KABALIKAT: A PROPOSED THREE-STOREY EXECUTIVE BUILDING EXTENSION AT CAPITOL BAYOMBONG, NUEVA VIZCAYA

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ABSTRACT

The Nueva Vizcaya Provincial Capitol's current administrative building faces decentralization and insufficient storage space, leading to inefficiency and disorganization. To address these issues, a three-story extension to the executive building was proposed, tailored to the needs of 10 departments, including the Provincial Water Works Services and the Persons with Disabilities Affairs Office. Incorporating biophilic design principles, the extension featured natural elements like large windows, greenery, and living walls to enhance employee well-being, creativity, and productivity. Research through interviews, site visits, and case studies confirmed that the new design will optimize workflows, balance workspaces, and improve administrative efficiency. This project aimed to foster community ties, support economic growth, and create a healthier, more productive work environment.

Keywords: Administrative efficiency, biophilic design, government operations, workplace productivity, employee well-being

INTRODUCTION

The Nueva Vizcaya Provincial Capitol Complex serves as the administrative hub for the province's governance and public services across 15 municipalities. Over the years, the complex has expanded to address the province's evolving administrative needs but faces challenges, including decentralization and inadequate storage, which lead to inefficiency. It houses various offices, including the Provincial Waterworks System and Persons with Disabilities Affairs Division, among others.

To address these issues, a three-story executive building extension is proposed. The project will provide modern office spaces, conference rooms, and support facilities tailored to the needs of ten key departments. Incorporating biophilic design principles, the extension aims to enhance productivity, reduce stress, and improve work satisfaction by integrating natural elements like greenery and large windows. This strategic investment is expected to optimize workflows, improve service delivery, and stimulate economic growth, benefiting both employees and the broader Nueva Vizcaya community.

METHODOLOGY

Data Gathering Procedure

The research used various methods to collect data, providing valuable insights to inform the design and guide the project, shaping design decisions and serving as a guiding force. The researcher conducted a site visit to assess and measure the existing tower on the property. This site visit served as the primary research instrument, allowing the researcher to observe the tower's current condition and determine its suitability for preservation and incorporation into the design process.

Case study

The researcher analyzed one local and two international case studies on biophilic office buildings to identify feasible approaches for the proposed Three-Story Executive Building at Capitol Bayombong, Nueva Vizcaya.

Locally, the San Miguel Corporation Building is an exemplary case study, showcasing the innovative integration of biophilic design principles. This building demonstrates how architecture can be both visually captivating and deeply connected to nature, offering valuable insights into sustainable and aesthetic design strategies.

Internationally, the Shui on WORKX in Shanghai highlights the transformative impact of biophilic design on workplace environments. Its thoughtful integration of natural elements not only enhances mental well-being and productivity but also fosters a sense of community within the workspace.

Additionally, the Federal Center South Building 1202 in the United States exemplifies high-performance design, sustainability, and efficient project execution. This 209,000-square-foot headquarters for the U.S. Army Corps of Engineers Northwest District revitalized a contaminated brownfield into a dynamic, eco-friendly government facility, setting a benchmark for sustainable redevelopment.

Web Research

The researcher used various resources through comprehensive online research, including articles, literature, books, and other relevant websites. This enabled the researcher to explore various aspects of subdivision development, including design principles, biophilic practices, community engagement strategies, and regulatory guidelines. The wealth of online information allowed the researcher to broaden the understanding of best practices, emerging trends, and case studies worldwide. By critically evaluating and synthesizing information from web sources, the researcher gained valuable insights that informed the decision-making process and influenced the Office's Biophilic design choices.

Demand and Supply Analysis

A proposed three-story extension to the executive building in Capitol, Bayombong, Nueva Vizcaya, was intended to address space limitations and improve government efficiency. The current infrastructure struggles to keep pace with expanding departments, hindering workflow and service delivery. The new building will provide dedicated office spaces and conference rooms and incorporate Biophilic design elements to enhance employee well-being and productivity. This project has the potential to stimulate economic growth and improve public services for the entire Nueva Vizcaya community.

Marketing Plan and Program

Nueva Vizcaya has thrived on its rich cultural tapestry and agricultural abundance for centuries. To keep pace with its ongoing growth and to embrace sustainable development goals, the provincial government needs a modern, efficient administrative infrastructure. This marketing program introduces a strategic approach to garner public support for the proposed three-story executive building extension at Capitol Bayombong. By outlining clear communication channels and impactful messaging, this program aims to transform this project from a vision into a reality, ultimately benefiting the entire Nueva Vizcaya community.

