



# Land Use Development and Infrastructure Plan (LUDIP)



**BATSTATEU  
PABLO BORBON**

*Leading Innovations, Transforming Lives*



# Land Use Development and Infrastructure Plan (LUDIP)

## MESSAGE FROM THE CHANCELLOR



**Dr. EXPEDITO V. ACORDA**  
Chancellor, BatStateU Pablo Borbon

*“A goal without a plan is just a wish.” ~ Antoine de Saint-Exupéry.*

Having a planned development is essential for a sustainable development and thus, the optimal use of available resources. Since resources are limited, it becomes necessary to use the resources wisely for the benefit of the community of Batangas Province but as well as its neighboring provinces.

Today, we live in a period characterized by a technical progress so dynamic that it goes beyond most peoples’ imagination. At the same time, we are confronted not only with the consequences of that progress, the depletion of the land resources showing that growth is limited, but also with other environmental consequences and phenomenon in which our development concepts will be hindered.

With that, Batangas State University – Pablo Borbon Campus in consonance with Republic Act No. 11396 or the “SUCs Land Use Development and Infrastructure Plan Act” together with the objectives of the Commission on Higher Education and the national government to render the land and physical assets of Higher Education Institutions to be holistically developed in the lens of strategic growth and development proudly proposed this Land Use Development and Infrastructure Plan.

This LUDIP enforces the intentions of the Republic Act No. 11396 to provide for a rational, holistic, efficient and just allocation, utilization, development and management of the country's land resources. It is also anchored on the national framework of development, particularly in its general aspiration of pursuing inclusive growth.

With that, BatStateU-Pablo Borbon’s land use and infrastructure projects wholeheartedly adheres to its mission, vision, and sustainability goals in carrying out its tripartite mandate on teaching, research, and extension that should emanate an aura of service, excellence, and nobility.

Be that as it may, the BatStateU-Pablo Borbon’s administration is determined and overindulged in its undertaking and commitment to continue constructing and upgrading its land use and infrastructure projects as enunciated in this LUDIP.

Wishing BatStateU- Pablo- Borbon to achieve all of its aspirations and ideals.

Continue to Soar, Red Spartans!

**Dr. EXPEDITO V. ACORDA**  
Chancellor, BatStateU Pablo Borbon





### **Land Use Development and Infrastructure Plan (LUDIP) Legal Mandates**

A new law mandates state universities and colleges (SUCs) to design development and infrastructure plans for the proper management of land resources. Republic Act No. 11396, signed by President Rodrigo Duterte on Aug. 22, requires all SUCs to submit their respective Land Use Development and Infrastructure Plan (LUDIP) to the Commission on Higher Education. SUCs are required to follow their respective development plans for all of their future infrastructure projects.

Under Republic Act No. 11396, land use or infrastructure projects of the SUCs shall also be required to follow the LUDIP which shall be linked with the land use plan and practice of the local government units to ensure complementation of activities across geographical boundaries. Under the new law, SUCs must submit the following as part of their LUDIP:

- campus planning framework, principles and processes, including master development plans
- detailed geographical description and survey of the site occupied by the SUCs
- inventory of all existing buildings, facilities, and other infrastructure within the compound or areas occupied by the SUCs
- cadastral survey of land occupied by the SUCs
- detailed description of the research core, academic core, and residential areas covering both housing for faculty, and dormitories for students
- detailed geographical description of land used for commercial, agriculture, fishery, forestry, and other activities, including open and recreational spaces, landscape features, and campus transportation system among others.
- design and estimated cost of construction, operation, maintenance of other infrastructure needs of the SUCs
- financial plan

The following agencies may also help SUCs in making their development and infrastructure plans:

- Housing and Land Use Regulatory Board
- University of the Philippines School of Urban and Regional Planning
- Department of Public Works and Highways
- Land Management Bureau of the Department of Environment and Natural Resources

The measure meanwhile tasks the CHED, UP-SURP, and HLURB to design capacity building programs for SUCs to enable them to develop and prepare suitable land use plans.

Responsive to Republic Act No. 11396, the Batangas State University prepared its LUDIP for the 11 campuses of the University.



## FOREWORD

This Land Use Development and Infrastructure Plan (LUDIP) of BatStateU – Pablo Borbon was authored and made possible due to wisdom and brilliance of the designated local committee officials, namely, Chairperson, Dr. Gina D. Bonifacio, Co- Chairperson, Dr. Teodorica G. Ani and Members, Dr. Realiza M. Mame, Engr. Emanuel L. Mendoza, Dr. Norrie E. Gayeta, Mrs. Kathleen F. Fanoga, Engr. Debbie Ann P. Marcelino and Dr. Gemar G. Perez in which in return, I would like to express my heartfelt appreciation and gratefulness and to wholeheartedly commend and acknowledge their valuable and dedicated service.

This LUDIP refers to BatStateU-Pablo Borbon Campus' master plan that contains the allocation and utilization of the land within a campus' geographic boundary to meet the required academic and non-academic support services and facilities.

This also translates into land uses and development plans the University's vision, which is aligned with higher level plans and consistent with the principles as well as standard design and development guidelines. It contains the campus development programs and projects and the investment needed to implement them.

This shall also serve as proof that the land assets, buildings, infrastructure, and other valuable properties identified therein are actually, directly and exclusively used for educational purposes, and necessary to promote the mandates of this University and for the purpose for which they have been reserved or acquired.

And this shall also be used as basis for the current and future uses of the properties of the BatStateU-Pablo Borbon Campus.

For BatStateU-Pablo Borbon Campus:

**Dr. EXPEDITO V. ACORDA**  
*Chancellor*





## **ACKNOWLEDGEMENT**

The Batangas State University – Pablo Borbon’s LUDIP Local Committee wishes to extend their heartfelt and profound gratitude to all persons who in one way or another have contributed efforts and support to make this endeavor a reality.

Above all to Almighty God, for the spiritual enlightenment, the wisdom and constant flow of ideas which help a great deal for lighting up the lamp of hope, encouragement, courage and patience to the success of this undertaking. For all these graces, our prayers of gratitude.

To University Officials, especially to our University President, Dr. Tirso A. Ronquillo, to our Pablo Borbon Campus’ Chancellor, Dr. Expedito V. Acorda and all others who have shared intellectual support, assistance, suggestions and recommendations that contributed in making this LUDIP possible.

Likewise due recognition and appreciation to Local Government Unit of Batangas City, especially the City Mayor’s Office, specifically to City Mayor, Hon. Beverley A. Dimacuha- Mariño and to City Planning and Development Office, to its coordinator, Mr. Januario B. Godoy for giving us the data and information and in sharing their ideas, practices and intellectual know-how in their field of specialization and for all their support to make this LUDIP possible.

And to all other persons behind this LUDIP, heartfelt gratitude, recognition and appreciation for all of the hardwork and brilliance that you all partied in the accomplishment of this LUDIP to make this possible.

In behalf of Pablo Borbon’s LUDIP Local Committee:

A handwritten signature in black ink, appearing to read 'Gina Bonifacio', written over a faint circular stamp.

**Dr. GINA D. BONIFACIO**

*Chairperson*



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# **I. PROFILE OF BATANGAS STATE UNIVERSITY**



## **GENERAL INFORMATION OF BATANGAS STATE UNIVERSITY**

## Introduction

### a. Legal bases/mandates

The establishment of Batangas State University is governed by specific legal bases which serve as guide its pursuit for quality tertiary education. First is the Republic Act No. 764 (1953) bestowed upon the Batangas Trade School (established in 1903 as Manual Training School) a national status, changing its name to Pablo Borbon Memorial Trade School, later (in 1957) to Pablo Borbon Regional School of Arts and Trades (PBRSAT). Another, legal underpinning is the Republic Act No. 5270 (1968) which made it possible for the conversion of the PBRSAT into a state college, the Pablo Borbon Memorial Institute of Technology (PBMIT).

Further, with the university's continued development and expansion the Republic Act. No. 9045 (March 22, 2001) created the Batangas State University (BatStateU) by integrating the Pablo Borbon Memorial Institute of Technology (PBMIT) and all its branches/campuses, the Jose P. Laurel Polytechnic College in Malvar, the Apolinario R. Apacible School of Fisheries in Nasugbu, and the Polytechnic University of the Philippines campus in Sto. Tomas, all in the province of Batangas.



Figure 1 Batangas State University Pablo Borbon

The Batangas State University (BatStateU) is committed to implement its mandate of equality and excellence, relevance and responsiveness, access and equity and efficiency and effectiveness through instruction, research, extension and production to meet the growing needs of the country and the world for globally competitive and morally upright professionals, scientist, technologist, technicians, skilled workers and entrepreneurs. It





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commits itself to the advancement of knowledge and skills in arts and sciences, teacher education, engineering, technology and informatics, accountancy, business and economics, agricultural sciences, law nursing and other related disciplines.

b. Brief profile of the university/college and its campuses

Batangas State University is a Level IV state university in the province of Batangas, Philippines. Established in 1903, the university is strategically located at the second largest economic region in the Philippines, which puts it at a prime position not only as a premier provider of higher and advanced learning, but also as a viable economic development zone.

As one of the country's model higher education institutions recognized by the Commission on Higher Education (CHED), BatStateU is the first and thus far the only state university in the Philippines with engineering, IT, and computer science programs accredited by the Accreditation Board for Engineering and Technology (ABET) – Engineering Accreditation Commission and Computing Accreditation Commission. With 15 development centers, it is recognized by the Regional Development Council of Region IV-A as the Regional Center for Technology Business Incubation and Development, and as the Regional Center for Science, Technology, Engineering, and Environment Research.



Figure 2 BatStateU Achievements



The university's Electronics Engineering program is designated by CHED as a national Center of Excellence, and its Electrical Engineering, Mechanical Engineering, Development Communication, and Teacher Education programs are national Centers of Development. It has also maintained high academic standards in architecture, industrial technology, computing sciences, business, agriculture, allied health, and the social sciences. It received ISO 9001:2015 certification from TÜV Rheinland Philippines, Inc., and is host to the first China-Philippines Silk Road Institute in the country.

With over 40,000 students facilitated by 1,700 faculty and staff in 11 campuses, Batangas State University remains steadfast in its adherence to international standards. It was given a three-star rating by Quacquarelli Symonds Stars University rating, and is part of the Top Universities list. Through Proclamation No. 947, President Rodrigo Roa Duterte designated the BatStateU Knowledge, Innovation, and Science Technology or KIST Park as a Special Economic Zone. It is the first KIST Park registered by the Philippine Economic Zone Authority or PEZA.



Figure 3 BatStateU Figures

### *Campuses*

Since 2003, Batangas State University has two main, two satellites, and six extension campuses in Batangas. To maintain camaraderie between its campuses, the university administers several annual activities like quiz bees and intramurals.

The university's main campuses are located in Batangas City; Pablo Borbon Main I is at Rizal Avenue, Poblacion while Pablo Borbon





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Main II is within Golden Country Homes Subdivision in Brgy. Alangilan. Both are named in honor of former governor Pablo Borbon. Being the oldest of all the campuses, Main I is the site of the former Batangas Trade School which was established in 1932. Since then, Main I has been the flagship campus and the seat of the administration of the university. The site of the second oldest campus, Main II, was acquired in 1984. When BatStateU was decentralized in 2021, the Pablo Borbon Main I became BatStateU Pablo Borbon while Pablo Borbon Main II is now known as BatStateU Alangilan.



Figure 4 BatStateU Alangilan (formerly BatStateU Main II)

On 25 February 2000, the Apolinario R. Apacible School of Fisheries or ARASOF in Brgy. Bucana, Nasugbu was incorporated into the former Pablo Borbon Memorial Institute of Technology as its first satellite campus.



Figure 5 BatStateU ARASOF - Nasugbu

With the implementation of Republic Act No. 9045, two more satellite campuses were incorporated to the then newly formed Batangas State University; this were Jose P. Laurel Polytechnic College or JPLPC in Poblacion, Malvar and a branch of the Polytechnic University of the Philippines or PUP in Poblacion, Santo Tomas However, on 22 May 2007, Congress enacted Republic Act No. 9472 that excluded PUP Santo Tomas from Batangas State University.



Figure 6 BatStateU JPLPC - Malvar

Earlier in 1994, the university's third oldest and first extension campus was inaugurated in Brgy. Caloocan, Balayan. In 2000, a memorandum of agreement was signed for the purpose of establishing more extension campuses in Lipa City, Rosario, Lobo, San Juan, Calaca, Padre Garcia, San Pascual, and Taysan. The said campus in Brgy. Marawoy, Lipa City was named Don Claro M. Recto campus as a tribute to the well-known Filipino politician while the one in Brgy. Namunga, Rosario was named Jose B. Zuño campus in honor of Rosario's first postwar mayor. The extension campuses in Lobo and San Juan were constructed in Brgy. Masaguitsit and Brgy. Talahiban, respectively. Recently, a ceremony was held on 8 June 2017 for the commencement of construction of another extension campus in Mabini and was launched on 6 August 2018.



Figure 7 BatStateU Lipa

Moreover, in December 2, 2020 the board of regents approved the official names of the five (5) constituent campuses of the university by virtue of board resolution no. 137-A, S.2020. After a thorough analysis of data the five campuses that have consistently shown strength in most indicators which include enrolment, academic infrastructures and support facilities, and total assets are the Batangas State University-Pablo Borbon, Batangas State University Alangilan, Batangas State University c - Nasugbo, Batangas State University JPLPC- Malvar, and Batangas State University Lipa. They are considered constituent campuses because of their strong capability for autonomy and operational sustainability.

### c. Brief history of the SUC and its campuses

#### *Early years*

Batangas State University was originally established as a Manual Training School in 1903 through the supervision of its first American principal, Mr. Scheer. The institution aimed to train youth for beneficial jobs specifically in woodworking. Two years later, it was renamed Batangas Trade School with Mr. Schartz, Zacarias Canent, Isaias, and Nad Pascual Magcamit as its principals, successively. The school was destroyed by fire in 1928 and classes were held temporarily at the old government building near the present Basilica of Immaculate Conception church. The construction of the school building at the site of Batangas State University's Main Campus I began in 1932.

After the Liberation, Batangas Trade School resumed activities on 10 September 1945 with Vicente J. Mendoza as its principal. Under the Philippine Rehabilitation Act of 1946, the school was renovated and the first batch of female students were admitted when courses in food trade, garment, and cosmetology were introduced as a response to the growing need of female workforce.





### *Pablo Borbon era*

Sometime before 1952, the school was renamed Pablo Borbon Memorial Trade School as a tribute to Pablo Borbon who served as the 6th governor of Batangas from 1910 to 1916. Through Republic Act No. 741, the school gained a national trade status on 18 June 1952. Again, it was renamed Pablo Borbon Regional School of Arts and Trades on 22 June 1957 as mandated by Republic Act No. 1957. Two months later, Arsenio Galauran became the school superintendent while the institution started to offer technical courses. The school started offering mechanical and electrical engineering in 1961. Galauran was succeeded by Vicente Mendoza in November 1962. Mendoza was then followed by Rosauro de Leon on 8 June 1963. It was during de Leon's administration that the school began to offer terminal classes in auto mechanics, cosmetology, electronics, dressmaking, machine shop practice, and radio mechanics. On 19 June 1965, Republic Act No. 4582 directed the school to offer degree courses in industrial education and industrial arts.

As authorized by Republic Act No. 5270, Pablo Borbon Regional School of Arts and Trades was elevated into a state college and renamed Pablo Borbon Memorial Institute of Technology or PBMIT on 15 June 1968. At the time of its conversion, it was the 23rd state college in the country. Rosauro de Leon was appointed to become PBMIT's first president.

In 1972, the newly established state college started to offer courses in electrical and mechanical engineering courses. Sometime before 1973, a secondary school department that came to be known as the Laboratory School was inaugurated. By 1973, Marcos Ato was its principal when the Laboratory School adopted the Revised Secondary Education Program or RSEP. The following year, the Graduate School was formally opened with a Master of Arts in Industrial Education major in Administration and Supervision as its pioneer course. This was followed in 1978 when Master of Management specialized in Business and Public Managements was offered in partnership with former U.P. College of Public Administration. Earlier in 1977, PBMIT launched the Extension Trade Training Program that aimed to train out-of-school youth in electricity, food trades, mechanics, practical automotive, and woodcraft in a span of 200 hours.



Isabelo R. Evangelio succeeded de Leon as college president in 1983. A year after Evangelio's ascendancy to the office, PBMIT acquired a three-hectare land in Batangas City. Eventually, this would become the site of Batangas State University's Main Campus II. Evangelio was succeeded by Mariano O. Albayalde in 1986. In the same year, PBMIT broadened its undergraduate programs in home economics, mathematics, and science. In association with Technological University of the Philippines or TUP, a doctoral degree in Industrial Education Management was offered in 1987. A science class with emphasis in mathematics and science of the Special Science Curriculum was piloted in the Laboratory School from 1987 to 1990 through the supervision of its principal, Mercedes del Rosario.

Albayalde's presidency was followed by Ernesto M. De Chavez in 1989. Courses in English language, elementary and secondary education, and computer science were made available the subsequent year. Simultaneously, PBMIT spearheaded the Dual Training System or DTS that was intended for aspiring technicians. DTS was conducted on a trimester basis; classes were held four days a week in industry and two days in school. By 1991, two more courses in development communication and biology were offered. Starting from 1993, the Laboratory School adopted the Technology Based-Curriculum to conform with PBMIT's Science Education Program. Together with Philippine Science High School and Quezon City Science High School, the three were the first secondary schools in the Philippines to adopt the aforementioned curriculum. In 1994, an extension campus was opened in Balayan with welding fabrication and automotive, electrical, and electronics technology as its premier courses.

From 1995 to 2000, numerous courses in various disciplines were introduced. Some of these were architecture, business administration, chemical engineering, sanitary engineering, fine arts, information technology, psychology, and public administration. The former College of Liberal Arts, Science, and Computer Studies; School of Accountancy, Business and Economics, Center for Gender, and Poverty Studies; and School of Food Science were established. A separate department for primary students was created that offered Kindergarten I and II in preschool and Grade I in elementary.



### *Conversion into a State University*

On 22 March 2001, Pablo Borbon Memorial Institute of Technology was converted into Batangas State University by virtue of Republic Act No. 9045. Ernesto M. De Chavez became the university's first president. The conversion also led to the unification of the Grade School Department and the Laboratory School from which the Integrated School came into existence with Maxima Ramos as its first director. On 17 July 2006, Nora L. Magnaye assumed as the university's second president and the first woman to hold the position. During her presidency, Batangas State University started to establish ties with different universities and colleges in China, Malaysia, South Korea, Thailand, and Vietnam.

On 17 July 2014, Tirso A. Ronquillo was appointed as the third university president. Since 2015, massive infrastructure development was concretized in the university's campuses. It was during Dr. Ronquillo's term when the university became a Level IV university, received ISO 9001:2015 certification, and was awarded Three Stars by the QS Stars rating. It was also during this time when its engineering and information technology programs were accredited by the US-based Accrediting Board for Engineering and Technology. The university established the first KIST park in the country, started offering new emerging programs, developed research and development centers, and expanded international partnerships during his term. In December 2019, the university launched its ten-year strategic plan highlighted by its new vision, mission, and strategic direction until 2029.

#### d. Current Governing Board/ inter-department bodies

##### *The BatStateU Board of Regents*

The Batangas State University Board of Regents is the highest governing body of the university, as stipulated in Sec. 5 of RA 9045. The Board regularly convenes at least once every quarter. The Board is composed of the following:

- Chairperson: CHED Commissioner;
- Vice Chairperson: University President;
- Members:
  - Chair of the Senate Committee on Higher, Technical and Vocational Education;
  - Chair of the House Committee on higher and technical education;
  - Regional Director of National Economic and Development Authority, Regional Office IV-A;
  - Regional Director of Department Of Science and Technology, Regional Office IV-A;
  - President of the BatStateU Faculty Confederation;
  - President of the University Student Council;



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- President of the BatStateU Federation of Alumni Associations;
- Private/prominent citizen; and
- University and Board Secretary.



Figure 8 Organizational Chart of Board of Regents





### *Pablo Borbon Campus Administration*

The Pablo Borbon campus is headed by the chancellor Dr. Expedito V. Acorda. Under his office are four vice-chancellors who are designated to different offices such as the office of Vice-chancellor for academic affairs, vice-chancellor for administration and finance, vice-chancellor for research development and extension services and the vice-chancellor for development and external affairs. On the other hand, Pablo Borbon has three (3) extension campuses namely Lemery, Rosario and San Juan, these are led by campus directors who directly report to the office of the chancellor.

Dr. Charmaine I. Trivino, as the Vice-chancellor for academic affairs works on the academic related matters with the deans of colleges. There are various offices under her supervision such as registration, library, health services, testing and admission, on the Job Training, Student Organization, Guidance and Counseling and Student Discipline. Each of the offices is designated with heads. Dr. Gina D. Bonifacio, the Vice-chancellor for administration and finance works with different offices whose functions involve administration and finance matters. These include the office of human resource management, records, procurement, property and supply, project and facility management, general services, environmental management unit, budget, cashiering, accounting and disbursing officer. The heads of these offices directly report to the office of the vice-chancellor.

Moreover, Dr. Vaberlie M. Garcia, the Vice-chancellor for research, development and extension services mobilizes the function of the office with the heads of the research and extension services office. The Vice-chancellor for development and external affairs Dr. Teodorica G. Ani, supervises other offices including the ICT services, planning and development, external affairs and resource generation. The campus directors of each extension campus of the Pablo Borbon oversee the functions of other offices such as the academic affairs, research and extension, development and external affairs and administrative services with the respective heads.





Figure 9 Organizational Chart of Pablo Borbon Campus Administration

## President's Advisory Council

The President's Advisory Council serves as the institution's management committee who spearheads strategic planning, policy formulation, and decision making based on Board-approved policies and guidelines. Currently, it is composed of the following:

1. DR. TIRSO A. RONQUILLO - University President
2. PROF. ROGELIO A. ANTENOR - Vice President for Academic Affairs
3. ATTY. LUZVIMINDA C. ROSALES - Vice President for Administration and Finance
4. ENGR. ALBERTSON D. AMANTE - Vice President for Research, Development and Extension Services
5. ATTY. NOEL ALBERTO S. OMANDAP - Vice President for Development and External Affairs
6. PROF. ENRICO M. DALANGIN - Chancellor, BatStateU ARASOF-Nasugbu
7. DR. EXPEDITO V. ACORDA - Chancellor, BatStateU Pablo Borbon
8. DR. JESSE A. MONTALBO - Chancellor, BatStateU Alangilan
9. ATTY. ALVIN R. DE SILVA - Chancellor, BatStateU Lipa
10. DR. PHILIP Y. DEL ROSARIO - Chancellor, BatStateU Malvar
11. PROF. ENRICO M. DALANGIN - Secretary of the University and of the Board of Regents



Figure 10 Organizational Chart of President's Advisory Council

*The Administrative and Academic Councils*

The university has an Administrative Council, as stipulated in Section 10 of RA 9045. It consists of the president of the university as the chairman, the vice presidents, deans, directors, and other officials of equal rank as members. The Administrative Council reviews and recommends to the Board policies governing the administration, management and development planning of the university for appropriate action.

The Academic Council, as provided in Section 11 of RA 9045, has the president of the university as chairman and all members of the instructional staff with the rank of not lower than assistant professor as members. This council has the power to review and recommend the curricular offerings and rules of discipline of the university, subject for appropriate action of the Board. It shall fix the requirements for admission of students, as well as for graduation and the conferment of degrees, subject to review and/or approval by the Board.



### e. Programs offered

The university's program offerings are recognized by the country's Commission on Higher Education. These are designed to provide opportunities for students to discover their potentials and enhance their technical and creative skills in a vibrant academic environment. Each program offering is anchored on pragmatic, relevant, and socially responsive curricula that train students to be globally competitive by embracing transdisciplinary, social intelligence, new media literacy, design mindset, and physical and virtual collaboration. The university believes that these skills are required in the emerging professional and social environments.

Graduate programs are also offered to provide advanced learning in specialized disciplines. These provide professionals more opportunities for career advancement, increase their prospects, and nurture greater intellectual curiosity and passion for inquiry, thus molding them to become leaders, managers, and innovators by developing transformative solutions to real world problems.

### ***College of Accountancy, Business, Economics and International Hospitality Management***

The College of Accountancy, Business, Economics and International Hospitality Management is an Institution offering nationally-accredited graduate and undergraduate programs in Business and Hospitality Management, Customs and Public administration, and Disaster Risk Management. Composed of more than 100 faculty and support staff catering to more than 9,000 students, the college has been the prominent producer of license professionals in the field of entrepreneurship, management accounting, hospitality and tourism management, public administration and disaster risk management in the region and the country. The college aims to provide quality education to prepare students for a wide range of careers in accountancy, business hotel and restaurant management, custom and Public Administration, aspire for continuing Education, enhance competencies at home their leadership skills to enable them to participate actively in the global market through high quality instruction, research, extension and production which serve as fertile ground for the internalization of values that uplift self, society and the environment. These programs are the second most sought-after programs after engineering. The university has been a prominent producer of licensed professionals in accountancy and customs administration, as well as world-class graduates in the fields of business, entrepreneurship, management accounting, hospitality and tourism management, public administration, and disaster risk management.

#### Programs Offered:

##### Graduate Programs

1. Doctor of Public Administration





2. Doctor of Business Administration
3. Master of Business Administration
4. Master in Public Administration
5. Master in Logistics Management/Port Administration
6. Master in Disaster Risk Management

### Undergraduate Programs

1. Diploma in Disaster Risk Management
2. Bachelor of Science in Accountancy
3. Bachelor of Science in Business Administration:
  - Major in Business Economics
  - Major in Financial Management
  - Major in Human Resource Management
  - Major in Marketing Management
  - Major in Operations Management
4. Bachelor of Science in Hospitality Management
5. Bachelor of Science in Tourism Management
6. Bachelor in Public Administration
7. Bachelor of Science in Customs Administration
8. Bachelor of Science in Entrepreneurship
9. Bachelor of Science in Management Accounting
10. Bachelor of Science in Public Health for Disaster Response

### **College of Teacher Education**

The university's Teacher Education program is designated by the Commission on Higher Education as a national Center of Development. The university remains to be one of the largest producers of licensed professional teachers and educational leaders and supervisors in the region. The teacher education program offerings focus on teaching pedagogies, curriculum development, and assessment of learning, instructional materials development, 21st century education, virtual learning, and other emerging trends in different fields of specialization.

In its pursuit to become a national university, the Batangas State University shall be known as the leading producer of researchers, scholars, and innovators. It shall spearhead the development and excellent delivery of dynamic curricula that are responsive to the drivers of industry. It shall be the primary generator of new knowledge on niche areas by conducting high-impact research that contributes to national development. Through community and global partnerships, it shall provide innovative solutions to emerging societal problems.

### Programs Offered:

#### Graduate Programs

1. Doctor of Education major in Educational Management
2. Doctor of Philosophy major in Educational Management
3. Doctor of Philosophy major in Mathematics Education



#### 4. Master of Arts in Education

- Master of Arts in Education major in Educational Management (Non-Thesis Program)
- Master of Arts in Education major in Educational Management (Thesis Program)
- Master of Arts in Education major in English Language Teaching
- Master of Arts in Education major in Mathematics Teaching
- Master of Arts in Education major in Pagtuturo ng Filipino
- Master of Arts in Education major in Physical Education
- Master of Arts in Education major in Psychology
- Master of Arts in Education major in Science Teaching
- Master of Arts in Education major in Social Studies Teaching
- Master of Arts in Education major in Technology and Livelihood Education Teaching

#### Undergraduate Programs

1. Bachelor of Early Childhood Education
2. Bachelor of Elementary Education
3. Bachelor of Physical Education
4. Bachelor of Technology and Livelihood Education major in Home Economics
5. Bachelor of Secondary Education
  - Bachelor of Secondary Education major in English
  - Bachelor of Secondary Education major in Filipino
  - Bachelor of Secondary Education major in Mathematics
  - Bachelor of Secondary Education major in Sciences
  - Bachelor of Secondary Education major in Social Studies

#### **College of Arts and Sciences**

The College of Arts and Sciences, being the heart of the university, has always adhered into being a cradle of academic excellence. With this, everyone in the college is expected to uphold the dignity of the teaching profession by giving the students of CAS effective academic deliverables. Under the first pillar, the college shall institutionalize an induction and orientation program for its student leaders, faculty, staff and students in order to make them internalize the vision, mission and core values of the university. The College also envisions to strengthen the research capability and productivity of its faculty by the offering of two graduate programs: MS Marine Biology and MS Development Communication.

In order to further ensure academic excellence and advocate a strong academic track of all the College's programs, CAS plans to benchmark the curricula of international universities, increase the number of academic programs as Center of Excellence and Center of Development and ensure the programs in the College are accredited by reputable accrediting bodies and organizations. Further, the College also warrants the development of a comprehensive graduate tracer program which shall serve as bases for





curricular reforms as well as upgrade academic laboratories and facilities to equip students with needed skills and competencies responsive to the call of the times. As part of its mandate on research, capacity building programs on priority areas shall be developed and conducted as well as encourage faculty members to develop and submit multi-disciplinary research proposals. A strong linkage and partnership schemes shall also be strengthened by means of raising the visibility of the College in the international community, establishing a strong connection with international partner institutions and in attending international conferences and other scholarly events which may lead to active pairing with academic foreign counterparts deemed as experts in their fields of specialization who may be invited by the College to conduct academic exchanges through seminars and other related activities.

Academic programs under the Arts and Science uphold their scholarly tradition in instruction, research, and community service. Its Development Communication program, in particular, is a designated Center of Development by the Commission on Higher Education. Research conducted in these programs focus on natural sciences, languages, environment and biodiversity, mathematics, humanities, and the social sciences.

### Programs Offered:

#### Graduate Programs

1. Doctor of Philosophy in English major in Language and Literature
2. Master of Arts in English major in Language and Literature
3. Master of Science in Mathematics
4. Master of Chemistry
5. Master in Development Studies

#### Undergraduate Programs

1. Bachelor of Arts in English Language Studies
2. Bachelor of Science in Biology
3. Bachelor of Science in Chemistry
4. Bachelor of Science in Criminology
5. Bachelor of Science in Development Communication
6. Bachelor of Science in Mathematics
7. Bachelor of Science in Psychology

### ***College of Nursing and Allied Health Sciences***

In June 2005, after the separation of AHSE (Associate in Health Science Education) from School of Science and Public Health, the College of Nursing emerged; and with it, was the introduction of a new program, entitled Bachelor of Science in Nursing; which was granted with CHED recognition dated October 23, 2007. In the year 2009, the college found itself expanding with more students, as it adopted a new program: Bachelor of Science in Nutrition and Dietetics.



On October 10, 2011, the University Board Regents approved a proposal which changed the name of the college from “College of Nursing” to “College of Nursing and Allied Health Sciences. From its humble beginnings, the College was transformed into a well-equipped and organized department that remains accessible to the poor and marginalized; while continuing to provide quality and affordable education.

Both programs, currently recognized as Level II by the AACCUP, have been performing well in licensure examinations for the past years, thereby reflecting quality education services. The BS Nursing and BS Nutrition and Dietetics have built its strength in instruction through excellent classroom education and clinical practice, extension services and research; by catalyzing the interplay of concepts among these realms to develop the next generation of leaders engaging in the practice of Nursing and Nutrition and Dietetics as a profession.

In 2020, after realizing the threat of global concerns that paralyzes health and economic mobility, the College of Nursing and Allied Health Sciences, through the stewardship of the University, have offered Bachelor of Science in Public Health (Major in Disaster Response); with the goal of helping the community through molding of students to be change agents in improving population health and reducing health care costs through transformative outcomes-based education (OBE).

#### Programs Offered - Undergraduate

1. Bachelor of Science in Nursing
2. Bachelor of Science in Nutrition and Dietetics
3. Bachelor of Science in Public Health

#### ***College of Medicine***

The Batangas State University is committed to the Sustainable Development Goals of ensuring healthy lives for all at all ages. Thus, with its branding of Population Health Model, the University offered the Doctor of Medicine program as approved by the Board of Regents through BOR Resolution 128 Series of 120; and it continuously scales in greater heights to achieve public health goals by initiating measures that would produce more medical professionals in the healthcare arena. It aims to equip a diverse student body to pursue various medical career options in order to become physician leaders and managers who can enhance community health and advance biomedical research for improving the healthcare delivery system at local, national, and global levels. Successful graduates of the program will be qualified to take the Physician Licensure. The program, designed for community-based medicine, shall include community health related courses; with the inclusion of basic sciences, clinical courses, and integrated topics prescribed by the Commission on Higher Education.

#### Programs Offered

1. Doctor of Medicine



### **College of Law**

The College of Law is a young department established in 2005. Guided by its vision of academic excellence, it caters to the aspirations of professionals mostly from Region IV to become part of the legal profession. To achieve its aim of developing competent and morally upright lawyers, the College is composed of faculty members who are trial judges, seasoned practitioners and scholars who possess the work ethic of a dedicated law professor. It is steadfast in its resolve to contribute to the achievement of the Batangas State University's vision and mission of producing leaders for the 21st century.

#### **Programs Offered**

1. Bachelor of Laws

### **Integrated School**

The Batangas State University has been an Integrated School (IS) in its Pablo Borbon Campus in Rizal Avenue, Batangas City. It offers pre elementary, elementary, junior high school, and senior high school (STEM Track). Only recently, the IS adopted a Science and Technology based curriculum in the high school department in response to the need for a basic education program that puts a premium on science, mathematics, and technology courses. A wide array of co-and extra-curricular activities are provided to maximize the students are provided to maximize the students' potentials for holistic development.

At the Elementary level, Integrated School is using the DepEd K to 12 Curriculum with addition of computer technology courses from Grades 1 to 6. This curriculum aims to provide every Batang IS with the education needed to compete in a global context. It covers Kindergarten and Six (6) years of primary education to provide sufficient time for mastery of concepts and skills, develop lifelong learners, and prepare graduates for their entry to Junior High School.

At the High School level, Integrated School is using a Science and Technology-oriented Curriculum. The Batangas State University Science and Technology Curriculum provides an avenue to address what high school students should learn and acquire as they progress through the basic education courses for Junior and Senior High School. It is designed to primarily enhance the essential knowledge, skills, and capabilities to help them develop interests in science and technology related careers. Furthermore, this curriculum aims to ensure that high school graduates of the Integrated School have a well-defined profile.

#### **Programs Offered**

1. Kindergarten
2. Elementary- Grade 1-6
3. Junior High School - Grade 7-10

- 4. Senior High School- Grade 11-12
- f. Recognition and awards obtained from international/national/ regional or private award giving bodies

### ***QS Intelligence Unit Rates BatStateU as a 3-Stars Institution***



Figure 11 QS Stars University Rating of BatStateU

In March 2020, Quacquarelli Symonds or QS Stars University rating gave Batangas State University a three-star rating. It received five stars for Teaching; four stars for Employability; one star for internationalization; two stars for Academic Development; three stars for Facilities; four stars for Inclusiveness; two stars for Specialist Criteria: Innovation; and four stars for Specialist Criteria: Electronics Engineering.

### ***CHED hails BatStateU as Model HEI; BatStateU Programs as COE/COD***



Figure 12 BatStateU COE and COD Awards

BatStateU was selected as a Model Higher Education Institution by the Commission on Higher Education in 2016. This made BatStateU a host university for the Philippine Higher Education Career System - Executive Development Program or EDP, which is part of the University Dynamics Laboratory of CHED in partnership with the Development Academy of the Philippines. The university hosted ten candidates of the EDP from 26 November to 1 December 2016.

In addition, the university's Teacher Education and Development Communication programs are designated by CHED as national Centers of Development.



## ISO-Certified Institution



Figure 13 BatStateU ISO 9001:2015 QR Code

TÜV Rheinland Philippines, Inc. awarded the university the ISO 9001:2008 certification in December 2017, and the ISO 9001:2015 certification after passing the external surveillance audit in September 2018. The ISO certification covers the design, development, and implementation of higher education services.

## National Awards and Citations

Two of Batangas State University's research projects received the National Gawad KALASAG (Kalamidad at Sakuna LABanan, SARiling Galing ang Kaligtasan) award from the Office of Civil Defense – National Disaster Risk Reduction and Management Council or NDRRMC. The amphibious vehicle known as the Tactical Operative Amphibious Drive or TOAD, which can be used for rescue operations during heavy floods, received the special award in November 2016.



Figure 14 Tactical Operative Amphibious Drive or TOAD



On the other hand, the research project of the university dubbed as Solar-Powered Isotropic Generator of Acoustic Wave or SIGAW, which is a tsunami early warning device, received a Special Recognition during the Gawad Kalasag awards night in December 2018. Gawad Kalasag is an annual awarding ceremony for significant initiatives in the promotion and advancement of Disaster Risk Reduction and Management in the country.



Figure 15 Solar-Powered Isotropic Generator of Acoustic Wave or SIGAW

### *Hosting of International Conferences*



Figure 16 Hosting of International Conferences

The university hosted 6 international conferences on engineering, science, technology, business, education, social sciences, disaster risk management and climate change adaptation, showcasing progressive leadership in these areas.



## BatStateU Selected as the Model HEI in 2016

The university received a memorandum from the Chairperson of Commission on Higher Education (CHED) last October 20, 2016 stating that Batangas State University had been selected as the Model HEI given its significant impact within and beyond its immediate communities. With this, the university together with the Commission hosted the Philippine Higher Education Career System Executive Development Programs Candidate during the conduct of the University Dynamics Laboratory.

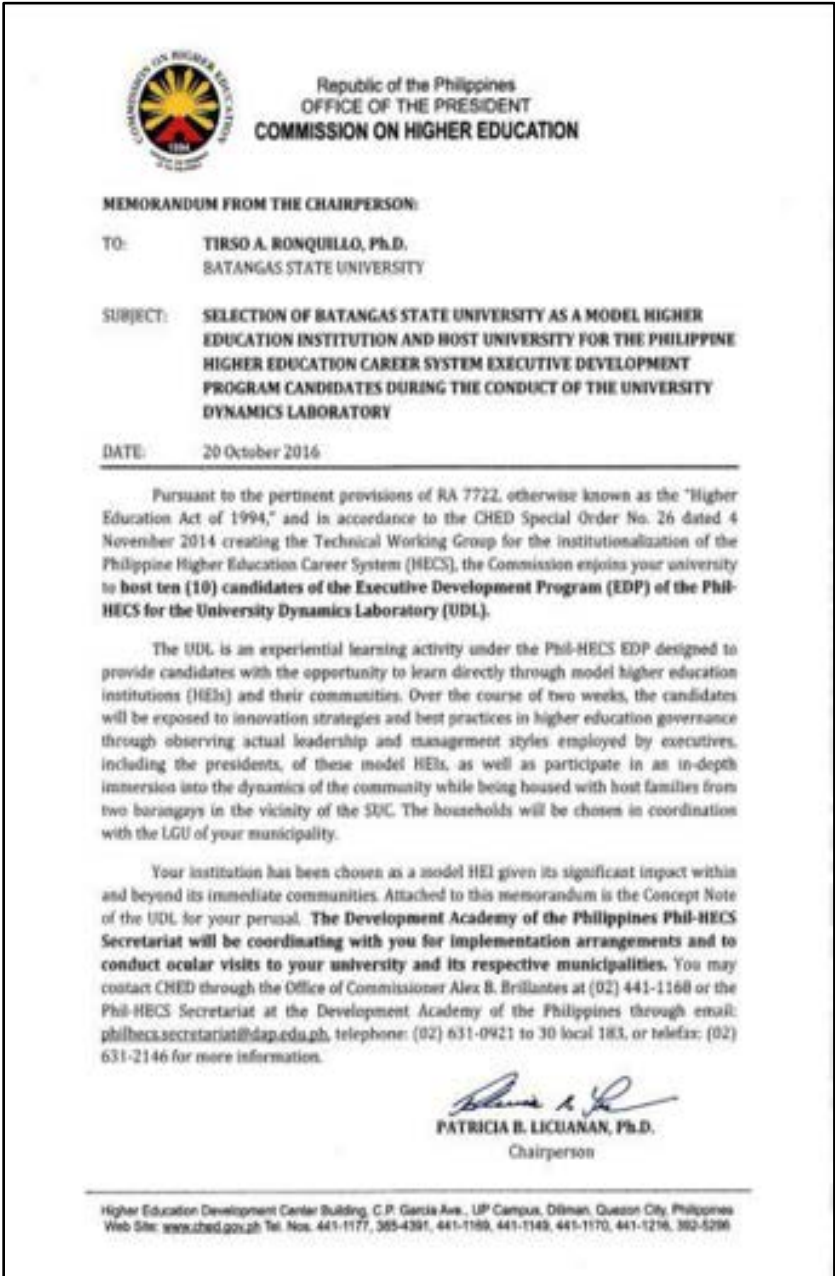


Figure 17 Memorandum from the CHED Chairperson dated October 20, 2016

### **2019 Regional Champion for Sustainable and Eco-friendly Schools in CALABARZON**

During the 2019 Search for Sustainable and Eco-friendly Schools, Batangas State University was awarded as the Regional Champion for CALABARZON. The university also received the Nestle Water Leadership Award and the One Meralco Energy Leadership Award. In ceremonies held on 22 November 2019, the university was adjudged as the National Winner – College Level for the Energy Leadership Award. The biennial Search is organized by the Department of Environment and Natural Resources through the Environment Management Bureau, in collaboration with the Department of Education (DepED), and the Commission on Higher Education, with support from Nestle Philippines, Inc., One Meralco Foundation, Inc., and Smart Communications, Inc.



Figure 18 Dr. Tirso Ronquillo (BatStateU President) Receiving the Award for the 2019 Regional Winners of Search for Sustainable and Eco-friendly Schools

### **Demographic Profile**

#### **a. Brief summary of the population**

Batangas State University - Pablo Borbon currently has a total of seventeen thousand and fourteen (17,014) students and seven hundred and thirty-nine (736) employees. This Academic Year 2021-2022, there are 3,934 male students and 13,080 female students.

As of November 2021, BatStateU PB has a total of 736 teaching and non-teaching personnel. There are 565 teaching personnel comprising 113 permanent, 6 temporary, 73 contractual, and 373 guest lecturers. On the other hand, there are 24 permanent, 2 casual, and 145 job orders giving us a total of 171 Non-Teaching Personnel.



Students

The below tables present the population for AY 2021-2022 of students in BatStateU Pablo Borbon.

Table 1 Integrated School (IS) Population for AY 2021-2022

Integrated School	No. of Enrolled Students
<i>ELEMENTARY</i>	
Kindergarten	30
Grade I	38
Grade II	58
Grade III	81
Grade IV	89
Grade V	96
Grade VI	109
<i>SECONDARY</i>	
Grade VII	134
Grade VIII	152
Grade IX	158
Grade X	186
Grade XI	300
Grade XII	256
<b>TOTAL</b>	<b>1,687</b>



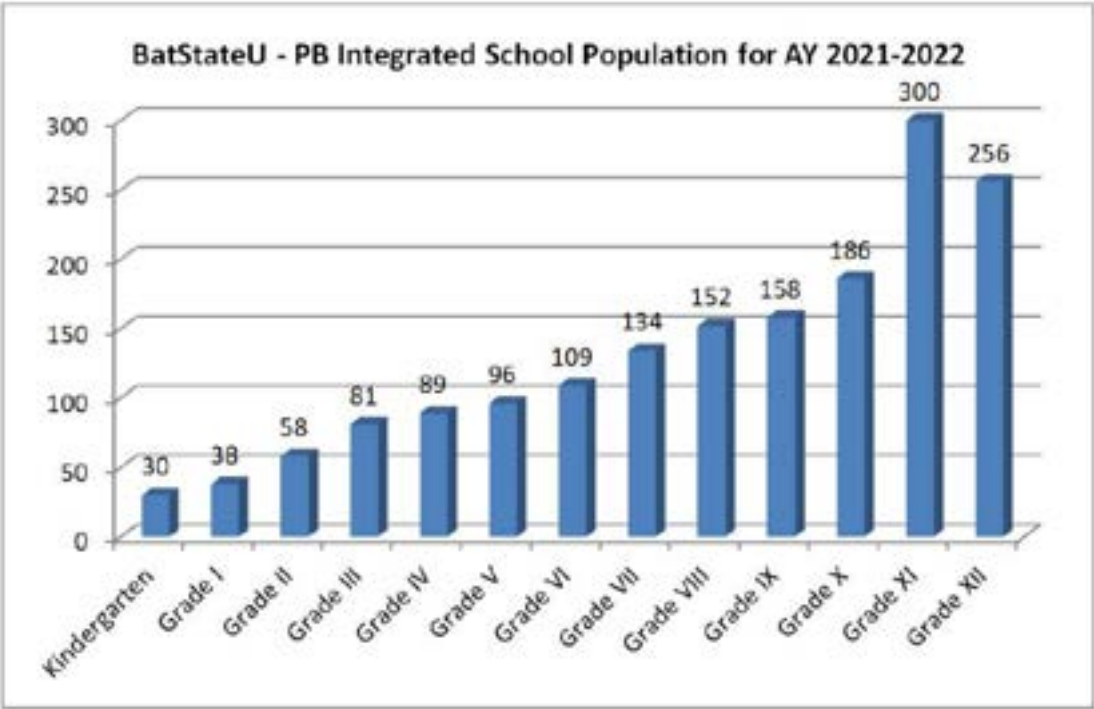


Figure 19 Graphical Representation of BatStateU - PB Integrated School Population for AY 2021-2022

Table 1 and Figure 19 showcase the population of students from the Integrated School of BatStateU Pablo Borbon Campus. Based on the given information, the majority of their population is from Grade XI which is the first level for the Senior HighSchool having a total of 300 students. The next highest in population is from the Grade XII of the Senior Highschool with a total of 256 students. Meanwhile, the Kindergarten has the lowest number of students having only 30 enrollees.

Table 2 Tertiary Level Population for AY 2021-2022 (as per the actual enrolment data)

PROGRAMS PER COLLEGES	1st year	2nd year	3rd year	4th year	Total
COLLEGE OF TEACHER EDUCATION (CTE)					
Bachelor of Early Childhood Education	32	25	16	0	73
Bachelor of Elementary Education	80	65	54	48	247
Bachelor of Physical Education	35	39	31	24	129
Bachelor of Secondary Education	348	359	343	182	1,232
Bachelor of Technology and	35	31	25	21	112



## Land Use Development and Infrastructure Plan (LUDIP)

Livelihood Education					
<b>Subtotal (CTE)</b>	<b>530</b>	<b>519</b>	<b>469</b>	<b>275</b>	<b>1,793</b>
<i>COLLEGE OF ARTS AND SCIENCES (CAS)</i>					
Bachelor of Science in Biology	114	89	72	33	308
Bachelor of Science in Chemistry	32	25	39	19	115
Bachelor of Science in Mathematics	18	22	7	14	61
B.S. in Development Communication	236	122	115	59	532
Bachelor of Arts in English Studies	275	90	47	25	437
Bachelor of Science in Criminology	253	214	150	31	648
Bachelor of Science in Psychology	396	194	178	108	876
<b>Subtotal (CAS)</b>	<b>1,324</b>	<b>756</b>	<b>608</b>	<b>289</b>	<b>2,977</b>
<i>COLLEGE OF NURSING AND ALLIED HEALTH SCIENCES (CONAHS)</i>					
Bachelor of Science in Nursing	397	193	129	49	768
BS in Nutrition and Dietetics	105	27	28	24	184
BS Public Health	33	-	-	-	33
<b>Subtotal (CONAHS)</b>	<b>535</b>	<b>220</b>	<b>157</b>	<b>73</b>	<b>985</b>
<i>COLLEGE OF ACCOUNTANCY, BUSINESS, ECONOMICS AND INTERNATIONAL HOSPITALITY MANAGEMENT (CABEIHM)</i>					
Bachelor of Science in Accountancy	522	358	238	104	1,222
BS Management in Accounting	211	162	322	49	744
BS in Business Administration	987	766	779	292	2,824
BS in Customs Administration	258	164	162	60	644



Land Use Development and  
Infrastructure Plan (LUDIP)

BS in Hospitality Management	349	220	182	107	858
BS in Tourism Management	275	132	126	61	594
BS in Entrepreneurship	161	52	49	26	288
Bachelor of Public Administration	418	46	45	36	545
Subtotal (CABEIHM)	3,181	1,900	1,903	735	7,719
OVERALL TOTAL	13,474				

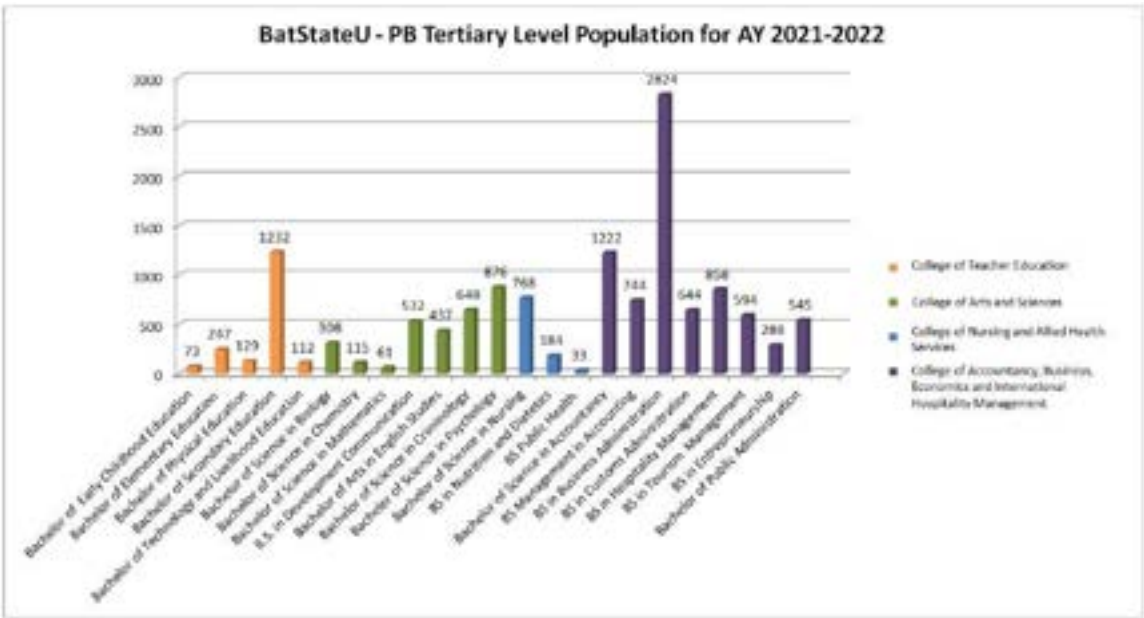


Figure 20 Graphical Representation of BatStateU - PB Tertiary Level Population for AY 2021-2022

The population from the Tertiary Level of BatStateU Pablo Borbon Campus is represented on Table 2 and Figure 20. It is evident that students from the College of Accountancy, Business, Economics and International Hospitality Management comprise most of the population in the Tertiary Level since it offers the most number of courses than the other colleges. Under the College of Accountancy, Business, Economics and International Hospitality Management, the students taking Bachelor of Science in Business Administration is the most populated course having 2,824 enrollees. In contrast, the Bachelor of Science in Public Health in the College of Nursing and Allied Health Services has the least number of enrollees with a total of 33 students.



Table 3 Graduate School Population for AY 2021-2022

PROGRAM	No. of Enrolled Students
<i>DOCTORATE</i>	
Doctor of Education in Educational Management	87
Doctor of Philosophy in Educational Management	70
Doctor of Philosophy major in Mathematics Education	40
Doctor of Philosophy in English	43
Doctor of Business Administration	26
Doctor of Public Administration	15
Doctor of Medicine	29
<i>MASTER'S DEGREE</i>	
MA in Education - Educational Management	344
MA in Education - Science Teaching	124
MA in Education - Mathematics Teaching	107
MA in Education - English Language Teaching	145
MA in Education - Pagtuturo ng Filipino	114
MA in Education - Psychology	11
MA in Education - Social Studies	49
MA in Education - TLE	99
MA in Education - Physical Education	37
Master in Business Administration	249
Master in Public Administration	41





# Land Use Development and Infrastructure Plan (LUDIP)

Master in Disaster Risk Management	46
Master of Science in Mathematics	7
Master of Arts in English	18
Bachelor of Laws	102
Professional Subject	50
OVERALL TOTAL	1,853

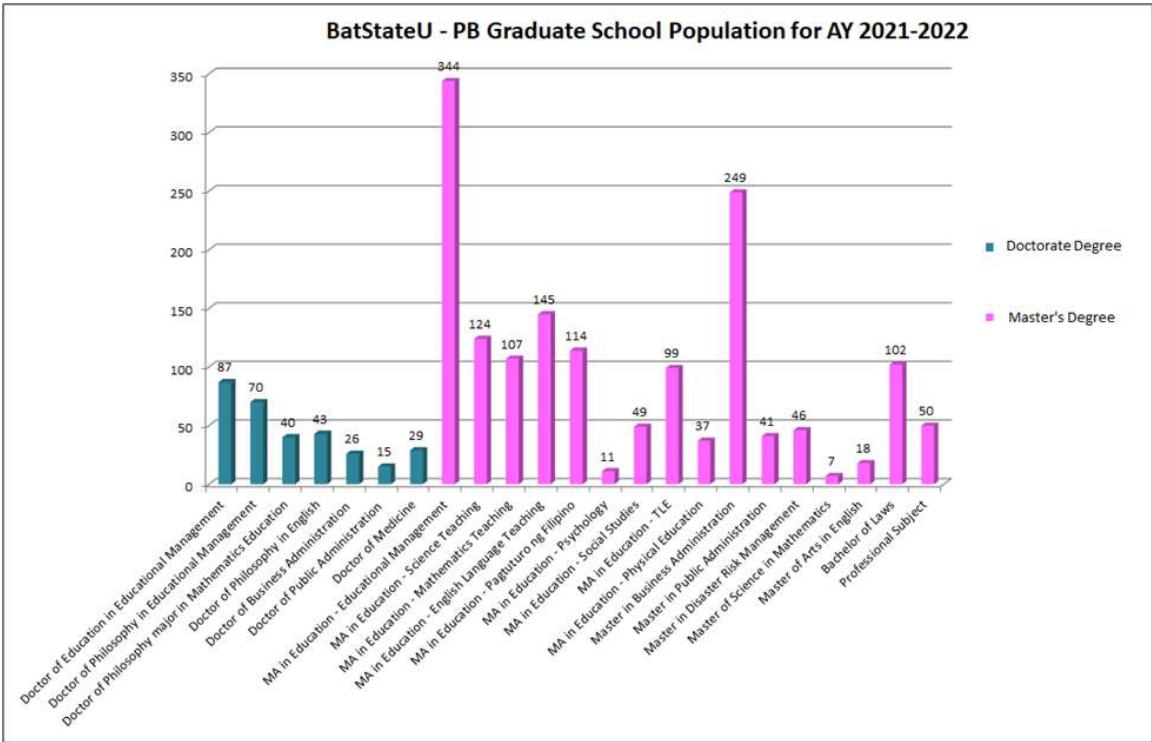


Figure 21 Graphical Representation of BatStateU - PB Graduate School Population for AY 2021-2022

The graduate programs of BatStateU Pablo Borbon is mainly populated with students taking their Master’s Degree. Particularly, the degrees in MA in Education major in Educational Management and Master in Business Administration have the highest number of enrollments for the first semester of Academic Year 2021-2022. As for the Doctorate Degree, most of the students in their category are from the Doctor of Education in Educational Management. The graduate degrees obtaining the highest number of enrollees (Master’s Degree and Doctorate Degree) are both from the College of Teacher Education.



Table 4 Breakdown of Student Population According to Gender

PROGRAM	MALE	FEMALE	TOTAL
Graduate School	463	1,390	1,853
Tertiary	2,695	10,779	13,474
Integrated School	776	911	1,687
TOTAL	3,934	13,080	17,014

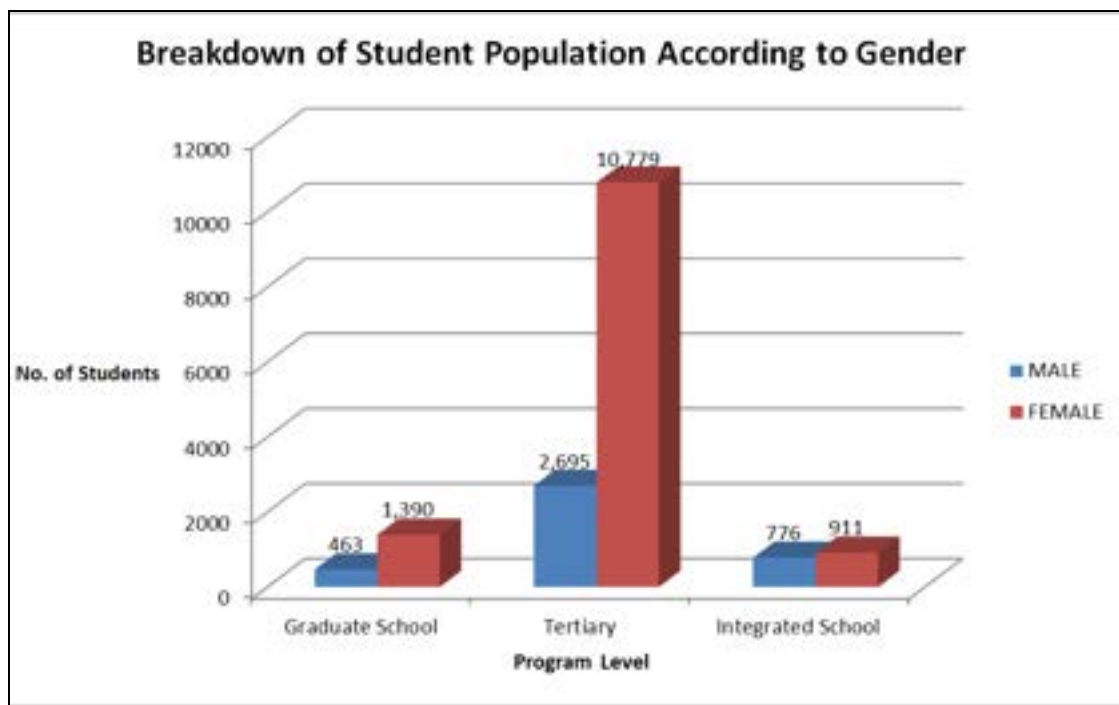


Figure 22 Graphical Representation of BatStateU - PB Student Population According to Gender for AY 2021-2022

Based on Table 4 and Figure 22 showing the breakdown of student population according to gender, there are more female students than male students in all program levels (Graduate School, Tertiary and Integrated School).



Faculty and Employee

Presented in below tables are the summary of population of Teaching and Non-Teaching Personnel in BatStateU Pablo Borbon.

Table 5 Teaching Personnel Population of BatStateU Pablo Borbon

COLLEGE / OFFICE	PERMANENT	TEMPORARY	GUEST LECTURER/ CONTRACTUAL
CABEIHM	45	1	143
CTE	32	1	89
CAS	27	4	59
CONAHS	8	-	33
CoM	-	-	19
CoL	1	-	12
IS	-	-	73
NSTP	-	-	18
TOTAL	113	6	446

Table 6 Non-Teaching Personnel Population of BatStateU Pablo Borbon

COLLEGE/OFFICE	PERMANENT	CASUAL	JOB ORDER
CABEIHM	-	-	2
CTE	1	-	2
CAS	1	-	2
CONAHS	-	-	1
CoM	-	-	1
CoL	-	-	1
IS	-	-	1
Chancellor	-	-	2
Quality Assurance Management	-	-	1
Internal Audit	-	-	1



## Land Use Development and Infrastructure Plan (LUDIP)

Office of the Vice Chancellor for Administration and Finance	-	-	1
Accounting Office	2	-	6
Budget Office	1	-	3
Records Management Office	1	-	-
Cashier Office	2	-	2
Human Resources Management Office	2	-	5
Property and Supply Office	-	-	4
Procurement Office	1	-	3
Environmental Management Unit	-	-	6
General Services Office	2	1	15
Project and Facility Management Office	2	1	27
Office of the Vice Chancellor for Academic Affairs	-	-	3
Health Services Office	2	-	7
Library Services	2	-	11
Registrar Office	3	-	9
Testing and Admission Office	-	-	3
On-the-Job Training Office	-	-	1
Office of the Student Discipline	-	-	1
Guidance Office	-	-	4
Office of the Vice	-	-	1





Chancellor for Research Development and Extension Services			
Research Office	-	-	1
Extension Office	-	-	1
Bids and Awards Committee	-	-	2
Office of the Vice Chancellor for Development and External Affairs	-	-	1
External Affairs Office	-	-	-
Information and Communication Technology	-	-	5
Resource Generation Office	2	-	8
Planning Office	-	-	1
<b>TOTAL</b>	<b>24</b>	<b>2</b>	<b>145</b>

b. Projected population of students and employees in the next 10 years

Listed below are the summary of projected population of students, teaching, and non-teaching personnel from the year 2021 up to 2031.

Students

Table 7 Projected Population of Students in the next 10-years

Academic Year	Graduate School	Tertiary	Integrated School	Total
2021-2022	1,853	13,474	1,687	17,014
2022-2023	2,017	1,6102	1,606	19,725
2023-2024	2,215	17,145	1,532	20,892
2024-2025	2,437	17,945	1,481	21,863



2025-2026	2,688	17,080	1,466	21,234
2026-2027	2,977	17,080	1,478	21,535
2027-2028	3,313	17,080	1,610	22,003
2028-2029	3,706	17,080	1,550	22,336
2029-2030	4,153	17,080	1,590	22,823
2030-2031	4,714	17,080	1,630	23,424

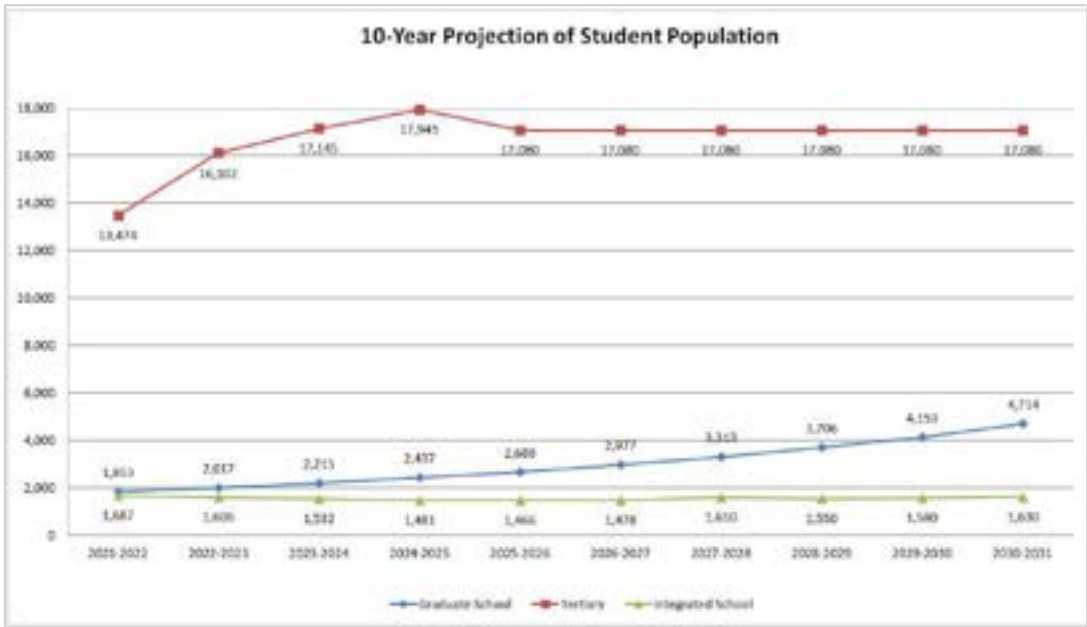


Figure 23 Graphical Representation of 10-Year Projection of Student Population

Table 7 and Figure 23 show the 10-year projection of student population at BatStateU Pablo Borbon. The student population is expected to continuously increase over the next 10 years though the Tertiary and Integrated School levels are to experience a gradual decrease during the Academic Year 2025-2026. This may be due to the mortality rate that resulted from the historical and actual data gathered by the Registrar’s Office of BatStateU Pablo Borbon.

Teaching and Non-Teaching Personnel

Table 8 Projected Population of Teaching Personnel in the next 10-years

Academic Year	CABEIHM	CTE	CAS	CONAHS	CoM	CoL	IS	NSTP	TOTAL
2021-2022	189	122	90	41	19	13	73	18	565
2022-2023	239	124	100	47	30	17	70	15	641
2023-2024	264	122	99	50	45	22	67	16	684



2024-2025	285	119	98	52	60	29	64	15	721
2025-2026	280	116	86	43	75	38	64	15	716
2026-2027	280	116	86	43	75	50	64	15	729
2027-2028	280	116	86	43	75	66	70	15	750
2028-2029	280	116	86	43	75	86	67	15	768
2029-2030	280	116	86	43	75	112	69	15	796
2030-2031	280	116	86	43	75	147	71	15	833

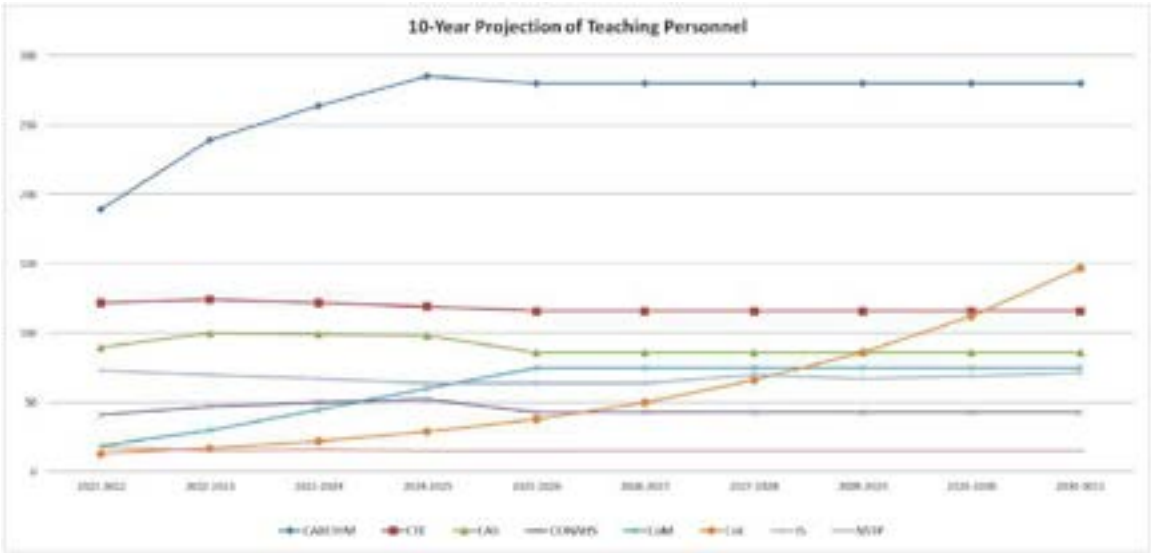


Figure 24 Graphical Representation of 10-Year Projection of Teaching Personnel

The table and figure above demonstrates the 10-year projection of teaching personnel at BatStateU Pablo Borbon. The College of Accountancy, Business, Economics and International Hospitality Management has the most number of teaching personnel and the college is expected to increase over the next 3 years. Moreover, most of the colleges / schools in the tertiary level are seen to be at constant population by the Academic year 2025-2026 since they have reached the maximum number of students that they may accommodate based on the previous table and figure for the student projection.

Table 9 Projected Population of Non-Teaching Personnel in the next 10-years

Academic Year	Projected Population
2021-2022	171
2022-2023	195
2023-2024	204



2024-2025	206
2025-2026	216
2026-2027	216
2027-2028	216
2028-2029	217
2029-2030	217
2030-2031	217

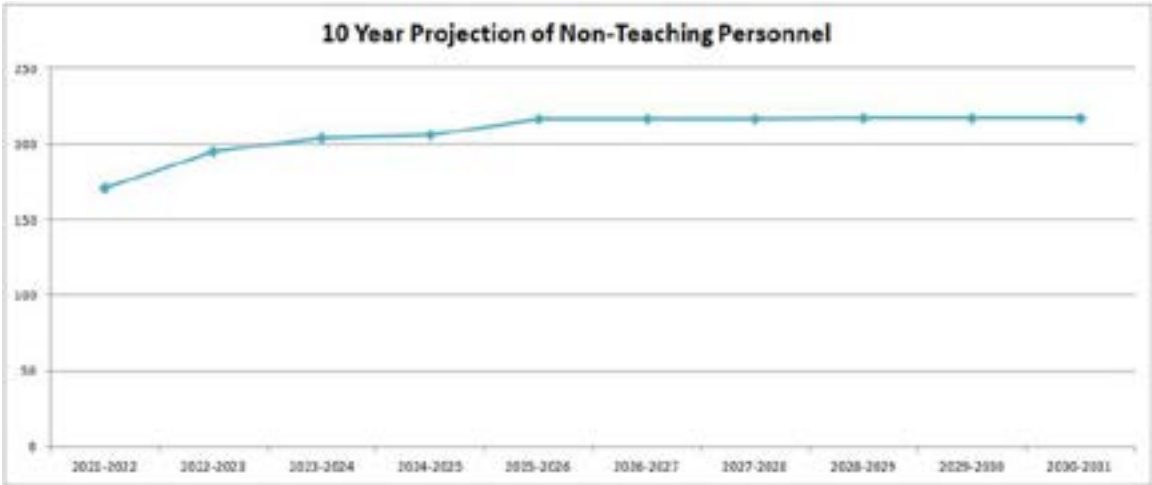


Figure 25 Graphical Representation of 10-Year Projection of Non-Teaching Personnel

The 10-Year Projection of Non-Teaching Personnel is also based from the projected number of students and teaching personnel. This is to accommodate all administrative concerns of the other stakeholders like the faculty members, students and parents.

Geographic Location

- a. Brief profile of the province and municipality where the SUC is located

BATANGAS PROVINCE

Batangas is a province in the Philippines situated in the CALABARZON region occupying the central section of Luzon. Its capital is the City of Batangas. The province has a land area of 3,119.75 square kilometers or 1,204.54 square miles. Its population as determined by the 2015 Census was 2,694,335. This represented 18.69% of the total population of the CALABARZON region, 4.69% of the overall population of the Luzon island group, or 2.67% of the entire population of the Philippines. Based on these figures, the population density is computed at 864



inhabitants per square kilometer or 2,237 inhabitants per square mile. The population of Batangas grew from 681,414 in 1960 to 2,694,335 in 2015, an increase of 2,012,921 people. The latest census figures in 2015 denote a positive growth rate of 2.41%, or an increase of 316,940 people, from the previous population of 2,377,395 in 2010. Batangas is bordered, clockwise from the North, by Cavite, Laguna, Quezon, Tayabas Bay, Verde Island Passage, and South China Sea.

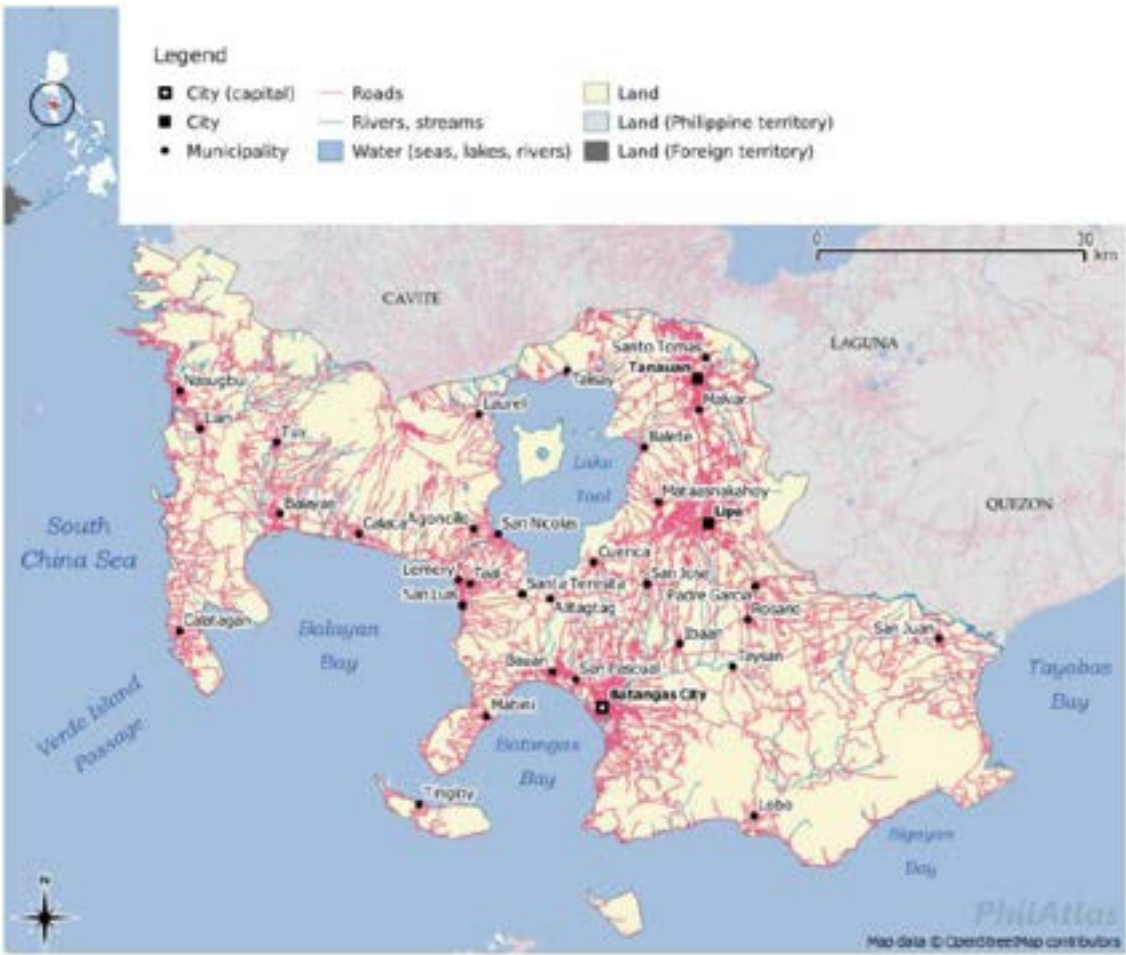


Figure 26 Map of Batangas Province

Batangas has 31 municipalities and 4 cities. The total number of barangays in the province is 1,078. The table below shows the list of cities and municipalities in the province.

Table 10 List of Cities and Municipalities in Batangas Province

No.	Name	Type
1	Agoncillo	Municipality
2	Alitagtag	Municipality
3	Balayan	Municipality
4	Balete	Municipality
5	Batangas City	City (Capital)
6	Bauan	Municipality
7	Calaca	Municipality
8	Calatagan	Municipality
9	Cuenca	Municipality



10	Ibaan	Municipality
11	Laurel	Municipality
12	Lemery	Municipality
13	Lian	Municipality
14	Lipa	City
15	Lobo	Municipality
16	Mabini	Municipality
17	Malvar	Municipality
18	Mataasnakahoy	Municipality
19	Nasugbu	Municipality
20	Padre Garcia	Municipality
21	Rosario	Municipality
22	San Jose	Municipality
23	San Juan	Municipality
24	San Luis	Municipality
25	San Nicolas	Municipality
26	San Pascual	Municipality
27	Santa Teresita	Municipality
28	Santo Tomas	City
29	Taal	Municipality
30	Talisay	Municipality
31	Tanauan	City
32	Taysan	Municipality
33	Tingloy	Municipality
34	Tuy	Municipality

According to the Bureau of Local Government Finance, the annual regular revenue of Batangas for the fiscal year of 2016 was ₱2,737,354,928.79. As of December 2016, the National Roads in Batangas as classified by the Department of Public Works and Highways are:

Primary Roads:

- Daang Maharlika (LZ)
- Manila-Batangas Diversion Road
- Manila-Batangas Road

Secondary Roads:

- Balayan-Balibago Road
- Banay-Banay-Mojon-Cuenca Road
- Batangas Port Diversion Road
- Batangas-Lobo Road
- Batangas-Quezon Road
- Batangas-Tabangao-Lobo Road
- Bolboc Access Road
- Bolboc Flyover and Approaches
- Diokno Highway
- Fernando Airbase Road
- Lipa-Rosario Road



- Lobo-Malabrigo-San Juan Road
- Manila-Batangas Pier Road
- Manila-Batangas Poblacion Road
- Nasugbu-Lian-Calatagan Road
- Palico-Balayan-Batangas Road
- Tagaytay-Nasugbu Road
- Tanauan-Talisay-Tagaytay Road
- Ternate-Nasugbu Road

### Tertiary Roads:

- Batangas Cadre Road
- Bauan-Mabini Road
- Lake Taal-Tagaytay Road
- Lipa City-Alaminos Road
- Lipa-Balete Road
- Lipa-Balete Road
- Manila South Road via Santo Tomas Poblacion
- Marawoy-Dagatan Road
- New Lipa City Hall Road
- Palico Cadre Road
- Palico-Balayan-Batangas Diversion Road
- Palico-Balayan-Lemery-Taal Diversion Road
- Rosario-San Juan Road
- San Juan-Laiya Road
- Talisay-Laurel-Agoncillo Road
- Tuy Diversion Road

Source: <https://www.philatlas.com/luzon/r04a/batangas.html>

### **BATANGAS CITY**

Spanish missionaries first arrived in Batangas City in 1572 but it took years before the first settlement was established. The settlement was located near the Calumpang River which had many huge logs in the area. The natives that settled near the riverside referred to the logs as "batang ", and so the settlement was named "Batangan ". The first Roman Catholic Church would eventually be built in 1581. The name of the settlement was changed to Batangas in 1601, and the first Gobernadorcillo appointed was Don Agustin Kasilao. The settlement has been the capital and administrative center of the Province since 1754 but has only been officially created as a City in 1969 through Republic Act No. 5495. Moreover, Batangas City was apportioned as the 5th Congressional District of Batangas Province through Republic Act No. 10673.

The timeline below marks the significant events/activities which shaped the growth and development of Batangas City.

Table 11 Timeline of growth and development of Batangas City

Date	Event/Activity
1572	Arrival of Spanish missionaries in Batangas City
1581	The first Roman Catholic Church was built.
July 4, 1901	Civil Government was established under the American Regime.
June 19, 1909	The Batangas Municipal Hall was inaugurated.
<b>June 1910</b>	<b>The Batangas Trade School was formally opened (now known as the Batangas State University and formerly known as Pablo Borbon Memorial Institute of Technology).</b>
July 25, 1915	Plaza Mabini was inaugurated.
December 12, 1941	Japanese planes bombed and totally destroyed the Batangas Airport in Barangay Alangilan.
February 13, 1948	Batangas Catholic Church was elevated to the status of Basilica Minor of Infant Jesus and Immaculate Conception.
June 21, 1969	Republic Act No. 5495 creating Batangas City was signed into law by the late President Ferdinand E. Marcos.
July 23, 1969	The Batangas City Government was formally organized.
August 19, 2015	Republic Act No. 10673 reapportioning Batangas City as the 5th Congressional District i n Batangas Province was signed into law by former President Benigno S. Aquino III.

Source: Batangas City Planning and Development Office, 2017



Photo source: <https://medium.com/life-as-we-know-it/batangas-city-4b1fb007cf08>

Figure 27 Batangas City Hall, c. early 1900s





*Photo source: SHLC Philippines Research Team, 2018*

Figure 28 Batangas City Hall, 2018

According to the Philippine Statistics Authority (PSA) Population Census of 2015, Batangas City is the second most populous city in the Province of Batangas. The City registered a population of 329,874 with an annual population growth rate of 1.46%. Given that the population maintains its growth rate of 1.46%, the population of the City will double in 47 years which will be in 2062. The projected population of Batangas City is expected to increase to 349,565 by 2019 and to 398,273 by 2028.

Batangas City has a total land area of 28,541.44 hectares (285.41 square kilometers). The town is subdivided into 105 barangays where 48 are classified as urban while the remaining 57 as rural. The largest barangay in terms of land area is Barangay Talahib Pandayan, encompassing approximately 2,029 hectares of land. On the other hand, Barangay 16 is the smallest barangay with roughly 1.5 hectares of land. Batangas State University Pablo Borbon Campus is situated in Barangay 20. The barangay has a total land area of 9.14 hectares.

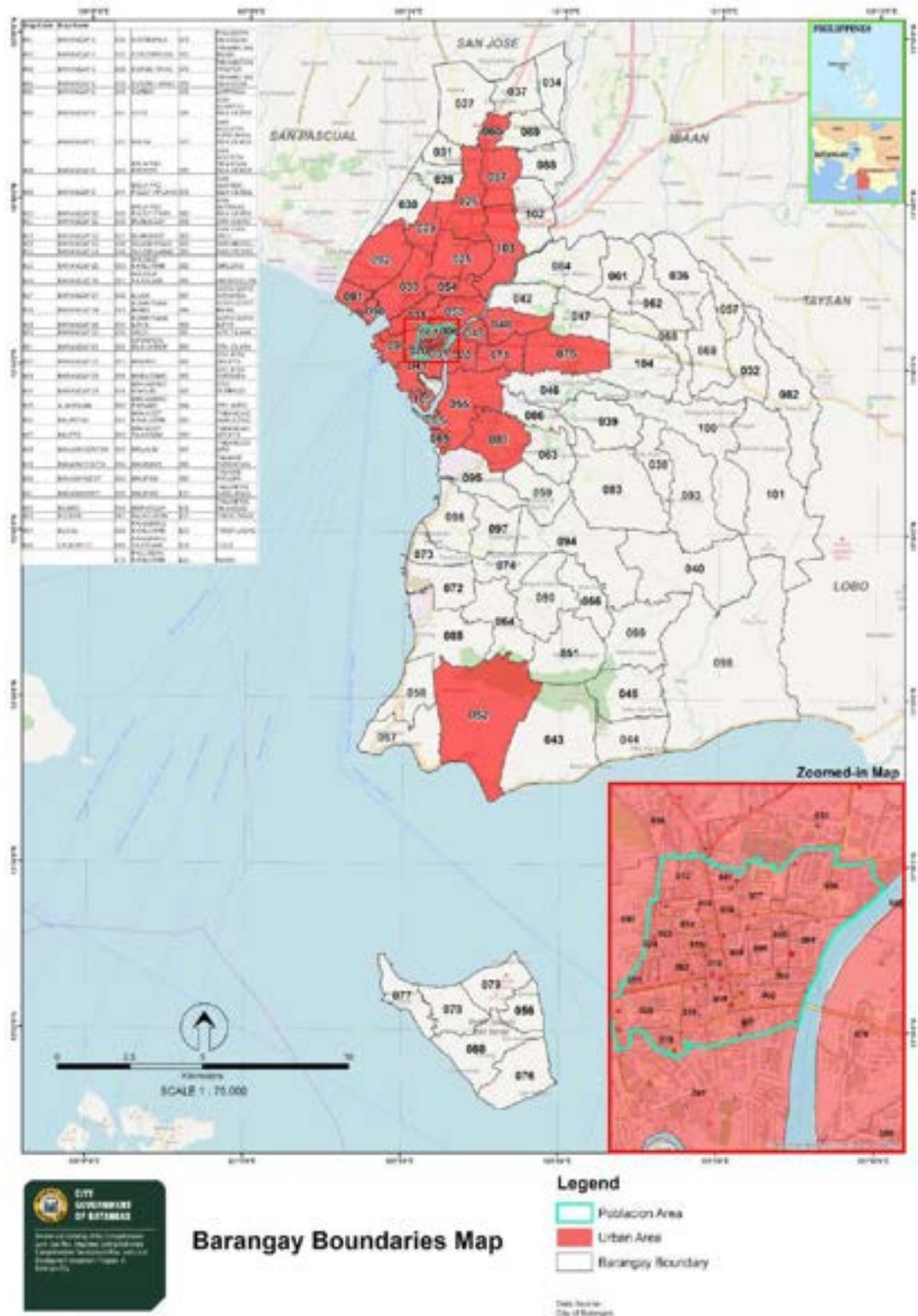


Figure 29 Barangay Boundaries Map

Source:

Batangas City CLUP 2019-2028

The Philippines: National Urban Policies and City Profiles for Manila and Batangas (PLANADES)



- b. Description of the land cover, topography of the area where the SUC is located

Batangas City has a total land area of 28,541.44 hectares. Twenty-four percent (24%) of which is currently built-up areas and the remaining 76% are distributed among other land uses such as agricultural, agroforestry, forest management area, sanitary landfill, tourism and waterways. The City's designated land for agricultural development which covers 7,743.84 hectares (27.13%) is suitable only for the growing of mangoes, coconuts, bamboo, corn, sugar cane, upland rice, coffee, and other fruit bearing trees. There is no large-scale production of any agricultural crop in Batangas City. The forest resources of Batangas City are not of commercial quantity, except for bamboo, which is in demand for its usage in the construction of fish pens. Likewise, Batangas City's general topography is largely flat to gently sloping, with more than 73% of the City's land area having a slope below 15%.

In terms of residential and commercial development, increases of both uses have been observed for the past decade. The expansion of residential development grew by 62% while commercial areas grew by 35%. On the other hand, areas allotted for cemeteries and memorial parks also expanded from 4.90 hectares in 2008 to 14.64 hectares in 2018. These developments are primarily the reason for the decrease of agricultural use by more than 40% for the past 10 years. Moreover, the progression of land use and urbanization marked the economic growth of the city.

Batangas City has two (2) distinct climatic types based on the modified Coronas classification used by the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) Type I and III. Type I is characterized by two (2) distinct seasons: dry from the months of November to April and wet during the rest of the year. Type I climate type generally prevails over the mainland areas of the City where the University is located. Occurrences of storm surges in the City are infrequent, with most of storm surges only being secondary hazards brought about by strong winds from tropical cyclones/typhoons that traverse the City annually, mostly affecting the City's 21 barangays. The storm surge occurrences in the City are normally associated with strong typhoons that come during the onset of the southwest monsoon months (June-November).

- c. Brief profile of watershed/sub-watershed coverage and locations, if any, under which the SUC is part of

Batangas City is traversed by several streams that converge at the Calumpang River, which in turn flows into the Batangas Bay. Indeed, the said river divides the city into two land masses: the northern portion, which is made up of 49 barangays (24 of which are in the Poblacion where



Batangas State University - Pablo Borbon is situated); and the southern portion, which is made up of 56 barangays including Isla Verde.

The Calumpang River is a perennial body of water that stretches 8.10 kilometers from the municipal boundary of Ibaan to the mouth of the Calumpang River in Barangay Malitam. It has a catchment area of roughly 472.00 square kilometers. The Poblacion's south eastern limit is formed by the river, which runs into Batangas Bay about two (2) kilometers south of Batangas Port.



Source: [https://live.staticflickr.com/7863/46615095325\\_f1b74dbf41\\_b.jpg](https://live.staticflickr.com/7863/46615095325_f1b74dbf41_b.jpg)

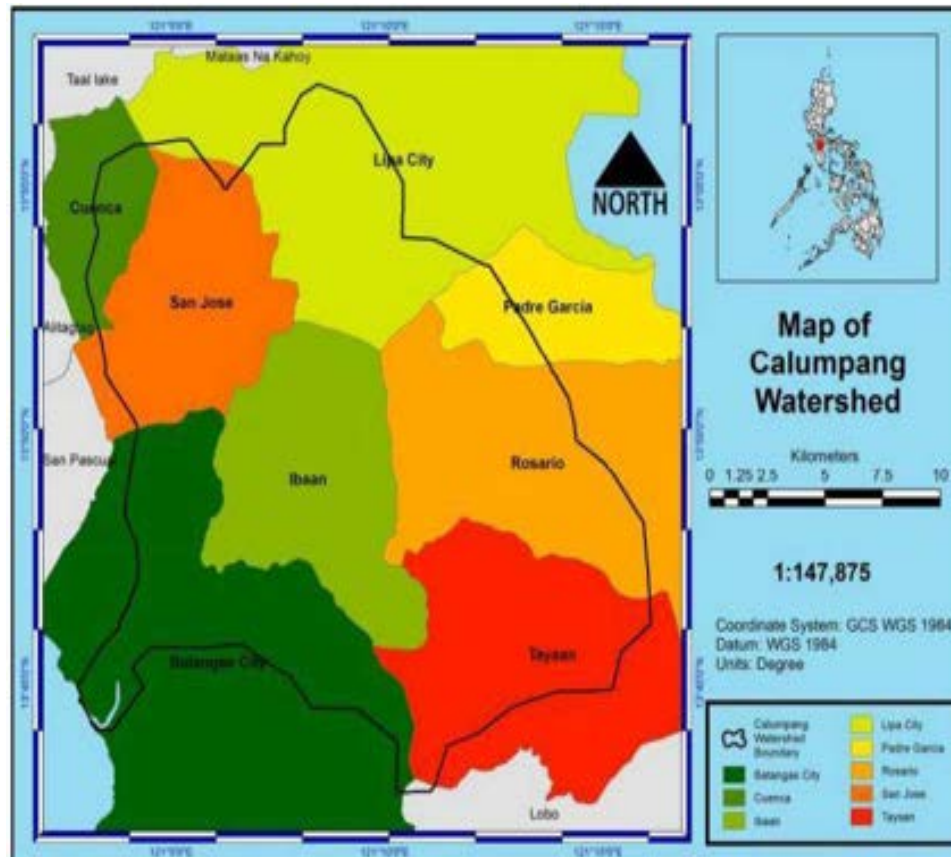
Figure 30 Calumpang River

More so, the Batangas City government is considering developing ecotourism along the entire width of the Calumpang River in Batangas province, Philippines. The water quality of this river, on the other hand, is classified as Class D by the Department of Environment and Natural Resources (DENR), making it only acceptable for agricultural and industrial use.

However, the city government emphasizes the importance of the Calumpang Watershed's ecosystem services, as well as the necessity for river rehabilitation, protection, and conservation in order to advance the river's ecological tourism plan. The Calumpang Watershed Rehabilitation and Conservation Strategic Development Program for 2013-2023, which is now in its third phase of implementation, was born out of this recognition.



The Calumpang River is located within Batangas City, but its tributaries traverse six municipalities (Cuenca, Padre Garcia, Rosario, San Jose, and Taysan) and two cities (Batangas City and Lipa City) as indicated in the map below.



Source: Abao, R. et al (2016). Systems Analysis and Modelling of Pollution Loading for Management of Calumpang River in Batangas City, Philippines. *International Journal of Environmental and Rural Development* 7-2.

Figure 31 Calumpang Watershed Map

- d. Significant national or regional/sub-national characteristics or value (e.g. biodiversity, cultural- historical, traditional or functional)

Batangas State University - Pablo Borbon is 72.51 km (45.06 mi) away from Verde Island Passage, a marine ecosystem which was recognized as the "Center of the Center of Marine Shorefish Biodiversity." The 1.14 million acre passage is the richest location in the Coral Triangle in terms of marine life. Many species, including hawksbill, olive ridley, and green turtles, humphead wrasses, gigantic groupers, and giant clams, are threatened, despite its potential as a UNESCO World Heritage Site.



Source: <https://www.researchgate.net/profile/Rebecca-Weeks-2/publication/260165658/figure/fig4/AS:297242062802946@1447879438189/The-Verde-Island-Passage-Marine-Protected-Area-Network-showing-extent-of-three-prior.png>

Figure 32 Verde Island Passage



Source: [https://ciorg.imgix.net/images/default-source/default-album/ci\\_74784462?&auto=compress&auto=format&fit=crop&w=1440&h=900](https://ciorg.imgix.net/images/default-source/default-album/ci_74784462?&auto=compress&auto=format&fit=crop&w=1440&h=900)

Figure 33 The Rich Marine Biodiversity of Verde Island Passage

As for cultural-historical value, Batangas City is blessed with a rich culture and heritage, and has become home to some of the country's most significant national leaders whose roles and legacy helped shape the country today. In its long history, Batangas City nurtured and preserved its historical roots from the pre-Spanish settlements up to the present. This gave rise to many urban centers of culture and business in the Poblacion. Historical buildings and ancestral houses in the town proper are maintained, some are



reconstructed, in a manner preserving their original features making it available for the next generation to appreciate and treasure.

The city of Batangas is the land of historical places, arts, culture and heritage, in which evidences of the past are preserved and displayed for reminiscing and inspirations at the city's various museums. These museums serve as venues where Batangas history, culture, and the arts are given importance, preserved, and eventually used as a tool for economic, moral, social, and spiritual development of the people, hence, developing in them a sense of pride in their identity as Batangueños.

The Museo Puntong Batangan (city museum) is the flagship cultural initiative of Batangas City. Designed primarily to instill a love for Batangueño culture in young people, the museum showcases the city's history and traditions through exhibits, visual and audio presentations. Also, Minor Basilica of the Immaculate Conception became one of the most visited pilgrimage sites in the province. The Minor Basilica enshrines two of the most important miraculous images of the city: the ivory image of the Immaculate Conception, the Patroness of the City and the famed black image of Santo Niño de Batangan. The dark image of the Child Jesus became one of the most well-known focal points of devotion in the City and province of Batangas and enjoyed much devotion for centuries.



Source:  
[http://3.bp.blogspot.com/-vcNvUi\\_Ir1k/TmwPXoIJISi/AAAAAAAAAEw0/tm2UDMYqEz0/s1600/SAM\\_4926.JPG](http://3.bp.blogspot.com/-vcNvUi_Ir1k/TmwPXoIJISi/AAAAAAAAAEw0/tm2UDMYqEz0/s1600/SAM_4926.JPG)

Figure 34 Minor Basilica of the Immaculate Conception in Batangas City

Under the jurisdiction of Republic Act No. 11377, July 23 of every year was declared a special working holiday in the City of Batangas,

Province of Batangas, in commemoration of its founding anniversary, to be known as "Batangas City Foundation Day." The City is also a festive city for its colorful celebration of its local festivals such as the Sublian Festival and the Sto Niño Festival.

The Sublian Festival is a two week long celebration which culminates every year on the 23rd of July, is rooted in the Batangueños' devotion to the town's patron: the Holy Cross in Bauan and Agoncillo, and the Sto. Niño in Batangas City. This religious devotion translated to a dance form indigenous to Batangas: the Subli. Traditionally performed to the accompaniment of drums and chanting, the Subli praise the Patron in a combination of poetry, movement and music. More so, Sto Niño Festival is the annual City Fiesta in honor of its patron, the Sto. Niño. A Fluvial Procession re-enacting the Sto. Niño's entrance into the city through the Calumpang River is held every January 7, the first day of the novena.



Source: [https://i.ytimg.com/vi/rzjaM\\_R1RKg/maxresdefault.jpg](https://i.ytimg.com/vi/rzjaM_R1RKg/maxresdefault.jpg)

Figure 35 Sublian Festival in Batangas City

The City of Batangas is also known for delicacies like Sinukmani, which is a type of rice cake that differs from all the local rice cakes with its origin and ingredients consisting of brown sugar, *malagkit* (sticky rice), *gata* (coconut milk), and *latik* (coconut caramel) or ground roasted peanuts as toppings.

Source: Batangas City Official Website - Tourism (Local Heritage and Tourism Information) - <https://www.batangascity.gov.ph/web/tourism/local-heritage>



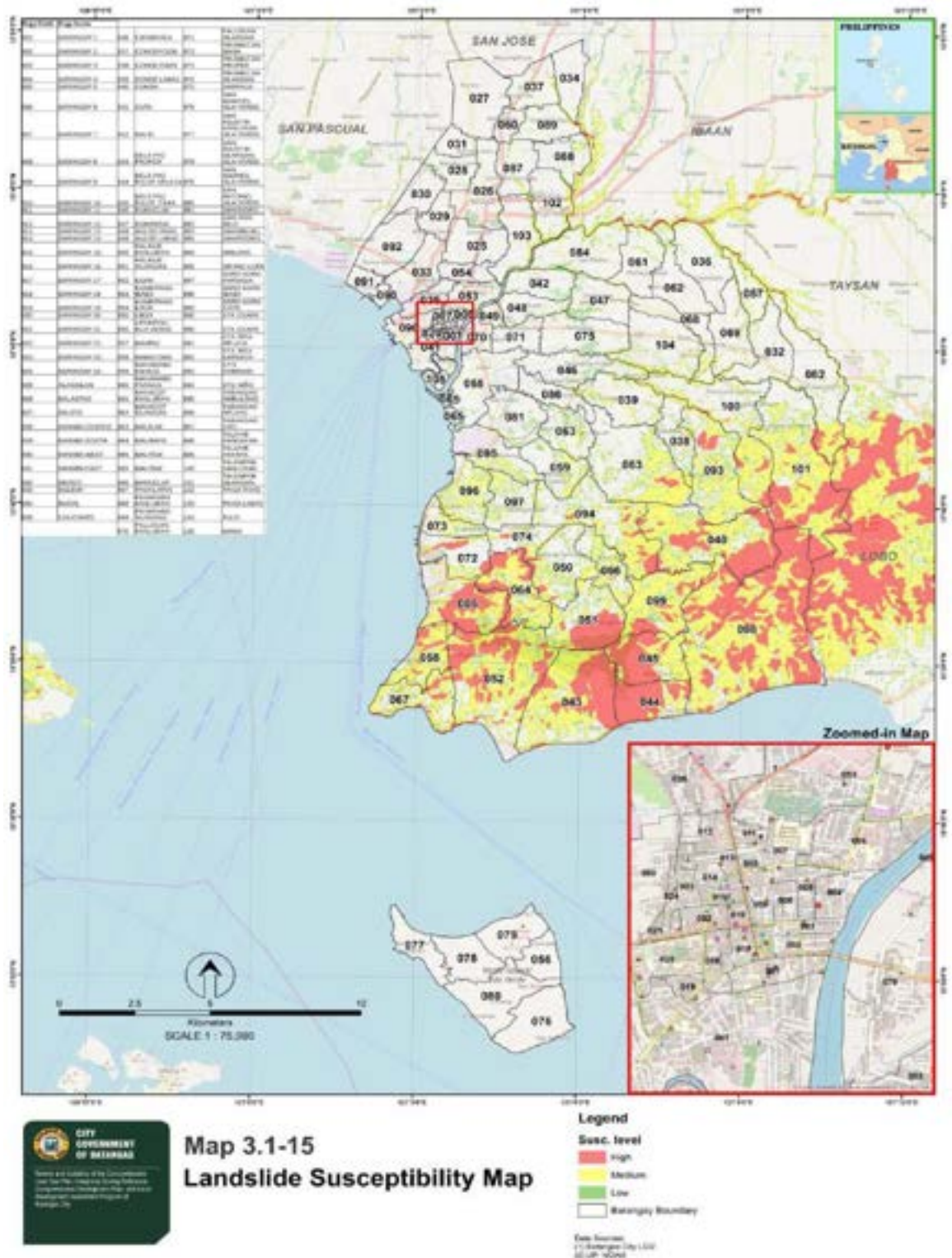


- e. Vulnerabilities and risks (landslides, earthquakes, floods, volcanic eruptions, underground caves and karst, erosion, and the like)

### ***Landslides***

Batangas City's general topography is largely flat to gently sloping, as such, the City's geo-hazard risk is generally considered to have low susceptibility to landslides. Landslide Overlay Zone are areas in the City that have been identified as highly susceptible to landslides and where specific regulations are provided in order to minimize its potential negative effect on developments. Generally, developments in these areas should be minimized or completely avoided. However, given the information and technological advancements in architecture and engineering, resilient and adaptive measures can be incorporated into the architectural and structural design of the existing and future developments, as specified in the zoning ordinance.

Some of the places within the city have high to medium susceptibility to landslides as per the Landslide Susceptibility Map. Since Batangas State University Pablo Borbon is not located near any form of mountain ranges, the susceptibility of landslides possibly occurring is low or close to none. However, landslides, rock falls and other types of mass movements may still occur in mountainous or hilly areas. Liquefaction manifested by sand boils or lateral spreading may affect low lying, waterlogged, sandy areas near the coasts or banks of rivers.



Source: Batangas City CLUP 2019-2028  
UP - NOAH

Figure 36 Landslide Susceptibility Map of Batangas City

## Earthquake

Earthquakes are not known to happen regularly in the City; but because of its tectonic, geomorphic and geographical characteristics, the City can potentially experience extreme damages consequent to earthquakes, extreme weather events and similar disturbances in the natural environment. In case of an Earthquake happening with an

approximate Magnitude of 8.5, the most affected barangays were the areas at the mouth of Calumpang River, Barangays Wawa and Malitam, wherein Batangas State University Pablo Borbon is near and the coastal barangays of Cuta and Sta. Clara. In case of the occurrence of land movement, strong ground shaking may cause extensive damage to or even the collapse of houses, buildings, bridges and other infrastructures. Collapsed structures usually accounts for most of the casualties during a strong earthquake as falling objects may also cause injuries.

Batangas is one of the seismically active areas in the Philippines. Instrumental monitoring of earthquakes for the past century has detected many small to large magnitude earthquakes near Batangas generated by Manila Trench and Lubang Fault. The Manila Trench is an earthquake generator located offshore of Luzon Island, roughly parallel to the Philippine Archipelago in the north but veers close to land at the southern tip of Occidental Mindoro. Another offshore generator is Lubang Fault, located between Mindoro Island and Batangas, which is also the locus of small to large magnitude earthquakes. It is represented in the map by a thin dash line to indicate that the fault line's known location is approximate. The fault line is underwater and estimated to start off the tip of the Calatagan Peninsula and runs across Balayan and Batangas Bays all the way to just off the City of Calapan in Oriental Mindoro.

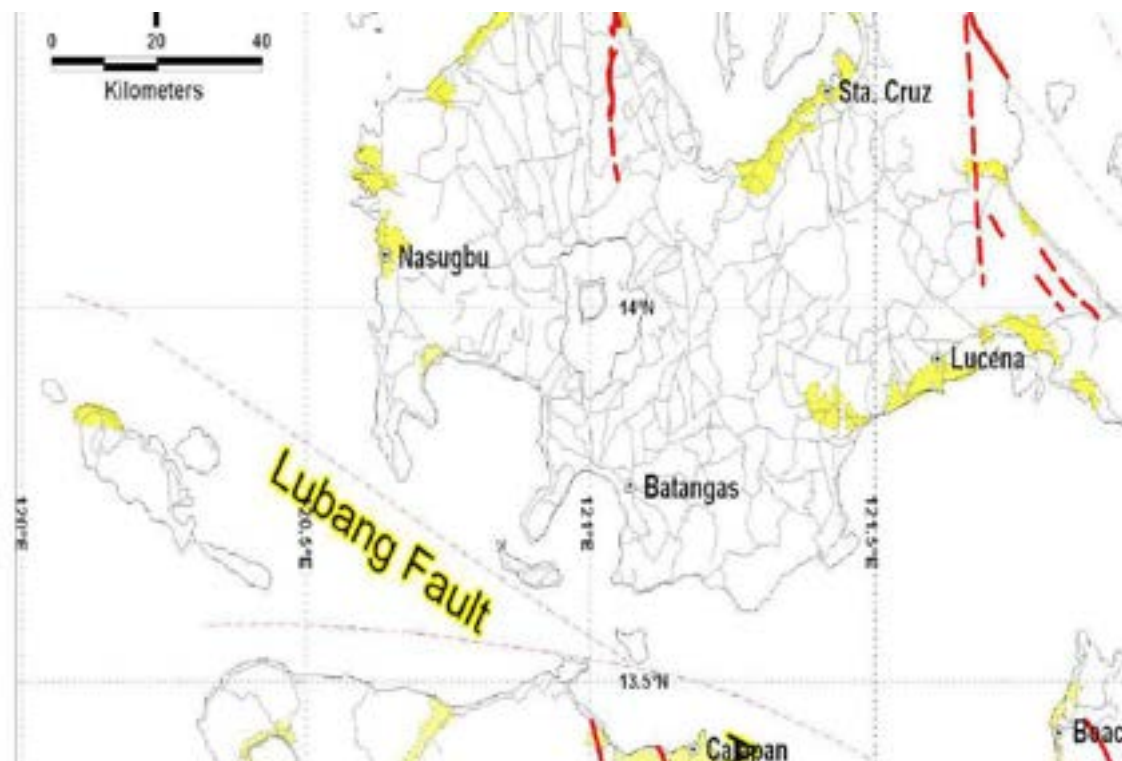
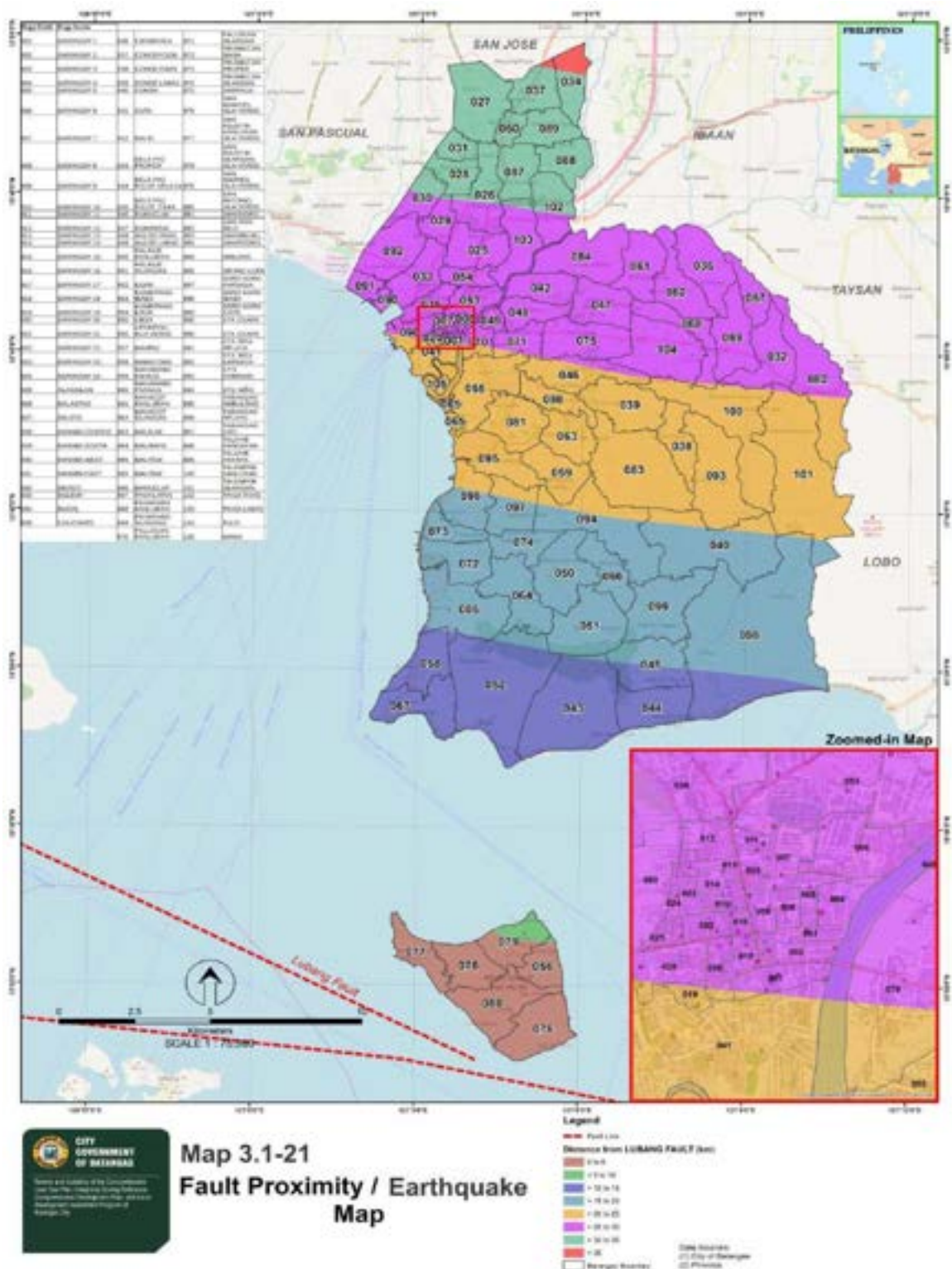


Figure 37 Part of the Active Faults and Liquefaction Susceptibility Map of Region IV-A.

Other than this, the other fault systems that are close to but not in Batangas territory are the southern tails of the West Valley Fault (which reaches down to Cavite) and the Infanta Fault (which reaches down to Lucena City in Quezon). Both fault lines are represented in the map above as broken red lines.





Source: Batangas City CLUP 2019-2028  
Philippines Institute of Volcanology and Seismology (PHIVOLCS)

Figure 38 Fault Proximity Map of Batangas City

Accordingly, the Fault Proximity Map shown above indicates that the location of the Pablo Borbon Campus is about 25 km up to 30 km away from the nearest fault in the province which is Lubang Fault.





### **Floods**

Floods occur naturally and can happen almost anywhere. They may not even be near a body of water, although river and coastal flooding are two of the most common types. Heavy rains, poor drainage, and even nearby construction projects can put you at risk for flood damage. Flood maps help mortgage lenders determine insurance requirements and help communities develop strategies for reducing their risk. The mapping process helps you and your community understand your flood risk and make more informed decisions about how to reduce or manage your risk.

More so, according to the data, several areas within the city that have been identified as prone to flooding hazards and where specific regulations are provided in order to minimize its potential negative effect on developments. According to the Flood Hazard Map presented by the Local Government of Batangas City, some places, especially Pallocan Kanluran which are near to the Calumpang River have High Flood Hazard Level which can reach higher than 1.5 meters. Places like Sta. Clara, Malitam and Libjo can also experience flooding from within 0.5 meters up to 1.5 meters or even higher. More so, several places such as Barangay 1, 5, 8, 9 and 20 have low to medium susceptibility of flooding. Also, some of the national and local roads and bridges in Batangas City are considered highly susceptible to flooding.

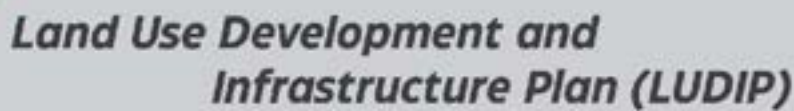
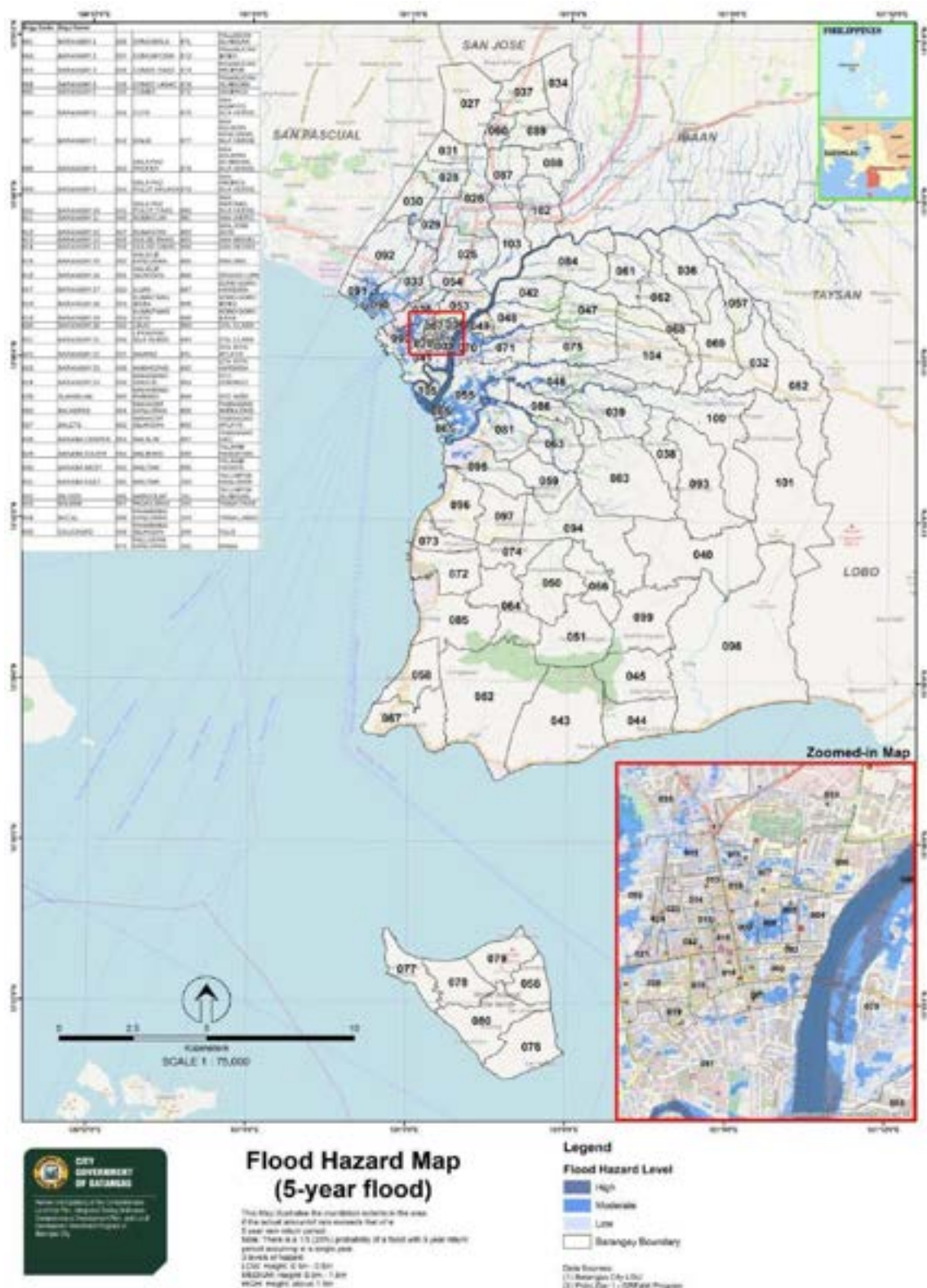


Figure 39 Flood Hazard Map of Batangas City (25-year flood)



Source: Batangas City CLUP 2019-2028  
Phil-LiDar 1 - DREAM Program

Figure 40 Flood Hazard Map of Batangas City (5-year flood)

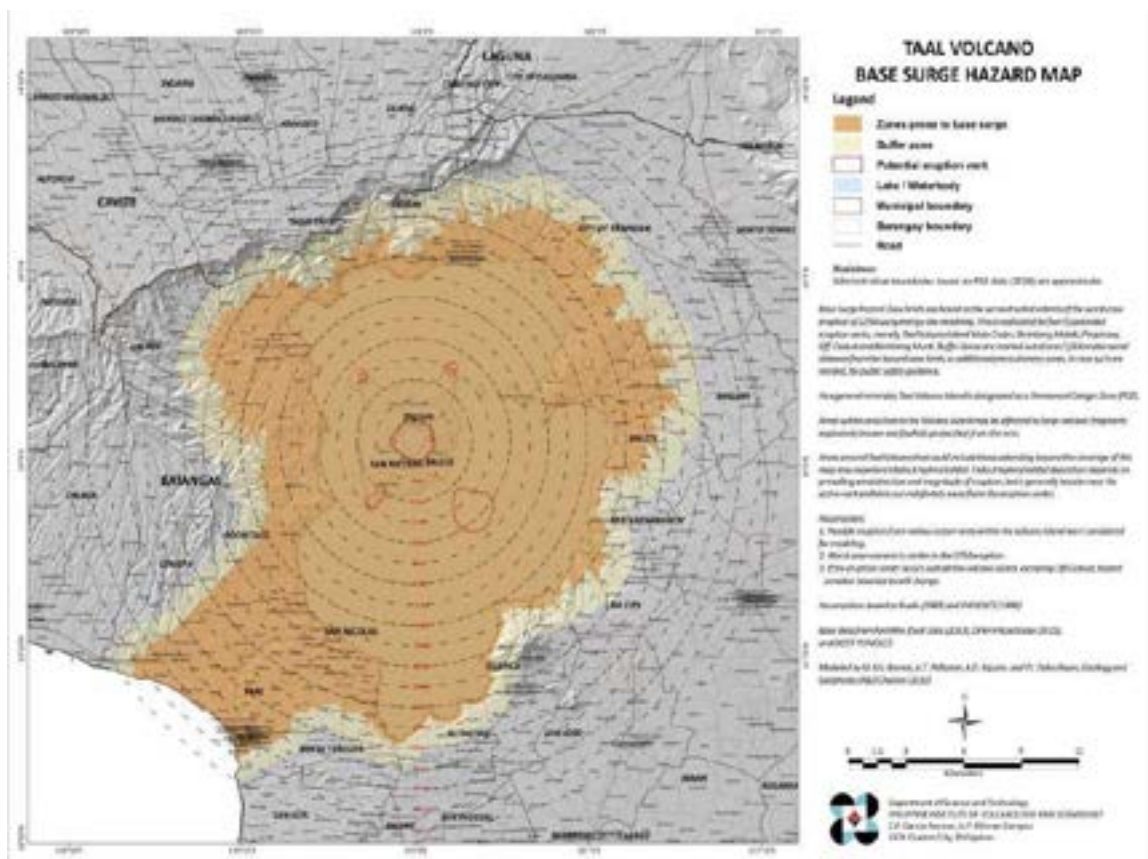
With that, Batangas State University Pablo Borbon which is located at Barangay 20, has low to medium susceptibility of flood hazard. Significantly, flood occurrence within the campus is mainly located near Gate 1 and the area within that zone. The flooding can reach up to 1.5



meters if the rain is severe according to the Flood Hazard Map released by the local government of the city.

## Volcanic Eruption

Volcanic eruptions are frequently preceded by an increase in volcanic tremor and significant variations in near-surface radon concentrations at distances up to tens of kilometers from the event, especially when magmatic intrusions, deformations, and earthquakes affect the summit and/or flanks of the volcano. Like earthquakes, the occurrence of a volcanic eruption is unpredictable.



Source: Department of Science and Technology  
Philippine Institute of Volcanology and Seismology  
Volcano Hazard Maps and Summary of Prone Barangays

Figure 41 Taal Volcano Base Surge Hazard Map

The nearest volcano to Batangas State University - Pablo Borbon is the Taal Volcano at a distance of 29.71 km (18.46 mi). Taal volcano is part of a caldera system in southern Luzon island and is one of the Philippines' most active volcanoes. Since 3,580 BCE, it has erupted 35 times, with VEI ratings ranging from 1 to 6, with the bulk of eruptions being VEI 2. Within the Main Crater, the caldera features a lake with an island that also holds a lake. The most recent eruption before 2020 occurred on the south flank near Mt. Tamboro in 1977. In base surge scenarios, BatStateU-PB is considered safe since it is not situated on the zones prone to this unfortunate event.

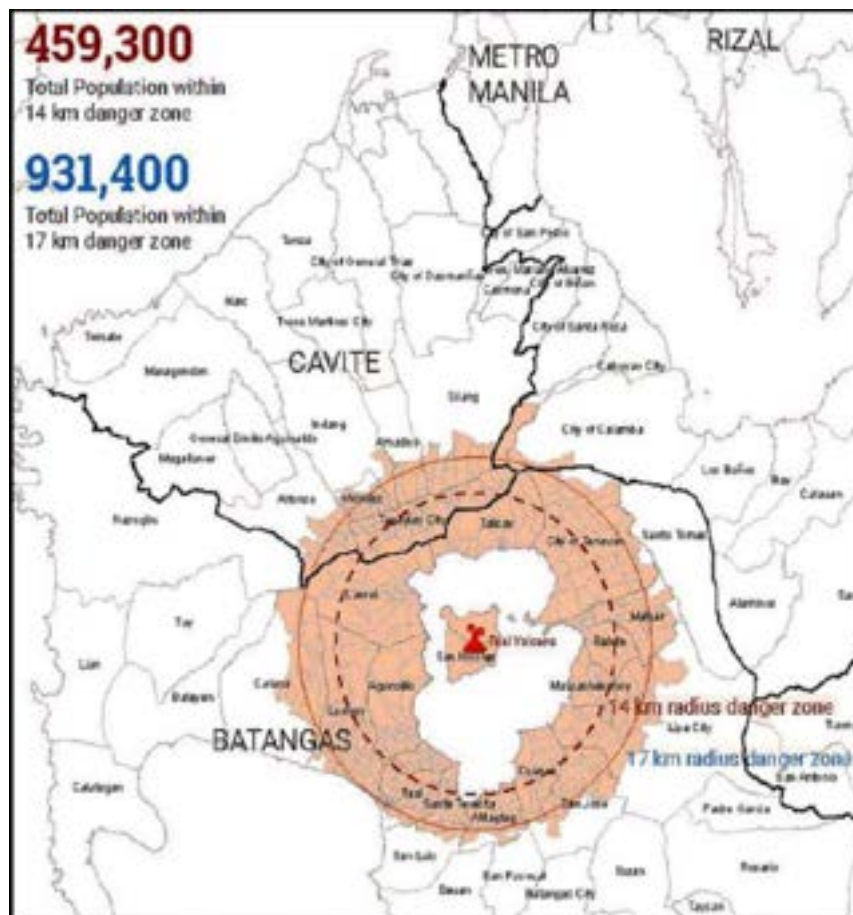




Source:

<https://assets2.rappler.com/612F469A6EA84F6BAE882D2B94A4B421/img/B590B1C3149F46C184A94569C5CBAE4D/tagaytay-taal-volcano-eruption-batangas-january-13-2020-002.jpg>

Figure 42 Taal Volcano Eruption last January 2020



Source: United Nations Office for the Coordination of Humanitarian Affairs

Figure 43 Affected population during the Taal Volcano eruption

Over 450,000 people reside within 40 kilometers of the caldera, according to the United Nations Office for the Coordination of Humanitarian Affairs in the Philippines and as shown in the figure above. The said map shows population totals within 14 and 17 km of Taal Volcano island. Based on reports from the Philippine Institute of Volcanology and Seismology (PHIVOLCS), satellite data, geophysical data, and media reports, this study covers activity from January to February 2020, including the 12 to 22 January eruption.

- f. Maps covering political boundaries of LGU and where SUC and its campuses are located.



Figure 44 Boundary Map of Batangas City



The maps shown above indicate the boundaries of the Local Government Unit of Batangas City together with the structures that are located within them. According to the official website of Batangas City, the capital of Batangas Province has a total land area of more or less 28,541.44 hectares. It is about 108.00 kilometers away from Manila and has an average travel time of approximately one hour forty-five minutes through the Southern Tagalog Arterial Road (STAR) tollway and the South Luzon Expressway.



Figure 45 Location Map of BatStateU Pablo Borbon

The map shown above presents the location of the SUC namely Batangas State University Pablo Borbon. Formerly known as Pablo Borbon Memorial Institute of Technology, is the oldest campus in the university and serves as the seat of the administration of the institution. It is located at Rizal Avenue, Batangas City, and has a land area of 5.96 hectares. Nestled at the heart of the city, its proximity to the Batangas International Port and convenient access to the Southern Tagalog Arterial Road (STAR), coupled with its strong program offerings in a 21st century environment, makes it an ideal academic destination for students and opens collaboration opportunities with national and international partners. It is near the Batangas City Port and is located in the heart of the city which makes the access to such establishments easier.





**DETAILED DESCRIPTION OF  
BATANGAS STATE UNIVERSITY  
- PABLO BORBON CAMPUS**



## Physical Features and Environmental Conditions

- a. Physical and locational characteristics, including land area, boundaries, covered barangays, and among others.

Situated along Rizal Avenue, Batangas City, Batangas State University – Pablo Borbon is covered by different barangays and landmarks. The 44,225 sqm or 4.42 hectare campus is bounded by the aforementioned avenue at the north, A. Delas Alas Drive and Buenafe St. at the south, Don Julian Pastor Access Road at the west and ALN.02 and A. Delas Alas Drive at the east. More so, the said campus is near Barangay Sta. Clara, Cuta, Barangay 21 and Poblacion. Given that it is located at the heart of Batangas City, the university is surrounded by various commercial, residential and institutional buildings. Indeed, Batangas City Sports Centre, Batangas City Convention Centre, Colegio ng Lungsod ng Batangas and Batangas National High School are some of the landmarks covering the university.

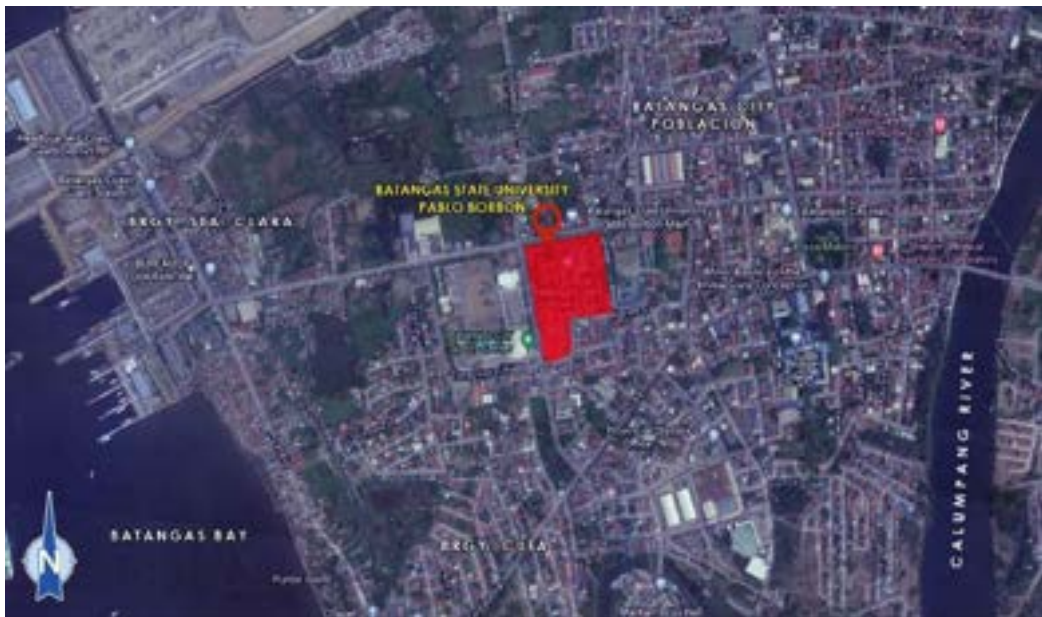


Figure 46 Location of BatStateU Pablo Borbon in Batangas City Proper Area

The campus was established on the western part of the city which is considered to have relatively flat lands. Furthermore, there are streams converging to Calumpang River that can be found kilometers away from the university. With this topography, it is susceptible to flooding once heavy rain or strong typhoons occur. To minimize this unfortunate event from taking place, the elevation of the gates at the front was increased. This preventive solution was initiated despite the fact that the occurrences of storm surges at the city are infrequent.



Figure 47 Facade of BatStateU Pablo Borbon

In general, based on the modified Coronas classification used by the Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA), BatStateU is anticipated to experience Type I climatic type since it is located at the mainland of the city. This type has two different seasons: dry from November to April and wet for the rest of the year.

b. Nearby airports, ports, bus terminals, and the like

Batangas International Container Port - Batangas Port also known as the Batangas International Container Port is considered as an international port in Luzon, primarily servicing the CALABARZON region and as an alternate port to Manila. It is located 3.7 km from Batangas State University Pablo Borbon Campus.



Source: <https://tribune.net.ph/wp-content/uploads/2018/11/SAK1752-e1520402293574.jpg>

Figure 48 Port of Batangas located at Brgy. Sta. Clara, Batangas City

Batangas City Grand Terminal is a multi-purpose transport terminal and complex that serves as a hub for travelers going to, from, and passing through Batangas City. Located at a 42,320 square meter property along Diversion Road, Barangay Alangilan, Batangas City, which is partly owned by the city government of Batangas, the Batangas City Grand Terminal is comprised of the terminal proper, which caters to buses, jeepneys, UV Express, and other public transportation; a commercial space that will soon accommodate restaurants, food stalls, and other business establishments; and a parking space for private vehicles. It is located 4.5 km away from Batangas State University Pablo Borbon Campus.



Source:

[https://upload.wikimedia.org/wikipedia/commons/thumb/9/9a/379Batangas\\_Province\\_landmarks\\_roads\\_20.jpg/1280px-379Batangas\\_Province\\_landmarks\\_roads\\_20.jpg](https://upload.wikimedia.org/wikipedia/commons/thumb/9/9a/379Batangas_Province_landmarks_roads_20.jpg/1280px-379Batangas_Province_landmarks_roads_20.jpg)

Figure 49 Batangas City Grand Terminal located at Brgy. Balagtas, Batangas City

Southern Tagalog Access Road (STAR) is a tollway component of the West Philippine Nautical Highway with a length of about 42 km. from Sto. Tomas, Batangas to the Batangas Port in Batangas City that is interconnected to the South Luzon Expressway (SLEX), it opened in April 2018 which shortened the travel time from Metro Manila to Batangas City by approximately 30 to 45 minutes. It is located 6.0 km away from Batangas State University Pablo Borbon Campus.



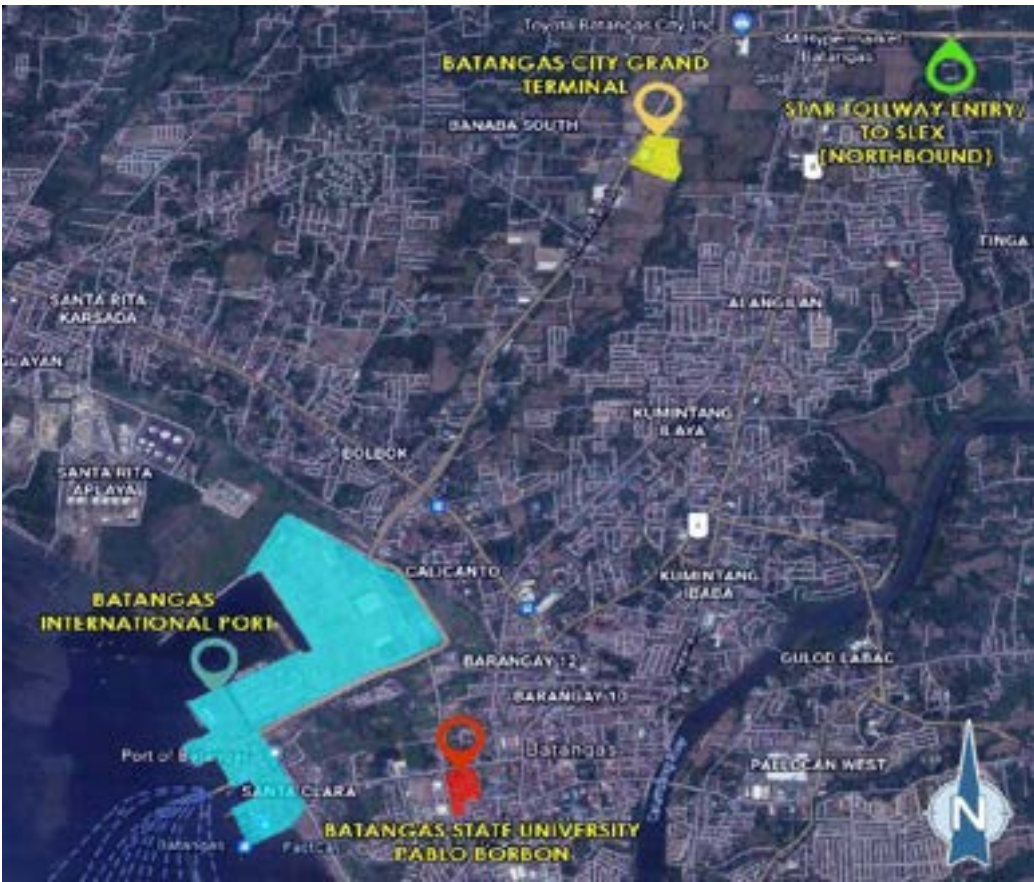


Figure 50 Map showing the location of BatStateU Pablo Borbon from Batangas International Port, Batangas City Grand Terminal and STAR Tollway

Ninoy Aquino International Airport formerly known and still commonly referred to as Manila International Airport, is the main international gateway for travellers to the Philippines and serves as a hub for Cebgo, Cebu Pacific, PAL Express, and Philippine Airlines, as well as a base for Philippines AirAsia. It is managed by the Manila International Airport Authority (MIAA), an attached agency of the Department of Transportation (DOTr). NAIA is located 98.5 km away from Batangas State University Pablo Borbon Campus.



Source: <https://boracaycompass.com/wp-content/uploads/2017/09/manila-ninoy-aquino-international-airport-mnl.jpg>

Figure 51 Ninoy Aquino International Airport - Terminal 1



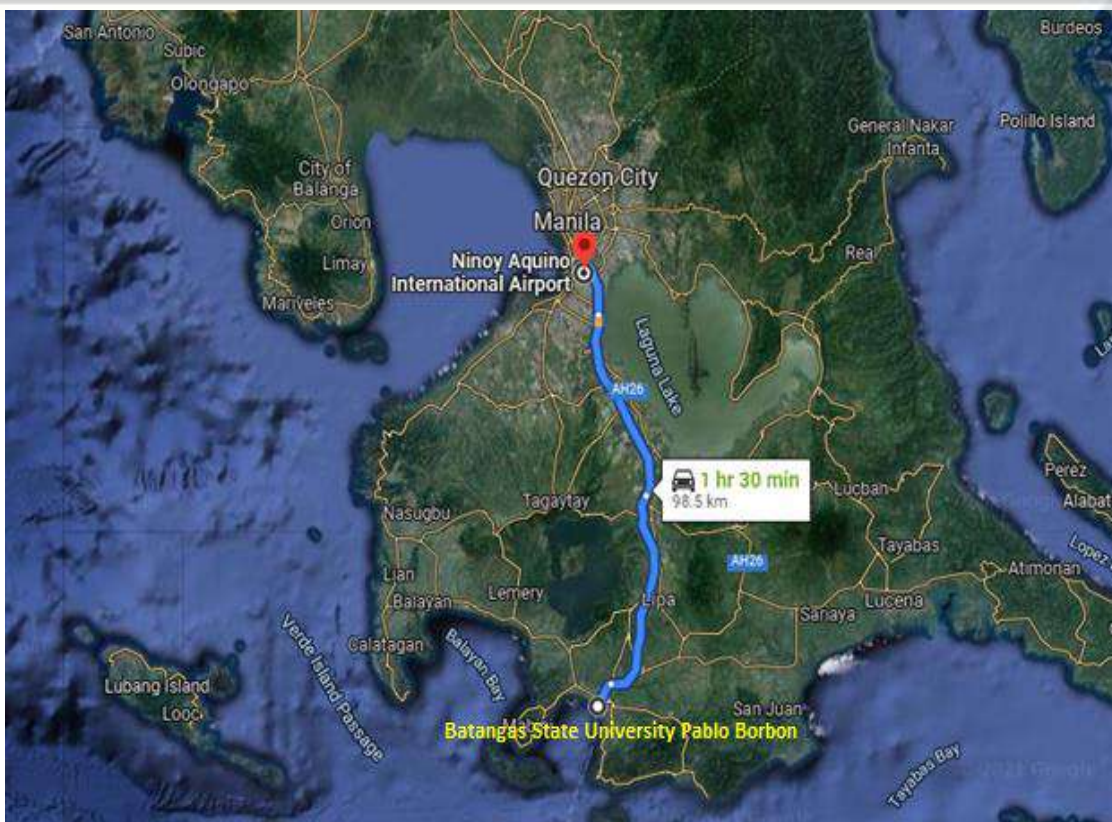


Figure 52 Distance of NAIA to BatStateU Pablo Borbon

c. Summary description of the natural biophysical environment

Batangas State University Pablo Borbon Campus is situated along Rizal Avenue, Batangas City. The campus consists of infrastructures mainly divided into two: Academic and Administrative. There are fifteen (15) buildings allotted for the academic facilities including classrooms, laboratories, multimedia rooms, faculty rooms and the likes. At present, the academic facilities are being utilized by six (6) colleges/school, namely: College of Accountancy, Business, Economics and International Hospitality Management (CABEIHM), College of Teacher Education (CTE), College of Arts and Sciences (CAS), College of Nursing and Allied Health Sciences (CONAHS), College of Law, and Integrated School. For the administrative building, there are twelve (12) infrastructures available. It consists of the administrative building, gates and facade, sewage treatment plant, audio-visual building, etc. The offices under Central and Pablo Borbon Administration use these facilities.

There are four gates in the campus. Gate 1 is the main gate where vehicles enter and exit. Through this gate also is the entrance and exit of employees, students and visitors. Gate 2 is used for vehicles only, this is opened during events for the entrance of service vehicles and when the main gate is flooded due to heavy rainfall. Gate 3 can be accessed by both vehicles and personnels. Gate 4 is currently under construction but this gate is another facade for the entrance of employees, students and visitors to easily access the STEAM Library.

Parking lots are strategically located inside the campus. There are specified areas for the parking of vehicles. Most of the buildings have their



own parking spaces in front. Visitors are advised to park in G.E. Parking Lot for easy monitoring of security services prior to entering to building premises for their transactions. With the increasing number of employees and customers, the present number of parking spaces inside the campus is insufficient. Therefore, there is a four-level parking lot to be constructed besides the Five-Storey Higher Education building.

Presented below is the Map of BatStateU Pablo Borbon Campus. In blue color are the academic buildings while in red color are the administrative buildings. The green color represents the landscape and softscape in the campus. The main landscape which is the Pablo Borbon Park is located in the center of the campus. The vegetative cover mainly consists of trees and plants such as Banaba Tree, Narra Tree, Mango Tree and other landscape plants that help in cooling the environment of the campus. There are vertical garden plants hanging along the hallways of the Campus that help in reducing the heat coming from the sun. Inside the SSC II building, there are two open areas from second to fifth floor. These open areas have an indoor garden like at the center which gives good ambience to the employees and visitors passing through.

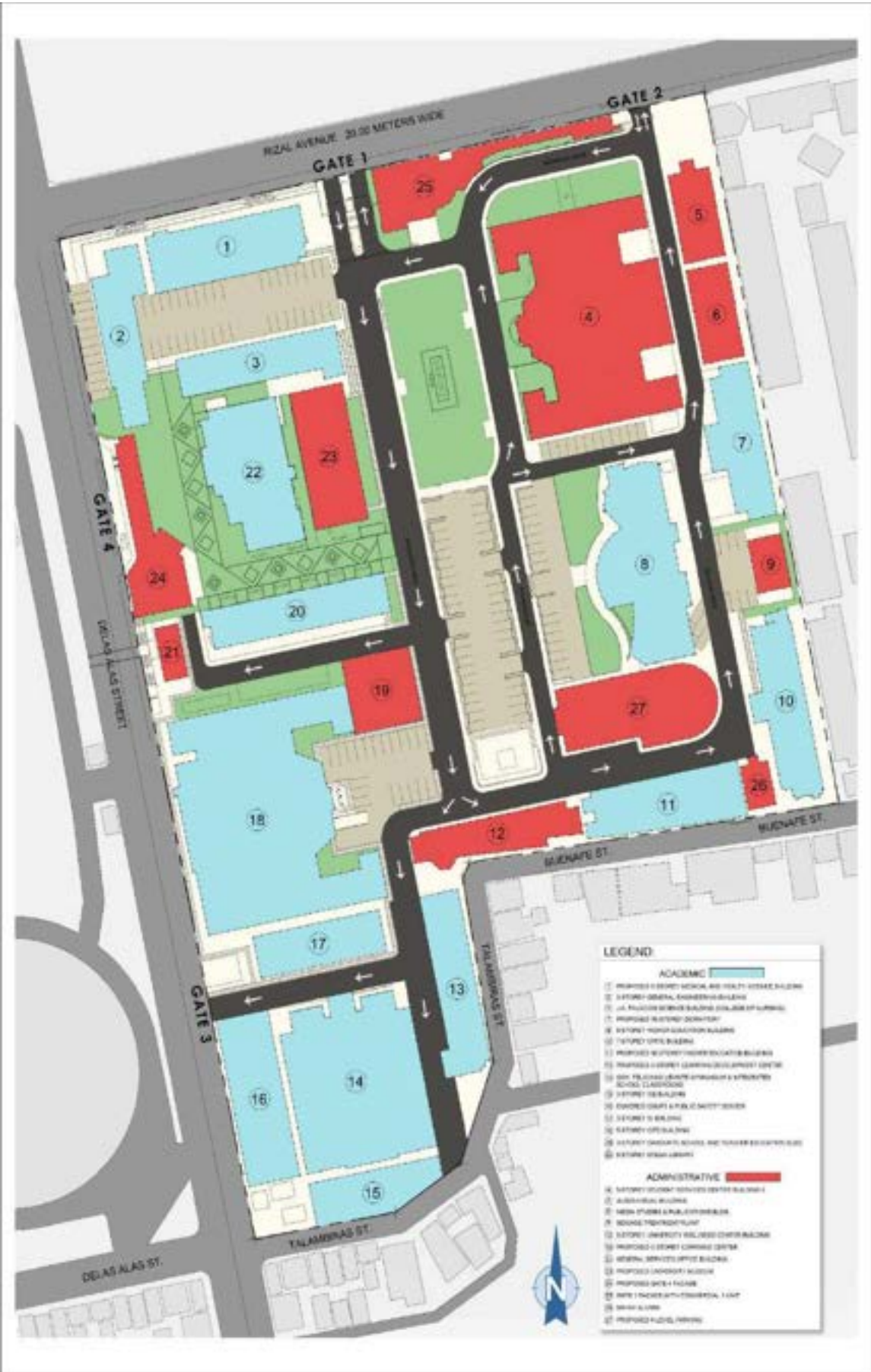


Figure 53 BatStateU Pablo Borbon Campus Map





Below is the hazard assessment as well as the likelihood and severity matrix of the Batangas State University:

Table 12 Likelihood Matrix

Number	Rating	Criteria
1	Low	Threat happens every two years or beyond
2	Medium	Threat happens once a year
3	High	Threat happens 2x or more every year

Table 13 Severity Matrix

Number	Rating	Criteria
1	Low	Negligible Impact
2	Medium	Minor Impact
3	High	Significant Impact

Table 14 Hazard Assessment

Hazard	Likelihood	Severity	Impact (Likelihood X Severity)	Rank
Fire	1	1	1	3
Flood	3	1	3	2
Typhoon	3	1	3	2
Tsunami	1	1	1	3
Power Outage	1	1	1	3
<b>Earthquake</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>1</b>
Cyber attack	1	1	1	3

It can be seen in the table above that after the assessment of hazards based on likelihood and severity, BatStateU PB is highly exposed to earthquakes with the highest computed impact. This means that this hazard will be the focus and priority of the contingency plan for BatStateU PB. Earthquakes occurred in the area leaving visible cracks in buildings and walls at the campus.

Based on the assessment of hazards, BatStateU PB requires a contingency plan for earthquakes that shall ensure preparedness for effective response of the entire population of the university.





Table 15 Earthquake Awareness

Root Causes	Early Warning Signs	Triggering Factors	Existing Mitigating Measures
<p>BatStateU PB is near the Lubang fault line. Earthquakes are caused by a sudden release of stress along faults in the earth's crust. The continuous motion of tectonic plates causes a steady build-up of pressure in the rock strata on both sides of a fault until the stress is sufficiently great that it is released in a sudden, jerky movement. The resulting waves of seismic energy propagate through the ground and over its surface, causing the shaking we perceive as earthquakes.</p>	<p>Geologists are working to develop an early warning system but there is still much to be learned about what happens just before an earthquake hits. Part of the problem is that earthquakes do not always behave in a consistent way—some signs occur at different times (days, weeks, or seconds before the event), whereas sometimes those signs do not occur at all. Some other possible signs of earthquake are:</p> <ul style="list-style-type: none"><li>• Watch for reports of earthquake lights.</li><li>• Observe unusual changes in animal behavior/color.</li><li>• Notice possible foreshocks.</li></ul>	<p>Scientists at Oregon State University looked at 44 years of seismic data and found clear evidence that temblors of magnitude 6.5 or larger trigger other quakes of magnitude 5.0 or larger.</p> <p>The test cases showed a clearly detectable increase over background rates," said the study's corresponding author, Robert O'Malley, a researcher in the OSU College of Agricultural Sciences.</p> <p>"Earthquakes are part of a cycle of tectonic stress build up and release. As fault zones near the end of this seismic cycle, tipping points may be reached and triggering can occur."</p>	<p>Conduct of earthquake drill</p> <p>With earthquake protocol to be followed</p>

In case, an earthquake occurred within the premise of the University, the following guidelines are to be followed.

- Use the Evacuation Areas highlighted in blue for head counting of designated floor, office and building marshals.
- The designated evacuation areas are the open grounds or parking area including the fountain area and the driveway beside the student center and the open space in front of Gate 1.

- The parking area in front of the GE Building and the CITE building was not designated as an evacuation area since it is a water retention facility.
- Designated building marshals shall conduct head count and will ensure that there are no aftershocks before students and personnel will be allowed to return to their respective buildings.



Figure 54 Evacuation Plan for Earthquake Scenario

## Inventory of Landholdings

Below is the inventory of landholdings of BatStateU Pablo Borbon. Stated in the table are the document available, manner of acquisition, status of ownership, lot area and remarks.

Table 16 Landholdings of BatStateU Pablo Borbon

Property Location/ Campus	Document Available	Manner of Acquisition	Status of Ownership	Land Area	Remarks
BatState U Pablo Borbon, Rizal Avenue Extension , Batangas City	Transfer Certificate of Title (TCT No. 052-20160021 27)	Transferred from TCT No. T-54370 (TOTALLY CANCELLED)	The owner is the Republic of the Philippines The beneficial user is Batangas State University, a corporation duly organized and existing under and by virtue of the	27, 254 sqm	For the half part of the campus only.



			laws.		
	Tax Declaratio n of Real Property (Tax Dec. No.: 0020- 00001)	-	The owner is the Republic of the Philippines. The beneficial user is Pablo Borbon Memorial Institute of Technology	25, 885 sqm	These Tax Declarati ons of Real Property cover the entire campus of BatState U Pablo Borbon.
	Tax Declaratio n of Real Property (Tax Dec. No.: 0020- 00135)	-	The owner is the Provincial Government of Batangas. No beneficial user is stated in the Tax Dec.	33, 676 sqm	

Above table presents the available documents of landholdings of BatStateU Pablo Borbon. At present, only half of the entire campus has an available Transfer Certificate of Title (TCT) under the ownership of the Republic of the Philippines and the beneficial user is the Batangas State University. The two presented Tax Declarations of Real Property above covers the entire campus land area. Hence, the BatStateU Pablo Borbon Campus has a total land area of 59,561 sqm. based on the tax declaration. The date of acquisition of the land is not given in the TCT and Tax Declaration.

*Technical Description from TCT No. 052-2016002127*

LOT NO. 5487-B, CSD-4A-001025-D BEGINNING AT A POINT MARKED “1” OF LOT 5487-B, CSD-4A-001025-D. BEING A N. 9 DEG. 29’ W., 599.79 M. FROM B.B.M. NO. 26, CAD-264, BATANGAS CADASTRE; THENCE N. 85 DEG. 21’ E., 53.87 M. TO POINT 2; THENCE N. 83 DEG. 12’ E., 16.12 M. TO POINT 3; THENCE S. 46 DEG. 10’ E., 50.54 M. TO POINT 4; THENCE S. 46 DEG. 49’ E., 23.62 M. TO POINT 5; THENCE S. 17 DEG. 38’ E., 20.50 M. TO POINT 6; THENCE S. 21 DEG. 59’ E., 24.21 M. TO POINT 7; THENCE S. 31 DEG. 59’ E., 23.27 M. TO POINT 8; THENCE S. 15 DEG. 19’ E., 41.03 M., TO POINT 9; THENCE S. 59 DEG. 02’ E., 26.34 M. TO POINT 10; THENCE S. 26 DEG. 56’ E., 25.11 M. TO POINT 11; THENCE S. 73 DEG. 50’ W., 6.61 M. TO POINT 12; THENCE S. 80 DEG. 11’ W., 168.04 M. TO POINT 13; THENCE N. 8 DEG. 16’ E., 130.52 M. TO POINT 14; THENCE N. 3 DEG. 19’ W., 84.00 M. TO THE POINT OF BEGINNING; CONTAINING AN AREA OF TWENTY SEVEN THOUSAND TWO HUNDRED FIFTY FOUR (27,254) SQUARE METERS, MORE OR LESS. ALL POINTS REFERRED TO ARE INDICATED ON THE



PLAN AND ARE MARKED ON THE GROUND AS FOLLOWS: COR. 1 BY P.S. CYL. CONC. MONS. AND THE REST BY OLD B.L. CYL. CONC. MONS. ALL POINTS REFERRED TO ARE INDICATED ON THE PLAN AND ARE MARKED ON THE GROUND AS FOLLOWS: COR. 1 BY P.S. CYL. CONC. MONS. AND THE REST BY OLD B.L. CYL. CONC. MONS. BOUNDED ON THE N., ALONG LINE 1-2 BY LOT 5488; ON THE NE., ALONG LINES 2-3-4 BY LOT 5502, BOTH OF CAD-264, BATANGAS CADASTRE; ON THE E., ALONG LINES 4-5-6-7-8-9-10-11 BY CREEK; ON THE S., & W., ALONG LINES 11-12-13-14 BY LOT 5486, CAD-264, BATANGAS CADASTRE; AND ON THE W., ALONG LINE 14-1 BY LOT 5487-A, CSD-4A-001025-D. BEARINGS TRUE; THIS LAND WAS SURVEYED IN ACCORDANCE WITH LAW AND EXISTING REGULATIONS PROMULGATED THEREUNDER, BY GODOFREDO CHAVEZ, GEODETIC ENGINEER, ON JUNE 20, 1978 AND DULY APPROVED BY THE DIRECTOR OF LANDS ON JUNE 30, 1978 AND THE ORIGINAL SURVEY, WAS ON MAY 1930 TO NOVEMBER 1934. NOTE: THIS LOT 5487-B, CSD-4A-001025-D IS IDENTICAL TO LOT 16635, CAD-264, BATANGAS CADASTRE AND COVERED BY F.P.A NO. (IV-A-1) 11377.

Table 17 Technical Description from the Tax Declaration of Real Property

Tax Dec. No.	Lot No.	Cadastral Lot No.	Boundaries	Classification	Actual Use	Assessed Value
0020-00001	1-CCS-303	128 PT.	<b>North:</b> Rizal Ave. <b>South:</b> A. Delas Alas Drive <b>East:</b> ALN. 02, A. Delas Alas Drive <b>West:</b> Don Julian Pastor Access Road	Special	School Site	15,660,430
0020-00135	-	130	<b>North:</b> Rizal Avenue <b>South:</b> Buenafe St. <b>East:</b> ALN 03 <b>West:</b> ALN 01	Special	School	20,373,980



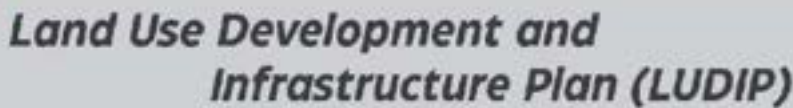
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Figure 55 Tax Declaration of BatStateU PB

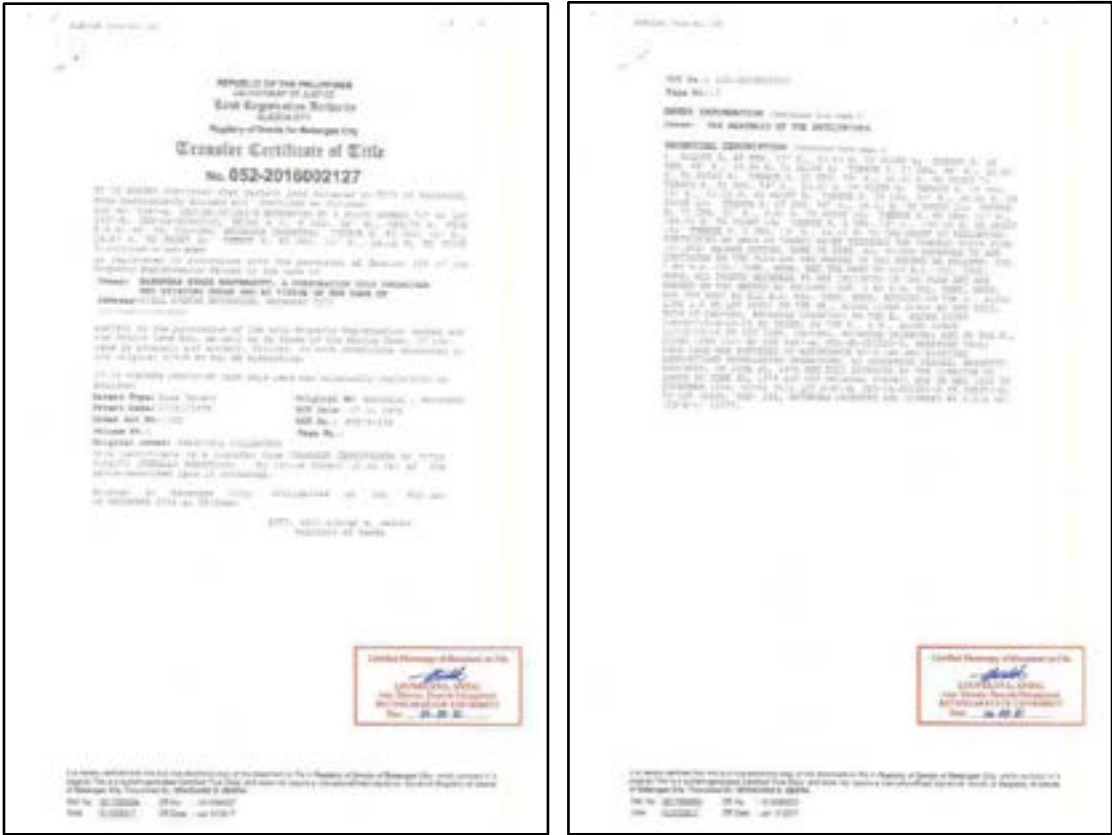


Figure 56 Transfer Certificate of BatStateU PB

Existing Land Use and Land Use Trends

a. Survey of land occupied by the SUCs

BatStateU Pablo Borbon is bounded by Rizal Avenue in the North, A. Delas Alas Drive in the South, D. Silang Street in the East and Don Julian Pastor Access Road in the West. The campus is situated between the Batangas National Highschool and Batangas City Coliseum. There are two tax declarations of property covering the whole campus. Tax declaration 0020-00001 covers the lot no. 1-CCS-303 with cadastral lot no. of 128 PT, used as school site and the assessed value is Php 15,660,430.00. On the other hand, Tax Declaration 0020-00135 covers the cadastral lot no. 130, used as a school site and with assessed value of Php. 20,373,980.00.



Figure 57 Boundary of BatStateU Pablo Borbon

b. Detailed descriptions

***Academic core***

The BatStateU Pablo Borbon is the home of over 17,000 students majoring in the fields of business, education, law, art, science, medicine, and allied health service. The six colleges housed in the campus are the College Accountancy, Business, Economics, and International Hospitality Management (CABEIHM), College of Teacher Education (CTE), College of Arts and Sciences (CAS), College of Nursing and Allied Health Services (CONAHS), College of Medicine (CoM), and College of Law (CoL). The Integrated School (IS) is also in the Pablo Borbon campus which offers elementary, junior high school, and senior high school.

The colleges offer from baccalaureate degree up to doctoral level. Recently, CABEIHM added three programs under its wing, these are the Bachelor of Science in Public Health for Disaster Response, Diploma in Disaster Risk Management, and Master in Disaster Risk Management. With the University branding as Population Health Model, the BatStateU Pablo Borbon campus offered the Doctor of Medicine program as approved by the Board of Regents through BOR Resolution 128 Series of 120; and it continuously scales in greater heights to achieve public health goals by initiating measures that would produce more medical professionals in the healthcare arena. As a young department established in 2005, the College of Law is steadfast in its vision of academic excellence. It is rigorous in the maintenance of academic standards. Thus, the faculty consists of trial judges, seasoned practitioners, and scholars, all who possess the work ethic of a competent and dedicated law professor.



### **Research core**

The BatStateU Pablo Borbon Research core aims to support, coordinate and optimize core structure and services for campus researchers and external stakeholders. This enables researchers and students of BatStateU to have access to the state-of-the-art technology for their scientific research and activities.

Moreover, the research facilities and services of BatStateU support faculty research successes. The available facilities enable particular types of research capacities, such as equipment, material, data acquisition and shared research resources that provide access to instruments, technologies, testing and other related services.

Under the section of *D. Facilities and Utilities including social services facilities and amenities*, listed are the offices and laboratory facilities used under the research core.

#### *List of Researches Assisted*

- ❖ Extraction and Synthesis of  $\text{Fe}_3\text{O}_4$  Using Brown Seaweeds for Oil Removal
- ❖ Development of Microbial Fuel Cell Using Activated Carbon from Tilapia Fish Scale and Treated
- ❖ Efficiency of Carbonized and Chemical Activated Calamansi Peel as an Adsorbent for Kitchen Wastewater Treatment
- ❖ Design and Development of Activated Carbon-Based Air Purifier Using Rice Husks as Adsorbent of Carbon Monoxide
- ❖ Hybrid Solar Cells Using Nanocomposite of Graphene and Silica-Derived Rice Husk
- ❖ Assessment of the Effectivity of Powder Dispersion Method on Swine Wastewater Treatment
- ❖ Adsorbent Capacity of Banana Stem as Activated Carbon for Laundry Wastewater Treatment
- ❖ Activated Charcoal Derived from Banana (*Musa Acuminata*) as Redox Mediator Utilized for Microbial Fuel Cell
- ❖ Development of Car Wash Wastewater Treatment System Using Powdered and Activated *Moringa oleifera* (Malunggay) Seeds
- ❖ Synthesis of Magnetite Using Brown Seaweeds as Reductant for Dye Removal
- ❖ Production of Biochar from Food Waste and Yard Waste By-products for Heavy Metal Adsorption

### ***Residential areas covering both housing for faculty and staff, dormitories for students***

At present, there is no official residential area for faculty, staff, and students within the campus. However, there is a proposed Ten-Storey Dormitory building which strongly supports the sustainability of the university's Strategic Plan. The pre-construction of this project will begin in 2021.



***Detailed geographical description and survey of the site intended for dormitories for students and housing sites for employees of the SUCs, including the architectural design and estimated cost of construction***

The proposed Ten-Storey Dormitory building for the BatStateU Pablo Borbon Campus will begin its pre-construction stage in 2021. This has a total estimated cost of 280M pesos and the actual construction duration is from January 2022 to December 2023. This facility has ground floor, dorm units, suite rooms, kitchen, laundry room, multipurpose hall, outdoor cafe, and roof garden. This project will benefit more than 10,000 students and over 200 employees in Batangas State University- Pablo Borbon. It will also be beneficial for the rest of Batangas State University community with 30,217 students and over 2,000 employees aside from other researchers in the region. Below figure shows the perspective of the proposed 10-Storey Dormitory.



Figure 58 Proposed 10-Storey Dormitory

The dormitory will be constructed behind the 5-Storey Student Services Center II Building and 5-Storey Higher Education Building. The dormitory will sit in between the Sewage Treatment Plant and Media Studies and Publication Building. The dormitory is strategically located as it sits behind the major academic and administrative buildings. Students and employees who will be residing in the dormitory will have separation from the main buildings but still have an easy access to the basic amenities,

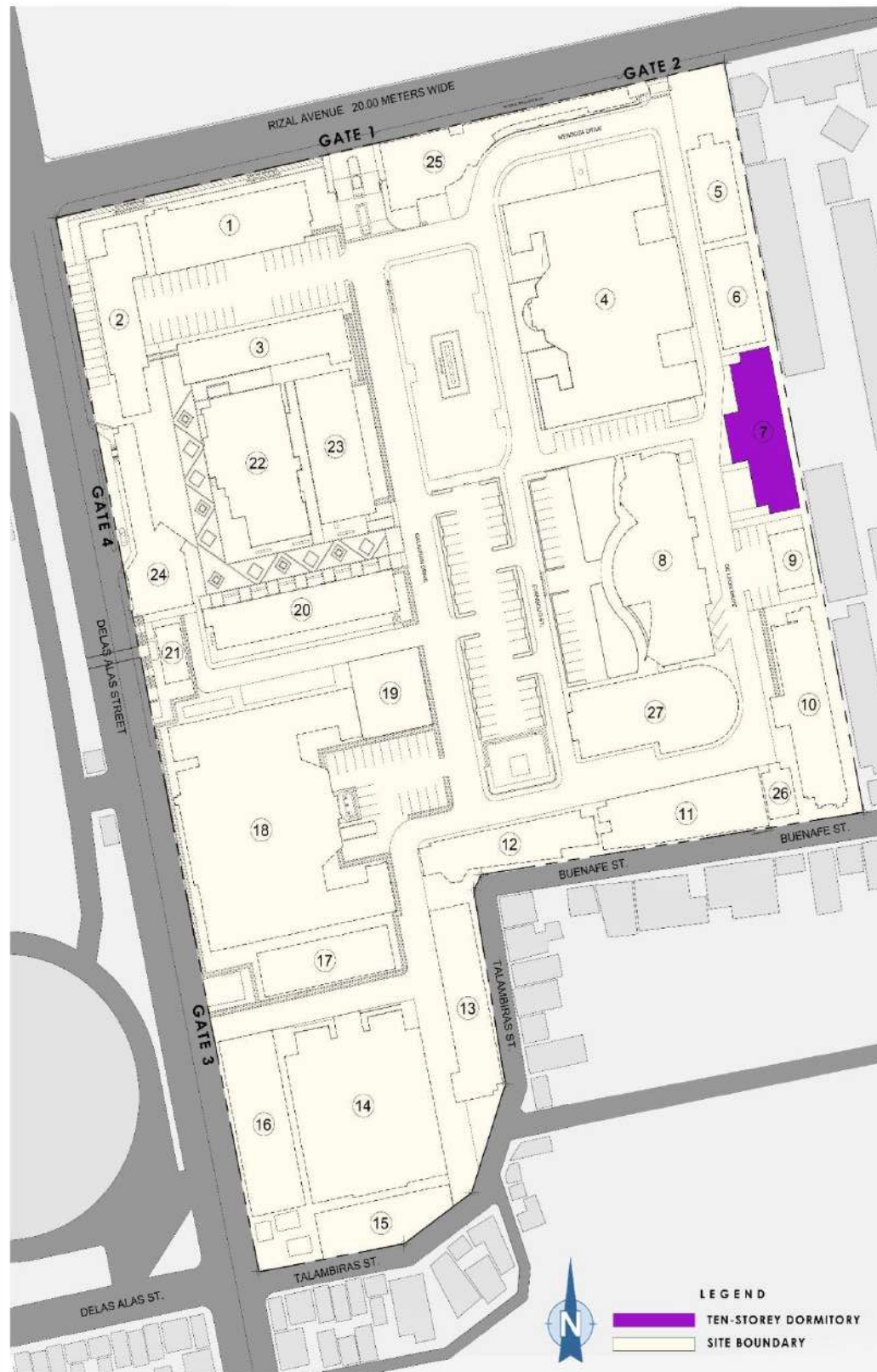


Figure 59 Location of the Ten-Storey Dormitory in BatStateU PB Campus

## Description of the Ten-Storey Dormitory

- A. AREA: 5,025m<sup>2</sup>
- B. The building construction in general will be reinforced concrete framed structure with concrete hollow blocks (CHB), glass panels on aluminum framing and drywall partitions as walls;



- C. Ancillary works associated with the facility includes but not limited to potable water, utility water, sanitary and surface drains and electric lighting and power.
- D. The Proposed University Dormitory is a ten - storey building that shall house:

### GROUND FLOOR

- Entrance porch
- Ramp for PWD
- Elevator Lobby
- Elevator
- Main Stairs (1)
- Electrical Room
- Garbage Chute
- Information Desk
- Hallway
- Command Center
- Pump Room
- Male Restroom
- Female Restroom
- Retail Units
- Open Store / Stall Area
- Fire Exits (2)
- Ramp for deliveries
- Generator Room

### SECOND FLOOR – SEVENTH FLOOR

- Elevator
- Elevator Lobby
- Main Stairs (1)
- Electrical Room
- Garbage Chute
- Lounge
- Access for Vertical Garden
- Mess Hall
- Dorm Unit for 2 persons (4)
- Dorm Units for 4 persons (6)
- Kitchen (2)
- Laundry Room (2)
- ACCU Area
- Fire Exits (2)

### EIGHT FLOOR

- Elevator
- Elevator Lobby
- Main Stairs (1)
- Electrical Room
- Garbage Chute



- Security and Information Desk
- Lounge
- Access for Vertical Garden
- Single Deluxe Suite (4)
- Double Deluxe Suite with Balcony (4)
- House Keeping Room
- Storage Room
- ACCU Area
- Hallway
- Fire Exits (2)

### NINTH FLOOR

- Elevator
- Elevator Lobby
- Main Stairs (1)
- Electrical Room
- Garbage Chute
- Security and Information Desk
- Lounge
- Access for Vertical Garden
- Single Deluxe Suite (4)
- VIP Deluxe Room with balcony (2)
- Housekeeping Room
- Kitchen (for in-house meal for guests)
- Hallway
- Fire Exits (2)

### TENTH FLOOR

- Elevator
- Elevator Lobby
- Multipurpose Hall
- Main Stairs (1)
- Electrical Room
- Garbage Chute
- Common Female Restroom
- Common Male Restroom
- Outdoor Café
- Roof Garden / View Deck
- Water Tank
- ACCU Area
- Fire Exits (2)
- Access for Vertical Garden

Other facilities included in the project are:

- Cistern
- Fire Detection Alarm System
- Telephone Communication System, CCTV and Public Address System (PAS)
- Complete Grounding System
- Plumbing Works





- Septic Vault and Catch Basins
  - Air – Conditioning and Ventilation Works
- d. Detailed geographical description of land used for commercial, agricultural, fishery, forestry and other activities, including open and recreational spaces, landscape features and campus transportation system, among others.

BatStateU Pablo Borbon Campus is situated in the Poblacion area of Batangas City. Therefore, there are no agricultural, fishery and forestry spaces inside the campus. However, these spaces can be seen in other campuses of BatStateU like in Lobo and Nasugbu. A year after the appointment of Dr. Tirso A. Ronquillo as the president of the university, massive infrastructure development was concretized in the university's campuses. There is a large difference between the features of the present Pablo Borbon Campus to the old Main Campus. Anyone passing-by along Rizal Avenue will always have a second look on the modern looking campus. Though there is no expansion in terms of lot area, the campus seems bigger and brighter as the middle part was opened and now sits the campus park. Below figure shows the landscape and softscape features of the campus.



Figure 60 Landscape and Softscape features of BatStateU Pablo Borbon

Placing the park in the middle of the campus helps in cooling the surroundings and attracts students to sit and relax while waiting for the next classes. Truly the water feature provides more comfort and cooling effect in the campus. Many students took photos with the large fountain as it gives instagramable vibe. Aside from the middle park, the campus has other areas allotted for green spaces. Along the hallways of the campus, there are vertical gardens and in front of the buildings there are mini gardens. The plants and trees found inside the campus are a combination of naturally-

grown trees, native plants, and foreign plants. The university believes that green spaces provide comfort from the busy and heavy schedule of both students and employees and also maintain the sustainability of the campus. The next figures show some of the landscape features of the campus.



Figure 61 University Fountain at the University Park





Figure 62 Landscape Features of Pablo Borbon



Figure 63 Green Spaces at Pablo Borbon

The allowed speed limit of vehicles inside the campus is 10 kph. Throughout the campus there are signages reminding all vehicle owners to drive accordingly. It is strictly prohibited to park vehicles in “No Parking” spaces. Signages for this are also spread in the campus area. Those who have vehicles are guided by the security officials to ensure that parking rules



are always followed. Reverse parking is encouraged as it is safer and also the plants can absorb the carbon dioxide emitted from the vehicles upon starting of engine. Below are some pictures of the parking situation on campus.



Figure 64 Parking situations on Pablo Borbon Campus

Below is the main entrance gate (Gate 1) of vehicles in BatStateU Pablo Borbon. There are two more gates where vehicles can enter and exit the campus, however, they are open during special occasions only to maintain the order of transportation inside and also the safety of the Red Spartan Community.



Figure 65 Gate 1 Entrance for Vehicles

Students, employees and visitors can enter the campus through Gate 1 as well but with a separate entrance area. Upon entering, students and employees must tap their RFIDs. This assures the security personnel that the person entering is really a student or employee of the university as they check them through the ICT monitoring system. Visitors must inform the guard which office they will be visiting before entering. They will be given an identification card indicating their visit. Gate 3 can also be used to enter for those coming from the back part of campus. Soon, a new gate with façade will be open along DJPMM Access Road. This will be the fourth gate in the campus that will be established to harmonize with the infrastructure projects of Batangas City Government.



Figure 66 Entrance Gate for Students, Employees and Visitors



The BatStateU Pablo Borbon Campus is accessible to public utility vehicles (PUVs) through Gate 1 and Gate 3. No PUVs can enter the campus unless it is hired privately as mode of transportation. The jeepneys passing through the campus are going to Soro-soro Ilaya, Balagtas, Alangilan, Sta. Clara, Libjo, Tabangao, and Bauan. To those who want a faster and private ride, there are tricycles passing by the campus area as well.



Figure 67 Loading and Unloading Zone in front of Gate 1

The main commercial space in the campus is the University Canteen that is located at the ground floor of CITE Building. The canteen caters the students from elementary to college as well as the employees of the university. It is fully air conditioned with a variety of stalls from snacks to heavy meals. The canteen sells food that is healthy and budget-friendly.



Figure 68 University Canteen





## Land Use Development and Infrastructure Plan (LUDIP)

The gymnasium is used for physical education classes of the students. The gym also serves as the major events place in the campus. Events such as graduation, pageants, seminars, etc are held in the gymnasium. The gym can be rented as well by those outside the organization of BatStateU for large private gatherings, mass meetings, and celebrations. The gym is famous for its hardwood floor that is very good for playing basketball. PBA players sometimes rent the gym for practice games.



Figure 69 BatStateU Gymnasium

Aside from the gymnasium, the campus has several lecture rooms that can be used for small gatherings and meetings. They are fully-air conditioned and equipped with large television screens and sound systems. These can be rented as well for private meetings or small group seminars.



Figure 70 Lecture Room in second-floor CITE Building

Amphitheatre is mostly used by student organizations especially when conducting activities. The university conducts meetings here also. For seminars and training, the amphitheater is a very ideal location because the surroundings have less distraction which will make the audience focus on the talk.



Figure 71 Amphitheatre in fourth-floor CITE Building

- e. Major trends/shifts in land tenure (i.e. CADC/ CADT issuance)/ conversion arrangements (i.e. establishments of special economic zones/ industrial areas

The BatStateU Pablo Borbon Campus have no issues when it comes to shift in land tenure or conversion into special economic zones. Since it is situated in the Poblacion area where most of the commercial spaces in the city is located, there is no expected change in the zoning ordinance in the near future. However, the university's infrastructure development continues to provide the best educational facilities to the students. This development also goes well with the city development projects.

### **Facilities and Utilities including social services facilities and amenities**

The BatStateU Pablo Borbon campus consists of infrastructures mainly divided into two: Academic and Administrative. There are fifteen (15) buildings allotted for the academic facilities including classrooms, laboratories, multimedia rooms, faculty rooms and the likes. At present, the academic facilities are being utilized by six (6) colleges/school, namely: College of



Accountancy, Business, Economics and International Hospitality Management (CABEIHM), College of Teacher Education (CTE), College of Arts and Sciences (CAS), College of Nursing and Allied Health Sciences (CONAHS), College of Law, and Integrated School. For the administrative building, there are twelve (12) infrastructures available. It consists of the administrative building, gates and facade, sewage treatment plant, audio-visual building, etc. The offices under Central and Pablo Borbon Administration use these facilities. Below are the list of buildings in the campus, categorized as existing and on-going construction and proposed buildings.

Existing Buildings

Table 18 Academic Buildings

BUILDING	AREA (SQ.M.)
3-STOREY GENERAL ENGINEERING BUILDING	543.00
INTEGRATED SCHOOL CLASSROOMS	167.00
3-STOREY ISE BUILDING	105.00
J.A. PALACIOS (SCIENCE) BUILDING (COLLEGE OF NURSING)	737.00
3-STOREY GRADUATE SCHOOL & TEACHER EDUCATION BUILDING	730.00
MEDIA STUDIES & PUBLICATIONS BUILDING	443.00
5-STOREY HIGHER EDUCATION BUILDING	1,090.00
3-STOREY IS BUILDING	483.00
5-STOREY CITE BUILDING	2,700.00

Table 19 Research Buildings

BUILDING	AREA (SQ.M.)
7-STOREY CIRTC BUILDING	610.00

Table 20 Administration Buildings

BUILDING	AREA (SQ.M.)
FIVE STOREY STEAM LIBRARY	3,555.00
5 - STOREY HIGHER EDUCATION BUILDING	5,335.00
POWERHOUSE	75.29
SEVEN - STOREY CIRTC BUILDING	3,541.37
THREE STOREY IS BUILDING	1,096.00





Land Use Development and  
Infrastructure Plan (LUDIP)

SEWAGE TREATMENT PLANT	151.00
GSO BUILDING	240.00

Table 21 General Services

BUILDING	AREA (SQ.M.)
POWERHOUSE	75.29
SEWAGE TREATMENT PLANT	151.00
GSO BUILDING	205.00
EXISTING POWERHOUSE	60.00

Table 22 Allied Services

BUILDING	AREA (SQ.M.)
5-STOREY STEAM LIBRARY	977.00
5-STOREY UNIVERSITY WELLNESS CENTER BUILDING	456.00

Table 23 Mixed Use Buildings

EXISTING BUILDING	AREA (SQ.M.)
AUDIO-VISUAL BUILDING	388.00
COVERED COURT	878.40
GOV. FELICIANO LEVISTE GYMNASIUM	1,788.60
GATE 1 FAÇADE WITH COMMERCIAL UNIT	682.75

Table 24 Parking/Open Space (Green Spaces)

BUILDING	AREA (SQ.M.)
BATSTATE-U MARKER	300.00
PARKING & OPEN SPACES (Green spaces)	9,758.00

Table 25 Driveway

BUILDING	AREA (SQ.M.)
DRIVEWAY	6,725.00



On-going Constructions

Table 26 Academic and Allied Services Buildings

BUILDING	AREA (SQ.M.)
PROPOSED 10-STOREY HIGHER EDUCATION BUILDING	730.00
PROPOSED 3-STOREY LEARNING AND DEVELOPMENT CENTER	740.00
COMMAND CENTER	410.00

Table 27 Future Building

BUILDING	AREA (SQ.M.)
PROPOSED 4-LEVEL PARKING	860.00

Proposed Buildings

Table 28 Proposed Buildings

BUILDING	AREA (SQ.M.)
PROPOSED 10-STOREY DORMITORY	714.00
PROPOSED 5-STOREY MEDICAL AND HEALTH SCIENCE BUILDING	630.00
PROPOSED UNIVERSITY MUSEUM	680.00

Academic Core Facilities

Table 29 Facilities of the College of Accountancy, Business, Economics, and International Hospitality Management

Building/Location	Floor Level	Facilities
CITE	1st Floor	Kitchen Laboratory
		Storage Room
	2nd Floor	Dean's Office
	3rd Floor	Accreditation Room
		Faculty Room
		Graduate School Faculty Room



Land Use Development and  
Infrastructure Plan (LUDIP)

		Storage Room
		Computer Laboratory
		CABEIHM Student Council Room
	4th Floor	20 Classrooms
		OJT Room
		CAPA Room
		Storage Room
	5th Floor - CITE Hostel	7 suite rooms
		2 standard rooms
		7 economic rooms
		2 Storage Room
		Laundry Room
		Dining Room
HEB	3rd Floor	5 Classrooms
	4th Floor	5 Classrooms
CIRTC	4th Floor	3 Classrooms

Table 30 Facilities of the College of Arts and Sciences

Building/Location	Floor Level	Facilities
MSP	1st Floor	Dean’s Office
		3 Faculty Rooms
		Accreditation Room
	2nd Floor	3 Classrooms
		Computer Laboratory





Land Use Development and  
Infrastructure Plan (LUDIP)

		Conference Room
		Graduate School Office
		Research and Extension, and OJT Office
		BS Psychology Research Laboratory
		Office Stock Room
	3rd Floor	5 Classrooms
		2 LATHE Office
Audio-Visual Building	1st Floor	Galleria
	2nd Floor	2 Radio Station
		Speech Laboratory
		Audio-Visual Library
		Photography Laboratory
		Audio-Visual Room
Science Laboratory	2nd Floor	Biology Laboratory 1
		Biology Laboratory 2
		Biology Stockroom
		Physics Stockroom
		PL-CAS
	3rd Floor	Chemistry Stockroom
		Chemistry Laboratory 1
		Chemistry Laboratory 2
		Research Laboratory/ Instrumentation Room
		Science Laboratory Office



Land Use Development and  
Infrastructure Plan (LUDIP)

Table 31 Facilities of the College of Law

Building/Location	Floor Level	Facilities
General Engineering Building	3rd Floor	Dean's Office
		3 Classrooms

Table 32 Facilities of the College of Nursing and Allied Health Services

Building/Location	Floor Level	Facilities
Don Juan Palacio Building	1st Floor	2 Laboratories
		Amphitheatre
HEB	2nd Floor	5 Classrooms
	5th Floor	Faculty Room

Table 33 Facilities of the College of Medicine

Building/Location	Floor Level	Facilities
Wellness Center	3rd Floor	Seminar Room
		Massage/Therapy Room
		Video Analysis Area
	4th Floor	10 Laboratory Rooms

Table 34 Facilities of the College of Teacher Education

Building/Location	Floor Level	Facilities
Graduate School & Teacher Education Building	1st Floor	Department Chair's Office
		Accreditation Room
		Dean's Office
		Coordinator's Room
		2 Classrooms
	2nd Floor	Coordinator's Room
		Faculty Room



Land Use Development and  
Infrastructure Plan (LUDIP)

		4 Classrooms
	3rd Floor	Audio-visual Room
		Chemistry Laboratory
		Bio/Physics Laboratory
		Computer Laboratory
		2 Classrooms
HEB	2nd Floor	3 Classrooms

Table 35 Facilities of the Integrated School

Building/Location	Floor Level	Facilities
New IS Building	1st Floor	Office Head, IS
		3 Faculty Rooms
		Storage Room
		PWD Comfort Room
		Classroom
	1.5 Floor	Conference Room
		Female Comfort Room
	2nd Floor	4 Classrooms
	2.5 Floor	Office of Head Teacher 1, ISHS
		Male Comfort Room
	3rd Floor	4 Classrooms
	3.5 Floor	2 Storage Rooms
Old IS Building	1st Floor	Office of Head Teacher 1 for ISGS and Faculty Room
		4 Classrooms





Land Use Development and  
Infrastructure Plan (LUDIP)

	2nd Floor	4 Classrooms
	3rd Floor	4 Classrooms
Left and Right Wings of the University Gymnasium	1st Floor	6 Classrooms
		Computer Laboratory
		Skills Laboratory
CITE	1st Floor	2 Classrooms
	2nd Floor	12 Classrooms
	3rd Floor	8 Classrooms
Graduate School & Teacher Education Building	2nd Floor	2 Classrooms
General Engineering	1st Floor	3 Classrooms

Table 36 Facilities of the Library

Building/Location	Floor Level	Facilities
President Isabelo R. Evangelio Memorial Library	1st Floor - Graduate School Library	Theses Section
		Study Area
		Local Governance Regional Resource Center Section
		Work Stations
		Technical Section
		Staff Room
		Conference / Accreditation Room
		Periodical Section
		Receiving Area
	2nd Floor - Undergraduate School Library	Research Area
		Study Area



		Work Stations
		Audio-Visual Room
		eLibrary

Table 37 Facilities of the Sports Development

Building/Location	Floor Level	Facilities
Gov. Feliciano “Sanoy” Leviste Memorial Multi- Purpose Gymnasium	1st Floor	University Gymnasium
		University Covered Court
		Volleyball Court
		Badminton Court
	2nd Floor	SDP Office
		Culture and Arts Office
		Faculty Room
HEB	2nd Floor	Table Tennis Area
		Darts Area
		Chess Area
Wellness Center	3rd Floor	Fitness Gym
		Sports Development Office

Administrative/General Services

Below is the inventory of facilities used by the offices of Central and Pablo Borbon Administration.

Table 38 Facilities of the Administrative Offices (Central and Pablo Borbon Administration)

Office	Building/ Location	Floor Level	Facilities
Office of the	SSC Building II	1st Floor	Office



Land Use Development and  
Infrastructure Plan (LUDIP)

VPAF			Pantry
			Stock Room
			Conference Room
Budget Office - Pablo Borbon	SSC Building II	1st Floor	Office
Accounting PB	SSC Building II	1st Floor	Office
			Pantry
			Stock Room
Cashier Office - Central	SSC Building II	1st Floor	Office Stockroom Pantry
Cashier Office – PB			
RMO - Central	SSC Building II	1st Floor	Office Storage Room Pantry
RMO - PB			
ID Room	SSC Building II	1st Floor	Office
			Stock Room
Testing and Admission Office - Central	SSC Building II	1st Floor	Office Pantry Testing Area
Scholarship and Financial Assistance Office - Central			
Testing and Admission Office - PB			
Procurement - PB	SSC Building II	2nd Floor	Office Pantry
Office of the Vice President for Development and External	SSC Building II	2nd Floor	Office of VP DEA
			Staff Area and Lounge



Land Use Development and  
Infrastructure Plan (LUDIP)

Affairs			Office Pantry
HRMO - PB	SSC Building II	2nd Floor	Office
			Pantry
Office of the Vice Chancellor for Administration and Finance - PB	SSC Building II	2nd Floor	Office
			Pantry
			Storage Room
Environmental Management Unit - PB	SSC Building II	2nd Floor	Office
	Sewage Treatment Plant		STP
	Waste Management Facilities		MRF CF HWF
Office of the Vice President for Research Development and Extension Services	SSC Building II	2nd Floor	Office
			Pantry
Research Management Office	SSC Building II	2nd Floor	Director's Office
			Front Office Space
Office of the Asst. Directors of Research	SSC Building II	2nd Floor	Office of the Asst. Directors of Research
Food Innovation Center			Office of Food Innovation Center
Analytical Research Center			Office of Analytical Research Center Common Pantry
Presidential Project	SSC Building II	3rd Floor	Office





Land Use Development and  
Infrastructure Plan (LUDIP)

Management Office			
PMO-Central	SSC Building II	3rd Floor	Director Office
			Staff Office
			Pantry
			Stock Room
			Blue Printing Room
Office of the Vice President for Academic Affairs	SSC Building II	3rd Floor	Office
			Conference Room
			Pantry
			Stock Room
ICT Services - Central	SSC Building II	3rd Floor	Office, Server Mini Room, Pantry
			Server
			Mini Room
			Pantry
External Affairs Office - Central	SSC Building II	3rd floor	Office
Office of Student Affairs and Services	SSC Building II	3rd floor	Office Pantry Stock Room Comfort Room Conference Area
Office of Student Organization/Office of Student Discipline	SSC Building II	3rd floor	
QAM Central	SSC Building II	4th Floor	Office
Office of the	SSC Building II	4th Floor	Office



Land Use Development and  
Infrastructure Plan (LUDIP)

Director for Legal Affairs			Pantry
			Stock Room
Internal Audit Services	SSC Building II	4th Floor	Office
Public Relations Office	SSC Building II	4th Floor	PR Director's Room
Auxiliary Services	SSC Building II	4th Floor	Office
			Pantry
Office of the President	SSC Building II	4th Floor	Office of the President
			Office of the Board Secretary
			Office of the Executive Assistant
			Front Desk
			Conference Room
			Lobby
			Pantry
PFMO-PB	CITE Building	Ground Floor	Projects Team Office Board Room
	GSO Building	1st Floor	Maintenance Barracks Stock Room
		2nd Floor	Maintenance Office
Resource Generation Office - Pablo Borbon	CITE Building	1st Floor	Office
			Stock Room
			Shop
Office of the	CITE Building	2nd Floor	Office of VCAA



Land Use Development and  
Infrastructure Plan (LUDIP)

Chancellor – Pablo Borbon			Office of VCDEA
			Office of the Chancellor
			Quality Assurance Management
			Internal Audit
			Lecture Room 1 and 2
			Pantry
			Conference Room
ICT Service - PB	CITE Building	3 <sup>rd</sup> floor (right wing)	Computer Laboratory I
	CITE Building	3 <sup>rd</sup> floor (left wing)	Computer Laboratory II
Server Room	CITE Building	3rd Floor	Office
			Server Room
			Stock Room
Office of the Vice Chancellor for Research, Development and Extension Services (OVCRDES)	Audio Visual Building	1 <sup>st</sup> Floor	OVCRDES
			Extension Service Office - PB
			Research Office- PB
Property and Supply Office - PB	Audio Visual Building	1 <sup>st</sup> Floor	Office and Storage room for office supplies and other supplies
	General Engineering Rooms	1 <sup>st</sup> Floor, GE rooms (101, 102,103)	Storage room for unserviceable items



Land Use Development and  
Infrastructure Plan (LUDIP)

HRMO - PB	Audio Visual Building	1st Floor	Office
Library Services	STEAM Library	1st to 5th Floor	Office
			Library
			Computer Laboratory
			Pantry
			Stock Room
University Museum	University Museum	1st and 2nd Floor	Office
			Display Area
			Stock Room
Action Center	Wellness Building	5 <sup>th</sup> Floor	Office / Stock Room
VIP CORALS LOBO	CIRTC Bldg.	4th floor	Office
Motorpool - Central	Motorpool		Office
General Services Office - Central	GSO Building	1st Floor	Office
General Services Office - Pablo Borbon		2nd Floor	Utility Personnel Barracks

RESEARCH CORE

Below is the list of offices and laboratory facilities in the campus used in the research core by both students and researchers:

Table 39 Summary of Laboratory Facilities used in BatStateU-PB

College/ Unit	Building	Floor Level	Facilities
CAS	MSP	2nd Floor	Computer Laboratory
			Research and Extension, and OJT Office





Land Use Development and  
Infrastructure Plan (LUDIP)

			BS Psychology Research Laboratory
	Audio-Visual Bldg.	Ground Floor	Research and Extension Coordinator, and OJT Coordinator
		2nd Floor	Radio Station
	DevCom	1st Floor	Speech Laboratory
			Photography Laboratory
	Science Laboratory	2nd Floor	Biology Laboratory 1 (BL1)
			Biology Laboratory 2- Micro Para lab
			Biology Stockroom
			Physics Laboratory
			Physics Stockroom
		PL-CAS	CAS STUDENTS with Physics Laboratory Courses
		3rd floor	Chemistry Laboratory 1 (CL1)
			Chemistry Laboratory 2 (CL2)
			Research Laboratory/ Instrumentation Room
			Science Laboratory Office
CABEIHM	CITE	1st Floor	Kitchen Laboratory
		3rd Floor	Computer Laboratory
College of Medicine	Wellness	3rd Floor	Video Analysis Area
		4th Floor	Private Room (Lab)
			Debriefing Area
			Operating Room



			Control Room
			Scrub Room
			Nursery Room
			Audio Visual Room
			Nurse Station
			Cadaver Room
			Stock Room
CONAHS	Don Juan Palacio Building	1st Floor	Skills Lab
			Nutrition Lab
CTE	CTE Building	3rd Floor	Audio Visual Room
			Chemistry Lab
			Bio/Physics Lab
			Computer Laboratory
Integrated School	NIS Building	2nd Floor	Science Laboratory 1 (High School)
			Science Laboratory 2 (High School)
	University Gymnasium (Right Wing)	Ground Floor	Computer Laboratory (Grade School)
	University Gymnasium (Right Wing)	Ground Floor	Skills Laboratory (High School)

- Note:
- 1. The two Science Laboratories in the New IS Building were used as classrooms of grade school pupils who were displaced due to the construction of the Learning Development Center located at the left side of the University Gymnasium.
  - 2. We have two other Computer Laboratories for High School Students located at the Old Student Center. The building was



demolished as well; currently, computers are lodged in rooms on the second floor of the NIS building.

3. We have a Cooking/Bread and Pastry Production Laboratory located near the Coop building. It was also displaced due to the construction of the new gate near the newly constructed University Library.

### *List of Available Research Laboratories*

The BatStateU Analytical Laboratory and Testing Services is primarily established to provide technical and analytical services to faculty and student researchers of the University. It also serves as a central analytical service laboratory to established Research Centers of the University with on-going institutional and externally funded research. It primarily provides technical and analytical services to the research community of BatStateU.

The following laboratories are used for computer fundamentals, Computer Programming Applications, Database Applications and Microsoft Office Applications, with internet connection used by the students in web browsing and other online examinations.

- Infotech Laboratory
- Multimedia Laboratory

CISCO Laboratory is equipped with CISCO Networking Technology Routers and Switches for Actual Laboratory Experiment / Activity. Computers are installed with CISCO Packet Tracer 7.1.1 Software for Simulation / Practice Activities.

### *Services*

The Analytical Laboratory can provide analytical services for physico-chemical analyses of foods, feeds, natural products, water and wastewater. Water and

Wastewater Physicochemical Analysis includes:

- Acidity and alkalinity
- Hardness
- Solids (TSS,TDS, Total Solids)
- Chemical Oxygen Demand

Analysis of Foods, Feeds and Natural Products includes:

- Free Fatty acids
- Acid Value
- pH
- Fats and Oils Analysis
- Proximate Analysis
- Antioxidant Properties



Analysis of Foods, Feeds and Natural Products includes:

- Free Fatty acids
- Acid Value
- pH
- Fats and Oils Analysis
- Proximate Analysis
- Antioxidant Properties

### ***Extension***

#### *Income generating projects*

Listed below are the existing and proposed income generating projects of the campus.

#### Existing income generating projects

1. Facility: University Shop  
Location: CITE Ground Floor  
Area: 29.17 sqm
2. Facility: University Canteen  
Location: CITE Ground Floor  
Area: 715 sqm
3. Facility: Building Space  
Location: Facade Area, Gate 1  
Area: 40 sqm
4. Facility: SCB2 Canteen  
Location: 3rd Floor Student Center Building  
Area: 300 sqm

#### Proposed income generating projects

1. Facility: Coffee Shop  
Location: 5th Floor Student Center Building  
Area: 58.70 sqm
2. Facility: Fitness Gym  
Location: 5th Floor Student Center Building  
Area: 124.24 sqm
3. Facility: SPA  
Location: 5th Floor Student Center Building  
Area: 176.90 sqm
4. Facility: Nursery/ Daycare Station  
Location: 2nd Floor Wellness Center Building  
Area: 81.11 sqm

#### *Hostel*

Facility: University Hostel (CABEIHM)  
Location: 5th Floor CITE Building  
Area/Rooms: 17 rooms





Allied Services

*Housing of officials, faculties, staff and dormitory of students*

At present, there is no official residential area for faculty, staff, and students within the campus. However, there is a proposed Ten-Storey Dormitory building which strongly supports the sustainability of the university's Strategic Plan. The pre-construction of this project will begin in 2021.

*Clinics*

The Health Services Department of Batangas State University seeks its meaningful existence in an academic community through a sustainable program of quality health deliveries to faculty, personnel and students within the limits of its capabilities and resources. It continues to pursue its health mission to people in its service areas in the spirit of altruism and in accordance with the commitment of the university.

Below are the facilities of the Health Services Department of BatStateU Pablo Borbon:

Table 40 Facilities of Health Services Department

Office	Building/ Location	Floor Level	Facilities
Health Services Department / Infirmary	Wellness Development Center	1st Floor	Female Ward
			Male Ward
			Medical Officer's Room
			Conference Room
			Lactation Room
			Isolation Room
			Emergency Room (Pantry, Record's Section, Medicine Storage room)
		2nd Floor	Dental Office
			Consultation room



			College of Medicine Faculty Room
			Nursing Office (Stock room, Pantry, Hearing and Vision room)
			Conference Room

Emergency Response

BatStateU ACTION Center operates under the Office of the University President in collaboration with partner LGUs, RLAs and private organizations in the local, national and international levels.

Structure

The ACTION Center is managed by a Management Committee (ManCom), which is composed of the University President as Chairman, with the Multi-Sectoral Advisory Council (MSAC) and the Executive Committee as members.

The ManCom is tasked to perform the following duties: 1. Formulate strategic plans for the ACTION Center and its programs and activities; and 2. Formulate policies, guidelines and mechanisms pertaining to the management of the ACTION Center.

Disaster Preparedness and Response

Batangas State University has been taking an active role in responding to the challenges in disaster risk management and disaster preparedness in conformance with the mandates and provisions set forth by the Republic Act No. 10121, otherwise known as the “Philippine Disaster Risk Reduction and Management Act of 2010” which seeks to strengthen the country’s capacity for disaster risk reduction and management by developing programs, institutionalizing policies and coordinating agencies, private or public sectors and individuals from all levels in the community towards a disaster- resilient nation and with Republic Act No. 9045 which illustrates that the University shall primarily provide advanced instruction and professional training in scientific, technological and special instructions and various fields, undertake research and provide leadership in these areas. The response and initiative in line with the mentioned Republic Acts strengthened by the development of Center for Adaptive Capacity-building and Technology Innovation for Occupational Hazards and Natural Disaster Center (ACTION Center) which was approved by virtue of Board Resolution No.



482-A, series of 2016.

Also, Incident Management Teams (IMTs) in all campuses were organized as part of the university's active and continuous efforts to effectively prepare for and respond to disasters that may occur in the university. Such IMTs are made up of designated personnel who will assume responsibility for ensuring the safety of all students, teaching and non-teaching staff when natural and human hazards strikes.

Transportation

- a. Infrastructure and road network maps; including drainage, parking areas

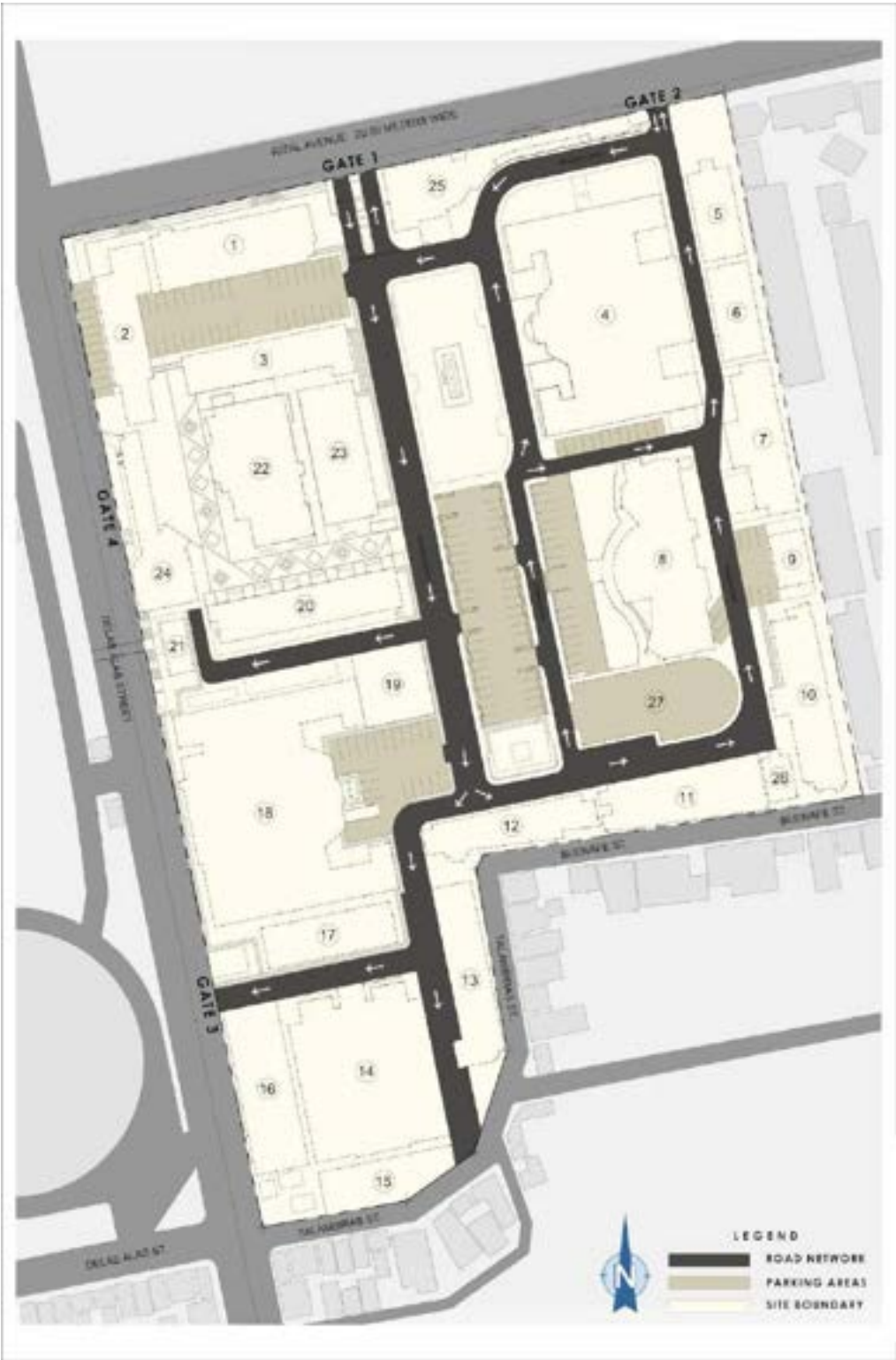


Figure 72 Route Planning inside BatStateU-PB

Routing (also known as route planning) is the process of determining the best cost-effective path by minimizing the distance or time required to reach a set of predetermined locations. To eradicate delays, organization of traffic flow in a network of roads is significantly important. Also, allocating parking spaces for vehicles plays a vital role to avoid congestion. With this, a route plan inside Batangas State University - Pablo Borbon campus is proposed as shown in the figure above.



One-way route is imposed on all road networks inside the university. Gates 1 and 3 are designated for the passage of vehicular traffic. While Gate 3 will only allow the exit, Gate 1 can be utilized for both entrance and exit. Meanwhile, Gate 2 is a closed gate which can only be used when necessary.

As for the parking areas, there are spaces allotted in front of the proposed 5-storey Medical and Health Science Building; at the back of General Engineering Building; in front of the Wisdom Tower; in front of the 5-storey CITE Building; in front and at the back of the 5-storey Higher Education Building and in front of the Sewage Treatment Plant. Lastly, to assure that all vehicles will be parked efficiently, a 4-level parking is proposed which will be situated at the left side of the Higher Education Building.

## b. Ports



Figure 73 Nearest Port to BatStateU Pablo Borbon

Batangas International Container Port - Batangas Port also known as the Batangas International Container Port is considered as an international port in Luzon, primarily servicing the CALABARZON region and as an alternate port to Manila. It is located 3.7 km from Batangas State University Pablo Borbon Campus.





Water is an essential component of every workplace. The BatStateU Pablo Borbon Campus is supplied by water from both deep-well (inside the campus) and Batangas City Water District. However, the most used source of water is from the deep-well. The water from the deep-well is pumped to the elevated water tank located at the back of the covered court beside the Old Integrated School Building. It is then pumped to the cistern tanks located at the back of the buildings before pumping to the overhead tanks for the water-use in the buildings.

To minimize the amount of rainwater flooding the campus, there are three water retention facilities that hold up run-off during heavy rainfall. The water retention facilities are built below the grounds. The largest among the three is located at the G.E. Building Parking lot. The two more facilities are located in the CITE Building parking lot and the road between the Gymnasium and Three-storey Learning Development Center. With these water retention facilities, flooding is still inevitable inside the campus as the receiving water canal outside is smaller than the facilities. Also, it is known that the area of the campus has a high susceptibility to flooding.



Figure 75 Water Retention Tank in the G.E. Building Parking Lot

In terms of electricity supply, the campus is supplied by Meralco. There are two Meralco electric meters in the campus which is outside the perimeter fence for easy access of the Meralco personnel. In terms of power outages, since the university is supplied by Meralco, the chance of blackouts is very small sometimes during typhoon season only. But, in case of long announced blackouts or there events which need additional power supply, there are generator sets in the campus. At present, there are two power

houses located beside the three-storey New IS Building and SSC II Building. The working generator set is the 853 kVA housed beside the CITE Building. The university will procure a new generator set which will be put in the powerhouse besides the SSC II building. The Sewage Treatment Plant (STP) has its own generator set in case the power supply is not able to run the blowers of the sequence batch reactor. The generator set is below 100 kVA and is located in the STP itself. The buildings of Student Services Center and CIRTC have installed solar panels to provide power to light fixtures in case of power failure. Even though there are no power outages, the solar lights are open to reduce the power consumption in the campus.



Figure 76 Powerhouse besides the SSC II Building

### Waste Management

Areas for waste management, segregation, collection and description on waste practices being used, especially innovative ones like converting waste to energy, zero waste policy being implemented, and among others.

Waste Management System is a systematic way of collection, transportation, treatment and disposal of generated wastes in the Campus. Wastes are discarded materials of the Campus either in solid, liquid or gas form. The wastes generated in every premise are safely collected, processed and disposed so as not to cause negative environmental and health impact. Institutional wastes are being monitored, recorded, evaluated and reported to regulatory agencies showing compliance to environmental regulations.



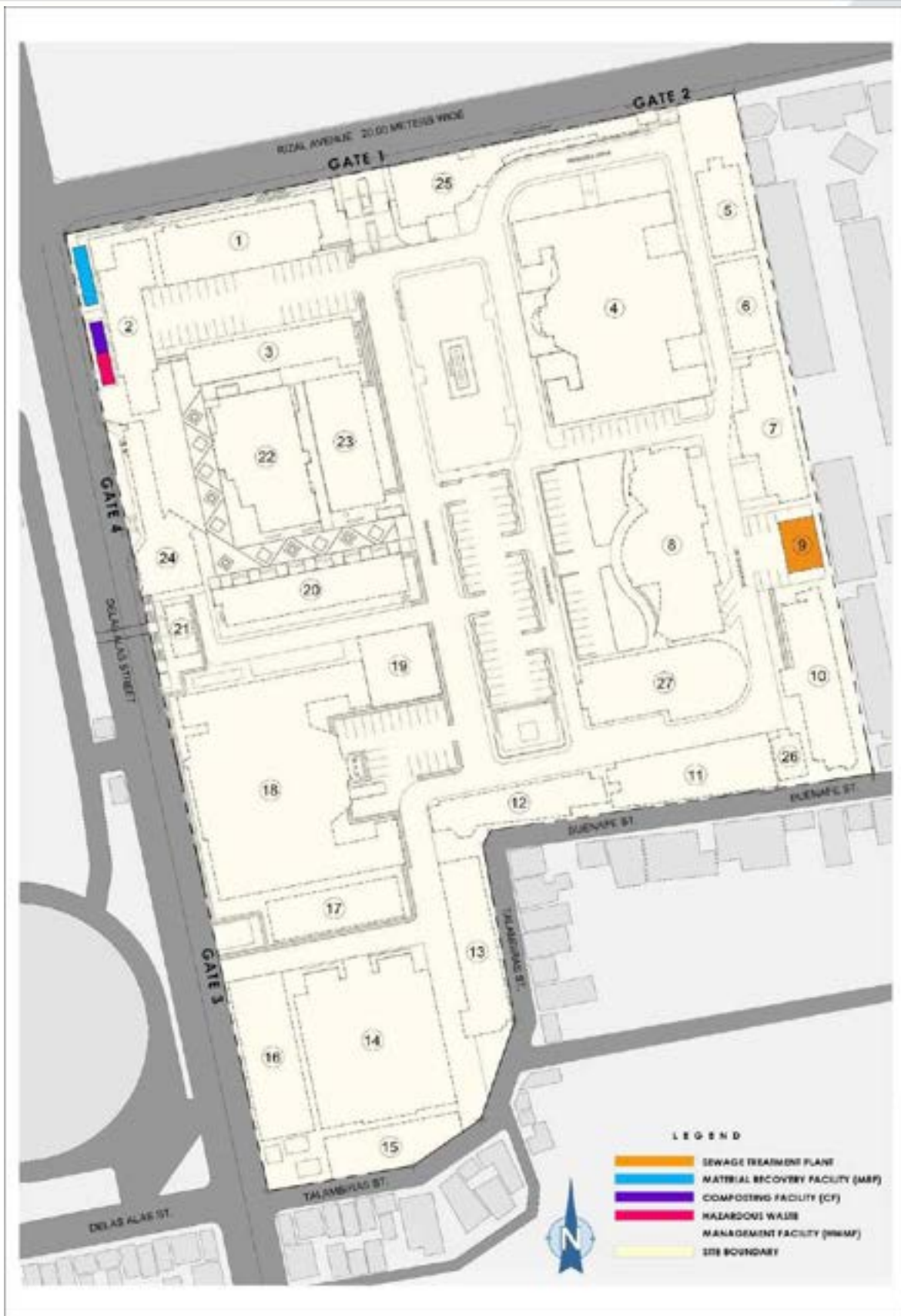


Figure 77 Waste Management Facilities

BatStateU Pablo Borbon Campus Waste Management Strategy, involves creating facilities in which wastes of students, professors and personnels flows safely with minimal risk and hazard. Indicated in the figure above are the facilities in which the waste which is generated by people within the campus will be consolidated or located. As follows, the Sewage Treatment Plant will be located beside the CIRTTC Building, whereas the Material Recovery Facility, Hazardous Waste Facility and the Composting Facility will be behind the General



Engineering Building. BatStateU Pablo Borbon Campus classified waste management into five (5), namely: Solid Waste Management, Wastewater Management, Hazardous Waste Management, Personal Protective Equipment (PPE) Disposal and Air Exhaust Management. Each of these components are discussed below in detail.

### *Solid Waste Management*

In minimizing the waste generated by the Campus, it is encouraged to purchase environmentally-acceptable, durable and cost-effective products. The procurement of items for the campus operation must be in bulky order to avoid excessive packaging materials to be disposed of. Through online infographics, webinars, seminars and posters, the students, faculty members and staff are educated and informed about the importance of segregation and waste reduction. At source, generated wastes in the campus are segregated to maximize the energy recovery. All generated wastes are recorded and updated as a basis in compliance with RA 9003 (Ecological Solid Waste Management Act of 2000).

Strategically-located and sealed bins are available for use by stakeholders staying in the campus. Bins are properly labeled to indicate specific wastes to be contained for a more efficient segregation from collection of wastes. Janitors collect the wastes from bins and be brought to the Material Recovery Facility. Periodic waste collection must be observed by the janitors at all times, or at maximum capacity of the bins. All collected wastes are inspected for proper segregation. All recyclables are ensured to be recovered and residual wastes are separated from it. Recovered items are placed in a safe and secured storage for selling and other significant purposes. The biodegradable wastes are properly composted in an isolated composting facility. The generated residual wastes in the campus are hauled by a third-party service provider for disposal. The service provider selects the transportation route with consideration of avoidance to populated area, watershed or catchment area and environmentally sensitive area. The schedule for transportation is at least once or twice a week, or when the storage place is full.

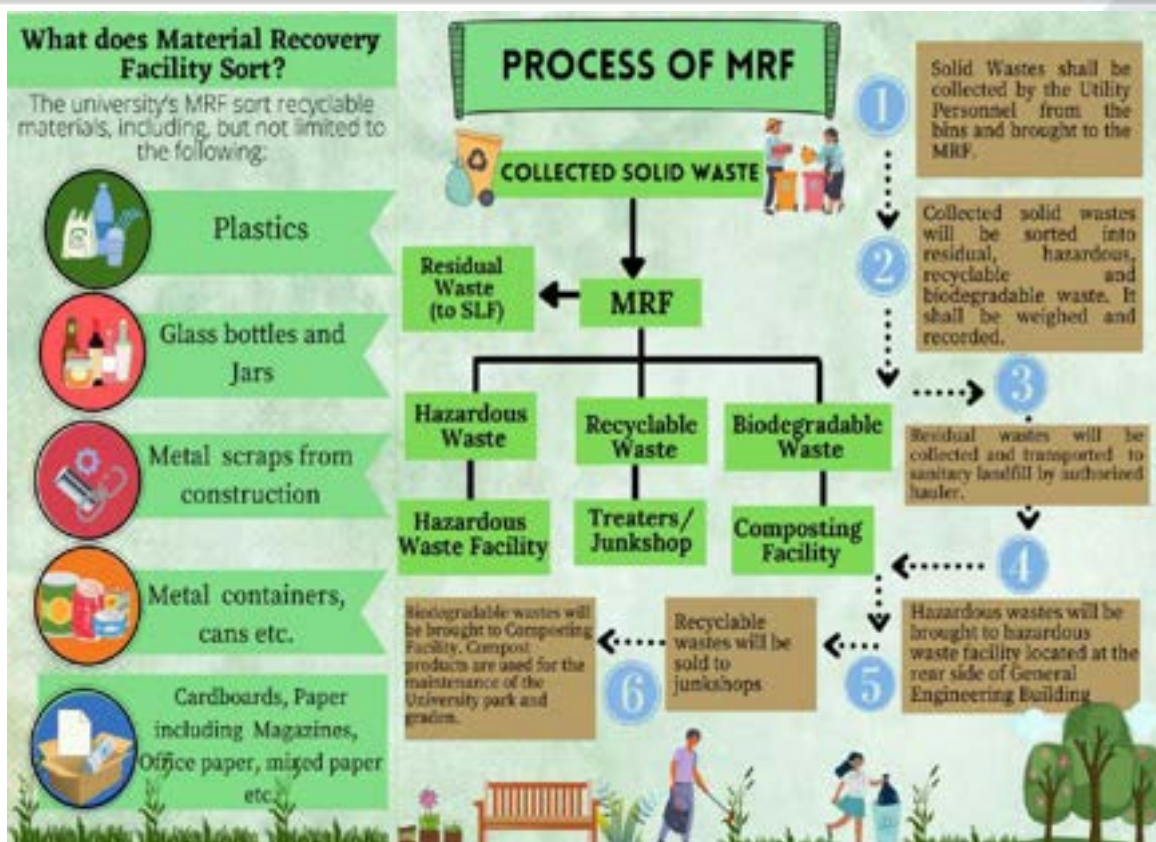


Figure 78 MRF Operational Process

## Wastewater Management

Water consumption in the campus is being monitored through the installed metering device. Problems in the piping system such as leakages are corrected right away once found or reported. Stakeholders are encouraged to minimize the use of water as necessary.

All wastewater is collected by an approved piping material and is to be treated prior to its disposal to the environment. An approved sewage treatment plant (STP) and septic systems are constructed in the campus to provide treatment of sewage to avoid surface and subsurface contamination. Monitoring of the quality of effluent is periodically done to ensure compliance to laws and regulations. Wastewater is disposed of in an approved manner. It is ensured that a related permit has been secured from the authority in compliance with the law and that the effluent discharge to the environment passed the effluent standard stipulated in DAO 2016-08. All wastewater discharge in the environment shall be in compliance with RA 9275 (Philippine Clean Water Act of 2004). Storm water is collected separately through conductor/downspout and conveyed to any receiving canal or body of water.





Figure 79 Existing and Functional Sewage Treatment Plant

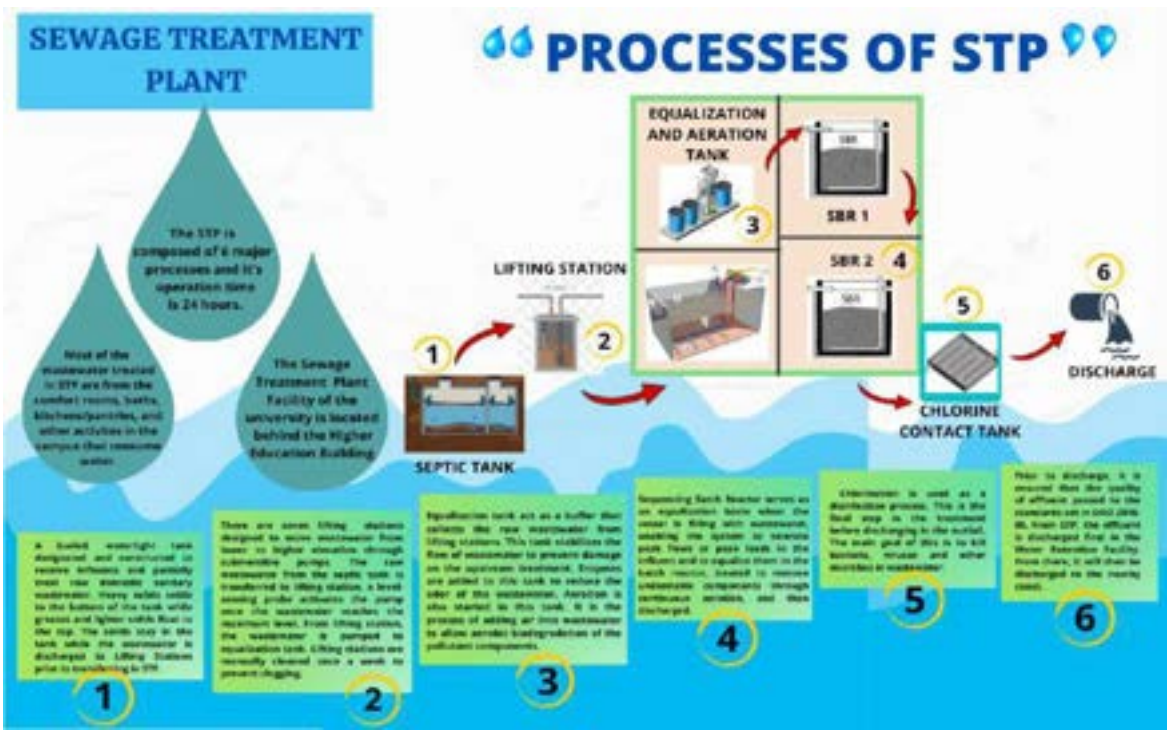


Figure 80 Operational Process of the STP



## Hazardous Waste Management

Hazardous wastes are substances that are without any safe commercial, industrial, agricultural, or economic usage and are shipped, transported or brought from the country of origin for dumping or disposal into or in transit through any part of the territory of the Philippines (DENR A.O. 2013-22). The campus is registered as a hazardous waste generator. The types of waste generated by the campus are: B206 - Mixture of sulfuric and hydrochloric acid; D407 - Mercury and mercury compounds; J201 - Containers previously containing toxic chemical substances; M501 - Pathological or infectious wastes; and I101 - Used industrial oil including sludge. The Campus at all times must comply with the requirements of RA 6969 (Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990), its implementing rules and regulations and the Procedural Manual for Hazardous Wastes Management. To dispose of the hazardous waste generated in the campus, the university procures the services of an authorized hauler with proper permit to transport the generated waste. The management ensures that all wastes are transported and treated prior to its disposal.



Figure 81 Operational Process of Hazardous Waste Facility

## Personal Protective Equipment (PPE) Disposal

In compliance to the requirements stated in BatStateU Crisis Management Plan with Board Resolution No. 107 Series of 2020 under Public Health Risk Mitigation Guideline due to COVID-19, the office of EMU-Pablo Borbon allocated trash bins solely for Miscellaneous Waste, specifically for M501 Pathological or Infectious Waste. These trash bins are intended for the safe collection and disposal of waste gloves, facemasks, PPEs, etc. used for protection against COVID-19. All allocated trash bins are labelled with “miscellaneous waste” and with pictures of the intended waste to be disposed of. Prior to disposing in the designated trash bin, masks must be cut in half to avoid reuse and one glove must be inside-out enveloping the other inside of it. These wastes are collected separately from the residual wastes and safely stored prior to its collection by the authorized hauler.



Figure 82 Infographic Material for the promotion of awareness to M501 Trash Bins



## Air Exhaust Management

All air pollution source equipment (APSE) are periodically maintained. All exhaust from any APSE is periodically monitored and tested to ensure compliance to standards. All gases released from APSE are treated, if applicable, so as not to induce negative environmental and health impact. Reports are submitted to the regulatory agency in compliance with the RA 8749 (Philippine Clean Air Act of 1999).



Figure 83 Air Exhaust Management Practice in the Campus



# **II. BATSTATEU PABLO BORBON DEVELOPMENT, LAND USE AND INFRASTRUCTURE PLAN**





## Vision, Mission, Goals and Objectives

### a. Agreed upon vision, goals, objectives and thrusts

#### **University Vision**

A premier national university that develops leaders in the global knowledge economy.

#### **University Mission**

A university committed to producing leaders by providing a 21st century learning environment through innovations in education, multidisciplinary research, and community and industry partnerships in order to nurture the spirit of nationhood, propel the national economy, and engage the world for sustainable development.

#### **University Motto**

*Leading Innovations, Transforming Lives*

#### **Core Values**

- *Patriotism*  
This value extends from promoting love of country to taking pride in being a Filipino. The University advocates a strong sense of commitment to national ideals through its active promotion of the Philippine culture and heritage, as well as concern for the environment and the nation's natural biodiversity, all of which lead to the creation of a pool of professionals who are instrumental for nation building.
- *Integrity*  
This pertains to the University's steadfast adherence to morally-sound principles and ideals in the pursuit of institutional goals and objectives. It covers the values of accountability, honesty, righteousness, incorruptibility, and decency in the governance and implementation of academic, administrative, financial policies.
- *Excellence*  
This represents the drive of the University to pursue greatness. It includes the cultivation of a culture of excellence in the hearts and minds of the stakeholders, and the continuous improvement in the systems by which the University operates on. This value pushes the institution to go beyond the standard levels of performance, and be in a position of leadership that would inspire the people and other institutions to serve the country in the highest degree.
- *Service*  
This refers to the genuine desire of the University to respond to the growing needs of the community. It encompasses the selfless performance of the University's mandates, and its duty to constantly meet



the challenges of development in the country in the spirit of uplifting the lives of the Filipino people.

- *Resilience*

This refers to the ability to conquer the different challenges, hardships and tests of time. This value encompasses the commitment of the University to support the government in pursuing sustainable development, and foster disaster risk reduction and management by dedicating its efforts towards strengthening readiness and capacity of the community and its people.

- *Faith*

The University's initiatives and activities are guided by a strong faith in a Supreme Being. These are anchored on high regard and respect for the beliefs and orientation of each member of the academic community for a productive and meaningful co-existence.

### b. Include department vision, goals, objectives and thrusts

#### **Academic**

##### **College of Teacher Education**

The College of Teacher Education endeavors to produce well-rounded academicians who possess technical, pedagogical and research skills in order to address the challenges of diverse educational settings and engage in lifelong learning. It prepares competitive educators in the global academic environment, guided by high moral standards and equipped with 21<sup>st</sup> century skills so they become agents of positive social transformation.

##### *Goals and Objectives*

The College of Teacher Education is committed to:

1. Provide students with learning opportunities for their advancement in specific fields of interest towards excellence, efficiency and effectiveness in the attainment of local, regional and national goals.
2. Design rationalized activities for the enhancement of classroom teaching through modern modes of instructional delivery, instructional materials preparation and assessment of learning.
3. Utilize the latest trends and strategies in research to address the evolving demands on the generation and dissemination of new knowledge and innovations in education.
4. Harness the capability of the students in conceptualizing, implementing, and sustaining extension projects of the college through active partnerships for inclusive social development.
5. Provide avenues in the development of professionalism and in the pursuance of lifelong learning for personal and professional growth and development.



### **College of Accountancy, Business, Economics and International Hospitality Management**

The College of Accountancy, Business, Economics and International Hospitality Management is an institution offering nationally-accredited graduate and undergraduate programs in Business and Hospitality Managements, Customs and Public administrations, and Disaster Risk Management. Comprised of more than 100 faculty and support staff catering to more than 3,500 students, the college has been the prominent producer of license professionals in the field of Accountancy and Customs Administration; competent graduates in the wide array of business, entrepreneurship, management accounting, hospitality and tourism management, public administration and disaster risk management in the region and the country.

#### *Goals and objectives*

The College of Accountancy, Business, Economics and International Hospitality Management aims to provide quality education to prepare students for a wide range of careers in accountancy, business, hotel and restaurant management, tourism management, custom and public administration, aspire for continuing education, enhance competencies and hone their leadership skills to enable them to participate actively in the global market through high quality instruction, research, extension and production which serve as fertile ground for the internalization of values that uplift self, society and the environment.

### **College of Arts and Sciences**

The College aims to provide exemplary leadership essential to the education of proficient and humane professionals in the arts and sciences.

#### *Goal*

The College aims to provide exemplary leadership essential to the education of proficient and humane professionals in the arts and sciences.

#### *Objectives*

1. Prepare the graduates of the different disciplines for professional careers in their chosen fields of specialization;
2. Equip graduates with a strong foundation in the arts and sciences with accompanying behavioral and social preparation of a well-rounded personality;
3. Conduct more relevant and responsive programs in research and extension to enhance instruction and linkages and disseminate research findings to promote viable technologies in the service area; and
4. Provide the manpower needs of industries and other service areas with globally competitive, dedicated professional worker having positive outlooks in life and with innate love for God, country and fellowmen.



### College of Nursing and Allied Health Services

These programs have national accreditation and produce qualified nursing and nutrition & dietetics professionals and leaders in clinical care and health promotion in the country. The faculty and students of these programs conduct research on food development, school health, and nutrition status.

The College of Nursing and Allied Health Sciences, offering BS Nursing, BS Nutrition and Dietetics, and BS Public Health, caters to mold future professionals in becoming high caliber healthcare providers who will raise the bar of excellence in the field of healthcare. The college targets to produce allied health experts who will change the landscape of the healthcare delivery system in local, national, and international levels.

#### *Goals and objectives*

1. To provide high-quality education that will prepare and equip students of health care professions with adequate theoretical and clinical experience according to the norms and standards of professional practice
2. To develop health care professionals imbued with moral, cultural and legal principles, and value the dignity and worth of each person
3. To provide and use facilities and resources beneficial to the achievement of the objectives of the College
4. To foster faculty participation in research and scholarly activities which will add to the body of knowledge which is both essential and beneficial to the College
5. To utilize leadership and management skills through the involvement of others in meeting the health needs and goals
6. To practice innovative health care and partnership with the communities in the province
7. To collaborate with colleagues and other interdisciplinary health teams to promote the health and well- being of the clients/patients
8. To deliver health care system and policies through professional leadership and modify professional roles and functions to meet the health needs of the society

### College of Medicine

The Batangas State University is committed to the Sustainable Development Goals of ensuring healthy lives for all at all ages. Thus, with its branding of Population Health Model, the University offered the Doctor of Medicine program as approved by the Board of Regents through BOR Resolution 128 Series of 120; and it continuously scales in greater heights to achieve public health goals by initiating measures that would produce more medical professionals in the healthcare arena.





### *Goal*

The College of Medicine aims for the improvement of the overall health status of the community by enhancing medical care systems through leveraging its strength in education and a high number of trained doctors to focus on making primary care accessible and community-based.

### **Integrated School**

The Batangas State University has an Integrated School (IS) in its Pablo Borbon campus in Rizal Avenue, Batangas City. It offers pre elementary, elementary, junior high school, and senior high school (STEM Track). Only recently, the IS adopted a Science and Technology based curriculum in the high school department in response to the need for a basic education program that puts a premium on science, mathematics, and technology courses. A wide array of co- and extracurricular activities are provided to maximize the students' potentials for holistic development.

### *Goals and objectives*

The Batangas State University Integrated School serves a threefold-function:

1. to serve as a feeder school for flagship engineering programs of the University;
2. to function as a laboratory school of the BatStateU College of Teacher Education, and
3. to provide educational service to the children of the faculty and employees of the university and of the general public.

In more specific terms, BatStateU Integrated School Elementary Department aims:

1. to provide optimum learning experiences which will promote academic excellence;
2. to create a learning environment that will allow the children to develop positive self- concept, self-discipline, and good working habits;
3. to provide opportunities that will develop love and appreciation for artistic and cultural experiences;
4. to enhance pupil's awareness of the scientific and technological advancement in the country and in the world;
5. to nurture Filipino children with love of God and country and with good moral values so that they grow as patriotic and law-abiding citizens with genuine concern towards their family, the community and society in general.

BatStateU Integrated School High School Department aims:

1. to provide optimum learning experiences which will promote academic excellence;
2. to create a learning environment that will allow the students to develop love of God and country, positive self-concept, self-



discipline, dignity of work, and other desirable moral, spiritual, and socio-cultural values;

3. to enhance student's awareness of the scientific advancement in the country and in the world and inculcate in them critical thinking, creativity and innovativeness;
4. to produce students equipped with knowledge, skills, and desirable attitudes and values for making an intelligent choice of a career and an enlightened commitment to serve God, country and fellowmen.

### **Research**

#### **Research Thrust and Priorities**

The University shall pursue thrusts and priorities which may be subjected to review at least annually by each area: Architecture, Engineering and Technology; Agriculture and Natural Science; Environment and Biodiversity; Entrepreneurial and Business; and Education, Mathematics and Social Sciences to make the Research Program of the University responsive to the emerging needs and environmental changes and development depending on research competencies available, appropriateness to the local needs and availability of the resources. The following thrusts and priorities are based on the national, regional and provincial agenda of the government identified through agenda setting and road mapping among research personnel, deans, faculty researchers, students and external stakeholders.

1. Food
2. Energy
3. Environment
4. Health and Medical Sciences;
5. Material Science and Engineering;
6. Information and Communications Technology;
7. Manufacturing and Process Engineering;
8. Science and Mathematics; and
9. Education and Social Sciences.

#### **Goals**

1. To develop and implement a functional research program that is relevant to the program thrusts of the University.
2. To enhance the research capabilities of the faculty and student researchers through human and physical resources development and the creation of an environment that fosters research.
3. To generate high impact research outputs for the utilization of the educational, communal and industrial sectors.
4. To provide faculty and students with assistance and support in creating an environment that is conducive for innovation, which will eventually create avenues for technology transfer and commercialization of their research.



5. To ensure that faculty and students benefit from research activities at the University.
6. To enrich the existing body of knowledge through multidisciplinary and interdisciplinary research.

### *Objectives*

1. Intensify the research capability of the University through human and physical resources development.
2. Develop quality research projects on the following key areas such as Architecture, Engineering and Technology; Agriculture and Natural Sciences; Environment and Biodiversity; Entrepreneurial and Business; Education, Mathematics and Social Sciences.
3. Ensure effective dissemination and application of research through oral and/or poster presentations and publication of results in refereed journals, and when appropriate, research output commercialization to encourage the entrepreneurial spirit in faculty and students.
4. Develop a culture of research among faculty and students by involving them in research activities through seminar workshops, research fora, research assistantships and other research interactions and collaborations.
5. Strengthen research consortia and linkages to augment research funding of the University.
6. Optimize the utilization of research outputs for technology transfer and possible income generating projects.

### *Extension*

The Batangas State University, as a leading institution of higher learning in the province, is committed to carry out its extension service function with the creation of the Office for Community Development Services, Office for Institutional and Industry Development Services and Office for Gender and Development, all under the Office for Extension Services, with the primary goal of achieving sustainable partnership with the government and private organizations in poverty alleviation. The University can now respond more adequately to the training needs of communities, industries, public and private agencies/organizations and to the members of the academy.

It is envisioned that the people of the community, the main focus of the University's extension services program, can be uplifted from helplessness to self-reliance, from ignorance to increased awareness, from indifference to positive involvement, and from aimless commitment. These shall be realized through the effective implementation of the University's Extension Service Program under the umbrella of SULAMBI.

At BatStateU-PB, we are committed to render extension service to our partner beneficiaries, educational institutions, and depressed and underserved communities to share our expertise in science, technology,



education, management, research, and community development.

### *Extension Service Philosophy*

An extension service that empowers the communities, particularly the underserved and depressed, from the bondage of poverty, malnutrition, ignorance, vices, indifference, and environmental destruction to enable the people to live with honor and dignity.

### *Goals*

- To develop and implement a viable Extension Service Program for the University
- To enhance the delivery of extension services to target clientele
- To improve the quality of life at the grassroots level
- To meet the needs of faculty members, administrators and non-teaching personnel in learning basic technical, vocational technological skills as well as in the areas of health and recreation.

### **Allied Services**

#### **Library**

The earliest documented record of the Pres. Isabelo R. Evangelio Memorial Library popularly known as the Batangas State University Main Library was dated way back the early 1950s with Miss Elvira Quinio as the librarian. During her time, the library collection was about 500 books only. After her term, she was replaced by two librarians, Miss Virginia Aguda and Mrs. Erlinda Arellano.

The library evolved alongside the institution that it serves. At first it catered to the needs of the Batangas Trade School students. In 1953, the name of the institution was changed to Pablo Borbon Memorial National School and years after to Pablo Borbon Regional School of Arts and Trades. Despite the numerous changes in the name of the institution, the library still remains afoot to serve and cater to the needs of the patrons of the institution.

In 1989, Mrs. Araceli Luna was designated Head of the Library Services alongside Mrs. Luningning D. Sanchez as the College Librarian and the late Fabianita Babasa as Junior Librarian. From 1991 to 1993, Mrs. Araceli Luna was replaced by Mrs. Representacion Maranan as Head of Library Services, but after the latter's tenure, she again took the position until July 2006.

During the early months of 2006, the library underwent renovation through the sponsorship of Don Emilio T. Yap, President and Chief Executive Officer of The Manila Bulletin Publishing Company. After the renovation, the library materials that were then housed at only one floor of the building were classified and sorted. The materials were grouped into two categories: materials of the Graduate School Library





that were housed in the ground floor of the building and materials for the Undergraduate Library that was housed in the second floor of the building. In 2006, shortly after Dr. Nora L. Magnaye assumed the presidency, Dr. Leodegaria D. Abanto was designated as Director of Library Services along with Mrs. Luningning D. Sanchez as College Librarian.

In February 2008, Mrs. Rosario L. Cuevas was designated University Librarian up to present wherein she directs and supervises the total operation of the library and is responsible in the administration of its resources and services.

### *Library Vision*

The University Library envisions to obtain a world class collection of books necessary in the development of efficient leaders and professionals in the field of engineering, architecture, science, arts, education, information technology and other disciplines.

### *Library Mission*

In line with its vision, the University library is committed to continuously maintain adequate, well-chosen and well selected print and non-print materials in support of the different curricula and programs of the University.

### *Library Goals*

The Batangas State University Library aims to provide adequate, well-chosen print and non-print materials which are supportive of the institution. It also aims to aid the BSU community in their educational, informational and recreational research endeavors.

## **Health Services Department**

The Health Services Department of Batangas State University seeks its meaningful existence in an academic community through a sustainable program of quality health deliveries to faculty, personnel and students within the limits of its capabilities and resources. It continues to pursue its health mission to people in its service areas in the spirit of altruism and in accordance with the commitment of the university.

The purpose of the School Health Program is to provide nursing services to appraise, protect and promote the health status of the students in Batangas State University. Health Services supplement rather than replace parental responsibility. This program is designed to encourage the use of physicians, dentists, and community health agencies' services.



### Goals

- To design, implement program of health and other related activities of the University
- To maintain a comprehensive health information system to support health programs and projects
- To provide effective and efficient medical, dental and nursing services to personnel and students
- To integrate health plans and programs to the national health programs of the Department of Health
- To assist various Universities in the extension program that requires health services

### Objectives

- To render health services such as consultation, emergency treatment, medical and dental examinations and other related services to students and personnel
- To conduct campaign on institution's dental, medical program and projects
- To coordinate with the students, parents and teachers organizations in the implementation of medical/dental programs and projects
- To coordinate with Provincial/City Health Units in the integration of health programs of the University
- To establish monitoring and evaluation systems existing health activities

### Services offered:

- Physical Examination (Medical and Dental) for new students
- Medical Examination for newly-hired personnel, students who will undergo on-the Job Training, students who will participate in a sports competition, students joining off-campus activities.
- Daily consultation and treatments
- Referrals to specialist with the consent of the client's parents or guardian
- Follow-up of cases referred by our school physician
- Health Services are available during extracurricular activities such as sports fest, institutional celebration and other designated school activities
- Samples of water are collected from different sources in the school buildings and campuses are sent to reliable laboratory for potability analysis every month
- Immunization for nursing students before exposure for practicum
- Dental Services
  - Dental examination
  - Preventive services such as; restoration, and fit and fissure sealant
  - Extraction of badly carious tooth
  - Screening, referral and care management



### BatStateU ACTION CENTER

The BatStateU ACTION Center is the home for community folks, barangay leaders, local executives, disaster managers, researchers, partner civil society organizations and other stakeholders needing assistance and support to enhance their knowledge and skills on disaster preparedness and response.



BatStateU ACTION Center operates under the Office of the University President in collaboration with partner LGUs, RLAs and private organizations in the local, national and international levels.

The ACTION Center aims to:

1. Protect whatever economic gains people and communities have garnered through formal education and research using science and technology;
2. Take a pro-active role in making people and communities safer and more resilient to save their lives and properties in times of natural calamities through professional education, skills training and innovative research;
3. Make local leaders and communities more aware of the dangers of natural hazards and be prepared when such disasters occur; and
4. Inform people and communities about all possible natural hazards in their areas, the warning information and the suggested actions to take during these events.

### Development Constraints

The university is aware of the potential impacts of proposed national, regional, provincial plans and targets. Potential land use conflicts such as Certificate of Ancestral Domain Title, military reservations, squatters and competing land uses are not present in Pablo Borbon Campus.

### Physical Development Strategies

Physical Development Strategies is generally based on BatStateU's Strategic Plan 2019-2029, a long range plan being transformed into a physical form based on the University's Vision. BatStateU Strategic Plan 2019-2029 serves as the University's blueprint towards the highest level of development and advancement as an important national player in knowledge creation and innovation and the development of human talents needed in the 21<sup>st</sup> century. Through the six pillars of Brand of Excellence, Access, Social, Relevance, Inclusive Innovation, Capacity, and Sustainability (BASICS) the university is geared towards meeting the university vision of achieving national relevance and

global competence.

Further, BatStateU adheres to the major rules and regulations given by the local and international governing bodies. The University strongly supports the AmBisyon 2040 in its long term vision and aspirations for the Filipino people to have prosperous and healthy lives, through smart and innovative ways. Such can be seen equivalent with BatStateU’s motto, “Leading Innovations, Transforming Lives.” Likewise, the Ten Year LUDIP of BatStateU Pablo Borbon corresponds to the Sustainable Development Goals set at 2030 by the United Nations.



Source:

[https://i1.wp.com/www.un.org/sustainabledevelopment/wp-content/uploads/2015/12/english\\_SDG\\_17goals\\_poster\\_all\\_languages\\_with\\_UN\\_emblem\\_1.png?fit=728%2C451&ssl=1](https://i1.wp.com/www.un.org/sustainabledevelopment/wp-content/uploads/2015/12/english_SDG_17goals_poster_all_languages_with_UN_emblem_1.png?fit=728%2C451&ssl=1)

Figure 84 International Framework of Sustainable Development Goals 2015-2030

Among the seventeen (17) Sustainable Development Goals (SDGs) also known as the “Global Goals” provided by the United Nations, BatStateU Pablo Borbon gives due consideration to the following:

- *Goal 3: Good Health and Well-Being*

The campus has an in-house Health Services Department that ensures the safety and health of employees and students at all times. Strict implementation of protocols is always observed especially in times of outbreaks. The health services of BatStateU offers medical and dental services.

- *Goal 4: Quality Education*

BatStateU Pablo Borbon includes the

- *Goal 5: Gender Equality*

The campus highly encourages the promotion of gender equality through the conduct of gender and development (GAD) programs





- *Goal 6: Clean Water and Sanitation*  
It is important to always maintain the cleanliness, orderliness and sanitation of all educational facilities. Hence, BatStateU has an established Environmental Unit and General Services Office to oversee the daily operations in maintaining the facilities pristine inside the campus.
- *Goal 8: Decent Work and Economic Growth*  
The University offers a wide range of work for the citizens of Batangas Province with its motto of Leadings Innovations, Transforming Lives.
- *Goal 9: Industry, Innovation and Infrastructure*  
To fulfill the University’s Vision and Mission, the Strategic Plan 2019-2029 was approved as its blueprint in academic, innovation and infrastructure development.
- *Goal 10: Sustainable Cities and Communities*  
The development of BatStateU Pablo Borbon is in harmony with the development in Batangas City.
- *Goal 11: Climate Action*  
Through education, research and extension, the University promotes the protection against climate change.
- *Goal 12: Life Below Water*  
BatStateU Pablo Borbon ensures that all wastewater generated in the campus is treated in the sewage treatment plant and compliant with the effluent standards set by the DENR before releasing it to the environment to protect the life below water.
- *Goal 15: Life On Land*  
Green spaces are provided in the Pablo Borbon campus not only for aesthetic purposes but to be a model in protecting landscapes.
- *Goal 17: Partnerships for the Goals*  
The University is in partnership with local, national and international organizations to achieve its goals.

## Development Concept and Structure Plan

The BatStateU Pablo Borbon Campus has a total land area of 5.95 hectares as declared in the Tax Declaration of the campus. The campus houses both the Central and Pablo Borbon Administration. The colleges in the campus are College of Accountancy, Business, Economics, and International Hospitality Management (CABEIHM), College of Law (CoL), College of Teacher Education (CTE), College of Nursing and Allied Health Services (CONAHS), College of Medicine (CoM), College of Arts and Sciences (CAS), and Integrated School (Elementary to Senior High school). The campus is located in Brgy. Poblacion 20, along Rizal Avenue Extension and DJPMM Access Road. In terms of land area, there is no future expansion for BatStateU Pablo Borbon. However, there is development in the infrastructures in the coming years. Below table presents the targeted land use allocation for BatStateU Pablo Borbon.



Table 41 Land Use Allocation Percentage

ZONE	TOTAL AREA in m <sup>2</sup>	PERCENTAGE
ALLIED SERVICES	1,843.00	4.82%
ACADEMIC	8,468.00	22.15%
GENERAL SERVICES	491.29	1.29%
RESEARCH	610.00	1.60%
ADMINISTRATIVE	2,635.00	6.89%
OPEN SPACE/GREEN SPACE	10,058.00	26.31%
MIXED-USE	4,403.13	11.52%
FUTURE BUILDINGS	2,884.00	7.54%
EXISTING BUILDINGS	107.00	0.28%
DRIVEWAY	6,725.00	17.59%

The existing buildings in the campus are 5-Storey STEAM Library, 5-Storey Higher Education Building, Powerhouses, 7-Storey CIRT Building, 3-Storey Integrated School Building, Sewage Treatment Plant, General Services Office Building, BatStateU Marker, Audio-visual Building, 5-Storey CITE Building, 5-Storey Student Services Center Building II, J.A. Palacios Building, 3-Storey Graduate School & Teacher Education Building, Media Studies & Publication Building, 5-Storey University Wellness Center, 3-Storey General Engineering Building, Faculty Room, Covered Court, Gov. Feliciano Leviste Gymnasium. Integrated School Classrooms, 3-Storey Integrated School Elementary Building. Stock Room, and Bahay Alumni.

Currently, major infrastructure projects are on-going in the campus, these buildings are the proposed 10-Storey Higher Education Building, proposed 3-storey Learning Development Center and Command Center. The 10-Storey Higher Education building will be used by college students for additional classrooms and laboratories. The Learning Development Center is allocated for the Integrated School Students. The rooms will be used by elementary, junior high school and senior highschool students. The University recently established an ACTION Center for disaster preparedness and response. Hence, the on-going construction Command Center Building will be the home of the said office. In addition to the buildings undergoing construction, the campus will open up its Gate 4 with a facade along DJPMM Access Road. In the next few years, the 10-storey Dormitory, 5-storey Medical and Health Science Building, University Museum and 4-Level Parking Building will be established.

The Land Use Plan

In preparation of the land use plan of BatStateU Pablo Borbon, the best applicable strategies were applied in designing the institutional infrastructure. Some of the best strategies used in designing the institution includes:

- Aligning structures, resource allocation with the university strategic plan.
- Analysis of Existing Situation and Identification of Development Needs
- Study the full development potential of the site given the constraints/potentials of the access roads and surrounding development.



Land Use Development and  
Infrastructure Plan (LUDIP)

Presented in below tables are the list of existing buildings, ongoing construction and future projects in BatStateU Pablo Borbon. It is expected that the campus will be fully-developed by the year 2029 as per the Strategic Plan 2019-2029 of the university. The campus is located at the corner of Rizal Avenue Extension and DJPMM Access Road. The campus is zoned to academic administrative, allied services, general services, research, open spaces/green spaces, mixed-use, future buildings, existing buildings, and driveway.

Table 42 Existing Buildings

COLOR CODE	BUILDING / FACILITY	SQM.
	5-STOREY STEAM LIBRARY	977.00
	5-STOREY UNIVERSITY WELLNESS CENTER BUILDING	456.00
	3-STOREY GENERAL ENGINEERING BUILDING	543.00
	INTEGRATED SCHOOL CLASSROOMS	167.00
	3-STOREY ISE BUILDING	105.00
	J.A. PALACIOS (SCIENCE) BUILDING (COLLEGE OF NURSING)	737.00
	3-STOREY GRADUATE SCHOOL & TEACHER EDUCATION BUILDING	730.00
	MEDIA STUDIES & PUBLICATIONS BUILDING	443.00
	5-STOREY HIGHER EDUCATION BUILDING	1,090.00
	3-STOREY IS BUILDING	483.00
	5-STOREY CITE BUILDING	2,700.00
	POWERHOUSE	75.29
	SEWAGE TREATMENT PLANT	151.00
	GSO BUILDING	205.00
	EXISTING POWERHOUSE	60.00
	7-STOREY CIRTC BUILDING	610.00
	5-STOREY STUDENT SERVICES CENTER BUILDING II	2,635.00
	BATSTATE-U MARKER	300.00
	PARKING & OPEN SPACES	9,758.00
	AUDIO-VISUAL BUILDING	388.00
	COVERED COURT	878.40
	GOV. FELICIANO LEVISTE GYMNASIUM	1,788.60
	GATE 1 FAÇADE WITH COMMERCIAL UNIT	682.75
	BAHAY ALUMNI	107.00
	DRIVEWAY	6,725.00

There are nine existing buildings in the campus allotted for academic use. Each college/department has their own building to support the students need. The CIRTC building is allotted for research laboratories of both faculty and students, however, included as well in the academic buildings are laboratories and offices of each college. The Student Services Center Building II is the building occupied by the administration offices, the student support offices like Registrar, Cashier, and Scholarship are also in this building. General services facilities like Sewage Treatment Plant, Power House, etc. are present in the campus to support the daily operation needs. The mixed use buildings such as covered court and gymnasium are used by the students for Physical Education courses and trainings. These can be rented as well for conduct of large gatherings. Aside from the buildings, the university has green spaces that help in



cooling the campus and gives a stress-free environment. Enough parking spaces are also provided strategically inside the campus. The allowable speed inside the campus is maximum of 10 km per hour with specific one-way routing scheme.

Table 43 On-going Constructions

COLOR CODE	BUILDING / FACILITY	SQM.
	PROPOSED 10-STOREY HIGHER EDUCATION BUILDING	730.00
	PROPOSED 3-STOREY LEARNING AND DEVELOPMENT CENTER	740.00
	COMMAND CENTER	410.00
	GATE-4 FAÇADE AND FENCE	665.38
	PROPOSED 4-LEVEL PARKING	860.00

In harmony to the development in Batangas City Coliseum, BatStateU Pablo Borbon will open up its fourth gate with Façade. With the continuous increase of student population, the 10-storey Higher Education Building and 3-storey Learning and Development Center are being constructed to provide additional classrooms and other student facilities. Command Center is for the use of the BatStateU ACTION Center. This building will be the center for disaster preparedness and risk management in the University. To maximize the parking space inside the campus, a four-level parking building is being constructed as well.

Table 44 Proposed Building

COLOR CODE	BUILDING / FACILITY	SQM.
	PROPOSED 10-STOREY DORMITORY	714.00
	PROPOSED 5-STOREY MEDICAL AND HEALTH SCIENCE BUILDING	630.00
	PROPOSED UNIVERSITY MUSEUM	680.00

In the coming years, three major development infrastructure projects will be established in the campus. These are the proposed 10-storey Dormitory for employees and students, proposed 5-storey Medical and Health Science Building for the newly offered program in the University: Doctor of Medicine, and the proposed University Museum.

Land, Water, Power Policies

The University strives to comply with the policies stipulated at the national, regional and local level. The policies that govern the university in land use, environment, power generation, and others are as follows:

*Institutional Land Uses as per the Batangas City CLUP 2019-2029*

To provide public service to the citizens of Batangas City, government, educational, and other institutional establishments that shall cater to the various needs of the people should be strategically located throughout the City.





