26,945	26,945	100.0%		
A	TOTAL STRUCTURE			5	90%														118,303	273,547	196,578	0	76,968	273,547	245,277	111.5%	
8.00	Stairs, Balustrades & Handrails																		0	0	0	0	0	0.0%			
8.01	None	None		0															0	0	0	0	0	0.0%			
8.00	Total Stairs Balustrades & Handrails			0	0%														0	0	0	0	0	0.0%			
9.00	Internal Walls/Partitions																		0	0	0	0	0	0.0%			

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Revision: Final

ID Code	Element	Condition Assessment		Condition Grading		Condition Gauge					Asset Renewal Cost																
		Condition Observations	Recommended Course of Action & Maintenance	Condition Grade	% Deterioration	VG	G	A	P	VP	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Renewal Total	Full Replace	% Full Replace
						0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	2013 (\$ USD)	2014 (\$ USD)	2015 (\$ USD)	2016 (\$ USD)	2017 (\$ USD)	2018 (\$ USD)	2019 (\$ USD)	2020 (\$ USD)	2021 (\$ USD)	2022 (\$ USD)							
18.04	Lighting (Internal) - Fluorescant - Twin?	Poor condition		5	90%						0	0	0	10,120	0	0	0	0	0	0	10,120	10,120	0	0	10,120	10,120	100.0%
18.00	Total Electrical Services			5	90%						0	0	0	36,294	0	0	0	0	0	0	36,294	36,294	0	0	36,294	36,294	100.0%
19.00	Vertical Transportation										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
19.01	None	None		0							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
19.00	Total Vertical Transportation			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.00	Special Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.01	None	None		0							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
20.00	Total Special Services			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	
C	TOTAL BUILDING SERVICES			5	90%						0	5,566	0	36,294	0	0	0	0	0	0	47,426	41,860	0	5,566	47,426	41,860	113.3%
	TOTAL BUILDING			5	90%						0	33,836	60,867	36,294	47,729	19,070	0	0	0	118,303	417,702	316,098	0	101,604	417,702	364,796	114.5%
										316,098																	
										Year 1 - 10 Consolidated Capital Replacement Cost																	



ID Code	Element	Condition Observations	Recommended Course of Action & Maintenance	Condition Grading		Condition Gauge					Asset Renewal Cost																
				Condition Grade	% Deter.	0-20 %	20-40 %	40-60 %	60-80 %	80-100 %	1	2	3	4	5	6	7	8	9	10	Total (\$ USD)	Year 1-10 Total	Year 11-20 Total	Year 21-30 Total	Grand Total	Full Replace	% Full Replace
8.01	Temporary Generators & Fuel Storage	One single phase, second Three phase. Francesco advises 300kW generator is oversized & needs replacing within 5	Replace with 150-200kW generator within 5 years	5	90%						0	0	253,000	0	0	0	0	0	0	0	253,000	253,000	0	0	253,000	253,000	100.0%
8.02	HV/LV Electrical Reticulation	Good condition	Sort wiring to powerpoles as loose and tangled	3	50%						0	0	0	0	0	0	0	0	0	0	85,388	0	85,388	0	85,388	85,388	100.0%
8.03	Lighting Poles	Timber poles with restraints - Good condition		3	50%						0	0	0	0	0	0	0	0	0	0	25,300	0	25,300	0	25,300	25,300	100.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
8.00	Total Electrical Infrastructure			4	70%						0	0	253,000	0	0	0	0	0	0	0	363,688	253,000	110,688	0	363,688	363,688	100.0%
9.00	Water Services										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
9.01	Water Reticulation	All ok, check above ground seals and junctions		2	30%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
9.02	Water Storage Tanks	Mostly PVC		3	50%						0	0	0	0	0	0	0	0	0	0	37,950	0	0	37,950	37,950	100.0%	
9.03	Pumps	Corrosion noted on several pumps	Cheek and services regularly	3	50%						0	0	0	0	0	0	0	0	0	18,975	37,950	18,975	0	18,975	37,950	200.0%	
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
9.00	Total Water Services			3	50%						0	0	0	0	0	0	0	0	0	18,975	75,900	18,975	0	56,925	75,900	105.3%	
10.00	Site Furniture										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
10.01	None	None		0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
10.00	Total Site Furniture			0	0%						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
	TOTAL SITE INFRASTRUCTURE										0	0	254,297	0	0	0	0	1,297	0	18,975	678,036	274,568	113,281	290,187	678,036	906,841	74.8%

