

IDENTIFICATION OF ARCHITECTURAL ELEMENTS IN THE OLD TEUNGKU MOSQUE IN PUCOK KRUENG DISTRICT. PIDIE JAYA

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Abstract

The Tengku Old Mosque in Pucok Kreung is a historic building with significant architectural, cultural, and religious value for the community. As a building that has undergone development and change over time, the existence of architectural elements in this mosque needs to be identified and documented to maintain its character and authenticity. This study aims to identify the characteristics of architectural elements in the Tengku Old Mosque in Pucok Kreung through theory (Ching, 2007; Naibaho & Pakpahan, 2024). The elements analyzed include floors, walls, columns or supporting structures, doors, windows, ventilation, ceilings, and roofs. This study uses a descriptive qualitative method with a case study approach. Data collection was carried out through field observations, documentation, and interviews with parties knowledgeable about the history and development of the mosque. Data analysis was carried out by identifying the physical condition, function, visual or aesthetic, and symbolic value contained in each architectural element. The results show that the Tengku Old Mosque in Pucok Kreung still retains most of the characteristics of traditional architectural elements that reflect the architectural identity of ancient mosques in Aceh. Each element has a structural and spatial function that supports worship activities, while also containing aesthetic and symbolic values that enhance the building's character. Although some elements have undergone changes due to renovations and functional needs, the mosque's primary character as a historic building is still recognizable through its form, materials, and architectural arrangement. This research is expected to serve as a reference in efforts to preserve and develop historic mosque buildings while still maintaining their architectural values.

Keywords: architectural elements, old mosque, architectural characteristics, preservation of historical buildings, Tengku Old Mosque in Pucok Kreung.

INTRODUCTION

Historic mosques in Indonesia are not merely places for ritual prayer. They are cultural records that store information about religious life, local craftsmanship, environmental adaptation, and community memory. In many regions, especially in Aceh, old mosques also demonstrate how Islamic worship spaces were translated into local architectural language. Their floors, walls, columns, roofs, openings, and decorative details are therefore not neutral technical parts. They act as evidence of construction knowledge, climatic response, symbolic expression, and social continuity.

The study of architectural elements is important because a historic building is usually understood through the physical components that remain visible. These components shape the way users move, pray, gather, and experience the sacred space. In mosque architecture, the relationship between the prayer hall, the direction of qibla, the roof structure, and the pattern of openings determines both functional comfort and visual identity. If these components are altered without documentation, the historical value of the building may gradually become difficult to read even though the building continues to function.

Teungku Di Pucok Krueng Old Mosque is located in Beuracan Village, Meureudu District, Pidie Jaya Regency, and was built in 1622 AD by Teungku Abdussalam. The mosque is associated with the development of Islam in the region and is commonly described as a historic building that has existed for centuries. Its location near Krueng Beuracan and close to the Banda Aceh-Medan route shows a strategic relationship between religious activity, settlement, circulation, and access to water. The mosque is known by the local community as an old mosque with a strong traditional appearance, including timber structure, carved wooden wall components, broad side openings, and a tiered roof that dominates its silhouette.

The mosque has not remained physically unchanged. Field documentation records that several elements have been renewed because of age, maintenance needs, and functional requirements. Some parts of the element material were replaced with new material in 1990, the floor changed from earlier materials into ceramic tile, the lower wall uses stronger masonry or stone-based treatment, and the roof covering has been replaced with a more durable material. The 2016 Pidie Jaya earthquake also affected parts of the mosque, including wall components and the inclination of several structural supports. These changes show that the mosque is both a heritage object and a living building that must continue to serve worship activities.

This situation creates a conservation problem. A building that is still used by the community cannot be preserved only by preventing all change. It needs maintenance, repair, and sometimes replacement of damaged components. However, every change should be guided by knowledge of which elements carry structural, spatial, visual, and historical value. Without such knowledge, renovation may solve a technical problem while weakening the architectural identity of the mosque. Element-based identification is therefore needed as a foundation for informed preservation.

