LEED®ing Development to Sustainable Mobility

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TDM AND LAND DEVELOPMENT SESSION
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WHAT IS LEED®?

Work undertaken has been based on LEED 2009

- Reduce energy consumption from transportation
- Includes examination of distance to transit stops and stations
- Provide bicycle parking
- Provide shower and locker facilities
- TDM Plans to meet reduction in single occupant vehicle trips
For some projects certification may be the catalyst to incorporate sustainable transportation programming

Specific point allocated for Sustainable Mobility

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<th>Demonstrated % Reduction in Conventional Commuting Trips</th>
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Do we need LEED® or can we use another approach to encouraging sustainable transportation at the site and neighbourhood levels? What are we doing to ensure that there is integration between sustainable mobility and neighbourhood planning?
HOW CAN SUSTAINABLE MOBILITY BE IMPLEMENTED

Transportation demand management measures seek to modify travel behaviour (demand) in ways that reduce both the number of single-occupant fossil fuel-powered vehicles and the levels of peak-period traffic in order to make more efficient use of the available transportation capacity (supply). Broadly speaking, these objectives can be achieved by encouraging people to make more trips by walking, cycling, transit and carpooling and other sustainable modes of transportation; by shifting to off-peak travel times; and by making locational choices that lead to fewer and shorter trips being made.

City of Markham Official Plan

TDM is aimed at changing travel patterns by reducing the amount of travel and shifting travel to non-peak periods or more efficient travel modes. Benefits include enhanced quality of life: lower traffic congestion, better air quality, improved public health and safety, greater economic competitiveness and increased flexibility in the face of fossil fuel shortages. The policy is as follows: The Town shall develop and implement in conjunction with Halton Region, Metrolinx and the Province, Transportation Demand Management initiatives to reduce single-occupant vehicle travel, lesson congestion on the Town’s road system, especially during peak periods and facilitate more sustainable travel behaviour. The Actions are to:

• Incorporate TDM policies in the Official Plan; and
• Development and implement a TDM Program.

Town of Halton Hills TMP
Policies are a great step to encouraging the integration of sustainable mobility and Neighbourhood Planning

But...we need something more concrete

AND

Something that has been proven
These programs can enhance use of sustainable transportation:

- At businesses
- In communities
- For customers
A Citizen’s Guide to LEED for Neighborhood Development:
How to Tell if Development is Smart and Green
LEED-ND IN COMMUNITIES

Location
- Pick the right location
- Walkable
- Reduce car dependence
- Smart growth strategies - in existing areas where there are a mix of uses

- Mixed use communities that support the use of walking, cycling and transit are rewarded by a number of points through the LEED-ND system
Transit-oriented developments are known to increase the use of transit and active travel modes.

- Reduces greenhouse gas emissions with the reduction in the use of single-occupant vehicle travel.
- Reduces demand for parking and the amount of land dedicated to parking and travel.
- Credit allocated through reducing automobile dependence; transit facilities and TDM.
Community design impacts mobility
Small towns can be more geared to sustainable mobility
Natural mix of uses within walking distance
Basic needs are met within short distances from home
What has happened to this form of development?

The rendering shows the central square of a prototypical neighborhood for east El Paso, Texas. Through changes in El Paso’s zoning regulations, the inclusion of public spaces such as the one shown can again become a feature of new neighborhoods.
DID YOU KNOW...

There are lots of shops within a 5 minute walk

#WalkBridgewater
Using the principles of the LEED-ND certification, the following are incorporated into neighbourhood design:

- Walkable streets
- Reduced parking
- Bicycle friendly design
- Mixed uses and community space

Do we need a certification program or should we be developing our communities in this way regardless??

Should we look at how we developed our communities of the past
WHAT DO WE NEED TO CREATE SUSTAINABLE MOBILITY – BASED COMMUNITIES?

- Do we need to use the LEED-ND certification program to ensure our communities are sustainable and support sustainable mobility options?
- Maybe not – this program includes a number of other elements that may not be relevant to our work.
- But it does help set out the principles for the development of a built environment that supports the use of sustainable modes such as transit, cycling and walking.
- Or do we need to look back and bring the community design principles of the past into today’s communities?
  - In other words, do we move away from segregated land uses and incorporate pleasant streetscapes, opportunities for social engagement; daily services and conveniences?
  - Yes
LEED-ND is one approach to improving the use of sustainable modes
Integrated public health and land use policies can support sustainable mobility
Communities built on these principles are more sustainable, lead to healthier populations and overall improvements to the social fabric of the community
For example

One landmark study of San Francisco compared three neighborhoods identical except for the levels of vehicle traffic on their streets. It revealed that residents of the neighborhood with the lowest level of car traffic had three times as many friends and twice as many acquaintances as their more heavily trafficked counterparts. (wri.org)
CONCLUSIONS

LEED, LEED ND and other programs that support mixed-use, walkable and community-focused developments are needed to encourage the use of sustainable transportation. Policies, development criteria and zoning can be used to provide the framework. Single-use developments need to be reconsidered. Suburbs need to be reimagined. Cooperation between all sectors involved in community development and planning.
THANK YOU

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