



Photo Credit: Ian Freimuth

Walkability

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Walkability is defined as “the extent to which the built environment supports and encourages walking by providing for pedestrian comfort and safety, connecting people with varied destinations within a reasonable amount of time and effort and offering visual interest in journeys throughout the network” [Southworth, 2005 quoted in Martin, 2016 p. 6]. Communities that place pedestrians first and prioritize safe, well connected and diverse active transportation infrastructure are shown to be more vibrant, healthy, social and economically prosperous. [8].

Planning for walkability in rural and remote communities has important **safety, health and equity benefits**. A study by the Toronto Centre for Active Aging revealed that, pedestrians are 5x more likely to be killed if struck by a vehicle on a rural road, and that although only 19% of the Canadian population lives rurally, 25% of all pedestrian fatalities occur on rural roads (Verlinden, 2016). Additionally, residents of rural and remote communities “report lower physical activity levels, are more likely to be obese, and are at higher risk of circulatory diseases” (p. 4). Lastly, planning walkable communities is about planning equitable communities. In rural areas where there is very little or no transit, owning a car is a necessity. Those with mobility issues, no vehicle access or no license (like the elderly) may have significant challenges moving about their communities (World Health Organization, 2007; Verlinden, 2016).

Communities that place pedestrians first are safer, healthier, more socially active, and economically prosperous.

Finally, making streets more complete by prioritizing walkability and other active modes, helps to give an economic boost to the community (Quednau, 2018, Verlinden, 2016) and by “slowing traffic, widening sidewalks, adding trees or pedestrian crossings [communities] can increase property values, improve retail sales and attract private investment” (Verlinden, 2016, p. 5). For remote communities, these improvements can “enliven a historical main street” (Verlinden, 2016, p.5), connect significant local landmarks and trail networks (Burden et al., 2020), and bolster tourism. (See Figure 1).



Photo Credit: Dan Burden

Figure 1: Still from Burden et al., Walkability and Health. (1:05)

Street Design - Altamont NY

In the town of Altamont NY, the small rural community implemented a street design that physically separates pedestrian infrastructure from the road. Wide sidewalks



Photo Credit: Alta Planning + Design

Figure 2: Separated Sidewalk design in Altamont, NY

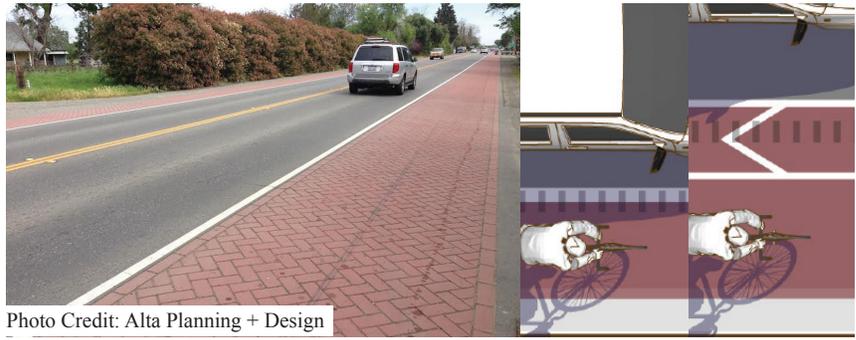


Photo Credit: Alta Planning + Design

Figure 3: SR 16 Paved shoulder - Creating visual separation with pavement striping

(6-8') buffered by parking lanes, curb extensions and street trees foster a safe and comfortable walking environment. Curb extensions create accessible road crossings at both intersections and midblock, by improving pedestrian visibility, bringing walkers to street level, and decreasing exposure to traffic while crossing (Burden, et al., 2020). The sidewalk also features clear edges on either side and street furnishings such as signage and lighting to allow for spontaneous social interaction, adequate resting places and visibility (Burden, 1999; Burden et al., 2020). (See Figure 2).

Ideally, sidewalks should be physically separated from roads (particularly high volume and high speed traffic routes). However developing fully separated pedestrian facilities can be expensive and therefore difficult to implement in some rural and remote communities.

