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LEED GREEN ASSOCIATE EXAM
REFRESHER
ONLINE TRAINING BY KRISHNAJI PAWAR
LEED AP(BD+C),GSAS CGP,GCP,ISO 14001
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MODULE 9

Location and Transportation

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LEED GREEN ASSOCIATE EXAM REFRESHER

The lecture delves into LEED strategies and technologies, starting with Location & Transportation (LT), focusing on factors like site selection and location, considering environmental, economic, and community aspects in green building projects.

Learning Objectives

- Introduction and Course Outline
- Knowing the Process of LEED Credentialing
- Basic Concepts of Sustainable Design
- Organizational Fundamentals
- LEED Green Building Rating System
- LEED Certification Process
- Getting a LEED Green Associate Credential
- Integrative Strategies
- Location and Transportation
- Sustainable Sites

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INTRODUCTION

- The lecture discusses the strategies and technologies within LEED categories, starting with Location & Transportation (LT).
- The focus is on factors applicable to site selection and location, such as compact development, alternative transportation methods, and community connectivity.
- Location is crucial in sustainable design as it impacts the ecosystem and water resources required.
- Factors to consider include the site's fit into existing infrastructure, potential contamination, and potential habitats for endangered species.
- Carbon emissions should be evaluated due to transportation requirements.
- Public transportation access, parking availability, and community value should be considered when choosing a site.

LOCATION AND TRANSPORTATION

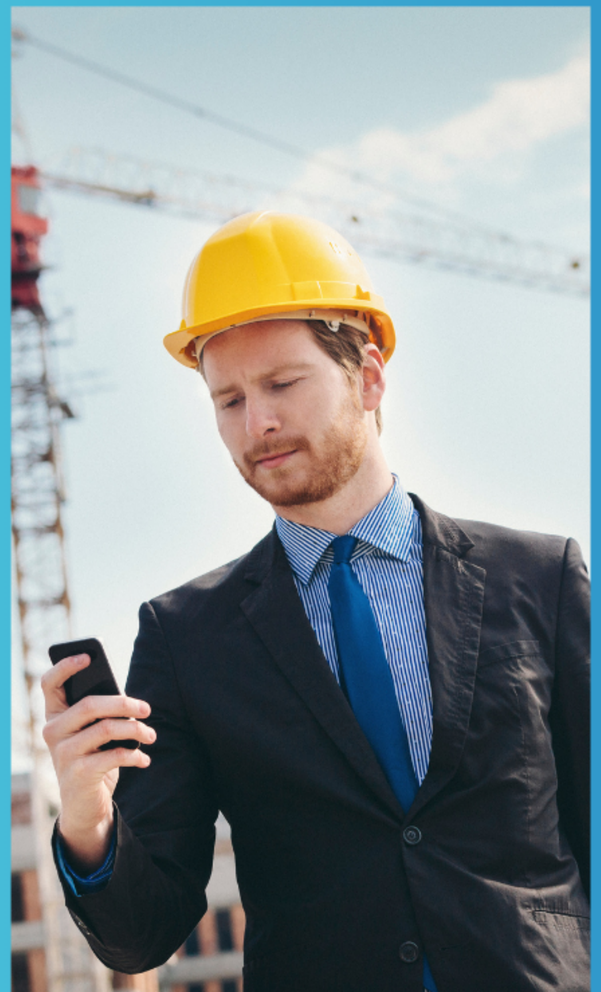
To help evaluate a potential project site, the LT category within the LEED rating systems is broken down into three factors:

- Location
- Transportation
- Neighborhood pattern and design





SUSTAINABLE SITE SELECTION STRATEGIES



- Increase building density to maximize square footage and minimize land impacts.
- Choose redevelopment and infill development to improve community quality and efficiency.
- Locate near existing infrastructure to save money and avoid urban sprawl.
- Protect habitats by preserving wildlife and open space with minimal disturbance.
- Increase diversity of uses to connect people with necessary services.
- Encourage multiple modes of transportation, such as pedestrian paths and bicycle networks, to integrate with public transportation.

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TRANSPORTATION

- Transportation accounted for 33% of U.S. greenhouse gas emissions in 2008 and 13.5% globally.
- Green buildings can reduce vehicle trips and promote sustainable modes of transportation.
- Environmental benefits include reduced pollution and vehicle emissions.
- Economic benefits include reduced need for roadway construction and maintenance.
- Social component improves human health by increasing walking or biking accessibility.



TRANSPORTATION STRATEGIES





- Choose sites adjacent to mass transit for easy access to public transportation.
- Limit parking capacity to encourage mass transit or bicycle commuting.
- Encourage bicycling by installing bike racks and showers for convenience.

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STRATEGIES FOR REDUCING TRANSPORTATION IMPACTS

- Encourage carpooling: Provide reserved and preferred parking spaces or reduced parking rates for carpools and vanpools.
- Encourage or provide alternative fuel vehicles: Encourage occupants to use low-emission vehicle types with reserved parking spaces.
- Incentivize building users/employees: Offer reserved parking spaces or parking discounts for multioccupancy vehicles.
- Support alternative transportation: Implement vehicle sharing programs, city-wide trolley systems, or other alternatives to reduce single-occupant automobile commuters.





NEIGHBORHOOD PATTERN AND DESIGN



- LEED ND has the largest impact on reducing transportation impacts associated with buildings.
- Project teams are encouraged to expand site selection strategies to the neighborhood scale.
- The rating system promotes pedestrian access and walking as primary transportation.
- Street grid density should be evaluated to determine a neighborhood's pedestrian-friendlyness.
- The rating system encourages diversity of use to promote walking and reduce car dependency.
- A diversity of businesses and community services minimizes travel length.

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STRATEGIES FOR NEIGHBORHOOD PATTERN AND DESIGN

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- Design walkable streets: Limit speed limits, design buildings for wide sidewalks, and consider building height-to-street-width ratio.
- Include pedestrian amenities: Shade, benches, and trees.
- Use compact development strategies: Increase residential and commercial square footage.
- Promote connectivity: Prohibit culs-de-sac and gated communities.
- Provide diverse land uses: Civic buildings, retail shops, and restaurants.
- Create a diverse community: Support diverse household types, ages, sizes, and income levels.
- Support access to sustainable food: Include community gardens and farmer’s markets.
- Ensure easy access to grocery stores: Provide healthy resources to residents.



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