- Government centers shall be strategically distributed so that they are readily accessible to the communities they serve. Facilities should be able to cater the population and their respective requirements.
- It is important that facilities such as schools, hospitals, day care centers, health centers, and police stations are easily accessible to all members of the community.
- The maximum distance for a student to walk from residence to school site is three (3) kilometers while the maximum travel time from residence to school on board a vehicle of public conveyance is 30 minutes.
- The schools should be located beyond 200 meters from places of ill-repute; recreational establishments of obscure character such as computer gaming cafes, bars or pubs, disco or party clubs, movie houses or theaters, billiard halls or centers, karaoke lounges, bistros, and the like manufacturing facilities; and industrial plants and military barracks.
- The ground area occupied by the school buildings and other structures should not exceed 40% of the school site to provide adequate open spaces for assembly and co-curricular activities, as well as to conform with the national and local regulations and standards pertaining to setbacks and distances between buildings.
- Continuous upgrading of such facilities should be prioritized to ensure that it can offer quality and efficient service to the public.

### ***General Utilities as per the Batangas City CLUP 2019-2029***

- Energy conservation shall be strictly enforced in the City as well as the enactment of the policy against infrastructure or facilities that produce GreenHouse Gases '(GHG). Apart from these, strict implementation of environmental laws, local ordinances and imposition of sanctions to all violators shall also be implemented. Additionally, renewable energy is highly considered to reduce use of fuel energy and to promote sustainable development in the City. Batangas City shall impose policies to require commercial, institutional, and industrial establishments to use solar energy. Another policy to be implemented is the monitoring of organized teams formed by the power distributors to identify illegal consumers and connections.
- Similar to power, water conservation shall also be strictly enforced in the City and policies disallowing discharge of hazardous and contaminated fluids into the water stream and water bodies shall be strengthened. The use of rainwater catchment or rainwater harvesting facilities is highly encouraged as well. The harvested water stored in tanks and cisterns can be used as additional water for non-hygienic purposes such as flushing of toilets, general cleaning, fire-fighting, and construction to name a few.



### Environmental Laws

#### **PD 1151 - “Philippine Environmental Policy of 1977”**

- The purpose of this Decree is to formulate an intensive, integrated program of environmental protection through the requirement of environmental impact assessments and statements. Every individual shall be responsible in contributing to the preservation and enhancement of the Philippine environment.

#### **PD 1152 - “Philippine Environment Code of 1977”**

- The Environment Code provides the guidelines on air quality management; protection and improvement of water quality; land use management; natural resources management and conservation (i.e., fisheries, wildlife, forests and soil conservation, flood control and natural calamities, energy development, surface and ground waters, mineral resources); and waste management.

#### **PD 1586 - “Environmental Impact Statement System”**

- The purpose of this decree is To attain and maintain a rational and orderly balance between socio-economic growth and environmental protection.
- The pursuit of a comprehensive and integrated environmental protection program necessitates the establishment and institutionalization of a system whereby the exigencies of socio-economic undertakings can be reconciled with the requirements of environmental quality
- The regulatory requirements of Environmental Impact Statement and Assessments instituted in pursuit of this national environmental protection program have to work into their full regulatory and procedural details in a manner consistent with the goals of the program

#### **RA 9003 - “Ecological Solid Waste Management Act of 2000”**

- It declares the policy of the state in adopting a systematic, comprehensive and ecological solid waste management program that ensures the protection of public health and the environment and the proper segregation, collection, transport, storage, treatment and disposal of solid waste through the formulation and adoption of best environmental practices.

#### **RA 6969 - “Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990”**

- An Act to control toxic substances and hazardous and nuclear wastes, providing penalties for violations thereof, and for other purposes. The main objective of this act is to control, supervise and regulate activities on toxic chemicals and hazardous waste. Under this act importation, manufacture, processing, handling, storage, transportation, sale, distribution, use and disposal of all unregulated chemical substances and mixtures in the Philippines,



as well as the entry even in transit, or storage and disposal of hazardous and nuclear wastes are regulated.

### **RA 8749 - “Philippine Clean Air Act of 1999”**

- It is a comprehensive air quality management policy and program, as it outlines the government's measures to reduce air pollution by including environmental protection activities into its development plans. This aims to achieve and maintain healthy air for all Filipinos.

### **RA 9275 - “Philippine Clean Water Act of 2004”**

- An Act providing for a comprehensive water quality management and for other purposes. This Act provides for the abatement and control of pollution from land based sources, and lays down water quality standards and regulations.

### **DENR A.O. 2016-08- “Water Quality Guidelines and General Effluent Standards of 2016”**

- This Administrative Order is issued to provide guidelines for the classification of water bodies in the country; determination of time trends and the evaluation of stages of deterioration/enhancement in water quality; evaluation of the need for taking actions in preventing, controlling, or abating water pollution

### **DOH A.O. 2017-10- “Philippine National Standards for Drinking Water of 2017”**

- This Administrative Order prescribed the standards and procedures on drinking water quality to protect the public and consumer's health.

### **PD 856 - “Code on Sanitation of the Philippines”**

- The aim of this act is the improvement of the way of the Filipinos by directing public health services towards the protection and promotion of the health of the people.

### **Ordinance No. 16 Series of 2010 - “Environment Code of Batangas City”**

- The E-code aims to protect, conserve and preserve the environment and natural resources of Batangas City by engaging all Batangueños in attaining sustainable development.

### ***Power Supply and Clean Energy Policy***

### **RA 9513 – “Renewable Energy Act of 2008”**

- An Act Promoting the Development, Utilization and Commercialization of Renewable Energy Resources and for other Purposes



- This act was codified in December 2008 to affirm the government's commitment to accelerate the utilization of renewable energy (RE) resources in the country. This is to effectively reduce harmful emissions and achieve economic development while protecting health and environment.

### **Other Relevant Laws/Policies**

#### **Republic Act 11396 - "SUCs Land Use Development and Infrastructure Plan (LUDIP) Act"**

- An act requiring all state universities and colleges (SUCs) to prepare, submit and implement a land use development and infrastructure plan (LUDIP) to ensure rational, holistic, efficient and just allocation, utilization, development and management" of the country's land resources

#### **Philippine Agenda 21**

- It is the nation's blueprint for sustainable development.
- Philippine Agenda 21 nvisions a better quality of life for all Filipinos through the development of a just, moral and creative, spiritual, economically vibrant, caring, diverse yet cohesive society characterized by appropriate productivity, participatory and democratic processes, and living in harmony and within the limits of the carrying capacity of nature and the integrity of creation.

#### **NEDA 2010-06 - "National Framework for Physical Planning (2001-2030)"**

- The National Framework for Physical Planning 2001-2030 (NFPP) provides the analytical parameters for the planned allocation, use and management of the country's land and other physical resources. The NFPP serves as a framework through which the planning and management of these resources are guided at the national and subnational levels.

#### **Sustainable Development Goals**

- It is also known as the Global Goals, which were opted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2031 all people enjoy peace and prosperity.
- The 17 SDGs includes: (1) No poverty, (2) No Hunger, (3) Good Health and Well-being, (4) Quality Education, (5) Gender Equality, (6) Clean Water and Sanitation, (7) Affordable and Clean Energy, (8) Decent Work and Economic Growth, (9) Industry, Innovation and Infrastructure, (10) Reduced Inequality, (11) Sustainable Cities and Communities, (12) Responsible Consumption and Production, (13) Climate Action, (14) Life Below Water, (15) Life on Land, (16) Peace and Justice Strong Institutions and lastly (17) Partnerships to Achieve the Goal



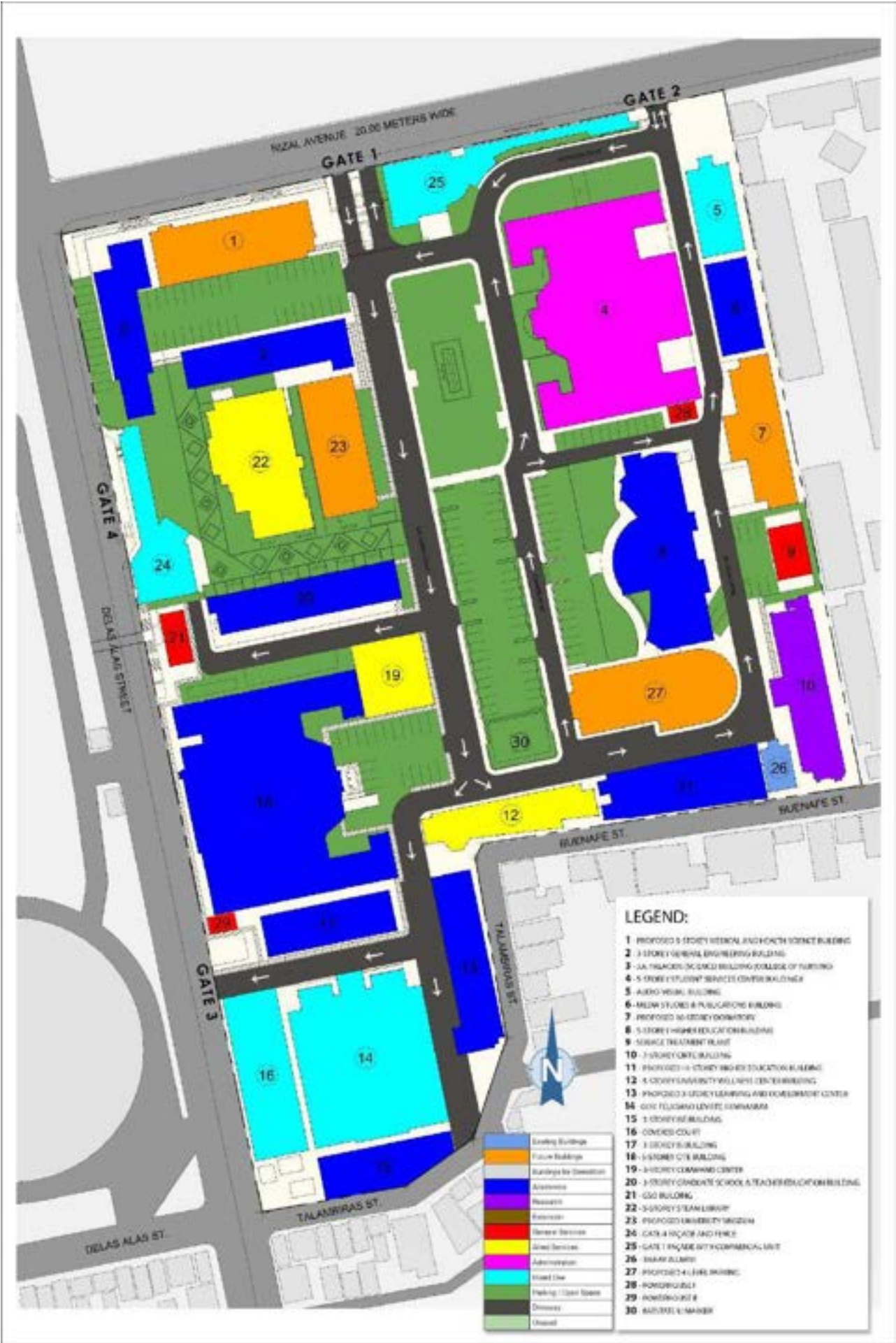


## **Major Development Programs**

The development of the campus is aligned with the BatStateU Strategic Plan 2019-2029. This plan covers a 10-year period that serves as the University's blueprint towards the highest level of development and advancement as an important national player in knowledge creation and innovation, and the development of the human talents needed in the 21<sup>st</sup> Century.



BATSTATEU PABLO BORBON MASTER PLAN





PROJECT PLAN OF BATSTATEU PABLO BORBON 2021-2031  
In Thousand Pesos ('000)

Particulars	YEAR/COST											Total
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
ACCESS												
Construction of University Dormitory / Residence Halls				250,000								250,000
CAPACITY												
Construction of Ten (10) Storey Higher Education Building (Phase I & II)	150,000											150,000
Construction of Three (3) Storey Learning Center	37,800											37,800
Improvement of Restrooms	2,515											2,515
Construction of Ten (10) Storey Dormitory	100,000	100,000										200,000
Construction of Gymnasium		200,000										200,000
Construction of Medical and Health Science Building	105,000											105,000



Construction of Four Level Parking	47,100											47,100
Construction of Gate 4 Façade	18,900											18,900
Construction of Student / Activity Center - Main I					200,000							200,000
Landscaping		6,830										6,830
Construction of Powerhouse 2	1,367											1,367
Asphalt Overlay								15,000				15,000
CCTVs around Pablo Borbon and CCTV House		5,000										5,000
Rehabilitation of Audio-Visual Building		5,565										5,565
Rehabilitation of CITE Building						54,000						54,000
Rehabilitation of GE Building					5,520							5,520
Rehabilitation of CONAHS Building					8,844							8,844
Staff House of Maintenance and General Services Personnel		3,380										3,380
Construction of Property and Supply Office Building		6,000										6,000





<b>SUSTAINABILITY</b>												
Income Generating Projects	3,204	1,731	2,289	1,119	1,958	3,560	1,531	1,835	2,662			19,889
Disaster Response	12,000	6,000	1,500	750	7,100	1,950	450	1,500	4,500			35,750
Construction of Integrated Waste Management Facility – MRF, CF and HWF		5,200										5,200
Expansion of Sewage Treatment Plant			3,500									3,500
Water Retention Facility: Cleaning and Water Reuse for Fire Hydrant and Garden Sprinkler System (with Control Room)		5,000	15,000									20,000



### Development Opportunities

This section highlighted some of the major infrastructure projects in Pablo Borbon campus. Some are on-going construction projects, and the others are proposed construction projects. These include the STEAM Library, University Museum, Gate 4 Façade, 10-storey Higher Education Building, 10-storey Dormitory, Medical and Health Science Building, Four Level Parking, and 3-storey Command Center. The pillars considered in developing these projects are ACCESS, CAPACITY and SUSTAINABILITY.



**STEAM LIBRARY**  
BatStateU - Pablo Borbon



**UNIVERSITY MUSEUM**  
BatStateU – Pablo Borbon



**GATE FOUR FACADE AND FENCE**  
BatStateU – Pablo Borbon  
Along DJPMM Access Road, Batangas City





**TEN-STOREY HIGHER EDUCATION BUILDING**  
BatStateU - Pablo Borbon





**TEN - STOREY UNIVERSITY DORMITORY**  
BatStateU – Pablo Borbon



# Land Use Development and Infrastructure Plan (LUDIP)



**FIVE - STOREY MEDICAL AND HEALTH SCIENCE BUILDING**  
BatStateU – Pablo Borbon





**FOUR LEVEL PARKING**  
BatStateU – Pablo Borbon



**THREE-STOREY LEARNING DEVELOPMENT CENTER**  
BatStateU – Pablo Borbon





EXISTING

LUDIP – Pablo Borbon



Proposed

COMMAND CENTER  
BatStateU – Pablo Borbon

## Disaster Risks and Climate Change Adaptation

### a. Vulnerable Areas

With careful planning and the strategic location of facilities, it is impossible to avoid natural hazards and disasters. BatStateU Pablo Borbon is situated in Batangas City where the nearest active Lubang fault is approximately 21.9 km away. Though the campus is considered safe from any ground ruptures, it is prone to ground shaking, liquefaction and tsunami with inundation depth of 2 to 2.99 meters.



Figure 85 Map showing the distance of BatStateU PB from Taal Volcano and Lubang Fault

The nearest active volcano in the campus is Taal. Since it is 28.9 km away, the campus is situated outside of the permanent danger zone. It is also safe from ballistic projectiles, base surge, and volcanic tsunami. However, it is prone to ash fall. When it comes to hydro-meteorological hazard assessment, the campus is highly susceptible to flooding with 1 to 2 meters flood height and/or more than 3 days of flooding.

As per the BatStateU ACTION Center, identified vulnerable areas susceptible to liquefaction in BatStateU Pablo Borbon are:

- Water Retention Facility 1 which is 70% of the GE Building Parking Lot
- Water Retention Facility 2 which is 50% of CITE Building Parking Lot
- Water Retention Facility 3 which is located between the Gymnasium and 3-storey Learning Development Center

### b. Mitigation Programs and Disaster Preparedness Strategies

Through the office of ACTION Center, the university has an active BatStateU Crisis Management Plan and Contingency Plan per campus. Below are excerpts from the said documents.



BATSTATEU CRISIS MANAGEMENT PLAN (BCMP)

During a crisis, the University requires procedures that address the needs of emergency response operations and recovery management. To address such emergencies, the university has established emergency response procedures that provide guidelines for the management of the immediate actions and operations required to respond to an emergency or disaster.

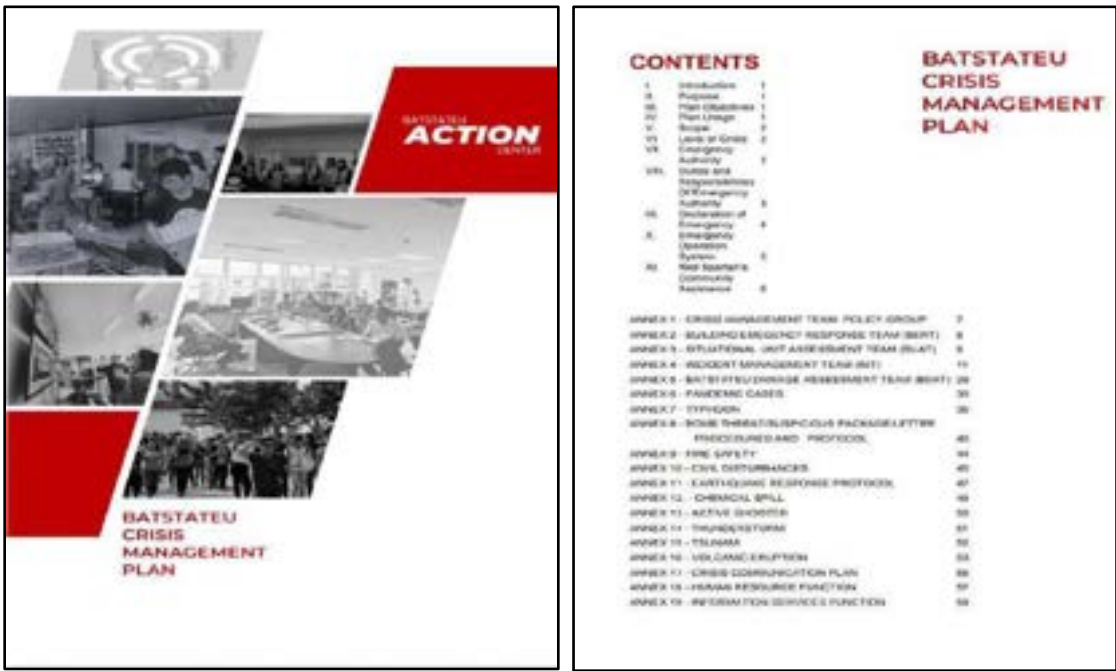


Figure 86 BatStateU Action Center Crisis Management Plan

This plan provides the management structure, key responsibilities, emergency assignments, and general procedures to follow during and immediately after an emergency. The University has established this plan to address the immediate requirements for a major disaster or emergency in which normal operations are interrupted and special measures must be taken to:

1. Protect and preserve human life, health and well-being.
2. Minimize damage to the natural environment.
3. Minimize loss, damage or disruption to the University's facilities, resources and operations.
4. Manage immediate communications and information regarding emergency response operations and campus safety.
5. Provide essential services and operations.
6. Provide and analyze information to support decision-making and action plans.

This plan does not supersede or replace the procedures for safety, hazardous materials response or other procedures that are already in place at the University. It supplements those procedures with a crisis management structure, which provides for the immediate focus of management on response operations and the early transition to recovery operations.



**Land Use Development and  
Infrastructure Plan (LUDIP)**



Resolution No. 107-F, S. 2020	Contingency Plan of Bacolod  Lanoy	For endorsement to the ACTION Center and coordination with the Executive Director and IMT of Lanoy
Resolution No. 107-G, S. 2020	Contingency Plan of Bacolod  Lapa City	For endorsement to the ACTION Center and coordination with the Executive Director and IMT of Lapa City
Resolution No. 107-H, S. 2020	Contingency Plan of Bacolod  San Juan	For endorsement to the ACTION Center and coordination with the Executive Director and IMT of San Juan
Resolution No. 107-I, S. 2020	Contingency Plan of Bacolod  ARASOF-Saangon	For endorsement to the ACTION Center and coordination with the Executive Director and IMT of ARASOF- Saangon
Resolution No. 107-J, S. 2020	Contingency Plan of Bacolod  JPLPC-Malvar	For endorsement to the ACTION Center and coordination with the Executive Director and IMT of JPLPC/Malvar

Attached is the certified true copy of the original resolution for your reference.

You are expected to give an update to the office of the undersigned and to the Office of the University and Board Secretary of the Actions Taken for the aforementioned resolution a week after your receipt of this Implementation Order.

*For guidance and strict compliance*

Dr. THOMAS A. HONAN, JR.  
University President

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Figure 87 Implementation Order No. 17 Series of 2020

## HAZARD PLANNING

Based on the assessment of hazards, BatStateU Pablo Borbon requires a contingency plan for earthquakes that shall ensure preparedness for effective response of the entire population of the university.

Table 45 BatStateU Pablo Borbon Contingency Plan for Earthquakes

Root Causes	Early Warning Signs	Triggering Factors	Existing Mitigating Measures
<p>BatStateU Main Campus 1 is near the Lubang fault line.</p> <p>Earthquakes are caused by a sudden release of stress along faults in the earth's crust. The continuous motion of tectonic plates causes a steady build-up of pressure in the rock strata on</p>	<p>Geologists are working to develop an early warning system but there is still much to be learned about what happens just before an earthquake hits. Part of the problem is that earthquakes do not always behave in a consistent way—some signs occur at different times (days, weeks, or seconds before the event), whereas sometimes those signs do not occur at all.</p> <p>Some other</p>	<p>Scientists at Oregon State University looked at 44 years of seismic data and found clear evidence that temblors of magnitude 6.5 or larger trigger other quakes of magnitude 5.0 or larger.</p> <p>The test cases showed a clearly detectable increase over background rates," said the study's corresponding</p>	<p>Conduct of earthquake drill</p> <p>With earthquake protocol to be followed</p>





both sides of a fault until the stress is sufficiently great that it is released in a sudden, jerky movement. The resulting waves of seismic energy propagate through the ground and over its surface, causing the shaking we perceive as earthquakes.	possible signs of earthquake are: <ul style="list-style-type: none"><li>• Watch for reports of earthquake lights.</li><li>• Observe unusual changes in animal behavior/color.</li><li>• Notice possible foreshocks.</li></ul>	author, Robert O'Malley, a researcher in the OSU College of Agricultural Sciences. "Earthquakes are part of a cycle of tectonic stress build up and release. As fault zones near the end of this seismic cycle, tipping points may be reached and triggering can occur."	
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The following will be the specific functions of the Red Spartan Rescue Team for each of the four thematic areas of disaster risk and reduction management.

*In case of the occurrence of earthquake:*

- Structural Mitigation
  - Inspection

This is a quick check that visually determines whether the building is structurally sound and strong. Presence of cracks and buckling in critical structures such as column and beam shall be noted, reported and corrected. This should be done regularly by the Mitigation Team that will soon be organized per college or unit in coordination with Incident Management Team
  - Maintenance

A complete and thorough examination of large equipment hanging cabinets shall be properly secured to prevent tipping. Large chemical cabinets shall have lip and support to prevent tipping over in case an earthquake occurs. This should be done by the Mitigation Team that will be organized per college or unit.
- Appropriate Structural Mitigation Measures in Batangas State University
  - Retrofitting of building structure
  - Eliminate or control of termite infestation which affect building and structure in Batangas State University.
  - Design and construct Batangas State University buildings which are resilient to the impact of liquefaction and tsunami.



### FIRE CONTINGENCY PLAN

The Batangas State University PB Main I Fire Contingency Plan is designed to provide a well-defined control and response framework for fire incidents and ensure the safety and protection of faculty, staff, students and other stakeholders.

#### *General Objective:*

To ensure a rapid, appropriate, and effective response to a major disaster making optimum use of all available resources of University and beyond.

#### *Specific Objectives:*

1. To ensure that the systems and mechanisms are developed and resources put in place to enable the emergency response team to participate actively and effectively in emergency response activities from the onset of the disaster within the University premises.
2. To ensure that procedures for the implementation and coordination of response activities are set up to ensure an efficient and appropriately-scaled response in keeping with identified needs.
3. To ensure that Incident Command System (ICS) structures in the University are enabled to operate effectively in disaster response, in spite of the damage to capacities and resources likely to be inflicted by the earthquake.
4. To ensure that procedures are established to ensure the efficient reception, deployment, and use of tools and resources involved in emergency response.

### CONDUCT OF EARTHQUAKE DRILL

This shall be done every semester to ensure that the student, faculty members, personnel and even those with administrative functions are ready in case of hazard occurrence.

#### ***Evacuation Plan for Earthquake Scenario***

1. Use the Evacuation Areas highlighted in blue for head counting of designated floor, office and building marshals.
2. The designated evacuation areas are the open grounds or parking area including the fountain area and the driveway beside the student center and the open space in front of Gate 1.
3. The parking area in front of the GE Building and the CITE building was not designated as an evacuation area since it is a water retention facility.
4. Designated building marshals shall conduct head count and will ensure that there are no aftershocks before students and personnel will be allowed to return to their respective buildings.



Figure 88 BatStateU PB Evacuation Plan for Earthquake Scenario

***Makeshift classrooms and tent after Calamity***

This is designed for the service continuity plan at BatStateU Pablo Borbon.

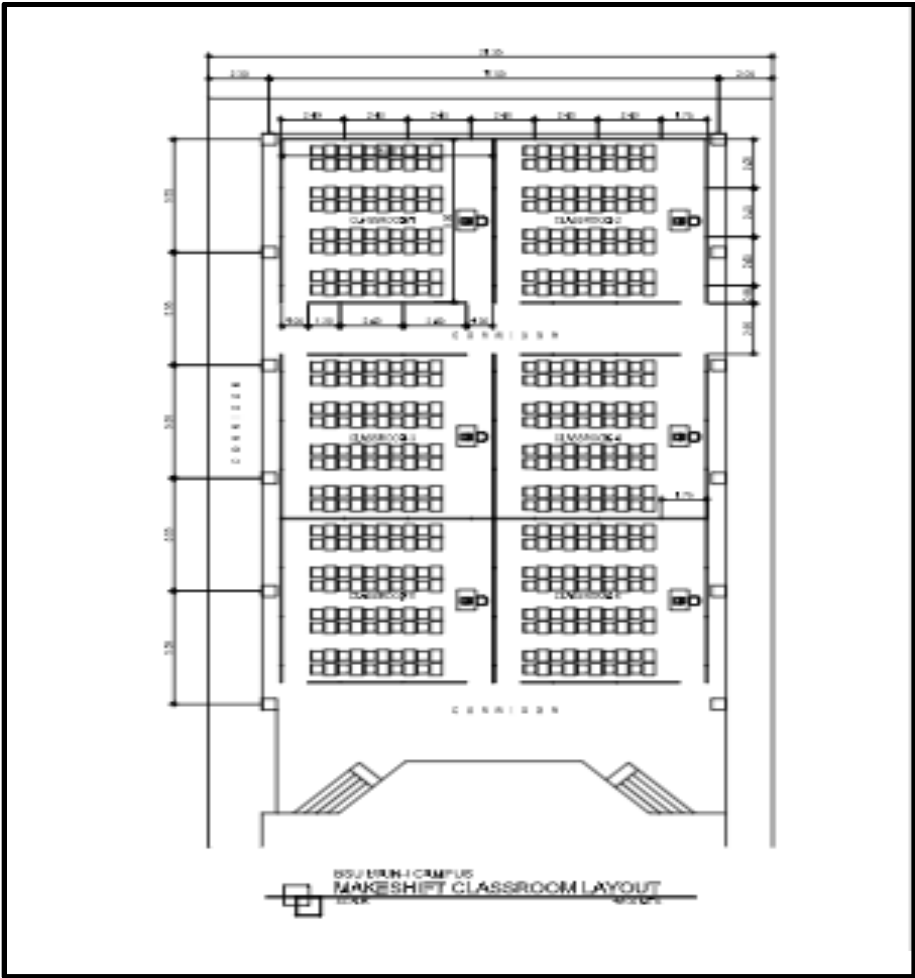


Figure 89 Pablo Borbon Gym Model

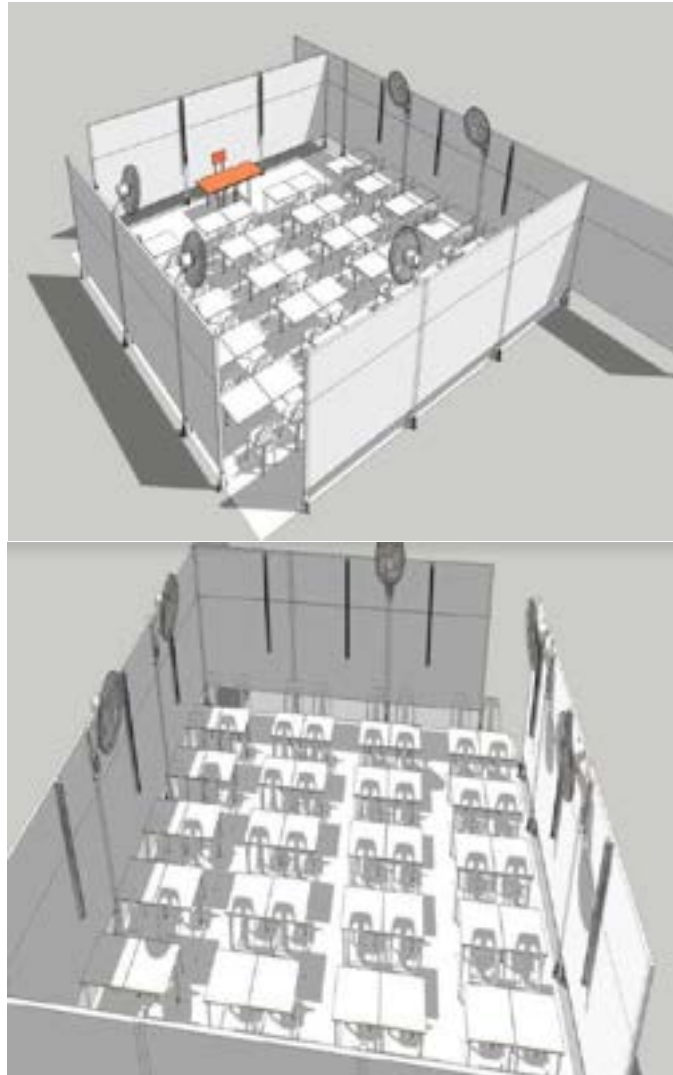


Figure 90 Design per Makeshift classrooms in the Gym

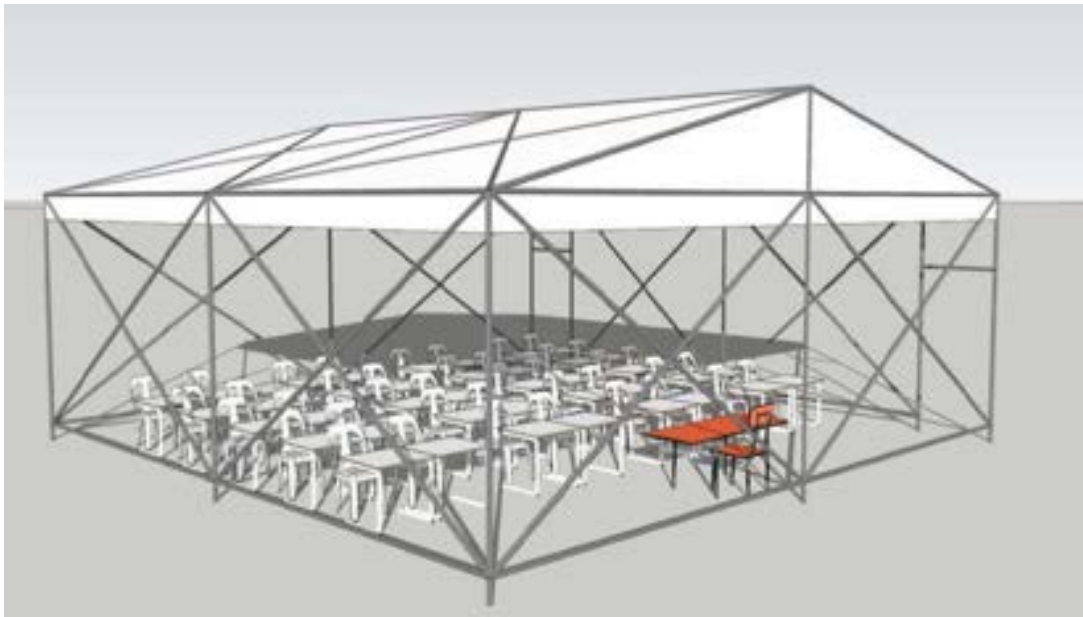


Figure 91 BatStateU-Main Tent

### DISASTER RESPONSE

- Activate the BatStateU Incident Command System.
- Closely coordinate and inform the concerned agencies of the situation in the area.





- Track and meet the members of the ICS to make the necessary response in accordance with each of the provided functions.
- Monitor the conditions of the affected infrastructures and other facilities that are necessary in the operation of the university.
- Monitor the status of the operation both in offices and classes at BatStateU.
- Conduct rapid assessment to gather data on the impact of disaster within the scope of the affected area.
- Submit reports to the Incident Commander and Responsible Officer for instruction of immediate utilization of resources to respond to the urgent needs arise due to disaster being encountered.
- Forwarded report to CDRRMO and PDRRMO for assistance and possible intervention.
- Monitor the escalation of situations that may aggravate impact on personnel and facilities.
- Prepare for the deployment/provision of the resources

### **DISASTER RECOVERY/REHABILITATION**

- Monitor the class suspension and class resumption.
- Establish temporary learning space in the nearby schools and agencies.
- Mobilize appropriate educational interventions such as but not limited to:
  - Psychological support and services
  - Teaching and learning materials
  - Conduct of life skill education and alternative delivery modes
  - Repairs of school facilities
  - Mobilize and facilitate appropriate personnel assistance
  - Conduct education cluster meetings



# **III. INSTITUTIONAL COORDINATION AND MONITORING SET-UP**



Setting a committee for institutional coordination and monitoring allows the BatStateU Pablo Borbon Campus to assess progress of implementation of the Land Use Development and Infrastructure Plan. In this way, the institution will be able to monitor and evaluate its effectiveness.

Organizing the Institutional Coordination and Monitoring (ICM) Committee

The LUDIP Pablo Borbon is responsible for the creation of an ICM Committee whose membership shall be identified and functions defined. These committees will be responsible for the monitoring, review, and evaluation of the implementation of programs and projects proposed in the LUDIP. The table shows the list of suggested members per thematic area.

Table 46 Institutional Coordination and Monitoring Committee

Thematic Area	Committee Members
Physical and Land Use Planning	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of PFMO</li><li>• Head of GSO</li></ul>
Infrastructure and Buildings	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of PFMO</li><li>• Head of GSO</li></ul>
Field Laboratories	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Research Development and Extension Services</li><li>• Head of Research</li><li>• Laboratory Supervisors</li></ul>
Environmental Protection	<ul style="list-style-type: none"><li>• Managing Head of PB Campus</li><li>• Vice Chancellor for Administration and Finance</li><li>• PCO of EMU PB</li><li>• Head of Health Services PB</li></ul>
Tourism and Heritage	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Academic Affairs</li><li>• Head of Culture and Arts</li><li>• Head of RGO PB</li></ul>
Solid Waste and Pollution Prevention	<ul style="list-style-type: none"><li>• Managing Head of PB Campus</li><li>• Vice Chancellor for Administration and Finance</li></ul>



	<ul style="list-style-type: none"><li>• PCO of EMU PB</li><li>• Head of GSO PB</li><li>• Head of Health Services PB</li></ul>
Traffic Routes	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of GSO PB</li><li>• Head of Security Services</li><li>• Head of PFMO PB</li></ul>
Sports Facilities	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Academic Affairs</li><li>• Head of Sports Division</li></ul>
Housing	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Development and External Affairs</li><li>• Vice Chancellor for Academic Affairs</li><li>• Head of RGO</li></ul>
IGP and Commercial Spaces	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Development and External Affairs</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of RGO</li></ul>

The above table presents the suggested members of the committees for the monitoring, review, and evaluation of the implementation of programs and projects proposed in the LUDIP. The members are selected based on their scope of responsibilities. Specifically, below are the duties and responsibilities of each committee:

- Ensure the implementation of Programs, Activities, and Projects (PAPs) related to the thematic area.
- Develop an operational plan with the physical and financial resources allotted for the implementation of PAPs.
- Manage records and database per thematic area such as reports and documentation on the status of activities.
- Perform such other functions as may be necessary for the accomplishment of LUDIP



### Stages of Institutional Coordination and Monitoring Set-up

Presented in the below figure are the stages for Institutional Coordination and Monitoring Set-up. This is to guide the proponents/stakeholders of BatStateU PB in the planning and implementation of Programs, Activities and Projects (PAPs) related to the thematic areas.



Figure 92 Stages of Institutional Coordination and Monitoring Set-up



1. Pre-planning Stage - the committee together with the concerned office shall gather necessary information related to the proposed PAPs.
2. Pre-approval Stage - the preliminary documents must be presented to the Chancellor and Vice Chancellors of the campus. The documents must support the goal and objectives of the PAPs to be proposed.
3. Planning Stage - the committee and concerned office shall create the plan of the PAPs from preliminary to execution stage. Monitoring and evaluation tools must be included in the development plan.
4. Approval Stage - in this stage, included are the approval of PAPs, budget allocation, procurement requests, and other necessary documents that need to be approved.
5. Implementation Stage - the PAPs must be implemented in accordance with the policies of the national, local, and campus. All requirements must be completed, and all permits are secured prior to project execution.
6. Monitoring Stage - the committee is responsible for the monitoring of the success of PAPs. They shall set a monitoring tool appropriate to the PAPs being implemented. It is to keep in mind that included in the monitoring is the financial plan status of the project especially for infrastructure.
7. Evaluation Stage - Once the entire project has been implemented, evaluation follows. This is to check whether the project has been successful and efficient to its purpose. In case of infrastructure projects, this is to check if the turned-over project is up to the quality standards.

### **Implementation, Monitoring and Evaluation**

Prior to the implementation of projects, all concerned offices must agree to the programs and plans set-up. Documents shall be approved by the top management and completed prior to execution of the project. Continuous monitoring must be done and reported as prescribed by the university policy. An evaluation must be conducted after every activity to check for its effectiveness.

The Budget Office will provide support during the implementation, monitoring and evaluation process, more particularly in the timely determination of the following:

- Meeting funding requirement of the Investment Program
- Level of funding generated from external sources
- Actual expenditures and major deviations from the plan if any
- Compliance with reportorial and other regulatory requirements
- Status of borrowed fund if any
- Other funding options in case of contingencies

To have consistency in the documentation, the forms and instruments to be used are of the university in the preparation, monitoring and evaluation of PAPs in thematic areas.





# Land Use Development and Infrastructure Plan (LUDIP)



**BATSTATEU  
ALANGILAN**

*Leading Innovations, Transforming Lives  
Building the Nation*



### **Land Use Development and Infrastructure Plan (LUDIP) Legal Mandates**

A new law mandates state universities and colleges (SUCs) to design development and infrastructure plans for the proper management of land resources. Republic Act No. 11396, signed by President Rodrigo Duterte on Aug. 22, requires all SUCs to submit their respective Land Use Development and Infrastructure Plan (LUDIP) to the Commission on Higher Education. SUCs are required to follow their respective development plans for all of their future infrastructure projects.

Under Republic Act No. 11396, land use or infrastructure projects of the SUCs shall also be required to follow the LUDIP which shall be linked with the land use plan and practice of the local government units to ensure complementation of activities across geographical boundaries. Under the new law, SUCs must submit the following as part of their LUDIP:

- campus planning framework, principles and processes, including master development plans
- detailed geographical description and survey of the site occupied by the SUCs
- inventory of all existing buildings, facilities, and other infrastructure within the compound or areas occupied by the SUCs
- cadastral survey of land occupied by the SUCs
- detailed description of the research core, academic core, and residential areas covering both housing for faculty, and dormitories for students
- detailed geographical description of land used for commercial, agriculture, fishery, forestry, and other activities, including open and recreational spaces, landscape features, and campus transportation system among others.
- design and estimated cost of construction, operation, maintenance of other infrastructure needs of the SUCs
- financial plan

The following agencies may also help SUCs in making their development and infrastructure plans:

- Housing and Land Use Regulatory Board
- University of the Philippines School of Urban and Regional Planning
- Department of Public Works and Highways
- Land Management Bureau of the Department of Environment and Natural Resources

The measure meanwhile tasks the CHED, UP-SURP, and HLURB to design capacity building programs for SUCs to enable them to develop and prepare suitable land use plans.

Responsive to Republic Act No. 11396, the Batangas State University prepared its LUDIP for the 11 campuses of the University.





## **FOREWORD**

Pursuant to Section 7 of Republic Act No. 11396, otherwise known as *SUCs Land Use Development and Infrastructure Plan (LUDIP) Act*, Batangas State University Lipa adopts its Campus Land Use Development and Infrastructure Plan, a necessary planning document for rational, efficient and just allocation, development and utilization of the campus land resources.

In preparing the plan, campus stakeholders considered the need for infrastructure and facilities for the utmost benefit of the University community and its clients.

This document highlights the planning parameters and assumptions to address future perceived needs and respond to existing challenges as the campus envisions and prepares to become fully sustainable as an institution of higher education. The proposed infrastructures in this plan shall increase the capacity of the campus to carry out its mandates and deliver its services efficiently. Aligned with the overall strategic vision of the University, the development to be implemented in accordance with this document shall enhance the capacity of the campus to become an open and accessible university providing an education with a brand of excellence that is socially-relevant, inclusive and sustainable.

The plan shall also open developments for world-class educational service amenities that also address vulnerabilities of the community to climate change and disaster risks, hence, planning and implementation adopts an integrated ecosystems approach in consideration of the physical development frameworks of the host city, province and region.



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## **Land Use Development and Infrastructure Plan (LUDIP)**

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# Land Use Development and Infrastructure Plan (LUDIP)



**BATSTATEU  
ALANGILAN**

*Leading Innovations, Transforming Lives  
Building the Nation*



# PART I

# PROFILE OF

# SUC



## A. Introduction

Batangas State University is a Level IV state university in the province of Batangas, Philippines. Established in 1903, the university is strategically located at the second largest economic region in the Philippines, which puts it at a prime position not only as a premier provider of higher and advanced learning, but also as a viable economic development zone. With 11 campuses, Batangas State University remains steadfast in its adherence to international standards. It was given a three-star rating by Quacquarelli Symonds Stars University rating, and is part of the Top Universities list.

Recently, the Batangas State University has been declared as the National Engineering University by virtue of Republic Act No. 11694 enacted on April 11, 2022.

As the National Engineering University, Batangas State University is poised to provide a leadership role in shaping a new vision for engineering education in the country.

Fortifying its service motto “Leading Innovations, Transforming Lives, Building the Nation”, it will further strengthen and expand its already robust 46 degree programs to include an even wider range of fields in engineering at both the graduate and undergraduate levels.

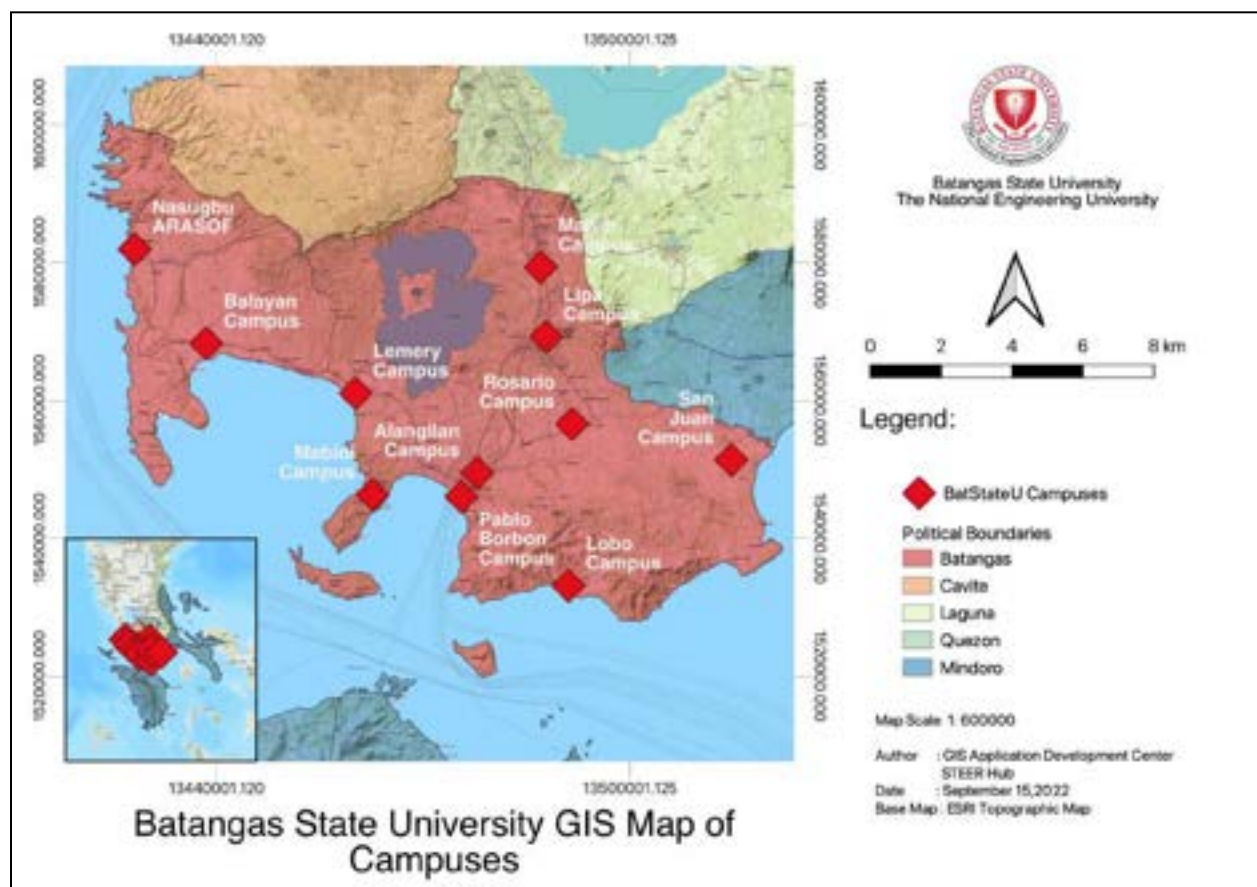


Figure AL-1. BatStateU GIS Map of Campuses

### (a) Legal bases/mandates

#### Legal Basis

- Republic Act No. 764 (1953) bestowed upon the Batangas Trade School (established in 1903 as Manual Training School) a national status, changing its name to Pablo Borbon Memorial Trade School, later (in 1957)
- to Pablo Borbon Regional School of Arts and Trades (PBRSAT).



- Republic Act No. 5270 (1968) converted the PBRSAT into a state college, the Pablo Borbon Memorial Institute of Technology (PBMIT).
- Republic Act. No. 9045 (March 22, 2001) created the Batangas State University (BSU) by integrating the Pablo Borbon Memorial Institute of Technology (PBMIT) and all its branches/campuses, the Jose P. Laurel Polytechnic College in Malvar, the Apolinario R. Apacible School of Fisheries in Nasugbu, and the Polytechnic University of the Philippines campus in Sto. Tomas, all in the province of Batangas.
- The Batangas State University (BatStateU) has been declared as "The National Engineering University" by virtue of *Republic Act No. 11694* enacted on April 11, 2022.

### **Mandate of the Batangas State University as The National Engineering University**

On April 11, 2022, the Batangas State University was declared as The National Engineering University by virtue of Republic Act 11694.

In Section 3 of RA 11694, the Purpose of the BatStateU is presented. As the national engineering university committed to develop leaders in the global knowledge economy, the BatStateU shall:

- a) Provide world-class academic training to young Filipinos in the field of engineering and other professions, and mold them into becoming responsible citizens who are aware of their role in nation-building, and are motivated to meet the challenges and opportunities as the country pursues its development goals, especially in the areas of infrastructure development, environmental protection, information and telecommunications, manufacturing, transportation, and land and shelter development;
- b) Offer advanced studies and specialization for engineers, scientists, entrepreneurs, industry practitioners, and other professionals, primarily for those who serve as faculty of the state and private colleges and universities;
- c) Strengthen engineering programs through the development and offering of industry-driven and emerging engineering programs; spearhead collaboration between the academe and engineering industries; and lead in the implementation of innovative pedagogies in engineering education through the Center for Innovations in Engineering Education;
- d) Serve as a research university in engineering and related field of specialization by conducting basic and applied research and development, promoting research collaboration with various colleges and universities in the country, and contributing to the dissemination and application of knowledge;
- e) Intensify scientific, innovative, and technological research and development that would lead in the development of high-impact research, startups and spinoffs and technology transfer of products and services in specific areas such as electronic systems, environment, information and computing technology, material science and testing, and advanced manufacturing through the established research centers under the Science, Technology, Engineering and Environment Research (STEER) Hub, recognized by the Regional Development Council (RDC) as the Center for Science, Technology, Engineering and Environment Research in the CALABARZON Region;



- f) Provide progressive leadership in setting academic standards and initiating innovations in advanced instruction, research, and professional training in the fields of engineering education, and maintain centers of excellence in such disciplines and professions;
- g) Offer undergraduate and graduate-courses within the areas of specialization and according to its capabilities, including medical and allied health, natural and applied sciences, teacher education, business, technology, management, social sciences, arts and culture, agriculture, and other related fields, as the Board of Regents may deem necessary to carry out its objectives, specifically, in order to provide greater access for deserving students in tertiary education and an adequate response to the particular needs of the government, the society and the industry in these fields;
- h) Lead in the protection, conservation, and strategic management of the Verde Island Passage (VIP) that separates the islands of Luzon and Mindoro, and described as the "center of the center of marine shore fish biodiversity in the world" by developing biodiversity experts, conducting collaborative research, marine exploration, community education and training, and establishment of the Verde Island Passage Center for Oceanographic Research and Aquatic Life Sciences (VIP CORALS) by the RDC-Region IV-A (Cavite, Laguna, Batangas, Rizal and Quezon Region) as the National Center for Marine Bio-Diversity in VIP;
- i) Lead in the generation of productive knowledge, innovation and technology to develop relevant and technical higher order skills needed to compete in the global knowledge economy;
- j) Provide an avenue for the professional advancement of Disaster Risk Management (DRM) managers and practitioners by offering academic programs in DRM and contribute in ensuring a resilient community through the Adaptive Capacity-building and Technology Innovation for Occupational Health and Natural Disaster (ACTION) Center endorsed by the RDC-Region IV-A as National Center for Disaster Risk Reduction and Management, and Climate Change Adaptation Education and Research;
- k) Contribute to national economic growth, jobs creation, domestic and foreign investment, and community well-being through the university-based Knowledge, Innovation and Science Technology (KIST) Park, designated as a Special Economic Zone by virtue of Presidential Proclamation No. 947, dated May 22, 2020;
- l) Serve as a public service university by providing various forms of community, public, and volunteer service, as well as scholarly and technical assistance to the government, private sector, and civil society while maintaining its standards of excellence;
- m) Strengthen its Laboratory and Integrated Schools for basic education by focusing and adopting advanced teaching and learning on science, technology, engineering and mathematics to serve as feeder schools for engineering, science and technology programs of the BatStateU: Provided, That the operation of the Integrated School shall be self-liquidating, through payment of tuition and other school fees by the students as approved by the governing board;
- n) Protect and promote the professional and economic rights and welfare of its academic and nonacademic personnel;



- o) Provide opportunities for training and learning in leadership, responsible citizenship, democratic values, institutions, and practice, through academic and nonacademic programs, including sports, towards the promotion of nationalism and a deep and enduring pride in the national identity;
- p) Serve as a regional and global university in cooperation with international and scientific unions, networks of universities, scholarly and professional association in the Asia Pacific region and around the world; and
- q) Provide democratic governance based on collegiality, representation, accountability, transparency, and active participation of its constituents, and promote the holding of fora for students, faculty, researchers, extension program specialists, staff, and alumni to discuss nonacademic issues affecting the BatStateU.

### (b) Brief profile About the University

Batangas State University is one of the country's model higher education institutions recognized by the Commission on Higher Education (CHED), BatStateU is the first and thus far the only state university in the Philippines with engineering, IT, and computer science programs accredited by the Accreditation Board for Engineering and Technology (ABET) – Engineering Accreditation Commission and Computing Accreditation Commission. With 15 development centers, it is recognized by the Regional Development Council of Region IV-A as the Regional Center for Technology Business Incubation and Development, and as the Regional Center for Science, Technology, Engineering, and Environment Research.



**Figure AL-2. BatStateU Campuses on Commercial Area Layer**

With 11 campuses, Batangas State University remains steadfast in its adherence to international standards. It was given a three-star rating by Quacquarelli Symonds Stars University rating, and is part of the Top Universities list. Through Proclamation No. 947, President Rodrigo Roa Duterte designated the BatStateU



Knowledge, Innovation, and Science Technology or KIST Park as a Special Economic Zone. It is the first KIST Park registered by the Philippine Economic Zone Authority or PEZA.

(<https://www.youtube.com/watch?v=Pb61NjXrJCg>)

The university's Electronics Engineering program is designated by CHED as a national Center of Excellence, and its Electrical Engineering, Mechanical Engineering, Development Communication, and Teacher Education programs are national Centers of Development. It has also maintained high academic standards in architecture, industrial technology, computing sciences, business, agriculture, allied health, and the social sciences. It received ISO 9001:2015 certification from TÜV Rheinland Philippines, Inc., and is host to the first China-Philippines Silk Road Institute in the country.



**Figure AL-3. BatStateU Alangilan Digitized Map – Current Features**

### **Leading Innovations, Transforming Lives**

*Leading Innovations, Transforming Lives* is the official motto of the university. It was registered at the Intellectual Property Office of the Philippines on 15 April 2016 with Certificate of Registration No. 4/2014/00013632. This is used in all official publications, newsletters, pamphlets, and brochures published by the University, as well as in official university merchandise sold at the University Shop. It carries with it the University's long-standing tradition of service, excellence, and virtue, as specified in its official seal, and is anchored on the goal of maximizing its relevance and transformative impact through innovations in instruction, research, and community service.

## Tower of Wisdom



Figure AL-4. Tower of Wisdom

In an evening fellowship on 19 November 2016, the university marker named Tower of Wisdom was inaugurated in its Main Campus during the 113th founding anniversary of Batangas State University. The design was conceptualized by Dr. Tirso Ronquillo, and was applied at the Intellectual Property Office as an Industrial Design on 15 November 2016. The structure rests on a 16 meter long and 11.3-meter-wide platform, to symbolize the 16th year of the current century and the 113th founding anniversary of the institution. It is 19.03 meters high, symbolic of the year the institution was founded. Through Resolution No. 729, s.2017, the Board of Regents declared the Tower of Wisdom as the official landmark of the university.

## (c) Brief history of the SUC and its campuses



Figure AL-5. Batangas State University Logo, Facade and Structures

Established as a manual training school in **1903**, **Batangas State University** is the **oldest** higher education institution in the country's Calabarzon Region. It was converted into a **state** college in **1968** through RA 5270, and was renamed Pablo Borbon Memorial Institute of Technology.

### Milestone through the years.

**1903** - Established as a Manual Training School for young men

**1905** - Renamed Batangas Trade School

**1953** - Became the Pablo Borbon Memorial Trade School by virtue of RA 746

**1957** - Renamed Pablo Borbon Regional School of Arts and Trades; Started offering technical courses

**1968** - Converted into a state college by virtue of RA 5270, called the Pablo Borbon Memorial Institute of Technology, the 23rd state college in the Philippines

**1971** - Offered industrial education and engineering programs

**1974** - Started offering graduate degree programs

**1984** - Expanded operations in its first extension campus in Alangilan, Batangas City



- 1987 - Started offering basic education through a special science class in the laboratory school
- 2001 - Converted into a state university by virtue of RA 9045, called the Batangas State University
- 2006 - Established stronger international partnerships and linkages
- 2015 - Modernized infrastructure to create a 21st century learning environment
- 2016 - Established research and development centers; Shifted academic calendar with the first semester opening in August
- 2017 - Recognized as Center of Excellence in Electronics Engineering and Center of Development in Mechanical Engineering, Electrical Engineering, Teacher Education and Development Communication; Classified as a Level IV state university; Received international accreditation of engineering and IT programs
- 2018 - Received ISO 9001:2015 certification; Recognized as a Regional Center for Disaster Risk Management Education and Research
- 2019 - Launched the new vision towards becoming a premier national university
- 2020 - Received presidential proclamation of the BatStateU Knowledge, Innovation and Science technology (KIST) Park as a Special Economic Zone; Awarded three stars by the QS stars rating; Approved the offering of emerging programs in engineering and allied fields

Table AL-1. GIS Attribute Table of BatStateU Campuses

	BatStateU Campus	Address	Longitude	Latitude
1	BatStateU Pablo Borbon	Rizal Avenue, Batangas City	121.0531168849614	13.754797027879365
2	BatStateU Alangilan	Alangila, Batangas City	121.0743307429293	13.784061425353526
3	BatStateU JPLPC Malvar	Malvar, Batangas	121.15625817036171	14.04494381618468
4	BatStateU ARASOF Nasugbu	Brgy. Bucana, Nasugbu, Batangas	120.62633036660107	14.067217369724982
5	BatStateU Lipa	Maraouy, Lipa, Batangas	121.16325449930176	13.956649004776681
6	BatStateU Lemery	Lemery, Batangas	120.91462421618677	13.885178945943968
7	BatStateU Rosario	Rosario, Batangas	121.19679605926775	13.846629485945055
8	BatStateU San Juan	Laiya Road, San Juan, Batangas	121.40376142421394	13.802385541198039



9	BatStateU Balayan	Balayan, Batangas	120.71995386631147	13.94835065410113
10	BatStateu Lobo	Brgy. Masaguitsuit, Lobo, Batangas	121.19221959946319	13.641459877095713
11	BatStateU Mabini	Mabini, Batangas	120.93702738091582	13.756453133999951

**BRIEF HISTORY OF THE ALANGILAN CAMPUS**

Acquired by the university in 1984, Alangilan is the second oldest campus in the university. Located in Brgy. Alangilan, Batangas City, it has total land area of 5.62 hectares; the three colleges and research hubs in the campus occupy 2.89 hectares, while 2.73 hectares were recently acquired for the Knowledge, Innovation, and Science Technology (KIST) Park, the first KIST Park registered under the Philippine Economic Zone Authority in the country.



Figure AL-6. GIS Mapping of BatStateU- Alangilan

**EXTENSION CAMPUS: BALAYAN**

One of the university’s oldest extension campuses is located in Brgy. Caloocan, Balayan. Established in 1994, BatStateU Balayan has since been offering technology and technical-vocational education programs to the youth of the community. Balayan is



a first-class municipality that hosts a number of industries and small-and-medium-scale enterprises.

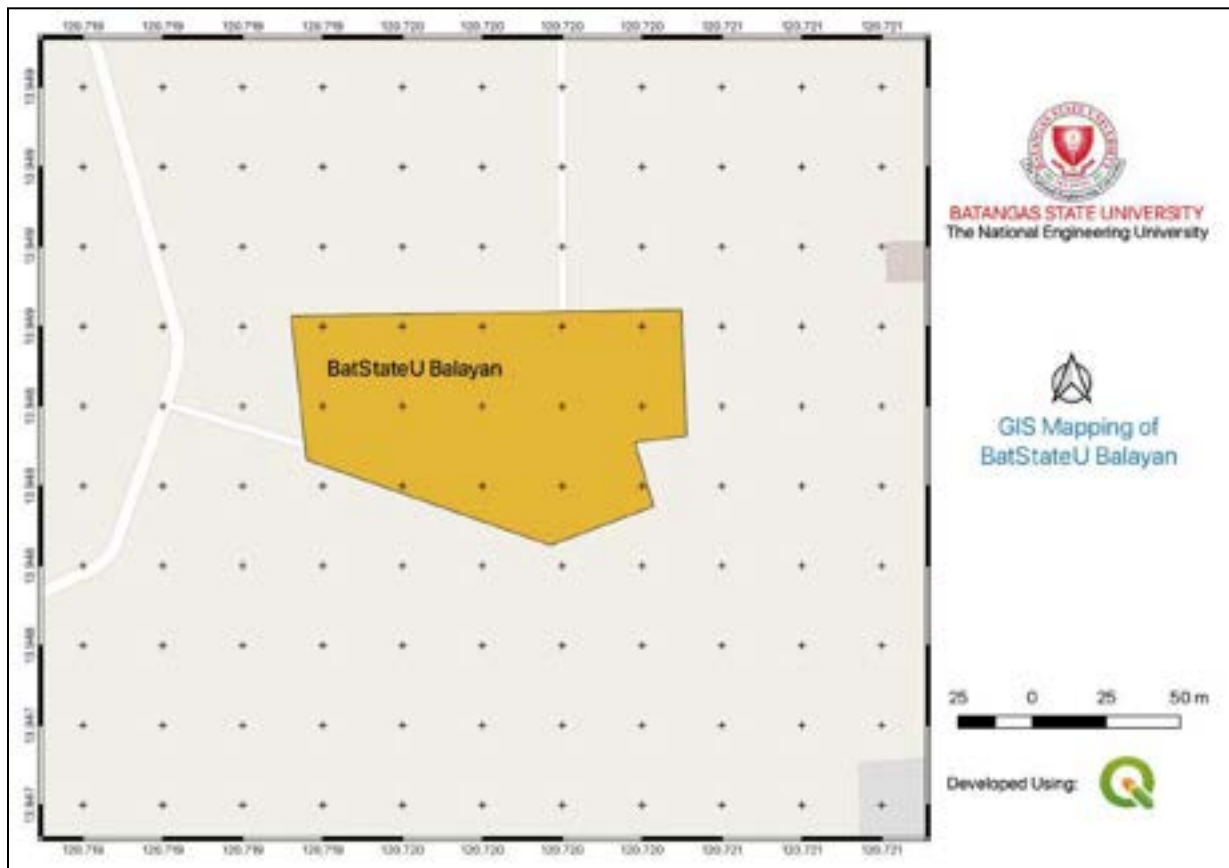


Figure AL-7. GIS Mapping of BatStateU- Balayan

## EXTENSION CAMPUS: LOBO

While BatStateU Lobo has the smallest actual-campus land area at 0.12 ha located in Brgy.Masaguitsuit, it is the location of the only College of Agriculture and Forestry in the province of Batangas, and is one of the very few in CALABARZON. Lobo has white sand beaches and protected mangrove forests, fish sanctuaries, and marine protected areas, while agriculture and food production are its main industries. Its seas are part of the Verde Island Passage, recognized to be the center of the center of marine shore fish biodiversity in the world.

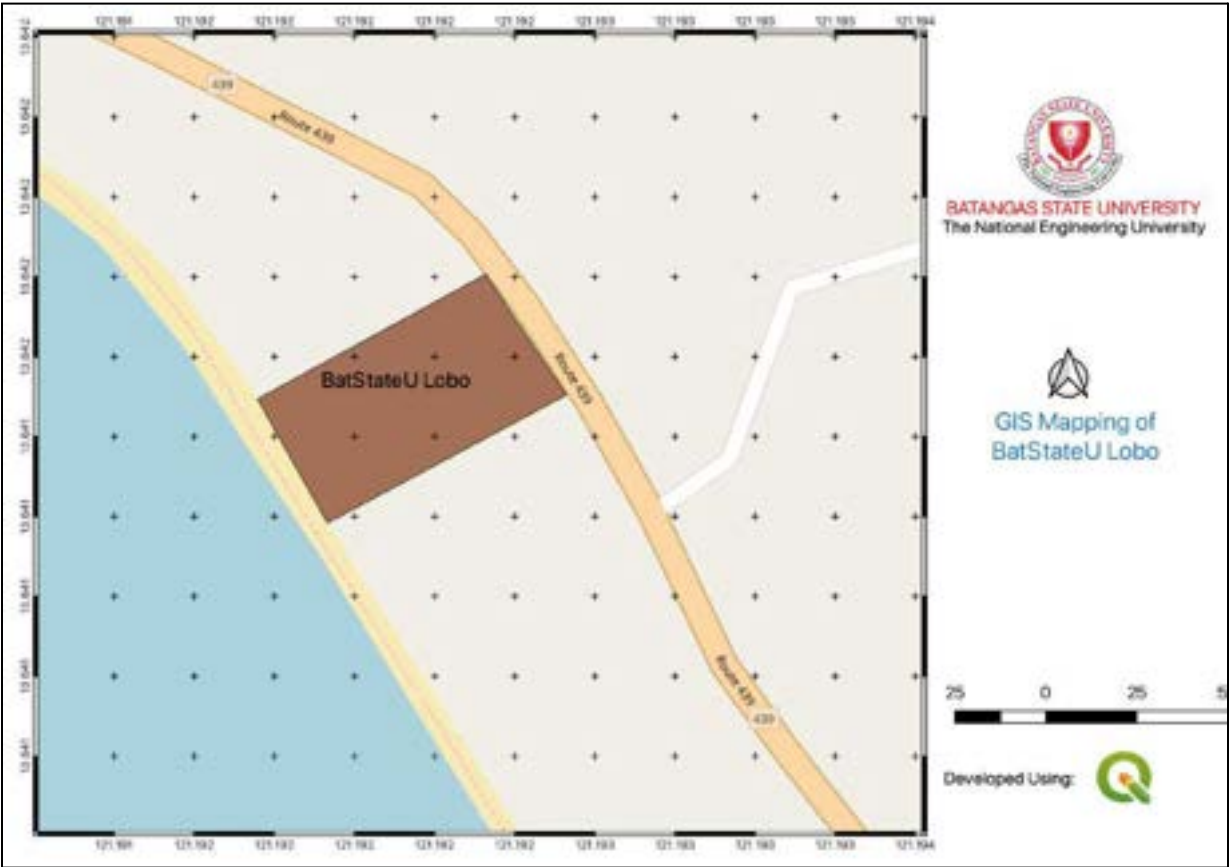


Figure AL-8. GIS Mapping of BatStateU- Lobo

## EXTENSION CAMPUS: MABINI

The newest campus in the university is BatStateU Mabini, with its operations starting only in 2018. Through the generosity of the local municipal government and the Yu family, the youngest BatStateU campus was established on a four-hectare property with a three-story building as its first academic infrastructure. Mabini, being a first-class municipality, has a booming economy and a hub for business industries primarily because of its diving destinations.

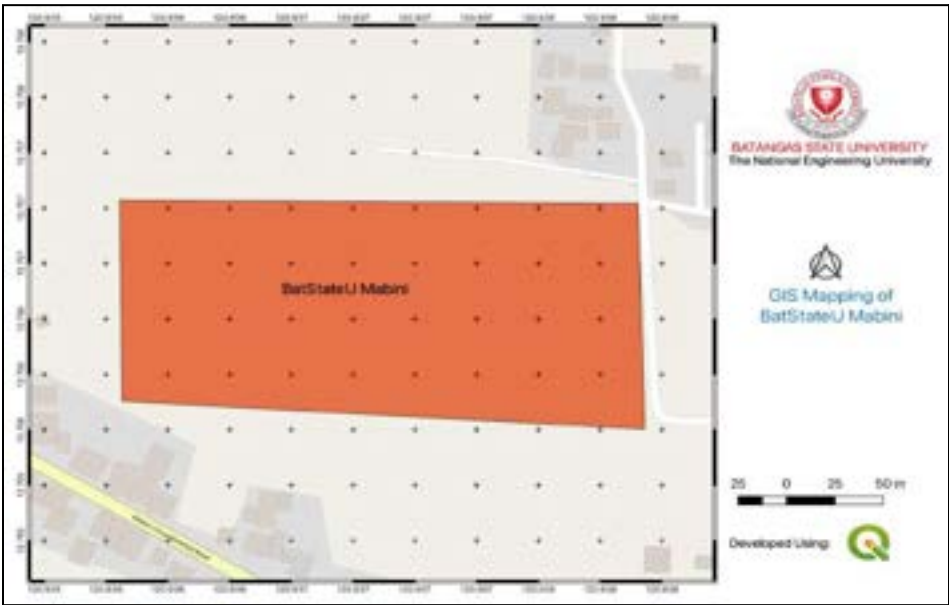


Figure AL-9. GIS Mapping of BatStateU- Mabini



### University Vision

*A premier national university that develops leaders in the global knowledge economy.*

### University Mission

*A university committed to producing leaders by providing a 21st century learning environment through innovations in education, multidisciplinary research, and community and industry partnerships in order to nurture the spirit of nationhood, propel the national economy, and engage the world for sustainable development.*

### Core Values

- *Patriotism*
- *Service*
- *Integrity*
- *Resilience*
- *Excellence*
- *Faith*

### • College of Engineering, Architecture and Fine Arts (CEAFA)

The College of Engineering, Architecture and Fine Arts is the premier college that offers the flagship programs of the university. It is a pioneer in the full implementation of outcomes-based teaching and learning and the integration of Technopreneurship in its curricula, with three centers of excellence and development and a number of graduates topping national licensure and certification examinations.

It prepares competitive educators in the global academic environment, guided by high moral standards and equipped with 21st century skills so they become agents of positive social transformation.

The College of Engineering, Architecture and Fine Arts (CEAFA) is situated at BatStateU Alangilan, Alangilan, Batangas City, and is catering to over 11, 000 students for its 26 undergraduate and graduate programs with ten (10) Master's Degree, one (1) Ph.D. and fifteen (15) undergraduate programs. To meet the challenges of the 21st century, the college will be offering on AY 2020-2021 additional nine (9) undergraduate, eight (10) Masters, one (1) Straight BS-MS, one (1) Straight MS-PhD, and two (2) Ph.D. degree programs. It offers strong academic curricula and broad ranges of other educational opportunities for learners to do extremely well in their chosen profession.

CEAFA is well-known and respected for its competent and highly committed faculty members as well as in sustaining its performance in delivering quality engineering, architecture, and fine arts education not only to the province of Batangas, but to the whole country and other countries as well. The College has been at the frontier of quality assurance in higher education in the region with its pioneering implementation of outcomes-based education in all its academic programs. In fact, the College is the first SUC in the country to have its 8 programs accredited by the Accreditation Board for Engineering and Technology (ABET), a well-known international accreditation body in the disciplines of applied and natural science, computing, engineering and engineering technology. Likewise, the same programs were also accredited by the Philippine Technological Council (PTC), a Washington Accord provisional member, and the



designated accrediting body for engineering programs in the country. All programs of CEAFA were also accredited by the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP), Inc.

CEAFA is also distinguished for its remarkable high performance in licensure examinations. The College has been consistently ranked as the top performing schools in Mechanical Engineering, with the other programs having higher percentage passing than the national percentage passing. As of the present time, the College is home to more than 162 Board Topnotchers in various license examinations.

The College is committed to combine technical knowledge and applications with wide ranging skills and attitudes to develop innovators and innovations in higher education expected to aid the challenges of the new millennia. Devoted to the University's vision and mission, CEAFA continuously strives for academic excellence to produce high-caliber professionals who will be active participants in nation building and responsive to the challenges of the 21st century.

### Goals

The College of Engineering, Architecture, and Fine Arts (CEAFA) aims to develop a well rounded graduate imbued with moral and ethical values, spiritual vigor, and utmost concern for the environment as integral parts of furtherance of a chosen profession.

It promotes excellence in the education of men and women who can assume leadership and meaningful participation in one's chosen field of engineering, architecture, fine arts or computing sciences.

### Commitment

The College of Engineering is committed to:

- Provide curricular programs for the development of a well-trained engineering professionals very well conscious of environmental protection;
- advance the ideals of a national identity devoid of cultural biases, but enriched with moral integrity, spiritual vigor, and credible pursuit for professional excellence;
- develop professional graduates ready for entry as active participants and/or competent leaders in the industrialized world who are:
  - well-educated in the principles of a particular engineering discipline so chosen;
  - well-trained in the art and science of industrial applications such as design and production to sales, management and operations;
  - promote an environment
  - for research and development so that students may advance the boundaries of knowledge in every professional facet of engineering;
  - for entrepreneurship whereby the products and services of a particular engineering field can be generated for business use and application.

### • College of Informatics and Computing Sciences (CICS)

The College of Informatics and Computing Sciences offers ITE graduate and undergraduate programs, facilitated by highly competent faculty members





catering to over 2,000 Information Technology and Computer Science students. The college focuses on the technical aspects and real-world applications of artificial intelligence, machine learning, deep learning, and security.

### **Goals and Objectives**

The College of Informatics and Computing Sciences aims to shape globally competitive computer magnates as they develop their professional identities and ethical values. It establishes equanimity, objectivity and wisdom, unselfishness and concern for the environment through their technological competencies, community partnerships and strong faith in the Supreme Being.

It promotes excellence in pedagogy as it develops a well-rounded graduate who can assume dynamic leadership, meaningful participation and internalization initiatives in the field of Information Technology and Computing Sciences.

The College of Informatics and Computing Science is committed to:

- Develop professional graduates ready for entry as active participants and/or competent leaders in the industrialized world who are:
- Advance ideals of national identity devoid of cultural biases, but enriched with moral integrity, spiritual vigor, and credible pursuit for professional excellence;
- Provide curricular programs for the development of well-trained IT professionals, and Computer scientists.
- Well-educated in the principles of a particular discipline;
- Well-trained in the art and science of computer applications such as: productivity tools, authoring software and software development applications.
- Well-oriented in advocating national consciousness on the promotion of our history, culture and traditions.

### **• College of Industrial Technology (CIT)**

The College of Industrial Technology is the first college established in the university, and has since proven to be a premier producer of well-rounded and globally competitive professionals who meet local, national, and international demands for skilled workers who significantly contribute to the manpower resources in response to the rapid industrialization of the modern world.

### **Goals**

The College of Industrial Technology shall produce well-rounded and globally competitive individuals who meet local, national and international demands for skilled workers.

### **Objectives**

- To devise up-to-date curricula that help attain goals, meet changing requirements and reflect changes in Industrial Technology.
- To facilitate quality technical-vocational education and training towards holistic competency and proficiency of the individuals in the different technology areas.
- To mold individuals whose personal, social, technical, practical qualities make them productive and valuable citizens of a global village.
- To train technologists in the use of applied research by innovating ways to address needs and problems and by implementing and extending current technology.



### (d) Current Governing Board/ inter-department bodies

#### The BatStateU Board of Regents

The Batangas State University Board of Regents is the highest governing body of the university, as stipulated in Sec. 5 of RA 9045.[12] The Board regularly convenes at least once every quarter. Currently, it is composed of the following:

1. **Dr. Marita R. Canapi**, CHED Commissioner – *Chairperson*
2. **Dr. Tirso A. Ronquillo**, University President – *Vice Chairperson*
3. **Sen. Francis “Chiz”G. Escudero**, Chairperson of the Senate Committee on Higher and Technical Education (represented by Mr. John Ryan D. Diamante)-  
*Member*
4. **Rep. Mark O. Go**, Chairperson of the House Committee on Higher and Technical Education (represented by Cong. Mario Vittorio A. Mariño, Congressman 5th District of Batangas) - *Member*
5. **Dr. Arsenio M. Balisacan**, Secretary of the National Economic and Development Authority ( represented by Dir. Luis Banua, Regional Director of the National Economic and Development Authority, Regional Office IV-A) - *Member*
6. **Dr. Renato U. Solidum**, DOST Secretary ( represented by Dir. Emelita P. Bagsit, Regional Director, DOST Region IV-A) - *Member*
7. **Engr. Ladislao L. Andal**, Private Sector Representative- *Member*
8. **Engr. Amando A. Plata**, President of the Federation of Alumni Association of Batangas State University- *Member*
9. **Dr. Kristoffer Conrad M. Tejada**, President of the BatStateU Faculty Confederation - *Member*



## BATANGAS STATE UNIVERSITY Board of Regents



**Dr. MARITA R. CANAPI**  
Commissioner, Commission on Higher Education  
Chairperson



**Dr. TIRSO A. RONQUILLO**  
President, BatStateU  
Co-Chairperson



**Cong. MARK O. GO**  
Chairperson, House Committee on Higher and Technical Education  
Member  
Represented by: **Cong. Mario Vittorio A. Mariño**  
Congressman, 5th District of Batangas



**Sen. FRANCIS "CHIZ" G. ESCUDERO**  
Chairperson, Senate Committee on Higher, Technical and Vocational Education  
Member  
Represented by: **Mr. John Bryan D. Diamante**



**Dr. ARSENIO M. BALISACAN**  
Secretary, National Economic and Development Authority  
Member  
Represented by: **Dir. Luis G. Banua**  
Director, NEDA Region IV-A



**Dr. RENATO U. SOLIDUM, Jr.**  
Secretary, Department of Science and Technology  
Member  
Represented by: **Dir. Emelita P. Bagsit**  
Director, DOST Region IV-A



**Engr. LADISLAO L. ANDAL**  
Private Sector Representative  
Member



**Engr. AMANDO A. PLATA**  
President, Federation of Alumni Associations of Batangas State University  
Member



**Dr. KRISTOFFER CONRAD M. TEJADA**  
President, BatStateU Faculty Confederation  
Member



**Dr. ENRICO M. DALANGIN**  
Secretary of the University and of the Board of Regents  
Head Secretariat

**Figure AL-10. The Board of Regents**

## President's Advisory Council

The President's Advisory Council serves as the institution's management committee who spearheads strategic planning, policy formulation, and decision making based on Board-approved policies and guidelines. Currently, it is composed of the following:

1. DR. TIRSO A. RONQUILLO - University President
2. DR. CHARMAINE ROSE I. TRIVIÑO - Vice President for Academic Affairs
3. ATTY. LUZVIMINDA C. ROSALES - Vice President for Administration and Finance
4. ENGR. ALBERTSON D. AMANTE - Vice President for Research, Development and Extension Services
5. ATTY. NOEL ALBERTO S. OMANDAP - Vice President for Development and External Affairs
6. PROF. ENRICO M. DALANGIN - Chancellor, BatStateU ARASOF-Nasugbu
7. DR. EXPEDITO V. ACORDA - Chancellor, BatStateU Pablo Borbon
8. ATTY. ALVIN R. DE SILVA - Chancellor, BatStateU Lipa





- 9. DR. PHILIP Y. DEL ROSARIO - Chancellor, BatStateU Malvar
- 10. PROF. ENRICO M. DALANGIN - Secretary of the University and of the Board of Regents



Figure AL-11. The Presidential Advisory Council

**The Administrative and Academic Councils**

The university has an Administrative Council, as stipulated in Section 10 of RA 9045. It consists of the president of the university as the chairman, the vice presidents, deans, directors, and other officials of equal rank as members. The Administrative Council reviews and recommends to the Board policies governing the administration, management and development planning of the university for appropriate action.

The Academic Council, as provided in Section 11 of RA 9045, has the president of the university as chairman and all members of the instructional staff with the rank of not lower than assistant professor as members. This council has the power to review and recommend the curricular offerings and rules of discipline of the university, subject for appropriate action of the Board. It shall fix the requirements for admission of students, as well as for graduation and the conferment of degrees, subject to review and/or approval by the Board.



Table AL-2. Designated Administrative Officials FY 2022  
Alangilan Campus

OFFICE OF THE CHANCELLOR	
President	Dr. Tirso A. Ronquillo ( By Virtue of BOR Resolution No. 78 S. 2022)
Head, Internal Audit Services	Ms. Mercedita B. Garcia
Head, Quality Assurance Management	Assoc. Prof. Divina Gracia D. Ronquillo
OFFICE OF THE VICE CHANCELLOR FOR ACADEMIC AFFAIRS	
Vice Chancellor for Academic Affairs	Prof. Paulina M. Macatangay
Dean, College of Engineering, Architecture and Fine Arts	Dr. Reynato A. Gamboa
Dean, College of Industrial Technology	Dr. Elisa D. Gutierrez
Dean, College of Informatics and Computing Sciences	Dr. Princess Marie B. Melo
Asso. Dean, Program Development and Quality Assurance - College of Engineering	Engr. John Kevin M. De Castro
Asso. Dean, College of Industrial Technology	Engr. Gina R. Eje
Asso. Dean, College of Informatics and Computing Sciences	Mr. Lloyd H. Macatangay
Head, Expanded Tertiary Education Equivalency and Accreditation Program (ETEEAP)	Dr. Gil B. Barte
Head, General Education	Ms. Marie Gale C. Agena
Head, Registration Services	Engr. Anicia M. Villena
Head, Library Services	Ms. Jannice B. Vejerano
Head, Health Services	Ms. Mayra J. Melo
Head, Testing and Admission	Engr. Rhea M. Macatangay
Head, On the Job Training	Engr. Adrian Ferdinand M. Melo
Head, Student Organization	Mr. Jefferson I. Cañada
Head, Guidance and Counseling	Engr. Carol Biklin G. Macabagdal
Head, Student Discipline	Assoc. Prof. Ninfa M. Vergara



## Land Use Development and Infrastructure Plan (LUDIP)

Head, National Service Training Program	Mr. Raymond Kit M. Rodriguez
Head, Culture and Arts	Mr. Luther Jose O. Eroa
Head, Sports Development	Mr. Henry P. Mendoza
Head, Scholarship and Financial Assistance	Ms. Glenda L. De Mesa
<b>OFFICE OF THE VICE CHANCELLOR FOR ADMINISTRATION AND FINANCE</b>	
Vice Chancellor For Administration And Finance	Assoc. Prof. Myrna A. Coliat
Head, Human Resource Management	Asst. Prof. Suzette M. Mercado
Head, Records	Dr. Maricel Grace Z. Fernando
Head, Procurement	Engr. Nomer M. Sarmiento
Head, Property and Supply	Engr. Marilou A. Maala
Head, Project and Facility Management	Engr. Oliver S. Dimailig
Head, General Services	Mr. Marwin E. Manalo
Head, Environmental Management Unit	Engr. Lovely C. Añonuevo
Head, Budget	Engr. Maylen G. Eroa
Head, Cashiering	Mrs. Violeta R. Hernandez
Head, Accounting	Asst. Prof. Eunize E. Magsino
Head, Disbursing Officer	Ms. Shaira Marie D. Reyes
Pollution Control Officer	Engr. Hazel May Ann M. Ruiz
<b>OFFICE OF THE VICE CHANCELLOR FOR RESEARCH DEVELOPMENT &amp; EXTENSION SERVICES</b>	
Vice Chancellor For Research, Development And Extension Services	Dr. Elisa D. Gutierrez
Head, Research	Dr. Sicily B. Tiu
Head, Extension Services	Engr. Edzel M. Gamab
<b>OFFICE OF THE VICE CHANCELLOR FOR DEVELOPMENT AND EXTERNAL AFFAIRS</b>	
Vice Chancellor For Development And External Affairs	Assoc. Prof. Alex I. Magboo
Head, ICT Services	Dr. Christopher C. Chua
Head, Planning and Development	Engr. Victor A. Semira
Head, External Affairs	Dr. Rowell M. Hernandez
Head, Resource Generation	Dr. Carmela S. Macatangay



EXTENSION CAMPUSES UNDER BATSTATEU ALANGILAN	
BATANGAS STATE UNIVERSITY BALAYAN	
OFFICE OF THE CAMPUS DIRECTOR	
Campus Director	Dr. Rhobert E. Alvarez
Head, Academic Affairs	Dr. Rhobert E. Alvarez
Head, Research And Extension	Ms. Jean Karla M. Castillo
Head, Development And External Affairs	Ms. Ma. Luz I. Sanchez
Head, Administrative Services	Dr. Michelle M. Del Rosario
BATANGAS STATE UNIVERSITY LOBO	
OFFICE OF THE CAMPUS DIRECTOR	
Campus Director	Dr. Romel U. Briones
Dean, College of Agriculture and Forestry	Dr. Myrna A. Garcia
Head, Academic Affairs	Dr. Myrna A. Garcia
Head, Research and Extension	Asst. Prof. Mars G. Panganiban
Head, Development and External Affairs	Mr. Herbert G. Bañados, Jr.
Head, Administrative Services	Mr. Melmar D. Eje
BATANGAS STATE UNIVERSITY MABINI	
OFFICE OF THE CAMPUS DIRECTOR	
Campus Director	Dr. Jodi Belina A. Bejer
Head, Academic Affairs	Dr. Sherry Joy A. Del Mundo
Head, Research and Extension	Dr. Jodi Belina A. Bejer
Head, Development and External Affairs	Dr. Sherry Joy A. Del Mundo
Head, Administrative Services	Dr. Jodi Belina A. Bejer

(e) Programs offered

Table AL-2 presents the existing and the newly offered courses in BatStateU Alangilan campus. Homing three major colleges in the University namely CEAFA, CIT and CICS, Alangilan is among the campuses with the most number of courses offered and thus, numbers of students.

Table AL-3. Programs offered in BatStateU Alangilan

College of Engineering, Architecture and Fine Arts (CEAFA)
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## Land Use Development and Infrastructure Plan (LUDIP)

Graduate Programs	<b>Academic Program</b>
	Doctor of Philosophy in Electronics Engineering
	Doctor of Philosophy in Engineering Education
	Doctor of Philosophy in Engineering Management
	Master of Science in Electronics Engineering
	Master of Science in Computer Engineering
	Master of Science in Advanced Manufacturing
	Master of Science in Artificial Intelligence
	Master of Science in Construction Management
	Master of Science in Earthquake Engineering
	Master of Science in Energy Engineering
	Master of Science in Engineering Management
	Master of Science in Material Science and Engineering
	Master of Science in Transportation Engineering
	Master of Engineering Major in Civil Engineering Major in Chemical Engineering Major in Computer Engineering Major in Electrical Engineering Major in Electronics Engineering Major in Environmental Engineering Major in Industrial Engineering Major in Mechanical Engineering
	Straight Bachelor to Master in Electronics Engineering
	Straight Masteral to Doctoral in Electronics Engineering
	Master in Urban Planning and Design
Undergraduate Programs	Bachelor of Science in Chemical Engineering
	Bachelor of Science in Civil Engineering
	Bachelor of Science in Computer Engineering
	Bachelor of Science in Electrical Engineering Major in Machine Automation and Process Control Major in Renewable Source Energy Design



	Bachelor of Science in Electronics Engineering Major in Computer Communications Major in Microelectronics Major in Telecommunications and Building Infrastructure
	Bachelor of Science in Food Engineering
	Bachelor of Science in Industrial Engineering
	Bachelor of Science in Instrumentation and Control Engineering
	Bachelor of Science in Mechanical Engineering
	Bachelor of Science in Mechatronics Engineering
	Bachelor of Science in Petroleum Engineering
	Bachelor of Science in Sanitary Engineering
	Bachelor of Science in Aerospace Engineering
	Bachelor of Science in Automotive Engineering
	Bachelor of Science in Biomedical Engineering
	Bachelor of Science in Ceramics Engineering
	Bachelor of Science in Geodetic Engineering
	Bachelor of Science in Geological Engineering
	Bachelor of Science in Metallurgical Engineering
	Bachelor of Science in Naval Architecture and Marine Engineering
	Bachelor of Science in Transportation Engineering
	Bachelor of Science in Architecture
	Bachelor of Fine Arts major in Visual Communication
	Bachelor of Science in Interior Design
<b>College of Informatics and Computing Sciences (CICS)</b>	
Graduate Programs	Master of Information Technology
	Master of Science in Computer Science
	Master of Science in Data Science
	Master of Science in Information Technology
Undergraduate Programs	Bachelor of Science in Computer Science



	Bachelor of Science in Information Technology
<b>College of Industrial Technology (CIT)</b>	
Graduate Programs	Doctor of Technology
	Master of Technology
Undergraduate Programs	Bachelor of Industrial Technology major in: Automotive Technology Computer Technology Civil Technology Drafting Technology Electrical Technology Electronics Technology Food Technology Instrumentation and Control Technology Mechanical Technology Mechatronics Technology Welding and Fabrication Technology

(f) Recognition and awards obtained from international/national/ regional or private award giving bodies.

The university is the **largest provider of engineering education in the country, offering 25 graduate and 21 undergraduate engineering programs**. As a pioneer in the full implementation of **outcomes-based teaching and learning** and the integration of **Technopreneurship** in its curriculum, the College addresses the concerns of the present and requirements of the future by concretizing strategic initiatives in instructional delivery, research productivity, and community-oriented extension activities. These serve as platforms that highlight the impact of engineering and creative solutions to local and global contexts.

***Nurturing Innovators by Embracing Standards of Excellence***

The university is the **only state university in the Philippines** with engineering programs accredited by the **Accrediting Board for Engineering and Technology – Engineering Accreditation Commission**, a US-based accrediting body that sets the gold standard of engineering and technology accreditation in the world. In addition, it is recognized by the Philippine government, through the Commission on Higher Education, as a **Center of Excellence in Electronics Engineering and Center of Development in Mechanical Engineering and Electrical Engineering**.

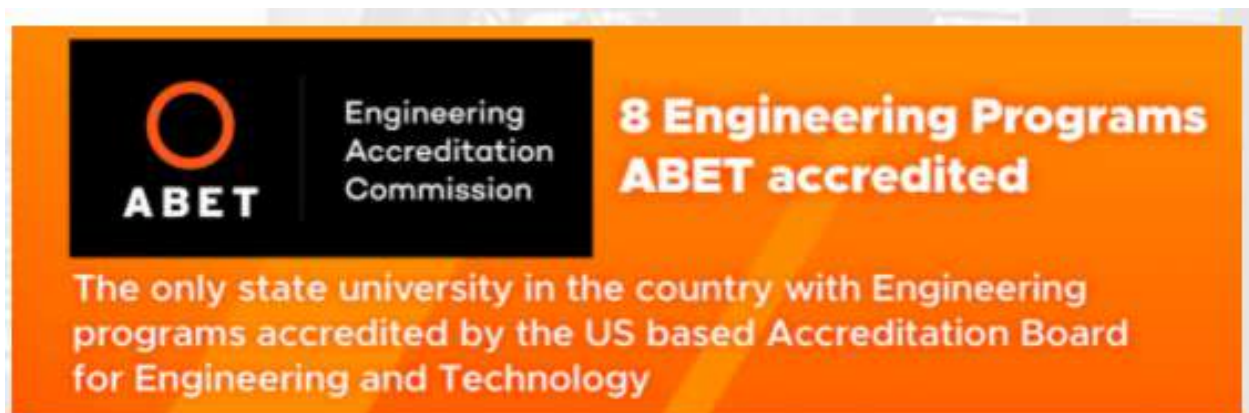


Figure AL-12. ABET Logo and definition

Just recently, the university received a three-star rating from **QS Stars**, with its Electronics Engineering program receiving a four-star rating. The college's engineering programs are also accredited by the **Philippine Technological Council**, the sole organization recognized by the Philippine government to accredit engineering programs in accordance with international standards. The College is home to top notch licensed engineers, with over **166 graduates topping the national licensure and certification examinations** administered by the Philippine Regulation Commission.





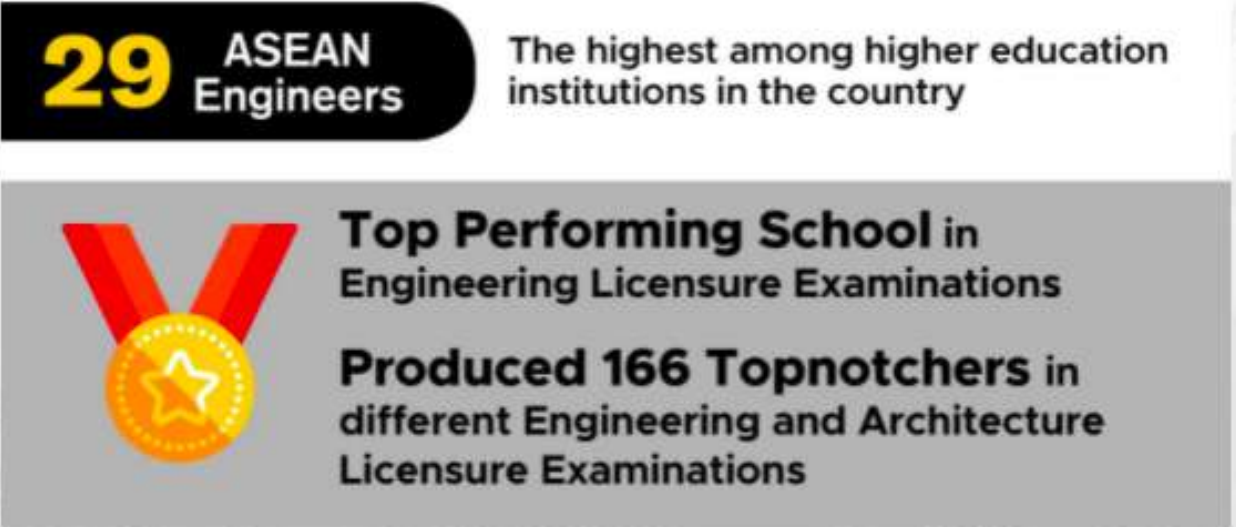


Figure AL-13. Awards received by the University from various award giving bodies

**Partnering with the Nation and the World**

The university has engaged more than 100 international and national universities and over 1,000 industries as its partners in the delivery of engineering education. Anchored primarily on the tenets of outcomes-based education, all of its program offerings undergo continuous quality improvement through national and international accreditation. Its faculty and students engage in industry immersion, faculty and student exchanges, and international cooperation to ensure that the graduates achieve the student outcomes that would allow them to thrive in their professional and career practice in local and global environments.

**ISO-Certified Institution**



TÜV Rheinland Philippines, Inc. awarded the university the ISO 9001:2008 certification in December 2017, and the ISO 9001:2015 certification after passing the external surveillance audit in September 2018. The ISO certification covers the design, development, and implementation of higher education services.

Figure AL-14. ISO Certification issued to the University

**National Awards and Citations**

Two of Batangas State University's research projects received the National Gawad KALASAG (Kalamidad at Sakuna LAbanan, SARiling Galing ang Kaligtasan) award from the Office of Civil Defense – National Disaster Risk Reduction and Management Council or NDRRMC. The amphibious vehicle known as the Tactical Operative Amphibious

Drive or TOAD, which can be used for rescue operations during heavy floods, received the special award in November 2016.

On the other hand, the research project of the university dubbed as Solar-Powered Isotropic Generator of Acoustic Wave or SIGAW, which is a tsunami early warning device, received a Special Recognition during the Gawad Kalasag awards night in December 2018.

Gawad Kalasag is an annual awarding ceremony for significant initiatives in the promotion and advancement of Disaster Risk Reduction and Management in the country.



Figure AL-15. BatStateU TOAD and Project Sigaw

**BatStateU Technology Park designated as Special Economic Zone**





**Figure IA16. BatStateU KIST Park**

Through Proclamation No. 947, President Rodrigo Roa Duterte designated the BatStateU Knowledge, Innovation, and Science Technology or KIST Park as a Special Economic Zone. It is the first KIST Park registered by the Philippine Economic Zone Authority or PEZA.

Strategically located near other technology parks, business hubs and transport systems in the CALABARZON Region, the Batangas State University KIST Park clearly serves as the top location for technology transfer and commercialization in the Philippines.

### Home of ASEAN-registered Engineers

The University has 29 ASEAN Engineers in the faculty roster, awarded by the ASEAN Federation of Engineering Organisations (AFEO), which facilitates the mobility of engineers within the ASEAN countries.

### Hosting of International Conferences



**Figure AL-17. BatStateU as it Hosts International Conferences**



The university hosted 6 international conferences on engineering, science, technology, business, education, social sciences, disaster risk management and climate change adaptation, showcasing progressive leadership in these areas.

**Table AL-4. Quality Assurance Related Recognitions**

ACADEMIC PROGRAMS	CHED/COPC	AACUP	ABET	PTC/PI CAB	COE/COD
<b>College of Engineering, Architecture and Fine Arts (CEAFA)</b>					
Graduate Programs					
Doctor of Philosophy in Electronics Engineering	COPC No. 009, S. 2019 effective AY 2019 – 2020				
Master of Science in Computer Engineering	Evaluated on Feb. 17, 2017 (RQUAT) and March 7-8, 2019 (TC) Submitted Compliance Report last Dec. 10, 2020, awaiting release.	Level II Re-accredited Effective Dec. 16, 2019 - Dec. 15, 2023			
Master of Science in Electronics Engineering	COPC No. 010, S. 2019 effective AY 2019 – 2020	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
Master of Engineering Major in Electronics Engineering	COPC No. 011, S. 2019 effective AY 2019 – 2020	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
Master of Engineering Major in Electrical Engineering	COPC No. 012, S. 2019 effective AY 2019 – 2020	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
Master of Engineering Major in Computer Engineering	COPC No. 042, S. 2020 effective AY 2020 – 2021	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			





## Land Use Development and Infrastructure Plan (LUDIP)

Master of Engineering Major in Chemical Engineering	COPC No. 001, S. 2020 effective AY 2020 – 2021	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
Master of Engineering Major in Civil Engineering	Awaiting results	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
Master of Engineering Major in Civil Engineering	Awaiting results	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
Master of Engineering Major in Environmental Engineering	Awaiting results	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
Master of Engineering Major in Industrial Engineering	Awaiting results	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
Master of Engineering Major in Mechanical Engineering	Awaiting results	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
Master in Urban Planning and Design	Submitted for COPC Application on January 26, 2021. Waiting for evaluation.				
Master of Science in Advanced Manufacturing	Submitted for COPC Application on January 26, 2021. Waiting for evaluation.				



# Land Use Development and Infrastructure Plan (LUDIP)

Master of Science in Artificial Intelligence	Submitted for COPC Application on January 26, 2021. Waiting for evaluation.				
Master of Science in Construction Management	Submitted for COPC Application on January 26, 2021. Waiting for evaluation.				
Master of Science in Earthquake Engineering	Submitted for COPC Application on January 26, 2021. Waiting for evaluation.				
Master of Science in Energy Engineering	Submitted for COPC Application on January 26, 2021. Waiting for evaluation.				
Master of Science in Engineering Management	Submitted for COPC Application on January 26, 2021. Waiting for evaluation.				
Master of Science in Material Science and Engineering	Submitted for COPC Application on January 26, 2021. Waiting for evaluation.				
Master of Science in Transportation Engineering	Submitted for COPC Application on January 26, 2021. Waiting for evaluation.				
Doctor of Philosophy in Engineering Education	Application on January 26, 2021. Waiting for evaluation.				
Doctor of Philosophy in Engineering Management	Application on January 26, 2021. Waiting for evaluation.				
Straight Bachelor to Master in Electronics Engineering	Application on January 26, 2021. Waiting for evaluation.				
Straight Masteral to Doctoral in Electronics Engineering	Application on January 26, 2021. Waiting for evaluation.				
Undergraduate Programs					



## Land Use Development and Infrastructure Plan (LUDIP)

Bachelor of Science in Chemical Engineering	GR No. 063, S. 2015 effective AY 2014 - 2015	Level II Re-accredited Effective Sept. 1, 2019 - Aug. 31, 2020 (Passed Level III Phase 1. Must undergo Phase 2)	ABET EAC accredited from Oct. 1, 2014. SSR was submitted to ABET by last July 1, 2022 and for general review/visit this November 2022	AN: A7023 - BATSU - CHE1B, accredited for AY 2017 - 2018 thru AY 2020 - 2021	
Bachelor of Science in Civil Engineering	GR No. 069, S. 2015 effective AY 2014 - 2015	Level III Re-accredited Effective Dec. 1, 2018 - Nov. 30, 2019 (Passed Level IV Phase 1. Must undergo Phase 2)	ABET EAC accredited until September 30, 2023 retroactive from Oct. 1, 2014. SSR must be submitted to ABET by July 1, 2022	AN: A7023 - BATSU - CVE1B, accredited for AY 2017 - 2018 thru AY 2020 - 2021	
Bachelor of Science in Computer Engineering	GR No. 079, S. 2015 effective AY 2014 - 2015	Level III Re-accredited Effective Jan. 2021 - Dec. 2021 (Passed Level III Phase I. Must undergo Phase 2)	ABET EAC accredited from Oct. 1, 2016. SSR was submitted to ABET by last July 1, 2022 and for general review/visit this November 2022	AN: A6018 - BATSU - CPE1A, accredited for AY 2018 - 2019 thru AY 2019 - 2020	
Bachelor of Science in Electrical Engineering	GR No. 064, S. 2015 effective AY 2014 - 2015	Level III Re-accredited Effective Dec. 1, 2018 - Nov. 30, 2019 (Passed Level IV Phase 1. Must undergo Phase 2)	ABET EAC accredited from Oct. 1, 2014. SSR was submitted to ABET by last July 1, 2022 and for general review/visit this November 2022	AN: A5008 - BATSU - ELE1B, accredited for AY 2015 - 2016 thru AY 2018 - 2019	Center of Development



## Land Use Development and Infrastructure Plan (LUDIP)

Bachelor of Science in Electronics Engineering	GR No. 068, S. 2015 effective AY 2014 - 2015	Level III Re-accredited Effective Dec. 1, 2018 - Nov. 30, 2019 (Passed Level IV Phase 1. Must undergo Phase 2)	ABET EAC accredited from Oct. 1, 2014. SSR was submitted to ABET by last July 1, 2022 and for general review/visit this November 2022	AN: A5008 - BATSU - ECE1B, accredited for AY 2015 - 2016 thru AY 2018 - 2019	Center of Excellence
Bachelor of Science in Food Engineering	Evaluated on March 7-8, 2019 (TC) and June 25, 2019. Awaiting results.	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
Bachelor of Science in Industrial Engineering	GR No. 080, S. 2015 effective AY 2014 - 2015	Level II Re-accredited Effective Sept. 1, 2018 - Aug. 31, 2019 (Passed Level III Phase 1. Must undergo Phase 2)	ABET EAC accredited from Oct. 1, 2014. SSR was submitted to ABET by last July 1, 2022 and for general review/visit this November 2022	AN: A7023 - BATSU - INE1B, accredited for AY 2017 - 2018 thru AY 2020 - 2021	
Bachelor of Science in Instrumentation and Control Engineering	COPC No. 041, S. 2020 effective AY 2020 - 2021	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
Bachelor of Science in Mechanical Engineering	GR No. 067, S. 2015 effective AY 2014 - 2015	Level IV Re-accredited (Effective May 5, 2019 - April 30, 2023)	ABET EAC accredited from Oct. 1, 2014. SSR was submitted to ABET by last July 1, 2022 and for general review/visit this November 2022	AN: A5008 - BATSU - MCE1A, accredited for AY 2015 - 2016 thru AY 2020 - 2021	Center of Development





## Land Use Development and Infrastructure Plan (LUDIP)

Bachelor of Science in Mechatronics Engineering	COPC No. 040, S. 2020 effective AY 2020 - 2021	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
Bachelor of Science in Petroleum Engineering	Evaluated on March 7-8, 2019 (TC) and Dec. 1, 2020. Required documents submitted online on Dec. 1, 2020. Awaiting release.	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
BS Sanitary Engineering	GR No. 127, S. 2015 effective AY 2014 - 2015	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024	ABET EAC accredited from Oct. 1, 2016. SSR was submitted to ABET by last July 1, 2022 and for general review/visit this November 2022	AN: A6018 - BATSU - ESE1A, accredited for AY 2018 - 2019 thru AY 2019 -	
BS Aerospace Engineering					
BS Automotive Engineering	Visited on April 8, 2021. Awaiting results.				
BS Biomedical Engineering	Visited on April 8, 2021. Awaiting results.				
BS Ceramics Engineering	Visited on April 8, 2021. Awaiting results.				
BS Geodetic Engineering	Visited on April 8, 2021. Awaiting results.				
BS Geological Engineering	Visited on April 8, 2021. Awaiting results.				
BS Metallurgical Engineering	Submitted response to TC document evaluation on May 31, 2021.				



# Land Use Development and Infrastructure Plan (LUDIP)

BS Naval Architecture and Marine Engineering	Submitted for COPC Application on January 26, 2021. Waiting for evaluation.				
BS Transportation Engineering	Visited on April 8, 2021. Awaiting results.				
BS Architecture	Evaluated on Sept. 7, 2012. Submitted application and fees on Nov. 3, 2017. Awaiting result.	Level II Re-accredited Effective Sept. 1, 2018 - Aug. 31, 2019 (Passed Level III Phase 1. Must undergo Phase 2)			
BS Interior Design	Submitted application and fees on Nov. 3, 2017. Awaiting action.	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
Bachelor of Fine Arts Major in Visual Communication	Submitted application and fees on Nov. 3, 2017. Awaiting action.	Level II Re-accredited Effective Nov. 1, 2020 - Oct. 31, 2024			
College of Informatics and Computing Sciences (CICS)					
Graduate Programs					
Master of Science in Computer Science	COPC No. 043, S. 2020 effective AY 2020 - 2021	Level II Re-accredited Effective Dec. 16, 2019 - Dec. 15, 2023			
Master of Science in Data Science and Analytics	Submitted for COPC Application on January 26, 2021. Waiting for evaluation.				



# Land Use Development and Infrastructure Plan (LUDIP)

Master of Science in Information Technology	COPC No. 044, S. 2020 effective AY 2020 - 2021	Level II Re-accredite d Effective Dec. 16, 2019 - Dec. 15, 2023			
Undergraduate Programs					
BS Computer Science	GR No. 108, S. 2016 effective AY 2016 - 2017	Level II Re-accredite d Effective Sept. 1, 2019 - Aug. 31, 2020 (Passed Level III Phase 1. Must undergo Phase 2)	ABET CAC accredited until September 30, 2025, retroactive from Oct. 1, 2016. Request to ABET for reaccreditati on visit by Jan. 31, 2024. SSR must be submitted to ABET by July 1, 2024	CAC-SAA -006.3, 20191126 accredite d June 2, 2018 Request to PICAB for reaccredit ation visit by Jan. 31, 2022. SSR must be submitted to PICAB by July 1, 2022	
BS Information Technology	GR No. 116, S. 2016 effective AY 2016 - 2017	Level II Re-accredite d Effective Sept. 1, 2019 - Aug. 31, 2020 (Passed Level III Phase 1. Must undergo Phase 2)	ABET CAC accredited until September 30, 2025, retroactive from Oct. 1, 2016. Request to ABET for reaccreditati on visit by Jan. 31, 2024. SSR must be submitted to ABET by July 1, 2024	CAC-SAA -006.3, 20191126 accredite d June 2, 2018 Request to PICAB for reaccredit ation visit by Jan. 31, 2022. SSR must be submitted to PICAB by July 1, 2022	
College of Industrial Technology (CIT)					
Graduate Programs					
Doctor of Technology		Level I Accredited Effective Dec. 1, 2017 - Nov. 30, 2020			



Level I Accredited Effective Dec. 1, 2017 - Nov. 30, 2020		Level I Accredited Effective Dec. 1, 2017 - Nov. 30, 2020			
<b>Undergraduate Programs</b>					
Bachelor of Industrial Technology Major in Automotive Technology	COPC No. 169, S. 2020 effective AY 2020 -2021	Level III Re-accredite d Effective Dec.1, 2018 - Nov. 30, 2019 (Passed Level IV Phase 1. Must undergo Phase 2)			
Bachelor of Industrial Technology Major in Civil Technology	COPC No. 170, S. 2020 effective AY 2020 -2021	Level III Re-accredite d Effective Dec.1, 2018 - Nov. 30, 2019 (Passed Level IV Phase 1. Must undergo Phase 2)			
Bachelor of Industrial Technology Major in Electrical Technology	COPC No. 171, S. 2020 effective AY 2020 -2021	Level III Re-accredite d Effective Dec.1, 2018 - Nov. 30, 2019 (Passed Level IV Phase 1. Must undergo Phase 2)			





## Land Use Development and Infrastructure Plan (LUDIP)

Bachelor of Industrial Technology Major in Electronics Technology	COPC No. 172, S. 2020 effective AY 2020 -2021	Level III Re-accredited Effective Dec.1, 2018 - Nov. 30, 2019 (Passed Level IV Phase 1. Must undergo Phase 2)			
Bachelor of Industrial Technology Major in Mechanical Technology	COPC No. 173, S. 2020 effective AY 2020 -2021	Level III Re-accredited Effective Dec.1, 2018 - Nov. 30, 2019 (Passed Level IV Phase 1. Must undergo Phase 2)			
Bachelor of Industrial Technology Major in Mechatronics Technology	COPC No. 174, S. 2020 effective AY 2020 -2021	Level III Re-accredited Effective Dec.1, 2018 - Nov. 30, 2019 (Passed Level IV Phase 1. Must undergo Phase 2)			
Bachelor of Industrial Technology Major in Welding and Fabrication Technology	COPC No. 175, S. 2020 effective AY 2020 -2021	Level III Re-accredited Effective Dec.1, 2018 - Nov. 30, 2019 (Passed Level IV Phase 1. Must undergo Phase 2)			



Bachelor of Industrial Technology Major in Drafting Technology	COPC No. 176, S. 2020 effective AY 2020 -2021	Level III Re-accredited Effective Dec.1, 2018 - Nov. 30, 2019 (Passed Level IV Phase 1. Must undergo Phase 2)			
Bachelor of Industrial Technology Major in Computer Technology	COPC No. 177, S. 2020 effective AY 2020 -2021	Level III Re-accredited Effective Dec.1, 2018 - Nov. 30, 2019 (Passed Level IV Phase 1. Must undergo Phase 2)			
Bachelor of Industrial Technology Major in Instrumentation and Control Technology	COPC No. 178, S. 2020 effective AY 2020 -2021	Level III Re-accredited Effective Dec.1, 2018 - Nov. 30, 2019 (Passed Level IV Phase 1. Must undergo Phase 2)			

Alignment with the LGU’s Vision

Batangas City’s Vision Statement

*A well diversified agro-industrial center and international gate-way, with a tourist friendly and safe environment and quality infrastructure, powered by a globally-competitive citizenry, and inspired by transparent, firm, and fair leadership.*

*(Source: <https://www.batangascity.gov.ph/web/about-the-city/general-information/mission-vision>)*

Role of the SUC in Local and Regional Development

As one of the country’s model higher education institutions recognized by the Commission on Higher Education (CHED), BatStateU is the first and thus far the only state university in the Philippines with engineering, IT, and computer science programs accredited by the Accreditation Board for Engineering and Technology (ABET) –



Engineering Accreditation Commission and Computing Accreditation Commission. With 15 development centers, it is recognized by the Regional Development Council of Region IV-A as the Regional Center for Technology Business Incubation and Development, and as the Regional Center for Science, Technology, Engineering, and Environment Research.

With over 40,000 students facilitated by 1,700 faculty and staff in 11 campuses, Batangas State University remains steadfast in its adherence to international standards.

B. Demographic Profile

The total enrolment in Batangas State University- Alangilan is 19622 students as of 1st semester A.Y. 2022-2023 and 779 teaching and non-teaching personnel.

Alangilan campus caters programs from Pre-baccalaureate, baccalaureate, and graduate studies. The summary of the population for the Academic Year 2016-2022 of the Alangilan Campus are shown in the table. Pre-baccalaureate program was able to record the highest from the academic year 2016-2017 with 1995 for the first semester and 1992 for the second. There is however a decreasing enrolment record with AY 2019-2020 able to admit only 99 students during its second semester. No recorded enrolled students for the pre-baccalaureate degrees on the succeeding semesters.

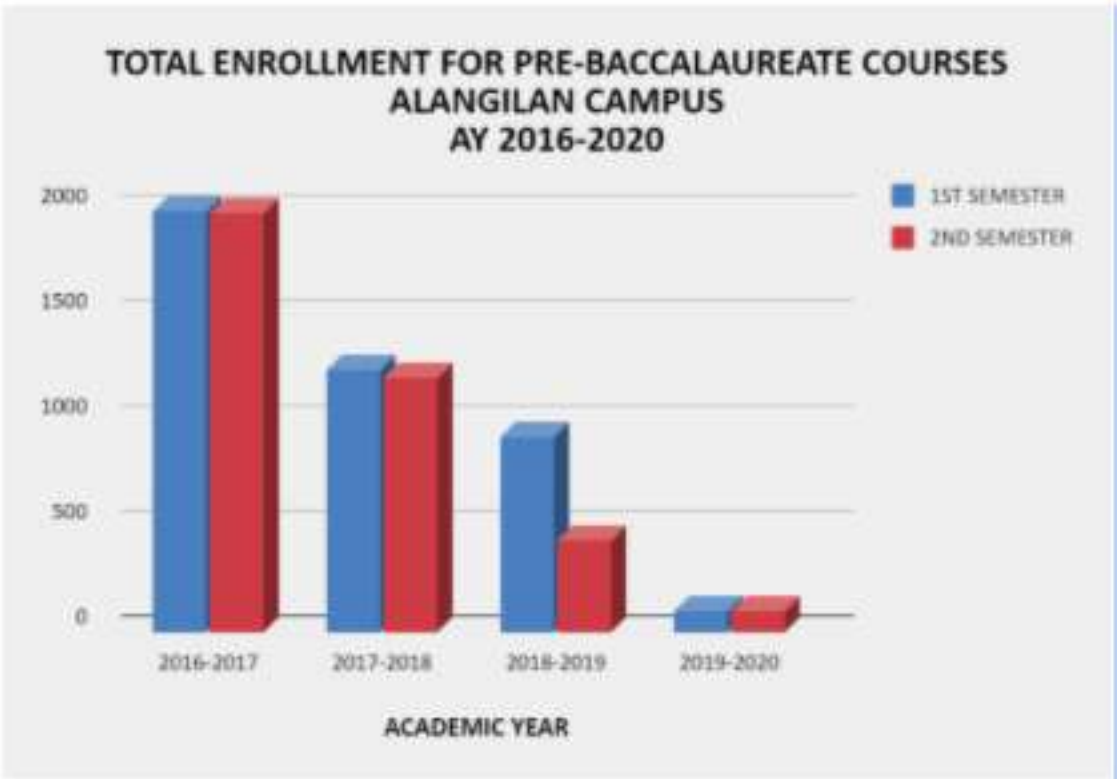


Figure AL-18. Total Enrollment for Pre-Baccalaureate Courses - Alangilan Campus (2016-2020)

On the other hand, baccalaureate degrees enrollment trend increases as shown on the graph. Its highest enrolment is recorded for the AY 2020-2021 with 9141 and 12372 students for first and second semester respectively.

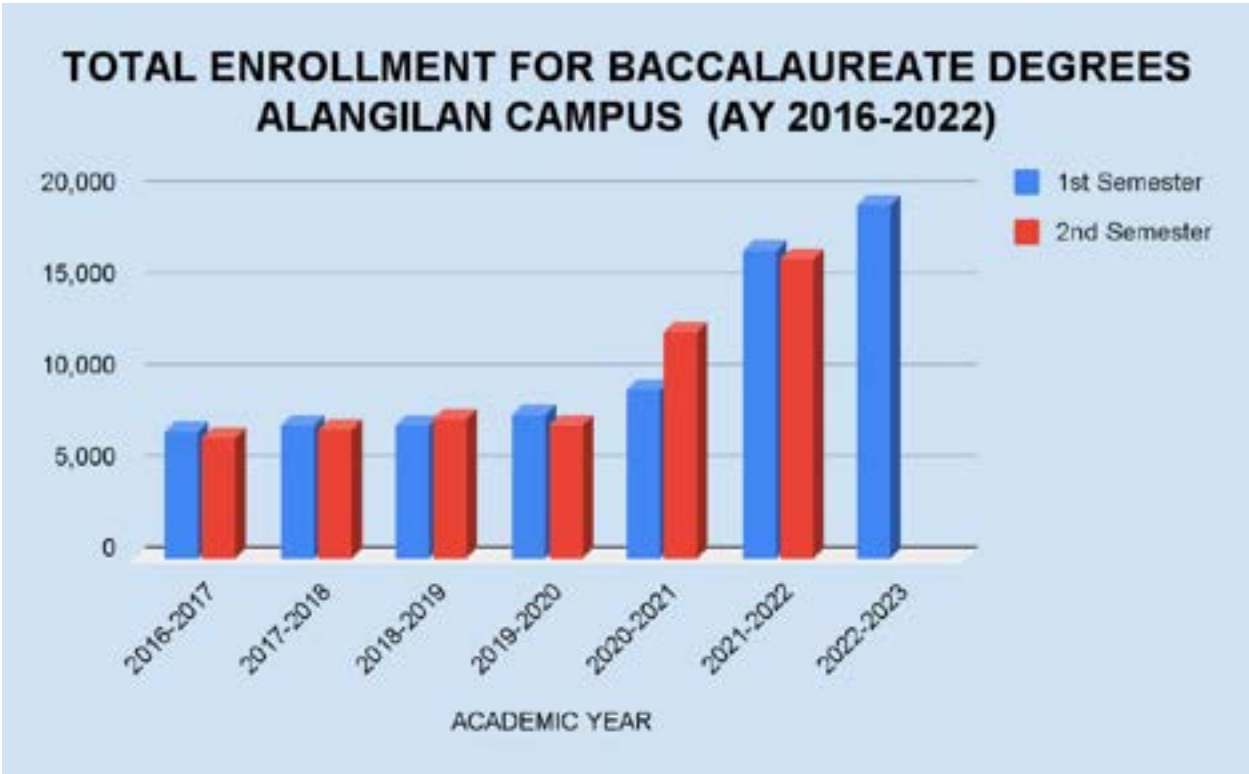


Figure IA-19. Total Enrollment for Baccalaureate Courses - Alangilan Campus (2016-2022)

Programs under the graduate school composed of both the masters and doctoral programs are relatively lower in terms of enrolment. The highest number of enrollees recorded for the Master’s programs was during the first semester of AY 2022-2023 with a total of 264 enrollees. Doctoral degree programs on the other hand were able to have 93 students enrolled in the first semester of AY 2022-2023 which is also the highest recorded number of enrolled students.

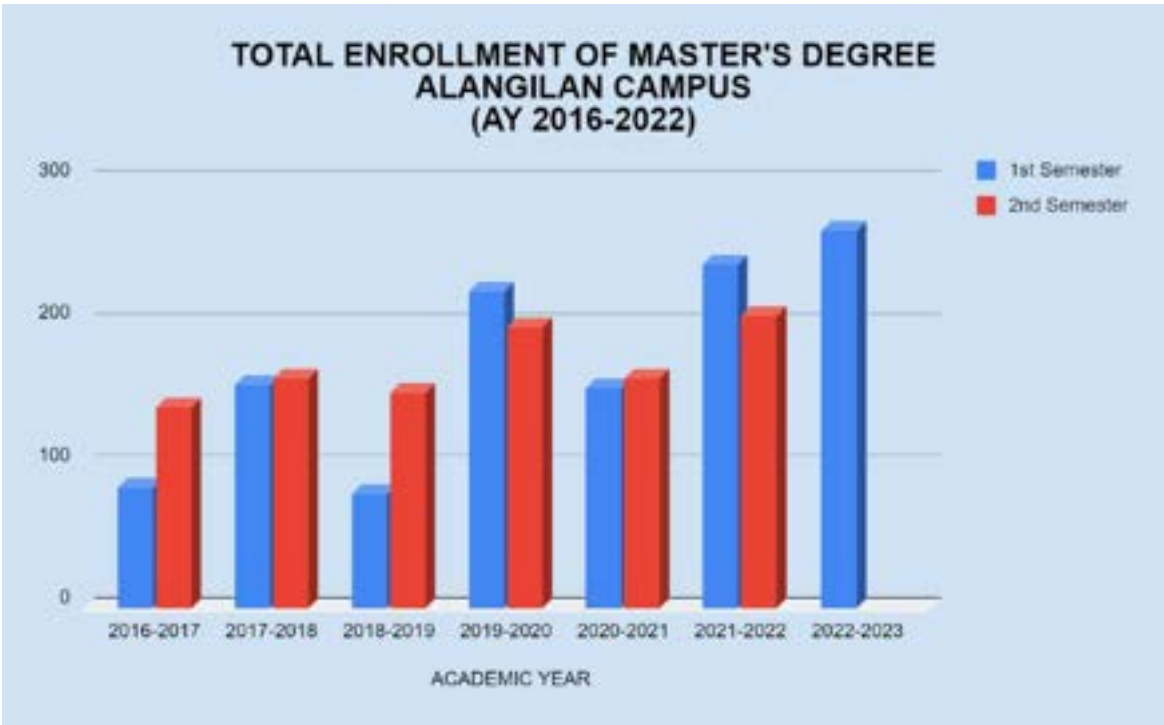


Figure AL-20. Total Enrollment for Master’s Degrees - Alangilan Campus (2016-2022)



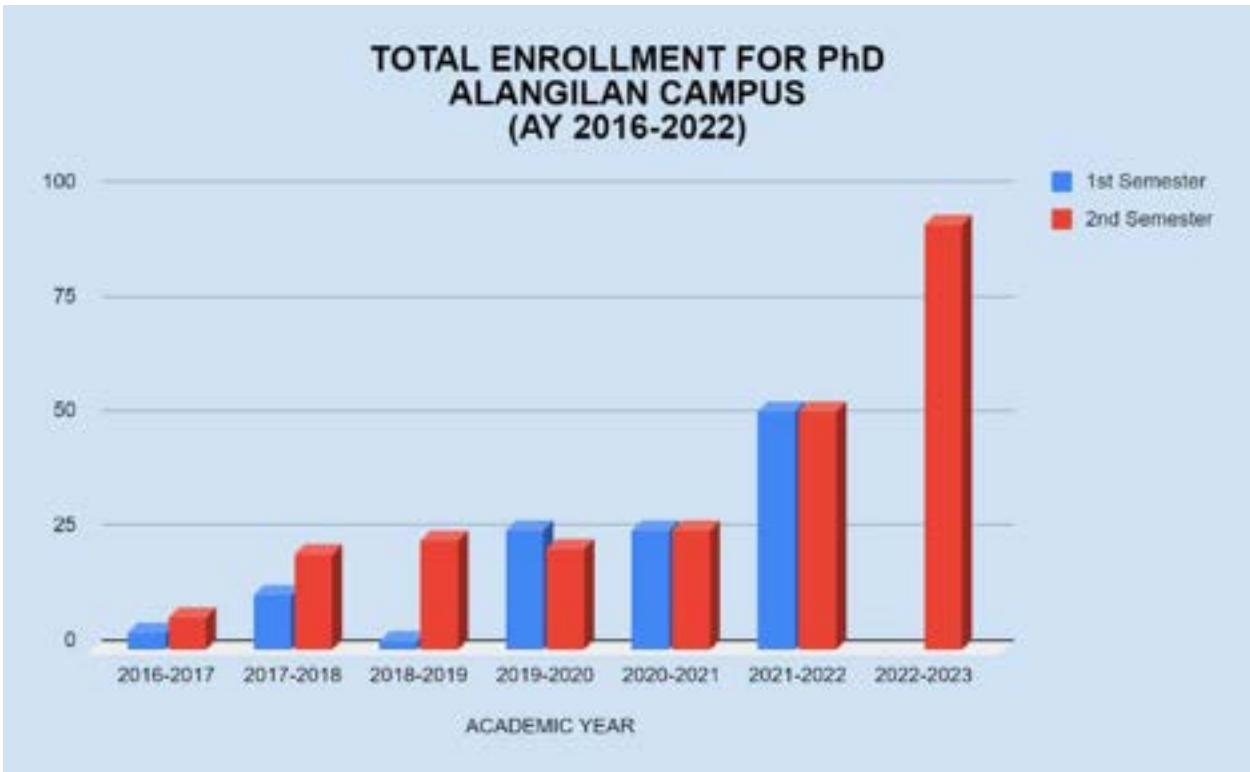


Figure AL-21. Total Enrollment for Doctoral Degrees - Alangilan Campus (2016-2022)

Shown below is the table of the profile of the students according to sex.

Table AL-5. Profile Of Students According To Sex - Alangilan Campus

Academic Year	Semester	Male	Percentage	Female	Percentage	Total Enrollees
Pre-Baccalaureate Programs						
AY 2016-2017	1st	1753	87.87	242	12.13	1995
	2nd	1712	85.94	280	14.05	1992
AY 2017-2018	1st	1078	87.01	161	12.99	1239
	2nd	1069	88.57	138	11.43	1207
AY 2018-2019	1st	791	85.61	133	14.39	924
	2nd	405	92.47	33	7.53	438
AY 2019-2020	1st	92	94.85	5	5.15	97
	2nd	93	93.94	6	6.06	99
Baccalaureate Degrees						
AY 2016-2017	1st	4047	58.24	2902	41.76	6949
	2nd	3737	56.47	2881	43.53	6618
AY 2017-2018	1st	4098	56.26	3185	43.73	7283



## Land Use Development and Infrastructure Plan (LUDIP)

	2nd	3865	55.13	3146	44.87	<b>7011</b>
AY 2018-2019	1st	4108	56.16	3207	43.84	<b>7315</b>
	2nd	4262	56.20	3322	43.80	<b>7584</b>
AY 2019-2020	1st	4150	53.14	3659	46.86	<b>7809</b>
	2nd	3919	53.82	3363	46.18	<b>7282</b>
AY 2020-2021	1st	4785	52.35	4356	47.65	<b>9141</b>
	2nd	6924	55.97	5448	44.03	<b>12372</b>
AY 2021-2022	1st	4785	52.35	4356	47.65	<b>9141</b>
	2nd	6924	55.97	5448	44.03	<b>12372</b>
AY 2022-2023	1st	9315	55.36	7510	44.64	<b>16825</b>
<i>Master's Degree</i>						
AY 2016-2017	1st	46	54.76	38	45.23	<b>84</b>
	2nd	89	63.57	51	36.43	<b>140</b>
AY 2017-2018	1st	94	60.26	62	39.74	<b>156</b>
	2nd	104	64.59	57	35.40	<b>161</b>
AY 2018-2019	1st	41	51.25	39	48.75	<b>80</b>
	2nd	93	62.00	57	38.00	<b>150</b>
AY 2019-2020	1st	141	63.80	80	36.20	<b>221</b>
	2nd	115	58.38	82	41.62	<b>197</b>
AY 2020-2021	1st	87	54.38	67	45.62	<b>154</b>
	2nd	101	61.49	60	38.51	<b>161</b>
AY 2021-2022	1st	141	58.51	100	41.49	<b>241</b>
	2nd	114	55.61	91	44.39	<b>205</b>
AY 2022-2023	1st	168	63.64	96	36.36	<b>264</b>
<i>PhD</i>						
AY 2016-2017	1st	4	100.00	0	0	<b>4</b>
	2nd	2	28.57	5	71.43	<b>7</b>
AY 2017-2018	1st	7	58.33	5	41.67	<b>12</b>
	2nd	12	57.14	9	42.85	<b>21</b>
AY 2018-2019	1st	2	100.00	0	0	<b>2</b>



## Land Use Development and Infrastructure Plan (LUDIP)

	2nd	12	50.00	12	50.00	24
AY 2019-2020	1st	15	57.69	11	42.31	26
	2nd	10	45.45	12	54.55	22
AY 2020-2021	1st	12	46.15	14	58.35	26
	2nd	13	56.52	10	43.47	23
AY 2021-2022	1st	30	57.69	22	42.31	52
	2nd	26	48.15	28	51.85	54
AY 2022-2023	1st	55	59.14	38	40.86	93

As shown in the table, for the pre-baccalaureate programs, there are more male than female students. The highest percentage for the male is during the First Semester of Academic Year 2019-2020 with 94.85% while for the female is during the First Semester of Academic Year 2018-2019 with 14.39%.

For the baccalaureate degrees, the highest percentage is during the First Semester of Academic Year 2016-2017 with 58.24% for male students. Meanwhile for the female students, the highest is during the First Semester of Academic Year 2019-2020 with 47.65%.

For the Master's degree students, the highest percentage is 64.59% for male students during the second semester of academic year 2017-2018 while for the female students the highest percentage is 48.75% during the first semester of the academic year 2018-2019.

For PhD students, the highest percentage for male is 100% for the first semester of academic year 2016-2017 and academic year 2018-2019. For the female students, the highest percentage is 71.43% during the second semester of the academic year 2016-2017.

The figure below is the graph showing profiles of all the students of Alangilan campus for the academic year 206-17 to academic year 2020-21. As seen in the figure, there is almost an equal number of male and female students.

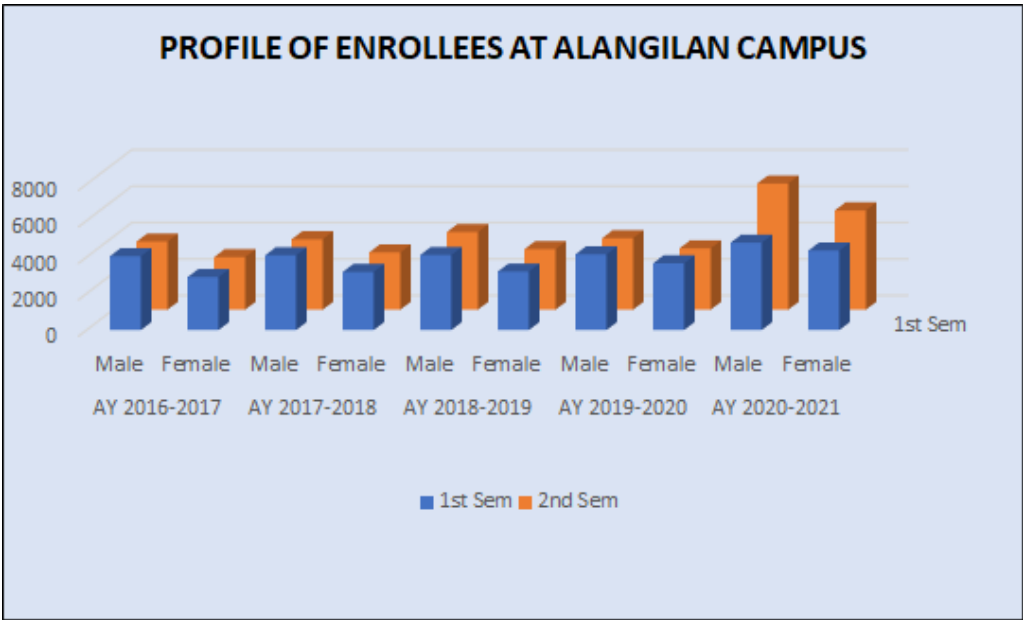


Figure AL-22. Profile of Enrollees at Alangilan Campus



(b) Projected population of students and employees in the next 10 years

Table AL-6. Projected Graduation Data

Year	Male	Female
2015-2016	1036	667
2016-2017	930	548
2017-2018	1208	580
2018-2019	1186	788
2019-2020	1369	811
2020-2021	1274	923
2021-2022	1167	720
2022-2023	1189	728
2023-2024	1232	758
2024-2025	1236	788
2025-2026	1245	788
2026-2027	1224	784
2027-2028	1216	761
2028-2029	1224	768
2029-2030	1229	775

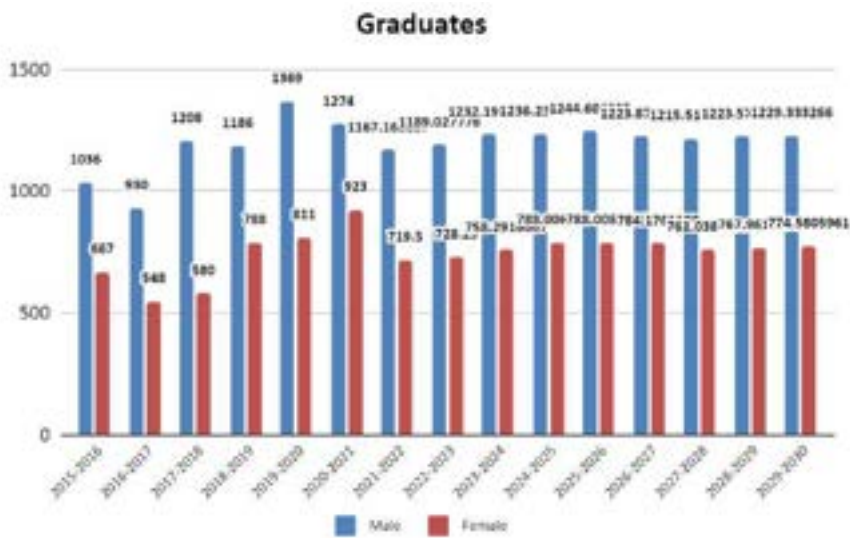


Figure IA-23. Projected Graduation Data using 6 period moving average



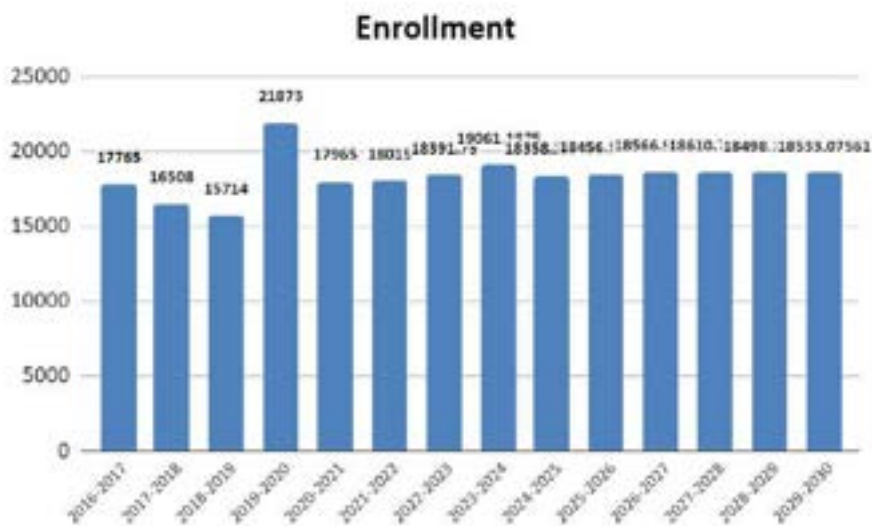


Figure AL-24. Projected Enrolment Data using 6 period moving average

Table AI-7. Projected Enrollment Data

Year	Total
2016-2017	17765
2017-2018	16508
2018-2019	15714
2019-2020	21873
2020-2021	17965
2021-2022	18015
2022-2023	18392
2023-2024	19061
2024-2025	18358
2025-2026	18457
2026-2027	18567
2027-2028	18611
2028-2029	18498
2029-2030	18533

Employee Population

Teaching employees of BatStateU Alangilan are composed of Regular, Temporary and Part-Time Lecturers. Regular and temporary are item positions experiencing complete benefits of employees with employer-employee relationship, while part time lecturers usually have main or major employment engagement with other employers and are only expected to render service during the class hours of the handled courses. There is no longer contractual faculty starting the year 2018, and is now combined with Part-time lecturers.

Teaching Personnel of Batangas State University- Alangilan

YEAR	PERMANENT	TEMPORARY	CONTRACTUAL	PART-TIME	TOTAL
2017	117	77	80	52	326
2018	119	72	0	156	347
2019	126	53	0	189	368
2020	130	48	0	241	419
2021	148	30	0	419	597
2022	149	19	0	446	614

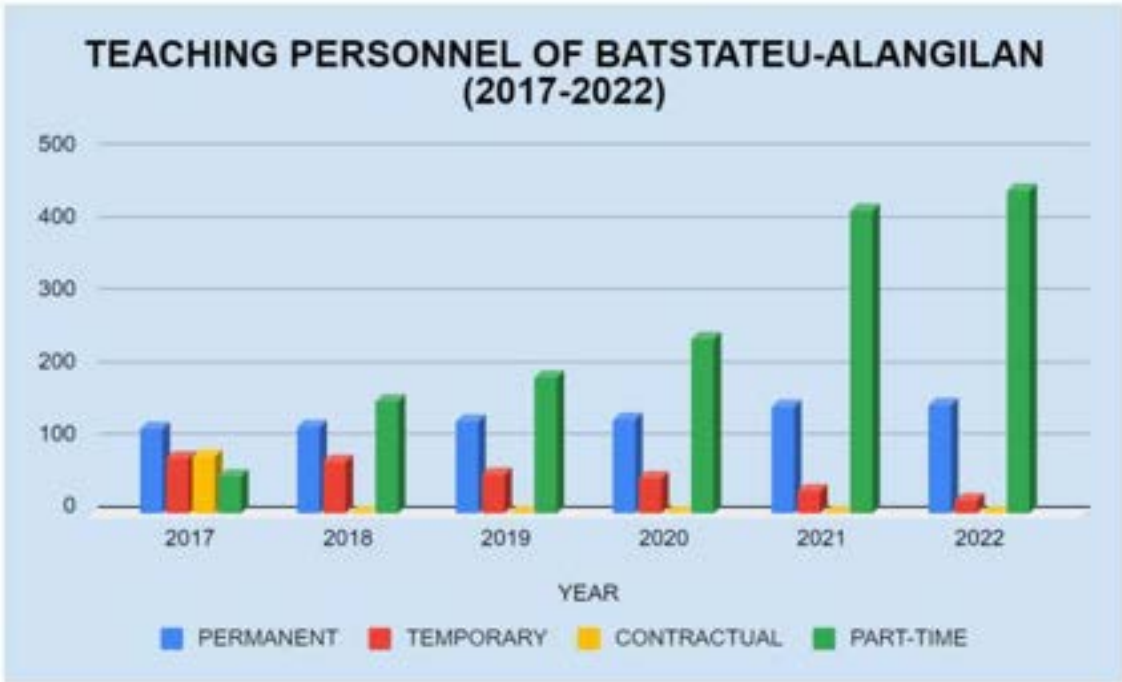


Figure AL-25. Number of Teaching Personnel in BatStateU Alangilan

Figure AL-25 is the data showing the current population of teaching personnel of the campus. It shows the increasing number of teaching personnel from 2017 up to 2022 due to the increasing number of enrolled students each year.

Non-teaching employees on the other hand are administrative or office staff that are fully employed in an office under the University. They can either be regular or with plantilla positions, casual and job orders depending on the job requirements. Majority of the non-teaching personnel are under the job order status which has a maximum limit of six month service to the university. Figure AL-26 shows the number of Non-Teaching Personnel in BatStateU Alangilan.



Non-teaching Personnel of Batangas State University- Alangilan

YEAR	REGULAR	CASUAL	JOB ORDER	TOTAL
2017	9	0	118	127
2018	8	2	126	136
2019	6	2	100	108
2020	6	2	49	57
2021	8	2	110	120
2022	10	2	153	165

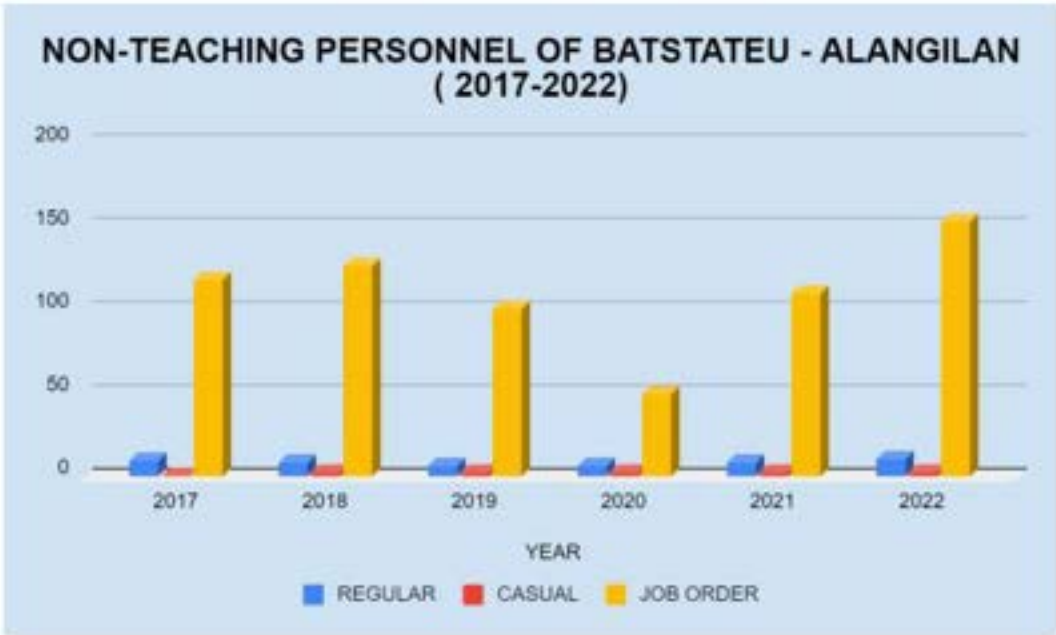


Figure IA-26. Number of Non-Teaching Personnel in BatStateU Alangilan

C. Geographic Location

(a) Brief profile of the province and municipality where the SUC is located

Batangas is a province in the Philippines situated in the CALABARZON region occupying the central section of Luzon. Its capital is the City of Batangas. The province has a **land area of 3,119.75 square kilometers or 1,204.54 square miles**. Its population as determined by the 2015 Census was 2,694,335. Shown below are the brief profiles of Batangas Province and Batangas City municipality where Batangas State University is located.



**Figure AL-27. Batangas Province’s Location in the Philippine Map**

Source:  
[https://www.google.com/search?q=Batangas+Province+profile&tbm=isch&source=iu&ictx=1&fir=6jlpasW2mCzfyM%252CtgiMGE97eTsNUM%252C\\_&vet=1&usg=AI4\\_-kT0B17tFR-VY\\_JMhioV](https://www.google.com/search?q=Batangas+Province+profile&tbm=isch&source=iu&ictx=1&fir=6jlpasW2mCzfyM%252CtgiMGE97eTsNUM%252C_&vet=1&usg=AI4_-kT0B17tFR-VY_JMhioV)



**Figure IA-28. Batangas City in the province and other provinces nearby Batangas**

The City of Batangas is a coastal city lying in a cove-like shape at the south-eastern portion of Batangas Province and geographically situated at coordinates 13 degrees, 45 minutes and 25.96 seconds north latitude and 121 degrees, 3 minutes and 29.2 seconds east longitude. It is bounded on the northwest by the municipality of San Pascual; on the north by the municipality of San Jose; on the east by the municipalities of Ibaan, Taysan and Lobo; and on the south by the Batangas Bay. Batangas City, the capital of Batangas Province has a total land area of more or less 28,541.44 hectares. It is about 112.00 kilometers away from Manila and has a travel time of approximately two (2) hours through the Southern Tagalog Arterial Road (STAR). ([https://batangascity.gov.ph/bats2/?page\\_id=129](https://batangascity.gov.ph/bats2/?page_id=129))

Batangas City, the capital of Batangas Province has a total land area of more or less 28,541.44 hectares. It is about 108.00 kilometers away from Manila and has an average travel time of approximately one hour forty-five minutes through the Southern Tagalog Arterial Road (STAR) tollway and the South Luzon Expressway (SLEX). (Source: [https://www.google.com/search?q=Batangas+Province+profile&tbm=isch&source=iu&ictx=1&fir=6jlpasW2mCzfyM%252CtgiMGE97eTsNUM%252C\\_&vet=1&usg=AI4\\_-kT0B17tFR-VY\\_JMhioV](https://www.google.com/search?q=Batangas+Province+profile&tbm=isch&source=iu&ictx=1&fir=6jlpasW2mCzfyM%252CtgiMGE97eTsNUM%252C_&vet=1&usg=AI4_-kT0B17tFR-VY_JMhioV))



Figure AL-29 shows the campuses of BatStateU distributed in the entire province of Batangas, reaching more of the stakeholders and providing quality education to many.



**Figure IA-29. Batangas State University Campuses**

Source:

<https://www.google.com/search?q=Batangas+Province+and+municipality+where+BatStateU+is+located.&og=Batangas+Province+and+municipality+where+BatStateU+is+located.&ags=chrome..69i57j69i64l3.44547j0j15&sourceid=chrome&ie=UTF->

(b) Description of the land cover, topography of the area where the SUC is located

Batangas City has a total land area of 28,541.44 hectares. Twenty-four percent (24%) of which is currently built-up areas and the remaining 76% are distributed among other land uses such as agricultural, agroforestry, forest management area, sanitary landfill, tourism and waterways. The City's designated land for agricultural development which covers 7,743.84 hectares (27.13%) is suitable only for the growing of mangoes, coconuts, bamboo, corn, sugar cane, upland rice, coffee, and other fruit bearing trees. There is no large-scale production of any agricultural crop in Batangas City. The forest resources of Batangas City are not of commercial quantity, except for bamboo, which is in demand for its usage in the construction of fish pens. Likewise, Batangas City's general topography is largely flat to gently sloping, with more than 73% of the City's land area having a slope below 15%.

In terms of residential and commercial development, increases of both uses have been observed for the past decade. The expansion of residential development grew by 62% while commercial areas grew by 35%. On the other hand, areas allotted for cemeteries and memorial parks also expanded from 4.90 hectares in 2008 to 14.64 hectares in 2018. These developments are primarily the reason for the decrease of agricultural use by more than 40% for the past 10 years. Moreover, the progression of land use and urbanization marked the economic growth of the city.

Batangas City has two (2) distinct climatic types based on the modified Coronas classification used by the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) Type I and III. Type I is characterized by two (2) distinct seasons: dry from the months of November to April and wet during the rest of the year. Type I climate type generally prevails over the mainland areas of the City where the University is located. Occurrences of storm surges in the City are infrequent, with most of storm surges only being secondary hazards brought about by strong winds from tropical cyclones/typhoons that traverse the City annually, mostly affecting the City's 21 barangays. The storm surge occurrences in the City are normally associated with strong typhoons that come during the onset of the southwest monsoon months (June-November).

(c) Brief profile of watershed/sub-watershed coverage and locations, if any, under which the SUC is part of

Batangas City is traversed by several streams that converge at the Calumpang River, which in turn flows into the Batangas Bay. Indeed, the said river divides the city into two land masses: the northern portion, which is made up of 49 barangays (which is where Batangas State University - Alangilan is situated); and the southern portion, which is made up of 56 barangays including Isla Verde.

The Calumpang River is a perennial body of water that stretches 8.10 kilometers from the municipal boundary of Ibaan to the mouth of the Calumpang River in Barangay Malitam. It has a catchment area of roughly 472.00 square kilometers. The Poblacion's south eastern limit is formed by the river, which runs into Batangas Bay about two (2) kilometers south of Batangas Port.



Source: [https://live.staticflickr.com/7863/46615095325\\_f1b74dbf41\\_b.jpg](https://live.staticflickr.com/7863/46615095325_f1b74dbf41_b.jpg)

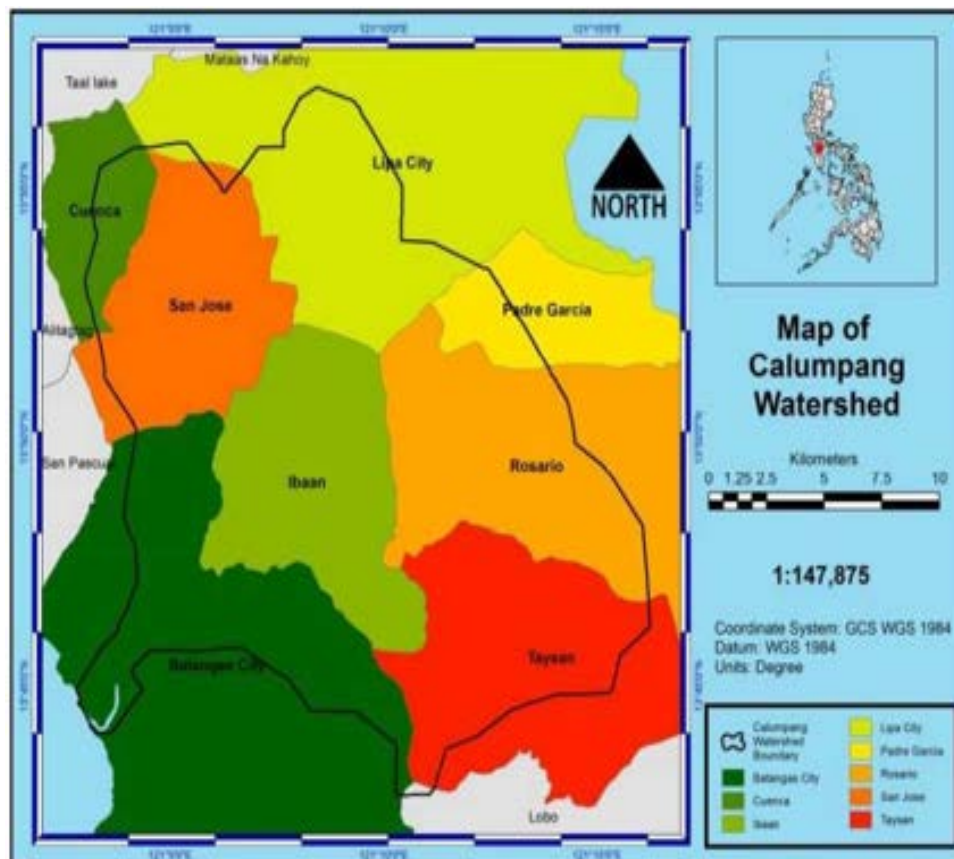
**Figure AL-30. Calumpang River**



More so, the Batangas City government is considering developing ecotourism along the entire width of the Calumpang River in Batangas province, Philippines. The water quality of this river, on the other hand, is classified as Class D by the Department of Environment and Natural Resources (DENR), making it only acceptable for agricultural and industrial use.

However, the city government emphasizes the importance of the Calumpang Watershed's ecosystem services, as well as the necessity for river rehabilitation, protection, and conservation in order to advance the river's ecological tourism plan. The Calumpang Watershed Rehabilitation and Conservation Strategic Development Program for 2013-2023, which is now in its third phase of implementation, was born out of this recognition.

The Calumpang River is located within Batangas City, but its tributaries traverse six municipalities (Cuenca, Padre Garcia, Rosario, San Jose, and Taysan) and two cities (Batangas City and Lipa City) as indicated in the map below.



**Figure IA-31. Calumpang Watershed Map**

Source: Abao, R. et al (2016). Systems Analysis and Modelling of Pollution Loading for Management of Calumpang River in Batangas City, Philippines. *International Journal of Environmental and Rural Development* 7-2.

(d) Significant national or regional/sub-national characteristics or value (e.g. biodiversity, cultural- historical, traditional or functional)

Batangas State University - Pablo Borbon is 72.51 km (45.06 mi) away from Verde Island Passage, a marine ecosystem which was recognized as the "*Center of the Center of Marine Shorefish Biodiversity*." The 1.14 million acre passage is the richest location in the Coral Triangle in terms of marine life. Many species, including hawksbill, olive ridley, and green turtles, humphead wrasses, gigantic groupers, and giant clams, are threatened, despite its potential as a UNESCO World Heritage Site.





Source:

<https://www.researchgate.net/profile/Rebecca-Weeks-2/publication/260165658/figure/fig4/AS:297242062802946@1447879438189/The-Verde-Island-Passage-Marine-Protected-Area-Network-showing-extent-of-the-prior.png>

**Figure AL-32. Verde Island Passage**



Source:

[https://ciorg.imgix.net/images/default-source/default-album/ci\\_74784462?&auto=compress&auto=format&fit=crop&w=1440&h=900](https://ciorg.imgix.net/images/default-source/default-album/ci_74784462?&auto=compress&auto=format&fit=crop&w=1440&h=900)

**Figure IA-33. The Rich Marine Biodiversity of Verde Island Passage**

As for cultural-historical value, Batangas City is blessed with a rich culture and heritage, and has become home to some of the country's most significant

national leaders whose roles and legacy helped shape the country today. In its long history, Batangas City nurtured and preserved its historical roots from the pre-Spanish settlements up to the present. This gave rise to many urban centers of culture and business in the Poblacion. Historical buildings and ancestral houses in the town proper are maintained, some are reconstructed, in a manner preserving their original features making it available for the next generation to appreciate and treasure.

The city of Batangas is the land of historical places, arts, culture and heritage, in which evidences of the past are preserved and displayed for reminiscing and inspirations at the city's various museums. These museums serve as venues where Batangas history, culture, and the arts are given importance, preserved, and eventually used as a tool for economic, moral, social, and spiritual development of the people, hence, developing in them a sense of pride in their identity as Batangueños.

The Museo Puntong Batangan (city museum) is the flagship cultural initiative of Batangas City. Designed primarily to instill a love for Batangueño culture in young people, the museum showcases the city's history and traditions through exhibits, visual and audio presentations. Also, Minor Basilica of the Immaculate Conception became one of the most visited pilgrimage sites in the province. The Minor Basilica enshrines two of the most important miraculous images of the city: the ivory image of the Immaculate Conception, the Patroness of the City and the famed black image of Santo Niño de Batangan. The dark image of the Child Jesus became one of the most well known focal points of devotion in the City and province of Batangas and enjoyed much devotion for centuries.



Source:

[http://3.bp.blogspot.com/-vcNvUi\\_Ir1k/TmwPXoIJIS/AAAAAAAAAEw0/tm2UDMYqEz0/s1600/SAM\\_4926.JPG](http://3.bp.blogspot.com/-vcNvUi_Ir1k/TmwPXoIJIS/AAAAAAAAAEw0/tm2UDMYqEz0/s1600/SAM_4926.JPG)

**Figure AL-34. Minor Basilica of the Immaculate Conception in Batangas City**



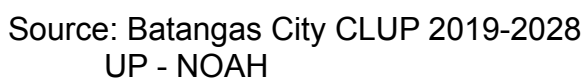
(e) Vulnerabilities and risks (landslides, earthquakes, floods, volcanic eruptions, underground caves and karst, erosion, and the like.

### ***Landslides***

Batangas City's general topography is largely flat to gently sloping, as such, the City's geo-hazard risk is generally considered to have low susceptibility to landslides. Landslide Overlay Zone are areas in the City that have been identified as highly susceptible to landslides and where specific regulations are provided in order to minimize its potential negative effect on developments. Generally, developments in these areas should be minimized or completely avoided. However, given the information and technological advancements in architecture and engineering, resilient and adaptive measures can be incorporated into the architectural and structural design of the existing and future developments, as specified in the zoning ordinance.

Some of the places within the city have high to medium susceptibility to landslides as per the Landslide Susceptibility Map. Since Batangas State University Pablo Borbon is not located near any form of mountain ranges, the susceptibility of landslides possibly occurring is low or close to none. However, landslides, rock falls and other types of mass movements may still occur in mountainous or hilly areas. Liquefaction manifested by sand boils or lateral spreading may affect low lying, waterlogged, sandy areas near the coasts or banks of rivers.





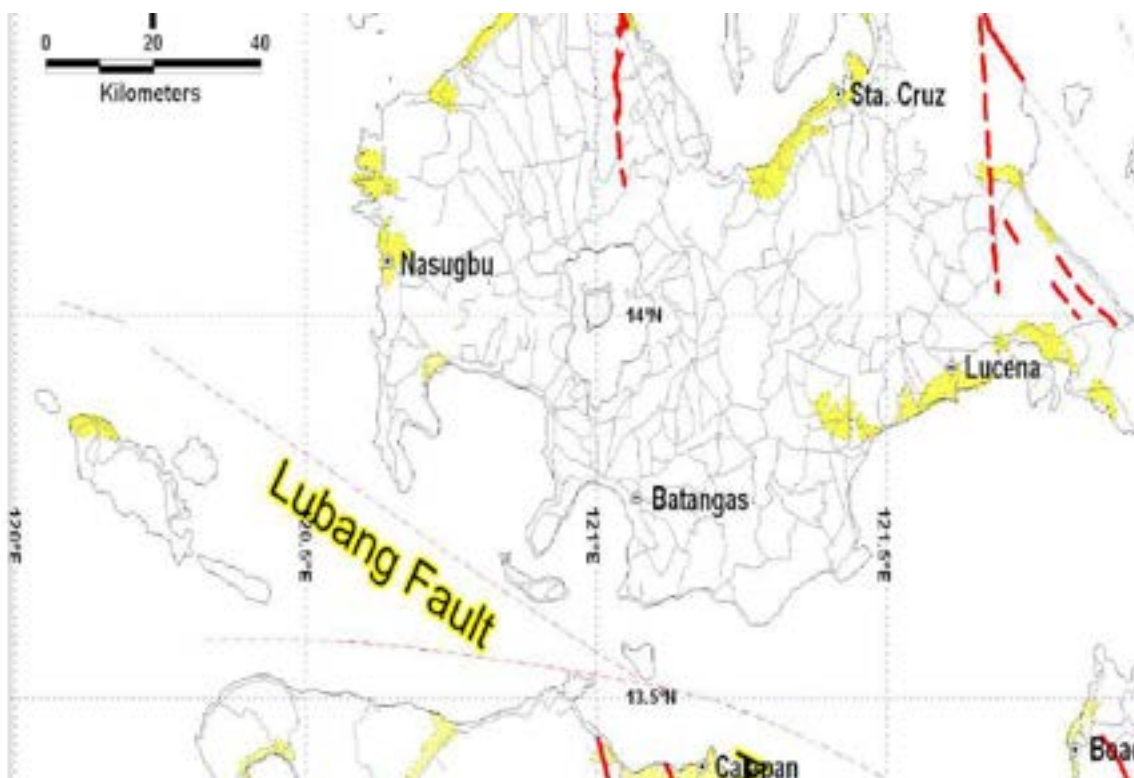
**Figure IA-35. Landslide Susceptibility Map of Batangas City**

Earthquakes are not known to happen regularly in the City; but because of its tectonic, geomorphic and geographical characteristics, the City can potentially experience extreme damages consequent to earthquakes, extreme weather events and similar disturbances in the natural environment. In case of an Earthquake happening with an approximate Magnitude of 8.5, the most affected barangays were the areas



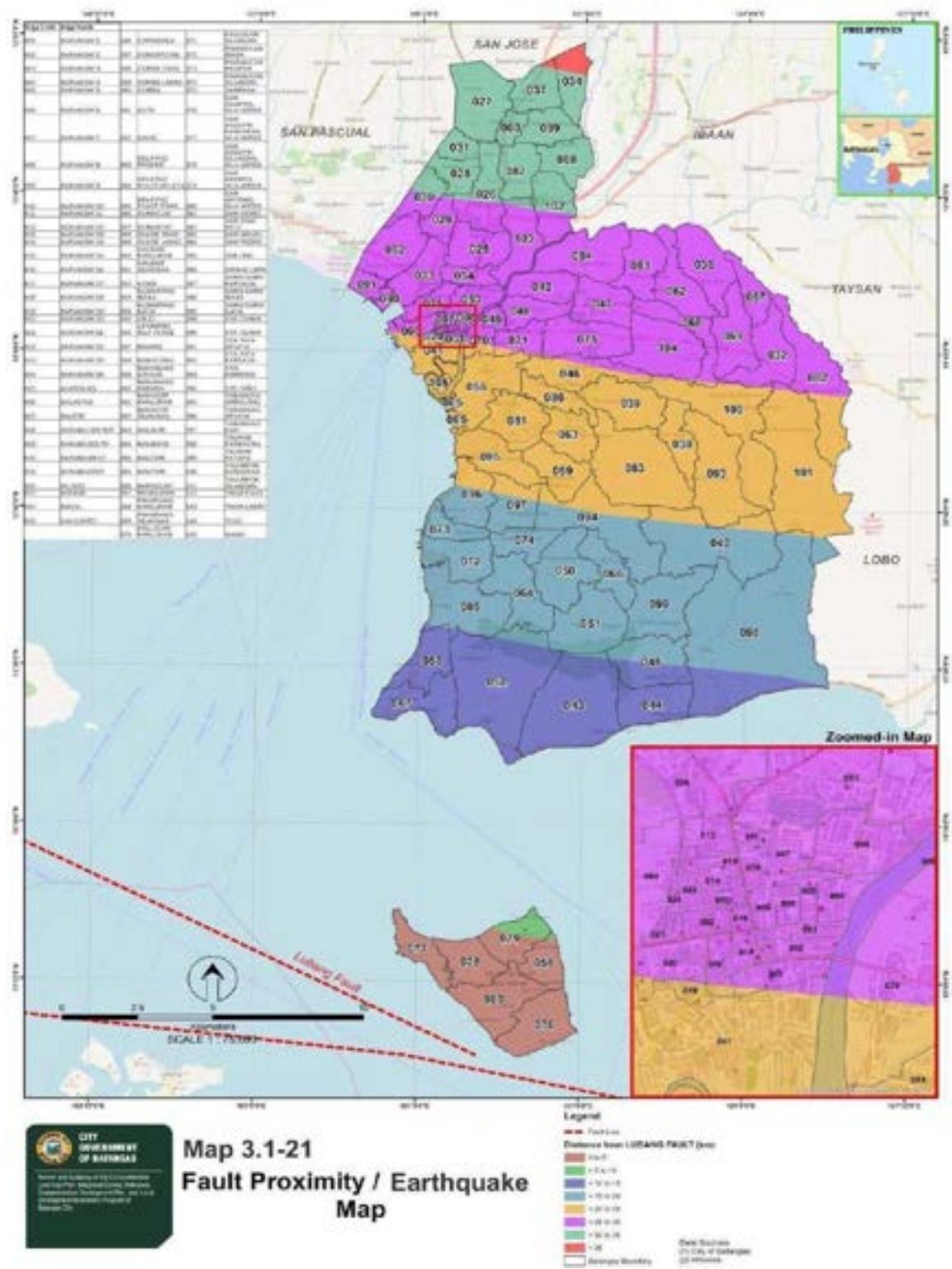
at the mouth of Calumpang River, Barangays Wawa and Malitam, wherein Batangas State University Pablo Borbon is near and the coastal barangays of Cuta and Sta. Clara. In case of the occurrence of land movement, strong ground shaking may cause extensive damage to or even the collapse of houses, buildings, bridges and other infrastructures. Collapsed structures usually accounts for most of the casualties during a strong earthquake as falling objects may also cause injuries.

Batangas is one of the seismically active areas in the Philippines. Instrumental monitoring of earthquakes for the past century has detected many small to large magnitude earthquakes near Batangas generated by Manila Trench and Lubang Fault. The Manila Trench is an earthquake generator located offshore of Luzon Island, roughly parallel to the Philippine Archipelago in the north but veers close to land at the southern tip of Occidental Mindoro. Another offshore generator is Lubang Fault, located between Mindoro Island and Batangas, which is also the locus of small to large magnitude earthquakes. It is represented in the map by a thin dash line to indicate that the fault line's known location is approximate. The fault line is underwater and estimated to start off the tip of the Calatagan Peninsula and runs across Balayan and Batangas Bays all the way to just off the City of Calapan in Oriental Mindoro.



**Figure AL-36. Part of the Active Faults and Liquefaction Susceptibility Map of Region IV-A.**

Other than this, the other fault systems that are close to but not in Batangas territory are the southern tails of the West Valley Fault (which reaches down to Cavite) and the Infanta Fault (which reaches down to Lucena City in Quezon). Both fault lines are represented in the map above as broken red lines.



Source: Batangas City CLUP 2019-2028  
Philippines Institute of Volcanology and Seismology (PHIVOLCS)  
**Figure IA-37. Fault Proximity Map of Batangas City**



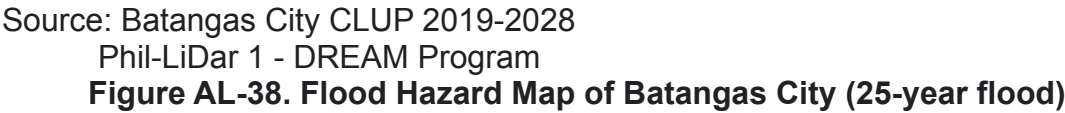
Accordingly, the Fault Proximity Map shown above indicates that the location of the Pablo Borbon Campus is about 25 km up to 30 km away from the nearest fault in the province which is Lubang Fault.

### *Floods*

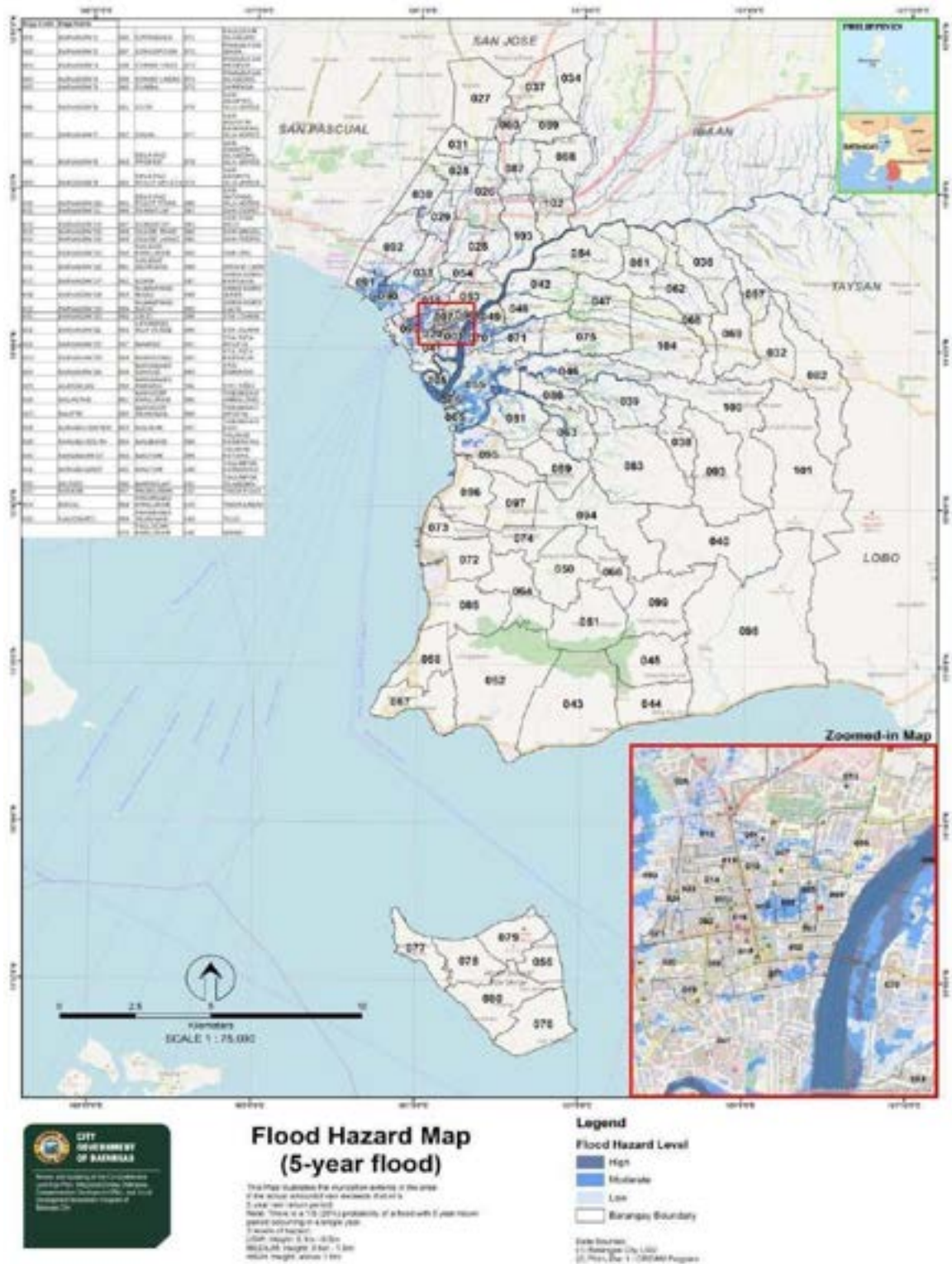
Floods occur naturally and can happen almost anywhere. They may not even be near a body of water, although river and coastal flooding are two of the most common types. Heavy rains, poor drainage, and even nearby construction projects can put you at risk for flood damage. Flood maps help mortgage lenders determine insurance requirements and help communities develop strategies for reducing their risk. The mapping process helps you and your community understand your flood risk and make more informed decisions about how to reduce or manage your risk.

More so, according to the data, several areas within the city that have been identified as prone to flooding hazards and where specific regulations are provided in order to minimize its potential negative effect on developments. According to the Flood Hazard Map presented by the Local Government of Batangas City, some places, specially Pallocan Kanluran which are near to the Calumpang River have High Flood Hazard Level which can reach higher than 1.5 meters. Places like Sta. Clara, Malitam and Libjo can also experience flooding from within 0.5 meters up to 1.5 meters or even higher. More so, several places such as Barangay 1, 5, 8, 9 and 20 have low to medium susceptibility of flooding. Also, some of the national and local roads and bridges in Batangas City are considered highly susceptible to flooding.









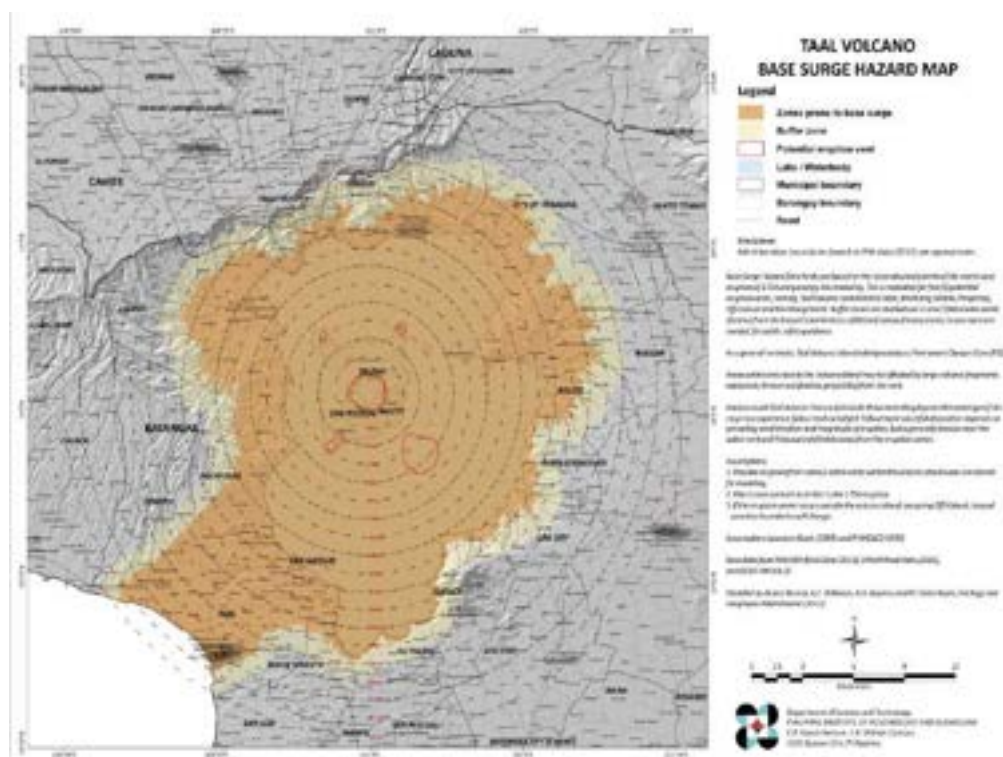
Source: Batangas City CLUP 2019-2028  
 Phil-LiDar 1 - DREAM Program  
**Figure IA-39. Flood Hazard Map of Batangas City (5-year flood)**

With that, Batangas State University Alangilan, has low to medium susceptibility of flood hazard. Significantly, flood occurrence within the campus is mainly located near Gate 1 and the area within that zone. The

flooding can reach up to 1.5 meters if the rain is severe according to the Flood Hazard Map released by the local government of the city.

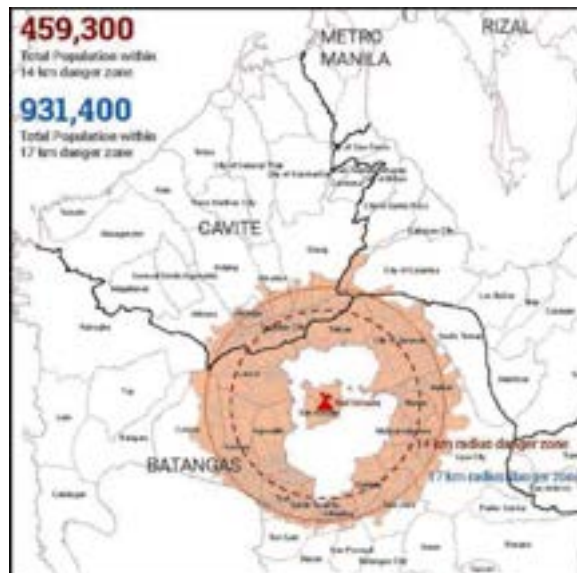
## Volcanic Eruption

Volcanic eruptions are frequently preceded by an increase in volcanic tremor and significant variations in near-surface radon concentrations at distances up to tens of kilometers from the event, especially when magmatic intrusions, deformations, and earthquakes affect the summit and/or flanks of the volcano. Like earthquakes, the occurrence of a volcanic eruption is unpredictable.



Source: Department of Science and Technology  
Philippine Institute of Volcanology and Seismology  
Volcano Hazard Maps and Summary of Prone Barangays  
**Figure AL-40. Taal Volcano Base Surge Hazard Map**

The nearest volcano to Batangas State University - Alangilan is the Taal Volcano at a distance of 29.71 km (18.46 mi). Taal volcano is part of a caldera system in southern Luzon island and is one of the Philippines' most active volcanoes. Since 3,580 BCE, it has erupted 35 times, with VEI ratings ranging from 1 to 6, with the bulk of eruptions being VEI 2. Within the Main Crater, the caldera features a lake with an island that also holds a lake. The most recent eruption before 2020 occurred on the south flank near Mt. Tambaro in 1977. In base surge scenarios, BatStateU-Alangilan is considered safe since it is not situated on the zones prone to this unfortunate event.



Source: United Nations Office for the Coordination of Humanitarian Affairs  
**Figure AL-41. Affected population during the Taal Volcano eruption**

Over 450,000 people reside within 40 kilometers of the caldera, according to the United Nations Office for the Coordination of Humanitarian Affairs in the Philippines and as shown in the figure above. The said map shows population totals within 14 and 17 km of Taal Volcano island. Based on reports from the Philippine Institute of Volcanology and Seismology (PHIVOLCS), satellite data, geophysical data, and media reports, this study covers activity from January to February 2020, including the 12 to 22 January eruption.

*Other possible hazards: Tsunamis and Liquefaction*





Figure AL-42. BatStateU Campuses on Liquefaction Map

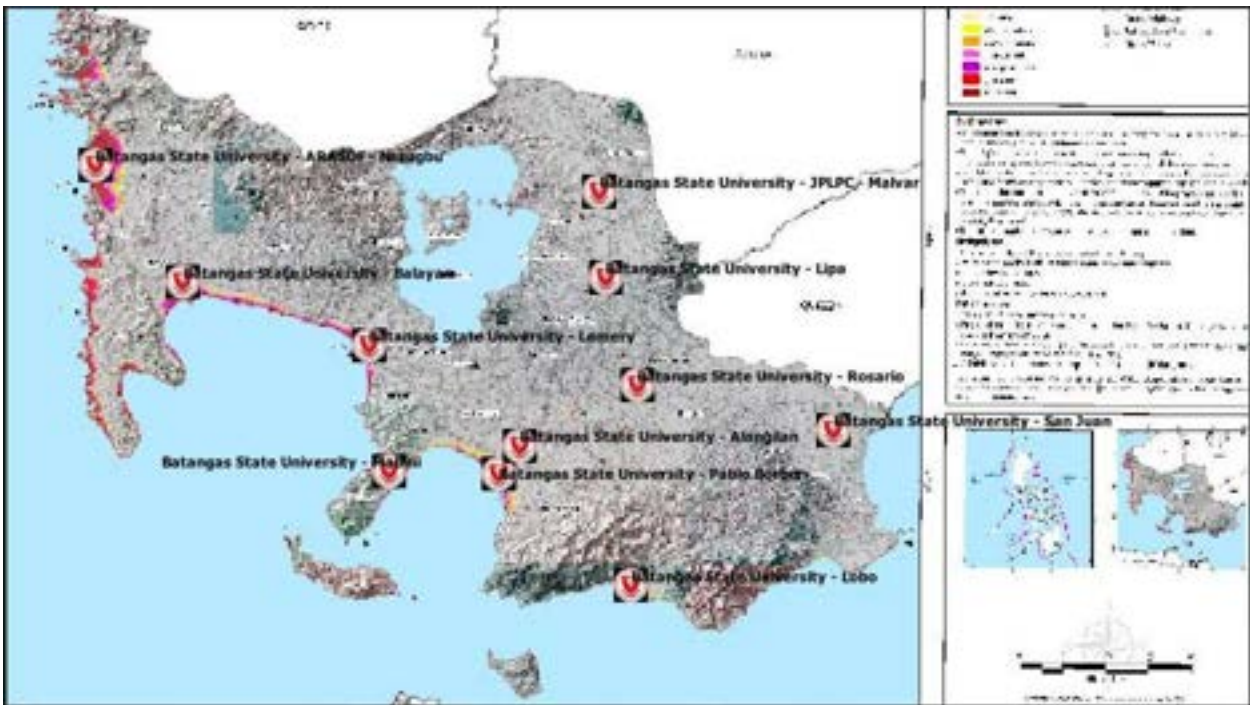


Figure IA-43. BatStateU Campuses on Tsunami Hazard Map





(f) Maps covering political boundaries of LGU and where SUC and its campuses are located.

Figure ALL-44 indicates the boundaries of the Local Government Unit of Batangas City together with the structures that are located within them. While figure AL-45 indicates administrative boundaries of the entire province with distinction of the locations of all BatStateU Campuses.

According to the official website of Batangas City, the capital of Batangas Province has a total land area of more or less 28,541.44 hectares. It is about 108.00 kilometers away from Manila and has an average travel time of approximately one hour forty-five minutes through the Southern Tagalog Arterial Road (STAR) tollway and the South Luzon Expressway.



Figure IA-44. Boundary Map of Batangas City



**Figure IAL-45. BatStateU Campuses on Batangas Map with Administrative Boundaries**

**Describe the site where the Program is situated, including geographical location, area, boundaries, etc.**

Batangas State University- Alangilan is located in Golden Country Homes Subdivision, Alangilan, Batangas City. The campus is located in an environment that would be adequate for the intellectual, social, physical and cultural interest of the community. It is kept in good condition and physical appearance.

The buildings are functionally designed and constructed of strong and durable materials to withstand earthquakes, typhoons and fire.

There are 7 existing buildings namely, College of Engineering, Architecture and Fine Arts (CEAFA) building, College of Industrial Technology(CIT) building, College of Information and Communication Technology(CICS) building, Food Innovation Center, Student Center Building, Science Technology Engineering and Environment Research (STEER) hub and Ralph G. Recto Type Building.

The renovation of the Gymnasium is currently ongoing and expected to be finished before the end of this year.

The campus is capable of meeting future expansion needs. Recently, the university has acquired an additional 1-hectare land in the Alangilan Campus. This opens up further future expansion. A planned Technology Hub will be in construction in the next year or two.





Figure AL-46. Vicinity Map of Batangas State University, Alangilan Campus





# Land Use Development and Infrastructure Plan (LUDIP)



**BATSTATEU  
ALANGILAN**

*Leading Innovations, Transforming Lives  
Building the Nation*

# **II**

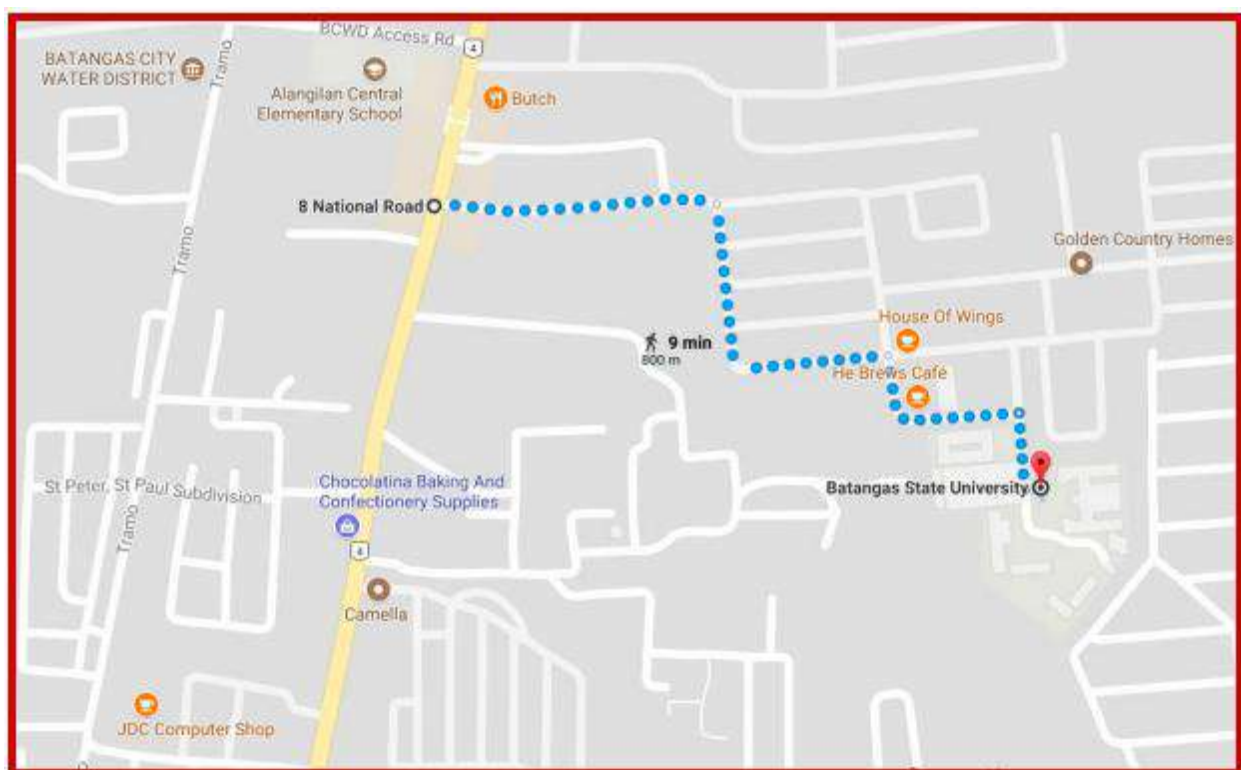
## **DETAILED DESCRIPTION OF THE SUC**

## II. DETAILED DESCRIPTION OF THE SUC

### A. Physical Features and Environmental Condition

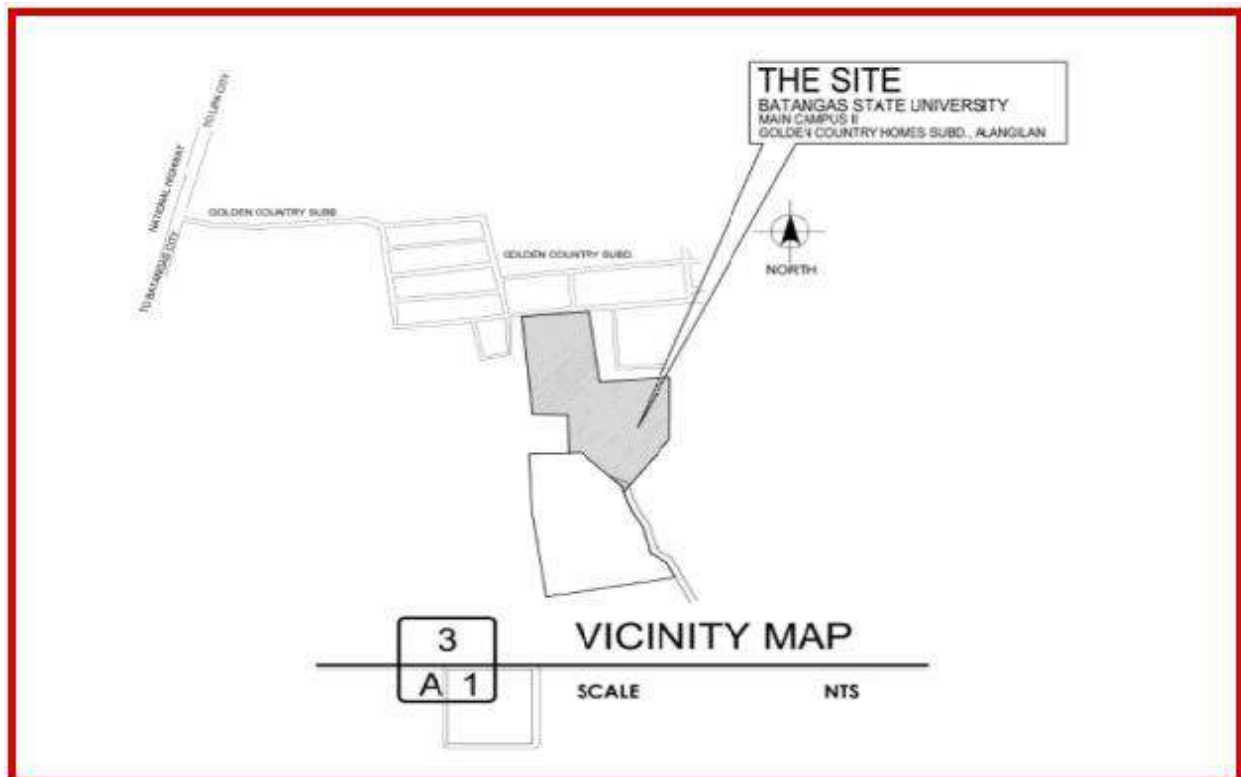
#### (a) Physical and locational characteristics, including land area, boundaries, covered barangays, and among others

Batangas State University, Alangilan is located inside Golden Country Homes (GCH) Subdivision in Brgy. Alangilan, Batangas City, Batangas Province, Philippines. The Campus , with a total land area of 5.62 hectares, which houses the College of Engineering, Architecture and Fine Arts (CEAFA), College of Industrial Technology CIT, College of Informatics and Computer Science (CICS), RECTO Bldg, Fitness Development Center and Student Center Building, is located inside the GCH Subdivision, Alangilan, Batangas City. The Campus is approximately 500 meters away from the GCH Subdivision Gate which is along the highway going to Manila. Figure below shows the Vicinity Map of Batangas State University, Alangilan Campus.



**AL-47. Vicinity Map of Batangas State University, Alangilan Campus**

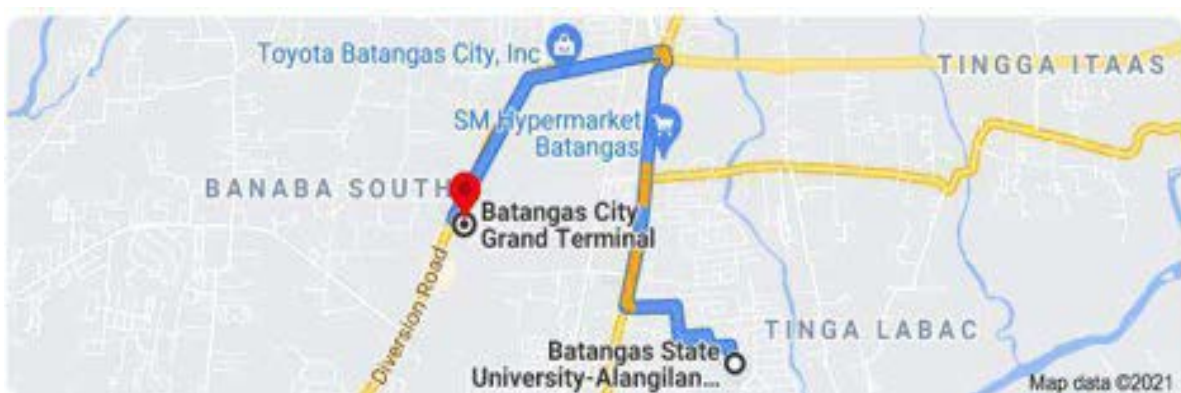




**AL-48. Vicinity Map of Batangas State University, Alangilan Campus**

**(b) Nearby airports, ports, bus terminals, and the like.**

Batangas City Grand Terminal is a multi-purpose transport terminal and complex that serves as a hub for travelers going to, from, and passing through Batangas City. Located at a 42,320 square meter property along Diversion Road, Barangay Alangilan, Batangas City, which is partly owned by the city government of Batangas, the Batangas City Grand Terminal is comprised of the terminal proper, which caters to buses, jeepneys, UV Express, and other public transportation; a commercial space that will soon accommodate restaurants, food stalls, and other business establishments; and a parking space for private vehicles. Batangas State University Alangilan is 3.6km away from the Batangas City Grand Terminal and can be reached via National Road/President Jose P. Laurel Hwy and Bauan - Batangas Provincial Rd/Diversion Road in 9 minutes.



Source: <https://www.google.com/search?q=BSU+Alangilan+to+Batangas+City+Bus+Terminal&biw=>

**AL-49. Location of Batangas State University from Batangas City Grand Terminal**





**AL-50. Batangas City Grand Terminal located at Brgy. Balagtas, Batangas City**

Image source: [https://upload.wikimedia.org/wikipedia/commons/thumb/9/9a/379Batangas\\_Province\\_landmarks\\_roads\\_20.jpg/1280px-379Batangas\\_Province\\_landmarks\\_roads\\_20.jpg](https://upload.wikimedia.org/wikipedia/commons/thumb/9/9a/379Batangas_Province_landmarks_roads_20.jpg/1280px-379Batangas_Province_landmarks_roads_20.jpg)



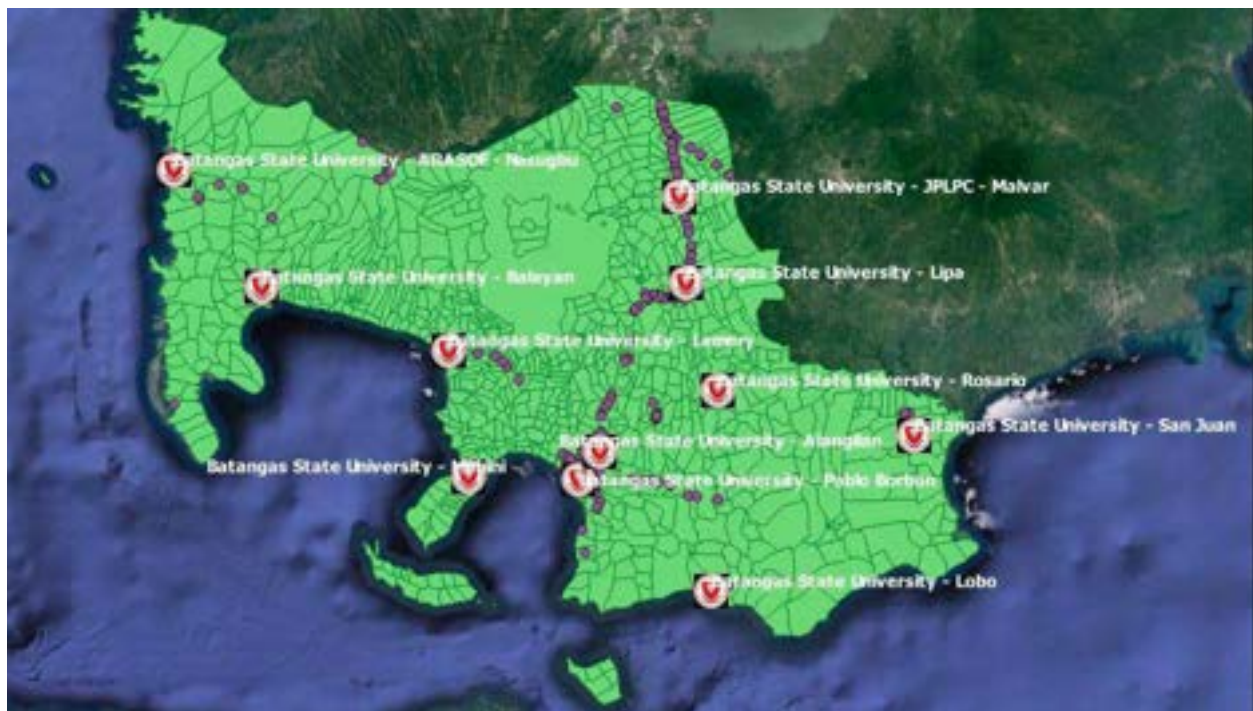
Source: <https://www.google.com/search?q=BSU+Alangilan+to+Batangas+International+Port&biw=1440>

**AL-51. Location of Batangas State University from the Port of Batangas**

Batangas International Container Port - Batangas Port also known as the Batangas International Container Port is considered as an international port in Luzon, primarily servicing the CALABARZON region and as an alternate port to Manila. Batangas State University Alangilan can be reached in 24 minutes (9.5 km) via Diversion Road from the Port of Batangas, and 28 min (8.6 km) via President Jose P. Laurel Highway

## .Public Land Transportation Vehicles

Land transportation services in the City are readily available through public utility buses, public utility jeepneys, privately owned cars, vans, and tricycles. For trips going to Metro Manila and neighboring provinces, commuters can avail of public utility bus companies such as Batangas Star Express, RRCG Transit, Supreme Trans. Liner, Ceres Transport, ALPS, Barney, JAM Transit, DLTB Co., N. Dela Rosa Liner Inc., Pong and Oning, SJ Park Ventures Inc., and Gold Star Transit Corporation. The opening of the Southern Tagalog Access Road (STAR) in April 2008, which is a tollway component of the West Philippine Nautical Highway with a length of about 42 km. from Santo Tomas, Batangas to the Batangas Port in Batangas City that is interconnected to the South Luzon Expressway (SLEX), shortened the travel time from Metro Manila to Batangas City by approximately 30 to 45 minutes. There have been a total of 81,468 vehicles registered in Batangas City as of 2017; of which 72,365 or 72% of vehicles are private, 782 or 0.90% are government vehicles and 8,375 or 10.3% are vehicles for hire. Motorcycles without sidecars are the single most common type of private vehicle (25,225 units or 34.86 percent), while utility vehicles are the most common type of government vehicle (519 units or 71.29%), and tricycles for hire are the most common for-hire vehicle (4,879 units or 58.25%). Source: Land Transportation Office,



**AL-52. BatStateU Campuses on Public Transport Terminal and Waiting Area Layer**





**AL-53. BatStateU Campuses with Road Network Layer**

**(c) Summary description of the natural biophysical environment:**

Batangas is a province in the Philippines situated in the CALABARZON region occupying the central section of Luzon. Its capital is the City of Batangas. The province has a land area of 3,119.75 square kilometers or 1,204.54 square miles. Batangas City is where Batangas State University is located. The City of Batangas is a coastal city lying in a cove-like shape at the south-eastern portion of Batangas Province and geographically situated at coordinates 13 degrees, 45 minutes and 25.96 seconds north latitude and 121 degrees, 3 minutes and 29.2 seconds east longitude.

Batangas State University Pablo Borbon Main II is located in Golden Country Homes Subdivision, Alangilan, Batangas City. The campus is located in an environment that would be adequate for the intellectual, social, physical and cultural interest of the community. It is kept in good condition and physical appearance. The buildings are functionally designed and constructed of strong and durable materials to withstand earthquakes, typhoons and fire. There are 7 existing buildings namely, Engineering building, College of Industrial Technology building, Information and Communication Technology building, Food Laboratory Building, Student Center Building, UHT Pasteurization Facility, and Ralph G. Recto Type Building.

The campus is capable of meeting future expansion needs. The proposed five-story STEER (Science, Technology, Engineering and Environment) Research Hub is currently under construction. Recently, the university has acquired an additional 1-hectare land in the Alangilan Campus. This opens up further future expansion. A planned Technology Hub will be in construction in the next year or two.



Hazards

Below is the hazard assessment as well as the likelihood and severity matrix of the Batangas State University:

Table AI-8  
Likelihood Matrix

Number	Rating	Criteria
1	Low	Threat happens every two years or beyond
2	Medium	Threat happens once a year
3	High	Threat happens 2x or more every year

Table AI-9  
Severity Matrix

Number	Rating	Criteria
1	Low	Negligible Impact
2	Medium	Minor Impact
3	High	Significant Impact

Table AI-10  
Hazard Assessment

Hazard	Likelihood	Severity	Impact (Likelihood X Severity)	Rank
Fire	1	1	1	3
Flood	3	1	3	2
Typhoon	3	1	3	2
Tsunami	1	1	1	3
Power Outage	1	1	1	3
Earthquake	3	2	6	1





Cyber attack	1	1	1	3
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It can be seen in the table above that after the assessment of hazards based on likelihood and severity, BatStateU Alangilan is highly exposed to earthquakes with the highest computed impact. This means that this hazard will be the focus and priority of the contingency plan for BatStateU Alangilan. Earthquakes occurred in the area leaving visible cracks in buildings and walls at the campus.

Based on the assessment of hazards, the campus requires a contingency plan for earthquakes that shall ensure preparedness for effective response of the entire population of the university.

Table AI-11  
Earthquake Awareness

Root Causes	Early Warning Signs	Triggering Factors	Existing Mitigating Measures
<p>BatStateU Alangilan is near the Lubang fault line.</p> <p>Earthquakes are caused by a sudden release of stress along faults in the earth's crust. The continuous motion of tectonic plates causes a steady build-up of pressure in the rock strata on both sides of a fault until the stress is sufficiently great that it is released in a sudden, jerky movement. The resulting waves of seismic energy propagate through the ground and over its surface, causing the</p>	<p>Geologists are working to develop an early warning system but there is still much to be learned about what happens just before an earthquake hits. Part of the problem is that earthquakes do not always behave in a consistent way—some signs occur at different times (days, weeks, or seconds before the event), whereas sometimes those signs do not occur at all.</p> <p>Some other possible signs of earthquake are:</p> <ul style="list-style-type: none"><li>• Watch for reports of earthquake lights.</li><li>• Observe unusual changes in animal behavior/color.</li><li>• Notice possible foreshocks.</li></ul>	<p>Scientists at Oregon State University looked at 44 years of seismic data and found clear evidence that temblors of magnitude 6.5 or larger trigger other quakes of magnitude 5.0 or larger.</p> <p>The test cases showed a clearly detectable increase over background rates," said the study's corresponding author, Robert O'Malley, a researcher in the OSU College of Agricultural Sciences.</p> <p>"Earthquakes are part of a cycle of tectonic stress build up and release. As fault zones near the end of this seismic cycle, tipping points may be reached and</p>	<p>Conduct of earthquake drill</p> <p>With earthquake protocol to be followed</p>

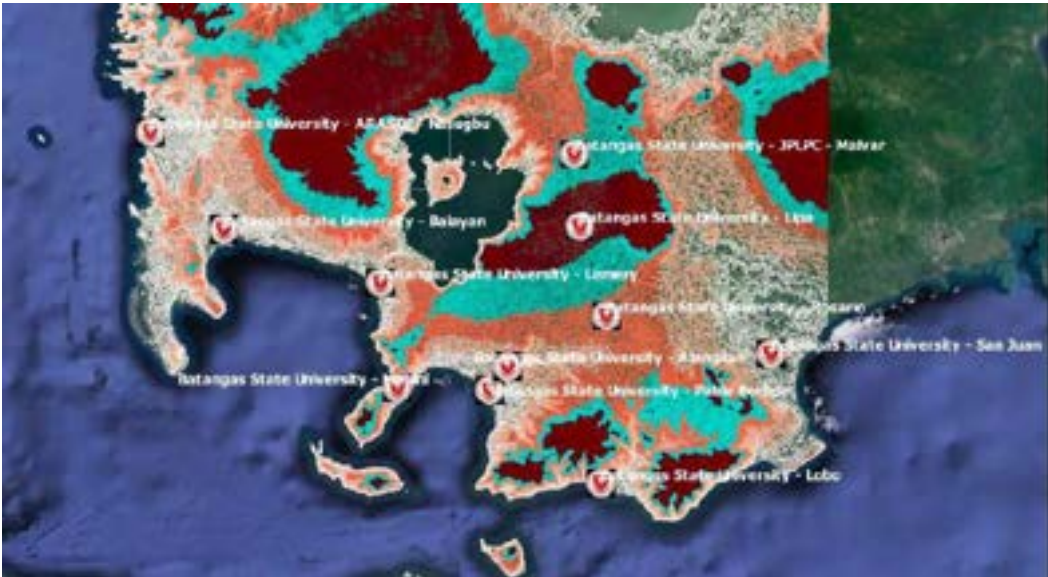


shaking perceive earthquakes.	we as		triggering can occur."	
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In case, an earthquake occurred within the premise of the University, the following guidelines are to be followed.

- Use the Evacuation Areas for head counting of designated floor, office and building marshals.
- The designated evacuation areas are the open grounds or parking area including the fountain area and the driveway and the open spaces on the ground.
- Designated building marshals shall conduct head count and will ensure that there are no aftershocks before students and personnel will be allowed to return to their respective buildings.

Topography



AL-54. BatStateU Campuses on Topographic Map

The campus has a fairly level terrain. Figure below shows the Topographic Map of the Campus, including physical infrastructure (buildings, roads and fences, property boundaries and vegetation).



AL-55. Topographic Map of Batangas State University, Alangilan

Climate

Generally, Batangas City is coolest during the months of December to January with temperature ranging from 22oC to 26oC. The mean temperature rises and attains a maximum of 36 degrees Celsius (36oC) in April and May. The month of September marks the steady fall of temperature. The driest months in Batangas City are from January to April, while typhoons and depressions most frequently affect the city during the months from July to December.

B. Inventory of Landholdings

Shown in the table is the inventory of landholdings by the Batangas State University- Alangilan Campus.

Table AI-12  
Inventory of Landholdings

Property Location/ Campus	Status of Ownership/ Document Available	Manner of Acquisition	Date of Acquisition	Technical Description
BatStateU Alangilan, Alangilan, Batangas City	Transfer Certificate Title (TCT No. T - 7921)	Transferred from TCT No T 7675 (totally canceled)	Dec 20, 1984	Area: 18, 993 sqm
	Transfer Certificate Title (TCT No. T - 7920)	Transferred from TCT No T 7675 (totally canceled)	Dec 20, 1984	Area: 180 sqm

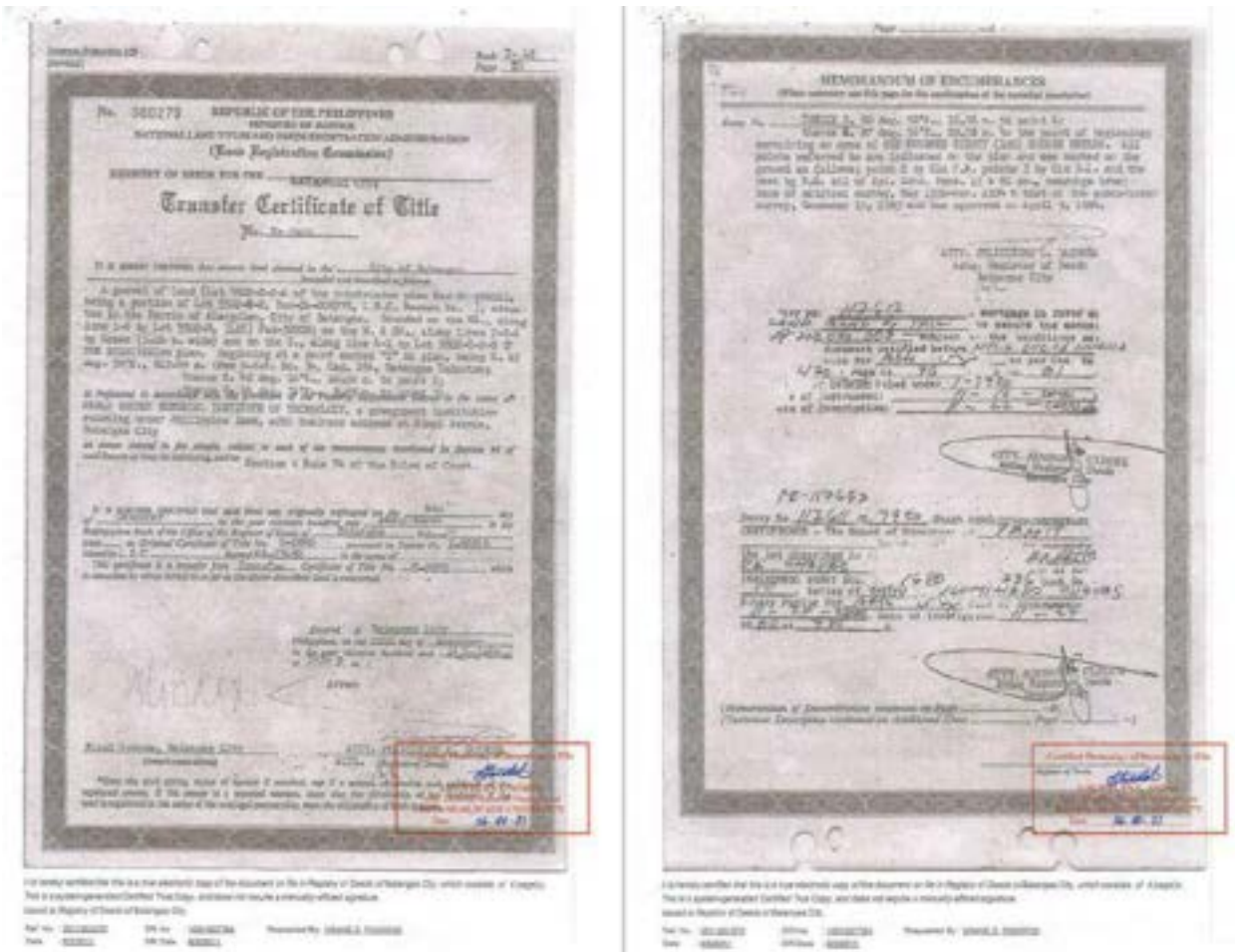




Land Use Development and  
Infrastructure Plan (LUDIP)

	Transfer Certificate Title (TCT No. T - 7955)	Transferred from TCT No 6000 (totally canceled)	Dec 20, 1984	Area: 10,000 sqm
	Transfer Certificate Title (TCT No. 052-2021000388)	Transferred from OCT 202000051 (totally canceled) from original owner Benicto Cabitac	March 10, 2021	Lot No. 5488 CAD 264 Area: 7,734 sqm

Transfer Certificate(S) of Title (TCT) Nos. TCT-T-7920, TCT-TT-7921 and TCT-T 7955 indicate that the land described and specified in these titles are owned by the Pablo Borbon Memorial Institute of Technology and now known as Batangas State University – Alangilan. Technical Descriptions are stated in each corresponding Transfer Certificate Title.



AL-56. Certificate of Ownership and/or TCT





**Land Use Development and  
Infrastructure Plan (LUDIP)**

[illegible][illegible][illegible][illegible]**AL-57. Certificate of Ownership and/or TCT**



### AL-58. Certificate of Ownership and/or TCT



## Land Use Development and Infrastructure Plan (LUDIP)

**CERTIFICATION**


To Whom It May Concern:

This is to certify that the real property owned/declared in the name of the Republic of the Philippines under Tax Declaration No. 020-00087 which is actually, directly and exclusively used for educational purpose is exempt from the payment of real property tax, as provided for under Section 234 (b) of Republic Act 7160; stated as follows:

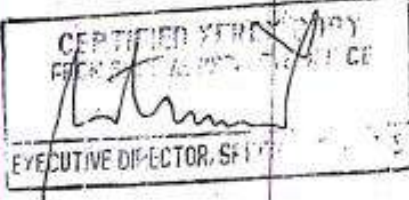
"Section 234. Exemptions from Real Property Tax. The following are exempted from payment of the real property tax:

(b) *Charitable institution, churches, parsonages or convents appurtenant thereto, mosques, non-profit or religious cemeteries and all lands, buildings, and improvements actually, directly, and exclusively used for religious, charitable or educational purposes."*

Issued this 15<sup>th</sup> day of October, 2012 upon request of interested party for whatever legal purpose/purposes it may serve.

  
**GUADALUPE JUDY A. TUMAMBING**  
City Assessor

O. R. No. 1806895  
Oct. 15, 2012

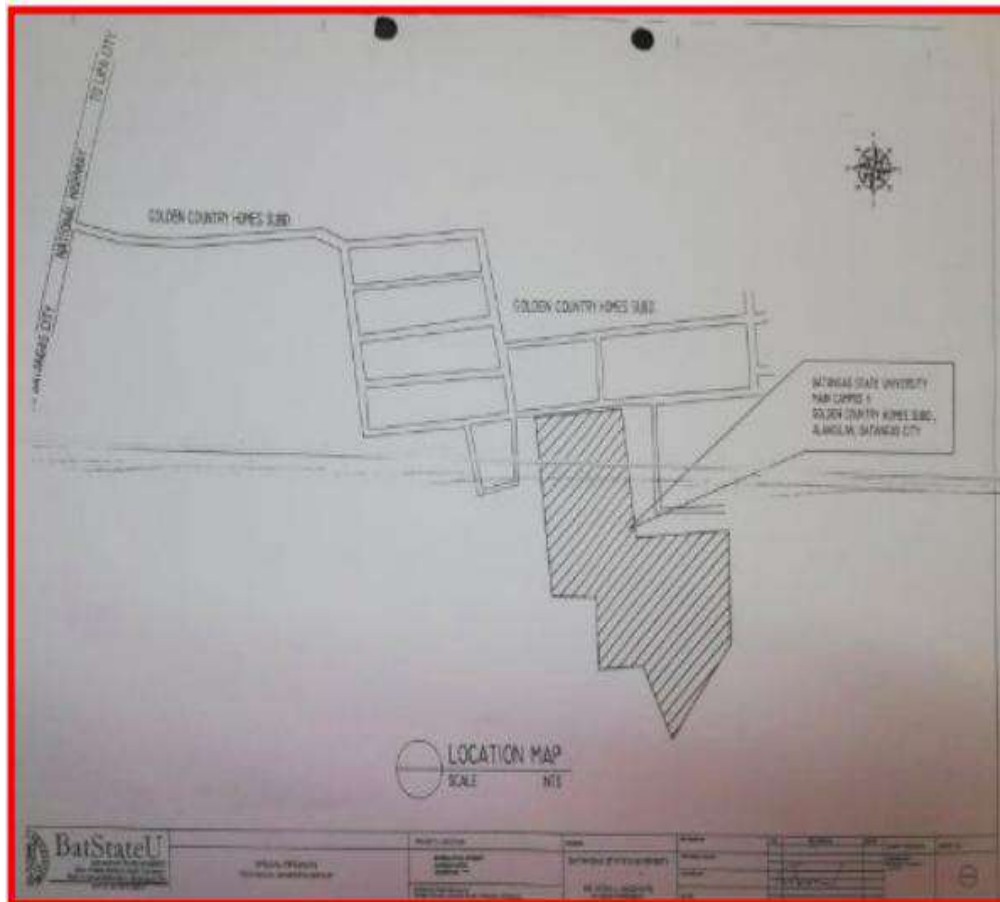
  
CERTIFIED TRUE COPY  
EXECUTIVE DIRECTOR, SFI

**AL-59. Certificate of Tax Exemption**

### **C. Existing Land Use and Land Use Trends**

**(a) Detailed geographical description** and survey of the site occupied by the SUCs, including all idle lands and campuses, branches or extension sites titled under the name of the SUCs, other sites occupied by the SUCs and adjacent communities;





**AL-60. Land Use Map of the BSU Alangilan Campus**



**AL-61. Digitized Map of BatStateU Alangilan**

**(b) Cadastral survey of land occupied by the SUCs, including:**

- Detailed geographical descriptions on land disputes (not applicable, no existing dispute)





- Natural and man-made hazards for climate change issues
- Zoning projections and process flow of how they are approved and revised;

Climate

Generally, Batangas City is coolest during the months of December to January with temperature ranging from 22oC to 26oC. The mean temperature rises and attains a maximum of 36 degrees Celsius (36oC) in April and May. The month of September marks the steady fall of temperature. The driest months in Batangas City are from January to April, while typhoons and depressions most frequently affect the city during the months from July to December.

- Inventory of all licenses or permits of the SUC over the water, forest and other natural resources within the area (ex. NWRB permit)

ENVIRONMENTAL COMPLIANCE CERTIFICATE

(Issued under Presidential Decree 1586)

ECC-R4A-2021-08-0149

THIS IS TO CERTIFY THAT THE PROPONENT, **BATANGAS STATE UNIVERSITY** is granted with this Environmental Compliance Certificate (ECC) for the **BATANGAS STATE UNIVERSITY - ALANGILAN CAMPUS PROJECT** located at **Barangay Alangilan, Batangas City, Batangas** by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau (EMB), CALABARZON Region.



REPUBLIC OF THE PHILIPPINES

NATIONAL WATER RESOURCES BOARD

8<sup>th</sup> Floor NIA Building, E. Delos Santos Avenue, Quezon City

WATER PERMIT

No.023824

Pursuant to the provisions of Presidential Decree Nos. 424 and 1067 promulgated on March 28, 1974 and December 31, 1976 respectively; and their Implementing Rules and Regulations

1. the Permittee, with indicated mailing address <b>Batangas State University Main Campus II</b> Rizal Avenue, Batangas City Batangas	2. is hereby granted permit to use water from the source known as <b>Deepwell # 1</b>  by diverting the water by means of <b>Pump</b>
3. with the diversion point located at Place: <b>Golden Country Homes, Alangilan,</b> Latitude: <b>Batangas City SA BATS 1-2514</b> Longitude: <b>13° 47' 0.32"</b> <b>121° 04' 26.56"</b>	4. in an amount, in liters per second, not exceeding <b>1.75 liters per second</b> during the month of <b>January to December</b>
5. for the purpose of <b>Other Use (School use)</b>	
6. subject to Existing Rights and to the conditions indicated at the back hereof, as well as to the following additional terms and conditions:	



**(c) Detailed description of the:academic core, research core, residential areas covering both housing for faculty and staff, dormitories for students, and the Major trends/shifts in land tenure (i.e. CADC/ CADT issuance)/ conversion arrangements (i.e. establishments of special economic zones/ industrial areas)**

**-Academic core**

Batangas State University is one of the country's model higher education institutions recognized by the Commission on Higher Education (CHED), BatStateU is the first and thus far the only state university in the Philippines with engineering, IT, and computer science programs accredited by the Accreditation Board for Engineering and Technology (ABET) – Engineering Accreditation Commission and Computing Accreditation Commission. It has a total land area of 5.62 hectares; the three colleges and research hubs in the campus occupy 2.89 hectares, while 2.73 hectares were recently acquired for the Knowledge, Innovation, and Science Technology (KIST) Park, the first KIST Park registered under the Philippine Economic Zone Authority in the country.

The colleges that are offered in Alangilan Campus are College of Engineering, Architecture and Fine Arts, College of Industrial Technology & College of Informatics and Computing Sciences. The total enrollment in university is 20,238 students as of A.Y. 2021. The campus offers courses from baccalaureate to masteral and doctoral degrees in various majors and specializations for courses in Engineering, Architecture, Fine Arts, Information Technology, Computer Science, and Industrial Technology making it among the campus with the top number of enrollees and offered courses.

**- Research core**

With 15 development centers, it is recognized by the Regional Development Council of Region IV-A as the Regional Center for Technology Business Incubation and Development, and as the Regional Center for Science, Technology, Engineering, and Environment Research (STEER).

Research Centers under the STEER HUB are 1) Center for Technopreneurship and Innovation (CTI); 2) GIS Application Development Center (GADC); 3) Digital Transformation Center; 4) Manufacturing Research Center - LIKHA FabLab; and 5) Materials Testing and Calibration Center.

STEER Hub develops and intensifies the various research projects and further advanced quality research of the university that fosters engineering, technology, science, and the environment. It provides access to graded functional equipment and software necessary to generate high impact research outputs. This research facility will serve as a place for training delivery and technology transfer for the capacity-building of stakeholders.

**- Residential areas covering both housing for faculty and staff, dormitories for students**

The fifth floor of the CEFA building is the student's dormitory.

**- Detailed geographical description and survey of the site intended for dormitories for students and housing sites for employees of the SUCs, including the architectural design and estimated cost of construction**

A Ten (10) - Storey Dormitory Building in the Alangilan Campus of Batangas State University is proposed to be built in the campus. The building is designed to bring

together the University faculty, staff, and students to develop solid services and engaged learning and teaching experiences. It will offer more integrated support services and other accommodation essentials to its students. Provided that Batangas State University is home to excellence, this center will ensure the quality of education and allocate its culture to a globally competitive institution.

In line with the construction of the dormitory, the university eyes its benefits for students to have more opportunity to build and maintain connections through utilizing campus resources, getting involved in student activities and forming invaluable relationships with other students, mentors and residence-life staff. With this, LUPID implementation and with the Batangas State University's commitment in developing first-rate facilities and considering it as beneficial to students and employees, the project Construction of Ten (10) - Storey Dormitory was proposed.



**AL-62. Perspective of the Proposed Ten-Story Dormitory**

**(d) Detailed geographical description** of land used for commercial, agricultural, fishery, forestry and other activities, including open and recreational spaces, landscape features and campus transportation system, among others. Maps included.

**(e) Major trends/shifts in land tenure** (i.e. **CADC/ CADT** issuance)/ conversion arrangements (i.e. establishments of special economic zones/ industrial areas)

**BatStateU Technology Park designated as Special Economic Zone**





### AL-63. BatStateU KIST Park

Through Proclamation No. 947, President Rodrigo Roa Duterte designated the BatStateU Knowledge, Innovation, and Science Technology or KIST Park as a Special Economic Zone. It is the first KIST Park registered by the Philippine Economic Zone Authority or PEZA.

Strategically located near other technology parks, business hubs and transport systems in the CALABARZON Region, the Batangas State University KIST Park clearly serves as the top location for technology transfer and commercialization in the Philippines.

#### D. Facilities and Utilities including social services facilities and amenities

Inventory of all existing buildings, facilities and other infrastructure within the compound or areas occupied by the SUCs and other real estate assets;

##### Academic Core

BatStateU Alangilan Campus houses the College of Engineering, Architecture & Fine Arts Building (CEAFA), College of Informatics and Computing Sciences Building (CICS), College of Industrial Technology Building (CIT), Sen. Ralph G. Recto Building (RGR), Science, Technology, Engineering and Environmental Research (STEER) Hub, Mechanical and Automotive Shop, UHT/HTST and Food Innovation Center, Student Services Center and Fitness Development Center (FDC). Not only are the CALABARZON youth educated in these buildings, but much of the most ground-breaking research takes place in these structures.

Character of buildings define their age through their materials, scale and form. The CIT, CICS, RGR, SSC and the Mechanical and Automotive Shop have Linear configuration, CEAFA and STEER Hub buildings in cubical form. The general external appearance of the buildings is an amalgamation of concrete, brick cladding and elements of contrasting red and gray colors with white as the prominent paint on concrete. Buildings were carefully sited to allow essential light and views, maximizing access to daylight.





The form of buildings constantly changed depending on the changing needs of users. The styles, the materials, the character of the buildings have been shifting, but there is not a unique "Batangas State University style" per se, rather, the notable buildings built over the course of time, reflect both the past, present and future needs of the Batangas State University community. The past and present experiences in those spaces shape and surprisingly make impact in the changes in design and style creating better structures that ensure a better, healthier, connected and resilient learning environment.

BatStateU uses the existing buildings to model the process of creating a university design framework. The existing buildings serve as the roadmap in shaping and developing University building character. The structures already existent on the campus are being observed, documented, and analyzed in the course of preparing the character, composition, and typology of future buildings. However, guides to the Design Team are provided by the administration so that new buildings accentuate the strengths of the university rather than diminish them. The administration makes sure that the design team clearly articulates the issues and gets all input to create a more balanced design.

The previous façade concept of mostly concrete with brick cladding accent, with glass windows on aluminum frame adapted in CEAFA, CICS and CIT buildings was replaced with unitized glazed curtain wall system with stone and metal panels, a change of concept particularly applied to the STEER Hub Building. The newly erected building, the STEER Hub has been strategically installed with a dynamic façade not only for aesthetic values, but also for improving the building's energy performance and thermal comfort level. The composition of reinforced concrete, aluminum cladding and glazed curtain walls using reflective glass allows natural light while repelling extreme heat that enters its interior spaces. The previous use of ceramic tiles and washout pebbles for building entrances and walkways have been replaced with large granite tiles for better appearance and less maintenance. Red and gray paint are used to complement and accent other exterior building materials. To ensure there is consistency, the University requires a project-based red and gray palette which are boldly incorporated into the architecture, symbolizing the spirit of the University. Red G.I roofing and stainless steel railings are continuously used and specified.

BatStateU is continuously planning a 21<sup>st</sup> century building character. Contemporary architecture is the architecture of the 21st century by which the university adapts at present, an architecture which does not correspond to a specific style but adapting to various styles from postmodernism to highly conceptual and expressive designs. The six newly proposed buildings in the KIST Park : the Technohub, Innovation Building, Hotel, IT Centrum, Data Center and Convention Center, as well as the three proposed buildings in the newly acquired lot which house the Dormitory, Library and Engineering Hub, bring in new aesthetics. What puts the newly proposed structures under the same category is the use of advanced technology and modern building materials and the display of innovative designs and techniques through various styles and concepts while incorporating sustainability in almost every facet of the facility.



**AL-64. College of Engineering, Architecture & Fine Arts Building**

Considered the frontier college of Batangas State University, College of Engineering, Architecture and Fine Arts holds a five-storey building of classrooms and laboratories used by about 8,000 engineering students and other facilities such as university canteen, library, audiovisual room, amphitheater, and dormitory. CEAFA is committed to provide excellent quality engineering, architecture, and fine arts education and deliver competent professionals equipped with technical knowledge and wide-range skills. Since 2015, the College is home to more than 140 board toppers in various licensure examinations primarily in engineering.





**AL-65. College of Informatics and Computing Sciences Building**

College of Informatics and Computing Sciences (CICS) resides in the 5-storey Information and Communication Technology Center inclusive of lecture classrooms and laboratories. The college at present supports 4 programs and provides advanced curricular courses as it aims to develop well-rounded IT professionals and computer scientists.



**AL-66. College of Industrial Technology Building**





## Land Use Development and Infrastructure Plan (LUDIP)

The College of Industrial Technology Building is a 4 storey building wherein most of its classroom and laboratory facilities are utilized by the BIT students.



**AL-67. Sen. Ralph G. Recto Building**

The RGR Building is a 3 storey building constructed in Batangas State University Alangilan Campus, where classroom and laboratory facilities are utilized largely by the Civil & Sanitary Engineering students.



**AL-68. Student Services Center**





## Land Use Development and Infrastructure Plan (LUDIP)

### - Library

The university library curated collections of books and other informational materials that they can use by the students for their research and projects. It provides an area for studying and facilitates access to resources and study materials. The university library is redefined increasingly to becoming hubs in engaging lifelong learning.



**AL-69. Foster Wheeler Library**



## AL-70. Proposed Five (5) Storey CAFA Building

This five-storey building is being proposed to be utilized by more than one thousand Architecture, Interior Design and Fine Arts students. The building spaces are allotted only for classrooms, lab rooms and comfort rooms due to unavailability of space. Facilities such as canteen, audiovisual/multimedia rooms and other related facilities are not included in the proposed spaces since those structures are present in other BatStateU Alangilan buildings. The Architecture, Interior Design and Fine Arts (ARIDFA) department presently under the College of Engineering, Architecture and Fine Arts (CEAFA) occupies only part of the third floor of CEAFA building and uses shared Engineering facilities particularly computer and other lab rooms.

## Laboratory Facilities in BatStateU Alangilan with Description of Facilities



### AL-71. CISCO Laboratory

CISCO Laboratory is equipped with CISCO Networking Technology Routers and Switches for Actual Laboratory Experiment / Activity. Computers are installed with CISCO.



### AL-72. Information Technology Laboratory

The Laboratory is used for computer fundamentals, Computer Programing Applications, Database Applications, Macintosh Applications, with internet connection provided by Globe Telecom used by the students in web browsing online examinations and other Academic related tasks and activities.





**AL-73. Multimedia Laboratory**

The Laboratory is used for computer fundamentals, Computer Programming Applications, Database Applications and Microsoft Office Applications, with internet connection provided by Globe Telecom used by the students in web browsing and other online examinations.



**AL-74. Engineering Materials Laboratory (UTM)**

This laboratory is intended for the conduct of different laboratory tests related to the mechanical properties of steel and concrete.



**AL-75. Hydraulics Laboratory**



## Land Use Development and Infrastructure Plan (LUDIP)

In the Hydraulics laboratory, we use to find and verify the difference between the theoretical calculations and actual quantities of flow and its parameters in a pipe network or open channels.



**AL-76. Soil Laboratory**

The Soil Laboratory helps the student to gain hands-on experience in conducting soil laboratory tests to determine soil parameters needed for geotechnical engineering design, and to communicate this information with others.



**AL-77. STAAD Laboratory**

This laboratory serves as the computer laboratory of the Civil and Sanitary Engineering Department. Different software was installed on the computers in this laboratory which includes STAAD, AutoCAD.



**AL-78. Environmental Laboratory**





The Environmental Laboratory supports the environmental protection functions of the State government by performing chemical, bacteriological and radiological analyses of environmental samples including drinking water, surface water, waste water, sediment, air, fish, soil and hazardous waste.



**AL-79. Geology Laboratory**

The Geology Laboratory provides hands-on surveys of the fundamentals of geology. This includes identification and interpretation of rock and minerals, testing of argillaceous rocks to determine its slake durability index, testing of the physical, chemical and petrophysical properties of rock to evaluate its potential of being hydrocarbon-bearing rocks.



**AL-79. Power and Thermodynamics Laboratory (Boiler Room)**

This Laboratory houses the Boiler, Gasoline Engine and Diesel Engine. The laboratory also contains different pumps, fans and blowers' apparatuses that demonstrates basic theories and principles of energy and mass or fluid transfers.



### **AL-81. Mechanical Measurement and Materials Testing Laboratory (Mechanical Laboratory 1)**

This Laboratory houses different experimental and demonstrating apparatus like, Charpy Impact Test Apparatus, Metal Creep Testing Apparatus, and Forced and Free Vibration Demonstrating Apparatus.



### **AL-82. HVAC Laboratory (Mechanical Laboratory 2)**

The HVAC Laboratory contains the Refrigeration Trainer and the Air-condition Unit Trainer. Students perform their experiments and watch demonstrations regarding the refrigeration and air-conditioning principles, parts and functions using the trainer found in the HVAC Laboratory.



### **AL-83. CAD Laboratory (Mechanical Laboratory 3)**

The CAD Laboratory contains computer units equipped with necessary software that are used in applicable CAD courses in which 2D, 3D modeling and simulations can be done.





**AL-84. Analytical Chemistry Laboratory**

This laboratory aims for the students to apply the principles and theories of gravimetric and volumetric methods of analysis of chemical samples, with an emphasis on acquiring skills in laboratory techniques and accuracy of measurements required to perform chemical analysis.



**AL-85. Food Innovation Center**

It serves as a hub for innovations on product/process development, and provides marketing strategies, food analysis, food safety, and quality training. FIC is not only limited to the BatStateU community but also serves Micro, Small and Medium Enterprise in Batangas Province where it envisions to transform the livelihood of the communities.



**AL-86. Instrumentation and Control Laboratory**

This laboratory is dedicated to the studies of process control, instrumentation and calibration courses. The laboratory is also used as a lecture room. The laboratory has a motor control trainer, a process control trainer and a SCADA based process control trainer.



**AL-87. Mechatronics and Robotics Laboratory**

The intent of this laboratory is to provide students hands-on experience on basic control technologies such as pneumatics, electro pneumatics and hydraulics. The laboratory has three platforms for pneumatics, electro-pneumatics, sensorics and advanced sensorics.





**AL-88. Power Electronics and Mechatronics Education Center (PEMEC)**

This laboratory was established in late 2014 from the funds of the Commission on Higher Education of the Philippines. The intention of the laboratory is the learning of power electronics and mechatronics technologies. It has several sets of robotics kits, Power Electronics training set, PLC training kits and a CNC training set.



**AL-89. Physics Laboratory**

The primary purpose of the Physics Laboratory is NOT to duplicate the concepts of lecture, although reinforcement is certainly beneficial and intended. This lab is an independent course from lectures covering independent concepts. This laboratory provides an introduction to experimental techniques in the laboratory, focused on experiments on forces, masses, and motion.



**AL-90. Multimedia Library**

The Laboratory is used for computer fundamentals, Computer Programming Applications, Database Applications and Microsoft Office Applications, with internet connection provided by Globe Telecom used by the students in web browsing and other online examinations. The laboratory contains 34 desktop computers which are fully functional. Each of the System Unit has Intel Core™ i5-8400 CPU @ 2.870GHZ (6 CPUs), 2.8 GHZ, HP 843C Motherboard, Toshiba SATA 1 TB HDD. Hyundai 8GB (1 x 8GB) DDR4 Memory, Intel HD graphics 630 Video Card, HP V223 21.5" LED monitor, no optical Drive and HP casing, keyboard and mouse. The system unit's specification would be essential for students in doing programming and Database in different languages, and for Multimedia applications such as Adobe Photoshop, and other movie editor applications. The size of the laboratory is 65.24 square meter also has two exit doors, enough windows and sufficient lighting. It has two window types of air-conditioner and one floor standing air-condition that is conducive in student learning. LCD projector is also kept in the laboratory for lectures and presentations. The laboratory is located at third floor of the Informatics and Communication Technology Center.



**AL-91. Software Laboratory Located in the CICS Building**

### **Software Laboratory 1**

The Laboratory is used for computer fundamentals, Computer Programming Applications, Database Applications and Microsoft Office Applications, with internet connection provided by Globe Telecom used by the students in web browsing and other online examinations. The laboratory contains 26 desktop computers which are fully functional. Each of the Systems Unit has Intel(R) Core™ i7-8700 CPU @ 3.00 GHz 3.00 GHz Processor, ASUS PRIME H310m-D Motherboard. Seagate Desktop HDD 1 TR, HYPERX 4.00 GB DDR3 memory, MSI/AFOX GTX 750Ti 2GB dd5 Video Card, AOC 21.5" LED Monitor Display , No Optical Drive, AeroCool GT USB 3.0 Casing, a4tech mouse and keyboard. The system unit's specification would be essential for students in doing programming and Database in different languages. The size of the laboratory is 65.24 square meter also has two exit doors, enough windows and sufficient lighting. It has two window types: air-conditioning and floor standing air-conditioning that is conducive in student learning. LCD projector is also kept in the Laboratory for lectures and presentations. The laboratory is located on the third floor of the Informatics and Communication Technology Center.

### **CISCO LABORATORY**

CISCO Laboratory is equipped with CISCO Networking Technology Routers and Switches for Actual Laboratory Experiment/Activity. Computers are installed with CISCO Packet Tracer 7.1.1 Software for Simulation / Practice Activities. Access to learning materials at [www.netacad.com](http://www.netacad.com).

The laboratory is dedicated for networking and is located on the third floor of the Information and Communication Technology (ICTC) Building. It is home for subjects that deal with networking such as Networking Fundamentals, basic Switching and Routing, Intermediate Switch and Routing and WAN Technology. System Units are also available





## Land Use Development and Infrastructure Plan (LUDIP)

in this laboratory it has 28 sets Intel(R) Core™ i5-7400 CPU @ 3.00 GHz 3.00 GHz Processor, ASUS PRIME 8250M -A Motherboard, Seagate Desktop HDD 1 TB HDD, HYPERX 4.00 GB DDR3 Memory, No Video Card, AOC 19.5 LED Monitor and enclosed in COOL MASTER PC CASE, A4tech Mouse and Keyboard, there the system has a Windows 10 operating system with basic application software to be used in configuring network devices. CISCO routers and switches are maintained in this laboratory for network simulation. The size of the laboratory is 65.24 square meter having two doors and sufficient windows that add more light in the laboratory. Split type air-conditioners are available that bring a conducive atmosphere in students' learning.



**AL-92. CISCO Laboratory**



**AL-94. Software Laboratory**

### **InfoTech. Laboratory**

The Laboratory is used for computer fundamentals, Computer Programming Applications, Database Applications, Macintosh Applications, with internet connection provided by Globe Telecom used by the students in web browsing and other online examinations. The laboratory contains 41 desktop computers which are fully functional. Each of the System Unit has Intel Core™ i5-7360 @ 3.60 HHZ (2 CPUs), 3.6 GHz 1 TB SATA DISK Macintosh HD. 8 GB 2133 mhz DDR4, Intel Iri Plus 640 1536MB, Built in Display 21.5 inch (1920x1080), Apply Magic Mouse and Keyboard. The System Units specifications would be essential for students in doing programming and Database in different languages, and other Macintosh applications. The size of the laboratory is 12meter x 8 meter and also has two exit doors, enough windows and sufficient lighting. It has two window types air-conditioners that are conducive in student learning. LCD projector is also kept in the laboratory for lectures and presentations. The laboratory is located on the third floor of the Informatics and Communication Technology Center.





**AL-95. Infotech Laboratory**

### **CIT Physical Facilities**

The following pictures are the facilities and laboratories in the College of Industrial Technology:





## I. Mechanical Shop



AL-96. Mechanical Shop

## II. Welding Shop

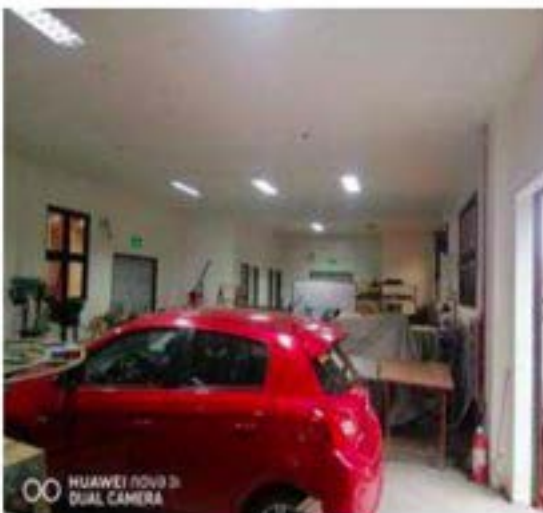






AL-96. Welding Shop

## III. Automotive Shop



AL-97. Automotive Shop

## IV. Electronics Shop



AL-98. Electronics Shop



## V. Electrical Laboratory



AL-99. Electrical Laboratory

## VI. Instrumentation Laboratory



AL-100. Instrumentation Laboratory

## VII. Physics Laboratory







**AL-101. Physics Laboratory**

**VIII. Chemistry Laboratory**



**AL-102. Chemistry Laboratory**





## IX Computer Laboratory I



AL-103. Computer Laboratory I

## X Computer Laboratory II





AL-104. Computer Laboratory II

## XI Computer Laboratory III



AL-105. Computer Laboratory III



## XII. Multi-Media Room-I



AL-106. Multimedia Room I (Entrance Door)



AL-107. Multimedia Room I



AL-108. Multimedia Room I (Seats)



**XIII. Multi-Media Room II**



**AL-109. Multimedia Room II (Control Unit and Entrance Door)**



**AL-110. Multimedia Room II**



**AL-111. Multimedia Room II (Seats)**

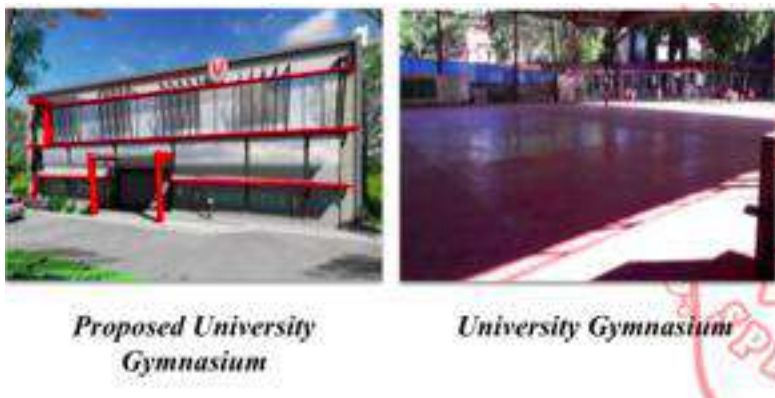


## Sports facility



**AL-112. Proposed Gymnasium**

The Fitness Development Center is a facility where the growing constituent's population of the university could hold physical education classes, cultural activities, sports and athletic activities, and other special university events and gathering activities.



**AL-113. Proposed Gymnasium and the Current Gymnasium**





## Land Use Development and Infrastructure Plan **(LUDIP)**



**Covered Gymnasium**  
**AL-114. Current Gymnasium at the Alangilan Campus**







## Land Use Development and Infrastructure Plan **(LUDIP)**



**AL-115. Audio Visual Room at the CEAFA Building**



**AL-116. Seating Arrangement at the Auditorium at the CEAFA Building**



**AL-117. Stage at the Auditorium at the CEAFA Building**

### **Research core**

Research Centers under the STEER HUB are 1) Center for Technopreneurship and Innovation (CTI); 2) GIS Application Development Center (GADC); 3) Digital Transformation Center; 4) Manufacturing Research Center - LIKHA FabLab; and 5) Materials Testing and Calibration Center.



### **AL-118. Science, Technology, Engineering and Environmental Research (STEER) Hub**

STEER Hub develops and intensifies the various research projects and further advanced quality research of the university that fosters engineering, technology, science, and the environment. It provides access to graded functional equipment and software necessary to generate high impact research outputs. This research facility will serve as a place for training delivery and technology transfer for the capacity-building of stakeholders.



**AL-119.Center for Technopreneurship and Innovation**

### General Mandates

The BatStateU CTI focuses on developing programs and activities geared towards creating a sustainable entrepreneurial ecosystem for the university. As an academic institution, the University believes in the importance of adequate and efficient training among budding entrepreneurs to make them competitive in their CTI entrepreneurial endeavors.

### **CENTER FOR TECHNOPRENEURSHIP AND INNOVATION (CTI)**

Address: 2F STEER Hub Bldg., Batangas State University  
Alangilan Campus, Batangas City

Center Head: Asst. Prof. John Richard M. Esguerra

Email: [innovation@g.batstate-u.edu.ph](mailto:innovation@g.batstate-u.edu.ph)



**AL-120. Electronics System Research**





## General Mandates

The Electronics Systems Research Center (ESRC) is committed to providing technical support and working space for R & D activities related to the fields of Electronic Engineering. The ESRC conducts research, provides experimental setups, and develops prototypes for various fields and research that involves electronics systems.

### ELECTRONICS SYSTEMS RESEARCH CENTER

Address: 2F STEER Hub Bldg., Batangas State University

Alangilan Campus, Batangas City

Center Head: Dr. Anton Louise P. de Ocampo

Email:antonlouise.deocampo@g.batstate-u.edu.ph



### AL-121. GIS Applications Development Center (GADC)

## General Mandates

GADC aims to create interdisciplinary collaboration for GIS technology solutions for research, education and community. The center offers software and hardware for GIS-technology driven research and conducts training to researchers.

### GIS Applications Development Center (GADC)

Address: 3rd Floor STEER Hub Bldg., Batangas State University

Alangilan Campus, Batangas City

Center Head: Engr. Janice F. Peralta

Email: janice.peralta@g.batstate-u.edu.ph



### AL-122. Manufacturing Research Center - LIKHA FabLab

## General Mandates



LIKHA FabLab aims to provide access to digital fabrication machineries and technical expertise to all Micro, Small, Medium Enterprises (MSMEs), a prototype, and product development. It operates as a shared services facility with partnership with DTI.

## MANUFACTURING RESEARCH CENTER (LIKHA FabLab)

Address: 1st Floor STEER Hub Bldg., Batangas State University  
Alangilan Campus, Batangas City  
Center Head: Engr. John Carlo V. Aggari  
Email: likhafablab@g.batstate-u.edu.ph



**AL-123. Digital Transformation Center**

## General Mandates

The Digital Transformation Center's prime objective is to be at the forefront of ICT innovation in the use of Internet of Things (IoT), Data Science and many other emerging ICT that benefits the community.

## DIGITAL TRANSFORMATION CENTER

Address: 2nd Floor STEER Hub Bldg., Batangas State University  
Alangilan Campus, Batangas City  
Center Head: Dr. Alvin S. Alon  
Email: dtc@g.batstate-u.edu.ph



**AL-124. Material Testing and Calibration Center**



### **General Mandates**

The Material Testing and Calibration Center (MTCC) aims to be a premier BatStateU core facility that provides a variety of instrumentation for materials testing and calibration services in the region.

#### **Material Testing and Calibration Center**

Address: 2nd Floor STEER Hub Bldg., Batangas State University  
Alangilan Campus, Batangas City  
Center Head: Dr. Reymark D. maalihan  
Email: [mtcc@g.batstate-u.edu.ph](mailto:mtcc@g.batstate-u.edu.ph)

### **Extension**

Some extension projects of the Campus are listed as follows:

- Solar Isotropic Generator of Acoustic Wave, a Tsunami Early Warning System.
- Building a Vigilant Community Through Technology Transfer of SIGAW
- Smart Analytics through Geo-Hazards Mapping

## **ENGINEERING EXTENSION SERVICES AGENDA**

One of the pillars of the University's Strategic Plan is Social Relevance, which mandates the university to respond to problems in communities and industries through the development of relevant institutional programs, provision of expertise, quality services, strategic partnerships and knowledge-based solution to achieve a more sustainable future. The University continuously strategizes on intensifying research-based extension service programs focused on issues of national importance.

The Engineering Extension Services Agenda, branded as GEARS or Galvanizing Extension Activities towards Relevance and Sustainability



## ENGINEERING EXTENSION SERVICES AGENDA

### AGRICULTURE AND AQUACULTURE

- Technology transfer and capacity building program for empowering the agriculture and aquaculture industries thru the use smart techniques in propagating priority agriculture and aquaculture commodities
- Development of Management Information System and conduct of Digital Technology Integration for Aquaculture and Agriculture Process Systems
- Integration of hardware and software technology Solutions for minimizing the abuse of resources in the Tasi Lake and the Verde Island Passage



## ENGINEERING EXTENSION SERVICES AGENDA

### DISASTER RISK REDUCTION AND MANAGEMENT

- Collaboration with different engineering programs and different agencies to address the gap specifically on access to electricity, potable water, food rations, shelter and clothing during different disaster scenarios
- Development of efficient alternative or backup communication system that can be used event during calamities
- Design and development of resilient shelters that can easily be set – up as temporary facility for evacuation



### ENGINEERING EXTENSION SERVICES AGENDA

#### FOOD INNOVATIONS

- Upscaling of food production systems for MSMEs and industries for increased productivity
- Value adding and preservation of local food products; and
- Packaging and labelling innovations of local food products for global competitiveness.



### ENGINEERING EXTENSION SERVICES AGENDA

#### GIS - BASED DECISION SUPPORT SYSTEM

- Conduct of training among DRRM practitioners, agriculturists and LGUs on the use of GIS tools for increased productivity
- Updating of the Comprehensive Land Use Plan (CLUP) of the province for a more effective delivery of service
- Development of effective systems for solid and hazardous waste management







### ENGINEERING EXTENSION SERVICES AGENDA

### VITALE: VIRTUAL INCLUSIVE TEACHING AND LEARNING FOR ENGINEERING EXCELLENCE

- Training of ICT personnel of other HEIs towards migration to alternative modes of Teaching and Learning
- Development of open source ICT tools and services
- Facilitation of capacity-building programs for faculty members of other HEIs

### Allied Services

- Housing of officials
- Housing of faculties and staff
- Dormitories for students
- Clinics
- Emergency response
- Church

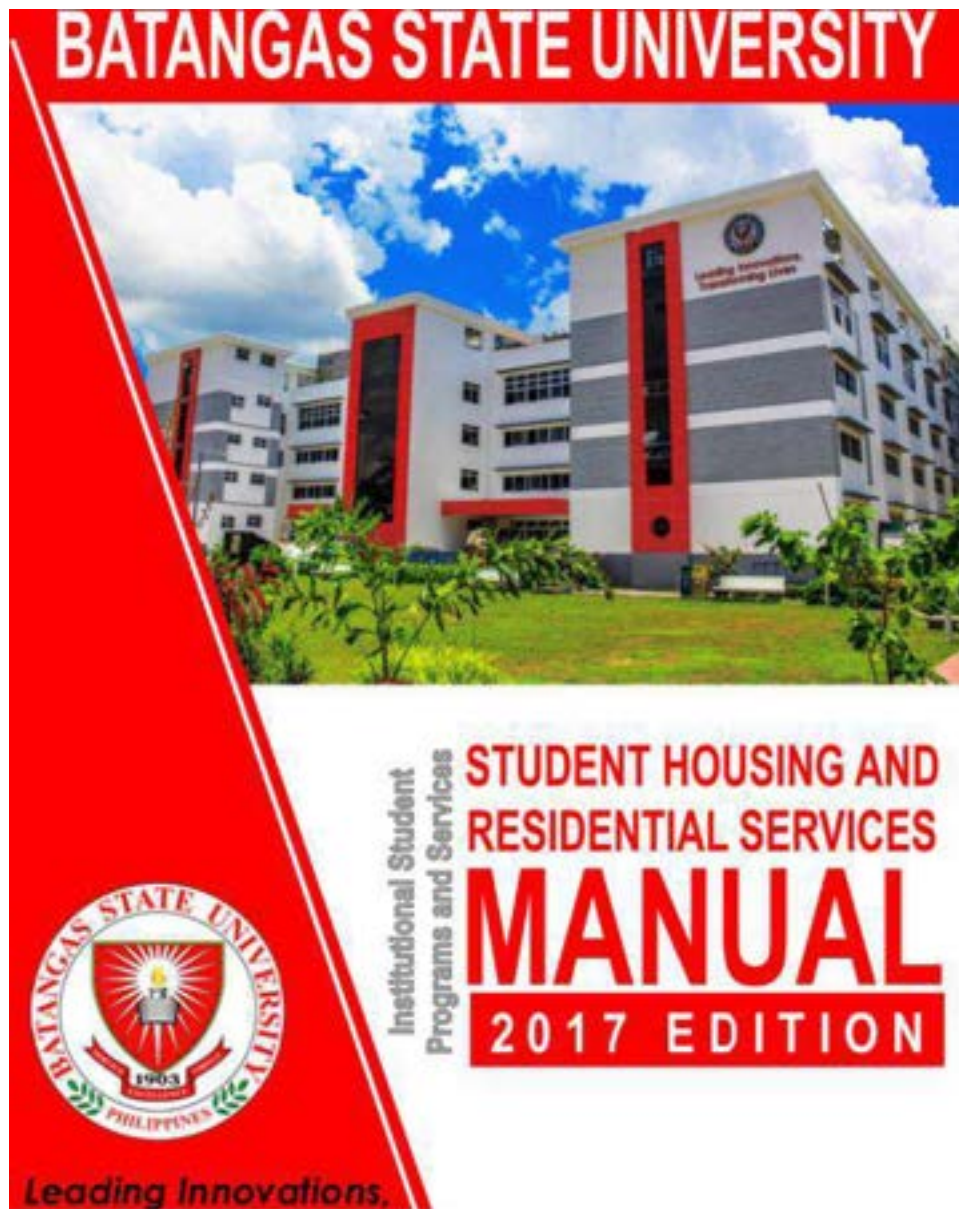
### Dormitory/Housing provisions of the Institution.