State Route 16 (SR 16) Capay/Esparto Improvement

Only one highway connects the small farming communities of Capay and Esparto in the Capay Valley in California. The SR 16 serves as the vital link for the regions commercial and agricultural industries, but also, in the small and remote community of Capay (pop. 133), the SR 16 serves as the communities main active transportation corridor. Because of this, the California Department of Transportation identified that this stretch of highway needed a collision reduction strategy to improve overall safety of the corridor. **In the absence of separate facilities, visual separations in the form of paved shoulders on the edge of SR 16 were widened to serve as a safer more functional space for pedestrians.** Enhanced traffic calming measures included pigmenting and texturing the shoulder, restriping, improving signage, and architectural, landscaping, and lighting improvements (Alta Planning + Design). (See Figure 3).

Paved shoulders best serve long-distance and regional travel for pedestrians and cyclists



Photo Credit: Yvonne Verlinden

Figure 4: ScreenShot from Backgrounder: Rural Complete Streets

Hudson Avenue Active Living Corridor

When simple pavement striping does not provide an adequate buffer for pedestrians and cyclists, extra buffering measures can be implemented. In Thunder Bay, Ontario, safety in the Active Living Corridor (connecting rural communities with Thunder Bay's largest recreation area) was enhanced with reflective flexi-posts to keep vehicles from travelling on the buffer zone.

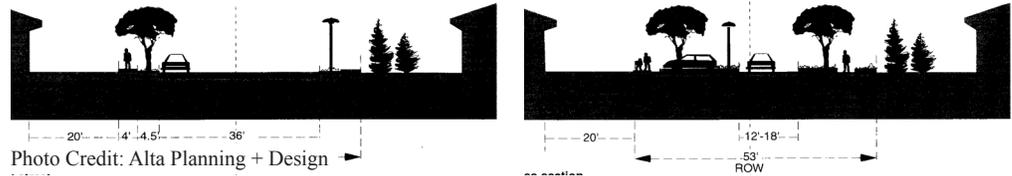


Photo Credit: Alta Planning + Design

Figure 5: Screenshot from Ben-Joseph, *Changing the Residential Street Scene*, p.508.

Re-thinking Walkability - Living Streets

Streets should be designed as social spaces where people meet, move freely and play

The Living Street (or Woonerf) is a type of street design for pedestrians. Invented in the Netherlands, **the Woonerf was design to be a social space where people can meet, move freely, walk, cycle, and children can play safely** (Ben-Joseph, 1995; Steinberg, 2015). Living Streets are characterized by 4 key principals. **Visible entrances** clearly indicating that this is a pedestrian environment and **Physical barriers** that control traffic and improve pedestrian safety in the space. The Living Street is a **shared and paved space** intended to serve all street users. Typically there is no physical separation between the pedestrian and motorized vehicular uses. Lastly, Living Streets are made to feel like the street is an extension of the front yard. They accomodate **landscaping and street furniture** to create intimate and social spaces that are accessible and safe to all users (Steinberg, 2015).



Photo Credit: Lior Steinberg

Figure 6: Kleine Applestraat in Groningen

Final Thoughts

Since the mid 1900's streets have been designed for cars. By design, urban transportation networks have favoured the automobile and for almost a century, the pedestrian environment has been largely ignored or planned only as an afterthought (Ben-Joseph, 1995). Healthy streets do a better job of encouraging walking and cycling as primary methods to move around the community. This is of particular importance in rural and remote communities because they present a host of unique transportation challenges and can be especially hostile environments for pedestrians (Verlinden, 2016). By designing better streets and reducing automobile dominance in the streetscape, rural and remote communities can be safer and more walkable. In small towns where the majority of social amenities and open spaces are already within walking distance, improving pedestrian safety, means that seniors will be able to age in place as their communities will encourage their success by supporting their mobility and social needs. Finally, in the remote communities experiencing economic and population declines, adopting walkable community development strategies that focus on taking care of their community first can boost the aesthetic of the community, making it an attractive place for private investment and tourism.