Market Conclusion

The marketing program for the proposed three-story executive building extension at Capitol Bayombong in Nueva Vizcaya employs a comprehensive, multi-channel approach to foster

public awareness, engagement, and support. By leveraging the province's rich cultural heritage and agricultural significance, it tailors impactful strategies for digital platforms like social media as well as traditional methods such as radio, print materials, and community activities. This inclusive and transparent effort not only unites diverse audiences but also aligns with Nueva Vizcaya's sustainable development goals, setting the foundation for the project's success as a significant milestone in the province's growth.

TECHNICAL STUDY

Project Location

Location: Capitol Compound, Bayombong, Nueva Vizcaya

Region: Region II Cagayan Valley

Conceptual Framework

Design Philosophy

"Form Follows Function," Louis H. Sullivan

"Form follows function" is a design principle asserting that a building or object's shape should primarily be based upon its intended function or purpose. Popularized by architect Louis Sullivan, it emphasizes practicality and functionality over aesthetics. This approach has profoundly influenced modern architecture and industrial design, promoting the idea that the most beautiful and effective designs emerge naturally from their intended use.

"The way people live can be directed a little by architecture," Tadao Ando

"The way people live can be directed a little by architecture," suggests that the design and structure of buildings and spaces have a subtle yet significant influence on human behavior and lifestyle. Thoughtful architectural design can shape how people interact, move, and feel within a space, encouraging certain activities and social interactions while promoting well-being and efficiency. While architecture cannot completely control human behavior, it can guide and enhance daily living experiences through intentional design choices.

"A great architect is not made by way of a brain nearly so much as he is made by way of a cultivated, enriched heart," Frank Lloyd Wright.

Wright underscores the importance of passion, empathy, and emotional intelligence in architecture. Wright suggests that technical skill and intellect, while essential, are not enough to create truly inspiring and impactful architecture. Instead, a deep appreciation for humanity, culture, and the environment, combined with a heartfelt connection to the art of building, is what truly makes an architect great. This perspective emphasizes that architecture is not just a technical profession but also an artistic and humane one.

Design Concept

Connective Architecture transforms government buildings into vibrant hubs of democracy, fostering collaboration and shared values. It's a visionary concept that embraces not just physical structures but also the spirit of inclusivity, enhancing public engagement and civic pride. Connective Architecture reimagines executive offices as dynamic extensions of the public realm, emphasizing interaction and openness over isolation. Instead of isolated fortresses, these offices

feature open courtyards and landscaped terraces designed as communal meeting spaces, encouraging dialogue between citizens and officials. Integrating eco-friendly elements, such as solar panels and natural ventilation systems, underscores a commitment to sustainability and benefits both the environment and future generations.

Design Considerations

1. Inclusive design

Inclusive design is an approach to creating products, services, and environments that are accessible and usable by as many people as possible, regardless of age, ability, or other factors. It aims to accommodate a diverse range of human needs and experiences, ensuring that everyone can fully participate and benefit from the design.

2. Flexibility

Flexible design accommodates diverse preferences and abilities, ensuring it remains relevant and functional as needs evolve. This approach enhances user experience by providing customizable options, supporting multiple uses, and extending the lifespan and usability of the design, ultimately promoting sustainability and inclusivity.

3. Natural light

Incorporating natural light as a design consideration involves strategically positioning windows, skylights, and other openings to maximize daylight entering a space. This not only reduces the need for artificial lighting, thereby saving energy, but also enhances occupants' well-being and comfort by creating a more pleasant and healthier indoor environment. Natural light improves mood and productivity and can even influence the perceived size and aesthetics of a space. Effective use of natural light requires thoughtful planning to control glare and heat gain, ensuring a balanced and efficient distribution of daylight throughout the interior.

4. Accessibility

This involves creating barrier-free environments with features like ramps, wide doorways, clear signage, and intuitive layouts that accommodate all users, including those with disabilities. By prioritizing accessibility, designers promote inclusivity and equal opportunity, enhancing the independence and quality of life for all individuals. Thoughtful, accessible design not only meets legal requirements but also fosters a more inclusive, user-friendly world.

