

LL 5: Community Resources / Transit

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Intent

Encourage the building of LEED homes in development patterns that allow for walking, biking, or public transit (thereby minimizing dependency on personal automobiles and their associated environmental impacts).

Requirements

Prerequisites

None.

Credits

Note: For new multihome developments, the distances below can be measured from the center of the community as long as the distance from the center of the community to the farthest home does not exceed ¼ mile. Using this approach, whole communities can qualify for this credit. For any homes farther than ¼ mile from the center of the community, distances must be recalculated for each home.

5.1 **Basic Community Resources / Transit** (1 point). Select a site that meets one of the following criteria:

- Located within ¼ mile of four basic community resources (**Table 1**).
- Located within ½ mile of seven basic community resources (**Table 1**).
- Located within ½ mile of transit services that offer 30 or more transit rides per weekday (combined bus, rail, and ferry).

OR

5.2 **Extensive Community Resources / Transit** (2 points). Select a site that meets one of the following criteria:

- Located within ¼ mile of seven basic community resources (**Table 1**).
- Located within ½ mile of 11 basic community resources (**Table 1**).
- Located within ½ mile of transit services that offer 60 or more transit rides per weekday (combined bus, rail, and ferry).

OR

5.3 **Outstanding Community Resources / Transit** (3 points). Select a site that meets one of the following criteria:

- Located within ¼ mile of 11 basic community resources (**Table 1**).
- Located within ½ mile of 14 basic community resources (**Table 1**).
- Located within ½ mile of transit services that offer 125 or more transit rides per weekday (combined bus, rail, and ferry).

Transit rides per weekday are calculated as follows: (1) within a ½ mile radius, count all the transit stops; (2) multiply each transit stop by the number of buses, trains, and ferries that pass through that stop per day; (3) add the total number of rides available at each stop within ½ mile together. Example: If there are four bus stops, and at each

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bus stop the service frequency is half-hourly (48 times per day), the total transit rides per day is 192.

Table 1. Types of Basic Community Resources

- | |
|---|
| <input type="checkbox"/> Arts and entertainment center |
| <input type="checkbox"/> Bank |
| <input type="checkbox"/> Community or civic center |
| <input type="checkbox"/> Convenience store |
| <input type="checkbox"/> Daycare center |
| <input type="checkbox"/> Fire station |
| <input type="checkbox"/> Fitness center or gym |
| <input type="checkbox"/> Laundry or dry cleaner |
| <input type="checkbox"/> Library |
| <input type="checkbox"/> Medical or dental office |
| <input type="checkbox"/> Pharmacy |
| <input type="checkbox"/> Police station |
| <input type="checkbox"/> Post office |
| <input type="checkbox"/> Place of worship |
| <input type="checkbox"/> Restaurant |
| <input type="checkbox"/> School |
| <input type="checkbox"/> Supermarket |
| <input type="checkbox"/> Other neighborhood-serving retail |
| <input type="checkbox"/> Other office building or major employment center |

Note: Up to two of each type of community resource may be counted. For example, two restaurants within ¼ mile may be counted as two community resources; four restaurants also count as two.

Synergies and Trade-Offs

A project receiving points for LL 1 is not eligible for points under LL 2–6, and vice versa.

LL 5.1 Basic Community Resources / Transit

LL 5.2 Extensive Community Resources / Transit

LL 5.3 Outstanding Community Resources / Transit

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Locating housing in communities with nearby existing resources reduces the number of cars that households need and therefore reduces a family's overall expenses and time spent in the car. It also creates more vibrant neighborhoods with better access to employment centers, transportation systems, schools, shopping, general services, and civic amenities. Increasing numbers of people enjoy in-town living or residing in and around mixed-use communities.

Living near community resources or mass transit options reduces the number and length of daily auto trips. According to the Bureau of Transportation Statistics, vehicle use in the United States nearly tripled, from 1 trillion to 2.99 trillion miles per year, between 1970 and 2005. Vehicles are responsible for more than 20 percent of U.S. greenhouse gas emissions (Energy Information Administration, Emissions of Greenhouse Gases in the United States 2005). Vehicle emissions contribute to climate change, smog, and particulate pollution, which all are harmful to human health and natural ecosystems. Neighborhoods with clusters of community services also tend to be more walkable and encourage a more active lifestyle.

In this credit, points are given to projects located near abundant local community resources, such as shops or services within walking distance or mass transit options like buses and rail. Homeowners in such communities are more likely to live near their workplaces and within easy reach of nearby activity centers.