Student Welfare Services are the basic services and programs needed to ensure and promote the well-being of students. Student Development Services are services and programs designed for the exploration, enhancement and development of the student's full potential for personal development, leadership and social responsibility through various institutional and/or student-initiated activities. Institutional Student Programs and Services are services and programs designed to pro- actively respond to the basic health, food, shelter and safety concerns including students with special needs and disabilities and the school. These are programs and activities to facilitate the delivery of essential services to the students. The Student Housing and Residential Services is under the Institutional Student Program and Services.

The Policies and Procedures of the Student Housing and Residential Services was approved under Resolution No. 551, Series of 2016 during the Fifty-Second (52nd) Regular Meeting of the Batangas State University Board of Regents held at CHED Executive Lounge, HEDC Building, C.P. Garcia Avenue, U.P. Diliman, Quezon City on December 28, 2016.

### Student Housing and Residential Services





***POLICIES AND PROCEDURES FOR STUDENT HOUSING AND RESIDENTIAL SERVICES Batangas State University, Alangilan Campus Dormitory.***

*In accordance with CHED Memorandum Order No. 09, s. 2013 (Enhanced Policies and Guidelines on Student Affairs and Services), the following guidelines for Student Housing and Residential Services in Batangas State University are hereby adopted for the information, guidance and compliance of all concerned.*

**ARTICLE I POLICY STATEMENT**

**Section 1. Pursuant to Sec. 26 of Article IX of the Enhanced Policy and Guidelines on Student Affairs and Services of the Commission on Higher Education (CHED), Batangas State University shall promote and improve the condition of those living in boarding houses and dormitories. It shall provide assistance to ensure access to accommodation that is safe and conducive to learning**



## ARTICLE II SCOPE AND COVERAGE

**Section 2.** *The policy and procedure covers the student housing and residential services that the school provides or recommends to students, the rules and regulation and the responsibilities of the persons involved in the operation of boarding houses/dormitories*

## ARTICLE III DEFINITION OF TERMS

**Section 3.** *The following terms were defined for better understanding of the policy.*

**Boarding House** – *A student housing that the University recommends outside the University premises*

**Border** – *A student who lives or is accommodated in a boarding house*

**Dormitories** – *Include building or part of the building where group sleeping accommodation is provided or recommended for students of the University.*

Visitation / Monitoring in BatStateU Dormitory in BatStateU  
Pablo Borbon Main II



AL-125. Visit and Monitoring of Dormitory





**AL-126. Receiving Area of the Dormitory**







**AL-127. Rooms in the Dormitory**



**AL-128. Kitchen/ Dining Area in the Dormitory**



**AL-129. Hallway in the Dormitory**

**Policies and guidelines in the operations of the Dormitory/Housing.**



## **STUDENT HOUSING AND RESIDENTIAL SERVICES**

### **POLICIES AND PROCEDURES FOR STUDENT HOUSING AND RESIDENTIAL SERVICES**

In accordance with CHED Memorandum Order No. 09, s. 2013 (Enhanced Policies and Guidelines on Student Affairs and Services), the following guidelines for Student Housing and

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OFFICE OF STUDENT AFFAIRS AND SERVICES    AY 2017-2018

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BATANGAS STATE UNIVERSITY

STUDENT HANDBOOK

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Residential Services in Batangas State University are hereby adopted for the information, guidance and compliance of all concerned.

### **POLICY STATEMENT**

**Section 1.** Pursuant to Sec. 26 of Article IX of the Enhanced Policy and Guidelines on Student Affairs and Services of the Commission on Higher Education (CHED), Batangas State University shall promote and improve condition of those living on boarding houses and dormitories. It shall provide assistance to ensure access to accommodation that is safe and conducive to learning.





Republic of the Philippines  
**BATANGAS STATE UNIVERSITY**

Batangas City

Tel Nos.: (043) 980-0385 loc. 1546/1122 Telefax: (043) 723-0339

Email Address: [batstateupresident@gmail.com](mailto:batstateupresident@gmail.com) Website Address: <http://www.batstate-u.edu.ph>

**EXCERPT FROM THE MINUTES OF THE FIFTY-SECOND (52<sup>nd</sup>) REGULAR MEETING OF THE BATANGAS STATE UNIVERSITY BOARD OF REGENTS HELD AT CHED EXECUTIVE LOUNGE, HEDC BUILDING, C.P. GARCIA AVENUE, U.P. DILIMAN, QUEZON CITY ON DECEMBER 28, 2016 AT 3:00 PM**

**PRESENT:**

HON. ALEX B. BRILLANTES, JR. CHED Commissioner	-	Chairman
HON. TIRSO A. RONQUILLO University President	-	Vice-Chairman
HON. LUIS G. BANUA Director, NLDA, R.O.IV-A	-	Member
HON. ALEXANDER R. MADRIGAL Director, DOST R.O. IV-A	-	Member
HON. FAUSTINO RICARDO G. CAEDO Private Sector Representative	-	Member
HON. AMANDO A. PLATA Alumni Regent	-	Member
HON. GEORGE P. COMPASIVO Faculty Regent	-	Member
HON. JOEY C. ESPINO Student Regent	-	Member
PROF. ENRICO M. DALANGIN Board and University Secretary	-	Head Secretariat

**OTHERS PRESENT:**

MS. MICAH ALEYAH A. ACUZAR	-	Technical Staff
MR. ARISTEO G. DIMASACAT	-	Technical Staff
MS. LOUWELYN A. LUSTRÓ	-	Technical Staff

**Res. No. 551, S. 2016**

**WHEREAS, the Policies and Procedures for Student Affairs and Services of the Batangas State University have undergone series of evaluation;**

**WHEREAS, one of these policies is the Policies and Procedures for Student Housing and Residential Services;**

**WHEREAS, the Director for Student Affairs and Services together with the Assistant Director for Scholarship and Financial Assistance, presented the Policies and Procedures for Student Housing and Residential Services before the Academic Council of the University and was duly approved through Res. No. 12-03, s. 2016, after thorough discussion and deliberation;**

**WHEREAS, the same was presented by the Student Regent to the Finance Committee of the Board of Regents during its meeting held December 19, 2016 and was approved**





Republic of the Philippines  
**BATANGAS STATE UNIVERSITY**  
Batangas City

Tel Nos.: (043) 980-0385 loc: 1546/1122 Telefax: (043) 723-0339  
Email Address: batstatepresident@gmail.com Website Address: <http://www.batstate-u.edu.ph>

**WHEREAS**, the Board during its 52<sup>nd</sup> Regular Meeting, accepted the endorsement of the Finance Committee;

**NOW, THEREFORE**, in view of the foregoing premises, the Board approved, as it is hereby approved the Policies and Procedures for Student Housing and Residential Services.

Attached and made as an integral part of this resolution is the copy of the policy.

**APPROVED.**

Certified Correct:

**Prof. ENRICO M. DALANGIN**  
Board and University Secretary

## **AL-130. Policies and Procedures for Student Housing and Residential Services**

Financial income from the operations of the dormitory/housing.

The financial income of the dormitory is available at the accounting office of the university.

Discuss briefly how dormitories (inside and outside) are being managed to show that

students are safe and protected.

- o Cleanliness and Orderliness is observed by the houseparent and the occupants.

- o House rules and policies are implemented for an orderly management in the Dormitory/hostel.

- o There are safety precaution measures against electrical and fire hazard.

- o Security is implemented for the safety of the occupants.

Best practices (Housing)

Cleanliness and Orderliness is observed by the houseparent and the occupants.

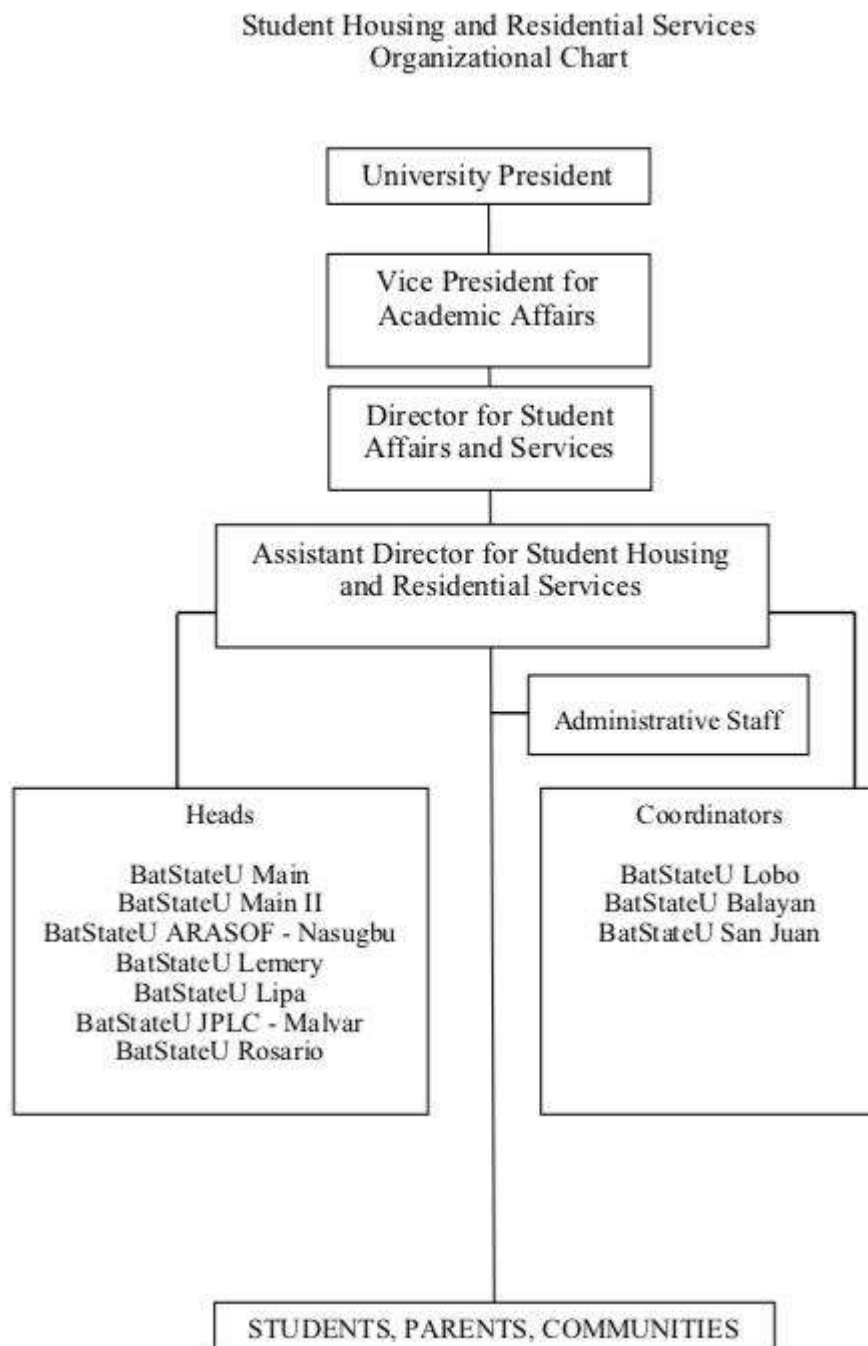
House rules and policies are implemented for an orderly management in the Dormitory/hostel.

- o Occupants are given areas specifically for studying

- o Curfew is implemented for the occupants for their safety and discipline.



- There are safety precautions against electrical and fire hazards.
- o All residents must know the Fire Drill and escape route from their dorm.
  - o All residents must know the nearest fire extinguisher and fire alarm switch.
- Security is implemented for the safety of the occupants.
- The dormitory is safe from outside threats.
- A good space (1 floor of the building) is provided for the dormitory.
- Affordable rates.
- The dormitory can be of any time frame use. (Monthly, Multi-month, Overnight)



AL-131. Student Housing and Residential Services Organizational Chart

## Existing Medical Health Facility



### AL-132. Existing Medical Health Facility

The university clinic has a treatment area where the client/patient is entertained and treated by the nurse on duty.



### AL-133. Existing Dental Health Facility

The university clinic has a dental facility where the university dentist performs dental procedures and treatments on students and staff.





## Allied Services



**AL-134. Student's Study Area near the CICS Building**



**AL-135. Student's Study Area near the RGR Building**

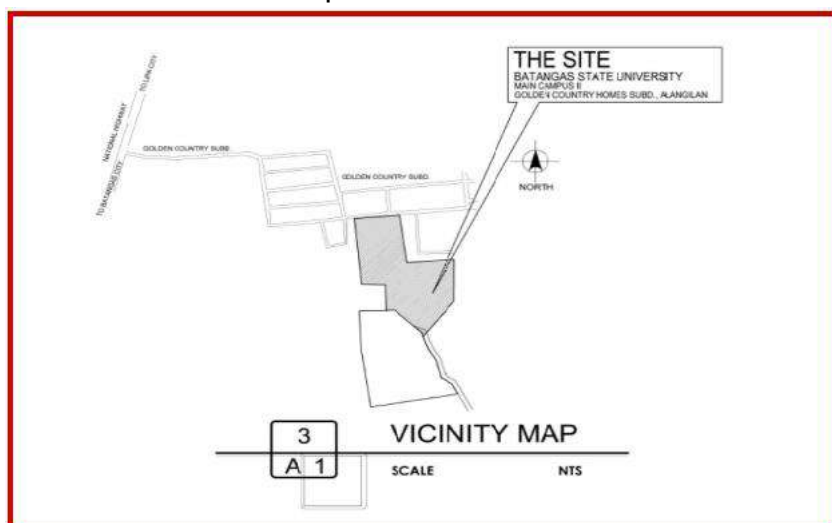


**AL-136. Student's Study Area near the FMSO Building**

## E. Transportation

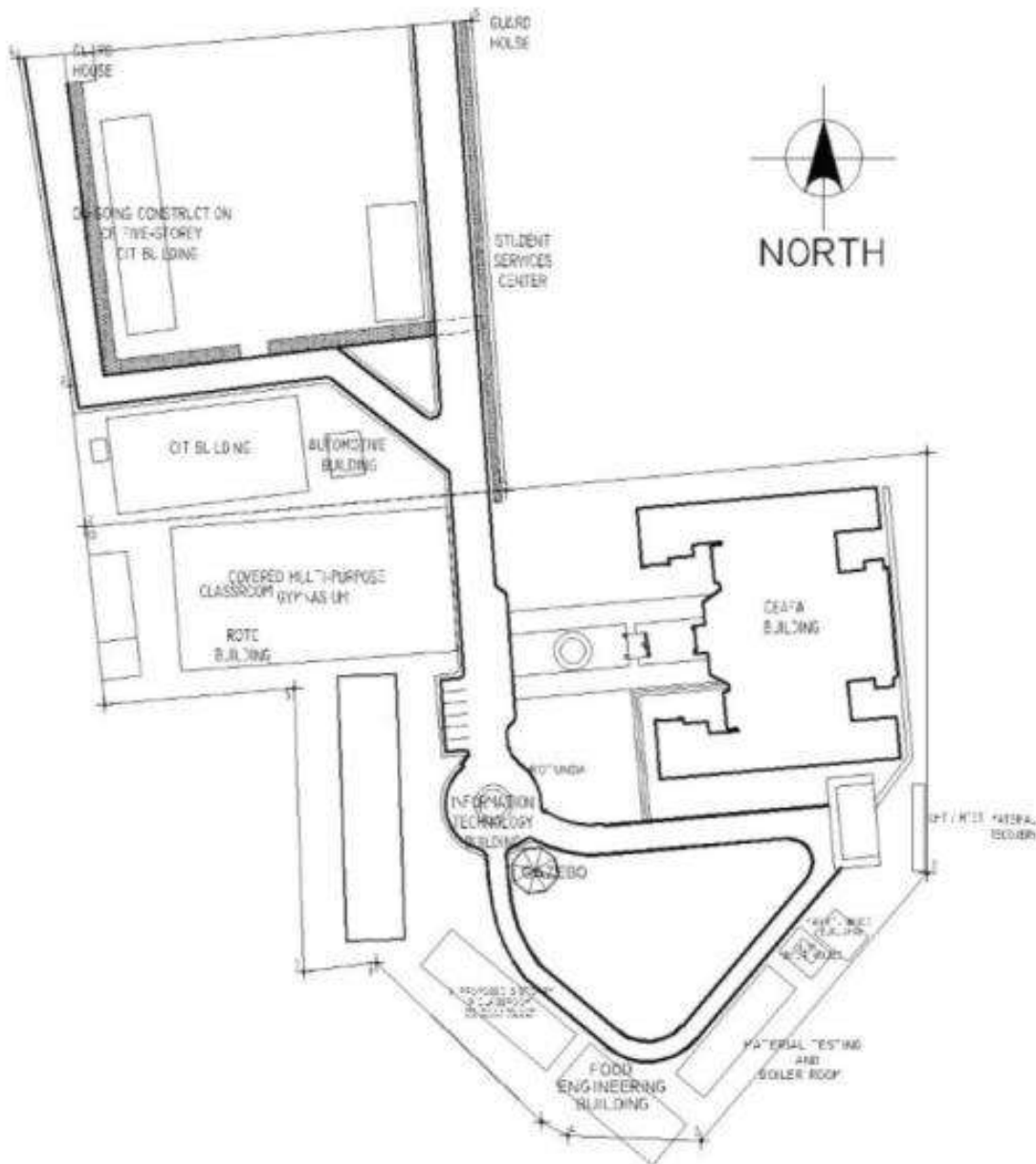
- (a) Infrastructure and road network maps; including drainage, parking areas
- (b) Ports (not applicable, no port/helipad within the university)
- (c) Helipads (not applicable, no port/helipad within the university)

There is an existing road network within the campus, as well as drainage facility and provided parking areas in mostly open spaces before each building. Vehicles are allowed to enter and exit , and as well park within the campus premises assisted by the guard on duty, abiding applicable policy (speed limit, available parking space, etc) on entering the campus and parking the vehicles. Aside from the facilities allotted for the vehicles, pedestrians are provided with the facade for the entrance and inspection necessary, as well as covered pathways in almost all the interconnections between buildings and into and out of the campus.





AL-137. Vicinity Map



## COVERED WALKS & ROAD NETWORK

AL-138. Covered Walks and Road Network  
Existing





**AL-139. Tricycle Terminal Outside the University**



**AL-140. Entrance Gate for Vehicles**



**Exit Gate for Vehicles**

**AL-141. Exit Gate for Vehicles**



**AL-142. Signs in the Gate for Odd and Even Scheme and Vehicle Inspection**





**AL-143. Student Entrance and Exit Gate**

The façade has six new high technology turnstiles with a total floor area of 679.97 sq.m.



**AL-144. Batangas State University- Alangilan Campus facade**

To provide a safe and secured University environment, turnstiles and gates access control Systems were installed throughout the University Campuses including this Student Entrance and Exit Gate at BatStateU Alangilan Campus.





**AL-145. Visitors Inspection**

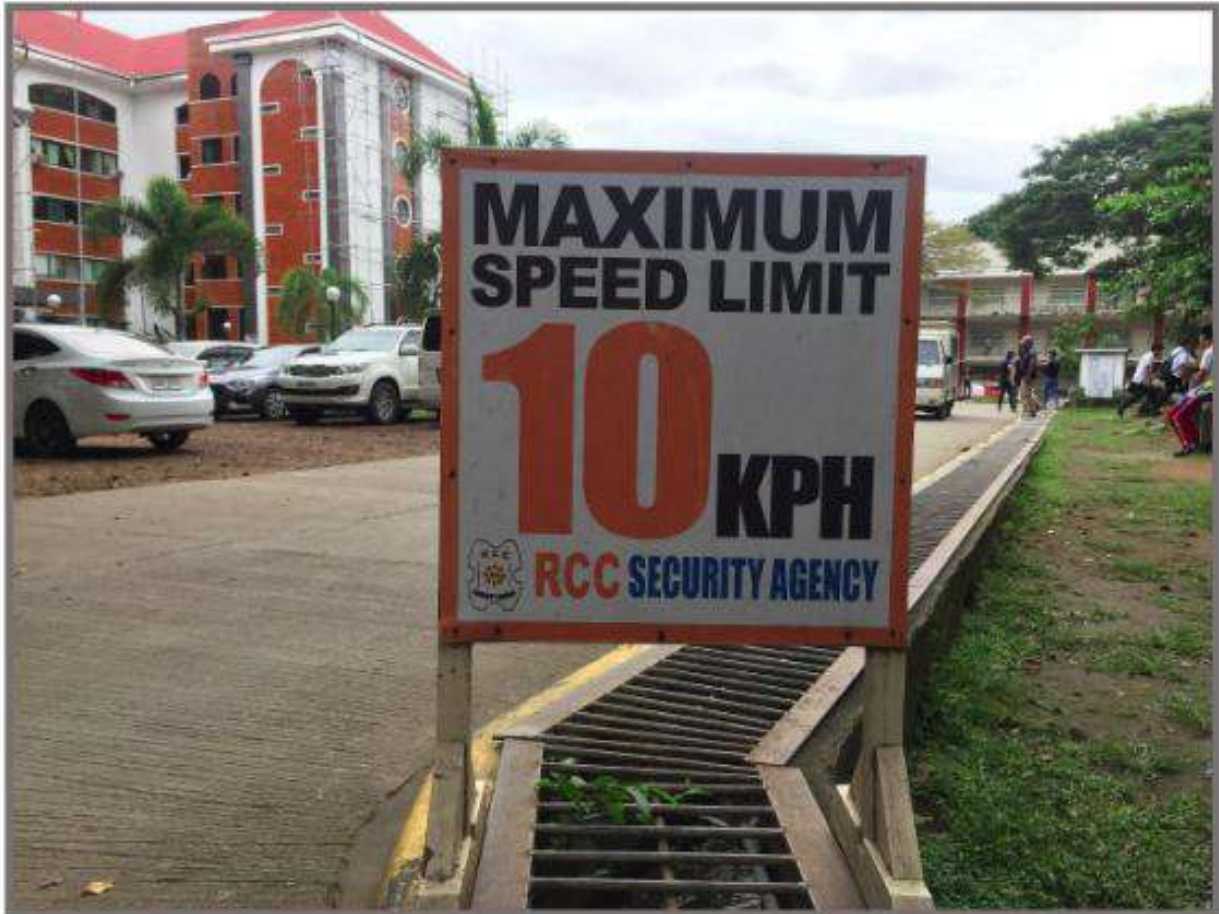


**AL-146. Covered Walkway**



**AL-147. Covered Walkway**





**AL-148. Signage for the Speed Limit Inside the Campus**





## Land Use Development and Infrastructure Plan **(LUDIP)**

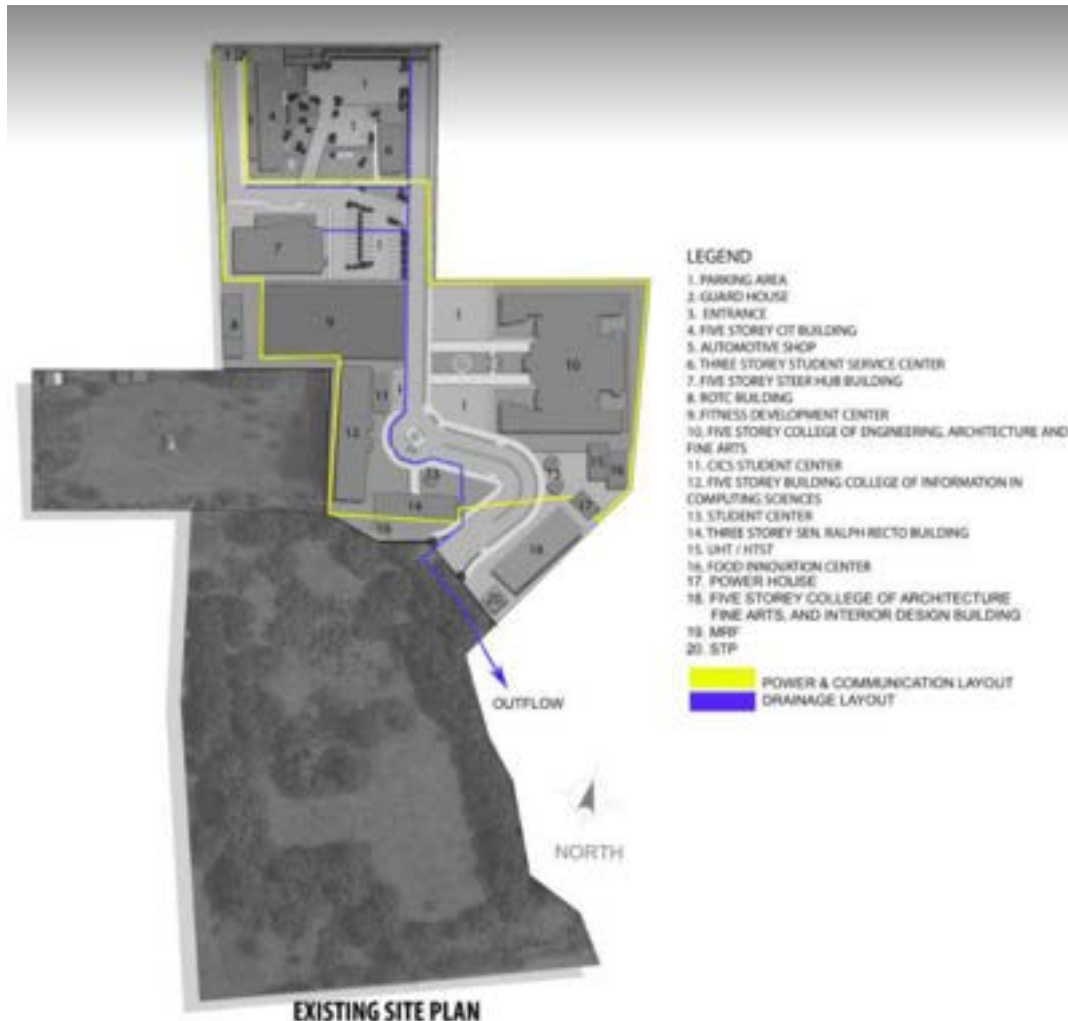


**AL-149. Provided Parking Areas**

## F. Power, Water, Communication Network

### (a) Location of power, water, communication including transmission lines within the campus

Figure 1B-127 is the existing site plan of Alangilan Campus showing the lay-out of power and communication lines. The same figure is also showing the drainage lay-out of the campus.



**AL-150. Power and Communication Lay-out and Drainage Lay-out**

(b) Water catchments

(c) Power generation projects, transmission lines, stations (maps)

### Alangilan Campus

#### Power and communication line

- All power and communication lines will be established at the back of each building starting from the entrance and will travel throughout the perimeter of the campus.

#### Drainage layout



## Land Use Development and Infrastructure Plan (LUDIP)

- The drainage system will start from the entrance which is the highest point and use the existing slope to run it through the existing creek beside the campus.



AL-151. Walkway Lay-out

### Waste Management

#### How the Institution's Waste Management Program is Implemented.

The waste management program is implemented through the Environment Management Unit. The unit ensures the waste management policies and guidelines are





strictly followed in all campuses. This unit is under the office of the Vice President for Administration and External Affairs. The said unit has the following personnel positions: The Director, the Assistant Director, a Pollution Control Officer, a Safety Officer, a Head of the Air & Water Quality Management Section, a Head of the Solid Waste Management Section, a Head of the Hazardous Waste Management Section and lastly, a Head for the Information, Education & Communication Section. These personnel are responsible for the implementation of the policies and guidelines on the Waste Management System of the University.

As an institution committed to be environmentally sustainable, Batangas State University Alangilan applied for and was issued an Environmental Compliance Certificate (ECC), ECC-R4A-2021-08-0149. In compliance with one of the conditions of ECC-R4A-2021-08-0149 issued to Batangas State University, the Environmental Management Unit (EMU) was created.

Moreover, EMU is created to ensure that environmental sustainability is implemented in all Batangas State University campuses. It implements the policies set by the Department of Environmental and Natural Resources (DENR) as cited in the ECC, and is responsible for securing the environmental records, compliance certificates and licenses of the university.

The main goal of the Environmental Management Unit is to create a better quality of environment, prevent damage to property and promote cost-effective environment, health and safety projects/activities/programs (PAPs) in Batangas State University towards Sustainable Development. The strategic initiatives, efforts and strategies are in accordance with the development goals with less impact on the financial aspect of the University. promotion on the preservation of environmental and occupational health and safety.

The general objective of the performance of the Environmental Management Unit based on its Operational Plan is to improve the quality of the physical environment and occupational health and safety. Specifically, the unit through this Operation plan shall achieve the following:

1. To ensure timely reports of Environmental Monitoring and Compliance Aspects
2. To ensure timely processing of requests within 10 days upon receipt of request until issuance
3. To ensure effective Information Dissemination and Communication Campaign
4. To ensure up keeping and availability of Environmental Data
5. To ensure protection of waste and air quality within the campus
6. To ensure periodic collection and transport of waste
7. To ensure periodic inspection of significant areas of monitoring

In general, Batangas State University currently has different waste management projects, programs and policies. The university formulates policies and guidelines on Waste Management Systems (WMS)



Areas for waste management, segregation, collection and description on waste practices being used, especially innovative ones like converting waste to energy, zero waste policy being implemented, and among others.

## Waste Management

Part of the environmental management plan of the university is the formulation of policies and guidelines on Waste Management Systems (WMS). Figures 7a and 7b show University Policies and Guidelines on Waste Management Systems and University Waste Management Program.

ENVIRONMENTAL MANAGEMENT UNIT

Phone: (043) 980 – 0385 loc 1132

POLICIES AND GUIDELINES ON WASTE MANAGEMENT SYSTEM (WMS)

1. General

Wastes are discarded materials of the University either in solid, liquid or gas form. The wastes generated in every premise shall be safely collected, processed and disposed so as not to cause negative environment and health impact.

Institutional wastes of the University shall be monitored, recorded, evaluated and reported to regulatory agency showing the compliance to environmental regulations and realization of one of the core values, concern for the environment, of the University.

2. Scope

2.1. The guidelines on waste management shall apply to main and extension campuses of the University.

2.2. The guidelines shall apply to any individual or group as a guide to a systematic management of waste in every premise in each campus.

3. Definitions:

For better understanding of the guideline, the following were used:

3.1. Permit – a document issued by a regulatory agency to the University authorizing the disposal, discharge or release of residual, effluent and exhaust respectively, to the environment. In this guideline, this refers to Permit to Operate and Discharge Permit.

3.2. Waste – refers to discarded materials with or without purpose and/or special handling after it serves its intended use. In this guideline, this refers to solid waste, wastewater, hazardous waste and Air exhaust waste.

3.3. Waste Management System – the systematic way of collection, transportation, treatment and disposal of generated waste in the University.



#### **4. Acronym**

- 4.1. APSE – Air Pollution Source Equipment
- 4.2. AQMA – Air Quality Management Act or RA 8749
- 4.3. CMR – Compliance Monitoring Report
- 4.4. DENR-EMB – Department of Environment and Natural Resources-Environmental Management Bureau
- 4.5. DP – Discharge Permit
- 4.6. ECC – Environmental Compliance Certificate
- 4.7. HWMA – Hazardous Waste Management Act or RA 6969
- 4.8. PTO – Permit to Operate
- 4.9. SWMA – Solid Waste Management Act or RA 9003
- 4.10. WQMA – Water Quality Management Act or RA 9275





## Land Use Development and Infrastructure Plan (LUDIP)

The guidelines on waste management have four (4) basic components:

### 5.1. Solid Waste Management

#### 5.1.1. Generation

- a. Items to be purchased by the University shall be environmentally-acceptable, durable and cost effective so as to minimize waste generation.
- b. Procurement of items for the University's Operation shall be in bulky order to avoid excessive packaging materials to be disposed.
- c. Packaging products to be used, foods to be sold shall be of recyclable type.
- d. The waste shall be segregated from the source of generation.
- e. Waste generated shall be recorded and updated as basis in compliance with SWMA and for future policy making.

#### 5.1.2. Collection

- a. A waste collection points shall be established in each campus for the centralized collection of waste in the campus.
- b. An approved, strategically-located, protected bin shall be positioned in every collection points
- c. Bins shall be properly labeled to indicate specific waste to be contained. The label shall be, either, biodegradable, recyclable, or residual.
- d. Janitors shall be in proper protective clothing so as to avoid exposure to possible disease-causing microorganisms.
- e. Waste shall be collected by the janitors and brought to the Material Recovery Facility.
- f. Wastes generated from trimming, landscaping and the like shall not be part of the containers positioned in collection points. A plastic or other approved container shall be used so as not to overload the capacity of the positioned bins.

#### 5.1.3. Transportation

- a. An approved way of transportation shall be used providing safety to handlers and exposed individuals.
- b. Approved materials for containment of waste and appropriate vehicles shall be used during the course of transportation.

#### 5.1.4. Processing and Recovery

- a. All waste generated shall be brought and processed to the Material Recovery Facility for energy recovery. It shall be weighed and recorded.
- b. Ensure all recyclables are recovered.
- c. Residual wastes are separated from recyclables for its collection by the municipal garbage hauler.
- d. Recovered items shall be restored for selling and other significant purposes.

#### 5.1.5. Disposal

- a. Only residual shall be subjected for disposal after thorough processing of waste.
- b. No recyclable wastes shall be disposed by the municipal garbage hauler.
- c. Biodegradable wastes shall be immediately collected and disposed to avoid harborage of vectors and transmit communicable diseases.
- d. Wastes shall not be burned unless approved by the authority, provided that during the burning of such does not release any harmful elements to the environment.

### 5.2. Wastewater Management

#### 5.2.1. Generation

- a. A metering device shall be installed to monitor water consumption.
- b. Water being supplied to the buildings shall be recorded and updated.



## Land Use Development and Infrastructure Plan (LUDIP)

- d. *Leakages in piping system shall be corrected.*
- e. *Use of water shall be minimized.*
- f. *Use other ways of cleaning materials other than water.*

### 5.2.2. Collection

- a. *All wastewater shall be collected by an approved piping material, acid-resistant, durable and cost effective.*
- b. *Discharge of waste from different plumbing fixtures shall be conveyed through the building sewer to a point of disposal.*
- c. *Wastewater from different sources shall be drained and conveyed it for treatment.*
- d. *Stormwater shall be collected through conductor/downspout and conveyed it any receiving canal or body of water.*

### 5.2.3. Treatment

- a. *Wastewater shall be treated prior to its disposal to the environment.*
- b. *An approved septic system shall be constructed so as to provide treatment of sewage to avoid surface and subsurface contamination.*
- c. *Monitoring of the quality of effluent shall be done to ensure compliance to laws and regulations.*

### 5.2.4. Disposal

- a. *Wastewater shall be disposed in an approved manner.*
- b. *Ensure that a related Permit has been secured from the authority in compliance with the law.*
- c. *Ensure that the effluent discharge to the environment passed the effluent standard stipulated in DAO 35.*
- d. *All waste discharge in the environment shall be in compliance with WQMA.*

## 5.3. Hazardous Waste Management

### 5.3.1. Generation

- a. *All waste generated shall be registered to the regulatory agency for their inventory.*
- b. *A Generator's ID number shall be secured from the authority as a transaction ID number for the issuance of permit to transport of waste.*
- c. *Any material containing toxic, hazardous elements for procurement shall be considered by the management to minimize significant environment and health effects when incidentally spilled, released and its cost of cleaning, collection, treatment and disposal.*
- d. *Chemicals for procurement shall be based on the required quantity so as not to minimize waste generation.*
- e. *Use of alternative and non-toxic materials, if possible, as packaging material for equipment, instruments so to reduce special handling and operation and maintenance cost.*

### 5.3.2. Collection

- a. *An approved method of collection shall be used upon collection of the waste.*
- b. *All waste shall be collected with proper protective gear to avoid contact, exposure to chemicals either for short or long period of time.*
- c. *Waste shall be collected using an approved container, leak and punctured-proof, durable and cost-effective.*
- d. *Waste shall not be drained in piping systems to avoid mixture of incompatible materials so as to prevent explosions, damage to lives and properties.*

### 5.3.3. Transfer

- a. *An approved method of handling shall be used in transporting waste from the point of generation to the temporary storage area.*



### 5.3.4. Storage

- a. Waste shall be safely stored prior to its collection by the authorized hauler.*
- b. The storage area shall be equipped with proper ventilation and security for safety purposes.*
- c. The storage area shall not be accessible to people except for the person in-charge to ensure public health protection.*

### 5.3.5. Transport and Treatment

- a. Only authorized hauler with proper permit shall transport the generated waste.*
- b. The management shall ensure that all waste generated shall be transported and treated prior to its disposal.*
- c. In case of on-site treatment, such waste shall passed the effluent standard.*

### 5.3.6. Disposal

- a. All waste shall be disposed in a sanitary landfill or other approved method of disposal.*
- b. All waste that is being disposed shall be recorded for documentation purposes.*

### 5.4. Air Exhaust Management

- 5.4.1. All APSE shall be periodically maintained.*
- 5.4.2. All exhaust from any air pollution source equipment shall be periodically monitored and tested to ensure compliance to standards.*
- 5.4.3. All gases released from APSE shall be treated, if applicable, so as not to induce negative environment and health impact.*
- 5.4.4. Submission of reports to the regulatory agency shall be made in compliance with the AQMA.*

## 6. Revision Requirements

The unit may amend, modify, and/or supplement the requirements in this policy and guidelines subject to presentation and acceptance from the members of administrative council and deliberation to the executive committee.

Prepared by:

  
**Engr. JERICK P. PECASO**  
OIC-Director, ERM  
Pollution Control Officer





# Land Use Development and Infrastructure Plan (LUDIP)



Republic of the Philippines  
**BATANGAS STATE UNIVERSITY**  
Batangas City, Batangas

**ENVIRONMENTAL MANAGEMENT UNIT**

Phone: (043) 980 – 0385 loc 1132

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## **AL-152. University Policies and Guidelines on Waste Management Systems**

### **The Environmental Management Unit**

As per ECC Condition No.8 , that Batangas State University shall set-up a competent Environmental Unit in accordance with DAO no. 26 series of 1992. The unit shall handle all environment-related aspects of the University in addition to the monitoring requirements as specified by the Environmental Management Plan / Environmental Monitoring Plan.

By virtue of the Memorandum Order No. 005 series of 2011, the **Environmental Management Unit (EMU)** is hereby created in compliance with the condition indicated in the Environmental Compliance Certificate (ECC) issued at Batangas State University Main Campus I by the Department of Environment and Natural Resources - Environment Management Bureau (DENR-EMB) Region IV-A office on January 20, 2010.

The EMU is under the Office of the Vice-President for Administration and External Affairs, headed by the Director and/or Pollution Control Officer with competent administrative staff.



The EMU collaborates with concerned offices for the implementation of mitigation action and application of stringent control measures relative to protection and conservation of the environment and promotion of health and safety in the workplace.



**AL-153. Waste Management Programs**

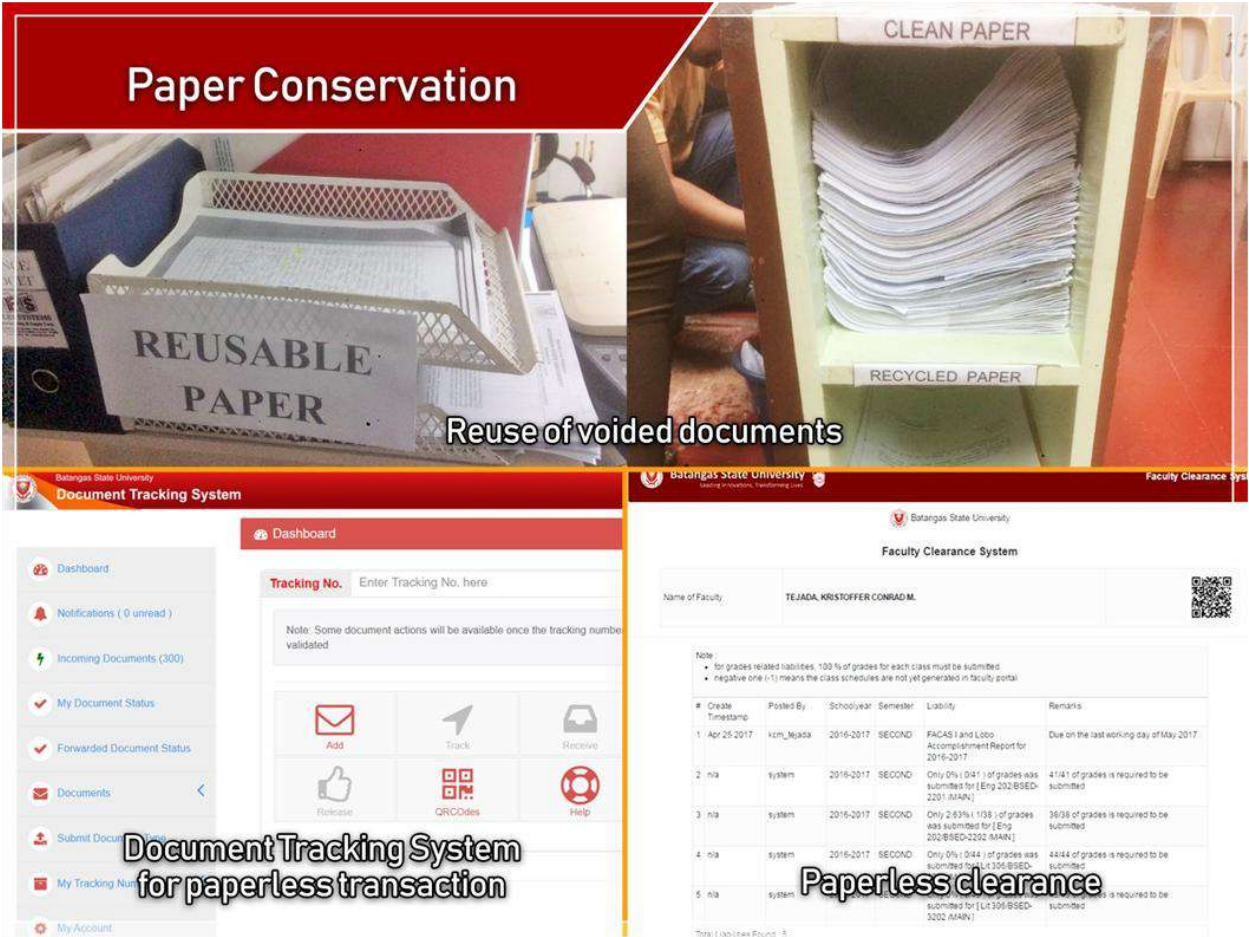




# Land Use Development and Infrastructure Plan (LUDIP)



AL-154. Electricity Conservation Programs



AL-155. Paper Conservation Programs





### Water Conservation Program



AL-156. Water Conservation Programs

### Pollution Prevention Program



AL-157. Pollution Prevention Program





**AL-158. Greening Programs**

# **II**

## **LAND USE DEVELOPMENT AND INFRASTRUCTURE PLAN**





## SUC DEVELOPMENT, LAND USE AND INFRASTRUCTURE PLAN

### A. Vision, Mission, Goals and Objectives

#### a. Vision

A premier national university that develops leaders in the global knowledge economy.

#### b. Mission

A university committed to producing leaders by providing a 21st century learning environment through innovations in education, multidisciplinary research, and community and industry partnerships in order to nurture the spirit of nationhood, propel the national economy, and engage the world for sustainable development.

#### c. University's Thrusts and Priorities

- Academic
- Research
- Extension
- General Services
- Allied Services

### B. Campus Development and Infrastructure Plan

#### 1. Development Constraints

The university is aware of the potential impacts of proposed national, regional, provincial plans and targets. Potential land use conflicts such as Certificate of Ancestral Domain Title (CADT), military reservations, squatters and are not present in Alangilan Campus.

#### 2. Campus Physical Development Plan Strategies

BSU Strategic Plan 2019-2029 serves as the University's blueprint towards the highest level of development and advancement as an important national player in knowledge creation and innovation and the development of human talents needed in the 21<sup>st</sup> century. Through the six pillars of Brand of Excellence, Access, Social, Relevance, Inclusive Innovation, Capacity, and Sustainability (BASICS) the university is geared towards meeting the university vision of achieving national relevance and global competence.

In line with this, BSUs adherence to the governing rules and regulations both local and international intensifies. We are one with Ambisyon 2040 in its long term vision and aspirations of the Filipino people for a prosperous and healthy lives, smart and innovative as expressed in our BSU official motto ***Leading Innovations, Transforming Lives.***

BSU Ten Year LUDIP at 2030 corresponds with SDGs set at 2030 along with Ambisyon Natin 2040.



**Figure AL-159. International Frameworks Sustainable Development Goals 2015-2030 (New York Sept. 2015)**

Among the 17 Sustainable Development Goals (SDGs) also known as the global goals, due consideration is given to the following selected items:

- SDG 4. Quality Education
- SDG 6. Clean Water and Sanitation
- SDG 7. Affordable and Clean Energy
- SDG 9. Industry, Innovation and Infrastructure
- SDG 11. Sustainable Cities and Communities
- SDG 12. Responsible Consumption and Production
- SDG 13. Climate Action

Due consideration is also given to Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai May 2015)



**Figure AL-160. The Sendai Framework for Disaster Risk Reduction 2015-2030**

As the country strengthens the international cooperation and global partnership in the Sendai Framework, BSU strongly support Sendai Framework priorities for Education Sector such as the following:

- Priority 1. Understanding Disaster Risk*
- Priority 2. Strengthening disaster risk governance to manage disaster risk.*
- Priority 3. Investing in Disaster Risk Reduction for Resilience*
- Priority 4. Enhancing Disaster Preparedness for Effective Response*

### 3. Site Development Plan and Infrastructure Plan (narrative and maps)

The Batangas State University has developed its Engineering Development Program: 2021-2025 anchored on the University’s Strategic Plan 2019-2029. It serves as the University’s blueprint towards achieving its vision of becoming a premier national university that develops leaders in the global knowledge economy.

This is the roadmap to success in the next five years. The management looked carefully at the past, assessed all angles and evidence, and extracted insights on how best Batangas State University can position itself for utmost service to the region, the nation and the world. Embodied in the plan is the mobilization of all intellectual capital- the human resources, infrastructure, and internal and external relationships towards being a fully relevant and responsible leader and actor in transforming the lives of individuals, families, and communities in the global knowledge economy and the Fourth Industrial Revolution.

In the Five-year Engineering Development Program, BatStateU capitalizes heavily on its core expertise in Engineering in working with partners here and abroad to push the frontiers of research and innovation and serve the goals of sustainable





development. Thus, as one of the country's leading institutions in Engineering, the university rolled out the Engineering Development Program: 2021-2025, which embodies the bold program for academic and curricular reforms that match the highest global standards. It expresses the agenda for research and extension services dedicated to addressing persistent and interlocking problems and issues in food production and security, individual health as well as health systems, climate change and environmental management, disaster risk reduction and management, shelter and personal protection among others, especially in the context of the current global pandemic and the challenges all have yet to address under Global Goals for Sustainable Development. The university will be both at the forefront as well as a respectable partner of government, industry and communities in all these co-creative and transformative endeavors.

These programs are not just meant to achieve institutional excellence and prominence. These are the strategic ways of broadening the playgrounds of the mind as it were, for the most important resources – the faculty and students. The Five-Year Engineering Development Program is an investment plan on the country's human resources. The large, challenging and dynamic global environments, which include the region and the nation, provide a wealth of dynamic learning.

One of the important aspects of the **Engineering Development Program (EDP)** is the proposed infrastructure development at Batangas State University - Alangilan. The university has acquired an additional 0.70-hectare land adjacent to the old campus site and strategically co-located with the *BatStateU KIST Park*. As shown on the proposed site development plan, there are three (3) major infrastructure buildings that will be constructed in the area namely: Fifteen (15) Storey Engineering Development Hub; Ten (10) Storey Dormitory and Five (5) Level Parking Building. This engineering complex will have ground facilities such as Entrance Façade, Iconic Landmark, Guard House using Smart ID Entry System, Underground Water Retention Facility equipped with filtration system for water reuse, wide roadways and walkways and underground utilities. There will be vehicular access through the KIST Park entrance and connecting bridges and entry ways will be constructed to directly link the pedestrians from the old campus areas and buildings. The Site Development of this area has an estimated cost of Ninety- Five Million pesos (Php 95, 000,000.00)

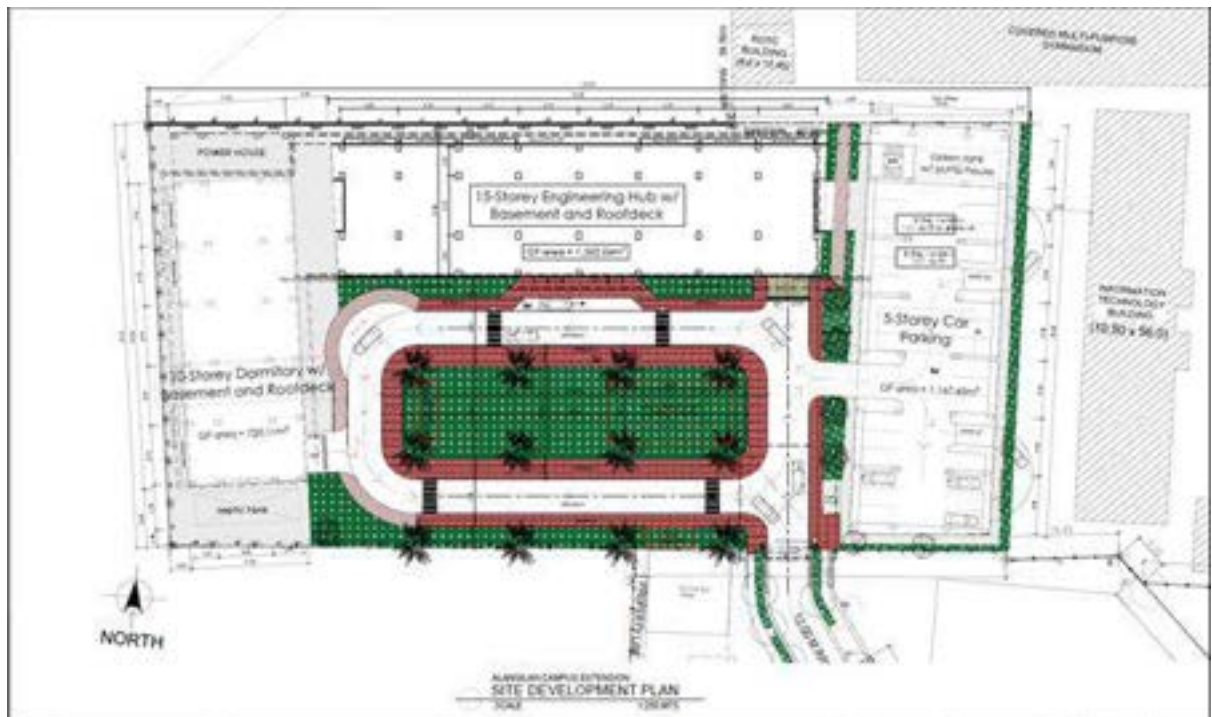


Figure AL-161. Site Development Plan of BatStateU Alangilan Campus Extension



Figure AL-162. Consolidated Site Development Plan of BatStateU Alangilan Campus and KIST Park





### Fifteen (15) Storey Engineering Development Hub

Institutional capacities to access, assess, adapt, adopt knowledge drive innovation that lead to productivity gains and economic growth. The Proposed Fifteen (15) Storey Engineering Development Hub will provide support to establish the University's innovation culture and knowledge management that will accelerate learning and discovery towards maximizing the faculty and students' potential.

The engineering development hub (see Figure 3) comprises both the physical space and a network of facilities to support the collaboration between and among students, faculty, industry partners, and other interested parties in the research and development of innovative products and services, particularly those that directly address the Sustainable Development Goals (SDGs). The proposed building will have an estimated total floor area of 24,608m<sup>2</sup>. The building will have a basement for utilities and also can provide 43 underground parking slots. This development hub will be a multi-functional building as it also houses the state-of-the-art Engineering and Technology Library, Students Centers and Recreational Facilities, Cafeterias and other support facilities. The building will also house several research centers with state-of-the-art laboratory facilities to support the university research and development programs which includes the following:

1. Dynamic System and Control Laboratory (DSCL)
2. Computer Aided Design and Analysis Lab (CADLAB)
3. Computational Laboratory
4. Flight Dynamics and Control Laboratory
5. Imaging Laboratory
6. Biomedical Sensing and Analytics Lab
7. Cell and Tissue Engineering Laboratory
8. Additive Manufacturing Lab
9. Small Scale Molecular Beam Epitaxy for Material Research and Development
10. Food Technology Lab
11. Geospatial Information System (GIS) Lab
12. Seaweeds Processing Lab
13. Advanced Material Testing Lab
14. Large Stroke Testing Lab
15. Seismic Test for High-rise Building Model
16. Rankine Cycle Steam Turbine Lab Power System
17. Aerodynamics Lab
18. Flight Mechanics Lab
19. Flame Diagnostics Lab
20. Motion Simulation Lab
21. Traffic Simulation Lab
22. Driving Simulation Lab
23. Energy and Power Solutions Lab
24. Marine hydrodynamics Lab
25. Ship Design Computer Lab
26. Construction Management Education and Research Lab
27. CDIO Makerspace
28. Project Management Software

To provide ease of access and mobility of users in this building, the Engineering Development Hub will be linked to the dormitory building and the parking building by means of walkways and bridges. With all these proposed amenities the construction of the Proposed Fifteen (15) Storey Engineering Development Hub will have an estimated cost of Nine Hundred Ninety Million pesos (PhP 990, 000,000.00)



**Figure AL-163. Proposed Fifteen (15) Storey Engineering Hub**

### **Ten (10) Storey Dormitory**

The Batangas State University is one of the largest state universities in the region. With over 35,000 students, and 2,000 teaching personnel, the university takes pride in its transformation from once a humble trade school to one of the SUC Level IV Universities in the country. The university is also the top producer of professionals in CALABARZON and has been a partner for academic, research and extension of various offices and line agencies.

With the increasing number of students and with the signing of Republic Act No. 11396 or “SUCs Land Use Development and Infrastructure Plan (LUDIP) Act” on August 22, 2019 by President Duterte, the university deemed it necessary to construct a Ten (10) Storey Dormitory Building. In signing the law, Duterte recognizes that “it is the policy of the state to provide for rational, holistic, efficient, and just allocation, utilization, development, and management of the country's land and water resources that is consistent with the principles of equity, social justice, environmental integrity and sustainable development for the common good”.

Among others, the LUDIP should include a detailed description of the research core, academic core, residential areas covering both housing for faculty and staff, dormitories for students, and detailed geographical description and survey of the site intended for dormitories for students and housing sites for employees of the

SUCs including the architectural design and estimated cost of construction. The facility shall be designed to cater to students and faculty and shall be designed as a sustainable and green building.

The Proposed Ten (10) Storey Dormitory building will have an estimated total floor area of 10,315m<sup>2</sup> (see Figure 4). The building will also have a basement for utilities and also can provide 18 underground parking slots. The proposed dormitory space will consist basically of rooms (Regular Dorm Unit, Deluxe Room Unit, Single Deluxe, Double Deluxe and Suite Room) and other support facilities. The dormitory will have a building capacity of 196 pax. With this capacity and other proposed amenities, the construction of the Proposed Ten (10) Storey Dormitory will require an investment cost of Four Hundred Fifteen Million Pesos (PhP 415,000,000.00).



**Figure AL-164. Proposed Ten (10) Storey Dormitory**

### **Five (5) Level Parking Building**

The proposed construction of major buildings basically requires support facilities, especially parking space. Car Parking requirement as per code based on the total building areas of the proposed dormitory and engineering hub total to 177 parking spaces. Due to the limitation of the available lot to provide the mentioned requirement a Five (5) Level Parking Building is proposed. This parking building will provide amenities such as comfort rooms, stairways as well as conveying systems and other building utilities. There will also be a provision of a connecting bridge to the proposed engineering hub and the CICS building from the old campus site. The proposed parking building can provide a total of 135 parking slots. This facility will require a total investment cost of Nine-Two Million Pesos (PhP 92,000,000.00).





Figure AL-165. Proposed Five (5) Level Parking Building



Figure AL-166. Proposed Five (5) Storey CAFA Building



This five-storey building is being proposed to be utilized by more than one thousand Architecture, Interior Design and Fine Arts students. The building spaces are allotted only for classrooms, lab rooms and comfort rooms due to unavailability of space. Facilities such as canteen, audio-visual/multimedia rooms and other related facilities are not included in the proposed spaces since those structures are present in other BatStateU Alangilan buildings. The Architecture, Interior Design and Fine Arts (ARIDFA) department presently under the College of Engineering, Architecture and Fine Arts (CEAFA) occupies only part of the third floor of CEAFA building and uses shared Engineering facilities particularly computer and other lab rooms.

### The Infrastructure and Facilities

*General description of the infrastructure and facilities that serve as a physical learning environment for the students.*

The university is particular with the effects of infrastructure design to student learning and is fully aware that well-designed campuses can positively affect learning. Location, building materials, size of classrooms, furniture, lighting, temperature, ventilation, noise level, sanitation, and the inclusion of auxiliary facilities were carefully studied and considered.

All infrastructures are installed with facilities and devices like ramps, handrails and ample spaces to allow the entry and access of wheel chairs in compliance to the Accessibility Law. (BP 344) The site is located in a healthy environment, enclosed with fencing and entrance/exit turnstiles to monitor students within the school area.

Locally-available and environmentally-friendly materials are used to the extent possible without compromising the school's structural strength and durability. The general building elements are steel, iron, concrete, and masonry. Walls, ceilings, and permanent partitions are of incombustible fire-resistive construction. To prevent the campus from flooding, runoff and stormwater is diverted to culverts through effective drainage systems. Interior learning spaces are designed based on the required National Building Code standards and with exits compliant to Fire Code of the Philippines. Furniture is provided in adequate numbers, with a plan for regularly replacing broken items. Building materials are durable and regularly maintained for protection and prevention from deterioration.

### 4. Campus Development Plan and Investment Program

Alangilan Campus Plan is a campus-specific policy document that defines the academic and administrative needs of BatStateU Alangilan community and its constituent campuses. A residential land located inside a subdivision has been translated into land uses and development plans compliant to BatStateU's long term development plan, applying its Development Principles and Design



Guidelines resulting in the present and proposed future physical development of BatStateU Alangilan Campus.

### ***Best strategies used in designing the institution.***

Some of the best strategies used in designing the institution includes:

- a. Aligning structures, resource allocation with the university strategic plan.
- b. Analysis of Existing Situation and Identification of Development Needs
- c. Study the full development potential of the site given the constraints/potentials of the access roads and surrounding development.

Other important features of the Plan includes:

- A visually appealing campus façade with the prominently encrypted University logo, featuring electronic turnstiles in the main entrance and with elevated design to restrict flood water coming from the main street in front of the campus.
- Parking and open spaces to be used alternatively as an evacuation area during disaster/calamity; shall also provide the much needed amenity for informal outdoor gathering space. Landscape, sidewalk and miscellaneous improvement
- for safety and aesthetic appeal of the campus.

### **Investment Program**

The proposed infrastructure development to support the university's Engineering Development Program required a total investment of more or less One Billion Seven Hundred Fourteen Million Seven Hundred Forty-six Thousand Seven Hundred Seven Pesos and Eighty-Nine Centavos (PhP 1,714,746,707.89) (see Figure 6). Currently the university, spearheaded by the university president together with the in-house Presidential Project Management Office (PrPMO) and Project Management Office (PMO) in collaboration with the university's Design Consultant and the end users are in the conceptual planning stage to come up with an efficient and sustainable building design.





# Land Use Development and Infrastructure Plan (LUDIP)

BatStateU Alangilan									
Programs and Projects by Level of Urgency									
Programs/Projects	Total Floor Area	Cost	Urgent	Essential	Necessary	Desirable	Acceptable	Deferrable	
1 Ten Storey Dormitory	10,315.00 sqm	414,327,277.44		✓					
2 Five Storey Parking Building (Parking Building Elevator)	6,085.00 sqm 1.00 lot	91,955,633.45 2,133,095.00		✓					
3 Engineering Hub				✓					
Fifteen Storey Engineering Hub	24,608.00 sqm	1,082,752,000.00		✓					
Engineering Hub Site Development	1.00 lot	19,416,985.00		✓					
Retention Tank and Water Pumping System		1,932,152.00		✓					
Valves and water Meters		360,794.00							
Electrical and Auxiliary		7,822,543.00		✓					
Perimeter Fence		2,982,730.00		✓					
Gate/Facade		3,900,000.00		✓					
Marker		1,500,000.00		✓					
4 Five Storey CAFA Building	2,677.00 sqm	85,664,000.00		✓					
Total Cost		P 1,714,746,707.89							

KIST Park									
Programs and Projects by Level of Urgency									
Programs/Projects	Total Floor Area	Cost	Urgent	Essential	Necessary	Desirable	Acceptable	Deferrable	
1 Six Storey Techno Hub	19,200.00 sqm	652,800,000.00	✓						
2 Six Storey Design Innovation Center	11,094.00 sqm	407,796,000.00		✓					
3 Convention Center	6,888.00 sqm	185,976,000.00		✓					
4 Six Storey Data Center	4,254.00 sqm	144,636,000.00		✓					
5 Six Storey IT Contrum	8,052.00 sqm	273,768,000.00		✓					
6 Six Storey KIST Hotel	25,164.00 sqm	855,576,000.00		✓					
7 Service and Utilities	1.00 lot	20,000,000.00	✓						
8 Parking Area	4,609.00 sqm	69,135,000.00		✓					
9 Road	13,419.00 sqm	201,285,000.00	✓						
10 Open Area	49,276.00 sqm	121,218,960.00		✓					
Total Cost		P 2,932,190,960.00							

Figure AL-167. Investment Programs

Key priority development projects and investment programs :



Figure AL-168. Proposed Ten - Storey Dormitory



Figure AL-169. Proposed Fitness Development Center

The Proposed Fitness Development Center is a facility where the growing constituent’s population of the university could hold physical education classes, cultural activities, sports and athletic activities, and other special university events and gathering activities.



**Figure AL-170. Proposed KIST Park Site Development Plan**

One of the recent developments in the University’s research direction is the establishment of the Knowledge, Innovation, Science and Technology (KIST) Park. The BatStateU KIST Part is envisioned as the country’s primary seedbed for technology. It creates a unified network of large firms, medium enterprises, tech start-ups, research institutes and other knowledge producing agents from the field of science, information technology, engineering, manufacturing and creative design.

It nurtures the growth of tech businesses, facilitates the transfer of university know-how to locator-companies, and stimulates the development of innovative products and processes. Through the promotion of industrial R&D, it hopes to raise the level of technological sophistication of regional industries, attract foreign investments, and accelerate the transition from a labor-intensive to a knowledge-intensive economy.

The KIST Park will have the following amenities

- Technology HUB
- Design Innovation Building
- IT Centrum and Data Center
- Convention Center
- KIST Hotel





Figure AL-171. BatStateU KIST Park Virtual Launch Announcement



Figure AL-172. BatStateU KIST Park Virtual Welcome





Figure AL-173. BatStateU KIST Park TechHub Building



Figure AL-174. BatStateU KIST Park Innovation Building



Figure AL-175. BatStateU KIST Park Tech Hub Building Front Elevation



Figure AL-176. BatStateU KIST Park Design Innovation Building and the Entrance Gate



Figure AL-177. BatStateU KIST Park Rotonda

## C. Campus Land Use Plan

### 1. Narrative and maps

Batangas State University Pablo Borbon Main II is located in Golden Country Homes Subdivision, Alangilan, Batangas City. The campus is located in an environment that would be adequate for the intellectual, social, physical and cultural interest of the community. It is kept in good condition and physical appearance.

The buildings are functionally designed and constructed of strong and durable materials to withstand earthquakes, typhoons and fire.

There existing buildings in Alangilan campus are the College of Engineering,





Architecture and Fine Arts (CEAFA) building, College of Industrial Technology (CIT) building, College of Information and Computing Sciences (CICS) building, Food Laboratory Building, Student Center Building, UHT Pasteurization Facility,

STEER hub, and Ralph G. Recto Type Building.

The campus is capable of meeting future expansion needs. Recently, the university has acquired land in the Alangilan Campus. This acquisition opens up further future expansion.

Table AL-13. Existing Land Use and Future Expansion Plan

BUILDING	STRUCTURE AREA in square meter
Alangilan Campus	
CEAFA	2648.57
CICS	821.63
CIT	535.58
RGR	395
STEER Hub	963.66
Mech & automotive shop	117.30
UHT	275.30
Fitness Dev Center	2018
Student covered study area	115.53
Student Service center	242.55
ROTC	248.30
Maintenance	70.82
Power house	70.82
Five Storey College of Architecture	535.58
STP Solid waste mgt facility / MRF	107.80
Alangilan Extension	
5 Storey Parking Area	1167.45
15 Storey Engineering hub	1352.56





10 Storey Dormitory building	720.11
KIST Park	
Design Innovation	1998.87
Service & Utilities	404.18
Convention center	3443.62
Technology Hub	3199.76
Data Center	708.32
Information Technology Centrum	1341.59
KIST Hotel	4194.09
Total Lot Area	6.41 hectares
Parking Area	4608.6
Road	13,418.77
Open Area	18,436.64 - 28.73% of Total Lot Area
Total Building Area	27696.99
Total Land Area	64,161.00



**Figure AL-178. Batangas State University- Alangilan Master Plan**

The existing school site complies with the national standard requirements set by the government.

BatStateU Alangilan’s Master Plan is generally based on BatStateU’s Strategic Plan 2019- 2029, a long range plan being transformed into a physical form based on the University’s Vision.

The Master Plan is composed of BatStateU’s Principles, Design Guidelines, and Current Land Acquisitions.

Alangilan Campus Plan is a campus-specific policy document that defines the academic and administrative needs of BatStateU Alangilan community and its constituent campuses. A residential land located inside a subdivision has been translated into land uses and development plans compliant to BatStateU’s long term development plan, applying its Development Principles and Design Guidelines resulting in the present and proposed future physical development of BatStateU Alangilan Campus.

BatStateU’s Land Use Development and Infrastructure Plan is prepared in accordance to Republic Act No. 11396, “SUC’s Land Use Development and



Infrastructure Plan (LUDIP) Act” for improved and optimal utilization of resources, with the assistance of government

institutions such as the HLURB, UP-SURP, DPWH and LMB-DENR.

- Landscape, sidewalk and miscellaneous improvement for safety and aesthetic appeal of the campus.

### 2. Land, Water, Power Policies

Policies that will govern specific land uses, water, and power generation and utilization policies.

#### Institutional Land Uses

##### General Institutional

- i. Government centers shall be strategically distributed so that they are readily accessible to the communities they serve. Facilities should be able to cater the population and their respective requirements.
- ii. It is important that facilities such as schools, hospitals, day care centers, health centers, and police stations are easily accessible to all members of the community.
- iii. The maximum distance for a student to walk from residence to school site is three (3) kilometers while the maximum travel time from residence to school on board a vehicle of public conveyance is 30 minutes.
- iv. The schools should be located beyond 200 meters from places of ill-repute; recreational establishments of obscure character such as computer gaming cafes, bars or pubs, disco or party clubs, movie houses or theaters, billiard halls or centers, karaoke lounges, bistros, and the like manufacturing facilities; and industrial plants and military barracks.
- v. The ground area occupied by the school buildings and other structures should not exceed 40% of the school site to provide adequate open spaces for assembly and co-curricular activities, as well as to conform with the national and local regulations and standards pertaining to setbacks and distances between buildings.
- vi. Continuous upgrading of such facilities should be prioritized to ensure that it can offer quality and efficient service to the public.

#### Land Use and Environmental Planning

PD 1151 – Philippine Environmental Policy issued on 18 April 1977

PD 1152- Philippine Environment Code, June 6, 1977

RA 7586 – National Integrated Protected Area System (NIPAS) of 1992

PD 984 – Pollution Control Law of 1976

RA 8749 – Clean Air Act of 1999

Republic Act 11396 - “SUCs Land Use Development and Infrastructure Plan (LUDIP) Act”

An act requiring all state universities and colleges (SUCs) to prepare, submit and implement a land use development and infrastructure plan (LUDIP) to ensure rational, holistic, efficient and just allocation, utilization, development and management" of the country's land resources.





### **PD 856 - “Code on Sanitation of the Philippines”**

The aim of this act is the improvement of the way of the Filipinos by directing public health services towards the protection and promotion of the health of the people.

**Philippine Agenda 21** – It is the nation's blueprint for sustainable development. Philippine Agenda 21 envisions a better quality of life for all Filipinos through the development of a just, moral and creative, spiritual, economically vibrant, caring, diverse yet cohesive society characterized by appropriate productivity, participatory and democratic processes, and living in harmony and within the limits of the carrying capacity of nature and the integrity of creation.

### **NEDA 2010-06 - “National Framework for Physical Planning (2001-2030)”**

The National Framework for Physical Planning 2001-2030 (NFPP) provides the analytical parameters for the planned allocation, use and management of the country's land and other physical resources. The NFPP serves as a framework through which the planning and management of these resources are guided at the national and subnational levels.

**HLURB** - The Housing and Land Use Regulatory Board (HLURB) is a national government agency tasked as the planning, regulatory and quasi-judicial body for land use development and real estate and housing regulation. These roles are done via a triad of strategies namely, policy development, planning and regulation.

### **RA 7160 – THE LOCAL GOVERNMENT CODE OF 1991**

The Code mandates the Local Government Units to adopt comprehensive land use plan and enact integrated zoning ordinances.

### **RA 9003 - “Ecological Solid Waste Management Act of 2000”**

It declares the policy of the state in adopting a systematic, comprehensive and ecological solid waste management program that ensures the protection of public health and the environment and the proper segregation, collection, transport, storage, treatment and disposal of solid waste through the formulation and adoption of best environmental practices.

### **RA 8749 - “Philippine Clean Air Act of 1999”**

It is a comprehensive air quality management policy and program, as it outlines the government's measures to reduce air pollution by including environmental protection activities into its development plans. This aims to achieve and maintain healthy air for all Filipinos.

### **RA 6969 - “Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990”**

An Act to control toxic substances and hazardous and nuclear wastes, providing penalties for violations thereof, and for other purposes. The main objective of this act is to control, supervise and regulate activities on toxic chemicals and hazardous waste. Under this act importation, manufacture,



processing, handling, storage, transportation, sale, distribution, use and disposal of all unregulated chemical substances and mixtures in the Philippines, as well as the entry even in transit, or storage and disposal of hazardous and nuclear wastes are regulated.

### **RA 7586 - “National Integrated Protected Area System (NIPAS) of 1992”**

It shall encompass ecologically rich and unique areas and biologically important public lands that are habitats of rare and threatened species of plants and animals, biogeographic zones and related ecosystems, whether terrestrial, wetland or marine, all of which shall be designated as 'protected areas'. The System shall recognize conservation areas and the management regimes being implemented by local government units (LGUs), local communities and indigenous peoples (IPs).

### **PD 1151 - “Philippine Environmental Policy of 1977”**

The purpose of this Decree is to formulate an intensive, integrated program of environmental protection through the requirement of environmental impact assessments and statements. Every individual shall be responsible in contributing to the preservation and enhancement of the Philippine environment.

### **PD 1586 - “Environmental Impact Statement System”**

The purpose of this decree is to attain and maintain a rational and orderly balance between socio-economic growth and environmental protection. The pursuit of a comprehensive and integrated environmental protection program

necessitates the establishment and institutionalization of a system whereby the exigencies of socio-ec

onomic undertakings can be reconciled with the requirements of environmental quality. The regulatory requirements of Environmental Impact Statement and Assessments instituted in pursuit of this national environmental protection program have to work into their full regulatory and procedural details in a manner consistent with the goals of the program.

### **PD 1152 - “Philippine Environment Code of 1977”**

The Environment Code provides the guidelines on air quality management; protection and improvement of water quality; land use management; natural resources management and conservation (i.e., fisheries, wildlife, forests and soil conservation, flood control and natural calamities, energy development, surface and ground waters, mineral resources); and waste management.

### **PD 984 - “Pollution Control Law of 1976”**

Provides guidelines for prevention, abatement and control of pollution of water, air and land.

### **Laws on Water Quality and Water Pollution**

#### **PD 600 and PD 979**



Marine pollution policies by National Pollution Control Commission Enforcement by Philippine Coast Guard

### **PD 1067 Water Code of the Philippines (old)**

Governs the ownership, appropriation, utilization, exploitation, development, conservation and protection of water resources. Identified rights and obligations of water users and the administrative agencies that enforce laws on water use and availability.

### **RA 9275 Clean Water Act of 2004**

An Act providing for a comprehensive water quality management and for other purposes. This Act provides for the abatement and control of pollution from land based sources, and lays down water quality standards and regulations.

**DENR A.O. 2016-08- “Water Quality Guidelines and General Effluent Standards of 2016”** This Administrative Order is issued to provide guidelines for the classification of water bodies in the country; determination of time trends and the evaluation of stages of deterioration/enhancement in water quality; evaluation of the need for taking actions in preventing, controlling, or abating water pollution.

**DOH A.O. 2017-10- “Philippine National Standards for Drinking Water of 2017”** This Administrative Order prescribed the standards and procedures on drinking water quality to protect the public and consumer’s health. Power Supply and Clean Energy Commonwealth Act 120- National Power Corporation to develop hydroelectric facilities.

### **PD 334- Philippine National Oil Company**

Due to a compelling need for the government to embark on measures that will help ensure a stable supply of petroleum products in order to sustain the growth of the economy and the social well-being of the nation. Amendments have been made to the charter to include exploration, exploitation and development of all energy resources in the country.

**PD 1442** An Act to Promote the Exploration and Development of Geothermal Resources Exploration and development of geothermal resources.

**BP 33-** An Act Defining and Penalizing Certain Prohibiting Acts Inimical to the Public Interests and National Security Involving Petroleum and/or Petroleum Products Prescribing Penalties Therefor and for Other Purposes It is the declared policy of the State to institutionalize as a national way of life energy conservation geared towards the judicious and efficient use of energy in order to enhance availability of energy supplies required to support economic, social and developmental goals.

In view of the continuing uncertainty of the international oil supply, it is imperative that measures to conserve energy be strengthened and/or petroleum products contrary to the intent and spirit of judicious usage and conservation of energy,



which are inimical to the public interest and national security, be prohibited and appropriate sanction therefor be imposed.

**RA 387-** Petroleum Act

**RA 5207-** Atomic Energy Regulatory and Liability Act of 1968

**RA 7638 -** Department of Energy Act of 1992

**RA 9367 -** Biofuels Act of 2006

**RA 9513 -** Renewable Energy Act of 2008

### 3. Disaster Risks and Climate Change Adaptation

The Philippine Climate Change and Disaster Policy

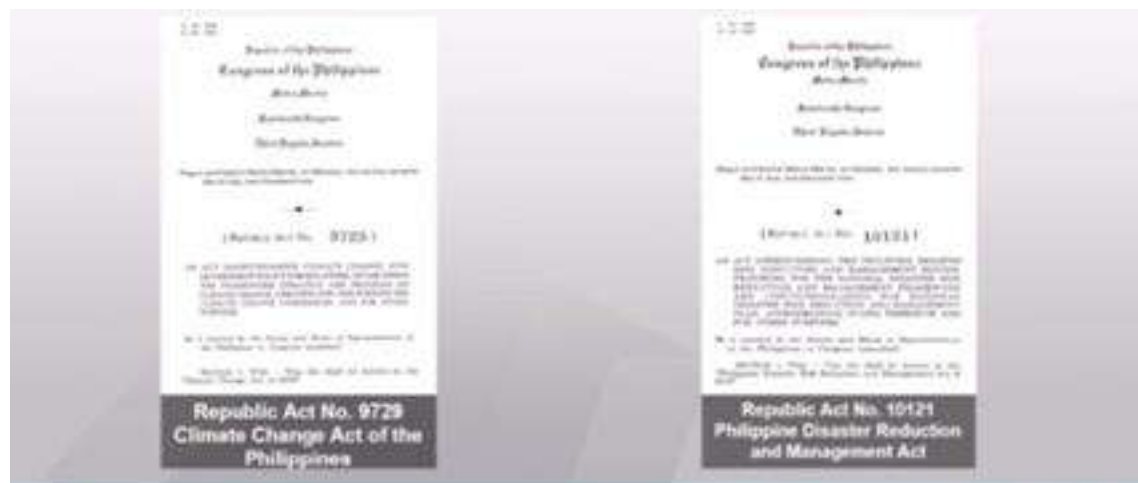


Figure AL-179. International Frameworks Sustainable Development Goals 2015-2030 (New York Sept. 2015)

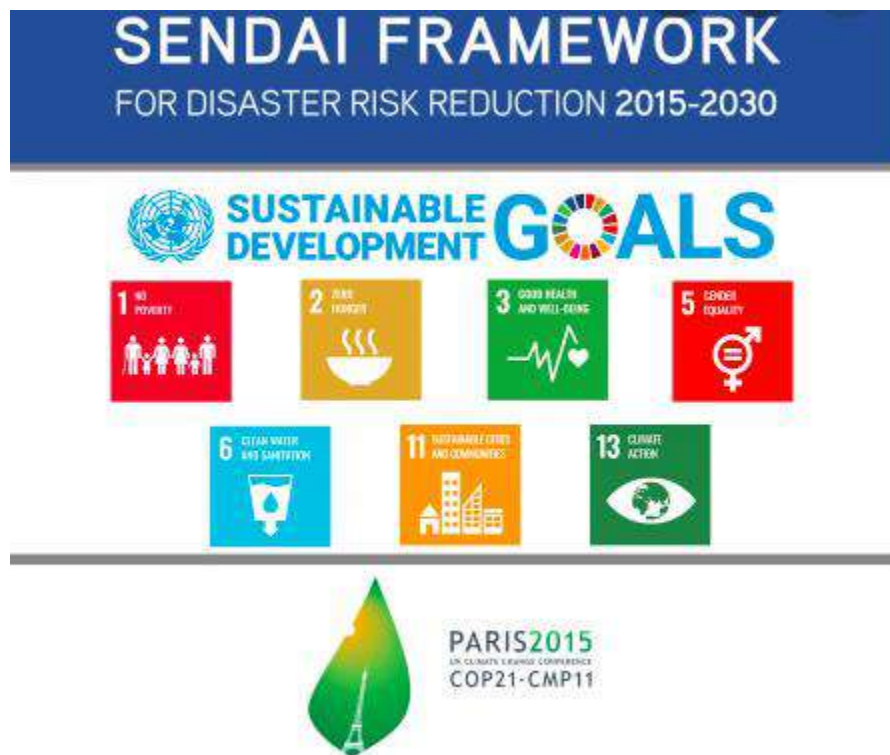


Figure AL-180. Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai, May 2015)

Paris Climate Change Agreement (Paris, Dec. 2015)

## Sendai Framework Priorities for Education Sector

Priorities for Education Sector

Priority 1. Understanding Disaster Risk

Priority 2. Strengthening disaster risk governance to manage disaster risk.

Priority 3. Investing in Disaster Risk Reduction for Resilience

Priority 4. Enhancing Disaster Preparedness for Effective Response

## Disaster Risks and Climate Change Adaptation

(a) Vulnerable areas, by campus

(b) Mitigation programs

(c) Disaster Preparedness Strategies

(d) Physical interventions

## Disaster Risk Reduction

The University is aware that disaster risk management reduces uncertainty, builds confidence, cuts costs and creates value. BatStateU Alangilan, as well as all other campuses, have a systematic approach for Disaster Risk Reduction with the collective efforts of the BatStateU Action Center, the government, the civil society and the stakeholders to build disaster resilient campuses and communities. Figure 5a shows BatStateU Action Center’s Crisis Management Plan.



Figure AL-181. BatStateU Crisis Management Plan

The Crisis Management Plan of the University has procedures to address the needs of emergency response operations and recovery management. To address such emergencies, the university has established emergency response procedures that provide guidelines for the management of the

immediate actions and operations required to respond to an emergency or disaster.

The plan provides the management structure, key responsibilities, emergency assignments, and general procedures to follow during and immediately after an emergency. The University has established this plan to address the immediate requirements for a major disaster or emergency in which normal operations are interrupted and special measures are taken.

The Multi-Hazard Emergency Preparedness Guide as shown in Figure 5b has guidelines in the Crisis Management Plan which are cascaded into the faculty, students and employees.



**Figure AL-182. Multi-Hazard Emergency Preparedness Guide Cover Photo and Announcement of Cascading**

The Disaster and Risk Reduction Management of 11 campuses including BatStateU Alangilan is the result of planning of BatStateU Action Center in coordination with the Office of Civil Defense, the local government and the university stakeholders. Figures 6a and 6b show BatStateU Action Center holding Integrated Planning and Action Center Planning Participants.





# **III**

## **INSTITUTIONAL COORDINATION AND MONITORING SET-UP**



III INSTITUTIONAL COORDINATION AND MONITORING SET- UP

In terms of institutional coordination, all aspects to include Physical and Land Use Planning, Infrastructure and Buildings, Field Laboratories, Environmental Protection, Tourism and Heritage, Solid Waste and Pollution Prevention, Traffic Routes, Sports Facilities, Housing and IGP and Commercial Spaces have monitoring set-up anchored with institutions and agencies coordinated for specific roles and responsibilities. Table AL-13 shows the details on the external coordination for the institutional coordination and Monitoring set-up.

Table AL-14. Institutional Coordination and Monitoring Set-up (External Coordination)

Institutional Coordination & Monitoring Set Up			
	Coordinating Institution	Roles	Monitoring Set Up
(a) Physical Land Use Planning	Batangas State University – concerned Unit	> prepare for the proposed Plan	
	Batangas or concerned LGU – MPDO	> review and permitting/approving consistent with the land uses	> Plan > CLUP
	DHSUD	> review consistency with the LGU’s CLUP	> CLUP
	DENR	> issuance of the Environmental Compliance Certificate (ECC), as necessary	>Provision of mitigating measures to address possible adverse impact to the environment through
(b) Infrastructure and Buildings	Batangas State University – concerned Unit	> review and approve specifically on the health, safety and sanitation	
	Batangas or concerned LGU – MPDO	> review and permitting/approving consistent with the land uses and the DED	



Land Use Development and  
Infrastructure Plan (LUDIP)

	DHSUD	> review and permitting/approving consistent with the land uses and the DED	> DED > CLUP
	DPWH	> provide technical assistance, as necessary	> DED
	DENR	> issuance of the Environmental Compliance Certificate (ECC), as necessary	> reviews its impact to the environment
(c) Field Laboratories	Batangas State University – concerned Unit	>prepare for the proposed Detailed Engineering and Design (DED)	
	Batangas or concerned LGU – MPDO	> review and permitting/approving consistent with the land uses	> DED
	DepED/CHED	> provide technical assistance, as necessary	> DED
	DENR	>issuance of the Environmental Compliance Certificate (ECC), as necessary	> reviews its impact to the environment
	DOH	> review and approve specifically on the health, safety and sanitation	> DED
(d) Environmental Protection	Batangas State University – concerned Unit	> prepare for the proposed Plan, DED, Field laboratories integrating environmental preservation and protection	
	Batangas or concerned LGU - MPDO	> review and permitting/approving consistent with the land uses, primarily focusing on environmental preservation and protection	> Plan > DED





	DENR	>issuance of the Environmental Compliance Certificate (ECC), as necessary	> reviews periodically, e.g. annually if the implementation of the projects is consistent with the approved Plan, design; and its impact to the environment
(e) Tourism and Heritage	Batangas State University – concerned Unit	> prepare for the proposed Plan consistent with the CLUP	> CLUP
	Batangas or concerned LGU - MPDO	>review and permitting/approving consistent with the land uses	> CLUP
	DENR	>issuance of the Environmental Compliance Certificate (ECC), as necessary	> reviews periodically, its impact to the environment
(f) Solid Waste and Pollution Prevention	Batangas State University – concerned Unit	>prepare for the proposed Solid Waste Management Plan (SWMP)	> SWMP
	Batangas or concerned LGU - MPDO	> review and permitting/approving consistent with the land uses	> CLUP and SWMP
	DENR	> reviews and approves the SWMP	> reviews periodically, its impact to the environment
(g) Traffic Routes	Batangas State University – concerned Unit	> prepare for the proposed Traffic Plan	



	Batangas or concerned LGU - MPDO	> review and permitting/approving consistent with the land uses and Traffic Plan, primarily focusing on traffic safety, security and mobility	> Traffic Plan > CLUP
	Local Traffic Unit of LGU	> provide technical assistance, as necessary	> Traffic Plan
	DENR	> issuance of the Environmental Compliance Certificate (ECC), as necessary	> reviews periodically, its impact to the environment
(h) Sports Facilities	Batangas State University – concerned Unit	> prepare for the proposed Sports facilities	
	Batangas or concerned LGU - MPDO	> review and permitting/approving consistent with the land uses, primarily focusing on safety and security	
	Sports Commission or its LGU counterpart	> provide technical assistance, as necessary	
	DENR	> issuance of the Environmental Compliance Certificate (ECC), as necessary	> reviews periodically, its impact to the environment
(i) Housing	Batangas State University – concerned Unit	> prepare for the proposed Housing Plan with its DED	
	Batangas or concerned LGU - MPDO	> review and permitting/approving consistent with the land uses, and DED primarily focusing on environmental preservation and protection, safety and security	> Housing Plan > CLUP



	DENR	> issuance of the Environmental Compliance Certificate (ECC), as necessary	> reviews periodically, its impact to the environment
(j) IGP and Commercial Spaces	Batangas State University – concerned Unit	> prepare for the proposed and/or maintain existing IGP and commercial spaces consistent with the related laws and policies	
	Batangas or concerned LGU - MPDO	> review and permitting/approving consistent with the land uses, primarily focusing on environmental preservation and protection	
	DTI or its local counterpart	> provide assistance on the proposed and/or existing operations	
	DHSUD	> consistency with the LGU’s CLUP	> CLUP

The campus has 24/7 security with 17 guards in three shifts. This is outsourced from RCC Security Service. There is a group designated for the maintenance and upkeep of the facilities of the campus. This is the Building, Equipment & Grounds Maintenance (BE & GM). This group is composed of several personnel that are assigned to certain different tasks. This group is headed by the Assistant Director of Building, Equipment & Grounds Maintenance (BE & GM). The Assistant Director directly supervises several units of the group; Maintenance Group, Janitorial Staffs and Security Personnel. The maintenance group is responsible for the campus maintenance works. This group handles the carpentry works, plumbing works, electrical works, air-condition repair & maintenance and paint jobs. The janitorial services are also a part of this group, this is outsourced from BLADES, Inc. The janitorial staff are responsible for the cleanliness of the campus. There are staff assigned at different floors of each building, the grounds as well as all comfort rooms in the campus.

The university has a unit designated to monitor the environmental activities of all campuses. This is the Environment Management Unit (EMU) under the office of the Vice President for Administration and External Affairs. The said unit has the following personnel positions: The Director, the Assistant Director, a Pollution Control Officer, a Safety Officer, a Head of the Air & Water Quality Management Section, a Head of the Solid Waste Management Section, a Head of the Hazardous Waste Management Section and lastly, a Head for the Information,





Education & Communication Section. These personnel are responsible for the implementation of the policies and guidelines on the Waste Management System of the University.

The policies and guidelines of the Waste Management System of the University are compliant to the following existing laws: RA 8749 or the Air Quality Management Act, RA 6969 or the Hazardous Waste Management Act, RA 9003 or the Solid Waste Management Act and the RA 9275 or the Water Quality Management Act. The waste management system has four components; Solid Waste Management, Wastewater Management, Hazardous Waste Management and Air Exhaust Management. The Office of Food Services or the Canteen Evaluation Committee monitors the food safety, hygiene and sanitation of all food business operations in the campus, makes spot checks and calls the attention of the staff for noted deviations from the policies and procedures of the university. The Committee shall also coordinate and report to the Auxiliary Services the monitoring and evaluation conducted in different food outlets in the university including its extension campuses. A food service coordinator in an extension campus shall be assigned to conduct the regular monitoring of different food business operations within the campus and shall directly report to the Office of Food Services. The Office of the Food Services shall coordinate with the local government for the safety of food service outside the school premises.

ENVIRONMENTAL PROTECTION

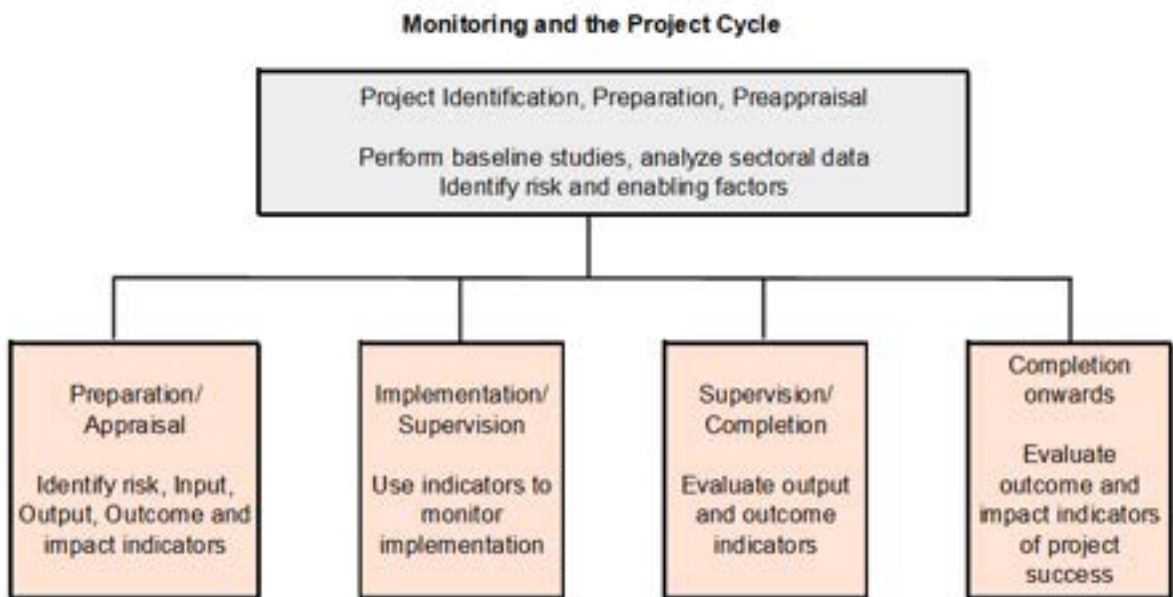
The Environmental Monitoring will be checked by actual inspection, checking of records or by interviews.

Table AL-15. Environmental Monitoring- Operation Phase

ENVIRONMENTAL ASPECTS	PARAMETER	MITIGATING MEASUREMENTS	LOCATION	SAMPLING PROCESS	FREQUENCY	RESPONSIBLE PERSON
Waste Water	Wastewater Volume & Domestic effluent	Efficient Drainage system	Sanitary Provisions	System check	Annually or as need arises	BSU
Solid Waste	Volume	Waste Segregation Coordination with Batangas City	Within the facility & immediate surroundings	Inspection & follow-up activities	Daily	BSU
Ecology	Vegetation	Maintenance of landscape & green areas	Grounds & immediate surroundings	Ocular inspection	Daily	BSU
Traffic	Localized Congestion	Provision of traffic assistant	Main entrance gate	None	As need arises	BSU with Sec Officers
Hazardous Waste	Volume	Proper Storage & Disposal	Facility premises	Supervision & inspection	As need arises	BSU

Table AL-16. Environmental Monitoring- Construction Phase

ENVIRONMENTAL ASPECTS	PARAMETER	MITIGATING MEASUREMENTS	LOCATION	SAMPLING PROCESS	FREQUENCY	RESPONSIBLE PERSON
Air Pollution	Dust and debris	Use cover for delivery trucks Water spraying Equipment maintenance	Construction area premises	Observation of Air Quality	Quarterly until project duration	Contractor
Waste Water	Volume of domestic waste	Conservation of water Cleanliness of drainage facility	Drainage and sanitary provisions	Periodic inspection	Quarterly until project duration	Contractor
Solid Waste	Volume of construction and domestic waste	Segregation Recycling Proper stockpiling & disposal use of garbage or containers City garbage collection	Construction area premises	Supervision inspection system check	Daily	Contractor with Utilities Personnel
Health and Safety of Personnel	Accidents and untoward incidents	Use of safety gadgets Health Services Harmonious working conditions	Construction area premises	Observation Checking of safety provisions	Daily	Contractor and safety officer



Source: The National Economic and Development Authority

Figure AL-183. Monitoring and the Project Cycle

## Environmental Analysis PESTLE

The university has a unit designated to monitor the environmental activities of all campuses. This is the Environment Management Unit (EMU) under the office of the Vice President for Administration and External Affairs. The said unit has the following personnel positions: The Director, the Assistant Director, a Pollution Control Officer, a Safety Officer, a Head of the Air & Water Quality Management Section, a Head of the Solid Waste Management Section, a Head of the Hazardous Waste Management Section and lastly, a Head for the Information, Education & Communication Section. These personnel are responsible for the implementation of the policies and guidelines on the Waste Management System of the University.

The policies and guidelines of the Waste Management System of the University are compliant to the following existing laws: RA 8749 or the Air Quality Management Act, RA 6969 or the Hazardous Waste Management Act, RA 9003 or the Solid Waste Management Act and the RA 9275 or the Water Quality Management Act. The waste management system has four components; Solid Waste Management, Wastewater Management, Hazardous Waste Management and Air Exhaust Management.

## Evidence that the campus is safe, well-maintained, clean and properly landscaped

The campus has 24/7 security with 17 guards in three shifts. This is outsourced from RCC Security Service. There is a group designated for the maintenance and upkeep of the facilities of the campus. This is the Building, Equipment & Grounds Maintenance (BE & GM). This group is composed of several



personnel that are assigned to certain different tasks. This group is headed by the Assistant Director of Building, Equipment & Grounds Maintenance (BE & GM). The Assistant Director directly supervises several units of the group; Maintenance Group, Janitorial Staffs and Security Personnel. The maintenance group is responsible for the campus maintenance works. This group handles the carpentry works, plumbing works, electrical works, air-condition repair & maintenance and paint jobs. The janitorial services are also a part of this group, this is outsourced from BLADES, Inc. The janitorial staff are responsible for the cleanliness of the campus. There are staff assigned at different floors of each building, the grounds as well as all comfort rooms in the campus.

### **Environmental Protection**

The Environmental Management Unit (EMU) stands to inculcate to the stakeholders the “Concern for the Environment” as one of the core values of the University. It is the advocacy towards the establishment of initiatives, policies and measures towards protection, conservation and sustenance of the environment and environmental resources of the University.

Batangas State University Alangilan was issued recently with an Environmental Compliance Certificate (ECC), dated August 03, 2021 by the DENR - EMB CALABARZON. This ECC includes all the conditions in the management of the environment in compliance to different environmental laws and regulations that shall be

The University’s environment and its activities, within the monitoring period, were successfully planned and managed resulting to compliance to major environmental regulations as follows:

#### **RA 8749 “Philippine Clean Air Act of 2004”**

Stack Sampling conducted to determine the air quality released into the atmosphere. The sampling was performed to two standby generator sets of the campus.

#### **RA 9275 “Philippine Clean Water Act of 2004**

Water meter installed for quantifying the water consumption of the University.

#### **RA 6969 “ Toxic Substances and Hazardous and Nuclear Waste Control Act of 1990”**

For storage, collection, treatment and disposal

#### **RA 9003 “ Ecological and Solid Waste Management Act of 2000”**

Compostable leaves and trimmed branches were collected, transferred and disposed through junk dealers to restore sanitation. Trash Bins at strategic locations for proper collection and proper waste disposal.

#### **PD 1586 “Philippine Environmental Impact Assessment Law”**

Pollution Control Officers Reports duly noted by VP for Admin and Finance and submitted to DENR-EMB.

### **Information Education Communication Campaign (IECC)**





Orientations for easy implementation of environmental policies and regulations.

**Safety signage at hazardous/danger areas in the campus.**

2019- Distribution of IEC Materials from the Environmental Management Bureau to staff and students of the University.

Setting a committee for institutional coordination and monitoring allows the BatStateU Alangilan Campus to assess progress of implementation of the Land Use Development and Infrastructure Plan. In this way, the institution will be able to monitor and evaluate its effectiveness.

**Organizing the Institutional Coordination and Monitoring (ICM) Committee**

The LUDIP BatStateU Alangilan is responsible for the creation of an ICM Committee whose membership shall be identified and functions defined. These committees will be responsible for the monitoring, review, and evaluation of the implementation of programs and projects proposed in the LUDIP. The table shows the list of suggested members per thematic area.

Table AL-17. Institutional Coordination and Monitoring Committee

Thematic Area	Committee Members
Physical and Land Use Planning	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of PFMO</li><li>• Head of GSO</li></ul>
Infrastructure and Buildings	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of PFMO</li><li>• Head of GSO</li></ul>
Field Laboratories	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Research Development and Extension Services</li><li>• Head of Research</li><li>• Laboratory Supervisors</li></ul>
Environmental Protection	<ul style="list-style-type: none"><li>• Managing Head of Alangilan Campus</li><li>• Vice Chancellor for Administration and Finance</li><li>• PCO of EMU Alangilan</li><li>• Head of Health Services Alangilan</li></ul>



## Land Use Development and Infrastructure Plan (LUDIP)

Tourism and Heritage	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Academic Affairs</li><li>• Head of Culture and Arts</li><li>• Head of RGO Alangilan</li></ul>
Solid Waste and Pollution Prevention	<ul style="list-style-type: none"><li>• Managing Head of Alangilan Campus</li><li>• Vice Chancellor for Administration and Finance</li><li>• PCO of EMU Alangilan</li><li>• Head of GSO Alangilan</li><li>• Head of Health Services Alangilan</li></ul>
Traffic Routes	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of GSO Alangilan</li><li>• Head of Security Services</li><li>• Head of PFMO Alangilan</li></ul>
Sports Facilities	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Academic Affairs</li><li>• Head of Sports Division</li></ul>
Housing	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Development and External Affairs</li><li>• Vice Chancellor for Academic Affairs</li><li>• Head of RGO</li></ul>
IGP and Commercial Spaces	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Development and External Affairs</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of RGO</li></ul>

The above table presents the suggested members of the committees for the monitoring, review, and evaluation of the implementation of programs and projects proposed in the LUDIP. The members are selected based on their scope of responsibilities. Specifically, below are the duties and responsibilities of each committee:

- Ensure the implementation of Programs, Activities, and Projects (PAPs) related to the thematic area.
- Develop an operational plan with the physical and financial resources allotted for the implementation of PAPs.
- Manage records and database per thematic area such as reports and documentation on the status of activities.

- Perform such other functions as may be necessary for the accomplishment of LUDIP

### Stages of Institutional Coordination and Monitoring Set-up

Presented in the below figure are the stages for Institutional Coordination and Monitoring Set-up. This is to guide the proponents/stakeholders of BatStateU Alangilan in the planning and implementation of Programs, Activities and Projects (PAPs) related to the thematic areas.



**Figure AL-184. Stages of Institutional Coordination and Monitoring Set-up**

1. Pre-planning Stage - the committee together with the concerned office shall gather necessary information related to the proposed PAPs.
2. Pre-approval Stage - the preliminary documents must be presented to the Chancellor and Vice Chancellors of the campus. The documents must support the goal and objectives of the PAPs to be proposed.
3. Planning Stage - the committee and concerned office shall create the plan of the PAPs from preliminary to execution stage. Monitoring and evaluation tools must be included in the development plan.
4. Approval Stage - in this stage, included are the approval of PAPs, budget allocation, procurement requests, and other necessary documents that need to be approved.
5. Implementation Stage - the PAPs must be implemented in accordance with the policies of the national, local, and campus. All requirements must be completed, and all permits are secured prior to project execution.
6. Monitoring Stage - the committee is responsible for the monitoring of the success of PAPs. They shall set a monitoring tool appropriate to the PAPs being implemented. It is to keep in mind that included in the monitoring is the financial plan status of the project especially for infrastructure.
7. Evaluation Stage - Once the entire project has been implemented, evaluation follows. This is to check whether the project has been successful





and efficient to its purpose. In case of infrastructure projects, this is to check if the turned-over project is up to the quality standards.

### Implementation, Monitoring and Evaluation

Prior to the implementation of projects, all concerned offices must agree to the programs and plans set-up. Documents shall be approved by the top management and completed prior to execution of the project. Continuous monitoring must be done and reported as prescribed by the university policy. An evaluation must be conducted after every activity to check for its effectiveness.

The Budget Office will provide support during the implementation, monitoring and evaluation process, more particularly in the timely determination of the following:

- Meeting funding requirement of the Investment Program
- Level of funding generated from external sources
- Actual expenditures and major deviations from the plan if any
- Compliance with reportorial and other regulatory requirements
- Status of borrowed fund if any
- Other funding options in case of contingencies

To have consistency in the documentation, the forms and instruments to be used are of the university in the preparation, monitoring and evaluation of PAPs in thematic areas.



# Land Use Development and Infrastructure Plan (LUDIP)



**BATSTATEU  
ARASOF-NASUGBU**

*Leading Innovations, Transforming Lives*



## MESSAGE



Today, it is with great pride and honor that I present to you the master plan of Batangas State University ARASOF-Nasugbu. This "living plan" will respond to the challenges and opportunities at hand with a clear set of goals, strategies, and actions developed and embraced by the campus, specifically the proposed Dormitory, Indoor Gymnasium with Olympic Size Swimming Pool with Sports and Wellness Amenities, Higher Education Building II and Technology, Engineering and Computing Building, among others.

Looking back to the development and history of ARASOF-Nasugbu more than half a century ago, the Apolinario R. Apacible School of Fisheries was established by RA 685, dated May 9, 1952, passed by Congress. Back then, there was only a three-story structure built on four-hectare land; now with more than nine hectares allotted for Academic Zone, Administration and General Services, Research and Extension, Allied Services, Mixed-Use of Academic and Administration, Driveway, Parking, Open Space and Recreation Area. Since offering the Secondary Fishery Curriculum for years, the school has undergone remarkable skills, academic achievements, and physical facilities. The flight of ARASOF continued when it subsequently became part of Batangas State University through RA 9045 as amended in 2001. Today, we are a distinguishing institution that caters to more than 6,000 students of seven colleges and a laboratory school. These rapid and significant developments enforce achieving the full potential of the campus' land and resources.

Hopefully, this long-term plan will inspire everyone to be innovative, transformational, and impactful, gearing us towards new significant directions.

Mabuhay ang BatStateU ARASOF-Nasugbu!

**ENRICO M. DALANGIN, Ph.D.**

Chancellor, BatStateU ARASOF-Nasugbu





## **Land Use Development and Infrastructure Plan (LUDIP) Legal Mandates**

A new law mandates state universities and colleges (SUCs) to design development and infrastructure plans for the proper management of land resources. Republic Act No. 11396, signed by President Rodrigo Duterte on Aug. 22, requires all SUCs to submit their respective Land Use Development and Infrastructure Plan (LUDIP) to the Commission on Higher Education. SUCs are required to follow their respective development plans for all of their future infrastructure projects.

Under Republic Act No. 11396, land use or infrastructure projects of the SUCs shall also be required to follow the LUDIP which shall be linked with the land use plan and practice of the local government units to ensure complementation of activities across geographical boundaries. Under the new law, SUCs must submit the following as part of their LUDIP:

- Campus planning framework, principles and processes, including master development plans
- Detailed geographical description and survey of the site occupied by the SUCs
- Inventory of all existing buildings, facilities, and other infrastructure within the compound or areas occupied by the SUCs
- Cadastral survey of land occupied by the SUCs
- Detailed description of the research core, academic core, and residential areas covering both housing for faculty, and dormitories for students
- Detailed geographical description of land used for commercial, agriculture, fishery, forestry, and other activities, including open and recreational spaces, landscape features, and campus transportation system among others.
- Design and estimated cost of construction, operation, maintenance of other infrastructure needs of the SUCs
- Financial plan

The following agencies may also help SUCs in making their development and infrastructure plans:

- Housing and Land Use Regulatory Board
- University of the Philippines School of Urban and Regional Planning
- Department of Public Works and Highways
- Land Management Bureau of the Department of Environment and Natural Resources

The measure meanwhile tasks the CHED, UP-SURP, and HLURB to design capacity building programs for SUCs to enable them to develop and prepare suitable land use plans.

Responsive to Republic Act No. 11396, the Batangas State University prepared its LUDIP for the 11 campuses of the University.



## **ACKNOWLEDGEMENT**

The completion of this LUDIP report would not have been possible without the efforts, participation and hard work of people from BatStateU ARASOF-Nasugbu and those from the Municipals Office of Nasugbu.

The Batangas State University ARASOF Nasugbu would like to express their sincerest gratitude and appreciation to the following: Dr. Tirso A. Ronquillo, the University President who gave the opportunity and challenge to be part of this very important undertaking, to the Committee on the Preparation of the university LUDIP headed by Atty. Luzviminda C. Rosales and to Dr. Enrico M. Dalangin, the BatstateU ARASOF Chancellor for the support and guidance; to the the ARASOF Nasugbu LUDIP Committee, Assoc. Prof. Josephine D. Vergara (Chairperson), Assoc. Prof. Erwin Caparas (Co-Chaiperson), To the members: Dr. Lorissa Joana E. Buenas, Dr. Froilan G. Destreza, Asst Prof. Marithel J. Tiangco, Dr. Anania B. Aquino, Dr. Maria Luisa A. Valdez, Dr. Gloria A. Rearte, Asst. Prof. Gloria L. Araos, Asst. Prof. Renalyn D. Malabanan; To the Technical Working Group: Arch. Lara Patria E. Cabanillas, Engineer Nicko Jeanina M. Dimafelix, Mr. Alvin P. Caraig, Ms. Johanna Paula H. Barcelon, Mr. Juvenal R. Oriondo, Engr. Alfredo V. Atienza Jr., Mr. Kenneth S. Laguatan; to the Secretariat: Asst. Prof. Aleli A. Dadayan, Mr. Marvin C. Hernandez, Dr. Raymart O. Basco and Ms. Maria Dhonna Cel I. Umandal.

Our thanks and appreciation also goes to Ms. Regina Grace U. Lascano, Mr. Alex James Pimentel (Officer of Municipal Disaster Risk Reduction and Management Officer), and Engr. Francisco Amoyo (Head of MENRO) and to the LUDIP Committee Central for conducting LUDIP Orientation Webinar; to all the attendees in the Stakeholders Meeting composed of the representatives of the Faculty Confederation, Administrative officials, Department of Education,, Municipal Offices of the Nasugbu, Barangay Bucana officials, parents and student leaders.

Above all, to the great Almighty God, the author of knowledge and wisdom.



## **FOREWORD**

The Land Use Development and Infrastructure Plan (LUDIP) was created by BatStateU ARASOF-Nasugbu to improve and optimally utilize the resources of the campus. Its preparation and implementation is a requirement for the approval of infrastructure projects. The LUDIP of this campus includes campus planning framework, principles and processes, master development plans, geographical descriptions and survey of the campus, inventory of all existing buildings, facilities and other structures with the compound, survey of land area occupied by the campus, geographical description of land, research and academic core, and residential areas like housing and dormitories, design and estimated cost of construction, operation and maintenance, and financial plan.

Nasugbu is characterized by variation in topographic relief. To be able to work on the LUDIP, the following insights were also considered: The climate in Nasugbu where the campus is located falls under Type I classification, characterized by two pronounced seasons: dry season from November to April and wet season for the rest of the year. However, the municipality is exposed to seven (7) natural hazards: typhoon, tsunami, storm surge, landslide, flooding, earthquake and volcanic eruption. However, Nasugbu is most susceptible mostly to typhoons, flooding and landslide due to typhoons and windstorms, and potentially, tsunami. Because of these threats, Nasugbu has a contingency plan that shall help ensure preparedness for effective response in the entire municipality including Disaster Preparedness Strategies that can be used during disastrous situations. In addition, BatStateU ARASOF-Nasugbu also has a disaster response team, also called the Incident Command Team, which can be activated upon the advice of the Incident Commander, Dr. Enrico M. Dalangin.

Moreover, BatStateU ARASOF-Nasugbu implements environmentally-sound programs and activities through its Environmental Management Unit. This includes the Solid Waste Management Program (Generation, Segregation, Collection, Processing and Recovery, and disposal of wastes) and the Hazardous Waste Management Program participated in by the campus officials, faculty members, staff, students, and other stakeholders. In addition, the campus also follows policies that govern specific land uses, water, and power generation and utilization. These policies assist the University in ensuring the proper utilization of land, water, and power.

The LUDIP ARASOF-Nasugbu created an ICM Committee responsible for the monitoring, review, and evaluation of the implementation of programs and projects proposed in the LUDIP. All concerned offices must agree to the programs and plans set-up, while documents shall be approved by the top management and completed prior to execution of the project. Moreover, continuous monitoring must be done and reported as prescribed by the university policy. For every activity, evaluation must be conducted after every activity to check for its effectiveness. All the insights mentioned were considered to be able to work on the LUDIP.





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## I. GENERAL INFORMATION OF THE SUC

### A. Legal Bases/Mandates

The establishment of Batangas State University is governed by specific legal bases which serve as a guide in its pursuit for quality tertiary education. First is the Republic Act No. 764 (1953) bestowed upon the Batangas Trade School (established in 1903 as Manual Training School) a national status, changing its name to Pablo Borbon Memorial Trade School, later (in 1957) to Pablo Borbon Regional School of Arts and Trades (PBRSAT). Another, legal underpinning is the Republic Act No. 5270 (1968) which made it possible for the conversion of the PBRSAT into a state college, the Pablo Borbon Memorial Institute of Technology (PBMIT).

Further, with the university's continued development and expansion the Republic Act. No. 9045 (March 22, 2001) created the Batangas State University (BSU) by integrating the Pablo Borbon Memorial Institute of Technology (PBMIT) and all its branches/campuses, the Jose P. Laurel Polytechnic College in Malvar, the Apolinario R. Apacible School of Fisheries in Nasugbu, and the Polytechnic University of the Philippines campus in Sto. Tomas, all in the province of Batangas.



Figure 1. Batangas State University Pablo Borbon

The Batangas State University (BatStateU) is committed to implement its mandate of equality and excellence, relevance and responsiveness, access and equity and efficiency and effectiveness through instruction, research, extension and production to meet the growing needs of the country and the world for globally competitive and morally upright professionals, scientist, technologist, technicians, skilled workers and entrepreneurs. It commits itself to the advancement of knowledge and skills in arts and sciences, teacher education, engineering, technology and informatics, accountancy, business and economics, agricultural sciences, law nursing and other related disciplines.





### **Mandate of the Batangas State University as The National Engineering University**

On April 11, 2022, the Batangas State University was declared as The National Engineering University by virtue of Republic Act 11694.

In Section 3 of RA 11694, the purpose of the BatStateU as the national engineering university committed to develop leaders in the global knowledge economy, the BatStateU shall:

- a) Provide world-class academic training to young Filipinos in the field of engineering and other professions, and mold them into becoming responsible citizens who are aware of their role in nation-building, and are motivated to meet the challenges and opportunities as the country pursues its development goals, especially in the areas of infrastructure development, environmental protection, information and telecommunications, manufacturing, transportation, and land and shelter development;
- b) Offer advanced studies and specialization for engineers, scientists, entrepreneurs, industry practitioners, and other professionals, primarily for those who serve as faculty of the state and private colleges and universities;
- c) Strengthen engineering programs through the development and offering of industry-driven and emerging engineering programs; spearhead collaboration between the academe and engineering industries; and lead in the implementation of innovative pedagogies in engineering education through the Center for Innovations in Engineering Education;
- d) Serve as a research university in engineering and related field of specialization by conducting basic and applied research and development, promoting research collaboration with various colleges and universities in the country, and contributing to the dissemination and application of knowledge;
- e) Intensify scientific, innovative, and technological research and development that would lead in the development of high-impact research, startups and spinoffs and technology transfer of products and services in specific areas such as electronic systems, environment, information and computing technology, material science and testing, and advanced manufacturing through the established research centers under the Science, Technology, Engineering and Environment Research (STEER) Hub, recognized by the Regional Development Council (RDC) as the Center for Science, Technology, Engineering and Environment Research in the CALABARZON Region;
- f) Provide progressive leadership in setting academic standards and initiating innovations in advanced instruction, research, and professional training in the fields of engineering education, and maintain centers of excellence in such disciplines and professions;
- g) Offer undergraduate and graduate-courses within the areas of specialization and according to its capabilities, including medical and allied health, natural and applied sciences, teacher education, business, technology, management, social sciences, arts and culture, agriculture, and other related fields, as the Board of Regents may deem necessary to carry out its objectives, specifically, in order to provide greater access for deserving students in tertiary education and an adequate response to the particular needs of the government, the society and the industry in these fields;



- h) Lead in the protection, conservation, and strategic management of the Verde Island Passage (VIP) that separates the islands of Luzon and Mindoro, and described as the "center of the center of marine shore fish biodiversity in the world" by developing biodiversity experts, conducting collaborative research, marine exploration, community education and training, and establishment of the Verde Island Passage Center for Oceanographic Research and Aquatic Life Sciences (VIP CORALS) by the RDC-Region IV-A (Cavite, Laguna, Batangas, Rizal and Quezon Region) as the National Center for Marine Bio-Diversity in VIP;
- i) Lead in the generation of productive knowledge, innovation and technology to develop relevant and technical higher order skills needed to compete in the global knowledge economy;
- j) Provide an avenue for the professional advancement of Disaster Risk Management (DRM) managers and practitioners by offering academic programs in DRM and contribute in ensuring a resilient community through the Adaptive Capacity-building and Technology Innovation for Occupational Health and Natural Disaster (ACTION) Center endorsed by the RDC-Region IV-A as National Center for Disaster Risk Reduction and Management, and Climate Change Adaptation Education and Research;
- k) Contribute to national economic growth, jobs creation, domestic and foreign investment, and community well-being through the university-based Knowledge, Innovation and Science Technology (KIST) Park, designated as a Special Economic Zone by virtue of Presidential Proclamation No. 947, dated May 22, 2020;
- l) Serve as a public service university by providing various forms of community, public, and volunteer service, as well as scholarly and technical assistance to the government, private sector, and civil society while maintaining its standards of excellence;
- m) Strengthen its Laboratory and Integrated Schools for basic education by focusing and adopting advanced teaching and learning on science, technology, engineering and mathematics to serve as feeder schools for engineering, science and technology programs of the BatStateU: Provided, That the operation of the Integrated School shall be self-liquidating, through payment of tuition and other school fees by the students as approved by the governing board;
- n) Protect and promote the professional and economic rights and welfare of its academic and nonacademic personnel;
- o) Provide opportunities for training and learning in leadership, responsible citizenship, democratic values, institutions, and practice, through academic and nonacademic programs, including sports, towards the promotion of nationalism and a deep and enduring pride in the national identity;
- p) Serve as a regional and global university in cooperation with international and scientific unions, networks of universities, scholarly and professional association in the Asia Pacific region and around the world; and
- q) Provide democratic governance based on collegiality, representation, accountability, transparency, and active participation of its constituents, and promote the holding of fora for students, faculty, researchers, extension program specialists, staff, and alumni to discuss nonacademic issues affecting the BatStateU.



## B. Brief Profile of the University/College and its Campuses

Batangas State University was declared as “The National Engineering University” on April 11, 2022 by virtue of Republic Act 11694. It is a Level IV state university in the province of Batangas, Philippines. Established in 1903, the university is strategically located at the second largest economic region in the Philippines, which puts it at a prime position not only as a premier provider of higher and advanced learning, but also as a viable economic development zone.



Figure 2. The National Engineering University

As one of the country’s model higher education institutions recognized by the Commission on Higher Education (CHED), BatStateU is the first and thus far the only state university in the Philippines with engineering, IT, and computer science programs accredited by the Accreditation Board for Engineering and Technology (ABET) – Engineering Accreditation Commission and Computing Accreditation Commission. With 15 development centers, it is recognized by the Regional Development Council of Region IV-A as the Regional Center for Technology Business Incubation and Development, and as the Regional Center for Science, Technology, Engineering, and Environment Research.



Figure 3. BatStateU Achievements



The university's Electronics Engineering program is designated by CHED as a national Center of Excellence, and its Electrical Engineering, Mechanical Engineering, Development Communication, and Teacher Education programs are national Centers of Development. It has also maintained high academic standards in architecture, industrial technology, computing sciences, business, agriculture, allied health, and the social sciences. It received ISO 9001:2015 certification from TÜV Rheinland Philippines, Inc., and is host to the first China-Philippines Silk Road Institute in the country.

With over 40,000 students facilitated by 1,700 faculty and staff in 11 campuses, Batangas State University remains steadfast in its adherence to international standards. It was given a three-star rating by Quacquarelli Symonds Stars University rating, and is part of the Top Universities list. Through Proclamation No. 947, President Rodrigo Roa Duterte designated the BatStateU Knowledge, Innovation, and Science Technology or KIST Park as a Special Economic Zone. It is the first KIST Park registered by the Philippine Economic Zone Authority or PEZA.



Figure 4. BatStateU Figures

### Campuses

Since 2003, Batangas State University has had two main satellites, and six extension campuses in Batangas. To maintain camaraderie between its campuses, the university administers several annual activities like quiz bees and intramurals.

The university's main campuses are located in Batangas City; Pablo Borbon Main I is at Rizal Avenue, Poblacion while Pablo Borbon Main II is within Golden Country Homes Subdivision in Brgy. Alangilan. Both are named in honor of former governor Pablo Borbon. Being the oldest of all the campuses, Main I is the site of the former Batangas Trade School which was established in 1932. Since then, Main I has been the flagship campus and the seat of the administration of the university. The site of the second oldest campus, Main II, was acquired in 1984.



Figure 5. BatStateU Alangilan (formerly BatStateU Main II)

On 25 February 2000, the Apolinario R. Apacible School of Fisheries or ARASOF in Brgy. Bucana, Nasugbu was incorporated into the former Pablo Borbon Memorial Institute of Technology as its first satellite campus.



Figure 6. BatStateU ARASOF-Nasugbu

With the implementation of Republic Act No. 9045, two more satellite campuses were incorporated to the then newly formed Batangas State University; this were Jose P. Laurel Polytechnic College or JPLPC in Poblacion, Malvar and a branch of the Polytechnic University of the Philippines or PUP in Poblacion, Santo Tomas However, on 22 May 2007, Congress enacted Republic Act No. 9472 that excluded PUP Santo Tomas from Batangas State University.





Figure 7. BatStateU JPLPC - Malvar

Earlier in 1994, the university's third oldest and first extension campus was inaugurated in Brgy. Caloocan, Balayan. In 2000, a memorandum of agreement was signed for the purpose of establishing more extension campuses in Lipa City, Rosario, Lobo, San Juan, Calaca, Padre Garcia, San Pascual, and Taysan. The said campus in Brgy. Maraway, Lipa City was named Don Claro M. Recto campus as a tribute to the well-known Filipino politician while the one in Brgy. Namunga, Rosario was named Jose B. Zuño campus in honor of Rosario's first postwar mayor. The extension campuses in Lobo and San Juan were constructed in Brgy. Masaguitsit and Brgy. Talahiban, respectively. Recently, a ceremony was held on June 8, 2017 for the commencement of construction of another extension campus in Mabini and was launched on August 6, 2018.



Figure 8. BatStateU Lipa

Moreover, on December 2, 2020, the board of regents approved the official names of the five (5) constituent campuses of the university by virtue of Board Resolution no. 137-A,S.2020. After a thorough analysis of data the five campuses that have consistently shown strength in most indicators which include enrolment, academic infrastructures and support facilities, and total assets are the Batangas State University-Pablo Borbon, Batangas State University Alangilan, Batangas State University ARASOF-Nasugbu, Batangas State University JPLPC-Malvar, and Batangas State University Lipa. They are





considered constituent campuses because of their strong capability for autonomy and operational sustainability.

### C. Brief History of Batangas State University

#### Early Years

Batangas State University was originally established as a Manual Training School in 1903 through the supervision of its first American principal, Mr. Scheer. The institution aimed to train youth for beneficial jobs specifically in woodworking. Two years later, it was renamed Batangas Trade School with Mr. Schartz, Zacarias Canent, Isaias, and Nad Pascual Magcamit as its principals, successively. The school was destroyed by fire in 1928 and classes were held temporarily at the old government building near the present Basilica of Immaculate Conception church. The construction of the school building at the site of Batangas State University's Main Campus I began in 1932.

After the Liberation, Batangas Trade School resumed activities on 10 September 1945 with Vicente J. Mendoza as its principal. Under the Philippine Rehabilitation Act of 1946, the school was renovated and the first batch of female students were admitted when courses in food trade, garment, and cosmetology were introduced as a response to the growing need of female workforce.

#### Pablo Borbon Era

Sometime before 1952, the school was renamed Pablo Borbon Memorial Trade School as a tribute to Pablo Borbon who served as the 6th governor of Batangas from 1910 to 1916. Through Republic Act No. 741, the school gained a national trade status on 18 June 1952. Again, it was renamed Pablo Borbon Regional School of Arts and Trades on 22 June 1957 as mandated by Republic Act No. 1957. Two months later, Arsenio Galauran became the school superintendent while the institution started to offer technical courses. The school started offering mechanical and electrical engineering in 1961. Galauran was succeeded by Vicente Mendoza in November 1962. Mendoza was then followed by Rosauro de Leon on 8 June 1963. It was during de Leon's administration that the school began to offer terminal classes in auto mechanics, cosmetology, electronics, dressmaking, machine shop practice, and radio mechanics. On 19 June 1965, Republic Act No. 4582 directed the school to offer degree courses in industrial education and industrial arts.

As authorized by Republic Act No. 5270, Pablo Borbon Regional School of Arts and Trades was elevated into a state college and renamed Pablo Borbon Memorial Institute of Technology or PBMIT on 15 June 1968. At the time of its conversion, it was the 23rd state college in the country. Rosauro de Leon was appointed to become PBMIT's first president.

In 1972, the newly established state college started to offer courses in electrical and mechanical engineering courses. Sometime before 1973, a secondary school department that came to be known as the Laboratory School was inaugurated. By 1973, Marcos Ato was its principal when the Laboratory School adopted the Revised Secondary Education Program or RSEP. The following year, the Graduate School was formally opened with a Master of Arts in Industrial Education major in Administration and Supervision as its pioneer course. This was followed in 1978 when Master of Management specialized in Business and Public Managements was offered in partnership with former U.P. College of Public Administration. Earlier in 1977, PBMIT



launched the Extension Trade Training Program that aimed to train out-of-school youth in electricity, food trades, mechanics, practical automotive, and woodcraft in a span of 200 hours.

Isabelo R. Evangelio succeeded de Leon as college president in 1983. A year after Evangelio's ascendancy to the office, PBMIT acquired a three-hectare land in Batangas City. Eventually, this would become the site of Batangas State University's Main Campus II. Evangelio was succeeded by Mariano O. Albayalde in 1986. In the same year, PBMIT broadened its undergraduate programs in home economics, mathematics, and science. In association with Technological University of the Philippines or TUP, a doctoral degree in Industrial Education Management was offered in 1987. A science class with emphasis in mathematics and science of the Special Science Curriculum was piloted in the Laboratory School from 1987 to 1990 through the supervision of its principal, Mercedes del Rosario.

Albayalde's presidency was followed by Ernesto M. De Chavez in 1989. Courses in English language, elementary and secondary education, and computer science were made available the subsequent year. Simultaneously, PBMIT spearheaded the Dual Training System or DTS that was intended for aspiring technicians. DTS was conducted on a trimester basis; classes were held four days a week in industry and two days in school. By 1991, two more courses in development communication and biology were offered. Starting from 1993, the Laboratory School adopted the Technology Based-Curriculum to conform with PBMIT's Science Education Program. Together with Philippine Science High School and Quezon City Science High School, the three were the first secondary schools in the Philippines to adopt the aforementioned curriculum. In 1994, an extension campus was opened in Balayan with welding fabrication and automotive, electrical, and electronics technology as its premier courses.

From 1995 to 2000, numerous courses in various disciplines were introduced. Some of these were architecture, business administration, chemical engineering, sanitary engineering, fine arts, information technology, psychology, and public administration. The former College of Liberal Arts, Science, and Computer Studies; School of Accountancy, Business and Economics, Center for Gender, and Poverty Studies; and School of Food Science were established. A separate department for primary students was created that offered Kindergarten I and II in preschool and Grade I in elementary.

### **Conversion into a State University**

On March 22, 2001, Pablo Borbon Memorial Institute of Technology was converted into Batangas State University by virtue of Republic Act No. 9045. Ernesto M. De Chavez became the university's first president. The conversion also led to the unification of the Grade School Department and the Laboratory School from which the Integrated School came into existence with Maxima Ramos as its first director. By July 17, 2006, Nora L. Magnaye assumed office as the university's second president and the first woman to hold the position. During her presidency, Batangas State University started to establish ties with different universities and colleges in China, Malaysia, South Korea, Thailand, and Vietnam.



Then on July 17, 2014, Tirso A. Ronquillo was appointed as the third university president. Since 2015, massive infrastructure development has been concretized in the university's campuses. It was during Dr. Ronquillo's term when the university became a Level IV university, received ISO 9001:2015 certification, and was awarded Three Stars by the QS Stars rating. It was also during this time when its engineering and information technology programs were accredited by the US-based Accrediting Board for Engineering and Technology. The university established the first KIST park in the country, started offering new emerging programs, developed research and development centers, and expanded international partnerships during his term. In December 2019, the university launched its ten-year strategic plan highlighted by its new vision, mission, and strategic direction until 2029.

List of Campuses and Corresponding Address and Geographic Tagging

The BatStateU is composed of both constituent and extension campuses established by its governing board upon the recommendation of its President. The constituent campuses include the following, and those that may be created in the future:

Pablo Borbon Campus	Rizal Avenue, Batangas City
Alangilan Campus	Golden Country Homes, Barangay Alangilan, Batangas City
ARASOF-Nasugbu Campus	R. Martinez St., Brgy. Bucana, Nasugbu, Batangas
JPLPC-Malvar Campus	Poblacion, Malvar, Batangas
Lipa Campus	Brgy. Marawoy, Lipa City

The extension campuses include the following:

Balayan Campus	Brgy. Caloocan, Balayan, Batangas
Lemery Campus	Brgy. Bagong Sikat, Lemery, Batangas
Mabini Campus	Sitio Mailayin, Brgy. P. Niogan, Mabini, Batangas
Rosario Campus	Brgy. Namunga, Rosario, Batangas
San Juan Campus	Brgy. Talahiban II, San Juan, Batangas
Lobo Campus	Brgy. Masaguitsuit, Lobo, Batangas



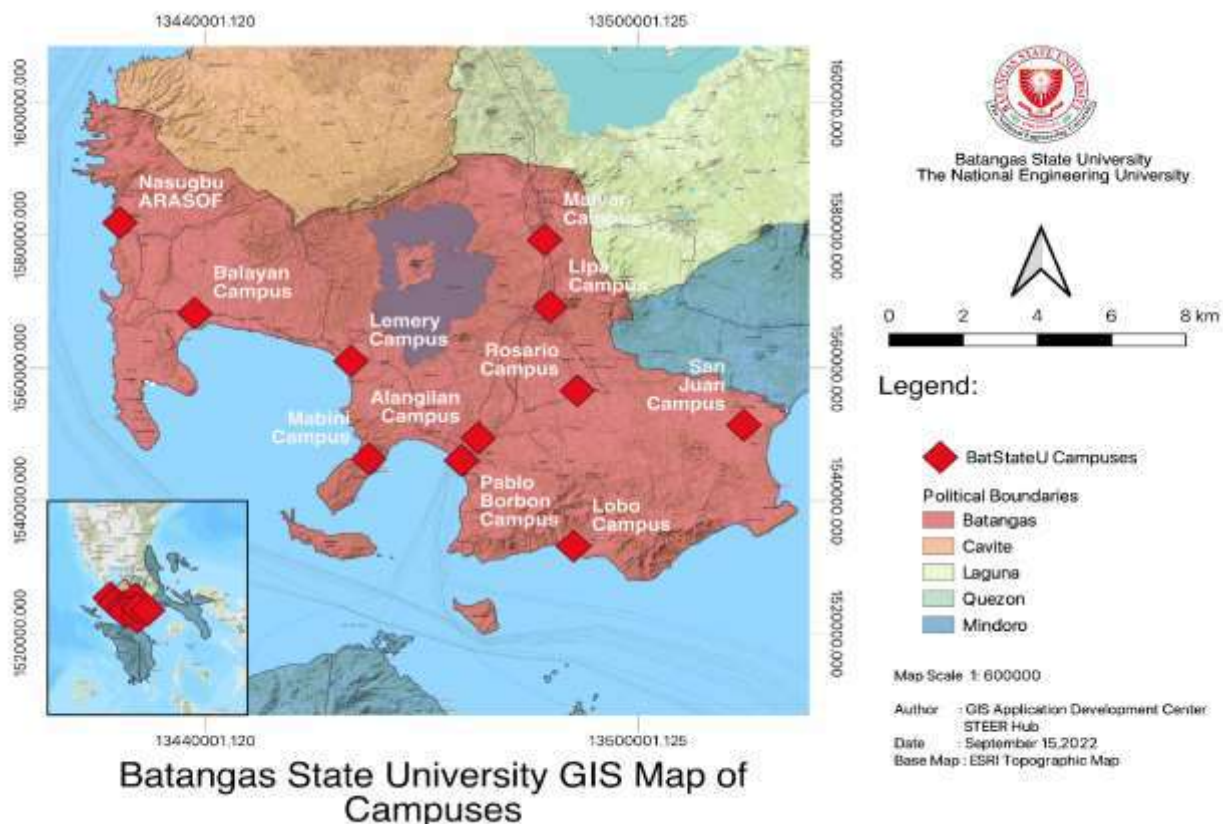


Figure 9. Batangas State University GIS Map of Campuses

## Brief History of Batangas State University ARASOF-Nasugbu

The Batangas State University ARASOF-Nasugbu, also known as the Pambansang Pamantasan ng Batangas ARASOF-Nasugbu is located at Barangay Bucana, Nasugbu, Batangas. It started as a branch of the Philippine Institute of Fisheries Technology in Nasugbu, Batangas on May 1952 by virtue of Republic Act No. 685 passed by Congress through the efforts of the late Congressman Apolinario R. Apacible and former Director of Fisheries, Dr. Deogracias Villadolid. A 4.3-hectare tract of land was donated by Don Antonio Roxas y Cia as its site.



Figure AN-1. BatStateU ARASOF-Nasugbu



Below is the timeline of the History of Batangas State University ARASOF-Nasugbu beginning from its foundation in 1957 and onwards.

On January 12, 1957, the institute, formerly under the Department of Agriculture and Natural Resources, was transferred to the Department of Education directly under the General Office of the Bureau of Public Schools.

On June 10, 1957, the institute started offering a secondary fishery curriculum, and the name was changed to Batangas School of Fisheries. In 1963, the school was transferred to the Bureau of Vocational Education under the supervision of the Superintendent of Marikina School of Arts and Trades in Marikina, then to Pablo Borbon School of Arts and Trades in Batangas City, and lastly, Cavite School of Fisheries.

In 1972, the school became an independent fishery school under a school administrator who later on became the school's Superintendent. During the school year from 1974 to 1975, it started offering the Fishery Technical Education Curriculum leading to the Diploma in Fishery Technology. In view of the urgent need for qualified fishery technologists in various phases of fishery industry, the four-year Fishery Technology curriculum leading to the degree of Bachelor of Science in Fisheries (BSF) was approved by the Bureau of Vocational Education under the then Department of Education, Culture and Sports on October 7, 1974 and was offered starting the school year from 1975 to 1976.

On July 1, 1975, the school was transferred to the Ministry of Education, Culture and Sports (MECS), Region IV. By virtue of Presidential Decree 787 issued on August 20, 1975, the name of the institution was changed to Apolinario R. Apacible School of Fisheries in recognition of the congressman who sponsored the bill in Congress.

In 1981, the school was transferred to the Department of Education, Culture and Sports under the Higher Education Regional Office, Region IV. In the same year, the school opened an elementary school unit starting with grade one. This unit serves as the pilot school for the integration of the three levels, elementary, secondary and tertiary, in a fishery school. It is known as the Integrated Fisheries Elementary Unit of ARASOF.

From 1994 to 1995, the school offered a Bachelor of Science in Fishery Education (BSFED). By virtue of Republic Act No. 7722 otherwise known as the "Higher Education Act of 1994", the Apolinario R. Apacible School of Fisheries was placed under the Commission on Higher Education as a CHED Supervised Institution.

On July 5, 1996, the school was authorized to offer Bachelor of Science in Hotel and Restaurant Management (BSHRM) and Bachelor of Science in Food Technology (BSFT) courses effective starting from the collegiate year from 1996 to 1997 through CHED Order No. 42. s. 1996, by virtue of Resolution No. R 117-96, s.1996.

The same authority was granted on September 11, 1997 through CHED Order No. 46, s.1997, by virtue of resolution No. R288, s.1997 to offer the Bachelor of Secondary Education and Bachelor of Elementary Education major in English, Mathematics and General Science effective starting the collegiate year from 1997 to 1998. The following year, Bachelor of Science in Information Technology and Bachelor of Science in Information Management were offered.

On February 25, 2000, the Board of Trustees of Pablo Borbon Memorial Institute of Technology passed Board Resolution No. 2, s. 2000 approving the official integration of ARASOF and two other schools pursuant to the provisions of RA 8292 otherwise known as the Higher Education Modernization Act of 1997 effective January 2000.

Subsequently, on March 24, 2000 through a referendum, the Board of Trustees of PBMIT approved the official name and address of this institution as Republic of the



Philippines Pablo Borbon Memorial Institute of Technology Apolinario R. Apacible School of Fisheries Nasugbu, Batangas.

On March 22, 2001, by virtue of Republic Act No. 9045, the Batangas State University, primarily the Main Campus and including all the satellite and extension campuses, was created by integrating the Pablo Borbon Memorial Institute of Technology with all its branches, Jose P. Laurel Polytechnic College in Malvar, Apolinario R. Apacible School of Fisheries in Nasugbu and Polytechnic University of the Philippines in Sto. Tomas.

In 2015, the modernization of infrastructure to create a 21st century learning environment started. In 2016, the Campus shifted its academic calendar with the first semester opening in August. The University including the BatStateU ARASOF-Nasugbu was classified as a Level IV state university in 2017; received ISO 9001:2015 certification in 2018; launched the new vision towards becoming a premier national university in 2019; and declared as the National Engineering University in 2022.

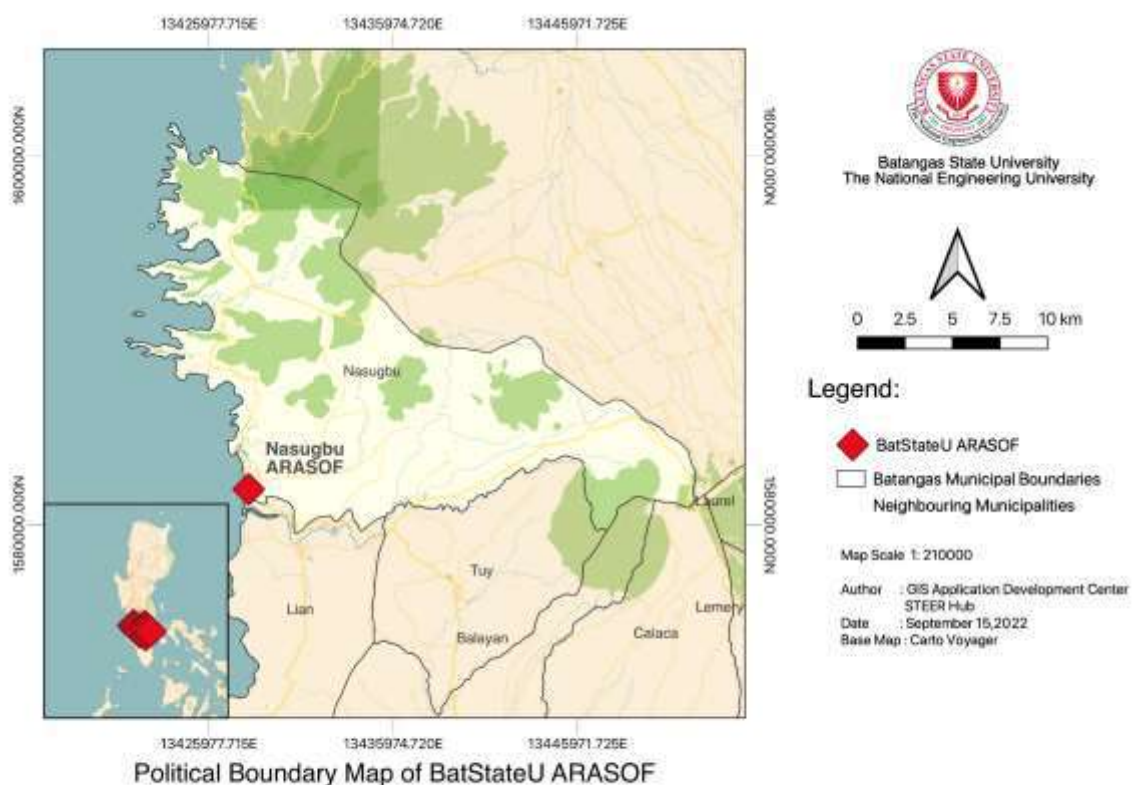


Figure AN-2. Political Boundary Map of BatStateU ARASOF-Nasugbu





Figure AN-3. ARASOF-Nasugbu Campus' Geographic Tag

## D. Current BatStateU Governing Board/ Inter-Department Bodies/ Interdepartmental Bodies

### The Board of Regents

The Batangas State University Board of Regents is the highest governing body of the university, as stipulated in Sec. 5 of RA 9045. The Board regularly convenes at least once every quarter. The Board is composed of the CHED Commissioner Chairperson, Dr. Marita R. Canapi; the University President as the Co-Chairperson, Dr. Tirso A. Ronquillo; the Chairperson of the Senate Committee on Higher, Technical and Vocational Education, Senator Francis "Chiz" G. Escudero represented by Mr. John Bryan D. Diamante; Cong Mark O. Go represented by Cong. Mario Vittorio A. Mariño as the Chairperson of the House Committee on Higher and Technical Education. Also, part of the board is Dr. Arsenio M. Balisacan represented by Director Luis G. Banua, NEDA Regional Office IV-A; Dr. Renato U. Solidum represented by Director Emelita P. Bagsit, DOST Regional Office IV-A; representative as Private Sector; and Dr. Kristoffer Conrad M. Tejada, President of the Confederation of BatStateU Faculty Association. Meanwhile Engr. Amando A. Plata represents the alumni as the President of the Confederation of BatStateU Alumni Associations; and the private/prominent citizen is represented by Engr.Ladislao L. Andal. The composition of the board of regents is completed by Dr. Enrico M. Dalangin as the University and Board Secretary.



# Land Use Development and Infrastructure Plan (LUDIP)



## BATANGAS STATE UNIVERSITY

### Board of Regents



**Dr. MARITA R. CANAPI**  
Commissioner, Commission on Higher Education  
Chairperson



**Dr. TIRSO A. RONQUILLO**  
President, BatStateU  
Co-Chairperson



**Cong. MARK O. GO**  
Chairperson, House Committee on Higher and Technical Education  
Member  
Represented by: **Cong. Mario Vittorio A. Mariño**  
Congressman, 5th District of Batangas



**Sen. FRANCIS "CHIZ" G. ESCUDERO**  
Chairperson, Senate Committee on Higher, Technical and Vocational Education  
Member  
Represented by: **Mr. John Bryan D. Diamante**



**Dr. ARSENIO M. BALISACAN**  
Secretary, National Economic and Development Authority  
Member  
Represented by: **Dir. Luis G. Banua**  
Director, NEDA Region IV-A



**Dr. RENATO U. SOLIDUM, Jr.**  
Secretary, Department of Science and Technology  
Member  
Represented by: **Dir. Emelita P. Bagsit**  
Director, DOST Region IV-A



Engr. LADISLAO L. ANDAL  
Private Sector Representative  
Member



Engr. AMANDO A. PLATA  
President, Federation of Alumni Associations of Batangas State University  
Member



Dr. KRISTOFFER CONRAD M. TEJADA  
President, BatStateU Faculty Confederation  
Member



Dr. ENRICO M. DALANGIN  
Secretary of the University and of the Board of Regents  
Head Secretariat

Figure 10. Organizational Chart of Board of Regents

President's Advisory Council

The President's Advisory Council serves as the institution's management committee who spearheads strategic planning, policy formulation, and decision making based on Board-approved policies and guidelines. Currently, it is composed of the following:

- 1. Charmaine Rose I. Triviño - Vice President for Academic Affairs
- 2. Assoc. Prof. Albertson D. Amante - Vice President for Research, Development and Extension Services
- 3. Atty. Luzviminda C. Rosales - Vice President for Administration and Finance
- 4. Atty. Noel Alberto S. Omandap - Vice President for Development and External Affairs
- 5. Dr. Enrico M. Dalangin - Secretary of the University and of the Board of Regents and Chancellor, BatStateU ARASOF-Nasugbu
- 6. Dr. Expedito V. Acorda - Chancellor, BatStateU Pablo Borbon
- 7. Atty. Alvin R. De Silva - Chancellor, BatStateU Lipa
- 8. Dr. Philip Y. Del Rosario - Chancellor, BatStateU Malvar





### The Administrative and Academic Councils

The university has an Administrative Council, as stipulated in Section 10 of RA 9045. It consists of the president of the university as the chairman, the vice presidents, deans, directors, and other officials of equal rank as members. The Administrative Council reviews and recommends to the Board policies governing the administration, management and development planning of the university for appropriate action.

The Academic Council, as provided in Section 11 of RA 9045, has the president of the university as chairman and all members of the instructional staff with the rank of not lower than assistant professor as members. This council has the power to review and recommend the curricular offerings and rules of discipline of the university, subject for appropriate action of the Board. It shall fix the requirements for admission of students, as well as for graduation and the conferment of degrees, subject to review and/or approval by the Board.

### ARASOF-Nasugbu Campus Administration

The BatStateU ARASOF-Nasugbu Campus is headed by the Chancellor, Dr. Enrico M. Dalangin. Under his office are four vice-chancellors who are designated to different offices such as the Office of Vice-Chancellor for Academic Affairs, Office of the Vice-Chancellor for Administration and Finance, Office of the Vice-Chancellor for Research Development and Extension Services and the Office of Vice-Chancellor for Development and External Affairs.

Dr. Lorissa Joana E. Buenas, the Vice-Chancellor for Academic Affairs, works on the academic related matters with the deans of colleges. There are various offices under her supervision such as Registration, Library, Health Services, Testing and Admission, Scholarship, On the Job Training, Student Organization, Guidance and Counseling and Student Discipline. Each of the offices is designated with heads. On the other hand, Mrs. Josephine Vergara, the Vice-Chancellor for Administration and Finance, works with different offices whose functions involve administration and finance matters. These include the Office of Human Resource Management, Records, Procurement, Property and Supply, Project and Facility Management, General Services, Environmental Management Unit, Budget, Cashiering, Accounting and Disbursing. The heads of these offices directly report to the vice-chancellor.

Moreover, Dr. Froilan G. Destreza, the Vice-Chancellor for Research, Development and Extension Services, mobilizes the function of the office with the heads of the Research and Extension Services Office. The Vice-Chancellor for Development and External Affairs, Assoc. Prof. Lorenjane E. Balan, supervises other offices including the ICT Services, Planning and Development, External Affairs and Resource Generation. The Campus Deans oversee the functions of different Colleges while the Heads of Offices oversee the administrative services.

### E. Programs Offered in BatStateU ARASOF-Nasugbu

The university's program offerings are recognized by the country's Commission on Higher Education. These are designed to provide opportunities for students to discover

their potentials and enhance their technical and creative skills in a vibrant academic environment.

Each program offering is anchored on pragmatic, relevant, and socially responsive curricula that train students to be globally competitive by embracing transdisciplinary, social intelligence, new media literacy, design mindset, and physical and virtual collaboration. The university believes that these skills are required in the emerging professional and social environments.

Plans to offer graduate programs were also considered to provide advanced learning in specialized disciplines. These will provide professionals more opportunities for career advancement, increase their prospects, and nurture greater intellectual curiosity and passion for inquiry, thus molding them to become leaders, managers, and innovators by developing transformative solutions to real world problems.

### **College of Accountancy, Business, Economics and International Hospitality Management**

- Bachelor of Science in Accountancy
- Bachelor of Science in Hospitality Management
- Bachelor of Science in Tourism Management
- Bachelor of Science in Management Accounting.
- Bachelor of Science in Business Administration major in:
  - Human Resource Management
  - Marketing Management
  - Financial Management

### **College of Arts and Sciences**

- Bachelor of Arts in Communication
- Bachelor of Science in Criminology
- Bachelor of Sciences in Fisheries and Aquatic Sciences
- Bachelor of Science in Food Technology
- Bachelor of Science in Psychology

### **College of Engineering**

- \*Bachelor of Science in Computer Engineering
- \*Bachelor in Industrial Technology

### **College of Informatics and Computing Sciences**

- Bachelor of Science in Information Technology
- \*Bachelor of Science in Computer Science

### **College of Nursing and Allied Health Services**

- Bachelor of Science in Nursing
- Bachelor of Science in Nutrition and Dietetics Programs

### **College of Teacher Education**

- Bachelor in Elementary Education
- Bachelor in Secondary Education major in
  - English
  - Mathematics



- Sciences
- Filipino
- Social Studies
- Bachelor of Physical Education

Laboratory School

- Kindergarten
- Elementary
- Junior High School
- Senior High School - STEM

\*For gradual phaseout

List of Program Offerings of the Campus with Corresponding COPC Number and Date of Issuance

College	No	Program	CHED COPC No.	Date Issued
College of Accountancy, Business, Economics and International Hospitality Management (CABEIHM)	1.	Bachelor of Science in Tourism Management	COPC No. 113, Series 2022	June 24, 2022
		Bachelor of Science in Hospitality Management	COPC No. 138, Series 2022	September 02, 2022
	2.	Bachelor of Science in Accountancy	COPC No. 132, Series 2021	December 07, 2021
	3.	Bachelor of Science in Business Administration majors in Financial Management, Marketing Management, and Human Resource Management	COPC No. 131, Series 2021	December 07, 2021
	4.	Bachelor of Science in Management Accounting		For follow-up to the Program Specialist In-Charged
College of Arts and Sciences (CAS)	5.	Bachelor of Arts in Communication	COPC No. 073, Series 2022	June 01, 2022
	6.	Bachelor of Science in Psychology	COPC No. 086, Series 2022	June 02, 2022
	7.	Bachelor of Science in Criminology	COPC No. 092, Series 2022	June 07, 2022
College of Teacher Education (CTE)	8.	Bachelor of Elementary Education (BEED-Area of Specialization: Content Course)	COPC No. 087, Series 2022	June 02, 2022



	9.	Bachelor of Secondary Education majors in *Sciences, Mathematics and English, Filipino and Social Studies	COPC No. 088, Series 2022	June 02, 2022
	10.	Bachelor of Physical Education	COPC No. 099, Series 2021	October 25, 2021
College of Nursing and Allied Health Sciences (CONAHS)	11.	Bachelor of Science in Nursing	COPC No. 013, Series 2021	August 10, 2021
	12.	Bachelor of Science in Nutrition and Dietetics		Waiting for updates
College of Informatics and Computing Sciences (CICS)	13.	Bachelor of Science in Information Technology	COPC No. 098, Series 2022	June 17, 2022

Table An-1. List of Program Offerings of the Campus with Corresponding COPC Number and Date of Issuance

## F. Recognition and Awards Obtained from International/National/ Regional or Private Award Giving Bodies

### Declared as the National Engineering University



Figure AN-4. The National Engineering University

On April 11, 2022, by virtue of Republic Act 11694, Batangas State University was declared as “The National Engineering University”. Distinctively, the University has the most number of engineering programs being offered among higher education institutions (HEIs) in the country. Half of its 46 programs are new and emerging graduate and undergraduate programs that are designed to respond to the imperatives of Industry 4.0 and the call for social and economic transformation.

## QS Intelligence Unit Rates BatStateU as a 3-Stars Institution



Figure AN-5. QS Stars University Rating of BatStateU

In March 2020, Quacquarelli Symonds or QS Stars University rating gave Batangas State University a three-star rating. It received five stars for Teaching; four stars for Employability; one star for internationalization; two stars for Academic Development; three stars for Facilities; four stars for Inclusiveness; two stars for Specialist Criteria: Innovation; and four stars for Specialist Criteria: Electronics Engineering.

## BatStateU as sole state university in PH with ABET-Accredited Engineering and IT Programs



Figure AN-6. ABET

BatStateU is the only state university in the Philippines with engineering and IT programs accredited by the Accreditation Board for Engineering and Technology (ABET) – Engineering Accreditation Commission and Computing Accreditation Commission.

ABET accreditation is recognized worldwide through international agreements, paving the way for graduates to work globally. It provides assurance that a university program meets the quality standards of the profession for which that program prepares its graduates.

## CHED hails BatStateU as Model HEI; BatStateU Programs as COE/COD



Figure AN-7. BatStateU COE and COD Awards

BatStateU was selected as a Model Higher Education Institution by the Commission on Higher Education in 2016. This made BatStateU a host university for the Philippine Higher Education Career System - Executive Development Program or EDP, which is part of the University Dynamics Laboratory of CHED in partnership with the

Development Academy of the Philippines. The university hosted ten candidates of the EDP from 26 November to 1 December 2016.

In addition, the University's Electronics Engineering program is designated by CHED as a national Center of Excellence, and its Electrical Engineering, Mechanical Engineering, Development Communication, and Teacher Education programs are national Centers of Development.

### ISO-Certified Institution



Figure AN-8. BatStateU ISO 9001:2015 QR Code

TÜV Rheinland Philippines, Inc. awarded the university the ISO 9001:2008 certification in December 2017, and the ISO 9001:2015 certification after passing the external surveillance audit in September 2018. The ISO certification covers the design, development, and implementation of higher education services.

### National Awards and Citations

Two of Batangas State University's research projects received the National Gawad KALASAG (KAlamidad at Sakuna LABanan, SARiling Galing ang Kaligtasan) award from the Office of Civil Defense – National Disaster Risk Reduction and Management Council or NDRRMC. The amphibious vehicle known as the Tactical Operative Amphibious Drive or TOAD, which can be used for rescue operations during heavy floods, received the special award in November 2016.



Figure AN-9. Tactical Operative Amphibious Drive or TOAD

On the other hand, the research project of the university dubbed as Solar-Powered Isotropic Generator of Acoustic Wave or SIGAW, which is a tsunami early warning device, received a Special Recognition during the Gawad Kalasag awards night in December 2018.





Figure AN-10. Solar-Powered Isotropic Generator of Acoustic Wave or SIGAW

Gawad Kalasag is an annual awarding ceremony for significant initiatives in the promotion and advancement of Disaster Risk Reduction and Management in the country.

### **BatStateU Technology Park Designated as Special Economic Zone**



Figure AN-11. BatStateU KIST Park  
Located at Brgy. Alangilan, Batangas City

Through Proclamation No. 947, President Rodrigo Roa Duterte designated the BatStateU Knowledge, Innovation, and Science Technology or KIST Park as a Special Economic Zone. It is the first KIST Park registered by the Philippine Economic Zone Authority or PEZA.

Strategically located near other technology parks, business hubs and transport systems in the CALABARZON Region, the Batangas State University KIST Park clearly serves as the top location for technology transfer and commercialization in the Philippines.

### **Home of ASEAN-registered Engineers**

The University has 29 ASEAN Engineers in the faculty roster, awarded by the ASEAN Federation of Engineering Organizations (AFEO), which facilitates the mobility of engineers within the ASEAN countries.

## Hosting of International Conferences



Figure AN-12. BatStateU ARASOF-Nasugbu

The university hosted 6 international conferences on engineering, science, technology, business, education, social sciences, disaster risk management and climate change adaptation, showcasing progressive leadership in these areas.

## G. Recognition and Awards Obtained from International/National/ Regional or Private Award- Giving Bodies by BatStateU ARASOF-Nasugbu

BatStateU ARASOF-Nasugbu is one of the campuses ISO 9001-2015 certified.



Figure AN-13. BatStateU ISO 9001:2015 QR Code

TÜV Rheinland Philippines, Inc. awarded the university the ISO 9001:2008 certification in December 2017, and the ISO 9001:2015 certification after passing the external surveillance audit in September 2018. The ISO certification covers the design, development, and implementation of higher education services.

## Accreditation

In line with its commitment to provide quality education, Batangas State University ARASOF-Nasugbu also submitted its programs to the Accrediting Agency of Chartered Colleges and Universities in the Philippines, Inc. (AACCUP) Program Accreditation. Currently, 11 percent of its programs are Level III Re-accredited, another 11 percent are in Level III Phase 2 status, 42 percent are under Level II Re-accredited status, while the remaining programs are in Level 1 and for Application since the campus has 2 new program offerings starting the First Semester of A.Y. 2021-2022.

## College of Arts and Sciences

BatStateU ARASOF-Nasugbu was awarded as one of the Top Performing Schools in the CALABARZON (State University Category) for its outstanding contribution, achievement and hard work, worthy of emulation to the Criminal Justice Education in the CALABARZON Region and for its exemplary performance in the Board Examination for Criminologists given by the Professional Regulation Commission- Professional Regulatory Board of Criminology and the Professional Criminologists Association of the Philippines, Inc. last November-December 2019, with a rating of 97 percent passing performance among the First Takers under Category 5 with 50 examinees. The Plaque of Recognition was given last February 19, 2020.



Figure AN-14. Plaque of Recognition

Likewise, BatStateU ARASOF-Nasugbu was awarded for its exemplary performance in the Board Examination for Criminologists given by the Professional Regulation Commission - Professional Regulatory Board of Criminology and the Professional Criminologists Association of the Philippines, Inc. last December 2018, with a rating of 84 percent passing performance among the First Takers under Category 3 with twenty-five (25) examinees. The Plaque of Recognition was given last February 7, 2019.

Moreover, BatStateU ARASOF-Nasugbu was awarded as “The Producer of Top-Notcher” for the outstanding performance of one of its graduates. Mr. Nathaniel Gomez, a Bachelor of Science in Criminology graduate, garnered the Ninth Highest Place (National Level) in the June 2018 Criminology Licensure Examination by the Professional Regulation Commission and the Professional Criminologists Association of the Philippines, Inc. Mr. Gomez was also awarded as Top 1 in the Regional Category.





Figure AN-15. Certificate of Excellence

BatStateU ARASOF-Nasugbu was also awarded a Certificate of Excellence as it ranked 3<sup>rd</sup> among public school colleges with 20-49 examinees in the CALABARZON during the December 2017 Criminology Licensure Examination in recognition of the outstanding contribution, achievement and commitment to the Professional Criminologists Association of the Philippines, Inc. (PCAP) CALABARZON Chapter.

The Certificate of Excellence was given during the Joint Oath-Taking Ceremony of the PCAP - CALABARZON Chapter and the Professional Regulation Commission (PRC) last February 6, 2018.

### College of Nursing and Allied Sciences

In 2018, Ms. Amira Balbin Dup-et, who earned a Diploma in Midwifery was one of the successful examinees from the College of Nursing and Allied Sciences who obtained the Ninth Highest Place (National Level) for the November 2018 Midwifery Licensure Examination.

### College of Teacher Education

Ms. Charina Vasquez Gozano, a Bachelor of Elementary Education graduate of BatStateU ARASOF-Nasugbu, garnered the Third Highest Place (National Level) for the BEED program in the April 18, 2010 Licensure Examination for Teachers.

### Alignment of the BatStateU's Vision and Mission with the Municipality of Nasugbu's Vision and Mission Statements

BatStateU is cognizant that Nasugbu is a first-class municipality in the province of Batangas and is considered as the largest and one of the oldest towns in the western coast of Batangas. It is a major tourism destination and a favorite leisure and vacation get-away of tourists, international and local, because of its proximity to Manila. Moreover, the town is blessed with abundant natural resources and picturesque sceneries and offers a wide range of tourist attractions, be it historical, cultural, man-made, natural or religious sites. Nasugbu was declared as a Special Tourism Zone in 2007 under Executive Order No. 647.

The University is likewise aware of the Municipality's vision statement, which highlights the aim of the town of Nasugbu to be an agro-industrial competitive city and a world class eco-tourism destination. This will be realized through its mission statement which aims to pursue an aggressive eco-tourism and agro-industrial development; to

implement a comprehensive provision for social services, basic utilities, and infrastructure support; and to share in the global obligation of environmental protection.

Nasugbu's priority programs, projects, and activities include: investment promotion by enhancing economic support services, agro-industry infrastructure, and ecotourism programs; improving the delivery of basic services, including disaster risk management; and environmental protection.

The Municipality of Nasugbu's vision and mission statements are in congruence with the BatStateU's vision and mission statements. The University's vision statement shows its aim to be a premier national university that develops leaders in the global knowledge economy. This is supported by the University mission statement, which shows its commitment to produce leaders by providing a 21st century learning environment through innovation in education, multidisciplinary research, and community and industry partnerships in order to nurture the spirit of nationhood, propel the national economy, and engage the world for sustainable development.

Moreover, this alignment is also manifested in the University's research thrusts and priorities, which include: Food, Energy, Environment, Health and Medical Sciences, Material Science and Engineering, Information and Communication Technology, Manufacturing and Process Engineering, Science and Mathematics and, Education and Social Sciences.

Likewise, the University's extension thrusts and priorities show the alignment of the vision and mission statements. This include: 1) Capability- Building Training Program such as Agricultural/Environmental Training for Farmers/Barangay Officials, Livelihood/Technical-Vocational/Skills Training, Continuing Education for Professionals, Basic Education/Information Technology Literacy Training; 2) Community Outreach Program like Food and Nutrition/Health and Sanitation/Maternal and Child-Care, Medical/Dental/Optical Mission, Blood Donation, Clean and Green Community/Coastal Cleanup, Tree Planting; Nursery and Vegetable Garden Establishment; Relief Goods Operation; Gift Giving Activity, Youth and Sports Development/Environmental Camps, Visit to Orphanages/Prison Camps/Rehabilitation Centers, Provide Counseling/Legal Advice, Fundraising for Community Development; 3) High-Impact, Long-Term Integrated Community-Based Development Program, Adopt-a-Barangay Program, Adopt-a-School Program, Barangay Integrated Development Approach in Nutrition Improvement (BIDANI), Agro-industrial Community-based Technology Center, Institutional and Industry Development Program; 4) Technical Assistance and Advisory Services, which include: Workers Education Services/Manpower Development Services, Information and Communication Technology, Engineering Design Consultancy, Construction Supervision, Disaster Mitigation, Solid Waste Management, Rural Development/Urban Planning, Business/Financial Plan; 5) Communication/Information Services such as Communication and/or Dissemination of Knowledge and Skills thru School-On-Air Program (DWPB FM 107.3) or thru the University Radio Station DWBX FM 96.5 - the Voice and Rhythm of the Sea; IEC Materials Development; Information Drives; and 6) Technology Transfer, Utilization and Commercialization Program.

### **Role of the Batangas State University in Local, Regional and National Development**

Batangas State University is committed to local, regional as well as national development. It harnesses the expertise of the members of the community and other individuals in relation to the municipality of Nasugbu, to the province of Batangas and to the country's quest for national development in the primary areas of engineering, science and technology for wealth creation, improvement of the quality of life, real economic



growth, and transformation of society. The members of the University community with profound scientific and professional knowledge shall contribute to or take a solicited involvement in the public policy process.

B. DEMOGRAPHIC PROFILE

The Campus is headed by the Chancellor to whom the Vice Chancellor's report to. There are four Vice Chancellors and these are the Vice Chancellor for Academic Affairs, Vice Chancellor for Research, Development, and Extension Services, Vice Chancellor for Administration and Finance, and Vice Chancellor for Development and External Affairs. The Chancellor also oversees the Internal Audit Office and Quality Assurance Management Office.

The Office of the Vice Chancellor for Academic Affairs (OVCAA) oversees the deans of the six (6) colleges, namely: College of Accountancy, Business, Economics, and International Hospitality Management (CABEIHM), College of Arts and Sciences (CAS), College of Engineering and Technology (CET), College of Informatics and Computing Sciences (CICS), College of Teacher Education (CTE) and College of Nursing and Allied Health Sciences (CONAHS).

Other heads of offices under the OVCAA are the Principal of the Laboratory School, the Head of the following Offices: General Education, Testing and Admission, Registration Office, Guidance and Counseling, OJT, Student Discipline, Library Services, NSTP, Culture and Arts, Sports Development Program, Scholarship and Financial Assistance, Health Services, and Students Organization Office.

The Office of the Vice Chancellor for Research, Development, and Extension Services has jurisdiction over the Office of Extension Services and Research Office.

Under the Vice Chancellor for Development and External Affairs are the Office of the ICT Services, Planning and Development, External Affairs and Resource Generation Office.

Under the Office of the Vice Chancellor for Administration and Finance are the Office of the Human Resources Management, Accounting, Budget, Records, Cashiering, Procurement, Property and Supply, Project and Facility Management, General Services, and Environmental Management Unit.

B.1 Number of Administrators – BatStateU ARASOF-Nasugbu

Office	Number of Offices	Number of Administrators/ Heads		
		Male	Female	Total
Chancellor	6	2	5	7
Vice Chancellor for Academic Affairs	20	6	14	20
Vice Chancellor for Research, Development and Extension Services	2	1	1	2
Vice Chancellor for Administration and Finance	10	3	7	10
Vice Chancellor for Development and External Affairs	4	1	3	4
Total	42	13	30	43

Table AN-2. Number of Administrators





B.2 Number of Faculty/Teaching Personnel and Non-Teaching Personnel

As of September 2022, BatStateU ARASOF-Nasugbu has a total of 315 employees with 197 teaching personnel and 118 non-teaching personnel.

Among the 197 teaching personnel, majority (103) are hired on a contract of service-part-time basis followed by those holding permanent appointments (70), and those with temporary appointments (24). In terms of sex, there are more female (117) than male (80). The non-teaching personnel of 118 consist of 64 male and 54 female.

	Male	Female	Total
<b>A. Teaching Personnel</b>			
• Permanent	24	46	70
• Temporary	13	11	24
• Contract of Service -Part Time	43	60	103
<b>B. Non-Teaching Personnel</b>	64	54	118
<b>TOTAL</b>	<b>144</b>	<b>170</b>	<b>315</b>

Table AN-3. Number of Faculty/Teaching Personnel and Non-Teaching Personnel

B.3 Student Population

For Academic Year 2022 – 2023, BatStateU ARASOF-Nasugbu has a total enrollment of 7,310 as depicted in the table below. This total is attributed mainly to the enrollment in six (6) colleges that reached a total of 6660. Additionally, Professional Teacher Education contributed an enrollment of 25 students and the Laboratory School an enrollment of 625.

Summary of Enrollment	
College	No. of Enrollees
College of Accountancy, Business, Economics, and International Hospitality Management (CABEIHM)	2,719
College of Arts and Sciences (CAS)	1,967
College of Engineering and Technology (CET)	110
College of Informatics and Computing Sciences (CICS)	551
College of Teacher Education (CTE)	1,075
College of Nursing and Allied Health Sciences (CONAHS)	238
<b>SUB-TOTAL</b>	<b>6660</b>
CTE-Professional Education	25
Laboratory School	625
<b>Total Enrollees</b>	<b>7,310</b>

Table AN-4. Student Population

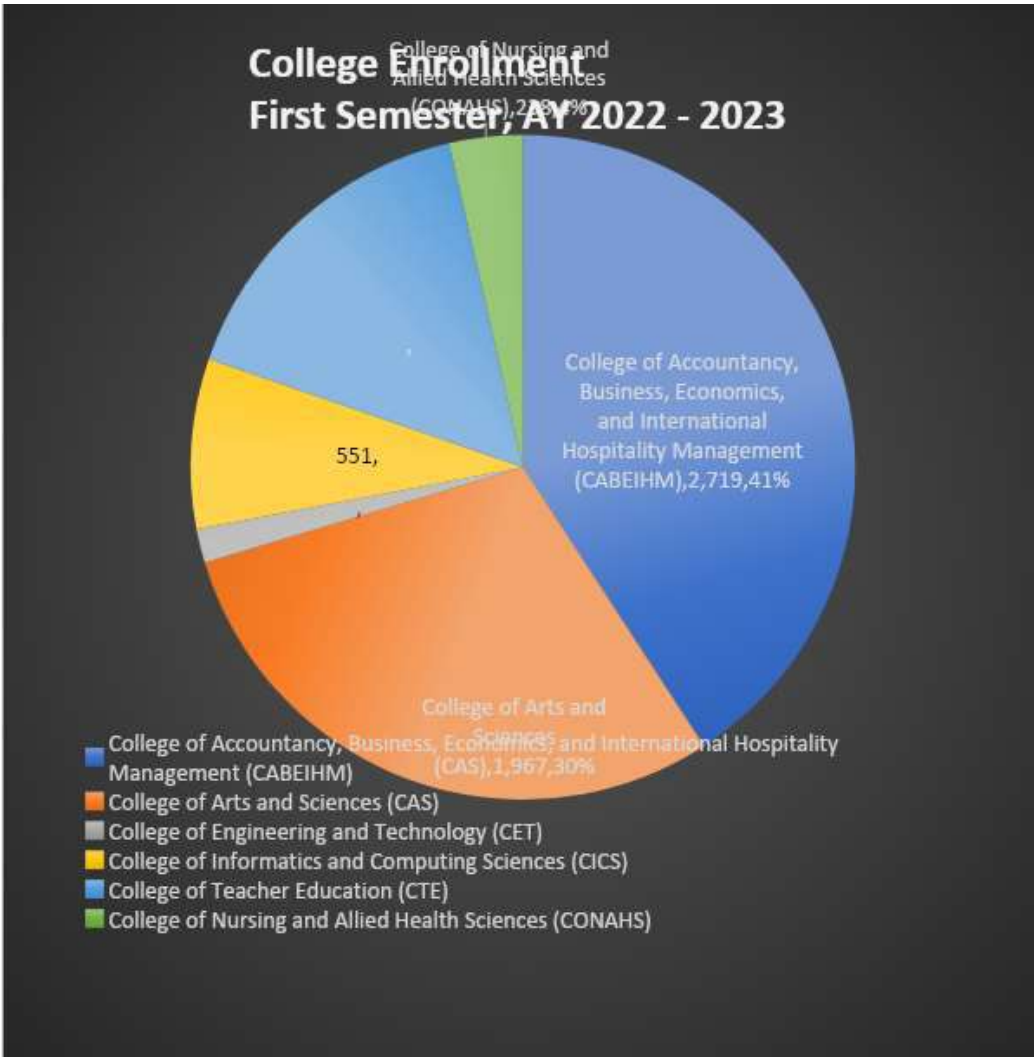


Figure AN-16. College Enrollment, First Semester, AY 2022-2023

**B. 3. 1 Student Population by Gender, First Semester, AY 2022 – 2023**

The enrollment in the first semester of the Academic Year 2021 - 2022 in the different programs offered in the campus is disclosed in Table AN-1 and the graph that follows:

Table AN-5. Student Enrollment by Gender

PROGRAMS	MALE	FEMALE	TOTAL
CABEIHM			
BS Hospitality Management	251	431	682
BS Hotel & Restaurant Management	0	1	1
BS Tourism Management	68	286	354
BS Accountancy	50	186	236
BS Management Accounting	22	65	87
BS Business Administration Major in Financial Management	38	150	188
BS Business Administration Major in Marketing Management	180	479	659
BS Business Administration major in Human Resource Management	113	399	512
CET			



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BS Computer Engineering	26	15	41
Bachelor of Industrial Technology major in Electrical Technology	55	14	69
<b>CICS</b>			
BS Computer Science	10	7	17
BS Information Technology	212	94	306
BS Information Technology major in Business Analytics	59	39	98
BS Information Technology major in Network Technology	60	70	130
<b>CONAHS</b>			
BS Nursing	39	165	204
BS Nutrition and Dietetics	8	26	34
<b>CAS</b>			
BS Psychology	73	368	441
BA Communication	276	272	548
BS Criminology	287	404	691
BS Fisheries and Aquatic Sciences	157	96	253
BS Food Technology	15	19	34
<b>CTE</b>			
Bachelor of Elementary Education	27	235	262
Bachelor of Physical Education	42	77	119
Bachelor of Secondary Education major in English	38	305	343
Bachelor of Secondary Education major in Filipino	19	64	83
Bachelor of Secondary Education major in Mathematics	34	100	134
Bachelor of Secondary Education major in Sciences	25	109	134
<b>TOTAL for Colleges</b>	<b>2184</b>	<b>4476</b>	<b>6660</b>
Professional Teacher Education Unit Takers	8	17	25
<b>Sub -Total</b>	<b>2192</b>	<b>4493</b>	<b>6685</b>
Laboratory School Elementary	116	132	248
Laboratory School Secondary/High School	111	166	277
Laboratory School Secondary/Senior High School	40	60	100
Sub -Total	267	358	625
<b>Grand Total</b>	<b>2459</b>	<b>4851</b>	<b>7310</b>



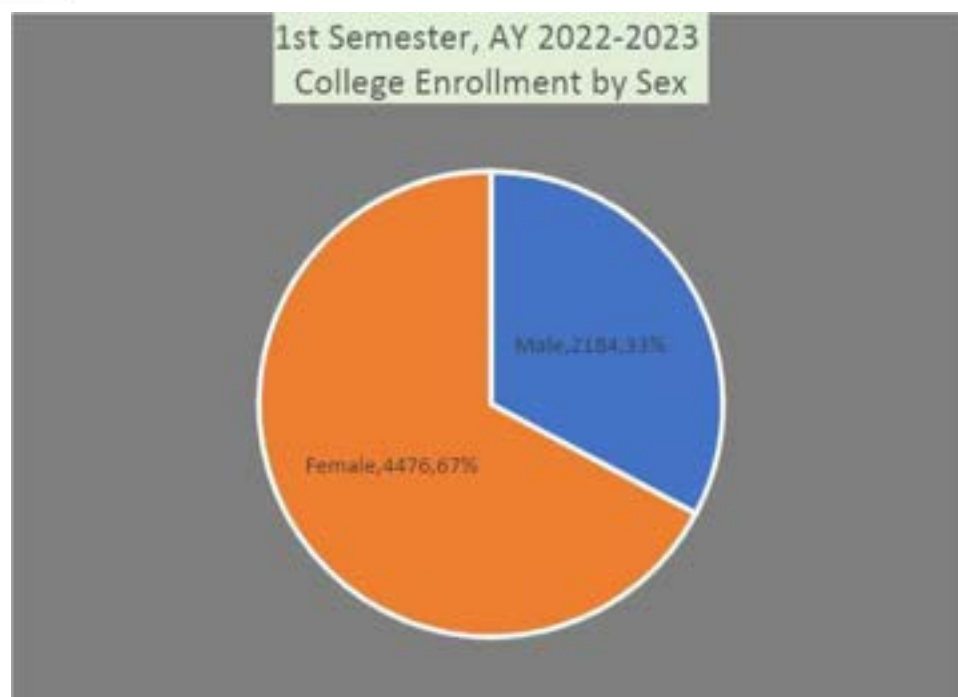


Figure AN-17. 1st Semester, AY 2022-2023 College Enrollment by Sex

The campus has a total college enrollment of 6660 with female students constituting 2/3 of the total enrollment. Male enrollment of 2184 accounts for 33% and female enrollment of 4476 is equivalent to 67%.

Students clustered mostly in the programs BS Hospitality Management, BS Business Administration Major in Marketing Management, and BS Business Administration Major in Human Resource Management, respectively. The Program BS criminology has the biggest enrollment of 691, followed by the enrollment of 682 in BS Hospitality Management, with the enrollment in BS Business Administration major in Marketing Management in third place having an enrollment of 659. BS Criminology is offered under the College of Arts and Sciences and its enrollment is seemingly responsible for making it the second largest college in the campus. The other two most heavily subscribed programs are offered in the College of Accountancy, Business, Economics and Hospitality Management (CABEIHM), consequently making it the biggest college in the campus.

In contrast, low enrollment is observed in the following programs: a.) BS Food Technology with 34 composed of 15 males and 19 females; b.) BS Nutrition and Dietetics with 8 males and 26 females for a total of 34. Moreover, there is low enrollment in BS Hotel and Restaurant Management with 1 student only and BS Computer Science with 10 males and 7 females for a total of 17 students as these programs are being phased out.

### B.3.2 Historical College Enrollment, 2010 – 2022

The graph below shows the historical college enrollment of BatStateU ARASOF-Nasugbu inclusive of Academic Years 2010 - 2022.

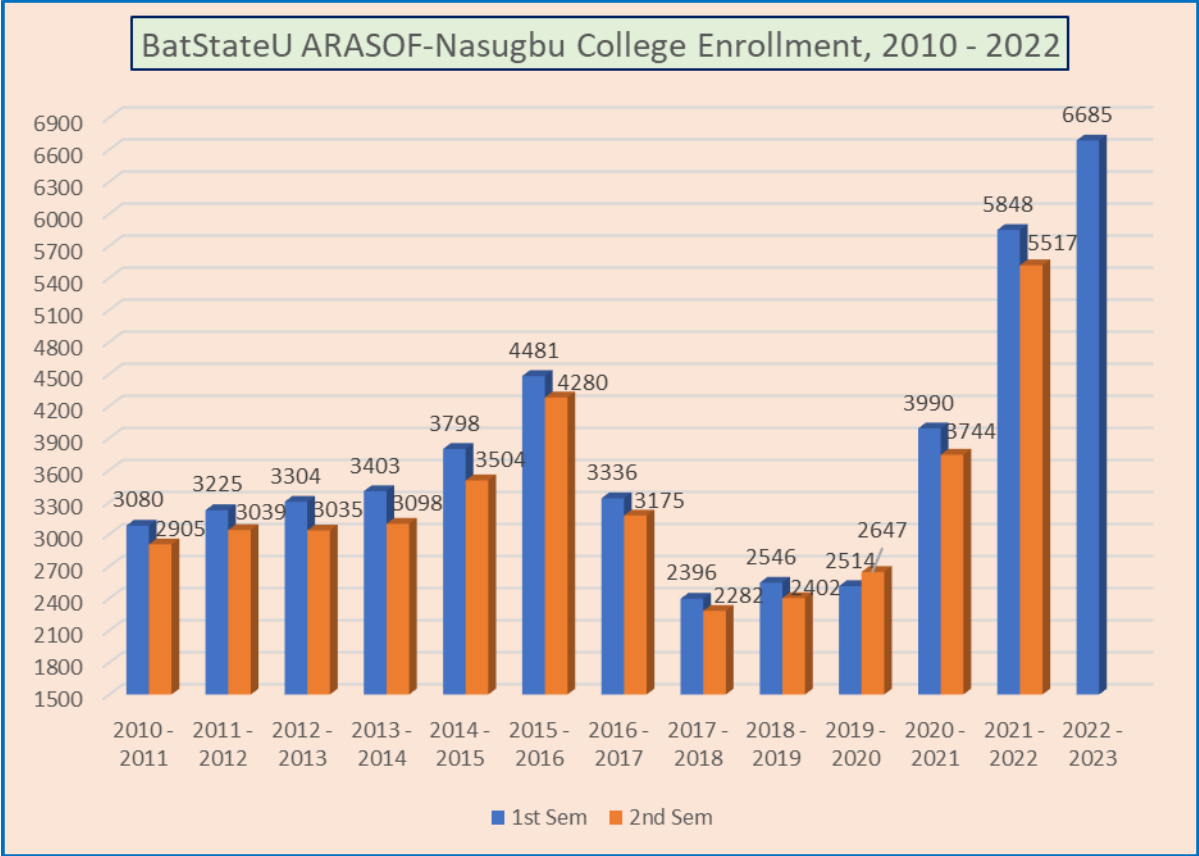


Figure AN-18. BatStateU ARASOF-Nasugbu College Enrollment, 2010-2022

The enrollment trend appears to be tipping up slightly, after a few down years. The data spanning for 11 academic years indicate a slight increase in enrollment from 2010 – 2015, then it went down until AY 2017-2018 and then rose steadily until the first semester of academic year 2022 - 2023.

The highest first semester enrollment of 6660 can be seen in AY 2022 – 2023 while the lowest average enrollment of 2339 can be noticed in the academic year 2017 – 2018. The lowest enrollment growth rate of 1.2% is observed in the Academic year 2011-2012 while the highest rate of 16.28% is recorded in AY 2015-2016. Negative enrollment rates were noted in two academic years (2016-2017 & 2017-2018) with the next academic years of 2018 – 2020 posting positive enrollment rates of 5.46%, 4.15% and 33.26%, respectively.

The implementation of the K-12 Basic Education program affected the enrollment. First-year enrollment in the academic year 2016-2017 was very low as the prospective college freshmen were in Grade 11 of Senior High School, thus the enrollment data is primarily attributed to the student population in the higher years. In the next academic year of 2017 – 2018, very low first year and second year enrollment was also recorded with the student registration mainly concentrated in the third year and fourth year levels. Starting 2019-2020, higher year levels of third year and fourth year were gradually filled in and the enrollment started to recover as manifested in the increase in enrollment.

For the Academic Year 2020 – 2021, the campus accommodated a college enrollment of 3990. This year saw the spread of COVID-19 affecting all parts of the world and the educational sector was not spared. However, the campus registered a net increase of 54% when compared to 2019 – 2020 enrollment. After this, the campus experienced an increase in enrollment, with the population reaching as high as 6685 in the first semester of AY 2022-2023.



B.3.3 Enrollment Trend Per Semester

On a per semestral basis, the 12-year enrollment generally reveals there is a higher registration in the first semester than in the second semester excluding the academic year 2019 – 2020. On the average, the enrollment drop in the second semester is computed at 5.83% with the maximum drop of 8.96% happening in the second semester of AY 2013 – 2014 with the lowest drop rate of 4.76% occurring in AY 2017 – 2018.

In contrast, an enrollment increase in the second semester was experienced in the academic year 2019 – 2020. A student registration of 2647 in the second semester was recorded, which is higher by 5.3% compared to the first semester enrollment of 2514.

In the Academic Year 2021-2022, the campus recorded an enrollment of 5848. This is equivalent to an increase of 47% when compared with the enrollment of 3,990 in the First Semester of Academic Year 2020 – 2021. An increase of 14.31% can be calculated when the student population for the first semester of AY 2022-2023 is compared to that of the first semester of AY 2021-2022.

B.4.2 Enrollment Projection

The enrollment projection is made based on many variables. The school considered the enrollment trend in the past ten-year, where a modest steady increase was noted in most programs. Likewise, the increasing population of the nearby communities resulting in rising enrollment in basic education and specifically in senior high school was also considered. It should also be noted the campus is strategically located in the western part of Batangas, where there is a dearth of higher education institutions. This gives the school the opportunity as the institution to be primarily considered by prospective college students for their tertiary education. In addition, the business and commercial activities humming in the area is a prospect for population increase due to migration.

The enrollment projection uses student-level data from six colleges of the campus. Each college uses a semester system, in which an academic year is defined by first and second semester.

Table AN-6. Ten-Year Enrollment Projection

ACADEMIC YEAR	YEAR LEVEL						INCREASE IN ENROLLMENT	% INCREASE
	1ST	2ND	3RD	4TH	5TH	TOTAL		
2022-2023	2,070	2,122	1,395	1,162	69	6,818	1,080	19%
2023-2024	2,265	1,969	2,015	1,325	24	7,598	780	11%
2024-2025	2,300	2,156	1,873	1,915	46	8,290	692	9%
2025-2026	2,300	2,190	2,053	1,780	51	8,374	84	1%
2026-2027	2,455	2,190	2,086	1,951	111	8,793	419	5%
2027-2028	2,475	2,334	2,086	1,983	148	9,026	233	3%
2028-2029	2,540	2,353	2,222	1,983	174	9,272	246	3%
2029-2030	2,570	2,415	2,241	2,112	174	9,512	240	3%
2030-2031	2,545	2,443	2,300	2,130	180	9,598	86	1%



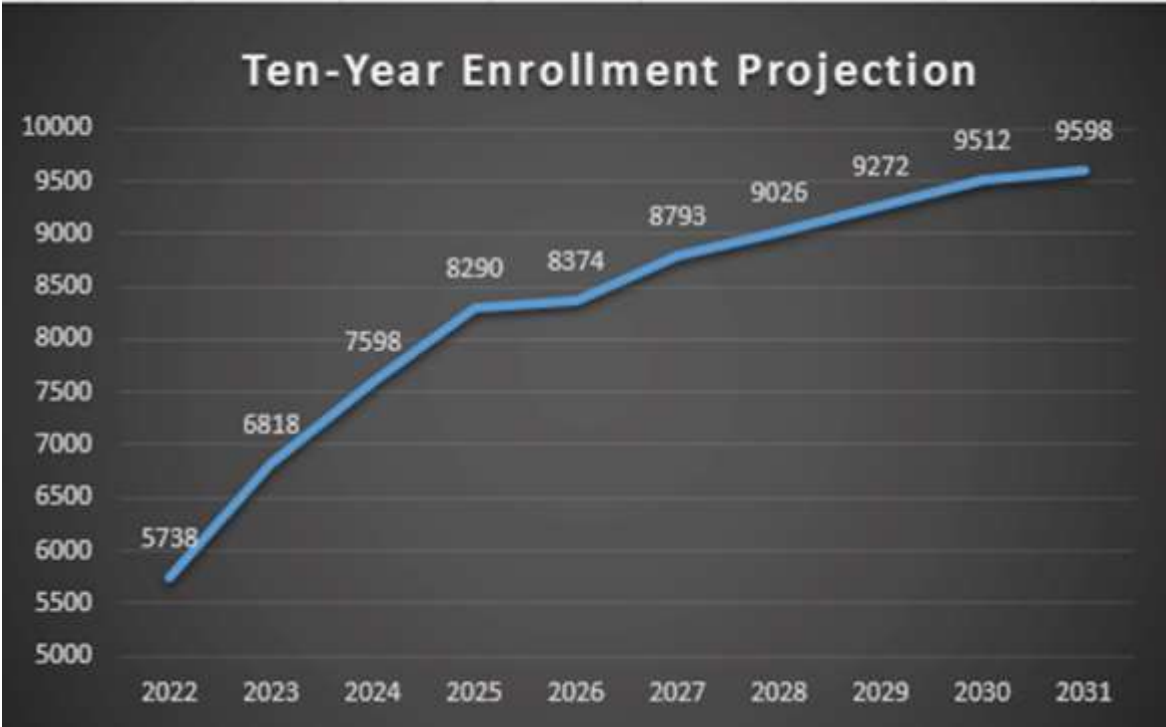


Figure AN-19. Ten-Year Enrollment Projection

The ten-year projection suggests an increasing college enrollment with an average increase of 6% per year. This increase is calculated as the difference between the current year and the previous year. From a college population of 5,738 in the academic year 2021-2022, it is forecasted to rise to as high as 9,598 as the school progresses along its ten-year education pathway. Enrollment is anticipated to surge the highest in 2022-2023, with an increase of 19% (5,738 to 6,818). Although the data shows a decrease in the first-year college enrollment, the increase in enrollment in higher years more than makes up for this, resulting in a high overall student population. Then, an increase of 11% and 9% for the academic years 2023-2025 is estimated as there is an increase in the enrollment in all levels. Afterwards, a very modest increase of 1-5% is made for the rest of the ten-year projection period, with academic year 2026-2027 anticipated with 5% increase and academic years 2025-2026 and 2030-2031 with 1% only.

C. GEOGRAPHIC LOCATION

- a. Brief Profile of the Province and Municipality where the Batangas State University ARASOF-Nasugbu is Located



Figure AN-20. Political Map of Batangas

Source: <https://islandsphilippines.com/calabarzon/batangas/political-subdivision.php>

The Province of Batangas is located along the southwestern edge of Luzon in the Philippines. The province consists of 34 cities and municipalities, of which 14 are coastal municipalities and 1 is a coastal city. The major bays of the province are Batangas Bay, Balayan and Adjacent Bays, and Tayabas and Adjacent Bays.

Batangas is a province in the Philippines situated in the CALABARZON region (CALABARZON, formally known as the Southern Tagalog Mainland, is a designated as Region IV-A that comprises the five provinces of Cavite, Laguna, Batangas, Rizal, and Quezon and one highly urbanized city, Lucena) occupying the central section of Luzon. Its capital is the City of Batangas. The province has a land area of 3,119.75 square kilometers or 1,204.54 square miles. Its population as determined by the 2015 Census was 2,694,335. This represented 18.69 percent of the total population of the CALABARZON region, 4.69 percent of the overall population of the Luzon Island group, or 2.67 percent of the entire population of the Philippines. Based on these figures, the population density is computed at 864 inhabitants per square kilometer or 2,237 inhabitants per square mile.

Nasugbu is a coastal municipality in the province of Batangas. The municipality has a land area of 278.51 square kilometers or 107.53 square miles which constitutes 8.93 percent of Batangas's total area. Its population as determined by the 2015 Census was 134,113. This represented 4.98 percent of the total population of Batangas province, or 0.93 percent of the overall population of the CALABARZON region. Based on these figures, the population density is computed at 482 inhabitants per square kilometer or 1,247 inhabitants per square mile.

The map shows the Koro Atoll with various islands and reefs labeled. The study site is highlighted in yellow. The map includes a scale bar (0 to 0.1 m) and a compass rose. The study site is located in the Koro Atoll, specifically in the area of the Koro Lagoon.

Nasugbu is bounded on the north by the municipalities of Maragondon, Magallanes and Alfonso in the province of Cavite; on the east by the Batangas municipalities of Laurel, Calaca, and Balayan; on the south by the Batangas municipalities of Lian and Tuy; and on the west by the South China Sea. Entering the town proper via the national highway, one passes fields of sugar cane, corn, and rice fields; hills and mountains. The terrain slopes downwards to the South China Sea. Because of its rolling terrain and coastline location, agriculture (sugarcane, rice, corn, vegetables, coconut, fruits), and aquaculture are Nasugbu's main industries.

The town of Nasugbu is characterized by variation in topographic relief. Areas located on the eastern side of the Poblacion and lining the shores on the Western side are predominantly level to gently sloping. The southern portions of the municipality are gently sloping while the Northwestern section is mountainous. Mainly, terrain slopes downwards to the South China Sea and as shown in the slope map generated from the slope map of Batangas by the Bureau of Soils of the province of Batangas.

Due to the prevalent nature of its terrain and coastal nature, agriculture with crops like sugarcane rice corn vegetables, coconuts, fruits and aquaculture have become Nasugbu's main source of livelihood and main economic activity.

Nasugbu has a naturally warm climate which falls under the first type of classification, Type 1, characterized by two pronounced seasons: dry from November to April and wet for the rest of the year. The annual average temperature is 27 degrees Celsius. January is the coolest month having an average temperature of 25.8 degrees Celsius, while April is the warmest month registering an average temperature of 29 degrees Celsius.



### c. Brief Profile of the Palico Watershed Coverage and Locations, under which the Batangas State University ARASOF-Nasugbu is Part of

The Palico Watershed in Nasugbu, Batangas, Philippines is an environmentally significant watershed since it is one of the major watersheds draining along Verde Island Passage – internationally known as “Center of Marine Shore fish Biodiversity” (Carpenter and Springer 2005).

The state of the Palico River was assessed by Daño in 2006 to determine the true condition of the river system through quality index and aquatic macroinvertebrate indicators. Assessment serves as a basis in determining the problems in various parts of the river and in the formulation of rehabilitation measures. It was found out that the river system has very high levels of coliform and organic pollutants way above the limit for Class C water. The low-level dissolved oxygen in the lower reaches of Lian-Palico River classified as a Very Bad River based on Water Quality Index method may trigger fish kill anytime. Modifying the current system of river classification to reflect the present condition, constraints of problems is essential so appropriate measures to address the problems in specific portions of the river can be achieved. Measures should focus on addressing the sources of high coliform from the upper to the lower reaches of the river and organic pollutants in some parts of the river. Solid and liquid waste management programs in the lower reaches of the Palico River should be given priority so that fish kill can be prevented if not minimized.

Likewise, Briones et al. (2016) evaluated the impact of Land Use Land Cover (LULC) on the hydrologic characteristics of Palico watershed in Batangas, Philippines. The inputs used were the 1989 and 2013 LULC maps and climatological and hydrologic data. Good agreement was obtained between simulated and observed streamflow values during model calibration ( $NSE=0.84$  &  $R^2=0.86$ ), and validation ( $NSE=0.61$  &  $R^2=0.68$ ). For the entire watershed, reduction in forest cover and rangeland resulted in an increase in surface runoff and decreases in baseflow or dry season flow and groundwater recharge. LULC changes affected the water quantity and timing of occurrence. Subbasin with 22 percent increase in forest cover and rangeland increased the baseflow by 1 percent to 15 percent and reduced the streamflow by 1 percent to 17 percent during the rainy months. Another sub basin with 54 percent forest loss resulted in a more pronounced rainfall-runoff response with 11 percent to 17 percent decrease in baseflow and 4 percent to 24 percent increase in streamflow during rainy months. Finding the balance between these two opposite LULC change scenarios is crucial for the attainment of water security and sustainability in the watershed and in the areas it serves.

### d. Significant National or Regional/Sub-National Characteristics or Value (Cultural- Historical Value and Biodiversity)

#### Cultural and Historical Significance

St. Francis Xavier and St. Lorenzo Ruiz are the two patrons of the town. There are no historical documents recounting Nasugbu's foundation. The earliest written records of the place are of the founding by the Jesuits of the Parish of St. Francis Xavier in 1852.

Nasugbu did not become an important commercial center due to the proximity of Balayan. The first historical account of this town relates to when a native tribesman, known only as Matienza, led his fellow Nasugbueños, together with some natives from

the nearby Lian, in revolt against a large land grant to the Roxases. This revolt which happened in the latter part of the 19th century failed.

Nasugbu was not as much irrigated as the fields of nearby towns, making it one of the towns that suffered much when the town of Lipa was besieged on 18 June 1896. Ten days later the effects for the people of Nasugbu were so dire that the Gobernadorcillo authorized taking 1000 pesos from the treasury of Lipa to provide a rice subsidy for the Nasugbueños.

When the revolution officially started in Batangas in September 1896, an organized revolt also broke out in the town of Nasugbu, together with the towns of Balayan, Lian, Talisay, and Lemery seven weeks later. The Revolt of Nasugbu was led by Luciano San Miguel and was one of the largest revolts in the province. However, on 12 December 1896, San Miguel unknowingly led his men into a trap, and Nasugbu suffered the greatest number of casualties in the revolution.

In September 1898, the town of Cautit in Cavite declared independence from Spanish rule. This made the life of the Caviteños more tumultuous than before. Due to this, the people of the nearby town of Alfonso invaded the Roxas estate and started to harass the tenants there. Although the municipal officials of Nasugbu responded quickly and complained to their counterparts in Cavite, the citizens were already defying authority.

During times of war, Batangas was administered by the Governor General and the right of habeas corpus was suspended, resulting in more casualties.

### Archeological Significance

**The Nasugbu Cow.** The Dark Age of Nasugbu was compensated for by a great archeological discovery. According to the National Museum of the Philippines, a group of scientists found a wooden cow a year before the Second World War. Knowing that it was of great significance to the history of the country, the cow was immediately handed over to the National Museum, but it did not survive the destruction of the war. However, a year after the war, a new archeological artifact was excavated in the nearby town of Calatagan, which in turn became the most important prehistoric artifact of the country.

**The San Diego Shipwreck.** Nasugbu's greatest contribution to the archeological world is the San Diego Shipwreck, discovered by a group of scientists in 1991 with the cooperation of the governments of France, the United States, and the Philippines.



Figure AN-22. Map of San Diego Shipwreck



In his book, *Los Sucesos de las Islas Filipinas*, Fr. Antonio de Morga wrote that being the Admiral of the Islands, he tried to defend the country from Dutch soldiers, who were then under the leadership of Admiral Oliver Van Noort.

But since de Morga had very little experience in warfare, he led the San Diego to sink somewhere south of Manila Bay. It was the first ever recorded battle between two European powers in Asian waters.

This eventful sinking of the San Diego happened at the dawn of 14 December 1600. Although the fight resulted in a draw, the news of the sinking reached every main city of the Old World. According to the chronicles, the ship contained so much food and battle gear that there was no room for people that would operate them.

De Morga, however, failed to give the exact location of the wreck. The ship remained sunk in Nasugbu waters for almost 500 years until its 1991 discovery. To date, it remains the country's most important submarine archeological finding. From it, the National Museum of the Philippines was able to collect about 5000 artifacts representing a time capsule of Asia, Europe, and the Americas.

The artifacts include Asian jars and ceramics from Vietnam and China, weaponry from Japan like *sabres*, and Portugal like cannons and gilded articles believed to come from Ibero-America. According to the National Museum, the wreckage contained some of the world's best-preserved astrolabes.

The artifacts were also exhibited in France in 1995 and Germany in 1996, returning to Manila for the celebration of the centennial of Philippine independence in 1998. Today, the San Diego collection remains the most extensive collection in the National Museum, occupying a large portion of the building's first floor and the whole second floor.

Nasugbu is the site of the first recorded naval battle between European troops in Southeast Asia - at Fortune Island to the west of the town.

### Marine Biodiversity

The global Coral Triangle is renowned as the world's center of marine biodiversity. Often referred to as the "Amazon Rainforest of the Seas", it has many fish species and 76 percent of the world's coral species. The Coral is home to 37 percent of the world's Reef Triangle and encompasses the waters of Indonesia, Malaysia, the Philippines, Papua New Guinea, the Solomon Islands, and Timor-Leste. The Verde Island Passage, which is located between the provinces of Batangas and Mindoro Oriental in the Philippines is one of the richest areas of the global Coral Triangle.





Figure AN-23. Map of The Coral Triangle

Hamilo Coast in Barangay Papaya, Nasugbu, Batangas is situated at the heart of the Asia-Pacific region and is providentially located at the entry of the Verde Island Passage, one of the most vibrant areas of the global Coral Triangle. The Coast's location at the entry of the said passage makes it an ideal jump-off point for cruising to other renowned Philippine Island destinations such as Apo Reef, Bohol, Boracay, Cebu, Mindoro, and Palawan.

One of the strong appeals of this leisure destination and residential haven is the extensive natural setting, which includes 13 majestic coves located along Barangay Papaya, Nasugbu, Batangas. These include the: Pico de Loro, Santelmo, Etayo, Balibago, Subli, Arkaya, Papaya, Neela, Durado, Patungan, Bucanita, Limbones, and Baybay Coves. Each cove is blessed with mountain ranges, endless views of the South China Sea, and teeming marine and terrestrial life. The recent declaration of the three coves of Hamilo Coast namely: Pico de Loro, Santelmo, and Etayo as MPAs is a significant move towards the attainment of sustainable development of the Coast. The said declaration is the result of a successful partnership between SM Land, World Wide Fund for Nature (WWF)-Philippines, local stakeholders, and surrounding communities.

The enormous number of species found within the identified Marine Protected Areas of Nasugbu, Batangas, Philippines is a direct indication of the great number of habitat opportunities afforded by this environment. In addition to the observable community of flora and fauna visible below and above the reef's surface, there are still thousands of unnoticed, diverse communities of organisms that live in regenerating coral slabs and rocks or in the crevices of the coral reefs in the identified MPAs.

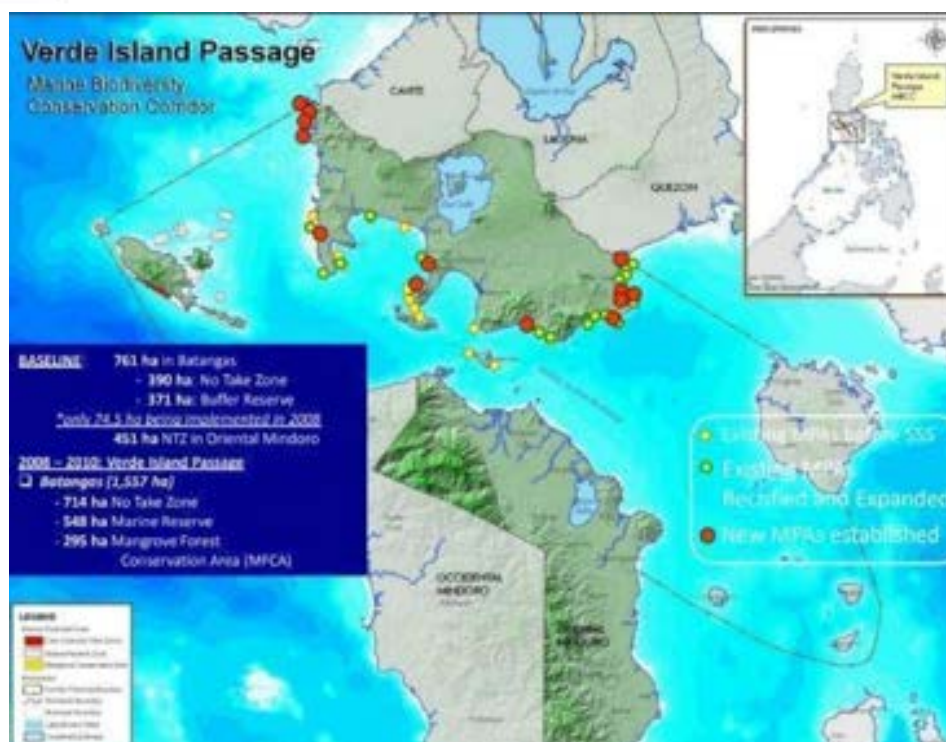


Figure AN-24. Map of Verde Island Passage

## e. Vulnerabilities and Risks (Floods, Earthquakes, Volcanic Eruptions, Underground Caves and Karst, Erosion, Landslides, and the like

Municipality of Nasugbu is exposed to seven (7) natural hazards: typhoon, tsunami, storm surge, landslide, flooding, earthquake and volcanic eruption. Being a typhoon-prone area with coastal, forest, and agricultural ecosystems, Nasugbu is most susceptible to typhoons, flooding and landslides due to typhoons and windstorms, and potentially, tsunami. Of these, the most frequent hazard encountered are typhoons. While there has not been an occurrence of tsunami, this is something that the municipality must prepare for especially in this era of climate change. Other hazards posing danger to the municipality are dengue, fire, and volcanic eruption.

**Typhoons.** The geographic location of Nasugbu, Batangas makes it prone to tropical cyclones which may occur in the months of June to December. However, with the climate change manifestation, a tropical cyclone may also occur during the months of January to May. The typhoon which may landfall in or within the vicinity of Nasugbu may be triggered by other weather disturbances like Habagat or Southwest Monsoon, Low Pressure Area and Inter-tropical Convergence Zone (ITCZ). Based on historical records, the typhoon left most devastation in the lives and properties of the communities. Some of the devastating typhoons that occurred in the Municipality from 2009 to 2016 were TY Ondoy in 2009, TY Odette 2013, TY Glenda 2014 and TY Mario in 2014. Barangay Bucana (Latitude: 14.07029 and Longitude: 120.632203), where the BatStateU ARASOF-Nasugbu is located, is only 8 meters / 26.25 feet above sea level, so if the sea rises two (2) meters in the nearby areas, it will be affected.

**Flooding.** Flooding may be more common, and the population of nearby coastal areas will have to be relocated. The Flood Susceptibility Map of Nasugbu by the Mines and Geoscience Bureau identified areas with high susceptibility to flooding namely Barangays Balaytigue, Catandaan, Looc, Pantalan, and Poblacion 5. Storm Surge and Tsunami. In the Tsunami Hazard Map prepared by PHIVOLCS for Nasugbu, an

earthquake of 8.2 magnitude can trigger a tsunami with wave height of 7.28 up to 7.45 meters, inundating approximately 4 kilometers from the coastal barangays, the entire Poblacion area and nearby barangays.

**Landslides.** The landslide Susceptibility Map of Nasugbu by the Mines and Geoscience Bureau identified areas with low to high susceptibility to landslides. There are only two (2) identified areas in the municipality highly susceptible to landslides namely: Barangay Kaylaway and Barangay Latag.

**Earthquakes.** Batangas Province, where Nasugbu is located, is one of the seismically active areas in the Philippines. Instrumental monitoring of earthquakes for the past century has detected many small to large-magnitude earthquakes near Batangas generated by the Manila Trench and Lubang Fault. The Manila Trench is an earthquake generator located offshore west of Luzon Island, roughly parallel to the Philippine archipelago in the north but veers very close to land at the southern tip of Occidental Mindoro. Another offshore earthquake generator is Lubang Fault, located between Mindoro Island and Batangas, which is also the locus of small to large-magnitude earthquakes. Other active faults on land are present in Southern Luzon, such as the Valley Fault System and the Philippine Fault. The current series of earthquakes in Batangas can be attributed to the movement of an unnamed local fault in the vicinity of the Tingloy-Mabini area.

**Volcanic Eruptions.** Located in the province of Batangas, Taal Volcano is one of the most active volcanoes in the country, with 34 recorded historical eruptions, all of which were concentrated on Volcano Island, near the middle of Taal Lake. The caldera was formed by prehistoric eruptions between 140,000 and 5,380 BP.

Taal Volcano, also known as one of the 16 Decade Volcanoes, is part of a chain of volcanoes lining the western edge of the island of Luzon. They were formed by the subduction of the Eurasian Plate underneath the Philippine Mobile Belt. Taal Lake lies within a 25–30 km (16-19 mi) caldera formed by explosive eruptions between 140,000 and 5,380 BP. Each of these eruptions created extensive ignimbrite deposits reaching as far away as present-day Manila.

Taal Volcano and the Taal Lake are located in the province of Batangas. The northern half of Volcano Island falls under the jurisdiction of the lake shore town of Talisay, and the southern half in San Nicolas. The other communities that encircle Taal Lake include the cities of Tanauan and Lipa, and the municipalities of Talisay, Laurel, Agoncillo, Santa Teresita, San Nicolas, Alitagtag, Cuenca, Balete, and Mataasnakahoy.

The Taal Volcano is comparatively small yet it is highly dangerous. The Philippines Institute of Volcanology and Seismology (Phivolcs) has warned of an “imminent hazardous eruption” that could take place any time. The surrounding state of Batangas has also declared a state of calamity. Permanent settlement on the island is prohibited by the Philippine Institute of Volcanology and Seismology (PHIVOLCS), declaring the whole Volcano Island as a high-risk area and a Permanent Danger Zone (PDZ).



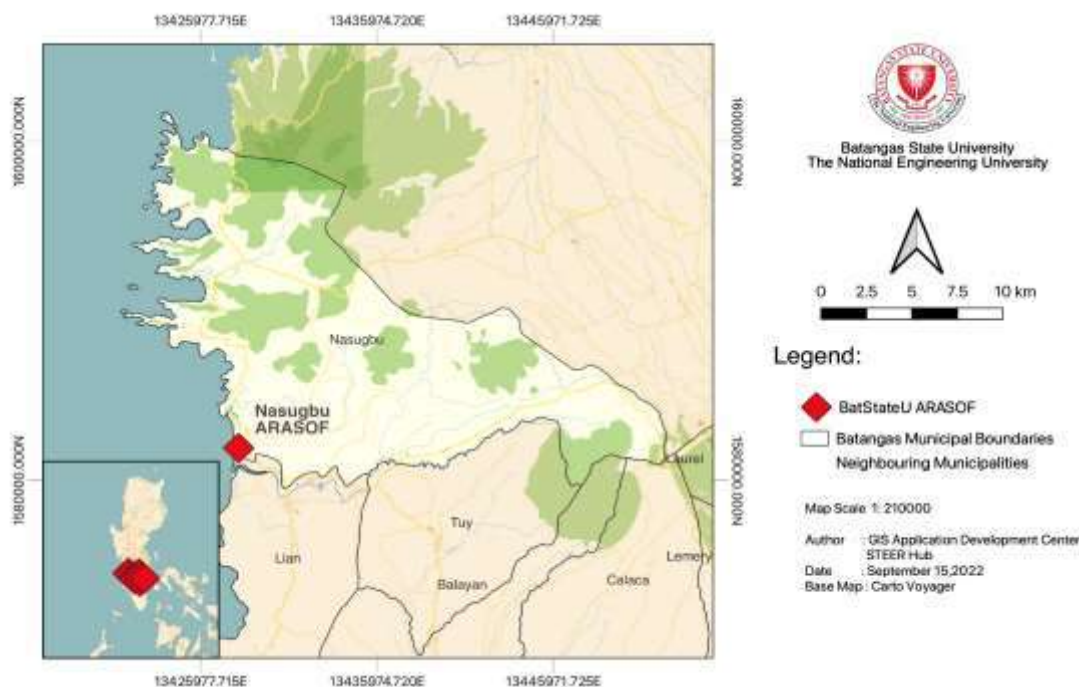


Figure AN-25. Political Map of Nasugbu

## DETAILED DESCRIPTION OF THE BATANGAS STATE UNIVERSITY ARASOF-NASUGBU

- A. Physical Features and Environmental Conditions
  - a. Physical and locational characteristics, including land area, boundaries, covered barangays, and among others



Figure AN-26. BatStateU ARASOF-Nasugbu Location Map

**Batangas State University ARASOF-Nasugbu** is located in Nasugbu, which is one of the coastal municipalities in the province of Batangas, consisting of 42 barangays with a total land area of 278.51 square kilometers. Nasugbu is bounded on the north by

the municipalities of Maragondon, Magallanes and Alfonso in the province of Cavite; on the east by the Batangas municipalities of Laurel, Calaca, and Balayan; on the south by the Batangas municipalities of Lian and Tuy; and on the west by the South China Sea.

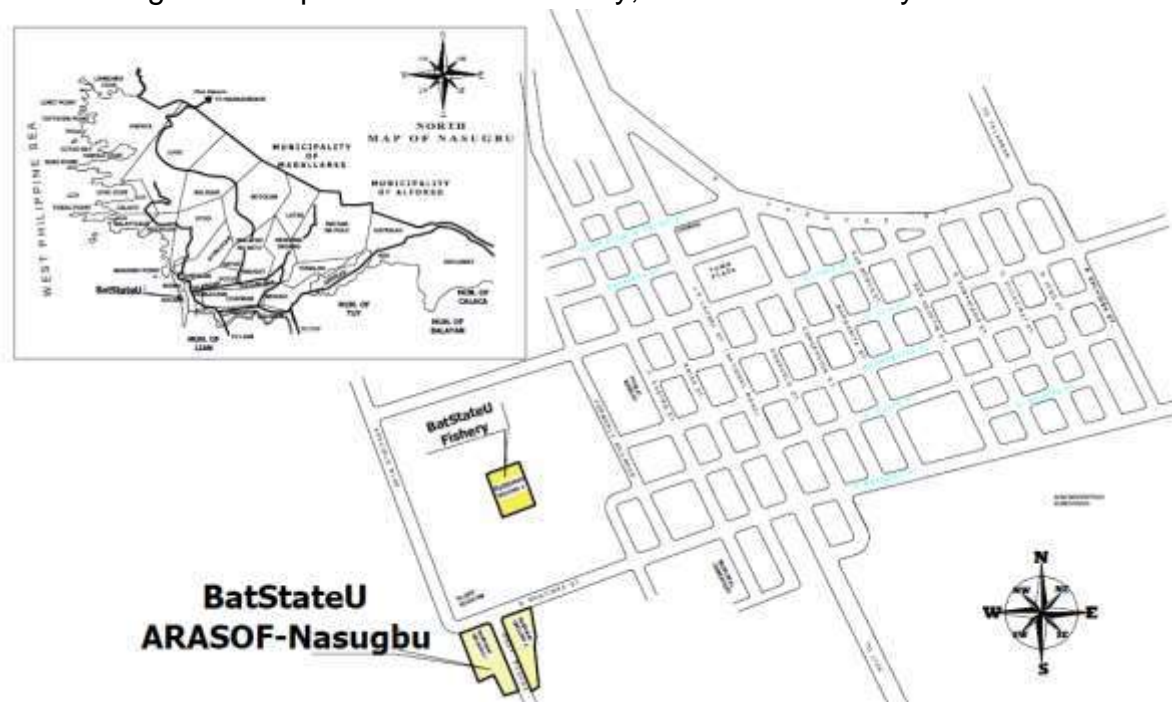


Figure AN-27. BatStateU ARASOF-Nasugbu Vicinity Map

The BatStateU ARASOF-Nasugbu Ground 1 and Ground 2, with geographical coordinates of 14.0669679943 and 120.626135987, is bounded to the North and East by Nasugbu Poblacion proper, to the South by Brgy. Bucana, and to the West by Nasugbu Bay. Landmarks near the site include Globe Telecom Building, Kainan sa Dalampasigan Restaurant and Johndel Subdivision. Since the campus is located near the bay, it is surrounded by various resorts, commercial areas and residential areas, and only a few minutes away from banks, public markets, grocery stores and establishments. BatStateU ARASOF-Nasugbu Ground 3 is situated at approximate geographical coordinates of 14.0694 and 120.6301. Adjacent barangays sharing a common border where the site is located are Poblacion Barangay 3, Barangay 11, Barangay 9 and Barangay Bucana.

Further, it is easily accessible from Manila by Public Transport Services coming from PITX, Coastal Road and Pasay bus terminals. It is also a quick two-hour drive by car through the old road from Southern Luzon Expressway to Tagaytay City then farther ahead to Tagaytay-Nasugbu Highway. Another alternative route is via Cavitex Highway and then through the largest subterranean tunnel in the Philippines that goes through Mount Palay Palay down to the rest of Nasugbu-Ternate Highway, leading to the town proper that is conveniently close to the campus.

The University campus has an expanse of 5.1755 hectares. The land area is divided into three grounds. The two grounds are adjacent to each other, with a barangay road in between, which is the main access to a part of residential lots and resorts in barangay Bucana. Ground 1, as of writing, is the side of the property adjacent to shores of Nasugbu, where majority of the buildings are located, including the admin building which is considered as the oldest structure in the campus dating back to the school's founding years.



Ground 2 is known to many as the Physical Education School Sports (PESS) Ground or the Roxas-Gargollo Sports Field. Measuring at 1.6849 hectare, this spacious open field used to be a frequent venue for PE subjects, military training, sports events and other outdoor activities. The BatstateU Hostel serves as a function hall for local events standing proudly at the southern part of the field alongside the Higher Education Building where most of the classes of the colleges of different programs are held.

Ground 3 has no existing buildings or facilities utilized by the university. This site was previously used as a functional palaisdaan managed by the university. However, it has been unused for several years to date awaiting future developments to be utilized as a research facility allotted for Fishery.

The campus area is within a physiographic region referred to as Southwest Luzon Uplands, consisting of the provinces of Rizal, Laguna, Cavite and Batangas. The area is generally underlain by recent deposits which are composed of alluvial and beach deposits.

The result of the subsurface investigation shows that the campus subsoil generally consists of poorly graded sand, silty sand and silt of varying relative condition. Within 2.0 meters' depth of the Borehole no.1 (BH-1) and 1.0-meter depth of Borehole 2 (BH-2), SPT N-values are generally indicative of loose condition. Beneath this layer, medium dense to dense sand was encountered, generally persisting until the termination of the boreholes.

Water level was also recorded at depths ranging from 2.15 to 3.50 meters below ground surface during the conduct of the field test. Water level in the area is generally shallow. As such, appropriate dewatering techniques shall be employed to ensure that excavations and subsequent construction of footings for new constructions are undertaken under relative dry conditions.

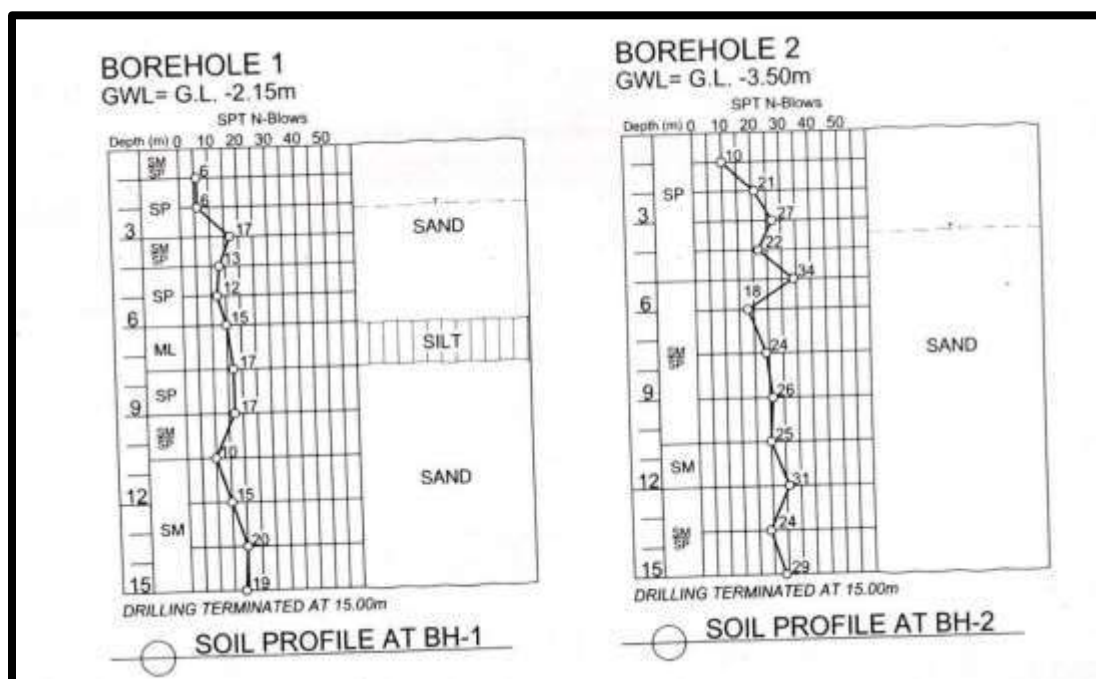


Figure AN-28. BatStateU ARASOF-Nasugbu Geotechnical Evaluation Report



The closest airport to Nasugbu is Ninoy Aquino International Airport (MNL). Distance from Ninoy Aquino International Airport to Nasugbu is 40.1 miles / 64.6 kilometers. DLTB Bus operates buses from DLTB LRT Gil Puyat Station to Nasugbu, the tickets cost ₱250 and the journey takes 2-3 hours.



Figure AN-29. Ninoy Aquino International Airport

The nearest port from the campus is located at Brgy. Wawa, which is also called the Nasugbu Port. The distance from the said pier to BatStateU ARASOF-Nasugbu is 2.3 km via Apacible Blvd. and 3.5 km if you take JP laurel St. which will take 7 mins. and 10 mins. drive, respectively.



https://www.google.com/maps/place/Wawa+Port,+Nasugbu,+Batangas/@14.0825347,120.6206188,3a,75y,90t/data=!3m1!1e2!3m6!1sAF1QipMrHvUrmWEA4Tcus92QMNmFkL5wZIX3gyT5AQZy!2e10!3e12!6shttps:%2F%2F1h5.googleusercontent.com%2Fp%2FAF1QipMrHvUrmWEA4Tcus92QMNmFkL5wZIX3gyT5AQZy%3Dw203-h152-k-nk!7i4000!8i3000!4m1!3i1m7!3m6!1s0x33bd96aaaf000ed7:0x7c87416b0d12f7ba!2sWawa+Port,+Nasugbu,+Batangas!3b1!8m2!3d14.0825347!4d120.6206188!3m4!1s0x33bd96aaaf000ed7:0x7c87416b0d12f7ba!8m2!3d14.0825347!4d120.6206188

Figure AN-30. Nasugbu Port





However, there are several bus companies that operate in the municipality. The lists are as follows:

- BSC/San Agustin Bus. The terminal for Nasugbu to Batangas City route was located adjacent to Savemore Nasugbu which is a 5 minute drive from the university, while the Nasugbu to Manila route terminal was located parallel to Jollibee Nasugbu which is 6 mins drive from the university either via R. Martinez St. or C. Alvarez St.



Figure AN-33. BSC Terminal Map (BatStateU Ground 1 and 2 to BSC terminal)



Figure AN-34. BSC Terminal Map (BatStateU Fishery - Ground 3 to BSC terminal)

- Del Monte Land Transport Bus (DLTBCo). The terminal is located at Brgy. 9, Nasugbu Batangas near Jack's Café which is a 13 minute drive via J.P Laurel St. The terminal only caters Nasugbu to Manila route and vice versa.





Figure AN-35. DLTB CO. Terminal Map (BatStateU Ground 1 and 2 to DLTBCo terminal)

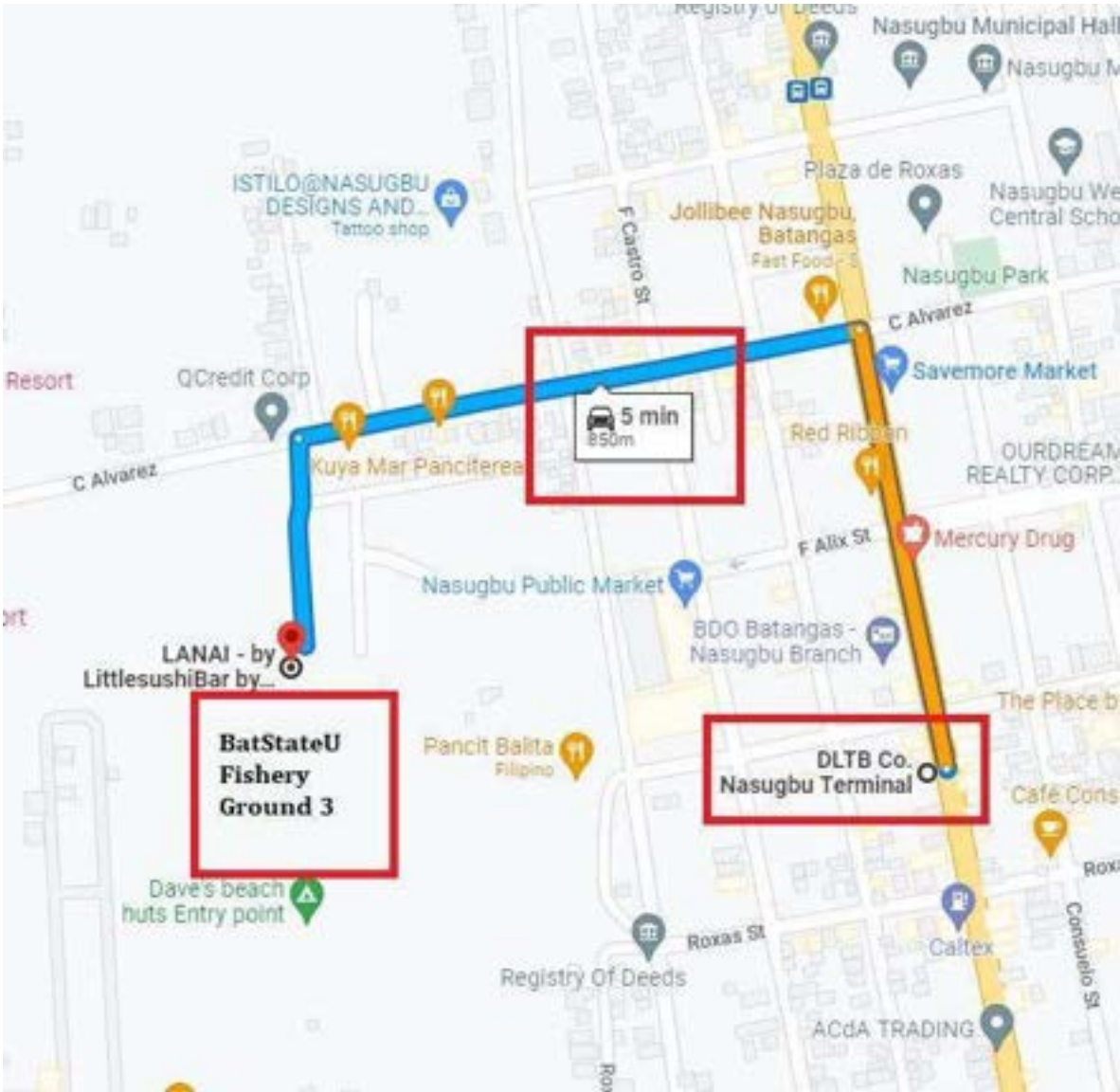


Figure AN-36. DLTB CO. Terminal Map (BatStateU Fishery - Ground 3 to DLTBCo. terminal)

- St. Gabriel Bus express. The terminal is located at Brgy. Lumbangan, Nasugbu, Batangas near WaterMart Nasugbu which is a 27 minute drive via J.P Laurel St. The terminal only caters Nasugbu to Manila route and vice versa.



Figure AN-37. St. Gabriel Bus Terminal Map  
(BatStateU Ground 1 and 2 to St. Gabriel Bus Express)

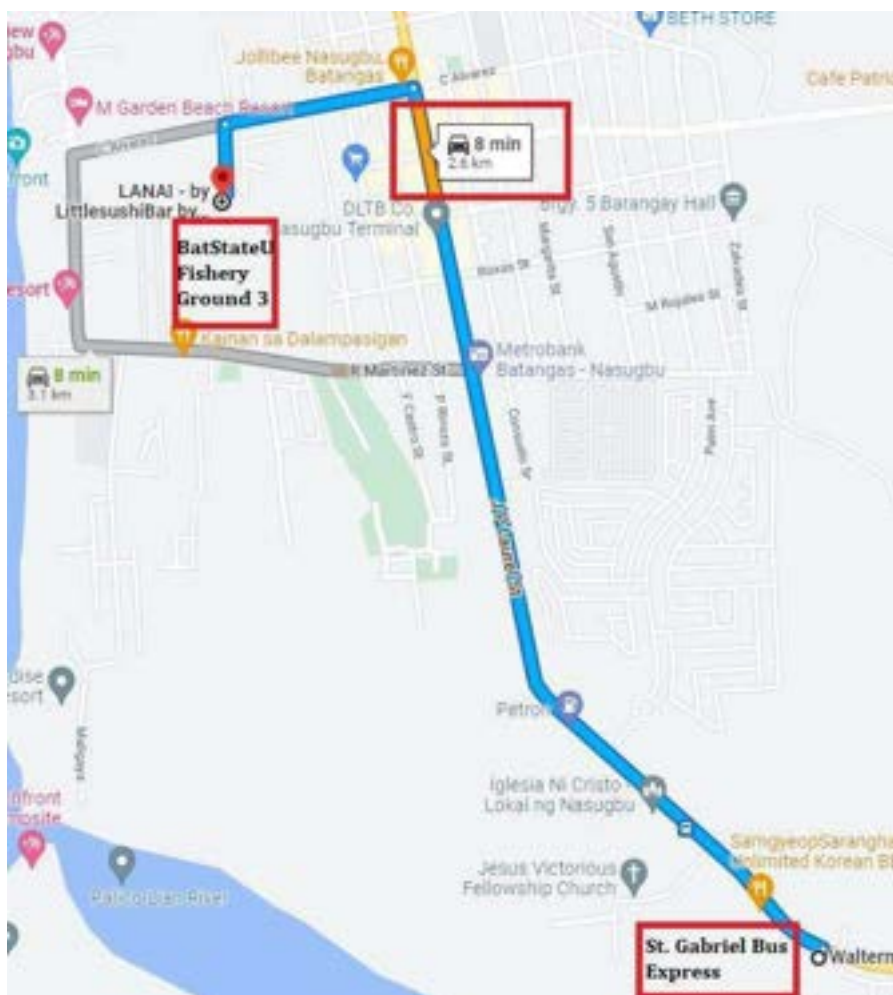
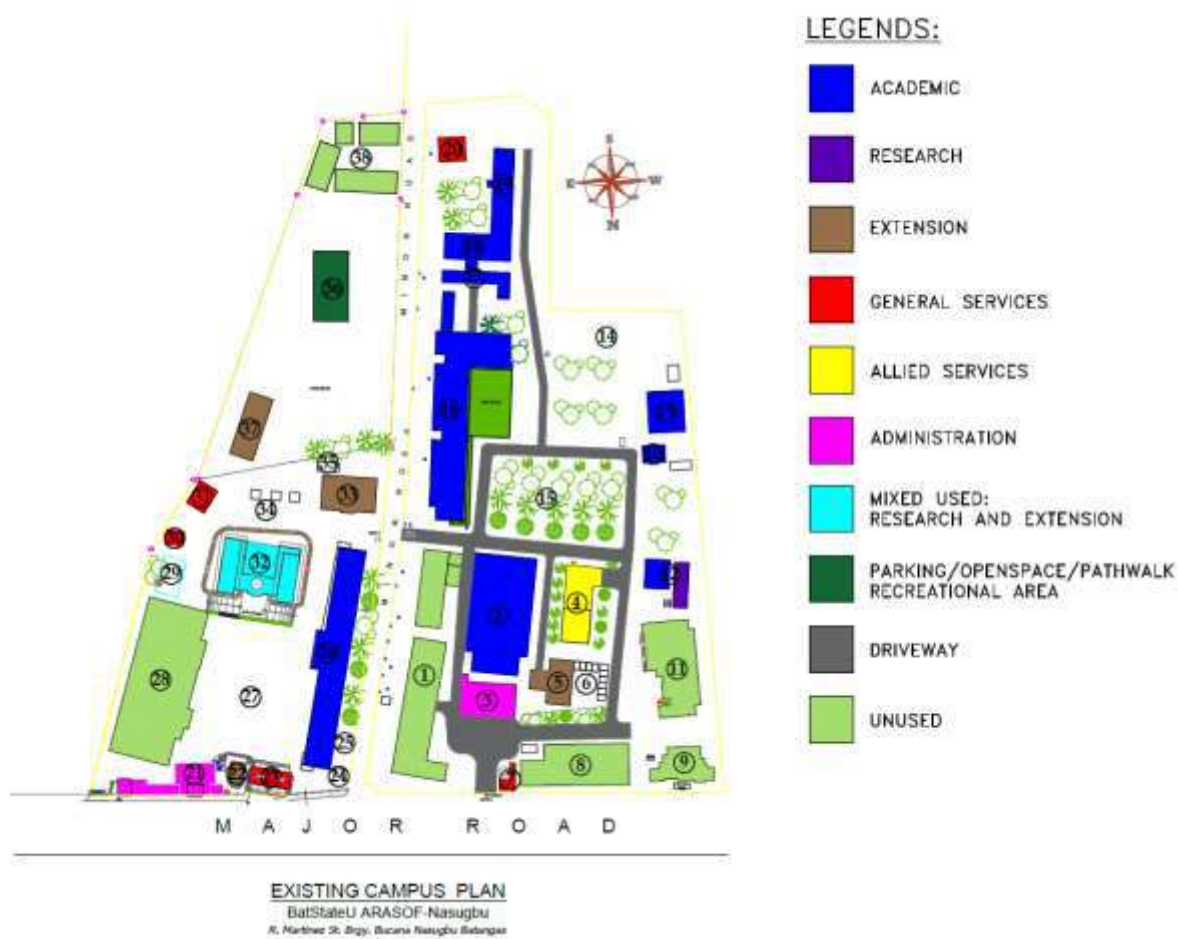


Figure AN-38. St. Gabriel Bus Terminal Map  
(BatStateU Fishery - Ground 3 to St. Gabriel Bus Express)



## c. Summary description of the natural biophysical environment

Presented below is the Campus Map of BatStateU ARASOF-Nasugbu Ground 1 and Ground 2. In blue color are the academic buildings while in pink color are the administration buildings. The green color represents the landscape and softscape in the campus. The main landscape which is the Mini Forest is located at the center of Ground 1. The vegetative cover mainly consists of trees, plants and park benches. The campus, being near the bay and with an average elevation of only 20 feet, is prone to flooding. Thus, newly constructed buildings and proposed buildings are all elevated from the campus' natural grade line.





**BUILDING NAMES:**

- |  |   |
|--|---|
| ① OLD COLLEGE OF TEACHER EDUCATION BUILDING              | ②① MAINTENANCE BUILDING                                 |
| ② JOSON GYMNASIUM  | ②② GATE 1: FACADE AND FENCE                             |
| ③ APACIBLE MUSEUM  | ②③ IGP BUILDING   |
| ④ INFIRMARY WITH SUPPLY AND PROCUREMENT OFFICE           | ②④ GUARD HOUSE AND DRIVEWAY (ENTRANCE AND EXIT)         |
| ⑤ UNIVERSITY CANTEEN                                     | ②⑤ CIRCUIT BREAKER                                      |
| ⑥ CANTEEN STALLS/KIOSKS                                  | ②⑥ OPEN SPACE   |
| ⑦ GATE 2: GUARD HOUSE                                    | ②⑦ HIGHER EDUCATION BUILDING I                          |
| ⑧ COLLEGE OF ENGINEERING AND COMPUTING SCIENCES BUILDING | ②⑧ OPEN GROUNDS   |
| ⑨ ON-GOING CONSTRUCTION OF VIP CORALS                    | ②⑨ ON-GOING CONSTRUCTION OF STUDENT SERVICES CENTER     |
| ⑩ COMPUTER LABORATORY (LABORATORY SCHOOL)                | ③① PUMP ROOM AND CISTERN TANK (STUDENT SERVICES CENTER) |
| ⑪ ON-GOING CONSTRUCTION OF LIVELIHOOD TRAINING CENTER    | ③② PUMP ROOM AND CISTERN TANK (HOSTEL)                  |
| ⑫ COLLEGE OF INDUSTRIAL TECHNOLOGY BUILDING AND HATCHERY | ③③ MOTORPOOL/UNIVERSITY GARAGE                          |
| ⑬ INSTITUTE OF MARINE TECHNOLOGY BUILDING                | ③④ HOSTEL BUILDING                                      |
| ⑭ OPEN SPACE   | ③⑤ UNIVERSITY CAFETERIA                                 |
| ⑮ MINI FOREST  | ③⑥ COTTAGES   |
| ⑯ NEW COLLEGE OF TEACHER EDUCATION BUILDING              | ③⑦ CISTERN TANK (CAFETERIA)                             |
| ⑰ COLLEGE OF ARTS AND SCIENCES LABORATORY BUILDING       | ③⑧ OPEN COURT   |
| ⑱ NUTRITION AND DIETETICS LABORATORY BUILDING            | ③⑨ UNIVERSITY DORMITORY                                 |
| ⑲ SKILLS LABORATORY BUILDING                             | ③⑩ BUCANA ELEMENTARY SCHOOL                             |

Figure AN-39. BatStateU ARASOF- Nasugbu Sectoral Map of Existing Buildings

Presented below is the Campus Map of BatStateU Fishery Ground 3. All of the area is shaded in green representing the unutilized land by the University awaiting future developments.

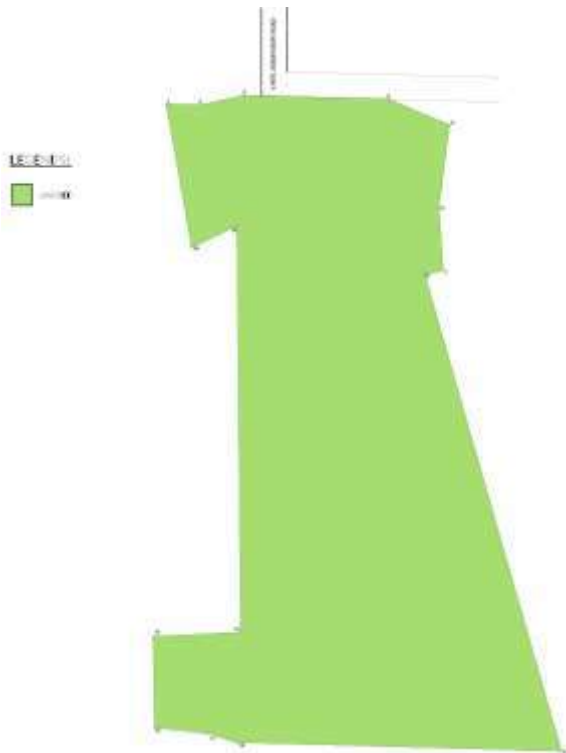


Figure AN-40. BatStateU Fishery Ground 3 Unused Area



**Liquefaction Hazard Map**  
**Municipality of Nasugbu, Batangas Province**

**Legend**

**Liquefaction Susceptibility**

- High
- Moderate
- Low

**Other Features**

- Political Boundary
- Municipal Boundary
- Barangay Boundary
- Highway
- Railroad
- Water (River/Lake)

**Explanation**

This map depicts the liquefaction hazard potential of the Municipality of Nasugbu, Batangas Province, based on the results of the geotechnical investigation conducted by the Batangas State University (BSU) Geotechnical Engineering Department. The map is intended to provide a general overview of the liquefaction hazard potential in the area, and it is not intended to be used as a basis for engineering design or other specific purposes. The map is intended to provide a general overview of the liquefaction hazard potential in the area, and it is not intended to be used as a basis for engineering design or other specific purposes.

**Limitations**

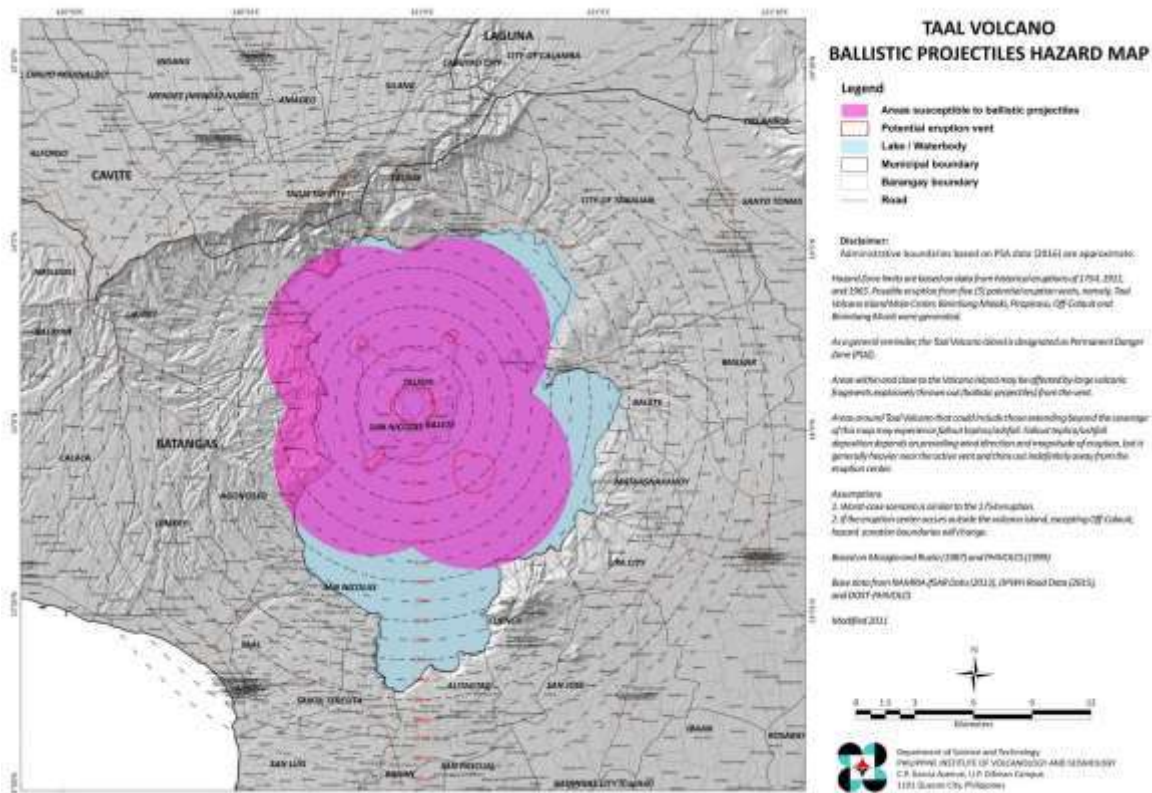
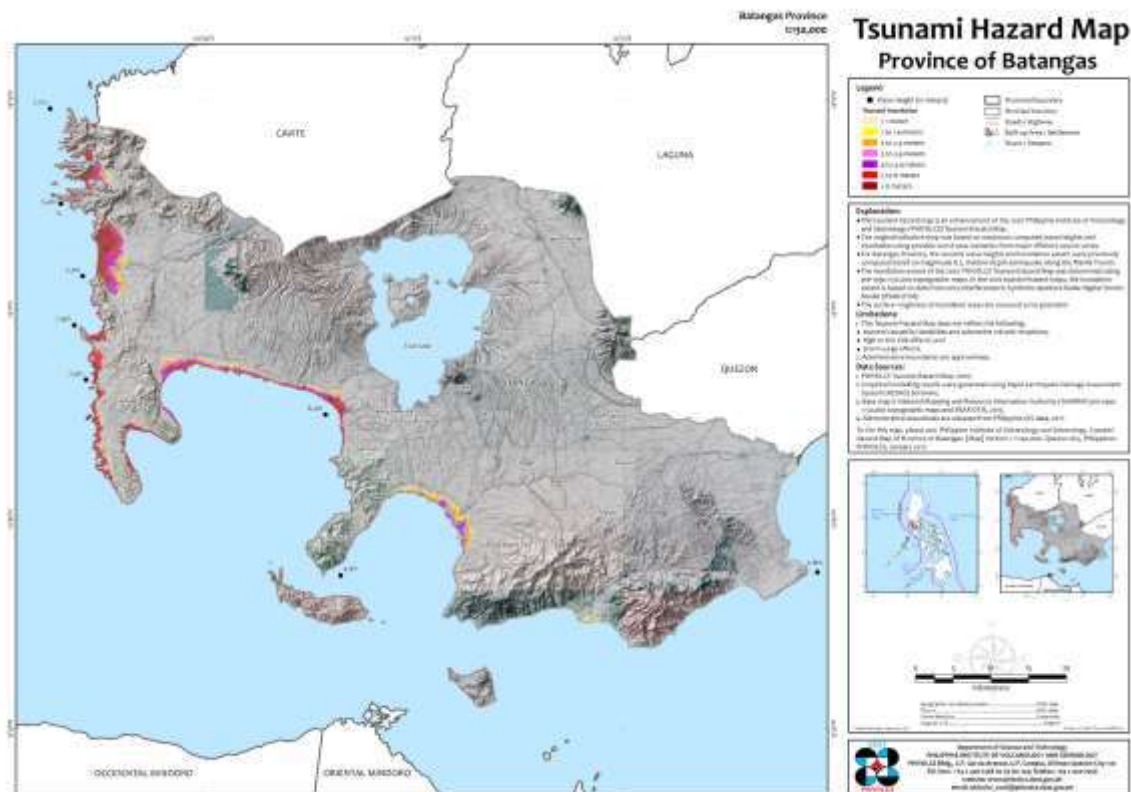
- The map is based on the results of the geotechnical investigation conducted by the Batangas State University (BSU) Geotechnical Engineering Department.
- The map is intended to provide a general overview of the liquefaction hazard potential in the area, and it is not intended to be used as a basis for engineering design or other specific purposes.
- The map is intended to provide a general overview of the liquefaction hazard potential in the area, and it is not intended to be used as a basis for engineering design or other specific purposes.

**Data Sources**

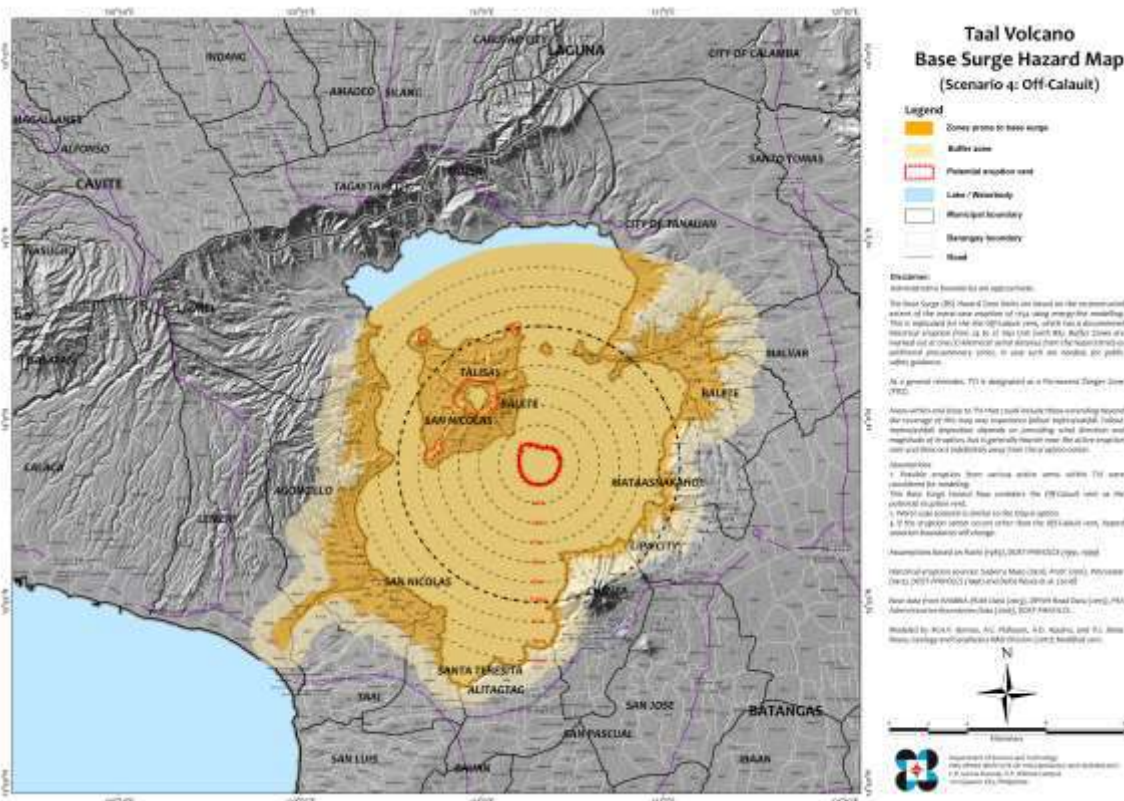
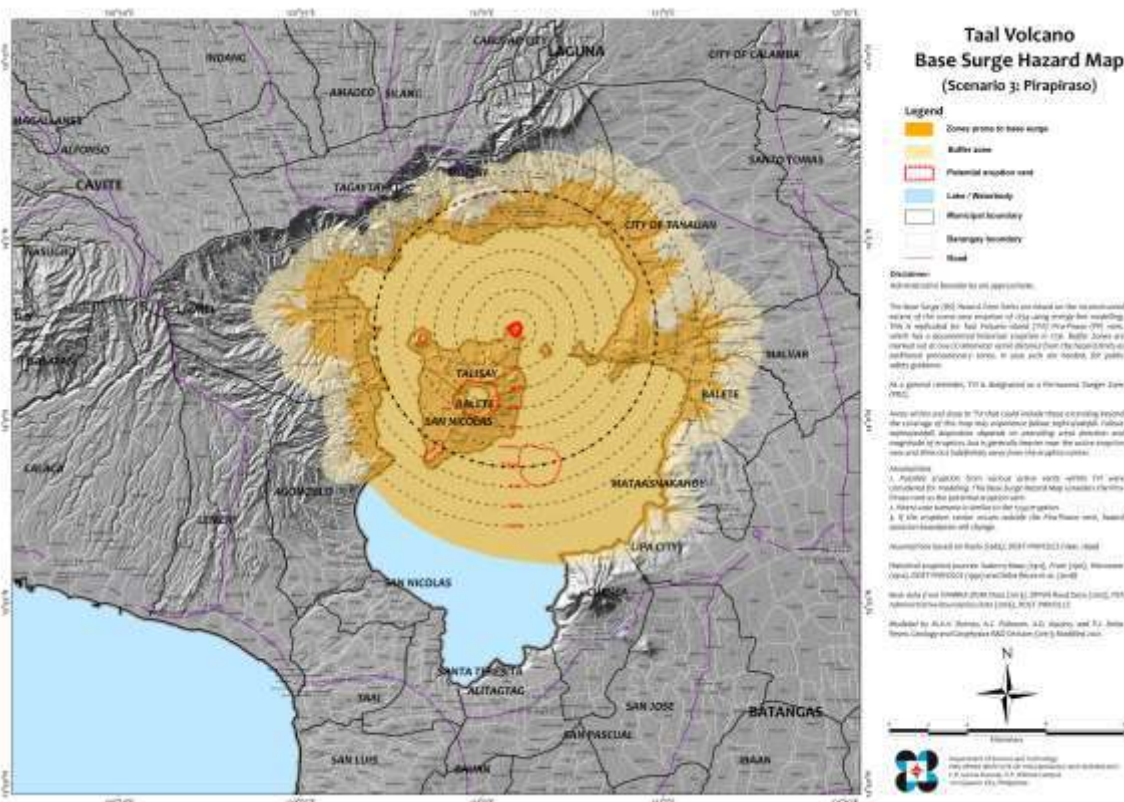
- The map is based on the results of the geotechnical investigation conducted by the Batangas State University (BSU) Geotechnical Engineering Department.
- The map is intended to provide a general overview of the liquefaction hazard potential in the area, and it is not intended to be used as a basis for engineering design or other specific purposes.
- The map is intended to provide a general overview of the liquefaction hazard potential in the area, and it is not intended to be used as a basis for engineering design or other specific purposes.