5. Safety and Security

Safety and security in design focus on creating environments that protect occupants from harm and ensure their well-being. This involves integrating features such as secure entrances, effective lighting, clear evacuation routes, and non-slip surfaces to prevent accidents and deter unauthorized access.

6. Community-oriented

Community-oriented design emphasizes creating spaces that foster social interaction, inclusivity, and a sense of belonging. This involves incorporating features such as communal areas, flexible gathering spaces, and accessible amenities that encourage user engagement and connection.

7. Green and open space

Green and open space design focuses on incorporating natural elements and expansive areas within urban and built environments to enhance environmental quality and user well-being. This consideration includes integrating parks, gardens, and natural landscapes, which promote biodiversity, improve air quality, and provide recreational opportunities. By designing green, open

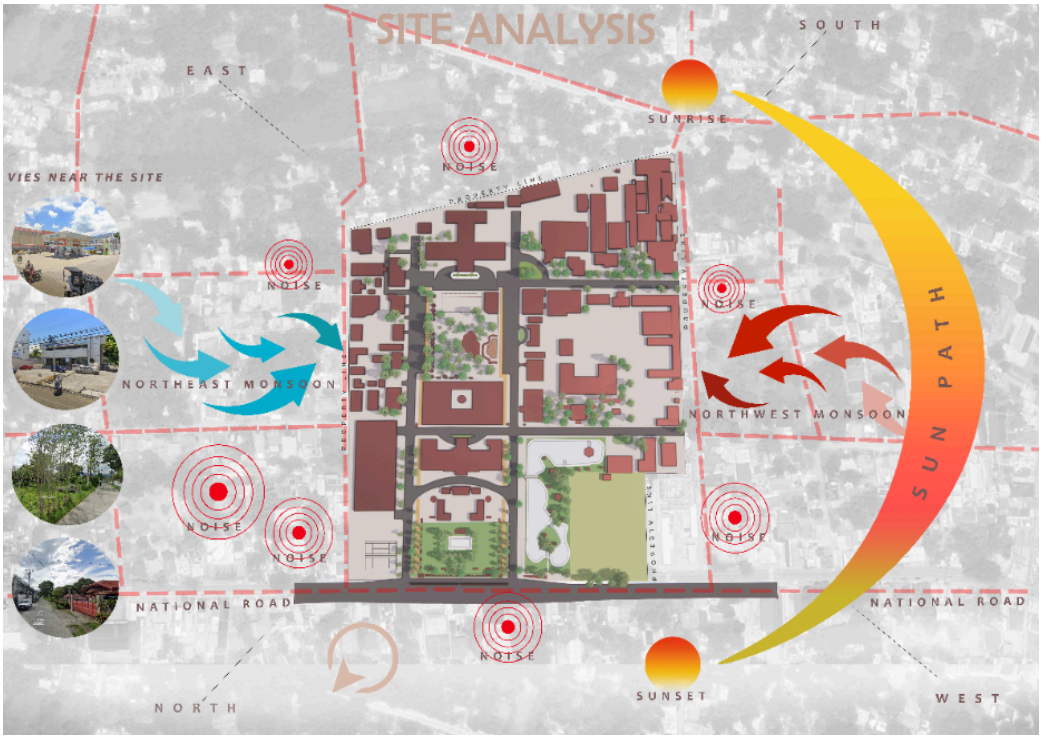
spaces, creators can create places for relaxation, socialization, and community activities, contributing to healthier, more sustainable living environments.

8. Circulation and flexibility

Circulation and flexibility in design ensure that spaces are easily navigable and adaptable to various needs. Effective circulation involves creating intuitive pathways and access routes that facilitate smooth movement and efficient use of the space. Flexibility refers to designing areas that can be easily reconfigured or adjusted to accommodate changing activities and functions.