Previous research on Teungku Di Pucok Krueng Old Mosque and other historic mosques in Aceh has addressed structural conditions, ornament documentation, and characteristics of old mosque architecture. These studies provide valuable background, but a focused article that organizes the mosque through the eight basic architectural elements remains useful. This article aims to identify the floor, wall, column, door, window, ventilation, ceiling, and roof of the mosque by analyzing their function, form, material, and visual or aesthetic character. The results are expected to support academic documentation and provide practical guidance for preserving the mosque as a historic religious building.



Image 1. Teungku Di Pucok Krueng Old Mosque as a historic religious building in Pidie Jaya

LITERATURE REVIEW

Architectural elements and spatial theory

Architectural elements are the basic physical components that define the existence of a building. Ching (2007) explains architecture through the relationship between form, space, and order. A point may generate a line, a line may form a plane, and a plane may define a volume. This theoretical view helps explain why floors, walls, columns, ceilings, and roofs cannot be treated as separate objects. They cooperate to form spatial boundaries, orientation, scale, enclosure, and visual hierarchy.

The floor is generally understood as a horizontal base plane that supports activity. Walls are vertical planes that define and protect space. Columns are vertical structural elements that can carry loads while also creating rhythm and direction. Openings such as doors and windows mediate movement, visibility, lighting, and airflow. The ceiling and roof define the upper boundary and often determine the character of interior space. Through these elements, architecture becomes a system of spatial organization rather than a collection of materials.

Naibaho and Pakpahan (2024) developed the discussion of architectural elements into a practical framework for visual identification. Their classification includes floor, wall, column or support, door, window, ventilation, ceiling, and roof. Each element can be evaluated through function, form, material, and visual quality. This approach is useful for historic mosque studies because it provides a clear method for comparing the current condition of the building with its original or traditional character.

Mosque architecture and traditional Acehnese context

A mosque is a place for sujud and congregational prayer, but its social role is wider than ritual activity. In many Muslim communities, mosques also serve as places for teaching, discussion, social coordination, and cultural continuity. This broader role affects architectural form. The prayer hall must be clear and flexible, circulation must support the movement of jamaah, and environmental comfort must be maintained because the building is used repeatedly throughout the day.

Traditional mosques in Indonesia often differ from Middle Eastern mosque models. Instead of relying mainly on large domes, many early mosques in the Indonesian archipelago used tiered roofs, timber structures, verandas, and climate-responsive openings. This form reflects local construction knowledge and a response to high rainfall, humidity, and the availability of timber. In Aceh, old mosques frequently show the interaction between Islamic function and local architectural expression through roof form, structural timber elements, and carved wooden details.

The tiered roof is especially important in traditional mosque architecture. It is both a climatic device and a visual sign. Its steep pitch allows rainwater to flow quickly, while its layered form creates vertical emphasis and a recognizable religious identity. The use of timber columns and beams also allows a relatively open interior that can accommodate prayer rows. When these elements remain visible, they help preserve the memory of local construction systems.

Openings and ventilation in traditional mosques are also significant. Large windows, semi-open walls, and perforated wooden panels allow daylight and air to enter the prayer hall. This passive environmental strategy is highly relevant in tropical climates because it improves comfort without depending on mechanical systems. At the same time, carved ventilation panels may carry aesthetic value, showing that environmental performance and ornament can be integrated in one element.

Element-based conservation of historic mosques

Conservation of a historic mosque requires more than preserving a facade. It requires understanding the building as a living system. The floor supports ritual movement, the walls define the sacred interior, the columns and roof sustain structure, and the openings create comfort and access. If one element is changed, other elements may also be affected. For example, replacing roof covering may improve durability, but it should not alter the slope, silhouette, or load behavior in a way that changes the building identity.

Element-based documentation is useful because it records not only what exists, but also how each component works. A wall can be described as a material surface, a boundary, a ventilating device, and a carrier of ornament. A column can be measured as a structural support and interpreted as a visual rhythm. A roof can be evaluated as a climatic protection and as the dominant sign of the mosque. This layered understanding allows conservation decisions to be more precise.