Figure AN-42. Liquefaction Hazard Map, Municipality of Nasugbu, Batangas Province









However, the nearest active volcano in Nasugbu, Batangas, where the University Campus is located, is Taal Volcano. Based on the Hazard Maps shown above provided by the Department of Science and Technology Philippine Institute of Volcanology and



Seismology, Nasugbu is not within the scope of its possible base surge and ballistic projectiles.

B. Inventory of Landholdings

a. Inventory of Landholdings

The vast landholdings of BatStateU ARASOF-Nasugbu consist of six (6) compounds, namely Main Ground, PESS Ground, Dormitory/Court and three (3) Fish Ponds. As a former School of Fisheries, the above-mentioned lands were obtained for the purpose of establishing and maintaining a branch of the Philippine Institute of Fisheries and Technology in Nasugbu, Batangas, or in general, for furthering the development of the fishing industries.

Below is the summary of inventory of landholdings of BatStateU ARASOF-Nasugbu:

Table AN-7. Summary of Inventory of Landholdings

No.	Descriptive Name	TCT	Date Acquired	Lot Area	Mode of Acquisition
1	Main Ground	TCT No. T-9840	November 20, 1962	25,111 sq. m.	Donation from Mr. Eduardo Roxas
2	PESS Ground	TCT No. T-66819	February 11, 1994	10,640 sq.m.	Purchased from B.H. Berkenkotter & Co.
3	Dormitory/Court Bucana,	TCT No. T - 31825	August 8, 1975	6,209 sq.m.	Donation from Remedios Cadeleña
4	ARASOF FISHPOND (Bucana)	TCT No. T-58597	December 27, 1990	10,121 sq.m.	Purchased from Mrs. Marcelena Abeleda
5	ARASOF Fishpond (Pantalan, Old)	TCT No. T-6112	December 20, 1962	30,248 sq.m	Purchased from Mrs. Susana Jaype and her children
6	ARASOF Fishpond (Pantalan, New)	TCT No. T-59324	April 4, 1991	10,000 sq.m.	Purchased from Spouses Mr. Felipe B. Echaluze and Mrs. Marilou C. Echaluze

b. Status of Ownership





On November 20, 1962, the first compound, Main Ground was acquired through Donation of Mr. Eduardo Roxas, containing an area of Twenty-Five Thousand One Hundred Eleven (25,111) square meters, with TCT No. T-9840 and a market value of Thirty-Seven Thousand Six Hundred Seventy Pesos (P37, 670.00) in the name of The Government of the Republic of the Philippines.

The second compound, known as the Physical Education School Sports (PESS) Ground or the Roxas-Gargollo Sports Field, was purchased on February 11, 1994 from B.H. Berkenkotter and Co. Inc., through its president, George E. Berkenkotter. With an area of ten thousand six hundred forty (10,640) square meters, the total amount of Eight Hundred Eleven Thousand Five Hundred Fifty-Eight Pesos and 91/100 (P811,558.91) was calculated as its acquisition cost with TCT No. T-66819 in the name of the Republic of the Philippines, for the use of the Apolinario R. Apacible School of Fisheries, Nasugbu, Batangas.

The Dormitory/Court Ground, the third compound, was acquired on August 8, 1975 also through Donation from Ms. Remedios Cadeleña, amounting to Nine Thousand Nine Hundred Thirty Pesos (P9,930.00) containing an area of Six Thousand Two Hundred Nine (6,209) square meters with TCT No. 31825 in the name of Batangas School of Fisheries, Nasugbu, Batangas.

Further, a portion of this lot (900 sqm more or less) has an existing DepEd building being used by the primary school children of Bucana Elementary School. The utilization of the said lot area was requested by the Barrio Council of Bucana and was allowed to construct (1) Marcos Type Pre-Fab Building for the said purpose.

The fourth compound, the Fish Pond – Freshwater located in Barangay Bucana with TCT No. T-58597 was purchased from Mrs. Marcelina Abeleda in the amount of Three Hundred Ninety-Two Thousand Six Hundred Ninety-Five Pesos and 55/100 (P392,695.55) on December 27, 1990 containing an area of Ten Thousand One Hundred Twenty One (10,121) square meters, in the name of The Republic of the Philippines, Department of Education, Culture and Sports, Nasugbu, Batangas, Apolinario R. Apacible, Nasugbu, Batangas.

Located in Barangay Pantalan, the fifth compound known as the Old Fish Pond was purchased on December 20, 1962 from Mrs. Susana Jaype and children amounting to Sixteen Thousand Six Hundred Pesos (P16,600.00) with an area of Thirty Thousand Two Hundred Forty-Eight (32,248) square meters with TCT No. T-6112, in the name of The Republic of the Philippines.

The sixth compound, known as the New Fish Pond, which is also located in Barangay Pantalan, was purchased from the spouses Felipe B. Echaluze and Marilou C. Echaluze on April 4, 1991 with TCT No. T-59324 containing an area of Ten Thousand (10,000) square meters, with the amount of Six Hundred Thousand Pesos (P600,000.00) in the name of The Republic of the Philippines, Department of Education, Culture and Sports, Nasugbu, Batangas, Apolinario R. Apacible, Nasugbu, Batangas.

The landholdings of Batangas State University ARASOF-Nasugbu as of this date are still under the name of Republic of the Philippines, Apolinario R. Apacible School of Fisheries in which according to RA 9045 shall be transferred to the Batangas State University.

### c. Manner of Acquisition

- The Main Ground was acquired through Conditional Donation from Mr. Eduardo Roxas, executed by a Deed of Conditional Donation.



- The Physical Education School Sports (PESS) Ground or the Roxas-Gargollo Sports Field, was obtained through Purchased by Expropriation from B.H. Berkenkotter and Co. Inc., through its president, George E. Berkenkotter, executed by a Court Order, Civil Case No. 22.
- The Dormitory/Court Ground was acquired through Donation from Ms. Remedios Cadeleña
- The Fish Pond – Freshwater, located in Barangay Bucana was purchased from Mrs. Marcelina Abeleda under the Absolute Contract, executed by a Deed of Absolute Sale.
- The Old Fish Pond, located in Pantalan was purchased on December 20, 1962 from Mrs. Susana Jaype and Children under the Absolute Contract, executed by a Deed of Absolute Sale.
- The New Fish Pond, located in Barangay Pantalan, was also purchased under the Absolute Contract, executed by a Deed of Absolute Sale. from the spouses Felipe B. Echaluze and Marilou C. Echaluze.

### C. Existing Land Use and Land Use Trends

#### Existing Land use of the Municipality of Nasugbu

The total land area of Nasugbu amounts to 27,633 hectares. It has a bigger land area compared to Lipa City and it has relatively the same land as Batangas City. The forest and the municipality constitute 9,019 hectares. It has a huge tract of land for production and plantation forest which is 4,612 hectares and 4,785 hectares respectively. The 48 hectares of protection land within Mt. Palay Palay. Whereas Mangrove area constitutes 24 hectares.

The total alienable and disposable land area is 12,674.5 hectares. The remaining land is devoted to production land especially for the cultivation of annual crops. Irrigated land is 2,698 hectares, higher than the other two cities of the province, while fishpond accounts for 282.5 hectares, and higher than the other two cities.

The tourism area of the municipality constitutes 475.5 hectares, most of which are located near the South China sea. It is where hotels and resorts are located. The industrial area on the other hand constitutes 129 hectares. These are located in the southwestern portion of the municipality along the Lian River.

Most of these built up areas are concentrated at Poblacion for 1,0134.77 hectares. However, a large portion of land within Poblacion is still agriculturally productive covering 2,1624.24 hectares.

EXISTING LAND USE LOCATION								
MUNICIPALITY	TOTAL AREA (HAS.)	ALIENABLE & DISPOSABLE LAND						
		IRRIGATED	CAC	PTV	PASTURE	FISHPOND	SUB-TOTAL PRODUCTION LAND	TOURISM
NASUGBU	27,633.00	2,698.00	6,065.00	3,629.00		282.50	12,674.50	475.50
		FORESTRY LAND						
		PRODUCTION	PLANTATION	PROTECTION	MANGROVE	SUB-TOTAL FORESTRY		
		4,162.00	4,785.00	48.00	24.00	9,019.00		

Figure AN-47. Existing Land Use Allocation of Nasugbu

Existing Land Use of BatStateU ARASOF-Nasugbu

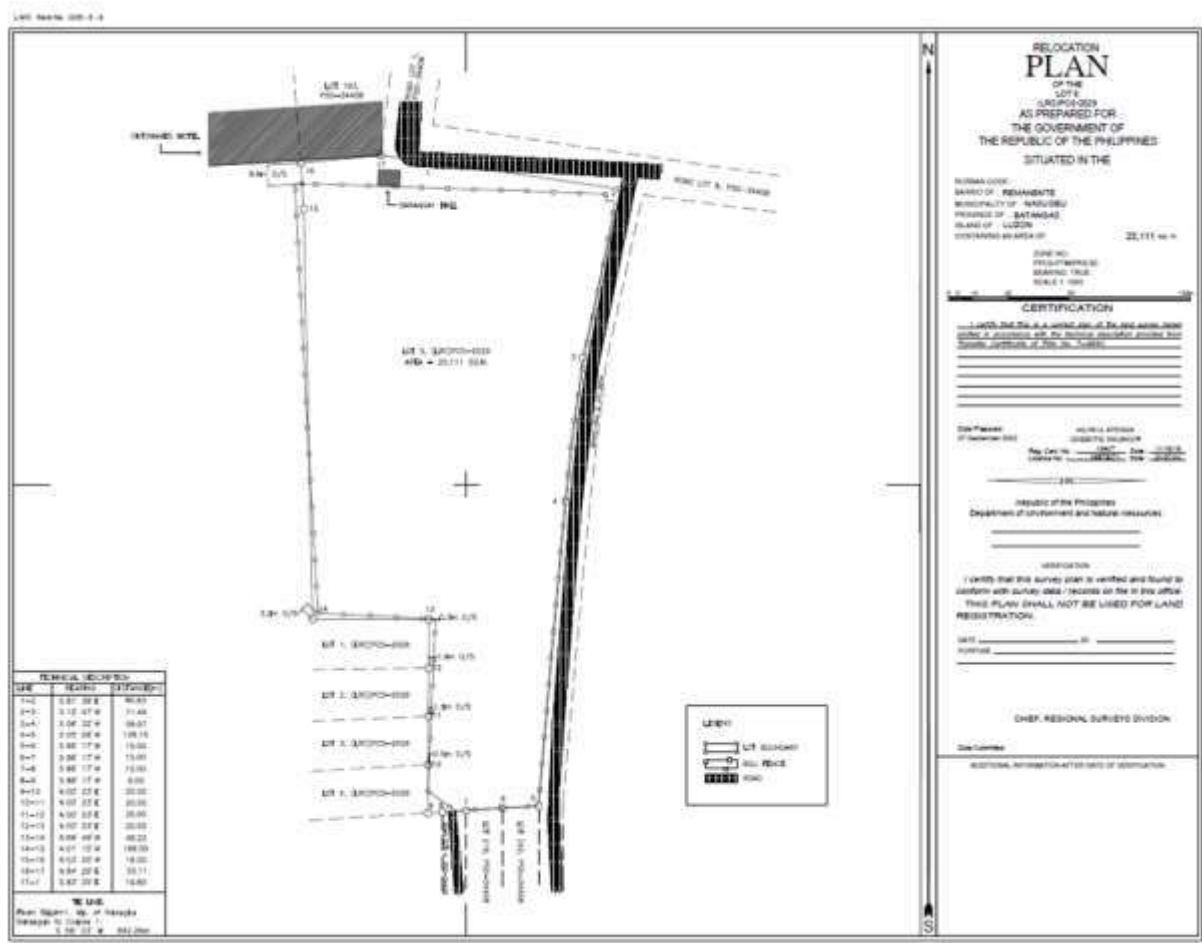
Batangas State University ARASOF-Nasugbu has three grounds, two of which, Ground 1 and Ground 2, are currently utilized where the existing classrooms and laboratory buildings are located. However, the other ground owned by Batangas State University ARASOF-Nasugbu, Ground 3, used to be a functional palaisdaan but is currently an unutilized land awaiting future developments.

Ground 1 and Ground 2 are located in Barangay Bucana, Nasugbu, Batangas. These grounds are part of Nasugbu’s Institutional Zone. These sites’ adjacent communities include residential areas, hotels and beach resorts, restaurants and a few private companies.



Figure AN-48. BatStateU ARASOF-Nasugbu Location Map

The land occupied by BatStateU ARASOF-Nasugbu Ground 1 was surveyed by Metasurv Geodetic Surveying Services last September 2022. Report on this survey is shown below.





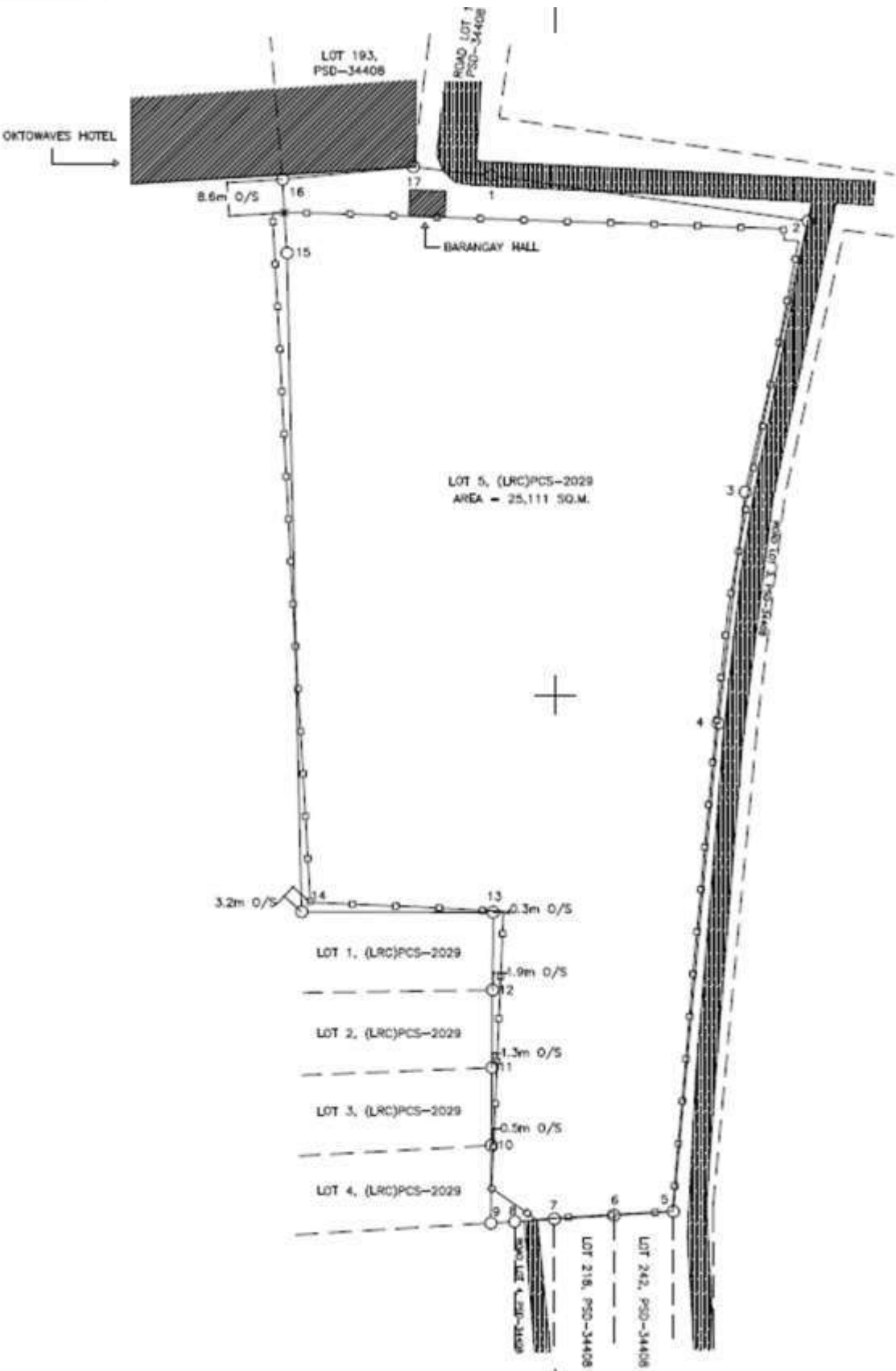


Figure AN-50. Zoomed copy of Cadastral Survey of Ground 1



Figure AN-51. Report of Survey of Ground 1

The red line represents the lot boundaries, while the yellow lines are for the actual lot occupied by BatStateU ARASOF-Nasugbu Ground 1. Based on the observed data, the university only occupies 23,903 sq.m.

The corners of lot 5 were marked on the ground to identify their actual positions. Out of seventeen corners, nine were marked on its exact position either with cylindrical concrete monuments (corners 3, 4, 6, 7, 9) or concrete nails or steel rebars with paint (corners 1, 2, 8, 15), five were marked with an offset due to restricted access to the adjacent properties (corners 10, 11, 12, 13, 16), one was not marked as it falls exactly on a corner of fence (corner 5), and two were not marked.

The portion from point 10 to 14 have a dispute with the adjacent resort lots. The offsets for these points are illustrated below:

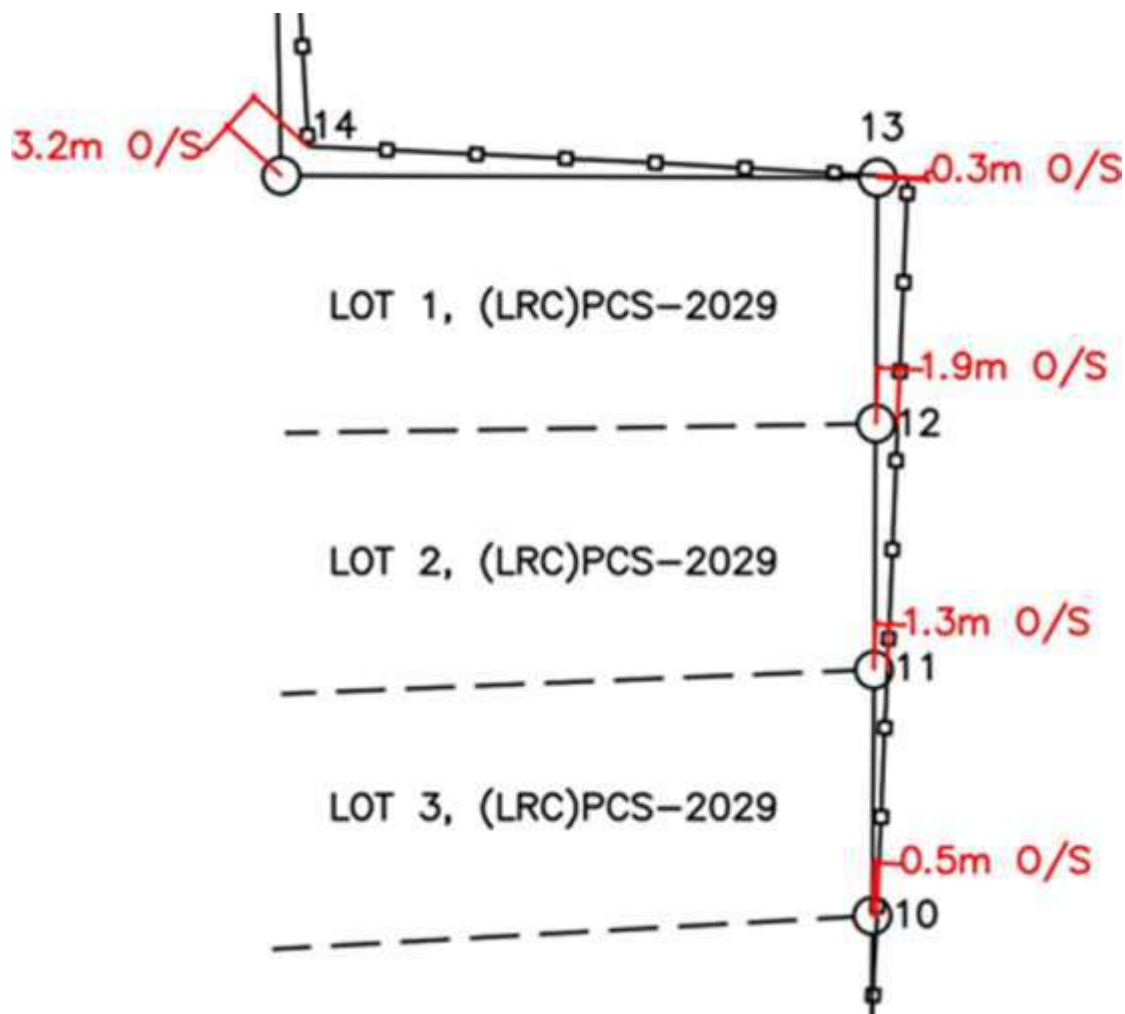


Figure AN-52. BatStateU ARASOF Nasugbu Ground 1: Survey on Land dispute

On the other hand, the offset of the corner near Oktowaves Hotel is illustrated below:



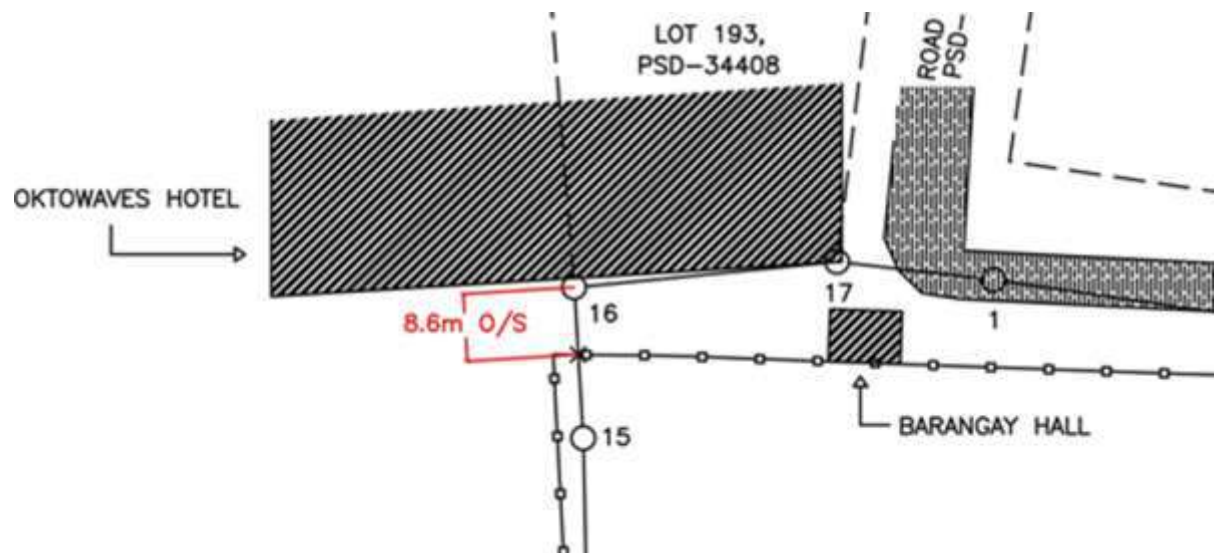


Figure AN-53. BatStateU ARASOF Nasugbu Ground 1: Survey on Land dispute

The land occupied by BatStateU ARASOF-Nasugbu Ground 2 was surveyed by the Bausas Surveying Office last August 2020. Report on this survey is shown below.



**BAUSAS SURVEYING OFFICE**

107 BILARAN, NASUGBU, BATANGAS

August 10, 2020

MR. ENRICO DALANGIN  
BATANGAS STATE UNIVERSITY  
NASUGBU, BATANGAS

Dear Sir:

We have completed the Relocation of the two lots owned by Batangas State University (BSU) specifically Lot 73 Psd 34408 and Lot 188-B (LRC) Psd-215305 with total area of 16,849 sq.m.

The results of the relocation survey are shown in the attached Survey Plan.

In the attached plan I overlaid the actual position of the concrete wall against the boundaries of the 2 lots based on their titles. In general, we found no significant variations on the location of the concrete fence except on the southern portion. The wall near the Elementary School is inside your property and this wall has left about 193 sq.m of your property outside your fence. This area is now occupied by an existing road between BSU and the residential areas, and three houses. Specifically, these house owners are 1) Luisa Paciona (4 sqm) 2) Marites Lopez (11 sqm) and 3) Jenny Derige (15 sq.m). When I checked the old plan Psd 34408, there is no road between Lot 188 and the residential lots. We tried to put corners 3, 4, and 5 of Lot 188-B but they are inside the residential areas already.

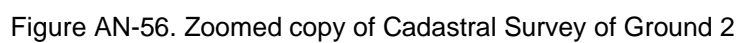
It should be noted also that Lot 188-A, the road lot which is located between Lot 73 and Lot 188-B, is inside your fences but I have not seen any title of this lot registered to BSU.

Truly yours,



ESMAEL L. BAUSAS

Figure AN-54. Results of the Relocation Survey





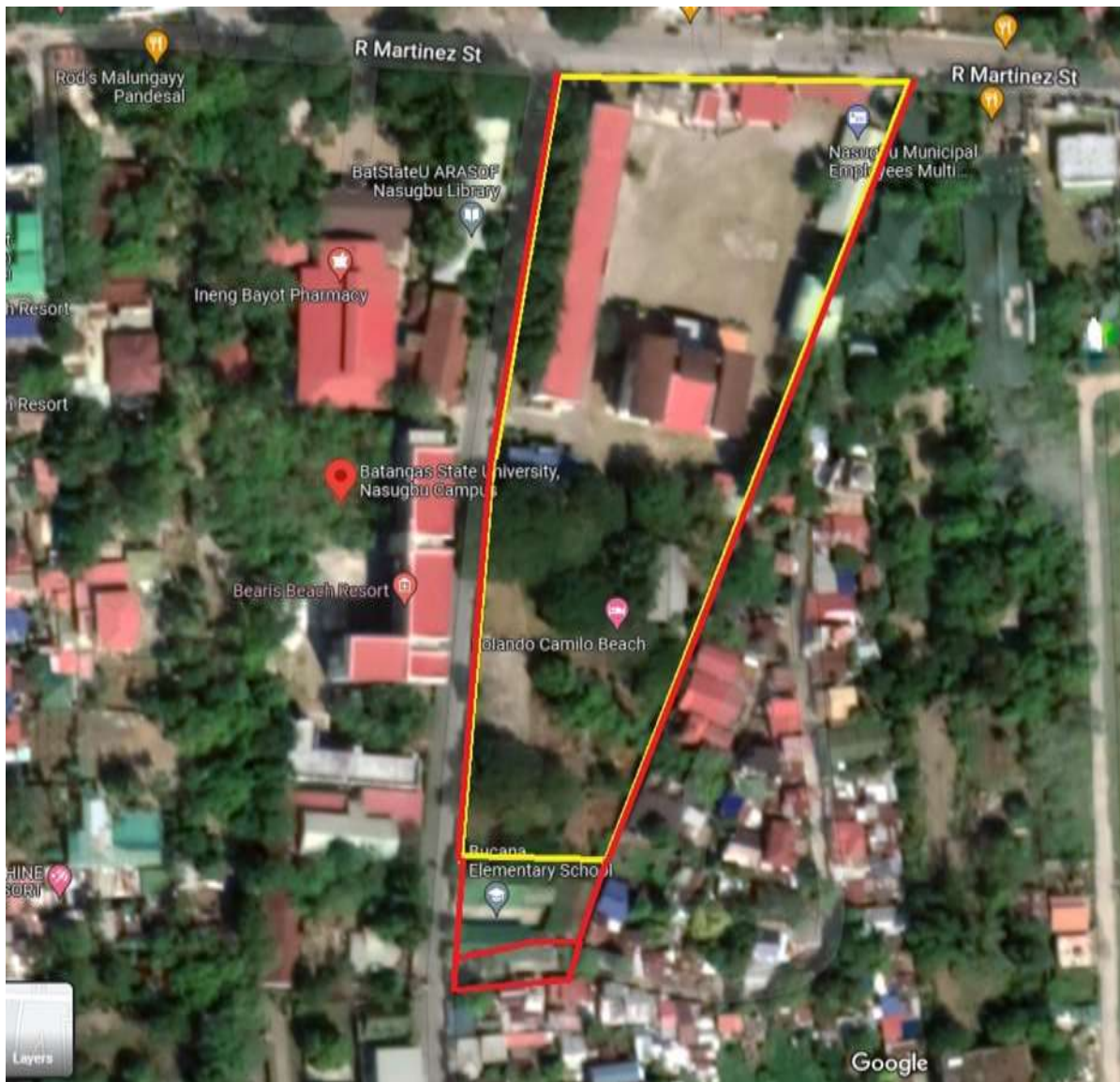


Figure AN-57. Report of Survey of Ground 2

Portion of the land owned by the university is currently occupied by Bucana Elementary School, while another portion is currently used as an access road and part of some residential areas. These areas are currently unutilized by the university but are part of the planned future development of this site.

Additionally, Ground 3 is located in Barangay 10 Poblacion, Nasugbu, Batangas. This site is part of the agricultural zone of Nasugbu. The university is now planning to develop the land to be an extension facility for fishery research. Adjacent to this land is a vast area of private agricultural lands, residential areas and a few local restaurants.

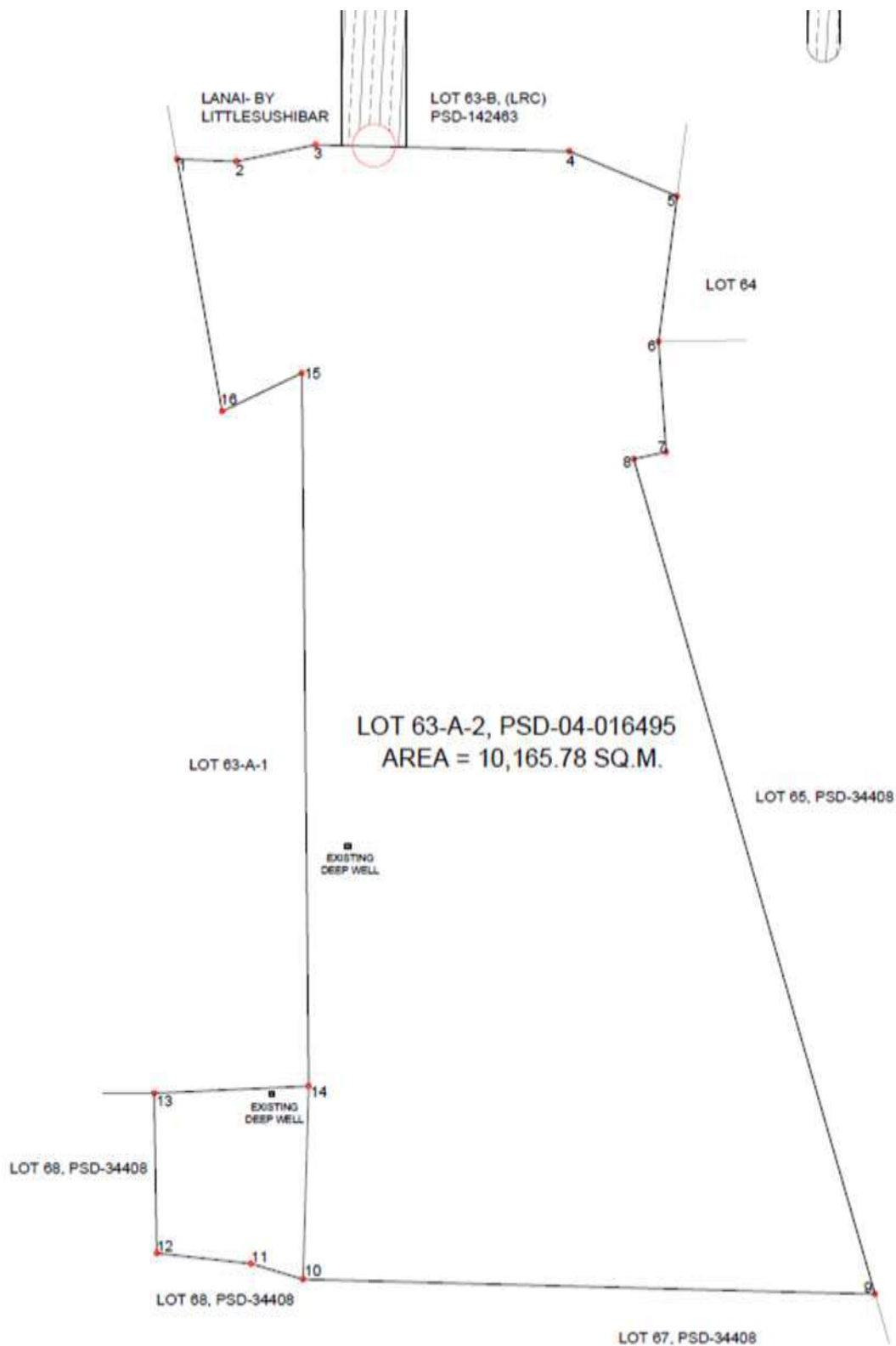


Figure AN-58. Cadastral Survey of Ground 3



Figure AN-59. Report of Survey of Ground 3



### 1. Ground 1 or Main Ground

The land area of Ground 1 has an expanse of 25,111 sq.m. where majority of the school buildings were located, including the oldest building, the administration building which was renovated last September 2017 into The Apacible Museum. Other buildings situated in this ground are as follows:

- a. Old College of Teacher Education building (for demolition)
- b. Library building
- c. New College of Teacher Education building
- d. Housekeeping/ Student Council building
- e. College of Arts and Sciences Laboratory building
- f. CITE building
- g. Maintenance building
- h. Institute of Marine Transportation building
- i. Computer and Laboratory building for Laboratory school
- j. College of Industrial technology building
- k. Hatchery
- l. Extension office
- m. College of Engineering and Computing sciences building
- n. Guard house (Gate 2)
- o. Apacible Museum (administration building)
- p. Joson Gymnasium
- q. University Canteen
- r. Infirmary, Supply and Procurement Building
- s. Livelihood Training Center (On-going construction)

The old ground also had a 1,502 sq.m open area serving as the university's mini forest where the students, employees and staff recreate and take a break. Other open areas were set to be used for other proposed school buildings for the next 10 years.



Figure AN-60. BatStateU ARASOF-Nasugbu Map Ground 1

## 2. Physical Education School Sports (PESS) Ground / Ground 2

The second half of the site is known to many as the Physical Education School Sports (PESS) Ground or the Roxas-Gargollo Sports Field. Measuring at 16, 849 sq.m, this spacious open field is a frequent venue for PE subjects, military training, sports events and other outdoor activities. However, it is now referred to as Ground 2 since the recent developments and new infrastructures constructed in this area. Also, standing proudly at the southern part of the field is the BatStateU Hostel that serves as a function hall for local events. Alongside of it is the Higher Education Building where most of the classes of the colleges of different programs are held. Other buildings situated in this ground are as follows:

- University Garage
- University Cafeteria
- Old Dormitory building
- Open court
- Bucana Elementary school
- Student Services Center building (On-going construction)

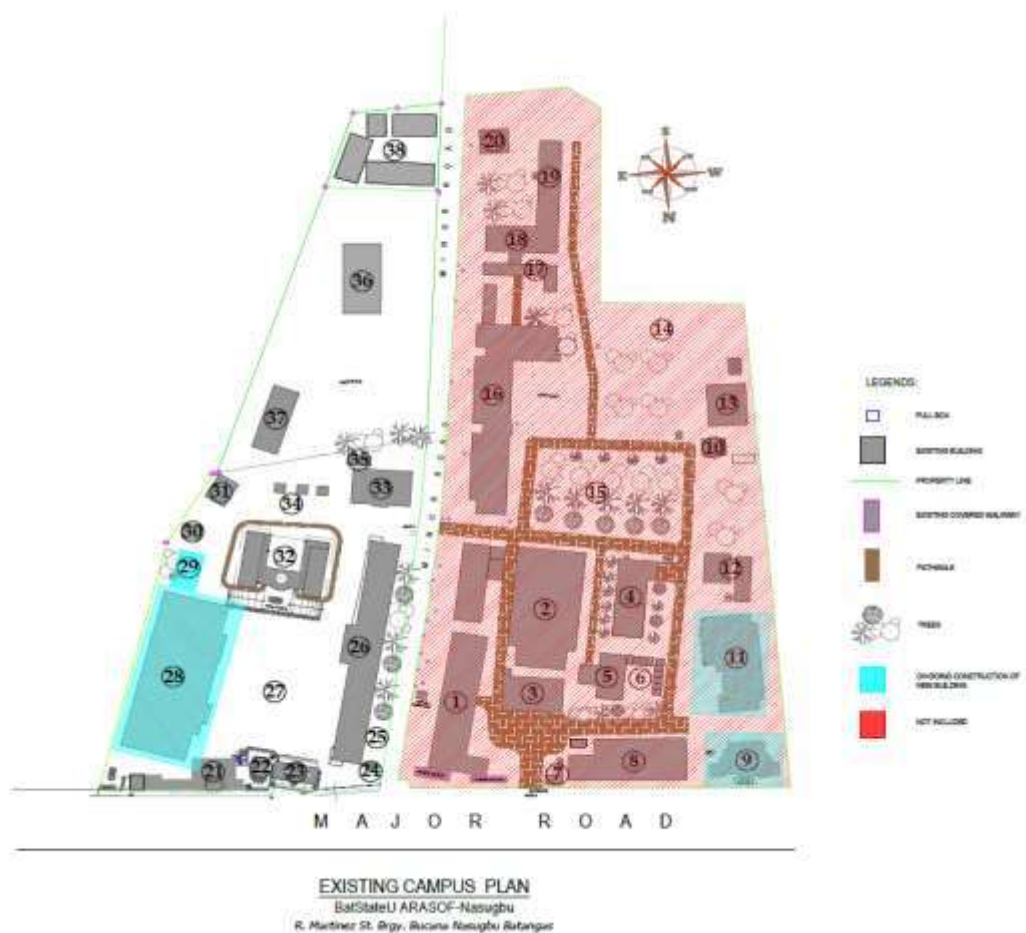


Figure AN-61. BatStateU ARASOF-Nasugbu Plan Ground 2

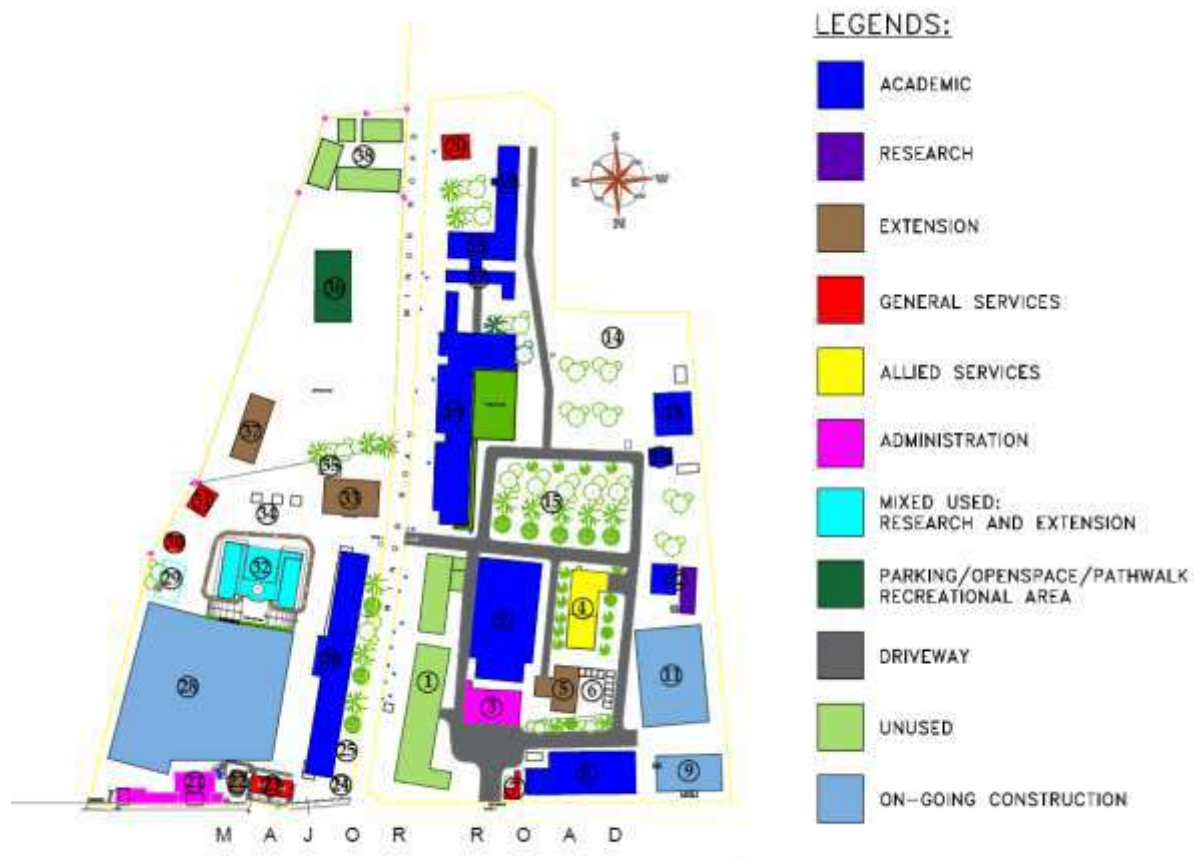
### 3. BatStateU Fishery/ Ground 3

Ground 3 is located in Barangay 10 Poblacion, Nasugbu Batangas. This ground is part of the agricultural zone of Nasugbu. The university is now planning to develop the land to be an extension facility for fishery research. Adjacent to this land is a vast area of private agricultural lands, residential areas and a few local restaurants.



Figure AN-62. BatStateU Fishery Ground 3





EXISTING CAMPUS PLAN  
BatStateU ARASOF-Nasugbu  
R. Martinez St. Brgy. Bucana Nasugbu, Batangas

## BUILDING NAMES:

- |  |   |
|--|---|
| ① OLD COLLEGE OF TEACHER EDUCATION BUILDING              | ②⑨ MAINTENANCE BUILDING                                 |
| ② JOSON GYMNASIUM  | ②⑩ GATE 1: FACADE AND FENCE                             |
| ③ APACIBLE MUSEUM  | ②⑪ IGP BUILDING   |
| ④ INFIRMARY WITH SUPPLY AND PROCUREMENT OFFICE           | ②⑫ GUARD HOUSE AND DRIVEWAY (ENTRANCE AND EXIT)         |
| ⑤ UNIVERSITY CANTEEN                                     | ②⑬ CIRCUIT BREAKER                                      |
| ⑥ CANTEEN STALLS/KIOSKS                                  | ②⑭ OPEN SPACE   |
| ⑦ GATE 2: GUARD HOUSE                                    | ②⑮ HIGHER EDUCATION BUILDING I                          |
| ⑧ COLLEGE OF ENGINEERING AND COMPUTING SCIENCES BUILDING | ②⑯ OPEN GROUNDS   |
| ⑨ ON-GOING CONSTRUCTION OF VIP CORALS                    | ②⑰ ON-GOING CONSTRUCTION OF STUDENT SERVICES CENTER     |
| ⑩ COMPUTER LABORATORY (LABORATORY SCHOOL)                | ②⑱ PUMP ROOM AND CISTERN TANK (STUDENT SERVICES CENTER) |
| ⑪ ON-GOING CONSTRUCTION OF LIVELIHOOD TRAINING CENTER    | ②⑲ PUMP ROOM AND CISTERN TANK (HOSTEL)                  |
| ⑫ COLLEGE OF INDUSTRIAL TECHNOLOGY BUILDING AND HATCHERY | ③① MOTORPOOL/UNIVERSITY GARAGE                          |
| ⑬ INSTITUTE OF MARINE TECHNOLOGY BUILDING                | ③② HOSTEL BUILDING                                      |
| ⑭ OPEN SPACE   | ③③ UNIVERSITY CAFETERIA                                 |
| ⑮ MINI FOREST  | ③④ COTTAGES   |
| ⑯ NEW COLLEGE OF TEACHER EDUCATION BUILDING              | ③⑤ CISTERN TANK (CAFETERIA)                             |
| ⑰ COLLEGE OF ARTS AND SCIENCES LABORATORY BUILDING       | ③⑥ OPEN COURT   |
| ⑱ NUTRITION AND DIETETICS LABORATORY BUILDING            | ③⑦ UNIVERSITY DORMITORY                                 |
| ⑲ SKILLS LABORATORY BUILDING                             | ③⑧ BUCANA ELEMENTARY SCHOOL                             |

Figure AN-63. BatStateU ARASOF-Nasugbu Existing Map



Table AN-8. EXISTING LAND USE ALLOCATION OF GROUND 1 AND GROUND 2

ACADEMIC ZONE	ADMINISTRATION AND GENERAL SERVICES	RESEARCH AND EXTENSION	ALLIED SERVICES	DRIVEWAY	PARKING, OPEN SPACE, RECREATION AREA	TOTAL AREA (SQ.M.)
10.33%	2.03%	2.92%	0.74%	6.41%	77.58%	100.00%
4,335.00	850.00	1,223.60	312.00	2,688.00	32,551.40	41,960.00

Table AN-9. EXISTING LAND USE ALLOCATION OF GROUND 3

ADMINISTR ATION AND ACADEMIC ZONE	ADMINISTRATION AND GENERAL SERVICES	RESEARCH AND EXTENSION	DRIVEWAY	PARKING, OPEN SPACE, RECREATION AREA	TOTAL AREA (SQ.M.)
10.42%	1.62%	45.36%	3.97%	37.01%	100.00%
1,058.94	164.91	4,611.18	403.084	3,762.76	41,960.00

b. Detailed description the:

Academic Core

The Academic Core buildings occupying campus land use of more or less 4,335 square meters or 10.33% of the total land use are composed of the following academic buildings and its descriptions:

Table AN-10. Academic Core

Building	Level	Rooms/Offices
Higher Education Building  Total Carrying Capacity: 1,023	1	5 classrooms, faculty room and dean’s office, male and female restrooms
	2	6 classrooms, 1 internet laboratory, male and female restrooms
	3	6 classrooms, 1 computer laboratory, male and female restrooms
College of Teacher Education  Total Carrying Capacity: 1,648	1	6 classrooms, faculty room and dean’s office, male and female restrooms
	2	8 classrooms, male and female restrooms
	3	8 classrooms, male and female restrooms



	4	6 classrooms, 1 faculty room
Joson Gymnasium Total Carrying Capacity: 532	1	stage, bleachers, basketball court and 2 mezzanine office
CICS Building Total Carrying Capacity: 308	1	4 classrooms, 2 laboratory rooms, faculty room, dean's office, student's lounge
CIT Building Total Carrying Capacity: 92	2	2 classrooms, dean's office and faculty room
Computer Laboratory Total Carrying Capacity: 28	1	1 laboratory room
Institute of Marine Technology Building Total Carrying Capacity: 160	1	2 classrooms, faculty room, male and female restroom, clinic and library
	2	3 classrooms and 1 conference room
CAS Laboratory Building Total Carrying Capacity: 117	1	4 laboratory rooms, male and female restrooms
	2	9 laboratory rooms
CONAHS Building Total Carrying Capacity: 297	1	3 classrooms, 5 laboratory rooms, faculty room, amphitheater
	2	3 classrooms

Research Core

Currently, there is no existing Research Building and the Office of the Research and Extension is for demolition. The future research development plan includes the establishment of Fisheries and Aquaculture Research Center and VIP Corals Nasugbu Marine Station.

Fisheries and Aquaculture Research Center

Batangas State University ARASOF-Nasugbu Research Office is targeting to be known as fisheries and aquaculture research campus in the next 3-5 years. One of the proposed plans is to have a fisheries and Aquaculture Research Center which will be located on the proposed HEB (Higher Education Building) II. The said center will be





comprised of the following laboratories: Aquaculture and Fish Hatchery Wet Laboratory, Fish Health/Microbiology Laboratory, Genetics and Molecular Biology Laboratory, Fish Nutrition Laboratory, Ichthyology and Fish Physiology Laboratory, Marine/Oceanography/Capture Fisheries, Fish Processing Technology, and Laboratory wares, Reagents and Culture Media. Those laboratories were described clearly in the proposed Higher Education Building (HEB) II.

The facility could possibly the approach of the research office to increase the economic benefits to the community from the sustainable use of marine resources, fisheries, aquaculture and tourism as well and/or increase scientific knowledge, develop research capability and transfer fisheries and aquaculture technologies in order to improve ocean health and enhance contribution of marine biodiversity and management of fisheries.

The VIP CORALS (Verde Island Passage Center for Oceanographic Research and Aquatic Life Sciences) Nasugbu Marine Station is presented in the latter part of the major development program.

**Residential areas covering both housing for faculty and staff, dormitories for students**

BatStateU ARASOF-Nasugbu has a population of 3,639 (208 employees and 3431 Students) in 2019, 4,722 (178 employees and 4,594 students) in 2020 and a total of 4,582 (248 employees and 4,334 students) as of May of 2021. Some students who are residents of far-flung barangays and municipalities are staying in boarding houses near the University area during school days.

The barangay around the area offers boarding houses, apartments which have undergone safety and fire inspection protocols and have proper operating documents and permits. From the following data below, it was computed that 1.2% of the enrollees are from areas that are beyond the 30km radius, it is expected that these students will either stay with their relatives in Nasugbu or in available boarding houses.

Table AN-11. Number of Students Enrolled from Different Municipalities 2<sup>nd</sup> Semester AY 2021-2022

MUNICIPALITY	NUMBER OF STUDENTS	MUNICIPALITY	NUMBER OF STUDENTS
Nasugbu, Batangas	2279	San Pascual, Batangas	3
Lian, Batangas	772	Taal, Batangas	4
Calatagan, Batangas	417	Talisay, Batangas	1
Tuy, Batangas	465	Tanauan, Batangas	1
Balayan, Batangas	285	Lipa, Batangas	1
Calaca, Batangas	64	Lucena	1



Lemery, Batangas	5	Mandaluyong City, Metro Manila	1
Baun, Batangas	1	Laguna	3
Calicanto, Batangas	2	Masbate	1
Cuta Cuta, Batangas	1	Occidental Mindoro	6
Ilaya, Batangas	1	Oriental Mindoro	2
Laurel, Batangas	1	Quezon Province	3
Batangas City	11	Tarlac	1
San Jose, Batangas	2		

Table AN-12. Inventory of Road Lengths Going to University Campus Outside Nasugbu Municipality

MUNICIPALITY/ PROVINCE	APPROX. LENGTH (KM)	MUNICIPALITY	APPROX. LENGTH (KM)
Lian, Batangas	5.5 km	San Pascual, Batangas	62.3 km
Calatagan, Batangas	36 km	Taal, Batangas	46.5 km
Tuy, Batangas	15 km	Talisay, Batangas	55.6 km
Balayan, Batangas	22 km	Tanauan, Batangas	73.4 km
Calaca, Batangas	32 km	Lipa, Batangas	77 km
Lemery, Batangas	45 km	Laguna	129 km
Baun, Batangas	62 km	Lucena	146 km
Calicanto, Batangas	68 km	Mandaluyong City, Metro Manila	98 km
Cuta Cuta, Batangas	70 km	Masbate	570 km
Ilaya, Batangas	75 km	Occidental Mindoro	209 km
Laurel, Batangas	44 km	Oriental Mindoro	183 km
Batangas City	69 km	Quezon Province	284 km
San Jose, Batangas	66.3 km	Tarlac	234 km

The enrollment trend of the University for the past 2 years has been continuously growing, and students from distant municipalities are surprisingly increasing. The

university planned to demolish the existing 2-storey dilapidated building to give way to the construction of a 5-storey dormitory which will occupy 528 sq.m. Land area located on the figure below. The target capacity of the proposed building is 90-110 occupants. This will accommodate students, faculty, and staff that are having difficulty attending their classes and going to work due to transportation issues. The university will ensure a safe, well-ventilated area to stay for study and to relax, and facilities for the convenience of the residents.



Figure AN-64. Proposed New 5-Storey Dormitory Building

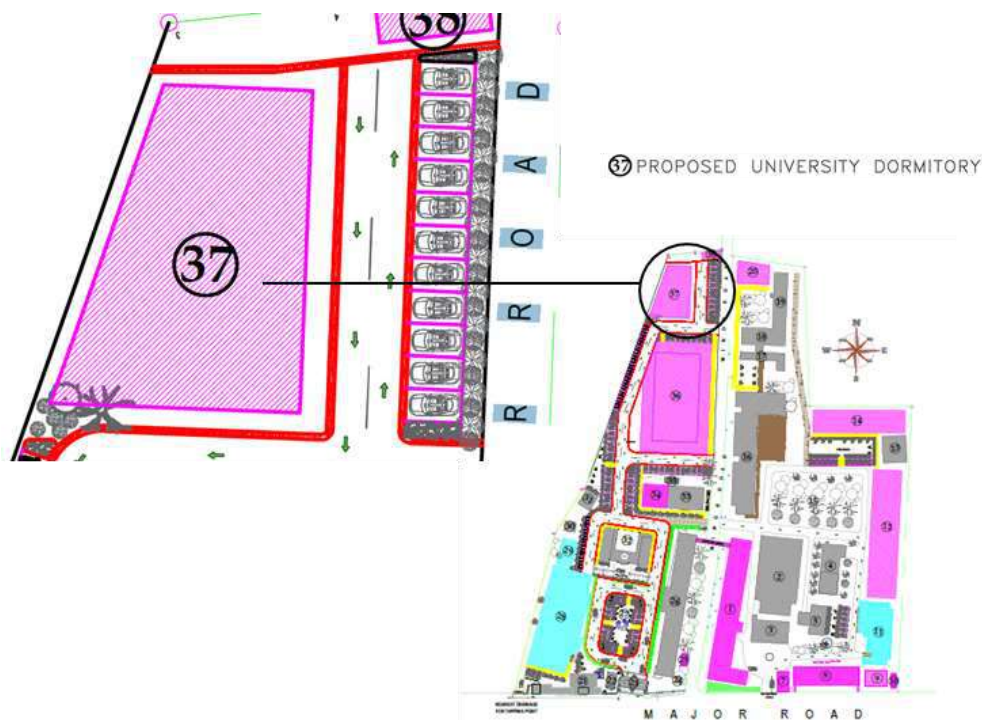


Figure AN-65. Location of the Proposed 5-Storey Dormitory

The proposed location of the new 5-storey Dormitory Building is at the northern part of Ground 2, which is suitable for housing students, faculties and staff because of its





semi-isolated location, with a separate gate to provide a different entry and exit points from the university gates and designated parking space. The total floor area of the proposed building is 2,640 sq.m.

The construction of the Proposed 5-storey Dormitory Building is estimated to cost Php 92,400,000.00 around the year 2023.

D. Facilities and Utilities including social services facilities and amenities

It has been 20 years since the Apolinario R. Apacible School of Fisheries became part of the Batangas State University as one of its campuses. Gradual transformation of its physical landscape and infrastructures from a vocational secondary school into a prestigious state university campus is evident with the newly constructed high-rise BatStateU architecturally- designed buildings and facilities.

D.1 Academic Core

At present, there are six (6) colleges, namely: College of Accountancy, Business, Economics and International Hospitality Management (CABEIHM), College of Arts and Sciences (CAS), College of Teacher Education (CTE) and Laboratory School, College of Informatics and Computing Sciences (CICS), College of Engineering and Technology (CET), and College of Nursing and Allied Health Sciences (CONAHS) offering sixteen (18) programs with a total of 6660 college students, 25 professional and laboratory school students or a total of 7310 enrolled students for A.Y. 2022-2023.

Summary List of Existing Academic Buildings

Table AN-13. Summary List of Existing Academic Buildings

Name of Building	COLLEGE/sharing in the use of the building	No. of Rooms/Offices/laboratories	Year Completed/ Year last major repair	Building/ Structure Condition
Higher Education Building (HEB)	College of Accountancy, Business, Economics and International Hospitality Management (CABEIHM). College of Informatics and Computing Sciences (CICS)	17 – classrooms	2008	Need minor Repair and repainting
		1 – faculty room		
		1- Conference room		
		4- Laboratory rooms		
BatStateU Hostel	College of Accountancy, Business, Economics and International Hospitality Management (CABEIHM).	9 - laboratories	Hostel Improvement completed February 2022	Good Condition
College of Teacher Education (CTE)	College of Teacher Education (CTE) Laboratory School and CABEIHM	26- classrooms	2016	Good Condition
		2 - laboratory rooms		
		1 – faculty room and /dean's office		
College of Engineering and Computing Sciences (CECS) CAS Laboratory Building	CECS and CET  Colleges of Arts and Sciences (CAS)	4 classrooms	2018	For major repair or condemnation
		2- laboratory rooms		Good Condition
		1 – faculty room and Dean's office		
Institute of Marine Transportation (IMT)	College of Engineering and Technology	2 classrooms	Major Repair and repainting Completed January 2022	Good Condition
		1 conference room 1 faculty room and Dean's Office		
CONAHS Building	College of Nursing and Allied Health Services (CONAHS), CET	6 classrooms	Major repair and repainting completed 2018	Good Condition
		5 laboratory rooms		
		1 Faculty Room and Deans Office		
		1 - amphitheater		
		1 - Nursing Skills Laboratory		
OLD CTE BUILDING	None	9- Classrooms	N/A	Condemned/ for demolition
		1 faculty room		
		1 Dean's Office		
Library		Level 2 – Library		For major repair or condemnation



With the assumptions of class schedule of 7:00 am -7:00 pm from Monday to Saturday; scheme of MW, TF, THS, 1hr and 30 minutes per lecture class; number of sections based on course offerings and number of enrolled students the capacity and the needed rooms and laboratories for the current academic year is computed as follows:

SUMMARY REPORT ON THE NUMBER OF EXISTING AND NEEDED CLASSROOMS

COLLEGE	NO. OF EXISTING LECTURE ROOM	NO. OF NEEDED LECTURE ROOM	NO. OF EXISTING LABORATORY ROOM	NO. OF Needed LABORATORY ROOM
CABEIHM	7	13	5	0
CAS	8	5	6	1
CET	2	0	0	0
CICS	4	0	4	0
CONAHS	2	3	3	0
CTE	12	0	1	0
LAB SCHOOL	16	0	0	0
TOTAL	51	21	19	1

Table AN-14. SUMMARY REPORT ON THE NUMBER OF EXISTING AND NEEDED CLASSROOMS

There are sixteen (16) academic programs under six (6) colleges, with a total number of 5847 students this 2021 Academic Year, sharing the limited number of classrooms, laboratories and facilities. At present, all possible means of maximizing the use of classrooms are employed and the university adapts the blended approach to teaching and learning to meet the needed classrooms and facilities of the increased number of students after the pandemic. Construction of the proposed buildings are in the pipeline that will be part of the Campus Land Use Development and Infrastructure Plan in line with the university strategic plan.

## The Higher Education Building (HEB)



Figure AN-66. Higher Education Building

Higher Education Building is a 3-storey building The HEB Classrooms and laboratories are being used by the students of CABELHM, CICS and CAS

## The College of Teacher Education (CTE) Building



Figure AN-67. College of Teacher Education Building

CTE building is being used by the students of the Teacher Education and laboratory school.



## The BatStateU Hostel



Figure AN-68. BatStateU Hostel

The BatStateU Hostel serves as laboratory for the BS Hospitality Management and BS Tourism Management programs under the College of Accountancy, Business, Economics and International Hospitality Management various activities of the students and school events. The operations of the hostel are under the Office of Resource Generation.

## The CAS Laboratories Building



Figure AN-69. CAS Laboratories

The CAS laboratories building houses the laboratories for BS Psychology, BS Criminology, Bachelor of Arts in Communication: Experimental psycho physiological, Psychological Assessment and Testing Room. Moot Court, Crime Laboratory, Multimedia Room, Recording Room, Radio laboratory, TV Production, Computer Editing Room.



### The CECS Building



Figure AN-70. CECS Building

The College of Engineering and Computing Sciences Building with 6 classrooms/laboratories houses the students of BSIT BSCoSci and BSCoE programs.

### The Institute of Marine Transportation (IMT) Building



Figure AN-71. Institute of Marine Transportation Building

The Institute of Marine Transportation (IMT) building consists of 5 classrooms, a faculty room being used by the students of Bachelor of Industrial Technology.

## The Food Technology Building



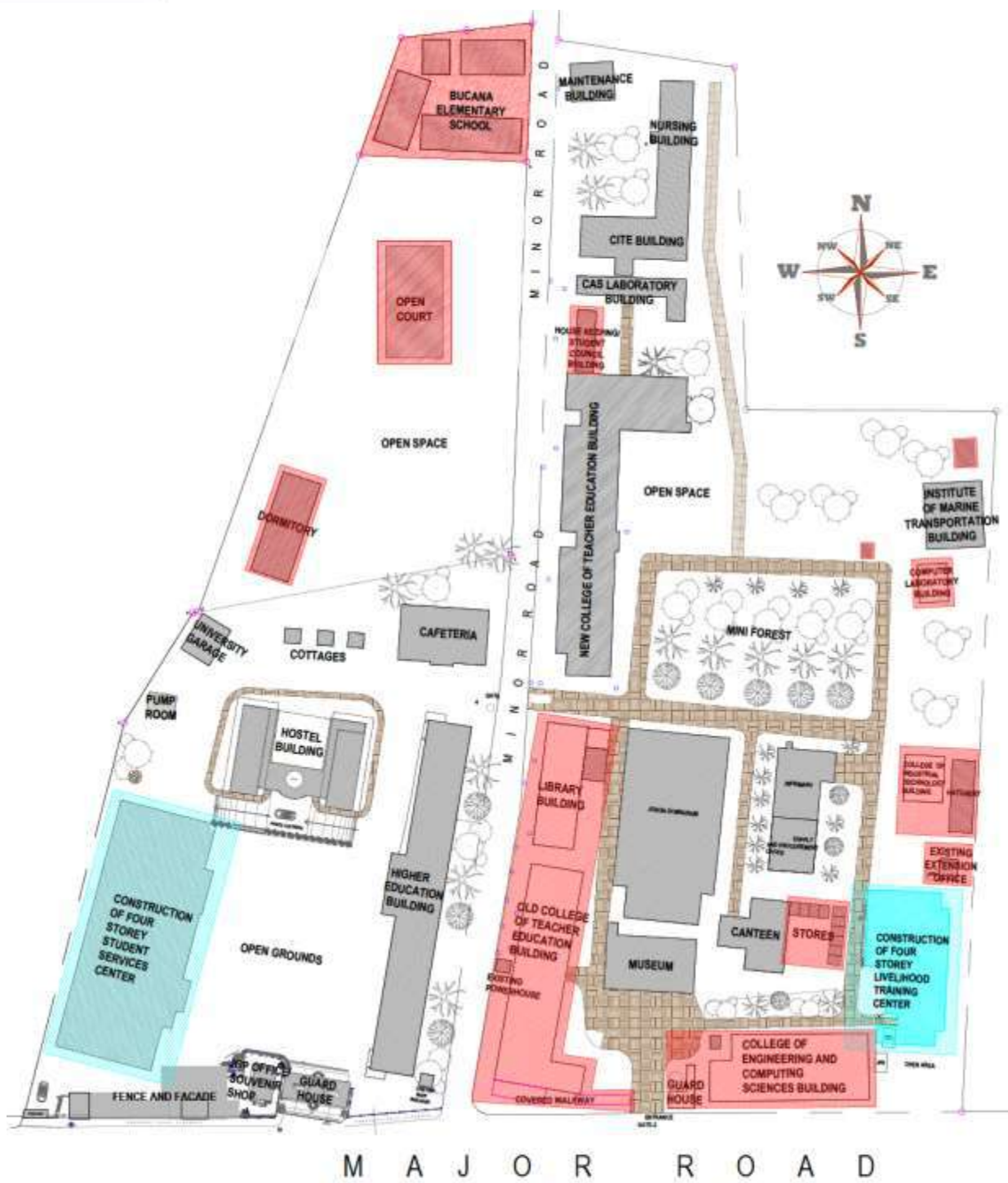
Figure AN-72. Food Technology Building

The 2-storey Food Technology building consisting of Food Technology Laboratory at the ground floor and faculty room and College Dean's Office at the second floor.

The newly repaired and painted two-storey College of Technology Building (CT) and one-storey Levi's building consist of 7 classrooms and laboratories: Nursing Skills, Anatomy and Physiology, Microbiology, Nutrition and amphitheater for BS Nursing and BS Nutrition and Dietetics students. It is located at the southernmost part of the campus being covered by the CAS Laboratories Building.

At present, a 4-storey Student Services Center and 4-storey Livelihood Training Center are undergoing construction and some buildings are under repairs and other dilapidated buildings are for demolition in the near future. Shown below is the existing Campus Buildings Plan which also reflects the building under construction and the building for demolition.





**CAMPUS PLAN**  
 BatStateU ARASOF-Nasugbu  
 R. Martinez St. Brgy. Bucana Nasugbu Batangas



Figure AN-73. Existing Campus Plan

D. 2 Library Building



Figure AN-74. Outside of School Library



Figure AN-75. School Library

Second floor of the library building.



## D.1.3 Laboratories

Majority of the laboratories and equipment of respective academic programs meet the minimum standards required by the Commission of Higher Education as mandated by the Program Policies, Standards and Guidelines. Should the budget permits, it has always been the priority of the administration to comply with the required laboratories and equipment to provide hands-on experience in developing the skills of the students.

### Hot Kitchen



Figure AN-76. Hot Kitchen

The Hot Kitchen Laboratory is located at the ground floor of the hostel opposite the cold kitchen. It is equipped with cooking equipment such as gas ranges, heavy-duty stoves, industrial ovens and fixtures such as sinks and preparation tables. It is where raw materials are prepared and cooked, whether baked, fried, roasted, boiled or steamed during food preparation classes.

### Cold Kitchen



Figure AN-77. Cold Kitchen



The Cold Kitchen Laboratory is located at the ground floor building of the hostel. It is equipped with air conditioning units, refrigerators/chillers, mixers and other equipment. It is used in the preparation of bakery products, salads and cold appetizers and desserts during baking and food preparation laboratory classes. It also has a stock room for small kitchen appliances and other kitchen supplies.

### Food and Beverages Laboratory



Figure AN-78. Food and Beverages Laboratory

The Food and Beverage Laboratory is located at the ground floor of the hostel. It is an air-conditioned room with television, refrigerator, tools and equipment used in food and beverage service. The laboratory is used for bar management and foodservice classes, cooking demonstrations and special event tastings.

### Front Desk



Figure AN-79. Front Desk

Bar Laboratory



Figure AN-80. Bar Laboratory



Figure AN-81. Bar Laboratory

The Bar Laboratory is located at the ground floor of the hostel. The laboratory is equipped with a front bar and a backbar. Wine tasting and cocktail mixing activities for bar management classes are conducted here.

## Housekeeping Room



Figure AN-82. Housekeeping Room (A)



Figure AN-83. Housekeeping Room (B)

The Housekeeping Room is located on the third floor of the hostel. It is fully equipped with guest room facilities, equipment and supplies. It is used by the students during their housekeeping laboratory activities.



## Crime Laboratory



Figure AN-84. Crime Laboratory

The Crime Laboratory Room for Bachelor of Science in Criminology Program primarily for the forensic science courses for examining evidences from sample criminal cases.

## Moot Court

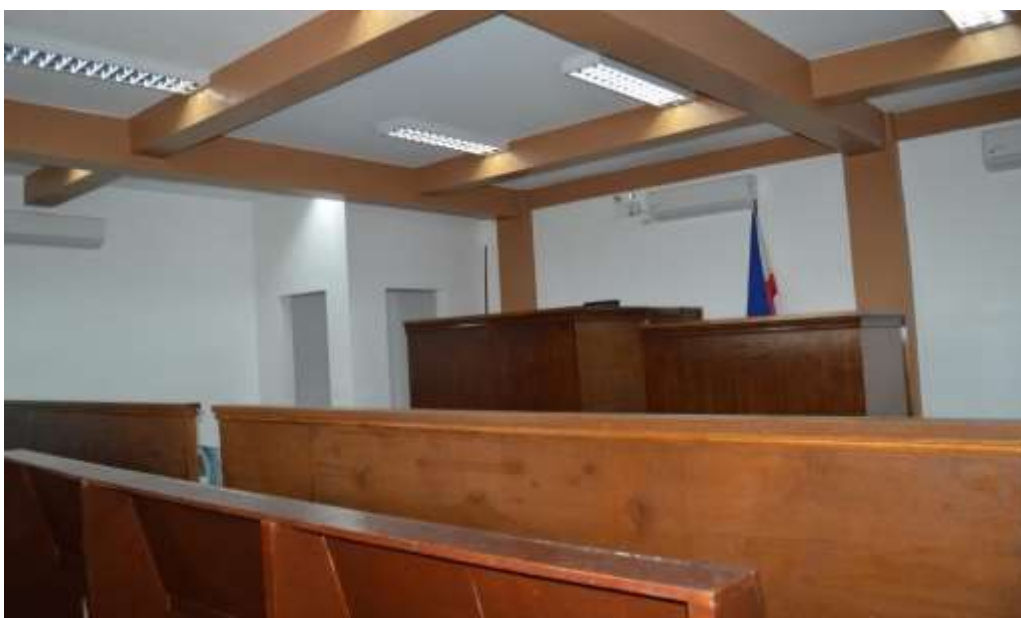


Figure AN-85. Moot Court

The Moot Court Room is the facility where the Bachelor of Science in Criminology students can take part in simulated court or arbitration proceedings, which involve participation in oral argument and simulation of testimony by witnesses, cross-examination, or the presentation of evidence, and on the application of the law to a

common set of evidentiary assumptions, facts, and clarifications/corrections to which the students are introduced.

### Psychological Experimental Laboratory



Figure AN-86. Psychological Experimental Laboratory

The Psychological Experimental Laboratory is a facility used by the Bachelor of Science in Psychology students for teaching, consultancy and experimental activities. It includes a covert observation room and small interview/audiovisual areas. It allows the psychology students to collect data from their participants using the same resources as professional psychologists.

### Multimedia Room



Figure AN-87. Multimedia Room

This Multimedia Room is furnished with theater seats and equipped with a projector and screen, as well as audio/visual facilities. Aside from film classes and viewing, the room can accommodate 25 students and is likewise used for lectures and other oral presentations.



## Radio Station Laboratory and Recording Room

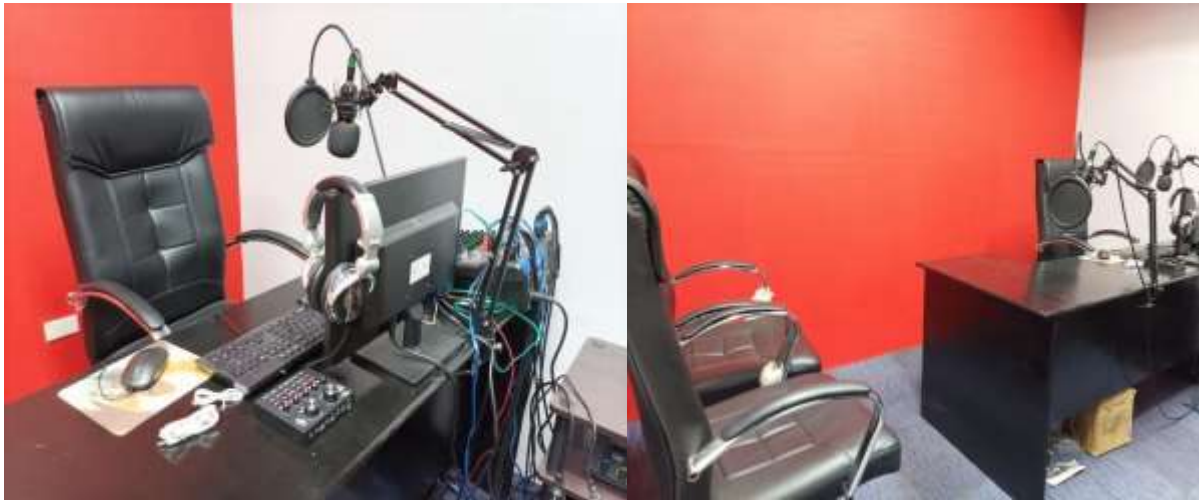


Figure AN-88. Multimedia Room

This facility is equipped with professional radio broadcast facilities and other equipment. This Radio Laboratory Room allows the Bachelor of Arts in Communication students to learn and develop skills in disc jockeying, news reporting, radio anchoring and hosting. In this laboratory, communication students can produce live and recorded radio programs. The recording room, located inside the radio laboratory/station, is equipped with microphone and mic stands where vocalists perform. It is adjacent to the control section where the audio mixing consoles are situated.

## CECS Computer Laboratories



Figure AN-89. Computer Laboratories



## CONAHS Amphitheatre



Figure AN-90. CONAHS Ampitheatre

An amphitheater- style demonstration room that can accommodate a maximum of 40 students at one time.

## Anatomy and Physiology Laboratory



Figure AN-91. Anatomy and Physiology Laboratory

The Anatomy and Physiology Laboratory is used by both BSN and BSND students to study the 11 systems of the human body.

Microbiology Laboratory



Figure AN-92. Microbiology Laboratory

Nursing Skills Laboratory



Figure AN-93. Nursing Skills Laboratory

The nursing skills laboratory simulates major areas in hospital settings and is equipped with basic instruments, equipment and supplies, to aid in the development of competencies in performing nursing procedures.

D.1.3 Sports Facilities

The Joson Gymnasium



Figure AN-94. Joson Gymnasium

The existing gymnasium is the facility being used for sports and cultural activities as well as venue for other academic fora, conferences and administration program and activities. The Joson Gymnasium is also being shared with the community for various purposes.

D.2 Administration and Academic Student Support Services

At present, the offices of administration and academic student support services are separately housed in old buildings given as follows:

Table AN-15. Administration and Academic Support Services

BUILDING	OFFICES	Year Acquired/ Yr Major repair completed	Status/ Condition
a. Museum Building/ b. Old Administration Building	Level 1 Office of the Chancellor, Registration Office Testing and Admission Office Project Management Office	Renovated- 2017	Good condition





	Level 2 Temporary Used as Faculty Room		
c. Library Building (ground floor)	<ul style="list-style-type: none"><li>- Offices of the Vice Chancellor for Administration and Finance,</li><li>- Accounting Office</li><li>- Budget Office</li><li>- Vice Chancellor for Research and</li><li>- Vice Chancellor for Development and External</li><li>- Planning Office</li><li>- External Affairs Office</li><li>- Quality Assurance Office</li><li>- General Services Office</li><li>- Records Office</li><li>- Environment Management Office</li><li>- Offices of the Guidance and Counselling,</li><li>- Student Discipline,</li><li>- Student Organization and Activities</li><li>- On the Job Training</li><li>- Scholarship Office</li></ul>	Acquired - 1994	For condemnation
d. Gymnasium (attic)	Human Resource Management Office Audio Room	Rehabilitated - 2015	Good Condition
e. Infirmary Building	Medical and Health Services Procurement Office Supply and Property Management Office SPMO Storage Room BAC Office	Rehabilitated – 2014	Good Condition
f. Façade	Gate1 ( Façade)	Acquired - 2018	For minor repair

	Gate 2, 3 & 4		For major repair/improvement
g. Motor pool and garage	Garage for 2 SUVs and 1 Bus		For improvement and extension

The Museum Building (The Old Administration Building)



Figure AN-95. Museum Building



Figure AN-96. Museum Entrance

The existing Museum Building is the old administration building renovated and designed to house the Apolinario R. Apacible Museum (the founder of the ARASOF). However, the budget from DBM did not include the cost for renovation of the interior of the building. At present, the second floor of the Museum building is for repair and the ground floor is temporarily occupied by offices of the Chancellor, Internal Auditor, Registration, Testing and Admission and the Facility and Project Management Office.

The four (4) Storey Student Services Center is currently under construction and expected to be completed by September 2022. The building is designed to facilitate the delivery of services to our students, employees and other stakeholders where all the offices of the student services and administration offices will be housed in one building, adopting the “One Stop Shop” for a more efficient transaction.

## Storage Areas



Figure AN-97. Storage Area

## General Services

### Security/Guard House



Figure AN-98. Security/Guard House

Security services of the BatStateU ARASOF-Nasugbu is outsourced from a private agency composed of 15 Security Guards with two (2) regular permanent watchmen.



## Motor Pool and Garage



Figure AN-99. Motor Pool and Garage

## Research and Extension

The offices of the Vice Chancellor for Research and Extension Services, Head of Research and Head of Extension are temporarily housed in the old multimedia room on the first floor of the library.



Figure AN-100. Research and Extension



Figure AN-101. Research and Extension

The existing old Research and Extension Office housed in the old Hatchery Building is for demolition which will give way to the land use for Higher Education Building II. Currently, the 5-storey Livelihood Training Building is under construction which will be primarily for the implementation of Extension Service Program and Activities. On the other hand, there is a proposed VIP Coral Building for construction for research purposes.



Figure AN-102. Proposed Livelihood Training Center

The construction of the four (4) storey Livelihood Training Center is also ongoing and will be completed in May 2022. The livelihood Training Center will be the facility for the conduct of various training activities of the campus extension service program which aims to capacitate the community beneficiaries to help earn a living to uplift the quality of



life. The ground floor will be for food production training, storage and food processing rooms, second floor for livelihood training, third floor is for offices and lecture rooms and fourth floor are rooms for accommodation of trainees.



Figure AN-103. Proposed VIP Coral Research Center

## Allied Services

Building	Year Acquired/ Yr Major repair completed	Status/ Condition
2 -Storey Dormitory	Acquired - 1998	Condemned/for demolition
Clinic/Infirmary	Acquired – 1994 Major repair -2014	Good Condition
Canteen	Acquired – 2013	For major repair
Cafeteria	Acquired - 2011	For expansion/
University Shop	Acquired - 2018	Good Condition

Table AN-16. List of Major BuildingRepair

## Housing

Currently, there is no provision for housing of officials, faculty and employees nor dormitories for students. The old dormitory building in the campus had been condemned



and it is one of the buildings for demolition. The proposed 5-storey dormitory will be located on the same site.

## Clinic/Infirmary



Figure AN-104. Infirmary Building

The infirmary building houses the facilities and equipment for Medical health and Dental Services for students and employees.

## BatStateU Canteen and Cafeteria



Figure AN-105. Canteen and Cafeteria

There are two buildings for food services, Canteen and Cafeteria located in BatState-U ARASOF Nasugbu Ground 1 and 2, respectively.

## BatStateU ARASOF-Nasugbu Facade



Figure AN-106. BatStateU ARASOF-Nasugbu

The facade of the campus facing R. Martinez St at the PESS ground is the unique BatStateU architectural design façade.

The four (4) Storey Student Services Center is currently under construction and expected to be completed by September 2022. This building is designed to facilitate the delivery of services to our students, employees and other stakeholders where all the offices of the student services and administration offices will be housed in one building, adopting the “One Stop Shop” for a more efficient transaction.



Figure AN-107. Proposed Student Services Center



### The University Shop



Figure AN-108. Resource Generation Office

Batangas State University is committed to serving the needs of its students, faculty, staff, and other members of the BatStateU community through the identification of their needs and making these needs available for their convenience through the Resource Generation Office (RGO). The RGO is strategically located adjacent to the campus facade at Gate No. 1. Its main function is to generate another means of income and enhance the financial capability of the University. It establishes linkages with the government and private organizations to further enhance the various business activities or affairs of the University.

RGO offers University products and business services to its community. It caters all business activities/ projects/ programs engaged in by the University.

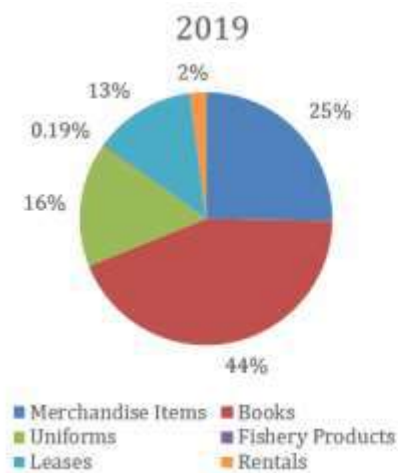
The RGO provides quality and affordable school uniforms; books ordered directly from the author or authorized publisher to provide the best and cheapest price; improved spaces for canteen tenants to provide a wide variety of food options at reasonable prices; a university shop that caters to affordable souvenir items and other merchandise; and businesses that provide services to students and the university.

Batangas State University ARASOF-Nasugbu Campus has plans to expand its revenue-generating resources by putting up a two-story business center building with an area of 770m<sup>2</sup> located at Ground 1 besides its entrance gate. The RGO will offer other lines of business and services to the students, faculty, and community. Some of these projects are planned to be part of the RGO's operations, including the Pasalubong Center and the shops that will be open to the public.

The Resource Generation Office has a variety of income-generating projects which include the selling of merchandise items, books, uniforms, fishery products, leases for food/snacks and photocopy centers, and rentals.



## Income Generating Projects Distribution of Sales (Pre-pandemic)



IGP	2019
Merchandise Items	2,019,893.58
Books	3,484,914.00
Uniforms	1,275,251.75
Fishery Products	15,100.00
Leases	1,028,969.82
Rentals	164,930.00
<b>Total Sales</b>	<b>7,989,059.15</b>

(Pandemic)



IGP	2020
Merchandise Items	337,042.31
Books	552,309.00
Uniforms	371,093.50
Fishery Products	14,700.00
Leases	253,478.52
Rentals	44,040.00
<b>Total Sales</b>	<b>1,572,663.33</b>

Figure AN-109. Income Generating Projects Distribution of Sales

The implementation of the K-12 program and the pandemic have a great impact on the revenue of RGO. It began to fall by 4% during the start of the K-12 program, when the incoming students were limited to elementary, junior, and senior high school students. By 2020, it had dropped to 67% due to the pandemic.

### Income Generating Projects (Revenue)

	Pre-Pandemic			Pandemic	
	2017	2018	2019	2020	2021
Revenue	3,294,272.49	17% (3,838,224.87)	-4% (3,669,059.97)	-67% (1,212,293.47)	-40% (722,751.54)

Table AN-17. Income Generating Projects (Revenue)

The Resource Generation Office intends to explore the possibility of developing linkages with SMEs as consignor. They also plan to avail credit lines from different suppliers applicable for business initiatives of RGO and the merchandise items will be displayed in the Business Center. The RGO plans to restore its business projects that were closed in 2020.

There is a significant impact on the operations of the Resource Generation Office caused by the pandemic. IGP has to halt some of its operations due to the guidelines attributed to the pandemic.

The revenue dropped by 67% in 2020 when the pandemic struck and started recovering in 2021.



Figure AN-110. Resource Generation Office Revenue (2018-2021)

Currently, university operations, including the IGP, have been gradually becoming normal and stable. The projections of the student enrollees lead to the perception of broadening the IGP lines and spaces for better income opportunities. Some of these are the renovation of the canteen, the extension of the cafeteria, and the construction of the Business Center.

With the increase in the number of students, an average of 6% increase per year based on the 10-year enrollment projection, and the restoration and additional income-generating projects, it is projected to have an increase in revenue of RGO for the next succeeding years.

The demand for books and uniforms will rise along with the services and merchandise offered by RGO. The construction of the business center will house 10 concessionaires that will provide food services to the university stakeholders and with its strategic location, it can be accessed by the nearby communities and even tourists around the area.

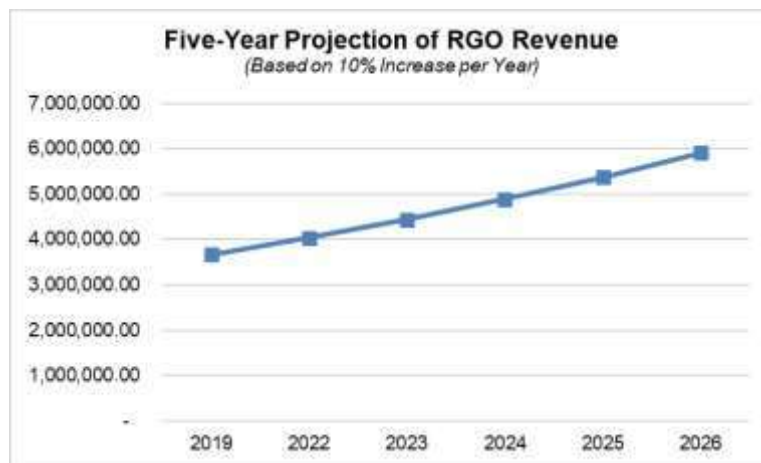


Figure AN-111. Five-Year Projection of RGO Revenue

The five-year projection of the RGO revenue is based on the office target of 10% increase of gross income of each business projects.

### Buildings for Demolition

1. Old College of Teacher Education building
2. Dormitory
3. Library
4. Research and Extension office
5. Hatchery
6. Computer laboratory (Old PTA building)
7. IGP Store/Stalls Near the school canteen

- **Emergency response and Disaster Preparedness Response**

Batangas State University has been taking an active role in responding to the challenges in disaster risk management and disaster preparedness in conformance with the mandates and provisions set forth by the Republic Act No. 10121, otherwise known as the “Philippine Disaster Risk Reduction and Management Act of 2010” which seeks to strengthen the country’s capacity for disaster risk reduction and management by developing programs, institutionalizing policies and coordinating agencies, private or public sectors and individuals from all levels in the community towards a disaster- resilient nation and with Republic Act No. 9045 which illustrates that the University shall primarily provide advanced instruction and professional training in scientific, technological and special instructions and various fields, undertake research and provide leadership in these areas. The response and initiative in line with the mentioned Republic Acts strengthened by the development of Center for Adaptive Capacity-building and Technology Innovation for Occupational Hazards and Natural Disaster Center (ACTION Center) which was approved by virtue of Board Resolution No. 482-A, series of 2016.

Also, Incident Management Teams (IMTs) in all campuses were organized as part of the university’s active and continuous efforts to effectively prepare for and respond to disasters that may occur in the university. Such IMTs are made up of designated personnel who will assume responsibility for ensuring the safety of all students, teaching and non-teaching staff when natural and human hazards strikes. Last 2019, all IMT members were trained in the basics of the Incident Command System, Contingency Plan



and started the training for the ICS level 2 Training for Batch 1 to 3.

Drills were also part of the planning and simulation in which all campuses took part in the earthquake exercise last year. Trauma recovery training for selected personnel and front liners as well as disaster risk reduction and management orientation for faculty members, employees and students at Batangas State University were also conducted and implemented. The office handles continuing training for the Batch 4 to 5 ICS level 2 training, but due to Enhanced Community Quarantine due to COVID 19, training for Batch 5 has been postponed.

### E. Transportation

#### a. Infrastructure and road network maps; including drainage, parking areas

Batangas State University is situated in Barangay Bucana, Municipality Nasugbu, Province of Batangas. The Municipality of Nasugbu has a total of 189.29 kms. road length which is 32 kms. national road, 35.35 kms. provincial road and 109.71 kms. barangay roads.

There are 8 provincial roads in the municipality namely: Nasugbu-Pantalan Rd. Camatchilihan-Tala Rd., Poblacion-Bucana Rd., Banilad-Pasong Kawayan-Tumalim Rd., calle F. Castro, Nasugbu-Look-Cavite Brgy. Rd., Nasugbu Blvd. Rd., and Calle Commission Civil Rd. The road surface type along national roads are mostly concrete and asphalt while municipal roads are mostly concrete, gravel and asphalt. Commercial streets have two (2) travel lanes with wider sidewalks.

Nasugbu is mainly accessible through the national road which serves as a main gateway from Tagaytay City. It also links Nasugbu to other towns like Tuy and Lian. It stretches inward to the Wawa river by a bridge connecting the provincial road to Looc Cove.

The municipality has 6 major bridges namely: Tumalim (the longest, 80 m), Looc bridge, Putat, Wawa, Dayap, and Bulihan bridge. The construction of farm to market roads are eminent in order to increase the production efficiency and distribution of goods and services. Also, in increasing accessibility towards the tourism front of the municipality, employment and income is expected to increase.

### Road Network

Batangas State University is one of the two (2) schools offering Tertiary Education in the Municipality of Nasugbu. The road going to the University is accessible by public and private transportation and has satisfactory roads and pathways.



Figure AN-112. Site Location of the BatStateU ARASOF-Nasugbu

The road network in Nasugbu where the University is located has several routes and access in some barangays in case of daily vehicular traffic. At present, there are road widening projects by the National Government in nearby areas. The road length from the nearest national road to the campus location is .85 km using the major road. The road surface type is concrete.

Table AN-18. Inventory of Road Lengths Going to University Campus Barangay in Nasugbu Municipality

BARANGAY	APPROX. LENGTH (KM)	BARANGAY	APPROX. LENGTH (KM)
Aga	22.3 km	Maugat	8.7 km
Balaytigue	18.8 km	Munting Indang	12.9 km
Banilad	15.2 km	Catandaan	7 km
Barangay 1 (Poblacion)	1.6 km	Cogunan	5 km
Barangay 2 (Poblacion)	1.6 km	Dayap	6.7 km
Barangay 3 (Poblacion)	1 km	Kaylaway	27.1 km
Barangay 4 (Poblacion)	1.5 km	Kayrilaw	23.2 km
Barangay 5 (Poblacion)	1.5 km	Latag	24.2 km
Barangay 6 (Poblacion)	1.6 km	Looc	17 km
Barangay 7 (Poblacion)	1.5 km	Lumbangan	6 km
Barangay 8 (Poblacion)	1.2 km	Malapad na Bato	9.1 km
Barangay 9 (Poblacion)	1 km	Mataas na Pulo	48.5 km
Barangay 10 (Poblacion)	1 km	Natipuan	7.7 km
Barangay 11 (Poblacion)	1.6 km	Pantalan	4.1 km
Barangay 12 (Poblacion)	1.2 km	Papaya	19.2 km



Bilaran	7.1 km	Putat	4.2 km
Bucana	300 m	Reparo	7.8 km
Bulihan	15.5 km	Talangan	3.2 km
Bunducan	8.9 km	Tumalim	17 km
Butucan	20.7 km	Utod	5.8 km
Calayo	15.6 km	Wawa	4.6 km

There is a diverse range of transportation facilities available to get people to and from the university. Students and employees traveling from far-flung locations take buses and jeepneys, whilst people who live in the Poblacion may choose to ride tricycles.

Location:	R. Martinez Street Barangay Bucana, Nasugbu Batangas
Total Campus Land Area:	41,960 sq.m.
Total Campus Land Area including Fishponds:	92,329 sq.m.
Ground 1:	25,111 sq.m.
Ground 2:	6,209 sq.m.
PESS:	10,640 sq.m.
Freshwater Fishpond:	10,121 sq.m.
Old Brackish Water Fishpond:	30,248 sq.m.
New Brackish Water Fishpond:	10,000 sq.m.

Batangas State University has a total campus land area of 92,329 sq.m. including the University owned fishponds. The University has three (3) owned Fishpond, one (1) is in Barangay Bucana which is around 10,121 sq.m. and two (2) in Barangay Pantalan the Old Brackish Water Fishpond with 30,248 sq.m. and the new brackish water fishpond 10,000 sq.m. These fishponds were used for Research and Educational purposes and also the source of other income of the University.

There are several available routes going to the fishpond. The fishpond located at the Barangay Bucana is just a few meters away from the Campus. The route going to the two (2) fishponds located at Barangay Pantalan has access in some nearby barangays.





Figure AN-113. Site Location of Fish Ponds

The Site Plan of the University has a detailed location and building identifications, pathways, covered path walk and open areas/space for parking. The open area/space of the university for parking is adequate to accommodate employees, clients and guests who wish to visit the University. For public transport, an area designated for loading and unloading of passengers with University Security Guards to monitor the safety.

## Drainage System

The drainage of the campus has a minimum size of 80cm x 80cm x 80cm (LxWxH). The drainage line of the university flows down the adjoining drainage of Barangay Bucana towards the nearest creek of the same Barangay. The university is divided into two (2) compounds, Ground 1 has established its drainage system while the drainage for PESS and Ground 2 is still for development.

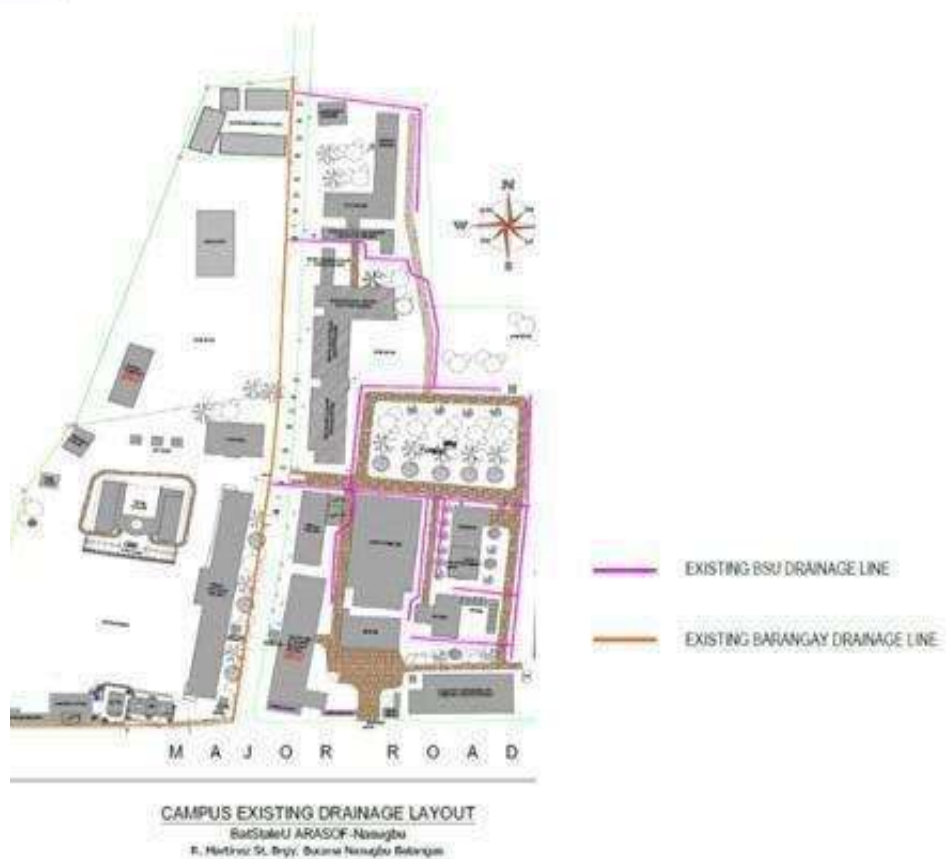


Figure AN-114. BatStateU ARASOF-Nasugbu Drainage Plan

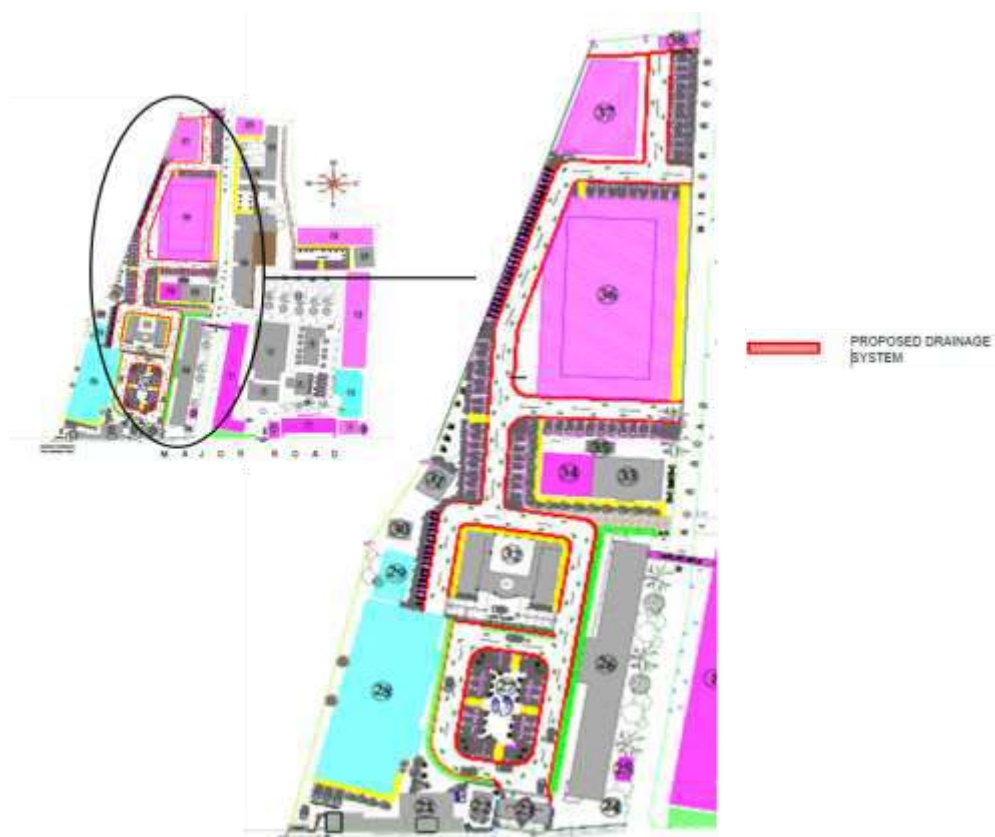


Figure AN-115. Proposed Drainage Plan for PESS and Ground 2

## Parking Areas

Due to on-going constructions on the campus, minimal space is now being utilized as parking areas inside the campus. The map shown below are the existing parking areas for Ground 1 and Ground 2. However, more parking spaces are being considered on the proposed development of the campus.

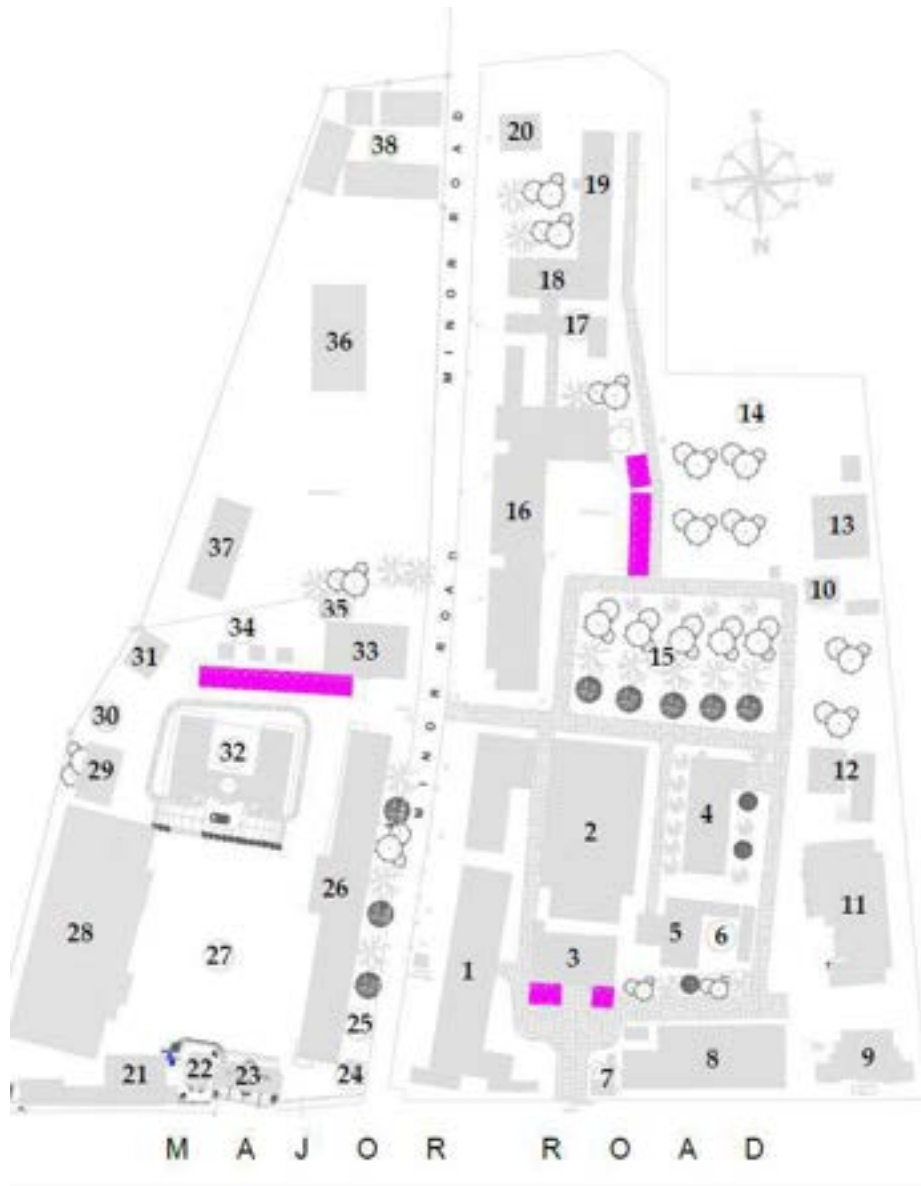


Figure AN-116. Map of Existing Parking Areas



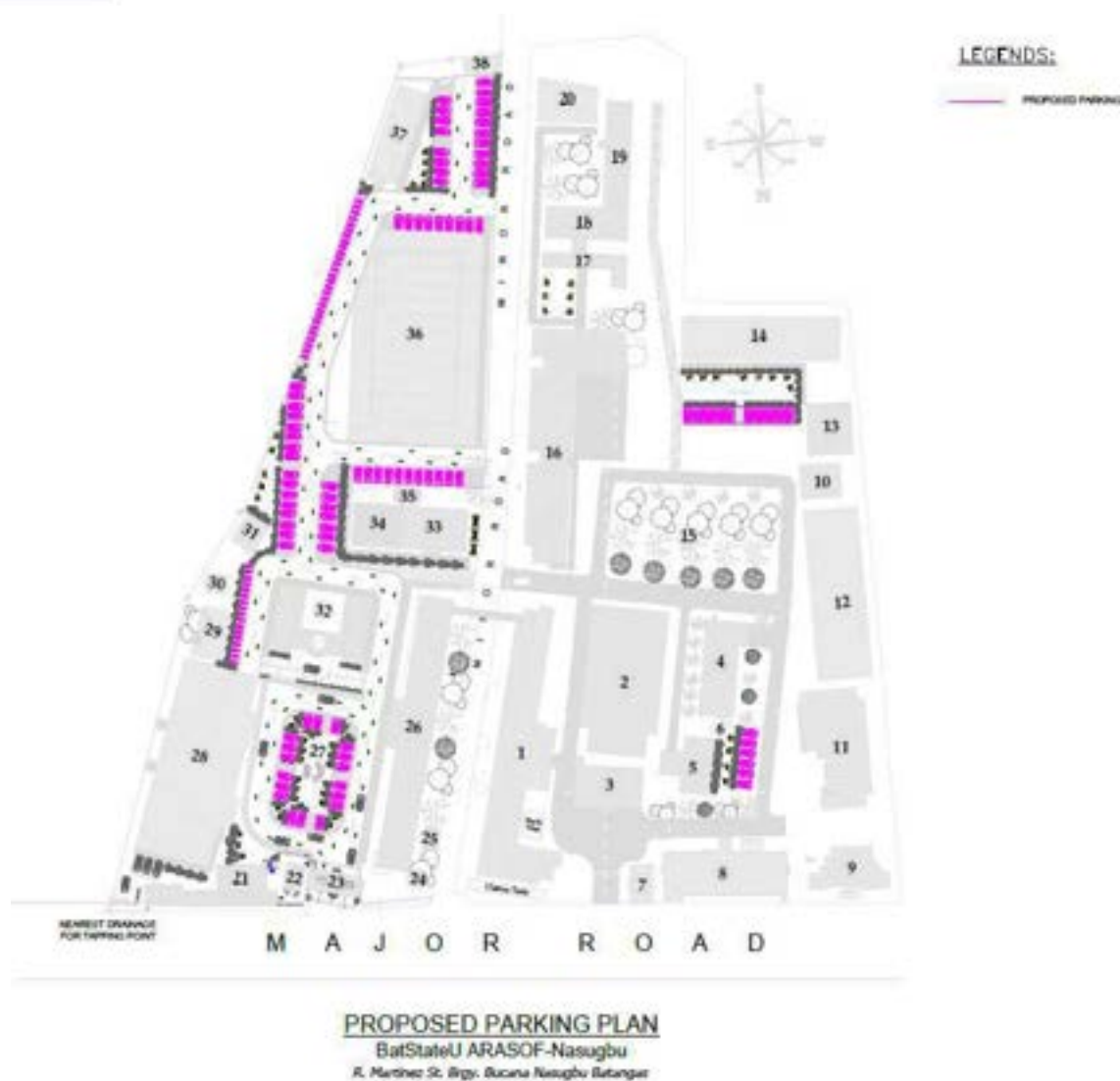


Figure AN-117. Map of Proposed Parking Areas

## D. Power, Water, Communication Network

### a. Power Supply

Batangas State University is situated in Barangay Bucana, Municipality Nasugbu, Province of Batangas. The Municipality of Nasugbu has a total of 189.29 kms. road length which is 32 kms. national road, 35.35 kms. provincial road and 109.71 kms. barangay roads.

The electricity in the University is distributed by Batangas 1 Electric Cooperative Inc. (BATELEC 1) with an average energy consumption of 16,874 kWh per month.

The powerhouse of the University is situated at the back of the old CTE building and behind the HEB building which is in the foremost of the Campus. The Electrical wiring of the campus is composed of underground feeder wire (red colored lines) and open wiring feeder (blue colored lines). Most electrical wiring of the campus uses underground feeder wire which is safer due to the location of the campus near the coastline, and to lessen the possibility of damage by storms and other weather events that may hinder classes. Electrical connections such as breakers, switches, and outlets in University buildings were subjected to a quarterly Preventive Maintenance to ensure safety of use.

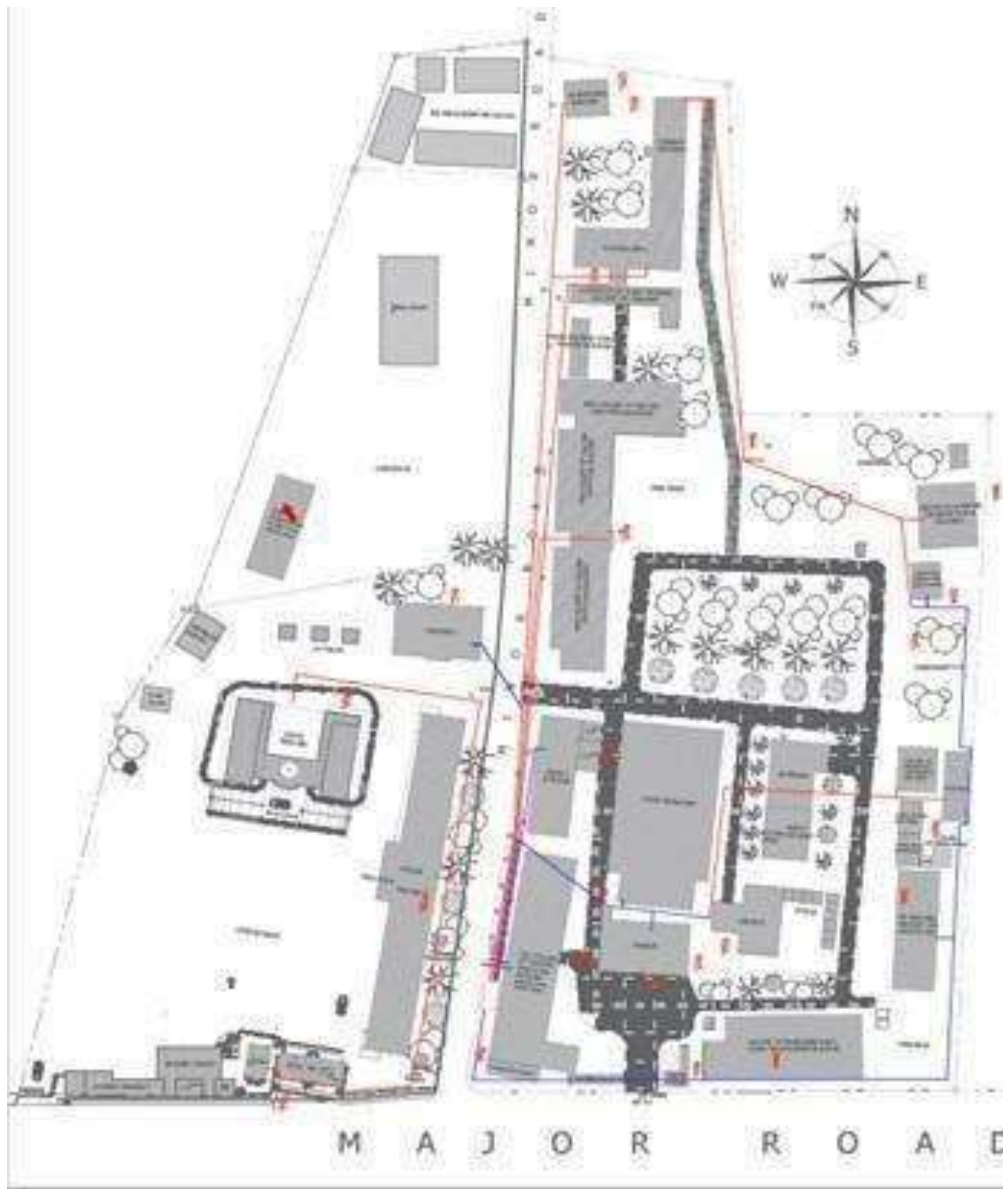


Figure AN-118. Existing Power Lines in the Campus

The Municipality of Nasugbu has 2 BATELEC Substations in Camp Avejar, Nasugbu (2 x 10MVA) and in Natipuan (10 MVA). Nearest to the Campus is in Camp Avejar, JP Laurel Street along the National Road.



Figure AN-119. Transmission Lines of BATELEC

## b. Water Supply

The University now has nine shallow wells with electric water pumps for the purpose of supplying water to the whole campus. The position of the water pumps has

been marked on the map below. In addition, the University's deep wells and water outputs (faucets) were subjected to routine Bacteriological inspection, and the water was chlorinated twice a month.

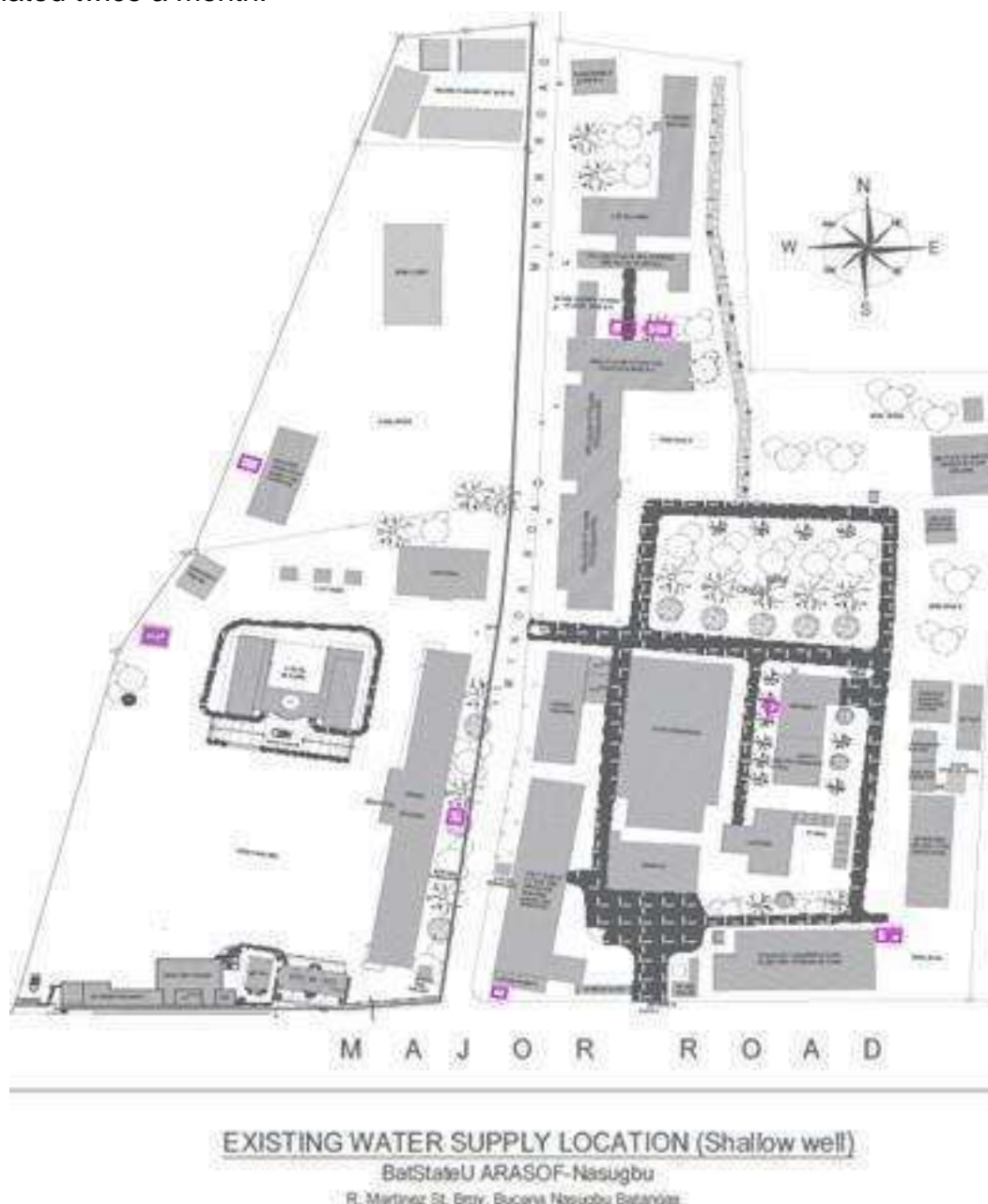


Figure AN-120. Existing Water Supply Location

### c. Communication

Globe Telecom is the major telecommunication company that provides telephone lines and internet connectivity of the University using 200 mbps. The University is using local lines and emails for its day to day inter office operations. For internet connectivity, the University is continuously improving the internet connections within the campus by installing access points to every room of every building to be able to give the students and employees continuous office/school related communication connections. There are 14 offices with issued mobile phones and telephone lines powered by Smart Communications for inter office and outside official communication with the clientele.

The University has a Private Branch eXchange (PBX) Telephone system that switches calls between users on local lines. Currently we have two (2) trunk lines and 16 local lines. The University proposes an upgrade which will be feasible in the following



year, the Private Automatic Branch eXchange (PABX) consisting of five (5) trunk lines and fifty-nine (59) local lines for the different offices and designated rooms with provision of spare lines in case there will be additional offices.

ANALYSIS OF POWER, WATER, AND COMMUNICATION NETWORK

Electricity and water have always been the primary and most widely used sources of energy in the university. The remunerated utility expenses show that there is a higher electricity and water consumption during fiscal year 2017. This is justified by the face-to-face mode of teaching and learning, where everybody is required to go to the university. It is also observed that it is gradually decreasing due to the implementation of the K-12 Program, with a sharp drop in fiscal year 2020 when the pandemic strikes. As university operations gradually return to normal in 2021 and enrollment also begins to rise, it is seen that the consumption of electricity and water will increase.

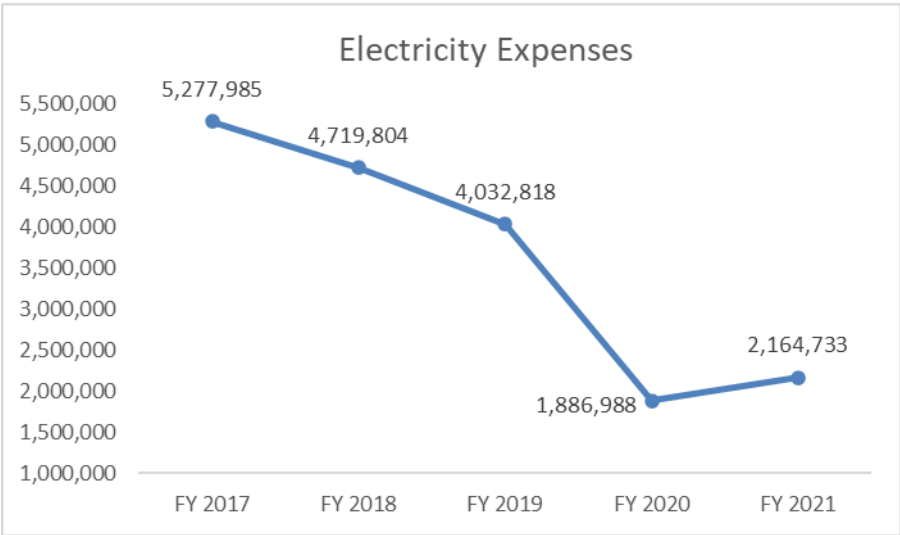


Figure AN-121. BatStateU ARASOF-Nasugbu Electricity Expenses

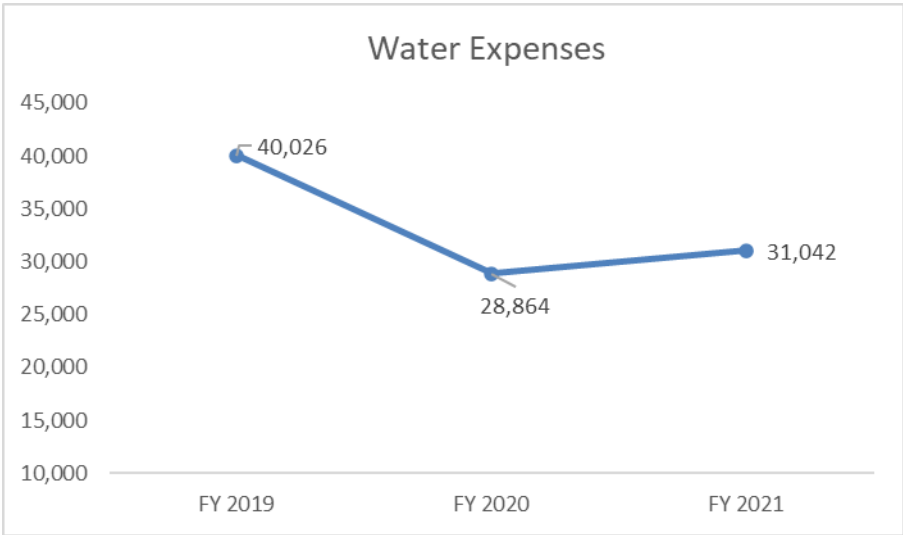


Figure AN-122. BatStateU ARASOF-Nasugbu Water Expenses

The use of communication in the university has a different perspective. During the pre-pandemic years 2017–2019, communication through telephone lines was mostly used for office operations and a minimal number of student inquiries. A sudden increase

in demand for telephone usage was seen in 2020–2021 based on telephone expenditure. Most of the operations were done at home or virtually. The regular use of telephone lines has been part of the normal university operation during these years. Meetings and work have been done and instructed over the telephone, and even learning instruction to students.

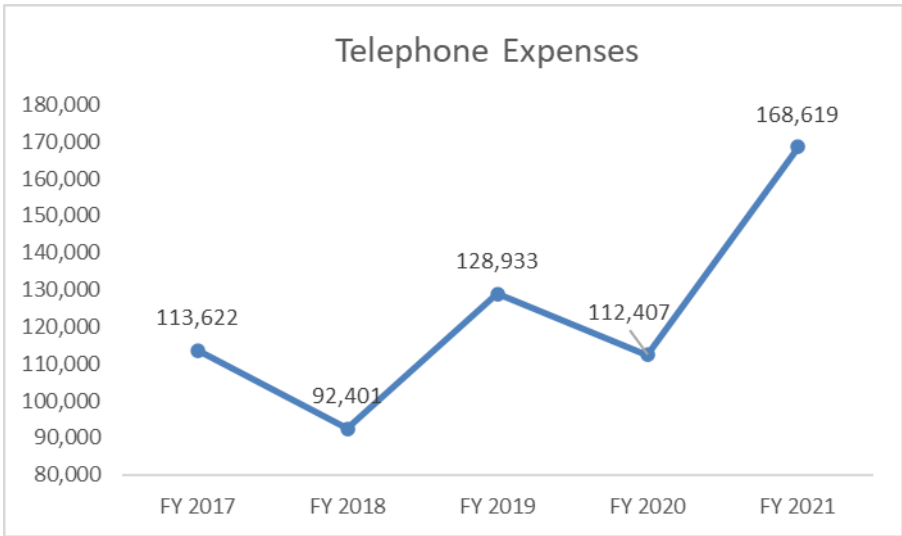


Figure AN-123. BatStateU ARASOF-Nasugbu Telephone Expenses

The university has subscribed to 100 mbps bandwidth since 2017 and increased by 200 mbps in 2021. Over the years, internet access has been part of the university’s means of communication, either for office work or for teaching and learning. The university stakeholders have been using these for inquiries, requests, dissemination of information and other office operations. It started going up to its peak in 2018 based on the subscription expenses when the university operations were still normal and noticed a gradual drop that hit its lowest point in FY 2021 during the pandemic. The Internet is used only by university employees required to report to work, while the mode of teaching is virtual.



Figure AN-124. BatStateU ARASOF-Nasugbu Internet Subscription Expenses

Batangas State University ARASOF-Nasugbu demand for power, water consumption, and communication either by telephone lines or via the internet is perceived by the number of its stakeholders. Based on the 10-year enrollment projection, it is

expected to increase to its peak in 2031, when there are 9,598 students enrolled and the resumption of the university's operations.

### E. Waste Management

The Batangas State University ARASOF-Nasugbu is cognizant of the significance of the environmental resources to various life forms in a wide array of ways and, therefore, committed to the protection and conservation of the same resources. One of the actual ways on how the campus is carrying out and promoting these environmental acts is by implementing environmentally-sound programs and activities through its Environmental Management Unit. These programs and activities are participated in by the campus officials, faculty members, staff, students, and other stakeholders. For the areas of waste management of the campus, this includes the (1) Solid Waste Management Program and the (2) Hazardous Waste Management Program.

#### 1. Solid Waste Management Program (SWMP)

The Solid Waste Management Program of the campus serves as the primary guide of all the concerned individuals and groups for a safe and systematic management of the campus solid waste in order to prevent further negative impact to the environment and concurrently to the overall well-being of the campus stakeholders. The program features guides on waste reduction and generation, segregation, collection, processing and recovery, and disposing of in accordance with the national environmental laws particularly the Republic Act No. 9003, otherwise known as Ecological Solid Waste Management Act of 2000, and to the local government unit's ordinances specifically Municipal Ordinance No. 02, s. 1997 and Municipal Ordinance No. 79, s. 2017. The components of this program are discussed in details as follows:

**Generation.** The first component of the program wherein possible sources of waste are mentioned and tackled. It features guides on how to reduce the waste of the campus such as being mindful about the kind of material that gets inside the campus in the first place. It also addresses the unsustainable use of SUP's or single-use plastics particularly when faculty members, staff, students, and other stakeholders are, for instance, ordering food outside and other similar undertakings. Moreover, a guide on what kind of food packaging—other than plastic—shall be used by the campus stall lessees are provided as well, since 60% of all plastics produced worldwide are used for food packaging (Groh et. al., 2018).

**Segregation.** Campus solid wastes are divided into three categories namely the recyclable, the biodegradable, and the residual wastes. This particular component of the program shows a guide on how the manner of disposing of individual wastes according to the aforementioned categories should be done. For example, prior to the collection of waste, it should have been already segregated properly from the points of collection.

**Collection.** This specific component of the program provides guidelines particularly on waste collection in the campus. For instance, the already segregated wastes from every collection point in the campus shall be collected and forwarded to the temporary Material Recovery Facility (MRF) of the campus for the purpose of processing and recovery. Further, the collected wastes shall be recorded in compliance to the Republic Act No. 9003, otherwise known as the Ecological Solid Waste Management Act of 2000, and at the same time for future development of environmental programs by the unit.





Figure AN-125. Temporary Material Recovery Facility of the Campus

**Processing and Recovery.** This is now the component of the program wherein the end-action for every waste category will be determined. For instance, the recyclables are to be recovered and prepared for selling to a local junk shop—and by doing so will bring financial gain to the campus—while the residuals are being separated and prepared to be disposed of.

**Disposal.** The final component of the program wherein the determined appropriate end-action for the segregated wastes are applied. Recyclable wastes are to be sold; biodegradable wastes are to be composted; and residual wastes are to be disposed of through the municipal garbage hauler.

The Solid Waste Management Program of the campus is anchored on the principle of the Waste Management Hierarchy which basically prefers the act of waste reduction from the source as much as possible over any other kind of waste intervention. The Environmental Management Unit is continuously performing waste generation audits of the campus to be utilized as a basis for the future development of supplemental environmental programs—such as a zero-waste program—that will further support our vulnerable environment.

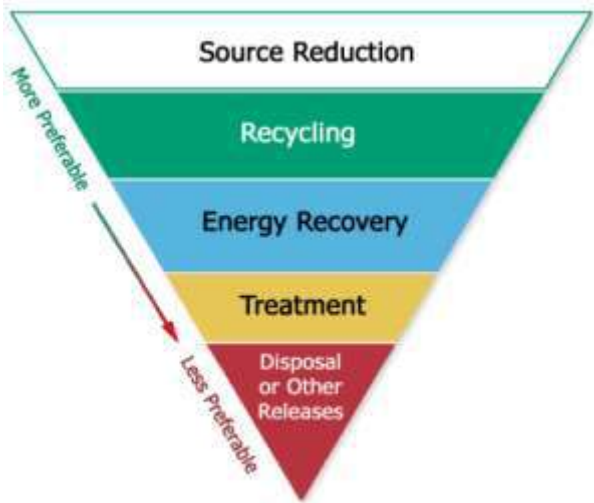


Figure AN-126. The Waste Management Hierarchy

## 2. Hazardous Waste Management Program (HWMP)

The Hazardous Waste Management Program presents a set of guidelines on how to properly manage the hazardous waste generated in the campus—from the source of generation up to its disposal in an environmentally-sound way through a duly recognized facility. Further, the guidelines in this program is in consonance to the provisions set forth in the Republic Act No. 6969 otherwise known as the Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990, and the Department of Environment and Natural Resources Administrative Order 2013-22 (DAO 2013-22).

Hazardous wastes generated in the campus must be fully disclosed to the DENR Environmental Management Bureau Region IV-A CALABARZON in order to obtain a Hazardous Waste Generator's ID from the DENR Environmental Management Bureau Region IV-A CALABARZON (DENR EMB R4A) which will serve as a requirement for every hazardous waste-related transaction with the said regulatory agency and other third-party entities. In a nutshell, all hazardous wastes of the campus such as busted fluorescent lamps, empty paint containers, and chemicals of some kind used in the science laboratories for educational purposes among others are turned over to the Environmental Management Unit—with documentation for proper accounting—for proper storage until it is time for its disposal. In disposing of these specific wastes, the campus works with a duly accredited waste transporter in order to transport the same to a duly accredited treatment, storage, and disposal (TSD) facility. The campus continues to assume its responsibility over these wastes until they are finally disposed of in an environmentally-sound way which can be supported by a certificate issued by a TSD facility.



Figure AN-127. Temporary Hazardous Waste Storage Area in the Campus

In light of the COVID-19 Pandemic, and in compliance to the BatStateU Crisis Management Plan, as implemented through the Board of Regents Resolution No. 107 Series of 2020, the Environmental Management Unit, in coordination with the Health Services Department and the General Services Office, has provided two (2) additional trash bins in the entrance and exit points in the campus to be used solely for used PPEs such as face masks, face shields, and other related pathological or infectious wastes. These wastes must be torn apart upon disposal to avoid reuse (e.g. face mask must be cut into half). Furthermore, these trash bins were properly labeled (i.e. M501 - Pathological or Infectious Waste) as recommended by the same crisis management plan congruent to the category stipulated in the DAO 2013-22.



Figure AN-128. Location of the trash bins intended for PPEs and other similar infectious waste in the campus





## II. SUC DEVELOPMENT, LAND USE AND INFRASTRUCTURE PLAN

### A. VISION, MISSION, GOALS AND OBJECTIVES

The BatStateU ARASOF-Nasugbu Land Use Development and Infrastructure Plan (LUDIP) is anchored on the university's vision and mission.

#### University Vision

A premier national university that develops leaders in the global knowledge economy.

#### University Mission

A university committed to producing leaders by providing a 21st century learning environment through innovations in education, multidisciplinary research, and community and industry partnerships in order to nurture the spirit of nationhood, propel the national economy, and engage the world for sustainable development.

The LUDIP also plays a great part in the pursuit of the 6 pillars or BASICS (Brand of Excellence, Access, Social Relevance, Inclusive Innovation, Capacity, and Sustainability) of the university's Strategic Plan 2019-2029.

#### Pillar 1 Brand of Excellence

In its pursuit to become a national university, the Batangas State University shall be known as a leading producer of researchers, scholars, and innovators. It shall spearhead the development and excellent delivery of dynamic curricula that are responsive to the drivers of industry. It shall be the primary generator of new knowledge on niche areas by conducting high-impact research that contributes to national development. Through community and global partnerships, it shall provide innovative solutions to emerging societal problems.

Goal: A culture of curiosity, inquiry, discovery, social responsibility and diversity.

#### Pillar 2 Access

Adherent to the government's drive to promote universal access to quality education, Batangas State University shall provide a 21st century learning environment, through smart infrastructure and innovative services, geared towards meaningful learning experiences for holistic student development.

Goal: A Holistic, Quality, and Inclusive Learning Environment in the 21st Century.

#### Pillar 3 Social Relevance

The University shall respond to problems in communities and industries through the development of relevant institutional programs, provision of expertise and quality services, and strategic partnerships and knowledge-based solutions to achieve a more sustainable future. In particular, the University shall take a proactive role in advancing the sustainable development strategies and educating the public on emerging and pressing social concerns.

Goal: Responsive Sustainable Solutions for Social Development through Community Partnerships.

### **Pillar 4 Inclusive Innovation**

The University shall be a catalyst for building an innovation ecosystem that supports wider participation of stakeholders in developing products and services for national development.

Goal: Primary Catalyst and Staging Ground for Inclusive Innovation.

### **Pillar 5 Capacity**

The University shall provide its personnel with continuing professional development towards achieving service excellence. In pursuit of achieving performance excellence in teaching, research and extension, and institutional service at par with accepted global standards, the University shall provide infrastructure and institutional programs for the strategic development of administrators, faculty and staff.

Goal: Institutional Readiness as a University in the 21<sup>st</sup> Century.

### **Pillar 6 Sustainability**

The University shall ensure sound resource management in order to effectively and efficiently carry out its mandates and to guarantee continuity of its programs. It shall observe accountability, transparency and efficiency in all its operations. The University shall explore public and private partnerships in its investment initiatives as well as global funding in order to widen streams of resources. It shall consider environmental sustainability in the planning and implementation of its programs, projects, and activities.

Goal: Tactical Resource Generation and Management for Institutional Growth and Sustainability

### **Academic Goals and Thrusts**

Batangas State University ARASOF-Nasugbu is composed of seven colleges and one laboratory school. Below is a brief description of each college and their goals.

#### **College of Teacher Education**

The College of Teacher Education endeavors to produce well-rounded academicians who possess technical, pedagogical and research skills in order to address the challenges of diverse educational settings and engage in lifelong learning. It prepares competitive educators in the global academic environment, guided by high moral standards and equipped with 21<sup>st</sup> century skills so they become agents of positive social transformation.

#### **The College of Teacher Education is committed to:**

1. Provide students with learning opportunities for their advancement in specific fields of interest towards excellence, efficiency and effectiveness in the attainment of local, regional and national goals.

2. Design rationalized activities for the enhancement of classroom teaching through modern modes of instructional delivery, instructional materials preparation and assessment of learning.
3. Utilize the latest trends and strategies in research to address the evolving demands on the generation and dissemination of new knowledge and innovations in education.
4. Harness the capability of the students in conceptualizing, implementing, and sustaining extension projects of the college through active partnerships for inclusive social development.
5. Provide avenues in the development of professionalism and in the pursuance of lifelong learning for personal and professional growth and development.

### **College of Accountancy, Business, Economics and International Hospitality Management**

The College of Accountancy, Business, Economics and International Hospitality Management is an institution offering nationally-accredited undergraduate programs in Business, Accountancy, Tourism and Hospitality Managements. The college caters to about one-third of the student population of the campus.

The College of Accountancy, Business, Economics and International Hospitality Management aims to provide quality education to prepare students for a wide range of careers in accountancy, business, hospitality management and tourism management, enhance competencies and hone their leadership skills to enable them to participate actively in the global market through high quality instruction, research, extension and production which serve as fertile ground for the internalization of values that uplift self, society and the environment.

### **College of Arts and Sciences**

The College aims to provide exemplary leadership essential to the education of proficient and humane professionals in the arts and sciences.

### **Objectives**

1. Prepare the graduates of the different disciplines for professional careers in their chosen fields of specialization;
2. Equip graduates with a strong foundation in the arts and sciences with accompanying behavioral and social preparation of a well-rounded personality;
3. Conduct more relevant and responsive programs in research and extension to enhance instruction and linkages and disseminate research findings to promote viable technologies in the service area; and
4. Provide the manpower needs of industries and other service areas with globally competitive, dedicated professional workers having positive outlooks in life and with innate love for God, country and fellowmen.

### **College of Informatics and Computing Sciences**

The College of Informatics and Computing Sciences aims to shape globally competitive computer magnates as they develop their professional identities and ethical values. It establishes equanimity, objectivity and wisdom, unselfishness and concern for



the environment through their technological competencies, community partnerships and strong faith in the Supreme Being. It promotes excellence in the pedagogy as it develops well-rounded graduates who can assume dynamic leadership, meaningful participation and internalization initiatives in the field of Information Technology and Computing Sciences.

### **The College of Informatics and Computing Sciences is committed to:**

- Develop professional graduates ready for entry as active participants and/or competent leaders in the industrialized world who are:
  - well-educated in the principles of a particular discipline;
  - well-trained in the art and science of computer applications such as: productivity tools, authoring software and software applications; and
  - well-oriented in advocating national consciousness on the promotion of our history, culture and traditions.
- Advance ideals of national identity devoid of cultural biases, but enriched with moral integrity, spiritual vigor, and credible pursuit for professional excellence;
- Provide curricular programs for the development of well-trained IT professionals and Computer scientists.

### **College of Nursing and Allied Health Sciences**

The College of Nursing and Allied Health Sciences, in line with the Batangas State University's vision and mission, aims to carry out its educative functions of molding professionals who are intellectually prepared, research and community-oriented and socially committed.

### **The College commits itself to:**

- Provide a high-quality health science program that will prepare and equip students with adequate theoretical and clinical experience according to the norms and standards of professional practice;
- Develop competent health care professionals imbued with moral, cultural and legal principles, and who value the dignity and worth of each person;
- Provide and use facilities and resources beneficial to the achievement of the objectives of the college;
- Foster faculty participation in research and scholarly activities which will add to the body of knowledge, which is both essential and beneficial to the college;
- Utilize leadership and management skills through the involvement of others in meeting the health needs and goals;
- Practice innovative health care and partnership with the communities in the province;
- Collaborate with colleagues and other interdisciplinary health teams to promote the health and well-being of clients; and
- Deliver health care systems and policies through professional leadership and modify professional roles and functions to meet the health needs of the society.

### **College of Engineering**

The College of Engineering aims to develop a well-rounded graduate imbued with moral and ethical values, spiritual vigor, and utmost concern for the environment as integral parts of furtherance of a chosen profession. It promotes excellence in the



education of men and women who can assume leadership and meaningful participation in one's chosen field of engineering. With the full implementation of outcomes-based teaching and learning and the integration of Technopreneurship in the curricula, engineering programs train future engineers and engineering professionals to develop cutting-edge technologies towards inclusive and sustainable development.

### Objectives

1. Help create innovations to ensure the competitive edge of the Philippines computing industry;
2. Adhere to ethical standards in the practice of the computer engineering profession.

### College of Industrial Technology

The College of Industrial Technology shall produce well-rounded and globally competitive individuals who meet local, national and international demands for skilled workers.

### Objectives

1. To devise up-to-date curricula that help attain goals, meet changing requirements and reflect changes in Industrial Technology.
2. To facilitate quality technical-vocational education and training towards holistic competency and proficiency of the individuals in the different technology areas.
3. To mold individuals whose personal, social, technical, practical qualities make them productive and valuable citizens of a global village.
4. To train technologists in the use of applied research by innovating ways to address needs and problems and by implementing and extending current technology.

### Laboratory School

It is the full responsibility of an educational institution to be part of nation-building by instilling curiosity and a love for learning in every child, so that they develop into young adults and productive citizens of the society. It is from this perspective that the BatStateU Laboratory School has defined its functions as a laboratory school for the College of Teacher Education, provide educational service to the public and serve as a feeder school for the University.

The Laboratory School of Batangas State University aims to develop children and young adults in becoming well-rounded, well adjusted, mentally alert, responsible, disciplined, law-abiding, and God-loving citizens equipped and imbued with knowledge, skills, attitudes and values as their solid foundation for their entry into grade one, high school and college with adequate exposure to relevant training in different learning areas to prepare them to become productive and worthy of society.

### Research Thrusts and Priorities

The University shall pursue thrusts and priorities which may be subjected to review at least annually by each area: Architecture, Engineering and Technology; Agriculture and Natural Science; Environment and Biodiversity; Entrepreneurial and Business; and Education, Mathematics and Social Sciences to make the Research Program of the University responsive to the emerging needs and environmental changes and development depending on research competencies available, appropriateness to the local needs and availability of the resources. The following research thrusts and priorities

are based on the national, regional and provincial agenda of the government identified through agenda setting and road mapping among research personnel, deans, faculty researchers, students and external stakeholders.

1. Food
2. Energy
3. Environment
4. Health and Medical Sciences;
5. Material Science and Engineering;
6. Information and Communications Technology;
7. Manufacturing and Process Engineering;
8. Science and Mathematics; and
9. Education and Social Sciences.

### Goals

1. To develop and implement a functional research program that is relevant to the program thrusts of the University.
2. To enhance the research capabilities of the faculty and student researchers through human and physical resources development and the creation of an environment that fosters research.
3. To generate high impact research outputs for the utilization of the educational, communal and industrial sectors.
4. To provide faculty and students with assistance and support in creating an environment that is conducive for innovation, which will eventually create avenues for technology transfer and commercialization of their research.
5. To ensure that faculty and students benefit from research activities at the University.
6. To enrich the existing body of knowledge through multidisciplinary and interdisciplinary research.

### Extension Services Office

The Extension Services Office is committed to render extension service to depressed and underserved communities, as well as to share the employees and students' expertise in science, technology, education, management and research to public and private agencies/organizations that need their services.

BatStateU also supports the 17 Sustainable Development Goals of the United Nations and ensures these are addressed in its extension activities.

Below are the 12-point extension agenda of the Office:

- BatStateU Inclusive Social Innovation for Regional Growth (BISIG)
- Livelihood and other Entrepreneurship Related on Agri-Fisheries (LEAF)
- Environment and Natural Resources Conservation, Protection and Rehabilitation
- Smart Analytics and Engineering Innovation
- Adopt a Municipality / Adopt a Barangay/ Social Development through BIDANI Implementation
- Community Outreach
- Technical-Vocational Education and Training (TVET)
- Technology Transfer and Adoption/Utilization
- Technical Assistance and Advisory Services



- Parents' Empowerment through Social Development (PESODEV)
- Gender and Development
- Disaster Risk Reduction and Management and Disaster Preparedness and Response/ Climate Change Adaptation (DRRM and DPR / CCA)

### B. DEVELOPMENT CONSTRAINTS

The university is aware of the potential impacts of proposed national, regional, provincial plans and targets. From the Luzon Spatial Development Framework (LSDP) 2015-2045 and CALABARZON Regional Physical Framework 2017-2045, Nasugbu acts as a sub-regional center for ecotourism, coastal and marine development.

As a market catchment of regional centers, the BatStateU ARASOF-Nasugbu takes into consideration the increase of both its students and employees' population in its proposed infrastructure plans.

Potential land use conflicts such as Certificate of Ancestral Domain Title, military reservations, and squatters are not present in ARASOF-Nasugbu Campus. However, the following should be considered in future development plans of the campus.

- **Existing Bucana Elementary School Building/s within the Campus Compound**
  - Bucana Elementary School has been occupying the 996 sq m lot in the Ground 2 of BatState-U ARASOF-Nasugbu since 1970. Although it is clear in the Resolution dated August 11, 1969 that the lot will be returned should it be needed for the expansion of the physical plant of the campus, Bucana Elementary School has been requesting that the lot be donated to them in order to accommodate the increasing number of learners and to be able to improve the structures built in the area.

### C. PHYSICAL DEVELOPMENT STRATEGIES

Batangas State University (BatStateU) has steadfastly positioned itself as a premier multi-campus institution of higher advance learning and professional training as well as a viable economic development zone in the region. As one of the country's nation builders, this achievement is feasible because of its commitment to produce leaders by providing a 21st century learning environment through innovations in education, multidisciplinary research, as well as community and industry partnerships in order to nurture the spirit of nationhood, propel the national economy, and engage the world for sustainable development.

Consistent with the BatStateU Strategic Plan 2019 to 2029, the University's academic endeavors and investment focus is divided into five (5) pillars: Brand of Excellence; Access; Social Relevance; Inclusive Innovation; Capacity and Sustainability, or simply BASICS.

The BatStateU ARASOF-Nasugbu's Operational Plan was also hinged on the said Strategic Plan and is centered on Impact through Innovation and Transformation. This responds to the challenges and opportunities at hand with a clear set of goals, strategies, and actions developed and embraced by the campus. The plan is dynamic and ambitious since it will raise the bar on its expectations of every faculty member, employee and

student. As a “living” plan, the campus expects these strategies and actions to evolve, even as they define and guide the University’s strategic direction, shape its future, and serve as a framework for resource allocation and investment. Hopefully, this bold academic, research and extension services plan, as partially articulated here, will inspire everyone to be innovative, transformational and impactful, gearing them towards new significant directions (Valdez, 2021).

## D. DEVELOPMENT CONCEPT AND STRUCTURE PLAN



Figure AN-129. Top View of BatStateU ARASOF-Nasugbu

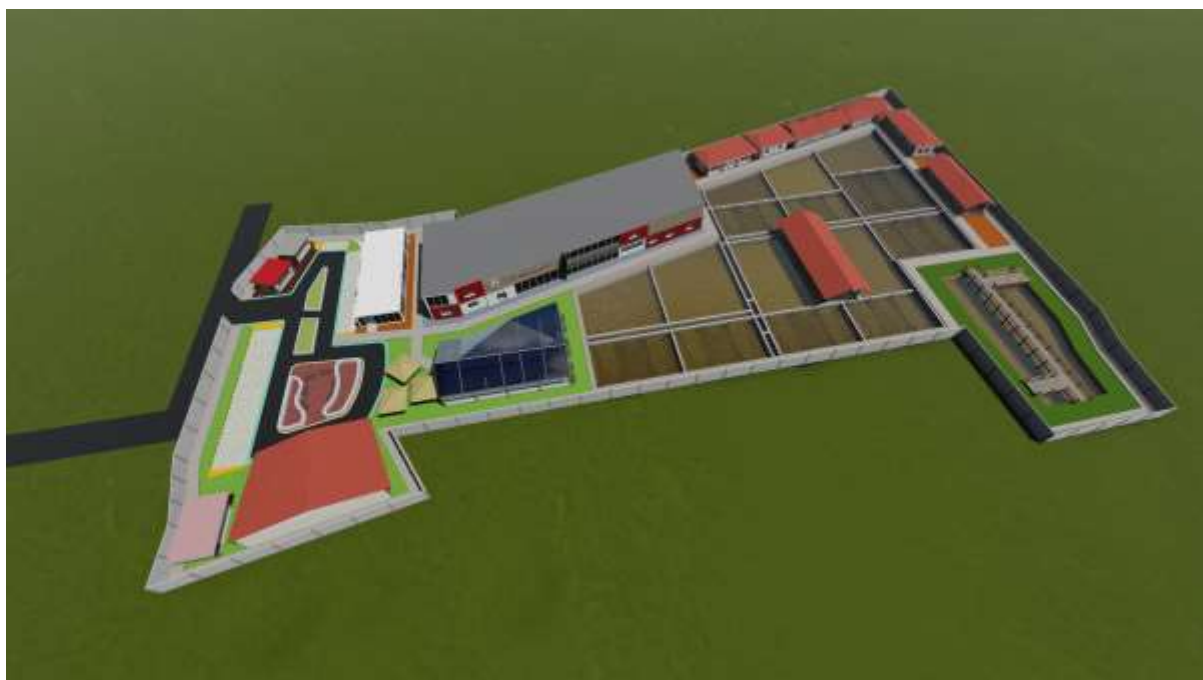


Figure AN-130. Top View of BatStateU Fishery Ground 3

The university acquired its Environmental Compliance Certificate (ECC) permit last August 3, 2021 and was notarized last September 30, 2021. See Figure below.





# Land Use Development and Infrastructure Plan (LUDIP)



Department of Environment and Natural Resources  
Environmental Management Bureau  
Regional Office No. IV – A CALABARZON

## ENVIRONMENTAL COMPLIANCE CERTIFICATE

(Issued under Presidential Decree 1586)

**ECC-R4A-2021-08-0150**

THIS IS TO CERTIFY THAT THE PROPONENT, **BATANGAS STATE UNIVERSITY** is granted with this Environmental Compliance Certificate (ECC) for the **BATANGAS STATE UNIVERSITY ARASOF – NASUGBU PROJECT** located at **R. Martinez Street, Barangay Bucana, Nasugbu, Batangas** by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau (EMB), CALABARZON Region.

SUBJECT ONLY to the conditions and restrictions set out in this Certificate with the following details:

### PROJECT DESCRIPTION

The Batangas State University ARASOF Nasugbu Campus Project shall cover a gross floor area of Twenty Five Thousand Seven Hundred Twenty (25,720) square meters within a total land area of Forty One Thousand Nine Hundred Sixty (41,960) square meters of parcels of land embraced by TCT Nos. T-31825, T-66819, and T-9840 located at R. Martinez Street, Barangay Bucana, Nasugbu, Batangas. The project components shall include: New CTE Building, CAS Building, Dietetics Building, Museum, CECS, Cafeteria, IMT Building, CONAHS / CITE Building, Infirmary - Procurement - Supply Office Building, Student Council / PTA Building, Joson Gym, AS Building, Dormitory, Façade, Students Services Center, University Garage, Hostel, Higher Education Building, Livelihood Training Center, New CECS building, New CAS-General Education Building, Material Recovery Facility, Guard House, Drainage System, Septic System, Water Supply System, Electrical System, Landscape, Open Grounds and other related support facilities/amenities.

This Certificate is issued in compliance to the requirements of Presidential Decree No. 1586, in accordance to Department Administrative Order No. 2003-30. The Bureau, however, is not precluded from reevaluating, adding, removing, and correcting any deficiencies or errors that may be found after issuance of this Certificate.

This is to certify, further, that in issuing this **CERTIFICATE**, it should be understood that the same is a **PLANNING TOOL** and **NOT A PERMIT**. It is expected that the proponent will diligently secure pertinent **PERMITS/CLEARANCES** from all concerned government agencies concerned (i.e. HLURB, NWRB, LGUs, NIA, DA, PCA, DOH, DEPED, CHED, DOLE, DTI, DPWH, DOTr, DOE, MGB, PMRB, etc.) prior to the implementation of the project to be submitted to this Office within sixty (60) working days upon receipt thereof; otherwise this Office shall be constrained to take appropriate legal action. The issuance of the ECC shall not be construed as resolving issues within the mandate of other government agencies.

Issued at EMB CALABARZON Region this **AUGUST 03, 2021**.

Approved by:

**DIR. NOEMI A. PARANADA**  
OIC-Regional Director



**ECC-R4A-2021-08-0150**  
**Batangas State University ARASOF - Nasugbu Project**  
**Batangas State University**

Figure AN-131. Environmental Compliance Certificate

Also considered on the development concept and structure plan of the University are the conditions stated on the Environmental Management and Monitoring Plan with the Environmental Compliance Certificate





As stated on the certificate, a proposed project of the University is allowed to proceed to the next stage of project planning, ensuring that the proposed projects will not cause significant negative environmental impact. Also, in accordance with the approved ECC, the campus shall cover a gross floor area of 25,720 sq.m. within the university’s total land area of 41,960 sq.m.

As per the date of writing, the total built-up area of the existing building structures, the total built-up area of the existing buildings to be demolished, and the total built-up area of the proposed buildings in the next ten years are as follows:

Summary of Built-Up Area of Existing Building Structures

Building Name	Builtup Area (sq.m.)
Old CTE Building	977.53
Joson Gymnasium	959.00
Apacible Museum	261.00
Infirmery Building	312.00
University Canteen	194.00
CECS Building	554.51
Computer Laboratory	50.84
Ermita Building	95.52
Hatchery	86.90
IMT Building	200.00
New CTE Building	1030.49
CAS Building	128.74
CONAHS Building	487.28
University Shop	40.00
HEB Building I	852.72
Hostel Building	547.24
University Cafeteria	257.35
University Dormitory	212.64
TOTAL	7,247.76

Table AN-19. Summary of Built-Up Area of Existing Building Structures

Summary of Built-Up Area of Existing Building Structures subject for demolition

Building Name	Builtup Area (sq.m.)
Old CTE Building	977.53
CECS Building	554.51
Computer Laboratory	50.84
Ermita Building	95.52
Hatchery	86.90
IMT Building	200.00
University Dormitory	212.64
TOTAL	2,177.94

Table AN-20. Summary of Built Area of Existing Building Structures subject for demolition



Summary of Built-Up Area of Proposed Building Structures

Building Name	Built up Area (sq.m.)
Proposed TEC Building	1080.22
Proposed ARASOF Business Center	496.32
On-Going Construction of VIP Corals	221.13
On-Going Construction of LTC	556.00
Proposed HEB Building II	801.45
Proposed Health Sciences and Allied Services Building	597.41
On-Going Construction of SSC	1272.75
Proposed Extension of University Cafeteria	175.43
Proposed Indoor Gymnasium	2318.37
Proposed University Dormitory	265.34
TOTAL	7,784.42

Table AN-21. Summary of Built-Up Area of Proposed Building Structures

Upon completion of all the proposed building structures in the next 10 years, As per the Land Use Development plan of the University, a total of 12,854.24 sq.m. built-up area will be taken up by the existing building structures and proposed building structures, in alignment with the issued ECC to the University.

The Batangas State University ARASOF-Nasugbu Ground 1 and Ground 2 has a total land area of 4.2 hectares. Part of the strategic plan was the newly constructed 4-storey CTE Building and 2-storey CAS Laboratory Building on Ground 1, which are both operational as of the date of writing. The on-going construction on Ground 1 is the proposed 4-storey Livelihood Training Center which will occupy a total land area of 557 sq.m., while the on-going construction on Ground 2 is the proposed 4-storey Student Services Center Building occupying a total lot area of 1,396 sq.m. which will also house the new university library and majority of administrative offices.

Major Projects included in the development plan are 3-storey Gymnasium and 5-storey Dormitory Building in Ground 2 and 4-storey Higher Education Building II, 4-storey TECS Building and 4-storey CONAHS Building in Ground 1.

The Batangas State University Fishery Ground 3 has a total land area of 10.17 hectares. The area will be an aquaculture farming and research site that can give benefits to the university as well as the people of Nasugbu and other nearby communities. Part of the site development plan is the proposed 2-storey Administration and Laboratory Building for the offices and venue of laboratory activities which will occupy a total lot area of 1,058.94 sq.m., the proposed Palaisdaan with a total area of 3,523.64 sq.m., the proposed Open Dampa Restaurant with a total area of 209.89 sq.m. which will offer foods like fishes straight from the Palaisdaan, the proposed Ornamental Fishes Breeding Facility and Display area for the presentation of different kinds of ornamental fishes which will occupy a total land area of 173.25 sq.m., the proposed Aquaponics, Aeroponics, and Hydroponics System Building with a total area of 273.4 sq.m., and the proposed Fishyalan

as one of the best recreational areas in the site which will occupy a total land area of 575.07 sq.m.

## E. The Land Use Plan

The target land use allocation is shown on the figure below. Academic Buildings, shown in blue highlight, take up most of the land area with a total of 9,386.45 sq. which is equivalent to 22.37% of the total land area of the campus. Highlighted in color yellow are the buildings allotted to allied services, wherein Building 4 is the existing Infirmary and Building 37 is the proposed 3-storey dormitory. Building 28, which is highlighted orange, is the Student Services Center Building which is classified as a mixed-use administrative and academic building because it houses the majority of the administrative offices and one floor for the new university library. Green highlights, which take up 53.19% of the total land area, are for open spaces, recreational areas and parking areas strategically located around the campus.







BUILDING NAMES:

- 1 PROPOSED TECHNOLOGY, ENGINEERING AND COMPUTING BUILDING

2 JOSON GYMNASIUM

3 APACIBLE MUSEUM

4 INFIRMARY

5 UNIVERSITY CANTEEN

6 PROPOSED PARKING WITH WATER RETENTION FACILITY BELOW

7 PROPOSED GATE 2: FACADE AND FENCE

8 PROPOSED ARASOF BUSINESS CENTER

9 ON-GOING CONSTRUCTION OF VIP CORALS

10 PROPOSED POWERHOUSE: ARASOF COMPOUND 1

11 ON-GOING CONSTRUCTION OF LIVELIHOOD TRAINING CENTER

12 PROPOSED HIGHER EDUCATION BUILDING II

13 INSTITUTE OF MARINE TECHNOLOGY BUILDING

14 PROPOSED HEALTH SCIENCES AND ALLIED SERVICES BUILDING

15 MINI FOREST

16 NEW COLLEGE OF TEACHER EDUCATION BUILDING

17 COLLEGE OF ARTS AND SCIENCES LABORATORY BUILDING

18 NUTRITION AND DIETETICS LABORATORY BUILDING

19 SKILLS LABORATORY BUILDING
- 20 PROPOSED MAINTENANCE BUILDING

21 GATE 1: FACADE AND FENCE

22 IGP BUILDING

23 GUARD HOUSE AND DRIVEWAY (ENTRANCE AND EXIT)

24 CIRCUIT BREAKER

25 PROPOSED POWERHOUSE: ARASOF COMPOUND 2

26 HIGHER EDUCATION BUILDING I

27 OPEN GROUND (FOUNTAIN, RECREATION AREA, AND PARKING)

28 ON-GOING CONSTRUCTION OF STUDENT SERVICES CENTER

29 PUMP ROOM AND CISTERN TANK (STUDENT SERVICES CENTER)

30 PUMP ROOM AND CISTERN TANK (HOSTEL)

31 MOTORPOOL/UNIVERSITY GARAGE

32 HOSTEL BUILDING

33 UNIVERSITY CAFETERIA

34 PROPOSED EXTENSION OF UNIVERSITY CAFETERIA

35 CISTERN TANK (CAFETERIA)

36 PROPOSED INDOOR GYMNASIUM WITH OLYMPIC SIZE SWIMMING POOL WITH SPORTS AND WELLNESS AMENITIES

37 PROPOSED UNIVERSITY DORMITORY

38 PROPOSED MAINTENANCE AND RECOVERY FACILITY (MRF)

Figure AN-132. Proposed Campus Plan of BatStateU ARASOF-Nasugbu Ground 1 and Ground 2

Table AN-22. PROPOSED LAND USE ALLOCATION FOR GROUND 1 AND GROUND 2

ACADEMIC ZONE	ADMINISTRATION AND GENERAL SERVICES	MIXED-USE: ACADEMIC AND ADMINISTRATION	RESEARCH AND EXTENSION	ALLIED SERVICES	DRIVEWAY	PARKING, OPEN SPACE, RECREATION AREA	TOTAL AREA (sq.m.)
22.37%	2.33%	3.33%	4.67%	1.38%	12.73 %	53.19%	100.0%
9,386.45	977.67	1,397.27	1,959.53	579.05	5,341.51	22,318.52	41,960.00

Target Land Use Allocation aims to provide adequate buildings and facilities for classrooms, offices, staff rooms, study areas, clinic, student center, cafeteria, comfort rooms, sports facilities, and other amenities. Existing structures were analyzed and identified the developmental needs. To achieve the full development potential of the campus' land and resources.

Highlights of the Site Development Plan are as follows:

- All buildings to be equipped with conveying, ventilation, and building management systems for efficiency and optimal use. It shall adopt a modern design concept with aluminum claddings to be used as accent in harmony with the University's red and white color theme.



### **Other important features of the Plan includes:**

- A visually appealing campus façade and perimeter fence with the prominently encrypted University logo, featuring electronic turnstiles in the main entrance and with elevated design to restrict flood water coming from the main street in front of the campus. This also serves as the image of the university from the outside and promotes uniformity of the different campuses.
- Adequate parking spaces and open spaces to be used alternatively as an evacuation area during disaster/calamity; shall also provide the much needed amenity for informal outdoor gathering space.
- Landscape, sidewalk, path walk and miscellaneous improvement for safety and aesthetic appeal of the campus.
- Adequate and appropriate drainage system that covers the whole campus area.
- Vehicular Circular Network and Traffic Flow
- Upgrading of Electrical Power system



Figure AN-133. Proposed Campus Plan of BatStateU Fishery Ground 3





BUILDING NAMES:

- ① PROPOSED DAMPA OPEN RESTAURANT
- ② PROPOSED ORNAMENTAL FISHES BREEDING FACILITY AND DISPLAY AREA
- ③ PROPOSED ADMINISTRATION AND LABORATORY BUILDING
- ④ PROPOSED AEROPONICS, AQUAPONICS AND HYDROPONICS SYSTEM
- ⑤ PROPOSED COVERED OUTDOOR AREA FOR FISH SEGREGATION AND HARVESTING
- ⑥ PROPOSED FISHYALAN
- ⑦ PROPOSED STAFF QUARTERS
- ⑧ PROPOSED STOCK ROOM
- ⑨ PROPOSED LIFE BEARER TANKS
- ⑩ PROPOSED SPAWNING TANKS
- ⑪ PROPOSED INDOOR HATCHERY
- ⑫ PROPOSED OUTDOOR HATCHERY
- ⑬ PROPOSED PUMP ROOM
- ⑭ PROPOSED GUARD HOUSE
- ⑮ PROPOSED POWERHOUSE
- ⑯ PROPOSED OPEN GROUND (PARKING AREA AND RECREATIONAL AREA)
- ⑰ PROPOSED NIPA HUT
- ⑱ PROPOSED DEEP WELL
- ⑲ PROPOSED FISHPOND

Table AN-23. PROPOSED LAND USE ALLOCATION FOR GROUND 3

Administration and General Services	Mixed-Use: Administration and Academic	Mixed-Use: Research and Extension	Research	Extension	Academic Zone	Driveway	Allied Services	Parking, Open Space, Recreational Area	TOTAL AREA (sq.m.)
1.62%	10.42%	37.90%	5.39%	2.06%	0.00%	3.97%	0.00%	38.64%	100.00%
164.91	1,058.94	3,852.89	548.4	209.89	0	403.084	0	3,927.67	10,165.78

Target Land Use Allocation aims to provide adequate buildings and facilities for laboratories, offices, open restaurant, display area, plant system, recreational areas, fishponds, area for harvesting and segregation of fishes, staff quarters, stock room, fish tanks, hatcheries, and other amenities. The proposed structures will give the university a wider-range of discoveries and research information concerning fisheries.

Highlights of the Site Development Plan are as follows:

- All buildings to be equipped with conveying, ventilation, and building management systems for efficiency and optimal use. It shall display and express the goal of showing that fishery can give an additional knowledge to individuals who will visit the location. It shall adopt a modern design concept with the University’s red and white color theme.

Other important features of the Plan include:

- An entrance gate and perimeter fence with the prominently encrypted University logo. This serves as the image of the university from the outside.
- Easy-access parking spaces for cars and motorcycles.
- Open areas for recreational activities and can be used also as an alternative area for evacuees during disaster/calamity.
- Canopy trees which provide shade and variety of plants as pleasing ornaments in the site.
- Continuous path walks around the entire site development for a better sighting of the facilities and buildings.
- Stainless steel grills on minor drains in the Palaisdaan for safety of the individuals visiting all parts of fishpond areas.

- A wooden connecting bridge in the Fishyalan that adds attractiveness in this area.

### F. LAND, WATER, POWER POLICIES

Policies that will govern specific land uses, water, and power generation and utilization policies.

#### Institutional Land Uses

##### General Institutional

- Government centers shall be strategically distributed so that they are readily accessible to the communities they serve. Facilities should be able to cater the population and their respective requirements.
- It is important that facilities such as schools, hospitals, day care centers, health centers, and police stations are easily accessible to all members of the community.
- The maximum distance for a student to walk from residence to school site is three (3) kilometers while the maximum travel time from residence to school on board a vehicle of public conveyance is 30 minutes.
- The schools should be located beyond 200 meters from places of ill-repute; recreational establishments of obscure character such as computer gaming cafes, bars or pubs, disco or party clubs, movie houses or theaters, billiard halls or centers, karaoke lounges, bistros, and the like manufacturing facilities; and industrial plants and military barracks.
- The ground area occupied by the school buildings and other structures should not exceed 40% of the school site to provide adequate open spaces for assembly and co-curricular activities, as well as to conform with the national and local regulations and standards pertaining to setbacks and distances between buildings.
- Continuous upgrading of such facilities should be prioritized to ensure that it can offer quality and efficient service to the public.

#### Land Use & Environmental Planning

PD 1151 – Philippine Environmental Policy issued on 18 April 1977

PD 1152- Philippine Environment Code, June 6, 1977

RA 7586 National Integrated Protected Area System (NIPAS) of 1992

PD 984 – Pollution Control Law of 1976

RA 8749 Clean Air Act of 1999

#### Republic Act 11396 - “SUCs Land Use Development and Infrastructure Plan (LUDIP) Act”

An act requiring all state universities and colleges (SUCs) to prepare, submit and implement a land use development and infrastructure plan (LUDIP) to ensure rational, holistic, efficient and just allocation, utilization, development and management" of the country's land resources.



### **PD 856 - “Code on Sanitation of the Philippines”**

The aim of this act is the improvement of the way of the Filipinos by directing public health services towards the protection and promotion of the health of the people.

### **Philippine Agenda 21**

It is the nation's blueprint for sustainable development. Philippine Agenda 21 envisions a better quality of life for all Filipinos through the development of a just, moral and creative, spiritual, economically vibrant, caring, diverse yet cohesive society characterized by appropriate productivity, participatory and democratic processes, and living in harmony and within the limits of the carrying capacity of nature and the integrity of creation.

### **NEDA 2010-06 - “National Framework for Physical Planning (2001-2030)”**

The National Framework for Physical Planning 2001-2030 (NFPP) provides the analytical parameters for the planned allocation, use and management of the country's land and other physical resources. The NFPP serves as a framework through which the planning and management of these resources are guided at the national and subnational levels.

### **HLURB - The Housing and Land Use Regulatory Board (HLURB)**

Is a national government agency tasked as the planning, regulatory and quasi-judicial body for land use development and real estate and housing regulation. These roles are done via a triad of strategies namely, policy development, planning and regulation.

### **RA 7160 THE LOCAL GOVERNMENT CODE OF 1991**

The Code mandates the Local Government Units to adopt comprehensive land use plan and enact integrated zoning ordinances.

### **RA 9003 - “Ecological Solid Waste Management Act of 2000”**

It declares the policy of the state in adopting a systematic, comprehensive and ecological solid waste management program that ensures the protection of public health and the environment and the proper segregation, collection, transport, storage, treatment and disposal of solid waste through the formulation and adoption of best environmental practices.

### **RA 8749 - “Philippine Clean Air Act of 1999”**

It is a comprehensive air quality management policy and program, as it outlines the government's measures to reduce air pollution by including environmental protection activities into its development plans. This aims to achieve and maintain healthy air for all Filipinos.

### **RA 6969 - “Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990”**

An Act to control toxic substances and hazardous and nuclear wastes, providing penalties for violations thereof, and for other purposes. The main objective of this act is to control, supervise and regulate activities on toxic chemicals and hazardous waste.



Under this act importation, manufacture, processing, handling, storage, transportation, sale, distribution, use and disposal of all unregulated chemical substances and mixtures in the Philippines, as well as the entry even in transit, or storage and disposal of hazardous and nuclear wastes are regulated.

### **RA 7586 - “National Integrated Protected Area System (NIPAS) of 1992”**

It shall encompass ecologically rich and unique areas and biologically important public lands that are habitats of rare and threatened species of plants and animals, biogeographic zones and related ecosystems, whether terrestrial, wetland or marine, all of which shall be designated as 'protected areas'. The System shall recognize conservation areas and the management regimes being implemented by local government units (LGUs), local communities and indigenous peoples (IPs).

### **PD 1151 - “Philippine Environmental Policy of 1977”**

The purpose of this Decree is to formulate an intensive, integrated program of environmental protection through the requirement of environmental impact assessments and statements. Every individual shall be responsible in contributing to the preservation and enhancement of the Philippine environment.

### **PD 1586 - “Environmental Impact Statement System”**

The purpose of this decree is to attain and maintain a rational and orderly balance between socio-economic growth and environmental protection.

The pursuit of a comprehensive and integrated environmental protection program necessitates the establishment and institutionalization of a system whereby the exigencies of socio-economic undertakings can be reconciled with the requirements of environmental quality.

The regulatory requirements of Environmental Impact Statement and Assessments instituted in pursuit of this national environmental protection program have to work into their full regulatory and procedural details in a manner consistent with the goals of the program.

### **PD 1152 - “Philippine Environment Code of 1977”**

The Environment Code provides the guidelines on air quality management; protection and improvement of water quality; land use management; natural resources management and conservation (i.e., fisheries, wildlife, forests and soil conservation, flood control and natural calamities, energy development, surface and ground waters, mineral resources); and waste management.

### **PD 984 - “Pollution Control Law of 1976”**

Provides guidelines for prevention, abatement and control of pollution of water, air and land.

## **Laws on Water Quality and Water Pollution**

### **PD 600 and PD 979**

Marine pollution policies by National Pollution Control Commission  
Enforcement by Philippine Coast Guard



### **PD 1067 Water Code of the Philippines (old)**

Governs the ownership, appropriation, utilization, exploitation, development, conservation and protection of water resources.

Identified rights and obligations of water users and the administrative agencies that enforce laws on water use and availment.

### **RA 9275 Clean Water Act of 2004**

An Act providing for a comprehensive water quality management and for other purposes. This Act provides for the abatement and control of pollution from land based sources, and lays down water quality standards and regulations.

### **DENR A.O. 2016-08- “Water Quality Guidelines and General Effluent Standards of 2016”**

This Administrative Order is issued to provide guidelines for the classification of water bodies in the country; determination of time trends and the evaluation of stages of deterioration/enhancement in water quality; evaluation of the need for taking actions in preventing, controlling, or abating water pollution.

### **DOH A.O. 2017-10- “Philippine National Standards for Drinking Water of 2017”**

This Administrative Order prescribed the standards and procedures on drinking water quality to protect the public and consumer’s health.

### **Power Supply and Clean Energy**

Commonwealth Act 120- National Power Corporation to develop hydroelectric facilities.

### **PD 334- Philippine National Oil Company**

Due to a compelling need for the government to embark on measures that will help ensure a stable supply of petroleum products in order to sustain the growth of the economy and the social well-being of the nation.

Amendments have been made to the charter to include exploration, exploitation and development of all energy resources in the country.

### **PD 1442 An Act to Promote the Exploration and Development of Geothermal Resources**

Exploration and development of geothermal resources.

### **BP 33- An Act Defining and Penalizing Certain Prohibiting Acts Inimical to the Public Interests and National Security Involving Petroleum and/or Petroleum Products Prescribing Penalties Therefor and for Other Purposes**

It is the declared policy of the State to institutionalize as a national way of life energy conservation geared towards the judicious and efficient use of energy in order to enhance availability of energy supplies required to support economic, social and developmental goals.

In view of the continuing uncertainty of the international oil supply, it is imperative that measures to conserve energy be strengthened and/or petroleum products contrary to the intent and spirit of judicious usage and conservation of energy, which are inimical

to the public interest and national security, be prohibited and appropriate sanction therefor be imposed.

RA 387- Petroleum Act

RA 5207- Atomic Energy Regulatory and Liability Act of 1968

RA 7638 - Department of Energy Act of 1992

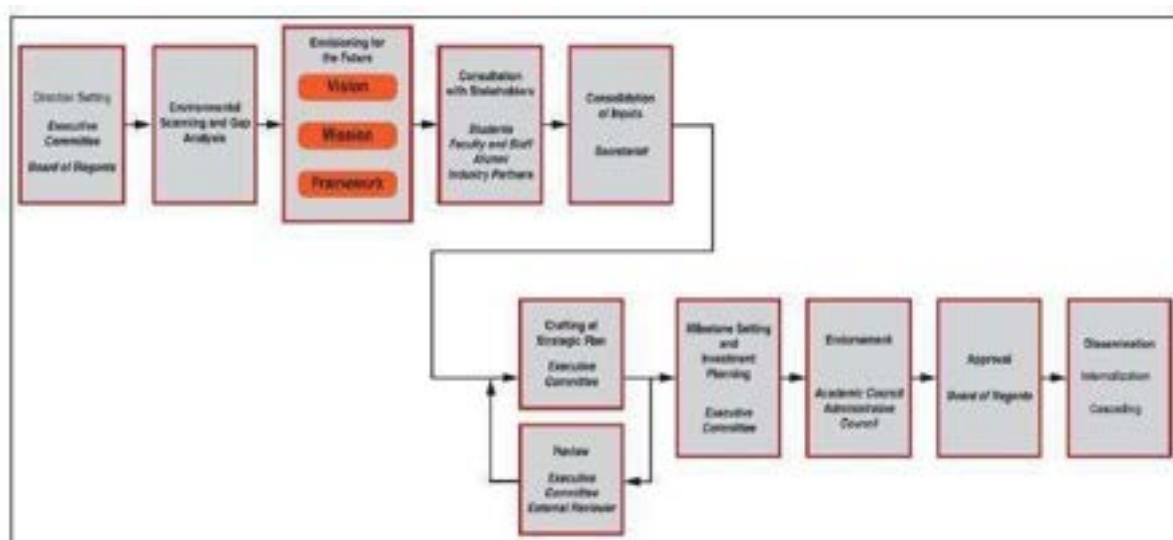
RA 9367 - Biofuels Act of 2006

RA 9513 - Renewable Energy Act of 2008

## G. MAJOR DEVELOPMENT PROGRAMS

### Strategic Planning Process of Batangas State University

This Strategic Planning Process is taken from the Strategic Plan 2019-2029 of Batangas State University. Covering a ten-year period, the BatStateU Strategic Plan 2019-2029 serves as the University's blueprint towards the highest level of development and advancement as an important national player in knowledge creation and innovation, and the development of the human talents needed in the 21st Century.



Source: BatStateU Strategic Plan 2019-2029

Figure AN-134. BatStateU Strategic Planning Process

### Strategic Planning Process

The strategic planning process went through a number of phases. Under Phase I, the Strategic Planning Management Committee (SPMC) and Technical Working Groups (TWGs) were created, composed of members of the University's Executive Committee, assisted by the Office of Institutional Planning and Development and the Office of the University and Board Secretary. Serving as the communication team for the planning process, the SPMC informed the interested stakeholders on the planning stages and emerging issues, and formed solutions generated throughout the process.

In the same planning phase, the BatStateU Board of Regents and the Executive Committee conducted a direction-setting activity which identified the general thrusts and priorities of the University for the next ten years as well as the general themes of the University Strategic Plan.

In Phase II, four major offices of the university - Academic Affairs; Administration and Finance; Research, Development and Extension Services; and External Affairs and



ICT - conducted the internal environmental scanning. Using the PESTLE model as a guide, the aforementioned offices gathered pertinent data from the previous strategic plan accomplishments, SUC Leveling status report, trends and policy directions of various key sectors and other sources to determine the current position of the University and identify gaps on key areas through a Gap Analysis. The results of these process served as input in the actual drafting of strategic goals and specific initiatives.

In Phase III, internal and external university stakeholders convened for consultative discussions of the six thematic areas (BASICS) of the University Strategic Plan 2019-2029. Input from the environmental scanning, discussions with stakeholders, and deliberations within and among sub-committees were used to prepare the initial draft of the University Strategic Plan.

In Phase IV, the SPMC produced the draft of the University Strategic Plan 2019-2029 which was presented to the BatStateU Administrative and Academic Councils for further enhancement and endorsement. Consequently, the University Strategic Plan 2019-2029 was approved by the Board of Regents through Resolution No. 87, s. 2019. Finally, with the inclusion of recommendations by the members of the Board of Regents, the University Strategic Plan was disseminated to all university stakeholders and cascaded to concerned offices.

### Strategic Planning Framework

Strategic planning allowed the University to set priorities, focus energy and resources, strengthen operations, ensure that employees and other stakeholders are working toward common goals, establish agreement around intended outcomes, and assess and adjust its direction in response to the ever-changing environment.



Source: BatStateU Strategic Plan 2019-2029  
Strategic Planning Framework

Figure AN-135. BatStateU Strategic Planning Framework

The framework depicts a stable structure composed of a base or foundation of a) the University’s Core Values: Patriotism, Integrity, Excellence, Service, Resilience and

Faith; and b) Enablers: Governance, Human Resources, Financial Resources, Infrastructure, Linkages, and Government. The six pillars represent the University Goals or BASICS: 1) Brand of Excellence, 2) Access, 3) Social Relevance, 4) Inclusive Innovation, 5) Capacity, and 6) Sustainability. BASICS are geared towards meeting the University Vision of achieving National Relevance and Global Presence. The framework's apex depicts the Tower of Wisdom, the university's icon and official marker, which also serves as a memorial to the value of time as a critical element in this undertaking.

### ENABLERS

#### Governance

The role of leadership and administration is essential in strategic governance. The Board of Regents' active engagement in the promulgation of policies and the exercise and/or delegation of its duly constituted specific and general powers of administration is critical. The commitment of the University's leadership, key officials, and the entire academic community is of paramount importance in pursuing the university vision in a manner that is strategic, inclusive and sustainable.

#### Human Resource

The highly competent faculty and staff are vital to fulfilling the University's vision. They must be trained to become independent, analytical, and creative thinkers who contribute to the character of a premier national university.

#### Financial Resources

The delivery of all the University's goals and strategic initiatives is dependent on its overall financial strength from the resources available, grants and other funding sources by observing highest standards of accountability, transparency and integrity. By balancing the need to spend prudently on current operating expenditures, with the requirement to generate funds for significant investment, the university vision will be achieved.

#### Infrastructure

The provision of a modern, efficient and stimulating working and learning environment through innovative and high-quality infrastructure, functionally and aesthetically, is key to achieve the University's academic, research and extension services goals. It also includes good space management to optimize access and capacity.

#### Linkages

The University must establish sustainable and mutually beneficial partnerships and collaborations to support the fulfilment of its mandates and ensure significant presence in the local and international academic community.

#### Government

Government policies enable the University to act strategically and innovatively. Government regulatory and procedural requirements should be properly addressed to help achieve the vision of becoming a premier national university. Setting the platform for discussion with the government, especially with the legislature, of some gains, successes and challenges of SUCs would set future directions of the University in particular and higher education in the country in general.

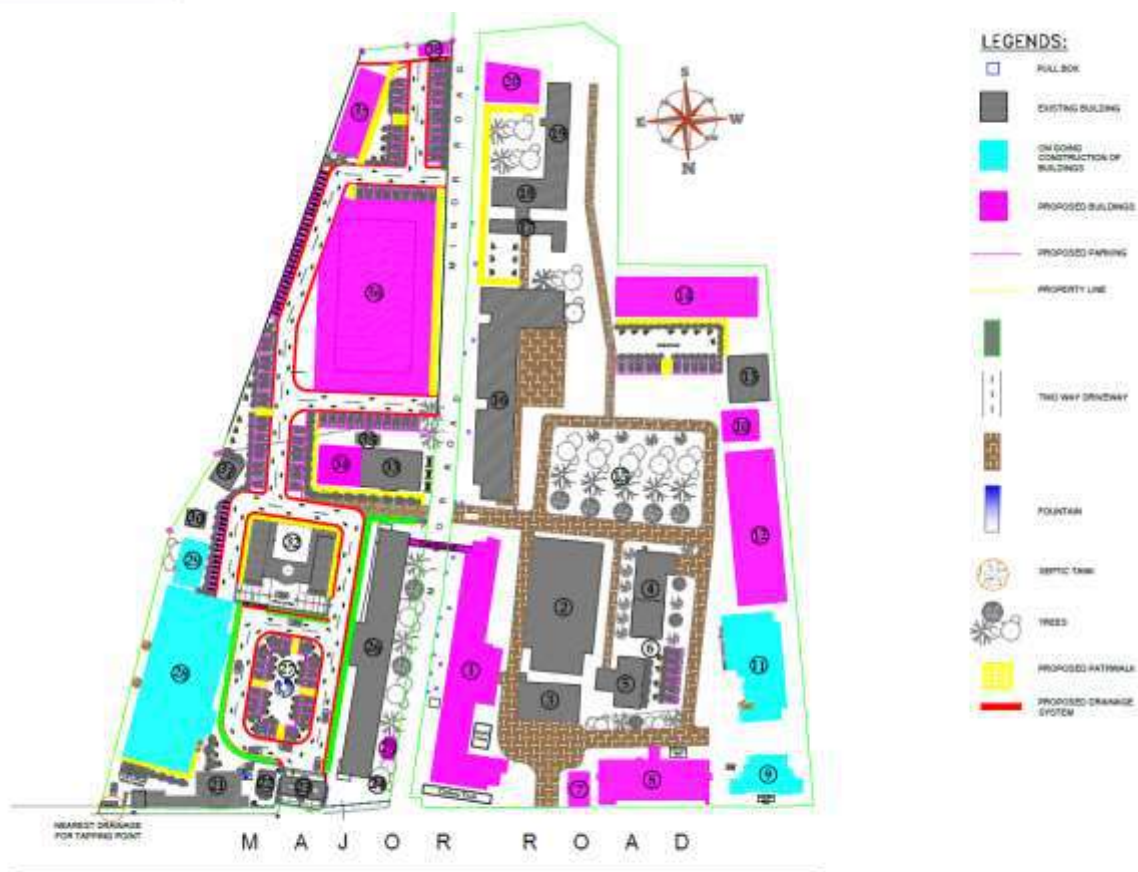
## MASTER SITE DEVELOPMENT PLAN



Figure AN-136. Site Development Overview of Ground 1 and Ground 2

With a total expanse of 4.159 hectares of land area, the BatStateU ARASOF-Nasugbu Ground 1 and Ground 2 have adequate space to fulfil its developmental needs in providing classrooms, sports facilities, laboratories, housing facilities, recreational spaces and commercial areas necessary to achieve an environment conducive for both learning and working with a compelling aesthetic and physical presence. The university recognizes the positive effects of the infrastructure and architectural designs for learning facilities to student learning, which are considered in all planning and designing processes.





**PROPOSED SITE DEVELOPMENT PLAN**  
BatStateU ARASOF-Nasugbu  
R. Martinez St. Brgy. Bucina Nasugbu Batangas

## BUILDING NAMES:

- |   |   |
|---|---|
| ① PROPOSED TECHNOLOGY, ENGINEERING AND COMPUTING BUILDING | ②③ PROPOSED MAINTENANCE BUILDING  |
| ② JOSON GYMNASIUM   | ②④ GATE 1: FACADE AND FENCE   |
| ③ APACIBLE MUSEUM   | ②⑤ IGP BUILDING   |
| ④ INFIRMARY   | ②⑥ GUARD HOUSE AND DRIVEWAY (ENTRANCE AND EXIT)   |
| ⑤ UNIVERSITY CANTEEN                                      | ②⑦ CIRCUIT BREAKER  |
| ⑥ PROPOSED PARKING WITH WATER RETENTION FACILITY BELOW    | ②⑧ PROPOSED POWERHOUSE: ARASOF COMPOUND 2   |
| ⑦ PROPOSED GATE 2: FACADE AND FENCE                       | ②⑨ HIGHER EDUCATION BUILDING I  |
| ⑧ PROPOSED ARASOF BUSINESS CENTER                         | ②⑩ OPEN GROUND (FOUNTAIN, RECREATION AREA, AND PARKING)   |
| ⑨ ON-GOING CONSTRUCTION OF VIP CORALS                     | ②⑪ ON-GOING CONSTRUCTION OF STUDENT SERVICES CENTER   |
| ⑩ PROPOSED POWERHOUSE: ARASOF COMPOUND 1                  | ②⑫ PUMP ROOM AND CISTERN TANK (STUDENT SERVICES CENTER)   |
| ⑪ ON-GOING CONSTRUCTION OF LIVELIHOOD TRAINING CENTER     | ②⑬ PUMP ROOM AND CISTERN TANK (HOSTEL)  |
| ⑫ PROPOSED HIGHER EDUCATION BUILDING II                   | ②⑭ MOTORPOOL/UNIVERSITY GARAGE  |
| ⑬ INSTITUTE OF MARINE TECHNOLOGY BUILDING                 | ②⑮ HOSTEL BUILDING  |
| ⑭ PROPOSED HEALTH SCIENCES AND ALLIED SERVICES BUILDING   | ②⑯ UNIVERSITY CAFETERIA   |
| ⑮ MINI FOREST   | ②⑰ PROPOSED EXTENSION OF UNIVERSITY CAFETERIA   |
| ⑯ NEW COLLEGE OF TEACHER EDUCATION BUILDING               | ②⑱ CISTERN TANK (CAFETERIA)   |
| ⑰ COLLEGE OF ARTS AND SCIENCES LABORATORY BUILDING        | ③① PROPOSED INDOOR GYMNASIUM WITH OLYMPIC SIZE SWIMMING POOL WITH SPORTS AND WELLNESS AMENITIES |
| ⑱ NUTRITION AND DIETETICS LABORATORY BUILDING             | ③② PROPOSED UNIVERSITY DORMITORY  |
| ⑳ SKILLS LABORATORY BUILDING                              | ③③ PROPOSED MAINTENANCE AND RECOVERY FACILITY (MRF)   |

Figure AN-137. Master Site Development Plan of Ground 1 and Ground 2

Shown on the table below is the Matrix of Proposed Infrastructures for the next 10 years.

Table AN-24. MATRIX OF PROPOSED INFRASTRUCTURES

Item No.	Proposed Building Name	Building Footprint	No. of floors	Total Area	Target Cost per Area	Estimated Cost	Target Date of Construction	Priority Rank
1	Technology, Engineering, Computing Building	1,100	4	4,400	35,000	154,000,000.00	2022	1
2	Construction of Powerhouse (Ground 1)	35	1	35	35,000	1,225,000.00	2022	2
	Upgrading of Electrical System (Ground 1)	N/A	N/A	N/A	N/A	23,775,000.00		
3	Higher Education Building II (HEB)	1151	4	4,604	35,000	161,140,000.00	2023	3
4	Construction of Powerhouse (Ground 2)	35	1	35	35,000	1,225,000.00	2023	4
	Upgrading of Electrical System (Ground 2)	N/A	N/A	N/A	N/A	23,775,000.00		
5	Renovation of Interior of Apacible Museum	260	2	520	12,000	6,240,000.00	2023	5
6	Dormitory Building	528	5	2,640	35,000	92,400,000.00	2023	6
7	Gymnasium	2320	3	6,960	35,000	243,600,000.00	2023	7
8	Business Center	385	2	770	35,000	26,950,000.00	2023	8
9	Gate and Façade for Ground 1	92	1	92	35,000	3,220,000.00	2023	9
10	Extension of Cafeteria	176	1	176	35,000	6,160,000.00	2023	10
11	Material Recovery Facility (MRF)	33	1	33	35,000	1,155,000.00	2023	11
12	Landscape, Walkways and Driveways (Ground 2)	N/A	N/A	1,927	35,000	67,445,000.00	2024	12
13	Drainage System (Ground 2)	N/A	N/A	N/A	N/A	10,000,000.00	2024	13
14	College of Nursing and Health Sciences Building	656	4	2,624	35,000	91,840,000.00	2026	14
15	Maintenance Building	208	1	208	35,000	7,280,000.00	2028	15
16	Rehabilitation Mini Forest	N/A	N/A	1,595	6,000	9,570,000.00	2028	16
17	Construction of New Fence (Ground 1)	N/A	N/A	2,085	15,000	31,275,000.00	2028	17
18	Construction of New Fence (Ground 1)	N/A	N/A	1,926	15,000	28,890,000.00	2028	18
GRAND TOTAL						991,165,000.00		

Many existing buildings in the campus are already dilapidated due to old-age and subject for demolition. These areas will be utilized to construct new buildings and facilities for better use of the spaces as part of the long term development plan.

### Proposed 5-Storey Dormitory Building

One of a few buildings for demolition is the existing dormitory building shown on the figure below.





Figure AN-138. Old Dormitory Building (Front View)



Figure AN-139. Old Dormitory Building (Side View)

This old dormitory is located at the back of the campus. The old lodging house has 2 floors with 20 rooms and 8 common bathrooms. Students from the outlying barangays and municipalities are the occupants of the dormitory.



Table AN-25. 10-Year Enrollment Projection

COLLEGE STUDENTS	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031
4th year	811	1,162	1,325	1,915	1,780	1,951	1,983	1,983	2,112	2,130
3rd Year	1,223	1,395	2,015	1,873	2,053	2,086	2,086	2,222	2,241	2,300
2nd Year	1,469	2,122	1,969	2,156	2,190	2,190	2,334	2,353	2,415	2,443
1st Year	2,235	2,070	2,265	2,300	2,300	2,455	2,475	2,540	2,570	2,545
Sub-total	5,738	6,749	7,574	8,244	8,323	8,682	8,878	9,098	9,338	9,418
No. of Students outside 30km radius*	69	81	91	99	100	104	107	109	112	113
70% Assumption	48	57	64	69	70	73	75	76	78	79
*Based on 1.2% of 2020-21 Data on Residency										

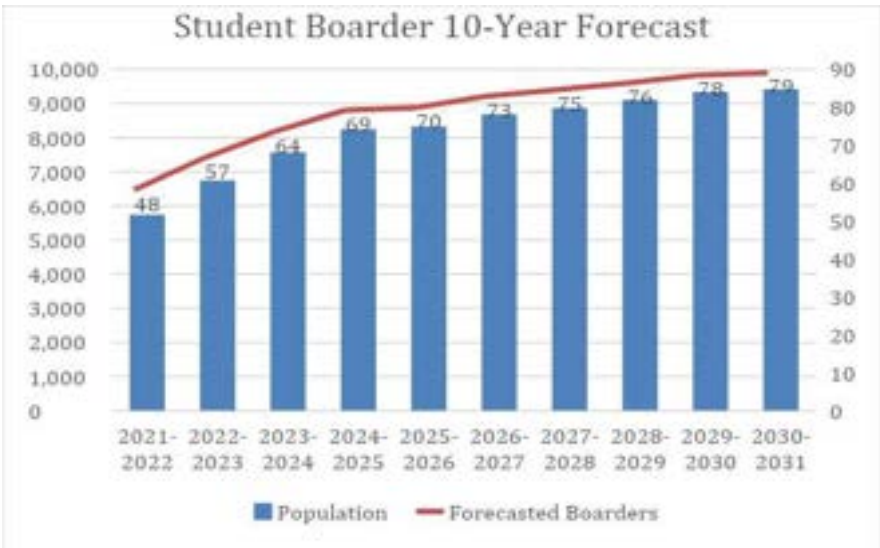


Figure AN-140. Projected Number of Students who will need a Dormitory

Due to the growing number of students at the university, residents in the surrounding area took advantage of the opportunity to convert their homes into boarding houses, while others resorted to building apartments for rent. Due to these establishments, the school lodging house became quiescent.

The enrollment trend of the University for the past 2 years has been continuously growing, and students from distant municipalities are surprisingly increasing. The university planned to demolish the existing 2-storey dilapidated building to give way to construct a 5-storey dormitory which will occupy 528 sq.m. The target capacity of the proposed building is 90-110 occupants. This will accommodate students, faculty, and staff that are having difficulty attending their classes and going to work due to transportation issues. The university will ensure a safe, well-ventilated area to stay for study and to relax, and facilities for the convenience of the residents.



Figure AN-141. Proposed New 5-Storey Dormitory Building

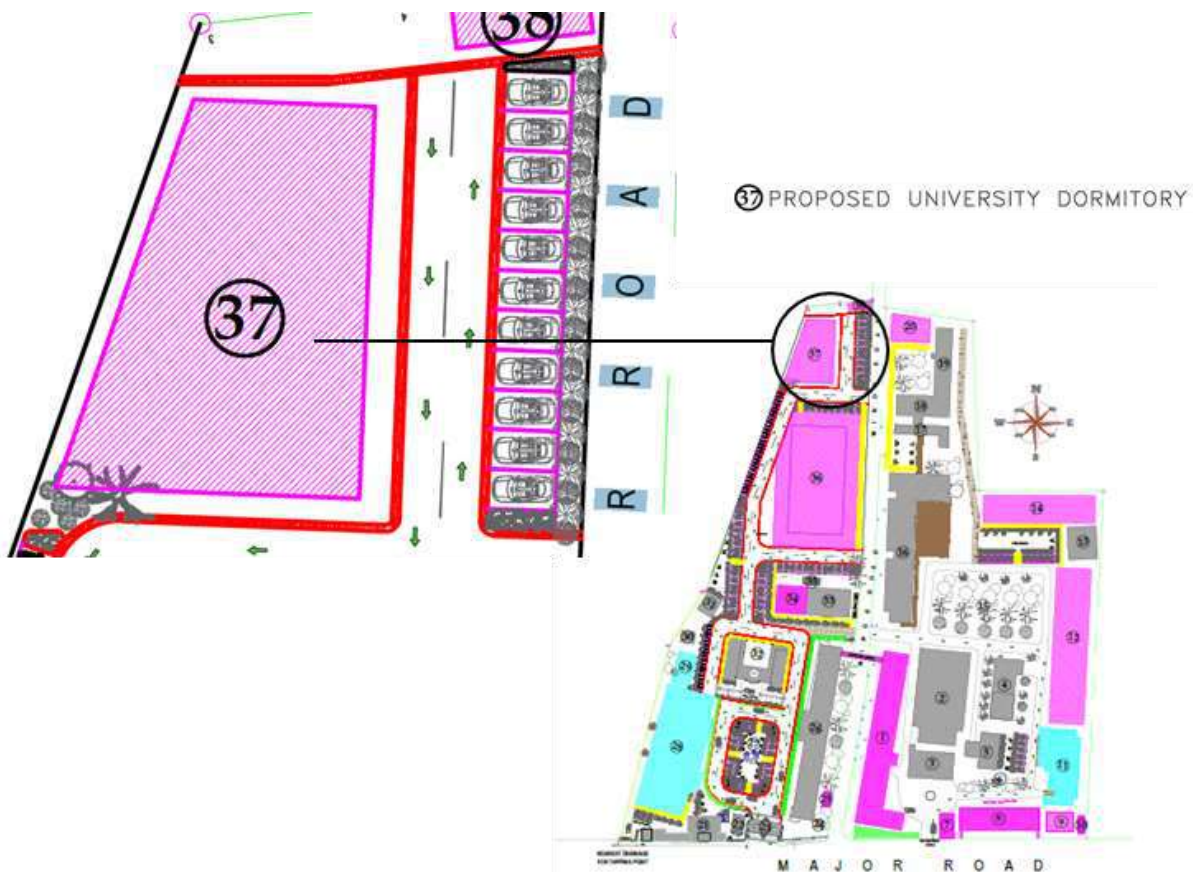


Figure AN-142. Location of the Proposed 5-Storey Dormitory

The proposed location of the new 5-storey Dormitory Building is at the northern part of Ground 2, which is suitable for housing students and staff because of its semi-isolated location, with a separate gate to provide a different entry and exit points from the university gates and designated parking space.

The total floor area of the proposed building is 2,640 sq.m. The building construction in general will be reinforced concrete framed structure with concrete hollow blocks (CHB), glass panels on aluminum framing and combination of chb and drywall partitions as walls. Ancillary works associated with the facility includes but not limited to potable water, utility water, sanitary and surface drains and electric lighting and power.

**The Proposed Dormitory building is a five (5)-Storey building that shall house:**

Ground Floor:

- Entrance Porch
- Ramp for PWD
- Elevator Lobby
- Elevator
- Main Stairs (2)
- Electrical Room
- Hallway
- Common Mess Area
- Powder Room for guest (Male and Female)
- Reception
- Storage Room
- Linen Room
- Laundry Room
- Drying Room
- Waiting Area
- Quad Room w/ Toilet and Bath 1-8 (Male and Female)
- Fire Exits (2)

Second Floor:

- Elevator
- Elevator Lobby
- Main Stairs (2)
- Electrical Room
- Hallway
- Common Mess Area
- Quad Room with Toilet and Bath 9-16 (Male and Female)
- Drying Area
- Fire Exits (2)

Third Floor:

- Elevator
- Elevator Lobby
- Main Stairs (2)
- Electrical Room
- Hallway
- Common Mess Area
- Double Bedroom with Toilet and Bath 1-10 (Male and Female)
- Drying Area
- Fire Exits (2)

Fourth Floor:

- Elevator
- Elevator Lobby
- Main Stairs (2)
- Electrical Room
- Hallway
- Common Mess Area





- Double Bedroom with Toilet and Bath 11-20 (Male and Female)
- Drying Area
- Fire Exits (2)

### Fifth Floor:

- Elevator
- Elevator Lobby
- Main Stairs (2)
- Electrical Room
- Hallway
- Common Mess Area
- Single with Toilet and bath 1-10 (Male and Female)
- Drying Area
- Fire Exits (2)

### Other facilities included in the project are:

- Cistern
- Fire Detection Alarm System
- Fire Protection Works
- Telephone Communication System, CCTV and Public Address System (PAS)
- Complete Grounding System
- Plumbing Works
- Septic Vault and Catch Basins
- Air – Conditioning and Ventilation Works

### **Proposed Four-Storey Technology, Engineering and Computing Sciences (TECS) Building**

The Old CTE Building, as shown on the figure below, is already declared as condemned and not allowed for occupancy. This is subject to demolition and will give way to the construction of a new building, The TECS Building.



Figure AN-143. Old CTE Building (For Demolition)



Figure AN-144. Proposed 4-Storey TECS Building

The College of Informatics and Computing Sciences aims to shape globally competitive computer magnates as they develop their professional identities and ethical values. It establishes equanimity, objectivity and wisdom, unselfishness and concern for the environment through their technological competencies, community partnerships and strong faith in the Supreme Being.

It promotes excellence in pedagogy as it develops a well-rounded graduate who can assume dynamic leadership, meaningful participation and internalization initiatives in the field of Information Technology and Computing Sciences.

With the above-mentioned goals of the College, it is strongly recommended that Laboratory Facilities should be improved and be innovative especially during this 21st century generation because these resources could help students enhance their learning



by understanding the theoretical concepts of Science and Technology which are taught in classrooms. It gives students first-hand experience and offers better opportunities for learning.

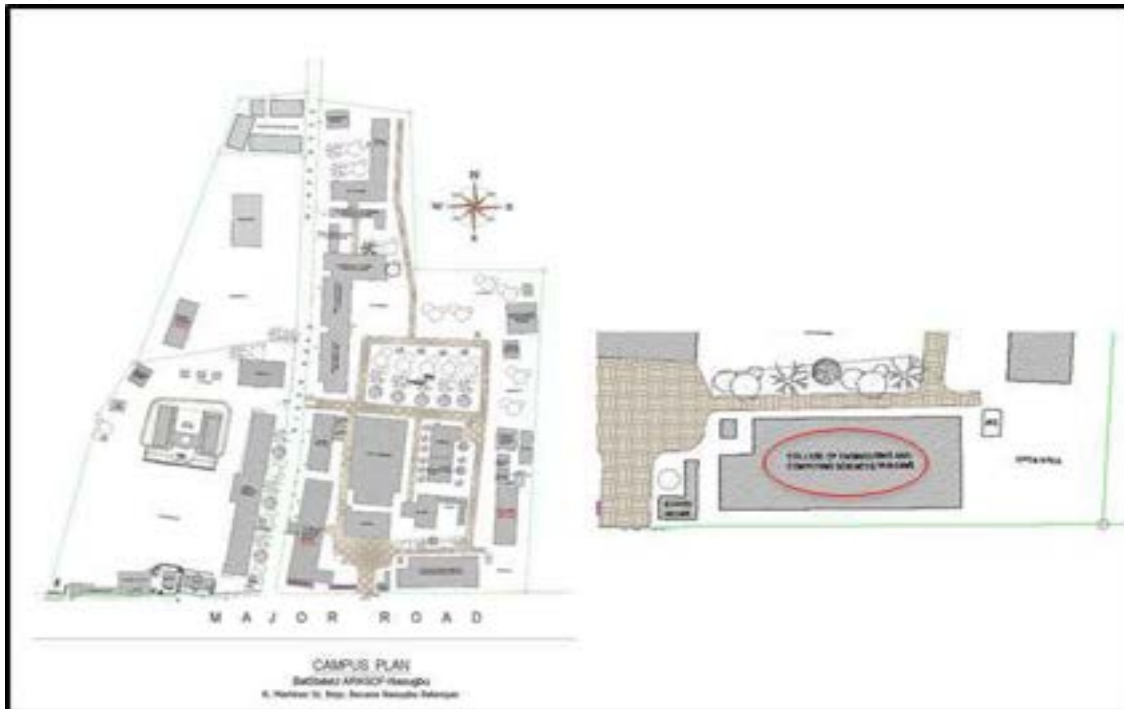


Figure AN-145. Location of Existing College of Informatics and Computing Sciences (CICS) Building



Figure AN-146. Existing College of Informatics and Computing Sciences (CICS) Building

The existing three-decade old building occupies about 585 square meters with Dean's Office, Faculty Room, Mac Laboratory, Electronics and Electrical Laboratory, Logic Circuit Laboratory, Cisco Laboratory and two (2) Lecture Rooms, which are utilized by BS in Computer Science, BS in Information Technology, and BS in Computer Engineering students and faculty.

The table below (Table 22) shows an increasing trend in the enrollment of students under the College of Engineering and College of Informatics and Computing Sciences. The current building, aside from old and is already deteriorating, needs to be replaced with a new one. Also, more spaces like lecture rooms and modern computer/engineering





laboratories must be constructed to support the growing number of students and to provide borderless and efficient learning to students.

Table AN-26. Enrolment Trend, 2019-2021

College	AY 2019-2020	AY 2020-2021	AY 2021-2022
College of Engineering / College of Informatics and Computing Sciences	438	486	598

The increase in the number of students in the college from 2019 to 2021 is proof that construction of a new CICS building should be one of the development priorities in the Campus. From one-storey to four-storey building structure, it can sustain the needs of the College relative to the facilities and laboratory requirements with a growing number of students. Likewise, such structures that have technology infrastructures will benefit the students for it will give them fast access to knowledge, accelerated learning and engaging ways to apply what they’ve learned.

Most importantly, the safety, security and well-being of both faculty and staff must be prioritized, given the fact that the existing CICS building is three decades old. Also, it might not be conducive to learning to the growing number of our students as the majority of the physical structure is subject to major repairs.



Figure AN-147. Proposed Four-Storey Technology, Engineering and Computing Sciences (TECS) Building

Cognizant of the ethos and noble aim of educating and training the students to prepare them in the global knowledge economy, it is imperative that they should also be provided with quality facilities in order to let them experience a safer, secured and quality learning environment. Furthermore, it is important to value students' perspectives to build an educational environment that can embrace students responsibly and to create a campus that students will be proud of as their "home" even after graduation. Lastly, such development and innovations will add to the campus distinctive individual characteristics as the face of the university and will create an appealing aura that will attract more students.

The proposed building will have a total floor area of 4,392 sq. m. The building construction in general will be reinforced concrete framed structure with concrete hollow blocks (CHB), glass panels on aluminum framing and combination of chb and drywall partitions as walls. Ancillary works associated with the facility includes but not limited to potable water, utility water, sanitary and surface drains and electric lighting and power.

## The Proposed TECS building is a four (4)-Storey building that shall house:

### GROUND FLOOR

- Entrance porch
- Ramp for PWD
- Elevator Lobby
- Elevator
- Main Stairs (2)
- Electrical Room
- Hallway



- Pump Room
- Male Restroom
- Female Restroom
- Engineering Allied Laboratories
- Engineering Professional Laboratory
- Faculty Room w/ dining area and pantry
- Dean's Office
- Research and Extension Office
- Conference Room
- Storage Room
- Fire Exits (1)

### SECOND FLOOR

- Elevator
- Elevator Lobby
- Drawing Laboratory
- FabLab
- Robotics Laboratory
- Male restroom
- Female Restroom
- Game Development Laboratory
- Computer Networking Laboratory
- Computer Laboratory 1-3
- Fire Exits (1)

### THIRD FLOOR

- Elevator
- Elevator Lobby
- Main Stairs (2)
- Electrical Room
- Multimedia Room 1
- Multimedia Room 2
- Male Restroom
- Female Restroom
- Lecture Room 1-6
- Hallway
- Fire Exits (1)

### FOURTH FLOOR

- Elevator
- Elevator Lobby
- Main Stairs (2)
- Electrical Room
- Male Restroom
- Female Restroom
- Lecture Room 7-14
- Tank and Pump Room
- Hallway



- Fire Exits (1)

**Other facilities included in the project are:**

- Cistern
- Fire Detection Alarm System
- Fire Protection Works
- Telephone Communication System, CCTV and Public Address System (PAS)
- Complete Grounding System
- Plumbing Works
- Septic Vault and Catch Basins
- Air – Conditioning and Ventilation Works
- Conveying System/Elevator
- Electrical Rooms
- Fire Exits
- Tank and Pump Room

**Proposed 4-Storey Higher Education Building II**



Figure AN-148. Proposed Higher Education Building II

Another major development project of the University is the Higher Education Building II. The Development Plan is hinged on the “Modernization of the Bachelor of Science in Fisheries Program’s Instructional Laboratory Facilities in Batangas State University ARASOF-Nasugbu,” which is geared towards making the BSFAS Program a niche academic area of the Campus. Owing to the idea that it will be a specialized program that matches the university’s reputation and leverages existing industry partnerships, the BSFAS Program may attract student-applicants and create favorable student outcomes. These may only be achieved by establishing instructional laboratory facilities to be utilized in the four fields of fisheries and aquatic sciences (Valdez, 2021).

Likewise, since this Development Plan presents an overview of the fisheries laboratory facilities in BatStateU ARASOF-Nasugbu, the Program will deliberately focus

on the construction of those facilities to address fisheries issues, providing venues to foster interdisciplinary and inclusive research collaborations, exposing the realities of stakeholder collaborations to produce well-rounded scientists and managers; and coming up with ways that may motivate possible linkages with other universities, researchers, and funding sources to support diverse research activities of the Campus (Valdez, 2021).

The proposed building will have a total floor area of 4,604 sq. m. The building construction in general will be reinforced concrete framed structure with concrete hollow blocks (CHB), glass panels on aluminum framing and combination of chb and drywall partitions as walls. Ancillary works associated with the facility includes but not limited to potable water, utility water, sanitary and surface drains and electric lighting and power.

### **The Proposed HEB II Building is a four (4)-Storey Building that shall house:**

#### **Ground Floor:**

- Entrance porch
- Ramp for PWD
- Elevator Lobby
- Elevator
- Main Stairs (2)
- Electrical Room
- Hallway
- Pump Room
- Male Restroom
- Female Restroom
- Hatchery
- Outdoor Workstation and wet Laboratory
- Fish Pathology and Microbiology Laboratory - This laboratory will be for fish disease diagnosis and related activities. It should have a disinfection area, a general working area, and an isolation room. A separate isolation room will prevent contamination of experiments using culture media.
- Genetics and Molecular Biology Laboratory This laboratory will be for genetics and molecular biology activities such as molecular identification of fish, shellfish, and other aquatic organisms, as well as pathogens. This laboratory can be designed similar to the fish pathology and microbiology laboratory
- Fish Processing Laboratory - This laboratory will be for activities related to fish processing such as product development, fish deboning, and packaging. It should be ideally designed to prevent cross contamination by designating specific areas for storage, washing/preparation, cooking, packaging, and product presentation. Aside from the common fixtures and fittings such as lights, smoke detector, fire extinguisher and ventilation system, these are the important fixtures and fittings needed in the laboratory
- Fish Nutrition Laboratory - This laboratory is designated for proximate analysis of feed and other related activities. It should have working areas and sufficient space to fit equipment such as the fume hood and oven.
- Storage Room



- Fire Exits (1)

### **Second Floor:**

- Elevator
- Elevator Lobby
- Male restroom
- Female Restroom
- Marine Fisheries Laboratory - This laboratory is intended for activities related to oceanography and capture fisheries
- Conference Room
- Soil and Water Quality Laboratory - This laboratory is intended for analyses of soil quality parameters such as pH, texture, and organic matter and water quality parameters such as total ammonia nitrogen, alkalinity, and hardness
- Faculty Room
- Dean's Office
- Classrooms/Lecture rooms 1-8
- Electrical Room
- Fire Exits (1)

### **Third Floor:**

- Elevator
- Elevator Lobby
- Main Stairs (2)
- Electrical Room
- Male Restroom
- Female Restroom
- Ichthyology and Fish Physiology Laboratory - This laboratory is intended for fish dissection, measurement of morphometric and meristic characters, and other related activities.
- Storage Room
- Lecture Room 9-16
- Mini Study Area
- Hallway
- Fire Exits (1)

### **Fourth Floor:**

- Elevator
- Elevator Lobby
- Main Stairs (2)
- Electrical Room
- Male Restroom
- Female Restroom
- Audio Visual Room
- Lecture Room 16-25
- Drying area
- Tank and Pump Room
- Hallway
- Fire Exits (1)

### **Other facilities included in the project are:**

- Cistern





- Fire Detection Alarm System
- Fire Protection Works
- Telephone Communication System, CCTV and Public Address System (PAS)
- Complete Grounding System
- Plumbing Works
- Septic Vault and Catch Basins
- Air – Conditioning and Ventilation Works

Lecture Rooms/Classrooms (Good for 35 students based on the CHED Unnumbered CMO, series of 2018)

Table AN-27. Proposed Location: First, Second, Third and Fourth Floors

FLOOR	NUMBER OF CLASSROOMS	MEASUREMENT
First Floor	2 to 3 Classrooms	60 to 65 sq. m. each
Second Floor	8 to 9 Classrooms	60 to 65 sq. m. each
Third Floor	10 Classrooms	60 to 65 sq. m. each
Fourth Floor	12 Classrooms	60 to 65 sq. m. each
Total Number	32 to 34 Classrooms	

Note: The 32 to 34 estimated number of classrooms provided by the Project and Facility Management Office was based on the standard area for each Lecture Room. The said estimate was in consonance with the 10-Year Projected No. of Enrollees of the College of Arts and Sciences which requires 31 classrooms.

Table AN-28. Needed Classrooms Based on Students’ Projection

ACADEMIC YEAR	PROJECTED NO. OF STUDENTS PER YEAR	CURRENTLY AVAILABLE CLASSROOMS FOR CAS (HEB 207, HEB 208, CT 201, CT 202, AND CT 203)	NEEDED CLASSROOMS
A.Y. 2020-2021	855	5	14
A.Y. 2021-2022	1493	5	25
A.Y. 2022-2023	1803	5	30
A.Y. 2023-2024	1937	5	32
A.Y. 2024-2025	1988	5	33
A.Y. 2025-2026	1839	5	31
A.Y. 2026-2027	1839	5	31
A.Y. 2027-2028	1839	5	31
A.Y. 2028-2029	1839	5	31
A.Y. 2029-2030	1839	5	31
A.Y. 2030-2031	1839	5	31

Aside from the fact that laboratory equipment is mandated by CHED, the construction of instructional laboratory facilities is imperative to house the equipment in order to provide a conducive learning environment that would help strengthen the skills of current and future BSFAS students making them more competitive and at par with industry standards. Consequently, this will be a testament of the university's commitment and reputation as a provider of quality education comparable to global standards. This Development Plan may have a positive impact on the BSFAS Program by strengthening its research capability individually and collectively as well as effectively, efficiently and in a sustainable manner in the fields of aquaculture, capture fisheries, post-harvest fisheries and aquatic resource management. Moreover, the BSFAS faculty and student-researchers will be exposed to new avenues of research like marine microbiology, which could lead to a more thorough understanding of harmful algal blooms (HAB), as well as discoveries in medicine.

Likewise, the research outputs of the program may greatly benefit communities that work in the fisheries sector by: 1) establishing sustainable methods for aquaculture; 2) providing knowledge about fish health; 3) improving fish capture methodologies, 4) establishing various methods for processing marine products for food consumption; 5) assessing the carrying capacity, population densities, biology of cultivated species and measures for increasing fish production; 6) introducing new cultured species, genetic studies for stock improvement, developing hybrid fish resistant to certain diseases or faster-growing strains of cultured fish; 7) providing information on diseases of cultured fish, their prevention, control and treatment, pollution ecology, toxicology and disposal of industrial wastes and sewage, especially as they affect fish production in fresh waters. Lastly, the modernization of the program's laboratory facilities may allow the influx of data to be organized in a manner that can be easily stored and accessed by the end-users or even by the general public.

### Proposed 4-Storey CONAHS Building

The College of Nursing and Allied Health Sciences is one with the University in carrying out its mission of providing a 21st century learning environment through innovations in education. To effectively perform this mission, the college facilities must be able to keep up with the recent demands in providing quality health science education.

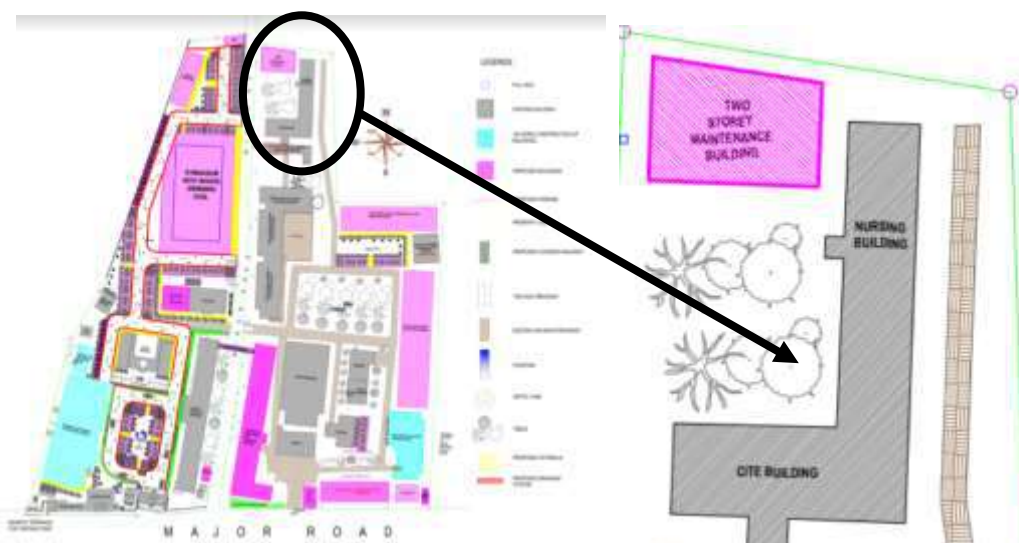


Figure AN-149. Existing CONAHS Building

Currently, the CONAHS Building occupies a 1,079 square meter space at the northernmost part of the campus. It has an amphitheater, four laboratories, and eight classrooms, which are utilized by BS in Nursing, BS in Nutrition and Dietetics, BS in Criminology, and BS in Food Technology students.

Table AN-29. CONAHS Enrolment Trend

	AY 2019-2020		AY 2020-2021		AY 2021-2022
	1 <sup>st</sup> Sem	2 <sup>nd</sup> Sem	1 <sup>st</sup> Sem	2 <sup>nd</sup> Sem	1 <sup>st</sup> Sem
BS in Nursing	72	71	137	125	166
BS in Nutrition & Dietetics	62	60	39	34	47
Total	134	131	176	159	213

It is noteworthy in Table 1 that there is an increasing trend in enrollment in the college from 2019 to 2021. To accommodate more aspiring professional health care workers, the development of the CONAHS building into a four-storey structure would be necessary. Moreover, upgrading the health science facilities would be of great help in assuring effective and holistic development of students’ competencies.



Figure AN-150. Proposed Four-Storey CONAHS Building



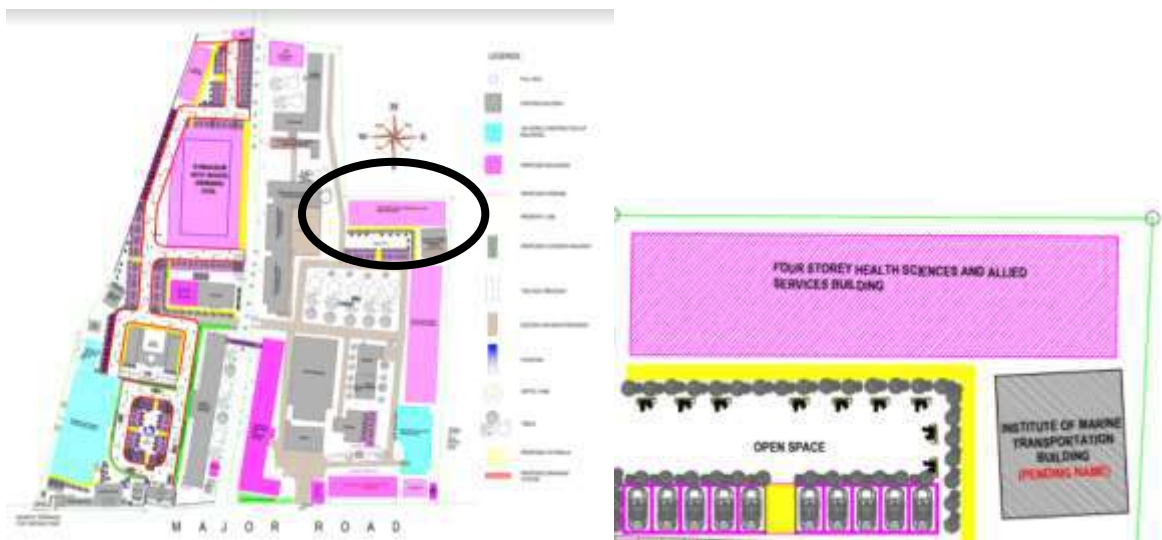


Figure AN-151. Location of Proposed Four-Storey CONAHS Building

The four-storey CONAHS Building with a total floor area of 2,624 sq.m. Is proposed to be situated at the north eastern part of the campus. Its first floor will consist of the Dean’s Office, Faculty Room, Research and Extension Services Office, cafeteria, and four laboratories (i.e. Nursing Skills and Simulation Laboratory, Nutrition and Dietetics Laboratory, Anatomy and Physiology Laboratory, and Microbiology and Parasitology Laboratory). Classrooms will occupy the second and third floors, with eight rooms on each floor to provide a conducive learning environment for the health sciences students. On the fourth floor of the proposed CONAHS building, there will be an amphitheater, a Student Center and interconnected rooms which can be utilized as venues for various college and campus events.

The development of the college infrastructure will not only contribute to the provision of quality education but will also be an instrument in enticing more students to begin their health science careers at BatStateU ARASOF-Nasugbu.

### Proposed 3-STOREY Gymnasium with Olympic Size Swimming Pool



Figure AN-152. Proposed 3-STOREY Gymnasium with Olympic Size Swimming Pool (Front View)



Figure AN-153. Proposed 3-STOREY Gymnasium with Olympic Size Swimming Pool (Side View)

College students and faculty members need proper support to succeed both in personal and professional life. Our campus, BatStateU ARASOF-Nasugbu, recognizes this need and will build a gymnasium with a swimming pool equipped with modern sports and wellness amenities. The gymnasium intends to help students and faculty alike develop a sound body and mind through different beneficial physical and health activities. It will be used primarily for physical education classes, and at the same time will offer the students and other members of the institution a change from their regular time table of studies, classes, teaching and the world of work.

The gymnasium will be home to many contests to be held in the campus, whether it be academic or cultural. With a total floor area of 6,958 sq.m. It can accommodate approximately 2,000 persons at a single time, allowing students to be active spectators of the school's activities and contests, favoring their holistic development. The gym will also feature an indoor basketball court, which can be converted to either volleyball court, badminton court, or tennis court. Indoor athletic games will also be accommodated inside the gym.

The Olympic size swimming pool measuring 50 meters long, 25 meters wide, and a minimum of 2 meters deep has a water capacity of 660,430 gallons. These measurements create a surface area of 13,454.72 square feet and a volume of 88,263 cubic feet. This pool will feature at least eight lanes with two outside lanes used as a buffer zone during a swimming competition. Each lane measures 2.5 m wide and is marked by a rope and buoys on top of the water and a lane line painted on the bottom. The lane lines end 2 m before the end wall of the pool as an indicator to the swimmer.

The modern sports and wellness amenities that come with the gymnasium will assure exposure to many types of exercises for fitness and endurance power. These amenities include Weight bars, Treadmills, Cross Trainers, Rowing Machine, Crunches Pads, Bench-press and Cycling Machines etc. that will motivate the students to exercise to burn extra fat or develop their muscles and strength.

As most people now are health conscious, the gymnasium with a swimming pool equipped with modern sports and wellness amenities is a very much welcome development in the school.

The Proposed Gymnasium building is a three (3)-Storey building that shall house:

## Ground Floor:

- Entrance porch
- Ramp for PWD
- Main Stairs (3)
- Electrical Room
- Hallway
- Pump Room
- Reception
- Male Restroom (Public)
- Female Restroom (Public)
- Indoor Olympic size Swimming Pool (25m x 50m)
- Bleachers
- Sport's Office
- Conference Room
- Shower Room (Male and Female) for athletes
- Toilet Room (Male and Female) for athletes
- Waiting Area
- Storage Room (for sports equipment's)
- Fire Exits (4)

## Second Floor:

- Male Restroom (Public)
- Female Restroom (Public)
- Waiting Area
- Electrical Room
- Hallways
- 1 Basketball court (28 x15m)
- 2 Volleyball court (18m x 9m)
- Shower Room (Male and Female) for athletes
- Toilet Room (Male and Female) for athletes
- Bleachers
- Fire Exits (4)

## Third Floor:

- Male Restroom (Public)
- Female Restroom (Public)
- Waiting Area
- Electrical Room
- Hallways
- Shower Room (Male and Female) for athletes
- Toilet Room (Male and Female) for athletes
- 2 Tennis court (23.77 m x 10.97m) for doubles
- 3 Badminton court (13.4m x 6.1m) for doubles
- Bleachers
- Fire Exits (4)

## Other facilities included in the project are:

- Cistern
- Fire Detection Alarm System
- Fire Protection Works



- Telephone Communication System, CCTV and Public Address System (PAS)
- Complete Grounding System
- Plumbing Works
- Septic Vault and Catch Basins
- Air – Conditioning and Ventilation Works

## On-Going Construction Of Proposed 4-Storey Livelihood Training Center



Figure AN-154. Location of Livelihood Training Center



Figure AN-155. On-Going Construction – Livelihood Training Center

Livelihood Training Center will be constructed to promote more needed job training and livelihood development for the essential family income in the area and nearby area. Batangas State University ARASOF-Nasugbu addresses the zero poverty and decent work economic growth as reflected in the Sustainable Development Goals of 2030.

The facility might also attract more linkages and promote more extension services’ programs, projects and activities that leads to securing all men and women, in particular the poor and the vulnerable, have equal rights to economic resources and access to basic services and/or to achieve full and productive employment and decent work for them.



Figure AN-156. Proposed 4-Storey Livelihood Training Center

**On-Going Construction of Proposed 4-Storey Student Services Center Building**





Figure AN-157. On-Going Construction of SSC Building



Figure AN-158. Proposed 4-Storey Student Services Center Building

As mandated by the Commission on Higher Education stated in Art. 11 of Section CMO No. 09 s.2013 regarding Enhanced Policies and Guidelines on Student Affairs & Services, The Batangas State University including ARASOF- Nasugbu provides student centered activities and services in support to academic instruction that facilitates holistic and well-rounded student development. While Sec. 11 of Art. 6 of the same Memo mandates that there must be an office to manage the student affairs and services.



At present, the offices of the student services in BatStateU ARASOF- Nasugbu are housed in separate old buildings that require its clientele's longer turnaround time when transacting business in various offices. And as a former vocational secondary school, the size and design of the student services and administrative offices were not tailored to nor adequate to accommodate and meet the changing demands of the increasing number of the students.

The Proposed Four-Storey Student Services Center will house both academic and administration offices which include Testing and Admission, Registration, Library, Guidance and Counseling, Scholarship, Student Discipline, Student Organization and Activities, Clinic, ICT, School Publication, NSTP/ROTC, OJT and Placement, Research and Extension, Sports and Development, Culture and Arts, and Administration Offices such as Human Resources Management, Accounting, Budget, Project Management Office, Cashier's, External and Internal Auditor, College Dean, Director for Administration and Financial Services and Executive Director Office.

Also included is the University Library at the third floor which will have a seating capacity of not less than 258 with additional reading area in the second floor. Most importantly, the building is designed to increase operational efficiency as to interoffice transactions for both the students and employees and will enhance aesthetic value of the physical learning environment.

### **VIP CORALS (Verde Island Passage Center for Oceanographic Research and Aquatic Life Sciences) Nasugbu Marine Station**



Figure AN-159. Proposed VIP CORALS

The Verde Island Passage (VIP) is the center of the center for marine shore fish biodiversity in the world. It is the heart of marine life of the coral triangle.

VIP is one of the most important fishing grounds where more than half of the marine species in the country inhabit. It is one of the shipping routes that provide services in bringing goods from one dock to another, and is recognized as a tourist attraction which increases the livelihood of coastal communities surrounding it.

However, these also pose a significant threat to its marine ecosystem. Overpopulation, pollution, shipping activities, mining activities, overfishing, and even climate change poses serious and harmful effects to Verde Island Passage. Local governments and organizations have taken efforts in conserving and protecting its aquatic resources, but the risk remains high.

For its part, Batangas State University has established a marine research center called the “Verde Island Passage Center for Oceanographic Research and Aquatic Life Sciences” or simply VIP CORALS. This marine center houses different facilities and equipment namely: Main Laboratory Building, Outdoor Hatchery Facility, and Dive Locker Facility that are necessary for providing research, education and extension services. It focuses on the marine shore ecosystems which is home to about 300 corals, 1700 shore fishes, turtles, dolphins, whales and other marine invertebrates and plants. These ecosystems provide food and nursing ground to higher organisms, and support local livelihood and ecotourism.

VIP CORALS will help sustain the richness and diversity of the Verde Island Passage through research projects that will monitor the marine ecosystem. It shall also form linkages with surrounding institutions, organizations, local government units and common fisher folks.

Batangas State University ARASOF-Nasugbu is identified to put up a station for the VIP CORALS headed by Dr. Enrique Miguel Ma. Ascuna.

### **Fisheries and Aquaculture Research Center**

Batangas State University ARASOF-Nasugbu Research Office is targeting to be known as fisheries and aquaculture research campus in the next 3-5 years. One of the proposed plans is to have a fisheries and Aquaculture Research Center which will be located on the proposed HEB (Higher Education Building) II. The said center will be comprised of the following laboratories: Aquaculture and Fish Hatchery Wet Laboratory, Fish Health/Microbiology Laboratory, Genetics and Molecular Biology Laboratory, Fish Nutrition Laboratory, Ichthyology and Fish Physiology Laboratory, Marine / Oceanography / Capture Fisheries, Fish Processing Technology, and Laboratory wares, Reagents and Culture Media. Those laboratories were described clearly in the proposed Higher Education Building (HEB) II.

The facility could possibly the approach of the research office to increase the economic benefits to the community from the sustainable use of marine resources, fisheries, aquaculture and tourism as well and/or increase scientific knowledge, develop research capability and transfer fisheries and aquaculture technologies in order to improve ocean health and enhance contribution of marine biodiversity and management of fisheries.

### **Commercial Areas**

#### **School Cafeteria**

Batangas State University has its cafeteria on its two (2) compounds. Ground 1 canteen is conveniently located next to the Gymnasium, making it easy to stop for breakfast, a snack, or lunch. The canteen is well ventilated and has a welcoming environment due to its adequate number of tables and clean and tidy area. It also has an



upper deck for additional space. With an area of 193 sq., it contains several stalls that offer a different variety of food at an affordable and student-friendly price.



Figure AN-160. Location of the Existing Canteen in Ground 1

The cafeteria on campus ground 2 is an open cafeteria with a land area of 257 sq.m. and 8 food stalls serving a variety of dishes for breakfast, snacks, and lunch. The cafeteria can accommodate 140 students and has 2 comfort rooms and a handwashing area. The number of students has risen by 30% each year in the past 2 years. The existing cafeteria cannot accommodate the increasing number of students, for that reason, some students go outside of the campus to have their meals somewhere else.



Figure AN-161. Existing Cafeteria in Ground 2



The university plans on extending the cafeteria for the convenience and safety of the students, employees, and guests. They proposed an extension of 126 sq.m. on a vacant lot beside the existing cafeteria. These can accommodate a maximum of 115 students. The extension will consist of 10 additional 12-seater tables, a two (2) new comfort room for male and female, and a hand washing area.

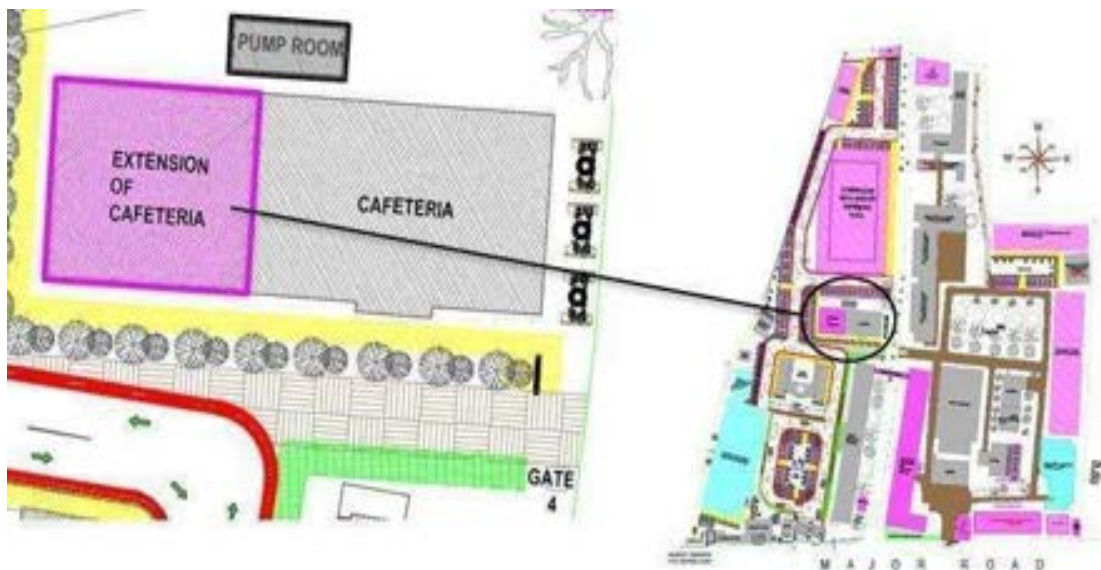


Figure AN-162. Location of the Existing and Extension of Cafeteria in Ground 2



Figure AN-163. Proposed Extension of Cafeteria in Ground 2

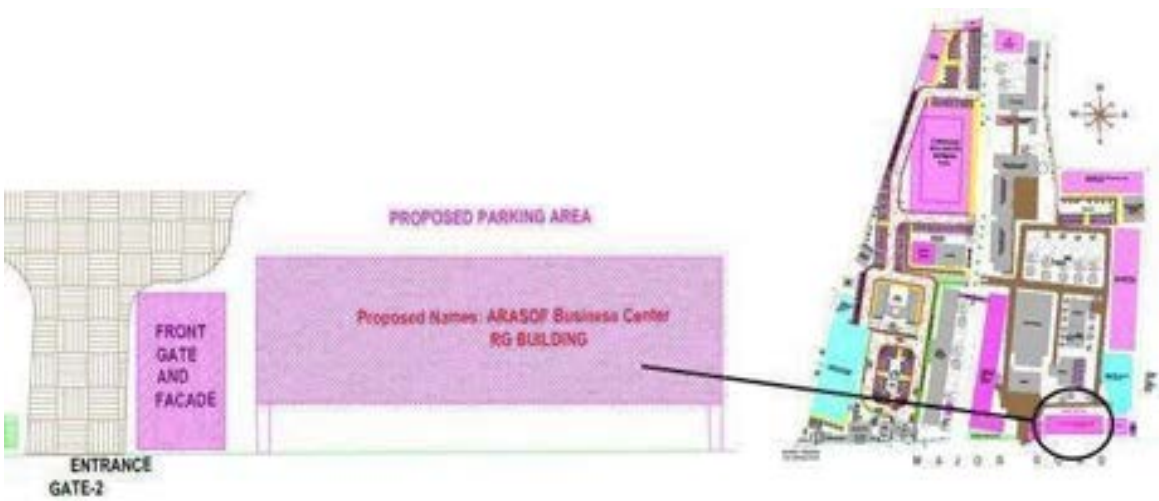


Figure AN-164. Location of the Proposed RG Building in Ground 2





Business Center

The University responds to the needs of its students, faculty and staff and other members of the community through identification of their needs and making these needs available for their convenience. The University Resource Generation Office (RGO) caters to all business-related activities, projects, and programs engaged in by the University.

RGO provides quality and affordable school uniforms; books directly ordered from the author or authorized publisher at the cheapest price; and they are also responsible for providing the space for canteen tenants to provide a wide variety of food choices at an affordable price; and quality and affordable souvenirs and items for students, faculty, alumni, and guests.

The current 40 sq.m. space of the RGO is not sufficient to accommodate the needs and assistance of its clientele. Due to the growing number of university students, the demand for supplies is continuously increasing. The RGO is not only used for the display of items but also serves as storage for their stocks.

Table AN-30. Enrollment Trend (2019-2022)

	AY 2019-2020		AY 2020-2021		AY 2021-2022
	1 <sup>st</sup> Sem	2 <sup>nd</sup> Sem	1 <sup>st</sup> Sem	2 <sup>nd</sup> Sem	1 <sup>st</sup> Sem
Laboratory School	551	549	513	513	554
College	2,880	2,638	4,081	3,803	5,846
Total	3,431	3,187	4,594	4,316	6,400

The project for a bigger space for the RGO is being planned. The RGO proposes to expand its horizons by offering other lines of business and services to the students, faculty, and the community. Several projects are planned to be part of the RG's operation, including the Pasalubong Center and the Shops that will be open to the public.

Description of the Two (2) -Storey Business Center

- A. AREA: 770 m<sup>2</sup>
- B. The building construction in general will be reinforced concrete framed structure with concrete hollow blocks (CHB), glass panels on aluminum framing and combination of CHB and drywall partitions as walls;
- C. Ancillary works associated with the facility includes but not limited to potable water, utility water, sanitary and surface drains and electric lighting and power.
- D. The Proposed Business Center building is a four (2)-Storey building that shall house:

GROUND FLOOR



- Entrance porch
- Ramp for PWD
- Main Stairs (2)
- Electrical Room
- Hallway
- Male Restroom
- Female Restroom
- Concessionaires (10 units)
- Storage Room
- Fire Exits (1)

### SECOND FLOOR

- Supply Office
- Storage Room
- Procurement Office
- Elevator Lobby

### Other facilities included in the project are:

- Cistern
- Fire Detection Alarm System
- Fire Protection Works
- Complete Grounding System
- Plumbing Works
- Septic Vault and Catch Basins
- Air – Conditioning and Ventilation Works



Figure AN-165. Proposed Two (2) - Storey Business Center



Figure AN-166. Proposed Two (2) - Storey Business Center (Front View)



Figure AN-167. Proposed Two (2) - Storey Business Center (Side View)

**OTHER BUILDINGS AND FACILITIES**

*Gate and Façade for Ground 1*





Figure AN-168. Gate and Façade for Ground 1

With a total floor area of 92 sq.m., the building construction in general will be reinforced concrete framed structure with concrete hollow blocks (CHB), aluminum cladding and steel frames. Ancillary works associated with the facility includes but not limited to potable water, utility water, sanitary and surface drains and electric lighting and power.

**The Proposed Gate and Façade is a one (1)-Storey building that shall house:**

- Entrance porch
- Ramp for PWD
- Main Stairs
- Electrical Room
- Walkway
- Male Restroom (Public)
- Female Restroom (Public)
- Reception
- Fence
- Gate
- Biometrics
- Fire Exit (1)

**Other facilities included in the project are:**

- Cistern
- Telephone Communication System, CCTV and Public Address System (PAS)
- Complete Grounding System
- Plumbing Works
- Septic Vault and Catch Basins

***Power House and Upgrading of Electrical System***



The existing panel boards can no longer supply the power requirements of the new and proposed buildings in Ground 1. Furthermore, it was already not in a good condition and was subject for replacement. Also, the existing generator was defective and was declared condemned a long time ago. The existing powerhouse was 85% dilapidated and is subject for demolition in the next few years.



Figure AN-169. Proposed Power House

The proposed power house for Ground 1 has a total floor area of 29 sq.m. It will house the Generator Area, Panel Boards, Ramp for machines and generator, complete grounding system and catch basin. While the proposed powerhouse for Ground 2 also has a total floor area of 29 sq.m.

### ***Proposed One (1) -Storey Maintenance building***

The proposed Maintenance Building with a total floor area of 208 sq.m. will house all storages, shops and work areas such as Electrical Room, Storage Room, Carpentry Works Area, Masonry Works Area, Welding Works Area, Plumbing Works Area and Air-conditioning and Ventilation Works Area.

#### **Other facilities included in the project are:**

- Restroom
- Cistern
- Plumbing Works
- Septic Vault and Catch Basins
- Ventilation Works

### **Proposed One (1) -Storey Materials Recovery Facility**



Figure AN-170. Proposed Materials Recovery Facility (Front View)



Figure AN-171. Inside of the Proposed Materials Recovery Facility

Although there is an existing Materials Recovery Facility (MRF) in the campus, the Environmental Management Unit (EMU), being the office that handles all the environmental activities of the campus, deemed it necessary to include a new MRF in the campus' 10-year Land Use Development and Infrastructure Plan (LUDIP) which is designed to have a bigger capacity, thus, suggesting a more efficient usage.

A waste segregation facility like an MRF is significant as the campus mainly generates a solid kind of waste. Its function is to receive wastes collected all over the campus which are subject for segregation. These wastes, then, will be processed and the qualified materials such as biodegradable and recyclable wastes will be recovered and stored until it is time for appropriate actions—all performed in an efficient and environmentally-friendly manner. Likewise, the new MRF will include the provision of a special storage area—which is safe, secured, and well-ventilated—intended solely for all the hazardous waste generated in the campus.

The provision of a Material Recovery Facility and the processes involved therein is compliant to the national environmental laws such as, but not limited to, the Republic Act No. 9003 or otherwise known as the "Ecological Solid Waste Management Act of

2000,” and the Republic Act No. 6969 or the "Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990."

Other major development programs include road network development to provide adequate parking spaces and proposed drainage network for Ground 2. Site development plans for these programs are shown below.

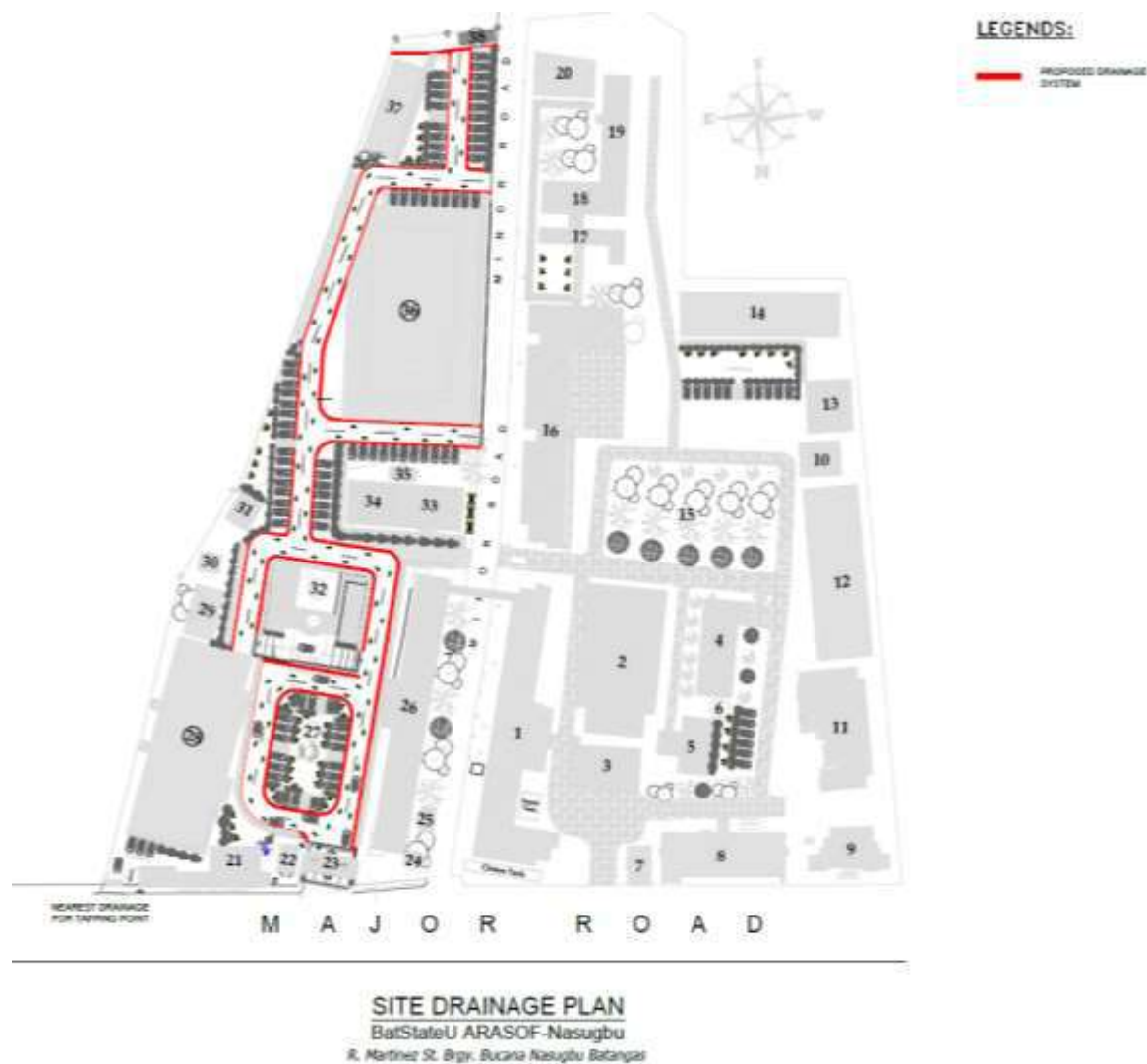


Figure AN-172. Proposed Site Drainage Plan



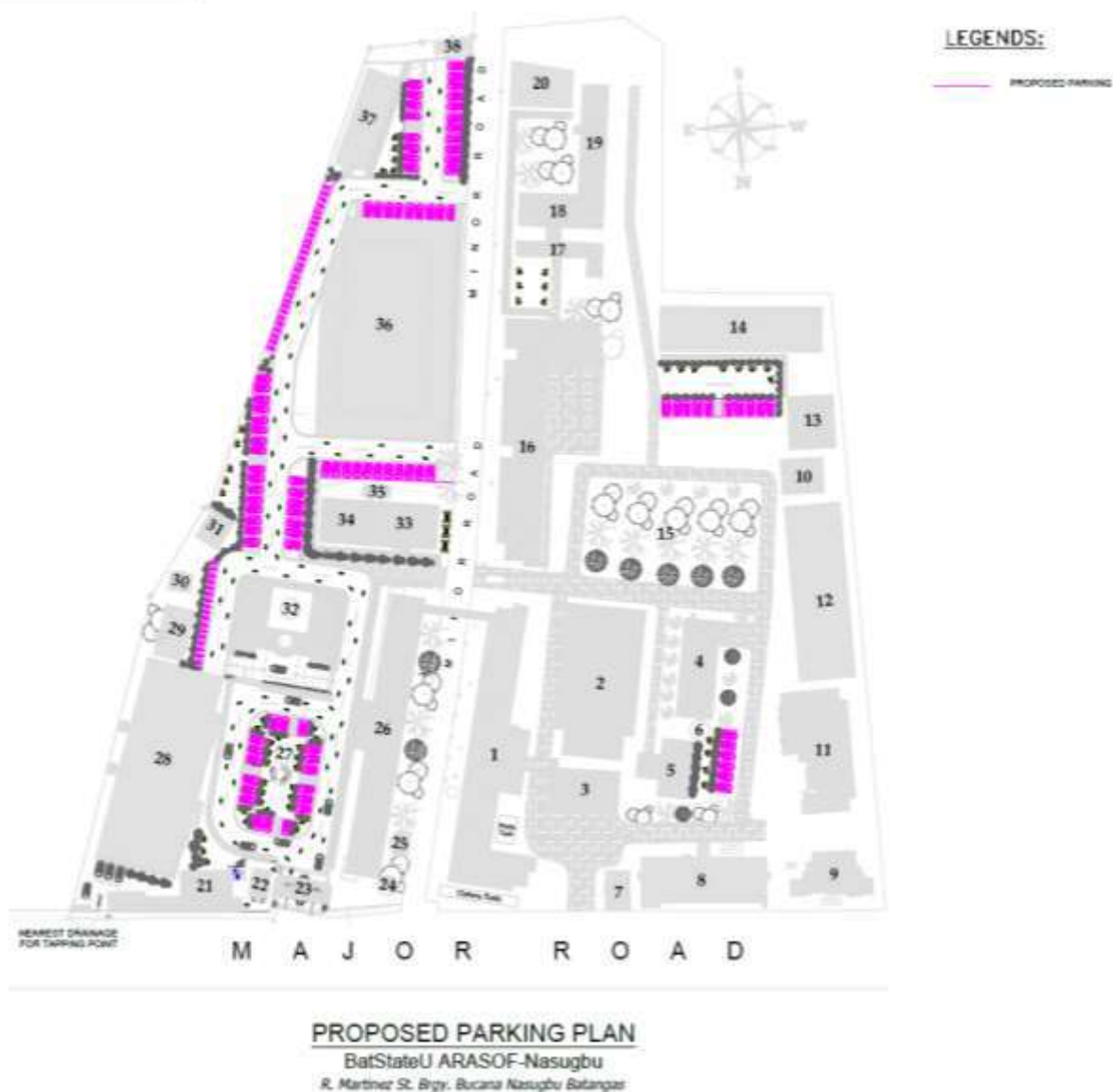


Figure AN-173. Proposed Parking Plan

BatStateU Fishery is the one of the land properties owned by the University that are intended for various fishery-related activities, projects, and laboratories.