274,568
 Year 1 - 10 Consolidated Capital Replacement Cost

Appendix D

Energy Use Analysis





Building System Descriptions

HVAC System	AC Split-Units to provide cooling. No extract or supply system. Natural ventilation by open windows/spaces.
Plumbing System	Metered connection to town water main, cold water only
Electrical System	Over head and underground metered connection to town main. Single and 3 phase.

Plant Item	Description	Location	Operation	Condition	Current maintenance	Recommendations	Current Operational Status
Mechanical Systems							
AC Unit	Indoor Units	Internal	Manual operation	Varied	Monthly cleaning, weekly leak checking. Upcoming planned upgrades to replace old units with more efficient ones.	Replace damaged units with higher efficiency units	
		Internal	Manual operation	Varied	Monthly cleaning, weekly leak checking. Upcoming planned upgrades to replace old units with more efficient ones.	Set all units to 24degC.	
	Some outdoor units are heavily rusting.	"	-	Poor	-	Consider replacing old/damaged units with more efficient ones.	
	Some outdoor units have been vandalized	"	-	Poor	-	The units require cleaning or replacement.	
General AC Units	Dirty outdoor units	"	-	Poor	-	Wipe down to avoid excess dirt getting into filters.	
General	Louvered windows left open or have louvers missing completely.	External	-	Average	-	Ensure that these are not near AC units. If they are they should be closed/fixd	
Lighting	Internal lighting during the day.	Internal	Manual Operation	Good	-	Turn off lights when not required or room not in use.	
General	Closed curtains/blinds during daylight hours.	Internal	-	Average	-	Open curtains to increase natural lighting.	

Recommendation Key

	Plant operating efficiently
	Improvements possible with minimal capital expenditure
	Capital investment recommended to improve system within 2-5years
	Plant requires significant maintenance or replacement
	Potential Health and Safety Hazard
Potential for Future Improvement	An opportunity to improve the standard of servicing in the site - for consideration in future stages.