Previous studies of historic mosques in Aceh and Indonesia show that material changes are common in active religious buildings. The challenge is to distinguish between acceptable maintenance and changes that reduce heritage value. Replacement may be appropriate when it preserves form, proportion, spatial use, and cultural expression. However, elements with strong historical and visual value, such as carved timber panels, original columns, and the tiered roof structure, require more careful intervention. This study therefore places each element in relation to function, material, and visual identity.

METHOD

This research used a descriptive qualitative method with a case study approach. The case study method was selected because Teungku Di Pucok Krueng Old Mosque has a specific historical context, active religious use, and distinctive architectural characteristics that require detailed observation. The research did not seek to test numerical hypotheses. It aimed to interpret the physical condition and architectural meaning of the mosque elements based on field evidence and relevant theory.

The research object was the architectural elements of Teungku Di Pucok Krueng Old Mosque in Beuracan Village, Meureudu District, Pidie Jaya Regency, Aceh. The observation focused on eight elements: floor, wall, column or support, door, window, ventilation, ceiling, and roof. These elements were selected because they form the main body of the building and directly affect worship activities, structural stability, environmental comfort, and visual identity.

Primary data were collected through direct observation, visual documentation, simple measurement, and informal interviews with persons who understood the history and development of the mosque. Observation recorded visible condition, material use, form, position, function, and visual character. Measurements were used for several

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elements, such as the floor dimension, wall height, door dimension, window opening, and column diameter. Documentation photographs were used to compare elements and to support visual interpretation.

Secondary data were obtained from books, journal articles, previous studies, and documents discussing mosque architecture, architectural elements, conservation, and Teungku Di Pucok Krueng Old Mosque. These sources were used to construct the analytical framework and to compare the observed characteristics with established architectural concepts. The theoretical basis of the article is Ching (2007) and the element classification developed by Naibaho and Pakpahan (2024).

The analysis was conducted in four stages. First, each element was described based on field observation. Second, the element was classified according to function, form, material, and visual character. Third, the observed data were interpreted in relation to worship use, structural logic, climatic response, and preservation value. Fourth, the findings were synthesized to identify which elements continue to express traditional Acehese mosque architecture and which elements show adaptation caused by renovation, maintenance, or earthquake-related repair.

Table 1. Operational framework for identifying architectural elements

Variable	Indicators	Main observation focus
Floor	Function, form, material, visual quality	Activity surface, prayer row organization, surface condition, floor pattern, and material change.
Wall	Boundary, material, opening relation, ornament	Spatial enclosure, protection, masonry base, timber upper wall, carved panels, and visual unity.
Column/support	Structural role, dimension, position, material	Load transfer, central and surrounding supports, timber condition, rhythm, and post-earthquake stability.
Door	Access, size, type, material, ornament	Entrance transition, circulation, double-leaf timber door, position, and relation with wall panels.
Window	Lighting, airflow, form, position	Side openings, visual rhythm, daylight, cross ventilation, and relationship to the prayer hall.
Ventilation	Air exchange, light support, material, ornament	Perforated carved panels, open windows, airflow path, and integration of function and aesthetics.
Ceiling	Upper boundary, shape, material, visual impression	Relationship with roof structure, timber texture, interior scale, and spatial atmosphere.
Roof	Protection, type, slope, material, identity	Tiered roof form, rain response, covering material, silhouette, and traditional mosque identity.

RESULTS AND DISCUSSION

The observation shows that Teungku Di Pucok Krueng Old Mosque retains a strong traditional architectural character even though several materials have changed. The building remains organized around a prayer hall supported by timber columns and covered by a tiered roof. The wall system combines a solid lower part with timber and carved details above. The side openings and perforated ornaments support daylight and airflow. The following discussion explains the eight architectural elements in detail.

Table 2. Summary of architectural elements and conservation interpretation

Element	Existing characteristics	Architectural interpretation	Conservation priority
Floor	Flat ceramic tile floor; earlier phases included timber and cement.	Supports worship activity, circulation, cleanliness, and visual order.	Document material history; maintain flat, clean surface without altering spatial openness.
Wall	Solid lower base combined with timber upper panels and carved elements.	Defines the prayer hall and combines protection, ventilation, and craft identity.	Preserve carved timber panels and wall proportions; repair masonry sensitively.