The property used to be utilized as ARASOF fishponds for its Fishery Programs but currently, the ponds are not suitable for fish culture and cultivations due to water contaminants. The proponents are proposing to develop the land for tilapia culture and aeroponics farming of lettuce or other possible vegetables provided that solutions for the existing problems are to be addressed.

The project is the first of the phase projects for the BatStateU FISHERY Project wherein it proposes to utilize the 10,165.78 sq.m farm lot property by developing a fishery innovation and aquatic hub. The hub is envisioned to house state-of-the-art and smart-ready facilities for fishery laboratories and research on fish culture and cultivation as well as on aeroponics, hydroponics, and aquaponics farming. The hub will be a center for collaborative research, extension activities, and academic activities of different colleges of the BatStateU ARASOF-NASugbu with a distinct focus on fishery and aquatic education and technology.

In the facility, fifteen concrete fish ponds will be constructed (see figures for perspective drawings) with variations in area for each pond depending on the purpose.



The whole area is proposed to be part of the five-year development plan of the University anchored to the BatStateU Strategic Plan 2019-2029.

The BatStateU FISHERY Project aims to construct and establish a state-of-the-art fishery and aquatic study innovation hub facilities utilizing the one-hectare farm lot property of the Batangas State University ARASOF-Nasugbu in Barangay Bucana, Nasugbu, Batangas. Specifically, it aims to achieve the following:

- 1. Construct and establish a state-of-the-art fishery laboratory;
- 2. Construct and establish state-of-the-art and smart fish ponds and facilities;
- 3. Construct and establish aeroponics, hydroponics, and aquaponics greenhouse; and
- 4. Construct and establish fishery resource-generation and fishery recreational facilities.

The BatStateU FISHERY Project proposal has an estimated budget for the infrastructure totaling PHP 281, 305. 660.00. Table 1 shows the different infrastructures in the proposed project.

Table 1: ESTIMATE - BATSTATEU FISHERY				
DESCRIPTION	AREA (SQ.M)	FLOORS/QUANTITY	COST PER SQ.M	TOTAL
EARTHFILL				P 25,000,000.00
ADMINISTRATION AND LABORATORY BUILDING	1,058.94	2	P 40,000.00	P 84,715,200.00
DAMPA OPEN RESTAURANT	209.89	1	P 30,000.00	P 6,296,700.00
ORNAMENTAL FISHES BREEDING FACILITY AND DISPLAY AREA	173.25	1	P 40,000.00	P 6,930,000.00
AQUAPONICS, AEROPONICS, AND HYDROPONICS SYSTEM	273.40	1	P 32,000.00	P 8,748,800.00
COVERED OUTDOOR AREA FOR FISH SEGREGATION AND HARVESTING	156.00	1	P 15,000.00	P 2,340,000.00
STAFF QUARTERS	60.00	1	P 40,000.00	P 2,400,000.00
STOCK ROOM	40.00	1	P 40,000.00	P 1,600,000.00
LIFE BEARER TANKS	75.00	1	P 40,000.00	P 3,000,000.00
SPAWNING TANKS	50.00	1	P 40,000.00	P 2,000,000.00
INDOOR HATCHERY	75.00	1	P 40,000.00	P 3,000,000.00
OUTDOOR HATCHERY	75.00	1	P 40,000.00	P 3,000,000.00
GUARD HOUSE	22.00	1	P 40,000.00	P 880,000.00
POWER HOUSE	18.00	1	P 40,000.00	P 720,000.00
PUMP ROOM	24.91	1	P 40,000.00	P 996,400.00
FISHYALAN	575.07	1	P 40,000.00	P 23,002,800.00
FISHPOND AREA WITH MINOR DRAINS	3,523.64	1	P 25,000.00	P 88,091,000.00
PERIMETER FENCE	1,562.06	1	P 12,000.00	P 18,744,720.00
WALKWAYS AND ROADWAY	1,400.00	1	P 15,000.00	P 21,000,000.00
CONCRETE PLANTERS	200.00	1	P 2,000.00	P 400,000.00
PARKING AREA	219.34	1	P 15,000.00	P 3,290,040.00
NIPA HUT		3	P 50,000.00	P 150,000.00
GRAND TOTAL				P 281,305,660.00

The BatStateU FISHERY Project is a long-term development plan which shall be ultimately unified with the Fishery and Aquatics Program of the University to fully enhance the quality of the program, and establish the campus as a center for excellence in fishery education in the region. This program shall be segmented into planned integral phases and shall be monitored by milestones and key performance indexes for each part of the project. Monitoring tools such as Gantt Charts, Project Monitoring, and Project Management tools shall be utilized partnered with agile project management.

Summary of Structures

Structure	Area (m²)	Qty
Ornamental Fishes Breeding Facility and Display	173.25	1
Administration and Laboratory Building	1058.94	1
Dampa Open Restaurant	209.89	1
Outdoor Area for Fish Segregation and Harvesting	156	1



Aquaponics, Aeroponics, and Hydroponics System	273.4	1
Fishyalan	575.05	1
Pump room	24.91	1
Guardhouse	22	1
Power House	18	1
Staff Quarter	40	1
Stock Room	25	1
Life Bearer Tanks	75	1
Spawning Tanks	50	1
Indoor Hatchery	75	1
Outdoor Hatchery	75	1

Table AN-31. Summary of Structures





Figure 1 shows the Aerial view of the 1-hectare land of the BatStateU ARASOF-Nasugbu in which the location is in the middle and with an uneven perimeter. The piece of land was once with several fishponds and used as the laboratory for the fish culturist and became a source of income for the campus. The source of water for the ponds was contaminated due to the drainage coming from the supermarket, the operation was halted and up until this moment, the land is still unused. As estimated, the budget needed for the earth-fill for this size of land is approximately amounting to twenty-five million pesos (PHP 25,000,000.00). Manifest in the layout is those several fishponds for aquaculture, fishery research and extension activities, and other activities related to the fishery, likewise, the administration and laboratory building has a great size in terms of land area for it houses the modern laboratories for fisheries.



Figure AN-175. Proposed Ornamental Fishes Breeding Facility and Display Area

The Proposed Ornamental Fishes Facility and Display Area is an aquarium designed building with transparent glass walls. This will be one of the main highlights of the entire fishpond. It will be designed like that for the people to easily sight the ornamental fishes with various aquarium sizes inside the building and give the people an interesting view. The total floor area of the proposed building is 173.25 sq.m.



Figure AN-176. Proposed Administration and Laboratory Building

The Proposed Two (2) – Storey Administration and Laboratory Building with a total floor area of 1058.94 sq.m. will be used for administrative tasks and laboratory activities. The ground floor of the building will consist of the Information Area, Infirmary, Admin Office, Aquaculture Mini Museum, Market Office, Canteen, Planning Department, Record Keeping, Lobby, Meeting Room, Maintenance Department, Locker Room, Library, and two (2) Comfort Rooms. The second floor will include most of the laboratory areas. It will have the Executive’s Office, Researcher’s Office,



Culture Room, Fishery Sciences, Sterilization Room, Microscopy Room, Dissection Room, Weighing Room, Emergency Shower/Eyewash Station, two (2) Laboratory Rooms, Stock Room, Analysis Office, Marine Studies, AVR Room, and two (2) Comfort Rooms. Fire exits will be included for the safety of the building.



Figure AN-177. Proposed Open Dampa Restaurant

The Open Dampa Restaurant with a total floor area of 209.89 sq.m. is a one (1) – storey building that will be used for preparation and serving of foods and drinks to satisfy customers nearby the area. The restaurant will consist of the Dining Area, Cashier, Storage Room, Kitchen, Comfort Rooms, Handwashing Area, and Dish Room. It will be an interesting venue because you can eat fishes from the Palaisdaan such as Tilapia, Bangus, and other food fish species will be offered in the restaurant. Dampa is conceptually where the different types of fish dishes are cooked and served, as well as managing a restaurant for the laboratory of the Bachelor of Science in Hotel and Restaurant Management students and other students having or needing the establishment for academic, research and extension services activities.





Figure AN-178. Proposed Aquaponics, Aeroponics, and Hydroponics System Building

Proposed Aquaponics, Aeroponics, and Hydroponics System Building will serve as the planting site of the Bucana Fishpond. It will consist of several kinds of plants that can be included in this modern farming system. There will be an area for hanging plants and others will be suspended in wide water tanks. The proposed building will have an area of 273.4 sq.m. This is where the different researches in the said field will be conducted. Academicians and researchers could use the area for such activities.



Figure AN-179 Proposed Fishyalan

The Proposed Fishyalan with a total area of 575.07 sq.m will be one of the recreational areas of the whole development site. It will have three (3) connecting bridges around the Fishyalan Area for the individuals to simply wander around that part. Fishing boats will be provided to those people who want to experience a closer look and feed fishes such as Koi Fish and others.



Figure AN-180. Proposed Palaisdaan

The Proposed Palaisdaan will consist of fifteen (15) set of basins with different sizes having a total area of 3523.64 sq.m. Edible fishes will be raised and cultivated in the fishpond such as Tilapia, Catfish and Bangus, etc. It will also have minor drains to maintain the standard height and water quality necessary in the basins. The fishponds will be a concrete pond with earthen floor.



Figure AN-181. Proposed Covered Area for Fish Segregation and Harvesting

The Proposed Covered Outdoor Area for fish segregation and harvesting will have a total floor area of 156 sq.m. It is the nearest area of the entire Palaisdaan for important activities such as the separation and gathering of different varieties of fishes. It is vital for the freshness and quality of the harvested fishes.





Figure AN-182. Proposed Staff Quarters

The Proposed Staff Quarters will provide the rooms needed by the people working and taking care of the site. The floor area of the proposed quarters is 60 sq.m. It will be consisting of one (1) room for Female Staff, one (1) room for Male Staff, Living Area, Dining Area, and Comfort Room.



Figure AN-183. Proposed Stock Room

The Proposed Stock Room with a total area of 40 sq.m will be the storage location for supplies needed in the Palaisdaan and feeds for the fishes.





Figure AN-184. Proposed Live-Bearer Tanks Facility

The Proposed Live-Bearer Tanks will serve as the containers for the fishes that give birth to living young. The floor area of the proposed facility is 75 sq.m.



Figure AN-185. Proposed Spawning Tanks Facility

The Proposed Spawning Tanks is a facility with a total floor area of 50 sq.m. This will be the facility area for the female fishes releasing large quantities of unfertilized eggs into the water while male fishes will release milt to fertilize the eggs.



Figure AN-186. Proposed Indoor Hatchery

The Proposed Indoor Hatchery will serve as the facility to condition breeders to delay or advance their maturation cycle. It will have a total floor area of 75 sq.m.



Figure AN-187. Proposed Outdoor Hatchery

The Proposed Outdoor Hatchery will serve as an outdoor nursery area of fishes under certain environmental conditions. The total floor area of the proposed facility is 75 sq.m.





Figure AN-188. Proposed Guard House

The Proposed Guard House with an area of 22 sq.m will provide the security necessary in the Bucana Fishpond Site and the people inside the entire facilities.



Figure AN-189. Proposed Power House

The Proposed Power House will supply the electric power in the site. It will consist of a total floor area of 18 sq.m.





Figure AN-190. Proposed Pump Room

The Proposed Pump Room with an area of 24.91 sq.m will be the facility to pump water in all the structures in the site.

## H. DISASTER RISKS AND CLIMATE CHANGE ADAPTATION

Nasugbu is a first-class municipality in the province of Batangas and is considered as the largest and one of the oldest towns in the western coast of Batangas. Nasugbu is approximately 102kms from the country's capital and 70 kms from the provincial capital. It is a major tourism destination and a favorite leisure and vacation get-away of local and international tourists because of its proximity to Manila. The town is blessed with abundant natural resources and picturesque sceneries. It offers a wide range of tourist attractions, historical, cultural, man-made, and natural. Nasugbu was declared as a Special Tourism Zone in 2007 under Executive Order No. 647.

### TOPOGRAPHY

Nasugbu is characterized by variation in topographic relief. Areas Located on the eastern side of the Poblacion and lining the shores on the Western side are predominantly level to gently sloping. The southern portions of the municipality are gently sloping while the Northwestern section is mountainous. Mainly, terrain slopes downwards to the South China Sea and as shown in the slope map generated from the slope map of Batangas by the bureau of soils of the province of Batangas.

The Municipality of Nasugbu is located in the coastal areas (Western tip) of the province of Batangas with a bearing of 14 degrees 04 minutes latitude and 120 degrees longitude. It is bounded on the north by the Municipalities of Maragondon, Magallanes and Alfonso (Cavite), on the east by the municipalities of Laurel, Calaca and Balayan (Batangas); on the south by the Municipalities of Lian and Tuy; and on the west by the South China Sea. Travel distance from Metro Manila is about 102 kilometers via Tagaytay City. From Batangas City, which is the provincial capital, its distance covers about 70 kilometers, traversing through several municipalities of the province.



Batangas State University ARASOF-Nasugbu is located in R. Martinez Street Barangay Bucana in Nasugbu Batangas.

CLIMATE

The climate in Nasugbu where the campus is located falls under Type I classification, characterized by two pronounced seasons: dry season from November to April and wet season for the rest of the year. The annual average temperature in the municipality is 27.3 °C (81.1 °F). January is the coolest month having an average temperature of 25.8 °C (78.4 °F), while April is the warmest month registering an average temperature of 29 °C (84 °F).

A. VULNERABLE AREAS

Municipality of Nasugbu is exposed to seven (7) natural hazards: typhoon, tsunami, storm surge, landslide, flooding, earthquake and volcanic eruption.

Being a typhoon-prone area with coastal, forest, and agricultural ecosystems, Nasugbu is most susceptible to typhoons, flooding and landslides due to typhoons and windstorms, and potentially, tsunamis. Of these, the most frequent hazard encountered are typhoons.

While there has not been an occurrence of tsunami, this is something that the municipality must prepare for especially in this era of climate change.

Other hazards posing danger to the municipality are dengue, fire, and volcanic eruption.

Table AN-32. Hazards Affecting Nasugbu

HAZARD	PROBABILITY		IMPACT		AVERAGE P+1 / 2	RANK
	TE	REMARKS	RATE	REMARKS		
Typhoon	5	The event is expected to occur in many or most cases	5	Moderate	7.5	1
Rain Induced Flooding & Storm Surge	5	The event is expected to occur in many or most cases	3	Minor	6.5	2
Vehicular Accidents	5	The event is expected to occur in many or most cases	3	Minor	6.5	2
Dengue	3	The event could occur at some time, but probably will not	3	Minor	4.5	3
Rain Induced Landslide	3	The event might occur at some time, and probably will not	2	Minor	4	4
Residential Fire	2	The event might occur at some time, and probably will not	2	Minor	3	4



Industrial Fire	2	The event could occur at some time, but probably will not	2	Minor	3	4
Earthquake	1	The event may occur only in exceptional cases	3	Moderate	2.5	5
Volcanic Eruption	1	The event may occur only in exceptional cases	3	Moderate	2.5	5
Tsunami	1	The event may occur only in exceptional cases	3	Moderate	2.5	5

1. FLOODING

There are 5 areas in the municipality highly susceptible to flooding: Barangays Balaytigue, Catandaan, Looc, Pantalan, and Poblacion 5.

Table AN-33. Summary Table on Barangay Susceptibility to Flooding

HIGH	MODERATE	LOW TO MODERATE TO HIGH	LOW TO HIGH	MODERATE TO HIGH
Balaytigue Catandaan Looc Pantalan Poblacion 5	Papaya Poblacion 1 Poblacion 3 Poblacion 7 Putat Talaman	Bucana Bulihan Maugat Utod	Bilaran Bunducan Dayap Lumbangan MalapadnaBa to Natipuan	Calayo Cogonan Poblacion 6

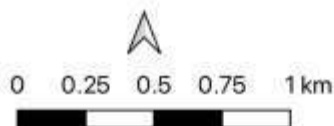
Barangays Papaya, Bucana, Wawa, Natipuan, and Calayo, while not classified as highly susceptible to flooding based on MGB assessment, have residents living within two kilometers from the coastline, hence, at alert level during typhoons.





## Nasugbu ARASOF 0.5 Flood Susceptibility Map

  
Batangas State University  
The National Engineering University



### Legend:

-  BatStateU Campuses
-  0.5m Flood Susceptibility
-  Nasugbu
-  Batangas Municipal Boundaries
- Geophysical Features**
-  Wet lands/ Swamps/ Rice Fields
-  Rivers

Map Scale 1: 21590

Author : GIS Application  
Development Center  
STEER Hub  
Date : September 15, 2022  
Base Map : ESRI Topographic  
Map

Figure AN-191. Nasugbu ARASOF 0.5 Flood Susceptibility Map

## 2. LANDSLIDE

There are only 2 areas in the municipality highly susceptible to landslides: Barangay Kaylaway and Latag.

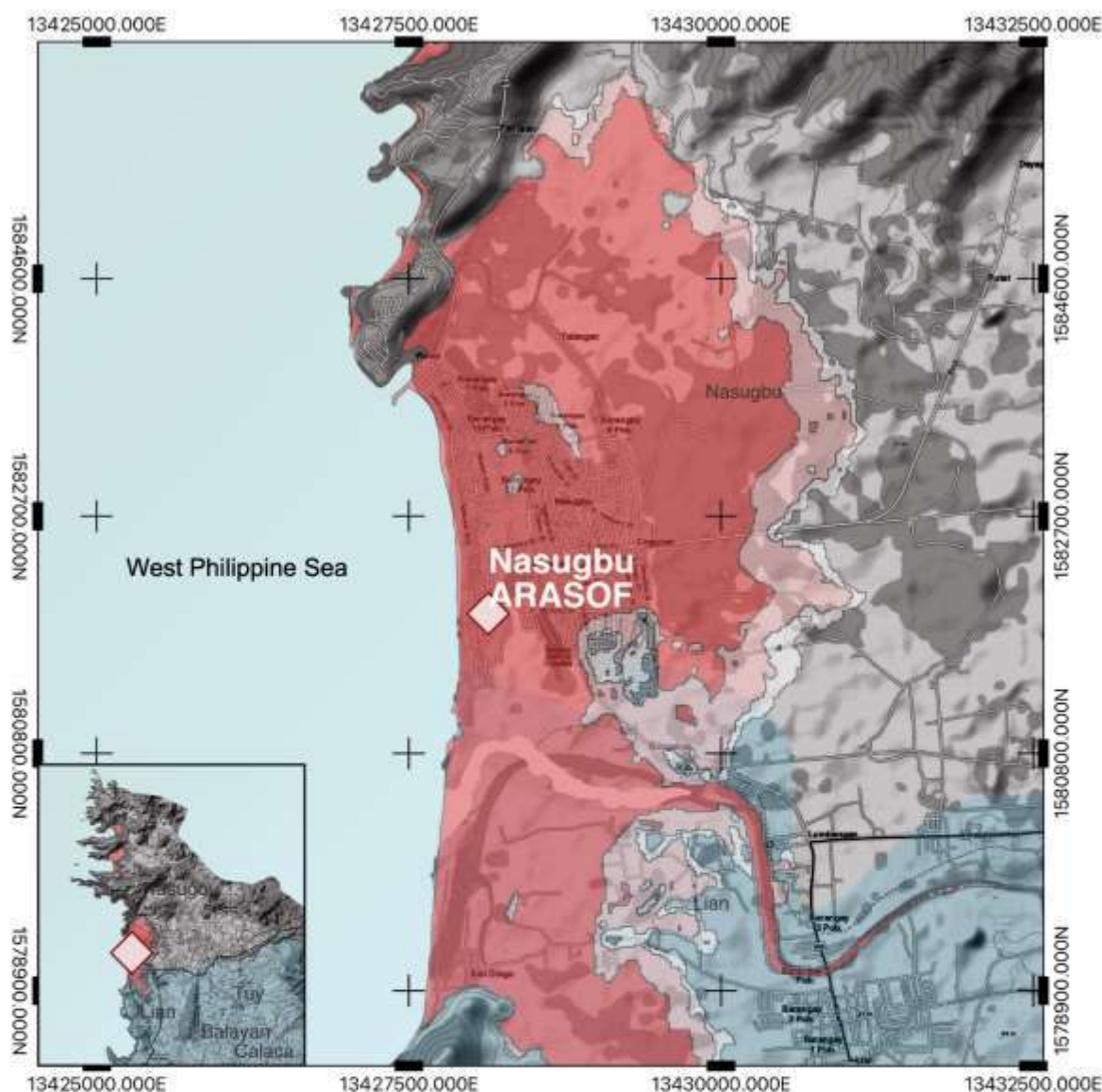


Table AN-34. Summary Table on Barangay Susceptibility to Landslide

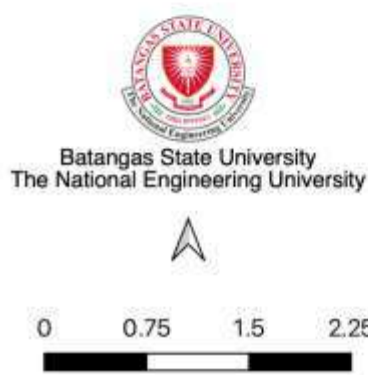
HIGH	MODERATE	LOW TO MODERATE	LOW TO HIGH	MODERATE TO HIGH
Kaylaway Latag	Aga Papaya	Bulihan Calayo Munting Indang	Latag	Bulihan Kayrilao

3. STORMSURGE AND TSUNAMI






In the Tsunami Hazard Map prepared by PHIVOLCS for Nasugbu, an earthquake of 8.2 magnitude can trigger a tsunami with wave height of 7.28 up to 7.45 meters, inundating approximately 4 kilometers from the coastal barangays, the entire Poblacion area and nearby barangays.



GIS Map of Storm Surge Hazard  
BatStateU ARASOF

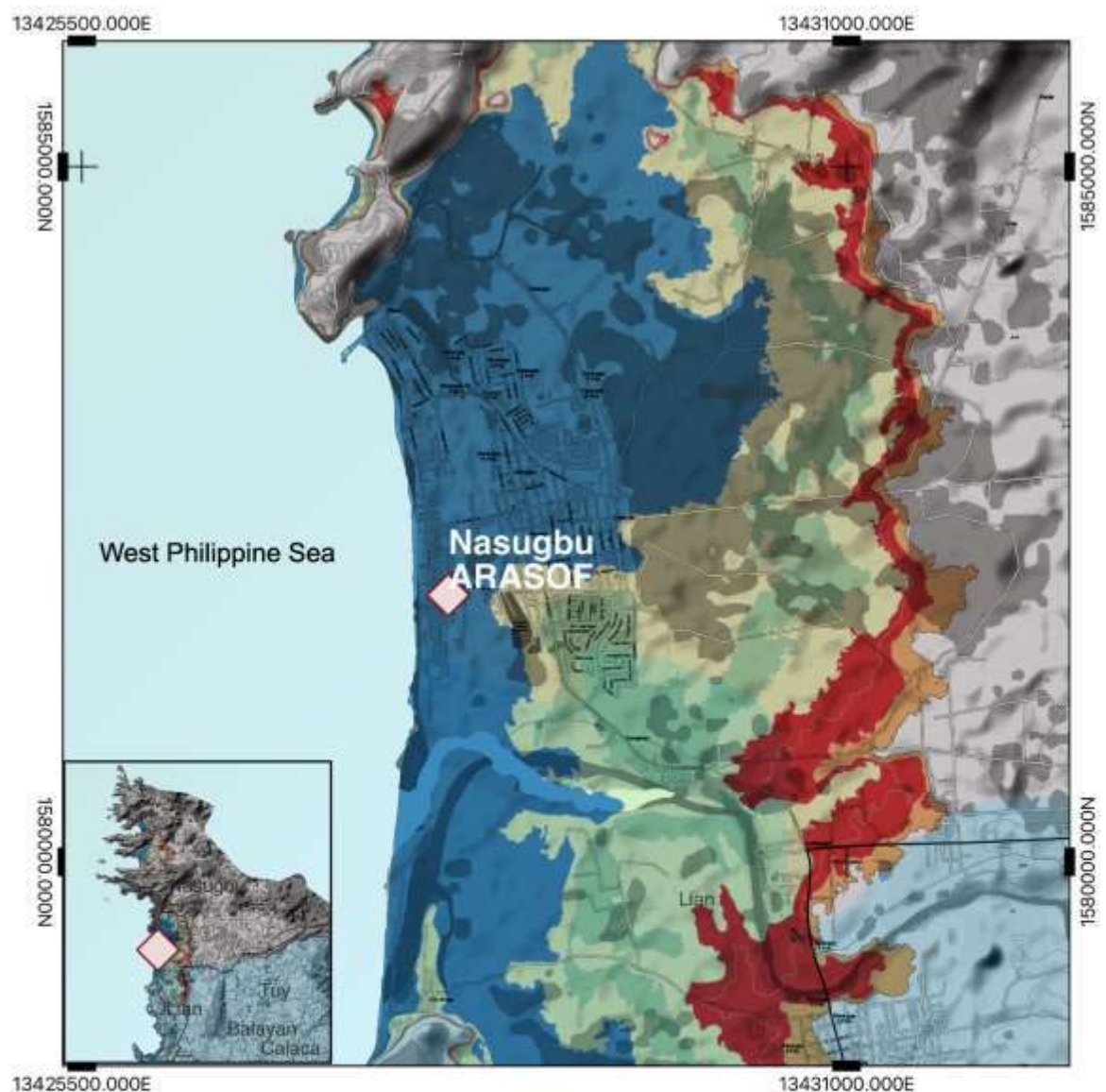


## Legend:

-  BatStateU ARASOF Nasugbu
- Risk level
-  1 - 1
-  1 - 2
-  2 - 2
-  2 - 3
-  3 - 3

Map Scale 1: 21590  
 Author : GIS Application Development Center  
 STEER Hub  
 Date : September 15, 2022  
 Base Map : ESRI Topographic Map





Tsunami Hazard Map of ARASOF Campus

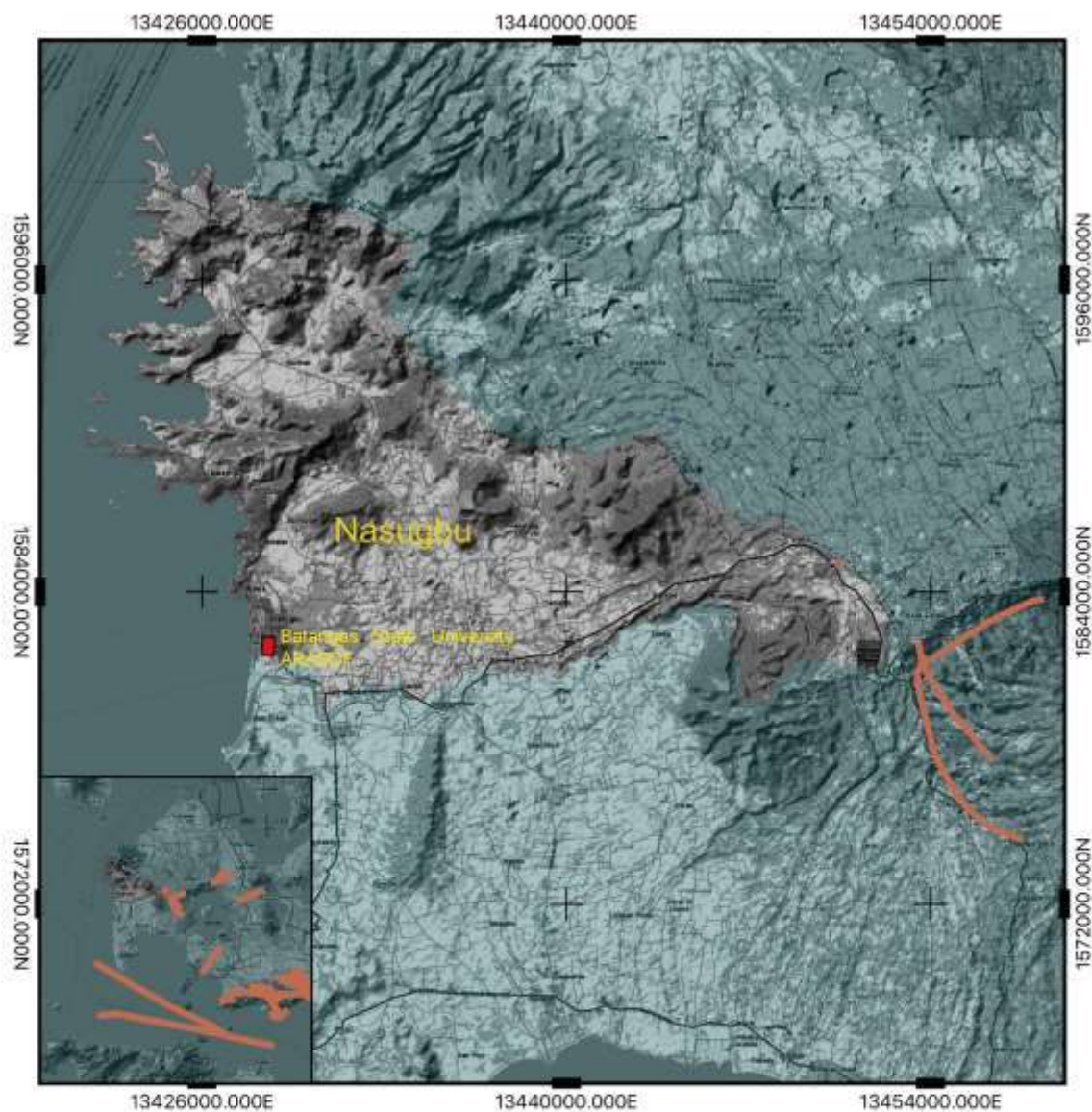


Figure AN-178. Tsunami Hazard Map of ARASOF Campus

## 4. EARTHQUAKE

Earthquakes in Nasugbu, Batangas may occur only in exceptional cases. Existing fault lines are the following: Lubang Fault, Phil. Trench, West Valley Fault, Lubang Fault which can be triggered by Lubang Fault, Manila Trench & Philippine Trench.

Since earthquakes cause ground shaking, there is need to retrofit of all infrastructure in BatStateU and prevent harm by conducting earthquake drills.



Fault Line GIS Map within Batangas : ARASOF Nasugbu Campus

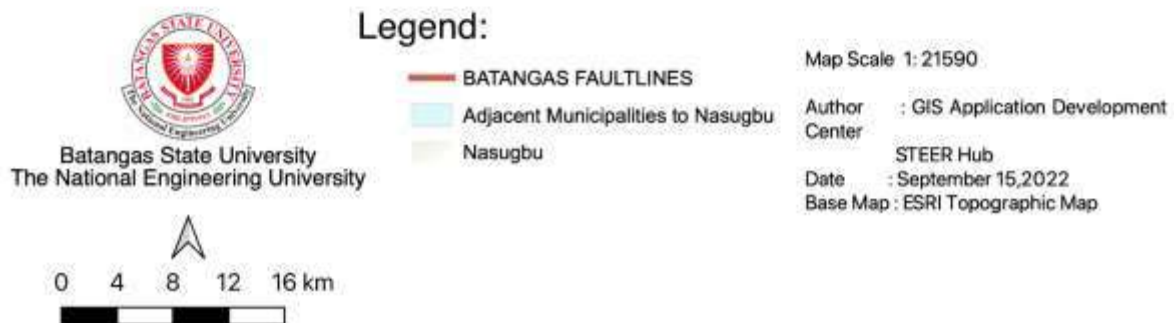


Figure AN-179. Fault Line GIS Map within Batangas: ARASOF-Nasugbu Campus



B. MITIGATION PROGRAMS

Based on the assessment of the hazards, Nasugbu requires having a contingency plan for typhoons that shall help ensure preparedness for effective response in the 42 barangays and the entire municipality.

Table AN-35. Mitigating Measures on the Anatomy of Typhoon

HAZARDS	ROOT CAUSES	EARLY WARNING SIGNS	TRIGGERING FACTORS	EXISTING MITIGATING MEASURES
Typhoon	The geographic location of Nasugbu, Batangas makes it prone to tropical cyclone which may occur in the month of June to December. However, with the climate change manifestation, a tropical cyclone may also occur during the months of January to May.	PAGASA Weather Bulletins; Tri media (TV, radio and internet); Indigenous knowledge such unexplained migration of birds; blood red coloration of the sky during sunset and sunrise and convergence of cirrus clouds at one point in the	A tropical cyclone which may landfall in or within the vicinity of X may be enhanced by the following weather conditions: Habagat or SW Monsoon, Inter-tropical Convergence Zone (ITCZ)	Non-structural measures like de-clogging and planted mangroves; Structural measures such flood control structures and improvement of canals in prone areas and poblacion. Active early warnings through Tri-Media implemented with constant updates with 42 Brgys.

The root cause of the typhoon is the geographic location of Nasugbu. Typhoons may occur in the months of June to December. However, there may also be typhoons during the months of January to May due to climate change.

The early warning signs that the MDRRMC needs to watch out for are the PAGASA Weather Bulletins; tri media (TV, radio and internet); indigenous knowledge such unexplained migration of birds; blood red coloration of the sky during sunset and sunrise and convergence of cirrus clouds at one point in the horizon.

The typhoon which may landfall in or within the vicinity of Nasugbu may be triggered by other weather disturbances like Habagat or Southwest Monsoon, Low Pressure Area and Inter-tropical Convergence Zone (ITCZ).

Contingency measures for other hazards were considered that shall help Nasugbu ensure its preparedness for effective response.





Table AN-36. Mitigating Measures on the Anatomy of Typhoon

HAZARDS	ROOT CAUSES	EARLY WARNING SIGNS	TRIGGERING FACTORS	EXISTING MITIGATING MEASURES
Flash flood	Heavy rains	Speed and Turbidity of water	Uprooting of Trees	Tree planting activities, de-silting of waterways and rivers
Rain Induced Flood	Heavy rains	Ponding on low lying areas	Clogged Drainage	De-silting of waterways and rivers
		Ponding on low lying areas	Damaged Drainage	Repair and improvement of damaged drainages
Rain Induced Landslide	Heavy rains	Rumbling sound & earth movement	No slope protection Uprooting of trees	Installation of slope protection and tree planting activities
Storm Surge	Heavy Rains	Strong Wind	Typhoon / Habagat	Drainage repair and installation of ripraps
Residential Fire	Spark	Smoke Explosion	Electrical Faulty warning / candle	Safety and awareness tips
Industrial Fire	Spark	Smoke Explosion	Faulty equipment / accidents	Industrial safety tips and awareness. Active coordination with industrial zones on CP management
Earthquake	Lubang Fault, Phil. Trench, West Valley Fault	Ground shaking	Lubang Fault, Manila Trench & Philippine Trench	Retrofitting of all infrastructures
Tsunami	Ground shaking	Groundshaking, Unusual tide activity	Earth movements from Lubang, Phil Trench and West Valley Fault or Volcanic Eruption	Mangrove reforestation, Determined Tsunami zones, Created evacuation plan and route, Created evacuation zones



Volcanic Eruptions		Pre eruption warnings from Phivolcs Ground shaking, smoke and sulfur upheaval with Phivolcs warning	
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C. DISASTER PREPAREDNESS STRATEGIES

Disaster preparedness plays a critical role in mitigating the adverse effects of natural disasters in the world. In fact, preparedness is defined by the United Nations International Strategy for Disaster Reduction (UNISDR) (United Nations International Strategy and Disaster Reduction, 2009) as knowledge, capabilities, and actions of governments, organizations, community groups, and individuals “to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.” Moreover, preparedness efforts may range from individual-level activities (such as first aid training), to household actions (e.g. stockpiling of equipment and supplies), community efforts (like training and field exercises), and governmental strategies (including early warning systems, contingency plans, evacuation routes, and public information dissemination).

The Municipality of Nasugbu also has Disaster Preparedness Strategies. This includes the area of Bucana where the University is located.

Table AN-37. Disaster Preparedness Strategies in Nasugbu

DRRM THEMATIC AREAS	RENGTHS	WEAKNESS	OPPORTUNITY	CHALLENGES
Disaster Preparedness				
	Simulation exercises and drills are regularly done by the University for all personnel.	Early warning system should be in place	DRRMC funds are available for Preparedness	Difficulty in 100% participation
	DRRM Council / Community Trainings & Seminar: 1st Aid, BLS, AMBU OPS, BWASR, WISAR, USAR, Rope Course, PADI, Vehicle Extrication, Fire Suppression,	High turnover of participants and personnel.	Availability of training providers and complete budget allocation for capacity building	100% commitment and attendance of Council members and Other Personnel



	Camp Management			
Disaster Response	Trained Responders	Turnover of trained personnel	Available volunteers from NGO's and other groups	100% commitment of individual volunteers and participation of trained LGU departments
	Equipment and Tools	Personnel training for proper use of equipment & tools	Personnel capacity building and operability know-how	100% commitment of trained personnel
	Rescue vehicles	Maintenance requirements are not met	Existing MOU with bus operators. MDRRMO exclusive Rescue Vehicle and Ambulance	Proper handling and maintenance
	Existing Evacuation Centers	Personnel Camp Management training	Assistance of NGO's, CSO's	Budget Allocation
Disaster Recovery and Rehabilitation	DRRM Council / LGU partners and other capable individuals to undergo rehabilitation activities with adequate manpower and machineries in the repair and rehabilitation of public infrastructure and community	Probable lack of fund due to size of affected communities and public infrastructure	MOU with PPA's	Changes in political dynamics





	Trainings & seminar for personnel and NGO's	Turnover of personnel and lack of budget allocation	MOU with PPA's and other NGO's and service providers for skills enhancement	Changes in political dynamics
	Physical and psychological rehabilitation of persons who suffered from effects of disaster	Fund sourcing and allocation	Provincial / Regional DSWD can assist in the psycho social rehabilitation. Partnership with private entities	Limited partnership

DISASTER PREPAREDNESS AND EMERGENCY RESPONSE

During a disaster, especially on typhoons, the most common occurrence in the campus, disaster response teams are activated upon the advice of the Incident Commander. The PIO coordinates with the Building Emergency Response Team Members on the communications that are needed to be sent, including the activation of early warning systems.

Early warning system currently available in the campus is fire alarm/siren (CTE Building). There are also megaphones to facilitate information dissemination inside the campus. Further, there are also twenty (20) two-way radio that are distributed in the campus. Of this number, ten are in the custody of Incident Management Members (Incident Commander, Deputy Incident Commander (Radio Custodian), Planning Section Chief, Operations Section Chief, Logistics Section Chief, Finance Section Chief, Public Information Officer, Security/Safety Officer (Alternate Radio Custodian), Operations, Member, and Resource Unit). The remaining ten are in the custody of Building Emergency Response Team Members.

D. PHYSICAL INTERVENTIONS

Physical interventions include the techniques and actions in ensuring the safety of the people and infrastructures of BatStateU ARASOF-Nasugbu. It may also include the purchase of DRRM tools and equipment of the University amounting to Php 98,390.

The implication of identifying the Disaster Risk and Climate Change Adaptation of the Municipality of Nasugbu to the Development Plan of Batangas State University ARASOF-Nasugbu is that the operations, development, personnel, stability, and security of BatStateU ARASOF-Nasugbu is greatly affected by these concerns. Seeing that it can lead to more serious problems in the future, it is important to be able to identify these threats and foresee how it can be solved and mitigated in the future.



III. INSTITUTIONAL COORDINATION AND MONITORING SET-UP

The set committee for institutional coordination and monitoring allows the BatStateU ARASOF-Nasugbu to assess progress of implementation of the Land Use Development and Infrastructure Plan. In this way, the institution will be able to monitor and evaluate its effectiveness.

Organizing the Institutional Coordination and Monitoring (ICM) Committee

The LUDIP ARASOF-Nasugbu is responsible for the creation of an ICM Committee whose membership shall be identified and functions defined. These committees will be responsible for the monitoring, review, and evaluation of the implementation of programs and projects proposed in the LUDIP. The table shows the list of suggested members per thematic area.

Table AN-38. Institutional Coordination and Monitoring Committee

THEMATIC AREA	COMMITTEE MEMBERS
Physical and Land Use Planning	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of PFMO</li><li>• Head of GSO</li></ul>
Infrastructure and Buildings	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of PFMO</li><li>• Head of GSO</li></ul>
Field Laboratories	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Research, Development, and Extension Services</li><li>• Head of Research</li><li>• Laboratory Supervisors</li></ul>
Environmental Protection	<ul style="list-style-type: none"><li>• Head of EMU</li><li>• Vice Chancellor for Administration and Finance</li><li>• PCO of EMU</li><li>• Head of Health Services</li></ul>
Tourism and Heritage	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Academic Affairs</li><li>• Head of Culture and Arts</li><li>• Head of RGO</li></ul>
Solid Waste and Pollution Prevention	<ul style="list-style-type: none"><li>• Head of EMU</li><li>• PCO of EMU</li></ul>



THEMATIC AREA	COMMITTEE MEMBERS
	<ul style="list-style-type: none"><li>• Head of GSO</li><li>• Head of Health Services</li></ul>
Traffic Routes	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Head of GSO</li><li>• Head of PFMO</li></ul>
Sports Facilities	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Academic Affairs</li><li>• Head of Sports Division</li></ul>
Housing	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Development and External Affairs</li><li>• Vice Chancellor for Academic Affairs</li><li>• Head of RGO</li></ul>
IGP and Commercial Spaces	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Development and External Affairs</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of RGO</li></ul>

The above table presents the suggested members of the committees for the monitoring, review, and evaluation of the implementation of programs and projects proposed in the LUDIP. The members are selected based on their scope of responsibilities. Specifically, below are the duties and responsibilities of each committee:

- Ensure that the implementation of Programs, Activities, and Projects (PAPs) related to the thematic area
- Develop an operational plan with the physical and financial resources allotted for the implementation of PAPs.
- Manage records and database per thematic area such as reports and documentation on the status of activities.
- Perform such other functions as may be necessary for the accomplishment of LUDIP.

Stages of Institutional Coordination and Monitoring Set-up

Presented in the below figure are the stages for Institutional Coordination and Monitoring Set-up. This is to guide the proponents/stakeholders of BatStateU ARASOF-Nasugbu in the planning and implementation of Programs, Activities and Projects (PAPs) related to the thematic areas.





Figure AN-196. Stages of Institutional Coordination and Monitoring Set-up

1. Pre-planning Stage - the committee together with the concerned office shall gather necessary information related to the proposed PAPs.
2. Pre-approval Stage - the preliminary documents must be presented to the Chancellor and Vice Chancellors of the campus. The documents must support the goal and objectives of the PAPs to be proposed.
3. Planning Stage - the committee and concerned office shall create the plan of the PAPs from preliminary to execution stage. Monitoring and evaluation tools must be included in the development plan.
4. Approval Stage - in this stage, included are the approval of PAPs, budget allocation, procurement requests, and other necessary documents that need to be approved.
5. Implementation Stage - the PAPs must be implemented in accordance with the policies of the national, local, and campus. All requirements must be completed, and all permits are secured prior to project execution.
6. Monitoring Stage - the committee is responsible for the monitoring of the success of PAPs. They shall set a monitoring tool appropriate to the PAPs being implemented. It is to keep in mind that included in the monitoring is the financial plan status of the project especially for infrastructure.
7. Evaluation Stage - Once the entire project has been implemented, evaluation follows. This is to check whether the project has been successful and efficient to its purpose. In case of infrastructure projects, this is to check if the turned-over project is up to the quality standards.

### Implementation, Monitoring and Evaluation

Prior to the implementation of projects, all concerned offices must agree to the programs and plans set-up. Documents shall be approved by the top management and completed prior to execution of the project. Continuous monitoring must be done and reported as prescribed by the university policy. An evaluation must be conducted after every activity to check for its effectiveness.



The Budget Office will provide support during the implementation, monitoring and evaluation process, more particularly in the timely determination of the following:

- Meeting funding requirement of the Investment Program
- Level of funding generated from external sources
- Actual expenditures and major deviations from the plan if any
- Compliance with reportorial and other regulatory requirements
- Status of borrowed fund if any
- Other funding options in case of contingencies

To have consistency in the documentation, the forms and instruments to be used are of the university in the preparation, monitoring and evaluation of PAPs in thematic areas.

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**BATANGAS STATE UNIVERSITY**

**The National Engineering University**



***Land Use  
Development  
and  
Infrastructure Plan  
(LUDIP)***

**Leading Innovations, Transforming Lives  
Building the Nation**





# Land Use Development and Infrastructure Plan (LUDIP)



**BATSTATEU  
JPLPC-MALVAR**

*Leading Innovations, Transforming Lives  
Building the Nation*





### MESSAGE FROM THE CHANCELLOR



**Dr. PHILIP Y. DEL ROSARIO**  
Chancellor, BatStateU JPLPC-Malvar

The BatStateU JPLPC Malvar includes in its immediate priority projects under the Republic Act. No. 11396 otherwise known as the Land Use Development and Infrastructure Plan (LUDIP). This Act specifically “requires State Universities & Colleges (SUCs) to prepare & implement a Land Use Development and Infrastructure Plan that shall include the construction of dormitories for students and housing sites for employees.”

Under the guidance of the Commission on Higher Education (CHED), the BatStateU JPLPC Malvar shall implement envisions its Land Use Development and Infrastructure Plan for 10 years to anticipate the increasing number of students year on year, as well as the challenges that come with it, most especially in the post-pandemic scenario.

This LUDIP addresses the required infrastructure and identifies the one that needs immediate implementation to further meet the necessary academic and non-academic support services and facilities. This is anchored in the University Strategic Plan which focuses on Brand of Excellence, Access, Social Relevance, Inclusive Innovations, Capacity, and Sustainability.

The process by which this plan was formulated is something we can be proud of. First, this undertaking was initiated and guided by our President, Dr. Tirso A. Ronquillo, and second, our personnel was involved in every step of the process. Thus, we can truly say that this plan is made by and for the “Spartans.”

I, therefore, urge every “Spartan” of BatStateU JPLPC Malvar to rally behind the implementation of this plan, keeping in mind our vision to become “a premier national university that develops leaders in the global knowledge economy”.

### *Signature*

**Dr. PHILIP Y. DEL ROSARIO**  
Chancellor, BatStateU JPLPC-Malvar



### **Land Use Development and Infrastructure Plan (LUDIP) Legal Mandates**

A new law mandates state universities and colleges (SUCs) to design development and infrastructure plans for the proper management of land resources. Republic Act No. 11396, signed by President Rodrigo Duterte on Aug. 22, requires all SUCs to submit their respective Land Use Development and Infrastructure Plan (LUDIP) to the Commission on Higher Education. SUCs are required to follow their respective development plans for all of their future infrastructure projects.

Under Republic Act No. 11396, land use or infrastructure projects of the SUCs shall also be required to follow the LUDIP which shall be linked with the land use plan and practice of the local government units to ensure complementation of activities across geographical boundaries. Under the new law, SUCs must submit the following as part of their LUDIP:

- campus planning framework, principles and processes, including master development plans
- detailed geographical description and survey of the site occupied by the SUCs
- inventory of all existing buildings, facilities, and other infrastructure within the compound or areas occupied by the SUCs
- cadastral survey of land occupied by the SUCs
- detailed description of the research core, academic core, and residential areas covering both housing for faculty, and dormitories for students
- detailed geographical description of land used for commercial, agriculture, fishery, forestry, and other activities, including open and recreational spaces, landscape features, and campus transportation system among others.
- design and estimated cost of construction, operation, maintenance of other infrastructure needs of the SUCs
- financial plan

The following agencies may also help SUCs in making their development and infrastructure plans:

- Housing and Land Use Regulatory Board
- University of the Philippines School of Urban and Regional Planning
- Department of Public Works and Highways
- Land Management Bureau of the Department of Environment and Natural Resources

The measure meanwhile tasks the CHED, UP-SURP, and HLURB to design capacity building programs for SUCs to enable them to develop and prepare suitable land use plans.

Responsive to Republic Act No. 11396, the Batangas State University prepared its LUDIP for the 11 campuses of the University.



## **FOREWORD**

All State Universities and Colleges (SUCs) including Batangas State University and all its campuses through Republic Act No. 11396 were mandated to craft their Land Use Development and Infrastructure Plan (LUDIP) in the next ten (10) years. From the title itself, the LUDIP emphasized the importance of proper identification of the existing and the proposed land use allocation with a campus' geographic boundary to meet the required academic and non-academic support services and facilities.

BatStateU JPLPC-Malvar considers the land use planning as an integral part of the process of the campus' growth and development, and places high emphasis in putting it into action. Consequently, this will determine when there is a limited supply of land and resources. Proper planning will likewise sustain future generations by providing adequate facility that would suffice the required rooms and spaces for the increasing population of the campus.





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The authors would like to extend their heartfelt gratitude and appreciation to the following for their immense and invaluable support in the completion of the Land Use Development and Infrastructure Plan (LUDIP) of Batangas State University JPLPC-Malvar;

First and foremost, praises and thanks to the Lord Almighty for His shower of blessings and guidance throughout the making of the Campus Land Use Development and Infrastructure Plan (LUDIP);

The completion of the Campus LUDIP could not have been possible without the support of our University President, Dr. Tirso A. Ronquillo, our Vice Presidents, Chancellors and Vice Chancellors of different campuses;

A debt of gratitude is also owed to various offices in Malvar Campus and to other Constituent Campuses for their kind assistance and for imparting their understanding of what it is all about.

And lastly, we would like to attribute this accomplishment to the collaborative effort of the Technical Working Group of the University and Campus LUDIP Committee and to all the persons involved in its completion.

For everything and in everything, to God be all the glory!

**TWG – LUDIP Committee**



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# Land Use Development and Infrastructure Plan (LUDIP)

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## **GLOSSARY OF TERMS**

**Ancestral Domain** refers to all areas generally belonging to Indigenous Cultural Communities/ Indigenous Peoples (ICCs/IPs) comprising lands, inland waters, coastal areas, and natural resources therein, held under a claim of ownership, occupied or possessed by ICCs/IPs, by themselves or through their ancestors, communally or individually since time immemorial, continuously to the present except when interrupted by war, force majeure or displacement by force, deceit, stealth or as a consequence of government projects or any other voluntary dealings entered into by government and private individuals/corporations, and which are necessary to ensure their economic, social and cultural welfare. It shall include ancestral lands, forests, pasture, residential, agricultural, and other lands individually owned whether alienable and disposable or otherwise, hunting grounds, burial grounds, worship areas, bodies of water, mineral and other natural resources, and lands which may no longer be exclusively occupied by ICCs/IPs but from which they traditionally had access to for their subsistence and traditional activities, particularly the home ranges of ICCs/IPs who are still nomadic and/or shifting cultivators.

**BatStateU JPLPC-Malvar** refers to Batangas State University JPLPC (former Jose P. Laurel P. Laurel Polytechnic College – Malvar campus).

**Branch or Campus** refers to an educational facility, which are units that are geographically separated or detached from the main campus of the college or university and has its own educational facilities, administrative and faculty complement, and program offerings.

**Campus Master Plan** refers to a campus-specific policy document that defines the academic, academic-support and administrative needs of the campus and its translation into land uses and development plans consistent and in compliance with the SUC Strategic Plan and the SUC Development Principles and Design Guidelines, for the development of the real estate properties assigned to the campus. It is composed of:

- a. Campus land use plan
- b. Campus master development plan
- c. Site development plan for each campus land use cluster

**Climate change** refers to a change in climate that can be identified by changes in the mean and/or variability of its properties and that persists for an extended period typically decades or longer, whether due to natural variability or as a result of human activity.

**Community Land Use** refers to an official designation of specific types of activity and coverage on a land surface area.

**Comprehensive Land Use Plan** refers to the document, formulated by the local government in consultation with its stakeholders, that defines or provides guidelines on the allocation, utilization, development and management of all lands, within a given territory or jurisdiction, including municipal waters, according to the inherent qualities of the land itself and supportive economic, demographic, sociocultural and environmental objectives



**Extension Class** refers to a class normally offered by a SUC in its main campus but is conducted in another location with the approval of the governing board and attestation from the CHED as compliant to its requirements.

**Extension Program** refers to a set of projects that aim to communicate and transfer knowledge and technology to specific sectors and target clienteles (as distinguished from those enrolled in formal degree programs and course offerings) to enable them to effectively improve production in community and/or institutions and the quality of life, at the same time enhance the SUCs' academic and research programs.

**Hazards** refers to a potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydrometeorological and biological) or induced by human processes (environmental degradation and technological hazards). Hazards can be single, sequential or combined in their origin and effects. Each hazard is characterized by its location, intensity, frequency and probability.

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**Infrastructure Project** refers to the construction, improvement, rehabilitation, restoration or major maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/ power and electrification facilities, national buildings, school buildings, hospital buildings and other related construction project of the government.

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waste management systems, shore protection, energy/ power and electrification facilities, national buildings, school buildings, hospital buildings and other related construction project of the government.

**Land use** refers to the manner of utilizing the land, including its allocation, development and management.

**Land use planning** refers to the branch of physical and socio-economic planning that determines the means and assesses the values or limitations of various options in which land is to be utilized, with the corresponding effects on different segments of the population or interests of a community taken into account in resulting decisions. Land-use planning involves studies and mapping, analysis of environmental and hazard data, formulation of alternative land-use decisions and design of a long-range plan for different geographical and administrative scales. Operationally, it is the process undertaken by public authorities to identify, evaluate and decide on different options for the use of land, including consideration of long-term economic, social and environmental objectives and the implications for different communities and interest groups, and the subsequent formulation and promulgation of plans that describe the permitted or acceptable uses.

**Man-made hazards** refer to events that are caused by humans and occur in or close to human settlements. The events leading up to a man-made hazard may be the result of deliberate or negligent human actions, but their impact can be equally as devastating.

**Master development plan** is a planning document that provides direction for the development of State Universities and Colleges including instruction, research, and extension.

**Master plan** refers to the dynamic long-term planning document that provides a conceptual layout to guide future growth and development of the SUC. A master plan includes analysis, recommendations, and proposals for a site's population, economy, housing, transportation, community facilities, and land use. It is based on stakeholders' input, surveys, planning initiatives, existing development, physical characteristics, and social and economic conditions.

**Natural hazards** refer to natural processes or phenomena occurring in the biosphere that may constitute a damaging event.

**Plan refers** to a formulation and means adopted in order to resolve a gap between an existing situation and future needs, including approaches to achieve longer term agency goals, needs for physical infrastructure and needs for various human and technical resources as appropriate.

**SUC Land Use Plan** refers to the document, formulated by the state universities and colleges based on RA 11396 in consultation with its stakeholders, that defines or provides guidelines on the allocation, utilization, development and management of all lands, within the SUCs jurisdiction, according to the inherent qualities of the land itself and in line with the Comprehensive Land Use Plan covering the SUCs land.



**Zoning refers** to the SUC regulations that delineate areas for specific uses to guide how the land assets of SUCs can and cannot be used. Zoning regulations can limit the use of land in order to ensure that infrastructure is built in appropriate areas as identified in the LUDIP of the SUC.



# **I. PROFILE OF BATANGAS STATE UNIVERSITY**





## **I. PROFILE OF BATANGAS STATE UNIVERSITY**

### **GENERAL INFORMATION OF BATANGAS STATE UNIVERSITY**

#### **A. Introduction**

##### **a. Legal Bases / Mandates**

The establishment of Batangas State University is governed by specific legal bases which serve as guide to its pursuit for quality tertiary education. First is the Republic Act No. 764 (1953) bestowed upon the Batangas Trade School (established in 1903 as Manual Training School) a national status, changing its name to Pablo Borbon Memorial Trade School, later (in 1957) to Pablo Borbon Regional School of Arts and Trades (PBRSAT). Another, legal underpinning is the Republic Act No. 5270 (1968) which made it possible for the conversion of the PBRSAT into a state college, the Pablo Borbon Memorial Institute of Technology (PBMIT).

Further, with the university's continued development and expansion the Republic Act. No. 9045 (March 22, 2001) created the Batangas State University (BSU) by integrating the Pablo Borbon Memorial Institute of Technology (PBMIT) and all its branches/campuses, the Jose P. Laurel Polytechnic College in Malvar, the Apolinario R. Apacible School of Fisheries in Nasugbu, and the Polytechnic University of the Philippines campus in Sto. Tomas, all in the province of Batangas.

The Batangas State University (BSU) is committed to implement its mandate of equality and excellence, relevance and responsiveness, access and equity and efficiency and effectiveness through instruction, research, extension and production to meet the growing needs of the country and the world for globally competitive and morally upright professionals, scientist, technologist, technicians, skilled workers and entrepreneurs. It commits itself to the advancement of knowledge and skills in arts and sciences, teacher education, engineering, technology and informatics, accountancy, business and economics, agricultural sciences, law nursing and other related disciplines.

On April 11, 2022, the Batangas State University was declared as The National Engineering University by virtue of Republic Act 11694.

Section 3 of RA 11694, the Purpose of the BatStateU is presented. As the national engineering university committed to develop leaders in the global knowledge economy, the BatStateU shall:

- a. Provide world-class academic training to young Filipinos in the field of engineering and other professions, and mold them into becoming responsible citizens who are aware of their role in nation-building, and are motivated to meet the challenges and opportunities as the country pursues its development goals, especially in the areas of infrastructure development, environmental protection, information



- and telecommunications, manufacturing, transportation, and land and shelter development;
- b. Offer advanced studies and specialization for engineers, scientists, entrepreneurs, industry practitioners, and other professionals, primarily for those who serve as faculty of the state and private colleges and universities;
  - c. Strengthen engineering programs through the development and offering of industry-driven and emerging engineering programs; spearhead collaboration between the academe and engineering industries; and lead in the implementation of innovative pedagogies in engineering education through the Center for Innovations in Engineering Education;
  - d. Serve as a research university in engineering and related field of specialization by conducting basic and applied research and development, promoting research collaboration with various colleges and universities in the country, and contributing to the dissemination and application of knowledge;
  - e. Intensify scientific, innovative, and technological research and development that would lead in the development of high-impact research, startups and spinoffs and technology transfer of products and services in specific areas such as electronic systems, environment, information and computing technology, material science and testing, and advanced manufacturing through the established research centers under the Science, Technology, Engineering and Environment Research (STEER) Hub, recognized by the Regional Development Council (RDC) as the Center for Science, Technology, Engineering and Environment Research in the CALABARZON Region;
  - f. Provide progressive leadership in setting academic standards and initiating innovations in advanced instruction, research, and professional training in the fields of engineering education, and maintain centers of excellence in such disciplines and professions;
  - g. Offer undergraduate and graduate-courses within the areas of specialization and according to its capabilities, including medical and allied health, natural and applied sciences, teacher education, business, technology, management, social sciences, arts and culture, agriculture, and other related fields, as the Board of Regents may deem necessary to carry out its objectives, specifically, in order to provide greater access for deserving students in tertiary education and an adequate response to the particular needs of the government, the society and the industry in these fields;
  - h. Lead in the protection, conservation, and strategic management of the Verde Island Passage (VIP) that separates the islands of Luzon and Mindoro, and described as the "center of the center of marine shore fish biodiversity in the world" by developing biodiversity experts, conducting collaborative research, marine exploration, community education and training, and establishment of the Verde Island Passage Center for Oceanographic Research and Aquatic



Life Sciences (VIP CORALS) by the RDC-Region IV-A (Cavite, Laguna, Batangas, Rizal and Quezon Region) as the National Center for Marine Bio-Diversity in VIP;

- i. Lead in the generation of productive knowledge, innovation and technology to develop relevant and technical higher order skills needed to compete in the global knowledge economy;
- j. Provide an avenue for the professional advancement of Disaster Risk Management (DRM) managers and practitioners by offering academic programs in DRM and contribute in ensuring a resilient community through the Adaptive Capacity-building and Technology Innovation for Occupational Health and Natural Disaster (ACTION) Center endorsed by the RDC-Region IV-A as National Center for Disaster Risk Reduction and Management, and Climate Change Adaptation Education and Research;
- k. Contribute to national economic growth, jobs creation, domestic and foreign investment, and community well-being through the university-based Knowledge, Innovation and Science Technology (KIST) Park, designated as a Special Economic Zone by virtue of Presidential Proclamation No. 947, dated May 22, 2020;
- l. Serve as a public service university by providing various forms of community, public, and volunteer service, as well as scholarly and technical assistance to the government, private sector, and civil society while maintaining its standards of excellence;
- m. Strengthen its Laboratory and Integrated Schools for basic education by focusing and adopting advanced teaching and learning on science, technology, engineering and mathematics to serve as feeder schools for engineering, science and technology programs of the BatStateU: Provided, That the operation of the Integrated School shall be self-liquidating, through payment of tuition and other school fees by the students as approved by the governing board;
- n. Protect and promote the professional and economic rights and welfare of its academic and nonacademic personnel;
- o. Provide opportunities for training and learning in leadership, responsible citizenship, democratic values, institutions, and practice, through academic and nonacademic programs, including sports, towards the promotion of nationalism and a deep and enduring pride in the national identity;
- p. Serve as a regional and global university in cooperation with international and scientific unions, networks of universities, scholarly and professional association in the Asia Pacific region and around the world; and
- q. Provide democratic governance based on collegiality, representation, accountability, transparency, and active participation of its constituents, and promote the holding of fora for students, faculty, researchers, extension program specialists, staff, and alumni to discuss nonacademic issues affecting the BatStateU.





### **b. Brief Profile of the University and Its Campuses**

The creation of the Batangas State University (BatStateU) was anchored on Republic Act No. 9045 otherwise known as an Act Creating the Batangas State University (BSU) by integrating the (1) Pablo Borbon Memorial Institute of Technology, including its Branches in Barangay Alangilan, Batangas City, in the municipalities of Balayan, Bauan, Lobo, San Pascual, Rosario, Taysan, Padre Garcia, Lemery, Calaca, Taal, Tanauan, San Juan and Lipa City, (2) Jose P. Laurel Polytechnic College in Malvar, (3) Apolinario R. Apacible School of Fisheries in Nasugbu, and (4) Polytechnic University of the Philippines Campus in Sto. Tomas, appropriating funds therefore and for other purposes.

Batangas State University is a Level IV state university in the province of Batangas, Philippines. Established in 1903, the university is strategically located at the second largest economic region in the Philippines, which puts it at a prime position not only as a premier provider of higher and advanced learning, but also as a viable economic development zone. As one of the country's model higher education institutions recognized by the Commission on Higher Education (CHED), BatStateU is the first and thus far the only state university in the Philippines with engineering, IT, and computer science programs accredited by the Accreditation Board for Engineering and Technology (ABET) - Engineering Accreditation Commission and Computing Accreditation Commission. With 15 development centers, it is recognized by the Regional Development Council of Region IV-A as the Regional Center for Technology Business Incubation and Development, and as the Regional Center for Science, Technology, Engineering, and Environment Research.

The university's Electronics Engineering program is designated by CHED as a national Center of Excellence, and its Electrical Engineering, Mechanical Engineering, Development Communication, and Teacher Education programs are national Centers of Development. It has also maintained high academic standards in architecture, industrial technology, computing sciences, business, agriculture, allied health, and the social sciences. It received ISO 9001:2015 certification from TÜV Rheinland Philippines, Inc., and is host to the first China-Philippines Silk Road Institute in the country.

With over 40,000 students facilitated by 1,700 faculty and staff in 11 campuses, BatStateU remains steadfast in its adherence to international standards. It was given a three-star rating by Quacquarelli Symonds Stars University rating, and is part of the Top Universities list. Through Proclamation No. 947, President Rodrigo Roa Duterte designated the BatStateU Knowledge, Innovation, and Science Technology or KIST Park as a Special Economic Zone. It is the first KIST Park registered by the Philippine Economic Zone Authority or PEZA.

The 11 campuses include: five (5) Constituent Campuses namely the Pablo Borbon Campus, Alangilan Campus, the Malvar Campus, the Nasugbu Campus, and the Lipa Campus; and six (6) Extension

Campuses namely the Balayan, Lemery, Lobo, Mabini, Rosario, and San Juan Campuses.

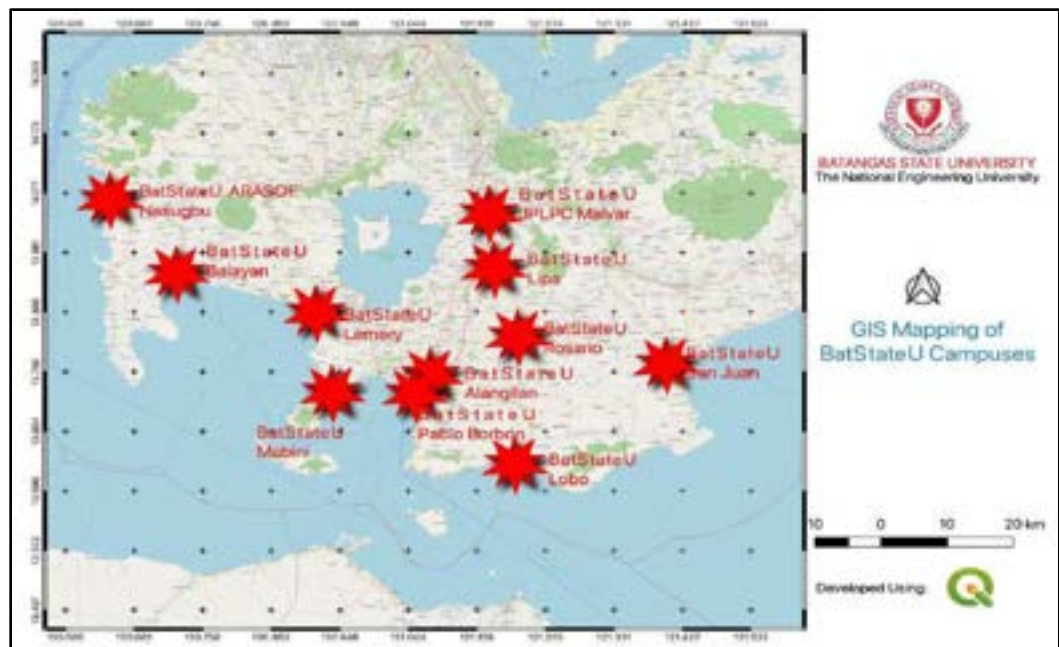


Figure 1 GIS Mapping of BatStateU Campuses

**Pablo Borbon** is the oldest campus in the university and serves as the seat of the administration of the institution. It is located at Rizal Avenue, Batangas City, and has a land area of 5.96 hectares. Nestled at the heart of the city, its proximity to the Batangas International Port and convenient access to the Southern Tagalog Arterial Road (STAR), coupled with its strong program offerings in a 21st century environment, makes it an ideal academic destination for students and opens collaboration opportunities with national and international partners.

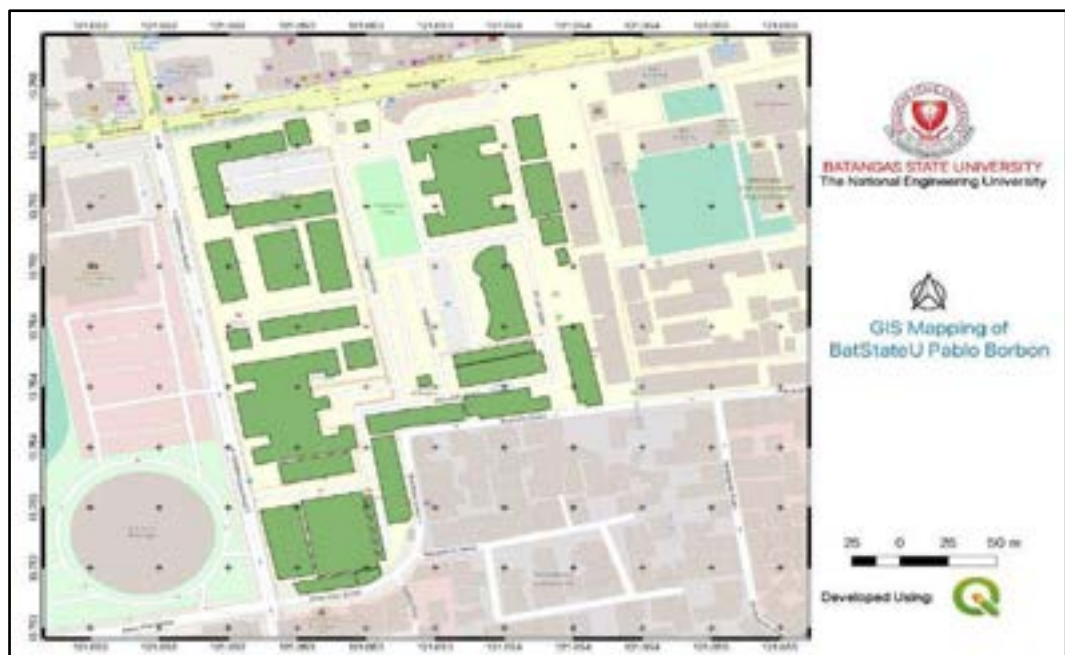


Figure 2 GIS Mapping of BatStateU Pablo Borbon

**Alangilan** was acquired by the university in 1984. It is the second oldest campus in the University located in Golden Country Homes, Brgy. Alangilan, Batangas City, with a total land area of 5.62 hectares wherein the three colleges and research hubs in the campus occupy 2.89 hectares, while 2.73 hectares were recently acquired for the Knowledge, Innovation, and Science Technology (KIST) Park, the first KIST Park registered under the Philippine Economic Zone Authority in the country.

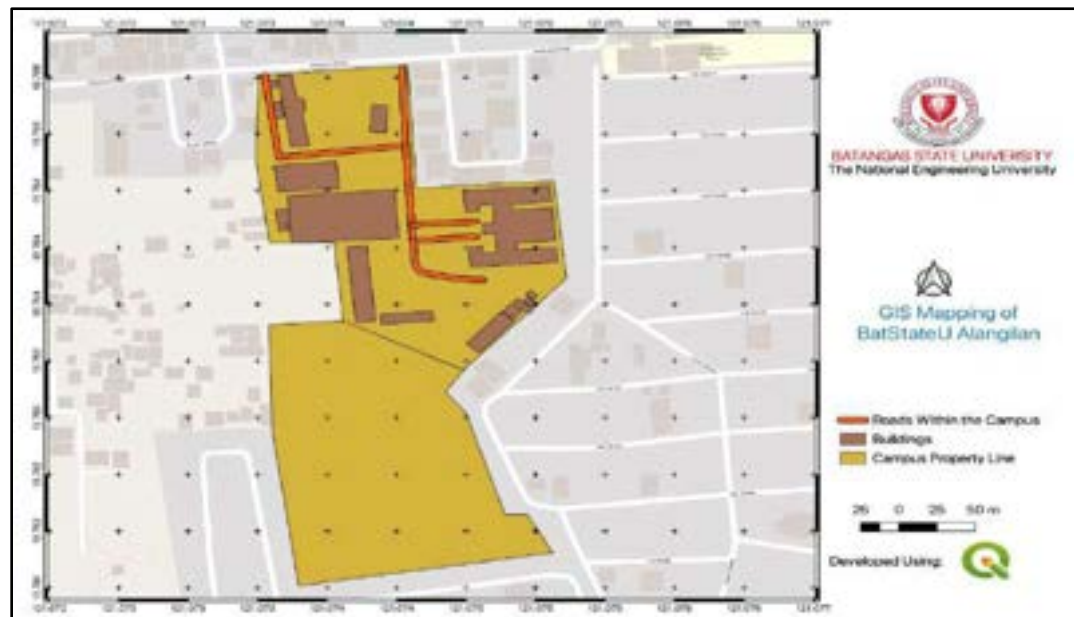


Figure 3 GIS Mapping of BatStateU Alangilan

**Nasugbu Campus** has geographical coordinates of 14.0669679943, and 120.626135987 and is the campus bounded to the North and East by Nasugbu Poblacion proper, to the South by Brgy. Bucana, and to the West by Nasugbu Bay. Landmarks near the campus include the Globe Telecom Building and *Kainan sa Dalampasigan* Restaurant. The school is easily accessible by Public Transport Services coming from PITX, Coastal Road and Pasay bus terminals in Manila. It is also a quick two-hour drive by car through the old road from Southern Luzon Expressway to Tagaytay City then farther ahead to Tagaytay-Nasugbu Highway. Another alternative route is via Cavitet Highway and then through the largest subterranean tunnel in the Philippines that goes through Mount Palay Palay down to the rest of Nasugbu-Ternate Highway, leading to the town proper that is conveniently close to the campus.

The campus has an expanse of 4.159 hectares. The land area is divided into two compounds. The first half of the site is adjacent to the shores of Nasugbu, where majority of the buildings are located, including the Administration Building which is considered as the oldest structure in the Campus dating back to the school's founding years while the second half of the site is known to many as the Physical Education School Sports (PESS) Ground or the Roxas-Gargollo Sports Field. Measuring at 1.6849 hectare, this spacious open field is a frequent venue for PE subjects, military training, sports events and other outdoor activities. The BatStateU Hostel that serves as a function hall for local events stands



proudly at the southern part of the field alongside the Higher Education Building where most of the classes of the colleges of different programs are held.



Figure 4 GIS Mapping of BatStateU ARASOF Nasugbu

**Lipa Campus** is located in Brgy. Marawoy, Lipa City. BatStateU Lipa is named Don Claro M. Recto campus as a tribute to the prominent public servant from Lipa, Batangas. The campus has shown strong academic performance and its programs have established a positive reputation in the community despite the presence of other higher education institutions in the area. Lipa City is a first-class city located only 78km south of Manila, easily accessible via STAR Tollway, and has become a key commercial, financial, and medical center in the province.



Figure 5 GIS Mapping of BatStateU Lipa

**Malvar Campus** is the former Jose P. Laurel Polytechnic College (JPLPC), a largely vocational school located in a 3.26-hectare property in Poblacion, Malvar, Batangas, was incorporated into Batangas State University by virtue of Republic Act 9045 in 2001. It is the third largest campus in the university. Since Malvar is just 68 km south of Manila and is conveniently accessible by STAR tollway, it is part of the Manila conurbation, making it prime for urbanization and shared industrial growth. The LIMA Technology Center is also located in Malvar; it is an industrial park and a potential world-class business hub and commercial destination owned by the real estate arm of the Aboitiz Group, one of the country's biggest business conglomerates.



Figure 6 GIS Mapping of BatStateU JPLPC-Malvar

**Balayan Campus** is one of the university's oldest extension campuses is located in Brgy. Caloocan, Balayan. Established in 1994, BatStateU Balayan has since been offering technology and technical-vocational education programs to the youth of the community. Balayan is a first-class municipality that hosts a number of industries and small-and-medium-scale enterprises.

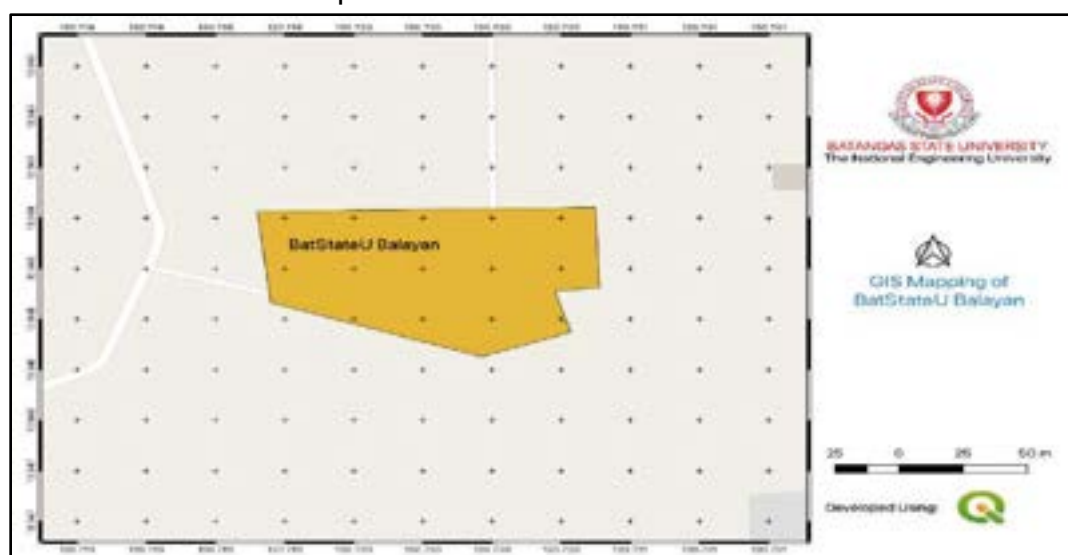


Figure 7 GIS Mapping of BatStateU Balayan

**Lemery Campus** is the second smallest campus in the university in terms of land area, located in Brgy. Bagong Sikat, Lemery, Batangas. Despite this, its program offerings, especially in education and business and management, remain strong and in demand. Lemery is a first-class municipality that is a growing urban center in Western Batangas. It serves as a provincial urban center for its surrounding rural municipalities, which highlight the growth of businesses, along with the establishment of two shopping malls in the area. It also hosts the largest public high school in the first legislative district of Batangas.



Figure 8 GIS Mapping of BatStateU Lemery

**Lobo Campus** has the smallest actual-campus land area at 0.12 ha located in Brgy. Masaguitsuit, it is the location of the only College of Agriculture and Forestry in the province of Batangas, and is one of the very few in CALABARZON. Lobo has white sand beaches and protected mangrove forests, fish sanctuaries, and marine protected areas, while agriculture and food production are its main industries. Its seas are part of the Verde Island Passage, recognized to be the center of the center of marine shore fish biodiversity in the world.

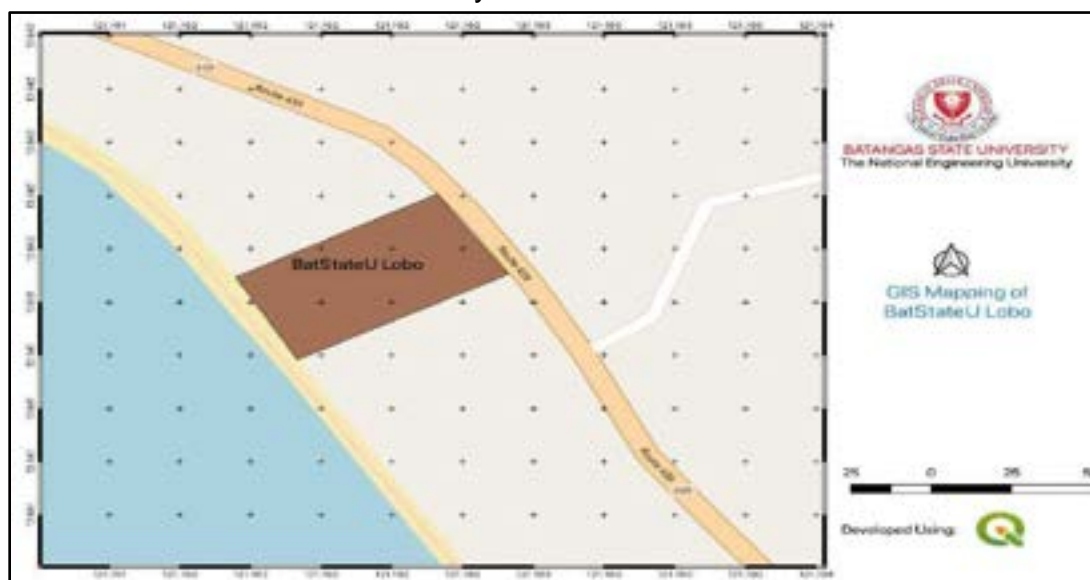


Figure 9 GIS Mapping of BatStateU Lobo



**Mabini Campus** is the newest campus in the university is BatStateU Mabini, with its operations starting only in 2018. Through the generosity of the local municipal government and the Yu family, the youngest BatStateU campus was established on a four-hectare property with a three-storey building as its first academic infrastructure. Mabini, being a first-class municipality, has a booming economy and a hub for business industries primarily because of its diving destinations.

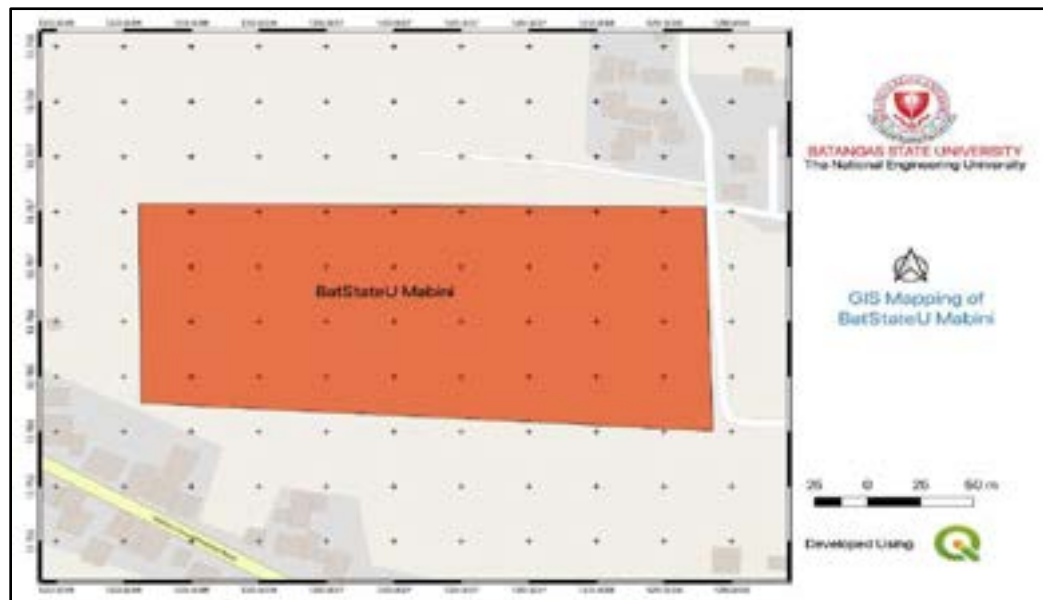


Figure 10 GIS Mapping of BatStateU Mabini

**Rosario Campus** is a one-hectare land of the campus in Barangay Namunga, Rosario, Batangas was donated by the generous Inandan and Zuño families of the municipality. As an expression of gratitude to the donors, the first school building of the campus was named after Pedro Inandan, while the campus was named after Jose B. Zuño. Rosario is a first-class municipality that has enabled business and industry to flourish, and is host to almost a hundred private and public educational institutions and learning centers.

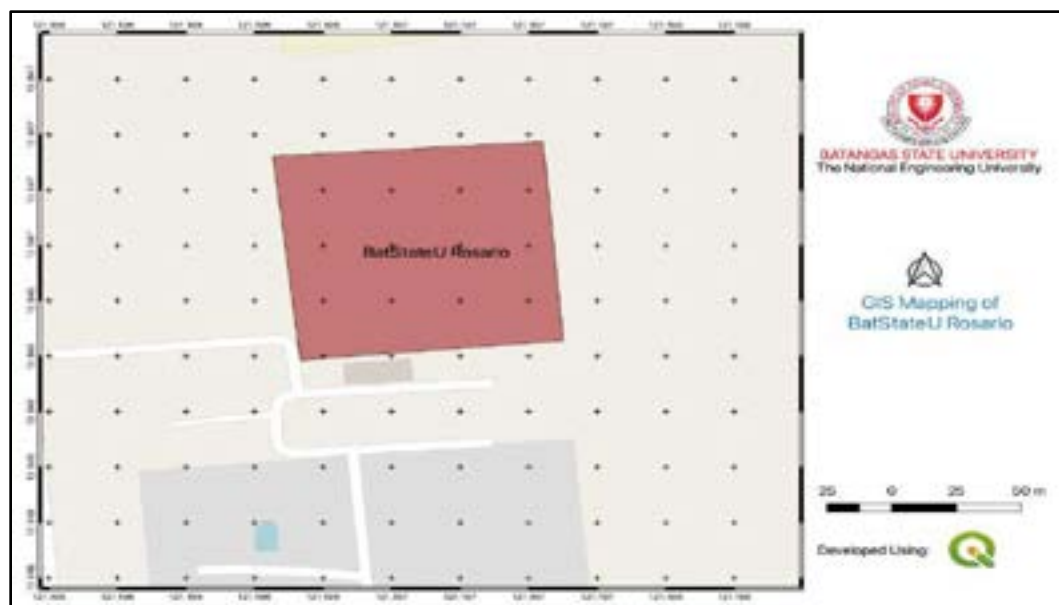


Figure 11 GIS Mapping of BatStateU Rosario



**San Juan Campus** was acquired by the university in 2000, BatStateU San Juan is one of the university’s smallest campuses in terms of land area located in Brgy. Talahiban II, San Juan, Batangas. San Juan is a first-class municipality that was identified as a special economic zone for its potential for development in industrial, commercial, banking, investment and financial centers.

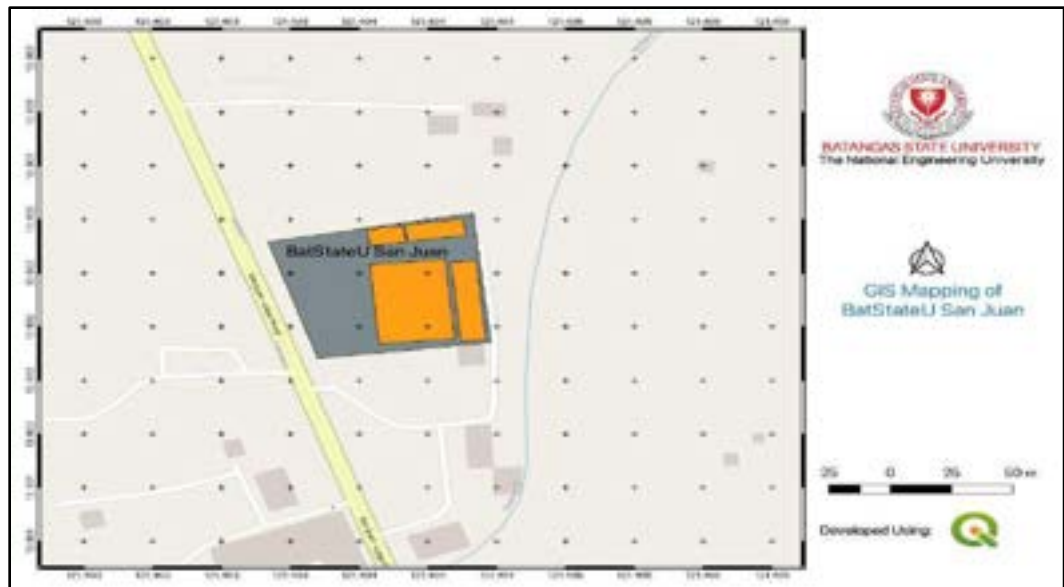


Figure 12 GIS Mapping of BatStateU San Juan

Table 1 GIS Attribute Table of BatStateU Campuses

	BatStateU Campus	Address	Longitude	Latitude
1	BatStateU Pablo Borbon	Rizal Avenue, Batangas City	121.0531168849614	13.754797027879365
2	BatStateU Alangilan	Alangila, Batangas City	121.0743307429293	13.784061425353526
3	BatStateU JPLPC Malvar	Malvar, Batangas	121.15625817036171	14.04494381618468
4	BatStateU ARASOF Nasugbu	Brgy. Bucana, Nasugbu, Batangas	120.62633036660107	14.067217369724982
5	BatStateU Lipa	Maraouy, Lipa, Batangas	121.16325449930176	13.956649004776681
6	BatStateU Lemery	Lemery, Batangas	120.91462421618677	13.885178945943968
7	BatStateU Rosario	Rosario, Batangas	121.19679605926775	13.846629485945055



8	BatStateU San Juan	Laiya Road, San Juan, Batangas	121.40376142421394	13.802385541198039
9	BatStateU Balayan	Balayan, Batangas	120.71995386631147	13.94835065410113
10	BatStateu Lobo	Brgy. Masaguitsuit, Lobo, Batangas	121.19221959946319	13.641459877095713
11	BatStateU Mabini	Mabini, Batangas	120.93702738091582	13.756453133999951

**c. Brief History of Batangas State University and BatStateU JPLPC-Malvar**

**Brief History of the Batangas State University**

- 1903- Established as a Manual Training School for young men
- 1905- Renamed Batangas Trade School
- 1953- Became the Pablo Borbon Memorial Trade School by virtue of RA 746
- 1957- Renamed Pablo Borbon Regional School of Arts and Trades; Started offering technical courses
- 1968- Converted into a state college by virtue of RA 5270, called the Pablo Borbon Memorial Institute of Technology, the 23rd state college in the Philippines
- 1971- Offered industrial education and engineering programs
- 1974- Started offering graduate degree programs
- 1984- Expanded operations in its first extension campus in Alangilan, Batangas City
- 1987- Started offering basic education through a special science class in the laboratory school
- 2001- Converted into a state university by virtue of RA 9045, called the Batangas State University
- 2006- Established stronger international partnerships and linkages
- 2015- Modernized infrastructure to create a 21st century learning environment
- 2016- Established research and development centers; Shifted academic calendar with the first semester opening in August
- 2017- Recognized as Center of Excellence in Electronics Engineering and Center of Development in Mechanical Engineering, Electrical Engineering, Teacher Education and Development Communication; Classified as a Level IV state university; Received international accreditation of engineering and IT programs
- 2018- Received ISO 9001:2015 certification; Recognized as a Regional Center for Disaster Risk Management Education and Research



- 2019- Launched the new vision towards becoming a premier national university
- 2020- Received presidential proclamation of the BatStateU Knowledge, Innovation and Science technology (KIST) Park as a Special Economic Zone; Awarded three stars by the QS stars rating; Approved the offering of emerging programs in engineering and allied fields

### **Brief History of BatStateU JPLPC-Malvar**

Jose P. Laurel Polytechnic College in Malvar, Batangas was established first at The Jose P. Laurel, Sr. Memorial School of Arts and Trades when House Bill No. 17366, sponsored by Speaker Jose B. Laurel Jr., was passed by the Lower House of Congress on April 30, 1968 and by the Senate on May 14, 1968. It finally became a law as Republic Act No. 5417 on June 15, 1968.



Figure 13 BatStateU JPLPC-Malvar

The school began its operation in the School Year 1969-1970 but did not enroll students yet. In School Year 1970-1971, the first batch of high school students was admitted. The students and staff were temporarily housed at the old elementary school building of Malvar Central School for one year.

The JPLSMSAT was under the Bureau of Vocational Education and under the supervision of the Superintendent Robinson N. Ylagan, the Vocational School Superintendent of Marikina School of Arts and Trades. Its first vocational school principal was Mr. Alejo C. Genove.

On September 26, 1970, the cornerstone for the Boys Shop Building was laid at the permanent site of JPLSMSAT that was formerly owned by the Philippine National Railways and known as the Triangulo because of its shape. In School Year 1971-1972, JPLSMSAT transferred from Malvar Central School to its present location.



In May 1973, Mr. Alejo C. Genove, the principal of the school was transferred to Biñan National School of Arts and Trade. Mr. Baldomero B. Macarandang, a native of Lipa City, who came from Quezon National School of Arts and Trades, Mauban, Quezon took his place. During his first year of administration, SY 1973-1974, the first 77 high school graduates. It was also this year that the first Agro-Industrial Trade Fair was held in this school.

With the reorganization of the Department of Education and Culture in the School Year 1975-1976, the Bureau of Vocation and Education was abolished. JPLSMSAT was separated from its mother school, the Marikina School of Arts and Trades and it became part of the Division of Batangas under Region IV with Dr. Pablo T. Mateo Jr. as its Regional Director.

The rapid pace of development enabled the school to open the Two-Year Technical Trade Education classes in SY 1976-1977. This meant several promotions. Mr. Baldomero B. Macarandang was promoted to Vocational School Administrator. This also meant that JPLSMSAT was no longer under the Division of Batangas but directly under the Regional Office, MEC, Region

JPLSMSAT was chosen as one of the Leader Schools in Region IV and the pilot school for 1989 SEDP. It was also a Regional Leader School for Technology and Home Economics under the New Secondary Education Curriculum where Summer Mass Trainings for Teachers of THE was held. The school was also involved in the manufacture of instructional materials and classroom furniture aside from manufacturing its own school furniture needs.

In the preliminary assessment of the newly restored Bureau of Technical-Vocational Education, the school was found capable of offering the new Certificate of Technology Courses under DECS Order 56, 59 and 63, S. 1987.

Aside from improving the physical aspects of the school, instructions are also improved and updated by sending teachers to seminars, training and scholarships here and abroad. Students are encouraged to participate in contests and athletic events to test their abilities in comparison to their counterparts in the province and the region. Academics clubs are also encouraged to do outreach programs to indigents and orphanages.

The school has gained recognition in the service area evidenced by the support given by various sectors through scholarship, job placements and the like. The biggest support was given by Dr. Eustacio T. Endaya, former mayor of Malvar and longtime JPLPC PTA President. Dr. Endaya and Dna. Trinidad Leviste Endaya, his wife, is considered the father and mother of the institution. Dr. Endaya was the one who made efforts that the school should be established in Malvar. Both give and solicit financial assistance for numerous financially needy students including financial and moral support to most of the programs and projects of the school. He also initiated the request to Congresswoman



Lally Laurel-Trinidad of the Third District of Batangas to file a bill to convert the school to college status.

On October 17, 1991, the House of Representatives approved the bill filed by Congresswoman Lally Laurel-Trinidad and then approved by the Senate on January 27, 1992. On May 21, 1992, President Corazon C. Aquino finally signed the bill into a law as Republic Act No. 7519. The law converts Jose P. Laurel, Sr. Memorial School of Arts and Colleges into a college to be known as Jose P. Laurel Polytechnic College.

With its conversion, the college underwent transformation from its former role as trade secondary and technical school to its role as a polytechnic college.

In 1996, the Commission on Higher Education granted JPLPC permission to pursue other degree courses. It started offering the Bachelor of Science in Industrial Education and Bachelor of Science in Industrial Technology in 1997 and had its first batch of graduates on April 4, 2001.

Upon the approval of the Republic Act 9054 on March 21, 2001, the Batangas State University was created integrating JPLPC as one of its autonomous campuses in Batangas. This led to the signing of a memorandum of agreement between the Department of Education, Culture and Sports and Batangas State University concerning the transfer of the JPLPC non-laboratory high schools to DECS on May 8, 2001.

At present, the campus has six (6) colleges, i.e. College of Engineering, College of Teacher Education, College of Accountancy, Business, Economics, and International Hospitality Management, College of Industrial Technology, College of Arts and Sciences, and College of Informatics and Computing Sciences which are in full operations offering a wide array of non-degree and degree courses to students coming from the different localities of Batangas. These program offerings are also supportive of the University's as well as the Municipality of Malvar's vision of fostering learning and developing future leaders in the global knowledge economy.

#### **d. Current Governing Board / Inter-Department Bodies**

##### **The Board of Regents**

The Batangas State University Board of Regents is the highest governing body of the university, as stipulated in Sec. 5 of RA 9045. The Board regularly convenes at least once every quarter.





# Land Use Development and Infrastructure Plan (LUDIP)



## BATANGAS STATE UNIVERSITY Board of Regents



**Dr. MARITA R. CANAPI**  
Commissioner, Commission on Higher Education  
Chairperson



**Dr. TIRSO A. RONQUILLO**  
President, BatStateU  
Co-Chairperson



**Cong. MARK O. GO**  
Chairperson, House Committee on Higher and Technical Education  
Member  
Represented by: **Cong. Mario Vittorio A. Mariño**  
Congressman, 5th District of Batangas



**Sen. FRANCIS "CHIZ" G. ESCUDERO**  
Chairperson, Senate Committee on Higher, Technical and Vocational Education  
Member  
Represented by: **Mr. John Bryan D. Diamante**



**Dr. ARSENIO M. BALISACAN**  
Secretary, National Economic and Development Authority  
Member  
Represented by: **Dir. Luis G. Banao**  
Director, NEDA Region IV-A



**Dr. RENATO U. SOLIDUM, Jr.**  
Secretary, Department of Science and Technology  
Member  
Represented by: **Dir. Emelita P. Baguit**  
Director, DOST Region IV-A



**Engr. LADISLAO L. ANDAL**  
Private Sector Representative  
Member



**Engr. AMANDO A. PLATA**  
President, Federation of Alumni Associations of Batangas State University  
Member



**Dr. KRISTOFFER CONRAD M. TEJADA**  
President, BatStateU Faculty Confederation  
Member



**Dr. ENRICO M. DALANGIN**  
Secretary of the University and of the Board of Regents  
Head Secretariat

Figure 14 Organizational Chart of Board of Regents

The Batangas State University Board of Regents is the highest governing body of the university, as stipulated in Sec. 5 of RA 9045. The Board regularly convenes at least once every quarter. Illustrated in Figure 2 is the organizational chart of Board of Regents. The Board is composed of the CHED commissioner chairperson Dr. Marita R. Canapi; the University President as the Vice Chairperson, Dr. Tirso A. Ronquillo; the Chair of Senate Committee on Higher, Technical and Vocational Education, Senator Francis Escudero; Representative Mark O. Go as the



Chair of the House Committee on Higher and Technical Education. Also, part of the board is Dr. Arsenio M. Balisacan, NEDA Regional Director, Regional Office IV-A; Dr. Renato U. Solidum, Jr., DOST Regional Director, Regional Office IV-A; Meanwhile, the private/prominent citizen is represented by Engr. Ladislao L. Andal, while Engr. Armando A. Plata represents the alumni as the President of Federation of BatStateU Alumni Associations; Dr. Kristoffer Conrad M. Tejada as the President of the confederation of BatStateU faculty association, and Dr. Enrico M. Dalangin as the Secretary of the University and of the Board of Regents.

Through the BoR Resolution No. 172, S. 2020 approving the Revised Organizational Structure, Management Processes and Procedures of the University, Dr. Philip Y. Del Rosario who is designated as the Chancellor of BatStateU JPLPC-Malvar, oversees the over-all operation of the campus. Under his supervision are the four vice-chancellors who are designated to different offices such as the Office of Vice-Chancellor for Academic Affairs, Vice-Chancellor for Administration and Finance, Vice-Chancellor for Research Development and Extension Services and the Vice-Chancellor for Development and External Affairs.

Dr. Amado C. Gequinto, as the Vice Chancellor for Academic Affairs works on the academic-related matters with the Deans of Colleges. There are various offices under his supervision such as Registration, Library, Health Services, Testing and Admission, On The Job Training, Student Organization, Guidance and Counseling and Student Discipline. Each of the offices is designated with heads.

Engr. Jovito P. Permante, the Vice Chancellor for Administration and Finance works with different offices whose functions involve administration and finance matters. These include the office of human resource management, records, procurement, property and supply, project and facility management, general services, environmental management unit, budget, cashiering and disbursing office and accounting. The heads of these offices directly report to the office of the vice chancellor.

Moreover, Engr. Rosana C. Lat, the Vice Chancellor for Research, Development and Extension Services mobilize the function of the office with the heads of the research and extension services office.

On the other hand, the Vice Chancellor for Development and External Affairs Dr. Sharon G. Angulo, supervises other offices including the ICT services, Planning and Development, External Affairs and Resource Generation. The heads of these offices directly report to the Office of the Vice-Chancellor.

### **President's Advisory Council**

The President's Advisory Council serves as the institution's management committee who spearheads strategic planning, policy formulation, and decision making based on Board-approved policies and guidelines. Currently, it is composed of the following:

1. Dr. Tirso A. Ronquillo - University President
2. Prof. Rogelio A. Antenor - Vice President for Academic Affairs



3. Atty. Luzviminda C. Rosales - Vice President for Administration and Finance
4. Engr. Albertson D. Amante - Vice President for Research, Development and Extension Services
5. Atty. Noel Alberto S. Omandap - Vice President for Development and External Affairs
6. Prof. Enrico M. Dalangin - Chancellor, BatStateU ARASOF-Nasugbu
7. Dr. Expedito V. Acorda - Chancellor, BatStateU Pablo Borbon
8. Dr. Jesse A. Montalbo - Chancellor, BatStateU Alangilan
9. Atty. Alvin R. De Silva - Chancellor, BatStateU Lipa
10. Dr. Philip Y. Del Rosario - Chancellor, BatStateU Malvar
11. Prof. Enrico M. Dalangin - Secretary of the University and of the Board of Regents

### **The Administrative and Academic Councils**

The university has an Administrative Council, as stipulated in Section 10 of RA 9045. It consists of the president of the university as the chairman, the vice presidents, deans, directors, and other officials of equal rank as members. The Administrative Council reviews and recommends to the Board policies governing the administration, management and development planning of the university for appropriate action.

The Academic Council, as provided in Section 11 of RA 9045, has the president of the university as chairman and all members of the instructional staff with the rank of not lower than assistant professor as members. This council has the power to review and recommend the curricular offerings and rules of discipline of the university, subject for appropriate action of the Board. It shall fix the requirements for admission of students, as well as for graduation and the conferment of degrees, subject to review and/or approval by the Board.

### **e. Programs Offered**

The university's program offerings are recognized by the country's Commission on Higher Education. These are designed to provide opportunities for students to discover their potentials and enhance their technical and creative skills in a vibrant academic environment. Each program offering is anchored on pragmatic, relevant, and socially responsive curricula that train students to be globally competitive by embracing transdisciplinary, social intelligence, new media literacy, design mindset, and physical and virtual collaboration. The university believes that these skills are required in the emerging professional and social environments.

BatStateU JPLPC-Malvar offers programs which may be reassessed for additional offerings in the future due to changing demographics and growing needs of the students. At present, the campus has six (6) academic departments which offer programs as enumerated below:





### **College of Accountancy, Business, Economics and International Hospitality Management**

The College of Accountancy, Business, Economics and International Hospitality Management is an Institution offering nationally-accredited undergraduate programs in Business and Hospitality Management. Comprised of more than fifty-four (54) faculty and support staff catering to more than two thousand two hundred twenty-five (2,225) students, the college has been the prominent producer of license professionals in the field of entrepreneurship, management accounting, hospitality and tourism management, in the region and the country. The college aims to provide quality education to prepare students for a wide range of careers in business and hospitality management aspire for continuing Education, enhance competencies at home their leadership skills to enable them to participate actively in the global market through high quality instruction, research, extension and production which serve as fertile ground for the internalization of values that uplift self, society and the environment. These programs are the second most sought-after programs after engineering.

### **Undergraduate Programs**

#### **Bachelor of Science in Management Accounting**

The Bachelor of Science in Management Accounting program provides general accounting education to students wanting to pursue a professional career in management accounting. This prepares students in various careers which involve partnering in management decision-making, devising planning and performance management systems, and providing expertise in financial reporting and control to assist management in the formulation and implementation of an organization's strategy.

#### **Bachelor of Science in Hospitality Management**

The BS Hospitality Management program provides a well-rounded education from an operational, analytical and administrative perspective. In addition, it includes core business courses that will allow graduates of the program to excel in any areas of the hospitality industry (culinary, accommodation, food and beverage service and other emerging sectors of the hospitality).

#### **Bachelor of Science in Tourism Management**

The BS Tourism Management program provides tourism education to students wanting to excel in the tourism industry. It prepared students for leadership position in tourism planning and product development, events planning, transportation services, travel and tour operations and other operational and administrative roles.



### **Bachelor of Science in Business Administration major in:**

#### **➤ Financial Management**

The Bachelor of Science in Business Administration major in Financial Management program prepares the graduates for careers in financial management as well as in related fields, including but not limited to, corporate finance, investment management, banking, credit, trust operations, insurance, foreign currency markets, money markets, capital markets, and other financial securities markets. The curriculum provides the graduate with knowledge on financial institutions and technical skills based on established financial theories, methodologies, and various analytical tools. It also promotes an outlook that is based primarily on ethics, market integrity, regulations, good governance and competitive global perspective, necessary for effective financial decision making.

#### **➤ Human Resource Management**

The Bachelor of Science in Business Administration major in Human Resource Management program prepares the graduate for a career in the Human Resource Department of any organization, handling the many diverse human capital requirements of the organization, including recruitment, staffing, training and career development.

#### **➤ Marketing Management**

The Bachelor of Science in Business Administration major in Marketing Management program prepares the graduate for careers in marketing, market research, advertising and public relations. The curriculum provides the graduate with both technical skills and competencies required in the field, but also the flexible mindset that is necessary to stay competitive in a constantly changing business environment.

### **College of Teacher Education**

The College of Teacher Education (CTE), one of the producers of professional teachers in Batangas province, remains steadfast to its commitment in exerting progressive efforts to achieve the highest standards of excellence. Catering to 770 students in undergraduate level, the CTE endeavors to produce academicians who possess technical, pedagogical and research skills in order to address the challenges of diverse educational settings and engage in lifelong learning.

Moreover, it prepares competitive educators in the global academic environment, guided by high moral standards and equipped with 21<sup>st</sup> century skills. Furthermore, the college provides resources and directs policy to ensure that each student learns in an environment that is physically and emotionally safe, is actively engaged in learning and is connected to the school and broader community, has access to personalized learning and is supported by qualified, caring faculty members; and is challenged academically and prepared for success in employment and participation in a global environment.



In line with this, the college underwent several phases of the accreditation processes facilitated by the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACUP), Inc. to ensure its programs' relevance and responsiveness to the needs of society. The CTE's two programs such as the Bachelor of Elementary Education (BEEd) and Bachelor of Secondary Education (BSEd) successfully leaped the Level III Phase 1 accreditation, and has rigorously prepared for the next phase on November 29 to December 1, 2021.

The curriculum and instruction offered by the college follows the framework prescribed by the Commission on Higher Education (CHED) as well as recognized teacher education organizations such as Philippine Association for Teachers and Educators (PAFTE) and the State University College Teacher Education and Association (SUCTEA). To successfully meet their standards, the administration supports faculty members and students through scholarships, allots budget to seminars and trainings, and provision of state-of-the art facilities and laboratories which are considered important measures to support students' academic performance and conducive teaching and learning environment.

Moreover, highly creditable performance of graduates in Licensure Examination for Teachers (LET) has been the ultimate focus of the college to meet the present demand of local and global parties and communities. In order to achieve this target, the college ensures adequate and relevant activities for LET preparation, budget allocation for review sessions/classes, and faculty involvement in various activities.

### **Undergraduate Programs**

#### **Bachelor of Elementary Education (BEEd)**

The BEEd is an undergraduate teacher education degree program designed to prepare individuals intending to teach in the elementary level. It aims to develop highly motivated and competent teachers specializing in the content and pedagogy for elementary education. After successful completion of all academic requirements of the degree/program, graduates of BEEd should be able to practice the teaching profession in the elementary level.

#### **Bachelor of Physical Education (BPEd)**

The BPEd is a four-year program aimed at equipping graduates with the competencies to meet the psychomotor, cognitive and affective needs of learners. It is aimed at physical literacy, which serves as the foundation for confident, enjoyable and sustained participation in a wide range of physical activities. Thus, it consists of developmentally appropriate activities. PE also aims to optimize health through learning experiences aimed at the formation of physical activity and healthy eating habits, as well as dispositions. These learning experiences likewise extend beyond the classroom; hence, student learning must be reinforced through





programs on school and community recreation, as well as organized, competitive sports.

### **Bachelor of Secondary Education (BSEd)**

The BSEd is an undergraduate teacher education program designed to equip learners with adequate and relevant competencies to teach in their chosen area of specialization/major in the secondary level. It aims to develop highly motivated and competent teachers specializing in the content and pedagogy for secondary education. After successful completion of all academic requirements of the degree/program, graduates of BSEd should be able to practice the teaching profession in the Secondary level.

This program has five majors:

- English
- Filipino
- Mathematics
- Sciences
- Social Studies

### **College of Arts and Sciences**

The College of Arts and Sciences, being the heart of the university, has always adhered into being a cradle of academic excellence. With this, everyone in the college is expected to uphold the dignity of the teaching profession by giving the students of CAS effective academic deliverables. Under the first pillar, the college shall institutionalize an induction and orientation program for its student leaders, faculty, staff and students in order to make them internalize the vision, mission and core values of the university.

In order to further ensure academic excellence and advocate a strong academic track of all the College's programs, CAS plans to benchmark the curricula of international universities, increase the number of academic programs as Center of Excellence and Center of Development and ensure the programs in the College are accredited by reputable accrediting bodies and organizations. Further, the College also warrants the development of a comprehensive graduate tracer program which shall serve as bases for curricular reforms as well as upgrade academic laboratories and facilities to equip students with needed skills and competencies responsive to the call of the times. As part of its mandate on research, capacity building programs on priority areas shall be developed and conducted as well as encourage faculty members to develop and submit multi-disciplinary research proposals. A strong linkage and partnership schemes shall also be strengthened by means of raising the visibility of the College in the international community, establishing a strong connection with international partner institutions and in attending international conferences and other scholarly events which may lead to active pairing with academic foreign counterparts deemed as experts in their fields of specialization who may be invited by the College



to conduct academic exchanges through seminars and other related activities.

Academic programs under the Arts and Science uphold their scholarly tradition in instruction, research, and community service. Its Development Communication program, in particular, is a designated Center of Development by the Commission on Higher Education. Research conducted in these programs focus on natural sciences, languages, environment and biodiversity, mathematics, humanities, and the social sciences.

### **Undergraduate Programs**

#### **Bachelor of Science in Criminology**

Bachelor of Science in Criminology is one of the programs offered in Batangas State University JPLPC-Malvar under the College of Arts and Sciences along with the BS Psychology program. It is level III accredited program assessed by the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP). Thus, this program aims to instill the values of leadership, integrity, accountability and responsibility among its students while serving their fellowmen, community and country and to prepare them for the future careers that such as law enforcement, correctional administration and other professions that are in line with their program.

In line with this, BS Criminology program adheres to different statutory and regulatory requirements of the government evident to its compliance to CMO No. 5 series of 2018 of the Commission on Higher Education. Further, Batangas State University JPLPC-Malvar is envisioned to produce professionally competent and morally upright criminology graduates who have the knowledge, skills, values and attitudes in addressing the problems in criminality in the country. Consequently, it won't be possible without the arms of the program which are the roster of the professional instructors who are all holders of masters and baccalaureate degrees in Criminology and other related courses. Hence, they also possessed credentials authenticated by the Commission to ensure that quality education will be given to its students.

Moreover, Criminology program in BatStateU-Malvar promotes research and inquiry when it comes to nature, causes, treatment, and punishment of criminal conduct that can help the criminal justice system to strengthen and improve their responses in crime prevention. Along with this, the College of Arts and Sciences in collaboration with the extension office of the University promotes and conduct different activities in relation to Criminology program such as self-defense seminars, outreach programs, basic life support activities and others which aims not only to help the community but also to share knowledge when it comes to crime prevention and preparedness.



### **Bachelor of Science in Psychology**

Bachelor of Science in Psychology Program of Batangas State University JPLPC Malvar is one of the undergraduate programs under the College of Arts and Sciences. It is a level III accredited program assessed by the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP). The program adheres to different statutory and regulatory requirements of the government evident to its compliance to CMO No. 34 s. 2017 and CMO 20 s. 2013 of the Commission on Higher Education.

The program aims to provide students with in-depth and broader understanding of theories, principles and skills in psychology and prepare the students to achieve useful judgments, rigorous thinking and independent work that is with global competitiveness. Moreover, the program aims to make student knowledgeable about the advanced psychological inquiry by comprehending and evaluating new information that will be prominent in becoming more responsible and educated members of the global society.

The program is equipped with qualified faculty handling professional and general education courses, advanced laboratory tools and equipment used in instructional delivery and number of research and community extension service initiatives that serve as the arm of the program to continue improve its processes to serve its stakeholders and the community.

### **College of Engineering**

The campus is strategically located within various Industrial Parks that will cater the employment of the graduates of different engineering disciplines. And because of the status of Batangas State University as one of the top Engineering Universities in the country, many companies and establishments forged partnerships in the college in relation to employment, training, seminars and research and extension services. Headed by their Dean who is an ASEAN Engineer, the College of Engineering is composed of highly qualified faculty members and equipped with different laboratories. At present, the campus offers two (2) academic programs enumerated below:

### **Undergraduate Programs**

#### **Bachelor of Science in Industrial Engineering**

Industrial Engineering deals with the design, improvement and installation of integrated systems of people, materials, information, equipment, monetary and energy to produce quality and cost-effective goods and services in a healthy and efficient work environment. The field of Industrial Engineering brings together the various sciences concerned with technology, the production of goods, performance of services and the way in which people work. It is the only engineering field with close links with management so many IEs move on to successful careers in management.





### **Bachelor of Science in Mechatronics Engineering**

Mechatronics Engineering deals with the branch of engineering that integrates available and emerging technologies with knowledge in mathematics, natural, social and applied sciences to conceptualize, design, and implement new, improved, or innovative mechatronics systems, devices, goods, services and processes.

### **College of Informatics and Computing Sciences**

The College of Informatics and Computing Sciences offers an undergraduate program, facilitated by highly competent professionals and innovative faculty members that serve as academic advisors, instructors and mentors catering nine hundred twenty-eight (928) Information Technology and Computer Science students. The broad expertise of the facilitators is invaluable to the students, organization, and community. They focus on attending relevant seminars, trainings and workshops for the continuous professional enhancement of knowledge and skills.

The college focuses on the technical aspects and real-world applications of artificial intelligence, machine learning, deep learning, and security. The college also prepares graduate to address various user needs including the selection, creation, application, development, evaluation, integration and management of computing technologies within the administration of computing-based system.

### **Undergraduate Program**

#### **Bachelor of Science in Information Technology (BSIT)**

The curriculum for BSIT includes the required GE courses, six (6) core courses common to all ITE programs, professional courses required for the BSIT program, and electives. The students are also required to undertake practicum work and complete a capstone project. Moreover, it is composed of three (3) tracks such as network technology, business analytics and service management. The Information Technology curriculum combines technical, professional, and general education components to prepare students for a career, further study, and lifelong professional development in the computing discipline associated with the program. Also, the program includes basic and advanced courses on planning, development, integration and management of information technology.

This program has three (3) majors:

- Service Management Track
- Business Analytics Track
- Major in Network Technology Track



### **Bachelor of Science in Computer Science (BSCS)**

The curriculum for BSCS includes the required GE courses, six (6) core courses common to all ITE programs, professional courses required for the BSCS program, and electives. The students are also required to undertake practicum work and complete a thesis. The foundation and professional courses under the BSCS program cover theory, algorithms, software design and development, and new developments in computing.

### **College of Industrial Technology**

The College of Industrial Technology is the first college established in the university, and has since proven to be a premier producer of well-rounded and globally competitive professionals who meet local, national, and international demands for skilled workers who significantly contribute to the manpower resources in response to the rapid industrialization of the modern world.

The college uses the newly constructed CIT Five-storey building which comprises thirteen (13) classrooms, one (1) Physics Laboratory, one (1) chemistry laboratory, two (2) computer laboratories, one (1) electrical technology laboratory, one (1) Industrial Engineering laboratory, one (1) faculty room, one (1) Dean's office, one (1) accreditation, three (3) male restrooms, three (3) female restrooms, and two (2) multi-media rooms which accommodates the increasing population of technology students. At the present, the new CIT building inspires the students to study hard and in helping the college to maintain the cleanliness and orderliness of the building. As part of the continuous improvement of the university, the CIT faculty and students are committed to making contributions in the field of research, extension, scholarship, and creative works both within and across disciplines.

### **Undergraduate Programs**

#### **Bachelor of Industrial Technology major in:**

##### **➤ Automotive Technology**

This course is designed to prepare students with the basic knowledge and skills necessary for modern state-of-the-art automotive workers. The increasing sophistication of Automotive Technology now requires workers who can use computerized shop equipment and work with electronic components while maintaining their skills with traditional hand tools. Automotive services technicians as vehicle components and systems become increasingly sophisticated. Motorcycle Mechanics repair and overhaul motorcycles. Besides repairing engines, they may work on clutches transmissions, brakes, drivelines, differential cycles, tires, power steering systems, auto electricity and electronics, ignition system, and make minor body repairs.



### ➤ **Civil Technology**

This course is a dynamic educational opportunity offering skills-based learning through class instructions, extensive laboratory experience, and fieldwork. Concentrations are as follows: carpentry, architectural design technology, construction/project management, surveying and mapping, construction estimate, and soil and construction material testing.

### ➤ **Computer Technology**

This course develops and prepares graduates who will be an integral part of the pool of technology experts specifically in the field of computer technology. The program is a strong combination of theoretical and practical concepts in electrical and electronics technology, computer technology, mathematics, computer science, management, and general education that leads to the Bachelor of Industrial Technology degree. The Bachelor's Degree program intends to prepare graduates to find employment as computer technologists here and abroad. Students will gain knowledge and skills in digital electronics, computer programming, computer networking, and system analysis and design.

### ➤ **Drafting Technology**

This course provides knowledge in the construction of different working drawings that help improve the skills in drawing. Knowledge in graphic communication is an important factor of the course. This course includes basic and advanced technical drawings, floor planning, architectural and structural drawings, architectural modeling, and estimating. This course also contains computer-aided design concepts and applications.

### ➤ **Electronics Technology**

This course program prepares graduates for employment in a wide variety of industries producing and/or using electrical and electronic equipment. The program provides a thorough understanding of digital electronics, circuit analysis, electronic devices, machine controls, programmable logic controllers, and industrial electronics. This course also includes theoretical analysis, software simulation, and hands-on application

### ➤ **Electrical Technology**

This course will prepare graduates with the skills necessary to enter careers in the design, application, installation, manufacturing, operation, and/or maintenance of electrical systems. Graduates of this degree program typically have strengths in the building, testing, operation, and maintenance of existing electrical systems and are well prepared for the development and implementation of electrical systems.





### ➤ **Food Technology**

This course deals with the basics of food science and technology including food chemistry, food microbiology, food nutrition and analysis, food processing and preservation, food product development and testing as well as food packaging and storage technology. This program also introduces fundamental concepts related to food quality management to meet the food standards imposed by the industry and the regulatory agencies of the government. This program also entails producing future food entrepreneurs since the demand of the business food industry is high in the production line.

### ➤ **Mechanical Technology**

This program provides the knowledge, skills, and attitudes in the various machining process that can be applied to their on-the-job training and on their future careers. It encompasses measurements, metallurgy and heat treatment, welding drive components, repair, and maintenance, pipe lifting, lubrication, and principles of tool and die. Likewise, pneumatics and hydraulics, CNC, inspection, and quality control are also vital elements of the curriculum.

### ➤ **Mechatronics Technology**

This course is a field of technology That includes a combination of mechanical, electronics, automation, and computer technology. Mechatronics is a design process that unifies these technology fields. Students in the mechatronics technology degree program will gain the technical know-how to install, repair, and maintain various types of electromechanical equipment and industrial machines and be equipped to work with electromechanical and automated equipment to create industrial and commercial products.

### **Programs with COPC**

In totality, BatStateU JPLPC-Malvar has fourteen (14) programs and the thirteen (13) programs have already been issued with the Certificate of Program Compliance (COPC) by the Commission on Higher Education (CHED) as reflected in Table 1. The program that has not received a COPC yet has nine (9) majors of specialization in which 8 out of 9 has already been visited by the RQAT team. The remaining major awaits for a visitation schedule from the RQAT assessors. This is the focal reason for the delay in the release of COPC for the remaining program. Table no. 1 presents the list of programs with COPC.



Table 2 List of Programs with COPC

LIST OF PROGRAMS WITH COPC			
NO.	PROGRAMS	COPC NUMBER	DATE OF ISSUANCE
<b>CABEIHM</b>			
1	Bachelor of Science in Business Administration Major in: <ul style="list-style-type: none"><li>Human Resource Management</li><li>Marketing Management</li><li>Financial Management</li></ul>	No. 126 Series 2022	12 <sup>th</sup> day of July 2022
2	Bachelor of Science in Management Accounting	No.125 Series 2022	12 <sup>th</sup> day of July 2022
3	Bachelor of Science in Hospitality Management	No. 076 Series 2022	1 <sup>st</sup> day of June 2022
4	Bachelor of Science in Tourism Management	No. 075 Series of 2022	1 <sup>st</sup> day of June 2022
<b>CTE</b>			
5	Bachelor of Physical Education	No. 100 Series 2022	14th day of June 2022
6	Bachelor of Elementary Education	No. 100 Series 2022	14th day of June 2022
7	Bachelor of Secondary Education	No. 102 Series 2022	14th day of June 2022
<b>CAS</b>			
8	Bachelor of Science in Criminology	No. 077 Series of 2022	1 <sup>st</sup> day of June 2022
9	Bachelor of Science in Psychology	No. 072 Series of 2022	1 <sup>st</sup> day of June 2022
<b>CICS</b>			
10	Bachelor of Science in Computer Science	No. 001 Series of 2021	6 <sup>th</sup> day of January 2021
11	Bachelor of Science in Information Technology	No. 002 Series of 2021	6th day of January 2021
<b>COE</b>			
12	Bachelor of Science in Industrial Engineering	No. 051 Series of 2020	18th day of September 2020
13	Bachelor of Science in Mechatronics Engineering	No. 145 Series of 2021	25th day of March 2022

**f. Recognition and Awards Obtained From International / National / Regional or Private Award-Giving Bodies**

The Batangas State University Board of Regents is the highest governing body of the university, as stipulated in Sec. 5 of RA 9045. he Board regularly convenes at least once every quarter. Currently, it is composed of the following:

## QS Intelligence Unit Rates BatStateU as a 3-Stars Institution



Figure 15 QS Stars University Rating of BatStateU

In March 2020, Quacquarelli Symonds or QS Stars University rating gave Batangas State University a three-star rating. It received five stars for Teaching; four stars for Employability; one star for internationalization; two stars for Academic Development; three stars for Facilities; four stars for Inclusiveness; two stars for Specialist Criteria: Innovation; and four stars for Specialist Criteria: Electronics Engineering.

## BatStateU as sole state university in PH with ABET-Accredited Engineering and IT Programs



Figure 16 ABET

BatStateU is the only state university in the Philippines with engineering and IT programs accredited by the Accreditation Board for Engineering and Technology (ABET) – Engineering Accreditation Commission and Computing Accreditation Commission.

ABET accreditation is recognized worldwide through international agreements, paving the way for graduates to work globally. It provides assurance that a university program meets the quality standards of the profession for which that program prepares its graduates.

## CHED hails BatStateU as Model HEI; BatStateU Programs as COE/COD



Figure 17 BatStateU COE and COD Awards



BatStateU was selected as a Model Higher Education Institution by the Commission on Higher Education in 2016. This made BatStateU a host university for the Philippine Higher Education Career System - Executive Development Program or EDP, which is part of the University Dynamics Laboratory of CHED in partnership with the Development Academy of the Philippines. The university hosted ten candidates of the EDP from 26 November to 1 December 2016.

In addition, the University's Electronics Engineering program is designated by CHED as a national Center of Excellence, and its Electrical Engineering, Mechanical Engineering, Development Communication, and Teacher Education programs are national Centers of Development.

### National Awards and Citations

Two of Batangas State University's research projects received the National Gawad KALASAG (KAlamidad at Sakuna LABanan, SARiling Galing ang Kaligtasan) award from the Office of Civil Defense – National Disaster Risk Reduction and Management Council or NDRRMC. The amphibious vehicle known as the Tactical Operative Amphibious Drive or TOAD, which can be used for rescue operations during heavy floods, received the special award in November 2016.



Figure 18 Tactical Operative Amphibious Drive or TOAD

On the other hand, the research project of the university dubbed as Solar-Powered Isotropic Generator of Acoustic Wave or SIGAW, which is a tsunami early warning device, received a Special Recognition during the Gawad Kalasag awards night in December 2018.



Figure 19 Solar-Powered Isotropic Generator of Acoustic Wave or SIGAW

Gawad Kalasag is an annual awarding ceremony for significant initiatives in the promotion and advancement of Disaster Risk Reduction and Management in the country.

### **BatStateU Technology Park designated as Special Economic Zone**



Figure 20 BatStateU KIST Park Located at Brgy. Alangilan, Batangas City

Through Proclamation No. 947, President Rodrigo Roa Duterte designated the BatStateU Knowledge, Innovation, and Science Technology or KIST Park as a Special Economic Zone. It is the first KIST Park registered by the Philippine Economic Zone Authority or PEZA.

Strategically located near other technology parks, business hubs and transport systems in the CALABARZON Region, the Batangas State University KIST Park clearly serves as the top location for technology transfer and commercialization in the Philippines.

### **Home of ASEAN-registered Engineers**

The University has 29 ASEAN Engineers in the faculty roster, awarded by the ASEAN Federation of Engineering Organizations (AFEO), which facilitates the mobility of engineers within the ASEAN countries.

### **Hosting of International Conferences**



Figure 21 Hosting of International Conferences

The university hosted 6 international conferences on engineering, science, technology, business, education, social sciences, disaster risk management and climate change adaptation, showcasing progressive leadership in these areas.

### ISO 9001-2015 Certification

BatStateU JPLPC-Malvar is one of the campuses ISO 9001-2015 certified.



Figure 22 BatStateU ISO 9001:2015 QR Code

TÜV Rheinland Philippines, Inc. awarded the university the ISO 9001:2015 certification in March 04, 2021 with its validity until January 18, 2024. The ISO certification covers the design, development, and implementation of higher education services.

## B. Demographic Profile

In an institution, it is important to know the demographic data of its population. Analysis of these data from multiple time periods can be used to see the variation in the number of enrollment as well as in the number of personnel hired. When a trend is spotted, increase or decrease to these numbers in the succeeding years can be well-determined. This helps identify the future needs of an institution, whether it is the need for a change or a new program offering or additional facilities. Below are the data of population of the campus, from previous years up to current year and the projection of enrollees and personnel for the next ten (10) years.

### a. Brief Summary of the Population (Male / Female):

Batangas State University JPLPC-Malvar has a total of 6,496 students this Academic Year 2022-2023 First Semester of which 2,440 are male and 4,056 are female.

On the other hand, the campus has a total of 286 employees of which 202 are from the teaching personnel and 84 from the non-teaching. Breakdown of the male and female population of employees for each status can be seen in Table 3.





Table 3 Male and Female Population of Teaching and Non-Teaching Employees

STATUS	MALE	FEMALE	TOTAL
<b>Teaching Personnel</b>			
Permanent	25	22	47
Temporary	4	0	4
Guest Lecturers	75	76	151
<b>Non-Teaching Personnel</b>			
Permanent	7	7	14
Casual	0	1	1
Job Orders	27	40	67
Part-Time			
*Physician	0	1	1
*Dentist	0	1	1
<b>TOTAL</b>	<b>138</b>	<b>148</b>	<b>286</b>

b. Projected Population of Students and Employees in the Next 10 Years

In this part, the distribution of the number of male and female students for AY 2011-2012 to AY 2020-2021, faculty members and job orders is discussed. Based on the data collected in previous years for students, faculty and job orders, 10-year projection was obtained.

Students

The table below presents the number of students by sex for first semester from 2011-2021. In total, there are more females (f=23, 927, 52%) as compared to males (f=22, 040, 48%) during the 10-year period.

Table 4 Number of Students for First Semester from 2011-2021 by Sex

Sex	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	Total
Male	1,937	2,361	2,822	2,849	3,153	2,403	1,656	1,531	1,449	1,879	22,040
Female	1,853	2,388	2,937	2,948	3,137	2,697	1,729	1,725	1,844	2,669	23,927
Total	3,790	4,749	5,759	5,797	6,290	5,100	3,385	3,256	3,293	4,548	45,967

Figures 23 and 24 show the number of male and female enrollees during 1st semester of AY 2011-2012 to AY 2020-2021. It can be seen from the Figures that the trend line presents an inverse relationship between the number of enrollees and the year. The slope of -107.21 and -40.12 suggests that there is really an inverse relationship between the number of male and female enrollees and the year. This means that as the year progresses from 2011 to 2021, the number of male enrollees decreases. This behavior of the data may be because of the abrupt decrease of enrollees from 2017 to 2021 because of K12. In respect of the purpose of obtaining projected number enrollees for 10 years, we intend to use the number enrollees for year 2011 to 2016 as basis of projection.

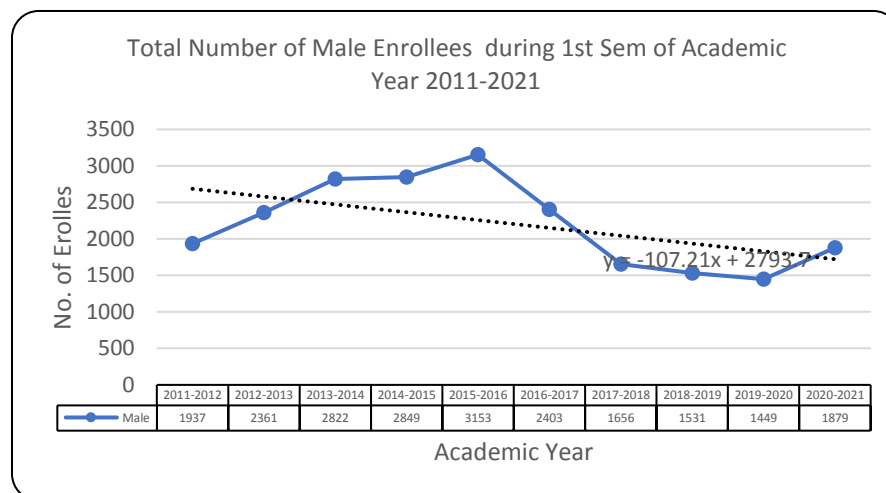


Figure 23 Number of Male Students for First Semester from 2011-2021 by Sex

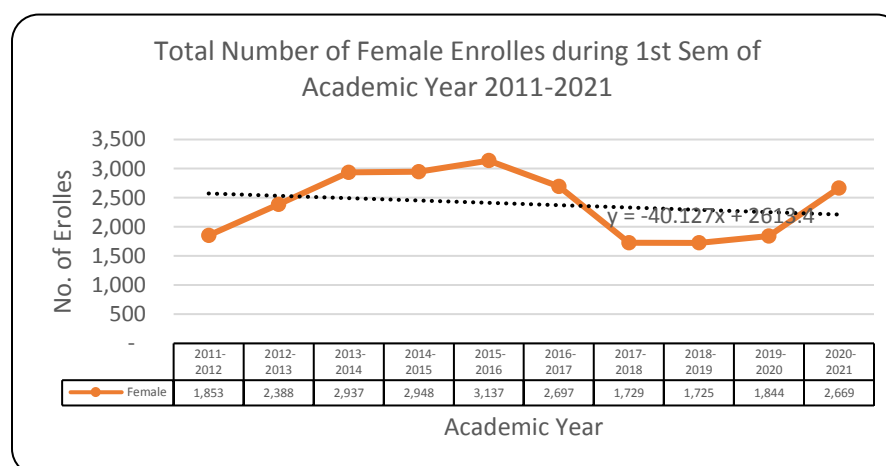


Figure 24 Number of Female Students for First Semester from 2011-2021 by Sex

Figures 25 and 26 present the number of male and female enrollees for AY 2011-2016. The figures and a slope of 292 and 312.8 suggest a positive relationship between the number of enrollees and the academic year. This data can be best used in approximating the projections of enrollees for 10 years or 2021 to 2030 for male and female students since during 2021 the University is already accepting graduates of K12.

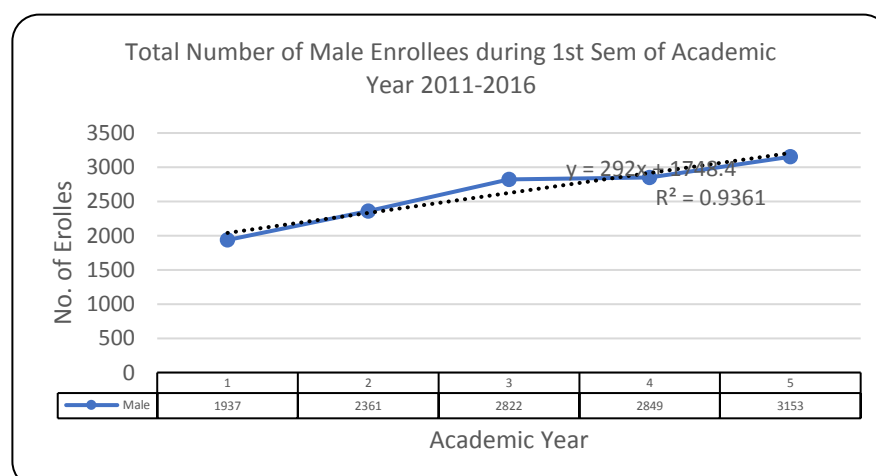


Figure 25 Number of Male Students for First Semester from 2011-2016 by Sex



## Land Use Development and Infrastructure Plan (LUDIP)

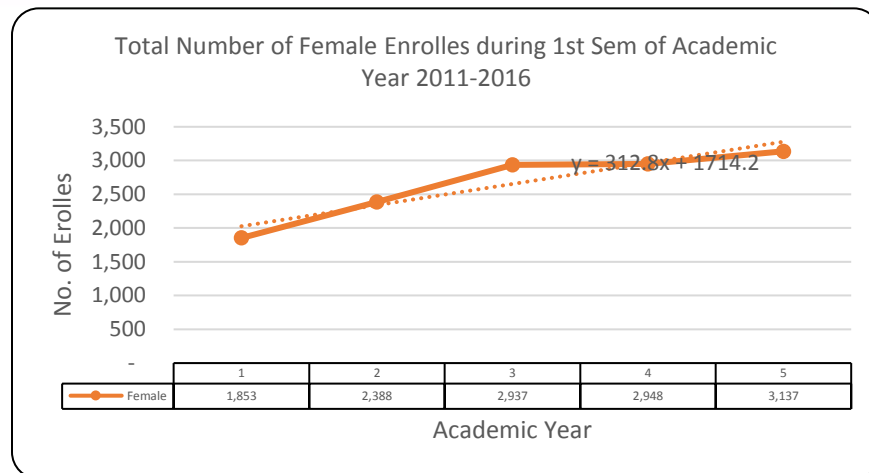


Figure 26 Number of Female Students for First Semester from 2011-2016 by Sex

Table 5 presents the projection of enrollees for 10 years for male and female student for first semester for year 2021-2031 based on the data presented on Figures 25 and 26.

Table 5 Projected Number of Enrollees for the First Semester from 2021-2031 by Sex

	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	Total
Male	3,500	3,792	4,084	4,376	4,668	4,960	5,252	5,544	5,836	6,128	48,140
Female	3,591	3,904	4,216	4,529	4,842	5,155	5,468	5,780	6,093	6,406	49,984
Total	7,091	7,696	8,300	8,905	9,510	10,115	10,720	11,324	11,929	12,534	98,124

Table 5 presents the number of students by sex for Second Semester from 2011-2021. In total, there are more females ( $f=22,170$ , 53%) as compared to males ( $f=19,877$ , 47%) during the 10-year period.

Table 6 Number of Students for Second Semester from 2011-2021 by Sex

Sex	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	Total
Male	1,690	2,088	2,417	2,556	2,862	2,232	1,526	1,390	1,382	1,734	19,877
Female	1,708	2,203	2,630	2,754	2,756	2,549	1,637	1,609	1,783	2,541	22,170
Total	3,398	4,291	5,047	5,310	5,618	4,781	3,163	2,999	3,165	4,275	42,047





Figures 27 and 28 below show the number of male and female enrollees during 2<sup>nd</sup> semester of AY 2011-2012 to AY 2020-2021. It can be seen from the Figure that the trend line presents an inverse relationship between the number of enrollees and the year. The slope of -81.218 and -24.885 suggests that there is also an inverse relationship between the number of male and female enrollees and the year. This means that as the year progresses from 2011 to 2021 the number of male enrollees decreases. This behavior of the data may be because of the abrupt decrease of enrollees from 2017 to 2021 because of K12. In respect of the purpose of obtaining projected number enrollees for 10 years, we intend to use the number enrollees for year 2011 to 2016 as basis of projection.

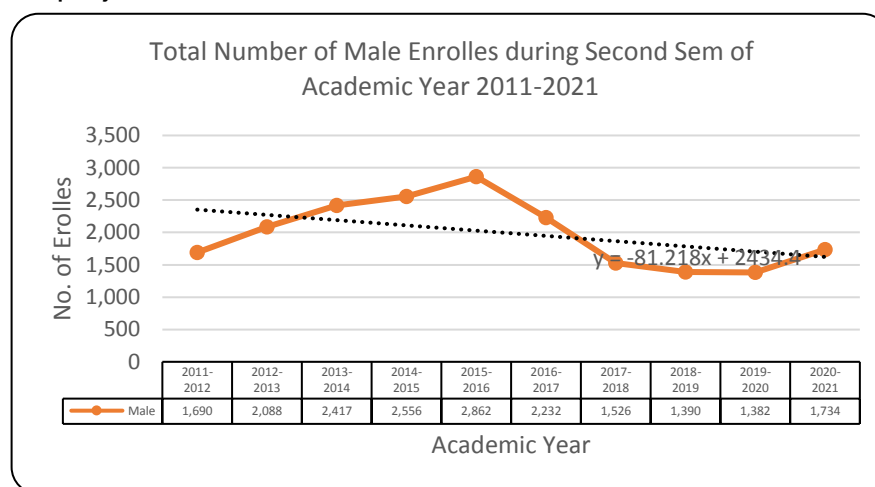


Figure 27 Number of Male Students for Second Semester from 2011-2021 by Sex

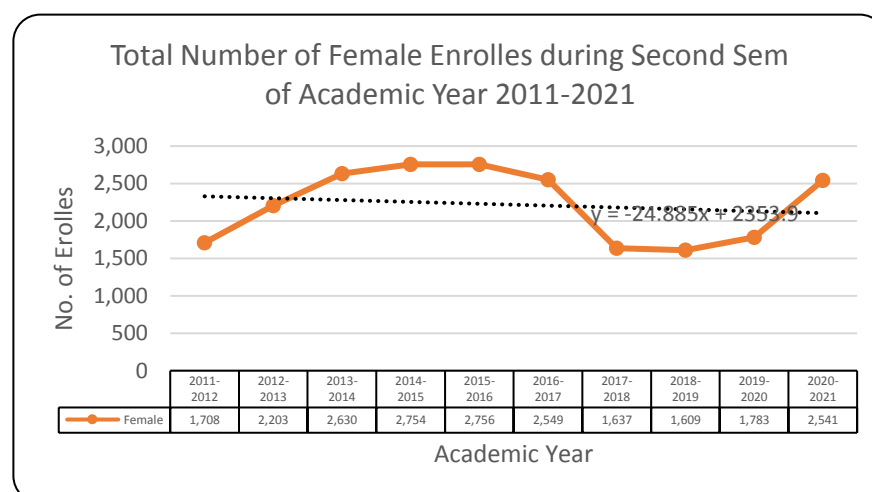


Figure 28 Number of Female Students for Second Semester from 2011-2021 by Sex

Figures 29 and 30 below present the number of male and female enrollees for AY 2011-2016. The figures and a slope of 281.2 and 264.7 suggest a positive relationship between the number of enrollees and the academic year. This data can be best used in approximating the projections of enrollees for 10 years or 2021 to 2030 for male and female students. Since, during 2021 the University is already accepting graduates of K12.

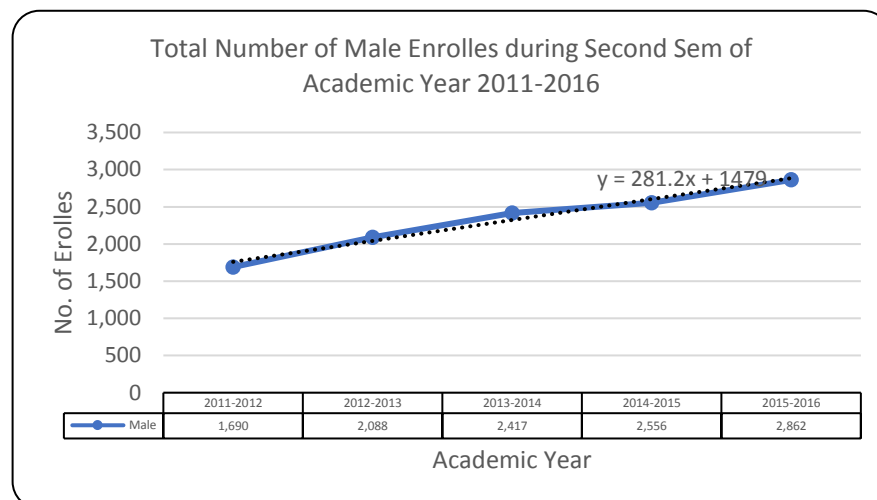


Figure 29 Number of Male Students for Second Semester from 2011-2016 by Sex

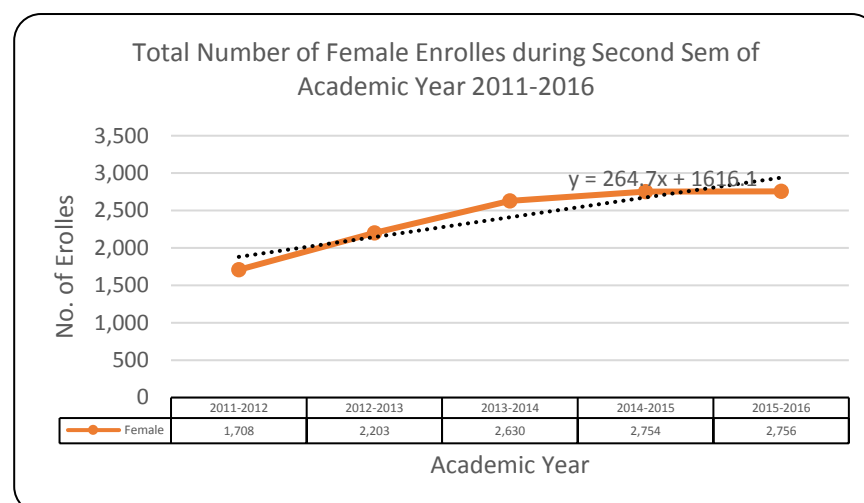


Figure 30 Number of Female Students for Second Semester from 2011-2016 by Sex

Table 7 presents the projection of enrollees for 10 years for male and female student for 2<sup>nd</sup> semester AY 2021-2031 based on the data presented on Figures 29 and 30.

Table 7 Projected Number of Students for Second Semester from 2011-2031 by Sex

Sex	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	Total
Male	3116	3447	3729	4010	4291	4572	4853	5135	5416	5697	44,266
Female	3,204	3,469	3,734	3,998	4,263	4,528	4,792	5,057	5,322	5,587	43,954
Total	6,320	6,916	7,462	8,008	8,554	9,100	9,646	10,192	10,738	11,284	88,220



Table 8 presents the number of students by sex for Midterm Class from 2011-2021. In total, there are more females ( $f=7932$ , 52%) as compared to males ( $f=7290$ , 48%) during the 10-year period.

Table 8 Number of Students for Midterm Class from 2011-2021 by Sex

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	
Male	781	995	1139	1004	1499	776	425	365	90	216	7290
Female	845	1069	1333	1452	1459	800	387	264	112	211	7932
Total	1626	2064	2472	2456	2958	1576	812	629	202	427	15222

Figures 31 and 32 below shows the number of Male and Female enrollees during Midterm Class of AY 2011 to 2021. It can be seen from the Figure that the trend line also presents an inverse relationship between the number of enrollees and the year. The slope of  $-107.58$  and  $-130.93$  suggests that there is really an inverse relationship between the number of male and female enrollees and the year. This means that as the year progress from 2011 to 2021 the number of male enrollees decreases. This behavior of the data may be because of the abrupt decrease of enrollees from 2017 to 2021 because of K12.

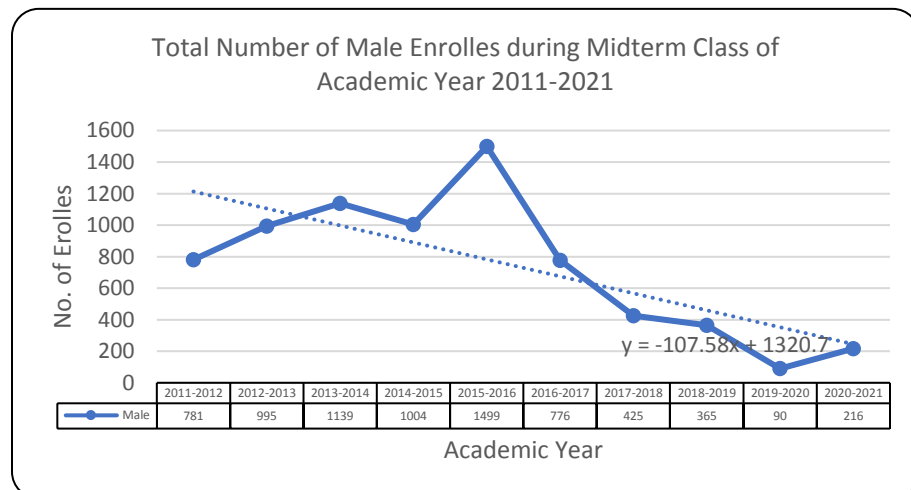


Figure 31 Number of Male Students for Midterm Semester from 2011-2021 by Sex

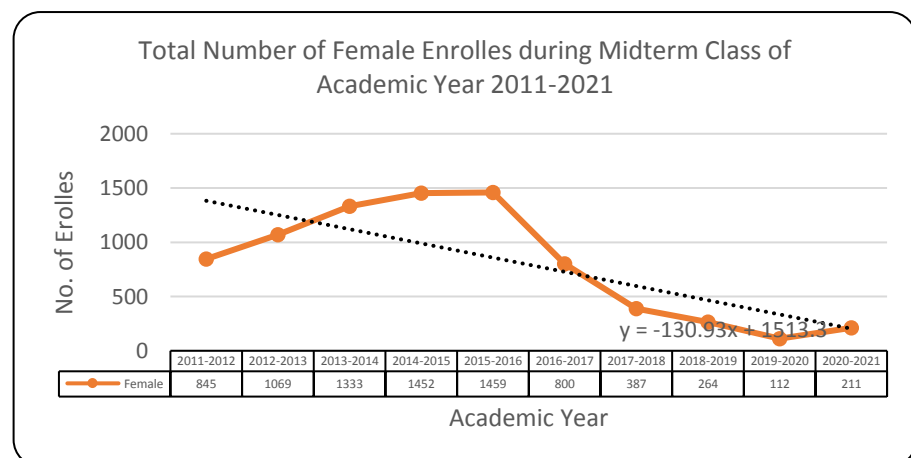


Figure 32 Number of Female Students for Midterm Semester from 2011-2021 by Sex





Based on the trend analyses conducted during midterm class of Academic Year 2011-2021, the slopes obtained suggest inverse relationship between the number of enrollees and the year. It means to say that the direction of the trend analysis is decreasing, hence, the 10-year projection in the midterm class cannot be made.

Table 9 Projected Number of Students for Midterm 2021-2031

Academic Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031
Projected Enrollees	534	561	589	619	650	683	717	753	791	831

The projections made in the number of students in first and second semesters from 2021-2031 cannot be applied in the projection of the number of students in the midterm class when historical data of midterm enrollees is considered. Thus, the 5% increase was assigned each year which is consistent to the average 5% increase in the projected number of students when trend analyses and forecasting were made in the first semester and second semester from 2021-2031.

Table 9 shows the projected number of students for midterm 2021-2031 using 5% increase each succeeding year from 2021-2031.

## Faculty

Table 10 and Figure 33 below show the distribution of teaching personnel (Permanent, Temporary and Guest Lecturers) in the campus. It can be seen that there is an increasing number of teaching personnel for both male and female faculty. It can also be observed that the difference between male and female is not quite large for the given year.

Table 10 Distribution of Teaching Personnel by Sex in 2016-2021

Sex	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Male	54	56	61	66	78
Female	52	48	60	72	74
Total	106	104	121	138	152

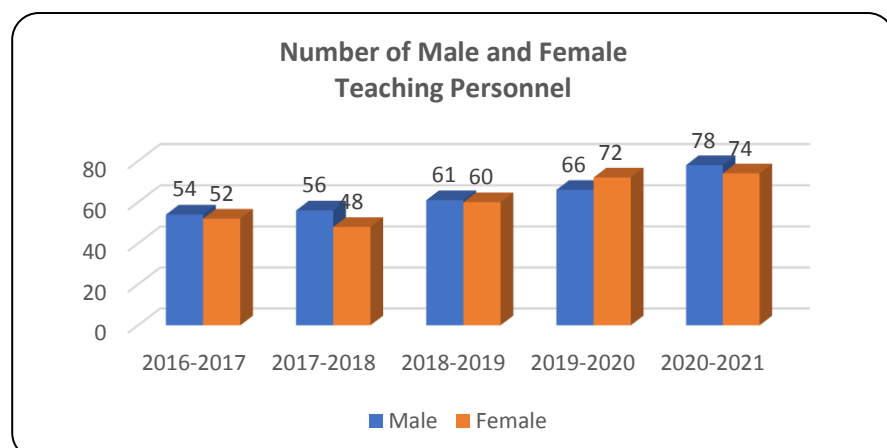


Figure 33 Number of Male and Female Teaching Personnel



Table 11 presents the number of teaching personnel by status. It can be observed that there are small changes in the number of permanent faculty for the given period due to small number of temporary faculty who finished their Masteral Degree . AY 2016-2017 was the last year that the University employed contractual faculty. As for the year 2017 to 2021, the table below depicts that there is an increasing number of guest lecturers.

Table 11 Distribution of Teaching Personnel by Status in 2016-2021

Status	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Permanent	35	36	38	34	38
Temporary	22	19	15	12	14
Contractual	39	1	0	0	1
Guest Lecturer	10	48	68	92	99
<b>Total</b>	<b>106</b>	<b>104</b>	<b>121</b>	<b>138</b>	<b>152</b>

Figure 34 shows the trendline between the number of guest lecturer and academic years. It can be observed that there is an increasing relationship between guest lecturer and the years. Because of this relationship, the data was used for the projection of guest lecturer for the years.

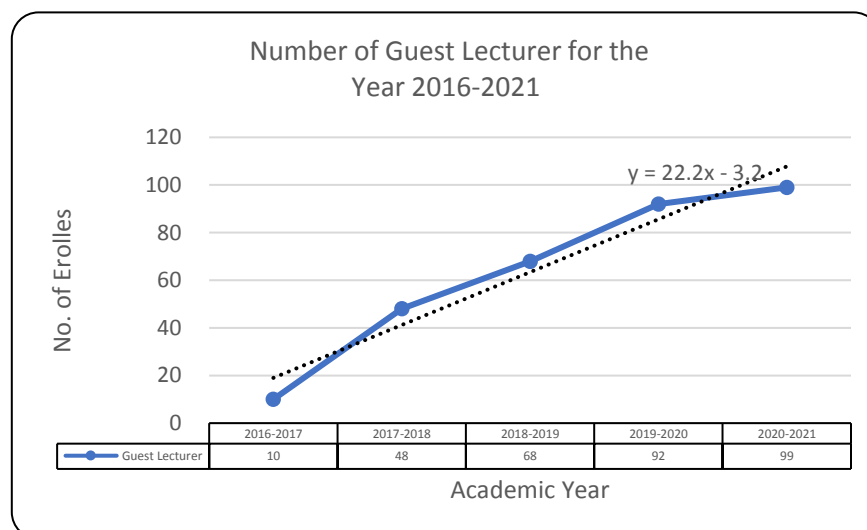


Figure 34 Number of Guest Lecturers for the Year 2016-2021

Table 12 Projection of Guest Lecturers for 2021-2030

Status	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030	2030-2031	Total
Guest Lecturers	99	130	152	174	197	219	241	263	285	308	2,068
<b>Total</b>	<b>99</b>	<b>130</b>	<b>152</b>	<b>174</b>	<b>197</b>	<b>219</b>	<b>241</b>	<b>263</b>	<b>285</b>	<b>308</b>	<b>2,068</b>



### Non-Teaching Personnel

The table and figure below show the distribution of non-teaching personnel by sex in the campus from 2016-2021. It can be seen that there is decreasing number of non-teaching personnel, hence, trend analysis cannot be performed. In average, there are more females ( $f=44$ , 56%) compared to males ( $f=34$ , 44%) non-teaching personnel.

Table 13 Distribution of Non-Teaching Personnel by Sex in 2016-2021

	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	Average
Male	45	45	38	13	29	34
Female	47	55	47	35	36	44
Total	92	100	85	48	65	78

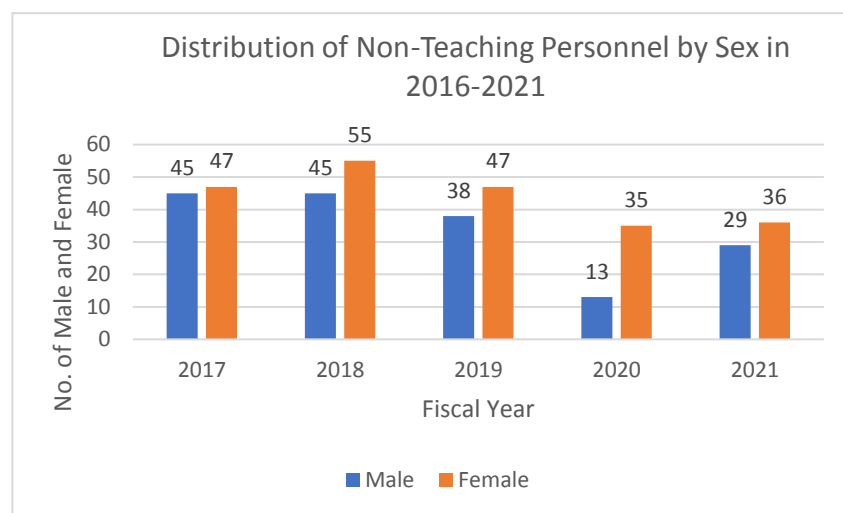


Figure 35 Distribution of Non-Teaching Personnel by Sex in 2016-2021

Table 14 Distribution of Non-Teaching Personnel Status by Sex for 2016-2021

Academic Year	PERMANENT		JOB ORDER		CASUAL		PART-TIME	
	Male	Female	Male	Female	Male	Female	Male	Female
2016- 2017	7	9	38	36	0	1	0	1
2017-2018	7	10	38	42	0	1	0	2
2018-2019	7	10	31	35	0	0	0	2
2019-2020	8	9	5	26	0	0	0	0
2020-2021	8	9	21	25	0	1	0	1
Average	7	9	26	33	0	1	0	1

In average, Table 14 shows that there are more females as compared to males across the different non-teaching personnel status.





Table 15 Number of Non-Teaching Personnel by Education for 2016-2021

	Elementary	Secondary	Vocational	Bachelor	Masteral
2016- 2017	1	17	20	50	4
2017- 2018	1	17	20	57	5
2018-2019	1	12	19	48	5
2019-2020	0	14	6	26	2
2020- 2021	0	17	7	36	5
Average	1	15	14	43	4

Analysis shows that 55.47% of the non-teaching personnel ( $f=43$ ) obtained their bachelor's degree. It is followed by secondary ( $f=15$ ), vocational ( $f=14$ ), and master's degree ( $f=4$ ) graduates with 20.99, 17.47, and 5.24 percentage respectively. Analysis shows that there is one elementary graduate during the period of analysis.

Note: Non-teaching personnel are expected to increase in 50% when face to face classes are permitted already. There is a proposed additional 39 non-teaching personnel (50% of the present non-teaching personnel) by the academic and administrative offices.

Table 16 Summary of Forecasted Demography on A. Y. 2030-2031

Enrollees		Enrollees (Average)	Non-Teaching Personnel	Teaching Personnel	Teacher to Student Ratio
First Semester	12,534	11908	78	360	1:33
Second Semester	11283				
Midterm	5982				

In summary, as shown in the above table, the average enrollees in the Academic Year 2030-2031 are 11908 while the total number of projected teaching personnel is 360. The data collected resulted to a teacher to student ratio of 1:33. The non-teaching personnel ( $f=78$ ) is expected to increase in 50% when face to face classes are permitted already. There are a proposed 39 additional non-teaching personnel by both the academic and administrative offices.

### C. Geographic Location

#### a. Brief profile of the province and municipality where BatStateU JPLPC - Malvar is located

Batangas is a province in the Philippines situated in the CALABARZON region occupying the central section of Luzon. Its capital is the city of Batangas.

The province has a land area of 3,119.75 square kilometers or 1,204.54 square miles. Its population as determined by the 2015 Census was 2,694,335. This represented 18.69% of the total population of the

CALABARZON region, 4.69% of the overall population of the Luzon Island group, or 2.67% of the entire population of the Philippines. Based on these figures, the population density is computed at 864 inhabitants per square kilometer or 2,237 inhabitants per square mile.

Batangas is bordered, clockwise from the North, by Cavite, Laguna, Quezon, Tayabas Bay, Verde Island Passage, and South China Sea.

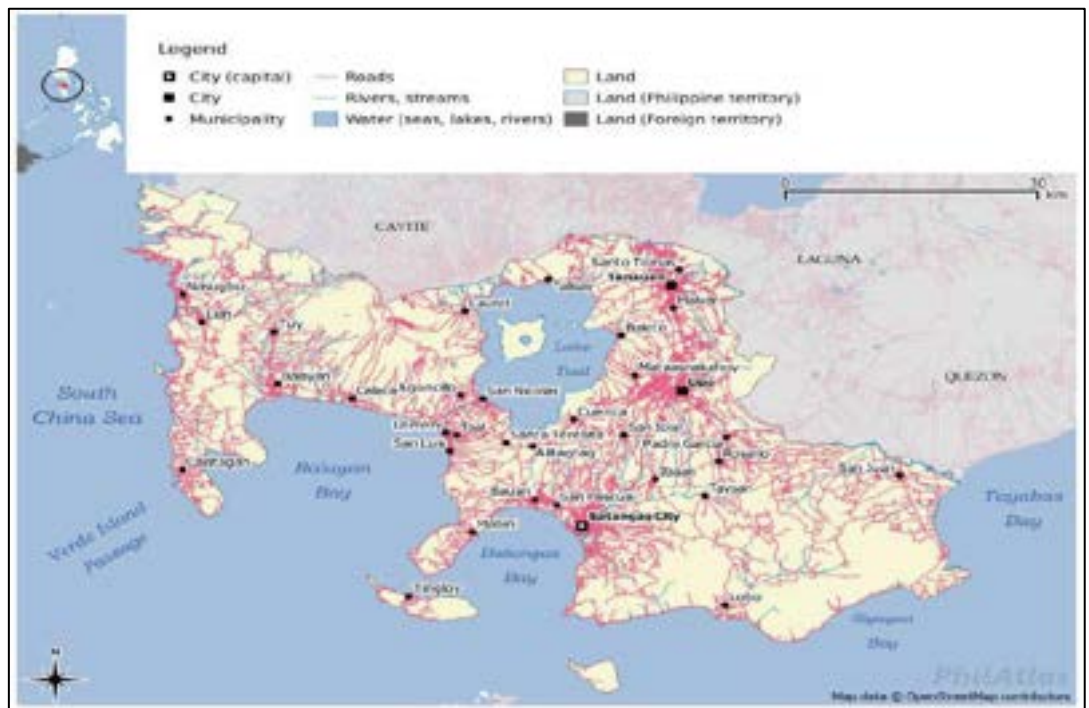


Figure 36 Map of Batangas Province

Figure 36 shows the map of Batangas as sourced by Openstreet Map showing boundaries, roads, bodies of water and political areas.

Malvar is located in the north-eastern part of the province of Batangas. It is bounded on the north by the City of Tanauan; on the east by the Municipality of Sto.Tomas; on the south by the City of Lipa; and on the west by the Municipality of Balete.

It is approximately 67 kilometers south of Metro Manila and 38 kilometers north of its provincial capital, Batangas City. The municipality can be accessed from Metro Manila and Batangas through the Manila-Batangas National Highway and the Southern Tagalog Arterial Road (STAR). It can also be accessed through the Municipality of Balete in the west.

## b. Description of the land cover, topography of the area where BatStateU JPLPC – Malvar is located

Batangas is a combination of plains and mountains, including one of the world's smallest volcanoes, Mt. Taal, with an elevation of 600 metres (2,000 ft), located in the middle of the Taal Lake. Other important peaks are Mount Macolod with an elevation of 830 metres (2,720 ft), Mt. Banoy with 960 metres (3,150 ft), Mt. Talamitam with 700 metres (2,300 ft), Mt. Pico de Loro with 664 metres (2,178 ft), Mt. Batulao with 693

metres (2,274 ft), Mt. Manabo with 830 metres (2,720 ft), and Mt. Daguldol with 672 metres (2,205 ft).

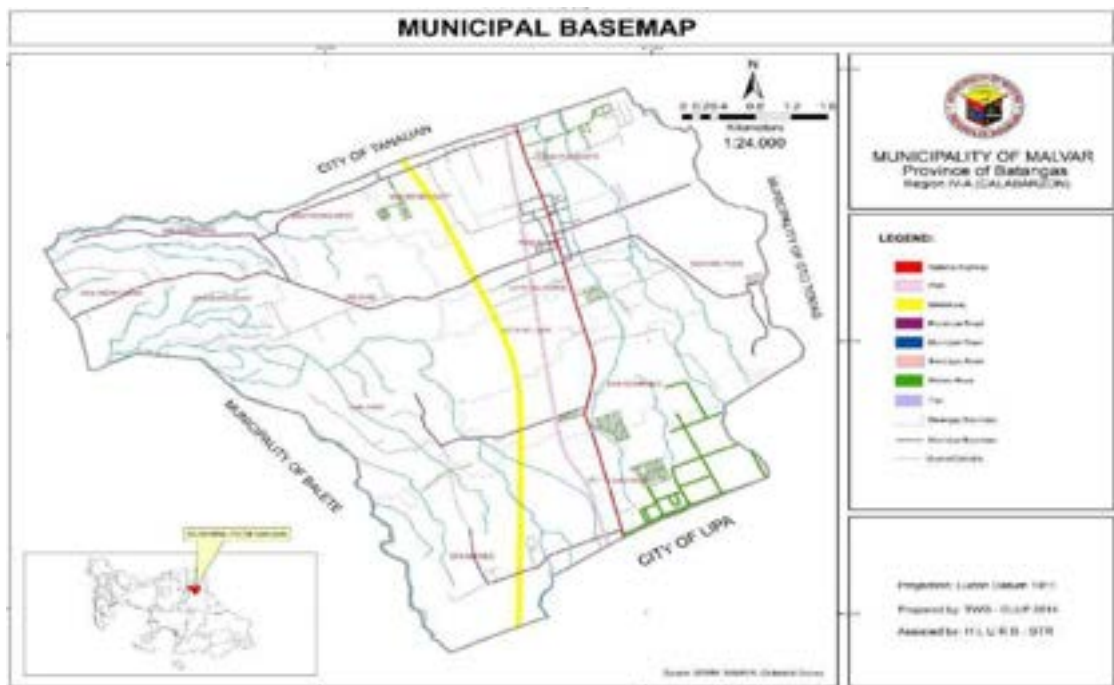


Figure 37 Municipal Base Map of Malvar

Figure 38 shows Batangas topographic map, elevation and relief. The map coordinates are 13.47385, 120.34558, 14.24446 and 121.61033. The minimum elevation is 0 m and maximum elevation is 2,531 m. The average elevation is 123 m.

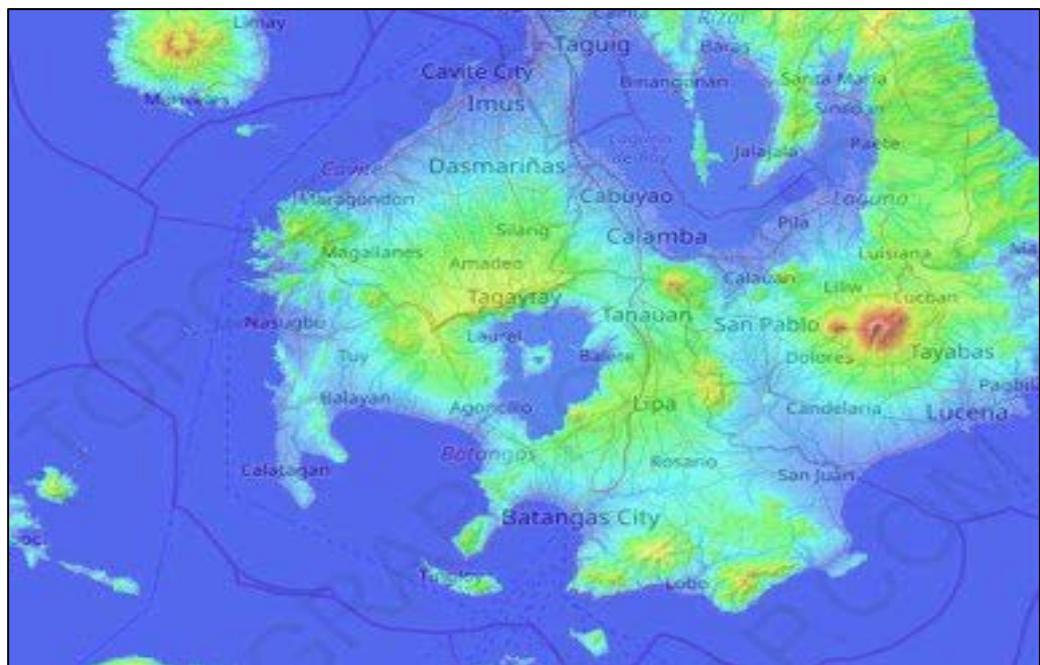


Figure 38 Topography Map of Batangas



The municipality's elevation ranges from 140 to 450 feet above sea level. As shown in Table 17, Malvar has a predominantly undulating to rolling terrain.

Table 17 Slope Categories and Areas

Description	Slope	Area	% of Total
Level to Very Gently Sloping	0-3%	401.247	12.16
Gently Sloping to Undulating	3-8%	287.604	8.72
Undulating to Rolling	8-18%	2,207.953	66.91
Rolling to Hilly	18-30%	63.460	1.92
Hilly to Steeply Hilly	30-50%	213.727	6.48
Steeply to Mountaneous	>50%	0.631	1.44
	<b>TOTAL</b>	3,300.000	100.00

Flat to undulating terrain can be found in the north-eastern part of the municipality and covers portions of Barangays San Pioquinto, Poblacion, San Pedro I, Bulihan and Luta Norte. High areas and steep slopes can be found along the escarpments of the north western part of the municipality, particularly in Barangays San Gregorio, Bilucaon, and San Juan. Steep slopes can also be found along the banks of San Juan River in Barangay Bagong Pook and San Pioquinto.

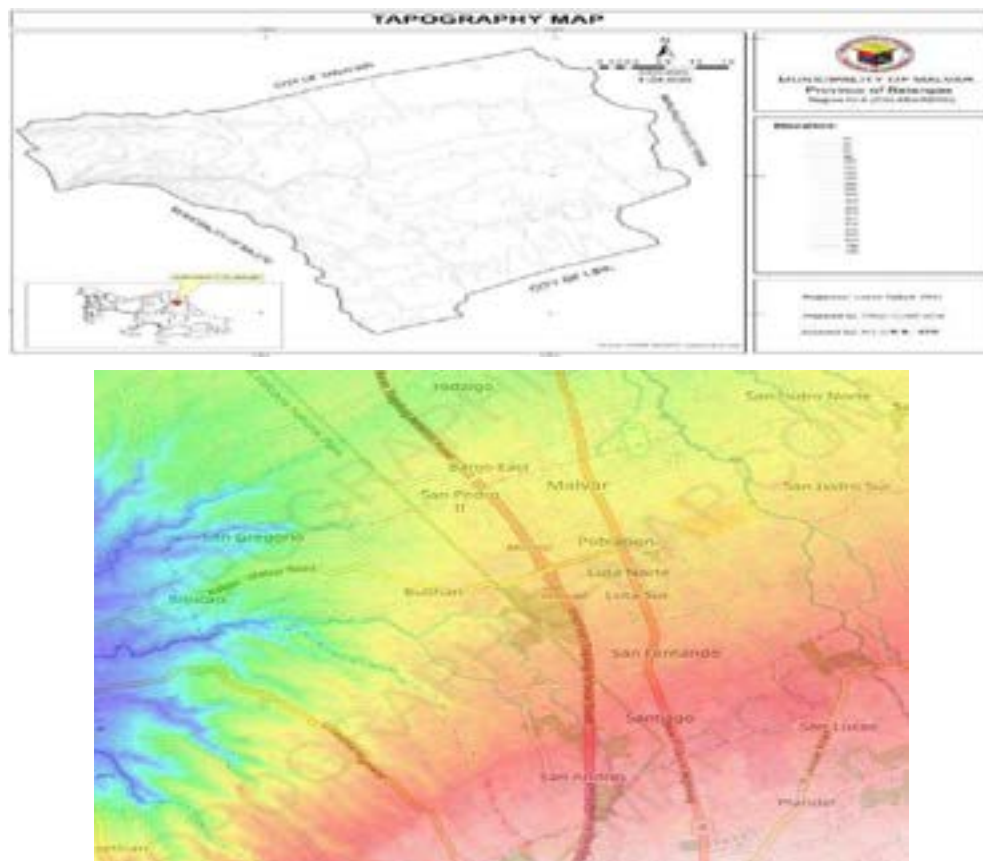


Figure 39 Topography Map of Malvar

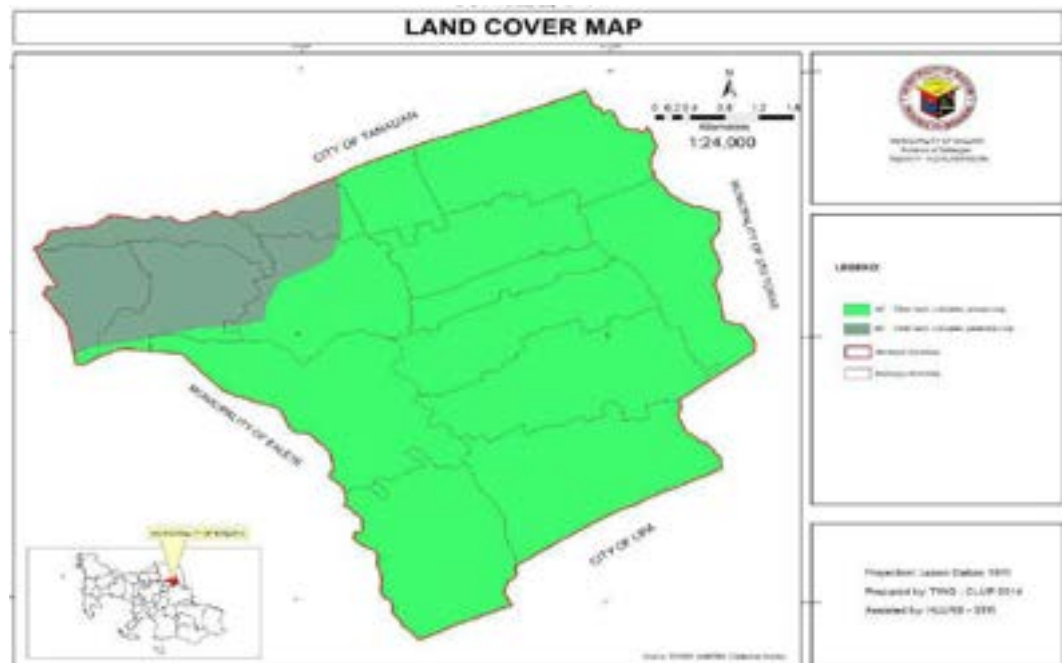


Figure 40 Land Cover Map of Malvar

The land cover classification of the municipality of Malvar is mostly classified as Annual Crop (other land, cultivated) and Perennial Crop (other land, cultivated) as shown in Figure 40.

**c. Brief profile of watershed / sub-watershed coverage and locations, if any, under which BatStateU JPLPC - Malvar is part of**

The Province of Batangas is located along the southwestern edge of Luzon in the Philippines. The province has a land area of about 3,166 km<sup>2</sup> and consists of 34 cities and municipalities, of which 14 are coastal municipalities and 1 is a coastal city. The major bays of the province are Batangas Bay, Balayan and Adjacent Bays, and Tayabas and Adjacent Bays.

The Calumpang River is the major river flowing into Batangas Bay while Pansipit and Benangbang Rivers are the major rivers flowing into Balayan Bay. Major economic activities in Balayan and Tayabas Bays include fishing and tourism mainly due to its sandy beaches and coral reefs. Batangas Bay is dominated by industrial, commercial and shipping activities.

Classification of River bodies of water within the Municipality. The water coming from springs in three (3) river bodies are all potable. In the aftermath of typhoon "Glenda", when water supply from the refilling stations cannot sustain our drinking needs, the springs of Balete River and San Juan River had been the source of drinking water.<sup>6</sup>

Malvar has several creeks that drain the municipality towards river bodies. One such river is the San Juan River, which snakes along the Malvar-Tanauan- Sto Tomas boundary. Creeks in the eastern side of the municipality drain towards this river, which in turn, drains to Laguna de Bay. On the other hand, Alulod River which forms a boundary



between the municipality of Balete and Malvar, channels water run-offs from the western side of the municipality to Taal Lake. San Gregorio River which is located at the northwestern side also drains towards the Taal Lake.



Figure 41 San Juan River

**San Juan River.** The surface water quality is Class C, which means that water is suitable for (1) Fishery Water for the propagation and growth of fish and other aquatic resources; (2) Recreational Water Class II – For boating, fishing, or similar activities; and (3) For agriculture, irrigation, and livestock watering.



Figure 42 San Gregorio River

**San Gregorio River.** The surface water quality is Class B, which means that it is still suitable as Recreational Water Class I – Intended for primary contact recreation (bathing, swimming, etc.)





Figure 43 Alulod River

**Alulod River.** The surface water quality is Class B, which means that it is still suitable as Recreational Water Class I – Intended for primary contact recreation (bathing, swimming, etc.)

The municipality of Malvar is part of the San Juan Sub-basin. The San Juan Sub-basin is located at the southwestern portion of the Laguna de Bay Basin. The sub-basin covers the barangays of two (2) municipalities and three (3) cities, namely: Municipality of Sto. Tomas, Municipality of Malvar, Calamba City, Tanauan City and Lipa City. It also covers small portions of the barangays which belong to Los Baños, Calauan, Bay, and Alaminos.

Its total land area is about 20,421.391 hectares. The City of Tanauan and Sto. Tomas have the largest land areas within the sub-basin while Malvar has the least. However, in terms of the number of barangays covered by the sub-basin, Sto. Tomas has the greatest proportion (100 percent), followed by Calamba City (90.74 percent), Tanauan City (58.33 percent), Malvar (40 percent) and Lipa City (4.17 percent) as shown in Figure 44.



Figure 44 San Juan Subbasin



d. **Significant National or Regional / Sub-National Characteristics or Value (e.g. Biodiversity, Cultural-Historical, Traditional or Functional)**

Under National Integrated Protected Areas System Act (NIPAS) proclamation 906 covered the Taal Volcano Protected Landscape (TVPL) which includes the municipalities of Talisay, Malvar, Tanauan, Laurel, Agoncillo, Santa Teresita, Cuenca, Alitagtag, Mataas na Kahoy, Lipa City, Balete, San Nicolas, Batangas; Tagaytay City. Ten barangays in the municipality are covered by TVPL which accounts to 1,614.64 hectares as protection forest.

Table 18 Ten Barangays of Malvar Covered by TVPL

Category	Location	Area (has)
Protection Forests		
NIPAS Areas	San Fernando	1,614.65
	San Gregorio	
	San Isidro	
	San Juan	
	San Pedro I	
	San Pedro II	
	Santiago	
	Bilucao	
	Bulihan	
	San Andres	

e. **Vulnerabilities and Risks (landslides, earthquakes, floods, volcanic eruptions, underground caves and karst, erosion, and the like.**

The land area where Batangas State University JPLPC – Malvar is located can be evaluated in terms of seismic, volcanic and hydro – meteorological hazards.

In terms of seismic hazard, the assessment can be summarized in Figure 45. It can be seen that the area is prone to ground shaking and is initially safe in terms of ground rupture (17.1 km from West Valley Fault), liquefaction and tsunami. These findings must be considered in designing structures to be built in the area to be compliant to National Building Code and National Structural Code of the Philippines to avoid damages to property and life.



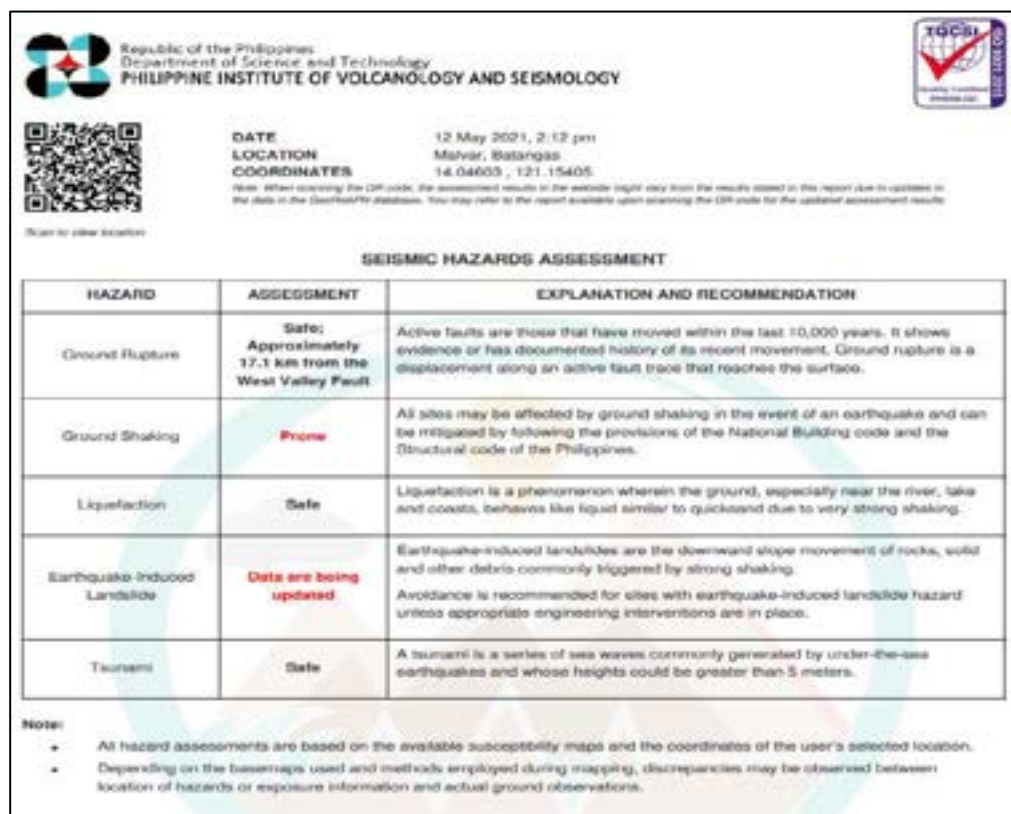


Figure 45 Seismic Hazard Assessment

In terms of volcanic hazard, the nearest active volcano in the area is Taal Volcano. It can be seen that the area is within the 17 km radius from Taal volcano's main crater or eruptive center. It is generally safe from ballistic projectiles, base surge and volcanic tsunami.

In terms of hydro-meteorological hazard, the assessment can be summarized in Figure 46. It can be seen that the area is suitable for development but needs further evaluation in terms of flooding and landslide. The area is safe in terms of storm surge and severe wind.

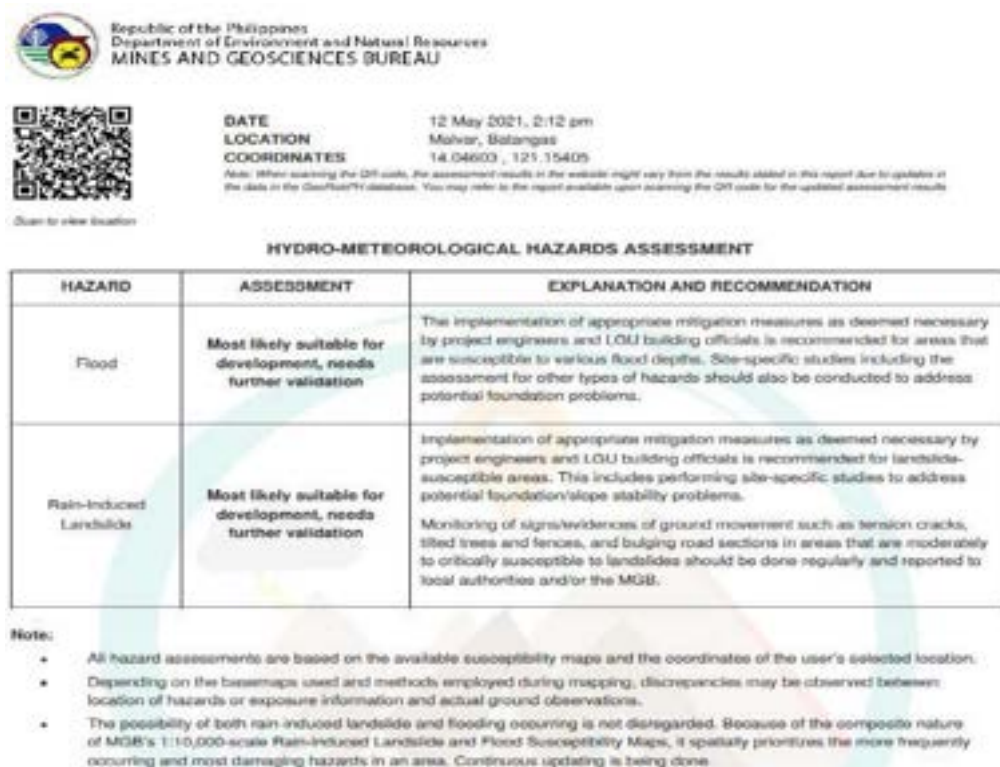


Figure 46 Hydro - Meteorological Hazard Assessment:



**f. Maps covering political boundaries of Malvar, Batangas and where BatStateU JPLPC - Malvar is located.**

According to the Philippine Statistics Authority, the municipality of Malvar has a land area of 33.00 square kilometres (12.74 sq mi) constituting 1.06% of the 3,119.75-square-kilometre- (1,204.54 sq mi) total area of Batangas.

Malvar is politically subdivided into 15 barangays. Shown below is the political map of Malvar highlighting its boundaries and showing where Batangas State University JPLPC – Malvar is located.

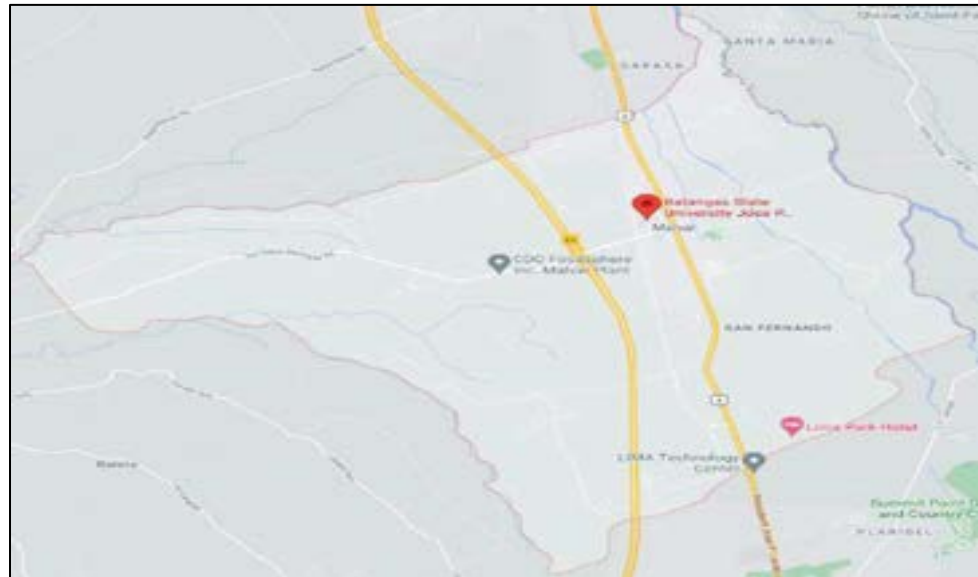


Figure 47 Political Map of Municipality of Malvar Showing Boundaries

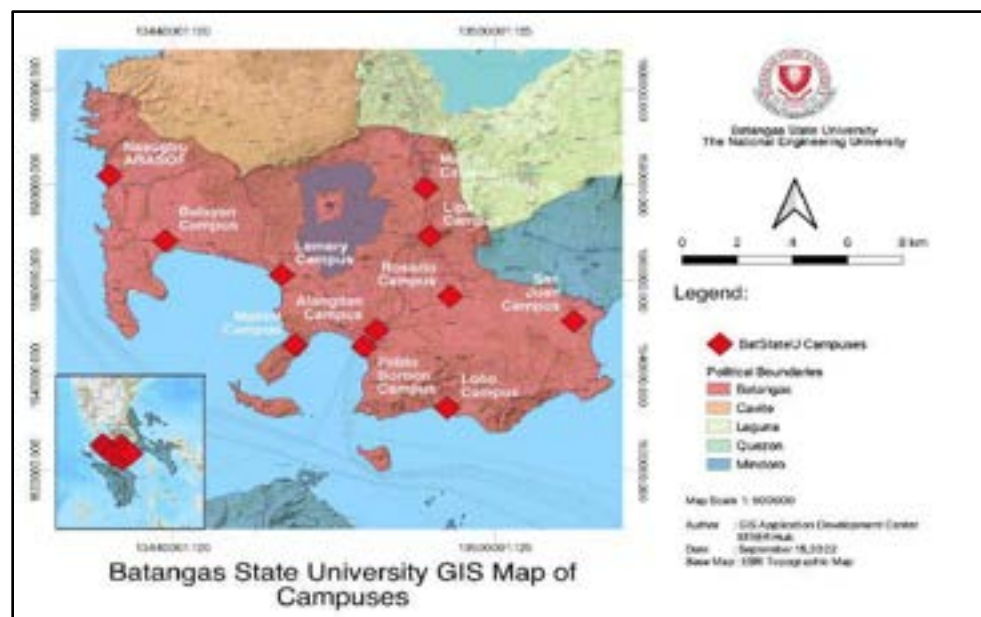
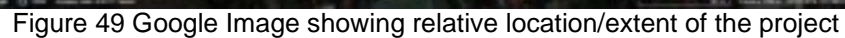


Figure 48 GIS Map of BatStateU Campuses Showing Political Boundaries

The Batangas State University JPLPC-Malvar is located at the intersection of geographical coordinates 14.03790000 N, 121.15957300 E per the vicinity map and site development plan. The figure below shows the Google Image showing relative location/extent of the project.



The campus' water supply is primarily connected to the three (3) deep wells in the vicinity mainly located in CIT building, CAS building and CECS building. Each comprises of submersible pumps that have a capacity of 3HP. There are three cistern tanks or holding tanks that are connected to the deep well. Their primary purpose is to hold water and avoid excessive withdrawals from the groundwater supply. Groundwater is used by the University for domestic purposes such as for flushing toilets, watering the garden, washing, and even drinking. The water demand needed to supply the campus is based on the consumption in cubic meters multiplied by the total number of occupants.

**Legend**

**Regional Groundwater Availability**

- Extensive And Highly Productive Aquifer
- Fairly Extensive And Productive Aquifers
- Local And Less Productive Aquifers
- Fairly To Less Extensive And productive Aquifers With Low To Moderate Potential Recharge
- Fairly Extensive And Productive Aquifers With High Potential Recharge
- Rocks Without Any Known Insignificant
- Groundwater Obtainable Through Drilled Wells, Largely Untested
- Rocks With Limited Potential, Low to Moderate Permeability
- No Data

54



## DETAILED DESCRIPTION OF BATSTATEU JPLPC - MALVAR

### A. Physical Features and Environmental Condition

- a. Physical and locational characteristics, including land area, boundaries, covered barangays, and among others.

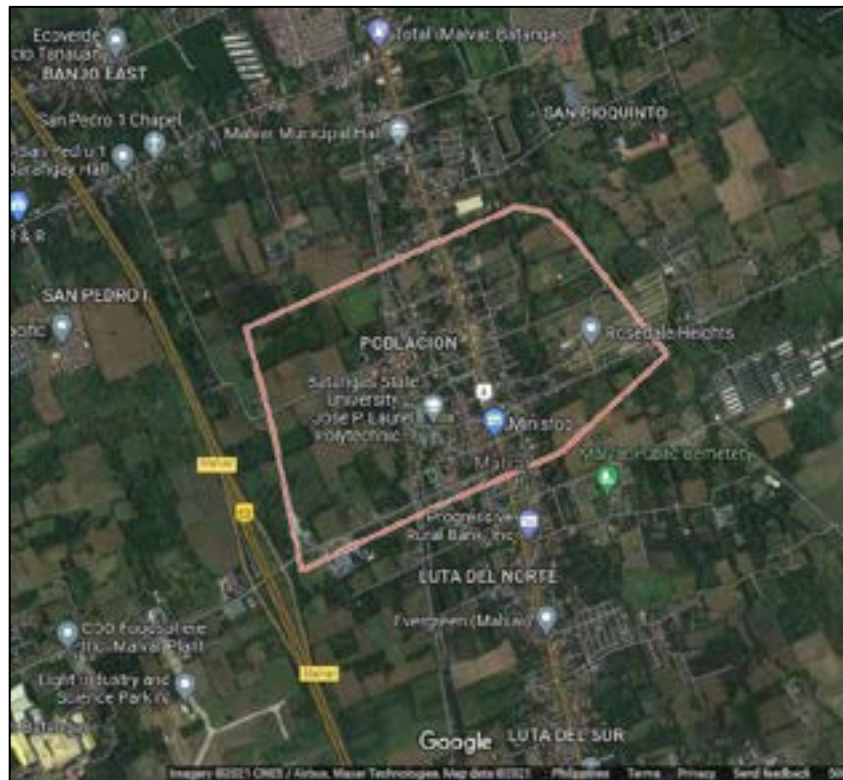


Figure 51 Google Map of Malvar, Batangas

The area where Batangas State University-JPLPC Malvar is located is approximately 32,964 square meters, more or less. The area is bounded by G. Leviste St. and is located within Brgy. Poblacion, Malvar, Batangas. Since Malvar is just 68 km south of Manila and is conveniently accessible by STAR tollway, it is part of the Manila conurbation, making it prime for urbanization and shared industrial growth. The LIMA Technology Center is also located in Malvar; it is an industrial park and a potential world-class business hub and commercial destination owned by the real estate arm of the Aboitiz Group, one of the country's biggest business conglomerates.

- b. Nearby Airports, Ports, Bus Terminals, and the like.

Batangas State University JPLPC Malvar campus can be accessed by land through public transportation such as jeepneys and buses. The nearest sea port is the Port of Batangas, Batangas Port Access Rd, Batangas which is approximately 41.1 kilometers apart as shown in Figure 52. There is no airport within Batangas Province, however the closest is Ninoy Aquino International Airport which 52.1 miles / 83.8 kilometers far from the province.



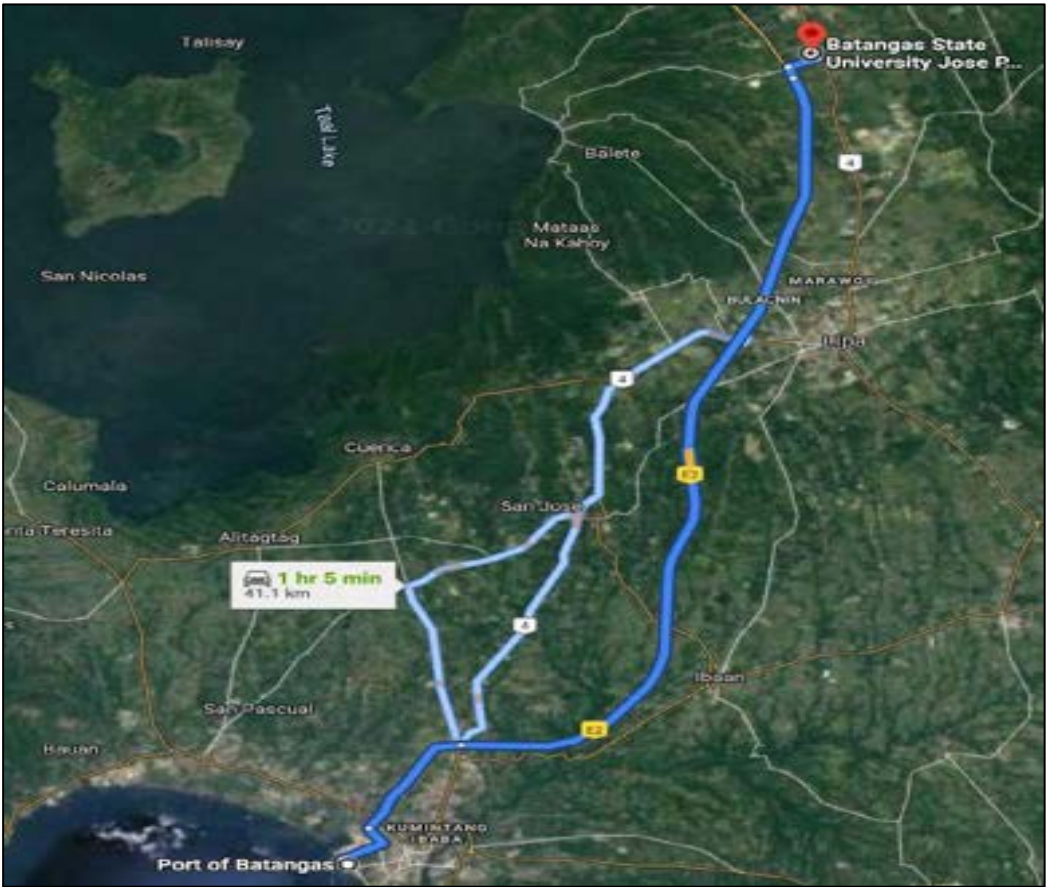


Figure 52 BatStateU JPLPC-Malvar Nearby Port

The nearest public transport terminal is located at SM City Lipa Grand Transport Terminal which is approximately 10.8 kilometers away via J.P. Laurel Highway as shown in Figure 53.

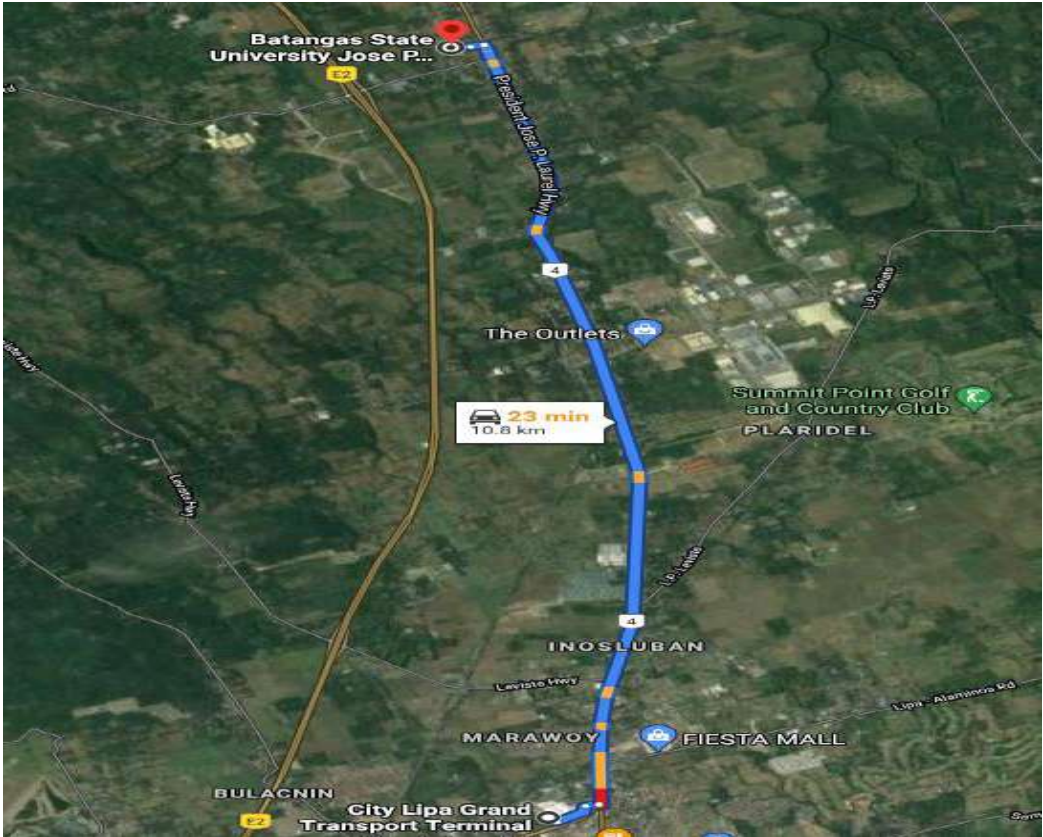


Figure 53 BatStateU JPLPC-Malvar Nearby Bus Terminal

## c. Summary Description of the Natural Biophysical Environment:

### Vegetative Cover

Batangas State University JPLPC-Malvar is located at Brgy. Poblacion, Malvar, Batangas which is classified with a land cover of Annual Crop, indicated by the green color legend as shown in the Land Cover Map of Malvar.

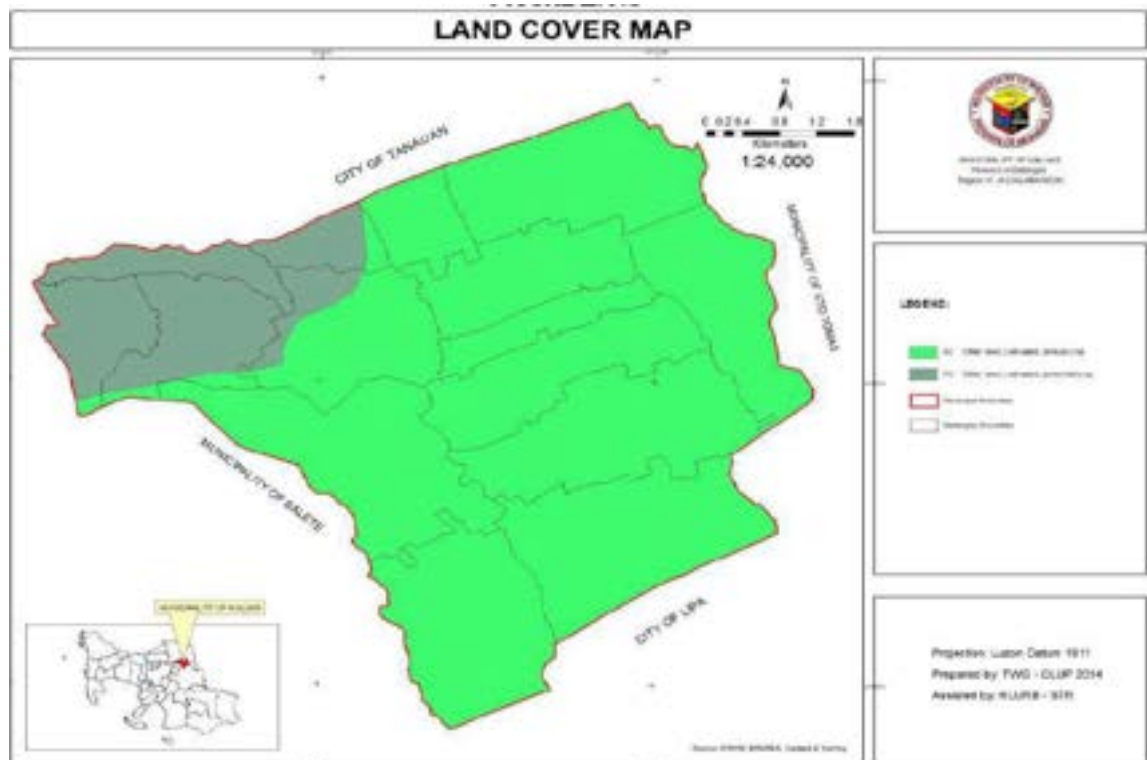


Figure 54 Land Cover Map of Malvar

### Soil Classification

The two basic soil types found in Malvar belong to the Lipa Soil Series which are basically residual soils derived from volcanic tuff. Both Lipa Clay loam and Lipa Loam are fertile types of soil, thus, suitable for agricultural production. Soils found in Malvar show moderate to moderately rapid degrees of permeability. This indicates that the soils are also suitable for settlement or urban development.

Batangas State University JPLPC Malvar campus is located at Brgy. Poblacion, Malvar, Batangas which is classified as Lipa Soil type, indicated by the light-brown color legend as shown in the Soil Map of Malvar.



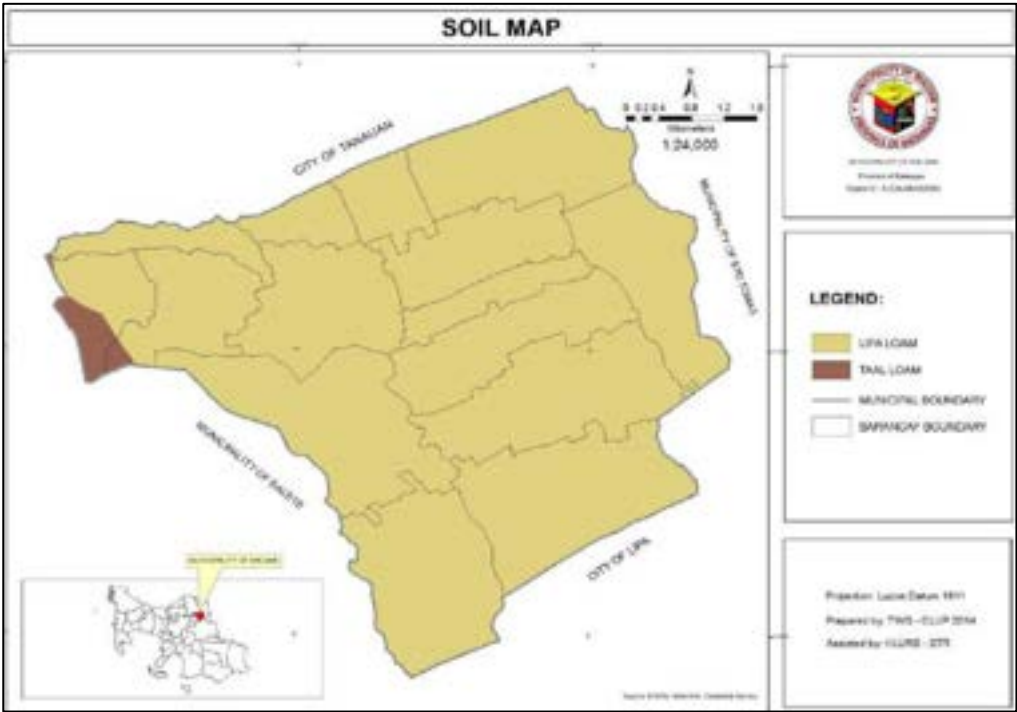


Figure 55 Soil Map of Malvar

### General Land Use

Batangas State University JPLPC-Malvar is located at Brgy. Poblacion, Malvar, Batangas. The location is classified as institutional use, indicated by the dark-blue color legend as shown in the General Land Use Map of Malvar.

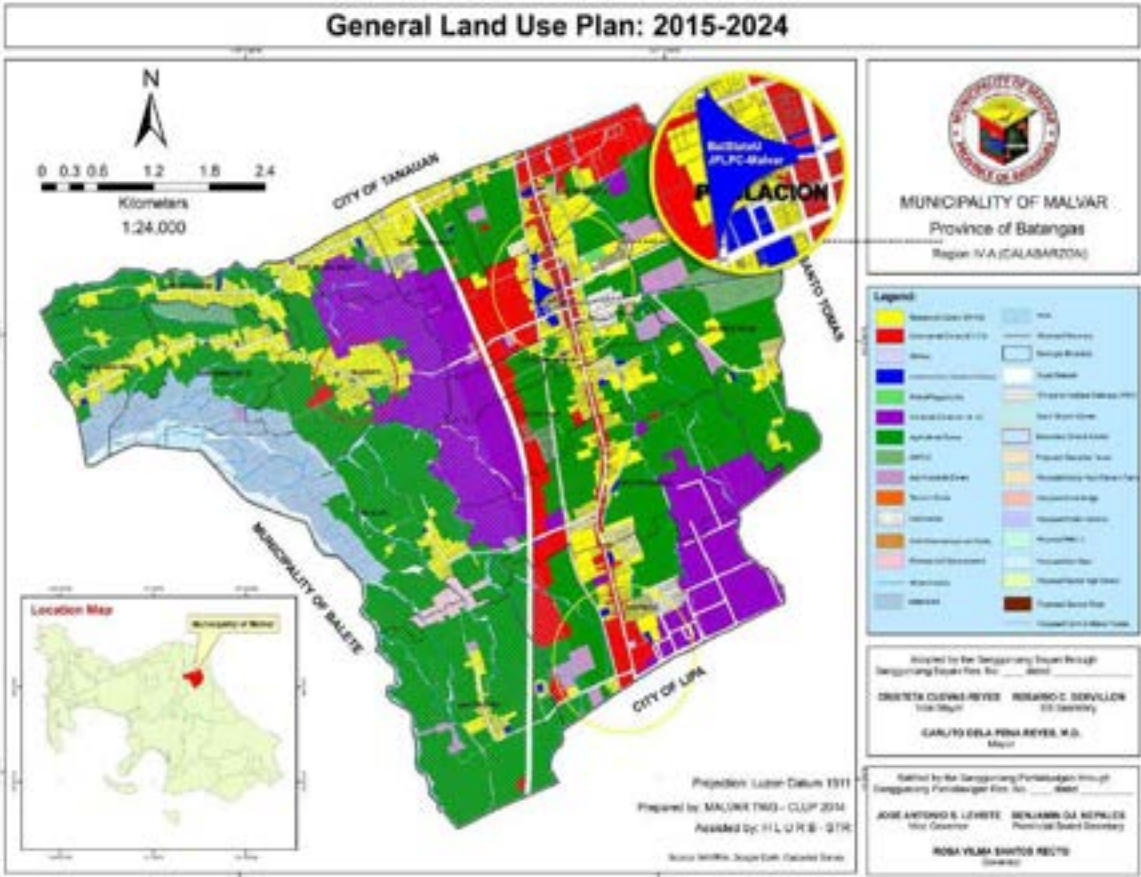


Figure 56 General Land Use Map of Malvar



## Hazard Maps

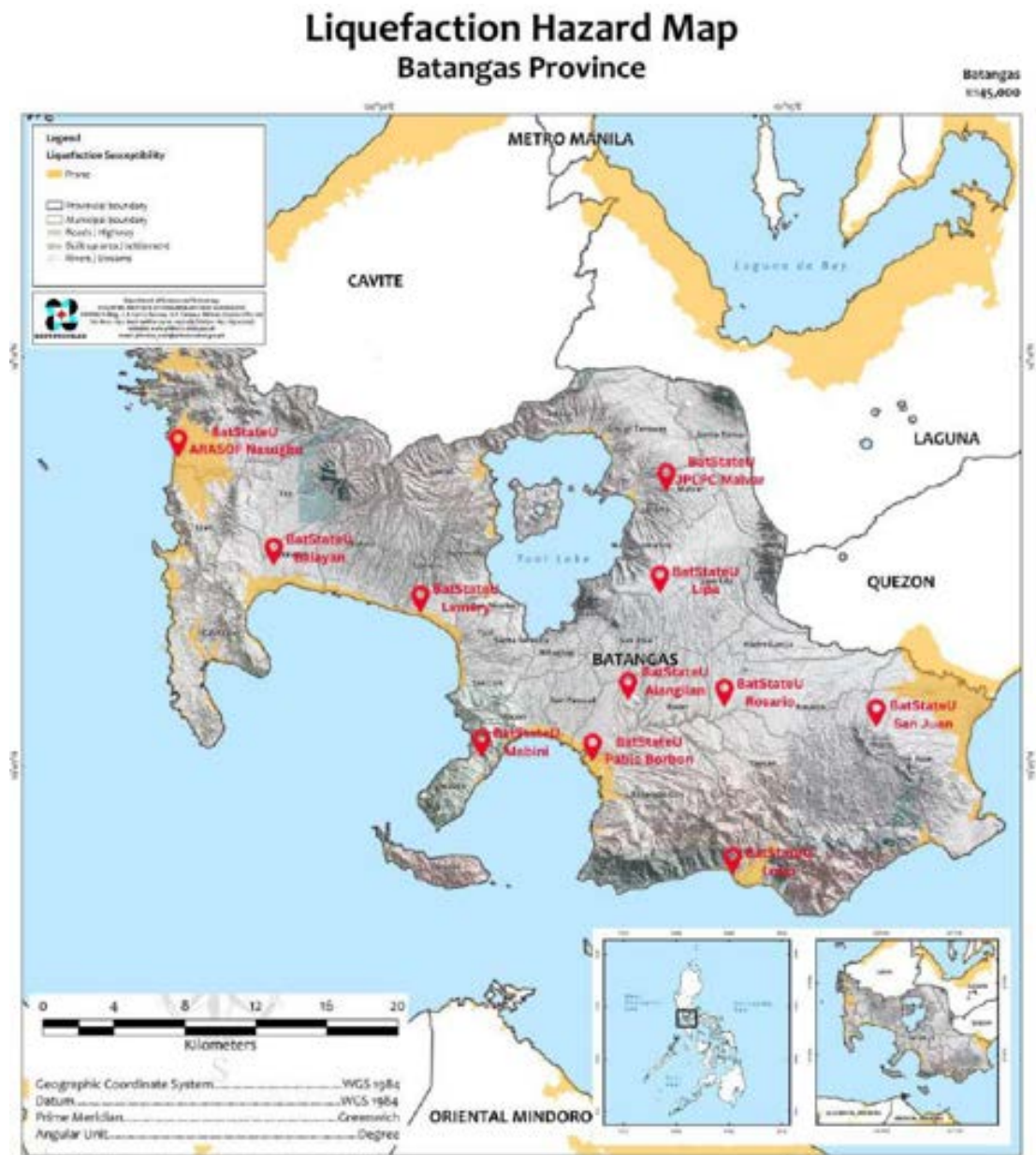


Figure 57 Liquefaction Hazard Map (Batangas Province)

According to the Mines and Geo-Sciences Bureau, the nearest faultline to Malvar is located approximately 10 kilometers east of Malvar. It is likely to occur somewhere in Sto. Tomas.

Taal Volcano is one of the most active volcanoes in the Philippines. According to PHILVOCS, during the 2012 unrest, they measured 60 earthquakes in a 24-hour period.

The whole region surrounding Taal is at considerable volcanic risk. Taal Volcano is situated in a highly populated and rapidly growing agricultural and industrial region. Five towns are located around the lakeshore and 2 cities and 8 more towns are lined up along the caldera rim.

Two large power stations are located 15 km and 17 km, respectively, from Taal Lake.

The geologic setting of Taal, and the variability of eruption sites and magnitudes, generates a diverse range of volcanic hazards, such

[illegible]

The Municipality of Malvar is a member of the Protected Area Management Board because it is included in the Taal Volcano Protected Landscape.

The most common hazards posing disaster to the municipality of Malvar are flood, landslide/soil erosion, dengue, scale insects (which cause yellowing of coconut leaves) , pest infestation, base surge, residential fire, gas leakage, vehicular incidents, ash fall from volcanic eruption, and earthquake. During the previous assessment reports about flooding, dengue, scale insects are high in occurrence. Residential fire was another potential hazard that happened in the past 2 years resulting in loss of lives and properties of three families. As seen on figure 2.9.2.1 the barangays of San Pioquinto, Bagong Pook, San Fernando, Santiago, San Andres, San Juan, Bulihan, San Gergorio has a low susceptibility to landslide while some portion of San Isidro and Bilucaon are moderate to susceptibility landslide which means have inactive/old landslide and tension cracks which are located away from the community. These areas usually have moderate slopes.



Batangas State University JPLPC Malvar campus is located at Brgy. Poblacion, Malvar, Batangas. The location is approximately within a 19-kilometer radius from a known source of volcanic activity (Taal Volcano). The area is outside the buffer zones and zones prone to base surge as shown in Figures 59-64.

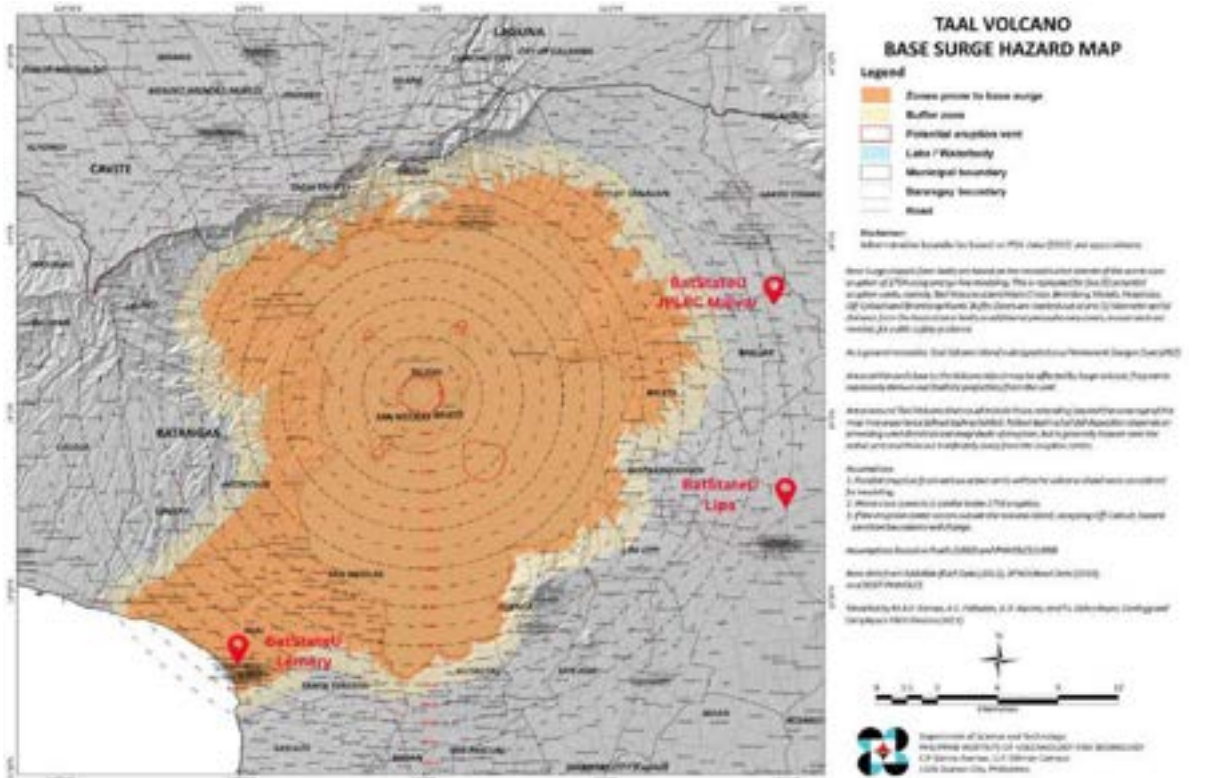


Figure 59 Taal Volcano Base Surge Hazard Map

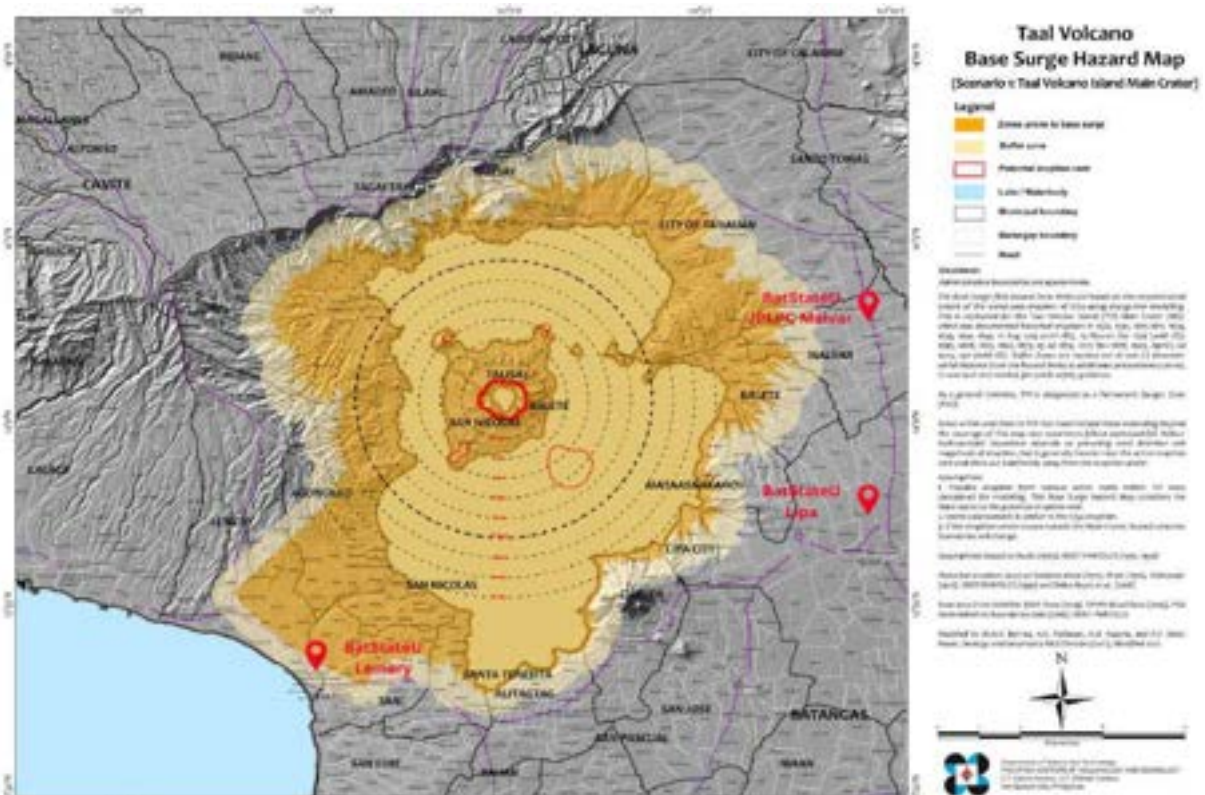


Figure 60 Taal Volcano Base Surge Hazard Map (Scenario 1: Main Crater)



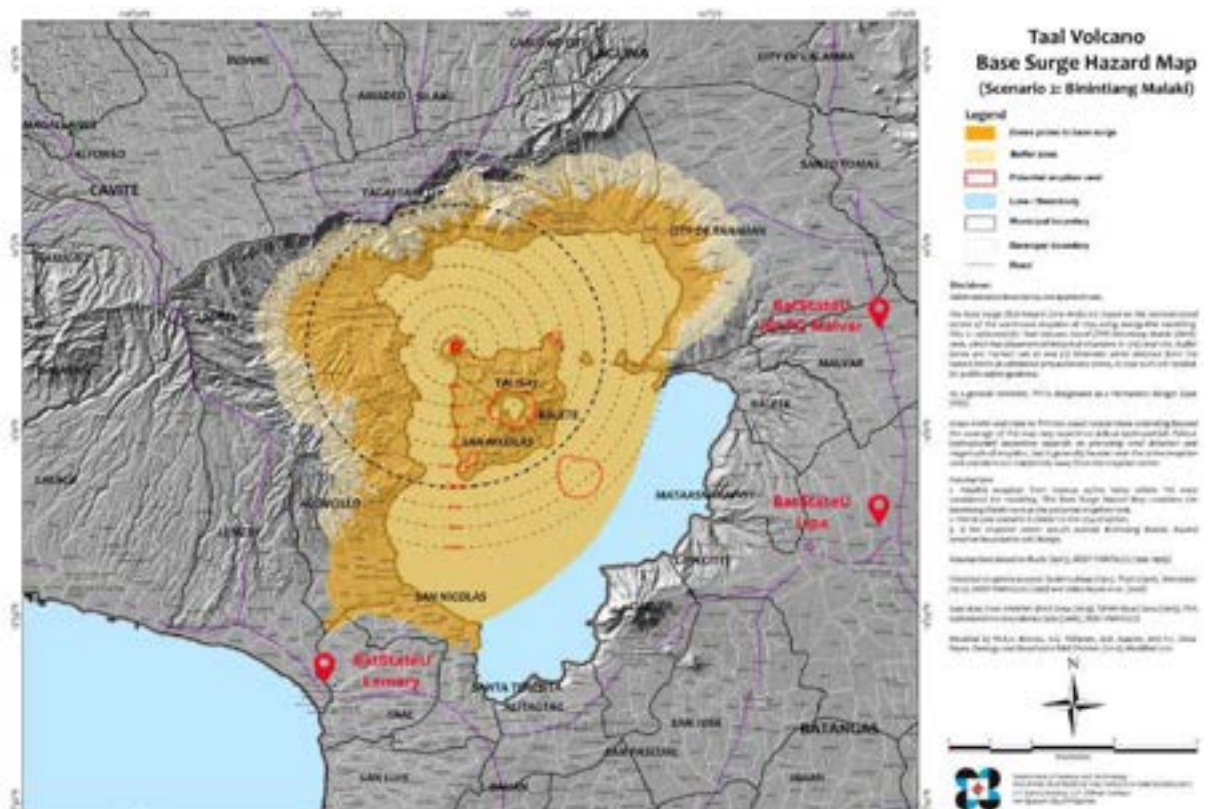


Figure 61 Taal Volcano Base Surge Hazard Map (Scenario 2: Binintiang Malaki)

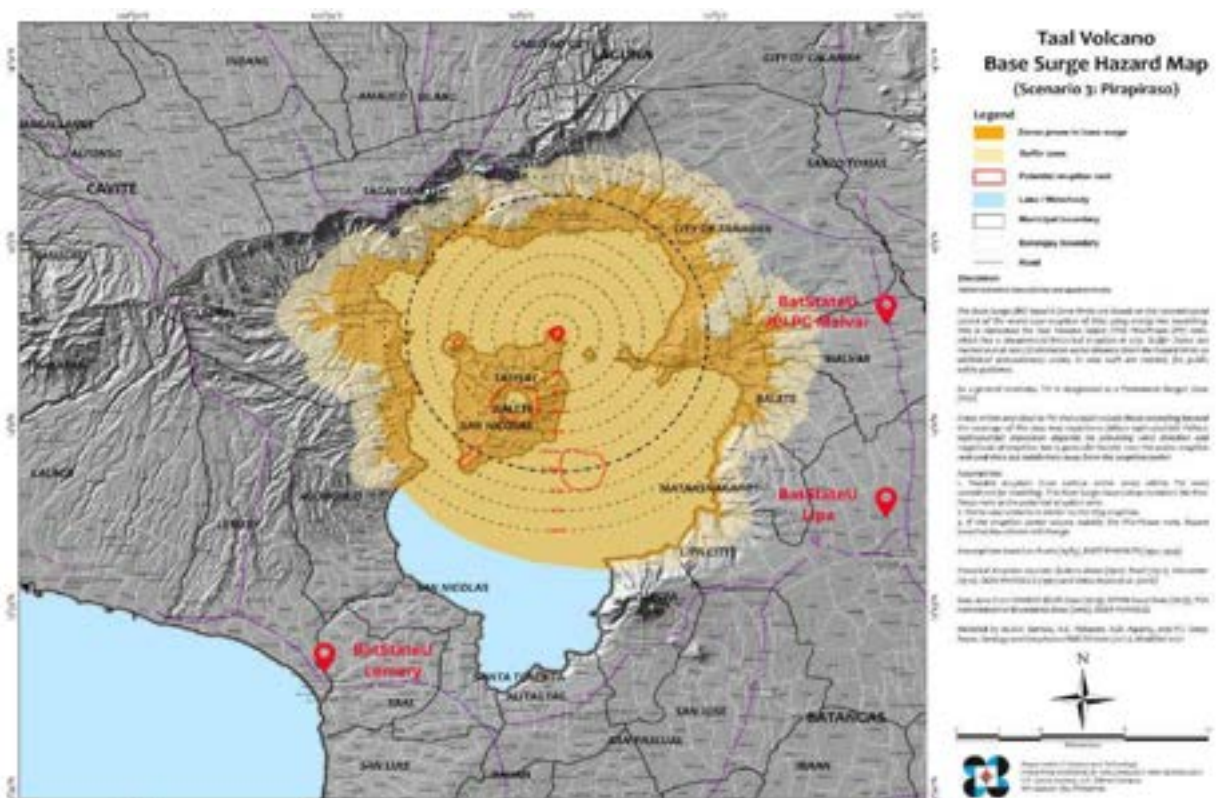


Figure 62 Taal Volcano Base Surge Hazard Map (Scenario 3: Pirapiraso)



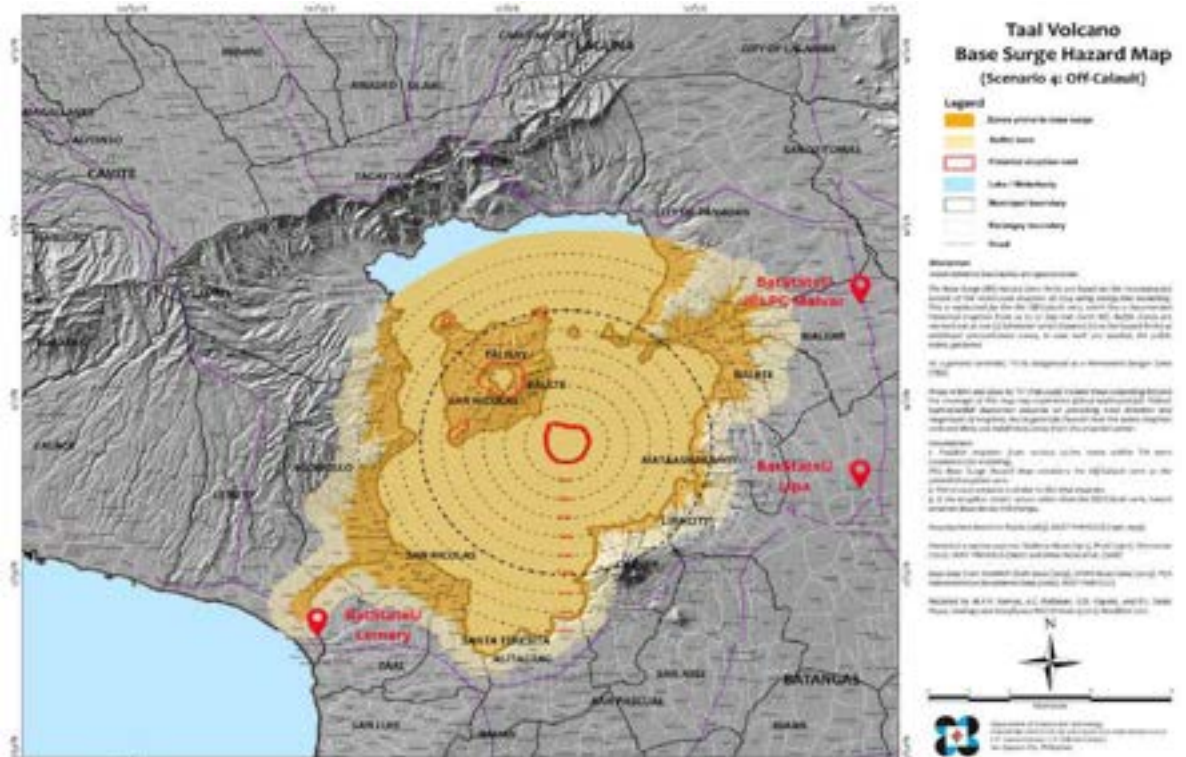


Figure 63 Taal Volcano Base Surge Hazard Map (Scenario 4: Off-Calaut)

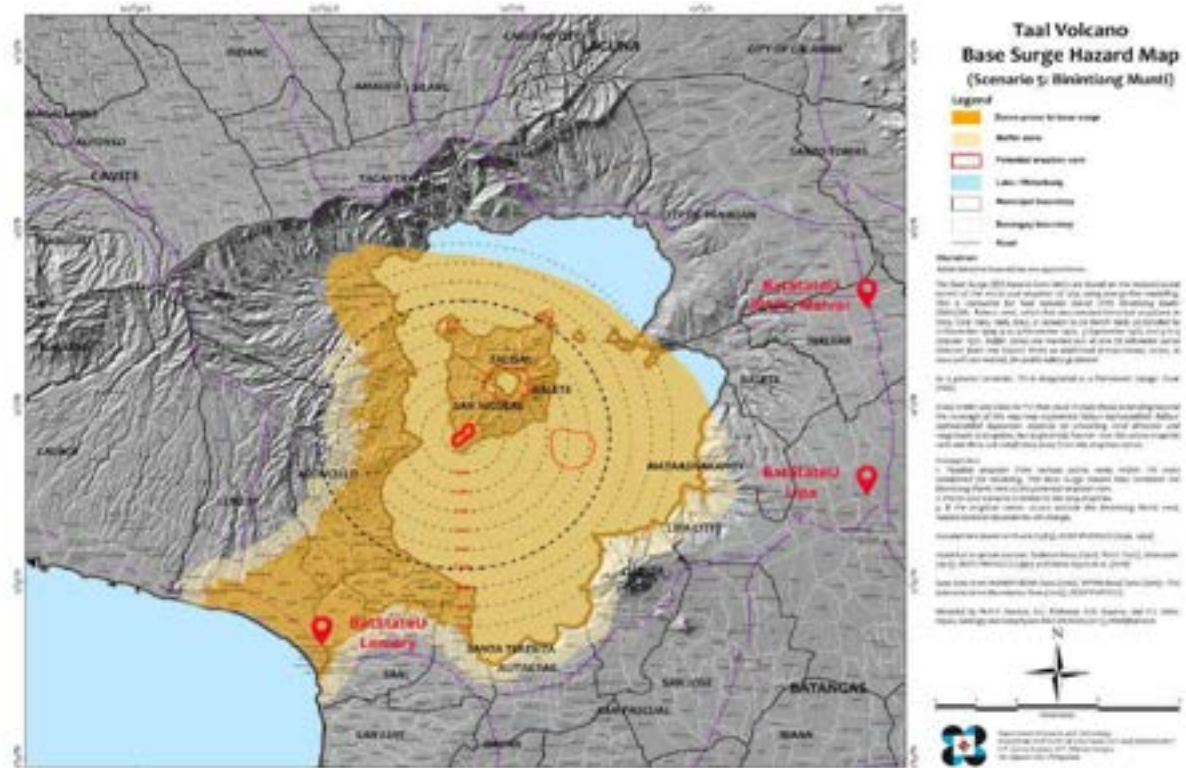


Figure 64 Taal Volcano Base Surge Hazard Map (Scenario 5: Binintiang Munti)

The location is approximately within a 19-kilometer radius from a known source of volcanic activity (Taal Volcano). The area is not included in the areas susceptible to volcanic tsunami and no fissures traverse near the location as shown in the hazard maps.

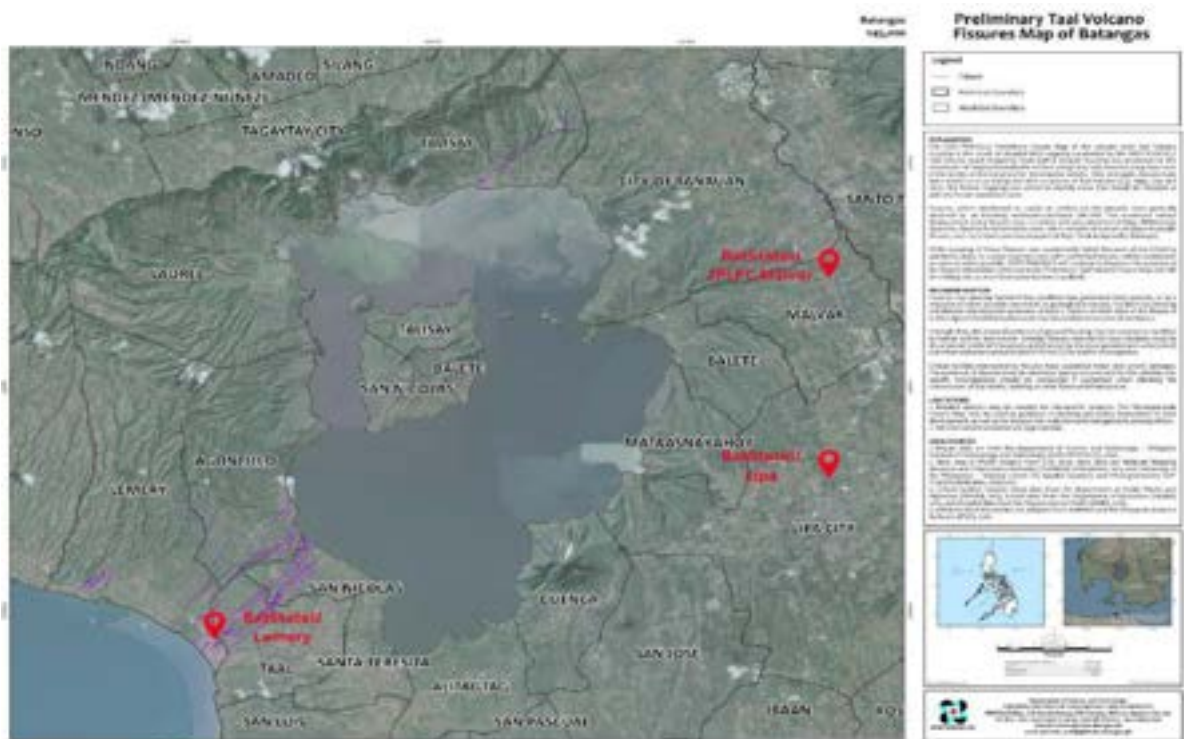


Figure 65 Preliminary Taal Volcano Fissures Map of Batangas

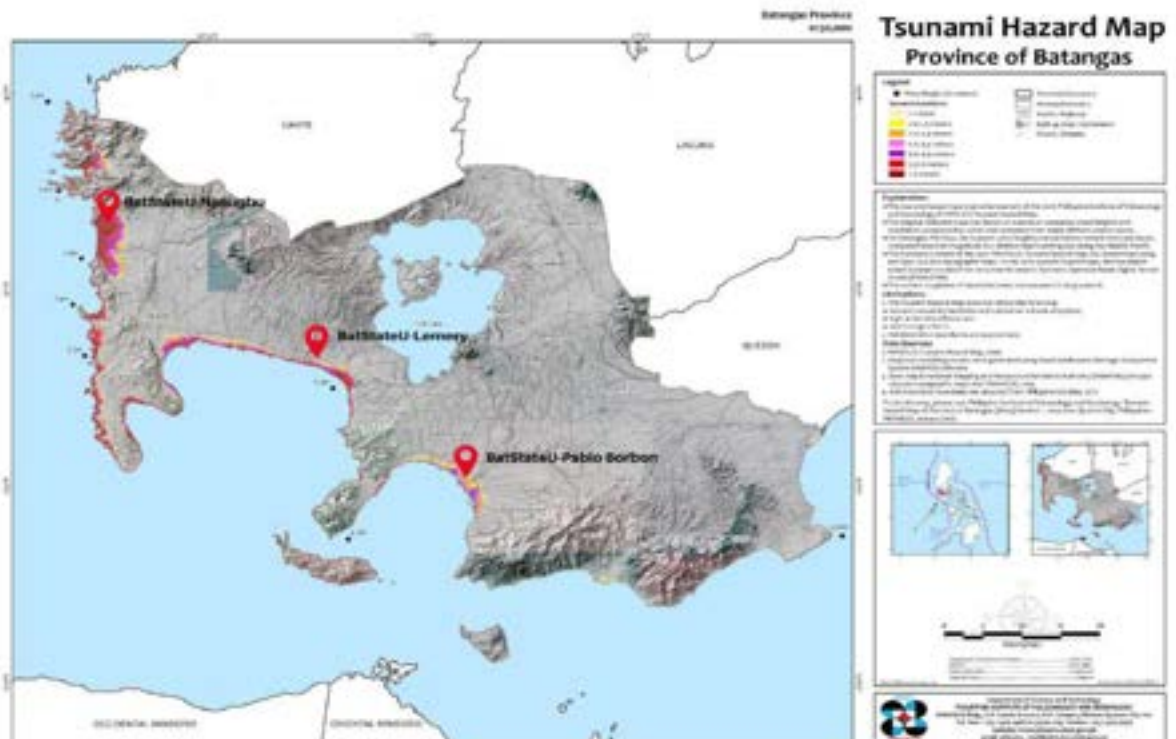


Figure 66 Tsunami Hazard Map (Batangas Province)



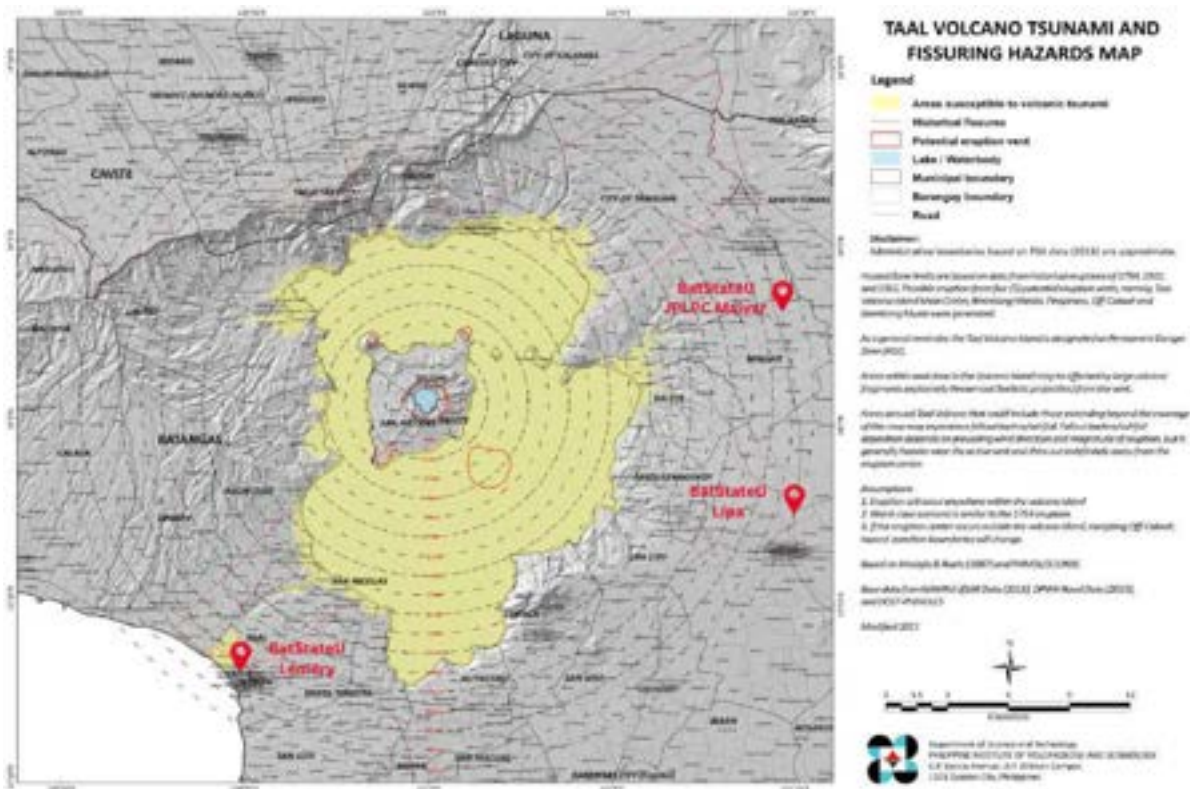


Figure 67 Taal Volcano Tsunami and Fissuring Hazards Map

The location is also classified with low landslide susceptibility as indicated by color yellow in the legend from the Figure 69.



Figure 68 Batangas Quadrangle Landslide & Flood Susceptibility Map



A map of Luzon, Philippines, showing flood susceptibility levels. The map uses four colors to represent different levels of susceptibility: dark blue for Very High, medium blue for High, light blue for Moderate, and white for Low. Major cities like Manila, Baguio, and Cebu are marked with red pins. The map includes labels for various provinces and regions such as Cavite, Aklan, Iloilo, Negros Occidental, and Mindanao. A legend on the right side explains the color coding. The Esri logo is visible in the bottom right corner.

Figure 70 Batangas Flood Susceptibility Map

The Mines and Geosciences Bureau Region IV-A (MGB CALABARZON) conducted a geohazard assessment of all the 15 barangays of the town of Malvar, Batangas. Technical personnel from the MGB undertook the geohazard assessment last June 2013. The assessed areas were rated as having low, moderate, high and very high (critical) susceptibility to landslides and low, moderate and high susceptibility to flooding.





Table 19 Results of Landslide Assessment

Barangays	Geographic Coordinates		Susceptibility Ratings
	Northings	Easting's	
Bagong Pook	14°02'21.5"	121°10'36.22"	High
Biluciao	14°02'08.0"	121°06'34.6"	Low to Moderate
Bulihan	14°02'18.2"	121°08'04.0"	Low
Luta Del Norte	14°02'25.3"	121°09'26.5"	Low
Luta Del Sur	14°02'21.1"	121°09'44.2"	Low
Poblacion	14°02'47.5"	121°09'26.0"	Low
San Andres	14°00'12.4"	121°09'07.5"	Low
San Fernando	14°02'37.9"	121°09'42.7"	Low
San Gregorio	14°02'45.4"	121°07'23.2"	Moderate to High
San Isidro	14°02'27.2"	121°07'08.3"	Low
San Juan	14°01'13.4"	121°08'44.2"	Low
San Pedro 1	14°03'17.5"	121°08'36.1"	Low
San Pedro 2	14°03'03.0"	121°08'07.1"	Low
San Pioquinto	14°03'25.9"	121°09'12.3"	Low
Santiago	14°00'57.2"	121°09'40.4"	Low

Source: MDRRMC Malvar

Table 20 Results of Flooding Assessment

Barangays	Geographic Coordinates		Susceptibility Ratings
	Northings	Easting's	
Bagong Pook	14°02'21.5"	121°10'36.22"	Low
Biluciao	14°02'08.0"	121°06'34.6"	Low
Bulihan	14°02'18.2"	121°08'04.0"	Low
Luta Del Norte	14°02'25.3"	121°09'26.5"	Low
Luta Del Sur	14°02'21.1"	121°09'44.2"	Low
Poblacion	14°02'47.5"	121°09'26.0"	Moderate
San Andres	14°00'12.4"	121°09'07.5"	Low
San Fernando	14°02'37.9"	121°09'42.7"	Low
San Gregorio	14°02'45.4"	121°07'23.2"	Low
San Isidro	14°02'27.2"	121°07'08.3"	Low
San Juan	14°01'13.4"	121°08'44.2"	Low
San Pedro 1	14°03'17.5"	121°08'36.1"	Low to Moderate
San Pedro 2	14°03'03.0"	121°08'07.1"	Low to Moderate
San Pioquinto	14°03'25.9"	121°09'12.3"	Moderate
Santiago	14°00'57.2"	121°09'40.4"	Low

Source: MDRMMC Malvar

B. Inventory of Landholdings

a. Inventory of Landholdings

Table 21 Inventory of Landholdings

Property Location/ Campus	Land Use	Status of Ownership
BatStateU JPLPC-Malvar	Educational	The land being occupied by BatStateU JPLPC-Malvar, with Transfer Certificate of Title No. T-11220, was donated by the Municipality of Malvar, represented by Mayor Eustacio T. Endaya for use of the Jose P. Laurel Memorial School of Arts & Trades, Malvar, Batangas, represented by Romulo Y. Mendoza, Director of Vocational Education, Manila.





**Land Use Development and  
Infrastructure Plan (LUDIP)**

### **b. Status of Ownership**

The land being occupied by BatStateU JPLPC-Malvar was donated by the Municipality of Malvar, represented by Mayor Eustacio T. Endaya with Certificate of Title No. T-11220 as illustrated in Figure 71 for the use of Jose P. Laurel Memorial School of Arts and Trades, Malvar, Batangas, represented by Romulo Y. Mendoza, Director of Vocational Education, Manila and herein specifies that the parcel of land shall be used exclusively as school site for the Laurel Memorial School of Arts and Trades (now BatSateU JPLPC-Malvar).

