Transit and Context Sensitive Solutions

CSS Workshop
"Context Sensitive Solutions & Designing Walkable Urban Thoroughfares"
TUESDAY, JULY 27, 2010


Grin & Bear It
By Fred Wagner
1.24
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Wagner
"We're gonna need roads...lots of 'em!"

Context Sensitive Solutions
(pedestrian, transit, bike)

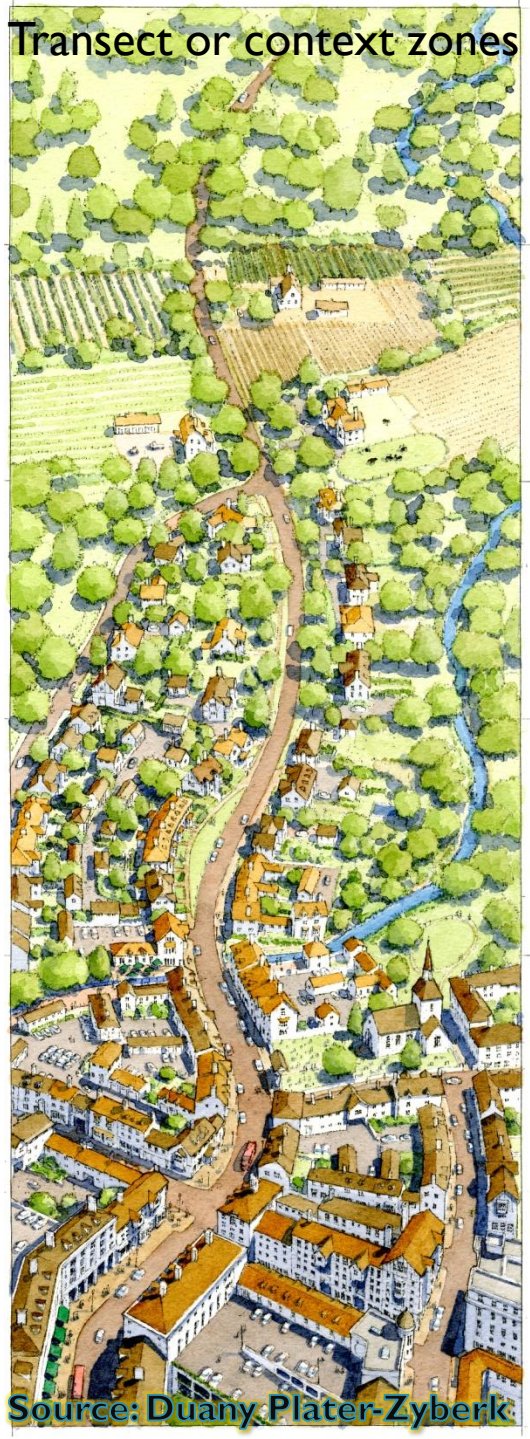
- AASHTO based system – the roadway setting is simply defined as being either urban or rural

- The number of different highway types is quite small

- Conversely, German guidelines use a complex system that distinguishes between a large number of roadway types

- There are three different criteria for determining the roadway setting
  - is the road outside or within a built-up area?
  - is the road framed by buildings?
  - is the roadway used largely for vehicular or pedestrian access or does it serve the role as a public gathering place?