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Element	Existing characteristics	Architectural interpretation	Conservation priority
Column/support	Timber columns arranged in central, surrounding, and perimeter hierarchy.	Carries roof loads and creates structural rhythm in the prayer hall.	Inspect post-earthquake stability; maintain timber character and structural rhythm.
Door	Double-leaf timber door with simple rectangular proportion.	Regulates access and marks the transition into the worship space.	Retain timber material, size relationship, and entrance composition.
Window	Large side openings arranged in repeated symmetrical order.	Provides daylight, views, cross ventilation, and facade rhythm.	Keep open character; protect timber and opening edges from weathering.
Ventilation	Open windows and perforated carved wooden panels.	Integrates airflow, light, ornament, and identity.	Conserve perforated wooden ornaments as functional heritage elements.
Ceiling	Timber upper interior following roof and structural rhythm.	Shapes interior scale, warmth, and visual continuity.	Avoid covering timber rhythm with incompatible modern finishes.
Roof	Tiered, steep, symmetrical roof with modern durable covering.	Protects the building and forms the strongest visual identity.	Preserve tiered profile, pitch, silhouette, and timber structural relationship.

Floor element

The floor functions as the basic horizontal plane that supports worship activities. In the prayer hall, it accommodates standing, bowing, prostration, sitting, and the formation of saf. The flat and stable surface allows jamaah to move from the entrance to the prayer area without significant obstacles. This condition confirms the role of the floor as an activity base and as an element that helps organize the order of congregational prayer.

The current floor uses ceramic tile with a clean and even surface. Field documentation indicates that the floor has experienced several material phases, including timber in an earlier period, cement during a later renovation, and ceramic tile in the existing condition. The change to ceramic tile improves hygiene, maintenance, and durability. It also supports frequent use because the surface is easier to clean after daily worship activities.

From a visual perspective, the light-colored ceramic floor creates an impression of brightness, cleanliness, and spaciousness. The repeated tile joints form a subtle geometric grid that can assist the perception of prayer rows. However, the current material also reduces the visibility of the earliest timber floor character. This finding illustrates a typical tension in conserving an active mosque: functional improvement may be necessary, but the history of material change should be carefully documented so that the building narrative is not lost.

The floor dimension also shows the importance of space capacity. The prayer hall is sufficiently wide to support congregational worship, and the absence of permanent partitions increases flexibility. In the framework of Ching (2007), the floor acts as a base plane that defines the lower boundary of space. In the framework of Naibaho and Pakpahan (2024), it meets the functional, formal, material, and visual indicators of an architectural element.