Site Analysis

Figure 20
Provincial Capitol Compound Site Analysis



SWOT Analysis

Table 1

Capitol Compound SWOT Analysis

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Central Location: Positioned centrally in Bayombong, facilitating accessibility and convenience for governmental operations and public access.	Limited Parking: Challenges with parking availability, especially during peak hours, impacting convenience for visitors and employees.	Infrastructure Development: Potential for enhancing infrastructure to improve traffic flow and parking facilities within the compound.	Budget Constraints: Financial limitations impacting maintenance and development efforts.
Historical Significance: Houses important administrative buildings and cultural landmarks, reflecting the heritage and significance of Nueva Vizcaya.	Infrastructure Maintenance: Potential issues with upkeep and maintenance of older buildings and facilities.	Community Engagement: Opportunities to expand cultural and community events at *Ammungan* Park, fostering local pride and tourism.	Political Instability: External factors such as political changes affecting governance and operations in the compound.
Diverse Facilities: Includes a range of essential facilities, such as government offices, convention centers, and public parks, supporting various civic and administrative functions.	Traffic Congestion: High traffic congestion during peak hours due to limited road access and parking spaces.	Technological Integration: Implementation of smart technologies for efficient management of facilities and services.	Environmental Impact: Potential challenges related to environmental sustainability and conservation of natural areas within the compound.

Building Space and Description

1. *Administrative Offices:* Include offices for provincial government departments such as administration, finance, planning, and public services.

2. *Meeting Rooms and Conference Facilities*: Designate spaces for government meetings, public hearings, and community consultations.

3. *Public Amenities*: Provide facilities like public restrooms, waiting areas, and visitor information centers.

4. *Landscaped Gardens*: Create green spaces with benches and pathways for relaxation and outdoor activities.

5. *Parking Facilities*: Allocate parking areas for staff, visitors, and government vehicles.

6. *Security and Accessibility Features*: Ensure the compound is accessible to people with disabilities and equipped with adequate security measures.

7. *Civic Spaces*: Incorporate spaces for public events, cultural exhibitions, and community gatherings.

8. *Maintenance and Service Areas*: Include areas for maintenance equipment storage, waste management, and utility infrastructure.

9. *Future Expansion Considerations*: Plan for future growth and potential expansion of government services and facilities within the compound.

Socio-Economic Study Benefits to The Community

Social Benefits

The building promotes social cohesion by providing communal spaces, such as open courtyards and terraces, for public interaction with officials. This fosters transparency, trust, and community engagement, enhancing civic participation and democratic values. It serves as a hub where citizens can voice concerns, collaborate on initiatives, and participate in decision-making processes.

Educational Benefits

Educational benefits arise from the building's design and function as a center for public discourse and civic education. It can host workshops, seminars, and educational events that inform citizens about governance, policies, and community initiatives. This promotes civic literacy and empowers individuals to actively participate in shaping their communities.

Health Benefits

The incorporation of natural ventilation systems, green spaces, and access to natural

light promotes a healthier indoor environment. This enhances occupant well-being, reduces stress levels, and improves productivity among employees and visitors. Green spaces also contribute to air quality improvement and overall physical health benefits for users.

Economic Benefits

The building supports economic growth through sustainable practices such as energy-efficient systems, which reduce operational costs over time. It may also stimulate local economies by creating jobs during construction and maintenance. Additionally, enhancing government efficiency and public service delivery can contribute to overall economic productivity and development.

Environmental Benefits

Environmental benefits include the building's eco-friendly design features, such as solar panels, and the integration of a biophilic design concept. These measures reduce carbon footprint, conserve resources, and mitigate environmental impact. By setting a precedent for sustainable architecture, the building demonstrates environmental stewardship and encourages similar practices in the community.

FINANCIAL STUDY

Table 8
Financial Study

Space	Room Area in sq.m.	Total Net Area
Basement	2055.88	P 113,073,400
Provincial Water Works Service	192.84 SQ.M	P 10,606,200
Person-Person with Disability Affairs Office	91.68 SQ.M	P 5,042,400
Person- Public Employment Service Division	100 SQ.M	P 5,500,000
Person- Internal Audit Service Office	128.2 SQ.M	P 7,051,000
Person- Provincial Information and Technology	231.36 SQ.M	P 12,724,800
Local Youth Development Office	54.63 SQ.M	P 3,004,650
Person- Provincial Assessors Office	458.49 SQ.M	P 25,216,950
Person-Provincial Human Resource Management Office	525.29 SQ.M	P 28,890,950

Person-Provincial Planning and Development Office	321.24 SQ.M	P 17,668,200
Person- Provincial Engineering Office	52.91 SQ.M	P 2,910,050
Roof Deck	3115 SQ.M	P 171,325,000
Elevator	110.7 SQ.M	P 6,050,000
Utilities	54 SQ.M	P 1, 890,000
Restrooms	132 SQ.M	P 3,960,000
	Total	**P 414,913,600.00**

MANAGEMENT STUDY

The Provincial Engineering Office will play a key role in setting technical standards, overseeing infrastructure quality, and ensuring compliance with local regulations. Selecting a reputable property management company through a competitive process, with input from the government and the Provincial Engineering Office, will ensure that the development's specific needs are met.