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Figure 71 Transfer Certificate of Title No. T-11220



**Land Use Development and  
Infrastructure Plan (LUDIP)**

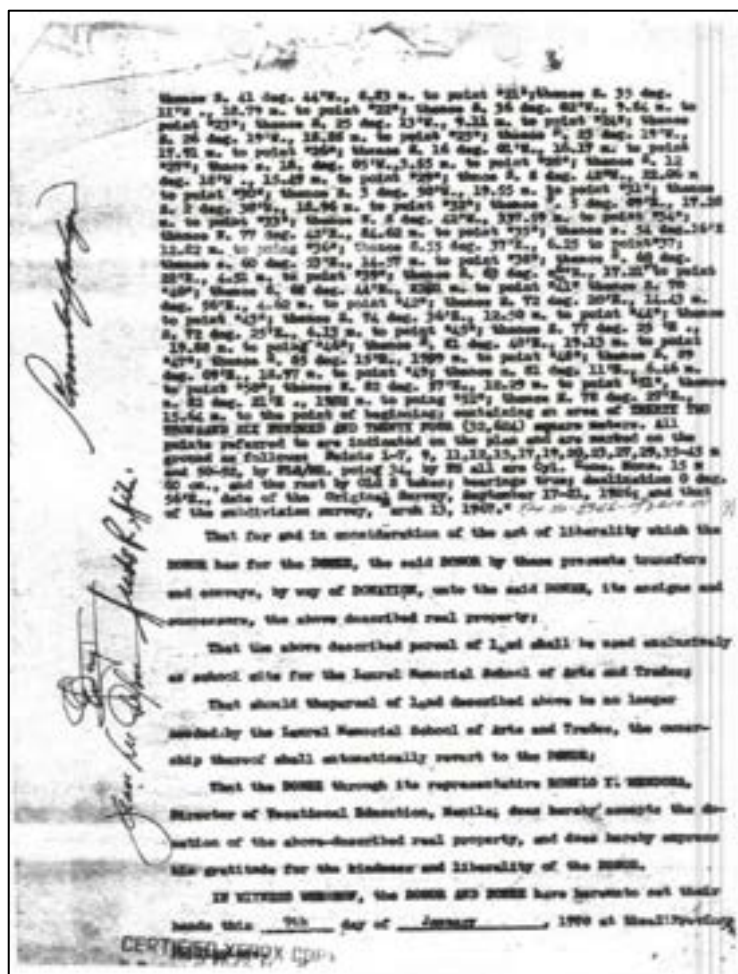
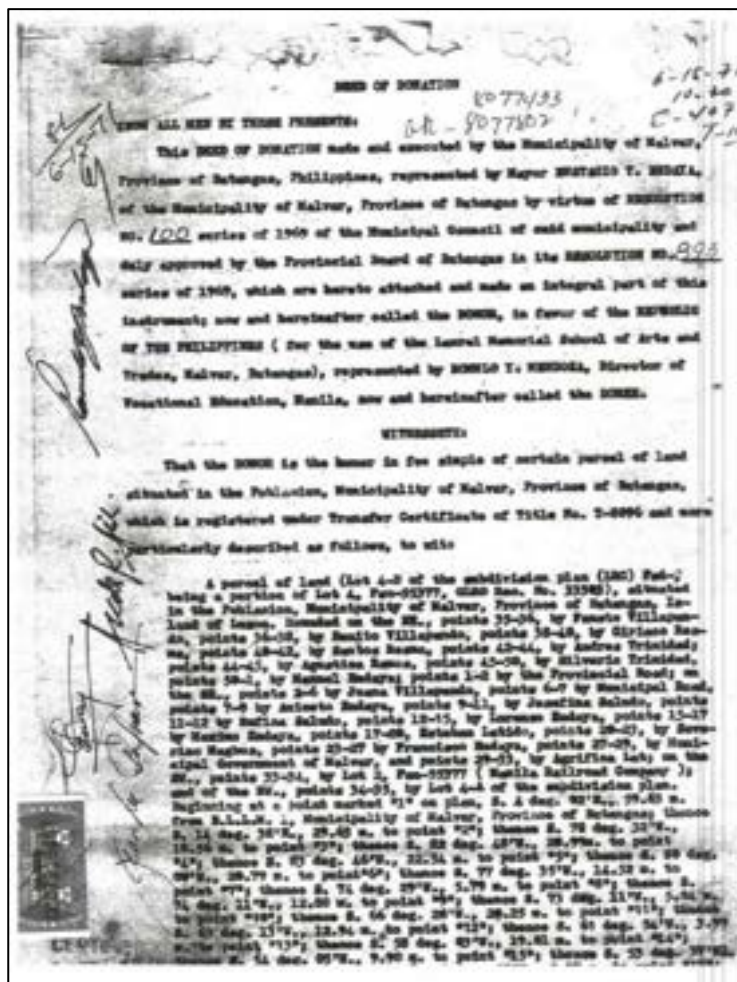


Figure 72 Deed of Donation



c. Manner of Acquisition

The deed of donation presented in Figure 72 was made and executed by the Municipality of Malvar, Batangas by virtue of Resolution No. 100 series of 1969 of the Municipal Council of said municipality and duly approved by the Provincial Board of Batangas in its Resolution No. 893 series of 1969.

d. Technical Description

Table 22 Technical Description of the Landholding

Property Location/ Campus	Total Land Area
BatStateU JPLPC-Malvar	32,624.00 square meters

C. Existing Land Use and Land Use Trends

Batangas State University JPLPC – Malvar occupies an estimated land area of 3.2 hectares and is located within the boundary of Brgy. Poblacion, Malvar Batangas. The soil profile of the area can be described as generally flat with gentle sloping. Refer to Figure 73. The geological description of the land is classified as Pliocene-Quaternary as seen in Figure 74. The Land is classified as Alienable/Disposable Land as shown in Figure 75. The Land Cover, presented in Figure 76, is classified as Other Land, Cultivated, Annual Crop, while the Soil is classified as Lipa Loam as seen in Figure 77.

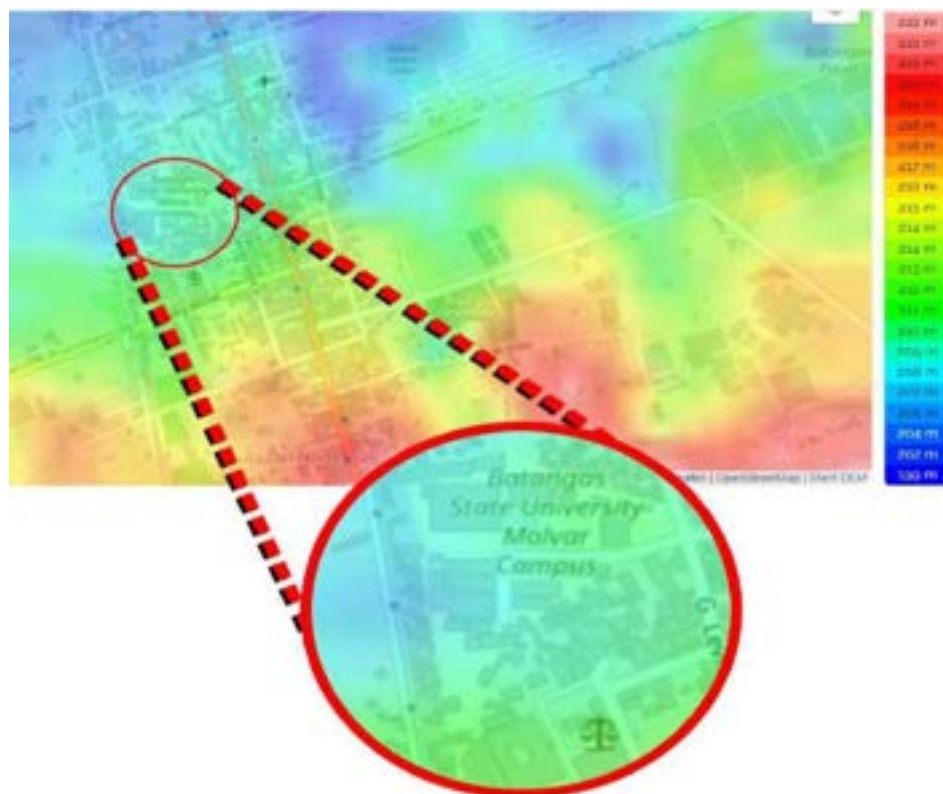
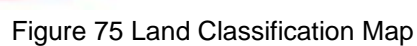


Figure 73 Topography Map





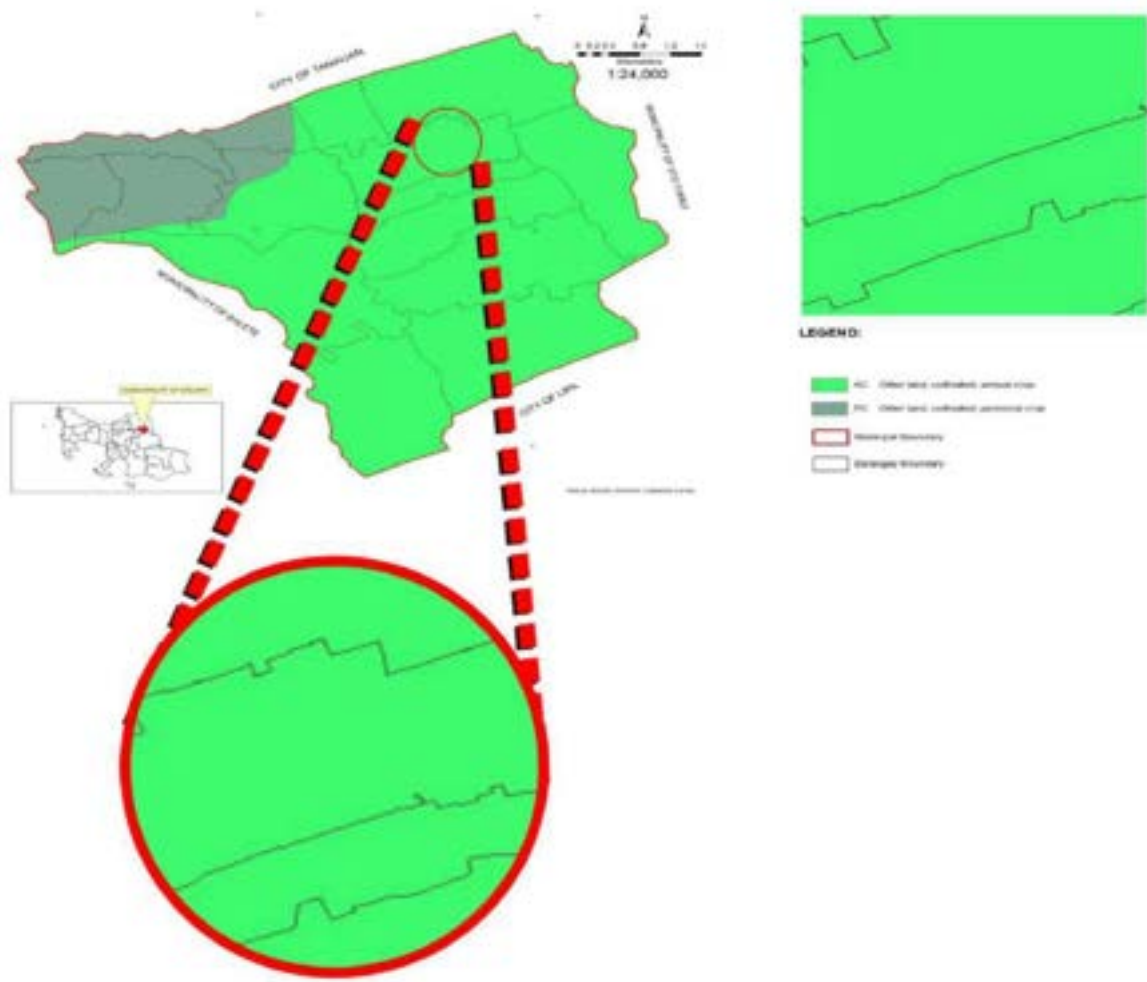


Figure 76 Land Cover Map

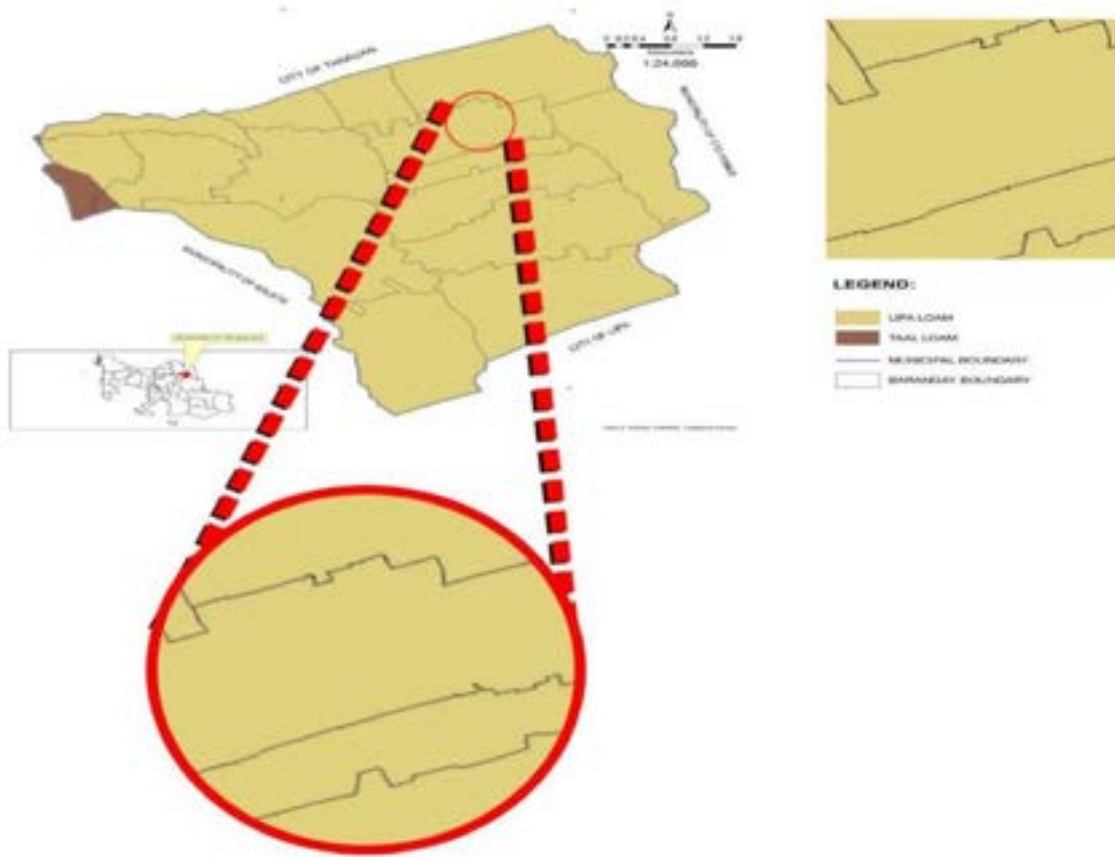


Figure 77 Soil Map

## Cadastral Survey of Land Occupied By BatStateU JPLPC - Malvar

Based on the conducted site survey for BatStateU JPLPC-Malvar, the general grade or soil profile of the land is flat with slightly sloping areas. The general elevation of the lot ranges from 97-100 meters above sea level. The highest point of the lot is at the entrance portion of the property and the lowest elevation of the lot is at the location of the Elementary Building as shown in Figure 78.

The property is bounded as described in the technical description of the lot title presented in Figure 79.

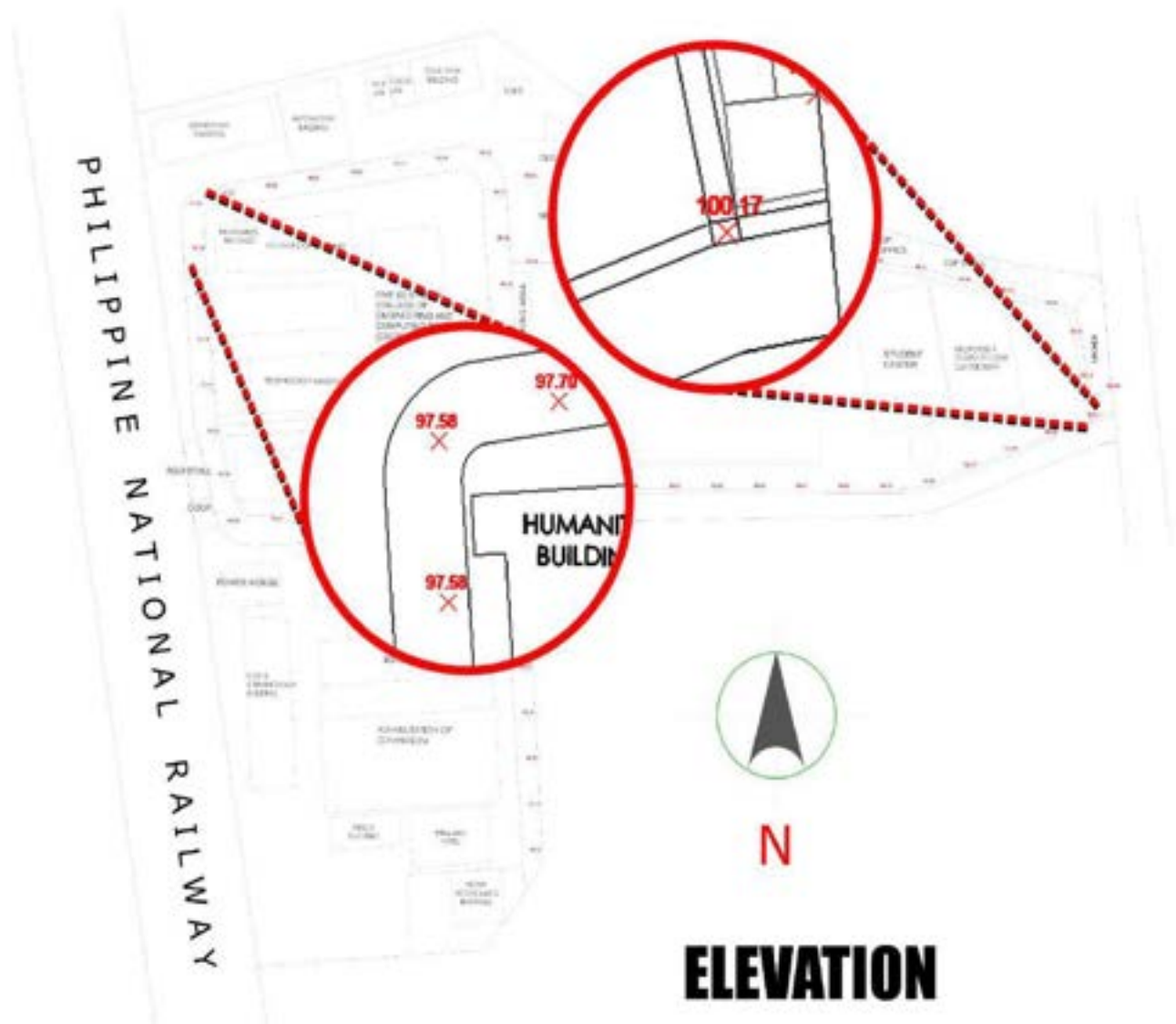


Figure 78 Elevation Survey



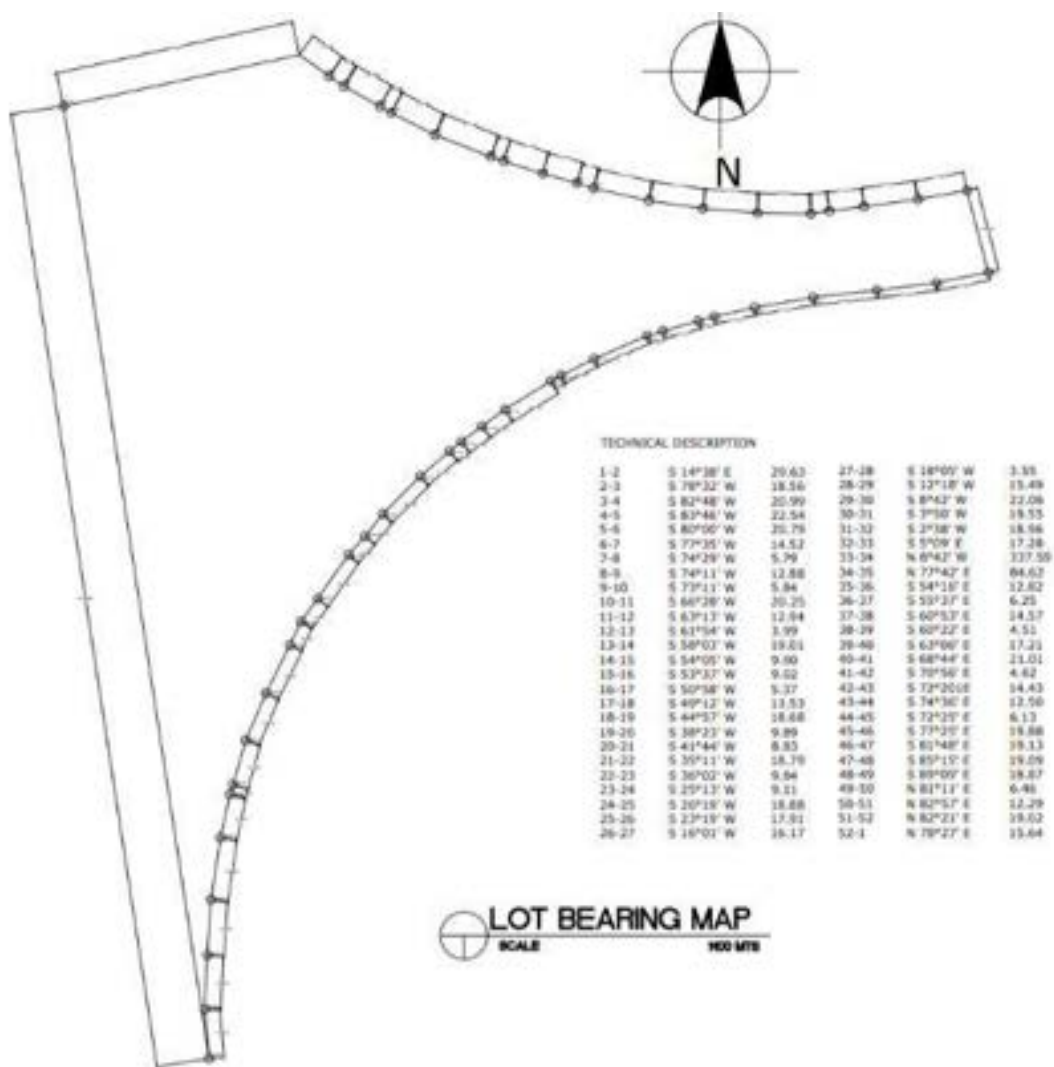


Figure 79 Lot Bearing Survey

## c. Detailed Description of the: Academic core

The academic core of BatStateU JPLPC-Malvar consists of academic buildings and other facilities that house teaching activities necessary for the proper functioning of academic programs of the campus. Comprising the academic core are the five (5) college buildings namely, College of Accountancy, Business, Economics and International Hospitality Management, College of Engineering and Computing Sciences, College of Industrial Technology, College of Arts and Sciences, and College of Teacher Education. Also included in the academic core are the Science Building, Elementary Building, Mini-Hostel, and Gymnasium.

## Research core

The Research Core of BatStateU JPLPC-Malvar focuses on both Social Science and Developmental Researches. Social Science is any branch of academic study or science that deals with human behaviour in its social and cultural aspects. Usually included within the social sciences



are cultural (or social) anthropology, sociology, psychology, political science, and economics. On the other hand, the Developmental Research is a systematic study of designing, developing, and evaluating instructional programs, processes, and products that must meet criteria of internal consistency and effectiveness. Having a dominant number of social science faculty researchers, the campus produces researches on psychology, management, criminology, and education in which outputs are utilized for the improvement of life and education in the campus and other beneficiaries. The campus also generates product-based researches on Information Communication Technology and different fields of industries in which technologies created are transferred to various industries to revolutionize products and work-oriented processes.

### **Residential areas covering both housing for faculty and staff, dormitories for students**

At present, there is no official residential area for faculty, staff, and students within the campus. However, there is a proposed Ten-Storey Hotel/Dormitory building which strongly supports the sustainability of the University's Strategic Plan. It is one of the priority buildings to be established within the next ten (10) years.

### **d. Major trends/shifts in land tenure (i.e. CADC/ CADT issuance)/ conversion arrangements (i.e. establishments of special economic zones/ industrial areas)**

The land being occupied by BatStateU JPLPC – Malvar has no major trends/shifts in land tenure/conversion arrangements as stated on the Transfer Certificate Title No. T-11220 & Deed of Donation which specifies that the parcel of land shall be used exclusively as school site for the Laurel Memorial School of Arts and Trades (now BatStateU JPLPC – Malvar).

### **D. Facilities and Utilities including social services facilities and amenities**

This report covers the inventory of all existing buildings, facilities and other infrastructure within the compound or areas occupied by BatStateU JPLPC-Malvar with actual photos, building's perspective, and quantity of its offices, laboratories and rooms with their corresponding total area.



Academic Core

The academic core of BatStateU JPLPC-Malvar consists of various buildings that are strategically designed to meet the needs of the growing population of the Campus. To cater the huge number of students and teaching personnel, the Campus has structured five (5) academic buildings which serve as a hub of learning and development. These academic buildings are shown in the figure below:

College of Engineering and Computing Sciences	
College of Industrial Technology	
College of Teacher Education	
College of Arts and Sciences	
College of Accountancy, Business, Economics and International Hospitality Management	

Figure 80 Academic Building





Other Buildings/Facilities Under Academic Core

In addition to the aforementioned academic buildings, the Campus has established other facilities to supplement the need for additional rooms for laboratories of each college, and venue for extra-curricular activities of the academe which are in the list below.

Science Building	
Elementary Building	
Mini-Hostel	
Gymnasium	

Figure 81 Other Buildings/Facilities Under Academic Core

## College of Engineering and Computing Sciences (CECS)



Figure 82 CECS Building

Engineering programs remain the flagship in the Batangas State University, this is why one of the largest existing buildings in Malvar campus was established for the use of this department. This five-storey building has a total area of 382.49 sq. m. which consists of different laboratories, rooms, and offices. It was built in 2017 with the purpose of accommodating students from both CoE and CICS Departments. Table 23 shows the number of classrooms each story holds and their corresponding areas.

Table 23 Technical Description of CECS Building

College of Engineering and Computing Sciences Building (CECS)		QTY	AREA (sq.m.)
Ground Floor	<b>Classrooms</b>	1	
	Classroom 1		64
	<b>Offices</b>	2	
	CE Office (Classroom 2)		64
	CICS Office		88
	<b>CR (CICS Office)</b>	1	-
Second Floor	<b>Female CR</b>	1	12
	<b>DP CR</b>	1	3.3
	<b>Classrooms</b>	2	
	Classroom No. 2		64
	Classroom No. 3		64
Third Floor	<b>Executive Director Office</b>	1	88
	<b>Male CR</b>	1	18
	<b>Classrooms</b>	3	
	Classroom No. 4		64
	ICT Office / Internet Lab		64
	CISCO Room		64



	<b>Offices</b>	2	
	Server Room		18
	COA Office (Auditor's Room)		17.83
<b>Fourth Floor</b>	<b>Classrooms</b>	3	
	Classroom No.4		64
	Classroom No.5		64
	Classroom No.6		64
	<b>Accreditation Room</b>	1	18
	<b>CECS Extension and Research</b>	1	18
<b>Fifth Floor</b>	<b>Laboratories</b>	3	
	Physics Laboratory		64
	IE Laboratory		64
	Chemistry Laboratory		64
	<b>CR</b>	1	5.97

For the current occupancy of the building, the first floor is being used by the Deans of CoE and CICS Departments. There is also a faculty room alongside the Deans' Offices and a Mechatronics Laboratory. The second floor, on the other hand, consists of the Chancellor's Office and two (2) classrooms. On the third floor are the ICT Office & Internet Laboratory, Server Rooms, CISCO Laboratory, and one (1) classroom. In addition, CECS Accreditation Room and Research & Extension Office, and three (3) classrooms are located at the fourth floor of the building, while the uppermost part of the building contains the Physics Lab, IE Lab, Chemistry Lab in which it was originally designed for.

The following are the detailed descriptions of the rooms that can be found in the College of Engineering and Computing Sciences Building:

1. **CoE Dean's Office and Faculty Room.** It is a 64 sq.m room where the Dean of the College of Engineering and their faculty members took their office. It has 3 air condition units, sofa set, cabinets, office tables, office chairs and tables, computers, printers, photocopying machine and telephone and interactive view board with trolley stand. The office also has pantry and a comfort room.
2. **CICS Dean's Office and Faculty Room.** It is an 88 sq.m room where the Dean of the College of Informatics and Computing Sciences and their faculty members took their office. It has 2 air condition units (window type), sofa set, cabinets, office tables and chairs, computers, printer, and interactive view board with trolley stand.
3. **Accreditation Room.** This is a 18 sq.m room located on the fourth floor of the building. It contains all accreditation files of the department. Files are stored in the filing cabinets.
4. **Research and Extension Office.** In this room, research and extension coordinators stored their files on research and extension.



5. **Laboratories.** CECS building has several laboratories used by students in their experiments and help the enhance their learning by understanding the theoretical concepts of science which are taught in classrooms. These laboratories are as follows:

**Physics Laboratory Room.** This laboratory room is intended for laboratory exercises in Physics. Students who are enrolled in Physics courses may use this room and the equipment here to perform their laboratory experiments. This room has chairs for pre-laboratory lectures and working tables for the actual experiments.

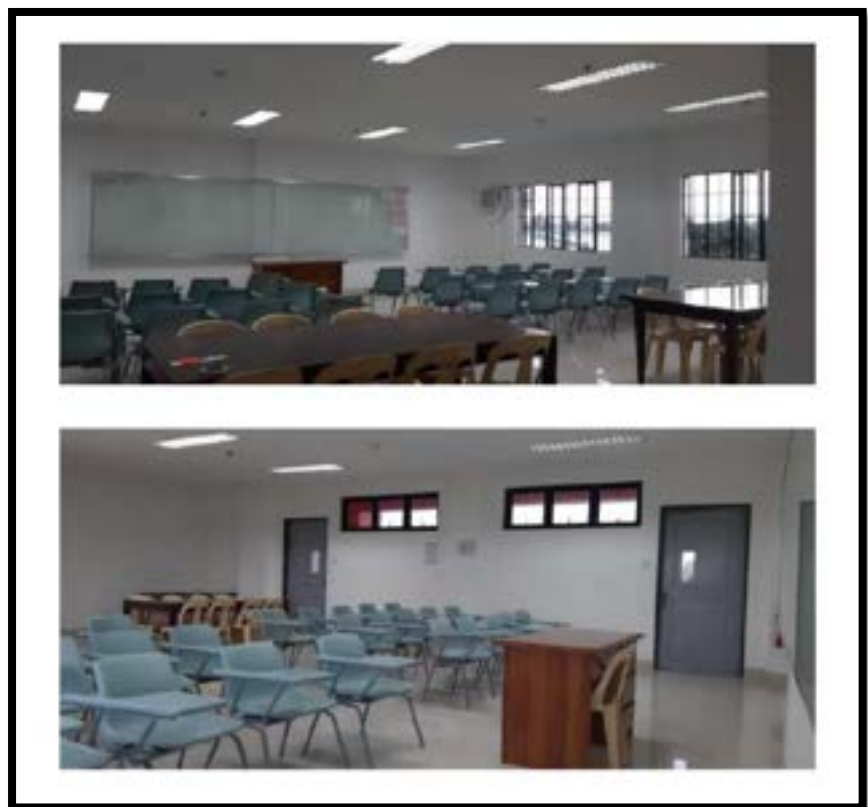


Figure 83 Physics Laboratory Room

**Mechatronics Laboratory.** The Mechatronics Laboratory has adequate space for a class of 24 – 30 students. Robotic kits are appropriately kept and labelled inside the cabinet. With the help of the modules, students will be able to design, construct and program various kinds of robots by themselves.

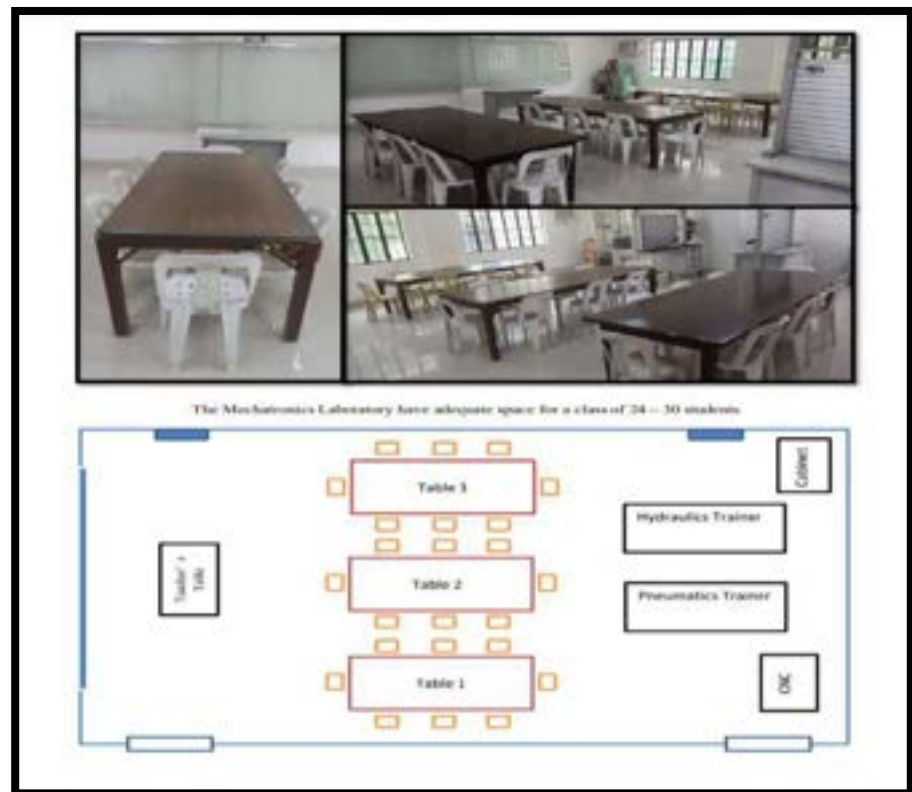


Figure 84 Mechatronics Laboratory

**Industrial Engineering Laboratory.** Industrial Engineering Laboratory is designed to cater 15-25 students to do their experiments in various Industrial Engineering subjects. The IE Lab is composed of Ergonomics Lab, Methods Engineering Lab and Work Measurement Lab, wherein it houses different tools and equipment used in different experiments.



Figure 85 Industrial Engineering Laboratory

**Chemistry Laboratory.** Chemistry Laboratory is located in the 5th floor of the building. It caters 15-25 students, doing their experiments on the subject.



Figure 86 Chemistry Laboratory Room

**CISCO Laboratory.** The College of Informatics and Computing Sciences serves as one of the three (3) major computer laboratories for the Information Technology program of the college. It provides the facility in which the students can learn, train and demonstrate their skills in computer networking and managing different routers and switches integrated in their course curriculum. The laboratory currently holds forty-nine (49) Desktop computers, a server/switch rack, set of CICSO routers, network cables used for splicing, a standard glass board for lectures, and a set of chairs for student use. Aside from being used as a CICSO laboratory it can also handle some of the other major courses of the program including programming.



Figure 87 CISCO Laboratory



**Internet Laboratory.** The Internet laboratory is one of the facilities provided to the students of the university. It allows the students to utilize and access the internet with desktop computers provided by the university. Each student has an allotted number of hours in using the computer for internet access. This provides the students with enough time to do their class homework and research. There are twenty five (25) Desktop Computer available for the students to use during the semester.



Figure 88 Internet Laboratory Room



College of Industrial Technology (CIT)



Figure 89 CIT Building

Industrial Technology programs are the oldest programs offered in the university. In BatStateU JPLPC-Malvar, it currently offers Bachelor of Industrial Technology with nine (9) majors specifically Automotive, Civil, Computer, Drafting, Electronics, Electrical, Food, Mechanical, and Mechatronics Technology. Having one of the largest populations among all colleges, the College of Industrial Technology’s construction was completed in February 2020 to respond to the increasing number of students. The total construction project amounts to Php 64,244,907.23. This building has a total area of 610.22 sq. m. Shown in the table below are the various offices/rooms each story holds and their respective sizes.

Table 24 Technical Description of CIT Building

College of Industrial Technology		QTY	AREA (sq.m.)
Ground Floor	<b>Rooms</b>	2	
	Classroom 1		64
	Civil Tech		64
	<b>Laboratories</b>	3	
	Electrical Technology Shop		64
	Chemistry Laboratory		64
	Physics Laboratory		64
	<b>Electrical Room</b>	2	17.22
Second Floor	<b>Storage Room</b>	2	5.2
	<b>DP CR</b>	1	3.34
	<b>Female CR</b>	1	17.22
	<b>Classrooms</b>	3	
	Classroom No.1		64
	Classroom No. 2		64
	Classroom No. 3		64
	<b>Associate Dean Office</b>	1	64
	<b>CR (Dean's Office)</b>	1	-



	<b>Faculty Room</b>	1	64
	<b>Storage Room</b>	1	5.2
	<b>Electrical Room</b>	1	17.22
	<b>Male CR</b>	1	17.22
<b>Third Floor</b>	<b>Classrooms</b> Classroom No. 4 Classroom No. 5	2	64 64
	<b>Laboratories</b> Computer Laboratory 1 Computer Laboratory 2 Computer Laboratory 3	3	64 64 64
	<b>Storage Room</b>	1	5.2
	<b>Electrical Room</b>	1	17.22
	<b>Female CR</b>	1	17.22
	<b>Classrooms</b> Classroom No.6 Classroom No.7 Classroom No.8 Classroom No.9 Classroom No.10	5	. 64 64 64 64 64
	<b>Storage Room</b>	1	5.2
<b>Fourth Floor</b>	<b>Electrical Room</b>	1	17.22
	<b>Male CR</b>	1	17.22
	<b>Classrooms</b> Classroom No. 11 Classroom No. 12 Classroom No. 13	4	64 64 64
	<b>Multimedia Room</b>	2	128
<b>Fifth Floor</b>	<b>Electrical Room</b>	1	17.22
	<b>Storage Room</b>	1	5.2

To summarize the current occupancy of the buildings, on the ground floor are the different laboratories and rooms including the Physics Lab, Chemistry Lab I, Electrical Technology Shop I, Electrical Technology, Shop II, and Civil Technology Room. The Office of the CIT Dean which is adjacent to its Faculty Room, and three (3) classrooms are located at the second floor whereas the three (3) computer laboratories and two (2) classrooms at the third floor. In addition, five (5) classrooms were installed at the fourth floor while at the fifth floor, there are three (3) classrooms, and two (2) Multimedia Laboratories.



The College of Industrial Technology (CIT) Building has the following laboratories in details:

## Computer Laboratory



Figure 90 CIT Computer Laboratory

## Physics Laboratory



Figure 91 Physics Laboratory

## Chemistry Laboratory



Figure 92 Chemistry Laboratory



## Electrical Laboratory



Figure 93 Electrical Laboratory

**Civil Laboratory**



Figure 94 Civil Laboratory





College Building



Figure 95 College Building

BatStateU JPLPC-Malvar is one with the university in its goal of producing licensed professional teachers and educational leaders and supervisors globally. Currently, the campus is offering three undergraduate programs namely: Bachelor of Elementary Education (BEEd), Bachelor of Physical Education (BPEd), and Bachelor of Secondary Education (BSEd). The Education students as well as the faculty members are accommodated by a two-storey building named as College Building which later on became the College of Teacher Education (CTE) Building with a total area of 470.73 sq.m. This building houses several rooms and laboratories for the use of its students and faculty. Below is the original plan of room placement of the building.

Table 25 Technical Description of College Building

College Building		QTY	AREA (sq.m.)
Ground Floor	<b>Classrooms</b> CTE101 CTE102	2	42.29 76.39
	<b>Associate Dean Office</b>	1	28.2
	<b>Faculty Room</b>	1	28.21
	<b>Research and Extension Office</b>	1	14.07
	<b>Laboratories</b> Speech Lab	1	76.38
	<b>Office</b> TESC Office Mathematics Learning Resource Center	2	- -
Second Floor	<b>Classrooms</b> Classroom 201 Classroom 202 Classroom 203 Classroom 204	4	56.39 56.39 56.39 56.39

As regards the current set-up of the building, the first floor is being occupied by CTE Dean's Office, Faculty & Research Room, two (2) classrooms, and CTE Speech Laboratory, while four (4) classrooms on the second floor are utilized by the students during face-to-face classes. All classrooms/learning spaces has an adequate temperature, ventilation and lightning as manifested by the number and type of windows and electrical lighting layout plan. The Speech Laboratory as show in the picture below was envisioned as a communication and research center in which education students, particularly English majors, could use the facilities for self-improvement and supervised practice and analytical listening and oral communication-related activities.

### Speech Laboratory



The cubicles in speech lab are arranged systematically to make language learning more effective.



Figure 96 Speech Laboratory



College of Arts and Sciences (CAS)



Figure 97 CAS Building

It was the first semester of the Academic Year 2005-2006 under the administration of Dr. Philip Y. Del Rosario, as the Acting Campus Administrator, when the College of Arts and Sciences (CAS) started. The College of Arts and Sciences Building was established during the time of Associate Dean, Loida F. Tungao and it caters the BS Psychology and BS Criminology programs. The College aims to provide leadership in quality instruction, extension services, and professional training in Arts and Sciences. It also aims to produce scientifically trained, economically stable, and environmentally conscious citizens. Moreover, it is anchored on the philosophy of providing students with humanistic education geared to enhance this commitment to personal growth and social transformation, thus making them professing love, and faith in the Almighty God, country, and fellowmen.

Table 26 Technical Description of CAS Building

CAS & Criminology Building		QTY	AREA (sq.m.)
Ground Floor	<b>Classrooms</b>	3	
	Classroom 101		56
	Classroom 102		56
	Classroom 103		56
	<b>Faculty Room</b>	1	56
Second Floor	<b>Stock Room</b>	1	10.80
	<b>Male CR</b>	1	22.79
	<b>Classroom</b>	1	
	Classroom 201		56
	<b>Laboratories</b>	3	
	Moot Court		56
	Psych Lab		56
	Crime Lab, Dark Room, Laboratory and Equipment Room		56
	<b>Office</b>	1	10.80
	<b>Female CR</b>	1	22.79



The offices that currently use the ground area of this building are the CAS Dean's Office & Faculty Rooms, three (3) classrooms, while the second floor was structured with one (1) classroom, MOOT Court, Psychology Lab, and Crime Laboratory.

### Psychology Laboratory

The Psychology Laboratory room is designed for counseling, psychological assessment (interviewing and psychological testing, etc.), psychological experimentation, and classroom purposes.



Figure 98 Psychology Laboratory



College of Accountancy, Business, Economics  
and International Hospitality Management (CABEIHM)



Figure 99 CABEIHM Building

CABEIHM Building is a four-storey building which is the hub for programs related to management accounting, business administration, and international hospitality management. In the first floor of the building, you can visit three (3) classrooms, two (2) hospitality management laboratories, faculty room and the Dean’s Office. In second floor of the building, an Audio-Visual Room with 100 seating capacity lie across the three regular classrooms. On the same floor you can also visit the accreditation office, internal audit office and comfort room for female students. Located on the third floor were five (5) classrooms, one (1) computer room, research and extension office of the college and comfort room for male students. In the fourth floor of the CABEIHM building, conference room that can hold approximately 200 individuals is across the ISO Office. On the other end of the fourth floor, comfort room for male and female students and guests is also strategically installed.

Table 27 Technical Description of CABEIHM Building

CABEIHM Building		QTY	AREA (sq.m.)
Ground Floor	<b>Classrooms</b>	3	
	Classroom No. 1		64
	Classroom No. 2		64
	Classroom No. 3		64
	<b>Laboratories</b>	2	
	Cooking Laboratory		64
	Baking Laboratory		64
	Female CR	1	24
	<b>DP CR</b>	1	6.25
	<b>Faculty Room/Dean's Office</b>	1	52
	<b>CR (Faculty and Dean's Office)</b>	2	-



<b>Second Floor</b>	<b>Classrooms</b>	3	
	Classroom No. 3		64
	Classroom No. 4		64
	Classroom No. 5		64
	<b>Male CR</b>	1	24
	<b>Multimedia Room</b>	1	128
	<b>Internal Auditor's Office</b>	1	16
<b>Third Floor</b>	<b>Accreditation Room</b>	1	26
	<b>Classroom</b>	5	
	Classroom No. 7		64
	Classroom No. 8		64
	Classroom No. 9		64
	Classroom No. 10		64
	Classroom No. 11		64
	<b>Female CR</b>	1	24
	<b>Research Center</b>	1	26
<b>Fourth Floor</b>	<b>CABEIHM Extension and Gender Development Office</b>	1	16
	<b>Function Hall</b>	1	404
	<b>Kitchen (Water Tank)</b>	1	16
	<b>Quality Assurance Office (Storage Room)</b>	1	52
	<b>Male CR</b>	1	12
	<b>Female CR</b>	1	12

### Kitchen Laboratory



Figure 100 Hot Kitchen



Figure 101 Cold Kitchen





Science Building



Figure 102 Science Building

The Two-Storey Science Building was built in 1982 with a total area of 494.29 sq.m. The building currently houses various facilities utilized by students from CIT and CABEIHM Departments like Mechanical Shop which is located on the ground floor, and Gym & Fitness Room, 1 classroom, CAS Physics Lab on the second floor.

Table 28 Technical Description of Science Building

Science Building		QTY	AREA (sq.m.)
Ground Floor	Mechanical Laboratory	1	196
	CR	2	
	Female CR		22.25
	Male CR		22.25
Second Floor	Classrooms / Laboratories	4	
	Classroom No. 1 (Physical Fitness room)		49
	Classroom No. 2		49
	Classroom No. 3 (Physics Lab)		98
	Classroom No. 4 (Biology Lab)		47.5

Elementary Building



Figure 103 Elementary Building

This two-storey building was built in 2009 with a total area of 270.5 sq.m. for the purpose of accommodating elementary students until AY 2017-2018 when offering for elementary education was totally abolished. Currently, the first and second floor were both installed with three (3) classrooms. Below is the table showing the rooms it contains and their corresponding areas.

Table 29 Technical Description of Elementary Building

Elementary Building		QTY	AREA (sq.m.)
Ground Floor	<b>Classrooms</b>	2	
	Classroom 1		49
	Classroom 2		48.3
	<b>Faculty (Classroom)</b>	1	49
	<b>Female CR</b>	1	10.78
	<b>Stock Rooms</b>	2	-
Second Floor	<b>Classrooms</b>	3	
	Classroom 1		49
	Classroom 2		48.3
	Classroom 3		49
	<b>Male CR</b>	1	10.78

## Mini Hostel



Figure 104 Mini Hostel

In the south wing of the University, a mini hostel was built to cater the academic needs of the international hospitality management programs. Located in the ground floor is a function hall which is commonly used during the simulation activities of students enrolled in international hospitality management courses. Storage room, functional kitchen and comfort rooms for both sexes were also installed in the ground floor to cater the needs of the program especially during their conduct of events and other functions. On the second floor of the Mini Hostel, five bedrooms that can accommodate guests during accreditations were strategically designed. The rooms also serve as training facility for students enrolled in international hospitality management programs. Faculty Office and comfort room for male and female were also located in the second floor of the Mini-Hostel building.

Table 30 Technical Description of Mini Hostel

Mini Hostel		QTY	AREA (sq.m.)
Ground Floor	Function Hall	1	169.14
	Storage Room	1	7.22
	Male CR	1	10.4
	Female CR	1	8.85
Second Floor	Faculty Office	1	16
	Bedrooms	5	
	Bedroom 1		20.1
	Bedroom 2		20.1
	Bedroom 3		20.1
	Bedroom 4		20.1
	Bedroom 5		25.44
	CR (Bedroom 5)		-



## Gymnasium



Figure 105 Campus Gymnasium

The rehabilitation of Campus Gymnasium was completed in 2018 with a contract price of Php14,689,324.75. This hosts events like conferences, sports or athletic activities, gatherings, and other inter-school activities. This 1,359.92 sq.m. gymnasium is equipped with adequate number of airconditioning units to maintain the right level of moisture and temperature inside. It also has three (3) offices and comfort rooms, EE room, utility room, storage room, control room, locker room, stock room, and mezzanine which serves as a hub for sound system of the gymnasium. Below is the list of corresponding areas of the rooms/offices that can be found inside the Campus Gymnasium.

Table 31 Technical Description of Campus Gymnasium

Gymnasium	QTY	AREA (sq.m.)
<b>Offices</b>	3	
Office 1		14.4
Office 2		14.4
Office 3		14.99
<b>EE Room</b>	1	8.33
<b>Utility Room</b>	1	
<b>Storage Room</b>	1	9.39
<b>Control Room</b>	1	8.48
<b>Locker Room</b>	1	6.83
<b>Stock Room</b>	1	8.14
<b>Female CR</b>	1	21.9
<b>Male CR</b>	1	14.4
<b>DP CR</b>	1	4.68



Administrative / General Services

Administrative and General Services consists of units that are responsible for the general cleanliness, and a place for administrative and financial transactions. Different buildings / facilities were designed and constructed in order to provide a proper venue for these units.






New Administration Building	
Student Center 1	
Student Center 2	
Power House 1	
Power House 2	

Figure 106 Administrative/General Services Buildings

## New Administration Building



Figure 107 New Administration Building

This three-storey building is situated alongside Food Laboratory, open stage and canteen. It was built in 2011 with a total area of 425.18 sq.m. It once served as a one-stop venue for administrative and financial transactions and student services including Registrar's Office, Accounting, Cashier, Human Resource Management Office, and Administrative and Financial Services / Budget office on the ground floor. At present, this area consists of offices such as Property and Supply, Project and Facility Management, and Procurement Office. On the second floor of the building is the College Library wherein facilities like Audio-Visual Viewing Room, Digital Scholar and E-Library/Thesis Area were established, while the uppermost part of the building is the function hall.

Table 32 Technical Description of New Administration Building

New Administration Building		QTY	AREA (sq.m.)
Ground Floor	<b>Offices</b>	6	
	Registrar Office		36
	Registrar Office		36
	Cashier		30
	Accounting		30
	Administrative and Financial Services		36
	Human Resource Management		36
Second Floor	<b>Male CR</b>	1	15
	<b>Female CR</b>	1	15
	<b>Library</b>	1	390
	<b>Male CR (Library)</b>	1	-
	<b>Female CR (Library)</b>	1	-
Third Floor	<b>Function Hall</b>	1	390

At present, there is an ongoing process for Library rehabilitation in which the second and third floor will be renovated for the use of library clientele. Other details such as number and area of each office are enumerated below.





Student Services Center I Building (SSC I)



Figure 108 Student Services Center I

Presently, Student Center I Building comprises four (4) rooms divided into several offices such as Testing & Admission Office, OJT & JPO, Scholarship Office on the first floor and Supreme Student Council Office, OSAS, and SOA on the second floor. It has a total area of 559.36 sq.m. This set up will be temporary for there is a budget allotted for its renovation, making it a relocation of some offices that will be demolished for the construction of another building and rehabilitation of drainage system.

Table 33 Technical Description of Student Services Center I

Student Center I Building		QTY	AREA (sq.m.)
Ground Floor	Offices	2	
	Alumni / Scholarship / IACEPO		45
	TAO / Student Discipline		45
	CR (TAO)	1	-
	CR	1	
Second Floor	Offices	2	
	Guidance and Counseling / Extension Services / Multifaith		45
	SSC / SOA / Student Publication		45

## Student Services Center II Building (SSC II)



Figure 109 Student Services Center II

Construction of this building was commenced on December 01, 2019 and was completed on December 31, 2020. It was designed and conceptualized specifically to provide a one-stop facility wherein all frontline offices are established to serve as a complete venue to accommodate students' concerns. It consists of offices such as Registrar's Office, Clinic, Accounting, Cashier, Guidance and Counselling, Human Resource and Offices of the Vice Chancellors. It has a total floor area of 812.11m<sup>2</sup> that will suffice the space needed for student services. This will also help reduce long queues and would lessen the total processing time of clients' requests.

Table 34 Technical Description of Student Services Center II

SSC II Building		QTY	AREA (sq.m.)
Ground Floor	<b>Offices</b>	3	
	Cashier		54.82
	Accounting		48.9
	Registrar		73.11
	<b>Clinic</b>	1	67.5
	<b>CR (clinic)</b>	2	-
	<b>Female CR</b>	1	10.35
	<b>Male CR</b>	1	10.35
Second Floor	<b>DP CR</b>	1	4.62
	<b>Offices</b>	4	
	Guidance		52.10
	HR		41.4
	Administration and Finance		61.89
	VCDEA		64.2
	<b>Dental Clinic</b>	1	39
	<b>Female CR</b>	1	10.5
	<b>Male CR</b>	1	10.35

PESCA Building

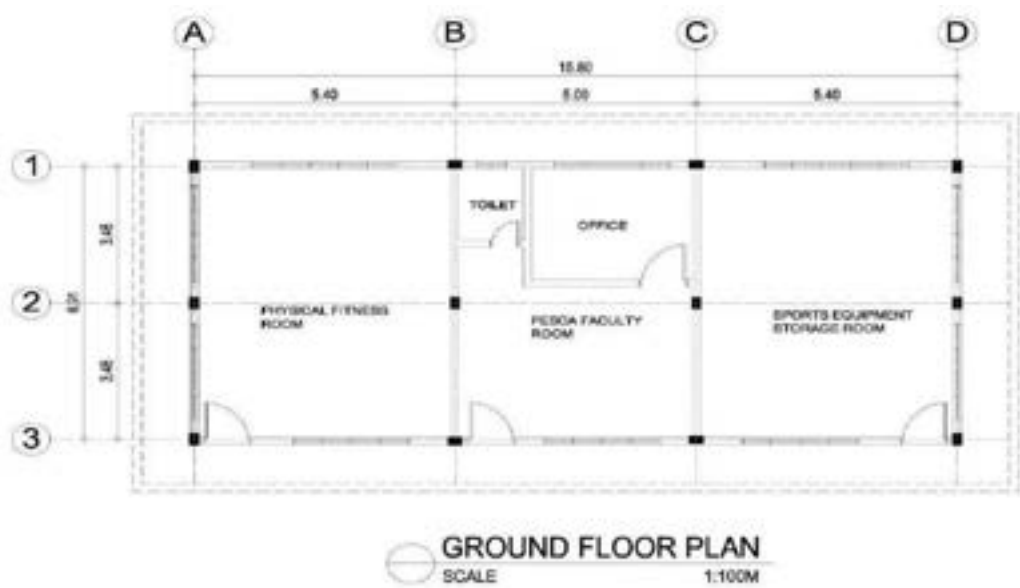


Figure 110 PESCA Building

PESCA is a one-storey building with a total floor area of 110.60 sq.m.. It consists of GSO Office, Culture & Arts Music Room, Maintenance Barracks & Work Area. It is situated alongside Gymnasium and at the back of Hostel Building.

Table 35 Technical Description of PESCA Building

PESCA Building	QTY	AREA (sq.m.)
Physical Fitness Room	1	37.58
General Services Office	1	37.56
Storage Room	1	34.90



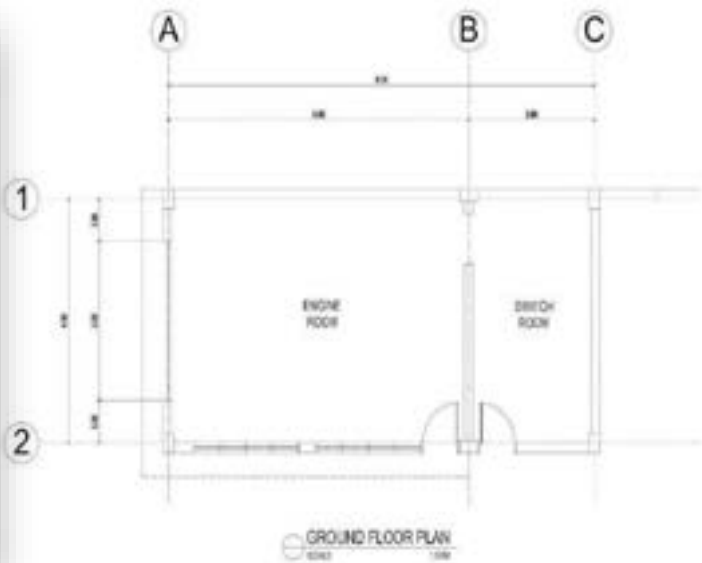


Figure 111 Power House 1



Figure 112 Power House 2

Table 36 Number of Power House of BatStateU JPLPC-Malvar

Powerhouse 1	1
Powerhouse 2	1
Water Tank	3
Streetlights	6

## E. Transportation

### a. Infrastructure and road network maps; including drainage, parking areas

#### Roads

The existing road network which ran an approximate total length of 430 meters, starts from university entrance point which ran alongside the existing covered pathway. This road ran up to the cross-intersection near Gate 2 where 3 junction roads start. Figure 113 shows the existing site development plan with road networks inside the campus represented by the arrow lines.

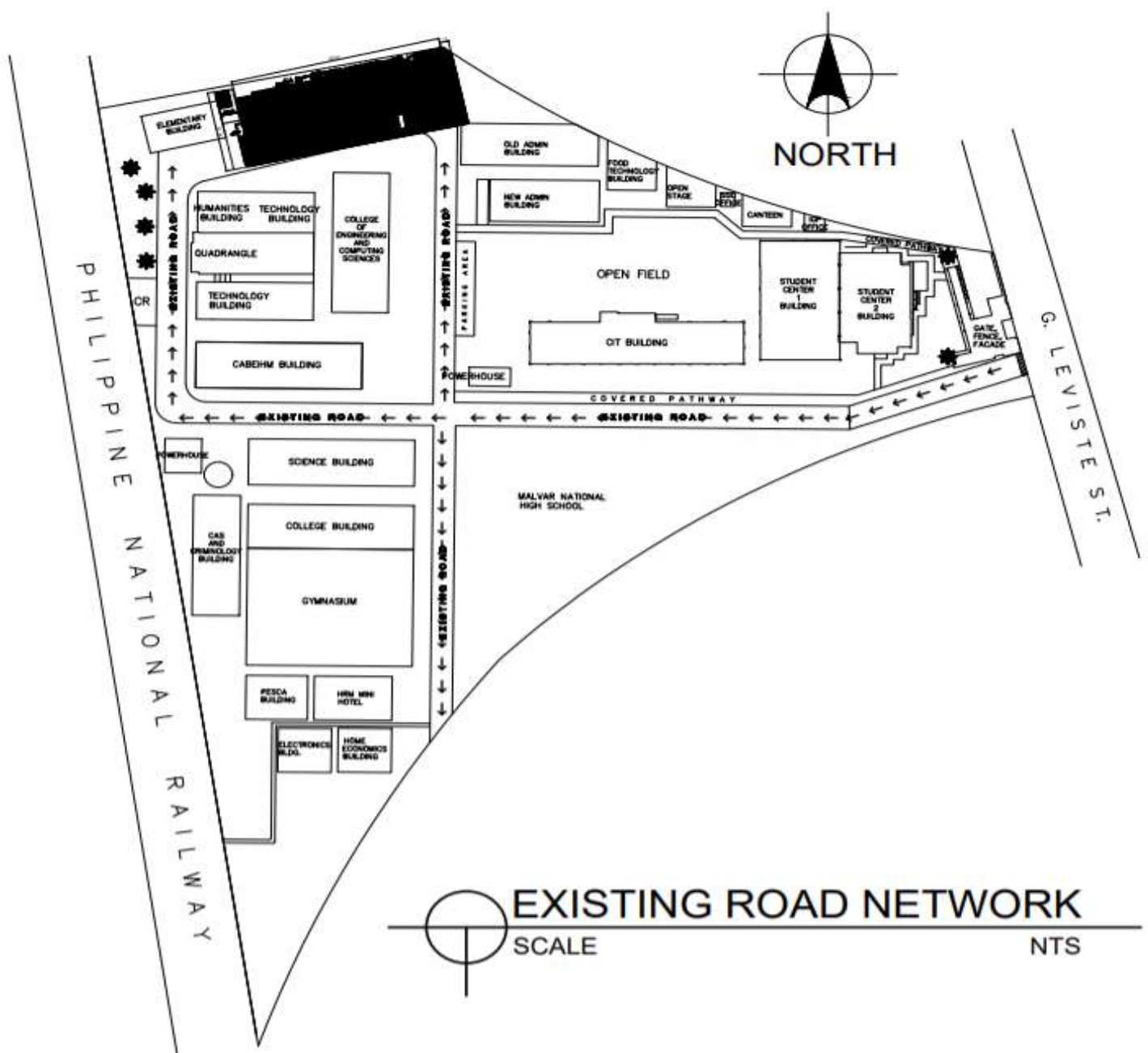


Figure 113 Existing Road Network Map

To create better road access inside the campus, a new proposed road network plan has made. The proposed road network comprises around 8.56% of the total land area of the campus. With 6 meters, 4 meters and 3 meters variations in width and a total length of 870 meters, this proposal covers additional road all around the campus premises, thus eliminating the dead-end roads from the existing ones. Figure 114 shows the proposed road network plan reflected on the proposed site development plan.

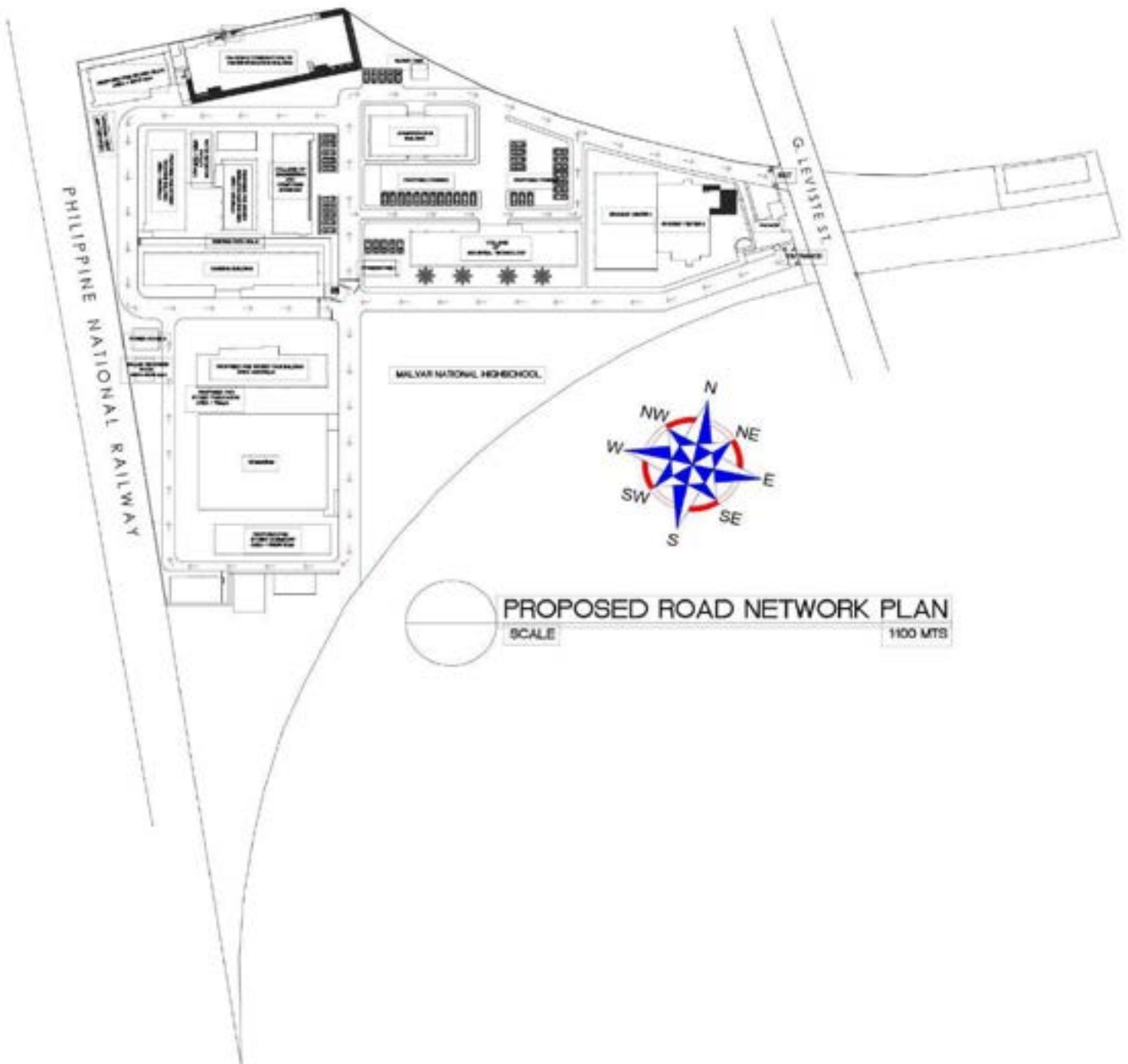


Figure 114 Proposed Road Network Plan



To even more control the excessive amount of rainwater that runs off every now and then during heavy rainfall, a new drainage plan is developed to improve stormwater management and drainage system inside the campus since significant amount of floods had been observed over the years.



The proposed drainage network will have two starting points located near the proposed CAS building and across the HEB building. With 20 manholes to guarantee easy maintenance access, this drain flow will run down and will be tapped to the municipal draining system available located at G. Leviste St. Figure 116 shows the proposed drainage network plan reflected in the site development plan.

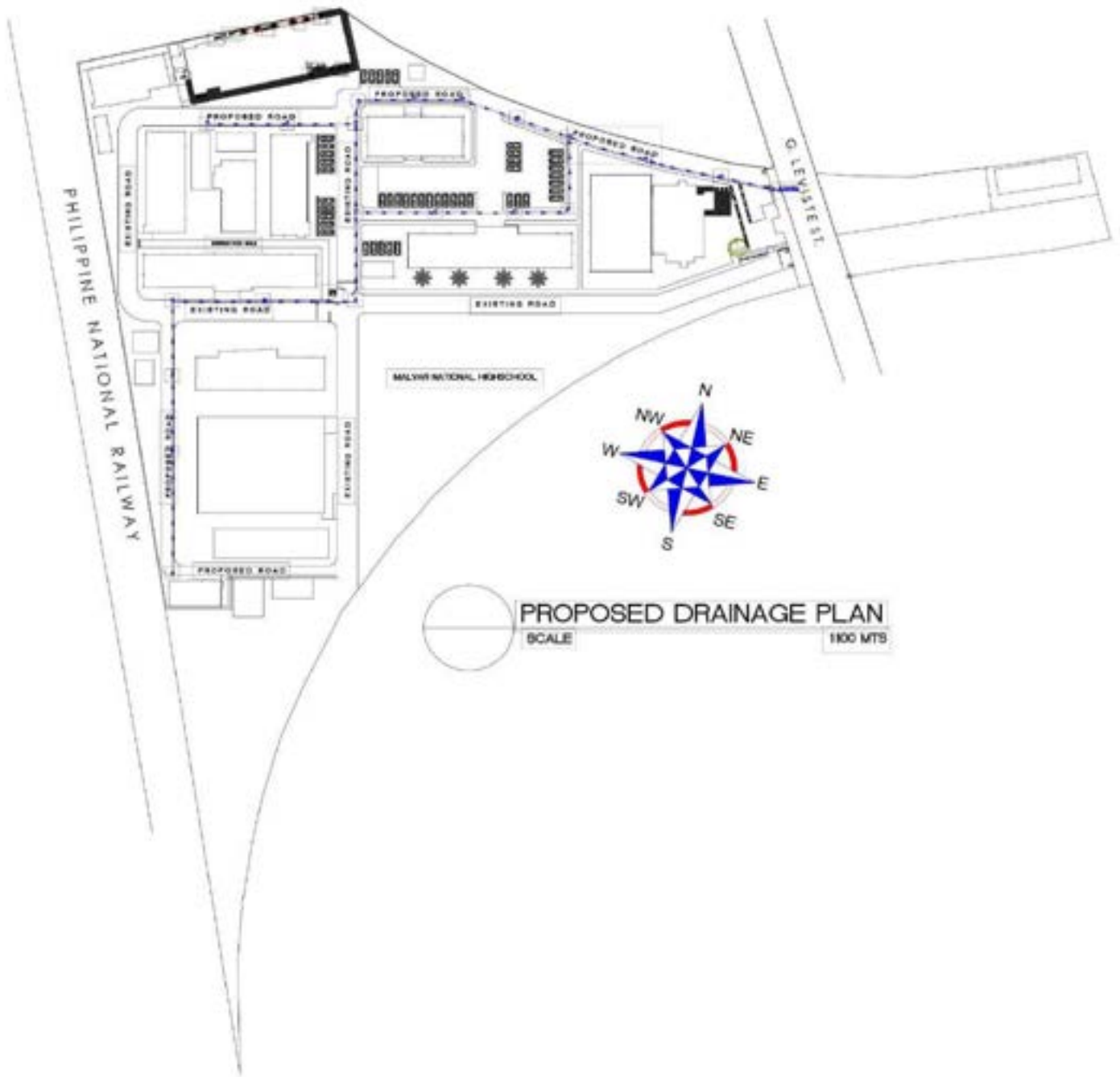
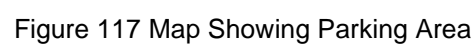


Figure 116 Proposed Drainage Network Plan





## Water Supply

In ensuring the water supply and distribution system inside the campus, water supply network plan is proposed with the reflected site development plan. Figure 118 shows the proposed water supply network with assigned tapping point per area. The proposed main water tank will be located near the New Administration Building and Higher Education Building.

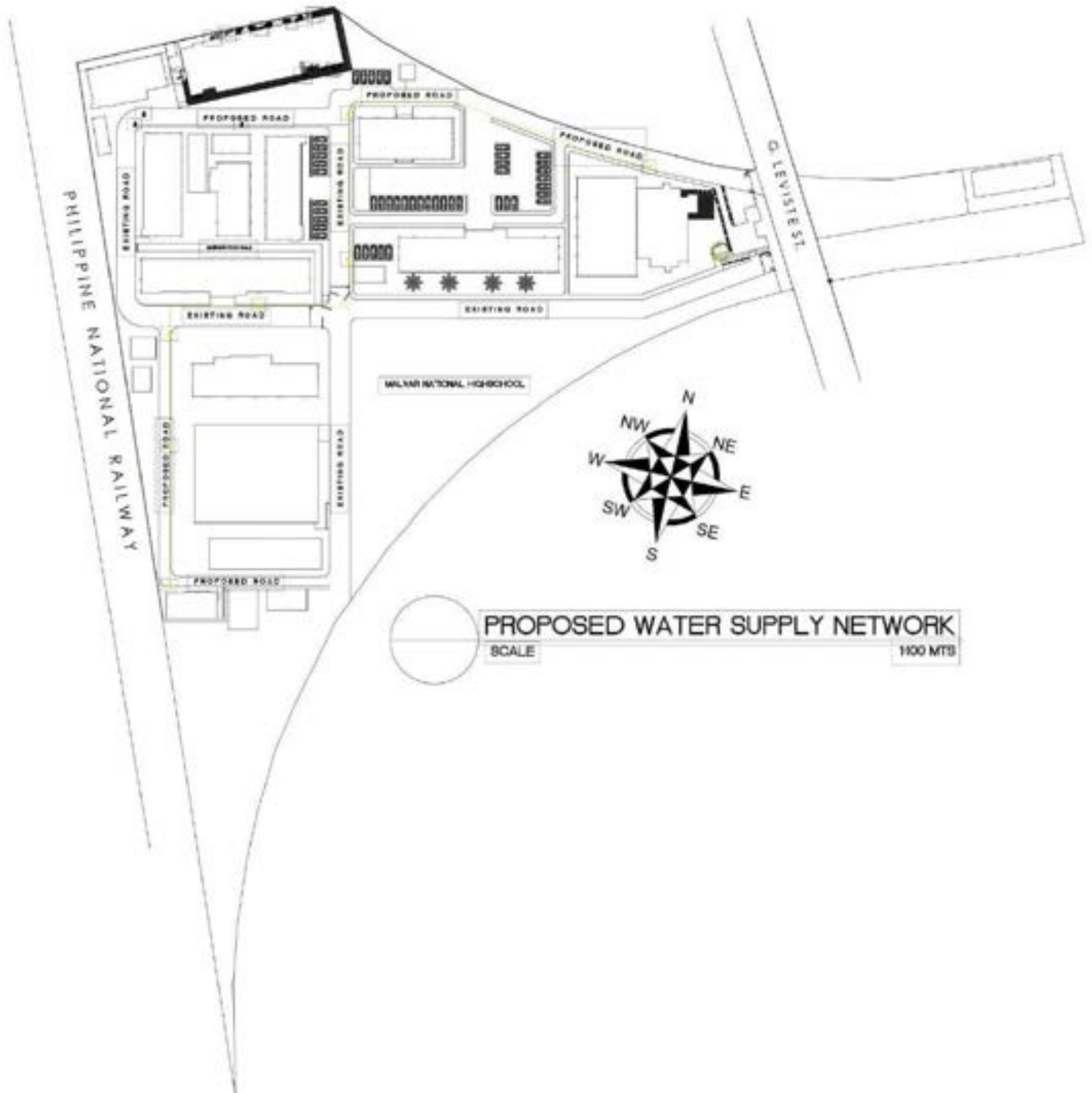


Figure 118 Proposed Water Supply Network Plan

## F. Power, Water, Communication Network

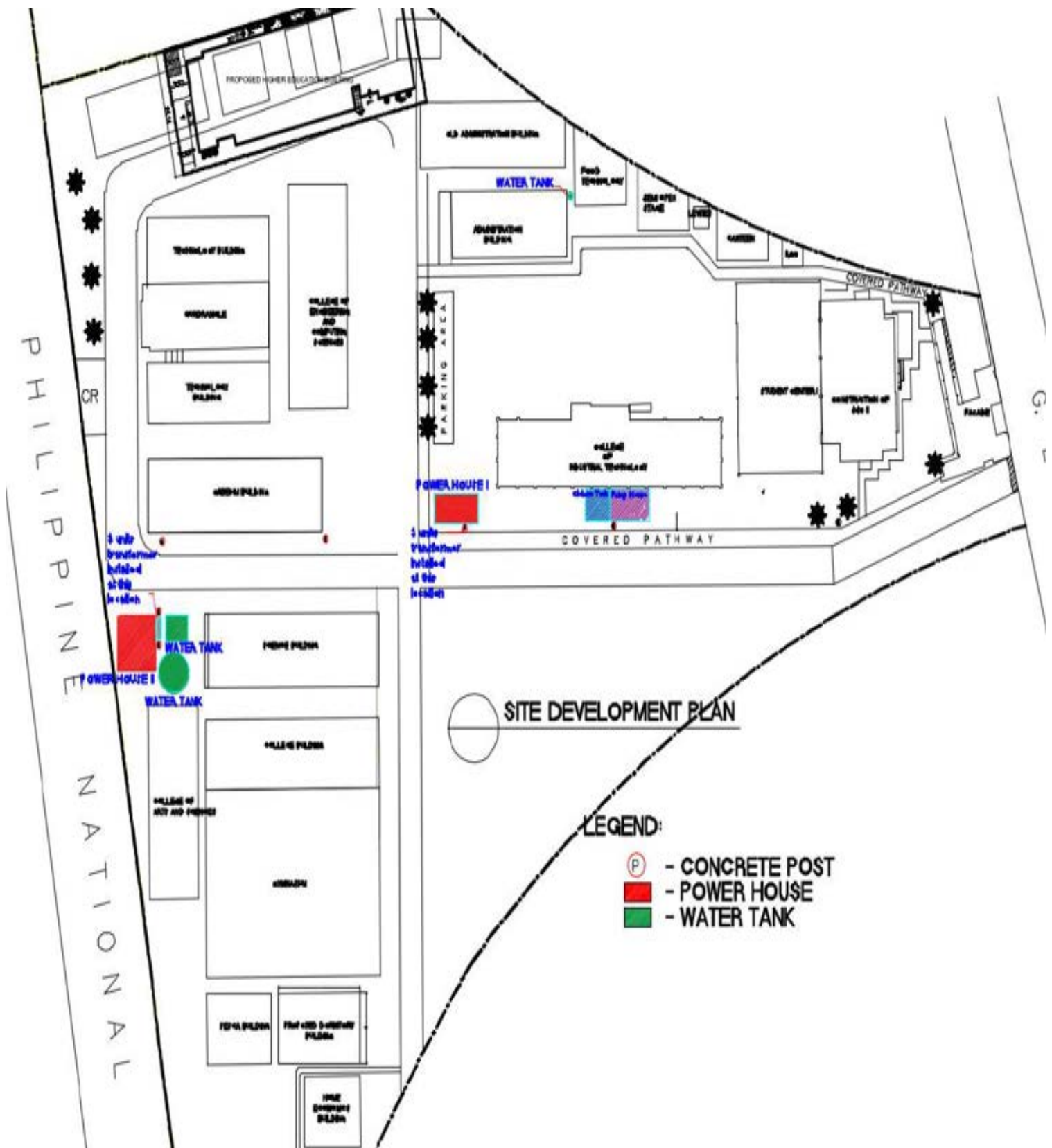


Figure 119 Power, Water, Communication Network Location

Figure 119 shows the location of facilities in regards to utilities, such as power supply, water supply and communication network which includes power houses and water tanks inside the campus area.



Figure 120 Power House 1

Power / Service Provider : BATELEC II  
Capacity : 16000 AT, 230V, 3P  
Connected Load / Buildings : Students Service Center 2  
Student Center 1  
Old Admin Building  
Facade  
Admin / Library Building  
Elementary Building  
College of Industrial Technology  
Building

Figure 120 shows Power House 1 which occupies 56.94 square meters of land area. Power is supplied by local service provider, BATELEC II. Capacity and connected loads are indicated above.





Figure 121 Power House 2

Power / Service Provider	: BATELEC II
Capacity	: 4000 AT, 230V, 3P
Connected Load / Buildings	: College of Engineering and Computing Sciences College of Accountancy, Business, Economics & International Hospitality Management Building PESCA Gymnasium Science Building College Building College of Arts and Sciences Building Higher Education Building

Figure 121 shows Power House 2 which occupies 56.63 square meters of land area. Power is supplied by local service provider, BATELEC II. Capacity and connected loads are indicated above.



Based on the data gathered, from 2017-2019, the average monthly power consumption is around 27,090kWhr (Twenty-Seven Thousand Ninety, Kilowatt Hour). And during the pandemic the average monthly consumption dropped to around 16,616kWhr (Sixteen Thousand Six Hundred Sixteen, Kilowatt Hour). It is observed that during December to February the consumption again drops to around 13,860kWhr (Thirteen Thousand Eight Hundred Sixty, Kilowatt Hour) due to cold weather condition. And when the face-to-face classes started last August 2022, the consumption relatively raised to 28,700kWhr (Twenty-Eight Thousand Seven Hundred, Kilowatt hour). It is projected that the consumption will raise to around 60% (Sixty Percent) in 5year period due to future building constructions.

Table 37 Monthly Power Consumption

Reading Period	Consumption	Demand
Dec 22, 2020 - Jan 22, 2021	11200	-
Jan 22, 2021 - Feb 22, 2021	13300	-
Feb 22, 2021 - Mar 22, 2021	16100	-
Mar 22, 2021 - Apr 22, 2021	14700	-
Apr 22, 2021 - May 22, 2021	15400	-
May 22, 2021 - Jun 22, 2021	16800	-
Jun 22, 2021 - Jul 22, 2021	17500	-
Jul 22, 2021 - Aug 22, 2021	17500	-
Aug 22, 2021 - Sep 22, 2021	17500	-
Sep 22, 2021 - Oct 22, 2021	20300	-
Oct 22, 2021 - Nov 22, 2021	20300	0.138
Nov 22, 2021 - Dec 22, 2021	16800	0.126
Dec 22, 2021 - Jan 22, 2022	14700	0.196
Jan 22, 2022 - Feb 22, 2022	13300	0.136
Feb 22, 2022 - Mar 22, 2022	14000	0.168
Mar 22, 2022 - Apr 22, 2022	16100	0.191
Apr 22, 2022 - May 22, 2022	16800	0.199
May 22, 2022 - Jun 22, 2022	17500	0.219
Jun 22, 2022 - Jul 22, 2022	25900	0.293
Jul 22, 2022 - Aug 22, 2022	28700	0.316



Figure 122 Water Tank

Location	: Between Admin Building and Food Tech
Supplied Buildings	: Old Admin Building Admin / Library Building Student Center I

Figure 122 shows the water tank in between Admin / Library Building and Food Tech. The water tank supplies nearby buildings and occupies around 4.2 square meters of land area.





Figure 123 Water Tanks

Location	: Beside CAS Building and Power House II
Supplied Buildings	: PESCA Gymnasium CAS College Building Science Building Elementary Building Technology Building CABEIHM

Figure 123 shows a water tank near CAS Building and Power House 2. The water tank supplies most of the buildings in the campus and occupies around 36.61 square meters of land area.



## **G. Waste Management**

Waste Management System is a systematic way of collection, transportation, treatment and disposal of generated wastes in the campus. Wastes are discarded materials of the campus either in solid, liquid or gas form. The wastes generated in every premise are safely collected, processed and disposed so as not to cause negative environmental and health impact. Institutional wastes are being monitored, recorded, evaluated and reported to regulatory agencies showing compliance to environmental regulations.

BatStateU JPLPC-Malvar Waste Management Strategy, involves creating facilities in which wastes of students, professors and personnel flows safely with minimal risk and hazard.

Environmental Management Unit (EMU) of the campus established policies and guidelines on waste management system based on the following:

1. Environmental Compliance Certificate;
2. Laguna Lake Development Authority;
3. Republic Act 9003 (Ecological Solid Waste Management Act of 2000);
4. Republic Act 6969 (Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990).
5. Decentralization of Environmental Management Unit.

### **Policies and Guidelines on Waste Management System (WMS) of BatStateU JPLPC-Malvar**

#### **1. General**

Wastes are discarded materials of the University either in solid, liquid or gas form. The wastes generated in every premise shall be safely collected, processed and disposed so as not to cause negative environment and health impact.

Institutional wastes of the University shall be monitored, recorded, evaluated and reported to regulatory agency showing the compliance to environmental regulations and realization of one of the core values, concern for the environment, of the University.

#### **2. Scope**

- 2.1. The guidelines on waste management shall apply to main and extension campuses of the University.
- 2.2. The guidelines shall apply to any individual or group as a guide to a systematic management of waste in every premise in each campus.

#### **3. Definitions**

For better understanding of the guideline, the following were used:

- 3.1. Generation - shall refer to the act or process of producing solid waste;



- 3.2. Generator - shall refer to a person, natural or juridical, who last uses a material and makes it available for disposal or recycling;
- 3.3. Permit – a document issued by a regulatory agency to the University authorizing the disposal, discharge or release of residual, effluent and exhaust respectively, to the environment. In this guideline, this refers to Permit to Operate and Discharge Permit.
- 3.4. Waste – refers to discarded materials with or without purpose and/or special handling after it serves its intended use. In this guideline, this refers to solid waste, wastewater, hazardous waste and Air exhaust waste.
- 3.5. Waste Management System – the systematic way of collection, transportation, treatment and disposal of generated waste in the University.

#### 4. Acronym

- 4.1. APSE – Air Pollution Source Equipment
- 4.2. AQMA – Air Quality Management Act or RA 8749
- 4.3. CMR – Compliance Monitoring Report
- 4.4. DENR-EMB – Department of Environment and Natural Resources-Environmental Management Bureau
- 4.5. DP – Discharge Permit
- 4.6. ECC – Environmental Compliance Certificate
- 4.7. HWMA – Hazardous Waste Management Act or RA 6969
- 4.8. LLDA – Laguna Lake Development Authority
- 4.9. MRF-Material Recovery Facility
- 4.10. PTO – Permit to Operate
- 4.11. SDS - Safety Data Sheet
- 4.12. STP-Sewage Treatment Plant
- 4.13. SWMA – Solid Waste Management Act or RA 9003
- 4.14. UCARF-Unified Concern and Action Request Form
- 4.15. WQMA – Water Quality Management Act or RA 9275
- 4.16. DAO-DENR Administrative Order

#### 5. Basic Components

The guidelines on waste management have four (4) basic components:

##### 5.1. Solid Waste Management

###### 5.1.1. Generation

- a. Items to be purchased by the University shall be environmentally-acceptable, durable and cost effective so as to minimize waste generation.
- b. Procurement of items for the University's Operation shall be in bulky order to avoid excessive packaging materials to be disposed.
- c. Waste generated shall be recorded and updated as basis in compliance with SWMA and for future policy making.





- d. Food wastes shall not be accessible to stray animals and pests. Moreover, it is prohibited to feed the stray animals with any type of food or waste.
- e. Canteen personnel are responsible for collecting and disposing of food waste.
- f. Students with laboratory activities (baking, cooking, and other food related activities) that generates food waste must be disposed of independently.
- g. The waste shall be segregated from the source of generation.
- h. Packaging products to be used, foods to be sold shall be of recyclable type.
- i. Students, faculty members and staff must be familiar with the importance of segregation and waste reduction through online infographics, webinars, seminars/posters.
- j. Students, faculty members and staff must be aware of the location of each building's university trash bin.

### 5.1.2. Collection

- a. A waste collection points shall be established in each campus for the centralized collection of waste in the campus.
- b. An approved, strategically-located, protected bin shall be positioned in every collection points.
- c. Bins per building shall be properly labeled to indicate specific waste to be contained. The label shall be, either, recyclable, non-recyclable, papers, and infectious waste.
- d. Janitors shall be in proper protective clothing so as to avoid exposure to possible disease-causing microorganisms.
- e. Waste shall be collected by the janitors and brought to the Material Recovery Facility.
- f. Wastes generated from trimming, landscaping and the like shall not be part of the containers positioned in collection points. A plastic or other approved container shall be used so as not to overload the capacity of the positioned bins. This container shall not contain non-biodegradable and must be brought to the composting area.
- g. Periodic waste collection must be observed by the janitors, or at maximum capacity of the bins.
- h. Waste collected shall be inspected for proper segregation.
- i. Containers shall be ensured to be tightly sealed at all times.

### 5.1.3. Transportation

- a. Containers i.e. plastic bags or sacks shall be inspected and ensured to be sealed properly.
- b. For hazardous wastes, incompatible materials shall be far from each other. SDS shall be used as guide.
- c. Approved materials for containment of waste and appropriate vehicles shall be used during the course of transportation. SDS shall be used.



- d. Service provider shall select a transport route, shall avoid populated area, watershed or catchment area and environmentally sensitive area.
- e. Schedule for transportation must be at least one or twice, or when storage places are full.

#### 5.1.4. Processing and Recovery

- a. All waste generated shall be brought and processed to the Material Recovery Facility for energy recovery. It shall be weighed and recorded.
- b. Ensure all recyclables are recovered.
- c. Residual wastes are separated from recyclables for its collection by the municipal garbage hauler.
- d. Recovered items shall be restored for selling and other significant purposes.
- e. Emptied containers or bins shall be triple-rinsed with water or other suitable solvent and air dried to ensure that it is free of liquid or other visible chemical residue.
- f. All recovered items must be placed in a safe and secured storage

#### 5.1.5. Disposal

- a. Only residual shall be subjected for disposal after thorough processing of waste.
- b. No recyclable wastes shall be disposed by the municipal garbage hauler.
- c. Biodegradable wastes shall be immediately collected and disposed to avoid harborage of vectors and transmit communicable diseases.
- d. Biodegradable waste shall be properly composted in an isolated composting facility.
- e. Wastes shall not be burned.
- f. Residual waste shall be placed in a safe and secured disposal.

### 5.2. Wastewater Management

#### 5.2.1. Generation

- a. A metering device shall be installed to monitor water consumption.
- b. Water being supplied to the buildings shall be recorded and updated.
- c. Procurement of plumbing fixtures, equipment and the like shall be environmentally acceptable.
- d. Periodic inspection of systems must be observed.
- e. Leakages in piping system shall be corrected.
- f. Use of water shall be minimized.
- g. Use other ways of cleaning materials other than water.



### 5.2.2. Collection

- a. All wastewater shall be collected by an approved piping material, acid-resistant, durable and cost effective.
- b. Discharge of waste from different plumbing fixtures shall be conveyed through the building sewer to a point of disposal.
- c. Wastewater from different sources shall be drained and conveyed it for treatment.
- d. Stormwater shall be collected through conductor/downspout and conveyed it any receiving canal or body of water.

### 5.2.3. Treatment

- a. Wastewater shall be treated prior to its disposal to the environment.
- b. An approved septic system shall be constructed so as to provide treatment of sewage to avoid surface and subsurface contamination.
- c. Monitoring of the quality of effluent shall be done to ensure compliance to laws and regulations.

### 5.2.4. Disposal

- a. Ensure that discharge permit has been secured from the authority in compliance with the law.
- b. Ensure that the effluent discharge to the environment passed the effluent standard stipulated in DAO 16-08.
- c. All waste discharge in the environment shall be in compliance with WQMA.

## 5.3. Hazardous Waste Management

### 5.3.1. Generation

- a. All waste generated shall be registered to the regulatory agency for their inventory.
- b. A Generator's ID number shall be secured from the authority as a transaction ID number for the issuance of permit to transport of waste.
- c. Any material containing toxic, hazardous elements for procurement shall be considered by the management to minimize significant environment and health effects when incidentally spilled, released and its cost of cleaning, collection, treatment and disposal.
- d. Chemicals for procurement shall be based on the required quantity so as not to minimize waste generation.
- e. Use of alternative and non-toxic materials, if possible, as packaging material for equipment, instruments so to reduce special handling and operation and maintenance cost.
- f. Train or inform the personnel and staff on the hazards posed by the improper handling, storage, transport, and use of hazardous waste and the containers.





### 5.3.2. Collection

- a. Every hazardous waste generated (e.g. busted fluorescent light bulb, paint container) shall be turned over to a designated officer (e.g. MRF Operator). The designated officer shall log (in a logbook or form) all receives hazardous wastes for proper accounting. Hazardous wastes shall not be disposed in an ordinary plastic bin.
- b. All waste shall be collected with proper protective gear to avoid contact, exposure to chemicals either for short or long period of time.
- c. Waste shall be collected using an approved container, leak and punctured-proof, durable and cost-effective.
- d. Waste shall not be drained in piping systems to avoid mixture of incompatible materials so as to prevent explosions, damage to lives and properties.

### 5.3.3. Transfer

- a. An approved method of handling shall be used in transporting waste from the point of generation to the temporary storage area.
- b. An approved vehicle shall be used in transporting waste so as to avoid spilling and/or released to the environment.

### 5.3.4. Storage

- a. Waste shall be safely stored prior to its collection by the authorized hauler.
- b. The storage area shall be equipped with proper ventilation and security for safety purposes.
- c. The storage area shall not be accessible to people except for the person in-charge to ensure public health protection.
- d. All containers must be regularly checked for leaks.

### 5.3.5. Labeling

- a. The size of the label is minimum 20cm by 30cm.
- b. The color of the label is yellow background and black for letters conspicuously marked in paint or other permanent form of marking.
- c. The material of the label must be scratch proof and resistant to tampering and weathering.
- d. The label is accompanied with the symbol corresponding to the characteristics of hazardous.

### 5.3.6. Packing

- a. In packing the hazardous waste, the containers must be in good condition without leaks and damages.
- b. The containers must be equipped with a strong lid or cap to prevent spillage during the transport.



- c. The containers to be used must be made from materials suitable for the characteristics of hazardous waste.

#### 5.3.7. Transport and Treatment

- a. Only authorized hauler with proper permit shall transport the generated waste.
- b. The management shall ensure that all waste generated shall be transported and treated prior to its disposal.

#### 5.3.8. Disposal

- a. All waste shall be disposed in a sanitary landfill or other approved method of disposal.
- b. All waste that is being disposed shall be recorded for documentation purposes.

### 5.4. Personal Protective Equipment (PPE) Disposal

#### 5.4.1 Used Disposal mask

- a. Masks must be cut in half to avoid reuse.
- b. Masks must be disposed of in a trash bag separated from other residual waste and must be labeled as “disposable PPE” or “infectious waste”. Date of disposal shall be also included in the label.
- c. Storage of waste in the separate trash bag shall be 72 hours before throwing in the residual waste.

#### 5.4.2 Used Disposable gloves

- a. Gloves shall be ensured to be inside-out, one glove enveloped inside the other, when disposed of in a trash bag separate from other residual waste.
- b. Trash bags shall be labeled as “disposable PPE” or “infectious waste”. Date of disposal shall be also included in the label.
- c. Storage of waste in the separate trash bag shall be 72 hours before throwing in the residual waste.

### 5.5. Air Exhaust Management

5.5.1. All APSE shall be periodically maintained.

5.5.2. All exhaust from any air pollution source equipment shall be periodically monitored and tested to ensure compliance to standards.

5.5.3. All gases released from APSE shall be treated, if applicable, so as not to induce negative environment and health impact.

5.5.4. Submission of reports to the regulatory agency shall be made in compliance with the AQMA.



# Land Use Development and Infrastructure Plan (LUDIP)

Figures 124-128 present the licenses or permits of BatStateU JPLPC-Malvar over the water, forest, and other natural resources within the area.



Republic of the Philippines  
Department of Environment and Natural Resources  
**Environmental Management Bureau CALABARZON**  
4700 Building, 1st Floor, Batangas City 4700  
Tel No. 043222-0000, 043222-0001, 043222-0002  
Email: emmb@denr.gov.ph

**ENVIRONMENTAL COMPLIANCE CERTIFICATE**  
(Issued under Presidential Decree 1586)  
**ECC-R44-2022-03-0044**

THIS IS TO CERTIFY THAT THE PROPOSER, **BATANGAS STATE UNIVERSITY JPLPC MALVAR** is granted this Environmental Compliance Certificate (ECC) for **BATANGAS STATE UNIVERSITY JPLPC-MALVAR CAMPUS PROJECT** located at **G. Leveña St., Poblacion, Malvar, Batangas** by the Department of Environment and Natural Resources (DENR) through the Environmental Management Bureau (EMB), CALABARZON Region.

This Certificate is being issued for the project, with the following details:

**PROJECT DESCRIPTION**

The Batangas State University JPLPC-Malvar Campus Project shall cover a total gross area of Three Hectare, Three Decimals, Nine Centes (39.4599) square meters within a total land area of THIRTY TWO Hectare and One Decimals, Twenty Cent (32.0200) square meters or parcel of land situated at TCT No. T-13229 located at G. Leveña St., Poblacion, Malvar, Batangas. The project facilities/components shall include: New Administration Building, Old Administration Building, Student Center Building & Student Center Building II, Canteen Building, College of Engineering and Computing Science Building, Science Building, College Building, CAS & Chemistry Building, Gymnasium, Public Building, New Hostel, College of Industrial Technology Building, Elementary Building, Research Hall Building, Tech Hall Building, Powerhouse 1, Powerhouse 2, Higher Education Building, 100000 Area, MWH Education Building, Water treatment Building, Natural Recovery Facility, Batangas State Storage Building, Water Distribution Facility, Storage Area, Parking Area, Faculty, Guard House, water supply system, drainage system, waste system, and other support facilities.

This Certificate is issued in compliance to the requirements of Presidential Decree No. 1586, as amended by Department Administrative Order No. 2003-39, The Bureau, however, it is not precluded from amending, adding, removing, and correcting any deficiencies or errors that may be found after issuance of this Certificate.

This is to certify further that in issuing this CERTIFICATE, it should be understood that the same is a **PLANNING TOOL** and **NOT A PERMIT**. Hence, the proponent shall secure pertinent **PERMITS/CLEARANCES** from all concerned government agencies (i.e. DENR, WHO, LDB, DOH, DOST, DHS, DSWD, DRR, DPW, FFA, LWMA, DAR, DA, PHED, MCH, RDA, etc.) prior to the implementation of the project, to be submitted to this Office within sixty (60) working days upon receipt thereof; otherwise this Office shall be constrained to take appropriate legal actions. The validity of this ECC shall not be rendered as voiding license within the purview of other government agencies.

Issued at EMB CALABARZON Region on **March 22, 2022**.

Approved by:



**DENR EMB REGIONAL DIRECTOR**

**ECC-R44-2022-03-0044**  
Batangas State University JPLPC-Malvar Campus Project  
Batangas State University JPLPC-Malvar

**SWORN STATEMENT OF OWNER/PROPOSER**

Under the provisions of Presidential Decree 1586, I, **PHILIP V. DEL ROSARIO** do hereby certify that the information provided to the Department of Environment and Natural Resources (DENR) - Environmental Management Bureau (EMB), CALABARZON Region pertaining to the **BATANGAS STATE UNIVERSITY JPLPC-MALVAR CAMPUS PROJECT** located at **G. Leveña St., Poblacion, Malvar, Batangas** are true and correct to the best of my personal knowledge and based on the records in my possession. Hence, I shall take full responsibility in complying with all conditions and restrictions contained in this Environmental Compliance Certificate (ECC).

**PHILIP V. DEL ROSARIO**  
Chairman  
**BATANGAS STATE UNIVERSITY**  
JPLPC-MALVAR  
TIN: \_\_\_\_\_

**SUBSCRIBED AND SWORN TO** before me this \_\_\_\_\_ the above named affiant taking oath presenting his government issued I.D. \_\_\_\_\_ No. \_\_\_\_\_ issued at \_\_\_\_\_ on \_\_\_\_\_

**Notarizing Officer**

**ECC-R44-2022-03-0044**  
Batangas State University JPLPC-Malvar Campus Project  
Batangas State University JPLPC-Malvar

**I. CONDITIONS**

**ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN**

The proponent shall strictly implement the following mitigating, enhancement and rehabilitation measures contained in the Environmental Management Plan (EMP) of its EIR/MP as follows:

- That the proponent shall undertake re-greening/landscaping and planting of native tree species within the project area to help attenuate noise levels, absorb heat and absorb some pollutant emissions.
- That all operational, external, chemical, traffic, process, excessive surface runoff erosion, siltation, dust, solid wastes and occupational & health hazards identified in the Environmental Performance Report and Management Plan (EIR/MP) shall be strictly managed and, in case of emergency episodes, appropriate response activities shall be immediately undertaken for the protection of the workers/personnel and the receiving environment.
- That effluent and adequate drainage system and wastewater treatment facility for its effluents and wastewater shall be provided/installed. All liquid wastes shall be properly treated and not to exceed DENR Pollutant Standards. The plans and designs of the proposed WWTF shall be submitted one (1) month upon receipt of the ECC with a completion period of six (6) months.
- That in support of the concern of the government to phase out mercury from all possible sources and to address global warming, the proponent shall install environment friendly lighting devices (i.e. Light Emitting Diode (LED) Lamps, Compact Fluorescent Lamps, etc.).
- That proper Air Pollution Source and Control Installations (APSCI) shall be provided by the proponent to avert pollutant emissions.
- That the proponent shall properly implement the following:
  - Effective Information, Education and Communication (IEEC) Plan shall be implemented in all project phases including communication of environmental risks of the project.
  - Technical Social Development Program (SDP) among employees/workers, host community and affected communities which shall cover livelihood training and employment, including assistance in the setting-up of social welfare programs for health and education that will ensure the participation of youth and women.
  - Waste management scheme as provided in the Environmental Management Plan (EMP) shall be continuously implemented.
  - Particulates/dust/suspension facilities shall be provided before the start and during the construction works.

**GENERAL CONDITIONS**

Further administrative conditions for the grant of this Certificate shall be strictly complied:

- That the proponent shall comply with the following environmental laws including their respective implementing rules and regulations such as: PD 1586 "Philippine Environmental Impact Statement System", RA 6969 "Toxic Substances and Hazardous and Radioactive Waste Control Act of 1990", RA 8749 "Clean Air Act of 1999", RA 9003 "Ecological and Solid Waste Management Act of 2000", RA 9275 "Clean Water Act of 2004" and other existing and applicable Philippine Laws.

**ECC-R44-2022-03-0044**  
Batangas State University JPLPC-Malvar Campus Project  
Batangas State University JPLPC-Malvar

- That the proponent shall strengthen the Environmental Unit in accordance with DAO No. 2014-02, Series of 2014 Approved Guidelines on Pollutant Control (Pollutant Accreditation). The Environmental Unit shall be integrated in the proponent's organizational chart to handle all environment related aspects of the project, in addition to the monitoring requirements as specified in the Environmental Management Plan (EMP)/Environmental Monitoring Plan (EMP) such as but not limited to the following:
  - Monitor actual project impacts vis-a-vis the predicted impacts and management measures in the EIR/MP;
  - Submit all environmental monitoring reports to this Office quarterly using the prescribed format of the Self-Monitoring Report (SMR) pursuant to DAO 2008-27;
  - Ensure that post-assessment priority/commitments are in place;
  - Submit semi-annual ECC Compliance Monitoring Reports (every January 15 and July 15 of each year) the project is implemented which shall contain summary of all the SMRs submitted quarterly pursuant to DAO 2003-30 (implementing rules and regulations of PD 1586); and
  - Submit an Abandonment Plan Two (2) months prior to abandonment. It shall include rehabilitation measures/clean-up, reclamation of areas possibly contaminated with toxic substances and presentation of options on proposed alternative projects in the area.
- That any authorized DENR-EMB personnel, with proper identification card and travel/mission order, shall be allowed unconditional access to conduct an on-the-spot inspection/monitoring without the need for prior notice to the proponent to ensure compliance to the issued ECC.
- That when the implementation of the project causes adverse environmental impacts and/or poses nuisance to public health and safety, the proponent shall immediately suspend its project operation until such time that appropriate remedial measures are effected and/or any damage to persons and/or properties resulting from the same are properly compensated.
- That systems/holding tanks shall be installed to minimize the emission of gas/odor for domestic purposes.
- That a billboard containing this message: **"Notice to the Public, This BATANGAS STATE UNIVERSITY JPLPC-MALVAR CAMPUS PROJECT of BATANGAS STATE UNIVERSITY JPLPC-MALVAR has been issued an Environmental Compliance Certificate (ECC-R44-2022-03-0044) by the Department of Environment and Natural Resources - Environmental Management Bureau (DENR-EMB) CALABARZON Region on March 22, 2022."** shall be installed at all entry and exit points and at all perimeters of the project facing the road to inform the general public within thirty (30) days from receipt of the Certificate.
- That, prior to project implementation, the proponent shall coordinate with the Mines and Geosciences Bureau (MGB) CALABARZON Region regarding the conduct of a detailed geological assessment within the project area. All recommendations and mitigating measures on geological, volcanic and hydrological hazards identified in the geological assessment report must be appropriately accomplished by the proponent.
- That proper health and sanitation practices shall be observed in all phases of the project and safety & personal protective equipment/devices shall be provided to the employees/workers to prevent health and occupational hazards.

**ECC-R44-2022-03-0044**  
Batangas State University JPLPC-Malvar Campus Project  
Batangas State University JPLPC-Malvar





# Land Use Development and Infrastructure Plan (LUDIP)

15. That a copy of the ECU shall be posted and maintained in a conspicuous location in the field office of the project, site clearly visible to the public and shall be adequately fenced or otherwise protected against damage and at the barangay bulletin board of the host barangay within thirty (30) days from receipt of the ECU.

16. That in compliance to the Paris Agreement and R.A. 9597 (Bio Fuels Act of 2008) to deal with the deforestation program on activities potential to contribute greenhouse gases or global warming, the proponent shall initiate an energy conservation program such as the use of alternative fuels.

### II. RESTRICTIONS

The proponent is strictly subject to the following restrictions:

1. That no other activities shall be undertaken other than what was stipulated in the ECPM. Should there be an expansion and/or deviation of the project beyond the project description, construction of other structures beyond those stated in the ECPM, any change in the activity or location, shall be made subject to a new Environmental Impact Assessment (EIA) requirements.
2. That no trees shall be affected in all phases of the project, or if there is any, necessary documents such as "Tree Cutting Permit", "Thinning Permit" and other permits/requirements, shall be secured from the concerned DENR sector pertaining to the implementation of the project.
3. That during the construction phase of the project, the proponent shall install a temporary 2-stage settling pond for wastewater prior to its final disposal into the local sewer and drainage system.
4. That the transfer of ownership/possession of this project complies with all the responsibility of complying with all the conditions in this ECU, the transfer of which shall be made known to the Office through a written notification by heavy granite within fifteen (15) days from such transfer.
5. That the proponent (BATANGAS STATE UNIVERSITY JPLPC-MALVAR as represented by its Chancellor, Mr. Philip Y. Del Rosario) and its ECPM preparer, Engr. Jerick P. Pecasal shall be jointly and severally accountable for any misrepresentation and failure to state material information in the submitted document.
6. The collection of processing fees and imposed penalty for the issuance of this ECU within the duration of the enhanced community quarantine/operational community quarantine is suspended and shall resume when regular business operation in the bureau shall resume. The issuance of ECU shall not construed as a waiver for the collection of the corresponding fees.

The conditions stipulated in this Certificate shall be deemed final within fifteen (15) days from receipt hereof and all conditions set forth above shall be complied with by the herein grantee. This ECU is deemed expired if not implemented within five (5) years from the date of issuance and the proponent shall have to apply for a new ECU if it intends to pursue the project.

*Non-compliance with any of the provisions of this certificate shall be a sufficient cause for the cancellation or suspension of this certificate and/or imposition of a fine in an amount not to exceed fifty thousand pesos (P50,000.00) for every violation thereof.*

ECC-R4A-2022-03-0044  
Batangas State University JPLPC-Malvar Campus Project  
Batangas State University JPLPC-Malvar

### PROJECT ASSESSMENT PLANNING TOOL

For the assistance of the Proponent and government agencies concerned in the management of the project and for better coordination in mitigation on the impact of the project on its surrounding areas and to the environment.

By way of recommendation, the following have been taken notice of by the undersigned and are forwarding these recommendations to the parties and authorities concerned for proper attention and action.

REGULATORY REQUIREMENTS	CONCERNED AGENCIES
1. The proponent shall comply with, but not limited to the following: 1.1 P.D. 856 in the Sanitation Code of the Philippines; 1.2 P.D. 442 in the Labor Code of the Philippines including occupational health and safety; 1.3 R.A. 5541 in the National Building Code of the Philippines including adequate storm drainage system and other flood control measures and compliance to the Fire Safety and Emergency Requirements; 1.4 P.D. 1062 in the Water Code of the Philippines; and 1.5 R.A. 9007 or the Bio-Fuels Act of 2008.	DENR DOLE - Bureau of Working Conditions Municipal Planning & Devt. Office/Building Official/EP/LOU Coastguard BANG/DPWH DOH
<b>ENVIRONMENTAL PLANNING RECOMMENDATIONS FOR THE PROPOSER</b>	
2. Close monitoring of the project should be undertaken by the proponent to maintain a high level of safety and efficiency at all stages of the project, and to immediately address any environmental (hazard) change that may take place.	

For dissemination and proper action of the parties concerned.

**ENR. NORRI A. PARANAKA**  
EC - Regional Director

Processing Fee: P.P. 100.00 Date: \_\_\_\_\_  
E.C. Fee: P.P. 100.00 Date: \_\_\_\_\_  
E.C. Fee: P.P. 100.00 Date: \_\_\_\_\_

ECC-R4A-2022-03-0044  
Batangas State University JPLPC-Malvar Campus Project  
Batangas State University JPLPC-Malvar

Figure 124 Environmental Compliance Certificate ECC-R4A-2022-03-0044

Republic of the Philippines  
DEPARTMENT OF ENVIRONMENT AND NATURE  
ENVIRONMENTAL MANAGEMENT BUREAU  
Region IV  
Date Issued by the Issuing Office: 10/10/2022, Manila  
Telephone No. (02) 886 9788  
Website: <http://denr.gov.ph>

### HAZARDOUS WASTE GENERATOR REGISTRATION CERTIFICATE

pursuant to Chapter 3 of the Administrative Order (A.O.) No. 2012-02, the environmental and regulatory of hazardous waste generators, this certificate is issued for:

Name of Waste Generator: BATANGAS STATE UNIVERSITY JPLPC-MALVAR CAMPUS

Physical Address: C. ESTRELLA STREET, PULACAN, MALVAR, BATANGAS

For an activity or project: as stipulated in the attached documents

**ON GRANT TO DENR**

Information about the generator's activity is listed below. Generators are required to keep records of activities:

Waste Class	Waste Number
Construction waste (e.g., concrete, brick, stone, etc.)	201
Mechanical and electrical components	202
Waste of electrical equipment	203
Industrial or laboratory waste	204
Used and spent oil, including oil sludge	205
Oil-contaminated materials	206
Used solvents	207
Waste from food and food processing, including: (a) food waste, (b) food processing waste, (c) food processing waste, (d) food processing waste	208

1. The generator shall maintain a record of all waste generated and its management in the form of a waste management plan (WMP) and submit it to the Department of Environment and Natural Resources (DENR) for review and approval.
2. Submission of the waste management plan (WMP) shall be made within 30 days after the start of any waste generation.
3. Proper filing of the waste management plan (WMP) shall be made in the office of the Regional Director, Environmental Management Bureau.
4. Submission of the waste management plan (WMP) shall be made in the office of the Regional Director, Environmental Management Bureau.

**ENR. NORRI A. PARANAKA**  
EC - Regional Director

10/10/2022

This is a computer-generated certificate. It is valid only if it is signed by the Regional Director, Environmental Management Bureau, DENR Region IV.

Printed and stamped on: 10/10/2022

Page 1 of 1

Figure 125 DENR – Hazardous Waste Generator Registration Certificate  
Registration No. OL-GR-R4A-10-032072




**Land Use Development and  
Infrastructure Plan (LUDIP)**



Figure 126 Laguna Lake Development Authority Clearance Permit No. PC-18C-2022-00349



Figure 127 Laguna Lake Development Authority Discharge Permit No. PC (N)-18C-2022-01741



Republic of the Philippines  
Department of Environment and Natural Resources  
ENVIRONMENTAL MANAGEMENT BUREAU  
Bureau for Air Quality Management  
Bureau for Air Quality Management  
Bureau for Air Quality Management

Permit No. PTO-OL-R4A 2D22-D3584  
Application Type: New

Date Issued: 02 Jun 2022  
Date Expiration: 02 Jun 2027

## PERMIT TO OPERATE

### Air Pollution Source and Control Installations

Permitted to Part 17, Title 26 of the Rules and Regulations of P.D. 870, as amended, hereby granted to:

**BATHANGS STATE UNIVERSITY (BPU) MALANG**  
CAMPUS JALAJARA ROAD, BATHANGS STATE UNIVERSITY (BPU)  
BATHANGS STATE UNIVERSITY

B. Lantela Jr., President, Malang, Batangas

subject to the following terms and conditions:

#### TERMS AND CONDITIONS

- This Permit is issued for the permitted to operate all the fuel burning equipments at the permittee's establishment identified on the previous page of the Permit.
- This Permit is subject to compliance of the existing Air Quality and Source Emission Standards and other provisions of the Clean Air Act and its implementing rules and regulations.
- The permittee shall at all times allow any authorized DENR (DSE) personnel with proper identification card and valid order from the division superintendent, to conduct air quality monitoring and inspection and monitoring to ensure its compliance to the permits and other applicable environmental laws without the need of prior notice to the permittee.
- This operating Permit shall be posted in a conspicuous location near the equipment and shall be immediately renewed or otherwise protected against damage.
- Any application for renewal of this Permit shall be filed not less than thirty (30) days before the expiry date indicated on the previous page of the Permit.
- The permittee shall submit Self-Monitoring Reports to the Bureau in accordance with DENR Administrative Order No. 27 (Series of 2007), The Self-Monitoring Report (SMR) on the operation and maintenance of the air pollution control equipment shall be made quarterly and submitted based on the following schedule:

Resource	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Garbage	Mar. 22-30	June 22-30	Sept. 22-30	Dec. 22-30
Laundry	Apr. 1-15	Jul. 1-15	Oct. 1-15	Jan. 1-15
Batangas	Apr. 1-7	Jul. 1-7	Oct. 1-7	Jan. 1-7
Food	Mar. 1-14	Jun. 1-14	Sept. 1-14	Dec. 1-14
Garage	Mar. 15-31	Jun. 15-31	Sept. 15-31	Dec. 15-31

- This is a condition of any of the conditions set forth herein shall be sufficient cause for the suspension or revocation of this permit and/or payment of fine in an amount not less than two thousand pesos (P20,000.00) for every condition violated.

Recommended to: \_\_\_\_\_ Approved by: \_\_\_\_\_

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This is a condition of any of the conditions set forth herein shall be sufficient cause for the suspension or revocation of this permit and/or payment of fine in an amount not less than two thousand pesos (P20,000.00) for every condition violated.

(Signature of the Permittee)

Page 2 of 2



**MR. WILSON A. PUNZANGA**  
DENR - Regional Director

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This is a condition of any of the conditions set forth herein shall be sufficient cause for the suspension or revocation of this permit and/or payment of fine in an amount not less than two thousand pesos (P20,000.00) for every condition violated.

(Signature of the Permittee)

Page 3 of 3

### Annex

#### Fuel Burning

ID	ATIS	Capacity	Brand name	Type of Fuel	AKIS
00001	Electric Generator Set	150 kVA	Generac	Diesel	---
00002	Electric Generator Set	300 kVA	Generac	Diesel	---
00003	Electric Generator Set	400 kVA	Generac	Diesel	---

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This is a condition of any of the conditions set forth herein shall be sufficient cause for the suspension or revocation of this permit and/or payment of fine in an amount not less than two thousand pesos (P20,000.00) for every condition violated.

(Signature of the Permittee)

Figure 128 DENR – Permit to Operate – Air Pollution Source and Control Installations  
Permit No. PTO-OL-R4A 2D22-D3584





# **II.BATSTATEU JPLPC – MALVAR DEVELOPMENT, LAND USE AND INFRASTRUCTURE PLAN**



## **II. SUC DEVELOPMENT, LAND USE AND INFRASTRUCTURE PLAN**

### **A. Vision, Mission, Goals and Objectives**

#### **a. Statement of the approved vision, mission, goals, objectives and thrusts**

##### **University Vision**

A premier national university that develops leaders in the global knowledge economy.

##### **University Mission**

A university committed to producing leaders by providing a 21st century learning environment through innovations in education, multidisciplinary research, and community and industry partnerships in order to nurture the spirit of nationhood, propel the national economy, and engage the world for sustainable development.

#### **b. Include department vision, mission, goals, objectives and thrusts, if any – Academic – Research – Extension – General services – Allied services**

##### **Academic**

##### **College of Accountancy, Business, Economics and International Hospitality Management**

##### **College Goal**

College of Accountancy, Business, Economics and International Hospitality Management (CABEIHM) aims to provide quality education to prepare students for a wide range careers in accountancy, business, hotel and restaurant management, tourism management, customs and public administration, aspire for continuing education, enhance competencies in business and hone their leadership skills to enable them to participate actively in the global market through high quality instruction, research, extension and production which serve as fertile ground for the internalization of values that uplift self, society and environment.

##### **General Objectives**

1. To provide multiple paths into the field of accountancy, business, economics, tourism, and hospitality management that will create a wide range of career options for students;
2. To develop among students a critical awareness of socioeconomic issues amidst a continuously changing business and economic environment which can lead to greater and more positive socioeconomic transformations.
3. To develop among students a critical awareness of socioeconomic issues amidst a continuously changing business and economic



environment which can lead to greater and more positive socioeconomic transformations.

### **College of Arts and Sciences**

#### **College Goal**

The College of Arts and Sciences (CAS) The College aims to provide exemplary leadership essential to the education of proficient and humane professionals in the arts and sciences.

#### **General Objectives**

1. Prepare the graduates of the different disciplines for professional careers in their chosen fields of specialization;
2. Equip graduates with a strong foundation in the arts and sciences with accompanying behavioral and social preparation of a well-rounded personality;
3. Conduct more relevant and responsive programs in research and extension to enhance instruction and linkages and disseminate research findings to promote viable technologies in the service area; and
4. Provide the manpower needs of industries and other service areas with globally competitive, dedicated professional worker having positive outlooks in life and with innate love for God, country and fellowmen.

### **College of Engineering**

#### **College Goal**

The College of Engineering (COE) aims to develop a well-rounded graduate imbued with moral and ethical values, spiritual vigor, and utmost concern for the environment as integral parts of furtherance of a chosen profession.

The College of Engineering is committed to:

1. Provide curricular programs for the development of a well-trained engineering professionals very well conscious of environmental protection;
2. advance the ideals of a national identity devoid of cultural biases, but enriched with moral integrity, spiritual vigor, and credible pursuit for professional excellence;
3. develop professional graduates ready for entry as active participants and/or competent leaders in the industrialized world who are:
  - well-educated in the principles of a particular engineering discipline so chosen;





- well-trained in the art and science of industrial applications such as design and production to sales, management and operations;
4. promote an environment
- for research and development so that students may advance the boundaries of knowledge in every professional facet of engineering;
  - for entrepreneurship whereby the products and services of a particular engineering field can be generated for business use and application.

### College of Informatics and Computing Sciences

#### College Goal

The College of Informatics and Computing Sciences (CICS) aims to shape globally competitive computer magnates as they develop their professional identities and ethical values. It establishes equanimity, objectivity and wisdom, unselfishness and concern for the environment through their technological competencies, community partnerships and strong faith in the Supreme Being.

It promotes excellence in the pedagogy as it develops a well-rounded graduate who can assume dynamic leadership, meaningful participation and internalization initiatives in the field of Information Technology and Computing Sciences.

#### General Objectives

1. Develop professional graduates ready for entry as active participants and/or competent leaders in the industrialized world who are:
2. Advance ideals of national identity devoid of cultural biases, but enriched with moral integrity, spiritual vigor, and credible pursuit for professional excellence;
3. Provide curricular programs for the development of a well-trained IT professionals, and Computer scientists.
4. Well-educated in the principles of a particular discipline;
5. Well-trained in the art and science of computer applications such as: productivity tools, authoring software and software development applications.
6. Well-oriented in advocating national consciousness on the promotion of our history, culture and traditions.



### College of Industrial Technology

#### College Goal

The College of Industrial Technology (CIT) The College of Industrial Technology shall produce well-rounded and globally competitive individuals who meet local, national and international demands for skilled workers.

#### General Objectives

1. To devise up-to-date curricula that help attain goals, meet changing requirements and reflect changes in Industrial Technology.
2. To facilitate quality technical-vocational education and training towards holistic competency and proficiency of the individuals in the different technology areas.
3. To mold individuals whose personal, social, technical, practical qualities make them productive and valuable citizens of a global village.
4. To train technologist in the use of applied research by innovating ways to address needs and problems and by implementing and extending current technology.

### College of Teacher Education

#### College Goal

The College of Teacher Education (CTE) aims to develop future elementary, secondary and technology teachers who are imbued with the idealism of the humanist, with a sense of respect for the advancement of Philippine life and culture, and with a genuine desire to facilitate learning and be conveyors of knowledge and values in all disciplines.

#### General Objectives

1. Provide greater understanding of the thrusts of government in its role of nation building through a general education program that instills love of country, culture, integrity, dignity of work and spiritual vigor;
2. Provide opportunities as formation center of quality and excellence in the different programs like BEED and BSED to students in Region IV and neighboring areas; and
3. Provide adequate reservoir of teachers trained to teach in the elementary, secondary and tertiary levels.



### Research Goals

1. To develop and implement a functional research program that is relevant to the program thrusts of the University.
2. To enhance the research capabilities of the faculty and student researchers through human and physical resources development and the creation of an environment that fosters research.
3. To generate high impact research outputs for the utilization of the educational, communal and industrial sectors.
4. To provide faculty and students with assistance and support in creating an environment that is conducive for innovation, which will eventually create avenues for technology transfer and commercialization of their research.
5. To ensure that faculty and students benefit from research activities at the University.
6. To enrich the existing body of knowledge through multidisciplinary/collaborative research.

### Research Objectives

1. Intensify the research capability of the University through human and physical resources development.
2. Develop quality research projects on the following key areas such as Food, Energy, Architecture, Engineering and Technology; Agriculture and Natural Sciences; Environment and Biodiversity; Entrepreneurial and Business; Education, Mathematics and Social Sciences.
3. Ensure effective dissemination and application of research through oral and/or poster presentations and publication of results in refereed journals, and when appropriate, research output commercialization to encourage the entrepreneurial spirit in faculty and students.
4. Develop a culture of research among faculty and students by involving them in research activities through seminar workshops, trainings, research fora, research assistantships and other research interactions and collaborations.

### Research Thrusts and Priorities

The University shall pursue thrusts and priorities which may be subjected to review at least annually by each area: Architecture, Engineering and Technology; Agriculture and Natural Science; Environment and Biodiversity; Entrepreneurial and Business; and Education, Mathematics and Social Sciences to make the Research Program of the University responsive to the emerging needs and environmental changes and development depending on research competencies available, appropriateness to the local needs and availability of the resources. The following thrusts and priorities are based on the national, regional and provincial agenda of the government identified through agenda setting and road mapping among research





personnel, deans, faculty researchers, students and external stakeholders.

1. Food, Energy
2. Environment
3. Health and Medical Sciences
4. Material Science and Engineering
5. Information and Communications Technology
6. Manufacturing and Process Engineering
7. Science and Mathematics
8. Education and Social Sciences.

### **Extension Services**

An extension service that empowers the communities, particularly the underserved and depressed, from the bondage of poverty, malnutrition, ignorance, vices, indifference, and environmental destruction to enable the people to live with honor and dignity.

### **Extension Services Goals**

1. To develop and implement a viable Extension Service Program for the University
2. To enhance the delivery of extension services to target clientele
3. To improve the quality of life at the grassroots level
4. To meet the needs of faculty members, administrators and non-teaching personnel in learning basic technical, vocational technological skills as well as in the areas of health and recreation

### **Extension Services Objectives**

1. To formulate and implement an effective mechanism for planning, policy-making, Financing, management, monitoring and assessment of the Extension Service of the University
2. To build and enhance the technological capabilities of the faculty for more effective extension service
3. To produce functionally literate, useful, self-reliant, and innovative citizens imbued with the values necessary to become effective members of a democratic society
4. To produce citizens who are equipped with vocational) livelihood/ technical skills that ensure productivity
5. To maximize the transfer of research-based technologies in the service areas
6. To create an environment that fosters dynamic involvement of the University, government and non-government organizations, and industrial establishments in developing the depressed communities



## Extension Services Thrusts and Priorities

The University shall pursue extension services programs, activities and projects (PAPs) that will enable institutions, industries and communities, particularly at the depressed and undeserved, to achieve sustainable development through:

### 1. BatStateU Inclusive Social Innovation for Regional Growth (BISIG) Program

#### a. Community Learning Exchange (CommLEx)

CommLEx aims to be a platform for social concerns exchange between students, researchers, extensionists, field specialists, LGUs, and community member. The program also aims to produce innovative social solutions for the concerned communities

#### b. Social Innovation Geared to the Protection and Advocacy for Water shed rehabilitation (SIGPAW) Project

The SIGPAW Projects aims to improve the condition of water sheds for sustainability

#### c. BOOTCAMP: Youth Engagement Project Towards Innovative Solutions Among Communities

The BOOTCAMP aims to promote participation in social innovation among out-of-school youths, and junior high school students – both to increase the awareness and engagement of the youth.

### 2. Livelihood and other Entrepreneurship related on Agri-Fisheries (LEAF)

#### a. Call for Extension Proposals

#### b. Presentation of Extension Proposals

#### c. Awarding of Notice To Proceed

#### d. Replication of Implemented viable livelihood programs such as native pigs and hybrid goats propagation, nursery establishment and taro chips production and many others in other adopted communities

#### e. Responsible Farming Through Organic Agriculture

#### f. Establishment of Coconut Seedlings Nursery and Mushroom Propagation

#### g. Establishment of Vegetable Gardens in various Communities

#### h. Introduction of Innovative Farming and Livestock Production

#### i. Production of Staple Root Crops

#### j. Livelihood Projects on Meat Processing, Fruits in Season and Handicrafts

#### k. Training – Workshop on Basic Accounting, Record Keeping and Product Marketing

These activities are aimed to identify potential extension programs for the livelihood and entrepreneurship for agri-fisheries.



The Objectives of the program is to reduce poverty and equality by generating employment and source of income among poor household and by moving highly vulnerable households into sustainable livelihoods and toward economic stability. The program addresses the zero poverty and decent work and economic growth as reflected in the Sustainable Development Goals of 2030.

### **3. Environmental and Natural Resources Conservation**

- a. Environment and natural resources conservation efforts
- b. Environmental education
- c. Mangrove nursery protection and establishment
- d. Tree planting
- e. Environmental advocacy and community organization
- f. Watersheds and forests adoption
- g. Environment and Natural Resources

The program aims to preserve the biodiversity, increase the productive capacity of watershed rainforest towards sustainable resource-based for watershed communities through research-based and extension program, project and activities.

### **4. Smart Analytics and Engineering Innovation**

- a. Development of Demo Farms
- b. GIS Mapping
- c. Application and Utilization of data analytics
- d. Development and Testing of Technopreneurship programs
- e. Development of Eco Tourism Sites/Parks

The program aims to at fostering and enabling research that can help data users such as small to medium, business enterprises, industry, local governments, legislators, policy makers, teachers, students, individuals and families and other stakeholders harness the potential of data, in varying levels of complexity, in order to make informed decisions, Innovations such as smart predictive informatics tools are needed to help make sense of ever increasing configurations of data, and thereby aid in day-to-day productivity as well as support macro goals of economic competitiveness.

### **5. Adopt-a-Municipality/Adopt-a-Barangay/Social Development Thru BIDANI Implementation**

- a. Health and Nutrition Services
- b. Community Engagement on Proper Sanitation
- c. Education/Literacy Services
- d. Training-Worksops on Bidani for adopted communities consisting of Barangay Integrated Development Plan Preparation (BIDP), Barangay Management Information System (BMIS) Utilization and Participative Nutrition Enhancement Approach (PNEA)





- e. Institutional Capacity Development of LGUs on the Preparation of Local Development Plans
- f. YAKAP LOBO

The program aims to design, develop, implement and evaluate/assess the research-based high impact community development services projects activities utilizing an approach that promotes nutrition-in-development through a local participative and integrated management system which addresses one of the sustainable Development Goal pertaining to good health and well-being of the community

### **6. Community Outreach Program**

- a. Medical/Dental/Optical Mission
- b. Relief Operations
- c. Gift-giving activities
- d. Visitation to Orphanages and Jails
- e. Providing Counseling/Legal Advice
- f. Fund Raising
- g. Bloodletting

The program aims to improve the quality of life at the grassroots level.

### **7. Technical-Vocational Education and Training (TVET) Program**

- a. Training on Structural Welding/Appliance Repair/Computer Maintenance/Electronics and Electrical
- b. Skills Training on Local Tourism
- c. Skills Training on Data Analysis, Coding and Programming, Project Management, Social Media and Digital Marketing and Technical Writing

The program aims to improve food security and improve household income to achieve growth in the local agricultural sector.

### **8. Technology Transfer and Adoption/Utilization Program**

- a. Technology Design, Development and Testing
- b. Training/Orientation on design, Construction, Operation and Maintenance of Technology
- c. Technology Transfer
- d. Technology Utilization
- e. Technology Assessment

Technology transfer and Adaptation/Utilization Program to individuals, agencies, organizations, associations and other groups, aims to achieve the following objectives; (1) to assist and support the faculty and students in creating avenues for technology transfer and commercialization of their research, (2) to build and enhance the



technological capabilities of the faculty for more effective extension service through technology assessment, transfer, adaptation, utilization and commercialization of research outputs, (3) to assist the education, community and industry sectors through technology advancement and innovation, (4) to facilitate the transfer of high impact research outputs for the utilization of the education, community and industrial sectors and (5) to ensure the quality of the research-based technologies in the services areas through assessment and monitoring.

### **9. Technical Assistance and Advisory Services Program**

- a. Capability and Expertise Utilization
- b. Career Development
- c. Stress Management and Life Coaching
- d. Financial Systems and Controls
- e. Human Resource utilization
- f. Machine and Equipment Utilization
- g. Manufacturing Systems
- h. Materials Management System
- i. Process and Operations
- j. Plant Layout
- k. Quality Control and Assurance System
- l. Safety and Housekeeping Practices
- m. Wastage Levels and Work Organizations

Specifically, the program aims to: (1) Identify strategies to improve productivity of small and medium manufacturing enterprise and (2) Recommend productivity improvement measures for immediate implementation

### **10. Parents' Empowerment through Social Development (PESODEV) Program**

- a. Entrepreneurial/Business development
- b. Disaster Preparedness and Response (DPR)/Disaster Risk Reduction Management (DRRM)
- c. Education
- d. Health and Wellness

PESODEV aims to provide livelihood, gender and development, responsible parenting and socio-cultural training and activities for parents to make them active members of the communities they belong including the University system.

### **11. Disaster Risk Reduction and Management and Disaster Preparedness and Response/Climate Change Adaptation Program (DRRM and DPR/CCA)**

- a. Design and Development of IEC materials and audio-visual materials
- b. Training on DRRM and DPR/CCA



- c. Training on Fire and Earthquake Drill and establishment of Campus Fire and Earthquake Brigade
- d. Training on Safety Services and Emergency Response (First Aid, Basic Life Support and Accident Prevention) and Establishment of BatStateU-Red Cross Rescue 143
- e. Training on Incident Command System and establishment of Incident Command Group
- f. Conduct of Environmental Youth Camps on Environment protection and rehabilitation

The program aims to promote a safe and secured environment for people and communities. Specifically, the program aims to increase awareness of people on DRRM and DPR/CCA, to increase safety and preparedness of the community members, to understand the proper response movement and evaluation in an emergency, to ensure the health and safety of the people during calamities and disasters and to train volunteers to respond to the needs of people and communities.

### 12. Gender and Development

- a. Information Campaign to End VAW
- b. Women's Month Celebration
- c. Gender Based Violence Information
- d. GAD Orientation/Gender Sensitivity Trainings
- e. Training on Anti-Sexual Harassment Act
- f. Awareness and Capability Building Activities on Maternal and Child-Health
- g. Awareness and Capability Building Activities on Adolescent Reproductive Health
- h. Awareness Activity on HIV/AIDS
- i. DRRM/CCA
- j. Livelihood-Related Activities
- k. Gender sensitive Seminars and Trainings for Overseas Filipino Families
- l. Establishment of mechanism to involve men in addressing gender issues
- m. Gender mainstreaming in instruction, research and extension
- n. Printing and Publication of GAD newsletter
- o. Purchase of reference books/Publications for the Library and GAD Resource Center
- p. GAD advocacy/IEC Materials
- q. GAD Capability Building Activities
- r. Partnership with External Agencies and Institutions
- s. Strengthening of GFPS or Similar GAD Mechanism





### General Services

This unit facilitates the implementation of laws, policies, plans, programs, rules and regulations in the area of human resource management; records management; property and supply management; and procurement in carrying out the service mandates. The offices of the unit ensure that transactions in these areas are compliant to rules embodied in circulars, memoranda and issuances of the national government, regulatory bodies and the University.

### Allied Services

#### Clinic

Health Services Department is committed to serve, disseminate, educate, and promote quality health care to University students, faculty, and employees. It values the utmost importance of creating a healthy lifestyle for all to nurture ones' body physically and mentally, thereby, producing upright citizens and surpassing the challenges of the 21st century.

## B. Development Constraints

### Potential Land Use Conflicts

Out of the total area of the landholding owned by BatStateU JPLPC-Malvar which is equivalent to 32,893.63 sq.m, 26.17% of it was occupied by Malvar School of Arts and Trades (MSAT), formerly known as Malvar National Highschool, with a total of 8,606.76 sq.m. land use allocation. This is where the three (3) buildings namely Drawing Room, Filipino – Chinese Chamber Room of Commerce, and Cooperative Canteen Building were situated. These three (3) buildings were subject for transfer of accountability to MSAT as the Batangas State University President, Dr. Tirso A. Ronquillo expressed his agreement for the requested transfer of the former. However, as regards Food Technology Room (H.E. Building) which was also included in the request, the building remains to be part of BatStateU JPLPC-Malvar until the satisfaction of suspensive condition stipulated in No. 7 in the Judgement by Compromise that “The BatStateU is willing to give the area occupied by the H.E. Building subject to the condition that a new H.E. Building of similar built and dimension will be constructed in BatStateU’s retention area”.

## C. Physical Development Strategies

Batangas State University (BatStateU) has steadfastly positioned itself as a premier multi-campus institution of higher advance learning and professional training as well as a viable economic development zone in the region. As one of the country's nation builders, this achievement is feasible because of its commitment to produce leaders by providing a 21st century learning environment through innovations in education,



multidisciplinary research, as well as community and industry partnerships in order to nurture the spirit of nationhood, propel the national economy, and engage the world for sustainable development.

Consistent with the BatStateU Strategic Plan 2019 to 2029, the University's academic endeavors and investment focus is divided into five (5) pillars: Brand of Excellence; Access; Social Relevance; Inclusive Innovation; Capacity and Sustainability, or simply BASICS.

The BatStateU JPLPC-Malvar Operational Plan was also hinged on the said Strategic Plan and is centered on Impact through Innovation and Transformation. This responds to the challenges and opportunities at hand with a clear set of goals, strategies, and actions developed and embraced by the campus. The plan is dynamic and ambitious since it will raise the bar on its expectations of every faculty member and students. As a "living" plan, the campus expects these strategies and actions to evolve, even as they define and guide the University's strategic direction, shape its future, and serve as a framework for investment and resource allocation. Hopefully, this bold academic, research and extension services plan, as partially articulated here, will inspire everyone to be innovative, transformational and impactful, gearing them towards new significant directions.

## D. Development Concept and Structure Plan (narrative and map)

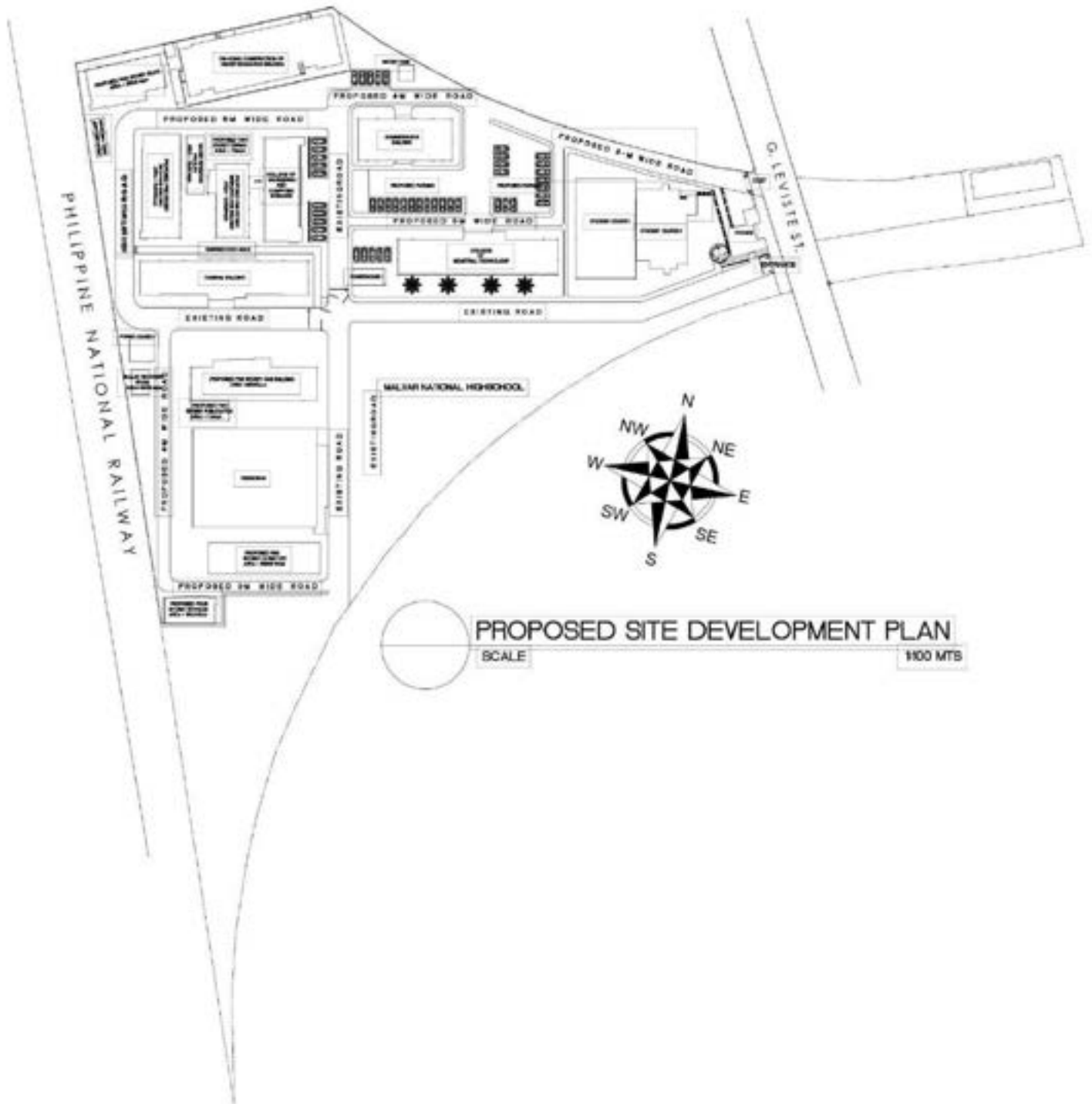


Figure 129 Proposed Site Development Plan of BatStateU JPLPC-Malvar

Figure 129 shows the proposed site development plan of the campus. It is a graphic representation of the existing and proposed structures including the buildings, roadways, drainage facilities, water lines, and landscaping areas.





Table 38 Proposed Land Use Allocation

Land Use	Area (sq.m.)	%	Legend
Academic	5,416.06	16.60	
Administrative/General Services	1,318.30	4.04	
Research	270.70	0.83	
Allied Services	435.15	1.33	
Extension Services	219.70	0.67	
Roads	6,316.43	19.36	
Pavement	3,998.64	12.26	
Landscape	4,860.10	14.90	
Utilities	299.32	0.92	
Path walk	876.84	2.69	
MNHS	8,612.76	26.40	
TOTAL	32,624.00	100.00	

The table above shows the proposed land use of the BatStateU JPLPC-Malvar. In comparison with the existing land use allocation that will be shown in Figure 106, the Academic Core, Allied Services, pavement and landscape are perceived to decrease in land area, whereas, the areas covering Administrative/General Services, Research, roads, and utilities will expand in size due to the planned construction of other structures.

## E. The Land Use Plan (narrative and map)

The Land Use Plan organizes campus property into functional uses that inform and guide the institution on the future development decisions and projects. This guides the campus on how existing land should best be used, it also identifies strategic assets and shared land used that are instrumental in advancing the University Mission's.

Presented in Figure 103 and Table 37 are the existing land use map and the existing land use allocation of the campus. The total land area where the campus is situated is 32,624 square meters or 3.2 hectares. Out of this area, 24,017.24 square meters will be used by the campus for its Land Use Development and Infrastructure Plan.

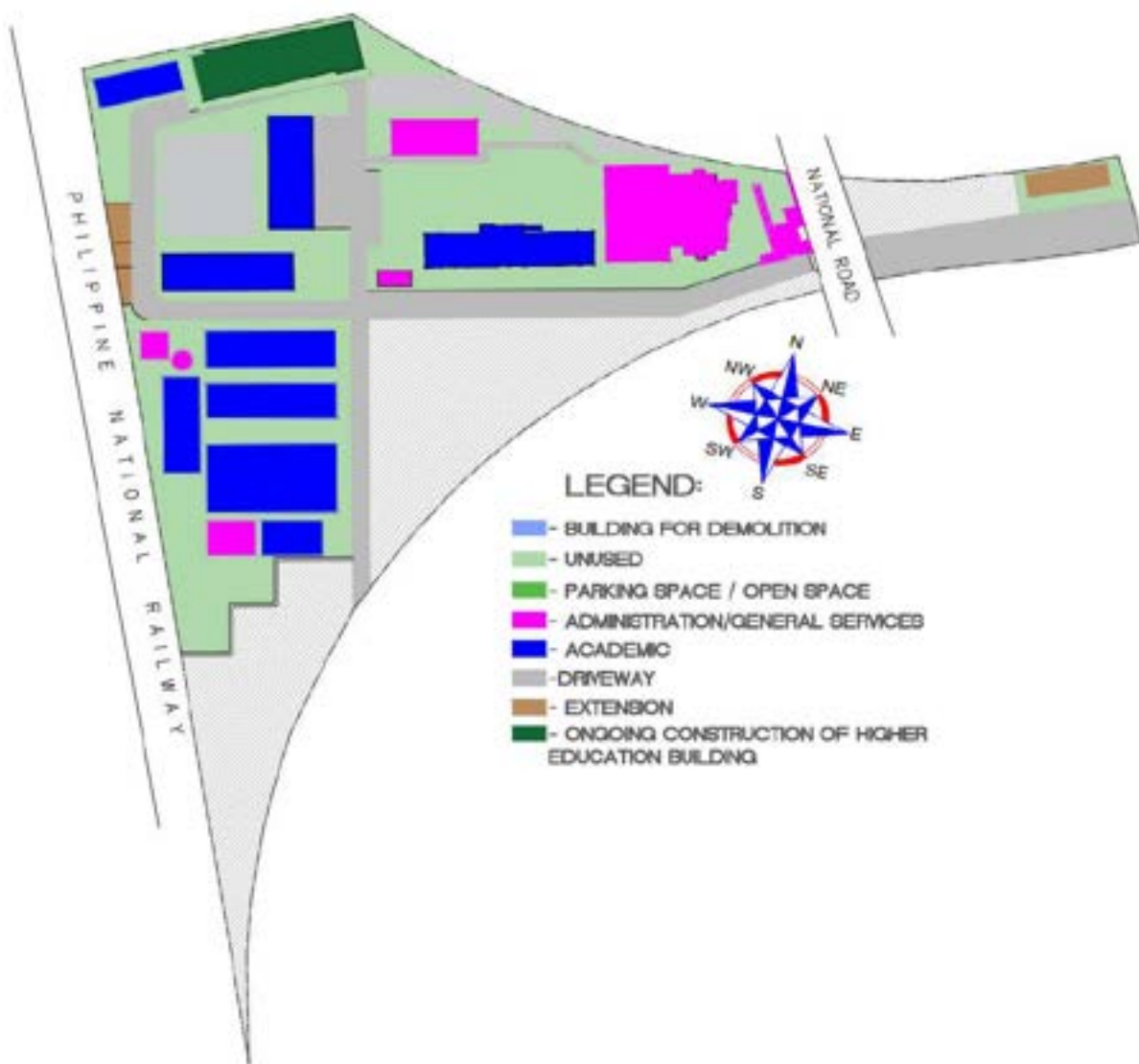


Figure 130 Land Use Map of BatStateU JPLPC-Malvar

Figure 130 shows the land use allocation map of the existing site development plan of BatStateU JPLPC-Malvar. This includes the existing infrastructures and facilities of the Campus.



The table below shows the breakdown of the land allocation use of the Campus.

Table 39 Breakdown of Land Use Allocation

Land Use	Area (sq.m)	%	Legend
Academic	6,809.26	20.87	
Administrative/General Services	1,764.96	5.41	
Allied Services	220.76	0.68	
Extension Services	220.76	0.68	
Roads	3,816.03	11.70	
Pavement	749.98	2.30	
Landscape	9,190.43	28.17	
Utilities	151.38	0.46	
Path walk	996.32	3.05	
Research	97.36	0.30	
MNHS	8,606.76	26.38	
TOTAL	32,624.00	100	

It is reflected on the table that Landscape or unused area covers the largest area of the campus which is 9,190.43 square meters or 28.17% of the total land area. It is followed by MNHS which is 8,606.76 square meters or 26.38% of the total area. On the other hand, the Academic Services with 6,809.26 square meters which is 20.87% ranks 3<sup>rd</sup> in the Land Use allocation.





Detailed Land Use Allocation:

The following tables show more detailed Land Use Allocation including building names and their corresponding area and number of storeys.

Table 40 Land Use Allocation for Academic Core

Academic Core		
Building Name	Area (sqm)	No. of Storeys
New Administration Building	399.24	3
College of Industrial Technology Building	610.22	5
Elementary Building	270.5	2
Higher Education Building	821.63	5
Technology Building	589.62	2
Quadrangle	323.96	N/A
College of Engineering and Computer Sciences Building	382.49	5
College of Accountancy, Business, Economics and International Hospitality Management Building	491.39	4
Gymnasium	1359.92	1
College of Arts and Sciences Building	368.3	2
Science Building	494.29	2
College Building	470.73	2
Food Technology Building	123.70	1
Open Stage	103.27	1
Total Area	6,809.26	

Table 40 shows the detailed breakdown of facilities included in Academic Core. With a total area of 6,809.26 square meters, the Academic Core category covers all the facilities that contain classrooms, laboratories, libraries and sports. Based on the data presented in Table 19, the Gymnasium comprises the largest land area under this category followed by Five-Storey Higher Education Building.



Table 41 Land Use Allocation for Administrative and General Services

Administrative/General Services		
Building Name	Area (sqm)	No. of Storeys
Student Services Center II	420.59	2
Student Center 1	611.09	2
PESCA	174.81	1
Levites	12.07	4
Façade/Security	147.16	1
Admin Building	361.38	2
Total Area	1,727.1	

Table 41 presents the building and facilities included under Administrative and General Services. Based on the data presented, the overall land area it covers is 1,727.1 square meters, with the Student Center I building, having the highest land area of 611.09 square meters, followed by Students Services Center II.

Table 42 Land Use Allocation for Allied Services

Allied Services		
Building Name	Area (sqm)	No. of Storeys
Mini Hostel	220.76	2
Total Area	220.76	

Table 42 shows the land use allocation under Allied Services with a total land area of 220.76 square meters which contains the Mini Hostel.

Table 43 Land Use Allocation for Utilities

Utilities		
Building Name	Area (sqm)	No. of Storeys
Powerhouse 1	56.94	1
Powerhouse 2	56.63	1
Water Tank (Beside CAS Building)	36.61	N/A
Water Tank (Beside Admin Building)	4.2	N/A
Total Area	151.38	

Table 43 shows the list of facilities allocated for the utilities which includes two powerhouses, two water tanks.



Table 44 Land Use Allocation for Extension

Extension		
Building Name	Area (sqm)	No. of Storeys
Canteen	78.04	1
RGO	19.32	1
Total Area	97.36	

Table 44 shows the list of facilities allocated for the Extension which includes Canteen and RGO.

## F. Land, Water, Power Policies

**Policies that will govern specific land uses, water, and power generation and utilization policies**

### 1. Land Use Policies

Land use and physical planning is a mechanism for identifying and evaluating alternative land use patterns that promote and ensure the various development policies and objectives of the State. Simplistically, land use planning is an activity where the most sustainable, appropriate, and beneficial use of land is determined. Though mostly associated with the devolved function of local government units (LGUs), a great portion of land use planning functions is practically retained by the national government. This is partly because land use planning is essentially inherent to national development planning and program implementation; that is, it requires spatial or geographic delineation that would identify specific areas or locations of land where sectoral programs and project should occur.

The following laws and policies pertaining to land use is important in land use planning and management.

- **Local Government Code of 1991**

**Section 447. Powers, Duties, Functions and Compensation.** (of municipalities)

(vii) Adopt a comprehensive land use plan for the municipality: Provided, that the formulation, adoption, or modification of said plan shall be in coordination with the approved provincial comprehensive land use plan;

(viii) Reclassify land within the jurisdiction of the municipality, subject to the pertinent provisions of this Code;

(ix) Enact integrated zoning ordinances in consonance with the approved comprehensive land use plan, subject to existing laws, rules and regulations; established fire limits or zones, particularly in populous centers; and regulate the construction, repair or





modification of buildings within said fire limits or zones in accordance with the provisions of this Code;

- **Urban Development and Housing Act of 1992**

**Section 39. Role of Local Government Units.** — The local government units shall be charged with the implementation of this Act in their respective localities, in coordination with the Housing and Urban Development Coordinating Council, the national housing agencies, the Presidential Commission for the Urban Poor, the private sector and other non-government organizations.

They shall prepare a comprehensive land use plan for their respective localities in accordance with the provisions of this Act.

- **Agriculture and Fisheries Modernization Act of 1997**

**Section 10. Preparation of Land Use and Zoning Ordinance.** — Within one (1) year from the finalization of the Strategic Agriculture and Fisheries Development Zone (SAFDZ), in every city and municipality, all cities and municipalities shall have prepared their respective land use and zoning ordinance incorporating the SAFDZ, where applicable. Thereafter, all land use plans and zoning ordinances shall be updated every four (4) years or as often as may be deemed necessary upon the recommendation of the Housing and Land Use Regulatory Board and must be completed within the first year of the term of office of the mayor. If the cities/municipalities fail to comply with the preparation of zoning and land use plans, the DILG shall impose the penalty as provided for under Republic Act No.7160

- **National Integrated Protected Areas System Acts of 1992**

**Section 10. Administration and Management of the System.** — The National Integrated Protected Areas System is hereby **placed under the control and administration of the Department of Environment and Natural Resources.** [...] the DENR is empowered to perform any and all of the following acts:

- a. To conduct studies on various characteristic features and conditions of the different protected areas, using commonalities in their characteristics, classify and define them into categories and prescribe permissible or prohibited human activities in each category in the System;
- b. To adopt and enforce a land use scheme and zoning plan in adjoining areas for the preservation and control of activities that may threaten the ecological balance in the protected areas;
- c. To cause the preparation of and exercise the power to review all plans and proposals for the management of protected areas;

- **Indigenous Peoples' Right Act of 1997**

**Section 7. Rights to Ancestral Domains.** — The rights of ownership and possession of ICCs/IPs to their ancestral domains shall be recognized and protected. Such rights shall include:



b. **Right to Develop Lands and Natural Resources.** - Subject to Section 56 hereof, the right to develop, control and use lands and territories traditionally occupied, owned, or used;

### 2. Laws on Water Quality and Water Pollution

As early as 1996, monitoring of the country's rivers showed that only 51% of the classified rivers still met the standards for their most beneficial use. The rest were already polluted from domestic, industrial and agricultural sources.

Most studies point to the fact that domestic wastewater is the principal cause of organic pollution (at 48%) of our water bodies. Yet, only 3% of investments in water supply and sanitation were going to sanitation and sewage treatment.

The following government policies pertaining to water quality and pollution are needed to be considered in planning.

- **Republic Act No. 9275**

Philippine Clean Water Act of 2004 aims to protect the country's water bodies from pollution from land-based sources (industries and commercial establishments, agriculture and community/household activities). It provides for a comprehensive and integrated strategy to prevent and minimize pollution through a multi-sectoral and participatory approach involving all the stakeholders.

- **Presidential Decree No. 1067/Water Code of the Philippines**

The Water Code of the Philippines sought to revise and consolidate the laws governing ownership, appropriation, utilization, exploitation, development, conservation and protection of water resources. Its objectives (Article 2) include, among others, to define the extent of the rights and obligations of water users and owners including the protection and regulation of such rights; to adopt a basic law governing the ownership, appropriation, utilization, exploitation, development, conservation and protection of water resources and rights to land; and to identify the administrative agencies which will enforce this Code.

#### **Section 51. General Guidelines for Water Resources Development Projects/Programs**

– As a general rule, a water resources project/program, may be implemented if it is in accordance with the national socio-economic development goals and objectives or necessary for the national security or protection of life and property. Any project/program involving the appropriation of water shall be directed towards the optimum single and/or multi-purpose utilization thereof. Whenever practicable, projects shall be conceived and viewed according to multi-purpose water resources planning concepts within the area unit of a river basin. In the case of small scale water development projects not readily covered by large-scale water development projects, development planning of the latter shall proceed alongside the implementation of the former.

### 3. Power Supply and Clean Energy

The following are laws and policies related to energy and power which are relevant to the planning process.

- Commonwealth Act 120- National Power Corporation to develop hydroelectric facilities
- PD 334- Philippine National Oil Company
- PD 1442- Exploration and development of geothermal resources
- BP 33- Energy Conservation
- RA 387- Petroleum Act
- RA 5207- Atomic/Nuclear energy
- RA 7638 - Created the Department of Energy and stipulated a policy of rationalizing government agencies
- RA 9367 – Biofuels Act of 2006
- RA 9513 – Renewable Energy Act of 200

### G. Major Development Programs



Figure 131 Site Development Overview

With a total expanse of 24,017.24 square meters of land area that will be used by BatStateU JPLPC-Malvar for its Land Use Development and Infrastructure Plan, the campus has adequate space to fulfill its developmental needs in providing classrooms, sports facilities, laboratories, housing facilities, recreational spaces and commercial areas necessary to achieve an environment conducive for both learning and working with a compelling aesthetic and physical presence. The university recognizes the positive effects of the infrastructure and architectural designs for learning facilities to student learning, which are considered in all planning and designing process.

Many existing buildings in the campus are already dilapidated due to old-age and subject for demolition. These areas will be utilized to construct new buildings and facilities for better use of the spaces as part of the long-term development plan.



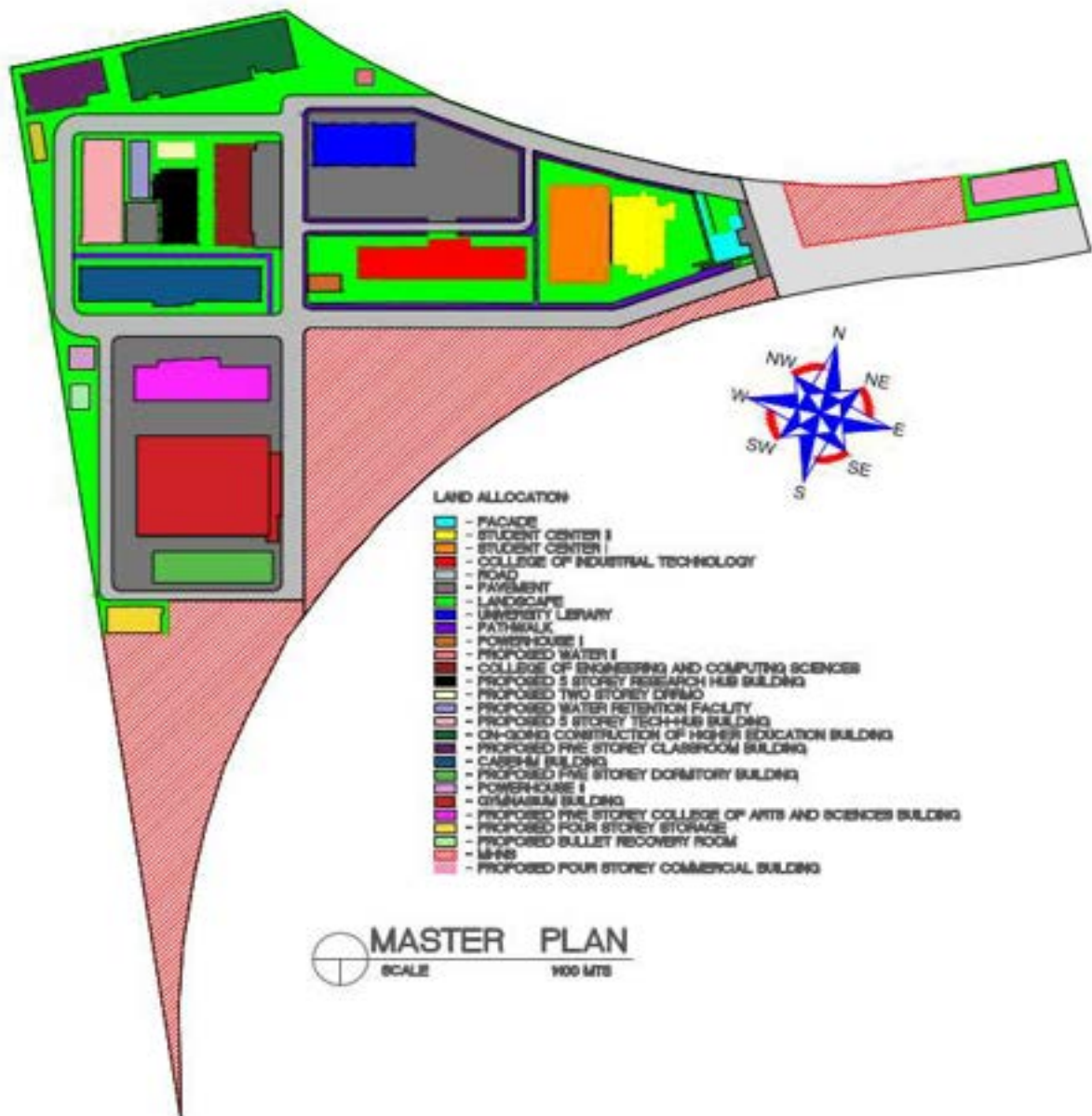


Figure 132 Master Plan of BatStateU JPLPC - Malvar

Figure 132 shows the master plan of BatStateU JPLPC – Malvar. It provides a conceptual layout for future expansion and physical development that would support the mission and strategic plan of the campus. It can also be seen in the figure the names of the proposed academic facilities, research hub, dormitory, utility infrastructures, etc. that are necessary to meet the needs of the campus. Most importantly, what it aims to establish is a physical environment that is safe, conducive and supportive of its wide-ranging programs.



Based on the historical analyses conducted, JPLPC-Malvar campus needs 298 classrooms for the 11908 enrollees in 2031. The assumption is based on the classroom student ratio of 1:40. To accommodate the projected enrollees, the administration shall consider morning, afternoon, and weekend class schedules across programs.

As of now we have 64 existing classrooms and laboratory rooms that can only accommodate 5,120 enrollees. To date, higher education building is under construction that can accommodate 1,280 enrollees. In relation to this, the administration proposes additional buildings to suffice the needed classrooms for the projected enrollees including ten-storey CAS Building and CTE Building that can accommodate 1,600 enrollees and 880 enrollees respectively.

If the budget allocation permits, there are additional infrastructures in the next 10 years which are vital to the needs of the BatStateU students and stakeholders. Infrastructure plays a very major role in the academic community. The provision of a modern, efficient and stimulating working and learning environment through innovative and high-quality infrastructure, functionally and aesthetically, is key to achieve the University's academic, research and extension services goals. It also includes good space management to optimize access and capacity. In addition, establishing high-quality infrastructures facilitates better instruction and positively affects student learning outcomes.

The table below shows the proposed major developments in JPLPC-Malvar Campus. It can be seen that within ten (10) years, the Campus will need an amount of Php1,132,881,107.00 for all its propose infrastructure project.

Table 45 Matrix of Proposed Infrastructures

Priority Rank	Proposed Building	Area	No. of Floors	Total Area	Estimated Cost	Target Date of Construction	Capacity
1	Library Renovation	390	3	1170	29,250,000.00	2022	150
2	SSC I Renovation	526	2	1052	26,300,000.00	2022	40
4	Hotel/Dormitory	468	10	4,680	270,000,000.00	2023	196
7	Storage Facility	140.03	4	560.12	42,009,000.00	2023	20
9	CAS Building	476.82	10	4,768.20	357,615,000.00	2024	1600
11	CTE Building	304.88	5	1,524.40	114,330,000.00	2025	400
12	Publication House	75.02	2	150.04	11,253,000.00	2026	20
13	Research Hub	270.86	5	1,354.30	101,572,500.00	2027	194
14	MRF	50.67	1	50.67	3,800,250.00	2028	-
15	Bullet Recovery Room	48	1	48	3,600,000.00	2029	20
16	Commercial	219.7	2	439.4	32,955,000.00	2029	20
17	Technology Hub	410.92	5	2,054.60	154,095,000.00	2030	560
18	DRRMO	75.02	2	150.04	11,253,000.00	2030	20
Sub-Total					1,063,532,750.00		



## Land Use Development and Infrastructure Plan (LUDIP)

	Proposed Road	Length	Width	Area	Estimated Cost	Target Date of Construction
8	Proposed 6-m wide road	66.00	6.00	396	4,752,000.00	2024
	Proposed 5-m wide road	104.00	5.00	520	6,240,000.00	
	Proposed 4-m wide road	131.00	4.00	524	6,288,000.00	
	Proposed 3-m wide road	149.00	3.00	447	5,364,000.00	
	Proposed 1.2-m covered sidewalk	401.50	1.20	481.8	5,781,600.00	
Sub-Total					28,425,600.00	
	Proposed Parking Area	Length	Width	Area		
10	At New Admin Building (including flagpole)	-	-	1,262.10	15,145,200.00	2025
	At Higher Education Building	-	-	70	840,000.00	
	At CIT Building	-	-	131	1,572,000.00	
Sub-Total					17,557,200.00	
	Proposed Drainage System	Length	Width	Area		
5	Water Retention Facility	-	-	112.5	2,812,500.00	2023
	RCP Drainage Line	497	-	-	4,970,000.00	
Sub-Total					7,782,500.00	
	Proposed Water Supply System	Length	Width	Area		
6	Elevated Water Tank	-	-	-	5,000,000.00	2023
	Main Water Supply Line	389	-	-	3,890,000.00	
Sub-Total					8,890,000.00	
	Demolition	Length	Width	Area		
3	Demolition Phase 1	-	-	3270.89	2,943,801.00	2022
8	Demolition Phase 2	-	-	2082.92	3,749,256.00	2023-2025
Sub-Total					6,693,057.00	
TOTAL					1,132,881,107.00	

In order for these proposed infrastructures to materialize, demolition of various buildings must take place. The demolished area will be used as the location of the new buildings/facilities. The following is the demolition plan of the Campus.

### Demolition Plan

#### I. Demolition Phase 1 (for implementation)

As part of Batangas State University's goal to identify gaps in infrastructure, this project is vital to develop a road network based on established standards. The demolition of existing buildings is to give way to a proposed construction of a road to improve the campus' infrastructure.





The Scope of Work includes but is not limited to the Demolition of Existing Buildings at Batangas State University JPLPC – Malvar Campus. The total area to be demolished is three thousand two hundred seventy and eighty- nine hundredths square meters (3,270.89m<sup>2</sup>).

The proposed Demolition Works in BatStateU Malvar Campus shall include the following buildings:

Table 46 Technical Description of Buildings for Demolition Phase 1

Building	Area (sq.m.)
IGP Office	141.30
Open Stage	110.95
Old Admin Bldg.	597.90
Canteen	125.45
Gazebo	21.82
Food Technology Bldg.	276.16
SSC Office	17.02
Boys & Girls Bldg.	699.00
Boys & Girls w/ Cosmetology	950.16
Quadrangle Stage	50.85
Quadrangle	280.28
<b>Total</b>	<b>3,270.89</b>

The estimated duration for the demolition is fifty calendar days. The estimated cost for the demolition at Php 900/sqm is 2.94 million pesos.

## II. Demolition Phase 2 (for proposal)

As part of Batangas State University’s goal to identify gaps in infrastructure, this project is vital to construct additional university facilities. The demolition of existing buildings is to give way to a proposed construction of Ten-Storey Hotel/Dormitory, Ten-Storey CAS building and Five-Storey CTE building. The scope of work includes but is not limited to the demolition of existing buildings at BatStateU JPLPC-Malvar. The total area to be demolished is two thousand eighty-two and ninety-two hundredths square meters (2,082.92m<sup>2</sup>).

The proposed demolition works in shall include the following buildings:

Table 47 Technical Description of Buildings for Demolition Phase 2

Building	Area (sq.m.)
PESCA Bldg.	117.53
Mini Hostel	224.18
Science Bldg.	494.29
College Bldg.	470.24
Elementary Bldg.	267.90
CAS Bldg.	368.30
HE Bldg.	140.48
<b>Total</b>	<b>2,082.92</b>

The estimated duration for the demolition is seventy calendar days. The estimated cost for the demolition at Php 1800/sqm is 3.75 million pesos.

## Detailed Description of the Proposed Infrastructures as to Priority Rank

### Library Renovation

Libraries play a fundamental role in an institution. The resources and services they offer create opportunities for learning, support literacy and education. Currently, the College Library of BatStateU JPLPC-Malvar is located in a three-storey New Administration Building in which it occupies the second level of the building. Due to the increasing number of its clientele and recommendations from the accreditors, the proposed expansion as well as renovation of the library is currently taking place. This project amounts to 7,537,464.00 under Supplemental Budget 2021 which is going to dedicate the entire building for the library. This initiative supports the University Strategic Plan, Pillar 2: Access, Strategy 3: Establish a modernized library equipped with state-of-the-art technology in order to provide efficient digital services. Figures 133-135 show the layout of the redesigned Three-Storey Library Building.



Figure 133 Perspective of the Redesigned Library



Figure 134 Second Floor Rendered View of the Library



Figure 135 Third Floor Rendered View of the Library

Moreover, bid opening for this project was conducted on November 10, 2021, while bid evaluation on November 22, 2021. This renovation is expected to be carried over to next year.



## Renovation of Student Services Center I

Presently, the Two-Storey Student Services Center I houses offices such as Testing & Admission Office, OJT & JPO, Scholarship Office on the first floor and Supreme Student Council Office, OSAS, and SOA on the second floor. With the proposed renovation of this building, it will take up a total land area of 526 sq.m. with an estimated cost of Php 26,300,000.00. It will consist of various offices under different departments and is expected to commence next year after the renovation of the College Library.



Figure 136 Perspective of Student Services Center I

## Dormitory/Hotel

The Proposed Ten-Storey Hotel/Dormitory strongly supports the goals and key initiatives outlined in BatStateU Strategic Plan 2019-2029 as envisioned by the University President. It is critical in achieving the mission of developing productive citizens by providing conducive learning environment. Below is the perspective of the proposed dormitory.



Figure 137 Perspective of the Proposed Ten-Storey Hotel/Dormitory

## Floor Plan

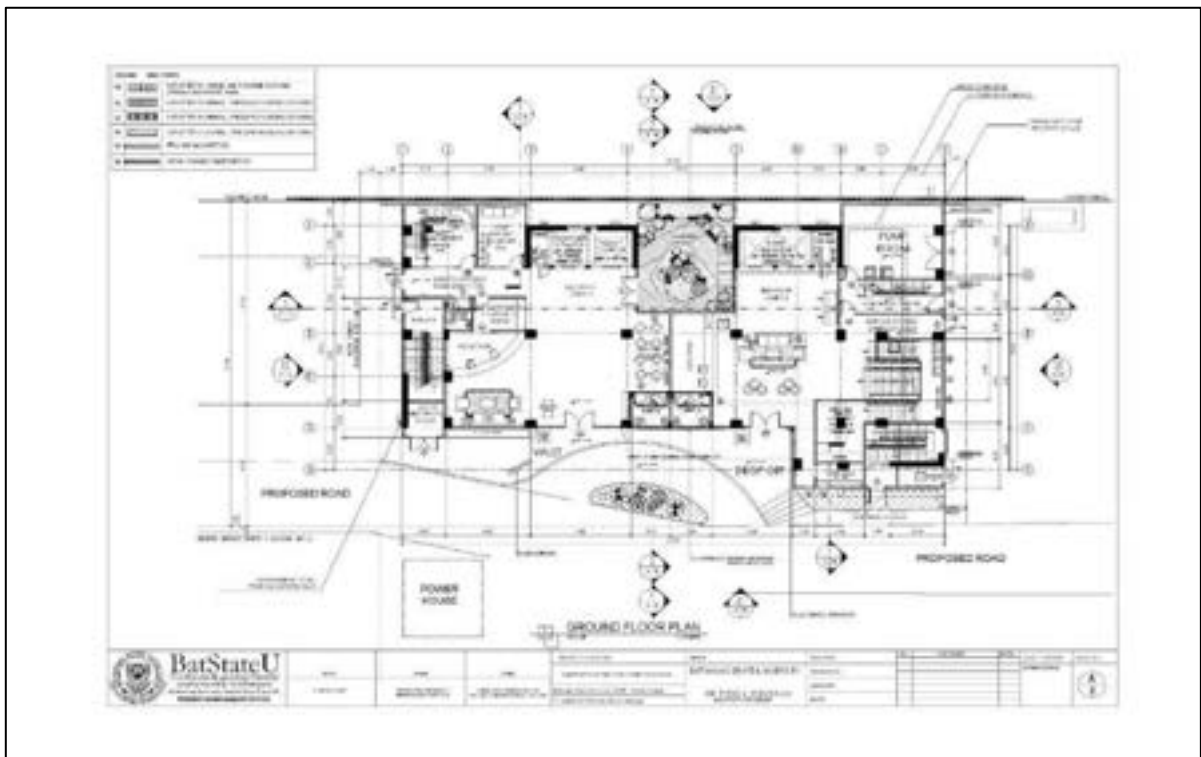


Figure 138 Ground Floor Plan

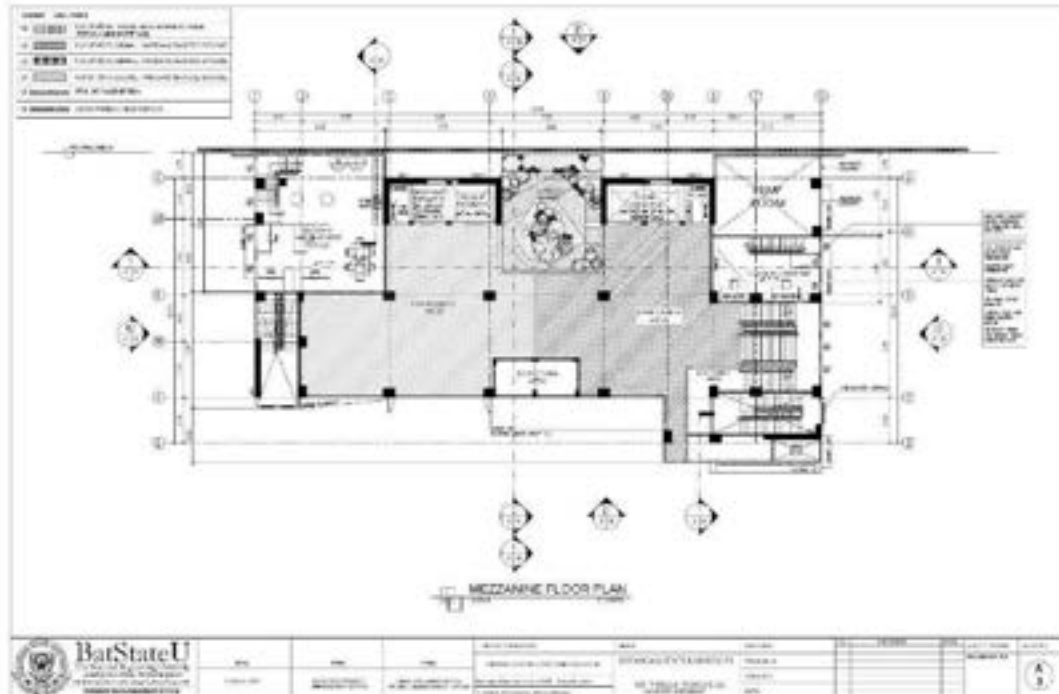


Figure 139 Mezzanine Floor Plan



Figure 140 Second Floor Plan



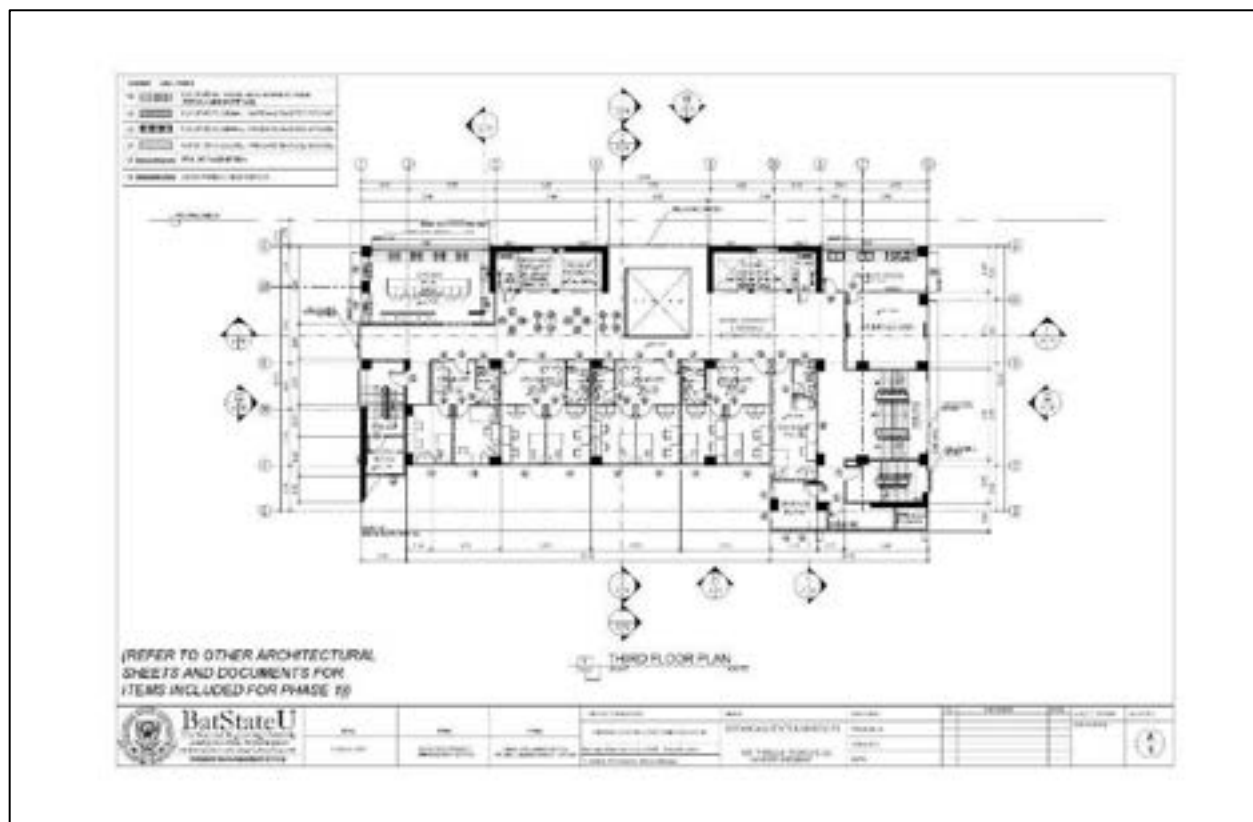


Figure 141 Third Floor Plan

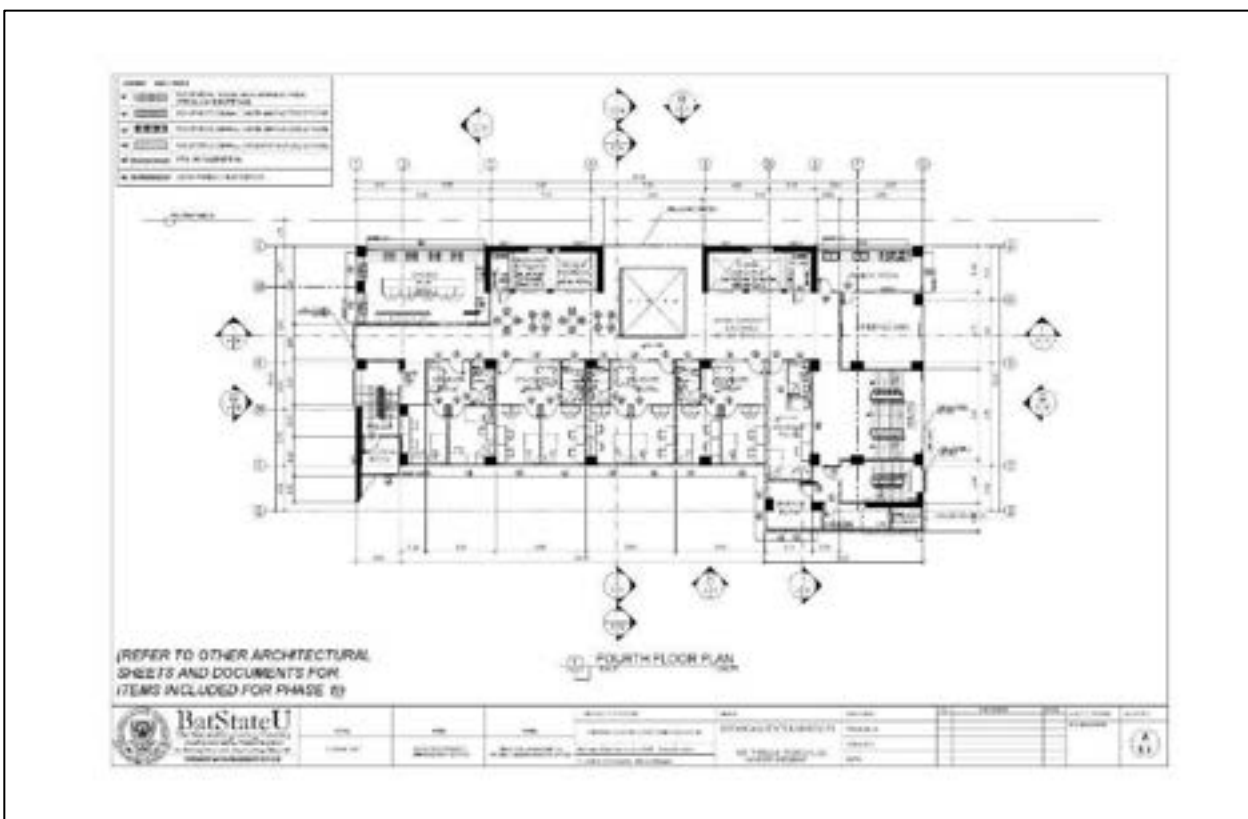


Figure 142 Fourth Floor Plan

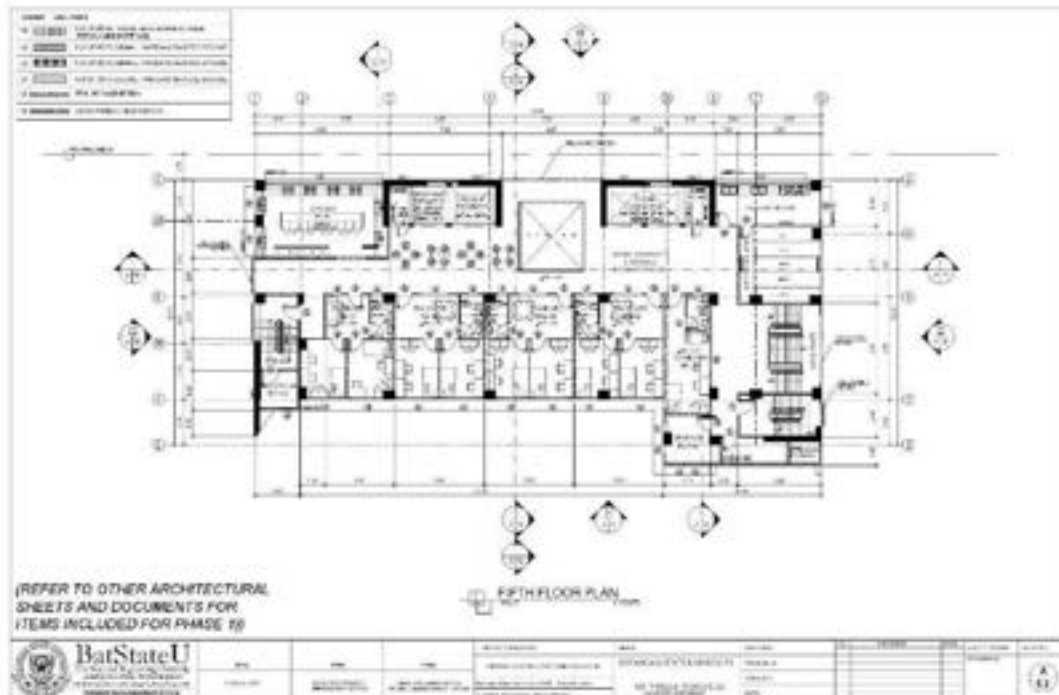


Figure 143 Fifth Floor Plan



Figure 144 Sixth Floor Plan



Figure 145 Seventh Floor Plan

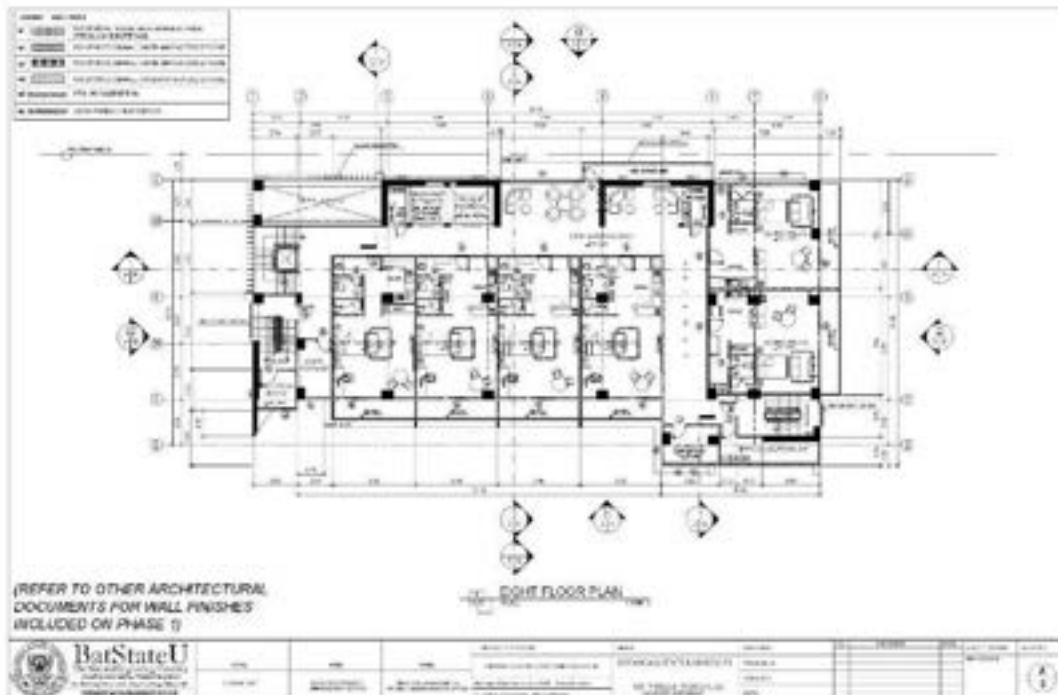


Figure 146 Eighth Floor Plan



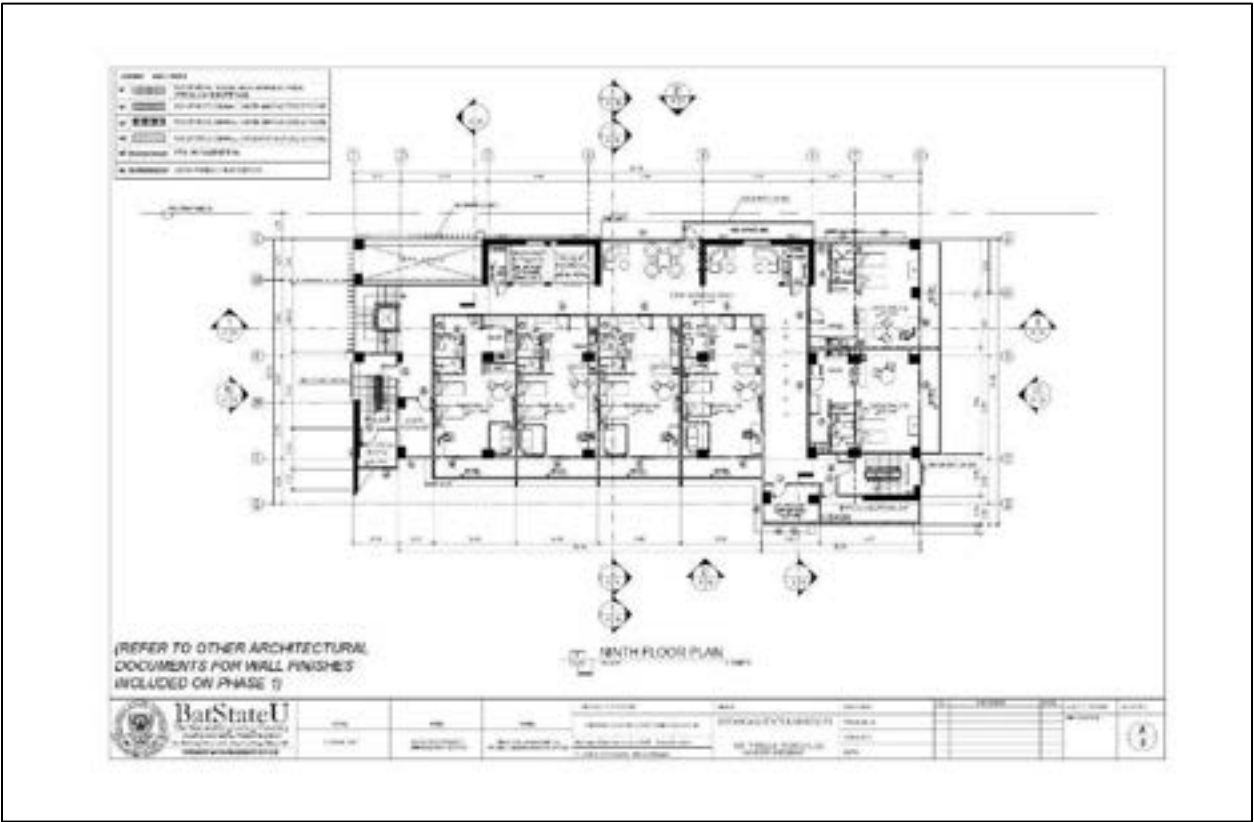


Figure 147 Ninth Floor Plan

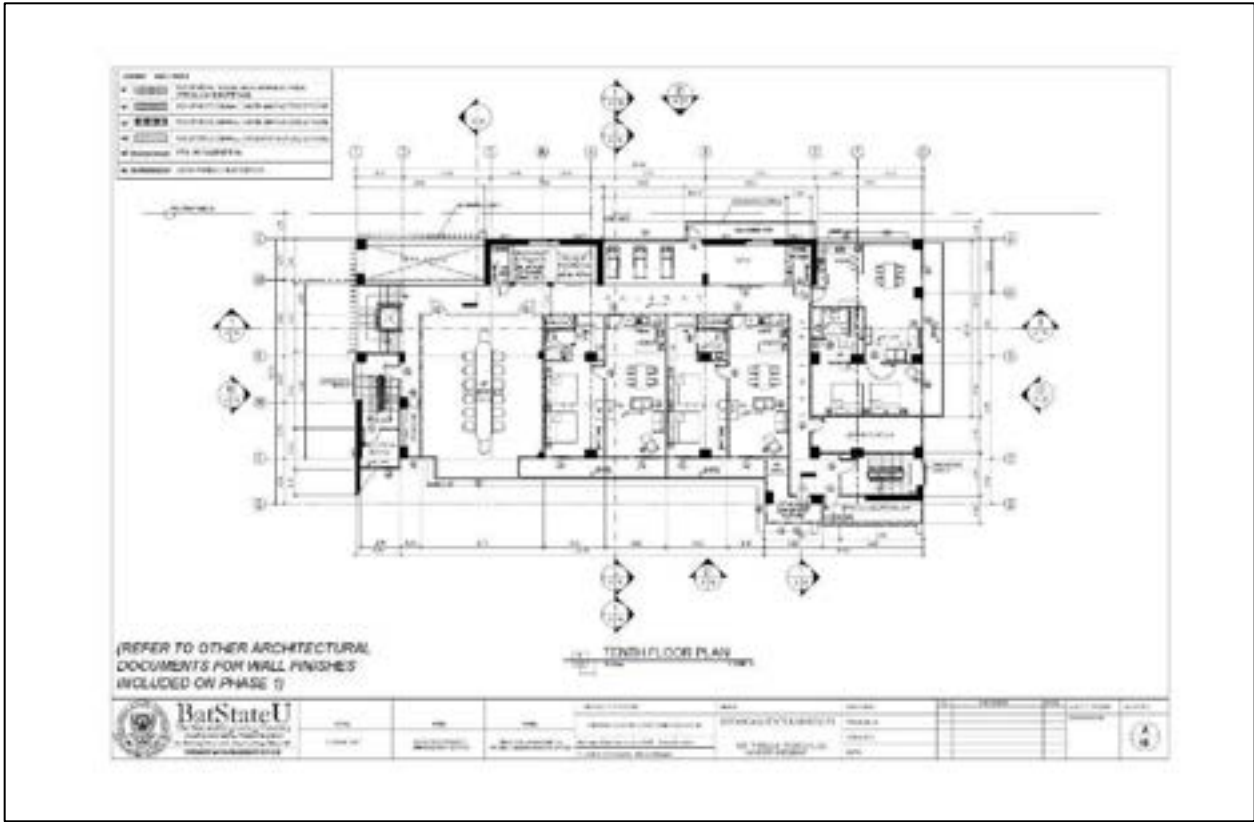


Figure 148 Tenth Floor Plan



This project shall also contribute to the accomplishment of University's BASICS: Goals, Strategies and Action Steps, more specifically:

### **Access**

Goal: A Holistic, Quality, and Inclusive Learning Environment in the 21st Century

Strategy 5: Improve student services - Establish a mechanism to ensure a conducive living environment for students through the construction of university dormitories/residence halls

### **Capacity**

Goal: Institutional Readiness as a University in the 21st Century

Strategy 4: Build and maintain infrastructure and other facilities that allow the University to deliver strategic priorities in an efficient and effective manner

- Develop and implement a long-term plan for infrastructure development that adopts energy-efficient architecture and consistent with strategic thrusts and priorities

- Identify gaps on infrastructure and service facilities based on established standards

CHED Memorandum Order No. 9, s. 2013 requires every university to provide student dormitories and housing facilities that are safe, clean, affordable and accessible to students, faculty, employee and guests. In compliance with the aforementioned memorandum, BatStateU JPLPC-Malvar conceptualized and designed a campus dormitory which specifically aims to provide modern living spaces for employees as well as the students who live from afar and seek programs that the campus offers which can serve as a complete venue to accommodate them. The estimated cost for this project is Php270,000,000.00 with a total floor area of 4,680 sq.m. which can accommodate large number of students, faculty/staff and guests.

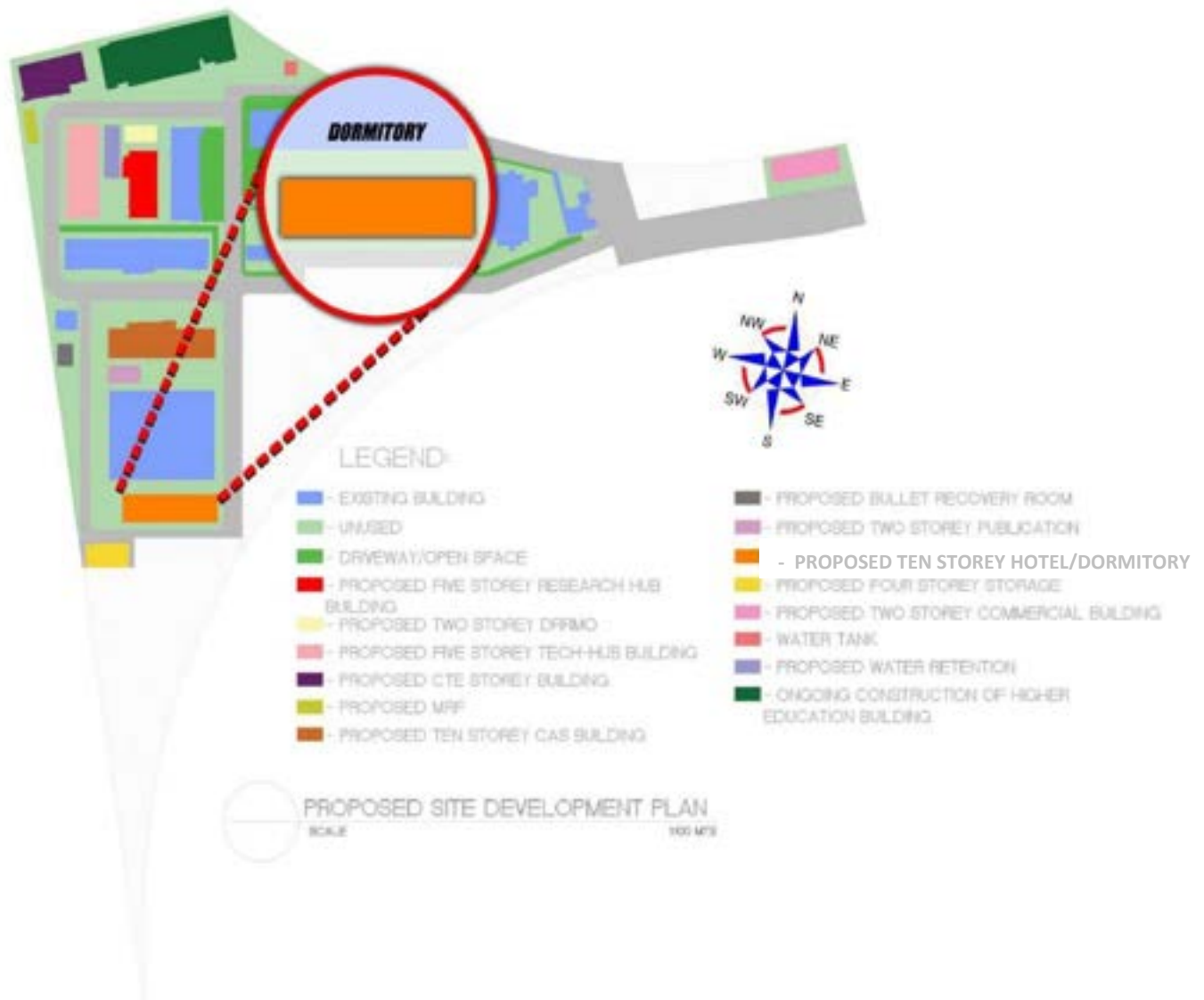


Figure 149 Location of Dormitory

The proposed construction of Ten-Storey Hotel/Dormitory has a building footprint of 468 square meters. The building will be constructed in the present location of the PESCA and Mini Hostel Building. The two (2) existing buildings will be demolished to give way to the construction. The demolished area will be 395.57 square meters and the area of idle land is 235.06 square meters. In addition, the total available buildable area is 630.63 square meters and 74.21 % of this area is the proposed land used area allocation.

For the development of the proposed dormitory, Project and Facility Management Office (PFMO) will conceptualize and design detailed engineering plans with compliance to all guidelines and building code set by the DPWH subject for review and approval of the Presidential Project Management Consultants (PRPMO). Upon approval of the consultants, consolidation and finalization of bid documents must be done for submission to the Bids and Awards Committee (BAC).

It shall provide an adequate space for students, employees and guests to foster sense of community, promote student activities and engagement and help reduce isolation and promote socialization that supports the achievement of university's goal and objectives.



## Storage Facility



Figure 150 Perspective of the Proposed Storage Facility

The storage facility will be a four-storey building with a total land area of 140.03 square meters. It will be used for storing raw materials and other materials, equipment, supplies and the like of Batangas State University JPLPC – Malvar Campus. The estimated amount for its construction is Php 42,009,000.00.

As shown in the Figure 151, the building will be constructed adjacent to the current location of the Mini Hostel Building. The ground floor contains receiving area for checking & inspection of newly delivered items, storage area for housing raw materials such as lumber, plywood, paint etc., condemned area for storing of unserviceable equipment awaiting disposal and fabrication area for Maintenance personnel use. The second floor will accommodate another two areas or offices dedicated also for storage. The third floor will be where the storage area for office supplies will be located. In addition, the Office of Head of Property and Supply will also be located here. while the Office of the Head of GSO and the storage area intended for tools and utilities storage will be constructed on the fourth floor.



Figure 151 Location of Storage Facility



Below is a table presenting the summary of included areas and offices per floor of the Storage Facility with their corresponding floor area.

Table 48 Technical Description of the Proposed Storage Facility

Storage		Area
Ground Floor	Storage Area	24.30
	Condemned Area	42.60
	Fabrication Area	32.40
Second Floor	Storage Area 1	24.30
	Storage Area 2	42.60
Third Floor	Storage Area (Office Supplies)	40.60
	Office of Head of Property and Supply	60.60
Fourth Floor	Storage Area (Tools and Utilities)	18.00
	Office of Head of GSO	64.00

Total Land Area: 140.03 sqm



## College of Arts and Sciences (CAS) Building

The purpose of the renovation of the Colleges of Arts and Science Building into a Ten-Storey Building is to adhere to the recommendation of RQAT and AACUP Accreditation to cater to the needs of the BS Criminology and BS Psychology students and to update the capacity of the college to sustain its mission, vision, goals, and objectives. The construction of the ten-storey building complies with the National Building Code requirements and other laws about structural stability, fire safety, vertical conveyance, and utility requirements. The construction of a ten-storey building design is meant to address institution requirements for both academic and non-academic facilities. The allotted budget for the said construction is amounting to Php 357,615,000.00. The figure below exhibits the proposed renovation of CAS Building.



Figure 152 Perspective of the Proposed Ten-Storey CAS Building

This construction has a building footprint of 476.82 square meters. As seen in Figure 153, a larger portion of the present location of the Science and CTE Building will be dedicated for the construction of the CAS Building sharing a smaller area with Publication Office. The two (2) existing buildings will be demolished to give way to the construction. Furthermore, the total available area after demolition is 1,599.85 square meters, 965.02 square meters from the demolished area and 634.83 square meters will be the pavement/landscape.

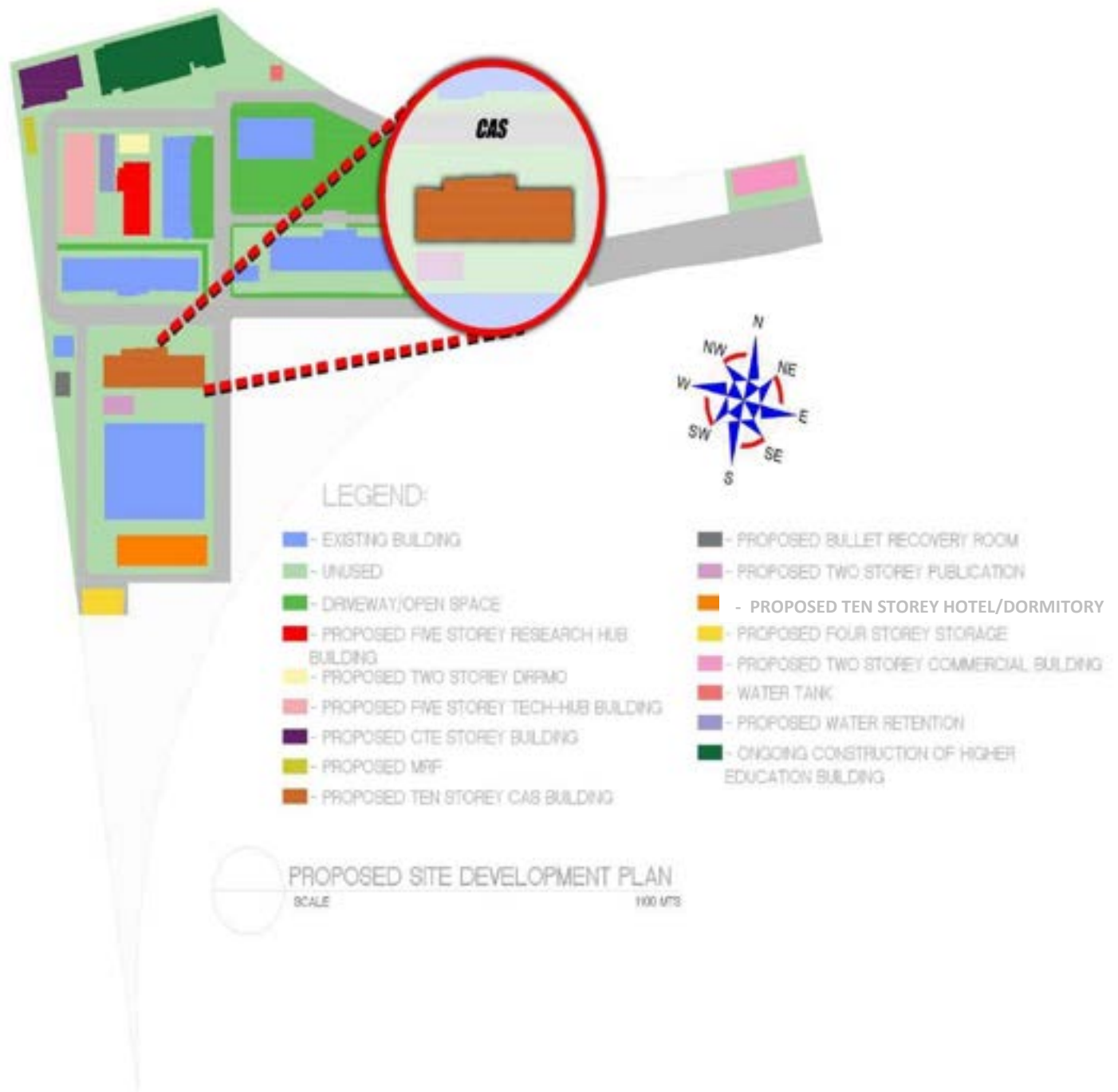


Figure 153 Location of Ten-Storey CAS Building

The College of Arts and Sciences will consist mostly of classrooms and laboratories with a total land area of 476.82 square meters. Its ground floor will cater two (2) Psychology Laboratories, Science Room, Crime Laboratory, a female and PWD restrooms, electrical and storage room. Installation of elevator will also be included. Its second floor will consist of three (3) Crime Laboratories, faculty and Dean's Office, a male restroom, electrical and storage room, while third floor is going to have another two (2) Crime Laboratories, two (2) classrooms, a female restroom, electrical and storage room. Its fourth floor will consist of four (4) more classrooms, a male restroom, electrical and storage room. And on the uppermost part of the building are four (4) classrooms, electrical room and water tank area.



Below is a table presenting the summary of included rooms and laboratories per floor of the College of Arts and Sciences building with their corresponding floor area.

Table 49 Technical Description of the Proposed CAS Building

College of Arts and Sciences		Area
Ground Floor	Science Room 1	64.00
	Psych Lab 1	64.00
	Psych Lab 2	64.00
	Crime Lab 1	64.00
	Female CR	17.22
	PWD CR	3.55
	EE room	17.22
	Storage Room	5.91
Second Floor	Faculty/Dean's Office	64.00
	Crime Lab 2	64.00
	Crime Lab 3	64.00
	Crime Lab 4	64.00
	Male CR	17.22
	EE room	17.22
	Storage Room	5.91
Third Floor	Crime Lab 5	64.00
	Crime Lab 6	64.00
	Classroom 1	64.00
	Classroom 2	64.00
	Female CR	17.22
	EE room	17.22
	Storage Room	5.91
Fourth Floor	Classroom 3	64.00
	Classroom 4	64.00
	Classroom 5	64.00
	Classroom 6	64.00
	Male CR	17.22
	EE room	17.22
	Storage Room	5.91
Fifth Floor	Classroom 7	64.00
	Classroom 8	64.00
	Classroom 9	64.00
	Classroom 10	64.00
	Water Tank	17.22
	EE room	17.22
	Storage Room	5.91

Total Land Area: 476.82 sq.m.



## College of Teacher Education (CTE) Building



Figure 154 Perspective of the Proposed Five-Storey CTE Building

The proposed construction of Five-Storey CTE Building with an estimated cost of Php 114,330,000.00 will be situated in the current location of Elementary Building. The total available area after demolition of Elementary Building will be 538.93 square meters which is obtained from the demolished area of 270.5 square meters as well as the idle area equivalent to 268.43 square meters. Figure 155 shows the proposed location on CTE Building.



Figure 155 Location of CTE Building

This building will contain five storeys with typical floor plans and a total land area of 304.88 square meters. Its ground floor will contain two (2) classrooms, a faculty room, a female and PWD restrooms. Electrical and storage rooms are located below the stairs. An elevator will also be installed. The second floor will contain another two (2) classrooms, a faculty room, a male restroom and electrical room while the third floor will be designed similarly except that it will house the Office of the Program Chair. In addition, records or stock room, a male restroom, electrical room and another two (2) classrooms will be installed on the fourth floor. Similar with the other buildings, its top most part will consist of water tank area and



electrical room. The machine room and two (2) classrooms will also be located on the fifth floor.

Below is a table summarizing the included rooms per floor of the Classroom Building with their corresponding floor area.

Table 50 Technical Description of the Proposed CTE Building

CTE Building		Area
Ground Floor	Classroom 1	64.00
	Classroom 2	64.00
	Faculty Room	17.22
	Female CR	17.22
	PWD CR	3.54
	EE room below	
	Storage room below	
Second Floor	Classroom 3	64.00
	Classroom 4	64.00
	Faculty Room	13.01
	Male CR	17.22
	EE room	4.21
Third Floor	Classroom 5	64.00
	Classroom 6	64.00
	Program Chair	13.01
	Female CR	17.22
	EE room	4.21
Fourth Floor	Classroom 7	64.00
	Classroom 8	64.00
	Records/Stock Room	13.01
	Male CR	17.22
	EE room	4.21
Fifth Floor	Classroom 9	64.00
	Classroom 10	64.00
	Machine Room	13.01
	Water Tank Area	17.22
	EE room	4.21

Total Land Area: 304.88 sqm



## Technology Hub

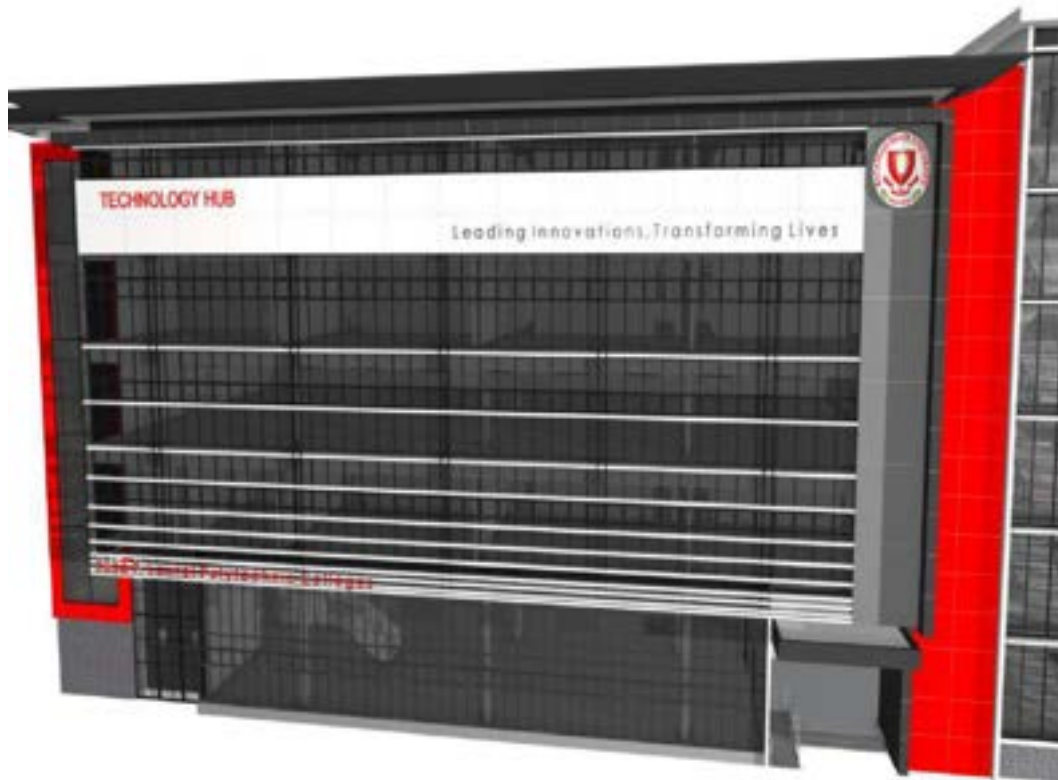


Figure 156 Perspective of the Proposed Technology Hub

The Technology Hub Building will be a five-storey facility with a total land area of 410.92 square meters. It will need an estimated budget of Php 154,095,000.00. The proposed location will be the area of the existing Quadrangle/Tech Building sharing the largest portion with proposed DRRM and Research Hub as show in the figure below.

Its ground floor plan will consist of three (3) laboratories, a female restroom, a PWD restroom and electrical room. The second-floor plan will be a typical floor plan consisting of three (3) laboratories, a male restroom and electrical room. On the other hand, the third floor will have three (3) laboratories, Auditor's Office and electrical room, same structure with the fourth floor except that it will be installed with three (3) classrooms instead of laboratories. The fifth floor, like in the other buildings, will have classrooms, water tank and electrical room.

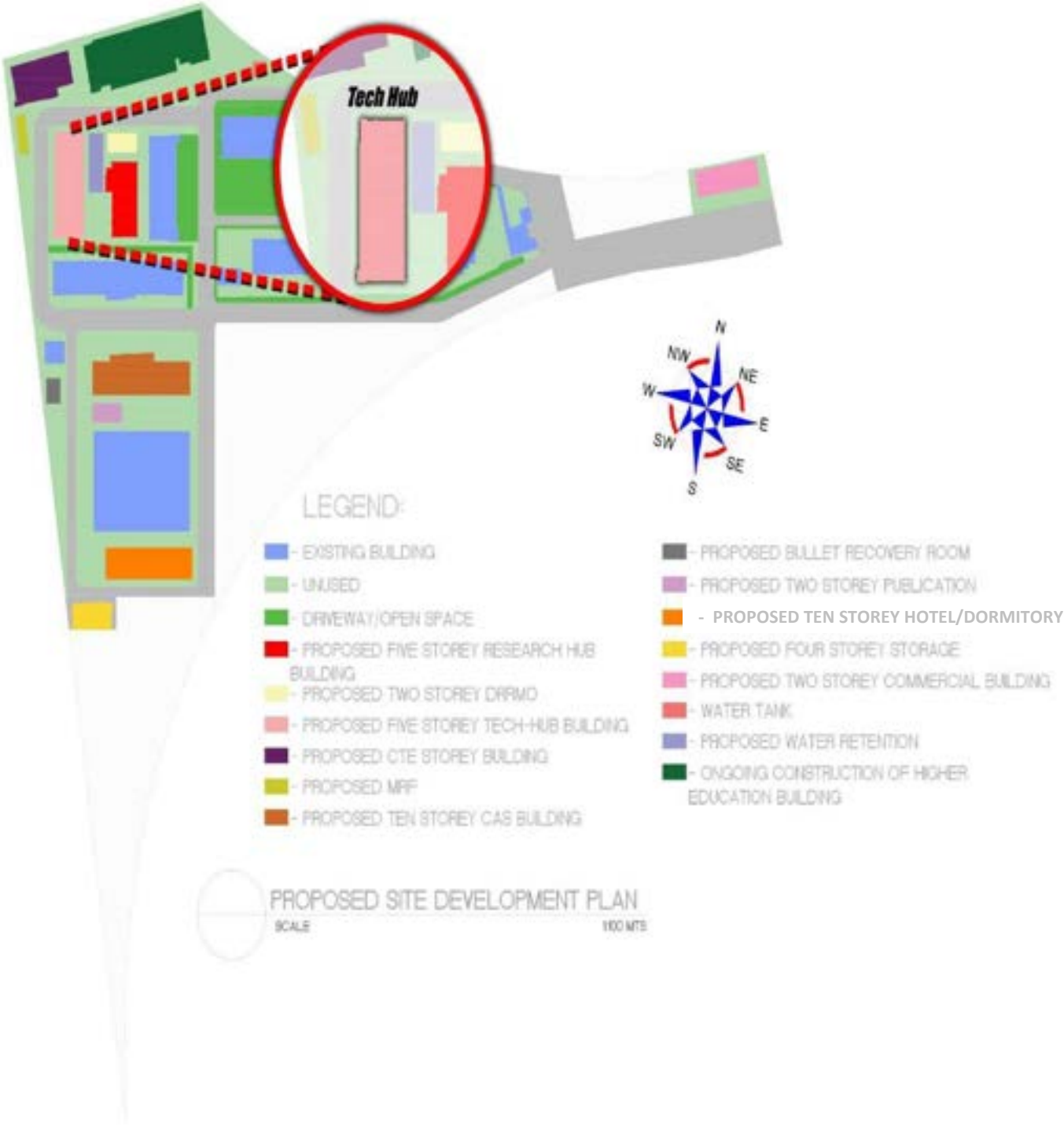


Figure 157 Location of Technology Hub

Below is a table presenting the summary of included rooms and laboratories per floor of the Tech Hub Building with their corresponding floor area.



Table 51 Technical Description of Tech Hub Building

Tech Hub Building		Area
Ground Floor	Laboratory 1	64.00
	Laboratory 2	64.00
	Laboratory 3	64.00
	Female CR	12.00
	PWD CR	3.30
	EE room	18.00
Second Floor	Laboratory 4	64.00
	Laboratory 5	64.00
	Laboratory 6	64.00
	Male CR	18.00
	EE room	18.00
Third Floor	Laboratory 7	64.00
	Laboratory 8	64.00
	Laboratory 9	64.00
	Auditor's Office	18.00
	EE room	18.00
Fourth Floor	Classroom 1	64.00
	Classroom 2	64.00
	Classroom 3	64.00
	Auditor's Office	18.00
	EE room	18.00
Fifth Floor	Classroom 1	64.00
	Classroom 2	64.00
	Classroom 3	64.00
	Water Tank Room	18.00
	EE room	18.00

Total Land Area: 410.92 sqm



## Research Hub

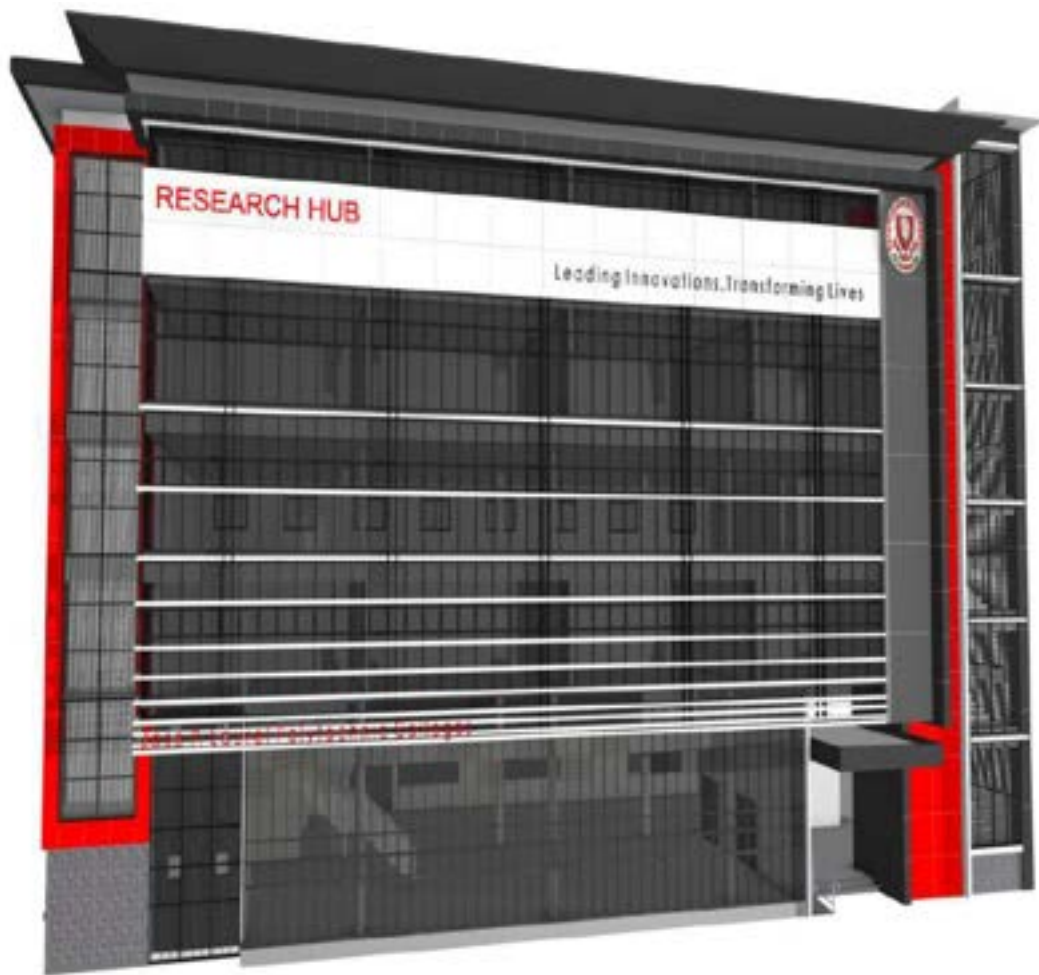


Figure 158 Perspective of the Proposed Five-Storey Research Hub

The proposed Research Hub will be a five-storey building with a total land area of 270.86 square meters. Construction of this hub has an estimated cost of Php 101,572,500.00. It will be the center of research, innovations, and development in the campus. This will house offices relevant and in support to the research and extension service undertakings of the campus. The main lobby of the building will display products and innovations that are outputs of the different research undertakings in the campus. This will also house the Office of the Vice Chancellor for Research, Development, and Extension Services, the Office of the Campus Research Unit, the Office of Extension Services and the Office for Gender and Development. Aside from administrative offices, the building will also contain laboratories for the conduct of campus researches such as statistics and data analysis office that is equipped with ICT facilities with softwares relevant to the conduct of researches. It also contains AVR, Conference, and Training Rooms important for the conduct of meetings, conferences and trainings on research and innovations.

Same with Technology Hub, it will also utilize the area of the current location of Quadrangle/Tech Building once demolished as shown in the figure below.

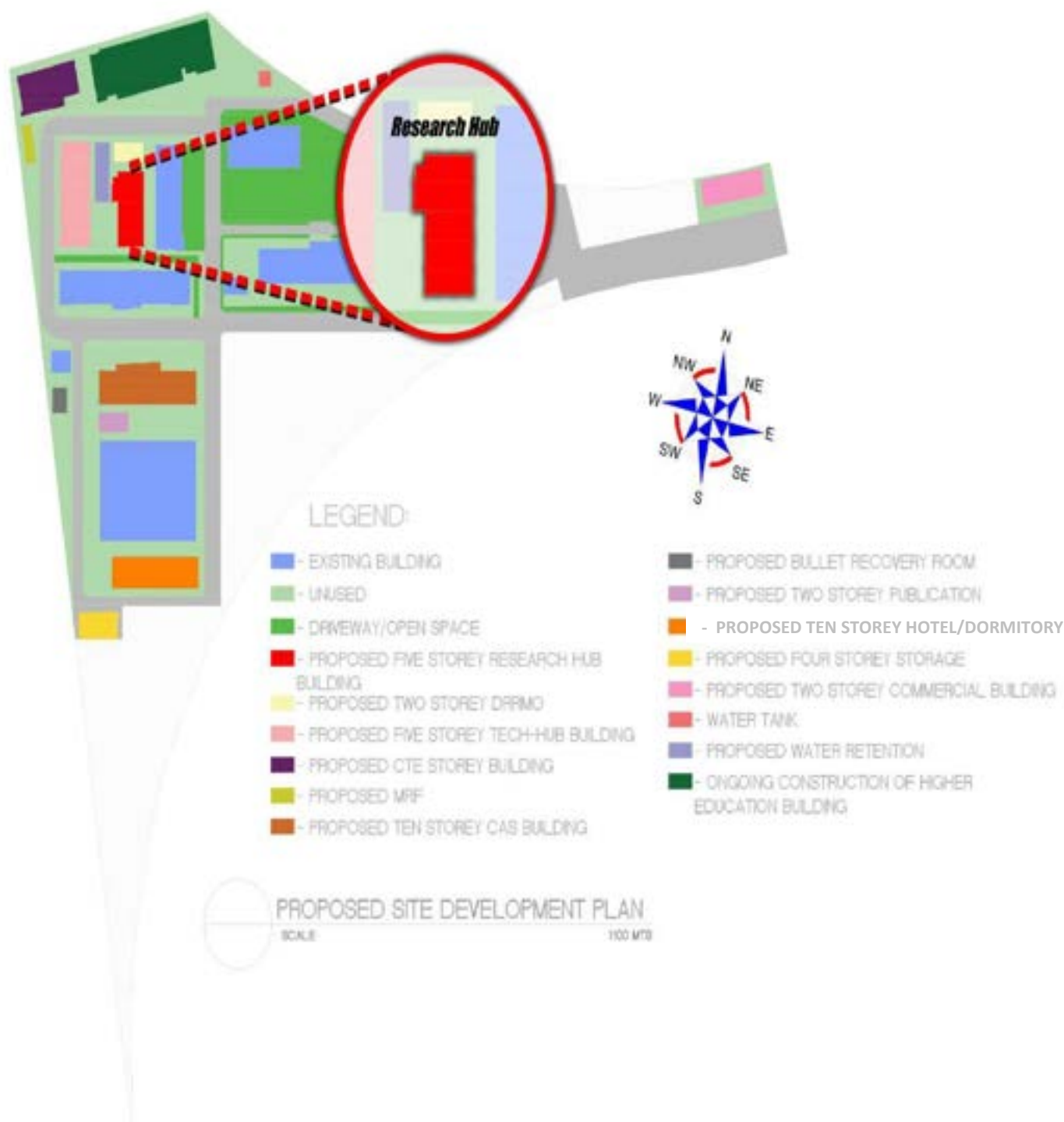


Figure 159 Location of Research Hub



The table below shows the summary of the offices and rooms per floor inside the Research Hub Building with their corresponding floor area.

Table 52 Technical Description of Research Hub

Research Hub		Area
Ground Floor	Daycare Center	59.60
	Lactation Room	20.00
	Display Room	39.80
	EE room	16.71
	Female CR	16.71
	PWD CR	3.00
Second Floor	Office 1	44.85
	Office 2	39.80
	VCRDES	9.80
	Secretary's Area	9.99
	Pantry	14.95
	EE room	16.71
	Male CR	16.71
Third Floor	Statistics Center	39.80
	Research Laboratory	79.60
	EE room	16.71
	Unisex CR	16.71
Fourth Floor	Training Area	39.80
	Function Hall	79.60
	EE room	16.71
	Unisex CR	16.71
Fifth Floor	Audio-Visual Room	39.80
	Product Development Laboratory	79.60
	EE room	16.71
	Water Room	16.71

Total Land Area: 270.86 sqm



### Material Recovery Facility



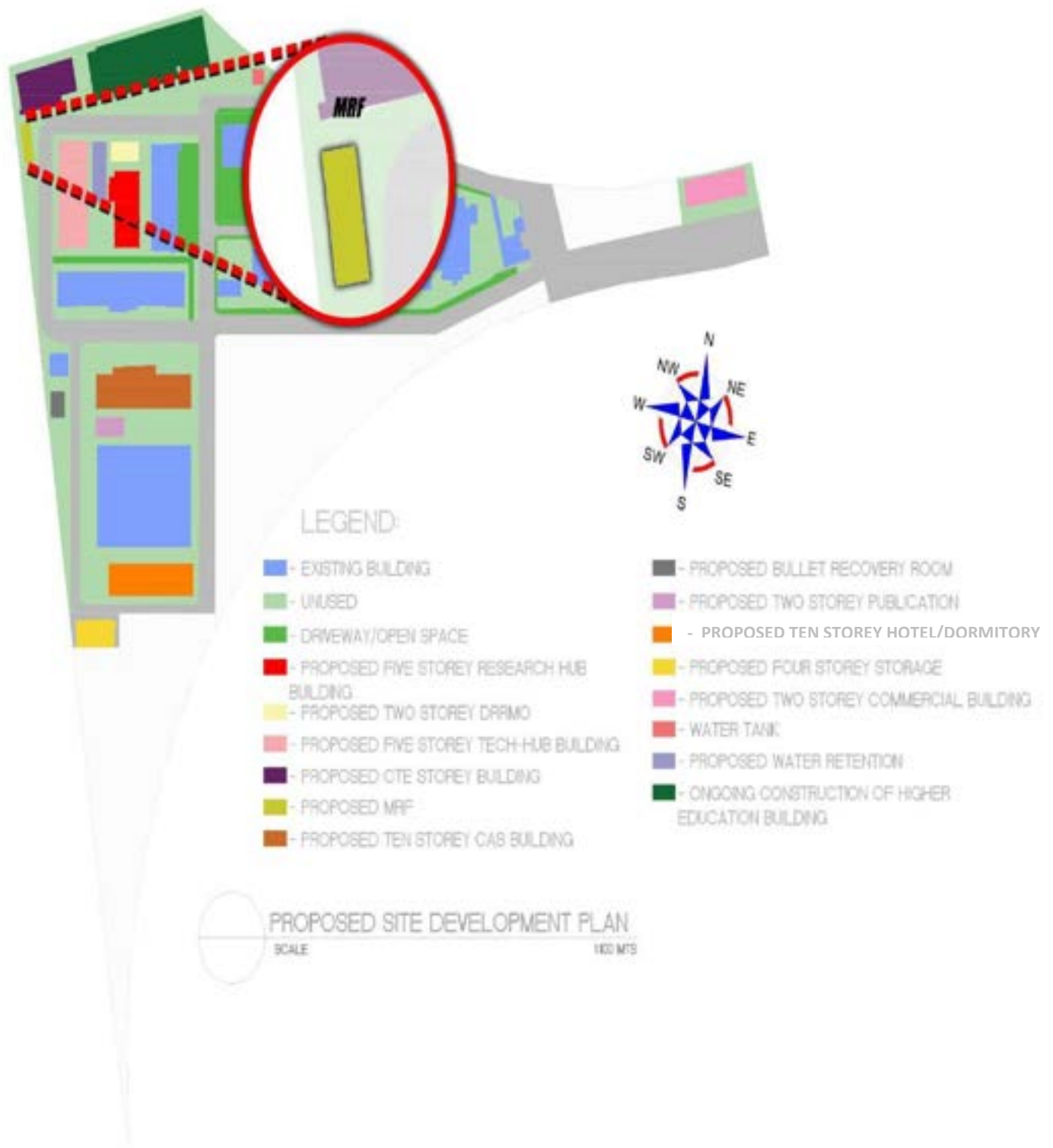
Figure 160 Perspective of the Proposed Material Recovery Facility

Material recycling has currently become an essential feature in the integrated solid waste management system. Therefore, establishment of a Material Recovery Facility becomes helpful in creating a valuable solid waste management strategy. This is the reason why MRF is included in the proposed infrastructures of the campus. The Material Recovery Facility, with a total building area of 50.67 square meters, will serve as repository for segregated discards that can be reused or recycled, as well as a place to turn biodegradable discards such as food and yard waste into fertilizer or soil conditioner. Below is the detailed summary.

Table 53 Technical Description of Material Recovery Facility

MRF		Area
Ground Floor	MRF Area 1	16.00
	MRF Area 2	16.00
	MRF Area 3	16.00

Total Land Area: 50.67 sqm



## Commercial Building



Figure 162 Perspective of the Proposed Commercial Building

As shown in Figure 163, this Two-Storey Commercial Building will be established on the empty site in front of Malvar State of Arts and Trades that is about to take up 219.7 square meters total land area. It has an estimated budget of Php 32,955,000.00. This will be utilized for a business purpose. In the long term, any income generated from this commercial building will be able to finance a project for innovation in school, and can improve the campus facilities.



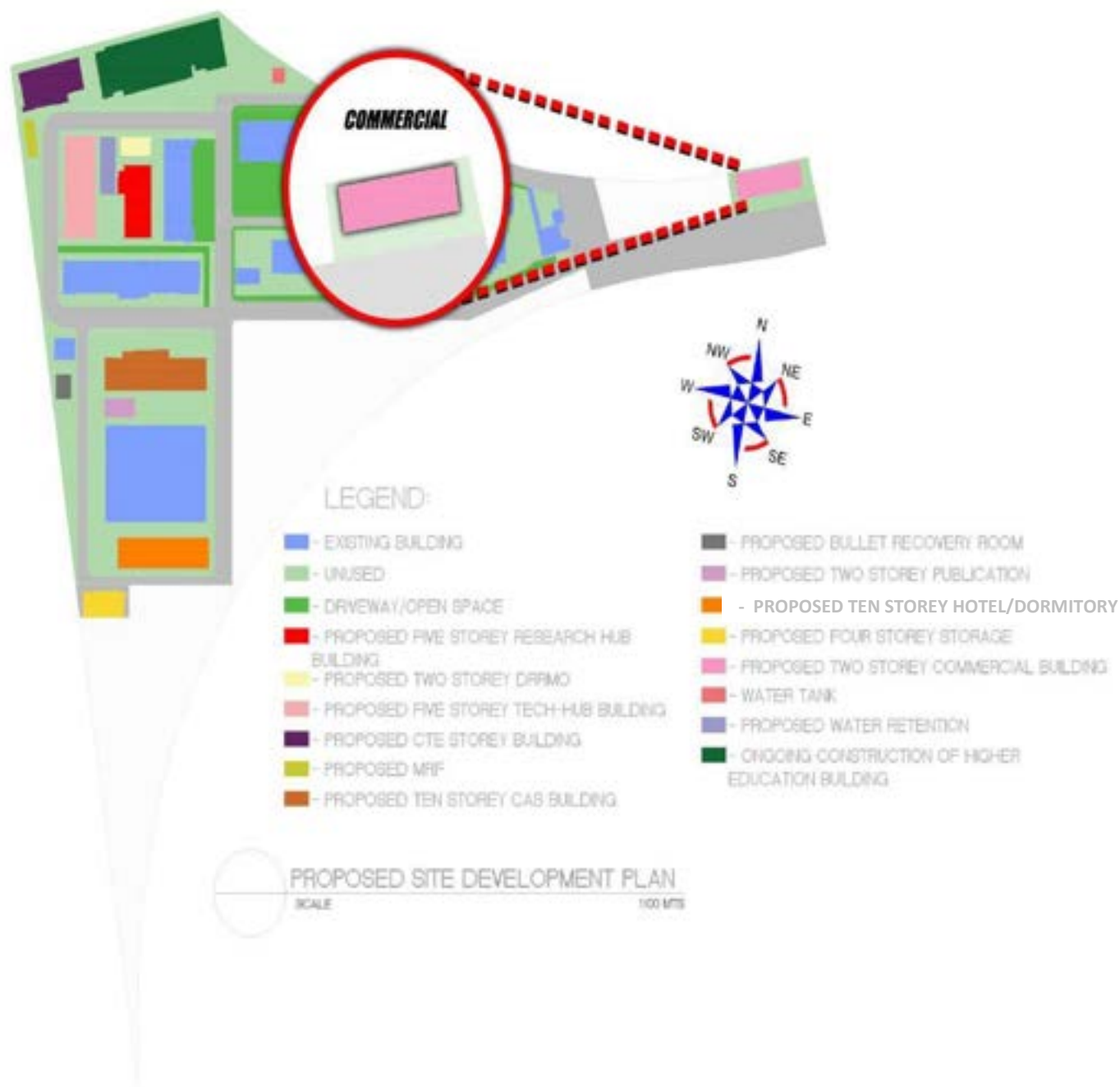


Figure 163 Site Development Plan Showing the Location of Commercial Building

## Bullet Recovery Facility



Figure 164 Perspective of the Proposed Bullet Recovery Facility

The purpose of the proposed construction of the Bullet Recovery Room is to adhere to the recommendation of RQAT and AACUP Accreditation to respond to the needs of the BS Criminology students to develop their occupational competencies in the field of specialization and to update the capacity of the college to sustain its mission, vision, goals, and objectives. It will use 48 square meters land area at the vacant slot near the Power House 2 as shown in Figure 165. The allotted budget for the Construction of the Bullet Recovery Room is Php 3,600,000.00.

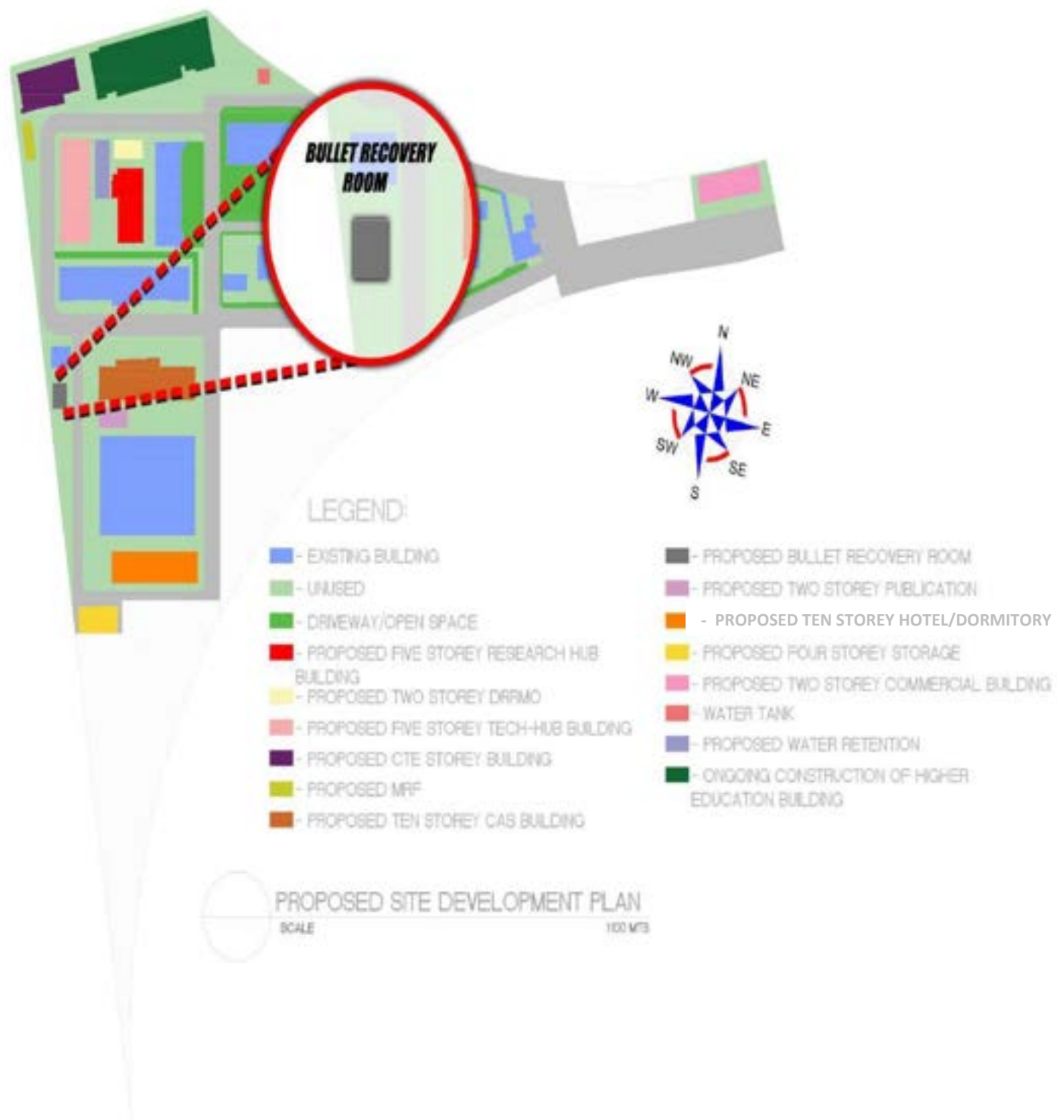


Figure 165 Location of Bullet Recovery Room



Figure 142 represents the detailed Recovery Room with its total area of 48 square meters.



Figure 166 Floor Plan of Bullet Recovery Facility

## Disaster Risk Reduction Management Office

Due to the natural hazards like earthquakes, floods, volcanic eruption, and the like, Batangas State University has established Disaster Risk Reduction Management Office (DRRMO) that will plan to reduce the damage caused by these disasters. No one can tell of their occurrence, the reason why Malvar Campus included DRRMO in the priority buildings.



Figure 167 Perspective of the Proposed DRRMO

The Disaster and Risk Reduction Management Office will be designed as a two-storey facility with a total land area of 75.02 square meters that will consist of the storage of DRRM tools, equipment and supplies on the ground floor to be used by their Incident Management Team of the campus in their usual operations. On the other hand, the second floor will contain the Office of the Head with included restroom and a mini conference room. This two-storey building has an estimated cost of Php 4,501,200.00 and is proposed to occupy the area of Quadrangle/Tech Building once demolished. This location is shown in the figure below.

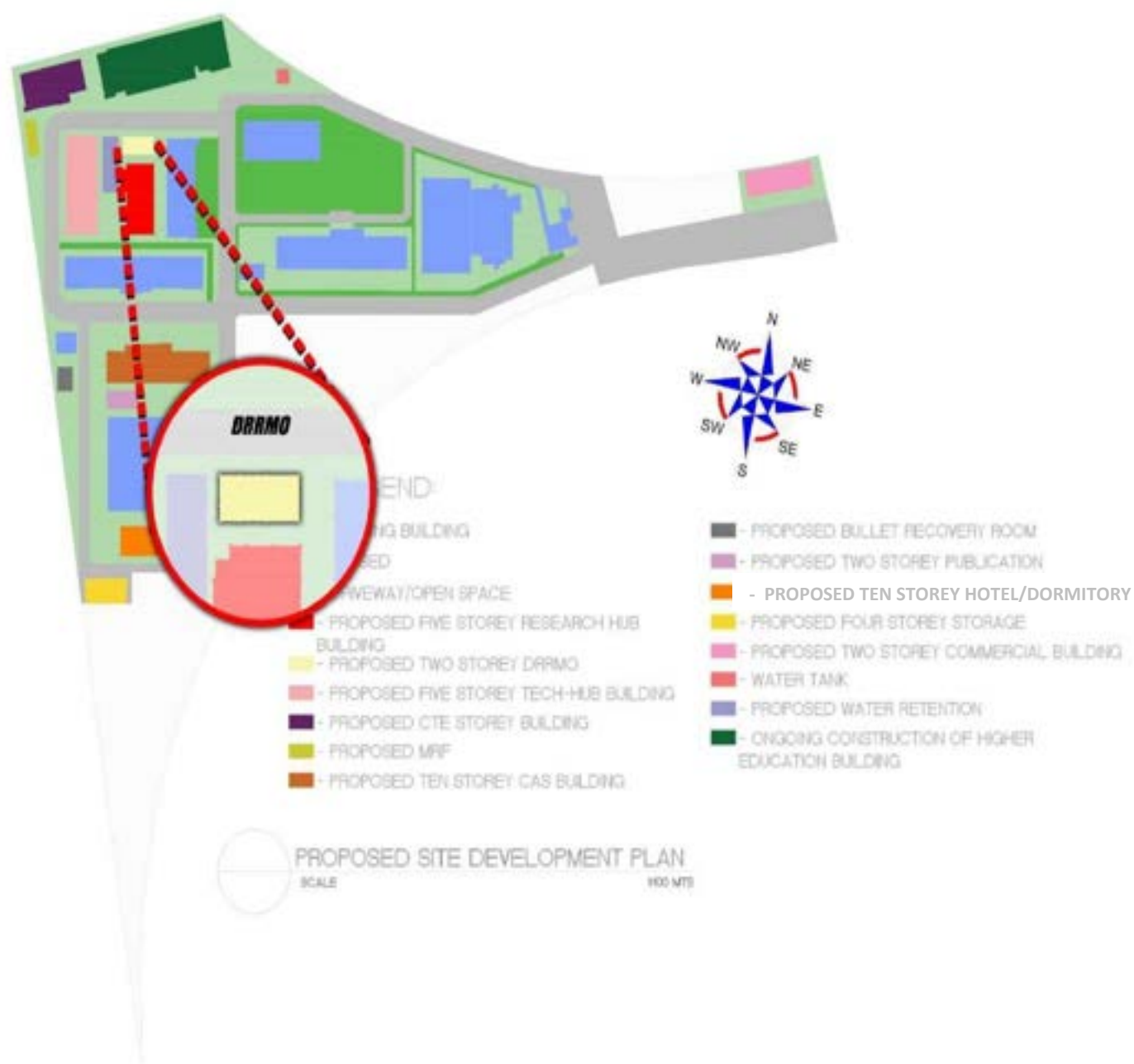


Figure 168 Location of DRRMO

The table below shows the summary of floor area that the offices and rooms inside the DRRMO will occupy.

Table 54 Technical Description of DRRMO

DRRMO		Area
Ground Floor	Office	20.00
	Tool Room/Storage	16.00
Second Floor	Office of the Head (with CR)	20.00
	Mini Conference Room	16.00

Total Land Area: 75.02 sqm



## Publication House



Figure 169 Perspective of the Proposed Publication Office

At present, the Publication Office is utilizing the office at the second floor of Student Services Center I. Its role includes production and dissemination of working papers and other scholarly publications. Being the publishing center of the Campus, it needs a more spacious and separate area for the people behind the creative works, for the bulk of publications once printed, and for them to exhibit their papers. With this, the campus has a proposed Publication House with a total land area of 75.02 square meters. It has an estimated cost of Php 11,253,000.00. It will use the area of Science/CTE Building after its demolition



Figure 170 Location of Publication House

Table 55 Technical Description of Publication House

Publication House		Area
Ground Floor	Office	20.00
	Storage	16.00
Second Floor	Office of the Head (with CR)	20.00
	Mini Conference Room	16.00

Total Land Area: 75.02 sqm

### H. Disaster Risks and Climate Change Adaptation

#### The Philippine Climate Change and Disaster Policy

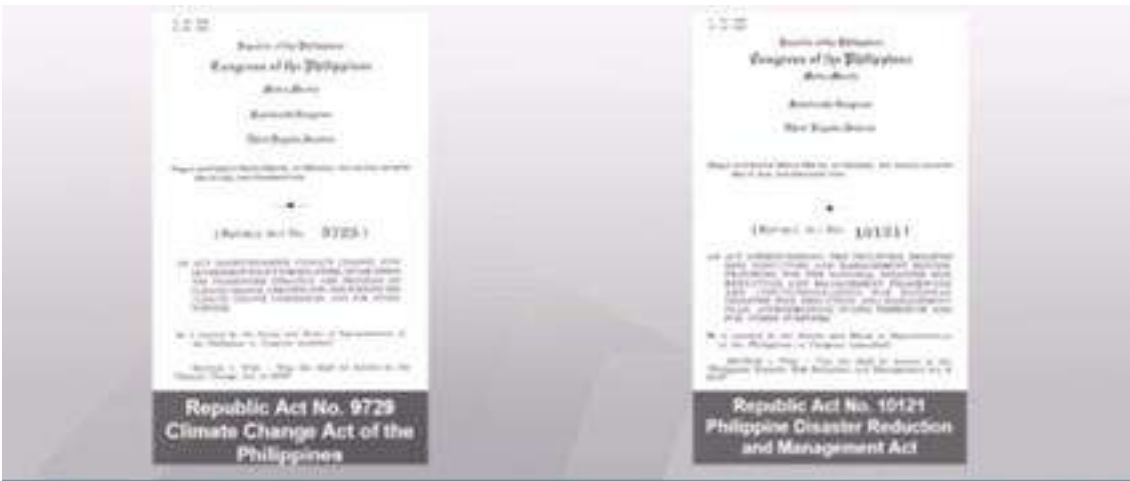


Figure 171 International Frameworks Sustainable Development Goals 2015-2030 (New York Sept. 2015)



Figure 172 Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai, May 2015)

- Priorities for Education Sector
- Priority 1. Understanding Disaster Risk

Priority 2. Strengthening disaster risk governance to manage disaster risk.

Priority 3. Investing in Disaster Risk Reduction for Resilience

Priority 4. Enhancing Disaster Preparedness for Effective Response

## Paris Climate Change Agreement (Paris, Dec. 2015)

### Disaster Risk Reduction

The University is aware that disaster risk management reduces uncertainty, builds confidence, cuts costs and creates value. BatStateU JPLP-Malvar, as well as all other campuses, have systematic approach for Disaster Risk Reduction with the collective efforts of the BatStateU Action Center, the government, the civil society and the stakeholders to build disaster resilient campuses and communities. Figure 149 shows BatStateU Action Center’s Crisis Management Plan.



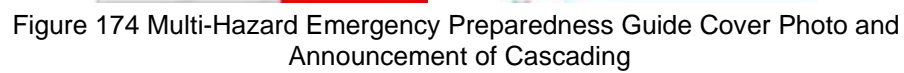
Figure 173 BatStateU Crisis Management Plan

The Crisis Management Plan of the University has procedures to address the needs of emergency response operations and recovery management. To address such emergencies, the university has established emergency response procedures that provide guidelines for the management of the immediate actions and operations required to respond to an emergency or disaster.

The plan provides the management structure, key responsibilities, emergency assignments, and general procedures to follow during and immediately after an emergency. The University has established this plan to address the immediate requirements for a major disaster or emergency in which normal operations are interrupted and special measures are taken.

Multi-Hazard Emergency Preparedness Guide as shown in Figure 174 has guidelines in Crisis Management Plan which are cascaded into the faculty, students and employees.