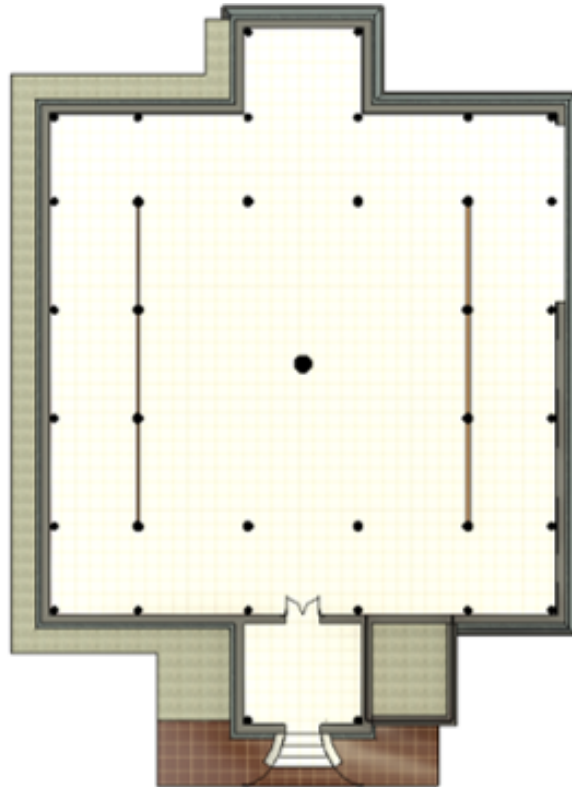


Image 2. Floor plan and spatial arrangement of the mosque prayer hall

Wall element

The wall defines the boundary between the prayer hall and the surrounding environment. It protects the interior from heat, rain, wind, and visual disturbance while maintaining a clear spatial enclosure. At the same time, the wall does not completely isolate the prayer space. It integrates doors, windows, and ventilation, allowing the building to remain connected with light, air, and exterior views.

The observed wall system is layered. The lower section uses a stronger and heavier material such as stone, masonry, or plastered wall treatment. This base provides durability, resistance to moisture, and physical protection. The upper section uses timber and carved wooden panels that create a lighter visual expression. This combination is significant because it brings together the need for structural and environmental durability with the preservation of traditional visual character.

The wall height and repeated bay arrangement follow the rhythm of the timber columns. This creates an ordered composition and prevents the wall from appearing as a single heavy mass. The carved upper panels enrich the wall surface while supporting ventilation. The pattern of the wall therefore demonstrates how a traditional building can combine enclosure, airflow, ornament, and identity in one architectural system.

The 2016 earthquake affected parts of the wall, especially some masonry and timber components. The repairs made after the damage are important for continuing the use of the mosque, but future maintenance should be sensitive to the original wall proportion and craft details. The carved wooden panels should be prioritized for documentation and conservation because they carry both functional and aesthetic value.



Image 3. Wall composition with solid base, timber panels, and perforated ornament

Column and support element

Columns are the main vertical structural elements of the mosque. They carry roof loads, transfer loads downward, and maintain the stability of the prayer hall. The timber columns also organize the interior space without forming closed rooms. This allows the prayer hall to remain open while still expressing a clear structural order.

Field measurement indicates a hierarchy of columns. A central or dominant support has a larger diameter, while surrounding columns and perimeter supports have smaller dimensions. This hierarchy suggests different structural roles in supporting the tiered roof. The central support becomes not only a technical element but also a visual marker in the prayer hall. The surrounding columns create rhythm and help define the spatial grid.

The use of timber as the main column material reflects traditional Acehnese construction knowledge and local material culture. Timber gives warmth to the interior and produces a strong historical impression. The visible connection between columns, beams, and roof structure also allows users to read how the building stands. This readability is a major heritage value because it reveals the construction logic of the old mosque.

The earthquake of 2016 reportedly caused inclination in some columns. This condition shows that structural conservation is essential. Repair work should not replace the timber character with visually incompatible materials unless required by safety considerations. Even when reinforcement is needed, the original rhythm, proportion, and visible timber character should be maintained as far as possible.



Image 4. Timber columns and upper structural rhythm in the prayer hall

Door element

The door functions as the main access and transition between the exterior, the veranda or entrance area, and the prayer hall. It guides the movement of jamaah into the mosque and helps regulate circulation. In a religious building, this transition also has spatial meaning because it marks the movement from everyday exterior space into a worship space. The main door uses timber and a double-leaf form. Its rectangular proportion is simple, functional, and consistent with the surrounding timber wall panels. Field measurement records a door width of about 106 cm and a height of about 195 cm. This dimension is adequate for daily movement and reinforces the human scale of the

building. The opening type also allows the entrance to be widened when needed for congregational activity. The visual character of the door comes from timber material, simple panel divisions, and limited ornament. The door does not dominate the facade, but it works together with carved wall elements to create a harmonious entrance composition. This restrained design is appropriate for a mosque because it supports orientation and identity without excessive visual distraction. As a conservation element, the door should be maintained not only as a functional object but also as part of the building transition system. Replacement, if required, should follow the same proportion, timber expression, and relationship to the carved wall panels. A modern door that ignores these relationships could weaken the historical character of the entrance.

