prioritizing physical space
envisioning livable streets:
a new set of values
new priorities
transportation is about people
streets should be designed
streets should be safe attractive for everyone
IN SOME CITIES, STREETS OCCUPY CLOSE TO 40% OF LAND AREA

40% = the public realm
Congress for the New Urbanism
Street Network Principles

CNU + SERA
Sustainable Street
Network Principles
Project for Transportation Reform
Street networks support communities and places.

Street networks attract and sustain economic activity.
Maximize opportunity for transportation choice.
All streets are safe and walkable.

The activity of walking is the fundamental unit for building the street network.
Integrate the street network with the natural system at all scales.

Sustainable street networks celebrate the natural and built environment.
Congress for the New Urbanism and ITE Recommended Practice

Designing Walkable Urban Thoroughfares: A Context Sensitive Approach
ITE manual replaces “design speed” with “target speed”

Design of the thoroughfare encourages desired operating speed

Design ensures that actual speeds will match the target speed

The manual details design factors which influence target speed

1. target speed
Now, design is controlled by “urban” or “rural” context

ITE manual broadens the choices for context

Uses the urban transect, which includes context zones ranging from suburban to high density urban

Land uses govern level of activity

Level of activity in turn governs design of the street
The design vehicle dictates lane width and curb-return radii

Now, the design vehicle = the largest design vehicle that may use a thoroughfare, regardless of frequency

ITE manual recommends the evaluation of tradeoffs in urban areas

Selecting largest vehicle may be undesirable and impractical

Impacts to pedestrians and other modes are usually inconsistent with community vision

3. design vehicle
Functional classification describes a street’s theoretical function and role in the network.

Also governs certain design parameters.

ITE manual acknowledges that the actual function of a street may be different.

Physical design of the thoroughfare is determined by the street type (thoroughfare type) designation.

4. functional classification
implementing livable street principles and guidance: studies support
Pedestrian component of street design

Sidewalk width

What minimum sidewalk width is considered necessary for a transit-oriented pedestrian district?

Sidewalk Corridors

Section A • Guidelines for Sidewalk Corridors


A-5

there is no pattern of existing sidewalk improvements in the area.

A3  DESIGNING AND IMPLEMENTING SIDEWALK CORRIDOR IMPROVEMENTS

A3.1 Zones in the Sidewalk Corridor

The Sidewalk Corridor is typically located within the public right-of-way between the curb or roadway edge and the property line. The Sidewalk Corridor contains four distinct zones: the Curb Zone, the Furnishings Zone, the Through Pedestrian Zone, and the Frontage Zone. Each of these four zones is discussed in detail in the sections that follow. Table A-1 provides guidelines for recommended widths of these zones under various street conditions.

A3.1a Constraints in the Sidewalk Corridor

Most of Portland's street system has already been built, and in many cases the existing Sidewalk Corridor is too narrow to accommodate the recommended zone widths. Competing needs for space in a constrained Sidewalk Corridor can be resolved in either of two ways: by compromising on the minimum required clearance for some or all of the zone or by increasing the dimensions of the Sidewalk Corridor.

The resolution of such conflicts in any given case must be based on considerations of balancing the conflicting uses and adjusting the magnitude of the solution to fit the magnitude of the project. Table A-1, on p. A-12, shows two constrained Sidewalk Corridor conditions that are commonly encountered on existing streets and gives the recommended zone widths for these conditions. In addition, Table A-2, beginning on p. A-14, gives siting criteria for many individual elements normally located within the Sidewalk Corridor of the right-of-way, such as utility poles, signals, signs, etc., with suggested contingency measures where siting criteria cannot be met.

A3.1b Widening the Sidewalk Corridor

In some cases, it is possible to increase the dimensions of the Sidewalk Corridor, either through acquisition of right-of-way or public walkway easements, or by reallocation of the overall right-of-way (such as by narrowing travel lanes or reducing the number of lanes). As part of a roadway reconstruction project on a street
safety and public health

Matthew Trowbridge, MD, MHP

[Graph showing the relationship between impact speed (mph) and percentage of fatalities. Source: Ashton & Mackay (1979)]
economic health of cities

Joe Cortright
and CEOs for Cities
other barriers to implementation
Highway design manuals currently in use

Institutional, organizational and cultural barriers

Funding priorities

Jurisdictional boundaries

other barriers to implementation
example:

AASHTO Green Book, TRB Highway Capacity Manual
also ITE Trip Generation Manual

prioritize autos and emphasize speed

are built into law in many jurisdictions

highway design manuals currently in use
example:

“Language barrier”

Multidisciplinary teams often need two engineers on projects—one with local DOT credibility, and one with knowledge of latest research.

institutional, organizational, cultural barriers
example:

DOT priorities are defined by incomplete or flawed data

Dedicated funds for safety improvements focus on auto only

OR DOT Safety Priority Index System (SPIS) misses simple low cost solutions for bikes and pedestrians

funding priorities
example:

Level of service for autos at intersection

State uses volume/capacity ratio

Local cities and counties use level of service (LOS)
technical challenges in adapting livability to different contexts
1) rural highways linking towns and main streets

2) urbanizing highways in cities

3) humanizing big streets

4) rehabilitating main streets from “highway-ization”

5) when you can start over
context:

urbanizing highways in cities
82nd Avenue existing conditions

82nd Avenue with streetscape improvements
- Vegetated medians to soften the streetscape and provide access management
- Stormwater planters to manage runoff, introduce vegetation to the streetscape, and serve as a buffer between vehicles and pedestrians
- Bury utility lines to remove sidewalk obstructions (as identified by 82nd Ave. Crash Corridor Safety Plan)
- Enhanced pedestrian crosswalks
- Use landscape to create an "edge" to the sidewalk when buildings are set back from the sidewalk
- Consider consolidating driveways and removing unnecessary curbcuts
- Existing property line private dedication to allow for wider, 15' sidewalks
- Sidewalks are too narrow (15' required by PDOT Pedestrian Guidelines)
- Obstructions within the sidewalk
- No "edge" to the sidewalk
- No buffer between pedestrians and moving vehicles
- Numerous curbcuts create conflict between pedestrians and vehicles
- Lack of street trees or other vegetation results in an overly-harsh environment
- Sidewalks are too narrow (15' required by PDOT Pedestrian Guidelines)
82nd Avenue existing conditions

82nd Avenue with streetscape improvements

- vegetated medians to soften the streetscape and provide access management
- stormwater planters to manage runoff, introduce vegetation to the streetscape, and serve as a buffer between vehicles and pedestrians
- bury utility lines to remove sidewalk obstructions (as identified by 82nd Ave. Crash Corridor Safety Plan)
- enhanced pedestrian crosswalks
- use landscape to create an “edge” to the sidewalk when buildings are set back from the sidewalk
- existing property line
- private dedication to allow for wider, 15’ sidewalks
- consider consolidating driveways and removing unnecessary curbcuts
- sidewalks are too narrow (15’ required by PDOT Pedestrian Guidelines)
- obstructions within the sidewalk
- lack of street trees or other vegetation results in an overly-harsh environment
- no buffer between pedestrians and moving vehicles
- no “edge” to the sidewalk
- numerous curbcuts create conflict between pedestrians and vehicles

OR Highway 213, 82nd Avenue
context 3:

humanizing big streets
Franklin Boulevard, Eugene, Oregon
complete streets | livable streets | streets for people

new vision

new research supports

need to address other barriers

livability can be adapted to different contexts

summary
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