Photo Credit: Alta Planning + Design

Figure #[4]: Planted buffer

Sources:

- Alta Planning + Design. (Date unknown). Visually Separated: Paved Shoulder [Website]. Retrieved from <https://ruraldesignguide.com/visually-separated/paved-shoulder>
- Burden, D., Fenton, M., Shaeffner, D. (2020). Walkability and Health: Building Strong Vibrant and Resilient Communities - Part I and II. *Smart Growth Online* [Youtube], Retrieved from <https://www.youtube.com/watch?v=JFkbejUrATw>.
- Ben-Joseph, E. (1995). Changing the Residential Street Scene: Adapting the shared street (Woonerf) Concept of the Suburban Environment. *Journal of the American Planning Association*, 61(4),504-515
- Burden, D. (1999). Street Design Guidelines for Healthy Neighbourhoods. *Urban Street Symposium*, 17, 1-15.
- Martin, C. (2016). Walkability. *School of Planning, Dalhousie University*.
- Steinberg, L. (2015). Woonerf. Inclusive and Liveable Dutch Street. Humankind.city. Retrieved from <https://www.humankind.city/post/woonerf-inclusive-and-livable-dutch-street>.
- Verlinden, Y. (2016). Backgrounder: Rural Complete Streets. Toronto Center for Active Transportation [PDF]. Retrieved from <https://www.completestreetsforcanada.ca/wp-content/uploads/2019/01/Rural-Complete-Streets-final.pdf>
- Quednau. (2018). Why Walkable Streets are more Economically Productive. Strongtowns.org. Retrieved from <https://www.strongtowns.org/journal/2018/1/16/why-walkable-streets-are-more-economically-productive>
- World Health Organization. (2007). Age-friendly Cities: A Guide. WHO Press: Paris, France.

Images:

Title:

Freimuth, I. (Date unknown). Naperville's Walkable Downtown. JPEG, retrieved from <http://www.placemakers.com/2018/04/03/healthiest-neighborhoods-both-walkable-and-green/>

Figure 1

Burden, D., Fenton, M., Shaeffner, D. (Date unknown). *Walkability and Health: Building Strong Vibrant and Resilient Communities - Part I*. YouTube, uploaded by Smart Growth Online, 12 Jun. 2020, ScreenShot retrieved from <https://www.youtube.com/watch?v=JFkbejUrATw>.

Figure 2

Alta Planning + Design. (Date unknown). Physically Separated: Sidewalk in Altamont, NY. Small Town and Rural Design Guide. JPEG, retrieved from <https://ruraldesignguide.com/visually-separated/paved-shoulder>

Figure 3

Alta Planning + Design. (Date unknown). (Date unknown). Visually Separated: Paved Shoulder in Capay, CA. Small Town and Rural Design Guide. JPEG, retrieved from <https://ruraldesignguide.com/physically-separated/sidewalk>

Figure 4

Verlinden, Y. (2016). *Backgrounder: Rural Complete Streets*. Toronto Center for Active Transportation. ScreenShot, retrieved from <https://www.completestreetsforcanada.ca/wp-content/uploads/2019/01/Rural-Complete-Streets-final.pdf>

Figure 5

Burden, D., Fenton, M., Shaeffner, D. (Date unknown). *Walkability and Health: Building Strong Vibrant and Resilient Communities - Part I*. YouTube, uploaded by Smart Growth Online, 12 Jun. 2020, <https://www.youtube.com/watch?v=JFkbejUrATw>.

Figure 6

Steinberg, L. (2015). Kleine Appelstraat in Groningen. Humankind.city. JPEG, retrieved from <https://www.humankind.city/post/woonerf-inclusive-and-livable-dutch-street>.

Alta Planning + Design. (Date unknown). Visually Separated: Paved Shoulder [Website]. Retrieved from <https://ruraldesignguide.com/visually-separated/paved-shoulder>

Alta Planning and Design is a full service planning, landscape architecture and engineering company focused on active transportation and design. Ruraldesignguide.com is a satellite website of Alta Planning and Design that provides resources and guidelines on designing roads that promote active transit and walkability in small town and rural transportation corridors.

Burden, D., Fenton, M., Shaeffner, D. (2020). Walkability and Health: Building Strong Vibrant and Resilient Communities - Part I and II. Smart Growth Online [Youtube], Retrieved from <https://www.youtube.com/watch?v=JFkbejUrATw>.

Dan Burden is America's foremost expert on urban and suburban walkability. Founder of many not-for-profits and a director at Blue Zones, his work is focused on developing healthy communities through active living and community building. He held a seminar delivered with Fenton and Shaeffner discussing active transportation and administer walkability audits. In it they discuss the features of and social benefits of walkable streets, and how to implement design features to provide safe and interesting pedestrian infrastructure.