Window element

The window element supports natural lighting, ventilation, and visual connection between interior and exterior. In the observed mosque, side openings are arranged along the prayer hall, allowing daylight to enter during the day. This reduces reliance on artificial lighting and creates a bright interior atmosphere suitable for worship. The windows are large and repeated in a symmetrical arrangement. Documentation indicates that the side openings are placed on both sides of the building, creating balance in the facade and interior rhythm. The broad openings also allow air to move across the prayer hall. This cross ventilation is important in Aceh because a mosque must remain comfortable in a warm and humid climate.

The visual form of the window is closely related to the timber wall and column system. The openings are not separate decorative objects; they are integrated into the structural and wall rhythm. Their repetition creates a sequence that supports spatial order. This relationship confirms that the window is both an environmental device and a visual element. The absence of heavy modern window treatment helps preserve the open and breathable character of the mosque. However, this openness also requires maintenance to manage rain splash, dust, and biological deterioration of timber elements. Conservation should therefore balance openness with careful protection of vulnerable materials.

Ventilation element

Ventilation is achieved through open windows and perforated carved wooden panels rather than through separate modern vents. This condition is important because it shows that environmental comfort is embedded in the architectural language of the mosque. Air can move through the side openings and small ornamental perforations, helping reduce heat and humidity inside the prayer hall. The perforated carved panels are especially significant. They perform a technical function by allowing air and light to pass through, but they also produce visual richness through repeated geometric and floral-inspired patterns. The ornament is therefore not merely decorative. It is a functional environmental element that contributes to the mosque atmosphere.

The position of ventilation elements at wall and upper-wall areas supports the movement of warm air out of the interior. Combined with the roof volume and broad side openings, this arrangement creates a passive cooling strategy. The mosque demonstrates how traditional architecture can use material porosity and spatial configuration to improve comfort without mechanical systems. From a preservation perspective, ventilating ornaments should be treated as high-value elements. Replacing them with plain panels or modern ventilation blocks would reduce both environmental performance and visual identity. Detailed photographic documentation, measured drawings, and periodic timber maintenance are recommended to preserve these elements.

Ceiling element

The ceiling or upper interior element defines the top boundary of the prayer hall. In the mosque, it is visually connected with the roof structure and timber framing. This relationship creates an interior space that feels high, open, and warm. The upper boundary does not function only as a cover. It shapes the perception of scale and contributes to the atmosphere of worship. The material character of the ceiling is dominated by timber color and texture. The visible linear arrangement of boards, beams, and rafters creates a rhythmic composition above the prayer hall. This rhythm corresponds to the column arrangement below, forming a visual relationship between vertical support and upper enclosure. The result is an interior that appears coherent and structurally readable.

In terms of comfort, the ceiling helps reduce direct exposure to the roof covering and gives a more organized interior appearance. Its height and slope support the impression of a larger volume. This spatial quality is important for a mosque because the prayer hall must feel calm, ordered, and sufficiently spacious for communal worship. The ceiling should be maintained as part of the roof and timber structural system. Any replacement material should preserve the visual relationship between columns, beams, ceiling plane, and tiered roof. If the ceiling is covered with a flat modern material that hides the timber rhythm completely, the interior character would be significantly reduced.

Roof element

The roof is the most dominant visual element of Teungku Di Pucok Krueng Old Mosque. It protects the building from rain, sun, and wind while defining the overall silhouette. The tiered form and steep pitch are characteristic of traditional mosque architecture in the Indonesian archipelago. In this mosque, the roof immediately communicates historical identity even from a distance. Functionally, the roof responds to the tropical climate. The steep slope allows rainwater to flow quickly to the edge of the building. The extended roof edges protect the wall and openings from direct rain and excessive sun. The layered roof form also creates a larger upper volume that can support air movement and reduce heat accumulation.

The roof material has changed over time. Earlier coverings such as thatch, palm fiber, or similar traditional materials were commonly used in old regional buildings, while current conditions show a more durable metal-based covering. This material change improves maintenance and weather resistance. However, the conservation value of the roof lies mainly in the preservation of form, pitch, tiered composition, and relationship with the timber structure. The roof should therefore be considered a primary identity element. Its silhouette, vertical hierarchy, and symmetrical organization must be preserved in any future repair. Even when the roof covering needs renewal, the replacement should not change the roof profile, scale, or visual dominance. The tiered roof is the strongest architectural sign that identifies the mosque as a historic Acehnese religious building.