Plant Item	Description	Location	Operation	Condition	Current maintenance	Recommendations	Current Operational Status
A Admin Building							
AC Units	Split-units	Internal	Manual Operation	Poor	Monthly filter cleaning, quarterly condenser unit cleaning	Replace damaged units with higher efficiency units.	
AC Units	Split-units	Internal	Manual Operation	Average	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent & incandescent lights	All areas	Manual operation	Good.	There is a plan to replace incandescent lights with fluorescent.	Consider replacing with newer fittings.	
Roof Insulation	Roof insulation	Internal	-	Poor. Some sections missing insulation completely	-	Add insulation where missing.	
General	Holes into the ceiling void remain unfixed.	Internal	-	Poor.	-	Fix up holes.	
General	Bookcase covering window.	Internal	-	Average	-	Move bookcase position to enable natural light into the room.	
Electrical	Exposed wiring	Internal	-	Average	-	Replace or fix wiring.	
B Classroom							
AC Units	Split-units	Internal	Manual Operation	Poor	Monthly filter cleaning, quarterly condenser unit cleaning	Replace damaged units with higher efficiency units.	
AC Units	Split-units	Internal	Manual Operation	Average	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent & incandescent lights	All areas	Manual operation	Good.	There is a plan to replace incandescent lights with fluorescent.	Consider replacing with newer fittings.	
Roof Insulation	Roof insulation	Internal	-	Poor. Some sections missing insulation completely	-	Add insulation where missing.	
General	Rust on fan blades	Internal	-	Average	-	Replace old/damaged fans with new ones to increase efficiency. Alternatively, remove flakey paint.	
C Classroom							
AC Units	Split-units	Internal	Manual Operation	Poor	Monthly filter cleaning, quarterly condenser unit cleaning	Replace damaged units with higher efficiency units.	
AC Units	Split-units	Internal	Manual Operation	Average	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent & incandescent lights	All areas	Manual operation	Good.	There is a plan to replace incandescent lights with fluorescent.	Consider replacing with newer fittings.	
Roof Insulation	Roof insulation	Internal	-	Poor. Some sections missing insulation completely	-	Add insulation where missing.	
Electrical	Exposed wiring	Internal	-	Average	-	Replace or fix wiring.	
D Directors Office							
AC Units	Split-units	Internal	Manual Operation	Poor	Monthly filter cleaning, quarterly condenser unit cleaning	Replace damaged units with higher efficiency units.	
AC Units	Split-units	Internal	Manual Operation	Average	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent & incandescent lights	All areas	Manual operation	Average. Some corrosion to fittings.	There is a plan to replace incandescent lights with fluorescent.	Consider replacing with newer fittings.	
Roof Insulation	Roof insulation	Internal	-	Good.	-	Replace where missing	
Mechanical	Some outdoor units have debris in their filters.	External	-	Poor	-	These units require immediate filter cleaning.	
Mechanical	Some outdoor units are heavily rusting.	External	-	Poor	-	Consider replacing old/damaged units with more efficient ones.	
Mechanical	Some outdoor units have been vandalized	External	-	Poor	-	The units require cleaning or replacement.	
General	AC areas not sealed	Internal	-	Poor.	Noted that there is a need to replace louvered windows with sliding windows.	Replacement of louvered windows with sliding doors.	
E Restroom							
Lighting	Fluorescent & incandescent lights	All areas	Manual operation	Average. Some corrosion to fittings.	There is a plan to replace incandescent lights with fluorescent.	Consider replacing with newer fittings.	
Electrical	Rusty and vandalized fuse-board.	Internal	-	Average	-	Replacement of any damaged components. Addition of a functioning latch to ensure this is not opened for vandals/public unless required to be.	
F Research							
AC Units	Split-units	Internal	Manual Operation	Poor	Monthly filter cleaning, quarterly condenser unit cleaning	Replace damaged units with higher efficiency units.	
AC Units	Split-units	Internal	Manual Operation	Average	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent & incandescent lights	All areas	Manual operation	Good.	There is a plan to replace incandescent lights with fluorescent.	Consider replacing with newer fittings.	
Roof Insulation	Roof insulation	Internal	-	Good.	-	Replace where missing	
Electrical	Incomplete wall-sockets	Internal	-	Average	-	Replace or fix sockets.	
H Peer Counselling							

Plant Item	Description	Location	Operation	Condition	Current maintenance	Recommendations	Current Operational Status
AC Units	Split-units	Internal	Manual Operation	Poor	Monthly filter cleaning, quarterly condenser unit cleaning	Replace damaged units with higher efficiency units.	
AC Units	Split-units	Internal	Manual Operation	Average	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent & incandescent lights	All areas	Manual operation	Good.	There is a plan to replace incandescent lights with fluorescent.	Consider replacing with newer fittings.	
Roof Insulation	Roof insulation	Internal	-	-	-	Replace where missing	
Mechanical	Refrigerant hose pipes are bent.	External	-	Poor	-	Un-kink these pipes to allow refrigerant flow more efficient.	
Electrical	Faulty wall-sockets	Internal	-	Average	-	Replace or fix sockets.	
Electrical	Exposed wiring	Internal	-	Average	-	Replace or fix wiring.	

I Computer Lab.