# **III. INSTITUTIONAL COORDINATION AND MONITORING SET-UP**



### III. INSTITUTIONAL COORDINATION AND MONITORING SET-UP

The set committee for institutional coordination and monitoring allows the BatStateU JPLPC-Malvar to assess progress of implementation of the Land Use Development and Infrastructure Plan. In this way, the institution will be able to monitor and evaluate its effectiveness.

#### A. Organizing the Institutional Coordination and Monitoring (ICM) Committee

The LUDIP JPLPC-Malvar is responsible for the creation of an ICM Committee whose membership shall be identified and functions defined. These committees will be responsible for the monitoring, review, and evaluation of the implementation of programs and projects proposed in the LUDIP. The table shows the list of suggested members per thematic area.

Table 56 Institutional Coordination and Monitoring Committee

THEMATIC AREA	COMMITTEE MEMBERS
Physical and Land Use Planning	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of PFMO</li><li>• Head of GSO</li></ul>
Infrastructure and Buildings	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of PFMO</li><li>• Head of GSO</li></ul>
Field Laboratories	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Research, Development, and Extension Services</li><li>• Head of Research</li><li>• Laboratory Supervisors</li></ul>
Environmental Protection	<ul style="list-style-type: none"><li>• Head of EMU</li><li>• Vice Chancellor for Administration and Finance</li><li>• PCO of EMU</li><li>• Head of Health Services</li></ul>
Solid Waste and Pollution Prevention	<ul style="list-style-type: none"><li>• Head of EMU</li><li>• PCO of EMU</li><li>• Head of GSO</li><li>• Head of Health Services</li></ul>





Traffic Routes	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Head of GSO</li><li>• Head of PFMO</li></ul>
Sports Facilities	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Academic Affairs</li><li>• Head of Sports Division</li></ul>
Housing	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Development and External Affairs</li><li>• Vice Chancellor for Academic Affairs</li><li>• Head of RGO</li></ul>
IGP and Commercial Spaces	<ul style="list-style-type: none"><li>• Chancellor</li><li>• Vice Chancellor for Development and External Affairs</li><li>• Vice Chancellor for Administration and Finance</li><li>• Head of RGO</li></ul>

The above table presents the suggested members of the committees for the monitoring, review, and evaluation of the implementation of programs and projects proposed in the LUDIP. The members are selected based on their scope of responsibilities. Specifically, below are the duties and responsibilities of each committee:

- Ensure the implementation of Programs, Activities, and Projects (PAPs) related to the thematic area.
- Develop an operational plan with the physical and financial resources allotted for the implementation of PAPs.
- Manage records and database per thematic area such as reports and documentation on the status of activities.
- Perform such other functions as may be necessary for the accomplishment of LUDIP.

## B. Stages of Institutional Coordination and Monitoring Set-up

Presented in the below figure are the stages for Institutional Coordination and Monitoring Set-up. This is to guide the proponents/stakeholders of BatStateU JPLPC-Malvar in the planning and implementation of Programs, Activities and Projects (PAPs) related to the thematic areas.

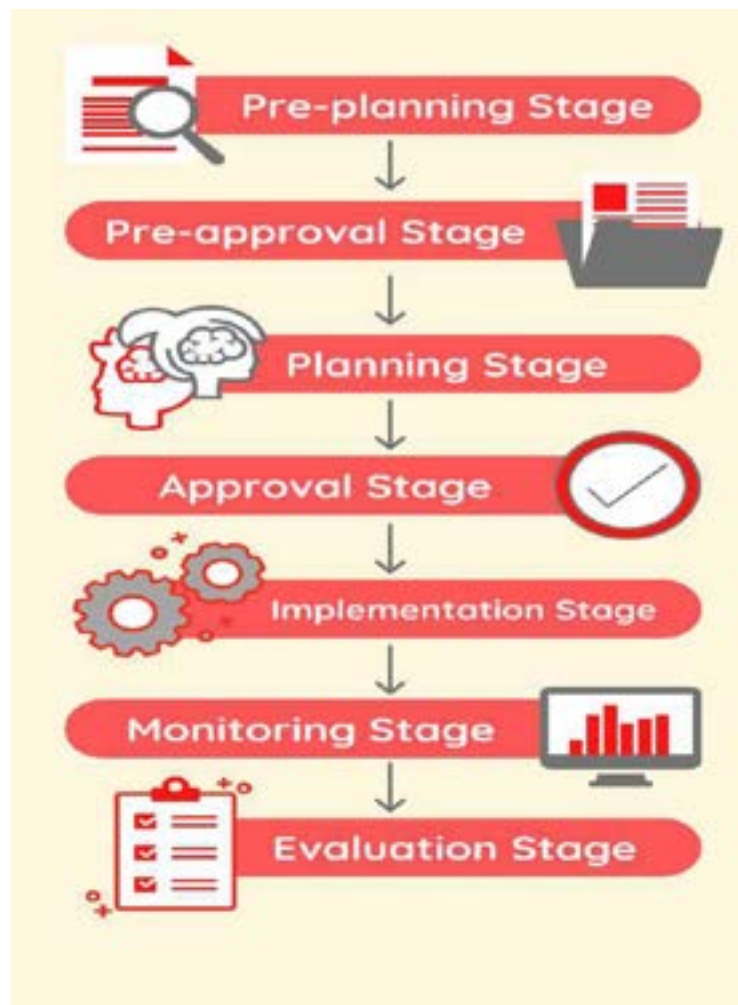


Figure 175 Stages of Institutional Coordination and Monitoring Set-up

1. Pre-planning Stage - the committee together with the concerned office shall gather necessary information related to the proposed PAPs.
2. Pre-approval Stage - the preliminary documents must be presented to the Chancellor and Vice Chancellors of the campus. The documents must support the goal and objectives of the PAPs to be proposed.
3. Planning Stage - the committee and concerned office shall create the plan of the PAPs from preliminary to execution stage. Monitoring and evaluation tools must be included in the development plan.
4. Approval Stage - in this stage, included are the approval of PAPs, budget allocation, procurement requests, and other necessary documents that need to be approved.
5. Implementation Stage - the PAPs must be implemented in accordance with the policies of the national, local, and campus. All requirements must be completed, and all permits are secured prior to project execution.
6. Monitoring Stage - the committee is responsible for the monitoring of the success of PAPs. They shall set a monitoring tool appropriate to the PAPs being implemented. It is to keep in mind that included in the monitoring is the financial plan status of the project especially for infrastructure.
7. Evaluation Stage - Once the entire project has been implemented, evaluation follows. This is to check whether the project has been successful and efficient to



its purpose. In case of infrastructure projects, this is to check if the turned-over project is up to the quality standards.

### **C. Implementation, Monitoring and Evaluation**

Prior to the implementation of projects, all concerned offices must agree to the programs and plans set-up. Documents shall be approved by the top management and completed prior to execution of the project. Continuous monitoring must be done and reported as prescribed by the university policy. An evaluation must be conducted after every activity to check for its effectiveness.

The Budget Office will provide support during the implementation, monitoring and evaluation process, more particularly in the timely determination of the following:

- Meeting funding requirement of the Investment Program
- Level of funding generated from external sources
- Actual expenditures and major deviations from the plan if any
- Compliance with reportorial and other regulatory requirements
- Status of borrowed fund if any
- Other funding options in case of contingencies

To have consistency in the documentation, the forms and instruments to be used are of the university in the preparation, monitoring and evaluation of PAPs in thematic areas.



Monitoring Set-Up for Infrastructure Projects

Project Conceptualization

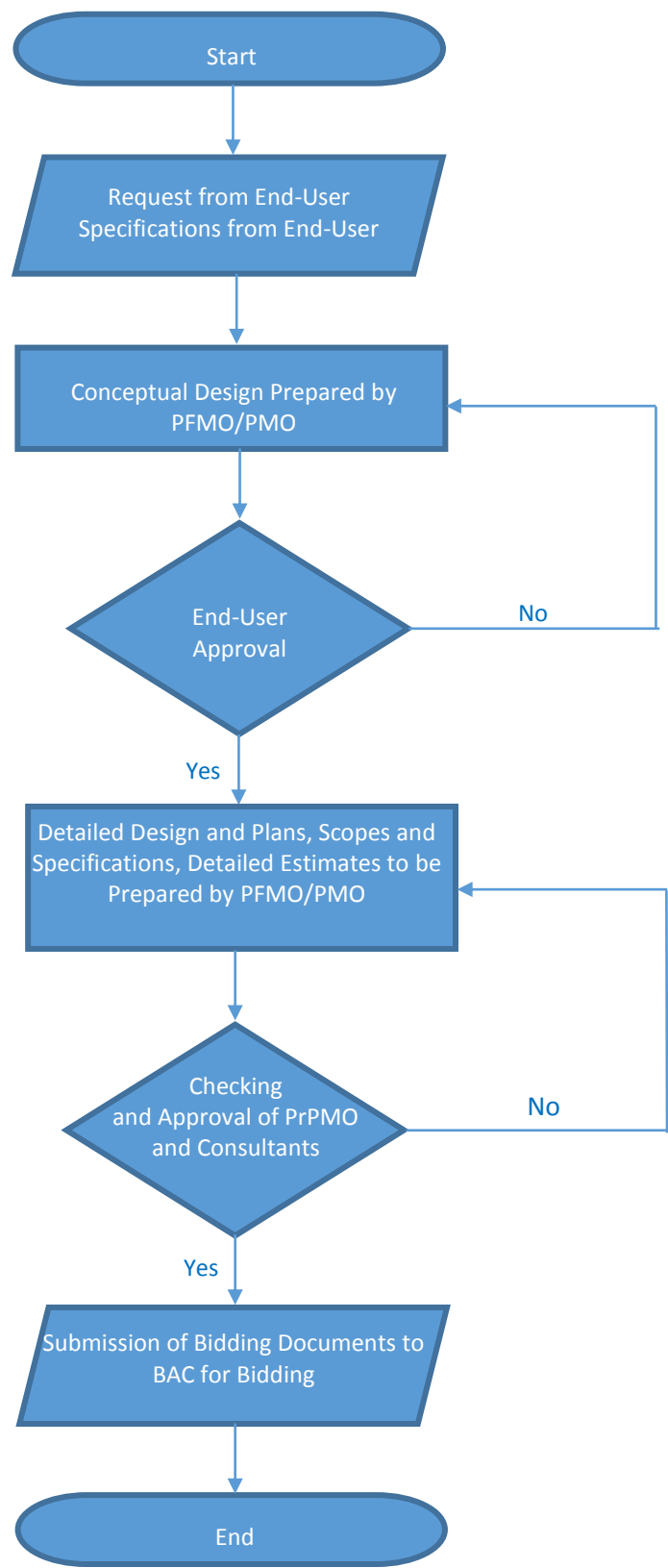


Figure 176 Project Conceptualization Flow Chart

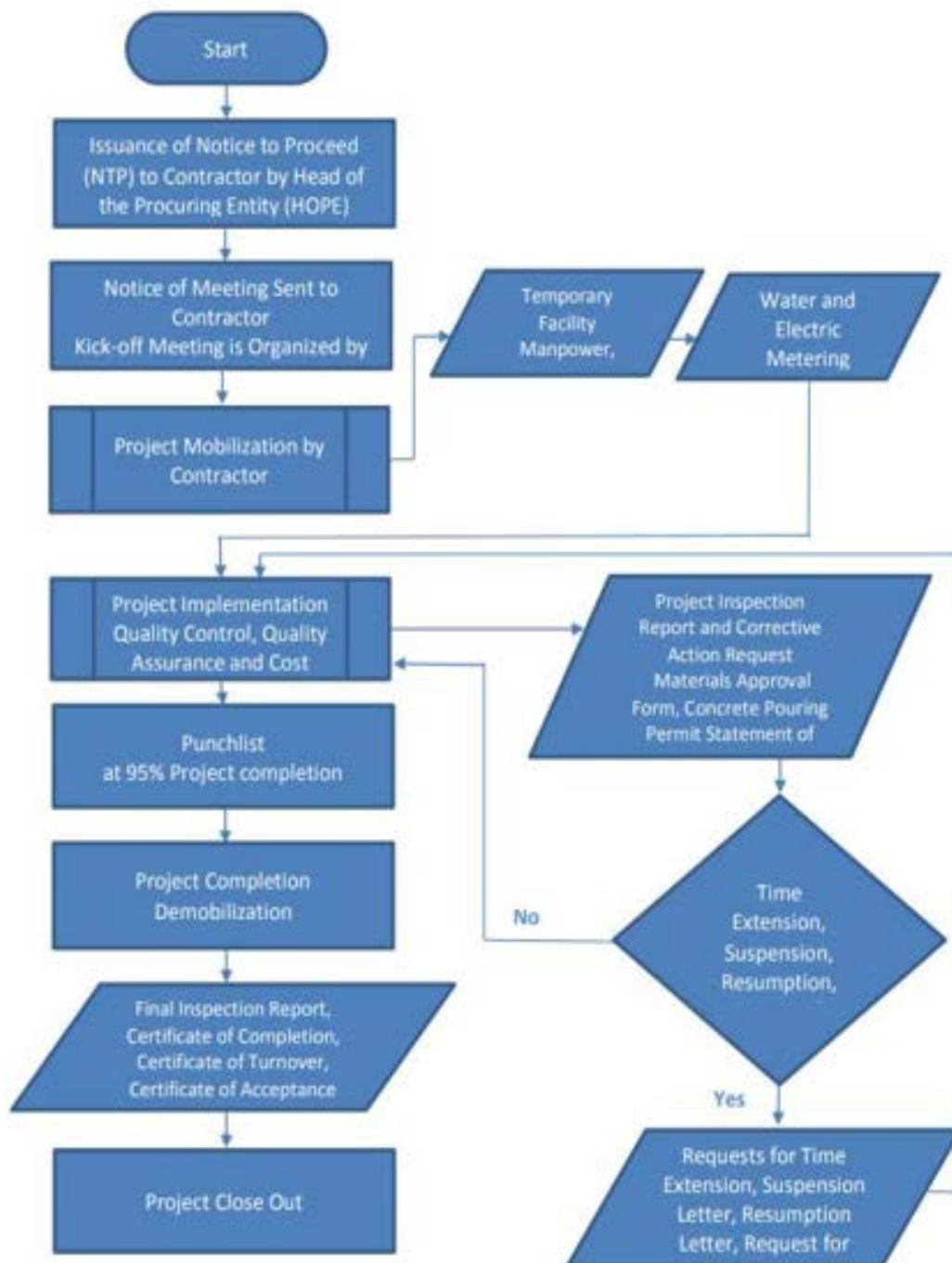


Figure 177 Project Implementation Flow Chart



# Land Use Development and Infrastructure Plan (LUDIP)



**BATSTATEU  
LIPA**

*Leading Innovations, Transforming Lives*





# Land Use Development and Infrastructure Plan (LUDIP)



## MESSAGE FROM THE CHANCELLOR



Batangas State University provides quality education to all qualified students to become leaders in the global knowledge economy. True to its vision, the institution has produced graduates who are achievers and successful professionals known for their contributions to their fields. We take pride in the strong university culture where every Red Spartan strives to live up to the tradition of excellence.

The changing conditions of the campus operation and profile, and the growing population and academic offerings necessitate strengthening its financial and administrative capacity, improving its physical plant and facilities, and developing its human resources. The campus Land Use Development and Infrastructure Plan (LUDIP) shall set the actions to be taken by the campus administration within the next ten years for this purpose.

The LUDIP envisions an accessible and open Batangas State University - Lipa to deliver services to its clients, most importantly the students, by giving them the opportunities to hone their competencies in a well-equipped institution, and making them leap high enough as responsible professionals after graduation and leave their legacies in their fields. The infrastructure development shall also attest to the Red Spartan community members' purpose of Leading Innovations and Transforming Lives, to build the nation with the sense of values of Patriotism, Integrity, Excellence, Service, Resilience and Faith.

**Atty. ALVIN R. DE SILVA**

Chancellor, BatStateU Lipa

## **LEGAL BASES AND MANDATES**

### **Legal Basis**

By the virtue of Republic Act No. 746, in 1953, a national status was conferred to Batangas Trade School (first established as Manual Training School in 1903), thereby changing its name to Pablo Borbon Memorial Trade School. Later in 1957, it was renamed Pablo Borbon Regional School of Arts and Trades (PBRSAT) and started offering technical courses.

In 1968, through Republic Act No. 5270, PBRSAT was converted into a state college and was called the Pablo Borbon Memorial Institute of Technology (PBMIT)—the 23<sup>rd</sup> state college in the Philippines.

In March 2001, Republic Act. No. 9045 integrated PBMIT and all its branches and campuses in the province of Batangas – the Jose P. Laurel Polytechnic College in Malvar, the Apolinario R. Apacible School of Fisheries in Nasugbu, and the Polytechnic University of the Philippines Campus in Sto. Tomas. This paved the way for its conversion into a state university, now called Batangas State University.

Republic Act No. 11694, otherwise known as the “Revised Batangas State University Charter” promulgated in April 2022, declared the University as The National Engineering University. Section 4 of the Charter lists the constituent campuses of the University. They are BatStateU-Pablo Borbon, BatStateU-Alangilan, BatStateU-ARASOF Nasugbu, BatStateU-JPLPC Malvar, and BatStateU-Lipa.

### **Mandate**

Batangas State University is committed to implement its mandate of equality and excellence, relevance and responsiveness, access and equity, and efficiency and effectiveness through instruction, research, extension, and production to meet the growing needs of the country and the world for globally competitive and morally upright professionals, scientists, technologists, technicians, skilled workers, and entrepreneurs. It commits itself to the advancement of knowledge and skills in arts and sciences, teacher education, engineering, technology and informatics, accountancy, business and economics, agricultural sciences, law nursing, and other related disciplines.

In accordance with the new Charter (RA 11694), and as the National Engineering University, BatStateU commits itself to develop leaders in the global knowledge economy. It envisions having programs for academic leadership, research and innovation, social responsibility, internationalization, sports, culture and the arts, and sustainability, to support local, regional, and national development.



## FOREWORD

Pursuant to Section 7 of Republic Act No. 11396, otherwise known as *SUCs Land Use Development and Infrastructure Plan (LUDIP) Act*, Batangas State University Lipa adopts its Campus Land Use Development and Infrastructure Plan, a necessary planning document for rational, efficient and just allocation, development and utilization of the campus land resources.

In preparing the plan, campus stakeholders considered the need for infrastructure and facilities for the utmost benefit of the University community and its clients.

This document highlights the planning parameters and assumptions to address future perceived needs and respond to existing challenges as the campus envisions and prepares to become fully sustainable as an institution of higher education. The proposed infrastructures in this plan shall increase the capacity of the campus to carry out its mandates and deliver its services efficiently. Aligned with the overall strategic vision of the University, the development to be implemented in accordance with this document shall enhance the capacity of the campus to become an open and accessible university providing an education with a brand of excellence that is socially-relevant, inclusive and sustainable.

The plan shall also open developments for world-class educational service amenities that also address vulnerabilities of the community to climate change and disaster risks, hence, planning and implementation adopts an integrated ecosystems approach in consideration of the physical development frameworks of the host city, province and region.

## **ACKNOWLEDGEMENT**

The Land Use Development and Infrastructure Plan (LUDIP) of the campus is prepared with the end goal of providing quality services to all its stakeholders through efficient and functional physical plant and facilities, financial, administrative and academic spaces, and human resources. The campus is truly grateful to different individuals, organizations, institutions and government bodies that help the CLUDIPPT Committee in the preparation of this plan.

The campus acknowledges the Local Government Unit of the City of Lipa and of Brgy. Marawoy, Lipa City for their usual support and assistance to the University. Also, the campus is immensely grateful to all its stakeholders, including the central and campus administration, faculty and staff, parents, alumni, students and community, who provide the campus the bases of the data of this plan.

Also, the campus thanks the Commission of Higher Education (CHED) for its guidance.

Finally, the campus sincerely recognizes the effort of the Campus Land Use Development and Infrastructure Plan Preparation Technical (CLUDIPPT) Committee and the Chancellor for working diligently to prepare this LUDIP.

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## **I. PROFILE OF BATANGAS STATE UNIVERSITY THE NATIONAL ENGINEERING UNIVERSITY - LIPA**

### **A. Introduction**

#### **a. Legal Bases / Mandates**

By the virtue of Republic Act No. 746, in 1953, a national status was conferred to Batangas Trade School (first established as Manual Training School in 1903), thereby changing its name to Pablo Borbon Memorial Trade School. Later in 1957, it was renamed Pablo Borbon Regional School of Arts and Trades (PBRSAT) and started offering technical courses.

In 1968, through Republic Act No. 5270, PBRSAT was converted into a state college and was called the Pablo Borbon Memorial Institute of Technology (PBMIT)—the 23<sup>rd</sup> state college in the Philippines.

In March 2001, Republic Act. No. 9045 integrated PBMIT and all its branches and campuses in the province of Batangas – the Jose P. Laurel Polytechnic College in Malvar, the Apolinario R. Apacible School of Fisheries in Nasugbu, and the Polytechnic University of the Philippines Campus in Sto. Tomas. This paved the way for its conversion.

Batangas State University is committed to implement its mandate of equality and excellence, relevance and responsiveness, access and equity, and efficiency and effectiveness through instruction, research, extension, and production to meet the growing needs of the country and the world for globally competitive and morally upright professionals, scientists, technologists, technicians, skilled workers, and entrepreneurs. It commits itself to the advancement of knowledge and skills in arts and sciences, teacher education, engineering, technology and informatics, accountancy, business and economics, agricultural sciences, law nursing, and other related disciplines.

Republic Act No. 11694, the “Revised Batangas State University Charter” declaring the University as The National Engineering University, provides in Section 4 that the constituent campuses of the University are BatStateU-Pablo Borbon, BatStateU-Alangilan, BatStateU-ARASOF Nasugbu, BatStateU-JPLPC Malvar, and BatStateU-Lipa.

#### **b. Brief Profile**

Batangas State University The National Engineering University Lipa, previously named as Don Claro M. Recto Campus, stands in a first-class city in the province known for its religious and heritage sites. While being home to notable attractions and landmarks, Lipa City prides itself as one of the most prominent economic and commercial areas in Batangas.

From its humble beginnings since its establishment in 2001, BatStateU TNEU Lipa Campus is now among the five constituent campuses and continues to leap beyond expectations through establishing a reputable presence in the red

and white community's academic paradigm. With more than 4,700 students, the Campus offers a number of degrees in the fields of engineering, technology, business, education, and social sciences.

### c. Brief History

It has been twenty years in the making before Batangas State University The National Engineering University Lipa finally emerged as one of the most promising campuses in the red and white community. Through twists, turns, and tests of time, the now constituent campus has remained committed to leap high—beyond expectations and amidst adversities.

The campus traces back its humble beginnings to March 2000 when former Lipa City Mayor Vilma Santos-Recto and former BatStateU President Ernesto de Chavez signed an agreement to establish a satellite campus in a yet to be developed historical city. The then Pablo Borbon Memorial Institute of Technology (PBMIT) was created under the maxim, “Expand, Enrich, Reach Out” which was an encapsulation of Dr. de Chavez’ initiative to serve the *deprived* and *underserved* sectors of the community.

When SY: 2000-2001 started, the campus first occupied five classrooms in Lipa City Public College at Don Claro Mayo Recto Street, Barangay 2, hence the former name, Don Claro M. Recto Campus. It initially offered programs in Industrial Technology, Mass Communication, Business Administration, and General Engineering to a total of 540 enrolled students. Because of the surprising number of enrollees, several classes were also carried out in the Regional Learning Center, an old building located at Brgy. Marawoy.

In 2003, BatStateU TNEU Lipa first utilized an eight-classroom building for conducting some of its classes and operating its Chemistry and Physics laboratories while the construction of the still-standing five-storey building was just underway. The campus finally received its certificate of occupancy for the first three storeys in August 2010 which strengthened the administration’s mission to consistently deliver quality instruction to its clientele.

A series of major improvements in the campus’ physical facilities has started to materialize including the construction of the University Gymnasium in 2013 and the Student Center in 2015. In March 2015, the campus formally received the deed of donation from the local government for the construction of the five-storey higher education building. This learning facility was initially built in December 2016 and was completed in September 2020.

Flashes of hope have continued when the five-storey College of Engineering and Computing Sciences (CECS) Building was formally inaugurated and turned over to the campus along with the newly furnished front gate, façade, University Shop, and guard house in March 2021.

Functioning as one of the five constituent campuses effective 2021, BatStateU Lipa now has more than 4,800 students and offers a number of programs in the fields of engineering, technology, business, education, and social sciences. From its humble beginnings, BatStateU TNEU Lipa now banners its *#LeapHighLipa* mantra—a constant reminder to always excel in the fields of instruction, research, extension, and production.



In between *“Expand, Enrich, Reach Out”* and *“Leading Innovations, Transforming Lives”* is a two-decade continuous pursuit of the campus to bring quality education closer to Lipeños. Through twists, turns, and tests of time, BatStateU Lipa will remain committed to leap high—beyond expectations and amidst adversities.

#### **d. Current Governing Board/Inter-department Bodies**

The University is governed by the Board of Regents. RA 11694 provides,

Section 12. The Board of Regents. - The governing body of the BatStateU shall be the Board of Regents, hereinafter referred to as the Board, which shall be chaired and co-chaired by the Chairperson of the Commission on Higher Education (CHED) and the BatStateU President, respectively, and with the following as members:

(a) Chairperson of the Committee on Higher, Technical and Vocational Education of the Philippine Senate;

(b) Chairperson of the Committee on Higher and Technical Education of the House of Representatives;

(c) Director General of the National Economic and Development Authority (NEDA);

(d) Secretary of the Department of Science and Technology (DOST);

(e) President of the federation of the faculty associations of the BatStateU;

(f) President of the federation of student councils of the BatStateU;

(g) President of the federation of alumni associations of the BatStateU; and

(h) Representatives of the non-teaching personnel association of the TSU; and

(i) Two (2) private sector representatives who have distinguished themselves in their professions or fields of specialization, chosen from among list of at least three (3) qualified persons as recommended by the search committee constituted by the President of the BatStateU, in consultation with the Chairperson of the CHED and other members of the Board, based on the standards and qualifications for the position set by the Board: Provided, That one (1) of the private sector representatives must have a distinctive contribution in the field of engineering and technology, reputable practice of the profession, and advancement of engineering education in the country.

The incumbent members of the Board are:

- Dr. Marita R. Canapi, Commissioner, CHED - Chairperson
- Dr. Tirso A. Ronquillo, University President - Co-Chairperson
- Members:
  - Hon. Francis Escudero, Senator, Chairperson, Senate Committee on Higher, Technical and Vocational Education (Represented by: John Bryan D. Diamante)
  - Hon. Mark Go, Member, House of Representatives, Chairperson House Committee on Higher and Technical Education (Represented by: Hon. Mario Vittorio A. Marino, Representative, 5th District of Batangas)
  - Dr. Arsenio M. Balisacan, Director General, National Economic and Development Authority (NEDA) (Represented by: Dir. Luis G. Banua, Director, NEDA Region IV-A)
  - Dr. Renato U. Solidum, Jr., Secretary, Department of Science and Technology (DOST) (Represented by: Dir. Emelita P. Bagsit, Director, DOST Region IV-A)
  - Engr. Ladislao A. Andal, Private Sector Representative
  - Engr. Amando A. Plata, President, Federation of Alumni Association of Batangas State University
  - Dr. Kristoffer Conrad M. Tejada, President, BatStateU Faculty Confederation

Dr. Tirso A. Ronquillo, the University President, is the chief academic officer, head of the university, faculty and chief executive officer in accordance with Section 16.

In exigency of service and by virtue of BoR Resolution No. 172, S. 2020 approving the Revised Organizational Structure, Management Processes and Procedures of the University, Atty. Alvin R. De Silva was designated as the Chancellor of BatStateU Lipa—an instated constituent campus—effective January 4, 2021.

Dr. Vanessah V. Castillo was designated as the Vice Chancellor for Development and External Affairs; Dr. Nerrie E. Malaluan as Vice Chancellor for Academic Affairs; Dr. Michael C. Godoy as Vice Chancellor for Administration and Finance; and Dr. Eufroña M. Magundayao as Vice Chancellor for Research, Development, and Extension Services.

These administrative officials are tasked to take charge in the monitoring and implementation of the strategic goals of offices under their supervision, in accordance with the University's Strategic Plan and its accompanying Investment Program, to ensure that success indicators are met as specified in the approved Strategic Performance Management System (SPMS) of the University.

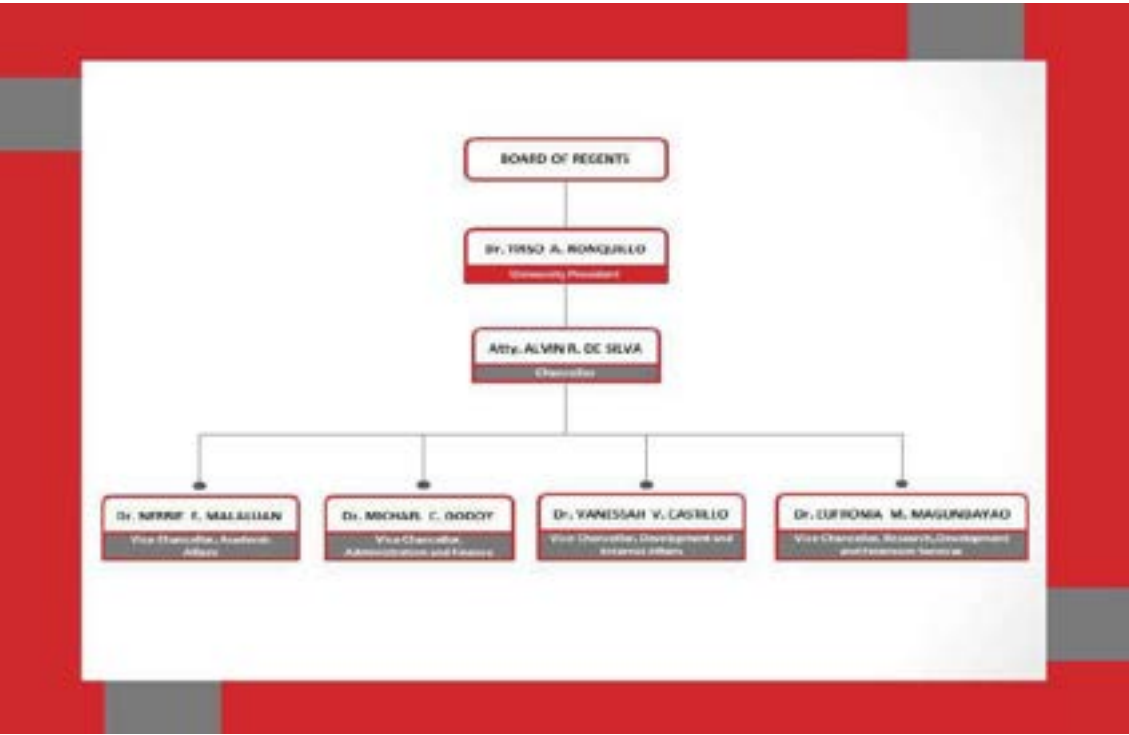


Figure LI-1 Organizational Structure

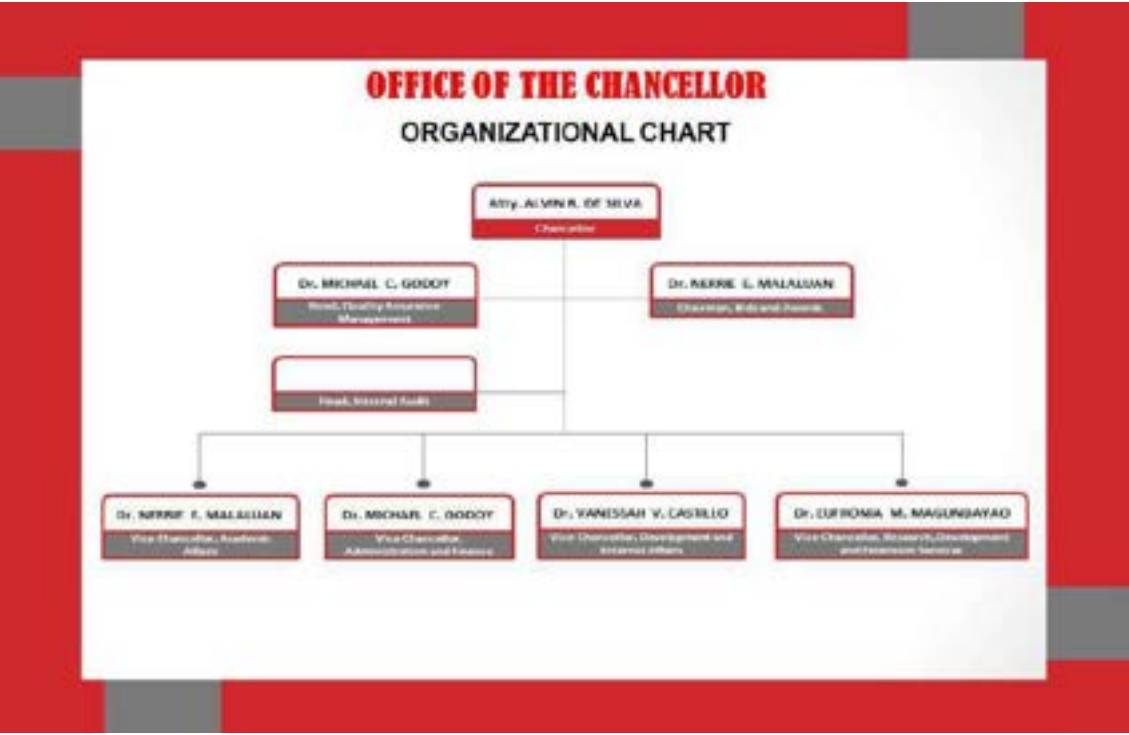


Figure LI-2 Organizational Chart

The Office of the Chancellor provides directions in the implementation of Programs, Activities, and Projects in academics, research, extension services, and infrastructure development; development and implementation of operational plan; and planning and managing the effective and efficient use of all personnel, physical, and financial resources of the campus.



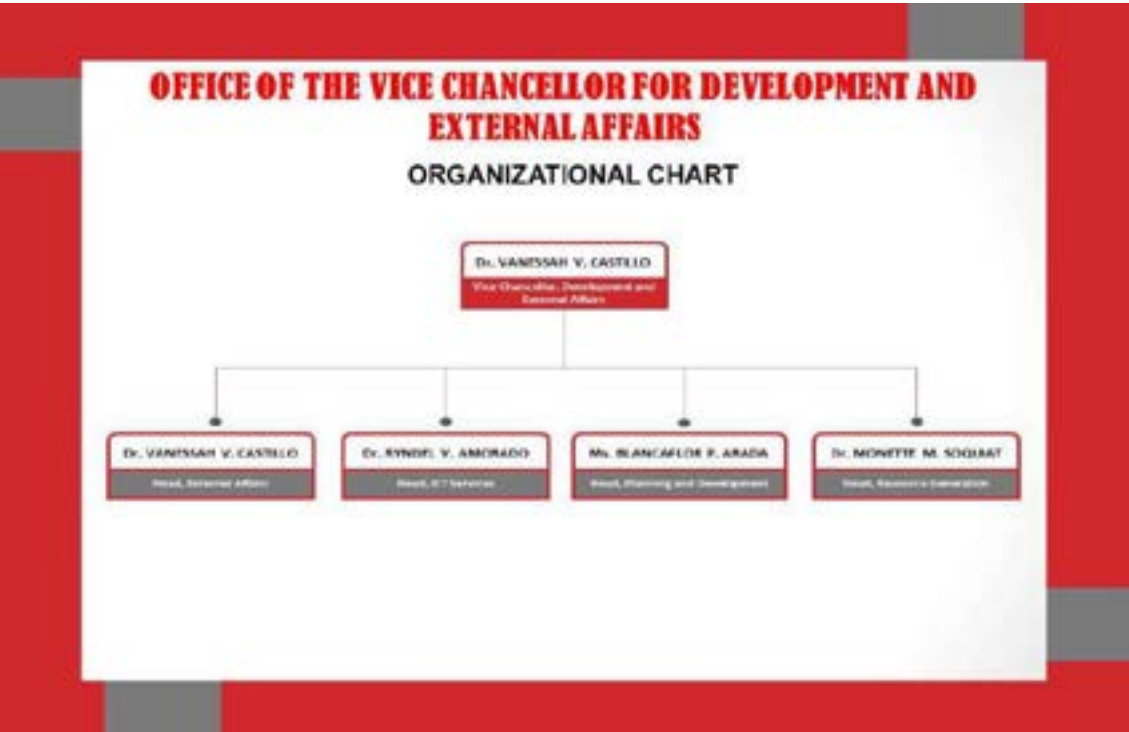


Figure LI-3 Office of Vice Chancellor for Development and External Affairs Organizational Chart

The Office of the Vice Chancellor for Development and External Affairs, meanwhile, supervises, develops, and recommends strategies for resource generation, external affairs, ICT services, and planning and development.

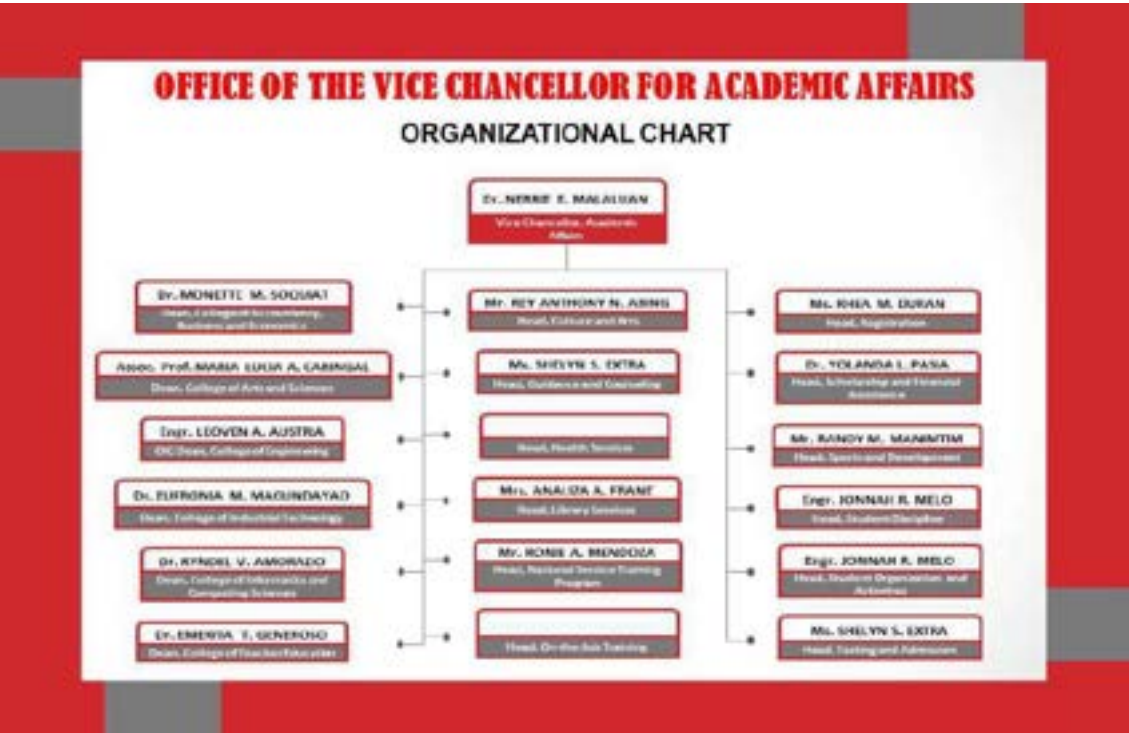


Figure LI-4 Office of Vice Chancellor for Academic Affairs Organizational Chart

The Office of the Vice Chancellor for Academic Affairs provides executive leadership in the overall planning, organizing, and controlling of the academic program areas.

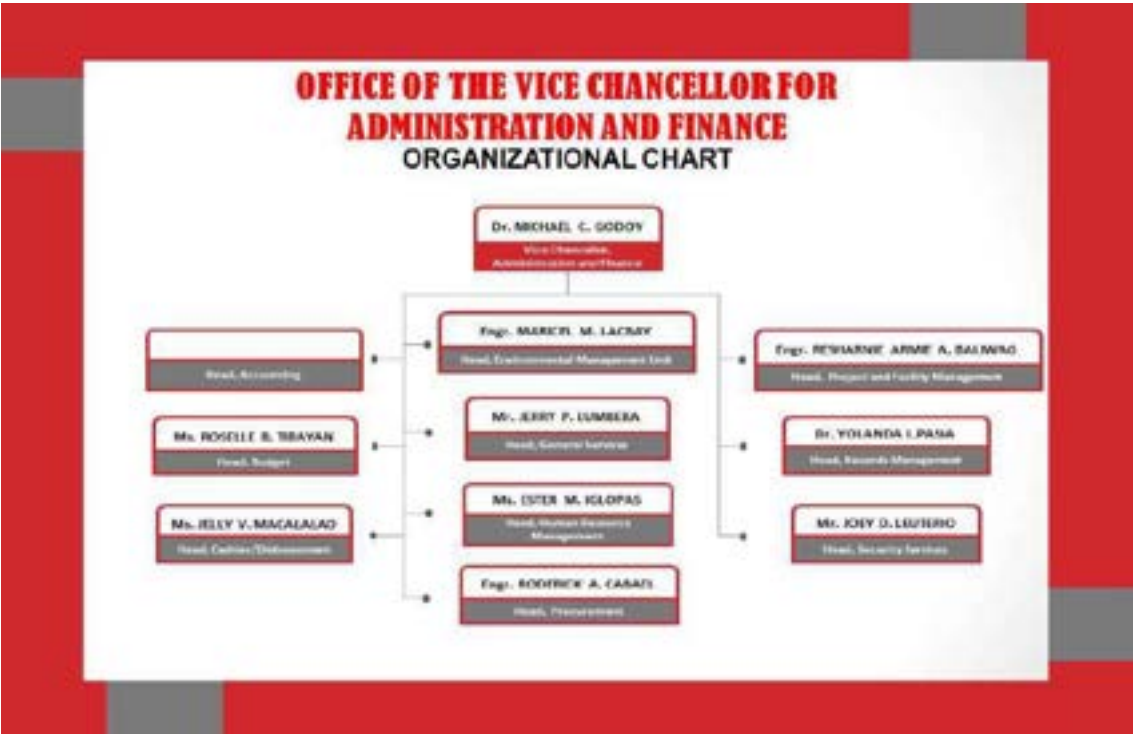


Figure LI-5 Office of Vice Chancellor for Administration and Finance Organizational Chart

The Office of the Vice Chancellor for Administration and Finance provides leadership, overall direction, and supervision in the operation of and in the implementation of policies and procedures in administrative and financial services.

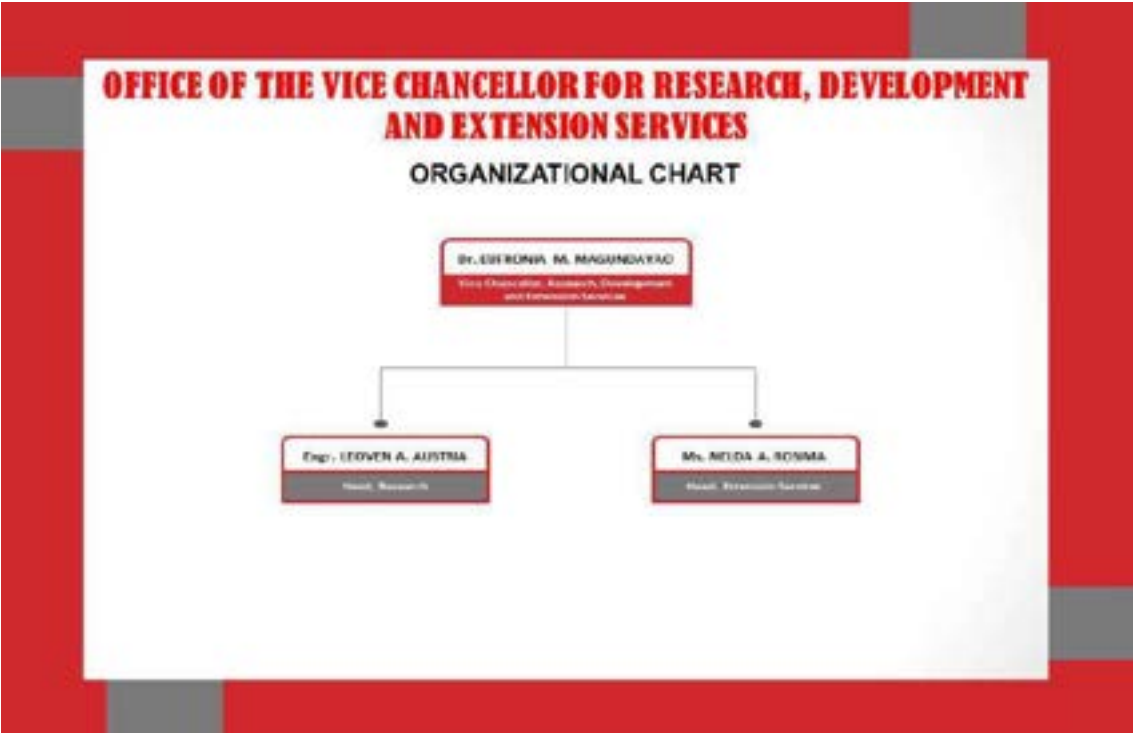


Figure LI-6 Office of Vice Chancellor for Research, Development and Extension Services Organizational Chart

Lastly, the Office of the Vice Chancellor for Research, Development, and Extension Services provides directions and supervises the conduct of research and delivery of extension services.

**e. Programs Offered**

BatStateU TNEU Lipa offers a variety of programs in the fields of engineering, technology, business, education, and social sciences to more than 4,700 enrolled students for AY: 2022-2023.

The College of Accountancy, Business, and Economics (CABE) which currently has a total of 1,850 students offers the following degrees: BS Management Accounting, BS Public Administration, and BS Business Administration with majors in Human Resource Management, Marketing Management, and Operations Management. With 1,488 enrolled students, the College of Arts and Sciences (CAS) offers the BA Communication and BS Psychology programs. The College of Industrial Technology (CIT) has a total number of 444 students and offers Bachelor in Industrial Technology with majors in Computer Technology, Electrical Technology, Instrumentation and Control Technology, and Electronics Technology. The College of Informatics and Computing Sciences (CICS) with 500 enrolled students offers BS Computer Science and BS Information Technology. The College of Engineering (CE), meanwhile, offers BS Industrial Engineering to 352 students. Lastly, the newly instated College of Teacher Education (CTE) has 156 enrolled students and offers Bachelor in Secondary Education with majors in English, Science, and Mathematics.

Table LI-1 Program Recognition

PROGRAM	Certificate of Program Compliance (COPC) / Government Recognition (GR) Reference
College of Arts and Sciences	
<b>BA Communication</b>	Government Recognition No. 101 s. 2015 July 8, 2015  Applied for COPC; submitted requirements; waiting for schedule of visit
<b>BS Psychology</b>	Government Recognition No. 100 s. 2015 July 8, 2015  Applied for COPC; submitted requirements; waiting for schedule of visit
College of Accountancy, Business and Economics	



<b>BS Management Accounting</b>	Submitted program for evaluation for COPC; Visited, September 24, 2021; Waiting for the result
<b>BA Public Administration</b>	Submitted program for evaluation for COPC; Visited, September 24, 2021; Waiting for the result
<b>BS Business Administration (Human Resource Management)</b>	Government Recognition No. 123 s. 2015 October 27, 2015  Applied for COPC; submitted requirements; waiting for schedule of visit
<b>BS Business Administration (Marketing Management)</b>	Government Recognition No. 123 s. 2015 October 27, 2015  Applied for COPC; submitted requirements; waiting for schedule of visit
<b>BS Business Administration (Operations Management)</b>	Submitted program for evaluation for COPC; Visited, September 24, 2021; Waiting for the result
College of Engineering	
<b>BS Industrial Engineering</b>	Submitted program for evaluation for COPC; Visited, September 23, 2015
College of Informatics and Computing Sciences	
<b>BS Computer Science</b>	COPC No. 101 Series of 2021, October 27, 2021
<b>BS Information Technology</b>	COPC No. 112 Series of 2022, June 24, 2022
College of Industrial Technology	
<b>Bachelor of Industrial Technology - Computer Technology</b>	COPC No. 038 Series of 2021, August 10, 2021
<b>Bachelor of Industrial Technology - Electrical Technology</b>	COPC No. 071 Series of 2021, September 7, 2021

<b>Bachelor of Industrial Technology - Electronics Technology</b>	Submitted program for evaluation for COPC; Visited, August 3, 2021; Waiting for the result
<b>Bachelor of Industrial Technology - Instrumentation and Control Technology</b>	Submitted program for evaluation for COPC; Visited, August 3, 2021; Waiting for the result
College of Teacher Education	
<b>Bachelor of Secondary Education - English</b>	COPC No. 100 Series of 2021 October 25, 2021
<b>Bachelor of Secondary Education – Mathematics</b>	COPC No. 100 Series of 2021 October 25, 2021
<b>Bachelor of Secondary Education – Science</b>	COPC No. 100 Series of 2021 October 25, 2021

In the coming years, BatStateU TNEU Lipa will offer additional programs. Consequently, some programs will also be phased out. By AY: 2026-2027, CAS will adhere to offer BS Social Work, BS Statistics, and BA English Language Studies. In 2029-2030, the college also aims to offer BA History, and BA Literature and Cultural Studies. A number of programs are expected to be added under CICS which are the following: BS Information System (2022-2023), BS Data Science (2023-2024), and BS Cyber Security. The BS Computer Science program, however, will no longer be offered starting AY: 2024-2025. Likewise, BS Industrial Engineering, the lone program under CE, will be phased out on AY: 2024-2025. CTE will offer Bachelor in Elementary Education on AY: 2024-2025.

f. **Recognitions and Awards Obtained**

- BatStateU Lipa Extension Services received the Blood Services Platinum from the Philippine Red Cross (PRC) in recognition of the campus' continuous support for voluntary blood donations on July 27, 2016. For the past five years, BatStateU Lipa has donated 534 units of blood from officials, professors, and students.
- BatStateU Lipa was hailed Top 39 in the 2017 Registered Master Electrician (RME) Board Examination with 90.1% passing rate.
- Four faculty members of BatStateU Lipa received awards in the 2<sup>nd</sup> INSTABRIGHT National Award for Education on January 09, 2021 at the Development Academy of the Philippines Conference Center, Tagaytay.
  - Outstanding Teacher of the Year*  
 Dr. Francis G. Balazon  
 Dr. Michael C. Godoy  
 Dr. Nerrie E. Malaluan  
 Mr. Arnold Q. Malaluan
  - Innovative Teacher of the Year*  
 Dr. Francis G. Balazon

- *Outstanding Researcher of the Year*  
Dr. Nerrie E. Malaluan
  - *Writer of the Year*  
Dr. Nerrie E. Malaluan
4. BatStateU Lipa has been conferred an Institutional Member of INSTABRIGHT International Guild of Researchers and Educators, Inc. (INGREI) on March 06, 2021.
  5. Four faculty members were recognized in the Luminary Excellence Education and Research Awards on May 28, 2022.

- \*Dr. Eufronia M. Magundayao
- Outstanding Educator in Community Engagement
  - Outstanding Educator in Science
  - Outstanding Research Adviser
  - Outstanding Researcher

- \*Asst. Prof. Arnold Q. Malaluan
- Outstanding Educator in Community Engagement
  - Outstanding Research Adviser
  - Outstanding Researcher

- \*Ms. Blancaflor Arada
- Outstanding Educator in Community Engagement
  - Outstanding Educator in Science
  - Outstanding Research Adviser
  - Outstanding Researcher

- \*Mr. Philip Geneta
- Outstanding Educator of the Year

6. BatStateU TNEU Lipa is now a member of the Asian Congress for Media and Communication.

**A. Demographic Profile**

As an academic institution, Batangas State University The National Engineering University Lipa operates through the collaboration of its stakeholders. Besides the guidance of administration, parents and community, the campus functions effectively through its backbone- the faculty and the non-teaching employees- to best serve its main clients, the students. To detail, presented below are the data on the demographic profile of these stakeholders.

**a. Brief Summary of the Population (Male/Female)**

**1. Students**

Table LI-2 Summary of Population of Students in AY 2020-2021

PROGRAM	AY 2020-2021		AVERAGE ENROLM ENT
	1st SEMESTER	2nd SEMESTER	



	M	F	T	M	F	T	M	F
Bachelor of Science in Industrial Engineering	268	334	602	234	313	547	251	324
Bachelor of Science in Computer Science	91	39	130	81	34	115	86	37
Bachelor of Science in Management Accounting	54	246	300	49	239	288	52	243
Bachelor of Science in Business Administration major in Human Resource Management	48	242	290	46	234	280	47	238
Bachelor of Science in Business Administration major in Marketing	119	215	335	114	213	327	117	214
Bachelor of Arts in Communication	169	309	478	147	262	409	158	286
Bachelor of Science in Psychology	47	207	254	42	193	235	45	200
Bachelor of Industrial Technology – Computer Technology	116	72	188	101	62	163	108	67
Bachelor of Industrial Technology – Electrical Technology	68	20	88	56	20	76	62	20
<b>Total</b>	<b>980</b>	<b>1684</b>	<b>2664</b>	<b>870</b>	<b>1570</b>	<b>2440</b>	<b>926</b>	<b>1629</b>

The table presents the summary of the population of students in BatStateU TNEU Lipa in the two semesters of A.Y. 2020-2021. It is detailed by program and by sex. As shown, among the nine (9) programs offered in the academic year, Bachelor of Science in Industrial Engineering tallies the highest number of enrollees at 602 and 547 in the first and second semester, respectively. This is seconded by the number of students enrolled in Bachelor of Arts in Communication at 478 and 409. Meanwhile, Bachelor of Science in Computer Science, Bachelor of Industrial Technology major in Computer Technology, and Bachelor of Industrial Technology rank least with the student population of 130 and 115, 188 and 163, and 88 and 86 in the two semesters, respectively.

Moreover, as regards to sex, majority of the programs offered in the academic year are dominated by female. These programs include the Bachelor of Science in Industrial Engineering, Bachelor of Science in Management Accounting, Bachelor of Science in Business Administration major in Human Resource Management and Marketing, Bachelor of Arts in Communication and Bachelor of Science in Psychology. However, the three computer and technology-related programs which tally the least number of enrollees are highly dominated by male students. Generally, two-thirds of the campus population are female.

## 2. Faculty

Table LI-3 Summary of Population of Faculty in AY 2020-2021

CATEGORY	AY 2020-2021						AVERAGE COUNT	
	1st SEMESTER			2nd SEMESTER				
	M	F	T	M	F	T	M	F
Permanent	12	9	21	14	16	30	13	13
Temporary	2	3	5	3	2	5	3	3
Guest Lecturers	35	33	68	40	36	76	38	35
Total	49	45	94	57	54	111	54	51

The table shows the summary of the population of faculty members in Batangas State University Lipa during the first and second semester of the A.Y. 2021-2021. It details the distribution of the population according to their status of employment and sex. As presented, the number of permanent faculty members increases from 21 in the first semester to 30 in the second semester. The number of faculty with temporary status remains the same, whereas the number of guest lecturers increases by 8, from 68 in the first to 76 in the second semester. Also, the table surfaces that, in terms of number, the faculty members of the campus are highly dominated by guest lecturers. In fact, the population of guest lecturers triples the count of those with item positions.

In terms of sex, among 94 faculty members in the first semester, 49 are males and 45 are females. Also, among 111 faculty members in the second semester, 57 are males and 54 are females. This justifies that the campus observes fair distribution in terms of sex.

3. Non-Teaching Personnel

Table LI-4 Summary of Population of Non-Teaching Personnel in A.Y. 2020-2021

CATEGORY	AY 2020-2021						AVERAGE COUNT	
	1st SEMESTER			2nd SEMESTER				
	M	F	T	M	F	T	M	F
Job Order	2	4	6	6	18	34	4	11
Utility Personnel	1	2	3	2	2	4	2	2
Maintenance	1	0	1	1	0	1	1	0
Security Guard	7	1	8	6	2	8	7	2
Total	11	7	18	15	22	37	14	14

The table presents the summary of the population of Non-Teaching Personnel in Batangas State University Lipa during the first and second semester of A.Y. 2020-2021. In particular, it details the distribution of the personnel according to their positions and sex. As shown, there are six (6) Job Orders in the first semester of the academic year. This number increases nine (9) times in the second semester as new offices are manned due to the implementation of the Revised Organizational Structure, Management Procedures and Processes (ROSMPP). Meanwhile, the number of Utility Personnel,

Maintenance and Security Guard almost remains the same between the two semesters.

As regards to sex, on average count, two-thirds of Job Order Personnel are females. Utility Personnel, on the other hand, are on fair count while male security guards outnumber female security guards in seven is to two (7:2) count.

**b. Projected Population in the Next Ten (10) Years**

The ten (10) year Land Used Development and Infrastructure Plan of the campus considers the number of students, faculty and non-teaching personnel it can accommodate from A.Y. 2021-2031. Indicated below is the 10-year population projection:

**1. Students**

- Historical Data**

Table LI-5 Historical Data of Faculty in AY 2016-2021

ACADEMIC YEAR	TOTAL	MALE	FEMALE
2016 - 2017	2330	1044	1286
2017 - 2018	1571	666	905
2018 - 2019	1685	698	987
2019 - 2020	1753	645	1108
2020 - 2021	2548	916	1632

**Note:** The data is based on the average/mean of the combined number of students the semesters in a year.

The table shows the historical data of the population of students in the campus from A.Y. 2016 to 2021. To detail, the population of students decreased from 2330 in AY 2016-2017 to 1571 in AY 2017-2018. This decline of population is due to the implementation of the K-12 program. However, the population began to increase in the next academic years. In particular, there were 1685 students in AY 2018-2019, which then increased to 1753 in AY 2019-2021. More so, a bunch of students began enrolling in the tertiary level upon completing a two-year senior high school program; thus resulting in the sudden increase of the population in AY 2020-2021 tallying 2548.

In terms of sex, female students dominated the population count among all the academic years. In fact. Almost two-thirds of the population in all academic years are female.

- Projected Data**



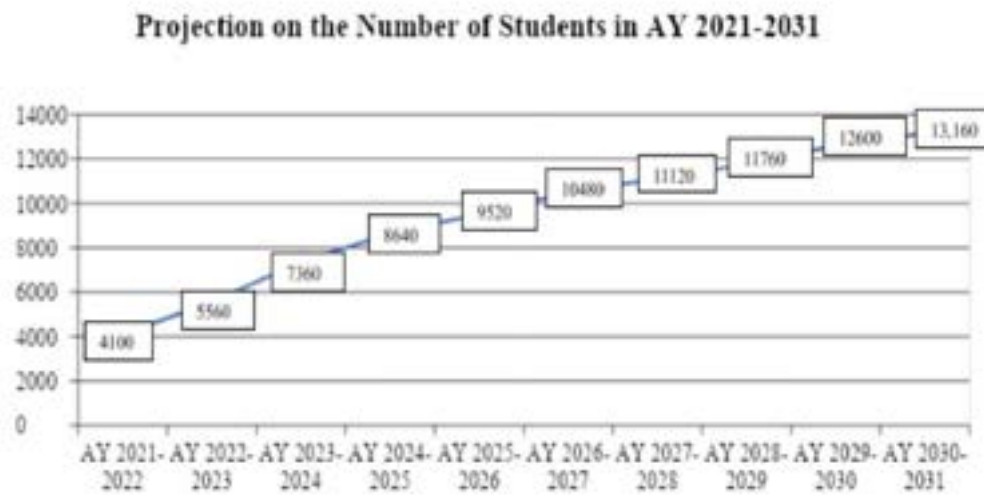


Figure LI-7 Projection on Number of Students (AY 2021-2031)

The line graph shows the projection of students' population in Batangas State University Lipa in AY 2021-2031. As presented, the number of students will increase every academic year. In particular, in AY 2021-2022, there are 4,100 students which is almost double the count in the previous academic year. The number also increases in AY 2022-2023 at 5,560, AY 2023-2024 at 7,360, AY 2024-2025 at 8,640, AY 2025-2026 at 9520, AY 2026-2027 at 10,480, 2027-2028 at 11,120, AY 2028-2029 at 11,760, AY 2029-2030 at 12,600, and AY 2030-2031 at 13,160.

The increase in the population of students in the academic years is caused by the new program openings in the campus. In particular, six (6) new programs are offered in AY 2021-2022. These include 1) Bachelor of Science in Information Technology, 2) Bachelor of Secondary Education major in English, 3) Bachelor of Secondary Education major in Science, 4) Bachelor of Industrial Technology major in Electronics Technology, 5) Bachelor of Science in Operations Management, and 6) Bachelor of Public Administration. Also, 1) Bachelor of Science in Information System, 2) Bachelor of Secondary Education major in Mathematics and 3) Bachelor of Industrial Technology major in Instrumentation and Control Technology will be offered in AY 2022-2023. Meanwhile, two (2) undergraduate programs are proposed to be offered by AY 2023-2024. These include 1) Bachelor of Science in Data Science and 2) Bachelor of Science in Cyber Security. In the same academic year, Master of Science in Business Administration will also be open. In academic year 2024-2025, 1) Bachelor of Elementary Education, Bachelor of Industrial Technology major in Automotive Technology and Bachelor of Science in Food Technology will be added to the list of the programs in the campus. However, in the same academic year, there will be no students in Bachelor of Science in Computer Science and Bachelor of Science in Industrial Engineering as these programs will no longer be offered.

Additional programs are proposed to open in the next academic year. These include Bachelor of Science in Accountancy, Bachelor of Science in Statistics, Bachelor of Science in Social Work, and Bachelor of Arts in English Language Studies by AY 2026-2027; Bachelor of Science in Management Engineering by AY 2028-2029; Bachelor of Arts in History and Bachelor of Arts in Literature and Cultural Studies by AY 2029-2030; and Bachelor of Science in Information Technology Entrepreneurship by AY 2030-2031.

The projected increase in the population of students from AY 2021-2022 to AY 2030-2031 denotes the increase in the number of faculty members and learning resources needed. With this projection, strategic planning on students' class scheduling and acquisition of learning facilities should be secured. Observance of three-shifts in a day and establishment of buildings for additional classrooms may be considered.

2. Faculty

- **Historical Data**

Table LI-6 Historical Data of Faculty in AY 2016-2021

ACADEMIC YEAR	TOTAL	MALE	FEMALE
2016 - 2017	51	26	25
2017 - 2018	45	26	19
2018 - 2019	48	27	21
2019 - 2020	55	28	27
2020 - 2021	106	54	52

***Note:** The data is based on the average/mean of the combined number of faculty members of the semesters in a year.*

The table shows the historical data of faculty from A.Y. 2016 to 2021. As reflected, from the year 2016-2017, there were a total of 51 faculty members. However, the number decreased to 45 in AY 2017-2018 due to the decline in the number of student-enrollees because of the implementation of the K-12 program. In AY 2018-2019, there were 48 faculty members, and this count increased to 55 in AY 2019-2020 as a number of students had completed K-12 program and began enrolling in the campus. More so, the number of faculty in AY 2020-2021 was doubled to 106. In terms of sex, there is almost a fair count distribution between male and female among the academic years; thus suggesting that the campus is absorbing compliance to GAD policies.

- **Projected Data**



Figure LI-8 Projected Number of Faculty (AY 2021-2031)

The line graph shows the projected number of faculty members in Batangas State University Lipa for AY 2021-2022 to AY 2030-2031. As presented, the number of faculty members will increase every academic year. This is caused by the increase of the number of students and programs in the campus. In particular, in AY 2021-2022, there are 154 faculty members. This count tallies one-third increase on the number of faculty from the previous academic year. The number also increases in AY 2022-2023 at 206, AY 2023-2024 at 272, AY 2024-2025 at 320, AY 2025-2026 at 352, AY 2026-2027 at 388, 2027-2028 at 411, AY 2028-2029 at 435, AY 2029-2030 at 466, and AY 2030-2031 at 487.

### 3. Non-Teaching Personnel

- **Historical Data**

Table LI-7 Historical Data of Non-Teaching Employee in AY 2016-2021

ACADEMIC YEAR	TOTAL	MALE	FEMALE
2016 - 2017	31	14	17
2017 - 2018	37	20	17
2018 - 2019	37	20	17
2019 - 2020	25	14	11
2020 - 2021	28	13	15

**Note:** The data is based on the average/mean of the combined number of non-teaching personnel of the semesters in a year.

Table surfaces the historical data of employees in the campus in the five (5) academic years. The data were presented by year, the total number of employees, the number of male and female employees. As shown, there were 14 male and 17 female non-teaching employees in AY 2016-2017. The number increased in AY 2017-2018 and 2018-2019 which both count to 20 males and 17 females. However, the population decreased in AY 2019-2020 and 2021-2021. Male non-teaching employees dropped to 14 and 13 in the two academic years, respectively. As to female population in the two terms, counts also dropped from 17 to 11 and 15 in AY 2019-2020 and 2020-2021.



● **Projected Data**

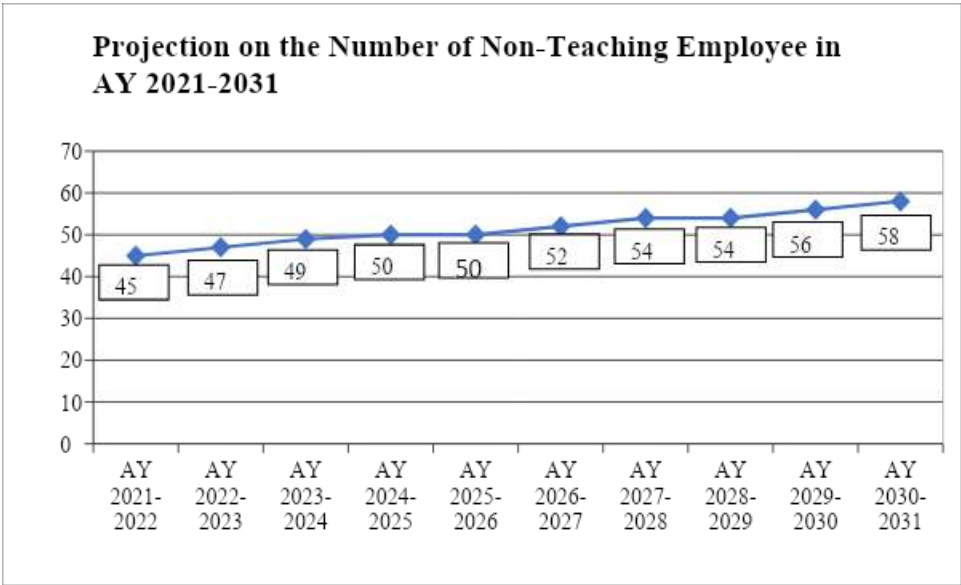


Figure LI-9 Projected Number of Non-Teaching Employee (AY 2021-2031)

The line graph shows the projected population of non-teaching employees in AY 2021-2022 to AY 2030-2031. As presented, the number of non-teaching employees will increase every academic year. Due to the implementation of the Revised Organizational Structure and Management Procedures and Processes (ROSMPP), the number of non-teaching employees escalates to 45 in AY 2021-2022- almost doubling the tally in the previous academic year. Also, as projected, the number also increases in AY 2022-2023 at 47, AY 2023-2024 at 49, AY 2024-2025 at 50, AY 2025-2026 at 50, AY 2026-2027 at 52, 2027-2028 at 54, AY 2028-2029 at 54, AY 2029-2030 at 56, and AY 2030-2031 at 58.

**B. Geographic Location**

**a. Brief Profile of Province of Batangas and City of Lipa**

Batangas is a province in the Philippines situated in the CALABARZON region occupying the central section of Luzon. Its capital is the City of Batangas.

The province has a land area of 3,119.75 square kilometers or 1,204.54 square miles. Its population as determined by the 2015 Census was 2,694,335. This represented 18.69% of the total population of the CALABARZON region, 4.69% of the overall population of the Luzon island group, or 2.67% of the entire population of the Philippines. Based on these figures, the population density is computed at 864 inhabitants per square kilometer or 2,237 inhabitants per square mile.

Batangas is bordered, clockwise from the North, by Cavite, Laguna, Quezon, Tayabas Bay, Verde Island Passage, and South China Sea.

Batangas is one of the most popular tourist destinations near Metro Manila. It is home to the well-known Taal Volcano, one of the Decade Volcanoes, and Taal Heritage town, a small town that has ancestral houses and structures dating back to the 19th century. The province also has numerous beaches and diving spots including Anilao in Mabini, Sombrero Island in Tingloy, Ligpo Island and Sampaguita Beach in Bauan, Matabungkay in Lian, Punta Fuego in Nasugbu, Calatagan and Laiya in San Juan. All of the marine waters of the province are part of the Verde Island Passage, the center of the center of world's marine biodiversity.

Batangas is a combination of plains and mountains, including one of the world's smallest volcanoes, Mt. Taal, with an elevation of 600 meters (2,000 ft), located in the middle of the Taal Lake. Other important peaks are Mount Macolod with an elevation of 830 meters (2,720 ft), Mt. Banoy with 960 meters (3,150 ft), Mt. Talamitam with 700 meters (2,300 ft), Mt. Pico de Loro with 664 meters (2,178 ft), Mt. Batulao with 693 meters (2,274 ft), Mt. Manabo with 830 meters (2,720 ft), and Mt. Daguldol with 672 meters (2,205 ft).

Batangas has several islands, including Tingloy, Verde Island (*Isla Verde*), and Fortune Island of Nasugbu.



Figure LI-10 Batangas Province Map and Its Boundaries

Batangas has 30 municipalities and 4 cities. The total number of barangays in the province is 1,078, with total population 2, 697,988.

ID#	Category	Score	Progression	Population Change (2010)	Revenue	Operational Change (2010)	Total Percentage	Procedural Score
Aggravate	Public Order Municipality	54,2572	55,000	0.000	134,400,000.00	0.000	0.000	0.000
Amplify	Public Order Municipality	55,0000	55,000	0.000	100,000,000.00	0.000	0.000	0.0000
Belonged	Public Order Municipality	55,3432	55,000	0.000	0.00,000,000.00	0.000	0.000	0.0000
Boulder (R)	Public Order Municipality	55,0000	55,000	0.000	80,000,000.00	0.000	0.000	0.0000
Calculus	Unlabeled City	55,0000	55,000	0.000	0.000,000,000.00	0.000	0.000	0.0000
Chosen	First Class Municipality	55,3432	54,000	0.000	50,000,000.00	0.000	0.000	0.0000
Circular	First Class Municipality	55,3432	50,000	0.000	100,000,000.00	0.000	0.000	0.0000
Conducting	Second Class Municipality	55,3432	55,000	0.000	200,000,000.00	0.000	0.000	0.0000
Converse	Public Order Municipality	55,3432	55,000	0.000	0.00,000,000.00	0.000	0.000	0.0000
Cover	Second Class Municipality	55,3432	55,000	0.000	0.00,000,000.00	0.000	0.000	0.0000
Covered	Public Order Municipality	55,0000	55,000	0.000	100,000,000.00	0.000	0.000	0.0000
Delivery (R)	First Class Municipality	55,0000	55,000	0.000	0.00,000,000.00	0.000	0.000	0.0000
Lower	Third Class Municipality	55,0000	55,000	0.000	0.00,000,000.00	0.000	0.000	0.0000
Liquid	Unlabeled City	55,0000	55,000	0.000	0.00,000,000.00	0.000	0.000	0.0000
Liquid	First Class Municipality	55,3432	50,000	0.000	100,000,000.00	0.000	0.000	0.0000
Machine (R)	First Class Municipality	55,0000	55,000	0.000	0.00,000,000.00	0.000	0.000	0.0000
Melancholy	Second Class Municipality	55,0000	55,000	0.000	100,000,000.00	0.000	0.000	0.0000
Suburbanization	Public Order Municipality	55,0000	55,000	0.000	100,000,000.00	0.000	0.000	0.0000
Unhappy	First Class Municipality	55,0000	55,000	0.000	0.00,000,000.00	0.000	0.000	0.0000
Practical Exercise	Second Class Municipality	55,0000	55,000	0.000	200,000,000.00	0.000	0.000	0.0000
Discrete (R)	First Class Municipality	55,0000	55,000	0.000	100,000,000.00	0.000	0.000	0.0000
San Juan (R)	First Class Municipality	55,0000	55,000	0.000	50,000,000.00	0.000	0.000	0.0000
San Luis (R)	Public Order Municipality	55,0000	55,000	0.000	100,000,000.00	0.000	0.000	0.0000
San Marcos (R)	First Class Municipality	55,0000	55,000	0.000	50,000,000.00	0.000	0.000	0.0000
San Marcos (R)	First Class Municipality	55,0000	55,000	0.000	100,000,000.00	0.000	0.000	0.0000
Santa Teresa (R)	First Class Municipality	55,0000	55,000	0.000	50,000,000.00	0.000	0.000	0.0000
Santa Teresa (R)	First Class Municipality	55,0000	55,000	0.000	100,000,000.00	0.000	0.000	0.0000
San	First Class Municipality	55,0000	55,000	0.000	100,000,000.00	0.000	0.000	0.0000
Talley (R)	First Class Municipality	55,0000	55,000	0.000	100,000,000.00	0.000	0.000	0.0000
Tamiami (R)	Unlabeled City	55,0000	55,000	0.000	0.00,000,000.00	0.000	0.000	0.0000
Tayam	Second Class Municipality	55,0000	55,000	0.000	100,000,000.00	0.000	0.000	0.0000
Tingy	First Class Municipality	55,0000	55,000	0.000	0.00,000,000.00	0.000	0.000	0.0000
Tul	Third Class Municipality	55,0000	55,000	0.000	100,000,000.00	0.000	0.000	0.0000
TOTALS			2,000,000		14,000,000,000.00		1.00	41,700

Figure LI-11 Batangas Province Population



Figure LI-12 Aerial View of Lipa City



Lipa City is a 1st class component city in the province of Batangas, Philippines. According to the 2015 census, it has a population of 332,386 people.

It is the first city charter in the province and one of four cities in Batangas alongside Batangas City, Santo Tomas, and Tanauan. It is located 78 kilometers (48 mi) south of Manila and is the most populous city of Batangas.

Lipa covers an area of 20,940 hectares (209.4 km<sup>2</sup>) at an elevation of 1,025 feet (312 m) above sea level. Lipa's fishing area is located at barangay Halang, in the west of the city; it is actually a portion of Taal Lake, which is connected to other municipalities (Cuenca, Mataasnakahoy and Balete).

Visually dominated by Mt Malarayat, Lipa is situated at an elevation of 1,025 feet above sea level with a predominantly agricultural economy based upon coffee, hog and poultry farming.

The city's location, in a valley between the Malepunyo Mountain Range and Mount Maculot, makes it a low-risk area for natural disasters. These two mountains serve as a windbreak during typhoons. Mount Maculot, in the west, also served as a shield during eruptions of the Taal Volcano.

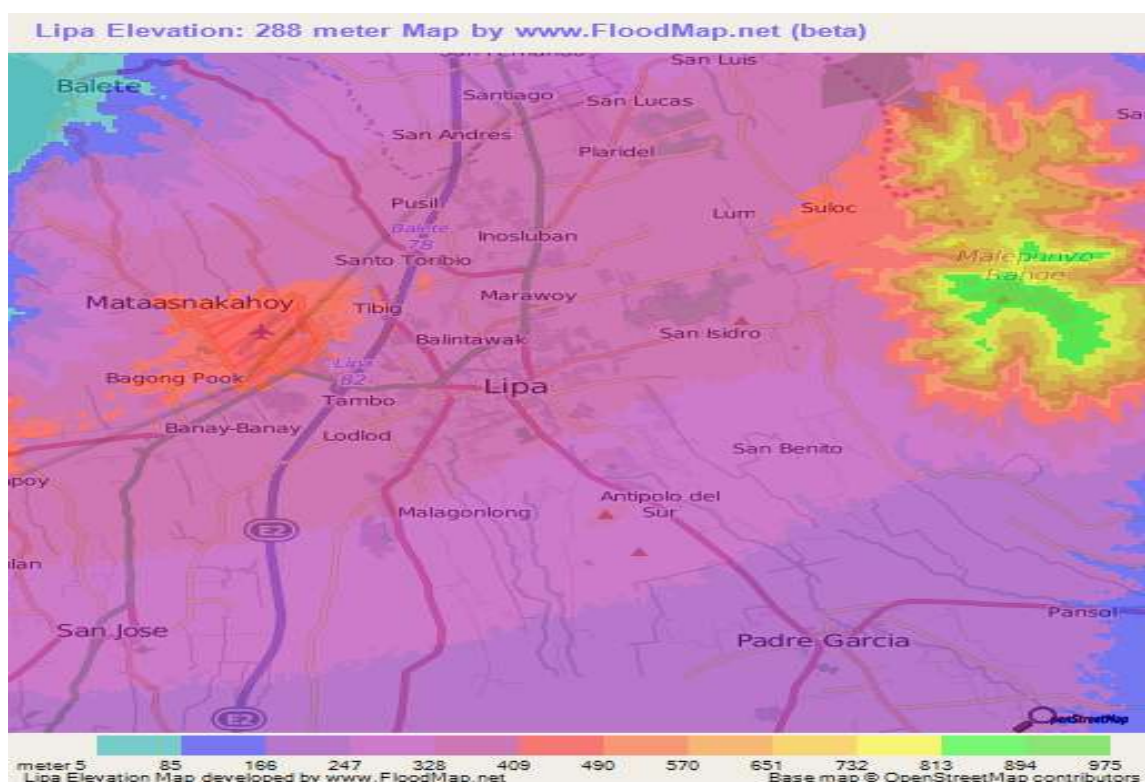


Figure LI-13 Lipa City Elevation Map

Lipa is bounded by the city of Santo Tomas in the northeast, San Pablo of Laguna and San Antonio, Quezon in the east, the municipalities of Padre Garcia and Rosario in the southeast, the municipalities of Ibaan and San Jose in the southwest, the municipalities of Cuenca and Mataasnakahoy and Taal Lake in the west and the municipalities of Balete and Malvar in the northwest.



Figure LI-14 Lipa City Map and Its Political Boundaries

The city consists of 72 barangays, 12 of which are in the poblacion (city proper) and 60 are suburbs. The Mayor, elected by direct majority vote, is the Chief Executive. A City Council, composed of elected City Councilors, serves as the legislature.

The barangays are:

- North District
  - Balintawak
  - Bugtong na Pulo
  - Bulacnin
  - Dagatan
  - Inosluban
  - Lumbang
  - Marawoy
  - Plaridel
  - Pusil
  - San Lucas
  - Talisay
- South District
  - Adya
  - Anilao
  - Anilao-Labac
- Bolbok
- Calamias
- Cumba
- Kayumanggi
- Lodlod
- Mabini
- Malagonlong
- Pagolingin Bata
- Pagolingin East
- Pagolingin West
- Quezon
- Rizal
- Sampaguita
- San Guillermo
- San Sebastian (Balagbag)
- East District
  - Antipolo Del Norte
  - Antipolo Del Sur
  - Latag
  - Malitlit
  - Muntingpulo
  - Pinagkawitan
  - Sabang
  - San Benito
  - San Celestino
  - San Francisco
  - San Isidro (formerly Sapac)
  - San Jose
  - Santo Niño
  - Santo Toribio
  - Tangob
  - Tipacan
- West District
  - Bagong Pook
  - Banaybanay
  - Bulaklakan
  - Duhatan
  - Fernando Air Base

- o Halang
- o Mataas Na Lupa
- o Pangao
- o Pinagtongulan
- o San Carlos
- o San Salvador
- o Sico
- o Tambo
- o Tangway
- o Tibig
- Urban District
  - o Poblacion Barangay 1
  - o Poblacion Barangay 2
  - o Poblacion Barangay 3
  - o Poblacion Barangay 4
  - o Poblacion Barangay 5
  - o Poblacion Barangay 6
  - o Poblacion Barangay 7
  - o Poblacion Barangay 8
  - o Poblacion Barangay 9
  - o Poblacion Barangay 9-A
  - o Poblacion Barangay 10
  - o Poblacion Barangay 11
  - o Poblacion Barangay 12

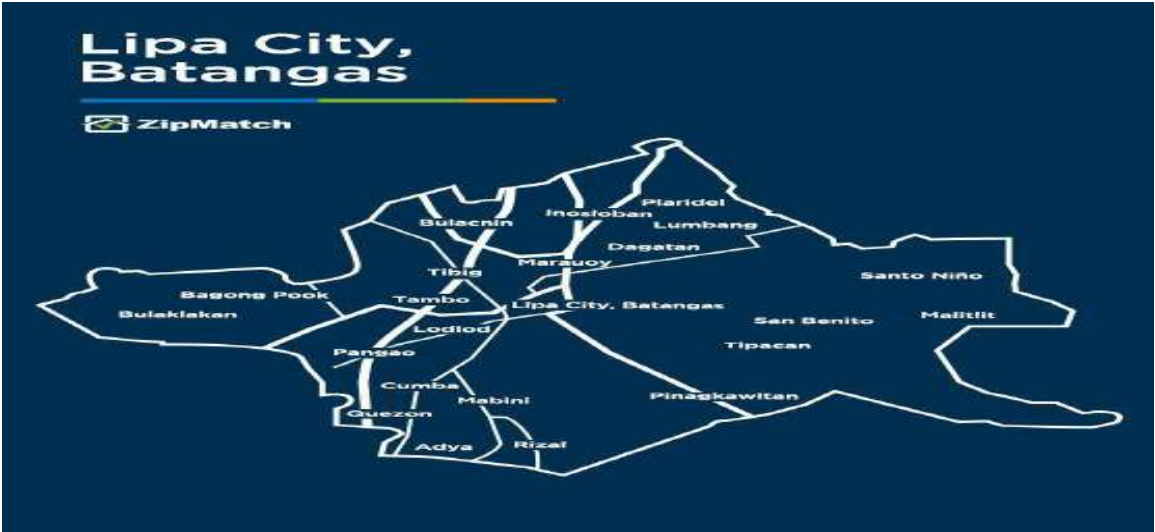


Figure LI-15 Map of Lipa City Barangays

Climate data for Lipa														[hide]
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	
Average high °C (°F)	28 (82)	29 (84)	30.3 (86.5)	31.7 (89.1)	31.5 (88.7)	30.5 (86.9)	29.4 (84.9)	28.2 (84.6)	28.5 (85.1)	28.6 (85.3)	28.9 (84.0)	28 (82)	29.6 (85.3)	
Daily mean °C (°F)	24.1 (75.4)	24.7 (76.5)	25.7 (78.3)	26.9 (80.4)	27 (81)	26.5 (79.7)	25.6 (78.1)	25.6 (78.1)	25.7 (78.3)	25.7 (78.3)	25.3 (77.4)	24.5 (76.1)	25.6 (78.1)	
Average low °C (°F)	20.3 (68.5)	20.4 (68.7)	21.1 (70.0)	22.2 (72.0)	22.6 (72.7)	22.5 (72.5)	21.9 (71.4)	22.1 (71.8)	21.9 (71.4)	21.8 (71.2)	21.5 (70.7)	21 (70)	21.6 (70.9)	
Average rainfall mm (inches)	57 (2.2)	30 (1.2)	32 (1.3)	52 (2.0)	160 (6.3)	221 (8.7)	311 (12.2)	298 (11.7)	270 (10.6)	248 (9.8)	240 (9.4)	169 (6.7)	2,060 (82.2)	
Source: Climate-Data.Org <sup>[2]</sup>														

Figure LI-16 Climate Data of Lipa

Lipa has a tropical monsoon climate with a dry season between January and April, and rain for the rest of the year. The average yearly temperature is 25.6 °C (78.1 °F). The highest recorded temperature is 35.7 °C (96.3 °F), and the lowest recorded temperature is 16.4 °C (61.5 °F).

**b. Brief Profile of Watershed**

Mt. Malarayat watershed supplies water to Lipa City and nearby towns. Mt Malarayat Forest Reserve (MMFR), based on the Proclamation 842, covers approximately 1,210 hectares of forest lands within the five upland communities in Lipa City which are Brgys Sto. Nino, Talisay, Malitlit, San Francisco and San Benito. It is the remaining chunk of forest within the Malarayat-Malepunyo mountain range. The proclamation was declared to



protect the watershed and the mountain range. Through the Department of Justice Resolution signed last November 2009, the jurisdiction of Malarayat watershed given to the National Power Corporation (NPC) through Executive Order in response to the need to conserve the MMFR as a source of water to Lipenos and as a result of series of consultations with the stakeholders, the local Government of Lipa initiated the creation of the Lipa Headwaters Council. The LHWC shall take the lead in the conservation of Malarayat Watershed. The whole mountain range is shared by the provinces of Batangas, Laguna and Quezon. The subwater shed of the pilot areas directly drains to Padre Garcia, Batangas. Mt Malarayat has rich biodiversity. There are approximately 122 plant species, 63 species of birds, 35 species of herpetofauna and 16 mammals, among which the famous alamid ( *Paradoxus philippinensis*) and the threatened Luzon Bleeding Heart (*Gallicolumba platenae*) for birds also thrives within the forests of Brgy Sto Nino and Talisay. Ironically, as it was reflected in the delineated MFR map that there is obviously no more public land within the forest reserve, all of which are titled or claimed. There are no more available areas for restoration in Brgy Sto Nino and Talisay. While it was determined that the grasslands in Brgy Malitlit are a potential reforestation area. This project focused on nurturing and maintaining the 5 hectares of grassland in Brgys. Sto Nino and Talisay, planted with indigenous forest trees. Assisted natural regeneration and replanting, protection and fireline establishment were carried out.



Figure LI-17 Lipa City Watershed



Figure LI-18 Lipa City Watershed Aerial View



Figure LI-19 Balintawak River beside SM City Lipa which is near Batangas State University Lipa

### c. Significant National or Regional Characteristics or Value

Lipa City is known to be the Philippine Coffee Granary and the most recognizable brand of coffee in the city is known as '**Kapeng Barako**'. This delicious flavor of coffee has a pungent aroma that is well balanced by its strong robust flavor. In fact, this is one of the reasons the locals call this coffee 'matapang'. Barako coffee was introduced to the Philippines in the 1740s by Spanish friars. It was originally planted in the lowlands of Lipa, Batangas. From there it spread to other areas in the province, and Batangas became known for its coffee locally. To celebrate this, the festival was developed in order to give thanks for the land's productivity for the production of coffee.





Figure LI-20 Lipa City as Coffee Granary and known in Kapeng Barako in the past decades

Lipa City is called Little Rome of the Philippines because of churches and religious groups 99.5% of the city population are Roman Catholic there are 49 parishes in all and 23 existing catholic schools, two high school seminaries, three college seminaries, and two pastoral centers. Lipa City houses most visited churches by visitors and pilgrims like Carmel Monastery, Lipa San Sebastian Cathedral, Redemptorist Lipa and Parish of Mary Mediatrix of All Grace.

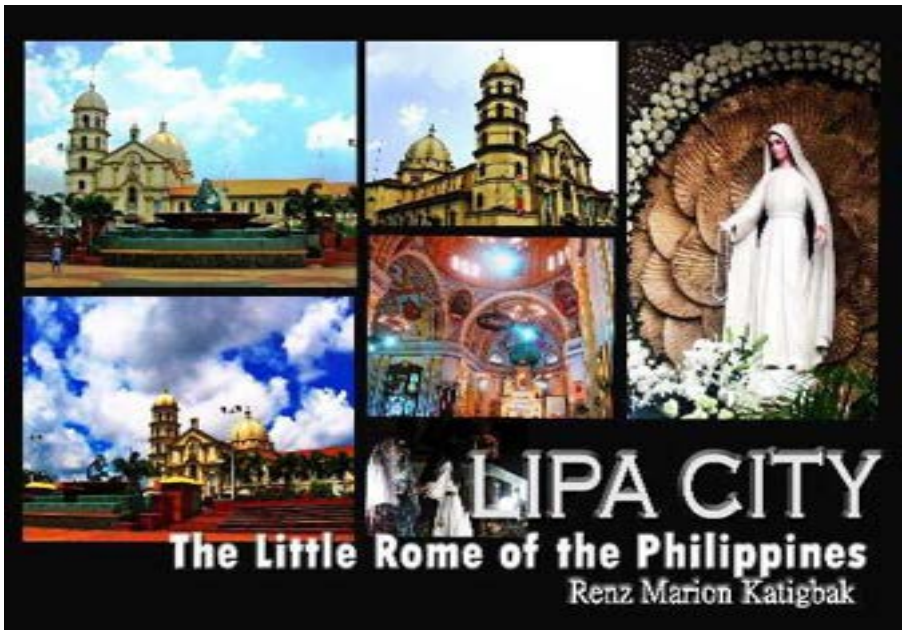


Figure LI-21 Lipa is Known as Little Rome of the Philippines which Houses Most Visited Churches

Lipa City is experiencing rapid urbanization and industrialization. It continues to be an important growth center in the CALABARZON Region because of its strategic location, its relatively cool climate and its industrious and God-fearing human resource. It has been home to many businesses as well as industrial and commercial centers. It is also continuously rising to become the Center of Medical Care in the region with the rise of many tertiary hospitals and medical care facilities offering more and more specialized medical services. Large and modern Mary Mediatrix Center, Lipa Medical



Center, Villa Hospital and Metro Lipa Hospital are some of the private medical centers in Lipa City. Lipa city also has two (2) public hospitals namely Lipa District Hospital and Ospital ng Lipa. Aside from the above-mentioned hospitals, there are more hospitals in the city as well as clinics owned by private physicians.

The city also promotes Medical Tourism. The Farm, which is one of the world's recognized medical and wellness resorts, was located in San Benito, Lipa City. It offers services such as a spa (what it calls a "healing sanctuary"), integrated health consultations for various diseases. The Farm at San Benito is Asia's center of excellence for the promotion of wellness, magnificent eco-luxury holistic health resort offering comprehensive, science-based, evidence-based medically supervised health optimization programs and life-changing retreats based on five healing components: holistic integrative medical services; nurturing spa treatments and hydrotherapy water wellness; plant-based vegan cuisine; mindful movement and functional fitness; as well as a healing environment and heartfelt service.



Figure LI-22 Lipa City promotes Medical Tourism and Center of Medical Care

Lipa has experienced impressive modernization in the last few years. Lipa City is one of the fast-emerging key cities in the country. It has evolved into a progressive city backed by modern conveniences and technological advancements. Industrial parks and commercial districts are popping up in the area. One of the most notable is the LIMA Technology Center, the largest privately-owned industrial park in the country. It is situated inside the LIMA Estate, a 700-hectare economic zone registered under the Philippine Economic Zone Authority (PEZA), which hosts more than a hundred businesses. The locators of LIMA Technology Center are from different industries, from logistics and manufacturing to hospitality. These enterprises employ over 60,000 professionals, boosting the local economy.



Figure LI-23 Aerial View of LIMA Technology Center, an Industrial Park in Lipa City

LIMA Technology Center is a modern industrial park, equipped with state-of-the-art power generation and water production infrastructure. All the utilities are supported by Aboitiz affiliates, providing the locators the security and ease of doing business. The industrial park is also complemented by a 30-hectare commercial zone or the LIMA Central Business District, which already houses The Outlets at Lipa, LIMA Exchange, LIMA Park Hotel, and LIMA Transport Hub. For this reason, it's one of the most coveted business parks in the Southern Tagalog region, a top choice for an alternative destination to Metro Manila. As more PEZA industrial parks pop up in the city with the government pushing countryside development, more opportunities will be available in the future in Lipa City.

Aside from the modernization of real estate, what accelerated Lipa's thriving business environment is the arrival of business process outsourcing (BPO) companies. Because of its huge talent pool, business-friendly government policies, and readily available infrastructure, Lipa City managed to attract outsourcing firms. The Department of Science and Technology Office (DOST-ICTO) and the Information Technology and Business Process Association of the Philippines included Lipa City in the list of the Next Wave Cities for the growth of the country's information technology and BPO sector. To professionals, especially those in the BPO industry, Lipa is an emerging career hub worth exploring. The goal of the local government to be a smart city will improve digital infrastructure in the area, positioning it better as a promising BPO hub.

#### **d. Vulnerabilities and Risks**

Lipa City is very much accessible; it has an extensive road network. The city is a transportation hub for Batangas and nearby provinces. The Southern Tagalog Arterial Road (STAR) and South Luzon Expressway (SLEX) provide access to Batangas City and Metro Manila.

### **National highways and expressways**

Lipa is served by a network of national highways and an expressway. The Southern Tagalog Arterial Road (STAR Tollway) connects the city with Batangas City, Tanauan and Santo Tomas, with a connection to South Luzon Expressway (SLEX), thereby linking the city with Calamba and Metro Manila. Jose P. Laurel Highway (with Ayala Highway (Route 4) on one portion, connects Lipa with the municipalities and cities of Malvar, Tanauan, Santo Tomas, and Calamba in the north and San Jose and Batangas City to the south. P. Torres Street or Lipa-Padre Garcia Road (Route 431), links the city with Padre Garcia and also serves as a route to the municipalities Rosario and San Juan. Another highway, the Alaminos-Lipa City Road, serves the northern barangays of the city, runs northeast to Alaminos and serves as a route to the city with San Pablo in Laguna. Governor Feliciano P. Leviste Highway or Lipa-Balete Road links Lipa with Balete.

### **Arterial roads**

Claro M. Recto Avenue, General Luna Avenue, and B. Morada Avenue serve the city center or *poblacion*. Arterial roads, such as Lodlod Avenue, Santo Tomas-Lipa Road and Lipa-Ibaan Road, serve the barangays and the rural areas within the city boundary, and connect the city with the nearby municipalities like San Jose, Santo Tomas and Ibaan, respectively. An arterial road running beside Fernando Air Base serves the municipality of Mataasnakahoy.

### **Public transportation**

Buses, vans, jeepneys, tricycles, and multicabs common means of transportation in the city. Large numbers of jeepneys ply their trade around the city, and are becoming the primary mode of transportation. A grand terminal built beside SM City Lipa mall now serves as the city's central transport terminal.



Figure LI-24 Perspective View of Batangas State University Lipa



Situated along A. Tanco Drive, Marawoy, Lipa City, the campus is surrounded by several government offices and establishments such as the *Ospital ng Lipa*, the City Engineering Office, the District office of the Department of Public Works and Highways (DPWH), the City Hall, and the SM City Lipa.



Figure LI-25 Batangas State University Lipa Location and Its Nearby Establishments

At the back perimeter of the campus is a creek connected to Balintawak river. The subsoil condition of the area occupied by the campus is sandy silt material in a superficial stiff to hard condition. It is with low plasticity. In particular, the subsequent layer of silty sand is located from 2m to 4 m levels. A weaker soil formation of fine -grained silty soil material extends from 4m to nearly 10m depth. Static water level is located measuring -14.22m.

**Seismic Considerations**

The area is considered under Seismic Zone 4 with Seismic Source Type A as influenced by the Central Mindoro Fault and the Lubang Fault in the south (Mindoro), and the tail-ends of Valley Fault and Infanta Fault System in the northwest and northeast proximity.

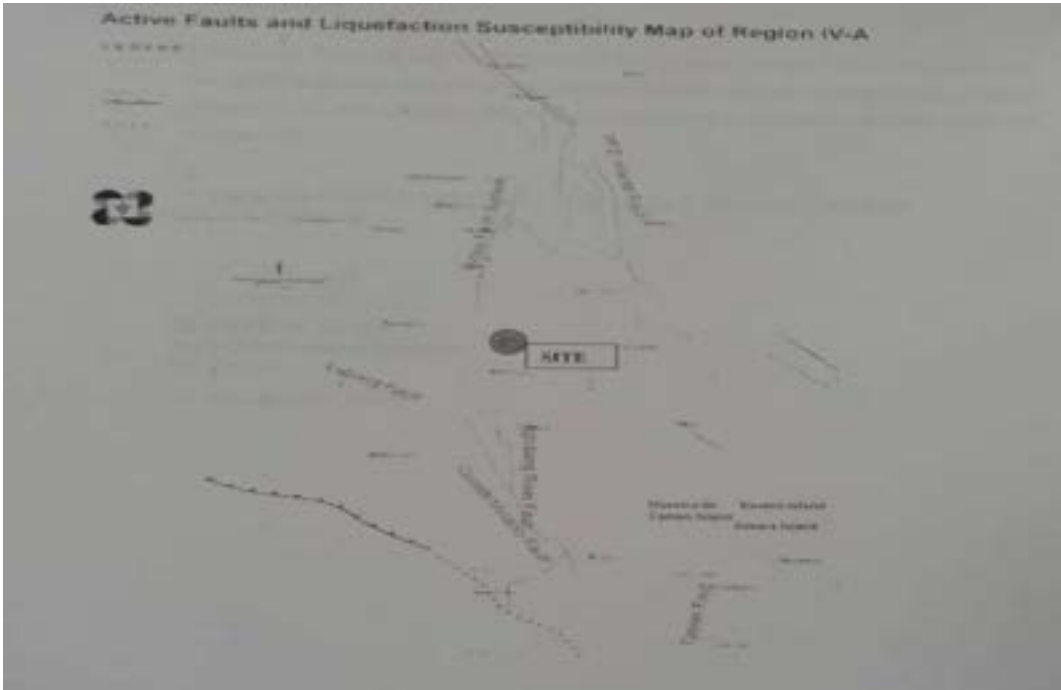


Figure LI-26 Nearby Active Faults

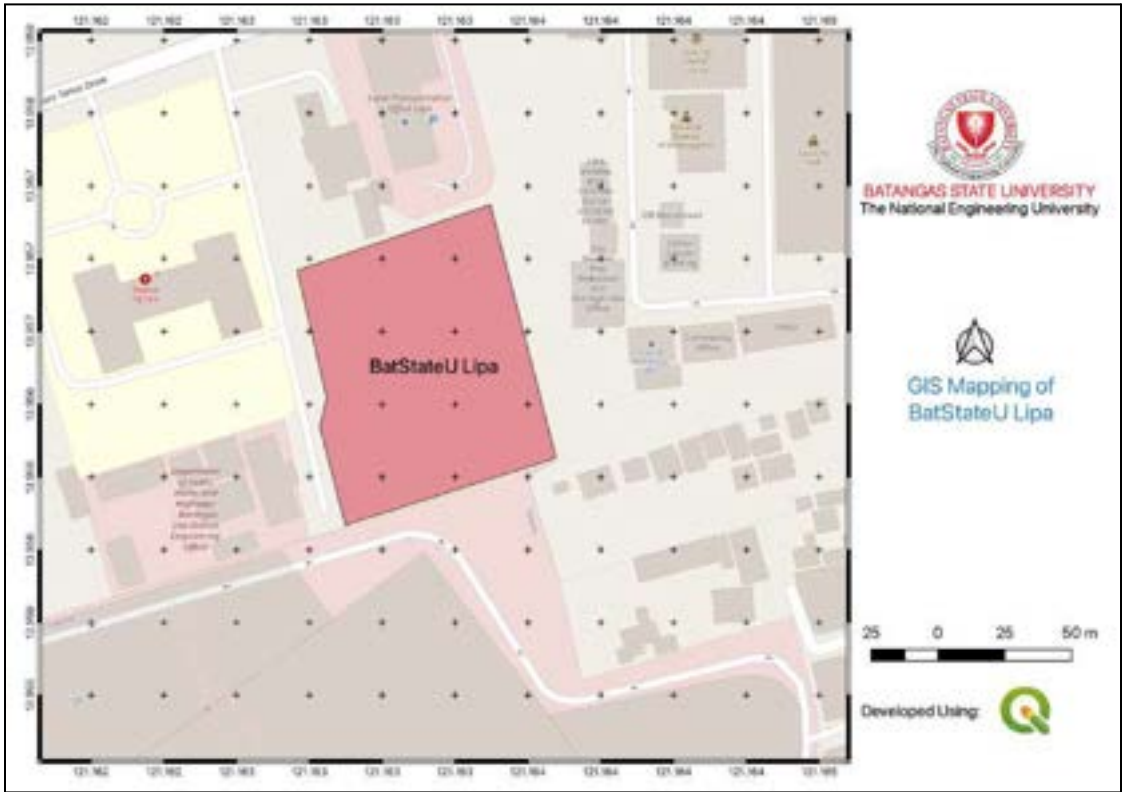
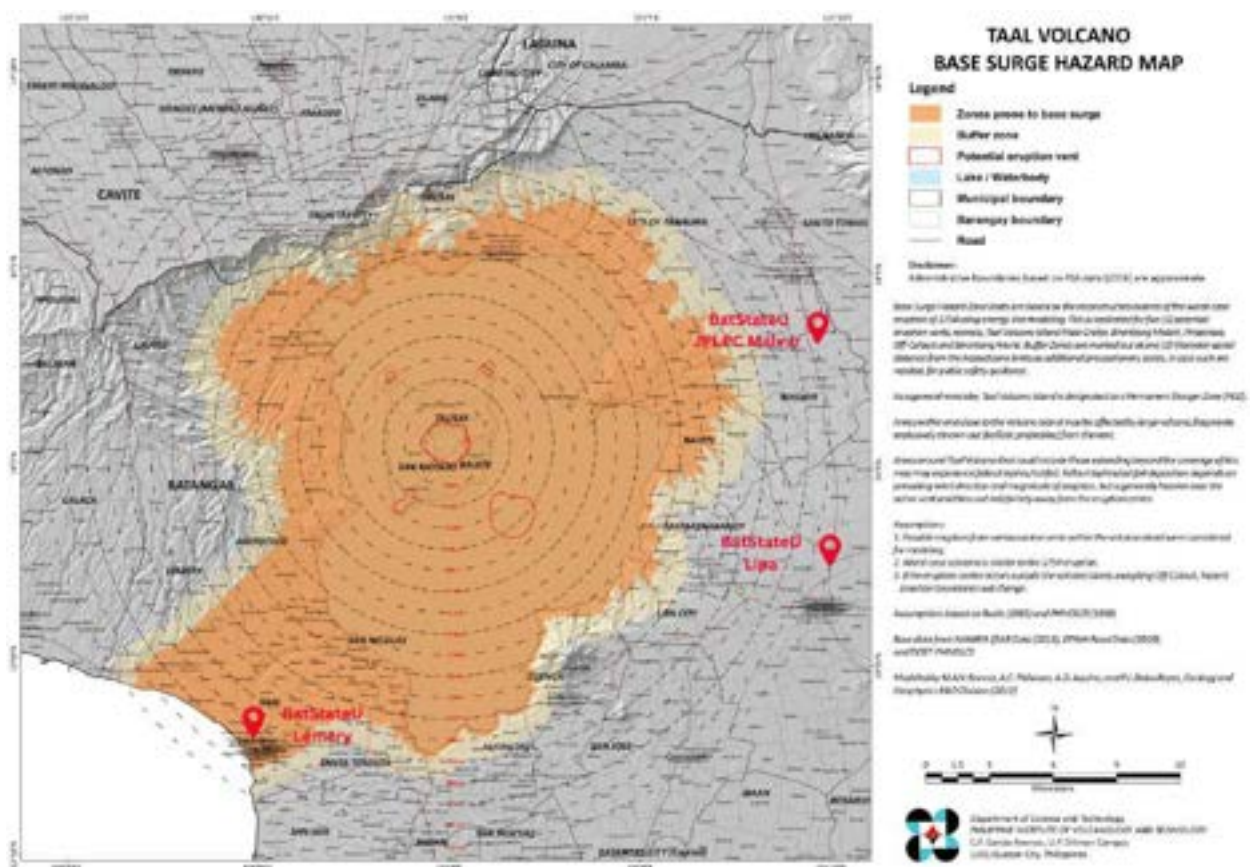


Figure LI - 27 GIS Mapping of BatStateU Lipa

The Batangas State University The NEU Lipa’s geographic coordinate system was located at Longitude: 121.16325449930176 and Latitude: 13.956649004776681.





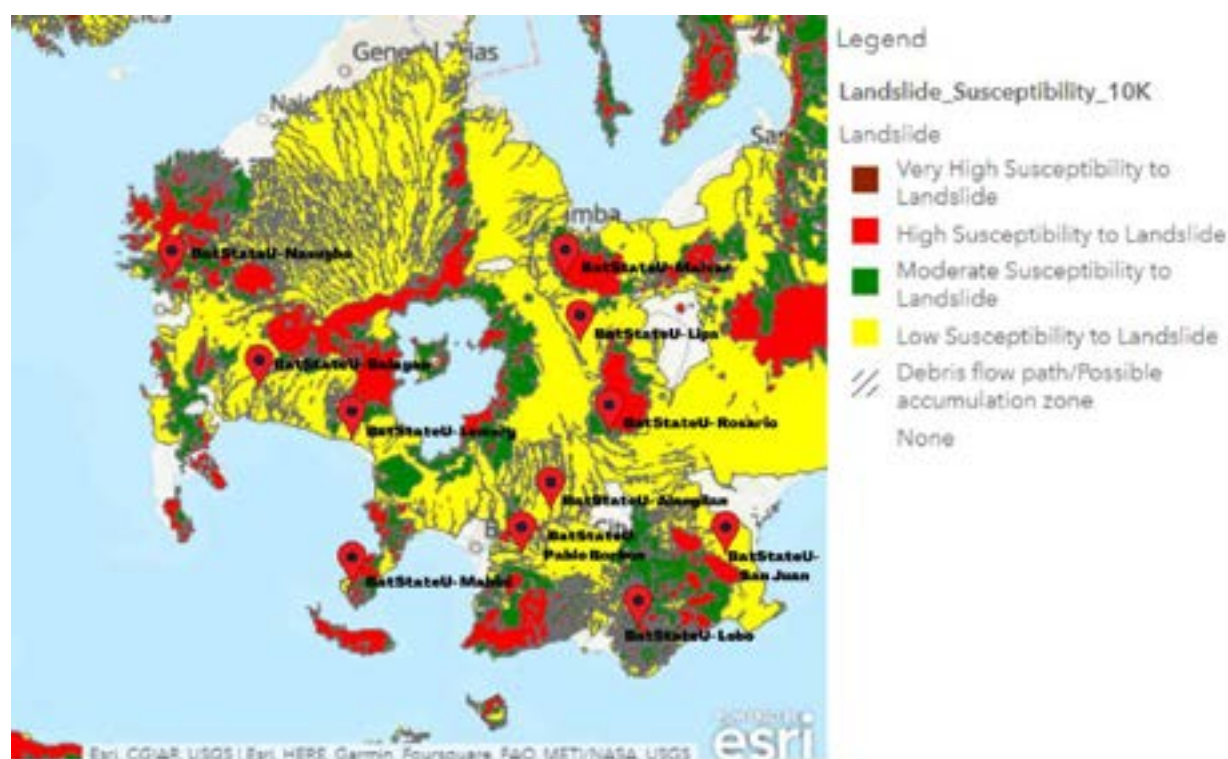


Fig LI - 29 Batangas Landslide Susceptibility Map

Above is the Batangas Landslide Susceptibility Map. According to PHIVOLCS, a landslide is the mass movement of rock, soil, and debris down a slope due to gravity. It occurs when the driving force is greater than the resisting force. It is a natural process that occurs in steep slopes. The movement may range from very slow to rapid which can affect areas both near and far from the source. Landslide materials may include soil, debris, rock, and garbage. As of the current record, at least approximately 90% of Lipa's land area has low susceptibility to landslide except for mountainous and near Taal lake areas. Above clearly shows that the current location of the Batangas State University The NEU is within the area with low susceptibility to landslide.

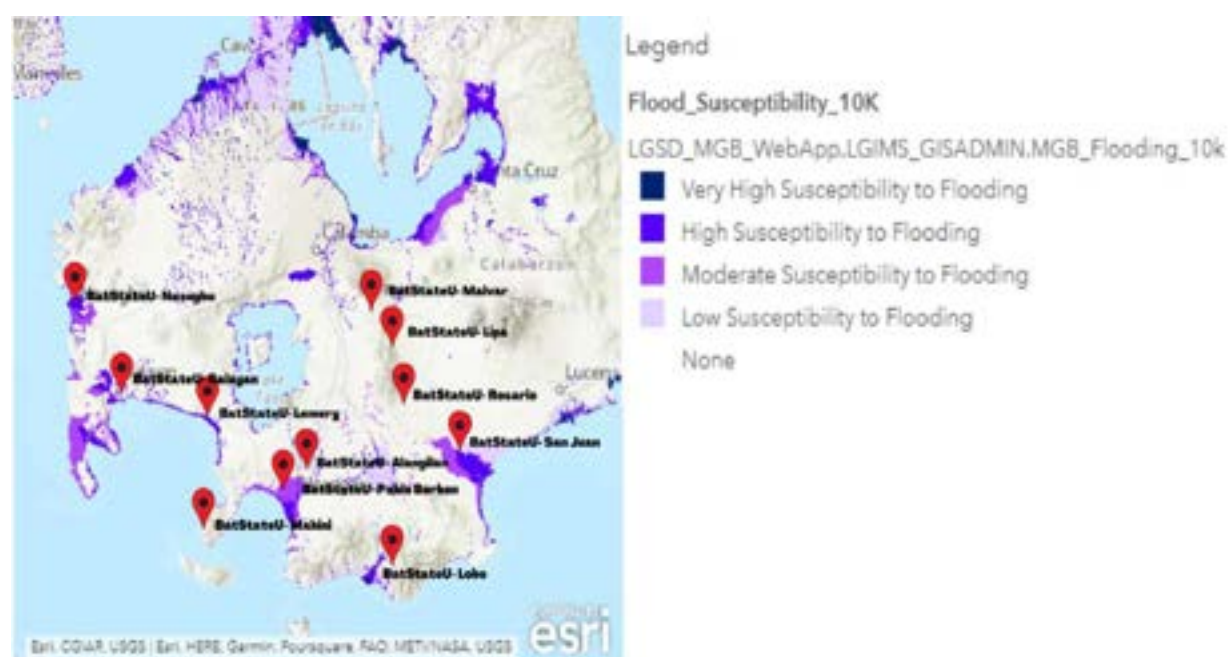


Fig 30 LI - Batangas Flood Susceptibility Map

As shown above, the Batangas State University The NEU situated in Lipa City which remains a flood-free area with its high elevation. However, with the climate change and torrential rain, there's no more location anywhere that can be considered 100% flood-free. As for Lipa's case, there are always catchment areas all over the city but once the rains stopped, the flood will subside almost immediately.

## DETAILED DESCRIPTION OF THE CAMPUS OF BATANGAS STATE UNIVERSITY THE NATIONAL ENGINEERING UNIVERSITY IN LIPA

Located in Brgy. Marawoy, Lipa City, the BatStateU TNEU Lipa was named Don Claro M. Recto campus as a tribute to the prominent public servant from Lipa, Batangas. The campus has shown strong academic performance and its programs have established a positive reputation in the community despite the presence of other higher education institutions in the area. Lipa City is a first class city and is only 78km south of Manila, easily accessible via STAR Tollway.

### A. Physical Features and Environmental Condition

### a. Physical and Locational Characteristics

BatStateU TNEU Lipa covers an area of 9498.10 square meters. It is located at Brgy. Maraway, northern part of Lipa City which is approximately 4 kilometers away from the *poblacion*. Its location is bounded by Brgy. Inusloban in the North, Brgy. Dagatan in the East, Brgy. Bulacnin and Brgy. Balintawak in the West, and Brgy. Sabang in the South. As to the political subdivision, the location is part of the North District. It is also situated at an elevation of 1025 feet (312 m) above sea level.

### **b. Nearby Airports, Ports, Bus Terminals**

The university could be reached through national highways and arterial roads. Jose P. Laurel Highway, or Ayala Highway provides access to people to reach the campus. Tanco Drive serves the campus and connects it with the highways. Balintawak road is also an alternate route going to the university.



Figure LI-27 Location Map of BatStateU Lipa

Surrounding the vicinity of the university are government and commercial buildings and infrastructures. Adjacent to the campus is SM City Lipa and in front are the offices of DPWH and Ospital ng Lipa. On its right side is the City Engineering's Office and Land Transportation Office. The university is also close to other government offices like the City Agriculture Office, City Environment and Natural Resources Office, Office of the City Veterinarian, Department of Agrarian Reform and Lipa City Hall. The Commission on Higher Education - Regional Office IV office building is also at an adjacent lot to the campus.

The campus is close to Lipa City Grand Terminal, approximately 0.75 kilometers away. However the nearest seaport, Batangas City Pier, lies 31.7 kilometers away from the campus. Ninoy Aquino International Airport is approximately an hour drive or 76 kilometers away from the campus.

### **c. Natural Biophysical Environment**

In terms of the Campus' biophysical characteristics of the environment, because the university is located in the heart of Lipa City, the campus enjoys a tropical monsoon climate under the Köppen climate classification, with a dry season between January and April, and rain for the rest of the year. The average yearly temperature is 25.6 °C (78.1 °F). The highest recorded temperature is 35.7 °C (96.3 °F), and the lowest recorded temperature is 16.4 °C (61.5 °F).

The Department of Public Works and Highways has initiated flood control and drainage improvement in the area where the campus is situated. The flood control and drainage plan, from time to time, has been reviewed and restructured to keep up with changes in flow patterns and other hydrological circumstantial requirements of natural and social causes. With an ample slope down contour of land on the southern portion of the campus, the university has made an improvement on its drainage system to ensure university's resiliency against flood.

The university is also susceptible to disasters like earthquakes and volcanic eruptions. The location of the university is included in the 17-km radius danger zone relative to Taal Volcano.

## **B. Inventory of Landholdings**





Figure LI-28 Perspective View of BatStateU Lipa

Batangas State University Lipa is located in Brgy. Marawoy, Lipa City, Batangas. It is situated under the subdivision plan of city land of Lot 4 and Lot 5, specifically Lot 4-C with an area of 5, 335 square meters and Lot 5-B with an area of 4, 228 square meters.



Figure LI-29 Topographic Plan of BatStateU Lipa

The City Government of Lipa, through Honorable Former Mayor Meynardo A. Sabili, donated a parcel of land to Batangas State University on March 30, 2015. University President, Dr. Tirso A. Ronquillo gladly received and accepted the donation with highest appreciation and gratefulness for the kindness and generosity of Lipa City Government. It has been agreed that the provided property lot portion will be used solely and exclusively for educational functions

and purposes. In return, the University will become a collaborative partner in the scholarship program of the city to help indigent beneficiary students.

Considering that this is the only parcel of land of the campus which is also effusively occupied, the University may need to acquire a new parcel of land through donations from City Government for upcoming projects or proposals for the campus development. If not conceivable, the University may consider renovating and/or transforming old buildings or establishments inside into new buildings with more floors and spaces to accommodate other facilities and areas needed for the development of the campus.

The Office of the City Planning and Development Coordinator certifies that the land occupied by BatStateU Lipa is within the “Institutional Area” based on the 1997 Comprehensive Land Use Plan and Revised Zoning Ordinance of the City of Lipa.

## DEED OF DONATION

KNOW ALL MEN BY THESE PRESENTS:

This DEED OF DONATION made and entered this MAR 30 2013 at Lipa City, Batangas, Philippines by and between:

**CITY GOVERNMENT OF LIPA**, a local government unit, duly organized under the law, with postal address at Lipa City Hall Compound, Brgy. Marawoy, Lipa City, Batangas, Philippines, represented by its City Mayor, Hon. Meynardo A. Sabili, hereinafter referred to as the DONOR;

- and -

**BATANGAS STATE UNIVERSITY (BSU)**, an educational institution, with principal address at Gov. Pablo Borbon, Main Campus I, Rizal Ave., Batangas City, represented by its University President, Dr. Tirso A. Ronquillo, hereinafter referred to as the DONEE;

### WITNESSETH:

THAT, the DONOR is the owner of a certain parcel of land, specifically Lot 4-C of Lot 4 with an area of 5,335 square meters and Lot 5-B of Lot 5 with an area of 4,228 square meters under the subdivision plan of land of Lot 4, Lot 5 (LRC) Pcs-23500, located at Barangay Marawoy, Lipa City, Batangas;

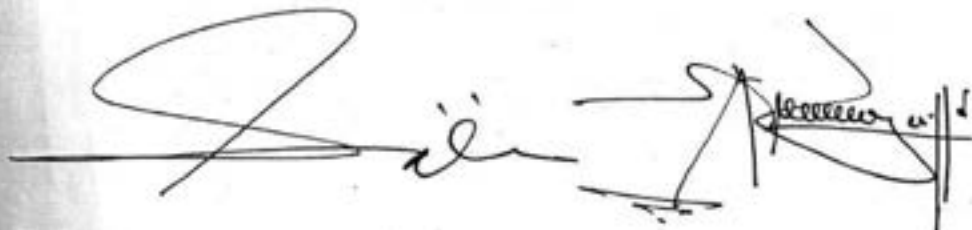
THAT, the existing school buildings of the DONEE is situated at Lot 4-C, while Lot 5-B shall be used for the construction of a new 5-storey school building by the DONEE, as part of its vision in establishing and developing an expanded learning facility to deal with the growing populace of students;

THAT, as a consequence thereof, the DONOR hereby voluntarily and freely gives, transfers and conveys, by way of donation, unto the DONEE's possession, the subject real property lot, including all of the rights, title and interests which the DONOR have in the above-described real property, together with all the improvements found thereon, free from all liens, encumbrances, and charges whatsoever, provided that the property lot portion donated should be used solely and exclusively for educational functions and purposes;


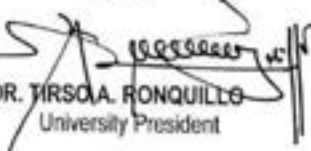
THAT, as an act of gratitude, the DONEE hereby declares its commitment to become a collaborative partner in the M.A. Sabili Scholarship Program to help indigent beneficiary students;

That, the DONEE hereby receives and accepts this donation, made in its favor by the DONOR, and do hereby express its appreciation and gratefulness for the kindness and generosity of the DONOR.

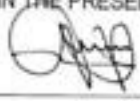

IN WITNESS WHEREOF, we have hereunto affixed our signatures below this MAR 30 2013 day of MAR 30 2013 in the City of Lipa, Philippines.

The block contains two handwritten signatures. The signature on the left is large and stylized, likely belonging to the City Mayor. The signature on the right is smaller and more compact, likely belonging to the University President. Both signatures are written in dark ink.



<b>CITY GOVERNMENT OF LIPA</b>  By: <b>HON. MEYNARDO A. SABILI</b> City Mayor	<b>BATANGAS STATE UNIVERSITY</b> Batangas City Campus Donee  <b>DR. VIRSOLA A. RONQUILLO</b> University President
---	---

SIGNED IN THE PRESENCE OF:

1. 	2. 
--	--


REPUBLIC OF THE PHILIPPINES )  
 CITY OF LIPA ) S.S.

BEFORE ME, a Notary Public for and in the said locality, this MAR 30 2015 personally appeared Hon. Mayor Meynardo A. Sabili, who is known to me to be the same person who executed the foregoing instrument and acknowledged to me that the same is his free and voluntary act and deed.

This instrument consisting of two (2) pages including this page, where this acknowledgment is, refers to the Deed of Donation by the parties concerned and their two (2) instrumental witnesses, whose respective signatures appear on page 2 and on the left hand margin of this page.

WITNESS MY HAND AND SEAL this MAR 30 2015 day of 2015 at Lipa City, Batangas.

Doc. No. 480  
 Page No. 92  
 Book No. 100000  
 Series of 2015.

  
**ATTY. DOMINADOR MAUNAY III**  
 NOTARY PUBLIC UNTIL DEC. 31, 2015  
 PID NO. 210400 - JAN. 5, 2015  
 IGP NO. 010210 - LIFETIME  
 ROLL NO. 43486




Figure LI-30 Two-Page Deed of Donation of BatStateU Lipa Land



Figure LI-31 Zoning Certificate of BatStateU Lipa Land

C. Existing Land Use and Land Use Trends





Batangas State University Lipa is located in Brgy. Marawoy, Lipa City, Batangas. It is situated under the subdivision plan of city land of Lot 4 and Lot 5, specifically Lot 4-C with an area of 5, 335 square meters and Lot 5-B with an area of 4, 228 square meters.

**a. Natural and man-made hazards for climate change issues.**

Based on the BatStateU TNEU Lipa Contingency Plan, the campus is susceptible to five (5) natural hazards.

Table LI-8 Probability and Impact Ratings of Identified Hazards

HAZARD	PROBABILITY		IMPACT		AVERAGE $\frac{P+I}{2}$	RANK
	RATE	REMARKS	RATE	REMARKS		
Earthquake	5	Geographic location	4	Communities near landslide prone areas	4.5	1
Flood	1	Identified areas prone to flood	1	Communities near flood prone areas.	1	5
Fire	3	Occurrence of major fire in the past	3	Communities in densely populated areas.	3.5	3
Volcanic Eruption	2	Geographic location	2	Communities near coastal areas/ coastal areas	2	4
Typhoon	4	Geographic location	4	Communities live in flood prone areas	4	2

As seen in the above table, the probability and impact ratings of the hazards, earthquake ranks 1. Based on historical records, some roads in the province were not passable and residents from nearby places were injured from the pieces of glass shattered due to the earthquake. Evacuation of families and individuals was reported in nearby municipalities.

**b. Detailed Description of Academic Core**

BatStateU TNEU Lipa has six (6) colleges offering different programs as follows:

**1. College of Accountancy Business and Economics**

- **Bachelor of Science in Business Administration major in Human Resource Management (BSBA HRMGT)**

The Human Resource Management Program prepares graduates for a career in the Human Resources Department of any organization, handling the many diverse human capital requirements of the organization, including recruitment, staffing, training and career development.

- **Bachelor of Science in Business Administration major in Marketing Management (BSBA MKTMGT)**

The Marketing Management program prepares the graduate for careers in marketing, market research, advertising and public relations. The curriculum provides the graduate with both technical skills and competencies required in the field, but also the flexible mindset that is necessary to stay competitive in a constantly changing business environment.

- **Bachelor of Science in Business Administration major in Operations Management (BSBA OMGT)**

The Operations Management program prepares students to manage the operations of manufacturing, agri-business as well as service enterprises, focusing on the need to effectively and efficiently produce and deliver products and services on time and within budget. The program curriculum covers all aspects of operations with the organization including the management of purchases, inventory, production and service quality, logistics, supply chain and distribution.

- **Bachelor of Science in Management Accounting (BSMA)**

The Bachelor of Science in Management Accounting provides general accounting education to students wanting to pursue a professional career in management accounting. Further, this is the program that complies with the latest competency framework for professional accountants issued by the International Federation of Accountants (IFAC) through their International Education Standards. Thus, this qualifies the graduate of this program to take assessments leading to certifications in management accounting given by global professional management accounting organizations.

- **Bachelor of Public Administration (BPA)**

The Bachelor of Public Administration aims to develop public servants with the required knowledge, values and skills to serve as professionals in government and civil society. BPA prepares its graduates for technical and administrative positions in government,

including the Foreign Service and Civil Society. It is good preparation for those interested in taking up law. Graduates can look forward to executive and policy-making positions in government elective and appointive, as well as executive and policy-making positions in civil society organizations.

## **2. College of Informatics and Computing Sciences**

- **Bachelor of Science in Computer Science (BSCS)**

The BS Computer Science program includes the study of computing concepts and theories, algorithmic foundations and new developments in computing. The program prepares students to design and create algorithmically complex software and develop new and effective algorithms for solving computing problems.

The program also includes the study of the standards and practices in Software Engineering. It prepares students to acquire skills and disciplines required for designing, writing and modifying software components, modules that comprise software solutions.

- **Bachelor of Science in Information Technology (BSIT)**

The BS Information Technology program includes the study of the utilization of both hardware and software technologies involving planning, installing, customizing, operating, managing and administering, and maintaining information technology infrastructure that provides computing solutions to address the needs of an organization.

The program prepares graduates to address various user needs involving the selection, development, application, integration, and management of computing technologies within an organization.

## **3. College of Arts and Sciences**

- **Bachelor of Science in Psychology**

Psychology is the scientific study of behavior and mental processes. In general, the emphasis is on the individual person and how the person's mental processes and behavior are affected by internal, relational and social factors. Psychology as a discipline and professional practice contributes to national development through basic and applied research and interventions aimed at solving problems and promoting optimal development and functioning at the individual, family, group, organizations/institutions, community, and national levels. The undergraduate programs in psychology provide initial training for those interested in teaching, research and the practice of psychology. Furthermore, they provide preparation for graduate studies in psychology as well as further studies in other professions such as medicine, law, and business management.



- **Bachelor of Arts in Communication (BACOMM)**

Communication as a field of study covers the various ways by which humans communicate. It focuses on how verbal and non-verbal messages are used to create meanings in different contexts using diverse media platforms. It includes a broad range of subject matter ranging from study of communication in interpersonal relationships, groups, organizations, and cultures.

This program aims to equip students with the knowledge and skills in the theory and practice of communication applicable in various professions and contexts, with focus on media professions.

#### **4. College of Industrial Technology**

- **Bachelor of Industrial Technology major in Computer Technology**

The Bachelor of Industrial Technology Major in Computer Technology develops and prepares graduates who will be an integral part of the pool of technology experts specifically in the field of computer technology. The program is a strong combination of theoretical and practical concepts in electrical and electronics technology, computer technology, mathematics, computer science, management and general education that leads to the Bachelor of Industrial Technology degree. The Bachelor's Degree program intends to prepare graduates to find employment as computer technologists here and abroad. Students will gain knowledge and skills in digital electronics, computer programming, computer networking and system analysis and design.

- **Bachelor of Industrial Technology major in Electrical Technology**

The program in Bachelor of Industrial Technology Major in Electrical Technology will prepare graduates with the skills necessary to enter careers in the design, application, installation, manufacturing, operation and/or maintenance of electrical systems. Graduates of this degree program typically have strengths in the building, testing, operation, and maintenance of existing electrical systems and are well-prepared for development and implementation of electrical systems.

- **Bachelor of Industrial Technology major in Electronics Technology**

The Electronics Technology program prepares graduates for employment in a wide variety of industries producing and/or using electrical and electronic equipment. The program provides a thorough understanding of digital electronics, circuit analysis, electronic devices, machine controls, programmable logic controllers and industrial electronics. This course also includes theoretical analysis, software simulation and hands-on applications.

- **Bachelor of Industrial Technology major in Instrumentation and**

### **Control Technology**

Bachelor of Industrial Technology Major in Instrumentation and Control Technology will prepare graduates with the technical and managerial skills necessary to enter careers in design, manufacturing, marketing, operations and maintenance in the field of measurement, control, robotics and automation technology. The program, as a result of extensive laboratory experience in components/device operation, calibration and interconnection, have strengths in their knowledge of operations, maintenance and manufacturing. Graduates are qualified to undertake the design and specification of control systems and for the subsequent management of their installation and operation.

## **5. College of Teacher Education**

- **Bachelor of Secondary Education (BSED)**

The BSEd is an undergraduate education program designed to equip learners with adequate and relevant competencies to teach in their chosen area of specialization/major (English, Mathematics and Science) in the secondary level. It aims to develop highly motivated and competent teachers specializing in the content and pedagogy for secondary education. After successful completion of all academic requirements of the degree/program, graduates of BSEd should be able to practice the teaching profession in the Secondary level.

## **6. College of Engineering**

- **BS Industrial Engineering**

The Bachelor of Science in Industrial Engineering program is intended to prepare students for a professional Industrial Engineering career including a leading role in the design, improvement, and installation of integrated systems of people, materials, information, equipment, and energy. Graduates of the program must have specialized knowledge and skills in the mathematical, physical and social sciences together with the principles and methods of engineering analysis and design to specify, predict, and evaluate the results to be obtained from such systems.

### **Research Core**

The research core of the university is based on the Research Manual's Thrusts and Priorities.

#### **Section 1.3 Research Thrusts and Priorities**

1. The University shall pursue thrusts and priorities which may be subjected to review at least annually by each area: Architecture, Engineering and Technology; Agriculture and Natural Science; Environment and Biodiversity; Entrepreneurial and Business; and Education, Mathematics and Social Sciences to make the Research Program of the University responsive to the emerging needs and environmental changes and development depending on research competencies available, appropriateness to the local needs and

availability of the resources. The following thrusts and priorities are based on the national, regional and provincial agenda of the government identified through agenda setting and road mapping among research personnel, deans, faculty researchers, students and external stakeholders.

- 1. Food;
- 2. Energy;
- 3. Environment;
- 4. Health and Medical Sciences;
- 5. Material Science and Engineering;
- 6. Information and Communications Technology;
- 7. Manufacturing and Process Engineering;
- 8. Science and Mathematics; and
- 9. Education and Social Sciences.

At present, BatStateU-Lipa’s pool of researchers are working on research on Kapeng Barako particularly on the post-harvest processing and market.

**D. Facilities and Utilities Including Social Services Facilities and Amenities**

Batangas State University Lipa is located in Brgy. Marawoy, Lipa City, Batangas. It is situated in a 9, 563-square-meter area of land donated by the Lipa City Government. Currently, the campus has three (3) five-storey buildings, one (1) gymnasium, one (1) façade, and one (1) powerhouse.

College of Engineering and Computing Sciences (CECS) Building is a project materialized by Honorable Senator Ralph G. Recto. It was turned over to the University on March 5, 2021. It is composed of fifteen (15) Administration Offices, two (2) laboratory rooms, and four (4) classrooms. The first floor of the building is occupied by six (6) offices which are Testing and Admission Office, Budget Office, Cashiering Office, Accounting Office, Procurement Office, and Registrar's Office. Located on the second floor of the building are the offices of Chancellor, Vice Chancellor for Administration and Finance, and Vice Chancellor for Development And External Affairs. The Office of Vice Chancellor for Research, Development and Extension Services is on the third floor together with the Human Resource Management Office, Records Management Office, ICT Room and Speech Laboratory. The three (3) main rooms in the fourth floor are classrooms with office rooms at two (2) sides. On the fifth floor are the three (3) laboratory rooms. The sizes of each room are listed below:

Table LI-9 Room Dimensions at CECS Building

TYPE OF ROOMS	DIMENSION (METER)
Administration (Half Rooms)	5.16 x 3.83
Administration	7.8 x 7.8
Classroom	7.8 x 7.8



Laboratory	7.8 x 7.8
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Figure LI-34 College of Engineering and Computing Sciences (CECS) Building

Another five-story establishment of the campus is the Higher Education Building. The first floor of the building houses Biology Laboratory , Physics Laboratory , Industrial Engineering Laboratory, Psychology Laboratory, and the electrical room. The second floor is occupied by the Office of the Vice Chancellor for Academic Affairs, Accreditation Room, and faculty rooms for guest lecturers and tenured faculty members. The third and fourth floors, on the other hand, contain classrooms - two (2) of which in the third floor are used as Computer Laboratories. The Multi Media Room is situated on the fifth floor with three (3) classrooms convertible to a function hall. Offices of the different college deans are on the left wing, in contrast to comfort rooms and water tank storage locations. Below is the list of rooms together with their dimensions.

Table LI-10 Rooms Dimensions at Higher Education Building

TYPE OF ROOMS	DIMENSION (METER)
Administration	8.00 x 3.83
Faculty Room	8.00 x 11.67
Classroom	7.8 x 7.8
Multi Media Room	15.6 x 15.7
Laboratory	7.8 x 7.8



Figure LI-35 Higher Education Building

Multi-Purpose Building is a five-storey building built in 2013 together with the Campus Gymnasium. Second floor is occupied by the Infirmary, Property and Supply Office, Environmental Management Office, Project and Facilities Office, General Services Office, and ICT Laboratory. Campus Library is located on the fifth floor, and the rest are rooms for different classes. The small rooms at the right side of each floor reside the offices of the dean of the College of Accountancy, Business and Economics, Guidance and Counseling, and Publication. The campus gymnasium is located in front of the building. Below is the table showing the dimensions of rooms in the building.

Table LI-11 Rooms Dimensions at Multipurpose Building

TYPE OF ROOMS	DIMENSION in Meter
Administration (Half Rooms)	5.16 x 3.83
Administration	7.8 x 7.8
Classroom	7.8 x 7.8
Laboratory	7.8 x 7.8
Gymnasium	38.75 x 16.96



Figure LI-36 Multi-Purpose Building



Figure LI-37 Gymnasium

The façade of the campus contains the Campus Shop with the following dimensions:

Table LI-12 Dimensions of Facade

TYPE OF ROOMS	DIMENSION (METER)
Facade	5.16 x 3.83
Shop/ Store	9.90 x 4.27

Located also in the facade is the Campus/University Shop which serves as the Income Generating Project of the campus. The front vacant lot of the facade can also be converted into a commercial area for lease as an additional source of revenue for the campus.





Figure LI-38 Facade



Figure LI-39 Shop/ Store

Currently, the Power House is being constructed inside the campus with a dimension of 10.6m x 10m (LxW). Another three-storey building is set to be established at the back of the Higher Education Building which will be composed again of numerous classrooms with the Campus Canteen at the first floor and the Campus Library at the fifth floor. The parking area is also allotted at the center open ground of the campus. Amenities like swimming pool and sports center are not present in the campus but are still available in case needed through a tied up contract with the City Government of Lipa for the use of specific amenities available in the city.



Figure LI-40 Proposed Site Development Plan of BatStateU Lipa

By assessing the current and the proposed site development plan of the campus, the construction of buildings or structures devoted specifically for a single purpose and use by one college is not possible due to limited space. However, sharing of buildings for several purposes and by different units of the campus is being incorporated in the plans for development. Administration buildings and centers for research, extension and allied services shall be housed in designated rooms and/or office spaces in existing buildings and those that will be constructed in the future. As currently done, academic, administration and some allied services are present in the buildings constructed. There are still some services that are needed to be established in the campus such as dormitories for students, training room, research, prayer room (instead of church), cultural, and emergency response facility. If construction of devoted centers for each service is not possible inside the campus, all these services shall be provided using rooms/spaces in any designated building. With this, buildings for constructions shall be designed in such manners that services can be provided. Since some classrooms have been converted into offices, it is recommended that the structure of a building be good enough to hold enormous classrooms for face-to-face classes. Cubicles for girls must be considered also in great quantity compared to boys since the number of female students dominates in the previous academic years.

The campus has strong partnerships with the local community for provision of housing facilities for students and employees of the campus. Private boarding houses and dormitories are available in the vicinity. The same are under regulation by the local government.

E. Transportation

Public transportation to and from the school and different points within the City of Lipa come in the form of jeepneys and tricycles, or three wheeled cabs, to nearby destinations. Commuters to neighboring cities and municipalities have the option of taking buses which ply the Manila-Batangas City and Manila-Lemery routes. The city's Grand Terminal is located at SM City Lipa which is a minute drive from the school.

The proposed site development consists of parking spaces to safely and efficiently meet the parking needs of faculty, staff, students and visitors.

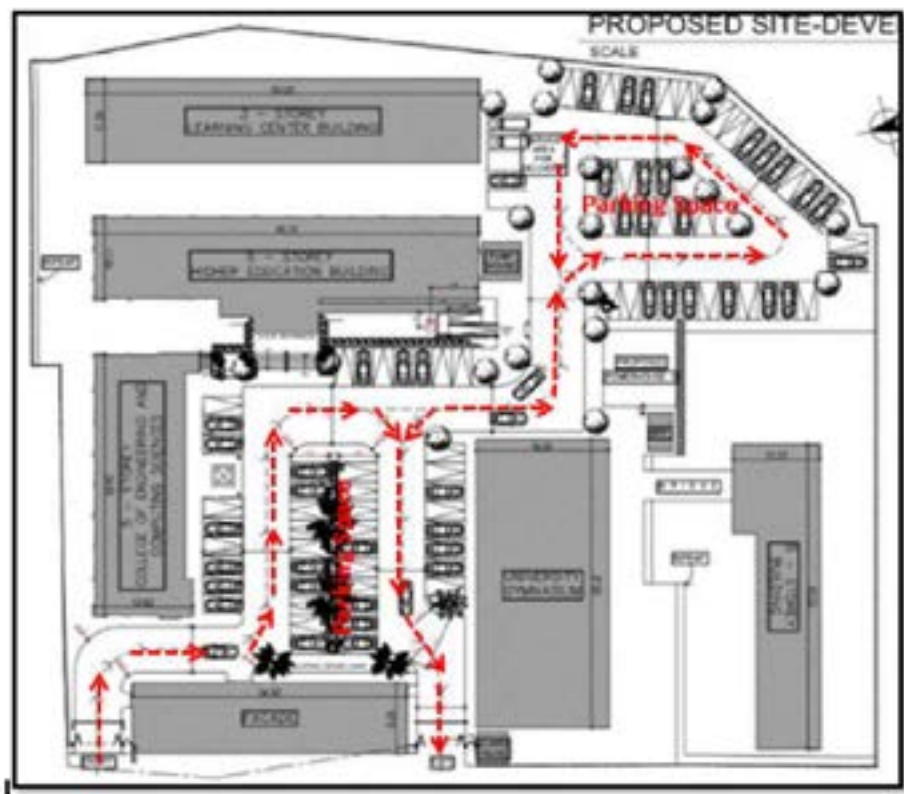


Figure LI-41 Proposed Roadway Plan



**F. Power, Water, Communication Network**

**a. Power**

The Batangas II Electric Cooperative, Inc. (BATELEC II) has an existing 3 x 100KVA Transformers that provides power supply to BatStateU TNEU Lipa. With the fast tracking construction of new infrastructures such as the Higher Education Building, the CECS Building and the future buildings that are planned to be constructed, the existing power system will not be able to accommodate the needed power supply of the university. This need resulted in the on-going upgrading of the Electrical System in the campus. Loads from potential and future buildings have been considered in the design for future use. This upgrade of Electrical System includes the Construction of a power house, installation of New Generator Set, and installation of a 3-250KVA Power Transformer.

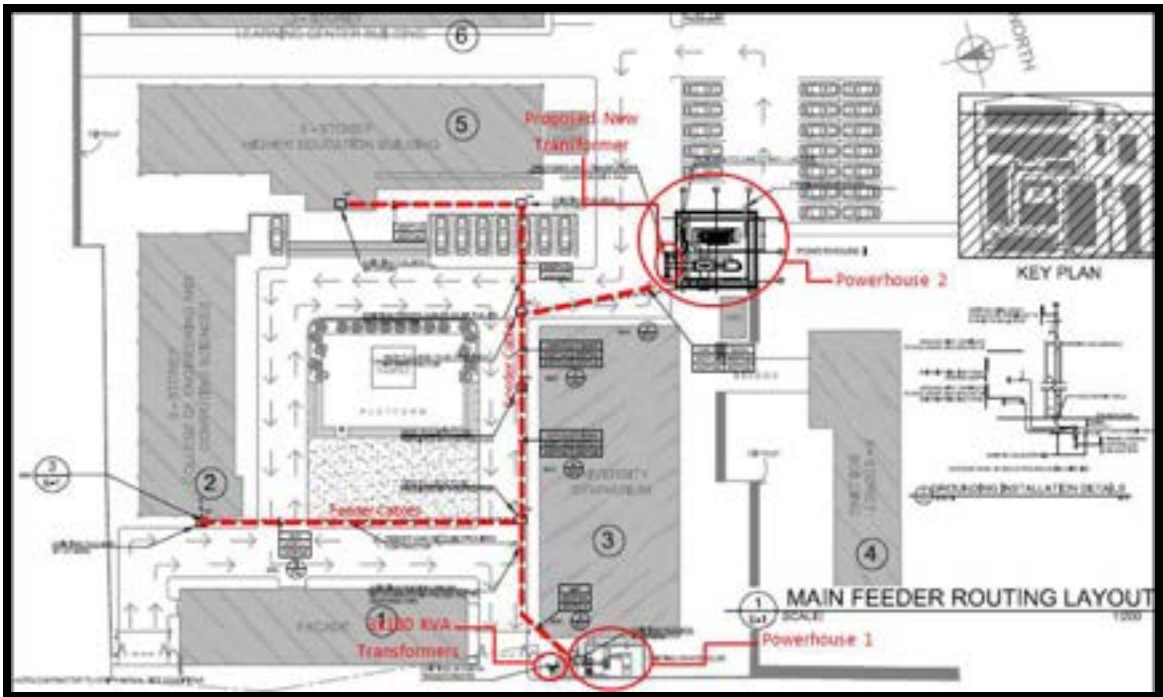


Figure LI-42 Power Layout at BatStateU-Lipa

**b. Communication Networks**

**1. Existing Internet and Communication line**

BatStateU TNEU Lipa campus has access to modern communication with the provision of internet, telephone and local in-campus network. Internet and telephone services are provided by reputable telecommunication companies.

The services are:

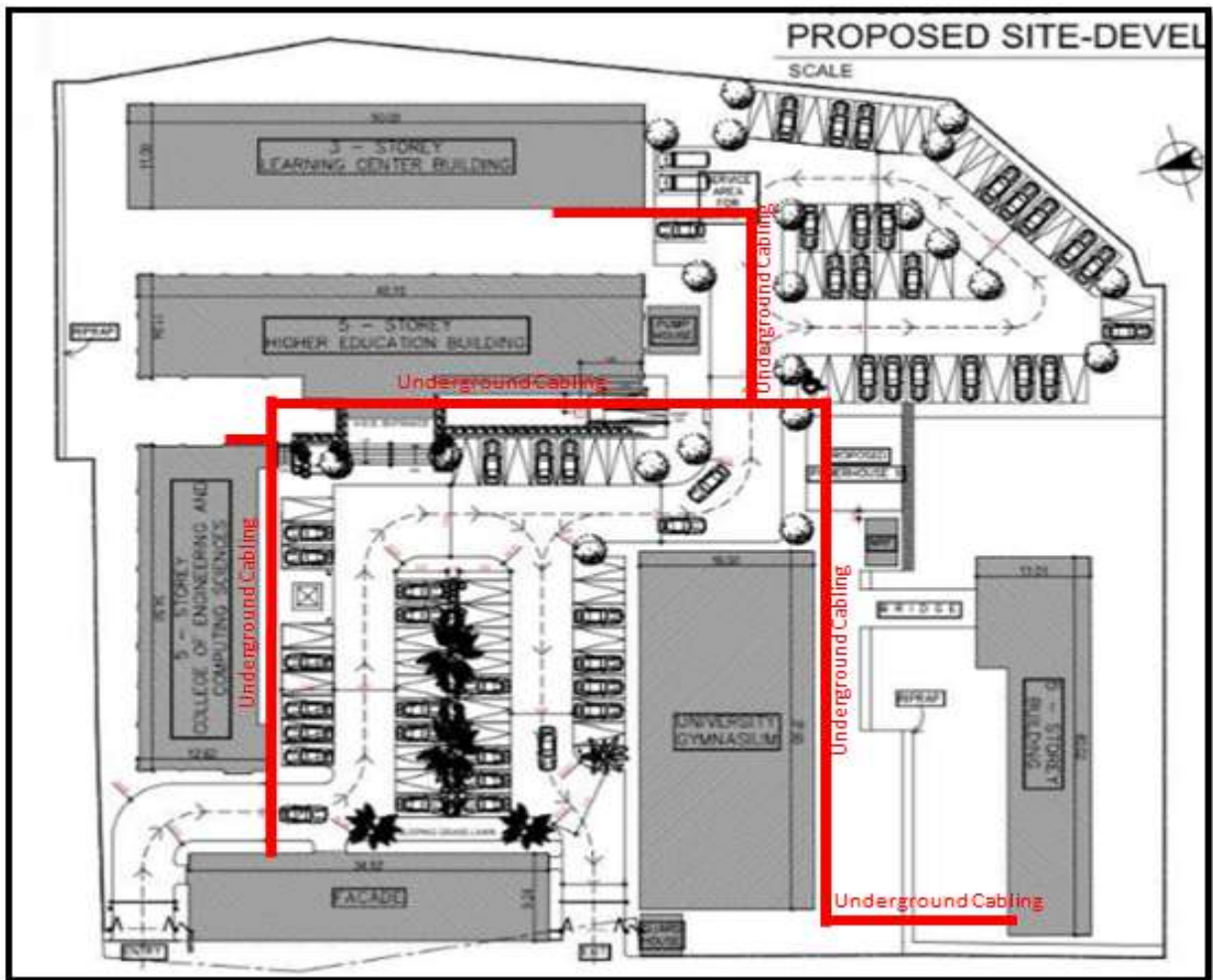
- PLDT line for landline with internet – located at CECS Building Room 203 - Chancellor's Office
  - Globe direct line with 40mbps speed
- Use of 19 VOIP for offices trunk line 980-0385 / 9080-0387

- Access point
  - Multi-Purpose Building has 25 access point with 5 access point per floor
  - CECS Building has 14 access point with 3 access point from 2nd to 5th floor
  - Gymnasium has 1 access point
  - Façade has 1 access point
  - Higher Education Building has 35 new access point for installation

## 2. Plan Improvements

Continuous improvement of the existing facilities is underway. Procurement of necessary equipment to beef up the access points are being done.

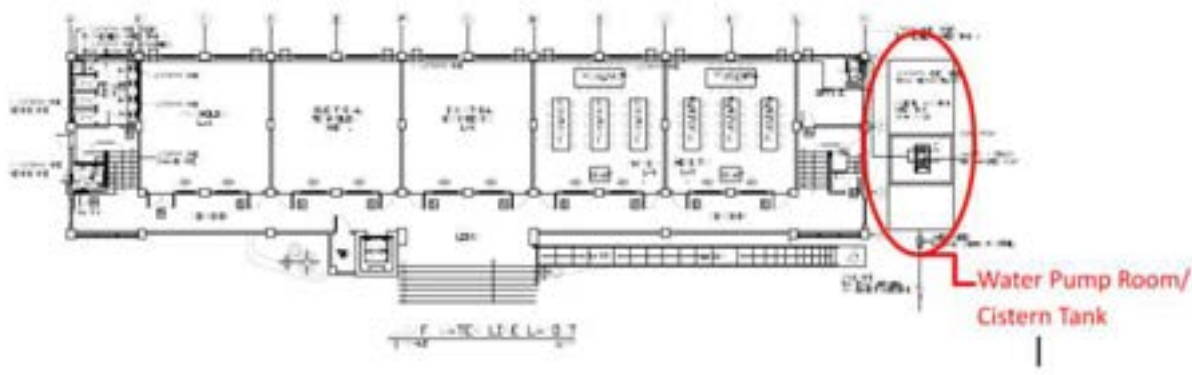
- Globe direct line subject for upgrade up to 100mbps and for future upgrades.
  - Additional VOIP phone for new offices
  - Proposed upgrade of existing CAT 6 cable to Fiber Optics
  - Construction of underground cabling from one building to another building
  - All new building for construction shall incorporate LAN Cabling
- Proposed transfer of Server Room from 2nd floor Multi-Purpose Building to 3rd floor CECS building (need power stability)
- Relocation of DICT Free Wifi (powered by PLDT) hub in the stage
- Additional Turnstile for the façade and another book for Gate 2
- Repair of existing CCTV and additional for two new buildings
- Repair of existing CCTV and additional for two new buildings
  - 6 CCTV for CECS Building
  - 10 CCTV for the corridors of the Higher Education Building
  - 10 CCTV for the laboratories of the Higher Education Building
  - 4 CCTV for the facade
- Proposed Installation of Information board (Large panel display TV) at the façade



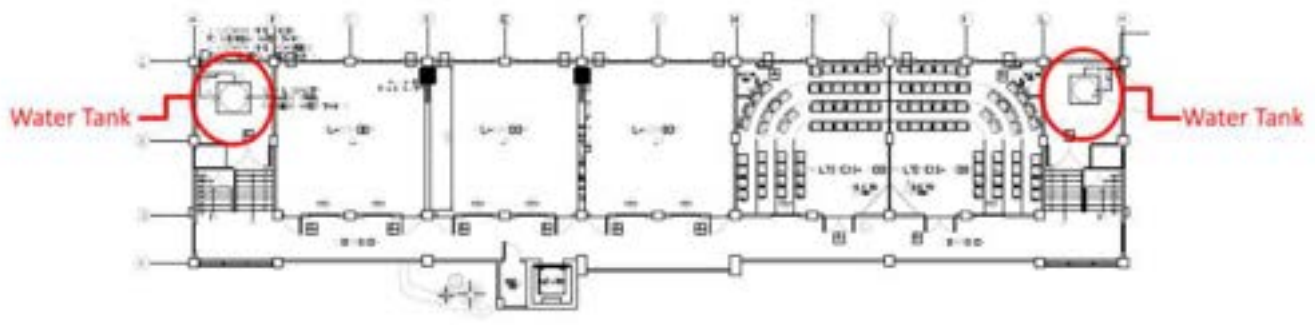
### c. Water

The main water supply of the BatStateU TNEU Lipa is from Metro Lipa Water District. Cistern tanks in every building are available for storage of water. Water pump is used to transfer water from the cistern tank to the water tank located at the top floor of every building. Water is distributed directly from the water tank by gravity.



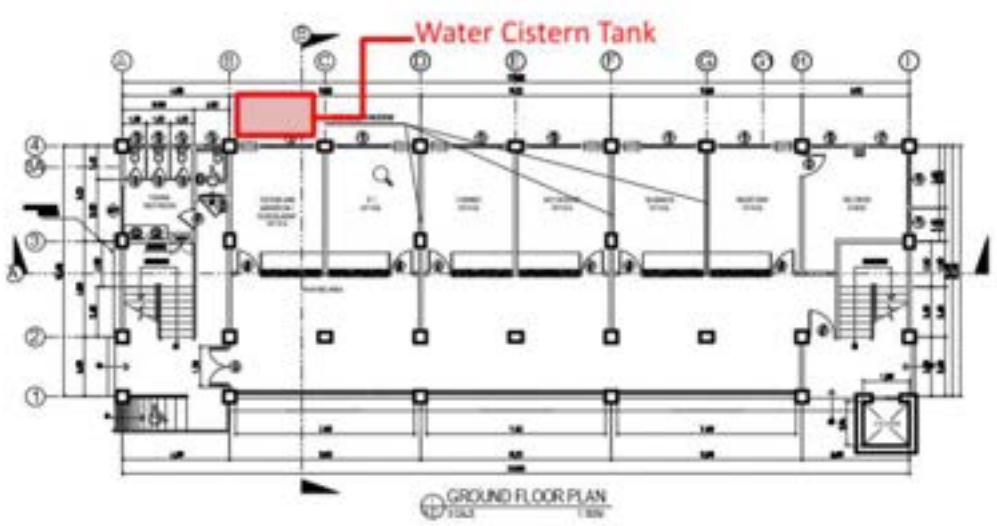


Ground Floor Plan



Fifth Floor Plan

Figure LI-44 Water SSource at Higher Education Building



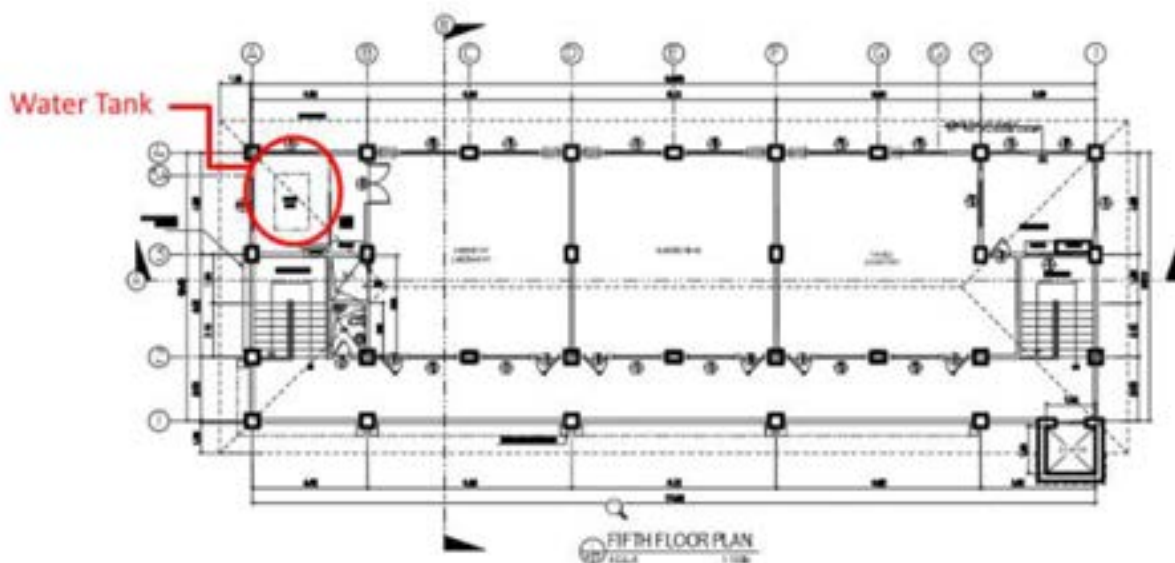


Figure LI-45 Water Source at CECS Bldg

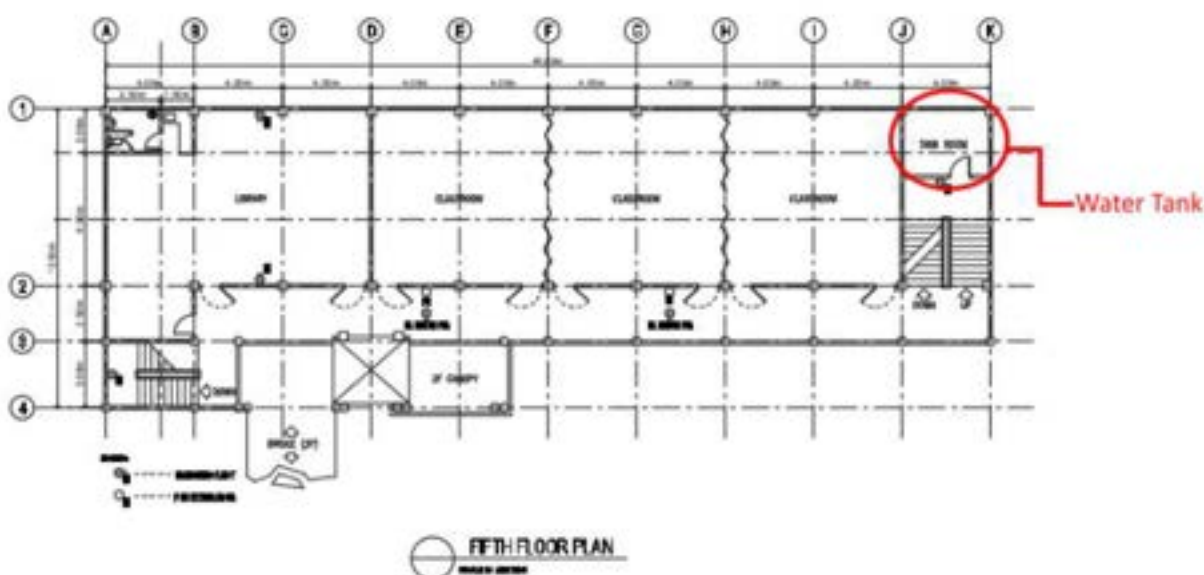


Figure LI-46 Water Source at Multi-Purpose Building

## G. Waste Management

Wastes are discarded materials of BatStateU TNEU Lipa in either solid, liquid or gas form. The wastes generated shall be safely collected, processed and disposed so as not to cause negative environment and health impact.

Institutional wastes of campus shall be monitored, recorded, evaluated and reported to regulatory agencies showing the compliance to environmental regulations and realization of one of the values and advocacies of the University concern for the environment of the University.

The wastes generated by the campys are defined as follow:

- Solid :

**Used/Scrap Paper** – Loose sheets of paper, often already partly used for writing notes on

**Plastic Bottles** – A bottle constructed from high-density or low density plastic. Typically used to store liquids such as water and soft drinks.

**Plastics**- A synthetic material made from a wide range of organic polymers such as polyethylene, PVC, nylon, etc.

- **Liquid:**

**Waste Water** – Used water including substances such as human waste, food scraps, oils, soaps and chemicals.

- **Hazardous Wastes:**

**Facemasks** – A protective mask covering the nose and mouth

**Surgical Gloves** – A sterile glove worn to prevent contamination and protect the hand from exposure to potentially infectious materials.

**a. Basic Components of Waste Management**

The guidelines on waste management have five (5) basic components.

**1. Solid Waste Management**

- **Generation**

- Items to be purchased by the BatStateU TNEU Lipa shall be environmentally-acceptable, durable and cost effective so as to minimize waste generation.
- Procurement of items for the BatStateU TNEU Lipa's operation shall be in bulk order to avoid excessive packaging materials to be disposed of.
- Packaging products to be used, foods to be sold shall be of recyclable type.
- The waste shall be segregated from the source of generation.
- Waste generated shall be recorded and the records shall be updated to serve as bases in compliance with SWMA and for future policy making.
- Students, faculty members, and staff must be familiar with the importance of segregation and waste reduction through online info-graphic, webinars, seminars/posters.

- **Collection**

- Waste collection points shall be established in strategic areas for the centralized collection of waste in the campus.

All wastes from collection points will be transported to the University's Material Recovery Facility (MRF). Identified collection points are as follows:

1. CECS Building Ground floor
2. CECS Building 2<sup>nd</sup> Floor
3. CECS Building 3<sup>rd</sup> Floor
4. CECS Building 4<sup>th</sup> Floor
5. CECS Building 5<sup>th</sup> Floor



6. CAHBEIM Building Ground Floor
7. CAHBEIM Building 2<sup>nd</sup> Floor
8. CAHBEIM Building 3<sup>rd</sup> Floor
9. CAHBEIM Building 4<sup>th</sup> Floor
10. CAHBEIM Building 5<sup>th</sup> Floor
11. HIGHER EDUCATION BUILDING Ground Floor
12. HIGHER EDUCATION BUILDING 2<sup>nd</sup> Floor
13. HIGHER EDUCATION BUILDING 3<sup>rd</sup> Floor
14. HIGHER EDUCATION BUILDING 4<sup>th</sup> Floor
15. HIGHER EDUCATION BUILDING 5<sup>TH</sup> Floor
16. GYMNASIUM
17. FAÇADE

- An approved, strategically-located protected bin shall be positioned in the collection points.
  - Bins shall be properly labeled to indicate specific waste to be contained. The label shall be either biodegradable or non-biodegradable. A separate bin and location for infectious and hazardous wastes shall be determined.
  - Minimum of 2 bins ( biodegradable, non-biodegradable) must be placed in each collection point for efficient segregation from collection of wastes. Segregation at source policy shall be implemented.
  - Personnel assigned to collect wastes shall be in proper protective clothing so as to avoid exposure to possible disease-causing microorganisms.
  - Waste shall be collected by the properly trained personnel and brought to the Material Recovery Facility.
  - Wastes generated from trimming, landscaping and the like shall not be placed into the containers positioned in collection points. Plastic bags or other approved containers shall be used to avoid overloading the capacity of the positioned bins.
  - Wastes shall be collected in a container that is compatible with such wastes under all conditions. Wastes that require specific handling procedure shall be collected in approved containers.
  - Containers shall be ensured to be tightly sealed.
  - Periodic waste collection by the janitors must be observed, or at maximum capacity.
  - Waste collected shall be inspected for segregation. If there is an indication of mixing of wastes of different categories, segregation shall be done.
- Transportation (from university facility to hauler's facility)
  - Containers shall be inspected and ensured to be sealed properly.
  - Small containers shall be avoided to be buried under some materials.
  - For hazardous wastes, incompatible materials shall be far from each other.

- Approved materials for containment of waste and appropriate vehicles shall be used during the course of transportation.
- Schedule for transportation is either once a week or twice a week, or when storage places are full.
- Processing and Recovery
  - Waste generated shall be brought to and processed at the Material Recovery Facility for energy recovery. It shall be weighed and recorded.
  - All recyclables shall be recovered.
  - Residual wastes shall be separated from recyclables. Residual wastes shall be collected by the city garbage hauler.
  - Recovered items shall be stored for selling and other significant purposes.
  - Emptied containers shall be rinsed at least three times with water or other suitable solvent. They shall be air dried. Special care shall be done to ensure that they are free of liquid or other visible chemical residue before disposal or reuse.
  - Personnel shall utilize environmentally-sound methods that maximize the utilization of valuable resources and encourage resources conservation and recovery.
  - All recovered items must be placed in a safe and secured storage.
- Disposal
  - Only residual waste shall be subjected for disposal after thorough processing.
  - No recyclable wastes shall be disposed of by the city garbage hauler.
  - Biodegradable wastes shall be immediately collected and disposed to avoid harborage of vectors and transmission of communicable diseases.
  - Biodegradable wastes shall be properly composted in an isolated composting facility.
  - Wastes shall not be burned unless approved by the authority; provided that, during the burning of such, no harmful elements are released to the environment.
  - Residual wastes shall be placed in properly labeled containers for safe and secured disposal

## **2. Wastewater Management**

- Generation
  - A metering device shall be installed to monitor water consumption.
  - Water being supplied to the buildings shall be recorded and the records shall be updated regularly.
  - The campus shall procure plumbing fixtures, equipment and the like that are environmentally acceptable.
  - Periodic inspection of plumbing and water distribution systems must be done.
  - Leakages in the piping system shall be corrected.

- Use of water shall be minimized.
- Cause efficient alternative cleaning materials other than water shall be used as appropriate.
- Collection
  - All wastewater shall be collected by an approved piping material that is acid-resistant, durable and cost effective.
  - Waste discharged through different plumbing fixtures shall be conveyed to the building sewer and to a point of disposal.
  - Wastewater from different sources shall be drained and conveyed for treatment.
  - Rain water shall be collected through conductor/downspout and conveyed to any receiving water retention facility, canal or body of water. Discharge shall be done with care to ensure safety of the community.
- Treatment
  - Wastewater shall be treated prior to its disposal.
  - An approved septic system shall be constructed so as to provide treatment of sewage to avoid surface and subsurface contamination.
  - Monitoring of the quality of effluent shall be done to ensure compliance to laws and regulations.
- Disposal
  - Wastewater shall be disposed of in an approved manner.
  - Before disposal, a permit shall be secured from the authority in compliance with the law.
  - The campus shall ensure that the effluent discharged to the environment passes the effluent standard stipulated in DAO 16-08.
  - Discharging of waste to the environment shall be subject to complaint with WQMA.

### **3. Hazardous Waste Management**

- Generation
  - Wastes generated shall be registered to the regulatory agency for their inventory.
  - A Generator's ID number shall be secured from the authority as a transaction ID number for the issuance of permit to transport waste.
  - Procurement of any material containing toxic or hazardous elements for procurement shall be planned properly to minimize. The management shall consider prevention and mitigation of significant and health hazards, possible spillage and release as well as costs for cleaning, collection treatment and disposal.
  - Chemicals for procurement shall be based on the required quantity so as not to minimize waste generation.
  - Use of alternative and non-toxic materials, if possible, as packaging material for equipment, instruments to reduce special handling and operation and maintenance cost.
  - Continue to own and be responsible for the hazardous waste generated or produced in the premises until the hazardous waste has



- been certified by the waste treater as adequately treated, recycled, reprocessed or disposed of.
  - Train or inform the personnel and staff on the hazards posed by the improper handling, storage, transport, and use of hazardous waste and the containers.
- Collection
  - An approved method of collection shall be used upon collection of the waste.
  - All waste shall be collected with proper protective gear to avoid contact, exposure to chemicals either for a short or long period of time.
  - Waste shall be collected using an approved container, leak and punctured-proof, durable and cost-effective.
  - Waste shall not be drained in piping systems to avoid a mixture of incompatible materials so as to prevent explosions, damage to lives and properties.
- Transfer
  - An approved method of handling shall be used in transporting waste from the point of generation to the temporary storage area.
  - An approved vehicle shall be used in transporting waste so as to avoid spilling and/or released to the environment.
- Storage
  - Waste shall be safely stored prior to its collection by the authorized hauler.
  - The storage area shall be equipped with proper ventilation and security for safety purposes.
  - The storage area shall not be accessible to people except for the person in-charge to ensure public health protection.
  - All containers must be regularly checked for leaks.
  - There should be segregation of non-treated from treated hazardous waste
- Labeling
  - The size of the label is 20cm by 30cm.
  - The color of the label is yellow background and black for letters conspicuously marked in paint or other permanent form of marking.
  - The material of the label must be scratch proof and resistant to tampering and weathering.
  - The label is accompanied with the symbol corresponding to the characteristics of hazardous waste.
- Packing
  - In packing the hazardous waste, the containers must be in good condition without leaks and damages.
  - The containers must be equipped with a strong lid or cap to prevent spillage during the transport.
  - The containers to be used must be made from materials suitable for the characteristics of hazardous waste.
- Transport and Treatment

- Only authorized haulers with proper permit shall transport the generated waste.
- The management shall ensure that all waste generated shall be transported and treated prior to its disposal.
- Disposal
  - All waste shall be disposed of in a sanitary landfill or other approved method of disposal.
  - All waste that is being disposed shall be recorded for documentation purposes.

#### **4. Personal Protective Equipment (PPE) Disposal**

- Used disposable mask
  - Masks must be cut in half to avoid reuse.
  - Masks must be disposed of in a trash bag separate from other residual waste and must be labeled as “disposable PPE” or “infectious waste”. Date of disposal shall be also included in the label.
  - Storage of waste in the separate trash bin shall be 72 hours before disposal.
- Used disposable gloves
  - Gloves shall be ensured to be inside-out, one glove enveloped inside the other, when disposed in a trash bag separate from other residual waste.
  - Trash bags shall be labeled as “disposable PPE” or “infectious waste”. Date of disposal shall be also included in the label,
  - Storage of waste in the separate trash bin shall be 72 hours before disposal.

#### **5. Air Exhaust Management**

- All APSE shall be periodically maintained.
- All exhaust from any air pollution source equipment shall be periodically monitored and tested to ensure compliance to standards.
- All gasses released from APSE shall be treated, if applicable, so as not to induce negative environment and health impact.
- Submission of reports to the regulatory agency shall be made in compliance with the AQM

#### **Environmental Compliance Certificate (ECC)**

Pursuant to Section 4 of PD 1586 known as “ESTABLISHING AN ENVIRONMENTAL IMPACT STATEMENT SYSTEM INCLUDING OTHER ENVIRONMENTAL MANAGEMENT RELATED MEASURES AND FOR OTHER PURPOSES”, Environmental Compliance Certificate shall be secured for any such environmentally critical projects.

In line with the university’s commitment to ensuring environmental sustainability, the Batangas State University - The NEU Lipa Campus applied for an Environmental Compliance Certificate.

An Environmental Compliance Certificate commonly known as ECC, is a certification issued by the Department of Environment and Natural Resources - Environmental Management Bureau (DENR-EMB) after a positive review of the project's application.

### Benefits of Environmental Compliance

Environmental compliance describes the many ways in which public authorities monitor, promote, and enforce compliance with the regulations to improve the society we live in through enhanced environmental benefits:

1. **Cost Reduction** : Non-compliance can prove costly in more ways than one. Apart from the costs in the form of penalties and litigation costs, unsustainable practices can be expensive and take many forms such as waste of resources, environmental remediation and so on. Cost reduction becomes easier when you follow sustainable practices and reduce waste.
2. **Reduced Carbon Footprint**: It can be reduced by adopting sustainable practices.
3. **Corporate Social Responsibility**: With consistent monitoring, sustainability goals are easily tracked and achieved. When an institution becomes sustainable, it is automatically going to be beneficial to society.



## **II. SUC DEVELOPMENT, LAND USE AND INFRASTRUCTURE PLAN**

### **A. Vision, Mission, Goals and Objectives**

#### **University Vision**

A premier national university that develops leaders in the global knowledge economy.

#### **University Mission**

A university committed to producing leaders by providing a 21st century learning environment through innovations in education, multidisciplinary research, and community and industry partnerships in order to nurture the spirit of nationhood, propel the national economy, and engage the world for sustainable development.

#### **1. College of Accountancy, Business and Economics**

The College of Accountancy, Business and Economics aims to provide quality education to prepare students for a wide range of careers in accountancy, business, and management. It has two program offerings namely Bachelor of Science in Management Accounting and Bachelor of Science in Business Administration. Under the Bachelor of Science in Business Administration, there are two majors- Financial Management and Marketing Management.

#### **Goals and Objectives**

The College of Accountancy, Business, Economics and International Hospitality Management aims to provide quality education to prepare students for a wide range of careers in accountancy, business, hotel and restaurant management, tourism management, custom and public administration, aspire for continuing education, enhance competencies and hone their leadership skills to enable them to participate actively in the global market through high quality instruction, research, extension and production which serve as fertile ground for the internalization of values that uplift self, society and the environment.

#### **2. College of Arts and Sciences**

#### **Goals**

The College aims to provide exemplary leadership essential to the education of proficient and humane professionals in the arts and sciences.

#### **Objectives**

1. Prepare the graduates of the different disciplines for professional careers in their chosen fields of specialization;
2. Equip graduates with a strong foundation in the arts and sciences with accompanying behavioral and social preparation of a well-rounded personality;
3. Conduct more relevant and responsive programs in research and extension to enhance instruction and linkages and disseminate research findings to promote viable technologies in the service area; and
4. Provide the manpower needs of industries and other service areas with globally competitive, dedicated professional workers having positive outlooks in life and with innate love for God, country and fellowmen.

### **3. College of Industrial Technology**

The College of Industrial Technology is the first college established in the university, and has since proven to be a premier producer of well-rounded and globally competitive professionals who meet local, national, and international demands for skilled workers who significantly contribute to the manpower resources in response to the rapid industrialization of the modern world.

#### **Goals**

The College of Industrial Technology shall produce well- rounded and globally competitive individuals who meet local, national and international demands for skilled workers.

#### **Objectives**

1. To devise up-to-date curricula that help attain goals, meet changing requirements and reflect changes in Industrial Technology.
2. To facilitate quality technical-vocational education and training towards holistic competency and proficiency of the individuals in the different technology areas.
3. To mold individuals whose personal, social, technical, practical qualities make them productive and valuable citizens of a global village.
4. To train technologists in the use of applied research by innovating ways to address needs and problems and by implementing and extending current technology.

### **4. College of Informatics and Computing Sciences**

The College of Informatics and Computing Sciences aims to shape globally competitive computer magnates as they develop their professional identities and ethical values. It establishes equanimity, objectivity and wisdom, unselfishness and concern for the environment through their technological competencies, community partnerships and

strong faith in the Supreme Being. It promotes excellence in pedagogy as it develops a well-rounded graduate who can assume dynamic leadership, meaningful participation and internalization initiatives in the field of Information Technology and Computing Sciences.

The College of Informatics and Computing Sciences is committed to:

1. Develop professional graduates ready for entry as active participants and/or competent leaders in the industrialized world who are:
2. Advance ideals of national identity devoid of cultural biases, but enriched with moral integrity, spiritual vigor, and credible pursuit for professional excellence;
3. Provide curricular programs for the development of well-trained IT professionals, and computer scientists who are well-educated in the principles of a particular discipline, well-trained in the art and science of computer applications such as productivity tools, authoring software and software development applications, and well-oriented in advocating national consciousness on the promotion of history, culture and traditions.

## **5. College of Engineering**

The College of Engineering aims to develop a well-rounded graduate imbued with moral and ethical values, spiritual vigor, and utmost concern for the environment as integral parts of furtherance of a chosen profession.

The industrial engineering alumni three to five years after graduation shall:

1. Effectively practice Industrial Engineering in various functional areas of an organization.
2. Adapt Industrial Engineering practice to the changing needs of the society and achieve Global competitiveness.
3. Adhere to professional, moral, ethical standards in the practice of industrial engineering.

## **6. Research Framework**

### **Goals**

1. To develop and implement a functional research program that is relevant to the program thrusts of the University
2. To enhance the research capabilities of the faculty and student researchers through human and physical resources development and the creation of an environment that fosters research.
3. To generate high impact research outputs for the utilization of the educational, communal and industrial sectors.
4. To provide faculty and students with assistance and support in creating an environment that is conducive for innovation, which will eventually create avenues for technology transfer and commercialization of their research.



5. To ensure that faculty and students benefit from research activities at the University.
6. To enrich the existing body of knowledge through multidisciplinary/collaborative research.

### **Objectives**

1. Intensify the research capability of the University through human and physical resource development.
2. Develop quality research projects on the following key areas such as Food, Energy, Architecture, Engineering and Technology; Agriculture and Natural Sciences; Environment and Biodiversity; Entrepreneurial and Business; Education, Mathematics and Social Sciences.
3. Ensure effective dissemination and application of research through oral and/or poster presentations and publication of results in refereed journals, and when appropriate, research output commercialization to encourage the entrepreneurial spirit in faculty and students.
4. Develop a culture of research among faculty and students by involving them in research activities through seminar workshops, training, research fora, research assistantships and other research interactions and collaborations.
5. Strengthen research consortia and linkages to augment research funding of the University.
6. Optimize the utilization of research outputs for technology transfer and possible income generating projects.

### **Thrusts and Priorities**

The University shall pursue thrusts and priorities which may be subjected to review at least annually by each area: Architecture, Engineering and Technology; Agriculture and Natural Science; Environment and Biodiversity; Entrepreneurial and Business; and Education, Mathematics and Social Sciences to make the Research Program of the University responsive to the emerging needs and environmental changes and development depending on research competencies available, appropriateness to the local needs and availability of the resources. The following thrusts and priorities are based on the national, regional and provincial agenda of the government identified through agenda setting and road mapping among research personnel, deans, faculty researchers, students and external stakeholders.

### **Strategies of Implementation**

1. Networking and Collaboration  
Develop a networking system among the colleges that will facilitate planning, packaging of research proposals implementing and monitoring, evaluating, documenting, disseminating and utilizing

research outputs

2. Investment on Human Capital

Provide a continuing program of upgrading the human capabilities in research training programs, giving attractive incentives to researchers, developing a pool of research experts, practicing the mentor system and others.

3. Resource and Fund Generation

Source out funds from external sources for upgrading physical facilities and equipment and implementation of other research undertakings.

4. High Impact and Relevant Programs

Undertake quality research in line with the thrusts and priorities of the University which can be immediately utilized by the community.

5. Linkages and Cooperation

Establish and maintain linkages with local and foreign research organizations, universities with strong research capability, non-government organizations and other private or government agencies.

6. Knowledge Management Center

Establish a management center for computerization, publication and dissemination of research outputs.

**7. Extension Service Framework**

**Goals**

1. To develop and implement a viable Extension Service Program for the University
2. To enhance the delivery of extension services to target clientele
3. To improve the quality of life at grassroots level
4. To meet the needs of faculty members, administrators and non-teaching personnel in learning basic technical, vocational technological skills as well as in the areas of health and recreation

**Objectives**

1. To formulate and implement an effective mechanism for planning, policy-making, financing, management, monitoring and assessment of the Extension Service of the University
2. To build and enhance the technological capacities of the faculty for more effective extension service
3. To produce functionally literate, useful, self-reliant, and innovative citizens imbued with the values necessary to become effective members of a democratic society
4. To produce citizens who are equipped with vocational/ livelihood/ technical skills that ensure productivity
5. To maximize the transfer of research-based technologies in the service areas

6. To create an environment that fosters dynamic involvement of the University, government and non-government organizations, and industrial establishments in developing the depressed communities

### **Thrusts and Priorities**

The University shall pursue extension service programs, activities and projects (PAPs) that will enable institutions, industries and communities, particularly the depressed and underserved, to achieve sustainable development through:

1. Community Extension Services
  - Capability-Building Training Program
    - Agricultural/ Environmental Training for Farmers/ Barangay Officials
    - Livelihood/ Technological-Vocational/ Skills Training
    - Continuing Education for Professional
    - Basic Education/ Information Technology Literacy Training
  - Community Outreach Program
    - Food and Nutrition/ Health and Sanitation/ Maternal and child-care
    - Medical/ Dental/ Optical Mission
    - Blood Donation
    - Clean and Green Community/ Coastal Cleanup
    - Tree Planting
    - Nursery and Vegetable Garden Establishment
    - Relief Goods Operation
    - Gift Giving Activity
    - Youth and Sports Development/ Environmental Camp
    - Visit to orphanage/prison camps/ rehabilitation center
    - Provide counseling/legal advice
    - Fundraising for Community Development
  - High-impact, long-term Integrated Community-based Development Program
    - Adopt-a-Barangay Program
    - Adopt-a-School Program
    - Barangay Integrated Development Approach in Nutrition Improvement (BIDANI)
    - Agro-industrial Community-based Technology Center
2. Institutional and Industry Development Program
  - Technical Assistance and Advisory Services
    - Workers Education Services/ Manpower Development Services
    - Information and Communication Technology
    - Engineering Design Consultancy
    - Construction Supervision
    - Disaster Mitigation
    - Solid Waste Management



- Rural Development/ Urban Planning
  - Business/ financial Plan
  - Communication/ Information Services
    - Communication and/or Dissemination of knowledge and skills thru school-on-air program (DWPB FM 107.3)
    - IEC Materials Development
    - Information Drives
  - Technology Transfer, Utilization and Commercialization Program
3. Gender and Development (GAD) Program
- Gender-responsive Planning and Budgeting
  - Gender Sensitivity Training
  - Gender Analysis

The University will continue to be responsive to the needs of the different sectors of the industry and community with which it interacts. It shall consolidate the roles of the Office of the Extension Services and develop a strategic plan that provides a framework for institutional and industry linkage and community engagement with particular emphasis on meaningful poverty alleviation programs and provisions of expert services needed by the communities in the service areas.

### **Strategies of Implementation**

1. Develop a networking system among the colleges that will facilitate planning, implementation, monitoring and evaluation of the extension program of the University.
2. Conduct needs assessment to target community beneficiaries of the community extension service.
3. Assist communities in Batangas by providing technical, vocational and educational services.
4. Assist target beneficiaries in putting up home industries and cooperatives.
5. Utilized research-based technologies for sustainable development.
6. Establish and maintain strong linkages with public and private organizations/ agencies and industrial establishments for fund generation and job placement.
7. Provide a continuing program for upgrading the capabilities of extension workers through the scholarship grants and training.

## **B. Development Constraints**

### **a. Direct/Indirect Impacts of Proposed National/ Regional/ Provincial Plans and Potential Targets**

The CALABARZON Regional Development Council through the efforts of the Regional Land Use Committee produced the CALABARZON Regional Physical Framework Plan 2017 - 2046. This

30 year development plan serves as a guide for the physical development of the Region.

As reflected in the CRFPF, CALABARZON ranks first among the regions in the country with the highest population growth rate. This may result in an influx of enrollees to the academic institutions in CALABARZON including Batangas State University Lipa. Relative to this, an additional 5 storey building which houses classrooms and parking areas will be constructed to support the increase of enrollees. The plan for a dormitory on the 5th floor of the Multi-purpose Building in BatStateU Lipa will provide spaces for students who wish to live inside the campus. Convenience to college students especially to the freshmen is one of the primary reasons for the construction of dormitories. More so, students living in dormitories will have opportunities to acquire special learning communities and academic support vital to a college life. Another plan of BatStateU Lipa is the construction of a Multi-faith room to provide the individual needs of the workforce and students of the campus.

Included in the Metro Batangas Cluster, Lipa City is identified as a service, institutional and commercial center of the cluster which can reach most of the municipalities in Batangas Province. Various large industries, in-migration and population growth may need higher academic institution services which include research and extension projects. Included in the plan of BatStateU TNEU Lipa is a two-storey research center which can accommodate offices/areas needed in the conduct of research and extension activities in partnership with industries, corporations and associations within the area.

Considered as a service and commercial area, Lipa City needs to develop more quality establishments for accommodation and amenities for leisure and adventures to encourage longer stay in the tourist destinations. Aside from dormitories, BatStateU TNEU Lipa plans to put up a coffee shop in partnership with DOST to showcase the Kapeng Barako of Lipa City. This hopes to attract local and foreign tourists who may frequent the city.

## **b. Potential Land Use Conflicts**

### **1. Environmental Sector**

Along Tanco Drive, Brgy. Marawoy, Lipa City and just hundreds of meters away from BatsStateU Lipa is a dumpsite where the garbage from various communities in Lipa are collected for segregation. This posts health concerns among the students, faculty members, employees and other stakeholders of the academic institution as it brings risks such as air pollution, water contamination and accidents.

### **2. Social Sector**

With the projection of the student population in BatStateU TNEU Lipa in the next 10 years including the increase of population

in the city and neighboring municipalities, the current number of academic buildings in the campus will not be enough to accommodate the students in the future.

3. Economic Sector

A growing number of entrepreneurs have put up businesses in Tanco Drive, Brhy. Marawoy, Lipa City and more may come as the street houses the Ospital ng Lipa, Agricultural Training Institute, Department of Public Works and Highways, Land and Transportation Office, City Engineer’s Office and BatStateU TNEU Lipa among others. These businesses provide access not only to residents and employees along the drive but also to the students of campus. This poses health risks if not all of them are registered with the city government.

4. Physical and Infrastructure Sector

At present, the access road from Tanco Drive going to the campus is narrow and needs improvement in terms of condition and road capacity . Aside from private vehicles, heavy equipment and trucks frequent this access road. There is a lack of public transportation such as jeepneys that will serve the passengers. Limited number of tricycles are available but would entail a much higher transportation fee.

C. Physical Development Strategies

BatStateU TNEU Lipa conducted a stakeholders’ forum and survey to identify the possible facilities/services/infrastructures that the campus still needs to acquire in accordance with the strategic plan of the University. The stakeholders forum conducted on August 16, 2021 via google meet and survey went smoothly and resulted in establishments that are needed to be developed and constructed based on total ranking. The below tables present the result of the conducted survey.

Table LI-13 Respondents from Conducted Survey

STAKEHOLDERS CATEGORY	COUNT OF FIELD
Student	319
Parent	209
Faculty	45
Alumni	43
Non Teaching Employee	20
Administrator	12
Community Official	1
Grand Total	649

Table LI-14 Result from Conducted Survey



FACILITIES	WEIGHTED MEAN	FACILITIES	WEIGHTED MEAN
Academic Bldg	3.83		
Emergency response	3.77		
Library	3.76		
Laboratories	3.76	Church/Multi Faith	3.57
		Culture & Arts	
Academic Devt Center	3.71	Center	3.54
Career Devt Center	3.70	General Services	3.53
Continuing Education	3.70	Incubation Center	3.44
Training Centers	3.70	Storage Areas	3.39
Research Center	3.68	Housing of Officials	3.38
Field Research Areas	3.66	Dormitories	3.34
		Product Display	
Field labs	3.66	Center	3.33
Health and Wellness			
Center	3.65	Motorpool/Parking	3.31
Canteen/Cafeteria	3.64		
Security	3.63		
Admin Bldg	3.62		
IGP Facility	3.59		

Based on the result, BatStateU Lipa faces significant challenges in terms of infrastructure development. Rapid growth in the school-age population based on forecasts is exacerbating shortages of classrooms which is also indicated as the first needed infrastructure in the survey result. The current numbers of classrooms inside the campus will not be enough to accommodate the growing numbers of students particularly in the future. Due to insufficient space inside the campus, the committee needs to propose spatial strategies that will help in providing the additional classrooms and other infrastructures.

Several facilities are not completely available in the campus and are still needed to be constructed like the Research/Training Center, Multi Faith Facility, and dormitories. These facilities will also need spaces that must be part of the proposed spatial strategies.

After considering the demographic profile, geographic location, physical features, environmental condition, land use trends, inventory of landholding and facilities, transportation, power and water communication network, and waste management of Batangas State University Lipa, several physical development thrusts have been proposed.

Most classrooms in the three (3) existing five-storey buildings were converted into offices when BatStateU Lipa became a constituent campus. This resulted in a lower number of classrooms, a total of twenty-six (26), which is not enough to accommodate the forecasted number of students in the coming years. A typical classroom in the campus can hold at most 40 students.

The table below shows the projection of students' population in Batangas State University Lipa in AY 2021-2031. As presented, the number of students will increase every academic year. In particular, in AY 2021-2022, there are 4,100 students which is almost double the count in the previous academic year. The number also increases in AY 2022-2023 at 5,560, AY 2023-2024 at 7,360, AY 2024-2025 at 8,640, AY 2025-2026 at 9520, AY 2026-2027 at 10,480, 2027-2028 at 11,120, AY 2028-2029 at 11,760, AY 2029-2030 at 12,600, and AY 2030-2031 at 13,160.

Table LI-15 Projected Data for Students

YEAR	TOTAL
2022	4100
2023	5560
2024	7360
2025	8640
2026	9520
2027	10480
2028	11120
2029	11760
2030	12600
2031	13160

The increase in the population of students in the academic years is caused by the new program openings in the campus. In particular, six (6) new programs are offered in AY 2021-2022. These include 1) Bachelor of Science in Information Technology, 2) Bachelor of Secondary Education major in English, 3) Bachelor of Secondary Education major in Science, 4) Bachelor of Industrial Technology major in Electronics Technology, 5) Bachelor of Science in Operations Management, and 6) Bachelor of Public Administration. Also, 1) Bachelor of Science in Information System, 2) Bachelor of Secondary Education major in Mathematics and 3) Bachelor of Industrial Technology major in Instrumentation and Control Technology will be offered in AY 2022-2023. Meanwhile, two (2) undergraduate programs are proposed to be offered by AY 2023-2024. These include 1) Bachelor of Science in Data Science and 2) Bachelor of Science in Cyber Security. In the same academic year, Master of Science in Business Administration will also be open. In academic year 2024-2025, 1) Bachelor of Elementary Education, Bachelor of Industrial Technology major in Automotive Technology and Bachelor of Science in Food Technology will be added to the list of the programs in the campus. However, in the same academic year, there will be no students in Bachelor of Science in Computer Science and Bachelor of Science in Industrial Engineering as these programs will no longer be offered.

Additional programs are proposed to open in the next academic year. These include Bachelor of Science in Accountancy, Bachelor of Science in Statistics, Bachelor of Science in Social Work, and Bachelor

of Arts in English Language Studies by AY 2026-2027; Bachelor of Science in Management Engineering by AY 2028-2029; Bachelor of Arts in History and Bachelor of Arts in Literature and Cultural Studies by AY 2029-2030; and Bachelor of Science in Information Technology Entrepreneurship by AY 2030-2031.

The projected increase in the population of students from AY 2021-2022 to AY 2030-2031 denotes the increase in the number of faculty members and learning resources needed. With this projection, strategic planning on students' class scheduling and acquisition of learning facilities should be secured. Observance of three-shifts in a day and establishment of buildings for additional classrooms may be considered. The number of existing classrooms inside the Campus will not be enough to accommodate the growing number of students in the coming years.

With this, a five-storey building with an estimated dimension of 35m (L) by 11m (W) is being proposed at the parcel of land in front of the Power House. It is estimated to have four (4) classrooms in each floor, with a total of 20 classrooms inside the whole building. The rest of the lot will be allotted as a motorpool of the campus. The twenty (20) classrooms in three (3) years will be divided into five (5) colleges of the campus.

#### **D. Development Concept, Structure Plan**

An effective educational institution adapts innovative instructional programs and, at the very least, provides a pleasant, secure, stable, convenient, well-lit, well-ventilated, and visually appealing physical environment. This facility should also comprise furniture, materials and supplies, equipment, and information technologies, as well as various aspects of the building grounds, such as athletic fields, play areas, outdoor learning areas, and parking spots.

The university building is more than just a passive container for the instructional experience; it is an integral ingredient of the educational process. The layout and design of a university have an impact on the place performance of the learners, academics, and general public. Long-term planning resulted in the development of an extensive infrastructure improvement strategy to address unfilled facility necessities at the Batangas State University Lipa in order to cater the needs of the growing populace of the students and the organization itself.





Figure LI-47 Ten-year implementation map and site development

The campus land and spaces shall be allocated as shown in the map and site development plan. Allocation of spaces shall be in accordance with the year to year implementation of the plan. New amenities will be provided.

The Research Center is also an important aspect of the campus which aims to strengthen the studies related to coffee, as the city has once been the Coffee Capital of the Philippines. A two-storey Research Center Building is another proposed physical development thrust in three (3) years which will be composed of a Coffee Shop/Store at the base floor and the research office at the top. It will be situated at the location of the former canteen of the campus, which is estimated to be 10.8m (L) by 4.9m (W). A 10.5 m (L) by 10m (W) Coffee Production Facility will also be constructed in the same year.

For the five-year development plan, reconstruction of the Campus Gymnasium is being proposed. The target dimension of the proposed closed gymnasium will be 43.84m (L) by 26.36m (W).

Ten (10) years from now, the Multi-Purpose Building is being planned to be reconstructed to restore the rooms and other facilities/services that house within. It was constructed in 2013 and is situated in a low area wherein its base floor became susceptible to floods during rainy days. Electrical wirings and connections are hazardous on these times since some classes are being administered here. At the

proposed reconstruction of this five-storey building, the Dormitory will be placed at the fifth floor of this.

A new campus expansion site shall be proposed to cater the needs of the growing population of students and the University's service commitments.

Since the campus has limited spaces for the construction of the additional facilities, maximization of available spaces and reconstruction of old buildings remain the most feasible strategy. Construction of additional buildings to cater the growing population of students and other stakeholders will be proposed in a new site that may be identified and acquired by the University.

## **E. Land Use Plan**

The construction of a project typically takes twelve to eighteen months, depending on the scope of work, material preferences, and production rates for shipment to the site, weather, unanticipated subsurface site conditions, and a variety of other factors. Nonetheless, in accordance with the results of long-term planning, a ten-year time frame will be observed for the proposed plan to be established on the school grounds.

### **a. Academic**

#### **1. Five Storey Academic Building**

The first three (3) years of development will include the construction of a five-story academic building with dimensions of 11m x 35m and four rooms per floor. Upon completion, there will be a total of twenty classrooms, each with a floor area of 64 square meters. The estimated cost of the project is Php 85 million.



Figure LI-48 Perspective of Proposed Five Storey Academic Building

#### **2. Campus Multipurpose Gymnasium**

The university aims to mold globally competent and value-laden citizens by striving to enrich students through a holistic approach. Basic services and programs to ensure and promote

student well-being, is the primary concern of the university to attain holistic student development. Facilities for student services is one of the primary concerns of the university.

In the next five years, campus development will focus on the reconstruction of the building with dimensions of 43.84m x 26.36m on the same site as the current gymnasium. The old gym had already outlived its ten-year lifespan, hence renovation and/or reconstruction of the gym is planned. It will be a structure that can be utilized as a fully-closed air conditioned facility for events, or as a well-ventilated sports and assembly building.

The gymnasium, as a multipurpose facility, can also support fairs, exhibitions and others. As the university also encourages technology start-ups that will add fresh impetus to the innovation ecosystem, the facility can be used to showcase innovation ideas. It can be used by local entrepreneurs to exhibit products, ideas that are of business potential. The estimated cost of the project is Php 80 million.



Figure LI-49 Perspective of Proposed Gymnasium

### **3. Reconstruction of the Old Five Storey Building for Classrooms and Dormitory**

In the next six (6) to ten (10) years the Multi-Purpose Building reconstruction will be the next priority. The said old building has a floor area of 11.01m x 40.02m. It will have five classrooms per floor, for a total of sixteen classrooms spanning from the first to fourth floors. A dormitory will be built on the fifth floor to provide convenience for students and school staff. The estimated cost of the project is Php 96.5 million.





Figure LI-50 Perspective of to be Reconstructed Five Storey Building with Dormitories

## **b. General Services**

### **1. Material Recovery Facility (MRF)**

In line with one of the University Strategic Plan 2019-2029's thematic areas, Sustainability, EMU ensures compliance of the University to all legal environmental requirements as prescribed by RA 9275, RA 8749, RA 9003, RA 6969, and PD 1586. More so, clients are provided with assistance on environmental issues and concerns to mitigate and control any potential risk to environment, health and safety, and public health. Construction of Material Recovery Facility (MRF) will be done in the first three years. Wastes from collection points will be temporarily transferred to this waste disposal area. The wastes are sorted and segregated, classified as recyclables and residual wastes. The recyclables materials are recovered from the waste stream and the residual wastes are transported to the nearest Sanitary Landfill. The MRF has a 14m x 10m footprint, or 140 square meters.

To maintain a sustainable and eco-friendly campus, a Sewage Treatment Facility (STF) will also be constructed with the same floor area (14m X 10 m or 140 sq. m) as the MRF will also be included in the same projected timeline. The facility will collect wastewater generated from buildings and provide applicable treatment prior to its disposal whose effluent complies with general effluent standard set by Department of Environment and Natural Resources through DENR AO 2016 -08. The estimated cost of the project is Php 15 million.



Figure LI-51 Perspective of Proposed MRF

### c. Research and Extension Services

#### 1. Research and Extension Office

The two-storey Research Center is also expected to be built in front of the five-storey building facing the DPWH facility in 2024 - 2027. It will have a projected area of 4.30m x 10.80m and will house the Research and Extension Office. Because Lipa was once a Coffee Capital of the Philippines, Kapeng Barako is the Research priority of the campus to bring back the glory of Kapeng Barako in Lipa. Research output will be displayed in the said building and will be open to future researchers of Kapeng Barako.

#### 2. Coffee Production Facility

To realize the campus goal of revitalizing the Kapeng Barako in Lipa City, Coffee Production Facility will also be built in 2024 - 2027. It will have a floor area of 10m x 10.5m. Research outputs will be produced in the facility. The estimated cost of constructing the building facility is Php 4.7 million. Other research endeavors may be staged using the facility.



Figure LI-52 Perspective of Proposed Coffee Production Facility  
Table LI-16 Proposed Ten Year Development Plan

PROJECT	PROJECT DESCRIPTION	DURATION YEAR	REMARKS
Construction of Five Storey Academic Building	A five storey academic building with 11m x 35m area and four classrooms per floor. There will be a total of twenty classrooms, each with a floor area of 64 square meters upon completion	C.Y. 2022 – 2024	The availability of the facility is deemed necessary to augment the required classroom due to the enormous increase in enrollees and to comply accreditation requirements of AACCUP
Construction of Material Recovery Facility (MRF)	A 14m x 10m or 140 square meters MRF or temporary waste disposal area where wastes are sorted and segregated and classified as recyclables and residual wastes. The recyclables materials are recovered from the waste stream and the residual wastes are transported to the nearest Sanitary Landfill.	C.Y. 2022 – 2024	To ensure compliance of the university to all legal environment requirements as prescribed by the law, and to mitigate and control any risk to environment, health and safety and public health



Construction of Sewage Treatment Plant (STP).	A 14m x 10m or 140 square meters STP that will collect wastewater generated from buildings and provide applicable treatment prior to its disposal whose effluent complies with general effluent standard set by Department of Environment and Natural Resources through DENR AO 2016 -08.	C.Y. 2022 - 2024	This is to collect wastewater generated from buildings and to provide applicable treatment prior to its disposal whose effluent complies with the general effluent standard set by Department of Environment and Natural Resources through DENR AO 2016 -08.
Reconstruction of Campus Gymnasium	The current gymnasium will be reconstructed into a closed fully air conditioned one with a dimension of 43.84m x 26.36m.	C.Y. 2024 - 2027	The facility is intended to cater the growing number of students and to provide better student affairs services
Construction of a two Storey Research Center	A 4.30m x 10.80m two Storey Research center that will house the Research and Extension Office as well as a coffee facility for the expediency of the researchers.	C.Y. 2024 – 2027	This will develop a research culture among the students and faculty. Because Lipa was once a Coffee Capital of the Philippines, Kapeng Barako is the Research priority of the campus to bring back the glory of Kapeng Barako in Lipa.

Construction of Coffee Production Facility	A 10m x 10.5m Coffee Production Facility	C.Y. 2024 – 2027	Because Lipa was once a Coffee Capital of the Philippines, the Coffee Production Facility will be a big help in the realization of its mission.
Reconstruction of the Old Five Storey Building	The Old Five Storey Building will be demolished for the construction of a new five storey building. It will have five classrooms per floor, for a total of sixteen classrooms spanning the first to fourth floors. A dormitory will be built on the fifth floor for the staff and students.	C.Y. 2027 – 2031	The existing five storey building is already old. It is no longer ideal for use.

**F. Land, Water, Power Policies**

The campus shall comply with existing statutory and regulatory policies as provided by the government. Local ordinances shall also be considered in the utilization of land, water and power resources.

A number of policies govern specific land uses, water, and power generation and utilization. These include:

**a. General Policies**

- 1. 1987 Philippine Constitution
  - ARTICLE 13, SECTION 9 Social Justice and Human Rights

“The State shall, by law and for the common good, undertake, in cooperation with the private sector, a continuing program of urban land reform and housing, which will make available at affordable costs, decent housing and basic services to underprivileged and homeless citizens in urban centers and resettlement areas. It shall also promote adequate employment opportunities to such citizens. In the implementation of such a program, the state shall respect the rights of the small property owners.”

2. RA 7279 Urban Development and Housing Act of 1992

The act stipulates that it is the policy of the State to undertake, in cooperation with the private sector, a comprehensive and continuing urban development and housing program aimed to provide housing through rational use of the land and adopt policies to regulate urban growth.

3. RA 7279 – UDHA of 1992 - Goals

The Republic Act articulates the provision for the rational use and development of urban land. This also emphasizes the adoption of workable policies to regulate and direct urban growth and expansion towards a dispersed urban net and a more balanced urban-rural interdependence.

4. RA 11201 Department of Human Settlement and Urban Development Act

HLURB - The Housing and Land Use Regulatory Board (HLURB) is a national government agency tasked as the planning, regulatory and quasi-judicial body for land use development and real estate and housing regulation. These roles are done via a triad of strategies namely, policy development, planning and regulation.

5. The Local Government Code of 1991 (RA 7160)

The Code mandates the Local Government Units to adopt comprehensive land use plans and enact integrated zoning ordinances.

**b. Land Use and Environmental Planning**

1. PD 1151 – Philippine Environmental Policy issued on 18 April 1977
2. PD 1152- Philippine Environment Code, June 6, 1977
3. RA 7586 National Integrated Protected Area System (NIPAS) of 1992
4. PD 984 – Pollution Control Law of 1976
5. RA 8749 Clean Air Act of 1999

**c. Laws on Water Quality and Water Pollution**

1. Presidential Decree no. 1067 Water Code

This governs the ownership, appropriation, utilization, exploitation, development, conservation and protection of water resources, and identifies the rights and obligations of water users and the administrative agencies that enforce laws on water use and availability.

2. RA 9275 – Clean Water Act of 2004

**d. Power Supply and Clean Energy**

1. Commonwealth Act 120- National Power Corporation to develop hydroelectric facilities
2. PD 334- Philippine National Oil Company
3. PD 1442- exploration and development of geothermal resources



4. BP 33- Energy Conservation
5. RA 387- Petroleum Act
6. RA 5207- Atomic/Nuclear energy
7. RA 7638 - Created the Department of Energy and stipulated a policy of rationalizing government agencies
8. RA 9367 – Biofuels Act of 2006
9. RA 9513 – Renewable Energy Act of 200

**e. Other relevant laws/policies**

1. Land Use Development and Infrastructure Plan, Republic Act 11396
2. Philippine Agenda 21
3. National Framework for Physical Planning (2001-2030)
4. Sustainable Development Goals

**G. Major Development Programs**

**a. Introduction**

A comprehensive planning process of BatStateU TNEU Lipa provides a framework to guide the university in its land use and campus development plan. The idea is to balance usability, capacity, design and cost in the plans for its facilities, infrastructures and other built structures.

The campus operates in a very small area, covering approximately 1000 square meters only. Sustainability and flexibility of design, maximization of capacity and life cycle costs are some important principles that guide the university in the planning process. These principles also contribute to the vision of the University to be the country's premier national university by providing a 21<sup>st</sup> century learning environment.

**b. Description of Design of the Building and Other Built Structures**

The University adheres to the standards of the National Building Code, and as university policy, building designs must address natural and man-made hazards. Building structures are designed to withstand earthquakes and gusts of winds during typhoons. They are also fitted for fire emergencies. Professional engineering consultants are hired for this purpose. Soil and ground conditions, waterways, easements and zoning ordinance, as well as national and local guidelines are considered in the location of buildings. Qualified contractors with proven experience are awarded infrastructure projects in the University.

University structures, facilities and buildings are designed to give equal access to persons with special needs and disabilities. Access ramps and lifts are installed as needed and in accordance with building codes.

### **1. Five-Storey Academic Building**

A five storey academic building with 11m x 35m area and four classrooms per floor is planned to be erected on the parking area beside the Higher Education Building in 2022 – 2024. Upon completion, there will be a total of twenty (20) classrooms, each with a floor area of 64 square meters.

### **2. Material Recovery Facility (MRF) and Sewage Treatment Plant (STP)**

The university is also set to build a 14m x 10m or 140 square meters MRF or temporary waste disposal area where wastes are sorted, segregated and classified as recyclables and residual wastes.

Beside the MRF is another 14m x 10m or 140 square meters STP that will collect wastewater generated from buildings and provide applicable treatment prior to its disposal whose effluent complies with general effluent standard set by Department of Environment and Natural Resources. Both MRF and STP are set to complete on 2022 - 2024

### **3. Reconstruction of Campus Gymnasium**

The current gymnasium will be redesigned as a closed facility which will accommodate the activities related to sports, culture and arts, and other related events. The gymnasium shall also be used as the campus DRRM Operation Center and staging area for volunteers in case of local emergencies.

### **4. Two Storey Research Center**

A 4.30m x 10.80m two Storey Research center which will house the Research and Extension Office and the coffee facility for the expediency of the researchers is set to be built also in 2024-2027.

### **5. Coffee Production Facility**

A 10m x 10.5 m building which will serve as the coffee production facility is set to be built also in 2024 - 2027

### **6. Reconstruction of the Old Five Storey Building**

A new Five Storey Building will be built in the current location of the five-storey Multi-Purpose Building. It will have five classrooms per floor, for a total of sixteen classrooms spanning the first to fourth floors. A dormitory will be built on the fifth floor for staff and students.

### **H. Disaster Risk and Climate Adaptation**

Disasters and climate change both affect people's lives. There is significant overlap between the problems that disaster risk reduction and climate change adaptation seek to address. Disaster risk reduction covers non-climate related disasters such as earthquakes. It also addresses climate-related disasters such as floods, droughts, cyclones and storm surges. With climate change predicted to increase the frequency and/or

intensity of climate-related hazards and effects, populations already exposed to those hazards and effects will be at greater risk.

BatStateU Lipa is exposed to five (5) hazards: earthquake, volcanic eruption, flood, fire and typhoon. A VHF base radio has been installed in the campus to help in efficient mobilization of personnel, equipment and materials, and other resources in the university during emergency response. ICS and IMT members shall be issued portable radios for the same purpose.

Table LI-17 Probability and Impact Ratings of Identified Hazards\*

HAZARD	PROBABILITY		IMPACT		AVERAGE	RANK
	RATE	REMARKS	RATE	REMARKS		
Earthquake	5	Geographic location	4	Communities near landslide prone areas	4.5	1
Flood	1	Identified areas prone to flood	1	Communities near flood prone areas	1	5
Fire	3	Occurrence of major fire in the past	3	Communities in densely populated areas	3.5	3
Volcanic Eruption	2	Geographic location	2	Communities near coastal areas/ coastal areas	2	4
Typhoon	4	Geographic location	4	Communities live in flood prone areas	4	2

\*Source: Contingency Plan of BatStateU-Lipa

As seen in the above table, the probability and impact ratings of the hazards, earthquake ranks number 1. Based on historical records, some roads in the province are not passable and residents from nearby places



were injured from the pieces of glass shattered due to an earthquake. Evacuation of families and individuals was reported in nearby municipalities.

To mitigate the risk of these hazards, disaster preparedness plays an important role. The following are the disaster preparedness guide for each type of hazards:

#### **a. Earthquake preparedness guide**

An earthquake is the weak to violent shaking of the grounds produced by sudden movement of rock materials below the earth's surface. Earthquakes in the area may be inevitable, but damage from them may be reduced. The steps to be taken before, during, and after an earthquake will help make individual's safer and reduce injuries, damages, and losses.

##### **1. Before an earthquake**

Know the hazards in your area.

- Be familiar with places where you can take cover, exit routes, and evacuation assembly areas. Secure furniture and materials that can cause injuries such as bookshelves.
- Familiarize yourself with the location of the fire extinguishers, medical kits, and communication facilities.
- Check the structural soundness of buildings and have it repaired or retrofitted if necessary.
- Check the stability of hanging objects and heavy furniture.
- Store harmful chemicals and flammable materials properly.
- Participate in campus earthquake drills

##### **2. During an earthquake**

When inside a building

- Stay calm and do the "DUCK, COVER, and HOLD". DUCK down into your hands and knees.
- COVER your head and neck with your hands and arms and take shelter under a sturdy table or desk. In an auditorium, stay between seating rows and duck at your seat. Stay alert for potential threats and keep your eyes open.
- HOLD on to your shelter until the shaking stops. DO not run or panic.
- Beware of falling objects and move away from glass windows, hanging objects, unsecured furniture or equipment containing hazardous chemicals.

When you are outside

- Move to an open area.
- Stay away from trees, powerlines, electric posts, concrete structures, and landslide prone areas.

3. After an earthquake

- Be prepared for aftershocks. These may occur seconds, minutes, hours or days after the initial shock.
- After the shaking stops, exit the building and go to the designated evacuation assembly area. Do not use the elevators.
- Check yourself and others for injuries. Report serious injuries to the campus authorities or Building Emergency Response Team (BERT) at your evacuation assembly area. Provide first aid if necessary.
- Do not re-enter buildings until the University authorities, specifically the Incident Commander, have given clearance to return.
- Do not move seriously injured people unless they are in obvious, imminent danger from fire and building collapse. Report their locations to the University authorities immediately.
- Stay on campus until you have been accounted for and instructed that it is safe to leave. Roads may have been damaged or blocked by debris, so travel may be dangerous.
- Only activate the fire alarm if there is a fire in the building.

4. In the unlikely event that you are trapped in a building:

- Stay calm.
- If a window is accessible, place an article of clothing outside the window as a marker for rescue teams. If there is no window, use your whistle or flashlight and tap on a pipe or wall so that rescuers can locate you.
- If accessible, pull the manual fire alarm or shout as a last resort to prevent dust inhalation and preserve your energy and voice.

5. For damage assessment:

- BatStateU Damage Assessment Team (BDAT) shall check the integrity of all the buildings in the campus given the following conditions:
  - If at least 4.5 magnitude earthquake is experienced; and
  - If assessment is requested by the lead building marshal due to seen or observed cracks in the buildings and problems in electrical wiring connections
- BDAT shall submit walk-through inspection report with computed damage cost and recommendation to the University President

**b. Typhoon preparedness guide**

Due to the Philippines' geographical location astride the Pacific Typhoon Belt, cyclonic storms and floods have been the principal natural hazard in the country—based on frequency of occurrence and

scale of intensity. The densely populated island of Luzon and the Visayan Islands are most adversely affected by typhoons which are accompanied by wind, rain, tidal waves and floods. In the track of these storms, public buildings, wharves, ships, communication lines, roads, bridges and local dwellings are either destroyed or damaged, and agriculture is severely disrupted.

## **1. General Guidelines**

- Pre-Disaster Risk Assessment (PDRA) shall be conducted on the declaration of PAGASA of Typhoon Signal No.2 in the city or municipality where the campus is located.
- All members of the Incident Management Team (IMT), BatStateU Damage Assessment Team and Lead Building Marshals of the campus are expected to report to work specifically to assess the state of the campus and to take the appropriate contingency steps as a result of PDRA.
- The General Services Office is expected to delegate service and maintenance staff to the campus for 24 hours, either on a straight-time or shift schedule.
- The Information Communication Technology (ICT) Office shall also appoint personnel who will be on campus for 24 hours, either on a straight-time or shift schedule.
- The Medical Health Unit shall be operating 24 hours in the campus to handle health and medical concerns of on-duty personnel.
- At least one (1) university vehicle must be readily available for 24 hours operation..

Once the typhoon signal 1 is declared in the area, the following shall be considered:

- Post Disaster Need Assessment (PDNA) shall be performed by the BatStateU Damage Assessment Team to assess losses and estimated costs of damages in the campus. This shall be properly laid down in the PDNA report that will be forwarded to the Crisis Management Team of the Campus.
- Crisis Management Team shall also be deactivated

## **2. Before the typhoon**

### **Building Interior**

- Check drains, gutters and downspouts on the roof of the building to ensure they are clear and able to drain off the heavy rain. Clogged roof drains could cause the roof to collapse from the weight of accumulated water, or cause damage to the interior of the building if water on the roof becomes deep enough to cover vent pipes and run down inside the building.
- Strap, anchor or remove antennas or loose objects from the roof.



- Protect all vent hoods, exhaust louvers, etc., from wind and rain.
- Bring in display racks and other objects usually left outside. Secure all loose objects, such as trash cans and potted plants, which might cause damage during strong winds.
- Remove outdoor signs, especially those that swing or are portable.
- Dumpsters (and large trash containers) can be secured by lashing two or more together with rope or chains and chocking the wheels. They might also be secured to a tree or telephone pole, if available.
- If the building has exterior glass frontage, clear out that section of the building as much as possible and use shutters or board up to protect glass. Cover all glass windows and doors on at least the first floor of the building with shutters, paneling or other protective material, such as plywood.
- Secure first floor doorways against flood waters with sandbags or heavy plastic sheeting and duct tape.

#### **Building Exterior**

- Clear all desk and table tops of small loose objects. Box or place in desk drawers or storage cabinets any loose papers, books, hanging plants, etc.
- Remove contents of lower file cabinet drawers on the ground floor of the building and secure contents elsewhere.
- Move important documents away from windows. Protect/relocate vital records. Relocate files, boxes, computers, office machines and other equipment to the innermost portion of the building or a safer location. Do not leave boxes or equipment on the floor; elevate them by placing items on desk or table tops.
- Disconnect all electrical appliances and equipment such as computers, copiers, coffee makers, electric clocks, calculators, etc.

### **3. During the Event**

- During the height of the typhoon, personnel should remain in a place that has been identified as safe from wind and flood.
- During a power failure, turn off electrical switches to prevent reactivation before necessary checks are completed.
- Constantly monitor any equipment that must remain online.
- When it is safe to do so, patrol the property and check for roof leaks, pipe breakage, fire or structural damage.

### **4. After the Event**

- Secure the site and survey for damage and for safety hazards, such as live wires, leaking gas or flammable liquids, poisonous

gasses, and damage to foundations or underground piping. Before restoring service, check all utilities.

- Do not turn on computer equipment if there are indications of low voltage power fluctuations, low air conditioning output, water under raised floor, broken windows or damaged equipment.
- Make temporary repairs as needed to prevent looting and/or any further damage. Cover broken windows and torn roof coverings immediately.
- Clean roof drains and remove debris from the roof to prevent drainage problems.

**b. Fire safety preparedness guide**

Uncontrolled fire poses danger not only to human life, but also to properties and livelihood. Basic knowledge on fire prevention and on what to do in case of fire is very important. One significant challenge that campus fire safety and facility managers face is the dissemination of information among students, faculty and employees for increased awareness on fire safety and prevention. Undoubtedly, all students and campus personnel play a major role in fire safety compliance and fire prevention in the campus.

If you discover fire in the campus, follow R.A.C.E.

- R - Remove people from immediate danger. Hit the fire alarm.
- A - Alert others in the area.
- C - Contain the emergency, e.g., by closing (but not locking) the door.
- E - Evacuate or extinguish the fire if trained and it is safe to do so.

If fire cannot be controlled upon the use of the fire extinguisher, the Lead Building Marshal shall immediately call the fire safety department/general services office of the campus to call the nearest Bureau of Fire Protection in the area.

**Use extinguishers on small fires**

**Remember PASS**

- P - Pull the pin.
- A - Aim at the base of the fire.
- S - Squeeze the nozzle.
- S - Sweep back and forth.

**On hearing the fire alarm, EVACUATE!**

- Take your emergency supplies, car keys, bags and/or wallets and other personal items if it is safe to do so. Cease any inter- or

across-floor movement. Periodically check your fire exit to ensure that it is unobstructed at all times.

- Secure your area and your classified materials and shut down equipment, if possible.
- Feel the door or doorknob to the hallway with the back of your hand. If it feels hot, do not open it; the fire may be on the other side of the door. If you are trapped, put a cloth or towel under/at the base of your door to help prevent the entry of smoke. Close as many doors as possible between you and the fire. Look for another exit.
- If the door is not hot, open it slowly. If the hallway is clear of smoke, evacuate via the nearest safe exit and to the designated Evacuation Assembly Area. If an area is smoky, stay low to the ground. Crawl when evacuating to avoid inhaling the smoke. Assume that the smoke and/or fumes are hazardous. Use a wet cloth, if possible, to cover your nose and mouth. Follow your Evacuation Guide.
- If your clothes or those of another are on fire, STOP, DROP and ROLL.
- DO NOT USE ELEVATORS.
- Await further instructions. Do not re-enter the building until allowed to do so by the Person-in-Charge.
- Lead building marshals are required to submit a report after the incident.

### **c. Volcanic eruption preparedness guide**

A volcanic eruption occurs when hot materials such as lava, rocks, dust, ash and gasses are expelled from a volcano. Volcanic hazards include flowing of fast-moving molten rocks and other ejected fragments which range in size from fine dust (volcanic dust) to large boulders (volcanic blocks). Other hazards associated with volcanic eruption are earthquakes, fissures caused by the force of upward moving magma, water displacement, and subsidence due to retreat of magma.

#### **1. Before a volcanic eruption**

##### **Know the signs of impending eruption**

- Increase in frequency of volcanic quakes accompanied by rumbling sounds
- Increase in volume of steam emission
- Change of color of volcanic steam emission from white to gray
- Drying of vegetation, springs, and wells around the volcano
- Animals exhibit unusual behavior as they sense the volcano's restiveness

##### **Know the community's warning systems and safety plans**



- Always monitor the volcano updates and watch out for advisories and warnings.
- Develop an evacuation plan and know the location of the evacuation sites and the fastest and safest way to go there.
- Close windows and doors to reduce entry of ash if heavy ashfall is expected to hit the campus premises.
- Work closely with local authorities to prepare for special procedures for the children, senior citizens, and persons with disabilities (PWD) on what to do if an evacuation is ordered.
- Localize information by including the phone numbers of local emergency services offices, the Philippine Red Cross chapter, and local hospitals.
- Know the ways of protecting the university facilities from ashfall, landslides and debris flows by consulting local disaster officials.
- University campuses prone to the effects of volcanic eruptions should have kits, evacuation supplies, and other basic necessities.

## **2. During a volcanic eruption**

### **Stay away from danger zones**

- Stay alert and awake. Follow the instructions that go with the warning. If there is a directive to evacuate to safer grounds, do so immediately.
- Advise the students to protect their heads and get away from the areas affected by small rock falls.
- Give priority for evacuation outside the area of ash showers to students with breathing problems. They should be advised to cover their nose with a wet piece of cloth.
- Assist in evacuating children, pregnant women, PWDs, and senior citizens during evacuation.
- Cover your mouth with wet cloth and wear protective goggles or eyeglasses.
- Avoid driving in heavy ash falls unless absolutely required. Driving a vehicle can stir-up volcanic ash that can clog engines, damage moving parts, and stall vehicles. If unavoidable, the vehicle should be driven at a speed of 60 kph or slower.
- Stay away from nearby rivers or streams for possible lahar flows.

## **3. After a volcanic eruption**

### **Remain alert and be cautious**

- Follow the authorities' warning and safety advice. Leave the evacuation area only when they say it is already safe to do so.
- Clear the canals and pathways of ash and other debris. Wear appropriate masks when cleaning.

- Scrape down accumulated ash in gutters and roofs of school buildings as heavy ash deposits can collapse the structure.
- Listen to local radio and television stations for the latest emergency information.
- Clear the canals and pathways of ash and other debris.
- Report broken utility lines and suspected damaged buildings to authorities.
- If you have a respiratory ailment, avoid contact with ash.

#### **d. Flooding preparedness guide**

PAGASA has defined flood as an abnormal progressive rise in water level of a stream that may result in the overflowing by the water of the normal confines of the stream with the subsequent inundation of areas which are not normally submerged. Simply, flooding pertains to the rising water level until it overflows and submerges the surrounding areas.

##### **1. Before the flooding**

Know the hazards in your area.

- Monitor the news for weather updates, warnings, and advisories.
- Learn about the flood and early warning and evacuation plan of the community. Know where the nearest evacuation center is located.
- Monitor the news for weather updates, warnings, and advisories.
- Learn about the flood and early warning and evacuation plan of the community. Know where the nearest evacuation center is located.

##### **2. During the flooding**

- Stay on higher ground and monitor news for any developments. Listen to the advice of the University authorities.
- Do not touch electrical equipment if you are wet or standing in floodwater.
- Beware of flooded roads or bridges and watch out for open manholes and drainages.
- Never attempt to cross streams or rivers when water is already above the knee.
- Beware of contaminated food and water especially those that were submerged in flood waters.
- Do not walk through or drive through flooded areas.

##### **3. After the flooding**

- Leave the evacuation area only when authorities say it is safe to return home.
- Be careful of broken electric wires, flammable items, and dangerous animals like snakes and rats.

- Check yourself and others for injuries. Report serious injuries to the authorities at your evacuation assembly area. Provide first aid if necessary.
- Report broken utility lines (electricity, water, gas and telephone) to appropriate agencies.
- Do not turn on the main switch or use appliances and other equipment until they have been checked by a competent electrician.
- Throw away rainwater in cans, pots, and tires to prevent breeding of mosquitoes.
- Make sure that the food and water are not contaminated by floodwater.
- Consult a doctor immediately when fever is felt or when there is a wound or for immunization.
- Check buildings for possible damages and repair as necessary.

#### **4. Flood mitigation strategy**

- Do not throw garbage in esteros and rivers.
- Help clean your neighborhood and maintain the cleanliness of your community.
- Support community activities which aim to lessen the occurrence of floods.
- Do not throw anything like plastic wrappers anywhere which may block or clog the drainage system.

#### **5. Vulnerable areas to flooding**

The current structure of BatStateU TNEULipa Multi-Purpose and Higher Education buildings have underground floors which are susceptible to flooding due to lack of proper drainage system within the university premises.

#### **e. Climate change mitigation**

Establishment of GREENSPACE within BatStateU TNEULipa is one of the initial steps to reduce the negative impact of climate change. Proper waste management will be continuously implemented to help mitigate the risk of climate change.



III. INSTITUTIONAL COORDINATION AND MONITORING SET UP

	COORDINATING INSTITUTION	ROLES	MONITORING SETUP
(a) Physical Land Use Planning	Batangas State University – concerned Unit	Prepare for the proposed plan	
	Batangas or concerned LGU - MPDO	Review and p ermitting/appro ving consistent with the land uses	v Plan v CLUP
	DHSUD	Review consistency with the LGU's CLUP	v CLUP
	DENR	Issuance of the Environmental Compliance Certificate (ECC), as necessary	Provision of mitigating measures to address possible adverse impact to the environment
(b) Infrastructure and Buildings	Batangas State University – concerned Unit	Prepare the proposed Feasibility Study and Detailed Engineering and Design (DED)	

	Batangas or concerned LGU - MPDO	Review and permitting/ approval consistent with the land uses and the DED	v DED  v CLUP
	DHSUD	Provide technical assistance, as necessary	v DED
	DENR	Issuance of the Environmental Compliance Certificate (ECC), as necessary	Reviews its impact to the environment
(c) Field Laboratories	Batangas State University – concerned Unit	Prepare the proposed Feasibility Study and Detailed Engineering and Design (DED)	
	Batangas or concerned LGU - MPDO	Review and permitting/ approval consistent with the land uses	v DED
	DepEd/CHED	Provide technical assistance, as necessary	v DED
	DENR	Issuance of the Environmental Compliance	Reviews its impact to the environment

		Certificate (ECC), as necessary	
	DOH	Review and approval of the health, safety and sanitation	v DED
(d) Environmental Protection	Batangas State University – concerned Unit	Prepare the proposed plan, DED, Field laboratories integrating environmental preservation and protection	
	Batangas or concerned LGU - MPDO	Review and permitting/ approval consistent with the land uses, primarily focusing on environmental preservation and protection	v Plan v DED
	DENR	Issuance of the Environmental Compliance Certificate (ECC), as necessary	Reviews periodically, e.g. annually if the implementation of the projects is consistent with the approved plan, design; and its impact to the environment



(e) Tourism and Heritage	Batangas State University – concerned Unit	Prepare the proposed Plan consistent with the CLUP	v CLUP
	Batangas or concerned LGU - MPDO	Review and permitting/ approval consistent with the land uses	v CLUP
	DENR	Issuance of the Environmental Compliance Certificate (ECC), as necessary	Reviews periodically its impact to the environment
(f) Solid Waste and Pollution Prevention	Batangas State University – concerned Unit	Prepare the proposed Solid Waste Management Plan (SWMP)	v SWMP
	Batangas or concerned LGU - MPDO	Review and permitting/ approval consistent with the land uses	v CLUP and SWMP
	DENR	Reviews and approves the SWMP	Reviews periodically its impact to the environment
(g) Traffic Routes	Batangas State University – concerned Unit	Prepare the proposed Traffic Plan (SWMP)	

	Batangas or concerned LGU – MPDO	Review and permitting/ approval consistent with the land uses and Traffic Plan, primarily focusing on traffic safety, security and mobility	v Traffic Plan v CLUP
	Local Traffic Unit of LGU	Provide technical assistance, as necessary	v Traffic Plan
	DENR	Issuance of Environmental Compliance Certificate (ECC), as necessary	Reviews periodically its impact to the environment
(h) Sports Facilities	Batangas State University – concerned Unit	Prepare the proposed Sports facilities	
	Batangas or concerned LGU – MPDO	Review and permitting/ approval consistent with the land uses, primarily focusing on safety, and security	
	Sports Commission or its LGU counterpart	Provide technical assistance, as necessary	

	DENR	Issuance of Environmental Compliance Certificate (ECC), as necessary	Reviews periodically its impact to the environment
(i) Housing	Batangas State University – concerned Unit	Prepare the proposed Housing Plan with its DED	
	Batangas or concerned LGU - MPDO	Review and permitting/ approval consistent with the land uses and DED, primarily focusing on environmental protection and preservation, safety and security	v Housing Plan v CLUP
	DENR	Issuance of Environmental Compliance Certificate (ECC), as necessary	Reviews periodically its impact to the environment
(j) IGP and Commercial Spaces	Batangas State University – concerned Unit	Prepare the proposed and/or maintain existing IGP and commercial spaces consistent with the related	



		laws and policies	
	Batangas or concerned LGU - MPDO	Review and permitting/ approval consistent with the land uses, primarily focusing on environmental protection and preservation	
	DTI or its local counterpart	Provide assistance on the proposed and/or existing operations	
	DHSUD	Review consistency with the LGU's CLUP	v CLUP



# Land Use Development and Infrastructure Plan (LUDIP)



**BATSTATEU  
MABINI**

*Leading Innovations, Transforming Lives  
Building the Nation*



## PRELIMINARY PAGES

### Land Use Development and Infrastructure Plan (LUDIP) Legal Mandates

A new law mandates state universities and colleges (SUCs) to design development and infrastructure plans for the proper management of land resources. Republic Act No. 11396, signed by President Rodrigo Duterte on Aug. 22, requires all SUCs to submit their respective Land Use Development and Infrastructure Plan (LUDIP) to the Commission on Higher Education. SUCs are required to follow their respective development plans for all of their future infrastructure projects.

Under Republic Act No. 11396, land use or infrastructure projects of the SUCs shall also be required to follow the LUDIP which shall be linked with the land use plan and practice of the local government units to ensure complementation of activities across geographical boundaries. Under the new law, SUCs must submit the following as part of their LUDIP:

- campus planning framework, principles and processes, including master development plans
- detailed geographical description and survey of the site occupied by the SUCs
- inventory of all existing buildings, facilities, and other infrastructure within the compound or areas occupied by the SUCs
- cadastral survey of land occupied by the SUCs
- detailed description of the research core, academic core, and residential areas covering both housing for faculty, and dormitories for students
- detailed geographical description of land used for commercial, agriculture, fishery, forestry, and other activities, including open and recreational spaces, landscape features, and campus transportation system among others.
- design and estimated cost of construction, operation, maintenance of other infrastructure needs of the SUCs
- financial plan

The following agencies may also help SUCs in making their development and infrastructure plans:

- Housing and Land Use Regulatory Board
- University of the Philippines School of Urban and Regional Planning
- Department of Public Works and Highways
- Land Management Bureau of the Department of Environment and Natural Resources





The measure meanwhile tasks the CHed, UP-SURP, and HLURB to design capacity building programs for SUCs to enable them to develop and prepare suitable land use plans.

Responsive to Republic Act No. 11396, the Batangas State University prepared its LUDIP for the 11 campuses of the University.



## FOREWORD

The conceptualization of this document was primarily done in the light of Batangas State University's adherence to Republic Act 11395 otherwise known as an act requiring State Universities and Colleges (SUCs) to prepare and implement a Land Use Development and Infrastructure Plan (LUDIP) that shall include the construction of dormitories for students and housing sites.

In this document, Batangas State University The National Engineering University Mabini Campus (BatStateU TNEU Mabini) shall attempt to shed light on the purposes, context and limitations of the campus' LUDIP targets employing the support of the University in general and the community particularly the Local Government of Mabini (LGU Mabini).

Furthermore, this document shall also present significant insights and areas included in the plan. Discussions will also cater to the climate change effects and risks and threats where BatStateU TNEU Mabini is currently located, the adoption of integrated ecosystems approaches and the physical framework of the Municipality of Mabini as a constitutive part of the Province of Batangas.



## **ACKNOWLEDGEMENT**

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Dr. Tirso A. Ronquillo and Hon. Mayor Noel “Bitrics” Luistro for the bold move of creating once a dream and now a reality serving its ultimate purpose to the students of Mabini and neighboring municipalities, BatStateU TNEU Mabini;

To the Planning and Development Team of Mabini, Batangas for unselfishly sharing with us the CLUP of the municipality in order to shed more light to the gray areas as we conceptualize the BatstateU TNEU Mabini LUDIP;

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To God Almighty for always bestowing us with healthy minds and bodies that even if the Campus is undermanned, BatStateU TNEU Mabini was able to hurdle the impossible.

To God be all the Glory!





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## **List of Acronyms and Glossary**

ABET - Accreditation Board for Engineering and Technology  
BatStateU - Batangas State University  
BATELEC - Batangas Electric Cooperative  
BASICS - Brand of Excellence, Access, Social Relevance, Inclusive  
CADT - Certificate of Ancestral Domain Title  
CALABARZON - Cavite, Laguna, Batangas, Rizal, Quezon  
CLUP - Comprehensive Land Use Plan  
CABEIHM - College of Accountancy, Business Economics and International Hospitality Management  
CAS - College of Arts and Sciences  
CHED - Commission on Higher Education  
CICS - College of Informatics and Computing Sciences  
CRFCP - Coastal Resources and Fisheries Conservation  
CLOAD - Certificate of Land Ownership and Donation  
DPWH - Department of Public Works and Highways  
DRRM - Disaster Risk Reduction Management  
EMU - Environmental Management Unit  
IECC - Information Education Communication Campaign  
Innovation, Capacity and Sustainability  
KIST - Knowledge, Innovation and Science Technology  
PBMIT - Pablo Borbon Memorial Institute of Technology  
LGU - Local Government Unit  
LUDIP - Land Use Development and Infrastructure Plan  
LWUA - Local Water Utilities Administration  
NAIA - Ninoy Aquino International Airport  
PEZA - Philippine Economic Zone Authority  
PBRSAT - Pablo Borbon Regional School of Arts and Trades  
Phivolcs - Philippine Volcanology and Seismology Commission  
SDGs - Sustainable Development Goals  
SUC - State Universities and Colleges  
TNEU – The National Engineering University  
WWF - World Wildlife Fund



## I.PROFILE OF SUC

### GENERAL INFORMATION OF THE SUC AND ITS CAMPUSES

#### A. Introduction

Batangas State University The National Engineering University is a Level IV state university in the province of Batangas, Philippines. Established in 1903, the university is strategically located at the second largest economic region in the Philippines, which puts it at a prime position not only as a premier provider of higher and advanced learning, but also as a viable economic development zone. With 11 campuses, Batangas State University TNEU remains steadfast in its adherence to international standards. It was given a three-star rating by Quacquarelli Symonds Stars University rating, and is part of the Top Universities list.

The road to fame as an integral part of the academic community in the country and as an essential partner of the community of the Province of Batangas of Batangas State University The National Engineering University (BatStateU TNEU) was not facile. Its glory and laurels at present were results of painstaking efforts to put the University in the pedestal that it is now. To shed light to how the University rose and became what it is today, the legal mandates below shall prove its constitutional existence as an empowered academic institution in the Province of Batangas and in the country in general.



Map MA-1. BatStateU TNEU Campuses on Batangas Map



## a. Legal Bases/Mandates

### Legal Basis

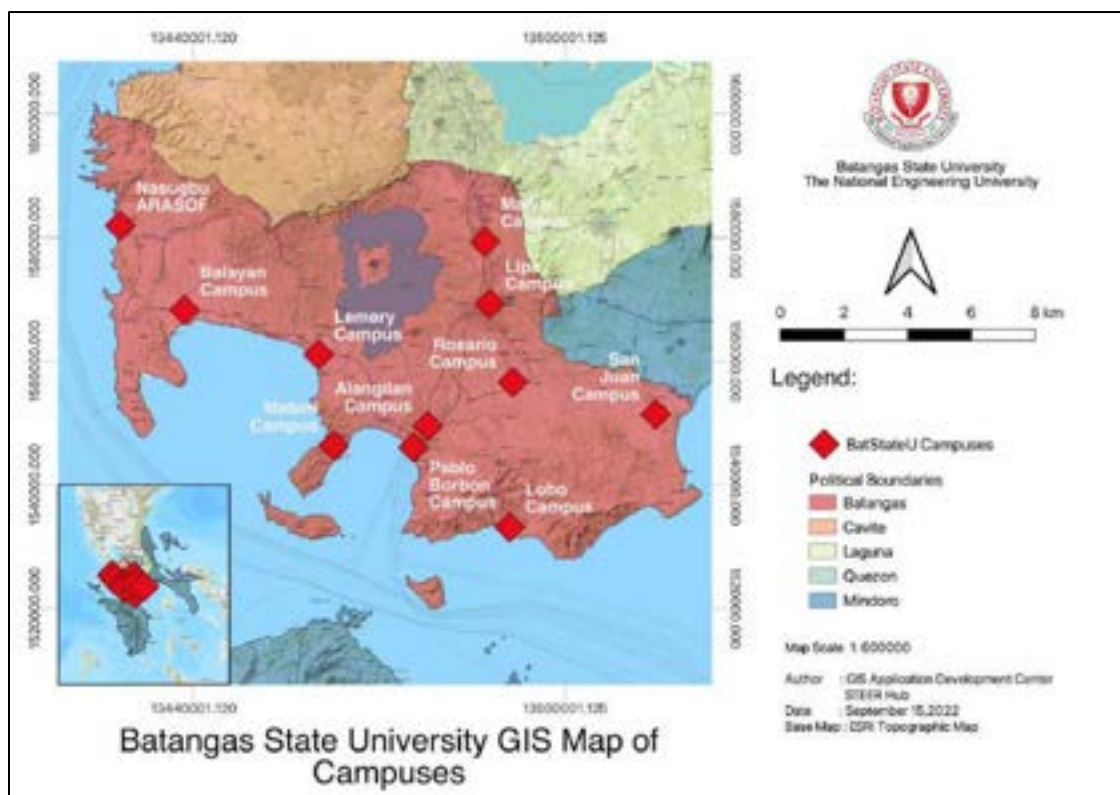
In 1953, Republic Act No. 764 bestowed upon the Batangas Trade School (established in 1903 as Manual Training School) a national status, changing its name to Pablo Borbon Memorial Trade School which later on was changed to Pablo Borbon Regional School of Arts and Trades (PBRSAT).

In 1968, Republic Act No. 5270 converted the PBRSAT into a state college which then was named as the Pablo Borbon Memorial Institute of Technology (PBMIT).

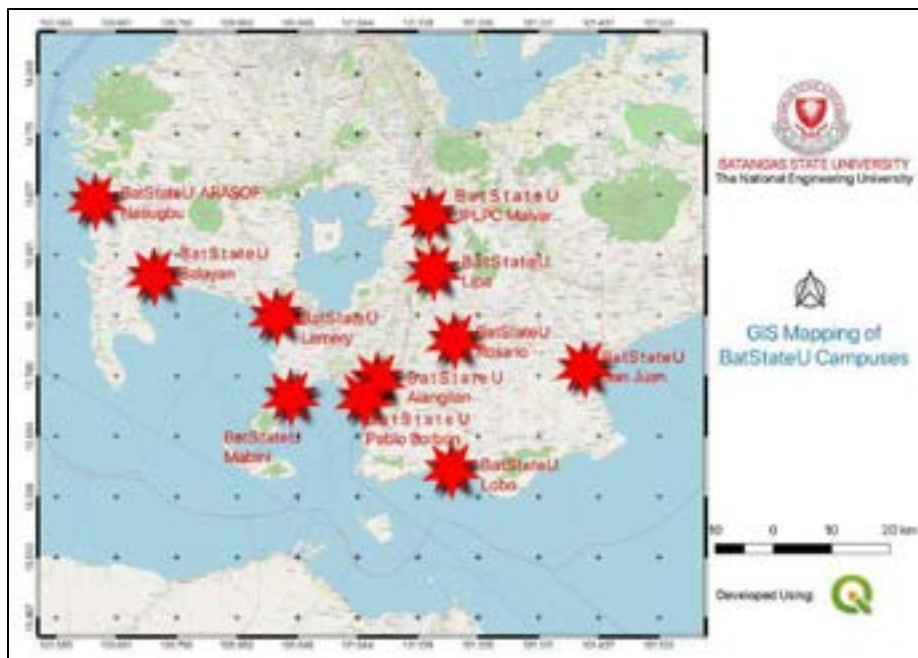
On March 22, 2021, Republic Act. No. 9045 created the Batangas State University (BSU) by integrating the Pablo Borbon Memorial Institute of Technology (PBMIT) and all its campuses, the Jose P. Laurel Polytechnic College in Malvar, the Apolinario R. Apacible School of Fisheries in Nasugbu, and the Polytechnic University of the Philippines campus in Sto. Tomas, all in the Province of Batangas.

In 2022, Republic Act No. 11694, declared the Batangas State University as the National Engineering University.