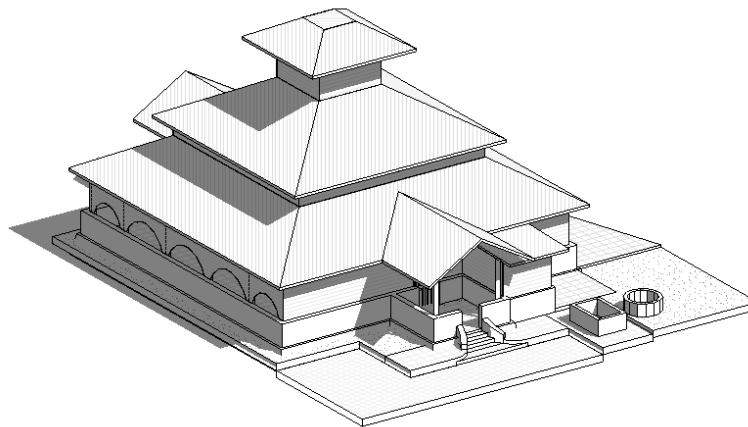


Image 5. Three-dimensional representation of the tiered roof and building mass

Synthesis of architectural character

The eight elements show that the mosque character is produced by the interaction of structure, space, material, climate, and visual expression. The floor supports ritual activity, the walls and ceiling define interior space, the columns and roof sustain the building, and the doors, windows, and ventilation regulate access and environmental comfort. None of these elements works alone. Together, they produce a coherent worship environment. The most important traditional indicators are the timber structural rhythm, carved wooden panels, repeated side openings, and tiered roof form. These elements allow the mosque to remain recognizable as a historic mosque even after material replacement in the floor, wall base, and roof cover. The findings suggest that the preservation strategy should focus on protecting form, proportion, timber craft, spatial openness, and the relationship between the structural system and the roof. The mosque also demonstrates that authenticity in an active religious building is not limited to original material. Authenticity also involves continuity of form, function, spatial experience, craft expression, and community use. Material replacement may be acceptable when it supports safety and maintenance while preserving the architectural character. However, visually dominant and historically meaningful elements require careful conservation planning.

Table 3. Preservation risks and recommended responses for future maintenance

Issue	Risk if unmanaged	Recommended response
Material replacement	Loss of historical reading and inconsistent visual character.	Allow replacement only when it maintains form, proportion, and visual harmony.
Timber deterioration	Weakening of columns, carved panels, ceiling, and roof structure.	Conduct periodic inspection, anti-termite treatment, moisture control, and careful repair.
Earthquake impact	Column inclination, wall cracking, and structural instability.	Use expert structural assessment and reversible reinforcement where possible.
Ventilation alteration	Loss of passive cooling and disappearance of carved ornament value.	Retain perforated timber panels and keep airflow paths open.
Roof repair	Change of silhouette or slope that weakens mosque identity.	Preserve tiered form, pitch, eaves, and visible proportion during maintenance.
Lack of documentation	Future renovations may remove important details unintentionally.	Prepare measured drawings, photographic records, and element-based maintenance guidelines.

Preservation and documentation implications

The identification results suggest that the mosque requires a preservation approach that begins with architectural documentation. Documentation should not be limited to general photographs of the facade. It should record measured dimensions, material conditions, joinery details, carving patterns, roof slope, column spacing, and the relationship between the prayer hall and its openings. These records would become a reference when future maintenance is required and would reduce the risk of replacing historic components with elements that do not match the original character.

The highest priority should be given to timber components because they carry structural, environmental, and aesthetic value at the same time. Columns support the roof, carved panels create ventilation and visual identity, and upper timber elements define the interior atmosphere. Timber is also vulnerable to humidity, termites, and mechanical damage. For this reason, preservation should include routine inspection, moisture control, cleaning, and careful replacement only on damaged parts. Where reinforcement is necessary, the added component should be visually restrained and should not cover the original timber rhythm.