AC Units	Split-units	Internal	Manual Operation	Poor	Monthly filter cleaning, quarterly condenser unit cleaning	Replace damaged units with higher efficiency units.	
AC Units	Split-units	Internal	Manual Operation	Average	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent & incandescent lights	All areas	Manual operation	Good.	There is a plan to replace incandescent lights with fluorescent.	Consider replacing with newer fittings.	
General	Roof insulation	Internal	-	Good.	-	Replace where missing	
Electrical	Unoccupied computers.	Internal	Manual operation.	Average.	-	Turn computers off when not in use.	

J Student Centre

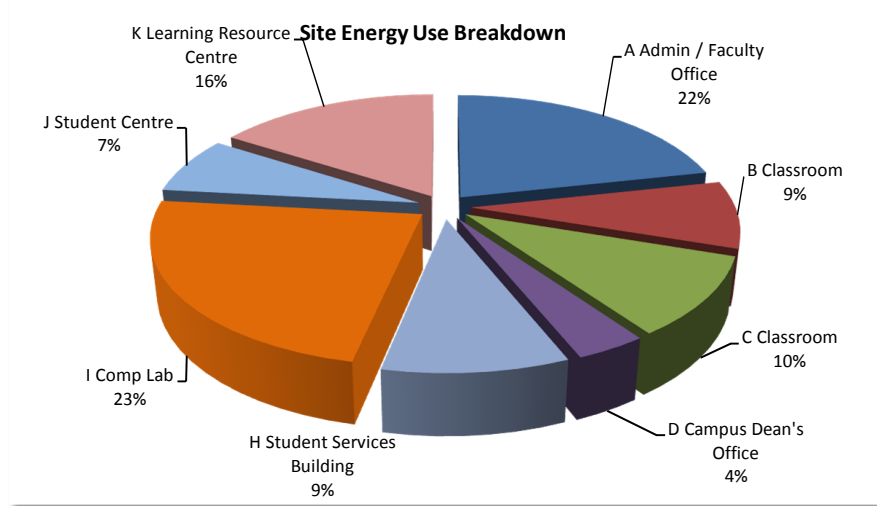
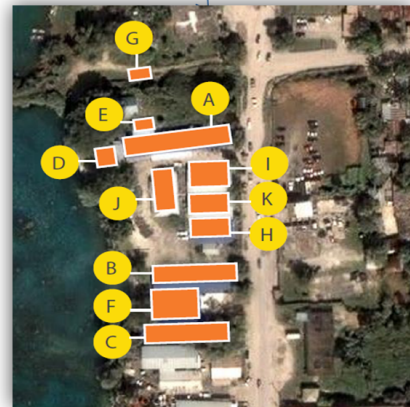
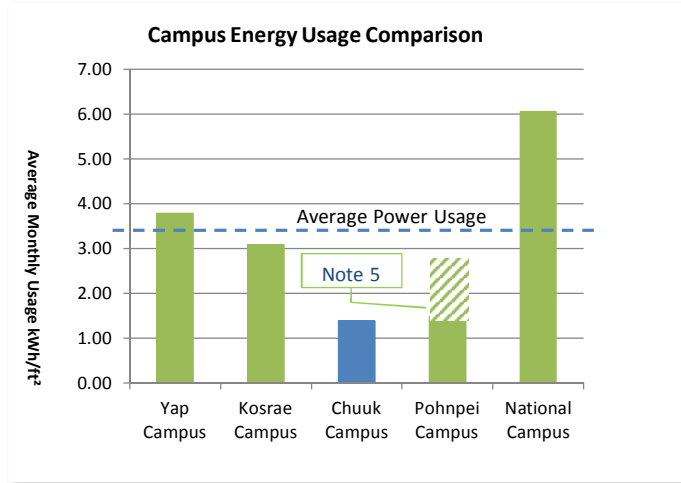
AC Units	Split-units	Internal	Manual Operation	Poor	Monthly filter cleaning, quarterly condenser unit cleaning	Replace damaged units with higher efficiency units.	
AC Units	Split-units	Internal	Manual Operation	Average	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent & incandescent lights	All areas	Manual operation	Good.	There is a plan to replace incandescent lights with fluorescent.	Consider replacing with newer fittings.	
General	Roof insulation	Internal	-	-	-	Replace where missing	
General	Some outdoor units have debris in their filters.	External	-	Poor	-	These units require immediate filter cleaning.	
General	Some outdoor units are heavily rusting.	External	-	Poor	-	Consider replacing old/damaged units with more efficient ones.	