ENVIRONMENTAL STUDY

Table 9
Construction Environment Impact Analysis

Environment's Subsystems	Reasons	Results	Possible Solution
Land	Excavation and land clearing for the construction site. Heavy machinery movement causes soil compaction.	Soil erosion and loss of topsoil. Disruption of the natural landscape and local ecosystems.	Implement erosion control measures such as silt fences and retaining walls. Use machinery with low ground pressure and designate specific pathways to minimize soil compaction. Replant vegetation and implement landscaping plans post-construction to restore the natural habitat.
Water	Runoff from construction activities carrying sediments and pollutants. Potential	Degradation of local water bodies and aquatic habitats. Potential impacts	Establish sediment control measures, such as sediment traps and buffer zones. Properly store and

	contamination from construction materials and chemicals.	on the water quality of nearby rivers or lakes.	handle construction materials to prevent spills and contamination. Implement rainwater harvesting systems and sustainable drainage solutions to manage stormwater runoff.
Living Things	Habitat destruction due to land clearing. Noise and vibration from construction activities.	Displacement of local wildlife and loss of biodiversity. Stress and disturbance to nearby wildlife populations.	Conduct a wildlife assessment before construction and develop a conservation plan. Create designated wildlife corridors and green spaces to provide refuge. Schedule construction activities to minimize disturbance during critical periods for wildlife (e.g., breeding seasons).
Air	Emissions from construction vehicles and machinery. Dust generation from excavation and material handling.	Reduced air quality, affecting workers and nearby residents. Potential health impacts from inhaling dust and emissions.	Use low-emission construction equipment and maintain it regularly to ensure efficiency. Implement dust control measures, such as water spraying and dust suppressants. Monitor air quality during construction and take corrective actions if standards are exceeded.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

1. The researcher provided insights into optimizing internal workflows and designing spaces in an executive extension office building. Open-plan layouts and flexible workspaces encourage spontaneous meetings and cross-departmental communication. Communal areas, such as landscaped terraces, were designed as meeting spaces,

encouraging dialogue between citizens and officials. Integrating community spaces and public access areas strengthens ties with the surrounding community.

2. The researcher provided strategies for designing work zones that balance individual focus and teamwork, ultimately enhancing productivity and well-being. Collaborative zones, equipped with comfortable seating and technology, encourage teamwork and idea-sharing.
3. The researcher incorporated biophilic design elements, such as large windows from floor to ceiling and penetrating natural light and greenery, to create a healthier and more pleasant work environment. By thoughtfully integrating these elements, the design achieved a harmonious balance between solitude and collaboration, resulting in a productive and thriving workplace.
4. The researcher incorporated a workspace design that integrated natural elements to improve occupant well-being and productivity. This design emphasized natural light and scenic views. It considered the inclusion of living walls and indoor plants with air-purifying properties.
5. The researcher integrated biophilic design in the new executive building extension at the Provincial Local Government Unit of Nueva Vizcaya, which significantly improves employee well-being, creativity, productivity, and administrative efficiency. By incorporating natural elements such as natural light, living walls, and air-purifying plants, the workspace creates a healthier, more stimulating environment. Natural light reduces eyestrain and enhances mood, scenic views offer visual relief and inspire innovative thinking, and living walls with indoor plants purify the air and foster a calm atmosphere that aids concentration and reduces stress. Biophilic elements promote a positive work environment, boosting productivity and efficiency in administrative tasks.

Recommendations

The proposed executive building extension at Capitol Bayombong, Nueva Vizcaya, aimed to improve local government operations by enhancing functionality and efficiency. Key recommendations include incorporating office layouts that adhere to anthropometric standards for employee comfort, consulting allied professionals for design assessment, and ensuring structural integrity through a green roof system that emphasizes environmental efficiency. Additionally, efficient parking management with clear signage and provisions for PWD spaces, as well as inclusivity by integrating an office for the mandatory representatives of Indigenous Peoples, is advised to ensure the building meets both practical and regulatory needs while fostering inclusiveness and sustainability.

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