Approach and Implementation

Where possible, build new homes on sites that are within or near existing communities that have resources in walking distance of access to mass transit options like buses and light rail. In semiurban and suburban communities, locate near bus routes, railways, and other mass transit corridors.

Design mixed-use projects by including commercial and other nonresidential spaces in any multifamily developments. Community resources that are included in the development can be counted in the calculation for these credits.

Contact the local transit agency to obtain information on existing or planned transit routes and the headways of each route that meet the thresholds in the requirements. Ideally, this information will be provided in a geo-referenced format. Using a GIS buffer analysis, identify sites that have adequate transit service per the requirements. Also get information about the frequency of transit stops for use in calculating total transit stops.

Contact local agencies, including chambers of commerce, to identify community resources near the project site or to find a potential project site with sufficient concentrations of community resources. In many cases, an online map program such as Google Maps can identify certain kinds of community resources; resources identified in this way must be verified on the ground, since these web pages are not always current.

In multi-home developments, incorporate walkways and bike paths throughout the development—both near the streets and between green spaces—that enable easy

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pedestrian access to the broader community beyond the development.

Calculations

Count the total number of community resources that are within $\frac{1}{4}$ mile and $\frac{1}{2}$ mile. Up to two of each type of community resource may be counted. For example, in LL 5.1, two restaurants can count for two of the four community resources within $\frac{1}{4}$ mile. A project that wants to count a community resource that is not listed must submit a Credit Interpretation Request to USGBC.

Developers of larger communities can measure the distance to the community resource from the center of the community, as long as the distance from the center to the farthest home does not exceed $\frac{1}{4}$ mile. Using this approach, whole communities can be qualified for this credit. For any homes farther than $\frac{1}{4}$ mile from the center of the community, distances must be recalculated for each home.

Calculate *transit rides per weekday* as follows:

1. Count all transit stops that are within $\frac{1}{2}$ mile of the home. In the case of large developments, count the distance from the center of the development;
2. For each transit stop, count the number of times a bus, train, or ferry stops per day;
3. Sum the total number of rides per day for each stop within $\frac{1}{2}$ mile.

Example: If there are four bus stops, and at each bus stop the service frequency is half-hourly (48 times per day), the total transit rides per day would be 192.

Exemplary Performance

No additional points are available for exemplary performance.

Verification and Submittals

Builder / Project Team:

- Present maps and/or a list of community resources or transit modes to the Green Rater.
- If applicable, present calculations for transit rides to the Green Rater.

Green Rater:

- Visually verify (using maps, lists provided by the project team, and/or on-site observation) the presence of community resources or transit rides, as per the credit requirements.
- If applicable, visually verify calculations for transit rides.

Considerations

Economic Issues

Although the cost of land near community resources may be higher, access to abundant transportation choices and other community resources can significantly increase the value and marketability of a home.

Environmental Issues

Increased automobile travel is one of the most damaging consequences of sprawl. People living and working in outlying developments tend to drive greater distances. Vehicle emissions contribute to climate change, smog, and particulate pollution, which are harmful to human health and natural ecosystems. In addition, the parking and roadway surfaces required to support vehicle travel consume land and nonrenewable resources, disrupt natural stormwater flow, and enlarge urban heat islands.

Regional Variances

The availability of community resources and public transit varies considerably by region. In some regions of the country, public transit is extensive and community

resources are clustered. In regions not well served by transit, this credit will likely be available only for projects located near existing town centers.

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Resources

Web Sites

Best Workplaces for Commuters

www.bestworkplacesforcommuters.gov/index.htm

(888) 856-3131

This program, established by the Environmental Protection Agency and the Department of Transportation, publicly recognizes employers for exemplary commuter benefits programs. It provides tools, guidance, and promotions to help employers incorporate commuter benefits into their employee benefits plan, reap financial benefits, and gain national recognition.

Victoria Transportation Policy Institute

www.vtppi.org

This independent research organization provides consulting and publicly available research about solutions to emerging transportation issues, such as transportation demand management.

Print Media

“The Influence of Land Use on Travel Behavior: Empirical Strategies,” by Reid Ewing and Robert Cervero. *Transportation Research, Policy and Practice* 35: 823–45, 2001.

Hidden in Plain Sight: Capturing the Demand for Housing Near Transit. Center for Transit-Oriented Development. Reconnecting America, 2004.

Our Built and Natural Environments: A Technical Review of the Interactions between Land Use, Transportation, and Environmental Quality. Development, Community, and Environment Division. U.S. Environmental Protection Agency, 2001.