K Learning Resources.

AC Units	Split-units	Internal	Manual Operation	Poor	Monthly filter cleaning, quarterly condenser unit cleaning	Replace damaged units with higher efficiency units.	
AC Units	Split-units	Internal	Manual Operation	Average	Monthly filter cleaning, quarterly condenser unit cleaning	Set all units 24degC.	
Lighting	Fluorescent & incandescent lights	All areas	Manual operation	Good.	There is a plan to replace incandescent lights with fluorescent.	Consider replacing with newer fittings.	
General	Roof insulation	Internal	-	Poor. Insulation completely missing	-	Add insulation in roof.	
General	Bookcase covering window.	Internal	-	Average	-	Move bookcase position to enable natural light into the room.	

Recommendation Key

	Plant operating efficiently
	Improvements possible with minimal capital expenditure
	Capital investment recommended to improve system within 2-5years
	Plant requires significant maintenance or replacement
	Potential Health and Safety Hazard
	Potential for Future Improvement An opportunity to improve the standard of servicing in the site - for consideration in future stages.



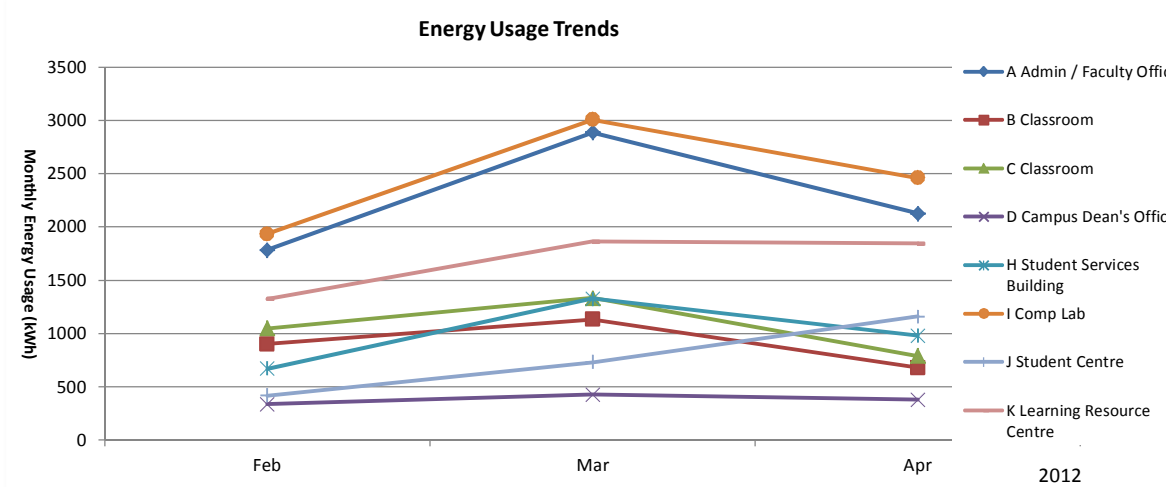
Campus Summary:

The figures presented above are based on figures available for 3 months in 2012, and hence is a snapshot view and not necessarily representative of average energy use. If further records were available a more detailed analysis of the energy usage can be conducted and more targeted recommendations produced.

