

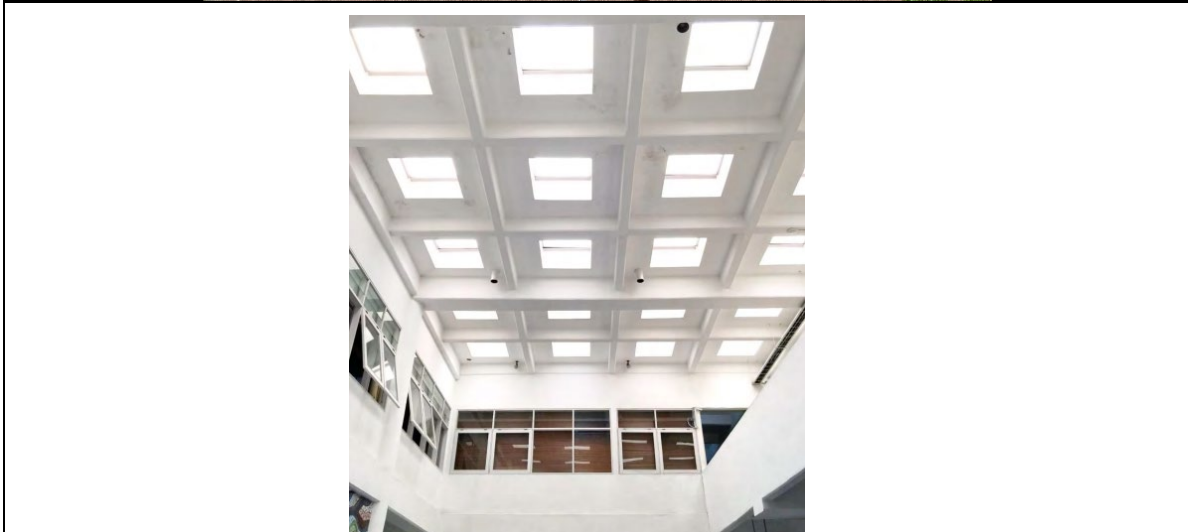


Template for Evidence(s) UI GreenMetric Questionnaire

University : Universitas Sumatera Utara
Country : Indonesia
Web Address : www.usu.ac.id

[2] Energy and Climate Change (EC)

[2.9] Elements of Green Building Implementation as Reflected in All Construction and Renovation Policies



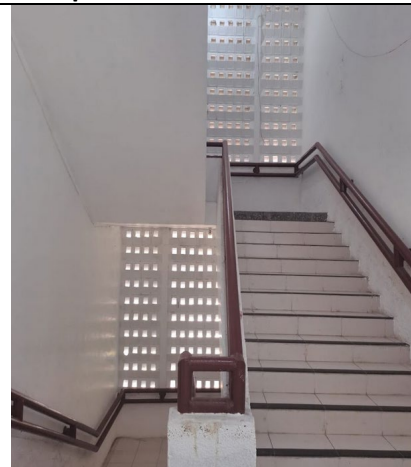
Green Building Implementation-Main Administration Building of Universitas Sumatera Utara



Full Daylighting and Natural Ventilation in USU Teaching Hospital



Full Daylighting and Natural Ventilation at campus Kwala Bekala



Green Building Implementation-Laboratory

Description:

Most of the Universitas Sumatera Utara buildings use natural sunlight for interior lighting. Some buildings with a cantilevered floor design give a shadow to the floor underneath to reduce the solar thermal heat. The use of natural sunlight can also reduce electrical consumption during the day. The USU Teaching Hospital lobby is



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designed with a hot attic chimney system to allow natural air circulation from the ground floor to the roof. It makes the entrance relaxed and comfortable without using the electric air conditioner. Natural ventilation at the hospital occurs due to a difference in air pressure and temperature to drive the air. The design element uses the inner court with a 1:1 ratio with the height of the building; thus, the inner court planted with grass remains shadowed during the day to reduce micro temperature up to 30C. The temperature difference between the inner court and the outdoor space drives the air through the corridors and hospital rooms.