Ben-Joseph, E. (1995). Changing the Residential Street Scene: Adapting the shared street (Woonerf) Concept of the Suburban Environment. Journal of the American Planning Association, 61(4),504-515

The Netherlands adapted a new residential street typology whose purpose was to challenge the fundamental notion of segregating pedestrians and vehicles. The Woonerven (living/shared street) emphasized the integration of traffic and pedestrian space as a positive principal for street planning. This was widely adopted in the Netherlands and eventually drew significant attention globally. The shared street was then adapted to countries like the, Israel, Japan, Australia and the US where it was implemented in various suburban and rural communities. Those communities, like the ones in the Netherlands have also noticed considerable reductions in traffic accidents, increased social interaction and play and a high degree of resident satisfaction.

Burden, D. (1999). Street Design Guidelines for Healthy Neighbourhoods. Urban Street Symposium, 17, 1-15.

An article by Dan Burden highlighting a shift in the way that communities, planners and engineers think about and plan streets. The realization that reducing car dependence and planning for more walkable, bike-friendly and transit oriented communities is the way to effectively reduce non-essential motorized trips. In the article, Burden identifies a set of guidelines for healthy neighbourhood development by outlining the various street typologies found in typical residential neighbourhoods and illustrating the desired proportions of the streetscape, provisions for on-street parking, street furnishing, sidewalks and other community amenities that make the streets more walkable and liveable.

Martin, C. (2016). Walkability. School of Planning, Dalhousie University.

This is a piece of literature that aims to identify key trends in walkability and pedestrian plans in 5 Canadian city regions. The goal is compare pedestrian planning approaches to

inform planners, government officials and community members how to design and implement future pedestrian plans. This article was useful in this research because it provided a good definition of what the term walkability means in the context of planning pedestrian friendly environments.

Steinberg, L. (2015). Woonerf. Inclusive and Liveable Dutch Street. Humankind.city. Retrieved from <https://www.humankind.city/post/woonerf-inclusive-and-livable-dutch-street>.

Human Kind is an urban design and planning company dedicated to challenging traditional ways of urban thinking and doing. Their mandate is to combine urban planning, social innovation and urban change strategies into vision and action. The website features a blog where planners can exchange ideas and concepts this entry is about the Woonerf concept. The blog entry illustrates how the woonerf has taken hold as a pedestrian first, social and playful hub that grants access to vehicles. The Woonerf has become a permanent street typology in the Netherlands and is becoming more accepted globally as a result of its success at transforming the street into a truly mixed use space, safe for all users.

Verlinden, Y. (2016). Backgrounder: Rural Complete Streets. Toronto Center for Active Transportation [PDF]. Retrieved from <https://www.completestreetsforcanada.ca/wp-content/uploads/2019/01/Rural-Complete-Streets-final.pdf>

A study by Yvonne Verlinden and the Toronto Center for Active Transportation focused on active transportation infrastructure in rural Ontario communities. The study revealed that statistically, rural areas are more hostile places for pedestrians than urban environments and because of this there is a need for further research into active transportation infrastructure in rural and remote communities. The author suggests four key areas where active, walking and cycling infrastructure could have dramatic and measurable impacts on rural communities. These are; safety, health, equity and economy. The author argues that active transportation infrastructure in rural areas can directly decrease pedestrian collisions and deaths, increase physical activity levels, reinforce equitable environments for those that can't drive or have mobility issues, and active transportation infrastructure means a healthier, nicer looking community and attractive to private investment and tourism.

Quednau. (2018). Why Walkable Streets are more Economically Productive. Strongtowns.org. Retrieved from <https://www.strongtowns.org/journal/2018/1/16/why-walkable-streets-are-more-economically-productive>

Strongtowns.org is an online resource dedicated to urban planning education, advocacy and action. The website hosts a collection of articles, podcasts, courses and general information about urban planning and changing the way we think about and advocate for the health of our urban communities. In the Why Walkable Streets are more Economical, the author illustrates how a study conducted on the tax revenue generated by the businesses and real estate in walkable communities in various US towns far exceeds the revenue generated in non-walkable communities. The argument is that walkable communities foster diversity, healthy and active living, and access to social amenities that non-walkable communities don't and this influences the economic value of walkable communities in an immensely positive way.

World Health Organization. (2007). Age-friendly Cities: A Guide. WHO Press: Paris, France.