### List of Campuses and Corresponding Address and Geographic Tagging



**Map MA-2** List of Campuses and Corresponding Address and Geographic Tagging



Map MA-3 GIS Mapping of BatStateU TNEU Campuses

Table MA-1 GIS Attribute Table of BatStateU Campuses

	BatStateU Campus	Address	Longitude	Latitude
1	BatStateU Pablo Borbon	Rizal Avenue, Batangas City	121.0531168849614	13.754797027879365
2	BatStateU Alangilan	Alangila, Batangas City	121.0743307429293	13.784061425353526
3	BatStateU JPLPC Malvar	Malvar, Batangas	121.15625817036171	14.04494381618468
4	BatStateU ARASOF Nasugbu	Brgy. Bucana, Nasugbu, Batangas	120.62633036660107	14.067217369724982
5	BatStateU Lipa	Maraouy, Lipa, Batangas	121.16325449930176	13.956649004776681
6	BatStateU Lemery	Lemery, Batangas	120.91462421618677	13.885178945943968
7	BatStateU Rosario	Rosario, Batangas	121.19679605926775	13.846629485945055
8	BatStateU San Juan	Laiya Road, San Juan, Batangas	121.40376142421394	13.802385541198039
9	BatStateU Balayan	Balayan, Batangas	120.71995386631147	13.94835065410113
10	BatStateu Lobo	Brgy. Masaguitsuit, Lobo, Batangas	121.19221959946319	13.641459877095713
11	BatStateU Mabini	Mabini, Batangas	120.93702738091582	13.756453133999951

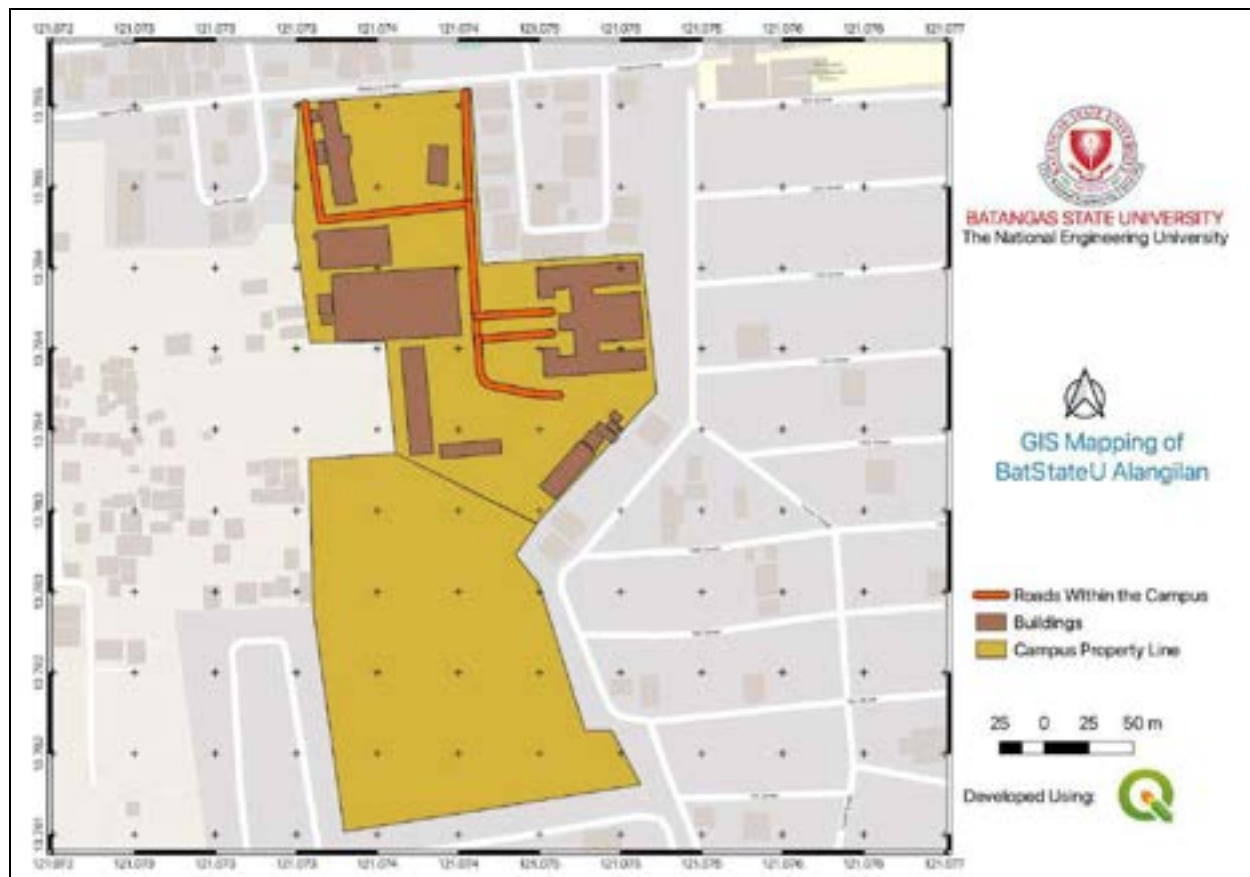


# Land Use Development and Infrastructure Plan (LUDIP)

Map MA-4 GIS Mapping of BatStateU Pablo Borbon



Map MA-5 GIS Mapping of BatStateU Alangilan

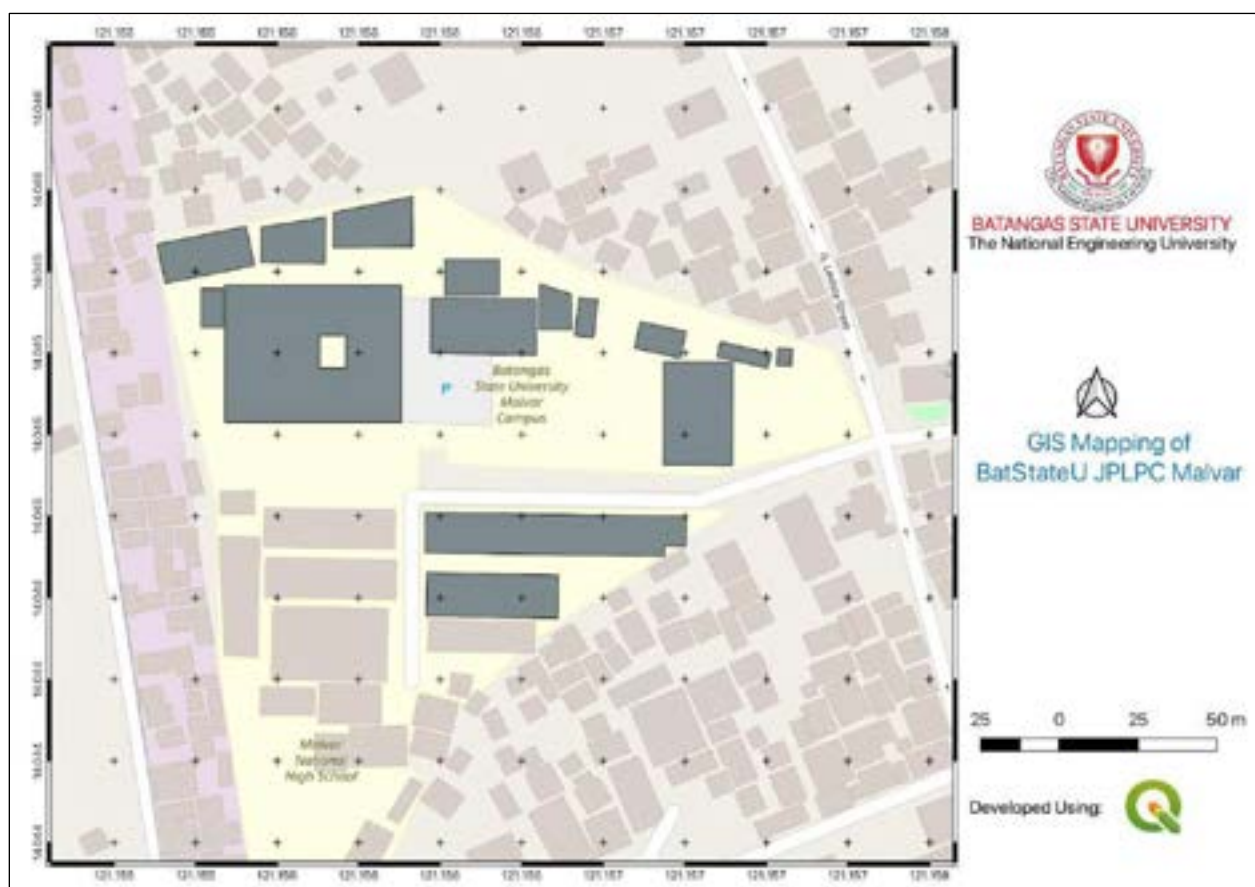




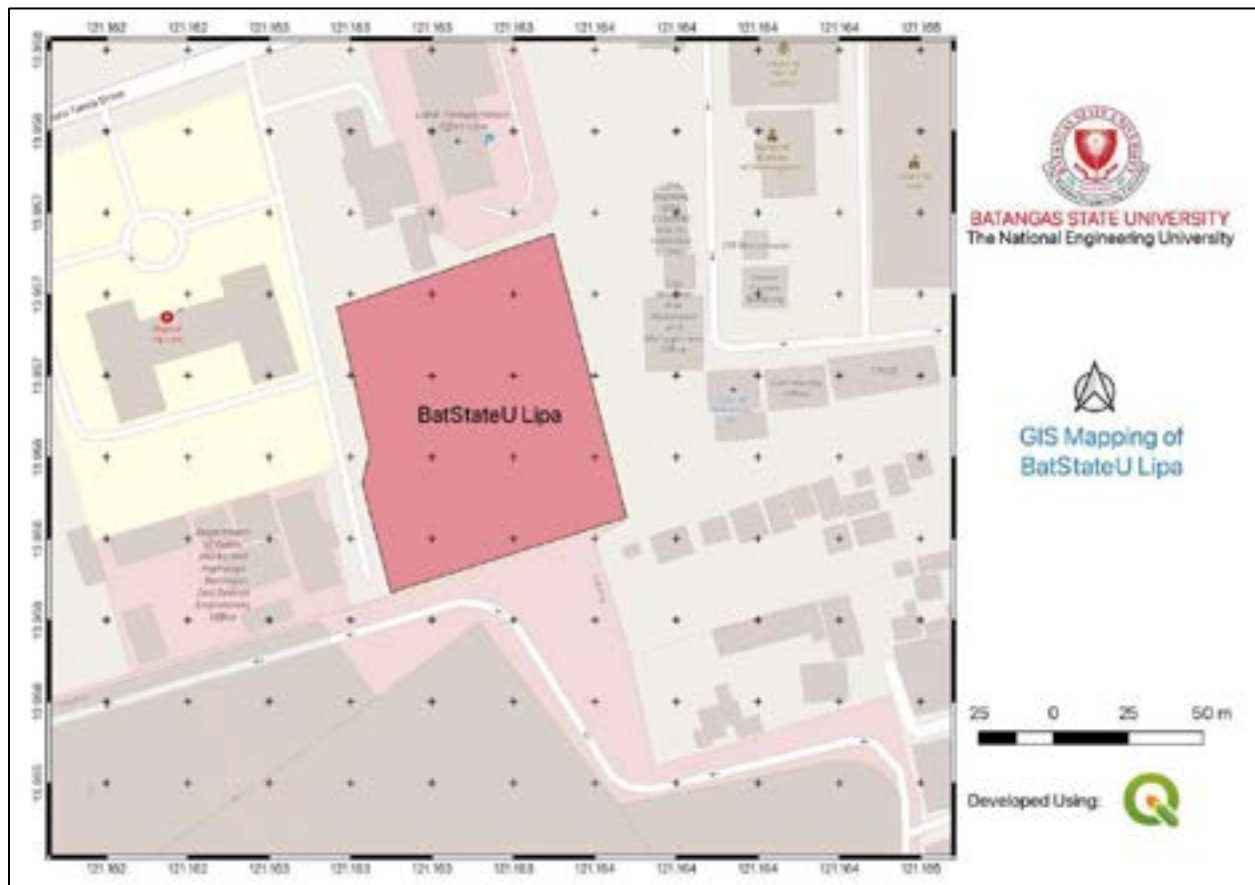
**Map MA-6** GIS Mapping of BatStateU ARASOF Nasugbo



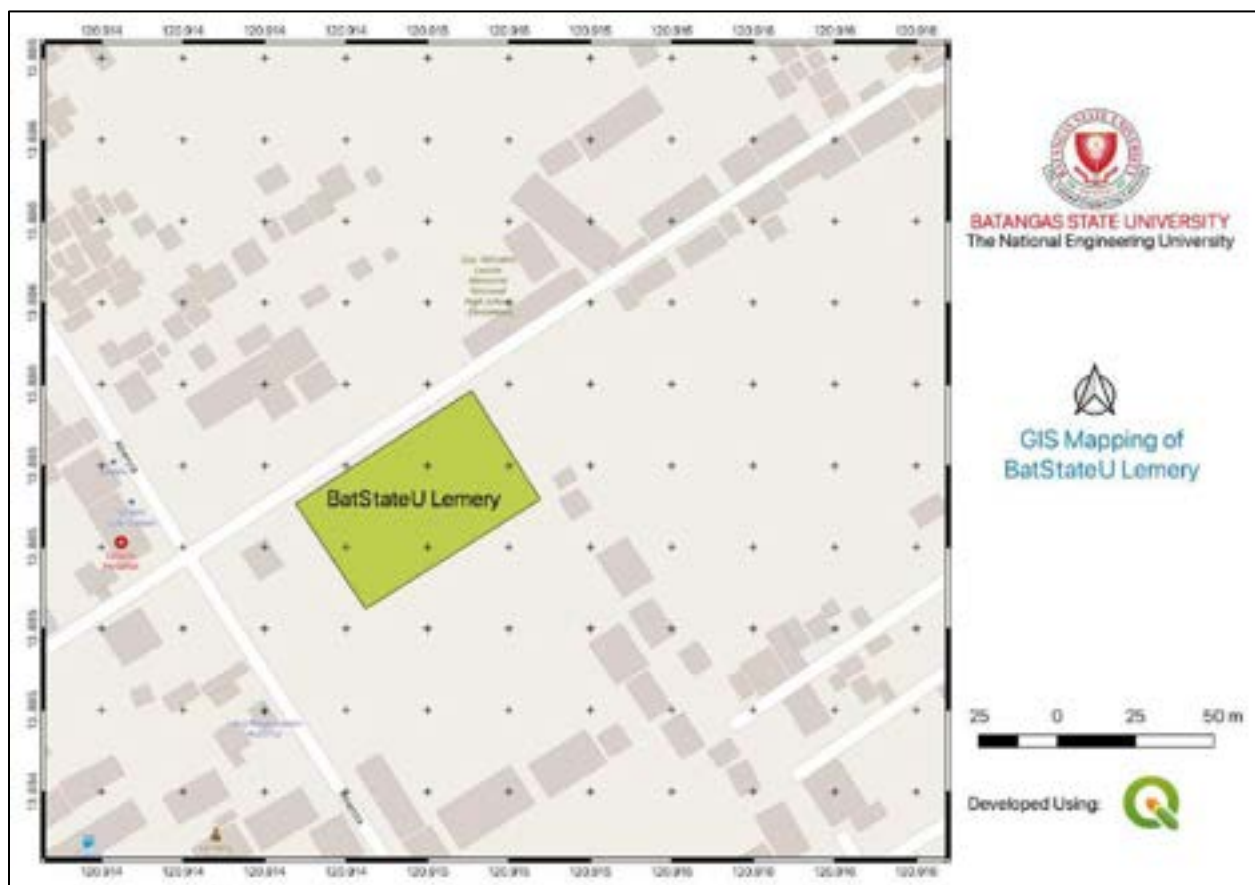
**Map MA-7** GIS Mapping of BatStateU JPLPC Malvar



Map MA-8 GIS Mapping of BatStateU Lipa



Map MA-9 GIS Mapping of BatStateU Lemery

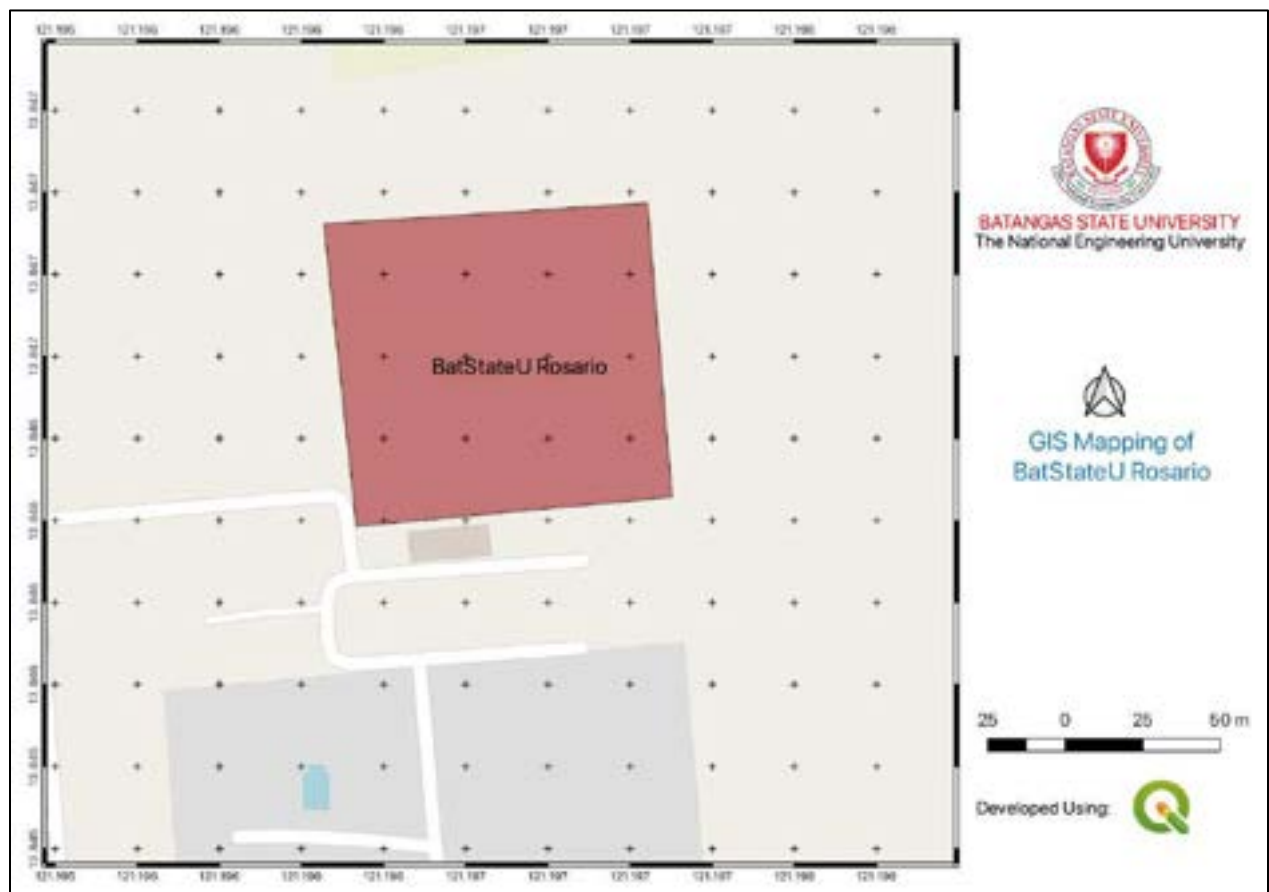






# Land Use Development and Infrastructure Plan (LUDIP)

Map MA-10 GIS Mapping of BatStateU Rosario

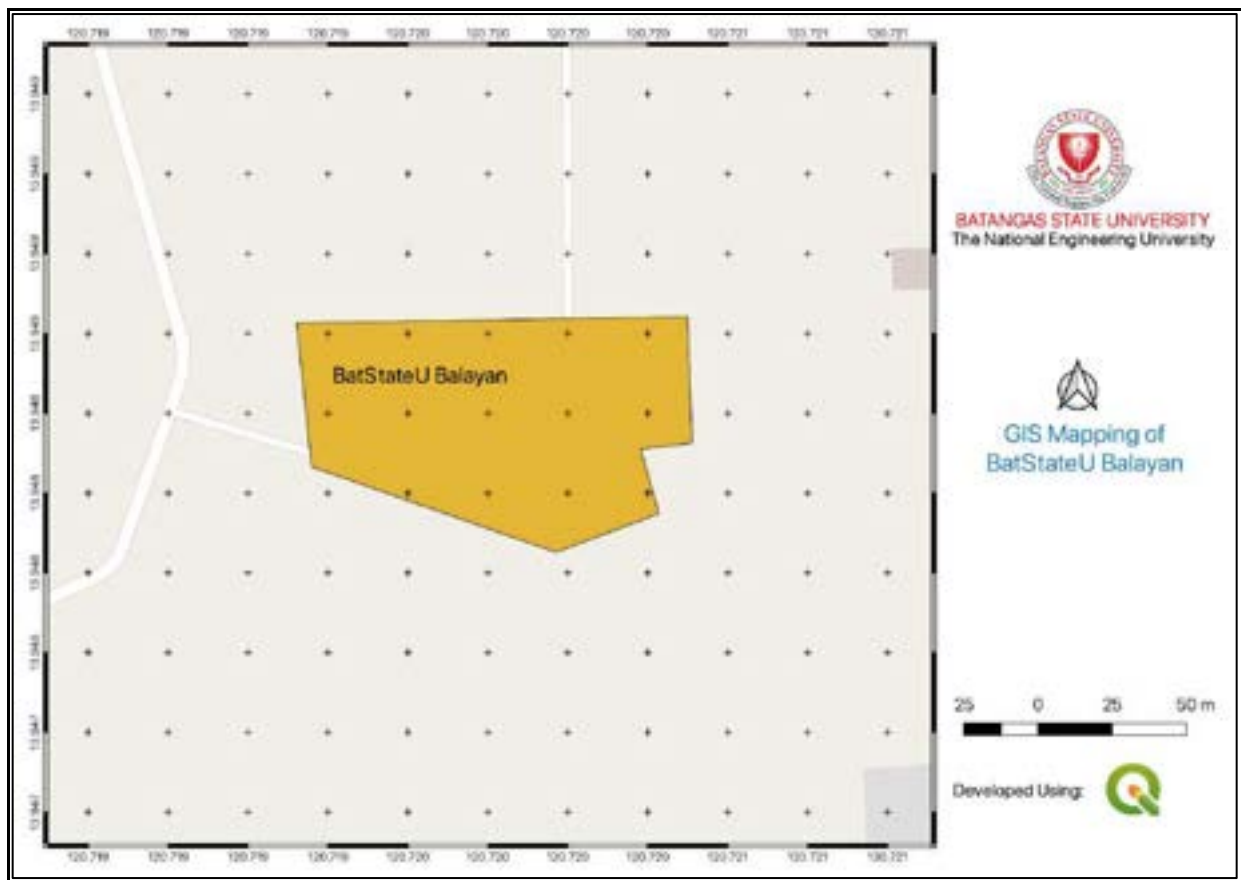


Map MA-11 GIS Mapping of BatStateU San Juan

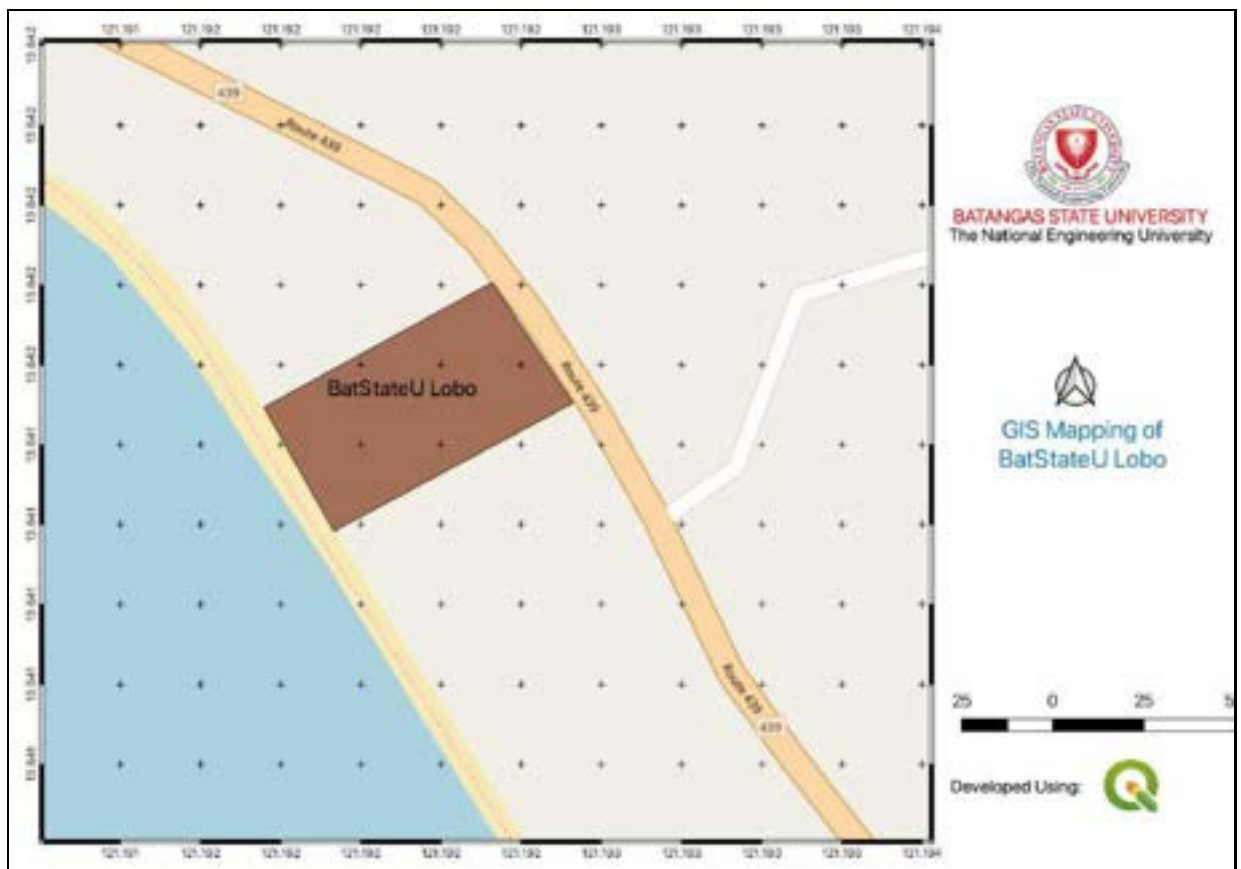




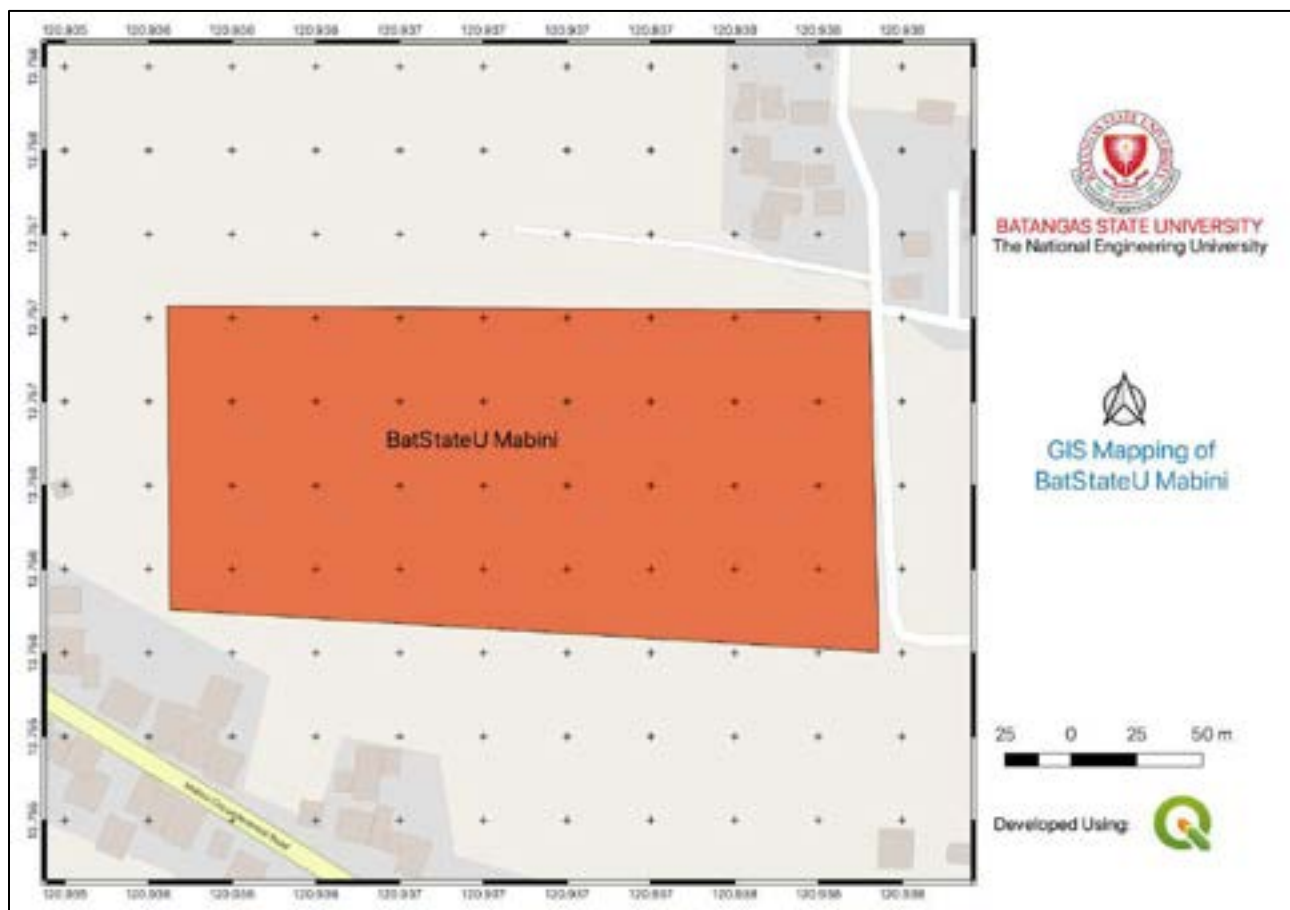
Map MA-12 GIS Mapping of BatStateU Balayan



Map MA-13 GIS Mapping of BatStateU Lobo



**Map MA-14** GIS Mapping of BatStateU Mabini



## Mandates

As to the University's mandate, Batangas State University (BatStateU) is committed to implement its mandate of equality and excellence, relevance and responsiveness, access and equity and efficiency and effectiveness through instruction, research, extension and production to meet the growing needs of the country and the world for globally competitive and morally upright professionals, scientists, technologists, technicians, skilled workers and entrepreneurs. It commits itself to the advancement of knowledge and skills in arts and sciences, teacher education, engineering, technology and informatics, accountancy, business and economics, agricultural sciences, law nursing and other related disciplines.

On April 11, 2022, the Batangas State University was declared as The National Engineering University by virtue of Republic Act 11694.

In Section 3 of RA 11694, the Purpose of the BatStateU is presented. As the national engineering university committed to develop leaders in the global knowledge economy, the BatStateU shall:



- a. Provide world-class academic training to young Filipinos in the field of engineering and other professions, and mold them into becoming responsible citizens who are aware of their role in nation-building, and are motivated to meet the challenges and opportunities as the country pursues its development goals, especially in the areas of infrastructure development, environmental protection, information and telecommunications, manufacturing, transportation, and land and shelter development;
- b. Offer advanced studies and specialization for engineers, scientists, entrepreneurs, industry practitioners, and other professionals, primarily for those who serve as faculty of the state and private colleges and universities;
- c. Strengthen engineering programs through the development and offering of industry-driven and emerging engineering programs; spearhead collaboration between the academe and engineering industries; and lead in the implementation of innovative pedagogies in engineering education through the Center for Innovations in Engineering Education;
- d. Serve as a research university in engineering and related field of specialization by conducting basic and applied research and development, promoting research collaboration with various colleges and universities in the country, and contributing to the dissemination and application of knowledge;
- e. Intensify scientific, innovative, and technological research and development that would lead in the development of high-impact research, startups and spinoffs and technology transfer of products and services in specific areas such as electronic systems, environment, information and computing technology, material science and testing, and advanced manufacturing through the established research centers under the Science, Technology, Engineering and Environment Research (STEER) Hub, recognized by the Regional Development Council (RDC) as the Center for Science, Technology, Engineering and Environment Research in the CALABARZON Region;
- f. Provide progressive leadership in setting academic standards and initiating innovations in advanced instruction, research, and professional training in the fields of engineering education, and maintain centers of excellence in such disciplines and professions;
- g. Offer undergraduate and graduate-courses within the areas of specialization and according to its capabilities, including medical and allied health, natural and applied sciences, teacher education, business, technology, management, social sciences, arts and culture, agriculture, and other related fields, as the Board of Regents may deem necessary to carry out its objectives, specifically, in order to provide greater access for deserving students in tertiary education and an adequate response to the particular needs of the government, the society and the industry in these fields;





- h. Lead in the protection, conservation, and strategic management of the Verde Island Passage (VIP) that separates the islands of Luzon and Mindoro, and described as the "center of the center of marine shore fish biodiversity in the world" by developing biodiversity experts, conducting collaborative research, marine exploration, community education and training, and establishment of the Verde Island Passage Center for Oceanographic Research and Aquatic Life Sciences (VIP CORALS) by the RDC-Region IV-A (Cavite, Laguna, Batangas, Rizal and Quezon Region) as the National Center for Marine Bio-Diversity in VIP;
- i. Lead in the generation of productive knowledge, innovation and technology to develop relevant and technical higher order skills needed to compete in the global knowledge economy;
- j. Provide an avenue for the professional advancement of Disaster Risk Management (DRM) managers and practitioners by offering academic programs in DRM and contribute in ensuring a resilient community through the Adaptive Capacity-building and Technology Innovation for Occupational Health and Natural Disaster (ACTION) Center endorsed by the RDC-Region IV-A as National Center for Disaster Risk Reduction and Management, and Climate Change Adaptation Education and Research;
- k. Contribute to national economic growth, jobs creation, domestic and foreign investment, and community well-being through the university-based Knowledge, Innovation and Science Technology (KIST) Park, designated as a Special Economic Zone by virtue of Presidential Proclamation No. 947, dated May 22, 2020;
- l. Serve as a public service university by providing various forms of community, public, and volunteer service, as well as scholarly and technical assistance to the government, private sector, and civil society while maintaining its standards of excellence;
- m. Strengthen its Laboratory and Integrated Schools for basic education by focusing and adopting advanced teaching and learning on science, technology, engineering and mathematics to serve as feeder schools for engineering, science and technology programs of the BatStateU: Provided, That the operation of the Integrated School shall be self-liquidating, through payment of tuition and other school fees by the students as approved by the governing board;
- n. Protect and promote the professional and economic rights and welfare of its academic and nonacademic personnel;
- o. Provide opportunities for training and learning in leadership, responsible citizenship, democratic values, institutions, and practice, through academic and nonacademic programs, including sports, towards the promotion of nationalism and a deep and enduring pride in the national identity;



- p. Serve as a regional and global university in cooperation with international and scientific unions, networks of universities, scholarly and professional association in the Asia Pacific region and around the world; and
- q. Provide democratic governance based on collegiality, representation, accountability, transparency, and active participation of its constituents, and promote the holding of fora for students, faculty, researchers, extension program specialists, staff, and alumni to discuss nonacademic issues affecting the BatStateU.

## b. Brief profile of the university/college and its campuses

### About the University

Batangas State University is a Level IV state university in the province of Batangas, Philippines. Established in 1903, the university is strategically located at the second largest economic region in the Philippines, which puts it at a prime position not only as a premier provider of higher and advanced learning, but also as a viable economic development zone.

As one of the country's model higher education institutions recognized by the Commission on Higher Education (CHED), BatStateU is the first and thus far the only state university in the Philippines with engineering, IT, and computer science programs accredited by the Accreditation Board for Engineering and Technology (ABET) – Engineering Accreditation Commission and Computing Accreditation Commission. With 15 development centers, it is recognized by the Regional Development Council of Region IV-A as the Regional Center for Technology Business Incubation and Development, and as the Regional Center for Science, Technology, Engineering, and Environment Research.

The university's Electronics Engineering program is designated by CHED as a national Center of Excellence, and its Electrical Engineering, Mechanical Engineering, Development Communication, and Teacher Education programs are national Centers of Development. It has also maintained high academic standards in architecture, industrial technology, computing sciences, business, agriculture, allied health, and the social sciences. It received ISO 9001:2015 certification from TÜV Rheinland Philippines, Inc., and is host to the first China-Philippines Silk Road Institute in the country.

With over 40,000 students facilitated by 1,700 faculty and staff in 11 campuses, Batangas State University remains steadfast in its adherence to international standards. It was given a three-star rating by Quacquarelli Symonds Stars University rating, and is part of the Top Universities list. Through Proclamation No. 947, President Rodrigo Roa Duterte designated the BatStateU Knowledge, Innovation, and Science Technology or KIST Park as a Special Economic Zone. It is the first KIST Park registered by the Philippine Economic Zone Authority or PEZA.




Figure MA-1 Brief Profile Batangas State University

## c. Brief history of the SUC and its campuses



Figure MA-2 Logo and Photos of Some Campuses of Batangas State University



Established as a manual training school in 1903, Batangas State University is the oldest higher education institution in the country's Calabarzon Region. It was converted into a state college in 1968 through RA 5270, and was renamed Pablo Borbon Memorial Institute of Technology (PBMIT). On March 22, 2001, PBMIT was renamed Batangas State University by virtue of RA 9045. Below is a glimpse of the milestones that the University has achieved.

### **Milestone through the years.**

**1903** - Established as a Manual Training School for young men

**1905** - Renamed Batangas Trade School

**1953** - Became the Pablo Borbon Memorial Trade School by virtue of RA 746

**1957** - Renamed Pablo Borbon Regional School of Arts and Trades; Started offering technical courses

**1968** - Converted into a state college by virtue of RA 5270, called the Pablo Borbon Memorial Institute of Technology, the 23rd state college in the Philippines

**1971** - Offered industrial education and engineering programs

**1974** - Started offering graduate degree programs

**1984** - Expanded operations in its first extension campus in Alangilan, Batangas City

**1987** - Started offering basic education through a special science class in the laboratory school

**2001** - Converted into a state university by virtue of RA 9045, called the Batangas State University

**2006** - Established stronger international partnerships and linkages

**2015** - Modernized infrastructure to create a 21st century learning environment

**2016** - Established research and development centers; Shifted academic calendar with the first semester opening in August

**2017** - Recognized as Center of Excellence in Electronics Engineering and Center of Development in Mechanical Engineering, Electrical Engineering, Teacher Education and Development Communication; Classified as a Level IV state university; Received international accreditation of engineering and IT programs

**2018** - Received ISO 9001:2015 certification; Recognized as a Regional Center for Disaster Risk Management Education and Research

**2019** - Launched the new vision towards becoming a premier national university

**2020** - Received presidential proclamation of the BatStateU Knowledge, Innovation and Science technology (KIST) Park as a Special Economic Zone; Awarded three stars by the QS stars rating; Approved the offering of emerging programs in engineering and allied field

**2022** – Proclaimed Batangas State University as The National Engineering University





## **History of Batangas State University The National Engineering University – Mabini Campus**

Mabini is among the thirty (30) municipalities in the Province of Batangas. It is considered a first class municipality. It sits on the Calumpang Peninsula overlooking Balayan and Batangas Bays, and the Maricaban Strait. Mabini derived its name from Apolinario Mabini, a Filipino revolutionary, better known as the “Brains of the Revolution” and the “Sublime Paralytic”. The municipality was formed in 1918, formerly part of the nearby town of Bauan.

One of the greatest developments in Mabini that coincides with the celebration of its Centennial Celebrations in 2018 is the establishment of the Batangas State University Mabini Campus which was supposedly named as Colegio de Pueblo de Apolinario Mabini. This project is through the initiative of the Municipal Mayor, Hon. Noel B. Luistro, who felt the need and urgency of establishing an excellent tertiary institution which can be of great help to the local residents who can’t afford studying in the city to acquire quality education.

Resolution No. 547, series of 2016 also known as the approval and establishment of Batangas State University-Mabini was executed by the Batangas State University Board of Regents on its 52nd regular meeting held at the CHED Executive Lounge, HEDC Building, C.P. Garcia Avenue, Up Diliman, Quezon City on December 28, 2016. The Board of Regents’ chairperson then was Dr. Alex B. Brillantes Jr., CHED Commissioner, and Dr. Tirso A. Ronquillo, the University President, was the Vice Chairperson, and seven other members of the board namely; Sen. Paulo Benigno A. Aquino IV represented by Atty. Jerry R. Marasigan, Rep. Ann K. Hoffer represented by Rep. Mario Vittorio A. Marino, Dir. Luis G. Banua, Dr. Alexander R. Madrigal, Mr. Faustino Ricardo G. Caedo, Engr. Amando A. Plata, Dr. George P. Compasiovo and Mr. Joey C. Espino.

The Campus’ groundbreaking was done on June 8, 2017 which was attended by Batangas Governor Hermilando “Dodo” Mandanas, Batangas State University officials headed by the President Tirso A. Ronquillo, and the Municipal Government of Mabini officials headed by Hon. Mayor Noel B. Luistro.



**Figure MA-3** Groundbreaking Ceremony of BatStateU TNEU Mabini



**Figure MA-4** Grand Opening of Classes in the Campus on August 6, 2018

The 11th campus of BatStateU TNEU which is located in Mabini, Batangas was opened on August 6, 2018 during the first day of classes where the first flag raising ceremony was also held in front of the main building. BatStateU TNEU Mabini Campus offered programs under the College of Accountancy, Business Economics and International Hospitality Management (CABEIHM), College of Arts and Sciences (CAS), and College of Informatics and Computing Sciences (CICS). These programs include BS Business Administration major in Marketing Management and Operation Management, BS Entrepreneurship, BS Management Accounting, BS Tourism Management, BS Development Communication, BS Information Technology, and General Engineering. For Academic Year 2018-2019, only the following courses has enrollees: General Engineering, BS Information Technology and BS Management Accounting. For the First Semester, there were 135 enrollees while the Second Semester had 129 enrollees across all courses. The campus was then led by its Executive Director, Dr. Expedito V. Acorda, the College Dean, Dr. Jodi Belina A. Bejer. Three visiting faculty members from the main campus namely; Dr. Sherry Joy A. del Mundo from the College of Arts and Sciences while Ms. Eunice Escalona, and MS. Jennifer Atienza were from the College of Accountancy, Business, Economics and International Hospitality Management were all tapped to support the already existing faculty members in the Campus. There were only six part guest lecturers then and they were Ms. Wennie C. Albania, Mr. Jonel Palubon, Mr. Maurice Oliver Y. Dela Cruz, Mr. Ian Manalo and Mr. Oliver Galicia who were all hired to teach General Education courses, one office staff Ms. Mikah Evangelista, and two student services providers, Ms. Reynalyn Asilo, and Ms. Clarissa Macapagal.





**Figure MA-5** Dr. Expedito V. Acorda  
First Executive Director of BatStateU TNEU Mabini



**Figure MA-6** Dr. Jodi Belina A. Bejer  
First Dean of Colleges of BatStateU TNEU Mabini



**Figure MA-7** Some of the First Faculty Members of BatStateU - Mabini (from left to right: Dr. Sherry Joy A. Del Mundo, Mr. Jonel F. Palubon, Mr. Maurice Oliver dela Cruz and Ms. Wennie C. Alabania)



**Figure MA-8** Pioneer Administrative Staff of BatStateU - Mabini  
(from left to right: Ms. Reynalyn Asilo and Ms. Mikah Evangelista)

On September 10, 2018, with the solicitation of the ever supportive Hon. Mayor Noel B. Luistro, a Deed of Donation and turnover ceremony was executed between Mr. Stephen Yu, the President of SeaOil Inc, who donated to BatStateU-Mabini a building named after his mother, the Josefina L. Yu Hall. It has eight rooms utilized for classes and offices and one multi-purpose function hall.

The main building was donated by Seaoil Philippines Inc. Upon the persistence of Municipal Mayor, Noel B. Luistro. Josefina L. Yu Hall was name after the mother of the President of Seaoil Inc., Mr. Stephen Yu. The signing of the deed of donation and turnover ceremony was done on September 10, 2018.







**Figure MA-9** Signing of the Deed of Donation and Turnover Ceremony on September 10, 2018

Furthermore, two more buildings were donated by the Department of Public Works and Highways (DPWH) also through the solicitation of Hon. Mayor Noel B. Luistro. One building consisted of four classrooms and the other smaller building was intended for multi-purpose use.



**Figure MA-10** Classroom Building donated by the Department of Public Works and Highways (DPWH) to BatStateU TNEU Mabini



**Figure MA-11** Additional building donated by the DPWH for multi-purpose use of the Campus

In Academic Year 2019 - 2020, three additional faculty members joined the pioneers. They were Mr. Kevin Joseph Dinglasan whose expertise were tapped because of the opening of the BS Development Communication program in the Campus; Ms Edd Jodi Bejer who became an additional General Education faculty member and Ms. Nathania Mae Alolod for BS Information Technology. Ms. Gabrielle Antonette Rubio replaced the two visiting faculty members from CABIHM Main Campus while Mr. Deanmarc Patrick Baluyot replaced Mr. Oliver Galicia. Enrolment increased to 188 students. As mentioned previously, the academic year marked the opening of the BS Development Communication program in the Campus.

In Academic Year 2020 - 2021, one additional faculty member joined the growing family of BatStateU in the person of Mr. Cedric Peterson Miraflor, a BS IT additional faculty. Mr. Joshua Abella replaced Mr. Maurice Oliver dela Cruz; Ms. Lorejane Largado replaced Mr. Kevin Joseph Dinglasan. Enrolled students increased to 252. It was also in this academic year when campus niching has been adopted by the university. A new organizational set up has started where there was already a BatStateU Central. Constituent campuses to be managed by Chancellors and Vice Chancellors were created namely Pablo Borbon, Alangilan, Malvar, Lipa and Nasugbu which will manage extension campuses depending upon the niching each campus advocated. The former Dean of Colleges of the Campus Dr. Jodi Belina A. Bejer became the Campus Director. Dr. Sherry Joy A, del Mundo of the College of Arts and Sciences Main Campus was transferred to BatStateU TNEU Mabini to Head its Academic Affairs and Development and External Affairs Offices. Because of the niching, BatStateU TNEU Mabini Campus will now only offer BS Information Technology to the students of the municipality and nearby towns within the area. Students presently enrolled in the other existing programs other than the BS IT will continue studying in the Mabini Campus until such time that they have graduated. Being the newest extension campus, there are a lot of development projects in store for BatStateU TNEU Mabini. In the years to come, more infrastructure projects



will be added, more qualified personnel will be hired and better services will be offered to its stakeholders.

Surely, there will be many insurmountable challenges and difficulties that the institution might face in its journey towards excellence; to greater heights and to higher glory. But for now, BatStateU TNEU Mabini will remain steadfast in its commitment in providing quality and excellent education and will always be true to its mantra of Leading Innovations and Transforming Lives.

#### **d. Current Governing Board / inter-department bodies**

##### **The BatStateU Board of Regents**

The Batangas State University Board of Regents is the highest governing body of the university, as stipulated in Sec. 5 of RA 9045.[12] The Board regularly convenes at least once every quarter. Currently, it is composed of the following:

1. Dr. Marita R. Canapi, Commissioner – Commission on Higher Education  
Chairperson
2. Dr. Tirso A. Ronquillo, University President, BatStateU, Co-Chairperson
3. Sen. Francis “Chiz” G. Escudero, Chairperson of the Senate Committee on Higher, Technical and Vocational Education
4. Rep. Mark O. Go, Chairperson of the House Committee on Higher and Technical Education
5. Dr. Arsenio M. Balisacan, Secretary, National Economic and Development Authority
6. Dr. Renato U. Solidum Jr., Secretary of the Department of Science and Technology
7. Engr. Ladislao L. Andal, Private Sector Representative Member
8. Engr. Amando A. Plata, President of the Confederation of BatStateU Alumni Associations
9. Dr. Kristoffer Conrad M. Tejada – President, BatStateU Faculty Confederation
10. Prof. Enrico Dalangin – University Secretary





Figure MA-12 The Board of Regent

## The Administrative and Academic Councils

The university has an Administrative Council, as stipulated in Section 10 of RA 9045. It consists of the president of the university as the chairman, the vice presidents, deans, directors, and other officials of equal rank as members. The Administrative Council reviews and recommends to the Board policies governing the administration, management and development planning of the university for appropriate action.

The Academic Council, as provided in Section 11 of RA 9045, has the president of the university as chairman and all members of the instructional staff with the rank of not lower than assistant professor as members. This council has the power to review and recommend the curricular offerings and rules of discipline of the university, subject for appropriate action of the Board. It shall fix the requirements for admission of students, as well as for graduation and the conferment of degrees, subject to review and/or approval by the Board.



## Land Use Development and Infrastructure Plan (LUDIP)

**Table MA-2** Designated Administrative Officials FY 2021  
Alangilan Campus

OFFICE OF THE CHANCELLOR	
Chancellor	Dr. TIRSO A. RONQUILLO
Internal Audit	Ms. MERCEDITA B. GARCIA
Quality Assurance Management	Assoc. Prof. DIVINA GRACIA D. RONQUILLO
OFFICE OF THE VICE CHANCELLOR FOR ACADEMIC AFFAIRS	
Vice Chancellor for Academic Affairs	Prof. PAULINA M. MACATANGAY
Dean, College of Engineering	Dr. REYNATO A. GAMBOA
Associate Dean for Program Development and Quality Assurance, College of Engineering	Engr. JOHN KEVIN M. DE CASTRO
Dean, College of Industrial Technology	Dr. ELISA D. GUTIERREZ
Associate Dean, College of Industrial Technology	Dr. GINA R. EJE
Dean, College of Informatics and Computing Sciences	Dr. PRINCESS MARIE B. MELO
Associate Dean, College of Informatics and Computing Sciences	Mr. LLOYD H. MACATANGAY
Head, General Education	Mrs. MARIE GALE C. AGENA
Head, Expanded Tertiary Education Equivalency and Accreditation Program (ETEEAP)	Dr. GIL B. BARTE
Head, Registration Services	Engr. ANICIA M. VILLENA
Head, Library Services	Ms. JANNICE B. VEJERANO
Head, Health Services	Ms. MAYRA J. MELO
Head, Testing and Admission	Engr. RHEA M. MACATANGAY
Head, On the Job Training	Engr. ADRIAN FERDINAND M. MELO
Head, Student Organization	Mr. JEFFERSON I. CANADA
Head, Guidance and Counselling	Engr. CAROL BIKLIN G. MACABAGDAL
Head, Student Discipline	Ms. NINFA M. VERGARA
Head, National Service Training Program	Mr. RAYMOND KIT M. RODRIGUEZ
Head, Culture and Arts	Mr. LUTHER JOSE O. EROA
Head, Sports Development	Mr. HENRY P. MENDOZA
Head, Scholarship and Financial Assistance	Ms. GLENDA L. DE MESA
OFFICE OF THE VICE CHANCELLOR FOR ADMINISTRATION AND FINANCE	
Vice Chancellor for Administration and Finance	Assoc. Prof. MYRNA A. COLIAT
Head, Human Resource Management	Engr. SUZETTE M. MERCADO
Head, Records	Dr. MARICEL GRACE Z. FERNANDO
Head, Procurement	Engr. NOMER M. SARMIENTO
Head, Property and Supply	Engr. MARILOU A. MAALA
Head, Project and Facility Management	Engr. OLIVER S. DIMAILIG
Head, General Services	Asst. Prof. MARWIN E. MANALO
Head, Environmental Management Unit	Engr. LOVELY C. AÑONUEVO
Head, Budget	Assoc Prof. MAYLEN G. EROA
Head, Cashiering	Ms. VIOLETA R. HERNANDEZ
Head, Accounting	Asst. Prof. EUNIZE E. MAGSINO
Disbursing Officer	Ms. SHAIRA MARIE D. REYES
Pollution Control Officer	Engr. HAZEL MAY ANN M. RUIZ



# Land Use Development and Infrastructure Plan (LUDIP)

OFFICE OF THE VICE CHANCELLOR FOR RESEARCH, DEVELOPMENT AND EXTENSION SERVICES	
Vice Chancellor for Research, Development and Extension Services	Dr. ELISA D. GUTIERREZ
Head, Research	Dr. SICILY B. TIU
Head, Extension Services	Engr. EDZEL M. GAMAB
OFFICE OF THE VICE CHANCELLOR FOR DEVELOPMENT AND EXTERNAL AFFAIRS	
Vice Chancellor for Development and External Affairs	Assoc. Prof. ALEX I. MAGBOO
Head, ICT Services	Dr. CHRISTOPHER C. CHUA
Head, Planning and Development	Engr. VICTOR A. SEMIRA
Head, External Affairs	Dr. ROWELL M. HERNANDEZ
Head, Resource Generation	Dr. CARMELA S. MACATANGAY



Figure MA-13 Organizational Structure of BatStateU TNEU Mabini

Table MA-3 Organizational Structure of BatStateU TNEU Mabini

## BATANGAS STATE UNIVERSITY MABINI

OFFICE OF THE CAMPUS DIRECTOR	
Campus Director	Dr. JODI BELINA A. BEJER
Head, Academic Affairs	Dr. SHERRY JOY A. DEL MUNDO
Head, Research and Extension	Dr. JODI BELINA A. BEJER
Head, Development and External Affairs	Dr. SHERRY JOY A. DEL MUNDO
Head, Administrative Services	Dr. JODI BELINA A. BEJER





By virtue of the approval of Board Resolution No. 137, s. 2020 otherwise known as Niche Areas of BatStateU Campuses, the Mabini Campus adopted a new organizational structure. As based from the mentioned board resolution, the campus will be under the stewardship of its constituent campus - Alangilan as one of its extension campuses together with Balayan and Lobo. The University President of the Alangilan Campus, Dr. Tirso A. Ronquillo by virtue of (*BOR Resolution No. 78, series of 2022*) heads the administrative roster with the assistance of his four Vice Chancellors: Prof. Pauline Macatangay for Academic Affairs, Prof. Alex Magboo for Development and External Affairs, Dr. Elisa D. Gutierrez for Research Development and Extension Services and Prof. Myrna Coliat for Administration and Finance. Currently, BatStateU TNEU Mabini is headed by its Campus Director Dr. Jodi Belina A. Bejer who also handles the campus' matters on Research Development and Extension Services while Dr. Sherry Joy A. Del Mundo poses as the Head of Academic Affairs and Development and External Affairs. Eleven faculty members - all guest lecturers - join BatStateU TNEU Mabini in the advancement of learning of its students with the assistance of a sole office staff, two utility personnel and 2 security guards.

e. Programs Offered

Table MA-4 List of Programs Offered in BatStateU TNEU Mabini in AY 2018-2019

BATANGAS STATE UNIVERSITY – MABINI CAMPUS	
Undergraduate Programs	
AY 2018-2019	
COLLEGE OF ENGINEERING AND COMPUTING SCIENCES	
General Engineering	
Bachelor of Science in Information Technology	
COLLEGE OF ACCOUNTANCY, BUSINESS ECONOMICS & INTERNATIONAL HOSPITALITY MANAGEMENT	
Bachelor of Science in Business Administration	
Major:	
• Marketing Management	
• Operations Management	
Bachelor of Science in Management Accounting	
Bachelor of Science in Entrepreneurship	
Bachelor of Science in Tourism Management	
COLLEGE OF ARTS & SCIENCES	
Bachelor of Science in Development Communication	



Table MA-5 List of Programs Offered in BatStateU TNEU Mabini in AY 2021-2022

<b>BATANGAS STATE UNIVERSITY – MABINI CAMPUS</b>
<b>Undergraduate Programs</b>
<b>AY 2021-2022</b>
<b>COLLEGE OF INFORMATICS AND COMPUTING SCIENCES</b>
Bachelor of Science in Information Technology

During the first year of opening BatStateU TNEU Mabini Campus to the students of the municipality and its neighboring towns, the program offerings included Bachelor of Science in Petroleum Engineering, Bachelor of Science in Information Technology, Bachelor of Science in Business Administration major in Marketing Management, Bachelor of Science in Business Administration major in Operations Management, Bachelor of Science in Management Accounting, Bachelor of Science in Tourism Management, Bachelor of Science in Development Communication, and Bachelor of Secondary Education major in Sciences. Among these programs, only five programs were opened, Bachelor of Science in Petroleum Engineering, Bachelor of Science in Information Technology, Bachelor of Science in Management Accounting, Bachelor of Science in Business Administration major in Marketing Management and Bachelor of Science in Development Communication. The following academic year, the BS Petroleum Engineering program became inactive due to the insufficiency of interested students to enrol in the course. Only 4 programs were left in AY2019 -2020 and the following academic year as well: Bachelor of Science in Information Technology, Bachelor of Science in Management Accounting, Bachelor of Science in Business Administration major in Marketing Management and Bachelor of Science in Development Communication.

Academic Year 2021-2022 welcomed new changes yet again. As campus niching has already been adopted, only the BS Information technology program accepted enrollees. The rest of the three: BS Development Communication, BSBA major in Marketing Management and BS Management Accounting did not accept interested enrollees in accordance with the stipulation of Board Resolution 137, s. 2020. The BS Information Technology program however was retained and will continue accepting enrollees in the succeeding academic years. Such was decided because apart from the program being included as part of the Alangilan Campus’ niche area of specialization, the number of student enrollees and the presence of industrial establishments in and near Mabini Municipality where the graduates can be accommodated became foremost considerations.

**f. Recognition and awards obtained from international/national/ regional or private award giving bodies.**

On September 13-15, 2022, BatStateU TNEU Mabini joined in the StartUp Hackathon 2022, a National Information Technology Competition sponsored by the City of Sta. Rosa, Laguna and in partnership with the Development Academy of the Philippines. The purpose of the competition was to tap public and private organizations to propose and develop IT related applications in preparation for Laguna's Smart City Vision. Mr. JOSHUA C. ABELLA, guest lecturer of the campus was hailed Best Hackathon Pitch Presenter while Team Care4Juan which includes two IT students of Mabini Zedric Buiza and Marvin Magboo was chosen as one of the 10 finalists out of 60 participating competitors.



**Figure MA-14** Mr. Joshua C. Abella was hailed Best Hackathon Pitch Presenter





Figure MA-15 Team Care4Juan chosen as one of the 10 finalists out of 60 participating competitors.

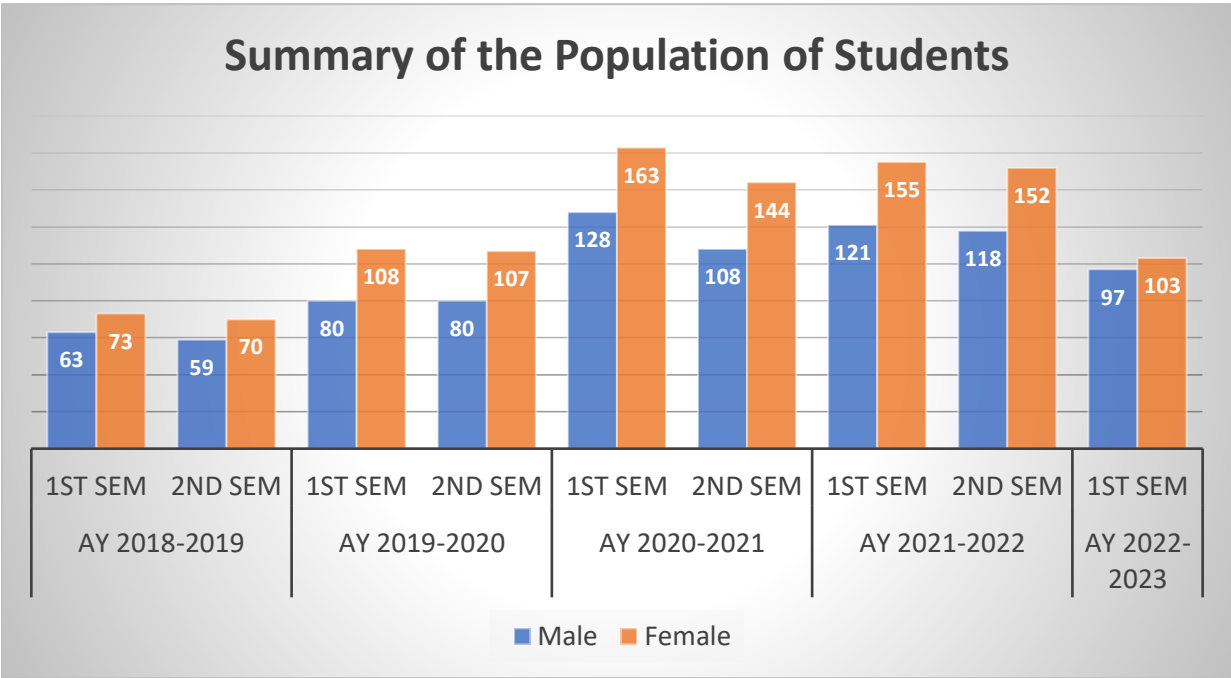
Batangas State University TNEU Mabini is able to support the causes of the local government specifically of its desire to promote improvement and development among its locales. The locally sponsored research project of BatStateU TNEU Mabini entitled Community Based Mapping and Monitoring System (CBMMS) was conceptualized to help the Municipal Disaster Risk Reduction and Management Office of the Municipality especially during times of disaster and calamity. Series of barangay visits have been done by the Campus and a number of meetings with the Head and staff were also administered to enhance more the application being developed. Just last September 9, 2022, the 34 barangays of Mabini were gathered via a seminar on the eventual utilization of the application. It is hoped that by Sept. 30, the date of the culmination of the approved research undertaking of the campus, the CBMMS as a developed technology of BatStateU TNEU Mabini can already be transferred to its beneficiary, the Mabini LGU and its MDRRM office.

## B. Demographic Profile

BatStateU TNEU Mabini is home to students from the municipality and its neighboring towns of Bauan, San Pascual and even some from Tingloy who are dreamers of eventually wanting to become successful professionals someday. Below is the breakdown of the Campus' enrollees throughout the years commencing from its inauguration in 2018.



(a) Brief summary of the population (male/female):  
- Students



**Figure MA-16** Graphical Presentation of the Population of the Students in the Campus by Gender from AY 2018-2019 to AY 2022-2023

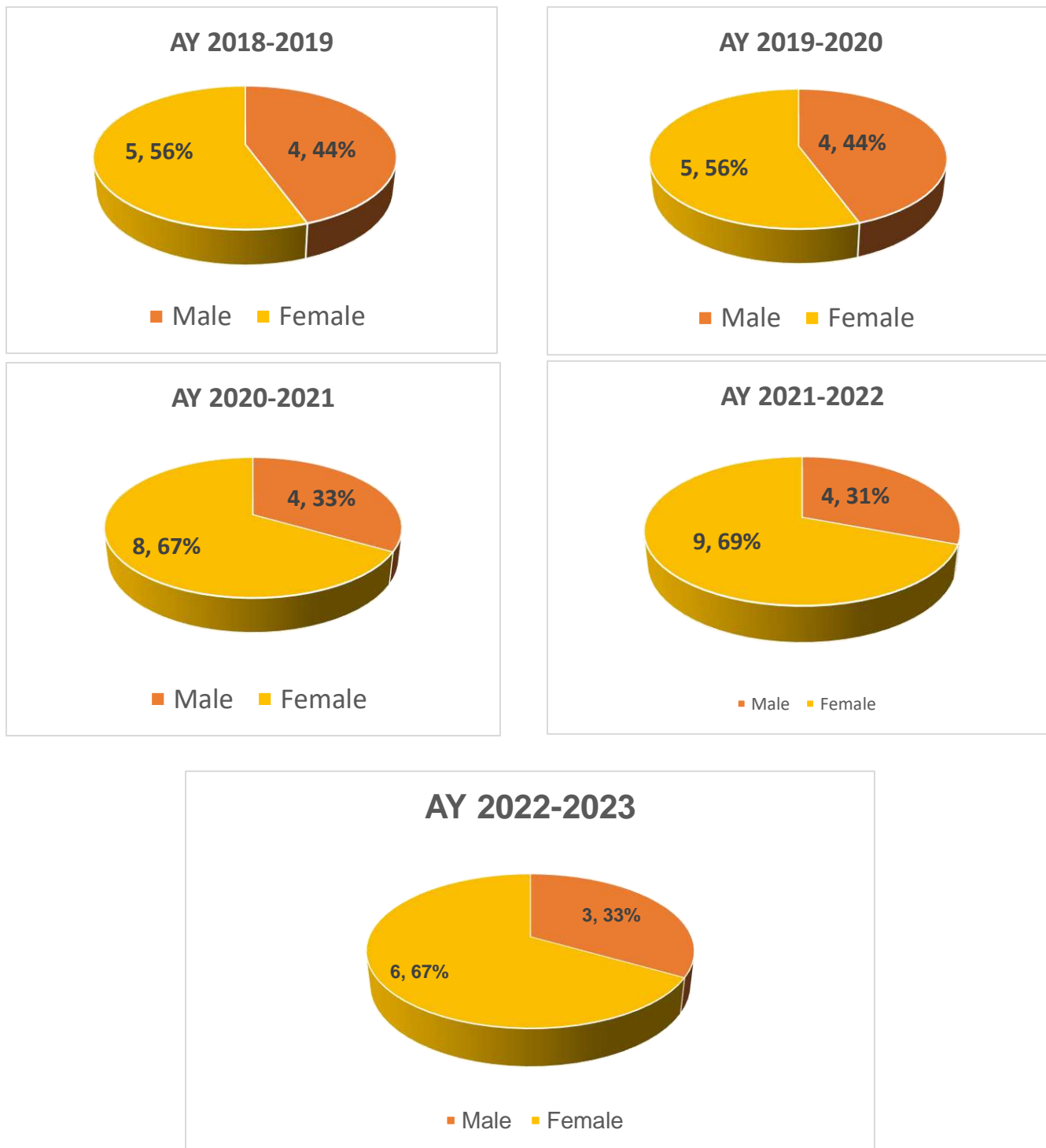
Academic Year 2018 -2019 welcomed a total of 136 pioneering students of the Campus. Seventy-three (73) or 54% were females while 63 or 46% were males. The following academic year 2019 - 2020 welcomed an addition of 52 more students as the student population rose to 188; this time the count of the males rose to 80; the females 108. Academic Year 2020 - 2021 pegged the Campus’ population to 252; 144 were female students while the males totaled to 108 and Academic Year 2021-2022 reached the Campus’ population to 270; 152 were female students and 118 for male students.

Currently, AY 2022-2023, BatStateU TNEU Mabini has a total population of 200 students, most of which came from the BS Information Technology Program which is considered the flagship course of the Campus. The rest of the total population registered 22 under the BS Development Communication program and 50 were enrolled in the BS in Business Administration major in Marketing Management.

Eventually and as it was expected, the students of BatStateU TNEU Mabini had experience considerable decrease in enrolment since the Campus did not already accept students of the BS Development Communication, BS in Management Accounting and Business Administration major in Marketing Management for AY 2021-2022 as mandated by Board Resolution No. 137, s. 2020 which approved the Niche Areas of BatStateU Campuses. With the Approval of the mentioned Board Resolution, BatStateU TNEU Mabini became an extension campus of its constituent ally Alangilan which in turn caters the BS Information Technology program under the College of Informatics and Computing Sciences. As a result of niching, faculty members were being shared by the different campuses whenever needed.



- Faculty



**Figure MA-17** Graphical Presentation of the Population of the Faculty Members in the Campus by Gender from AY 2018-2019 to AY 2022 – 2023

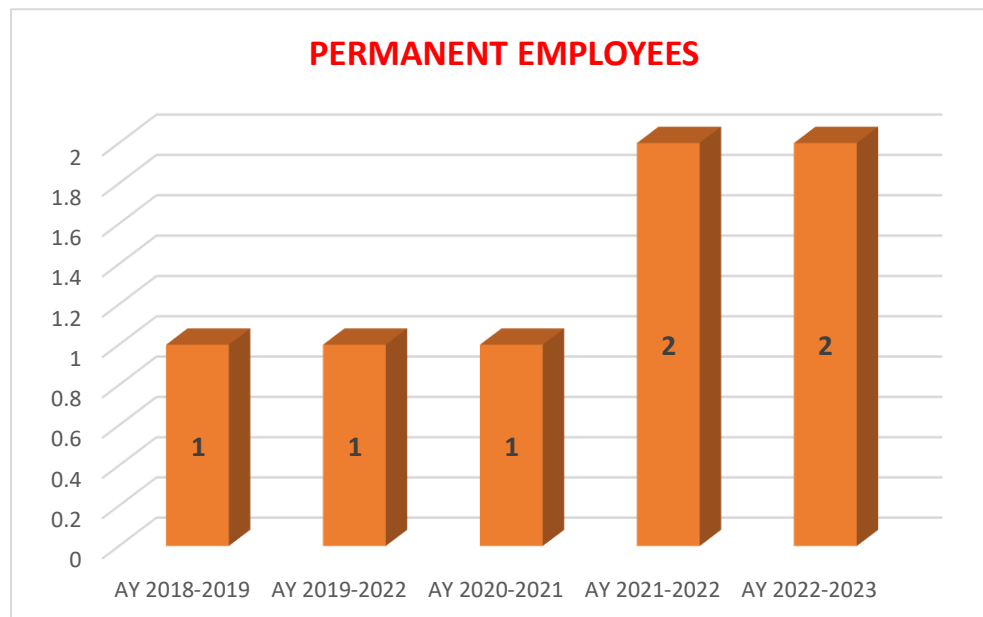
On the other hand, BatStateU TNEU Mabini was also home to promising faculty members who eventually honed the skills, talents and academic mindsets of budding professionals and future members of the workforce of the Campus. In AY 2018- 2019, nine (9) pioneering faculty members of the campus joined BatStateU TNEU Mabini; 5 or 56% were females while 4 or 44% were male faculty members. The same set of mentors extended their services as instructors of the Campus on the following Academic Year, 2019 - 2020. The number of students slightly increased in AY 2020 - 2021 which resulted in the addition of 3 more faculty members in the roster of mentors of the Campus while in AY 2021-2022, the number of faculty





has increased to 13. At present, the Campus has 22 in its roster of mentors; 14 were females while 8 were male faculty members.

- Other employees (Permanent)



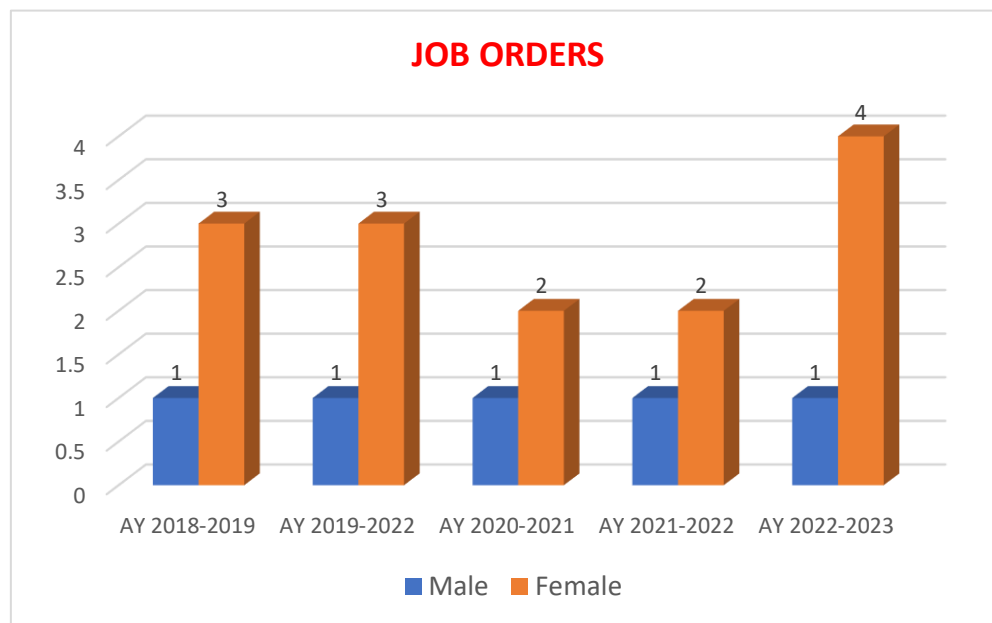
**Figure MA-18** Graphical Presentation on Permanent Faculty Members in the Campus  
AY 2018-2019 to AY 2022-2023

In the span of the three-year existence of BatStateU TNEU Mabini, only 1 permanent faculty member was designated to be a part of the Campus. Dr.Jodi Belina A. Bejer took on the challenging task of becoming the Campus’ first ever Dean of Colleges. Painstakingly enough, she was able to lead the Campus as it grew to what it is today.

In the campus’ fourth year of existence in the municipality as a local State University, an addition of one (1) permanent faculty member in the person of Dr. Sherry Joy A. Del Mundo, joined Dr. Bejer in running the operations of the Campus. Dr. Bejer now functions as the Campus Director and Head of the Offices of Research, Extension and Administrative Services. Dr. Del Mundo, on the other hand, heads the Offices of Academic Affairs and Development and External Affairs.



- Job orders



**Figure MA-19** Graphical Presentation on Job Order Personnel in the Campus  
AY 2018-2019 to AY 2022- 2023

BatStateU TNEU Mabini had been blessed with assistance from job order utility workers as well. During the first year of the Campus, 1 male and 3 female job order workers were detailed to assist in the operation of the Campus. The same set of JOs were commissioned to continue their job in the next year of the Campus' service to the community. As the third year of the campus started, the number of JOs went down to just 3; 1 janitress, 1 utility worker and 1 office staff. Currently, the three Job Order workers with an additional 1 RDES staff and 1 Library staff has increased to five.

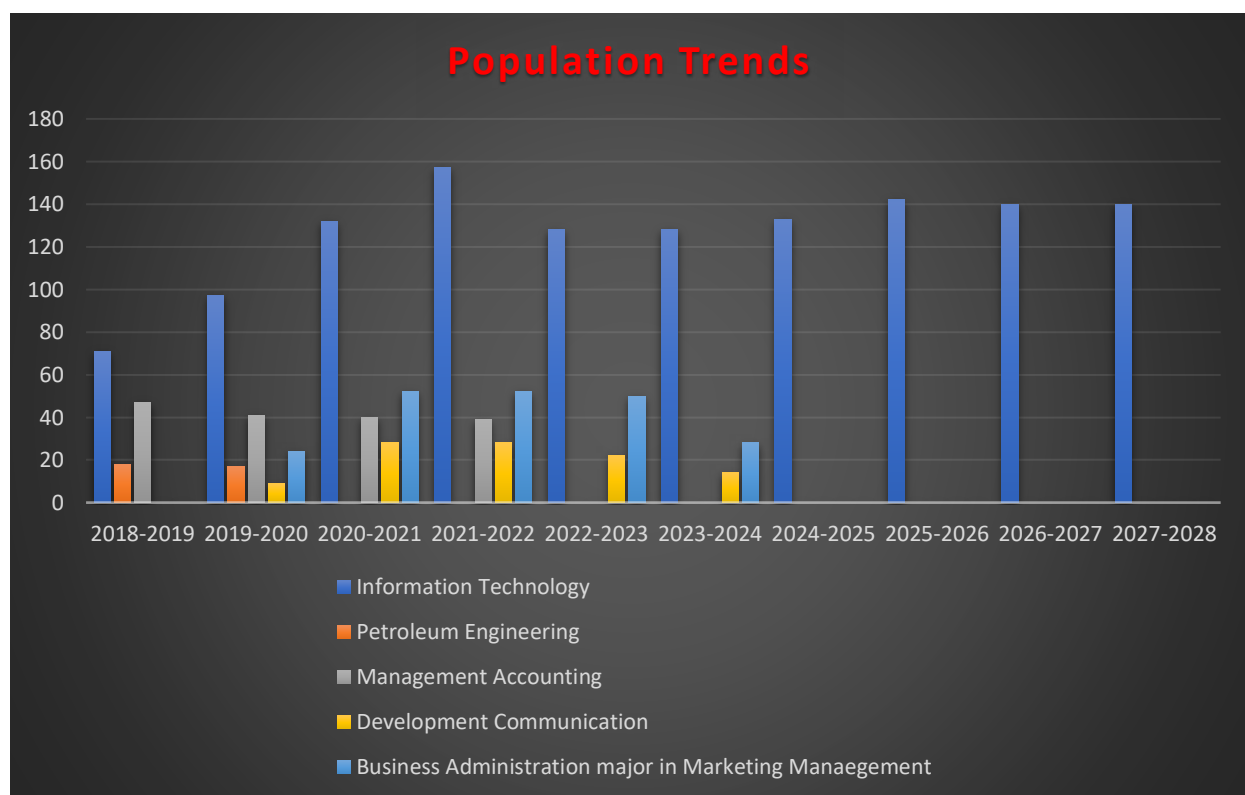
**(b) Projected population of students and employees in the next 10 years**

**Table MA-6** Projected population of students in the next 10 years

Population Trend of Students from AY 2018 - 2019 to AY 2027 – 2028										
PROGRAMS	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028
Information Technology	71	97	132	157	128	128	133	142	140	140
Petroleum Engineering	18	17	0	0	0	0	0	0	0	0
Management Accounting	47	41	40	39	0	0	0	0	0	0
Development Communication	0	9	28	28	22	14	0	0	0	0
Business Administration Major in Marketing Management	0	24	52	52	50	28	0	0	0	0
<b>TOTAL</b>	<b>136</b>	<b>188</b>	<b>252</b>	<b>276</b>	<b>200</b>	<b>170</b>	<b>133</b>	<b>142</b>	<b>140</b>	<b>140</b>



With the opening of BatStateU TNEU Mabini in 2018, the expected turn out of students enrolling in the Campus was not realized because of several reasons. First, Bachelor of Science in Education, which was expected to lure most of the students to enrol was not offered because of the noble purpose of the university President Dr. Tirso Ronquillo to not compete with the other local colleges in the area, thus, those interested to enrol in the education course went to Mabini College of Batangas instead. Also, the offered courses in the Campus did not appeal stellarly as expected to the rest of the expected enrollees. So, BatStateU TNEU Mabini had only 129 pioneering students under the courses: BS in Information Technology which had only 64 interested enrollees; BS Petroleum Engineering with 18 and BS Management Accounting with 47.



**Figure MA-20** Graphical Presentation of the Population Trend in BatStateU TNEU Mabini in the Next Ten Years

The following academic year welcomed the opening of two additional courses: BS in Development Communication which had 9 pioneering students and BS Business Administration Major in Marketing Management with 24 enrollees. The enrollment for the year increased by 58.

Academic Year 2020-2021 showed a bit of progress in terms of enrollees in the Campus because of the addition of 65 more students. Enrollment in all the courses increased except for Management Accounting probably because of the offering of BSBA major in Marketing Management which is allied to it and BS Petroleum Engineering which enrolled students already transferred to the Alangilan Campus.





Twenty more students added up to Academic Year 2021 - 2022; all of them coming from the BS Information Technology program. Enrollment in the other three courses offered remained the same.

The next two years and the succeeding academic years after will be crucial for BatStateU TNEU Mabini. Because of the niching of courses offered, only the BS Information technology program will accept student enrollees in the succeeding years. The rest of the program which are niched to the Pablo Borbon Campus did not accept enrollees anymore and that those who want to enroll will be accommodated already by the College of Arts and Sciences and the College of Accountancy, Business, Economics and International Hospitality Management of the Pablo Borbon Campus.

The administrators of the campus are in the process of proposing programs such as Bachelor in Marine Engineering Technology (BMET), Associate in Marine Diving Technology (AMDT), Bachelor of Science in Entertainment and Multimedia Computing (BSEMC) and Bachelor of Science in Food and Bioprocess Engineering (BSFBE). These programs will cater the needs of the municipality in terms of tourism and industry since the campus is situated along the coast and with several industrial establishments. It is hoped that once approved, students would be interested to enroll.

In the meantime, enrollment in the BS Information Technology program, which shall now become the flagship program of the Campus is expected to decrease because most of the number of students enrolled will be graduating already. Despite this, it was projected that a steady number of at least thirty enrollees will join BatStateU TNEU Mabini until AY 2027 - 2028.

Table MA-7 Projected population of employees in the next 10 years

Population Trend of Employees from AY 2018 - 2019 to AY 2027 – 2028										
PROGRAMS	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028
Permanent	1	1	1	2	3	3	4	5	6	7
Guest Lecturers	8	8	10	11	11	11	7	7	7	7
Job Orders	4	4	3	3	5	5	5	5	5	5
<b>TOTAL</b>	<b>13</b>	<b>13</b>	<b>14</b>	<b>16</b>	<b>19</b>	<b>19</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>

The Table above shows the population trend of the employees of BatStateU TNEU Mabini from AY 2018 - 2019 to AY 2027 - 2028. The basis of the projection was primarily based on the niching of programs which shall leave BatStateU TNEU Mabini only with its BS Information Technology program starting AY 2023 - 2024.

For permanent employees, the opening of the Campus in 2018 welcomed the leadership of the sole permanent faculty member of BatStateU TNEU Mabini in the person of Dr. Jodi Belina A. Bejer who acted as the Campus’ Dean of Colleges for three consecutive years. Four years



hence, Dr. Bejer was appointed the Campus Director and she was joined by another permanent employee in the person of Dr. Sherry Joy A. Del Mundo. In the next 5 years, it was projected that an additional one to three permanent employees may be adopted by the Campus.

In the case of Guest Lecturers, the Campus started off with eight and slowly rose to an addition of 3 to 4 more with the opening of programs like BS Development Communication, BS in Business Administration major in Marketing management and BS in Management Accounting. As the BS Information Technology program will be the only one left in the Campus starting 2023-2024, it was projected that four Guest Lecturers specifically those whose specialization are in Business Administration and Development Communication will no longer be rehired in the next five years.

In the case of Job Order employees, not much of a change in number is expected projection-wise.

### C. Geographic Location

#### a. Brief profile of the province and municipality where the SUC is located

Batangas, officially the Province of Batangas (Tagalog: *Lalawigan ng Batangas* IPA: [bɐˈtʌŋɡəs]) is a province in the Philippines located in the Calabarzon Region in Luzon. Its capital is the city of Batangas, and is bordered by the provinces of Cavite and Laguna to the north, and Quezon to the east. Across the Verde Island Passages to the south is the island of Mindoro and to the west lies the West Philippine Sea. Poetically, Batangas is often referred to by its ancient name Kumintáng. (*en.wikipedia.org*)

Batangas is one of the most popular tourist destinations near Metro Manila. It is home to the well-known Taal Volcano, one of the Decade Volcanoes, and Taal Heritage town, a small town that has ancestral houses and structures dating back to the 19th century. The province also has numerous beaches and diving spots including Anilao in Mabini, Sombrero Island in Tingloy, Ligpo Island and Sampaguita Beach in Bauan, Matabungkay in Lian, Punta Fuego in Nasugbu, Calatagan and Laiya in San Juan. All of the marine waters of the province are part of the Verde Island Passage, the center of the center of world's marine biodiversity. (*en.wikipedia.org*)

Mabini, officially the Municipality of Mabini (Tagalog: *Bayan ng Mabini*), is a 1st class municipality in the Province of Batangas. According to the 2020 census, it has a population of 50,858 people. Mabini is known for its diving and snorkeling sites. Its name Mabini is geographically located on coordinates 130 75' north latitude and 1200 94' east longitude. It is about 127 kilometers from the City of Manila and 17 kilometers from Batangas City, the capital of the province of Batangas. It is one of the municipalities of Batangas Province, within the CALABARZON Region.



The municipality is a peninsula nearly surrounded by water bodies and is known as Calumpang Peninsula. It is bounded on the north by the Municipality of Bauan, on the east by Batangas Bay, on the west by Balayan Bay and on the south by Verde Island Passage. It is on the southern tip of Batangas Province. Legend chronicled that the first Malay settlers to inhabit the vast fertile land bordering the two bodies of water now known as the Batangas Bay and Balayan Bay, first dropped anchors along the shores of the land protruding down southward known geographically as the Calumpang Peninsula. These Malays settlers found the lands fertile and the sea rich in marine resources. They established their settlements along the shores of Calumpang Peninsula, thus beginning the first human settlements in this once vast unknown land.

The Calumpang Peninsula was made part and parcel of the pueblo or municipality of Bauan, in the province of Kumintang, now Batangas. On November 23, 1917, Governor General Francis Burton Harrison issued Executive Order No. 85 separating 17 barrios from the town of Bauan, Batangas to constitute the new and independent municipality of Mabini. These barrios were Anilao, Bagalangit, Gamao, Mainaga, Malimatoc, Maricaban, Nag-Iba, Papaya, Pisa, Pulong Anahao, Pulong Balibaguhan, Pulong Niogan, Saguing, Solo, Talaga, Talahib and Tingloy. Seat of municipal government was established in the Barrio of Pulong Niogan. Executive Order No. 85 took effect on January 1, 1918, thus establishing the foundation of the town of Mabini on this date.

With the good graces of the then Governor – General Leonard Wood and the great leader of the country, Senate President Manuel L. Quezon, a new municipality was declared. Comprising eleven (11) barrios of the Calumpang Peninsula and the whole of Maricaban Island, an independent municipality, with the name of MABINI, was established. The name of the municipality was derived from the great name of the Sublime Paralytic, Brains of the Revolution and Premier Adviser to the President of the erstwhile Philippine Republic, GAT APOLINARIO MABINI. The new Municipality of Mabini, Province of Batangas, was inaugurated on January 1, 1918 with Captain Francisco Castillo, known as the founder of the town.

At present, the Municipality of Mabini consists of 34 barangays of Anilao East, Anilao Proper, Bagalangit, Bulacan, Calamias, Estrella, Gasang, Laurel, Ligaya, Mainaga, Mainit, Majuben, Malimatoc I, Malimatoc II, Nag-iba, Pilahan, Poblacion, Pulang Lupa, Pulong Anahao, Pulong Balibaguhan, Pulong Niogan, Saguing, Sampaguita, San Francisco, San Jose, San Juan, San Teodoro, Santa Ana, , Santa Mesa, Santo Nino, Santo Tomas, Solo, Talaga East and Talaga Proper. (*en.wikipedia.org*)

Batangas State University Mabini Campus is the youngest and newest of the eleven (11) campuses of the Batangas State University System. It is located in Pulong





Niogan specifically located at Sitio Mailayin. The campus is a neighboring government service institution of the Mabini Community Hospital located behind the buildings of BatStateU TNEU Mabini. Bordering the Campus westward is the Mabini Evacuation Center while residential areas border the campus southward and eastward.



**Map MA-15.** Geographic Location of Municipality of Mabini

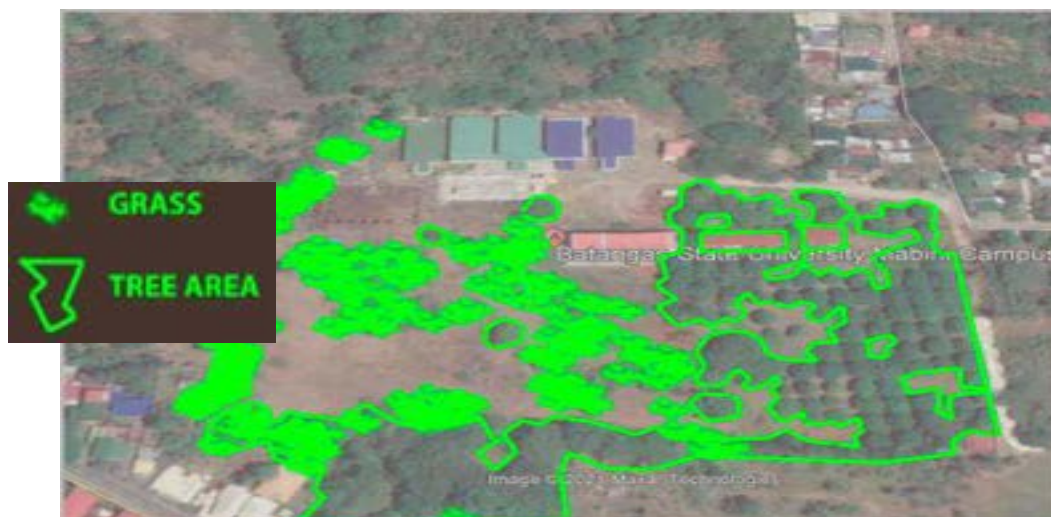


**Map MA-16** Actual Site Footage of the Geographical Location of BatStateU TNEU Mabini

**b. Description of the land cover, topography of the area where the SUC is located**

The general topography is characterized by valleys between prominent hills or mountains. It has peninsular characteristics rich in attractions for its scenic natural beauty. It has irregular coastlines with rugged surfaces and harborial beaches. The notable elevated portions are Mt. Panay, Mahabang Gulod and Gulugod Baboy.

The Campus is situated in Sitio Mailayin in Barangay Pulong Niogan. Barangay Pulong Niogan, specifically Sitio Mailayin, where BatStateU TNEU Mabini Campus is situated, is within moderate susceptibility to rain-induced landslides. The sitio formerly has a quarrying area, which operation had ceased for several years now. Having been subjected to this environmental hazard due to continuous excavation, the land area near the Campus resulted in uneven land contours and steep slopes.



**Map MA-17.** Land Cover and Topography of the Area where BatStateU TNEU Mabini is Located

**c. Brief profile of watershed/subwatershed coverage and locations, if any, under which the SUC is part of**

There are no inland water bodies. The blue sea waters of Batangas and Balayan Bays nearly surrounded the Municipality on its eastern, western and southern sides. However, no watersheds or subwatersheds can be identified with the location of the Campus since it is located near the heart of the town or the municipality’s “poblacion” area.



**Map MA-18** Footage Profile of Watersheds and Subwatersheds Coverage surrounding BatStateU TNEU Mabini



BatStateU TNEU Mabini has a total land area of four (4) hectares. Soil type is Ibaan loam which may cater to the growth and production of coconut, citrus, cacao and coffee. As mentioned, there are currently no watershed areas around the campus as well as areas of drainage of flooding.

**d. Significant national or regional/sub-national characteristics or value (e.g. biodiversity, cultural- historical, traditional or functional)**

Biodiversity in the Municipality of Mabini is rich since it lies in the center of the “coral triangle”. A study on the capture fisheries resources of the municipalities of Mabini and Tingloy was conducted and funded by the Kabang Kalikasan ng Pilipinas Foundation-World Wildlife Fund, (WWF) under its Coastal Resources and Fisheries Conservation project (CRFCP) and supported by the staff of WWF stationed in Anilao, Mabini, Batangas. The study is entitled “Assessment of the Marine Municipal Capture Fisheries of Mabini and Tingloy, Batangas. The study shows the following findings:

1. Mabini and Tingloy are best ridden by the two most important fishing grounds of the province namely Batangas Bay and Balayan Bay.

2. Capture fisheries could constitute a significant portion of their local economies.

3. In terms of spatial extent in municipal waters, the two towns cover the highest portion of the two bays.

4. These municipalities are blessed with rich coastal habitats (e.g., coral reefs) that form the innate assets for their booming eco-tourism industries. This is one rare situation for a local government in the country to be endowed with resources to support capture fisheries and eco-tourism, where the manner of use can potentially present conflicts among stakeholders.

5. It is therefore, logic of natural law that these natural endowments from their marine ecosystem be protected and sustained by the community in a collective manner.

Mabini is also rich in terms of culture, history and tradition. The town is named after the revolutionary paralytic hero, Apolinario Mabini who is considered by recent historians as the first Prime Minister of the Philippines. It was carved from Bauan municipality on January 1, 1918, with Captain Francisco Castillo, known as the founder of the town, as the first appointive Municipal President. Mabini is a resort town with some industrial locators such as Petron, Suntrak Corporation and CKU Steel Corporation. Although many of its residents are still dependent on agriculture as the main source of their income,





tourism is now an important pillar of the local economy. The municipality is host to several resorts and other businesses that cater to the needs of visitors.

Mabini is also a festive municipality because of its colorful celebrations of its local festivals. April 25 of each year marks the celebration of its Kinulob Festival which showcases its being a municipality of hog and chicken raisers. Apart from these products, Mabini is also known for its famous “tableya”, a traditional Filipino hot chocolate beverage made from pure, roasted cocoa beans that are pressed into coin-shaped tablets.

### **e. Vulnerabilities and risks (landslides, earthquakes, floods, volcanic eruptions, underground caves and karst, erosion, and the like.**

#### **Natural Hazards/Constraints**

The Mines and Geo-Sciences Bureau, Department of Environment and Natural Resources conducted geo-hazard assessment in the municipality sometime in May, 2013. The results of the MGB Rapid Field Assessment are as follows:

Eleven (11) barangays ( Bagalangit, Estrella, Laurel, Ligaya, Mainit, Pulong Anahao, San Francisco, San Jose, San Teodoro, Solo and Sto. Tomas) are considered highly susceptible to rain-induced landslides.

On the other hand, there are six (6) barangays (Bulacan, Majuben, Nag-Iba, Pilahan, Pulang Lupa, and Santo Niño) which are considered to be in the moderate to high susceptibility status as to rain-induced landslides. In addition to this, four (4) barangays (Calamias, Malimatoc II, Poblacion and Pulong Niogan) are under the moderate susceptibility status as to rain-induced landslides. Barangays Anilao East and Ligaya has high susceptibility for flooding while Talaga East and Talaga Proper has low susceptibility to rain-induced landslides.

Barangay Pulong Niogan, specifically Sitio Mailayin, where BatStateU TNEU Mabini Campus is situated, is within moderate susceptibility to rain-induced landslides. The sitio formerly has a quarrying area, which operation had ceased for several years now. Having been subjected to this environmental hazard due to continuous excavation, the land area near the Campus resulted in uneven land contours and steep slopes.

To add to this, the presence of mass movement such as landslides, tension cracks; saturated ground or seeps and sunken or displaced road surfaces made the matter for accessibility to the campus even more challenging. The quarrying activities are currently being controlled after the establishment of the Mabini Community Hospital, the existence



of Batangas State University Mabini Campus and the heeding of the residents near the quarrying site.

In terms of flooding, Barangay Pulong Niogan is within the low susceptibility status with no details as to cause, origin, location and direct effects or impacts to its residents. However, it is still suggested that residents and even workers within the area be observant always because of varying and unpredictable patterns of rain and the weather in general.

In terms of the recent earthquake swarm that occurred in the municipality last April, 4 to 8, 2017, utmost consideration as to related observable causes and hazard prevention measures were made known to all the residents of the municipality in general. A primer released by the Philippine Volcanology and Seismology Commission (Phivolcs) and a copy furnished to the Office of the Municipal Mayor by the Provincial Disaster Risk Reduction and Management Office paved the way for all the residents to better understanding of the event and the preventive measures which should be undertaken by those affected should an incident of the same nature happen again. According to the primer... “an earthquake swarm is a burst of earthquake activity clustered in a specific area in a short period of time due to the movement of a fault” With this said, the residents had been constantly reminded to earthquake drill exercises and other safeguarding activities to ensure the safety of all Mabinians.

To date, at least six earthquakes have affected Batangas Province. The Mindoro earthquakes of November 15, 1994, April 9, 1942 and May 26, 1889, and the earthquakes of April 1972, October, 1889 and September 16, 1852 whose epicenters were located in the West Philippine Sea. The 1994 Magnitude 7.1 Mindoro Earthquake was felt at intensity VII in the epicentral areas and may have shaken Batangas at intensities V to VI or even VII while the 1889 Magnitude 6.4 earthquake was felt at intensity VI-VII in Mindoro and Batangas. The 1852 Magnitude 7.6 and 1869 Magnitude 6.6 offshore events were reported felt at Intensity VII in and around Batangas. Although there were no accounts of direct damage in Batangas due to 1994, 1972, and 1942 events, the 1852, 1869 and 1889 events damaged several buildings and infrastructures in the area.

Batangas is one of the seismically active areas in the Philippines. Instrumental monitoring of earthquakes for the past century has detected many small to large magnitude earthquakes near Batangas generated by Manila Trench and Lubang Fault. Lubang Fault is estimated eight (8) kilometers away from Barangay Mainit, Mabini, Batangas while the Manila Trench (Southwest of Mamburao, Occidental Mindoro) is estimated at 72.52 kilometers away. The Manila Trench is an earthquake generator located offshore of Luzon Island, roughly parallel to the Philippine Archipelago in the north but veers close to land at the southern tip of Occidental Mindoro. Another offshore



generator is Lubang Fault, located between Mindoro Island and Batangas, which is also the locus of small to large magnitude earthquakes. Other active faults on land are present in Southern Luzon, such as Valley Fault System and the Philippine Fault. The current series of earthquakes in Batangas can be attributed to the movement of an unnamed local fault in the vicinity of the Tingloy-Mabini area.”

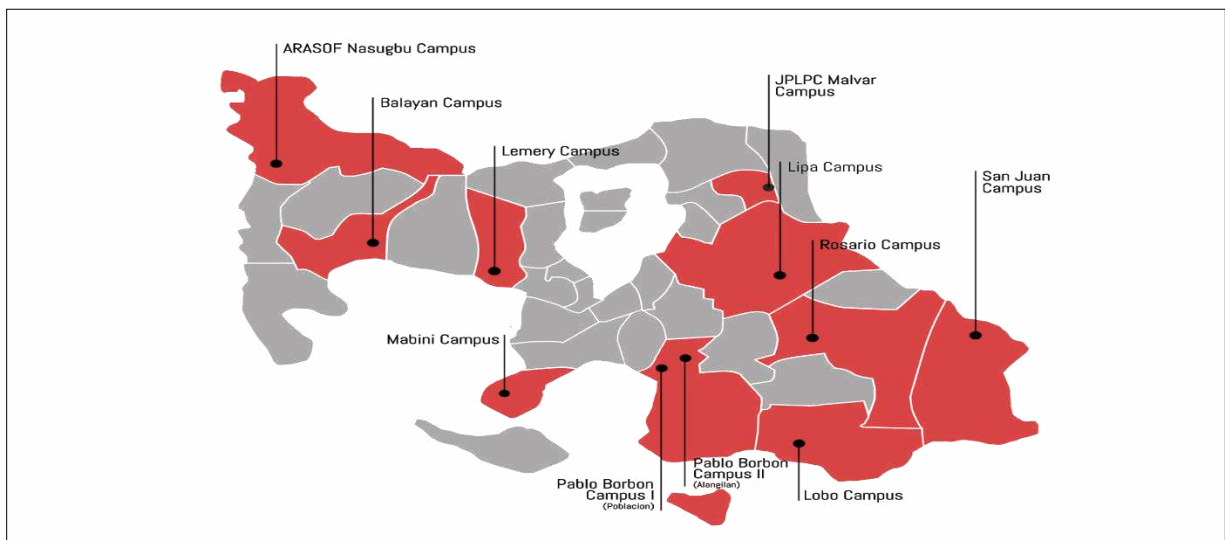
The Primer also states the following:

1. Although Taal Volcano is approximately 30 kilometers from Mabini, Batangas, the present network of instruments located in and around Taal Volcano shows no indication of any significant change of monitoring parameters suggesting renewed magmatic activity.
2. The magnitude is not big enough to generate a destructive tsunami.
3. Hypocenters of moderate-large magnitude earthquakes along active faults are too deep to be influenced by any human activity. This is related geothermal drilling and blasting by a private company in Mabini, Batangas.
4. Small to moderate magnitude earthquake events can still occur in the following days and weeks.
5. Strong ground shaking may cause extensive damage to or even the collapse of houses, buildings, bridges and other infrastructures. Collapsed structures usually accounts for most of the casualties during a strong earthquake. Falling objects may also cause injuries.
6. Landslides, rock falls and other types of mass movements may occur in mountainous or hilly areas. Liquefaction manifested by sand boils or lateral spreading may affect low lying, waterlogged, sandy areas near the coasts or banks of rivers.

**f. Maps covering political boundaries of LGU and where SUC and its campuses are located.**

Batangas State University TNEU Mabini is the smallest and youngest of the eleven campuses of the Batangas State University The National Engineering University System. Below is a map showing the location of the different campuses of the University and the municipality that each is situated.





**Map MA-19** Map Showing the Location of the Eleven Campuses of Batangas State University The National Engineering University

## II. DETAILED DESCRIPTION OF THE SUC

### A. Physical Features and Environmental Condition

- (a) **Physical and locational characteristics, including land area, boundaries, covered barangays, and among others.**

Batangas State University The National Engineering University (BatStateU; Filipino: *Pambansang Pamantasan ng Batangas*) is a Level IV state university in the Province of Batangas, Philippines. Established as a manual training school in 1903, Batangas State University is the oldest higher education institution in the country's Calabarzon Region. It was converted into a state college in 1968 through RA 5270, and was renamed Pablo Borbon Memorial Institute of Technology. It was finally elevated into a state university in 2001 by virtue of RA 9045. It has 11 campuses and more than 35,000 students enrolled in over 110 undergraduate and graduate degree programs.

Batangas State University was named one of the country's model higher education institutions by the Commission on Higher Education or CHED in 2016. The university's Electronics Engineering program is designated by CHED as a national Center of Excellence, and its Electrical Engineering, Mechanical Engineering, Development Communication, and Teacher Education programs are national Centers of Development. It has ISO 9001:2015 certification from TÜV Rheinland Philippines, Inc., and is host to the first China-Philippines Silk Road Institute in the country.

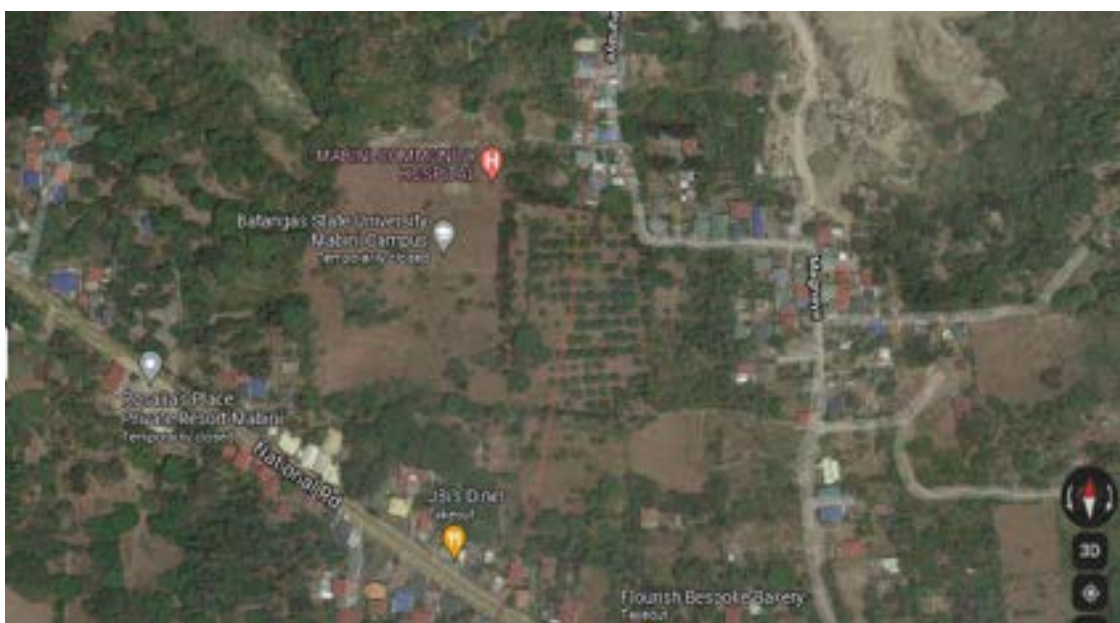
BatStateU is the first state university in the Philippines with engineering and information technology programs accredited by the US-based Accreditation Board for Engineering and Technology or ABET – Engineering Accreditation Commission and Computing Accreditation Commission. With 15 development centers, it is recognized by the



Regional Development Council of Region IV-A as the Regional Center for Technology Business Incubation and Development, and as the Regional Center for Science, Technology, Engineering, and Environment Research.

In 2020, the university received a three-star rating from Quacquarelli Symonds Stars University rating. Through Proclamation No. 947, President Rodrigo Roa Duterte designated the BatStateU Knowledge, Innovation, and Science Technology or KIST Park as a Special Economic Zone. It is the first KIST Park registered by the Philippine Economic Zone Authority or PEZA. This was officially launched on July 20, 2020 in virtual ceremonies attended by key government and industry officials.<sup>[26]</sup>

The newest of the eleven campuses of the Batangas State University System is BatStateU TNEU Mabini, with its operations starting only in 2018. The campus is situated in Sitio Mailayin of Barangay Pulong Niogan. Through the generosity of the local municipal government and the Yu Family, the youngest BatStateU campus was established on a four hectare property with a three-storey building as its first academic infrastructure. The University later on was able to acquire two more buildings donated by the DPWH of the 2nd District of Batangas under the selfless initiative of the Municipal Mayor of Mabini, Hon. Noel B. Lustro. The buildings consist of a four classroom one storey building and a multi-purpose hall. Mabini, being a first class municipality, has a booming economy and a hub for business industries primarily because of its diving destinations.



Map MA-20 Physical location of BatStateU TNEU Mabini

**b. Nearby airports, ports, bus terminals, and the like.**

The Municipality of Mabini caters to its main transport services in the area around the town: jeepneys and tricycles. Currently, there are two piers (*common language for*

ports) that serve the area: Anilao Pier and Talaga Pier, mainly catering for motor bancas going to and from the nearby island-town of Tingloy.

Mabini is roughly 18 to 20 kilometers to the nearest bus station in Batangas City. When the summer season is at its peak, local and international tourists are being transported directly to the municipality by buses and other private vehicles. The nearest airport from Mabini is the NAIA International Airport which is roughly a two- hour drive only because of the STAR Tollway, South Luzon Expressway and the Skyway as routes accessible in going to and from Mabini, Batangas to NAIA.

**c. Summary description of the natural biophysical environment:**

- All relevant thematic and sectoral maps, including vegetative cover, contour, drainage/flooding, general land use; tenurial conditions, hazards, climate risk/disaster risk projection maps, and the like
- Projection and expansion thematic maps and coverage area



**Map MA-21.** Thematic maps and coverage area of BatStateU TNEU Mabini

## **B. Inventory of Landholdings**

### **a. Inventory of Landholdings**

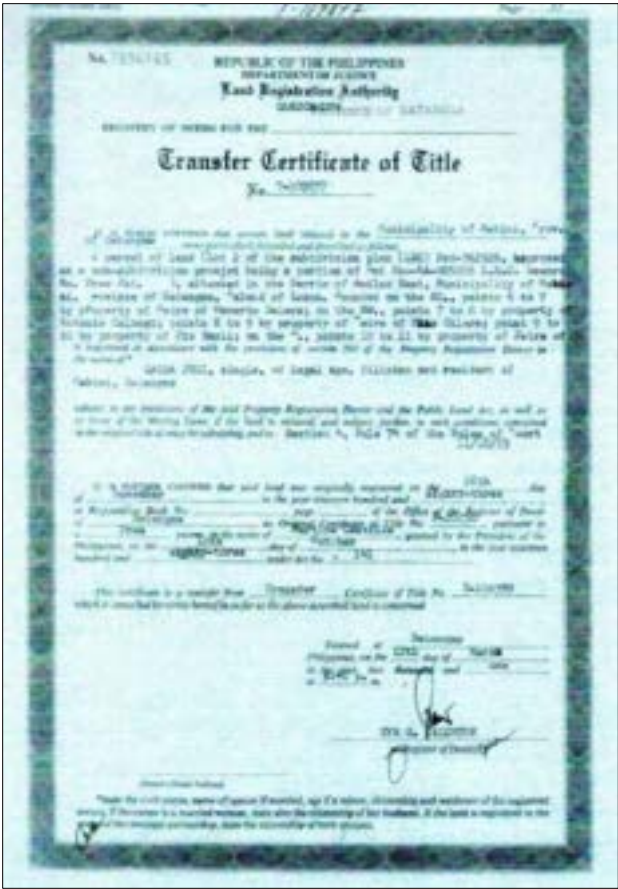
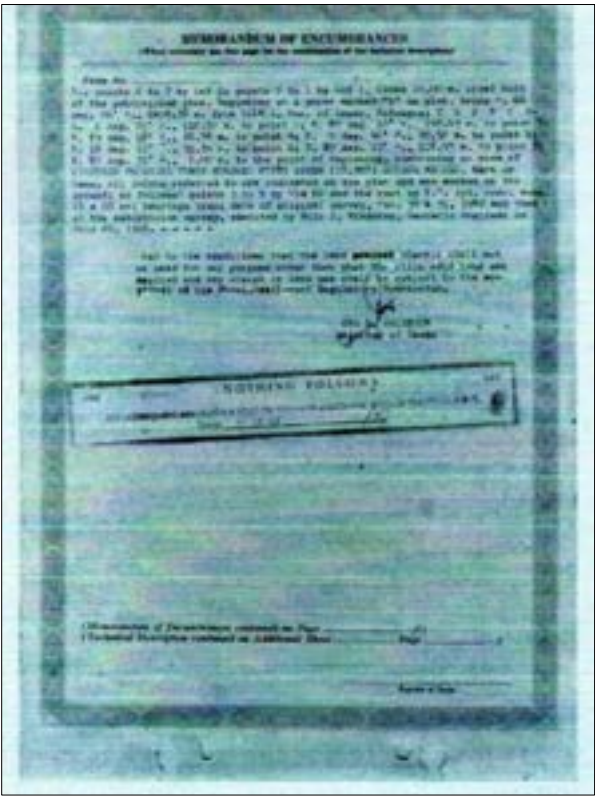
Currently, Batangas State University The National Engineering University Mabini has in its ownership the following: pending land title transfer of the four - hectare donated land where it is currently situated and three (3) donated buildings. The main building, the Josefina L. Yu Hall, which is a donation of SeaOil Philippines Incorporated is a three-story building with 4 rooms on the second floor and a multi-purpose area on the top floor. The other two buildings which were donated by the Department of Public Works and Highways





# Land Use Development and Infrastructure Plan (LUDIP)

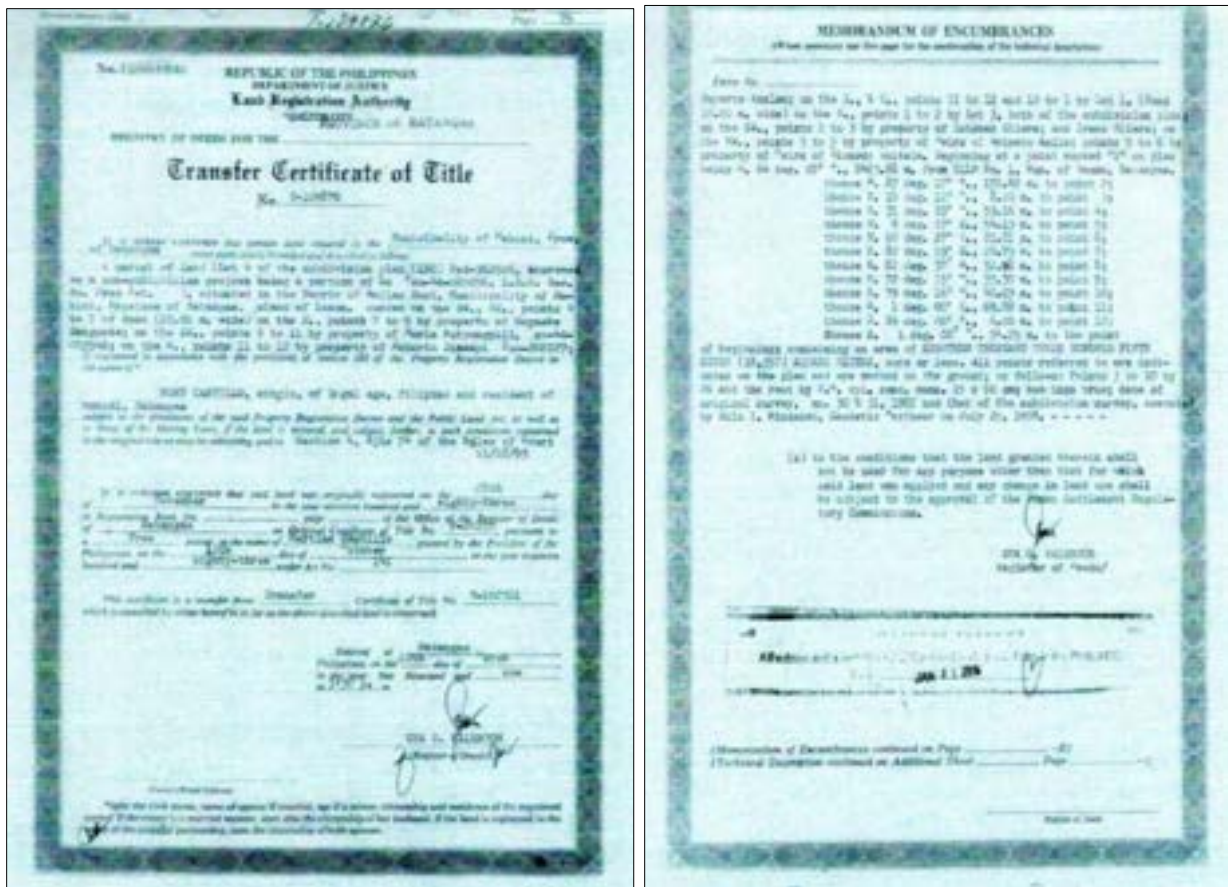
of the 2nd District of Batangas constitute a four-classroom building and a multi-purpose room as well.



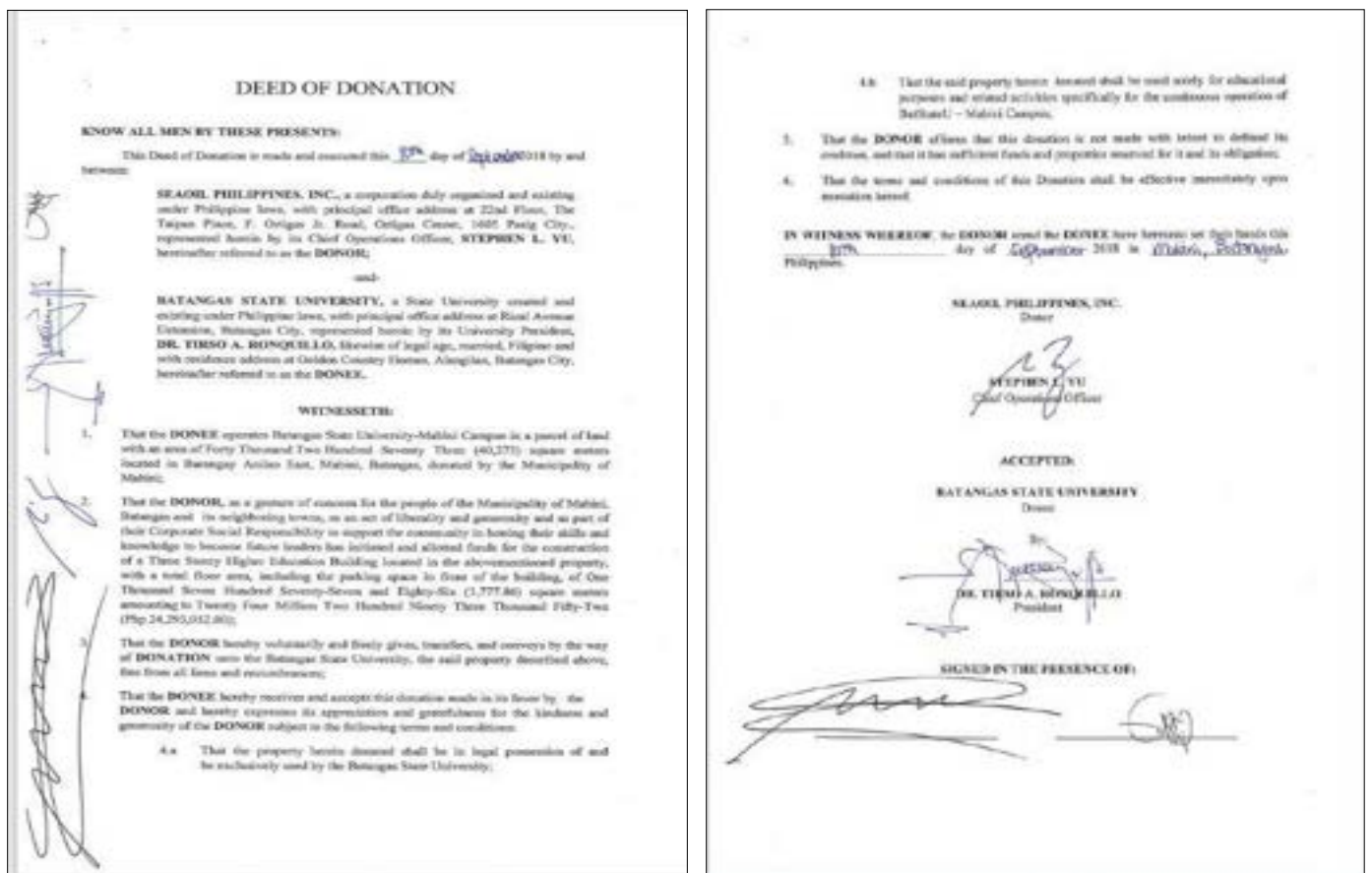




**Land Use Development and  
Infrastructure Plan (LUDIP)**



**Figure MA-21** Land Titles of the Four-Hectare Donation of the Castillos which needed to be transferred to the Municipality of Mabini



**Figure MA-22** Copy of the Deed of Donation of the Josephina Yu Hall of SEAOil Philippines Inc. to Batangas State University The National Engineering University



Figure MA-23 Certificates of Acceptance of the Donated DPWH Buildings to BatStateU TNEU Mabini

### b. Status of ownership

The land area where BatStateU TNEU Mabini is now located was acquired by the Municipal Government of Mabini from the Castillo Family of Pulong Niogan. Payment for the land area acquired from the Castillo's had been paid fully by the Municipal Government. Sadly, because of the pandemic and other unforeseen circumstances the processing of the actual transfer of title from the Castillo's to the Mabini Municipal Government was slowed down. The transfer has yet to happen upon payment of surcharges and other accumulated processing fees on the part of the Mabini LGU. Currently, the processing of such payables is still being done by the Assessor's Office of Mabini so that the eventual transfer of title from the Castillo's to the Municipal Government may be acted upon the soonest.

At its present status, BatStateU TNEU Mabini Campus has to coordinate, yet again, with the Assessor's Office of the Municipality of Mabini regarding the eventual ownership of the land where it is currently located. The University has been painstakingly exerting its effort to acquire full ownership of the land where BatStateU TNEU Mabini is currently situated.



## Original Certificate of Title

Because of the pandemic which started in March 2020, the processing of the actual transfer of land ownership from the Castillo Family to the Municipality of Mabini was delayed. The Mabini Assessor's Office had already filed for the transfer but sadly, surcharges kicked in and the only sound thing that the office did during the time that office to office transactions started to normalize was to pay for the fees incurred. At present, the issues on other surcharges and clarifications about the exact land area to be donated by the Mabini LGU to Batangas State University are being addressed.



**Figure MA-24** Letter from the Mabini LGU Addressing the Issue on the Delay of the Processing of the Transfer of Land Title Ownership of BatStateU TNEU Mabini Transfer Certificate of Title

## Transfer Certificate of Title

At its present status, BatStateU TNEU Mabini Campus has to coordinate, yet again, with the Assessor's Office of the Municipality of Mabini regarding the eventual ownership of the land where it is currently located. The University has been painstakingly exerting its effort to acquire full ownership of the land where BatStateU TNEU Mabini is currently situated.

## CLOAD (Certificate of Land Ownership and Donation)

The issue of ownership of the land that the Mabini LGU is supposed to donate to BatStateU TNEU Mabini is still on hold at present. No Certificate of Land Ownership has been issued yet because of the concerns on the transfer of ownership from the Castillos to the Municipality of Mabini.



Donated

The original Certificate of Title at present is still named after the original owner, the Castillos of Pulong Niogan. The processing of fees and other surcharges and the resolution of disputes related to the transfer of ownership of the land to the Municipal Government is still being settled currently by the Municipal Assessor's Office with the Bureau of Internal Revenue and other concerned government offices. Because of this, the University is constantly in communication with the Municipal Government of Mabini so that the process of transfer of ownership on the end of the Municipal Government to BatStateU will be realized the soonest time possible. As the university is still awaiting the finality as to the transfer of ownership, it is also in the process of settling with the Assessor's Office of the actual land area to be donated by the Mabini Municipal Government because of the issue on the shared ownership of the claimed donated land area with the Mabini Community Hospital which is a neighboring government service institution of the BatStateU TNEU Mabini Campus. Below are the copies of the Land Titles for Transfer of Ownership:





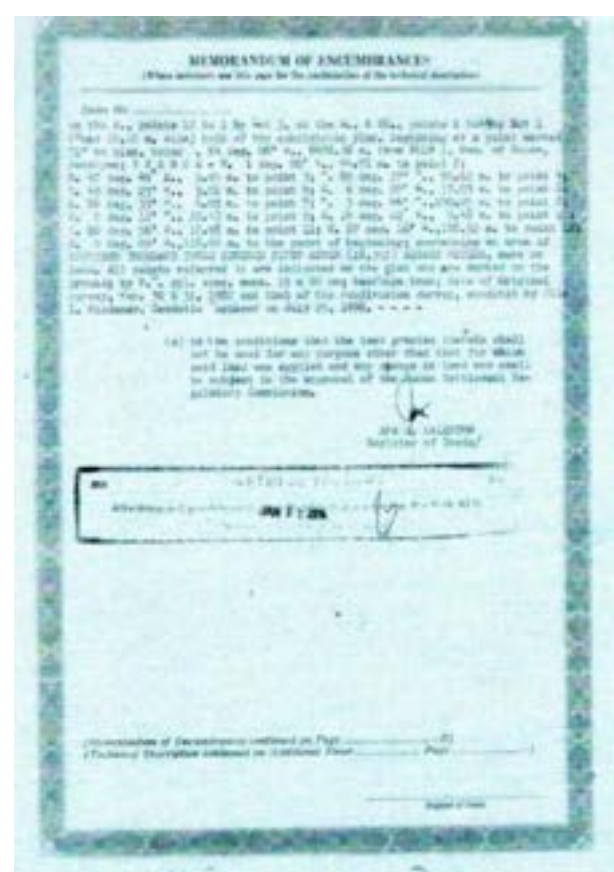
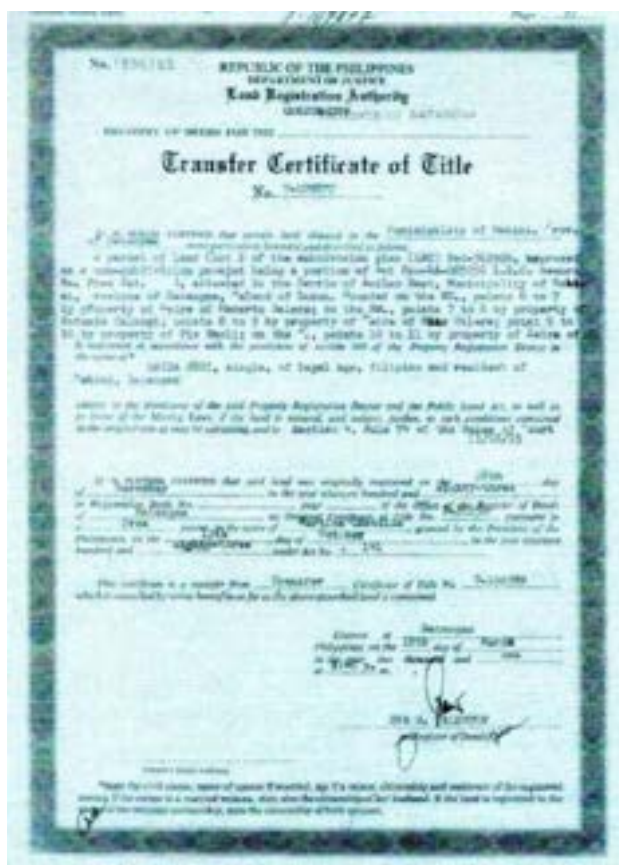
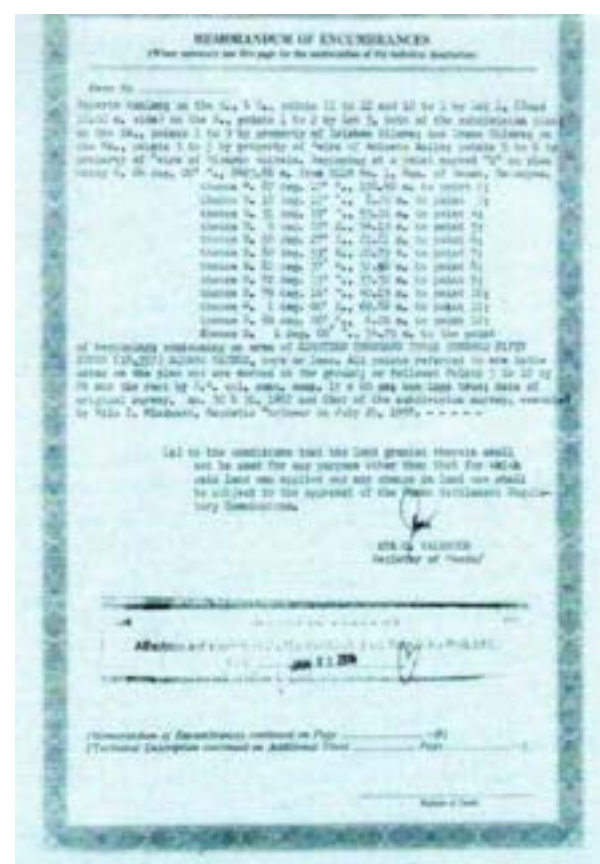
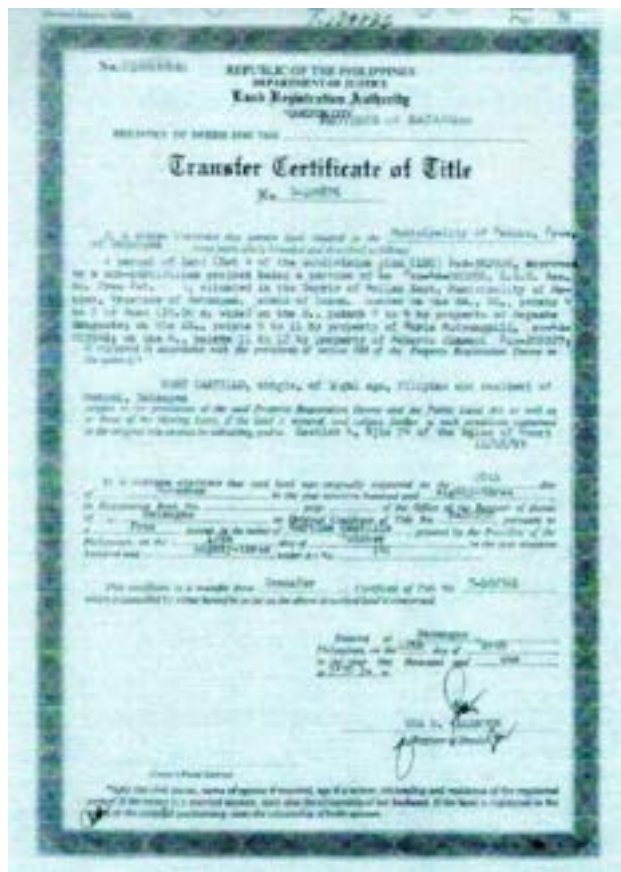


Figure MA-25 Land Titles of the Four-Hectare Donation of the Castillos which needed to be transferred to the Municipality of Mabini

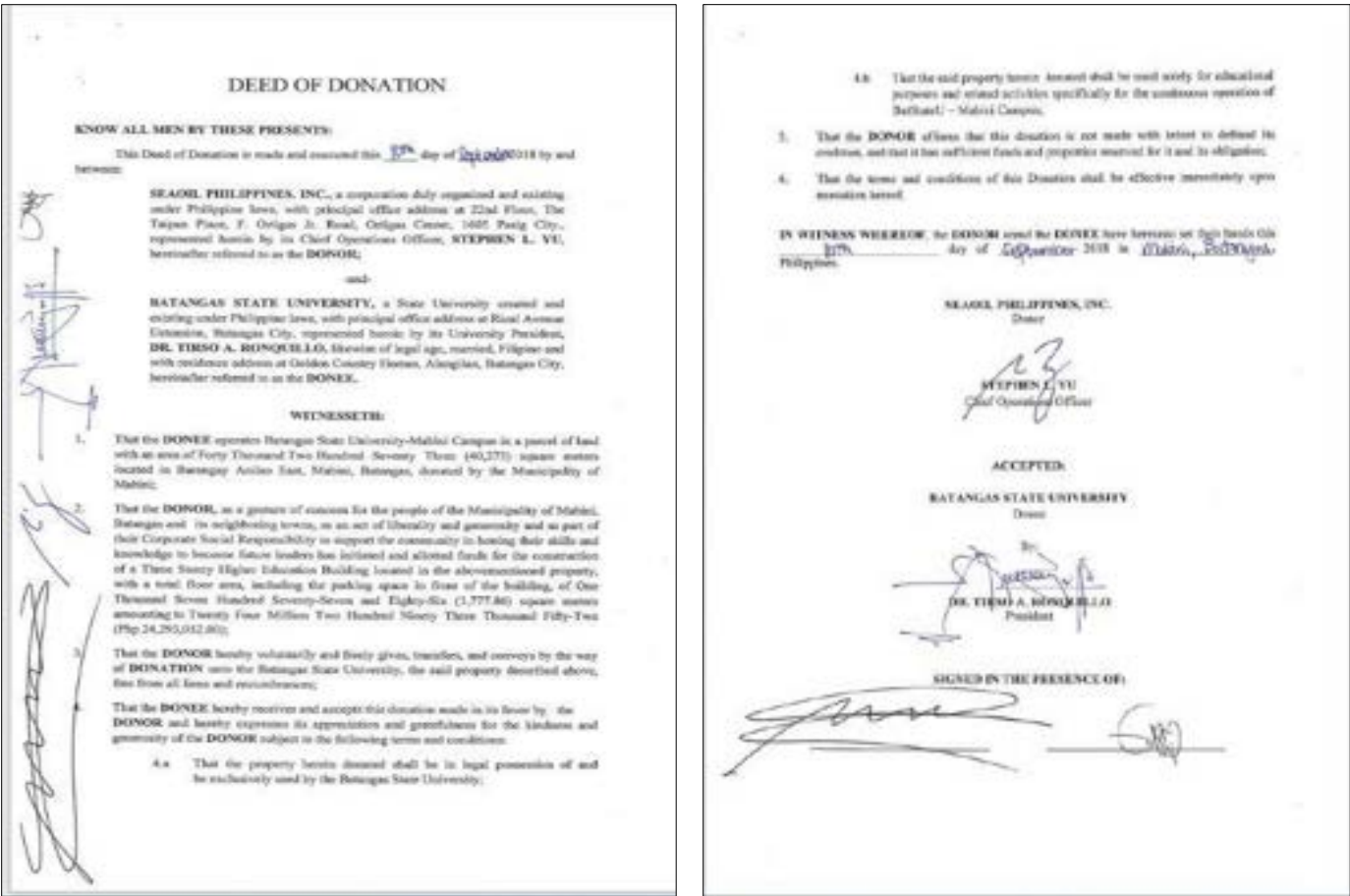




**Figure MA-26** Communication Letter from the Assessor's Office of Mabini shedding light to the actual processing of the Transfer of Land Ownership form the Castillos to the Municipal Government of Mabini

As to the buildings being utilized by BatStateU TNEU Mabini, below is the Deed of Donation of SeaOil Philippines Incorporated as represented by its Chief Operating Officer Mr. Stephen L. Yu to the University represented in the document by BatStateU President Dr. Tirso A. Ronquillo which was historically signed on September 10, 2018.

The document clearly states that the University building donated by SeaOil to BatStateU is pegged at an area of 1, 777.86 square meters which amounts to more or less P 24, 293, 092.00. The said building was donated by SeaOil as a gesture of concern to the people of the Municipality of Mabini and its neighboring towns and a fulfillment of their Corporate Social Responsibility of honing future leaders and partners of the workforce of Mabini and beyond. The 3-storey Higher Education Building which was named as the Josephina Yu Hall was agreed upon by the two parties to be of legal possession and use of Batangas State University and the said donated building will be used solely for educational purposes and related activities for the continuous operation of the BatStateU TNEU Mabini Campus.



**Figure MA-27** Copy of the Deed of Donation of the Josephina Yu Hall of SEAOil Philippines Inc. to Batangas State University The National Engineering University

Two other buildings were donated to Batangas State University The National Engineering University Mabini, this time, by the DPWH of the Second District of Batangas. The said donation happened because of the selfless initiative and utmost solicitation of the Mayor of Mabini, Hon. Noel B. Luistro. The buildings donated are composed of a building with 4 classrooms and a multi-purpose hall. The Certificates of Acceptance were signed on July 2, 2018.

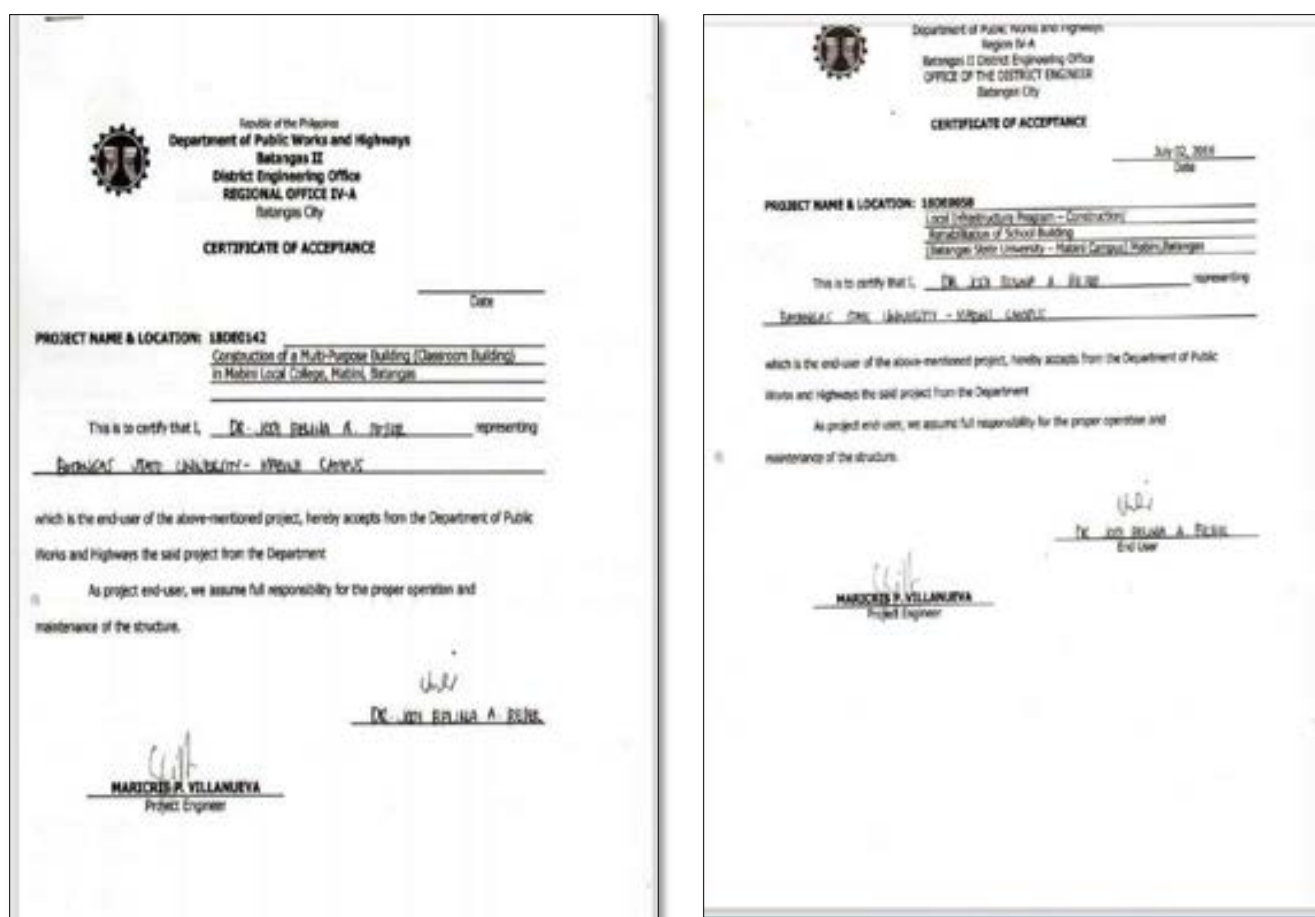


Figure MA-28 Certificates of Acceptance of the Donated DPWH Buildings to BatStateU TNEU Mabini

Currently, Batangas State University Mabini has in its ownership the following: pending land title transfer of the four hectare lot where it is currently situated and three (3) donated buildings. The main building, the Josefina L. Yu Hall, which is a donation of SeaOil Philippines Incorporated is a three-story building with 4 rooms on the second floor and a multi-purpose area on the top floor. The other two buildings which were donated by the Department of Public Works and Highways of the 2nd District of Batangas constitute a four-classroom building and a multi-purpose room as well.

### Proclamation / Usufruct / And the like

Because of the fact that the actual transfer of land title has not yet been done between BatStateU TNEU Mabini and the Municipality of Mabini, proclamation as to the actual and real owner of the land area supposedly awarded under the name of Batangas State University Mabini Campus is still pending. Since this is the case, the usufructuary right of the use of the land is temporarily given by the Municipality of Mabini to Batangas State University Mabini Campus. This status may be changed upon the actual legal transfer of land title by the Mabini Municipal Government to BatStateU TNEU Mabini Campus.





c. Manner of Acquisition

The manner of acquisition of the land where BatStateU TNEU Mabini Campus is currently situated, should transfer happen anytime soon will be by way of donation. The same manner of acquisition applies to the buildings donated by SeaOil Philippines Incorporated and by the DPWH of the 2nd District of Batangas.

d. Technical Description

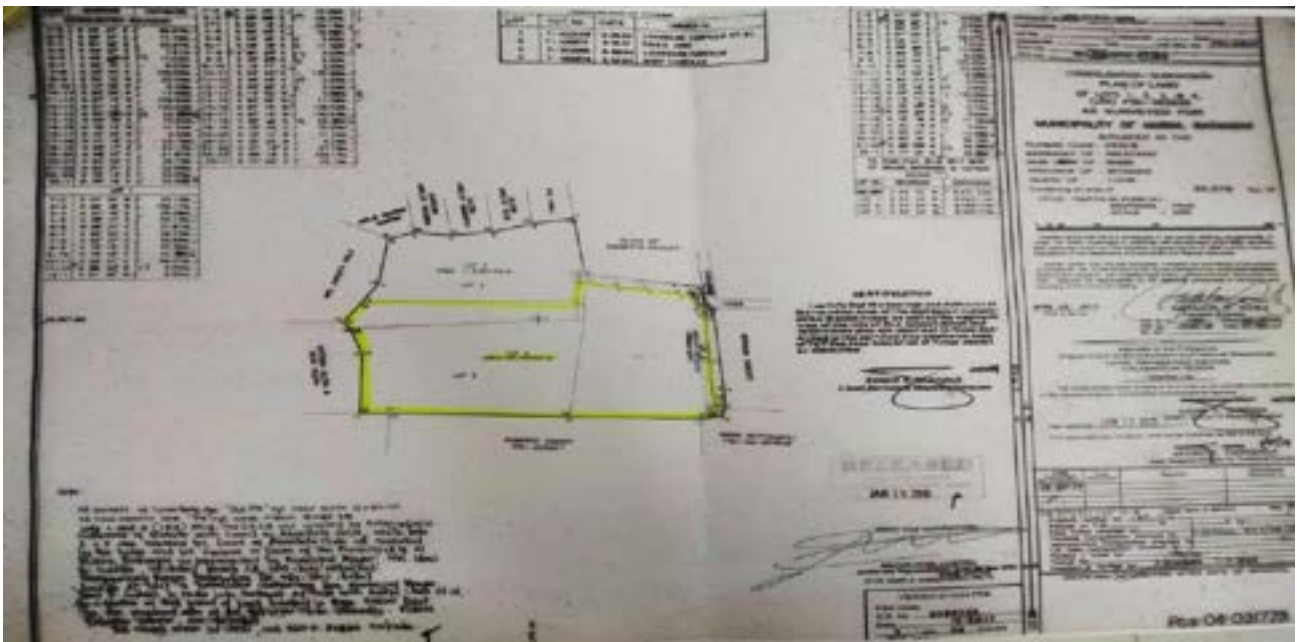


Figure MA-29 Cadastral Map of BatStateU TNEU Mabini

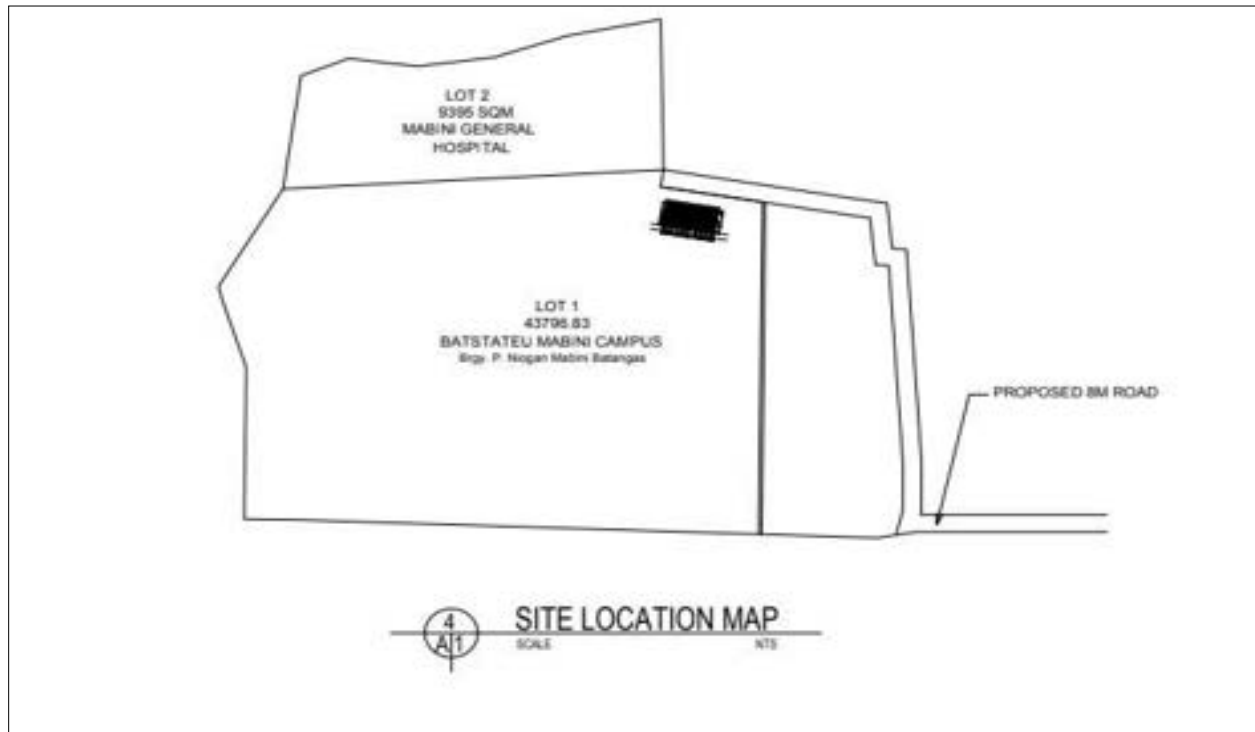


Figure MA-30 Letter Bearing the Actual Lot Area Donated by the Municipality of Mabini to BatStateU TNEU Mabini

C. Existing Land Use and Land Use Trends

BatStateU TNEU Mabini is situated in a four hectare land previously owned by the Castillo's of P. Niogan, Mabini, Batangas. Soil type in the area where the Campus is located is Ibaan loam, pretty much suited to plant and grow coconut, citrus, cacao and coffee. There are no watershed areas and no drainage of flooding. The construction of the academic buildings in the area paved the way for the land to be of use for the exercise

of corporate responsibility of the donor, SEOIL Philippines, to the people of Mabini. See attachment below showing the four hectare land area donated to the university and the parcel of land already occupied by BatstateU TNEU Mabini.



**Figure MA-31** Site Location Map of BatstateU TNEU Mabini

- a. Cadastral survey of land occupied by the SUCs, including:
- Detailed geographical descriptions on land disputes;
  - Natural and man-made hazards for climate change issues;
  - Zoning projections and process flow of how they are approved and revised;

The Cadastral survey of the land may have yet to be established and provided by the Mabini Assessor's Office to BatStateU TNEU Mabini. Since, the transfer of ownership is still between the donating family and LGU Mabini, there is no way that a cadastral survey will be in force anytime soon because of this matter.

**b. Detailed description of the:**

- **Academic core**

At present, there are two academic buildings at BatstateU TNEU Mabini: the Josephina Yu Hall and the DPWH Building. The Josefina Yu Hall currently houses all the student services rooms of the Campus all situated at the ground floor of the said building. The DPWH Building, in the meantime, is designed for classroom use. An adjacent smaller building to the DPWH Building will be used, on the other hand, as a multi-purpose





hall as envisioned by the administration of the Campus at present. Plans of constructing other buildings in the area to be used for academic purposes such as the Campus Gymnasium and other General Services Building are already being conceptualized by the University Administration.

- **Research core**

As of a Research Building, there is a plan of the University to construct a VIP CORALS Building in the area like that which was constructed in Lobo Campus since the Campus is near Anilao, a tourism haven for beach lovers and is part of the center of biodiversity in the Province of Batangas

- **Residential areas covering both housing for faculty and staff, dormitories for students PLAN**

To date, there is not yet a plan to construct housing facilities in the Campus since most of the students enrolled are residents of nearby barangays of P. Niogan. Those who came from other municipalities, in the meantime, can still enjoy staying at their place of residence as transportation facilities around the area where the Campus is located are highly accessible.

(d) Detailed geographical description of land used for commercial, agricultural, fishery, forestry and other activities, including open and recreational spaces, landscape features and campus transportation system, among others. Maps included.

Except for the Community Hospital situated behind the Campus, the land area of BatStateU TNEU Mabini has been designated to be constructed with student services center, general and administrative services buildings. As of the moment, no provision has been made yet for commercial, agricultural, fishery, forestry and other activities. As for a recreational space, a Campus gymnasium was requested for construction in 2023. Landscape features have already been started but because of the absence of perimeter fences, improvements have yet to be made in the days to come. The campus transportation system, on the other hand, has yet to be established since BatStateU TNEU Mabini may be reached via tricycles, the mode of transportation best fit in going to and from the Campus. With this at hand, the Campus will have to communicate with the Tricycle Association in the place so that transport servicing of students will be ensured at affordable rates.

(e) Major trends/shifts in land tenure (i.e. CADC/ CADT issuance)/ conversion arrangements (i.e. establishments of special economic zones/ industrial areas)

As far as the location of BatstateU TNEU Mabini is concerned, special economic zones and industrial areas have no provision to be established since there is no available space yet to serve their specific purposes.



**Map MA-22** Road Networks and Access Roads Going to and From the Campus

## D. Facilities and Utilities including social services facilities and amenities

Inventory of all existing buildings, facilities and other infrastructure within the compound or areas occupied by the SUCs and other real estate assets;

### Academic core

#### -Academic Buildings



**Figure MA-32** Building Perspective of the Main Academic Building or the Josefina L. Yu Hall



The Josefina L. Yu Hall was donated by SEA OIL Foundation through the initiative of the Mabini LGU headed by the Municipal Mayor, Noel “Bitrics” Luistro. The building is a three-storey, eight-room building situated in a 40,000 square meter lot located in Sitio Mailayin, Barangay P. Niogan in the municipality of Mabini. Originally, all of the eight rooms in the ground and second levels of the building are all designed to be utilized as classrooms for conduct of classes but because of the current set up that the Campus has been practicing since its opening, the ground floor which has four rooms are used as the Campus’ library, clinic, faculty room and computer laboratory. The second floor rooms are the ones used as classrooms while the third floor area is a multi purpose hall used by the Campus in their gatherings and holding of programs and activities.



**Figure MA-33** Actual photo of Josefina L. Yu Hall, the Main Academic Building of the Campus

The Josefina L. Yu Hall was the first building of Batangas State University The National Engineering Univeristy - Mabini. It was donated by SEA OIL Foundation and was named after Josefina Yu, wife of Francis Yu, the founder of SEA OIL. The company in response to its corporate social responsibility believes that BatstateU TNEU Mabini will be a promising venue where the students of Mabini and nearby municipalities can be equipped with knowledge and skills to uphold Godly values, and become steward leaders of the community and the country in general.





Figure MA-34 Building Perspective of the Second Academic Building of the Campus

The second academic building of BatStateU TNEU Mabini was a donation from the DPWH of the 2nd District of Batangas. The said donation was through the ingenuity and painstaking efforts of the Municipal Mayor Noel B. Luistro. The classroom building was designed as classrooms for the BS IT students of Mabini since most of the bulk of the Campus' students came from the program. Due to the toll of the pandemic, the said building had not been utilized since its acceptance from the donor in 2019.



Figure MA-35 Actual photo of the second building or the extension building



Figure MA-36 Building perspective of the third building



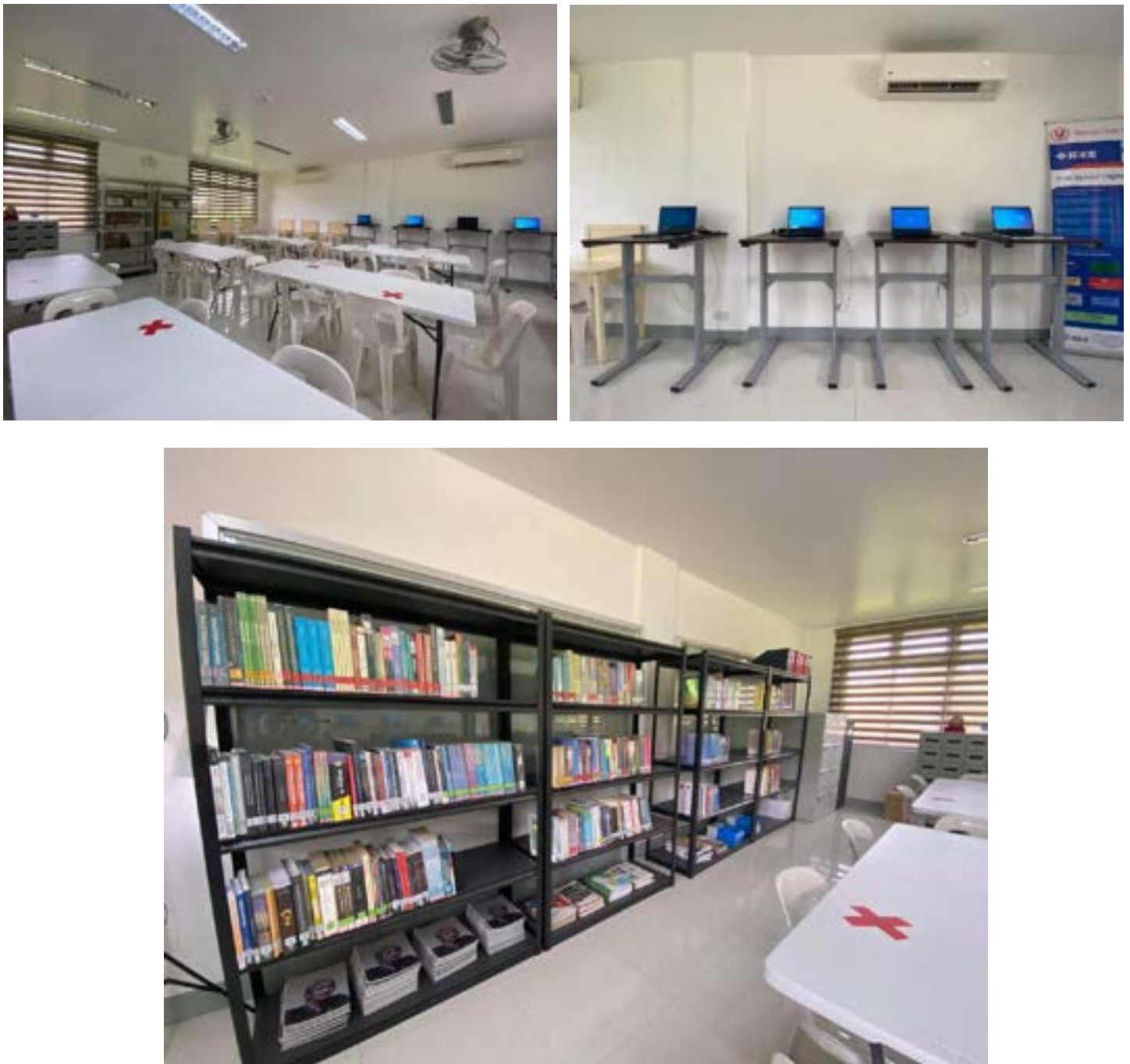
Figure MA-37 Actual photo of the third building.

The third building, which came with the second building, was also a donation of the DPWH of the 2nd District of Batangas. The Third building may be considered a General Services building since its original use was its being a Campus canteen. It was also not yet utilized due to the delays in the approval of the building’s actual utilization and purpose.





- Library



**Figure MA-38** Library of the Campus

The campus library is located on the ground floor of the Josefina L. Yu Hall. It is an air conditioned room with tables and chairs. Around 250 books on different topics specific for programs in BatStateU TNEU Mabini can be found in the campus library. Students can read during their free time and browse over online resources for research with the 20 high end laptops in the room for students' use. In addition, the library has internet access that can be utilized by students for their school work.





- **Laboratories**



**Figure MA-39** Computer Laboratory of the Campus

The campus has two computer laboratory rooms equipped with twenty and eighteen computer tables and desktops which students can use for their computer laboratory classes. The said laboratory rooms are located one on the ground floor and the other at the second floor of the Josefina L. Yu Building.

- **Sports facility**

As the Campus is still being developed and improved, makeshift areas around the Campus were being utilized for sports related activities. For indoor sports, equipment used by the Campus can all be found in the multi-purpose hall in the third floor of the Josefina Yu Hall. For outdoor sports which needed a bigger space, the grounds of the



# Land Use Development and Infrastructure Plan (LUDIP)

Campus were being used for volleyball activities of PE classes while basketball classes are temporarily being held at the covered court of Brgy. P. Niogan with a respective Memorandum of Agreement. As this was the case, the University, on its end, provided BatStateU TNEU Mabini all the needed sports equipment for the enhancement of PE classes and of the sports activities of the Campus' students in general. Below are the available sports equipment in the campus as provided by the University's Office of Sports Development Program.

MEMORANDUM OF AGREEMENT

BETWEEN ALL MEN BY THEIR PRESIDENTS

This AGREEMENT is made and entered into by and between:

**BABANGAY P. NIOGAN, MAHINA, BATANGAS**, with principal office at P. Niogan, Mahina, Batangas, herein represented by its Barangay Chairperson, **DR. ALEX MANALO**, hereinafter referred to as the "FIRST PARTY";

and

**BATANGAS STATE UNIVERSITY**, the National Engineering University of the Philippines by virtue of Republic Act 1094, with office and postal address at Rizal Avenue, Batangas City, herein represented by its President, **DR. THERO A. BAYONILLO**, hereinafter referred to as the "SECOND PARTY".

WITNESSETH:

WHEREAS, the SECOND PARTY, as a state university, performs academic and extra-curricular functions to provide better development to its students, and considers as part of its mandate the fulfillment of its responsibility to have its students not just academically but also physically;

WHEREAS, in order to accomplish the above objective, the SECOND PARTY aims to create activities for the students and faculty, which activities necessitate a proper venue for its successful accomplishment;

WHEREAS, the SECOND PARTY has not established its own gymnasium in order to facilitate school activities;

WHEREAS, the FIRST PARTY aims a gymnasium which may be used by the public; and

WHEREAS, the SECOND PARTY sent a request to the FIRST PARTY for the utilization of its gymnasium with and without time that the SECOND PARTY has established its own gymnasium, to which the SECOND PARTY willingly approved;

NOW, THEREFORE, for and in consideration of the above covenants, and of other covenants and stipulations hereinafter set forth, the parties hereto agree to enter into this Agreement under the following terms and conditions:

**I. OBLIGATIONS OF THE FIRST PARTY**

1. The FIRST PARTY shall strictly enforce the rules and regulations set forth in "Multi-Purpose Facility Usage Guidelines between Batangas, The National Congress and P. Niogan, Mahina, Batangas" (Annex A) regarding the utilization of the gymnasium of the SECOND PARTY.
2. The FIRST PARTY shall not in any way charge the SECOND PARTY payment for the utilization of the gymnasium.

**II. OBLIGATIONS OF THE SECOND PARTY**

3. The SECOND PARTY shall strictly abide by the rules and regulations set forth in the guidelines attached herewith as Annex A for the utilization of the gymnasium of the FIRST PARTY.
4. The SECOND PARTY shall assign one faculty member to coordinate with the Barangay representative for the purpose.
5. The SECOND PARTY shall acknowledge the efforts of the FIRST PARTY in all operational aspects of the activities to be accomplished/implemented.
6. The SECOND PARTY shall accept the FIRST PARTY in the maintenance and cleanliness of the gymnasium in the district of the utilization of the gymnasium by the SECOND PARTY.

**III. MISCELLANEOUS PROVISIONS**

7. This agreement shall take effect upon signing and shall be enforceable until such time that the First Party has constructed a Campus Gymnasium.
8. The Parties shall hold each other free from any damage or liability that may arise from or occasioned by the exercise of their rights and obligations under this Agreement except when such damage or liability is attributable to the gross negligence or willful misconduct of a Party or any of its officers, representatives or employees.
9. Both parties acknowledge that confidential information may be required during the execution of this Agreement. Thus neither party shall, without the written consent of the other, disclose any way all parts of the confidential information required by the parties to any person, including any third party or employees of the parties, unless such persons are required to have knowledge in such confidential information for the parties to achieve their mutual purpose in accordance with the Data Privacy Act of 2012.
10. This agreement shall be binding to both parties and their respective legal successors and assigns, and all rights and obligations of either party or herein provided shall not be assigned to any third party without prior written consent of the other party.
11. Any changes, modifications and alterations to the foregoing provisions shall be made upon mutual consultation of the parties.

IN WITNESS WHEREOF, the parties hereunto set their hands and seals this 11th day of 2022 at **BATANGAS CITY**.

For BATANGAS STATE UNIVERSITY      For BABANGAY P. NIOGAN, MAHINA, BATANGAS

**DR. THERO A. BAYONILLO**      **DR. ALEX MANALO**  
University President      Barangay Chairperson

Witness:      Witness:

**DR. JOHN MELINA A. REJER**      **DR. THERO A. BAYONILLO**  
Campus Director      President

ACKNOWLEDGEMENT

REPUBLIC OF THE PHILIPPINES )  
BATANGAS CITY ) S.S.

BEFORE ME, a notary public for and in **BATANGAS CITY**, personally appeared:

Agency	Representative	Valid ID	Date/Place of Issue
Batangas	Dr. THERO A. BAYONILLO	Emp./Valid ID No.	11-11-2022

Known to me to be known or identified by me through competent evidence of identity to be the person who executed the foregoing MOA, and they acknowledged to me that the same is their free and voluntary act and deed as well as that of the corporation herein represented.

WITNESS MY HAND AND NOTARIAL SEAL this 11th day of 11th 2022.

Doc. No. **1111**  
Page No. **1**  
Book No. **1**  
Series of **1111**

**ATY MARIA SOFIA QUINONES**  
Notary Public for the Province of Batangas and  
Notary Public for the City of Batangas  
Notary Public for the City of Batangas  
Notary Public for the City of Batangas  
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Notary Public for the City of Batangas

Figure MA-40 Memorandum of Agreement between Brgy. P. Niogan and BatStateU TNEU

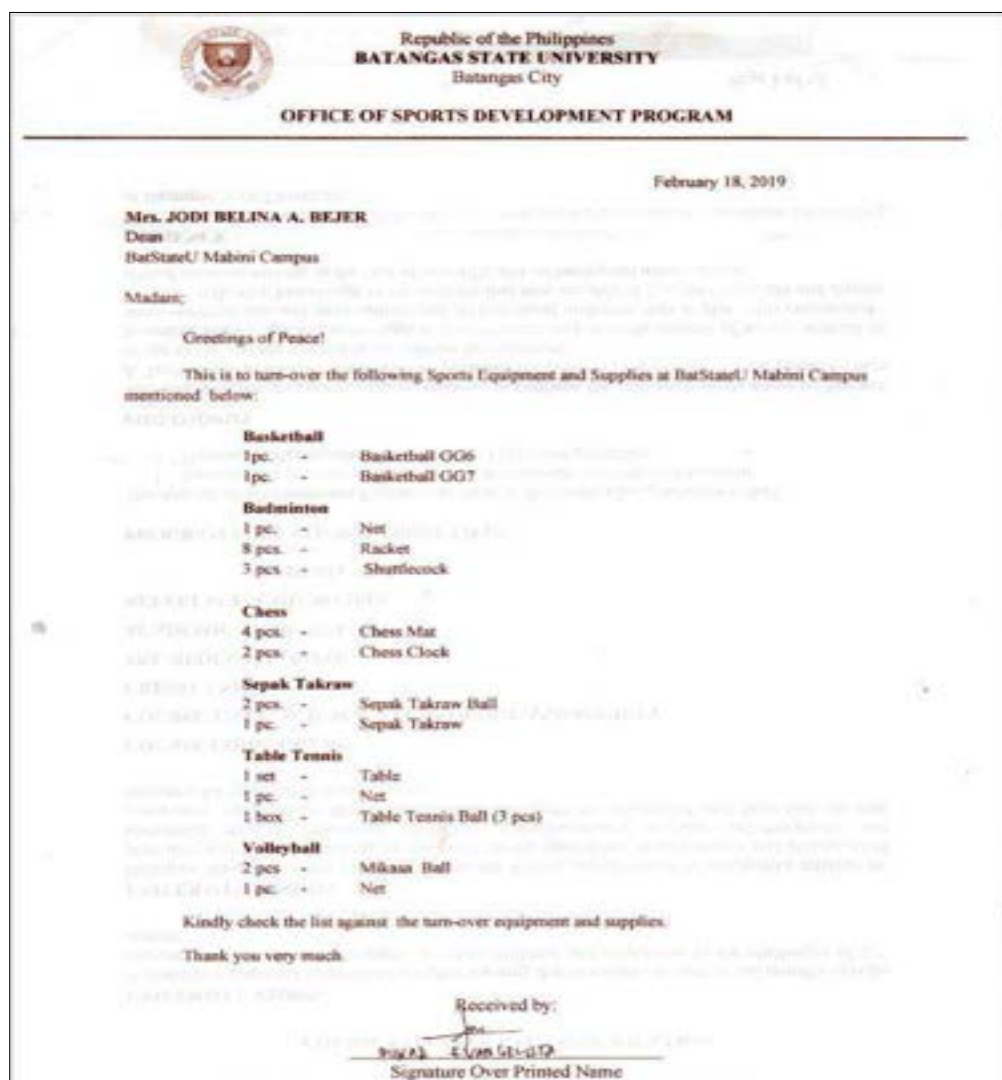


Figure MA-41 Sports Equipment Issued by the university to BatStateU TNEU Mabini

## Administrative/General Services

Since the Campus has at present only two Academic Buildings and no provision yet of buildings for the other offered services of the University such as student services, administrative services among others, the Josephina Yu Hall accommodates all the Campus Offices. The temporary Library of the Campus, as well as the DRRMO and supplies and materials storage room and the faculty lounge are all found at the ground floor of the said building.

- Security
- Motorpool

As to the security of the Campus as well as the Motorpool, the side area of the Josephina Yu Hall is now temporarily used as the security area while there is none yet a provision for a Campus Motorpool.





Research core – no provision yet

- Research centers
- Incubation centers
- Field research areas
- Field labs

Extension – no provision yet

- Income generating projects
- Hotels/hostels
- Product display centers

Allied Services

- Housing of officials – no provision yet
- Housing of faculties and staff – no provision yet
- Dormitories for students – no provision yet
- Clinic

The construction of the one-storey campus clinic has started on July 25, 2022 and is expected to be completed on November 2022.

- Church – no provision yet
- Emergency response

The emergency response activities of the Campus are in close coordination with the Action Center of BatStateU Central. At present, the Campus has already received equipment that can be used during emergency situations. Selected personnel of BatStateU TNEU Mabini also were able to attend trainings on emergency response especially in the performance of earthquake drills. In terms of response to medical concerns, though the Campus is still without an infirmary yet, there is an adjacent hospital which is already operating and soon to be level 1 accredited which the Campus may tap especially during times of emergency.



 <b>BATANGAS STATE UNIVERSITY</b> <b>MABINI CAMPUS</b> P. Niogan, Mabini, Batangas 4202 mabini@batstate-u.edu.ph	
DRRM TOOLS AND EQUIPMENTS	
Wheel chair	1 unit
Megaphone	2 units
Rechargeable Twinhead Emergency Light	2 units
Reflectorized Vests	3 units
OSHA approved Hard Hat	3 units
Spine Board	1 unit
Safety Harness	1 unit
Safety Rope (Estepro/Terrypor Rope 10mmx200m)	1 roll
Shovel	2 pcs
Crow bars	2 pcs
Caution and Danger Tape (75mmx305mm)	3 rolls
Flash Light Heavy Duty	3 pcs
Safety Shoes	3 pcs
Safety Cones	5 pcs
Compass (directional, +/- 1 degree of precision)	1 pc
Watch and Timer	1 pc
Emergency Ladder	1 pc
Safety Goggles	3 pcs
Sledge Hammer (Maso)	2 pcs
Safety Gloves	3 pcs
Retractable Tent	1 pc
Modular Tent	1 pc

Figure MA-42 DRRM Tools and Equipments

## E. Transportation

The Municipality of Mabini caters to its main transport services in the area around the town: jeepneys and tricycles. Currently, there are two piers (*common language for ports*) that serve the area: Anilao Pier and Talaga Pier, mainly catering for motor bancas going to and from the nearby island-town of Tingloy.

Mabini is roughly 18 to 20 kilometers to the nearest bus station in Batangas City. When the summer season is at its peak, local and international tourists are being transported directly to the municipality by buses and other private vehicles. The nearest airport from Mabini is the NAIA International Airport which is roughly a two- hour drive only because of the STAR Tollway, South Luzon Expressway and the Skyway as routes accessible in going to and from Mabini, Batangas to NAIA.

Public transportation to and from the school and different points within the municipality come in the form of jeepneys and tricycles, or three wheeled cabs to nearby destinations.

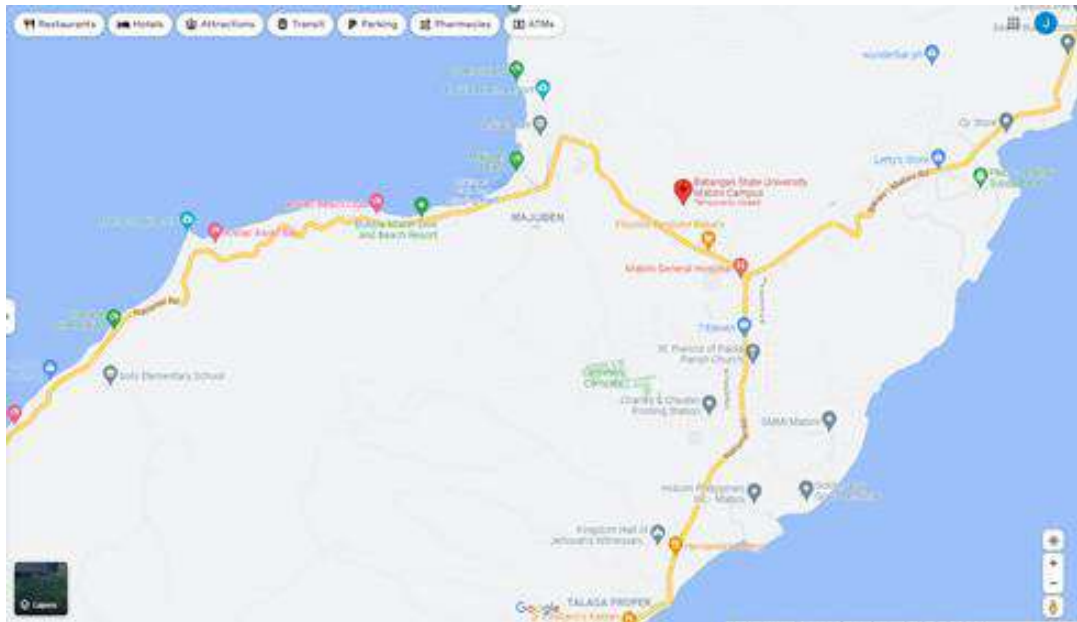


Figure MA-43 Road network maps

## F. Power, Water, Communication Network

### POWER

The Batangas II Electric Cooperative, Inc. (BATELEC II) is the existing power supplier of BatStateU TNEU Mabini. Because the Campus only houses several buildings, power source is still considered richly adequate as to the needs of BatStateU TNEU Mabini. Should there be additional building and infrastructure development in the future, BATELEC II serves as an efficient partner of the Campus in the smooth operation of its daily activities and undertakings. A power house may be proposed in the years to come should expansion be evident in BatStateU TNEU Mabini.

### WATER

The main water supply of the BatStateU TNEU Mabini is provided by the Local Water Utilities Administration (LWUA) which has Mabini Water District, a public water supply entity in the municipality, as one of its subsidiaries. Cistern tanks were placed just beside the Josephina Yu Hall used as water storage in cases when water supply may be cut due to unavoidable circumstances or because of announced maintenance of the said water system.

### COMMUNICATION NETWORK

As for communication, aside from the personally owned handheld devices of faculty members and staff which internet connection is being provided by the Campus, the following are the available provisions in the Campus:





1. Globe direct lines with 40mbps speed and subject for upgrade up to 100mbps and for future upgrades situated in the Campus Library and the Office of the Campus Director
2. It is to be proposed however that an additional VOIP phone for the faculty room be provided also.
3. Proposed transfer of Server Room from the 3rd floor of the Josephina Yu Hall to a more secured space in the 2nd floor since there is risk of the Camus server to get wet and malfunction especially during times if heavy rains as there was an identified leak from the ceiling of the third floor which cause cannot be found until now.

### **G. Waste Management (EMU)**

There are provisions for areas on waste management, segregation, collection and description on waste practices that are being used in the Campus. Innovative practices like converting waste to energy, zero waste policy being implemented among others were also slowly being adopted by the Campus.

#### **Waste Management**

The air, water and the land are precious natural resources available to man for its survival, growth and development. The protection and conservation of these finite resources will benefit the present and the future generations. Batangas State University is committed to protect the environment through the implementation of the Waste Management System through Environmental Projects/Activities and programs participated by all stakeholders of the university.

The university has an Environmental Management Unit that provides policies and guidelines on waste management systems. The said unit has the following personnel positions: The Director, the Assistant Director, a Pollution Control Officer, a Safety Officer, a Head of the Air & Water Quality Management Section, a Head of the Solid Waste Management Section, a Head of the Hazardous Waste Management Section and lastly, a Head for the Information, Education & Communication Section. These personnel are responsible for the implementation of the policies and guidelines on the Waste Management System of the University.



The policies and guidelines of the Waste Management System of the University are compliant to the following existing laws: RA 8749 or the Air Quality Management Act, RA 6969 or the Hazardous Waste Management Act, RA 9003 or the Solid Waste Management Act and the RA 9275 or the Water Quality Management Act. The waste management system has four components; Solid Waste Management, Wastewater Management, Hazardous Waste Management and Air Exhaust Management.


These guidelines are applied to the central, constituent campuses and extension campuses of the university. These guidelines also apply to any individual or group to a systematic management of waste in every premise of each campus.

Part of the environmental management plan of the university is the formulation of policies and guidelines on Waste Management Systems (WMS). Figures 7a and 7b show the University Policies and Guidelines on Waste Management Systems and University Waste Management Program.

The Mabini campus, as one of the constituent campuses adheres to the Environmental Waste Management System of the University. The Environmental Management Unit ensures that waste management policies and guidelines in all campuses including Mabini are strictly followed where garbage cans are placed in every room including offices. Garbages are being collected daily and deposited in vacant areas for sorting and segregation. Wastes that can be recycled are either used in some other ways, biodegradable ones are placed in compost pits while non-biodegradable waste that can't be recycled such as bottles and plastics are sold to junk shops.



# Land Use Development and Infrastructure Plan (LUDIP)



Republic of the Philippines  
**BATANGAS STATE UNIVERSITY**  
Batangas City, Batangas

**ENVIRONMENTAL MANAGEMENT UNIT** Phone: (043) 980 – 0385 loc 1132

**POLICIES AND GUIDELINES ON WASTE MANAGEMENT SYSTEM (WMS)**

**1. General**

Wastes are discarded materials of the University either in solid, liquid or gas form. The wastes generated in every premise shall be safely collected, processed and disposed so as not to cause negative environment and health impact.

Institutional wastes of the University shall be monitored, recorded, evaluated and reported to regulatory agency showing the compliance to environmental regulations and realization of one of the core values, concern for the environment, of the University.

**2. Scope**

2.1 The guidelines on waste management shall apply to main and extension campuses of the University.

2.2 The guidelines shall apply to any individual or group as a guide to a systematic management of waste in every premise in each campus.

**3. Definitions:**

For better understanding of the guideline, the following were used:

3.1. Permit – a document issued by a regulatory agency to the University authorizing the disposal, discharge or release of residual, effluent and exhaust respectively, to the environment. In this guideline, this refers to Permit to Operate and Discharge Permit.

3.2. Waste – refers to discarded materials with or without purpose and/or special handling after it serves its intended use. In this guideline, this refers to solid waste, wastewater, hazardous waste and Air exhaust waste.

3.3. Waste Management System – the systematic way of collection, transportation, treatment and disposal of generated waste in the University.

**4. Acronym**

4.1. APSE – Air Pollution Source Equipment

4.2. AQMA – Air Quality Management Act or RA 8749

4.3. CMR – Compliance Monitoring Report

4.4. DENR-EMB – Department of Environment and Natural Resources-Environmental Management Bureau

4.5. DP – Discharge Permit

4.6. ECC – Environmental Compliance Certificate

4.7. HWMA – Hazardous Waste Management Act or RA 6969

4.8. PTO – Permit to Operate

4.9. SWMA – Solid Waste Management Act or RA 9003

4.10. WQMA – Water Quality Management Act or RA 9273

Figure MA-44 University Policies and Guidelines on Waste Management System



## The ENVIRONMENTAL MANAGEMENT UNIT

As per ECC Condition No. 8, that Batangas State University shall set-up a competent Environmental Unit in accordance with DAO no 26 series of 1992. The unit shall handle all environment-related aspects of the University in addition to the monitoring requirements as specified in the Environmental Management Plan/Environmental Monitoring Plan.

By virtue of Memorandum Order No. 305 series of 2011, the Environmental Management Unit (EMU) is hereby created in compliance with the conditions indicated in the Environmental Compliance Certificate (ECC) issued to Batangas State University Main Campus I by the Department of Environment and Natural Resources – Environmental Management Bureau (DENR-EMB) Region IVA office on January 30, 2010.

The EMU is under the Office of the Vice President for Administration and External Affairs, headed by the Director and/or Pollution Control Officer with competent Administrative Staff.

The EMU collaborates with concerned offices for the implementation of mitigation action and application of stringent control measures relative to protection and conservation of the environment and promotion of health and safety in the workplace.

Figure MA-45 University Waste Management Program





### **III. SUC DEVELOPMENT, LAND USE AND INFRASTRUCTURE PLAN**

BatStateU TNEU Mabini is the youngest and newest of the eleven Campuses of the Batangas State University System. In the three years that it has existed as a local state University in the Municipality of Mabini, its presence had already been felt by its neighboring towns of Bauan, San Pascual and Tingloy.

In terms of the development, land use and infrastructure plans of both Batangas State University and the Municipality of Mabini to the Campus, the following discussion will shed light on the strategic direction it would want to pursue in the years to come.

#### **A. Vision, Mission, Goals and Objectives**

##### **Vision**

A premiere national university that develops leaders in the global knowledge economy.

##### **Mission**

A university committed to producing leaders by providing a 21st century learning environment through innovations in education, multidisciplinary research, and community and industry partnerships in order to nurture the spirit of nationhood, propel the national economy, and engage the world for sustainable development.

##### **University's Thrusts and Priorities**

- Academic
- Research
- Extension
- General Services
- Allied Services

The general direction being pursued by the University in accordance with the Vision, Mission, Goals, Objectives and Thrusts of BatStateU shall be adopted by its academic, research, extension, general and other allied services. As the administration, faculty and staff of BatStateU TNEU Mabini work as one in order to achieve the full potential of the Campus to its stakeholders and the community as well in terms of its LUDIP, BatStateU TNEU Mabini Campus



shall further its thrusts on environmental conservation, rationalization of priorities and adoption of cost efficiency measures.

### Goals and Objectives

1. provide a basis for plans especially those that relate to the physical aspects of development like land, academic resources, and infrastructures that aim to lessen vulnerabilities;
2. improve resilience of the campus to natural and man-made disasters; and
3. reconcile and rationalize land use and development proposals to maximize sound use of the resources of the university
4. identify properly high risks areas prone to natural hazards like flooding, landslide and among others in order to prevent negative impacts to the University

### B. Development Constraints

Based on the CLUP of Mabini, CADT, military reservations, squatters will not be potential land use conflicts of BatStateU TNEU Mabini since the municipality generally is peaceful. The most possible land use conflict that BatStateU TNEU Mabini can determine at present is the issue on the 4-hectare land ownership which as of writing is still being processed by the Municipality of Mabini with the family who donated the said parcel of land. Since the pandemic happened, the processing of the settlement of the land ownership slowed down which became a bit of a burden to both the University and the LGU as well. At present, the transfer of the ownership of the 4 hectare land to the LGU is underway.

### C. Physical Development Strategies

The BatStateU Strategic plan 2019-2029 serves as the university's blueprint towards the highest level of development and advancement as an important national player in knowledge creation and innovation and the development of human talents needed in the 21<sup>st</sup> century through the six pillars Brand of Excellence, Access, Social Relevance, Inclusive Innovation, Capacity and Sustainability (BASICS), the university is geared towards meeting the university vision of achieving national relevance and global competence.

In line with this, BatStateU adherence to the governing rules and regulations both local and international intensifies. We are one in AMBISYON 2040 in its long term vision and aspirations of the Filipino people for a prosperous and healthy life, smart and

innovative with our BatStateU official motto **Leading Innovations, Transforming Lives, Building the Nation.**

The BatStateU ten-year LUDIP at 2029 corresponds with the Sustainable Development Goals (SDGs) at 2030 along with Ambisyon Natin 2040.



Among the 17 SDGs of 2030, the following were considered in the conceptualization of this plan:

- 4. Quality Education
- 6. Clean Water and Sanitation
- 7. Affordable and Clean Energy
- 9. Industry, Innovation and Infrastructure
- 11. Sustainable Cities and Communities
- 12. Responsible Consumption and Production
- 16. Peace, Justice and Strong Institutions; and
- 17. Partnership for the Goals

## a. Proposed physical development thrusts and spatial strategies and options

In an attempt to further offer quality and affordable education to the students of the Municipality of Mabini and nearby towns being accommodate by BatStateU





Mabini, the following are infrastructure development projects in the Campus which are part of the future development plans of the University in general:

1. a parking space for the students and employees of the Campus and for visitors as well;
2. a gymnasium;
3. a five-storey higher education building;
4. a five-storey laboratory building;
5. a five-storey student center which will house the administration offices, university canteen among others;
6. another three storey building for the Supreme Student Council of BatStateU TNEU Mabini and will also serve as the Student Affairs building in the Campus;
7. a three storey library building;
8. a laboratory building which will house all laboratories of the Campus both academic and practical;
9. a Research Center of the Campus;
10. a five storey building which will serve as the Campus Dormitory for its transient students;
11. a five storey CIT building;
12. a Campus Park;
13. a powerhouse which will supply electricity needs of the Campus; and
14. an MRF/Waste Management facility;

All these envisioned projects will warrant a conducive academic environment and a safe and friendly Campus for all of its students.

### **b. Analysis and evaluation of development thrusts and spatial strategies and options, by campus**

BatStateU TNEU Mabini envisions offering only the best possible academic amenities that it can offer its students. At present, the 276 BatStateU students of the Campus are being offered with the best academic facilities and environment so far. Students are able to move around campus as freely as they can because of spacious classrooms and other academic amenities. What the Campus lacks though are main areas for improvement like a gymnasium for physical education and cultural activities, a clinic for the students' health welfare, a canteen and fencing of the University for safety and privacy purposes



**Figure MA-46** Site Development Plan of BatStateU TNEU Mabini

## D. Development Concept and Structure Plan (narrative and map)

### a. Targeted land use allocation and proposed expansion areas of each campus

As the Campus slowly develops into a blossoming academic environment on this side of the Province, the identified infrastructure development projects of the University for BatStateU TNEU Mabini are slowly turning into little realities. Such is the construction of the Campus Infirmary which will be constructed in the highlighted part of the Site Development Plan of the Campus shown below. If construction materializes as planned, the BatStateU TNEU Mabini infirmary will be put up in the vacant lot just in front of the DPWH four-classroom building in the Campus as planning of its eventual construction is already underway. The site development plan of the Campus with the location of the would-be Campus clinic can be viewed from Figure MA-23 from the previous page.

### b. Proposed concept map and structure plan (with several options)

The Campus would not be able to fill out this part because plans of both the University and the LGU have yet to be discussed and approved. As seen from the previous discussions, the latest structure plan of an infirmary in the Campus is being constructed. Other plans may have yet to be developed and conceptualized in the years to come.

## c. Overall land use allocation areas and expansion/threat areas

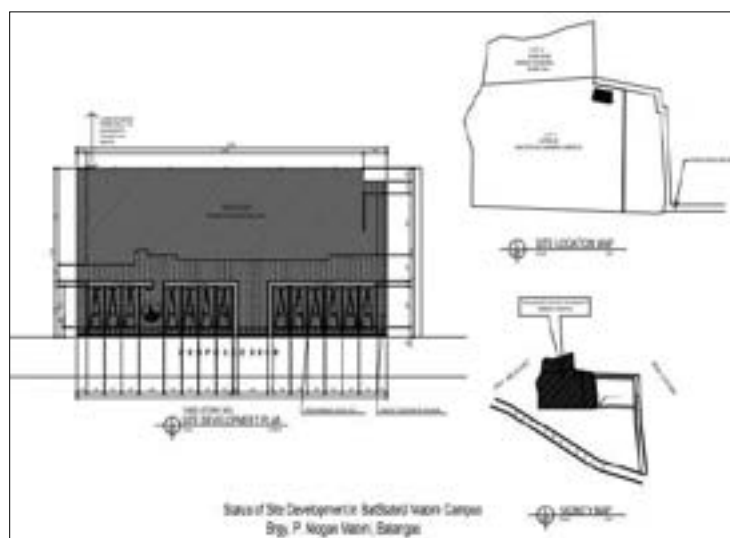
As of the time being, there was no existing land use allocation plan being cascaded to BatStateU TNEU Mabini. What the Campus has as of this time, is the structure plan of a Campus infirmary slated to be constructed in 2022. Since the Campus has not constructed perimeter fences enclosing its 4-hectare would-be ownership, threats of not being able to determine the Campus boundaries as to land use is considered a threat.

## E. The Land Use Plan (narrative and map)

### (a) Detailed land use allocation and sector maps

- Academic
- Research
- Extension
- General services
- Allied services

In reference to this part, out of the 4-hectare land being used by BatstateU TNEU Mabini at present, the only existing structure and infrastructure development done were two academic buildings: the Josephina Yu Hall - a three storey building donated by SEAOil Philippines to BatStateU TNEU Mabini and a four classroom building donated by DPWH of the Province of Batangas both being through the initiative of the good Mayor of Mabini, Honorable Noel B. Lusitro. At present, all other services being extended by the Campus to both its students and other stakeholders: research, extension, general services and allied services are all housed in the Josephina Yu Hall. In the future, the Campus envisions to already be able to offer its students a completely developed SMART Campus with all the amenities and facilities to be enjoyed by the Mabini Red Spartans.



**Figure MA-47.** Status of Site Development in BatStateU TNEU Mabini





(b) Sector and special areas plans and maps:

- Ancestral lands
- Cultural/heritage zones
- Biodiversity corridors
- Protected areas/lands and seascapes
- Ecotourism/tourism zones
- Economic zones
- Housing areas
- Transport areas
- Water source/impounding areas
- And the like.

The four hectare land to be awarded to BatStateU TNEU Mabini by the Mabini LGU is considered ancestral land owned by the Castillo Family of P. Niogan, Mabini, Batangas. As the Municipal Mayor of Mabini, Hon. Noel B. Lustro was able to acquire the land via donation to the Municipality of Mabini, the processing of papers and documents relative to the eventual transfer of ownership of BatStateU TNEU Mabini of the four hectare land is already underway. The location of the Campus is not within the following zones: cultural heritage, biodiversity corridors, protected areas and seascapes, and water source and impounding areas. However, BatStateU TNEU Mabini Campus is situated near the heart of the municipality's economic zones and other areas such as tourism and ecotourism zones, housing areas, and transport areas. This may be due to the fact that P. Niogan, where the Campus is located is near Poblacion, the town's business and political center.

### **F. Land, Water, Power Policies**

Policies that will govern specific land uses, water, and power generation and utilization policies have yet to be identified as based from the provisions set forth by the water and power suppliers of the Campus. As to land use, the Campus is painstakingly working out the immediate transfer of land title from the Mabini LGU to BatStateU TNEU Mabini to specifically ensure the ownership of the 4 hectare land which is supposedly a donation of the municipality to BatStateU TNEU Mabini.



### 1987 PHILIPPINE CONSTITUTION

#### ARTICLE 13, SECTION 9 Social Justice and Human Rights

- “The State shall, by law and for the common good, undertake, in cooperation with the private sector, a continuing program of urban land reform and housing, which will make available at affordable costs, decent housing and basic services to **underprivileged and homeless citizens** in urban centers and resettlement areas. It shall also promote adequate employment opportunities to such citizens. In the implementation of such program, the state shall respect the rights of the small property owners.”

#### RA 7279 Urban Development and Housing Act of 1992

- “it is policy of the State to undertake, in cooperation with the private sector, a comprehensive and continuing urban development and housing program aimed to provide housing through rational use of the land and adopt policies to regulate urban growth.

#### RA 7279 – UDHA of 1992 - Goals

- Provide for the rational use and development of urban land
- Adopt workable policies to regulate and direct urban growth and expansion towards a dispersed urban net and a more balanced urban-rural interdependence

HLURB - The Housing and Land Use Regulatory Board (HLURB) is a national government agency tasked as the planning, regulatory and quasi-judicial body for land use development and real estate and housing regulation. These roles are done via a triad of strategies namely, **policy development, planning and regulation**.

#### THE LOCAL GOVERNMENT CODE OF 1991 (RA 7160)

- The Code mandates the Local Government Units to adopt comprehensive land use plan and enact integrated zoning ordinances.

#### LAND USE & ENVIRONMENTAL PLANNING

PD 1151 – Philippine Environmental Policy issued on 18 April 1977

PD 1152 - Philippine Environment Code, June 6, 1977

RA 7586 National Integrated Protected Area System (NIPAS) of 1992

PD 984 – Pollution Control Law of 1976

RA 8749 Clean Air Act of 1999

#### Laws on Water Quality and Water Pollution

PD 600 and PD 979

– Marine pollution policies by National Pollution Control Commission

– Enforcement by Philippine Coast Guard



PD 1067 Water Code (old)

- governs the ownership, appropriation, utilization, exploitation, development, conservation and protection of water resources
- identified rights and obligations of water users and the administrative agencies that enforce laws on water use and availment.
- RA 9275 – Clean Water Act of 2004

### **Power Supply and Clean Energy**

Laws on Energy

- Commonwealth Act 120- National Power Corporation to develop hydroelectric facilities
- PD 334- Philippine National Oil Company
- PD 1442- exploration and development of geothermal resources
- BP 33- Energy Conservation
- RA 387- Petroleum Act
- RA 5207- Atomic/Nuclear energy
- RA 7638 - Created the Department of Energy and stipulated a policy of rationalizing government agencies
- RA 9367 – Biofuels Act of 2006
- RA 9513 – Renewable Energy Act of 2008

### **Other Relevant Laws/Policies**

LUDIP • Republic Act 11396

- Philippine Agenda 21
- National Framework for Physical Planning (2001-2030)
- Sustainable Development Goals

### **G. Major Development Programs**

Batangas State University TNEU Mabini Campus has adequate buildings and provisions for classrooms as of the moment since it offers only a handful of programs. However, a building or two may still be able to accommodate offices, staff rooms, study areas, clinics, student center, cafeteria, food outlets, comfort rooms and other amenities equipped with needed facilities

The university is particularly concerned with the impact of infrastructure design on student learning and is fully aware that a well-designed campus can have a positive effect on learning. The location, building materials, size of classrooms, furniture, lighting, temperature, ventilation, noise level, sanitation, and the inclusion of auxiliary facilities were carefully studied and considered.





Should construction of additional buildings be already possible in BatstateU TNEU Mabini, the Campus envisions that infrastructures are installed with needed amenities and devices like ramps, handrails and adequate space to accommodate wheelchair entry and exit in compliance with the Accessibility Law. The site must promote a healthy environment, enclosed with fencing and entrance/exit turnstiles to monitor students within the campus' area.

Locally-available and environment friendly materials are used by all means possible without compromising the university's structural strength and durability. Steel, iron, concrete, and masonry are the primary structural elements. Walls, ceilings, and permanent partitions should be of incombustible fire-resistive materials. To prevent the campus from flooding, runoff and storm water are diverted to culverts via effective drainage systems. Interior learning spaces are designed based on the required National Building Code standards and include exits that comply with the Fire Code of the Philippines. Furniture is provided in adequate quantities, with a plan to replace broken items on a regular basis. Building materials are durable and regularly maintained for protection and prevention from deterioration.

Mabini Campus has several proposed initiatives as part of the ten-year development plan. The drainage system, main gate construction, perimeter fencing and facade, construction of walkway and ground and landscaping of grounds as well as the upgrading of the electric power system are all planned and envisioned.

In the meantime, there are still other planned infrastructure projects in the Campus which includes the following:

1. a parking space for the students and employees of the Campus and for visitors as well;
2. a gymnasium;
3. a five-storey higher education building;
4. a five-storey laboratory building;
5. a five-storey student center which will house the administration offices, university canteen among others;
6. another three storey building for the Supreme Student Council of BatStateU TNEU Mabini and will also serve as the Student Affairs building in the Campus;
7. a three storey library building;



- 8. a laboratory building which will house all laboratories of the Campus both academic and practical;
- 9. a Research Center of the Campus;
- 10. a five storey building which will serve as the Campus Dormitory for its transient students;
- 11. a five storey CIT building;
- 12. a Campus Park;
- 13. a powerhouse which will supply electricity needs of the Campus; and
- 14. an MRF/Waste Management facility;

For guidance as to the timetable and urgency of the provisions of the identified infrastructure projects in BatStateU TNEU Mabini and the addition of other lined up projects for the Campus,, the tabular presentation below is attached.

Table MA-8 Programs and Projects by Level of Urgency

BatStateU Mabini									
Programs and Projects by Level of Urgency									
Programs/Projects	Total Floor Area	Cost	Urgent	Essential	Necessary	Desirable	Acceptable	Deferrable	
1 Campus Clinic	117.34 sqm	2,000,000.00	✓						
2 Perimeter Fence	1m		✓						
3 GSD	sqm								
4 Three Storey Laboratory Building	1,583.00 sqm	50,490,000.00		✓					
5 Covered Court/Gymnasium	1,203.93 sqm	31,302,180.00		✓					
6 Multi-Purpose Building	sqm								
7 Canteen	216.00 sqm	5,616,000.00		✓					
8 Three Storey Student Services Center	600.00 sqm	18,000,000.00		✓					
9 Five Storey Higher Education Building	2,670.00 sqm	85,440,000.00			✓				
10 Five Storey CIT Building	sqm								
11 Five Storey Dormitory	2,590.00 sqm	82,880,000.00			✓				
12 Two Storey Research Center	430.00 sqm	11,610,000.00			✓				
13 Three Storey Library	600.00 sqm	18,000,000.00			✓				
14 Powerhouse	40.00 sqm	1,000,000.00			✓				
15 Site Development					✓				
Road	1m								
Drainage	1m								
Parking	sqm								
Concrete Pavement	sqm								
Landscaping (softscape, hardscape)	sqm								
16 MRF/Waste Management	sqm								
17 Water Retention Facility	cum					✓			
18 STP	sqm								

## H. Disaster Risks and Climate Change Adaptation

### a. Vulnerable areas

Barangay Pulong Niogan, specifically Sitio Mailayin, where BatStateU TNEU Mabini Campus is situated, is within moderate susceptibility to rain-induced landslides. The sitio formerly has a quarrying area, which operation had ceased for several years now. Having been subjected to this environmental hazard due to continuous excavation, the land area near the Campus resulted in uneven land contours and steep slopes.



To add to this, the presence of mass movement such as landslides, tension cracks; saturated ground or seeps and sunken or displaced road surfaces made the matter for accessibility to the campus even more challenging. The quarrying activities are currently being controlled after the establishment of the Mabini Community Hospital, the existence of Batangas State University Mabini Campus and the heeding of the residents near the quarrying site.

In terms of flooding, Barangay Pulong Niogan is within the low susceptibility status with no details as to cause, origin, location and direct effects or impacts to its residents. However, it is still suggested that residents and even workers within the area be observant always because of varying and unpredictable patterns of rain and the weather in general.

In terms of the recent earthquake swarm that occurred in the municipality last April, 4 to 8, 2017, utmost consideration as to related observable causes and hazard prevention measures were made known to all the residents of the municipality in general. . A primer released by the Philippine Volcanology and Seismology Commission (Phivolcs) and a copy furnished to the Office of the Municipal Mayor by the Provincial Disaster Risk Reduction and Management Office paved the way for all the residents to better understanding of the event and the preventive measures which should be undertaken by those affected should an incident of the same nature happen again. According to the primer... “an earthquake swarm is a burst of earthquake activity clustered in a specific area in a short period of time due to the movement of a fault” With this said, the residents had been constantly reminded to earthquake drill exercises and other safeguarding activities to ensure the safety of all Mabinians.

To date, at least six earthquakes have affected Batangas Province. The Mindoro earthquakes of November 15, 1994, April 9, 1942 and May 26, 1889, and the earthquakes of April 1972, October, 1889 and September 16, 1852 whose epicenters were located in the West Philippine Sea. The 1994 Magnitude 7.1 Mindoro Earthquake was felt at intensity VII in the epicentral areas and may have shaken Batangas at intensities V to VI or even VII while the 1889 Magnitude 6.4 earthquake was felt at intensity VI-VII in Mindoro and Batangas. The 1852 Magnitude 7.6 and 1869 Magnitude 6.6 offshore events were reported felt at Intensity VII in and around Batangas. Although there were no accounts of direct damage in Batangas due to 1994, 1972, and 1942 events, the 1852, 1869 and 1889 events damaged several buildings and infrastructures in the area.

Batangas is one of the seismically active areas in the Philippines. Instrumental monitoring of earthquakes for the past century has detected many small to large magnitude earthquakes near Batangas generated by Manila Trench and Lubang Fault.





Lubang Fault is estimated eight (8) kilometers away from Barangay Mainit, Mabini, Batangas while the Manila Trench (Southwest of Mamburao, Occidental Mindoro) is estimated at 72.52 kilometers away. The Manila Trench is an earthquake generator located offshore of Luzon Island, roughly parallel to the Philippine Archipelago in the north but veers close to land at the southern tip of Occidental Mindoro. Another offshore generator is Lubang Fault, located between Mindoro Island and Batangas, which is also the locus of small to large magnitude earthquakes. Other active faults on land are present in Southern Luzon, such as Valley Fault System and the Philippine Fault. The current series of earthquakes in Batangas can be attributed to the movement of an unnamed local fault in the vicinity of the Tingloy-Mabini area.”

The Primer also states the following:

1. Although Taal Volcano is approximately 30 kilometers from Mabini, Batangas, the present network of instruments located in and around Taal Volcano shows no indication of any significant change of monitoring parameters suggesting renewed magmatic activity.
2. The magnitude is not big enough to generate a destructive tsunami.
3. Hypocenters of moderate-large magnitude earthquakes along active faults are too deep to be influenced by any human activity. This is related geothermal drilling and blasting by a private company in Mabini, Batangas.
4. Small to moderate magnitude earthquake events can still occur in the following days and weeks.
5. Strong ground shaking may cause extensive damage to or even the collapse of houses, buildings, bridges and other infrastructures. Collapsed structures usually accounts for most of the casualties during a strong earthquake. Falling objects may also cause injuries.
6. Landslides, rock falls and other types of mass movements may occur in mountainous or hilly areas. Liquefaction manifested by sand boils or lateral spreading may affect low lying, waterlogged, sandy areas near the coasts or banks of rivers.

### **b. Mitigation programs**

The Campus uses the Goals, Actions and Action Plans as mitigating measures for the LUDIP of the Campus. First, goals are set in order to create a general direction for the programs and projects to be undertaken. Then, actions are done based on the goals and objectives set. After the said step, analysis of actions undertaken via post conferencing with persons concerned were done in order to improve previous decisions

or actions made. With those in mind, an action plan for each activity to be done is a must in order to smoothly transition from the old and ineffective habits to the new innovations which may help in reaching the desired goals and objectives of the Campus in an orderly and efficient manner.

### c. Disaster Preparedness Strategies

In an attempt to answer the call of the time, that is, to prepare well the BatStateU Community during times of calamity and disaster whether man-made or natural, Batangas State University established its own Disaster Prevention Unit called the BatStateU ACTION Center.

The Disaster and Risk Reduction Management of the 11 campuses including BatStateU TNEU Mabini is the result of the planning done by the BatStateU Action Center in coordination with the Office of the Civil Defense, the local government and the university stakeholders.

The Crisis Management Plan of the University has procedures to address the needs of emergency response operations and recovery management. To address such emergencies, the University has established emergency response procedures that provide guidelines for the management of the immediate action and operations required to respond to any emergency or disaster.



**Figure MA-48** BatStateU Crisis Management Plan

The plan provides the management structure, key responsibilities, emergency assignments, and general procedures to follow during and immediately after an emergency. The University has established this plan to address the immediate



requirements for a major disaster or emergency in which normal operations are interrupted and special measures are taken.

In the meantime, the Multi-Hazard Emergency Preparedness Guide as shown in Figure MA-54 has guidelines in the Crisis Management Plan which are cascaded to the faculty, students and employees.



Figure MA-49 Multi-Hazard Emergency Preparedness Guide

The action Center has also provided the BatStateU TNEU Mabini Campus several IEC brochures that can be of help in times of emergency. These brochures include Active Shooter, Bomb Threat, Chemical Spill, Civil Disturbance, Earthquake, Fire Safety, Flooding, Pandemic, Thunderstorm, Tsunami, Typhoon and Volcanic Eruption. Included in each brochure are pertinent information about the particular disaster or hazard which may happen and the measures as to how they may be overcome and the telephone numbers of offices that can be contacted whenever necessary.

Below is an example of a brochure distributed to the campuses of BatStateU by the University's Action Center.

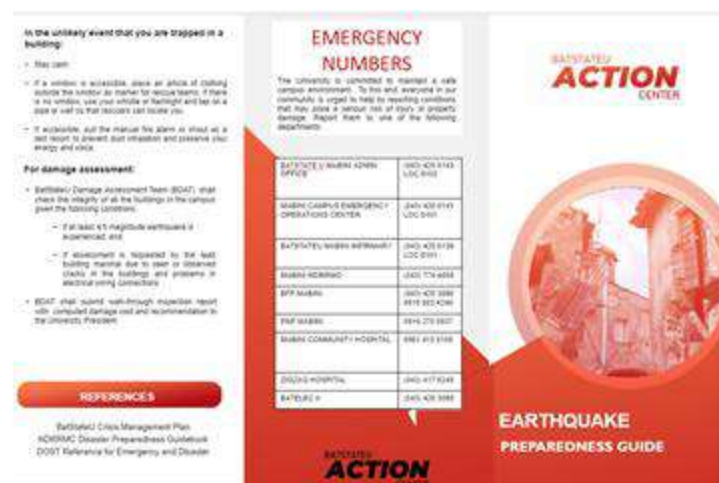






Figure MA-50 Earthquake Preparedness Guide

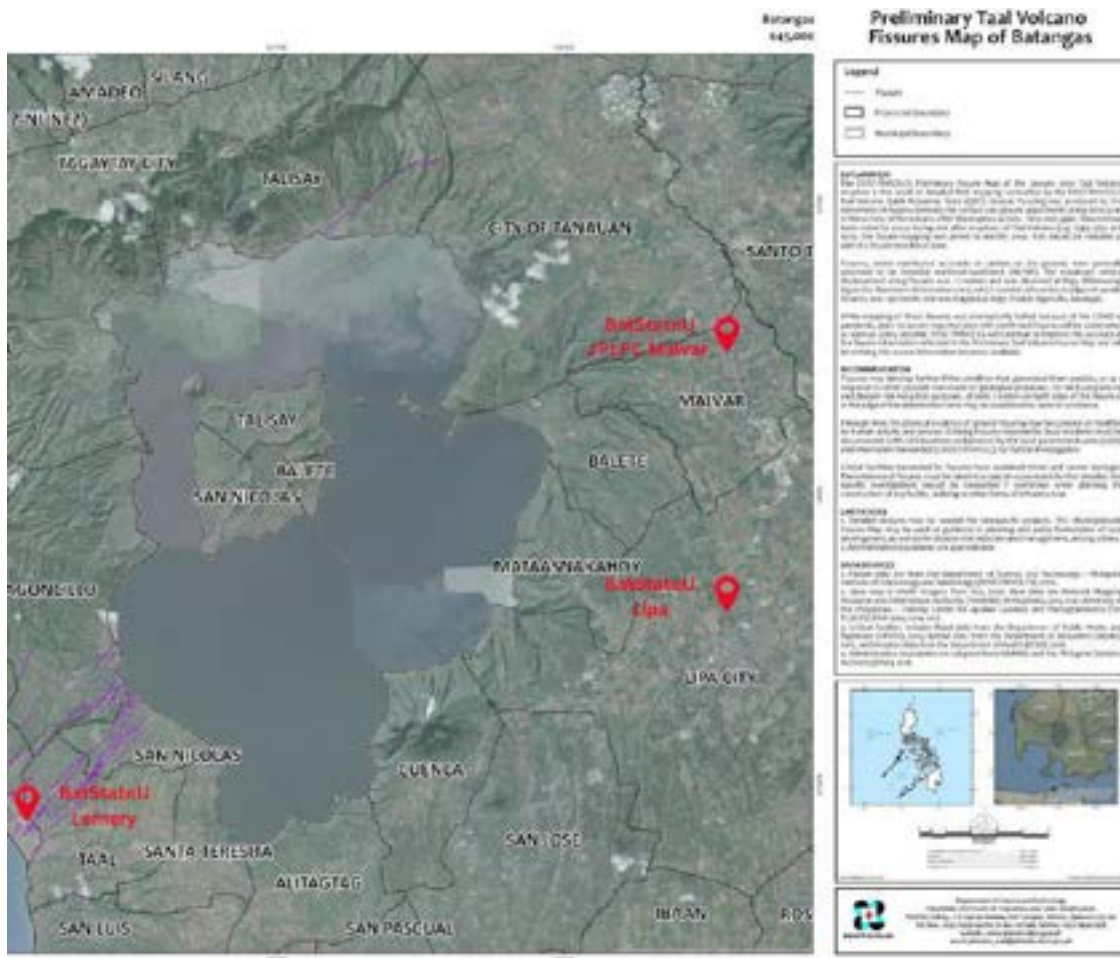
In order to further augment the vulnerability of Batangas State University to disasters and natural hazards, thematic maps on disaster preparedness and awareness are presented below to ensure that the Campus is in full know-how of what it must take as safety measures should calamities and the like strike.

## LIQUEFACTION HAZARD MAP (BATANGAS PROVINCE)

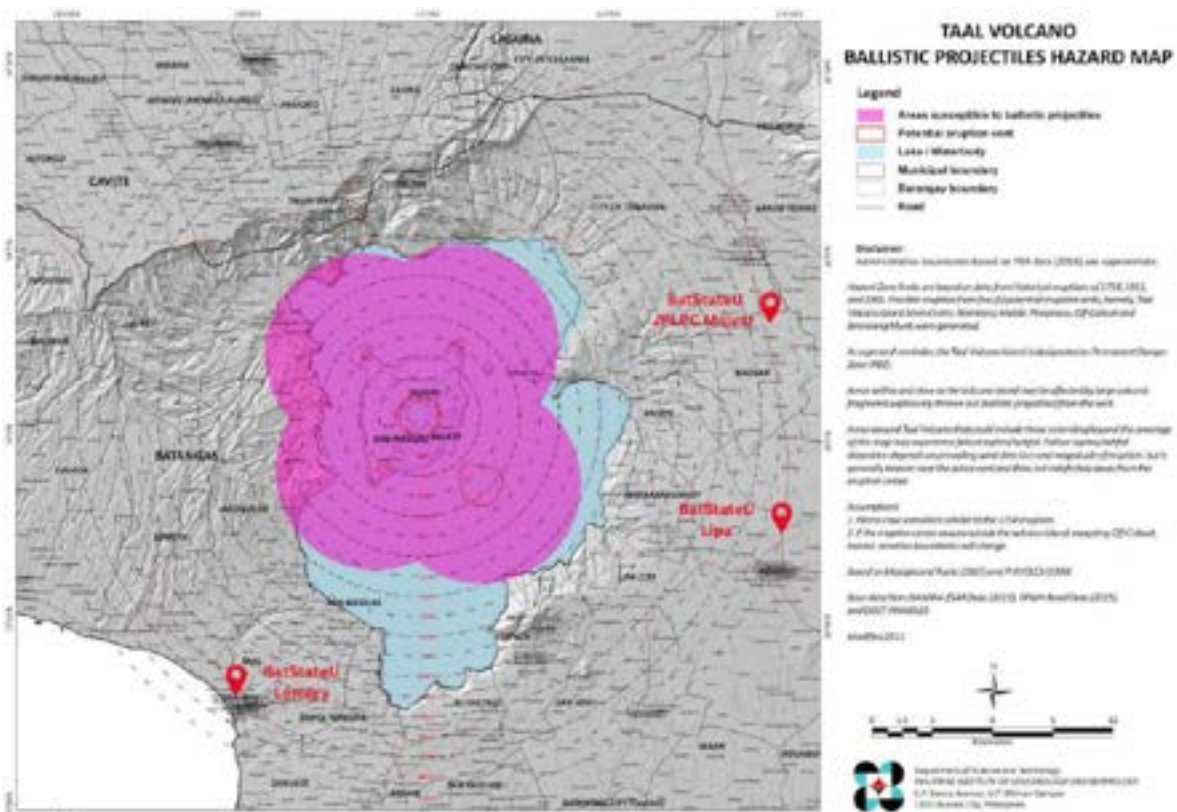


Map MA-23 Liquefaction Hazard Map

Map MA-24 Preliminary Taal Volcano Fissures Map of Batangas



Map MA-25 Taal Volcano Ballistic Project Tiles Hazard Map

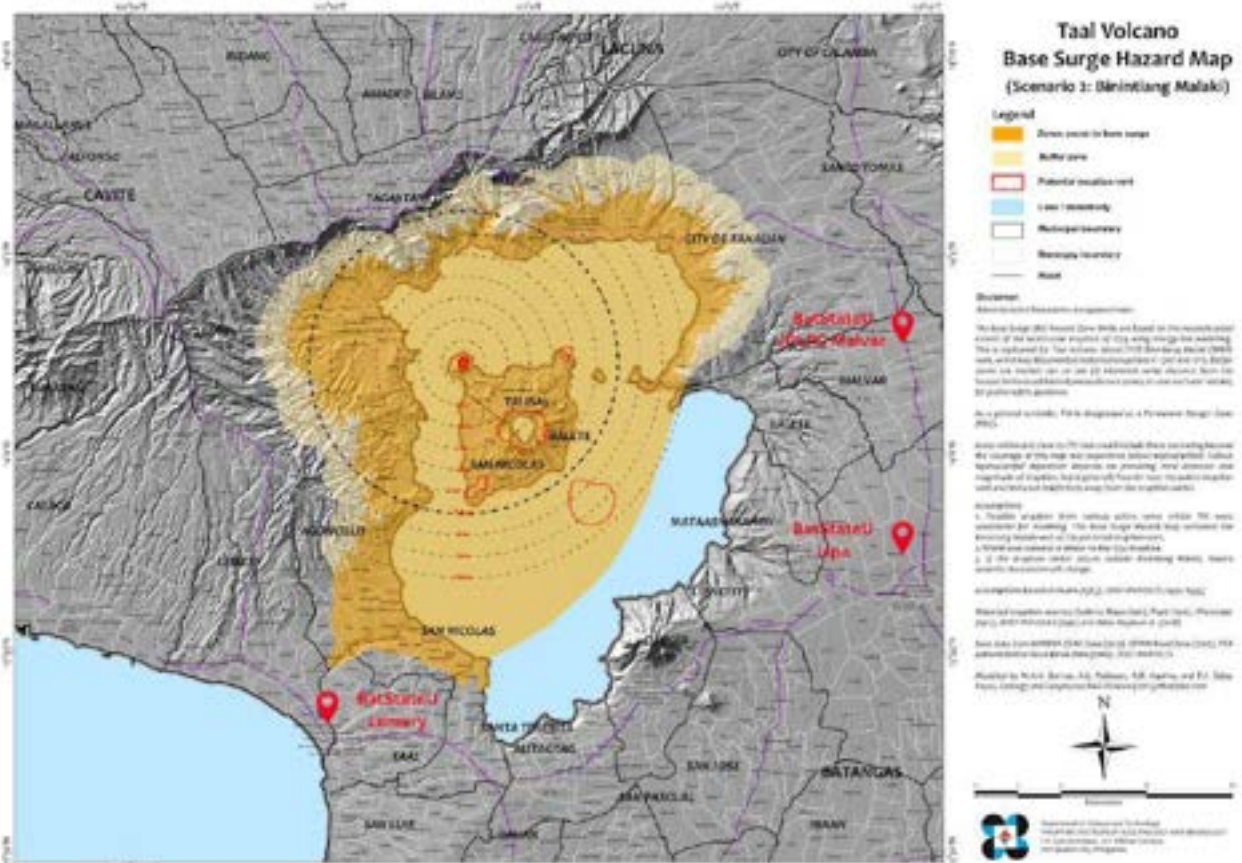




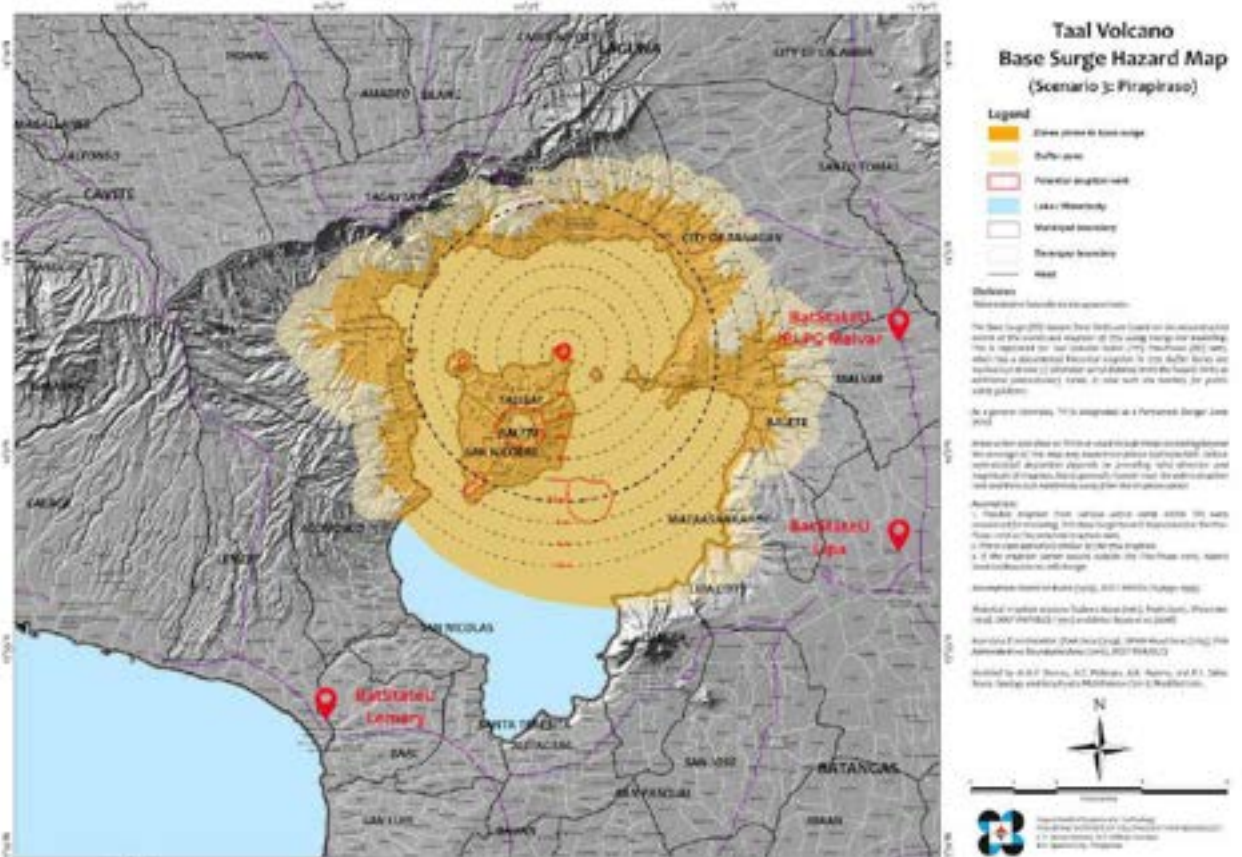
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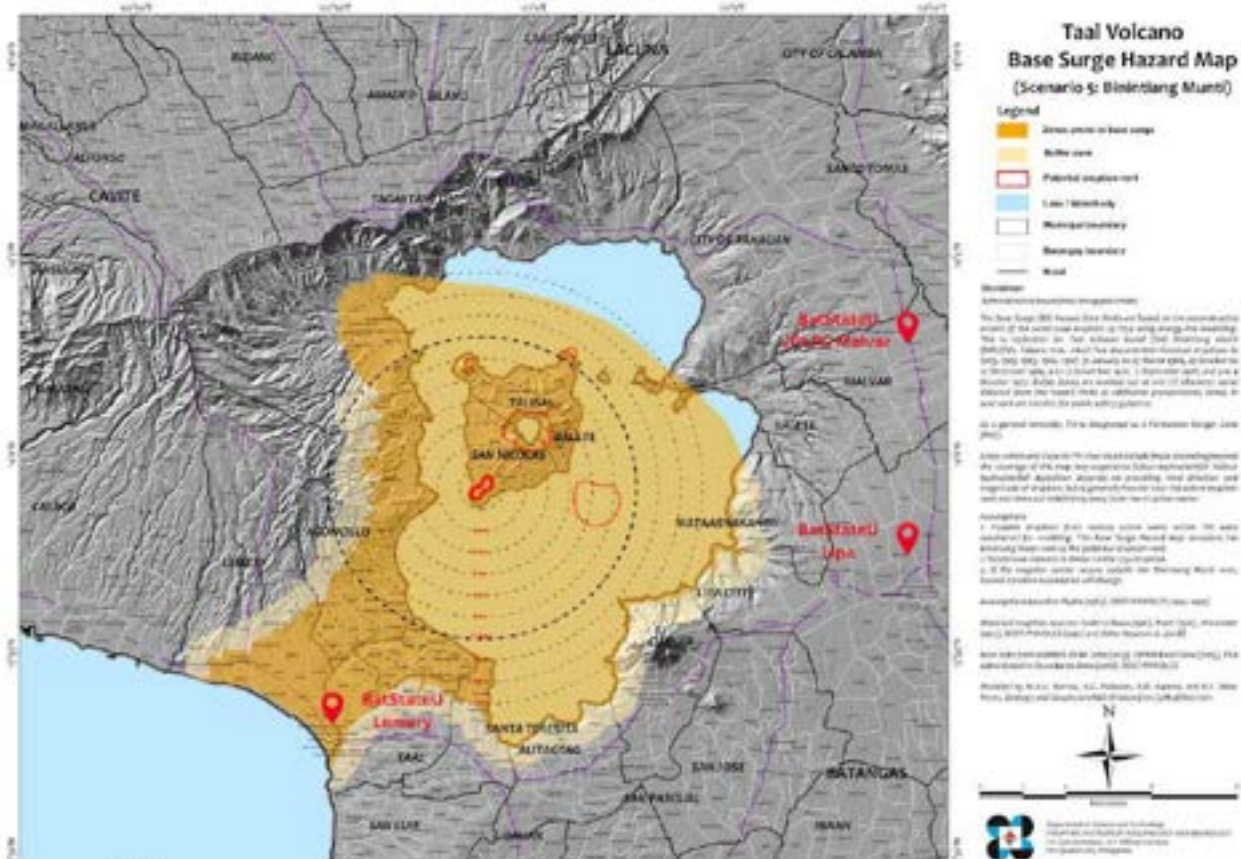
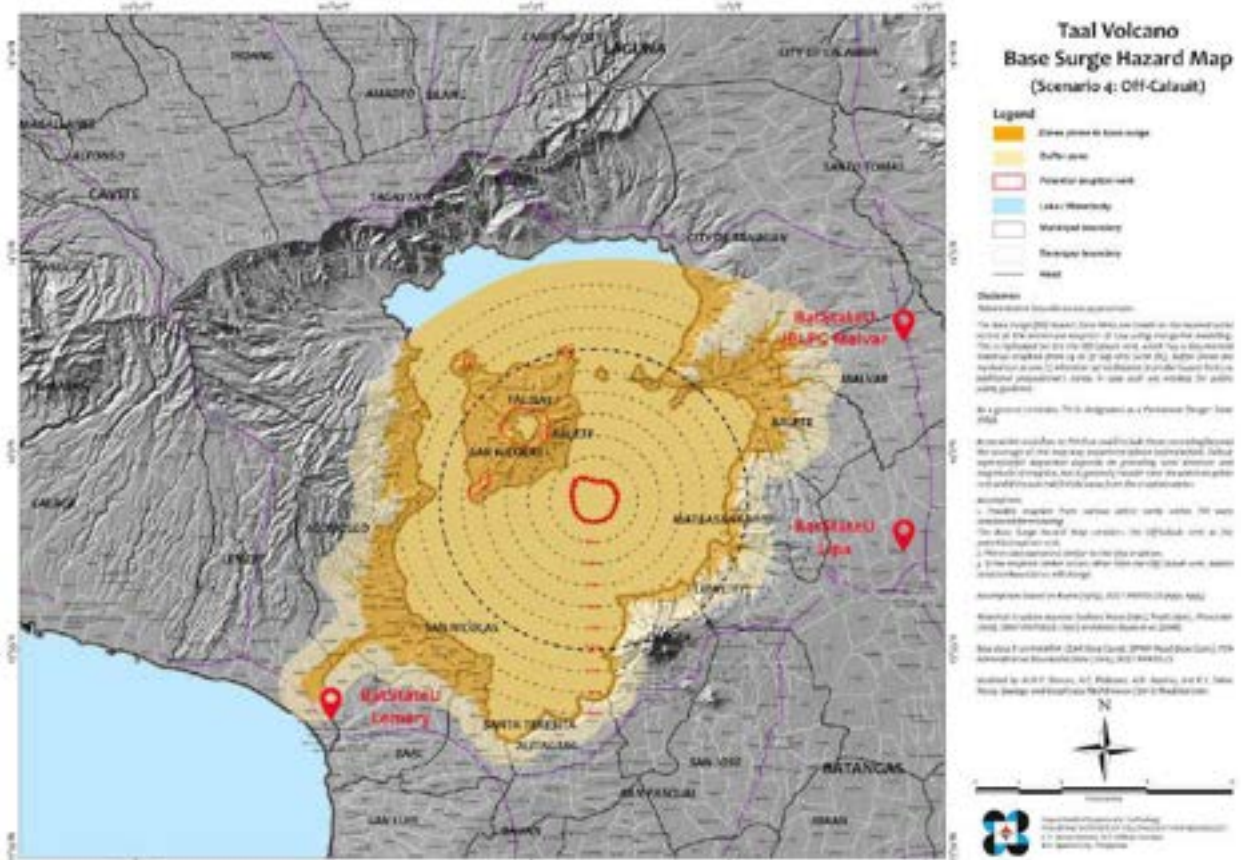
Map MA-28 Taal Volcano Base Surge Hazard Map (Scenario 2: Binintiang Malaki)



Map MA-29 Taal Volcano Base Surge Hazard Map (Scenario 3: Pirapiraso)

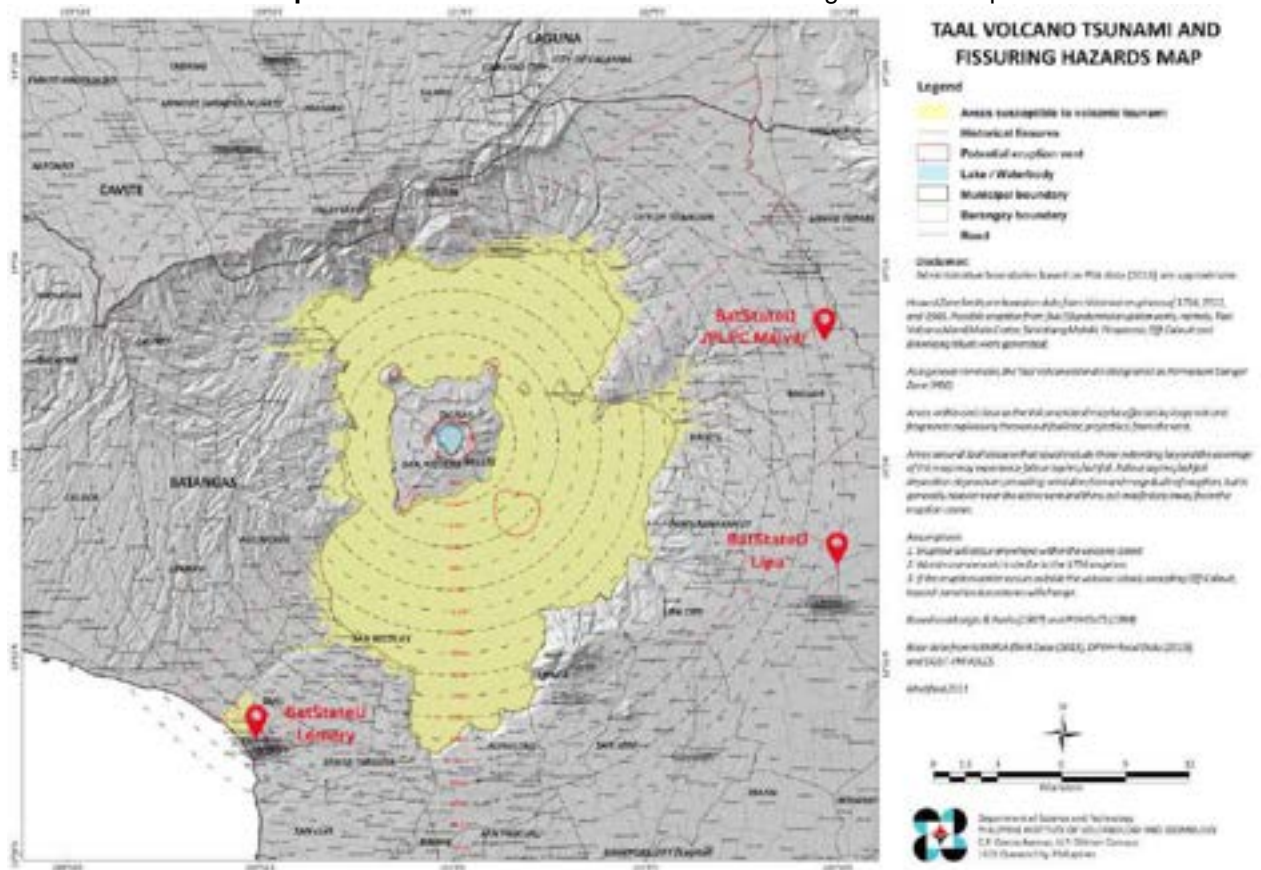




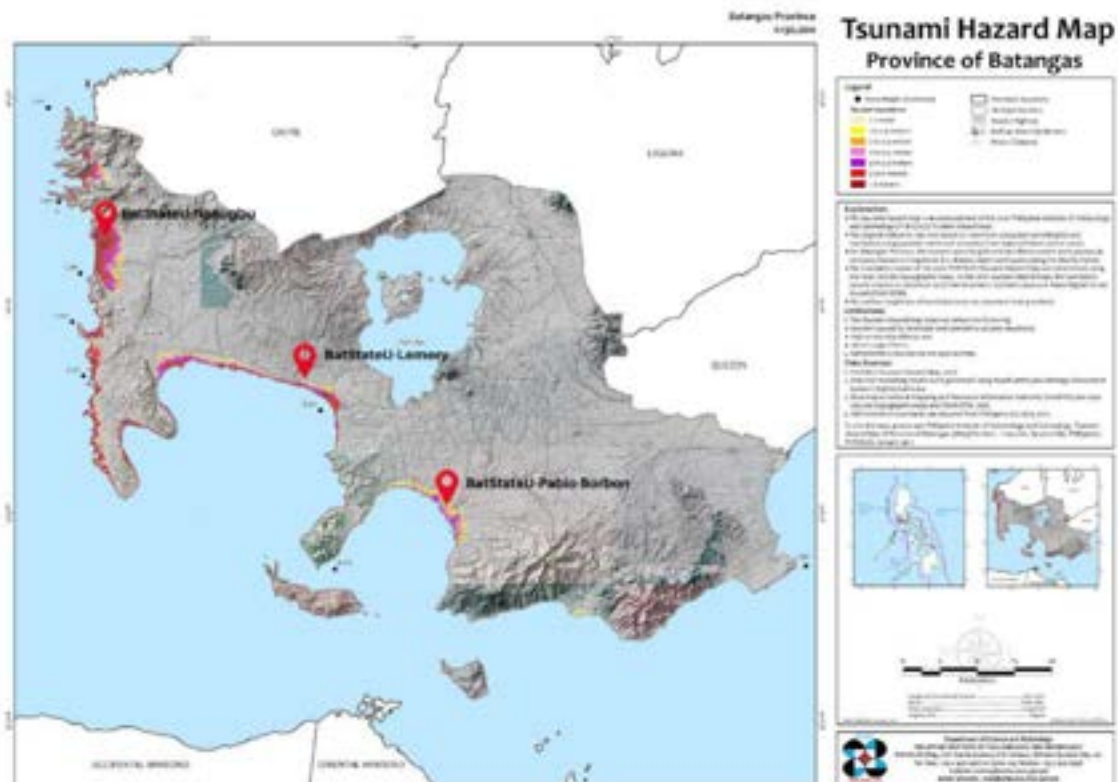




Map MA-32 Taal Volcano Tsunami and Fissuring Hazards Map



Map MA-33 Tsunami Hazard Map (Batangas Province)

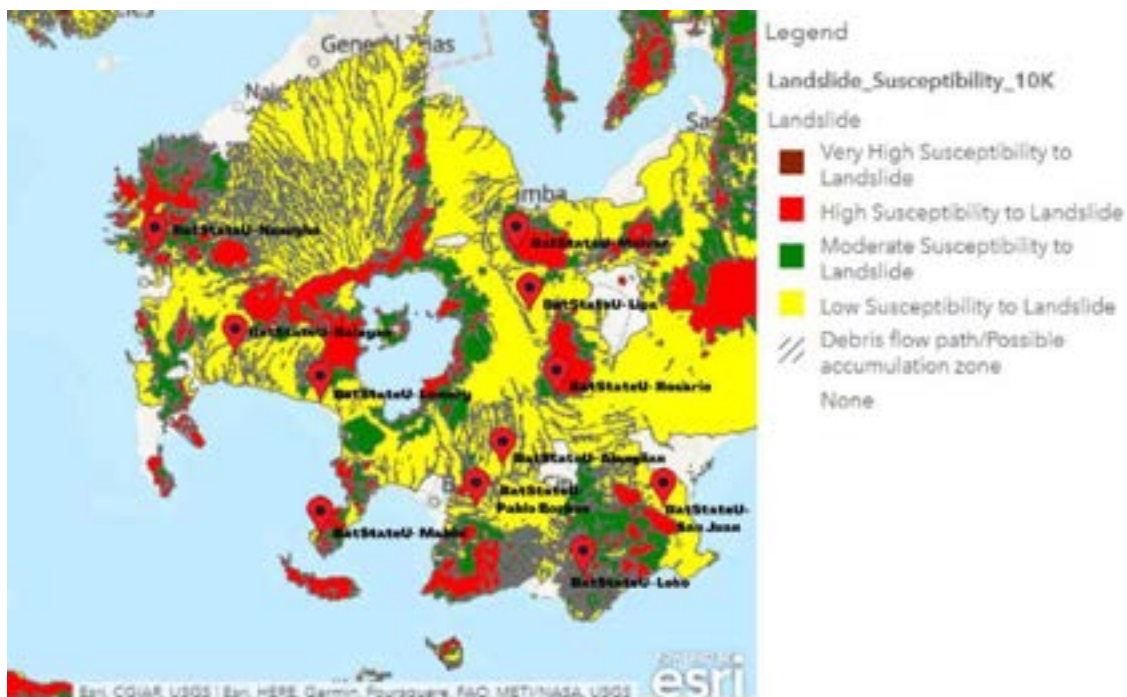




**Map MA-34** Batangas Quadrangle Landslide & Flood Susceptibility Map



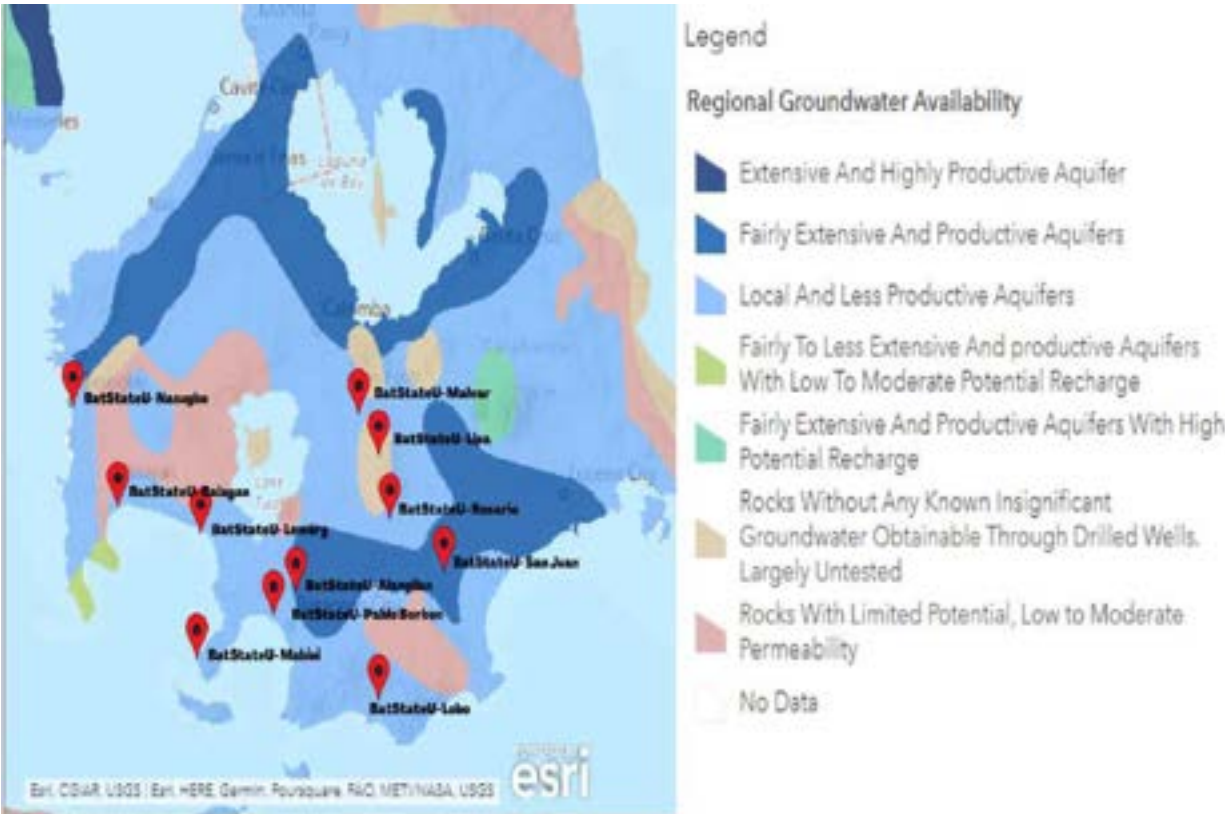
**Map MA-35** Batangas Landslide Susceptibility Map



Map MA-36 Batangas Flood Susceptibility Map



Map MA-37 Batangas Groundwater Availability Map





#### **IV. INSTITUTIONAL COORDINATION AND MONITORING SET-UP**

BatStateU TNEU Mabini envisions to offer only the best possible academic environment to the college students of the municipality and nearby towns which it intends to serve. Below are the University's vision for BatStateU TNEU Mabini and the direction that the Campus is leading towards in the next five to ten years.

##### **A. Physical and Land Use Planning**

Based from the Site Plan for BatStateU TNEU Mabini, the following infrastructure projects will be what the Campus is envisioned to have in the next five to ten years:

1. a parking space for the students and employees of the Campus and for visitors as well;
2. a gymnasium;
3. a five-storey higher education building;
4. a five-storey laboratory building;
5. a five-storey student center which will house the administration offices, university canteen among others;
6. another three storey building for the Supreme Student Council of BatStateU TNEU Mabini and will also serve as the Student Affairs building in the Campus;
7. a three storey library building;
8. a laboratory building which will house all laboratories of the Campus both academic and practical;
9. a Research Center of the Campus;
10. a five storey building which will serve as the Campus Dormitory for its transient students;
11. a five storey CIT building;
12. a Campus Park;
13. a powerhouse which will supply electricity needs of the Campus; and
14. an MRF/Waste Management facility;

Of these infrastructure projects and as based from the site plan presented above, the three storey building named Josefina Yu Hall is the only existing building as of the moment and the four classroom building and a small multi-purpose room donated by the DPWH of the Province of Batangas through the initiative of the Municipal Mayor of Mabini, Honorable Noel B. Luistro, the very reason why the said building was not part of the actual site plan of Batangas State University for its Mabini Campus. All the rest of the



infrastructure projects reflected in the site plan are proposed for construction in the next five to ten years..



Figure MA-51. Site Plan for BatStateU TNEU Mabini

## B. Infrastructure and Buildings

Plans for the Improvement of the BatStateU TNEU Mabini are already underway as based from the site plan attached above. As mentioned in the previous discussions, the plan, as of the moment, shows that only the three-storey

Higher Education Building named as the Josefina Yu Hall is by far the only existing infrastructure project in the Campus as all the rest are still being proposed. However, through the initiative of the LGU led by its Mayor Noel Luistro, a four-classroom building and an additional multi-purpose hall was constructed in the Campus. The said buildings were donations of the Department of Public Works and Highways (DPWH) of Batangas. The said classrooms as of the moment are not yet being used because of the still small number of student enrollees of BatStateU TNEU Mabini; but, because of the current situation that the country is



experiencing due to the Covid 19 pandemic, the DPWH Building, as it is called, will again be utilized.

Photos of the constructed and existing infrastructure projects in BatStateU TNEU Mabini were already presented in the first part of this document.

### **C. Field Laboratories**

Ongoing plans of constructing a Campus laboratory building is being conceptualized. Since BatStateU TNEU Mabini will be utilized as a “laboratory” Campus, the plans on the construction of the said building as well as the Campus field laboratories are being carefully planned out so that the purpose of the BatStateU TNEU Mabini Campus in the University System will be put into good use.

### **D. Environmental Protection**

The university has a unit designated to monitor the environmental activities of all campuses. This is the Environment Management Unit (EMU) under the office of the Vice President for Administration and External Affairs. The said unit has the following personnel positions: The Director, the Assistant Director, a Pollution Control Officer, a Safety Officer, a Head of the Air & Water Quality Management Section, a Head of the Solid Waste Management Section, a Head of the Hazardous Waste Management Section and lastly, a Head for the Information, Education & Communication Section. These personnel are responsible for the implementation of the policies and guidelines on the Waste Management System of the University.

The policies and guidelines of the Waste Management System of the University are compliant to the following existing laws: RA 8749 or the Air Quality Management Act, RA 6969 or the Hazardous Waste Management Act, RA 9003 or the Solid Waste Management Act and the RA 9275 or the Water Quality Management Act. The waste management system has four components; Solid Waste Management, Wastewater Management, Hazardous Waste Management and Air Exhaust Management.

The Environmental Monitoring will be checked by actual inspection, checking of records or by interviews.



# Land Use Development and Infrastructure Plan (LUDIP)

Table MA-9 Environmental Monitoring Plan of the University

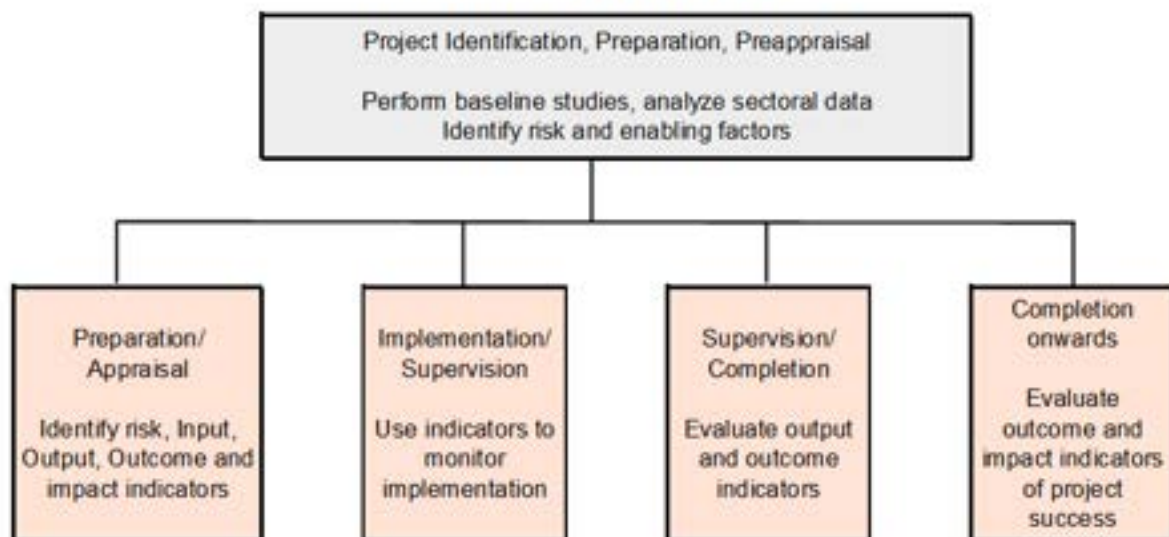
Environmental Monitoring – Operation Phase

ENVIRONMENTAL ASPECTS	PARAMETER	MITIGATING MEASUREMENTS	LOCATION	SAMPLING PROCESS	FREQUENCY	RESPONSIBLE PERSON
Waste Water	Wastewater Volume & Domestic effluent	Efficient Drainage system	Sanitary Provisions	System check	Annually or as need arises	BSU
Solid Waste	Volume	Waste Segregation Coordination with Batangas City	Within the facility & immediate surroundings	Inspection & follow-up activities	Daily	BSU
Ecology	Vegetation	Maintenance of landscape & green areas	Grounds & immediate surroundings	Orular inspection	Daily	BSU
Traffic	Localized Congestion	Provision of traffic assistant	Main entrance gate	None	As need arises	BSU with Sec Officers
Hazardous Waste	Volume	Proper Storage & Disposal	Facility premises	Supervision & inspection	As need arises	BSU

Environmental Monitoring Plan – Construction Phase

ENVIRONMENTAL ASPECTS	PARAMETER	MITIGATING MEASUREMENTS	LOCATION	SAMPLING PROCESS	FREQUENCY	RESPONSIBLE PERSON
Air Pollution	Dust and debris	Use cover for delivery trucks Water spraying Equipment maintenance	Construction area premises	Observation of Air Quality	Quarterly until project duration	Contractor
Waste Water	Volume of domestic waste	Conservation of water Cleanliness of drainage facility	Drainage and sanitary provisions	Periodic inspection	Quarterly until project duration	Contractor
Solid Waste	Volume of construction and domestic waste	Segregation Recycling Proper stockpiling & disposal use of garbage or containers City garbage collection	Construction area premises	Supervision Inspection system check	Daily	Contractor with Utilities Personnel
Health and Safety of Personnel	Accidents and untoward incidents	Use of safety gadgets Health Services Harmonious working conditions	Construction area premises	Observation Checking of safety provisions	Daily	Contractor and safety officer

Monitoring and the Project Cycle



Source: The National Economic and Development Authority

## How the Institution’s Waste Management Program is Implemented.

The waste management program is implemented through the Environment Management Unit. The unit ensures the waste management policies and guidelines are strictly followed in all campus. This unit is under the office of the Vice President for Administration and External Affairs. The said unit has the following personnel positions:





The Director, the Assistant Director, a Pollution Control Officer, a Safety Officer, and a Head of the Air & Water Quality Management Section, a Head of the Solid Waste Management Section, a Head of the Hazardous Waste Management Section and lastly, a Head for the Information, Education & Communication Section. These personnel are responsible in the implementation of the policies and guidelines on the Waste Management System of the University.

### Environmental Analysis PESTLE

The university has a unit designated to monitor the environmental activities of all campuses. This is the Environment Management Unit (EMU) under the office of the Vice President for Administration and External Affairs. The said unit has the following personnel positions: The Director, the Assistant Director, a Pollution Control Officer, a Safety Officer, a Head of the Air & Water Quality Management Section, a Head of the Solid Waste Management Section, a Head of the Hazardous Waste Management Section and lastly, a Head for the Information, Education & Communication Section. These personnel are responsible in the implementation of the policies and guidelines on the Waste Management System of the University.

The policies and guidelines of the Waste Management System of the University are compliant to the following existing laws: RA 8749 or the Air Quality Management

BATANGAS STATE UNIVERSITY	STUDENT HANDBOOK
Section 8. Monitoring and Evaluation	
8.1 The Office of Food Services or the Canteen Evaluation Committee monitors the food safety, hygiene and sanitation of all food business operations in the campus, makes spot checks and calls the attention of the staff for noted deviations from the policies and procedures of the university.	
8.2 The Office of Food Services or Canteen Evaluation Committee shall coordinate and report to the Auxiliary Services Office the monitoring and evaluation conducted in different food outlets in the university including its extension campuses.	
8.3 A food service coordinator in an extension campus shall be assigned to conduct the regular monitoring of different food business operations within the campus and shall directly report to the Office of Food Services.	
8.4 The Office of Food Services shall coordinate with the local government for the safety of food service outside the school premises.	
MANDATORY EVALUATION AND REVIEW	
Section 9. By the end of each academic year, the University shall conduct a mandatory review of the policy as to the status of its implementation and compliance to existing laws and regulations for possible revisions or amendments.	
EFFECTIVITY	
Section 10. These guidelines shall take effect immediately upon the approval of the University Board of Regents and shall be effective unless otherwise repealed or amended.	

Act, RA 6969 or the Hazardous Waste Management Act, RA 9003 or the Solid Waste Management Act and the RA 9275 or the Water Quality Management Act. The waste management system has four components; Solid Waste Management, Wastewater Management, Hazardous Waste Management and Air Exhaust Management.



### **Environmental Monitoring Plan**

The waste management program is implemented through the Environment Management Unit. The unit ensures the waste management policies and guidelines are strictly followed in all campus. This unit is under the office of the Vice President for Administration and External Affairs. The said unit has the following personnel positions:

The Director, the Assistant Director, a Pollution Control Officer, a Safety Officer, a Head of the Air & Water Quality Management Section, a Head of the Solid Waste Management Section, a Head of the Hazardous Waste Management Section and lastly, a Head for the Information, Education & Communication Section. These personnel are responsible in the implementation of the policies and guidelines on the Waste Management System of the University.

### **Evidence that the campus is safe, well-maintained, clean and properly landscaped**

The campus has a 24/7 security with 17 guards in three shifts. This is outsourced from RCC Security Service. There is a group designated for the maintenance and upkeep of the facilities of the campus. This is the Building, Equipment & Grounds Maintenance (BE & GM). This group is composed of several personnel that are assigned to certain different tasks. This group is headed by the Assistant Director of Building, Equipment & Grounds Maintenance (BE & GM). The Assistant Director directly supervises several units of the group; Maintenance Group, Janitorial Staffs and Security Personnel. The maintenance group is responsible for the campus maintenance works. This group handles the carpentry works, plumbing works, electrical works, air-condition repair & maintenance and paint jobs. The janitorial services are also a part of this group, this is outsourced from BLADES, Inc. The janitorial staffs are responsible for the cleanliness of the campus. There are staffs assigned at different floors of each building, the grounds as well as all comfort rooms in the campus.

### **Environmental Protection**

The Environmental Management Unit (EMU) stands to inculcate to the stakeholders the “Concern for the Environment” as one of the core values of the University. It is the advocacy towards the establishment of initiatives, policies and measures towards protection, conservation and sustenance of the environment and environmental resources of the University.

Batangas State University Alangilan was issued recently with an Environmental Compliance Certificate (ECC), dated August 03, 2021 by the DENR - EMB



CALABARZON. This ECC includes all the conditions in the management of the environment in compliance to different environmental laws and regulations that shall be

The University's environment and its activities, within the monitoring period, were successfully planned and managed resulting to compliance to major environmental regulations as follows:

RA 8749 "Philippine Clean Air Act of 2004"

- Stack Sampling conducted to determine the air quality released into the atmosphere.

The sampling was performed to two standby generator sets of the campus.

RA 9275 "Philippine Clean Water Act of 2004"

- Water meter installed for quantifying the water consumption of the University.

RA 6969 "Toxic Substances and Hazardous and Nuclear Waste Control Act of 1990"

- For storage, collection, treatment and disposal

RA 9003 "Ecological and Solid Waste Management Act of 2000"

- Compostables like leaves and trimmed branches were collected,, transferred and disposed through junk dealer to restore sanitation.
- Trash Bins at strategic locations for proper collection and proper waste disposal.

PD 1586 "Philippine Environmental Impact Assessment Law"

- Pollution Control Officers Reports duly noted by VP for Admin and Finance and submitted to DENR-EMB.

Information Education Communication Campaign (IECC)

- Orientations for easy implementation of environmental policies and regulations.

Safety signages at hazardous/danger areas in the campus.

2019- Distribution of IEC Materials from the Environmental Management Bureau to staff and students of the University.

### E. Tourism and Heritage

Mabini is an ecotourism and a sun and beach tourism area. In this regard, tourism plays an important role in the aspect of making Mabini mark its specific spot in the map. BatStateU TNEU Mabini Campus, being situated near the areas mentioned above, becomes a beneficiary of the tourism fame that Mabini has been experiencing over several years now.

As to heritage, Mabini is considered a historic town, being named after the Sublime Paralytic, Apolinario Mabini. As BatStateU TNEU Mabini is the only State University in the municipality; it was also able to curb history and probably heritage as well to the young ones and its future generations being the town's first State University. All thanks





to the University President of BatStateU Dr. Tirso A. Ronquillo and the Municipal Mayor of the town Honorable Noel B. Luistro for taking the initiative and in ensuring that a Batangas State University Campus will be constructed on this side of the Province of Batangas. As BatStateU TNEU Mabini has been serving the community for three years now, it is believed that the coming years will prove to be more fruitful and beneficial especially to the eventual College students of Mabini and nearby municipalities.

**F. Solid Waste and Pollution Prevention**

The waste management program is implemented through the Environment Management Unit. The unit ensures the waste management policies and guidelines are strictly followed in all campus. This unit is under the office of the Vice President for Administration and External Affairs. The said unit has the following personnel positions: The Director, the Assistant Director, a Pollution Control Officer, a Safety Officer, a Head of the Air & Water Quality Management Section, a Head of the Solid Waste Management Section, a Head of the Hazardous Waste Management Section and lastly, a Head for the Information, Education & Communication Section. These personnel are responsible in the implementation of the policies and guidelines on the Waste Management System of the University.



**Figure MA-52** Waste Management Program



Process Flowchart for the Request for the Maintenance and Repair

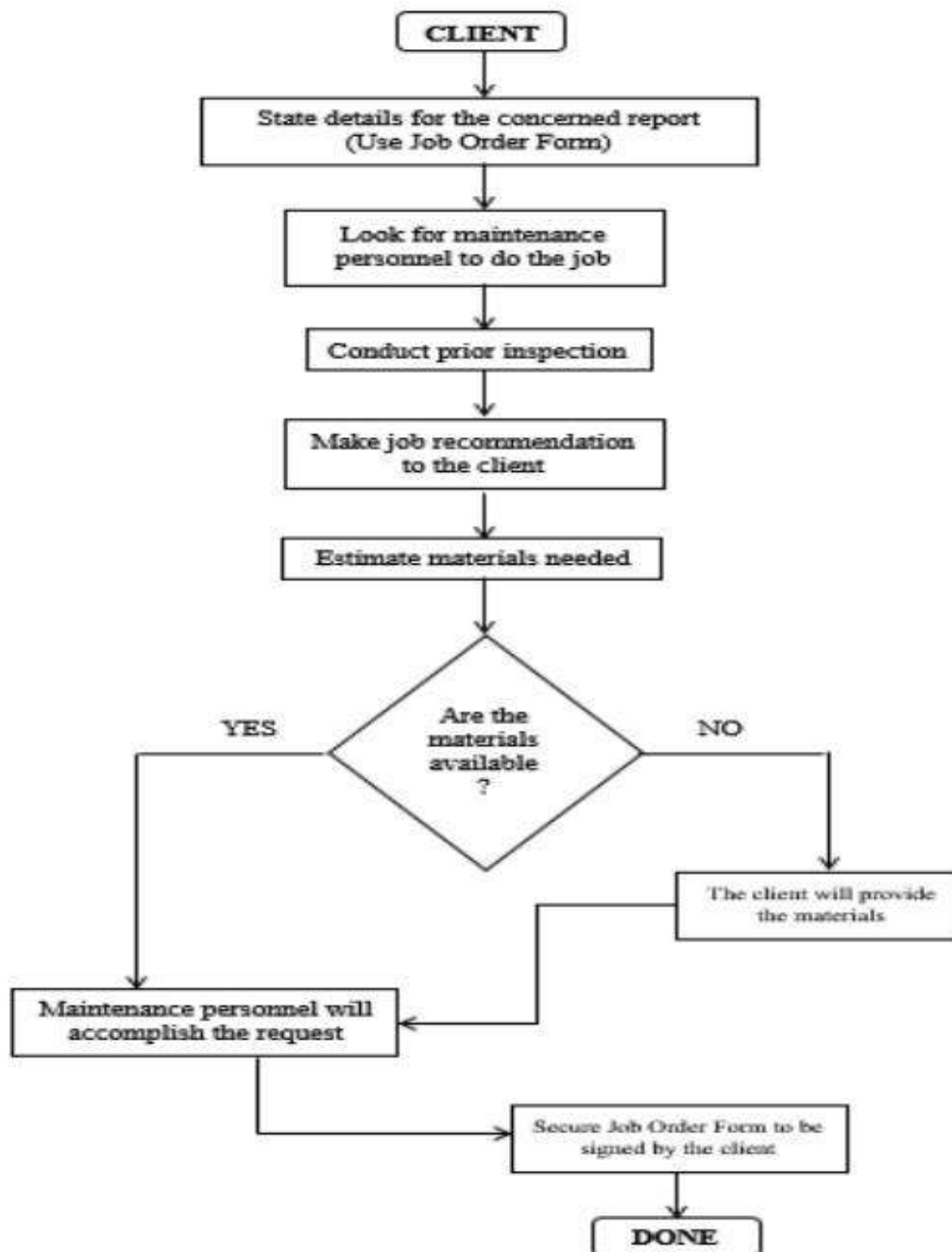


Figure MA-53 Process Flow Chart for the Request for the Maintenance and Repair

## Evidence that the campus is safe, well-maintained, clean and properly landscaped

The campus has 24/7 security with 2 security guards in two shifts. This is outsourced from RCC Security Service. Likewise, there are two utility and maintenance job order personnel to ensure cleanliness and orderliness of the rooms, facilities and grounds of the campus. These maintenance/janitorial staff and security personnel are supervised by the Campus Director, who at the same time is the Head for Administration Services of Mabini Campus.



### **G. Traffic Routes**

The vicinity of the Campus is ensured of being free from traffic and that traffic routes going to and from the Campus has been provisioned because of the construction of an additional “diversion road” in lieu of the existing barangay road of Sitio Mailayin in P. Niogan in order to ensure that congestion of vehicles will not happen. Also, the additional road constructed ensures the safety and well-being of both the commuters and the residents of the palace where the Campus is currently located.

### **H. Sports Facilities**

A gymnasium to be constructed within the 4 hectare land donated to BatStateU TNEU Mabini is already a proposal by the Office of the Campus Director for 2023 based on the 10 Year Strategic Plan of the Campus.. Should budget warrant, a Campus gymnasium is already a near reality in the next years to come.

### **I. Housing**

To date, there is not yet a plan to construct housing facilities in the Campus since most of the students enrolled are residents of nearby barangays of P. Niogan. Those who came from other municipalities, in the meantime, can still enjoy staying at their place of residence as transportation facilities around the area where the Campus is located are highly accessible. As reflected in the site plan for BatStateU TNEU Mabini, its housing project in the form of a five storey dormitory is still just a proposed infrastructure project which may happen in the next five to ten years based on the University’s 10 Year Strategic Plan.

### **J. IGP and Commercial Spaces**

Income generation may still be a far reality for BatStateU TNEU Mabini since the number of students is still very limited and that the core course being offered by the Campus is a non-Business course. Also, an Income Generating Project Office has not yet been established in the Campus which makes it all the more a limited capability for the Campus to engage in IGP related activities.

As to the provision of commercial spaces, the Campus needs first to be fenced for protection purposes and to ensure land use for infrastructure projects to be undertaken so that each land partition will be allotted to amenities and projects which should be constructed for BatStateU TNEU Mabini. As reflected also in the Site Plan for the Campus in the previous discussion there was not an area in the plan yet designed for commercial spaces in the campus.