The Chuuk campus is using less energy than average across the sites, based on the 3 months of energy readings from 2012 provided. It is hard to see a trend from this data, but the computer lab and faculty office account for almost 50% of the electricity usage on site. Energy saving measures should start with these areas.

Recommendations:

- Ensure the set point of the cooling units are around 24°C
- Turn units off when spaces are un-occupied
- Ensure units are free from obstructions, filters are clean, and pipework runs are straight to reduce loads on units
- Close windows when systems are operating
- Seal holes and penetrations into the building in areas that are air conditioned
- Keep doors leading to AC spaces closed
- Turn off lights when leaving a room
- Replace ceiling insulation where missing
- A trial of higher air conditioning set points and energy monitoring would be of particular benefit to admin areas as these are a particularly high user of energy on this campus.



Energy measurement

Being able to measure and record energy usage is a key step in improving energy efficiency. It has several benefits:

- Highlighting areas of high energy usage to enable targeting of specific areas for improvement
- Tracking effectiveness of efficiency measures
- Engage staff and students in the process to reduce energy usage between buildings / campuses e.g. competitions

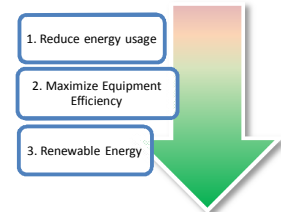


A range of various types of electricity meters are available which can be selected to best meet the College's needs.

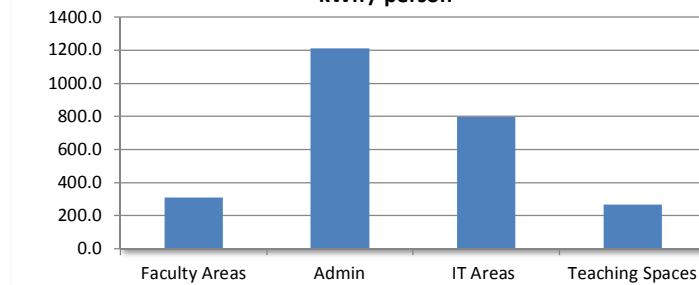
Reducing Your Energy Usage

There are many energy efficiency measures that can be undertaken with minimal capital cost. The following procedure will help to ensure that the most cost efficient measures are undertaken first.

- Reduce how much energy you use: e.g. (a), (b), (c), (d) above. Use of available energy saving resources to engage and educate staff and students.
- Maximize Equipment Efficiency e.g. Replacing air conditioning units with more efficient models when appropriate, provide high efficiency lighting when replacing fittings. (see note 4)
- Consider using renewable energy resources where appropriate, e.g. solar hot water, photovoltaic cells



Average Energy Usage Per Person : Chuuk Campus kWh / person



- Notes:
- The figures contained in this report are based on power consumption data provided by CoM (See attached Energy Usage Data Summary). Data provided was limited for some campuses and hence may not be representative of average energy use.
 - Site Energy Usage Breakdowns are estimated where insufficient background data is available.
 - Occupancy Data based on Sandy Pond Associates Room Capacities and Occupancy Rates
 - Note that if installation of high efficiency lighting is to be considered, power conditioning to the relevant lighting circuit may be required to prolong the life of the fixtures.

Moving forward:

This energy audit is a "snapshot" of how the campus is currently operating.

The findings of this study are to be fed forward into the future master planning of the college.

There are several items identified in this study which we have the ability to improve with redevelopment works or future new buildings.

Building Physics:

- Consideration of solar shading to windows to prevent solar gains
- Colour of buildings (Darker colors absorb more heat)
- Promotion of cross-flow natural ventilation
- Selection of glazing to minimize solar gain
- Consideration of requirement for cooling to equipment areas only

Renewable Energies:

Review of potentially suitable renewable energies for various sites

User engagement

- Education of users on energy consumption, and engaging of staff and students to take responsibility for energy costs
- Record keeping and metering of resource consumption
- PPM (Planned Preventative Maintenance) programmed and