The second priority is the roof because it determines the image of the mosque. The tiered roof form is the strongest visual marker of traditional mosque architecture in the building. Roof maintenance may use durable contemporary covering when needed, but the profile, pitch, eaves, and vertical hierarchy should be preserved. A change in roof slope or tier arrangement would have a greater effect on identity than a carefully selected change of covering material. This distinction is important for community-based decision making because it separates technical maintenance from visual transformation.

The third implication concerns the balance between active use and historical value. The mosque is not an abandoned monument. It remains a worship space used by the community, so cleanliness, safety, and comfort must be maintained. Ceramic floor material, repaired masonry, and durable roof covering can be understood as functional adaptations. These adaptations are acceptable when they support use without erasing the main spatial and visual structure. Conservation planning should therefore identify which parts may be renewed, which parts require preservation, and which parts need specialist assessment before any intervention is made.

Finally, the study indicates that local participation is essential. The community holds knowledge about repairs, material changes, earthquake damage, and daily use patterns. This knowledge complements architectural observation and should be included in a maintenance guideline for the mosque. A practical guideline could contain a list of protected elements, recommended materials, inspection schedules, and documentation procedures before renovation. Through this approach, the mosque can continue to function as a living religious space while its architectural identity remains protected for future generations.

Study limitations and future research direction

This article is limited to visual and qualitative identification. The analysis describes the architectural character of the mosque based on observable elements, documentation, and supporting information, but it does not include laboratory material testing or detailed engineering calculation. Because the building has experienced earthquake impact, a separate structural assessment is still needed to evaluate the capacity of timber columns, joints, roof members, and repaired masonry components.

Another limitation concerns historical chronology. Several material changes were identified from field information and previous documentation, but not all phases are supported by complete archival records. Future research should compare oral history, old photographs, government conservation documents, and measured drawings to reconstruct the development of the mosque more accurately. This would help distinguish original elements, repaired elements, and later additions with better precision.

Future studies may also compare Teungku Di Pucok Krueng Old Mosque with other historic mosques in Pidie Jaya and Aceh. Comparative analysis would show whether the floor pattern, timber column hierarchy, wall composition, carved ventilation, and tiered roof form represent a local typology or a broader regional tradition. Such comparison would strengthen the basis for conservation policy and provide a more complete understanding of Acehese mosque architecture.

CONCLUSION

This study identified eight architectural elements of Teungku Di Pucok Krueng Old Mosque: floor, wall, column or support, door, window, ventilation, ceiling, and roof. Each element performs a specific function while also contributing to the spatial, structural, environmental, and visual character of the building. The floor supports prayer activity and circulation; the wall defines and protects the prayer hall; the timber columns carry the roof and create interior rhythm; the door and windows regulate access, daylight, and air; ventilation supports passive comfort; the ceiling shapes the upper interior; and the roof forms the dominant identity of the mosque. The findings show that the mosque has experienced material changes, especially on the floor, wall base, and roof cover. These changes are related to durability, maintenance, and the continued use of the mosque. However, the main traditional character remains visible through the timber structural system, carved wooden panels, broad side openings, and tiered roof silhouette. This condition indicates that the mosque retains strong architectural identity even though it has adapted to functional needs.

The study concludes that conservation should prioritize elements with high structural, visual, and historical value. Timber columns, carved wooden ventilation panels, wall proportions, and the tiered roof form should be documented and maintained carefully. Material renewal may be acceptable when it preserves form, scale, spatial openness, and visual harmony. This approach allows the mosque to remain a living worship space while protecting its heritage value. The article contributes to architectural documentation by demonstrating the usefulness of element-based analysis for historic mosques. Future research may extend this study through detailed structural assessment, measured drawings, material testing, and comparative analysis with other old mosques in Pidie Jaya and Aceh. Such research would strengthen conservation planning and support community-based preservation of traditional mosque architecture.

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