Transect or context zones



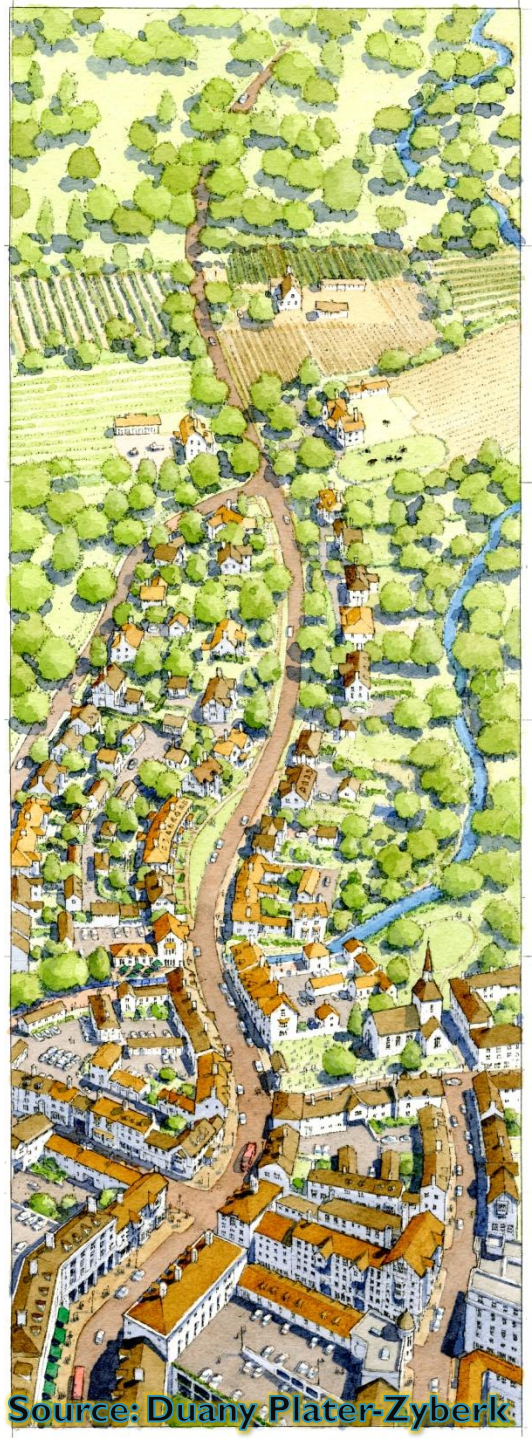
Source: Duany Plater-Zyberk

- Implicit understanding that roadways serve many functions beyond that of simply carrying vehicular traffic.

- For example, the German EVI is a roadway that is commonly designed as a public meeting place and excludes vehicular traffic.

- In general, the German system includes community friendly streets as part of the regular design scheme. In the USA, such roads can only be considered as an exception to the accepted design standard.

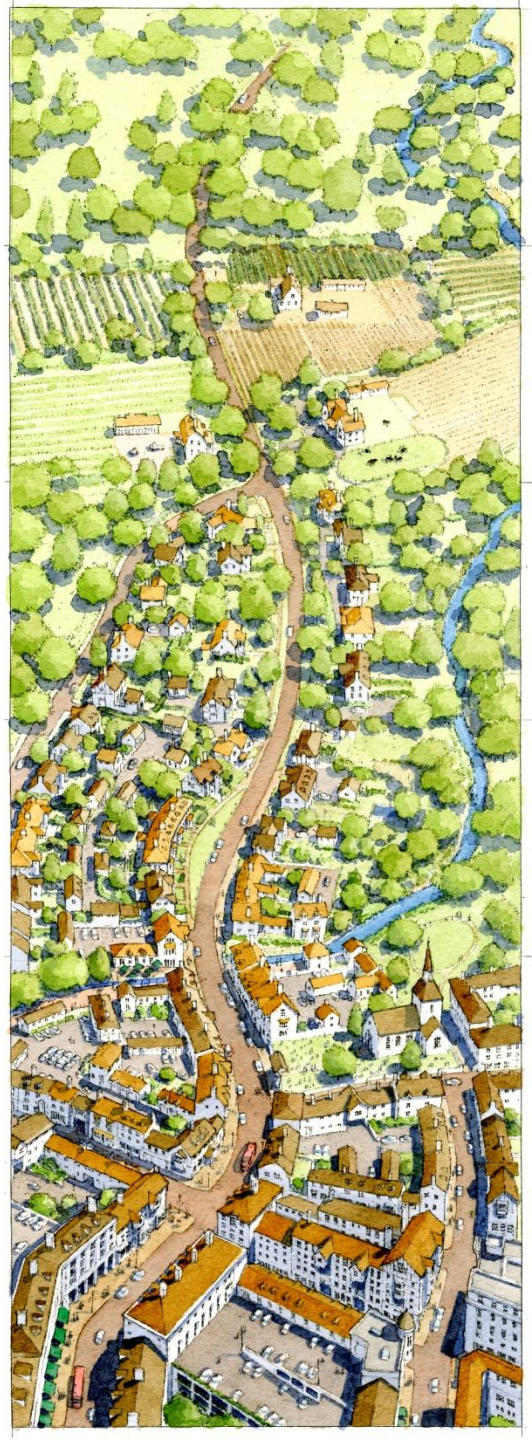
  - While the American guides suggest nine different categories, the German guide defines twenty-two highway classifications.



Source: Duany Plater-Zyberk

Smart Code
Form Based Code

Streets designed with all users in mind help connect transit to destinations – work, stores, school, and home. Every transit trip requires crossing the street at least once, and a complete streets policy ensures those streets have safe crossings and accessible sidewalks to get passengers, regardless of ability, from the bus or train to where they need to go.



Context Sensitive Solutions versus Complete Streets

The Federal Complete Streets Act of 2009 defines Complete Streets as:

"A roadway that accommodates all travelers, particularly public transit users, bicyclists, pedestrians (including individuals of all ages and individuals with mobility, sensory, neurological, or hidden disabilities), and motorists, to enable all travelers to use the roadway safely and efficiently."

The complete streets framework includes not only retrofitting existing streets to increase safety for all, but changing project scoping, planning procedures, and design standards so that streets are routinely designed with all users in mind from the outset. The related concept, CSS, emphasizes designing roadways with the surrounding context in mind.

Functions of a "Complete Street"

- Moving
- Meeting
- Marketing

Moving


ELLIS
O'FARRELL
PARK
UXOF
7Y19168


VTA


HOTEL
SAN DIEGO
901
DOWNTOWN
SAN DIEGO


F
FISHERMAN'S
WHARF
1815

Meeting

Marketing

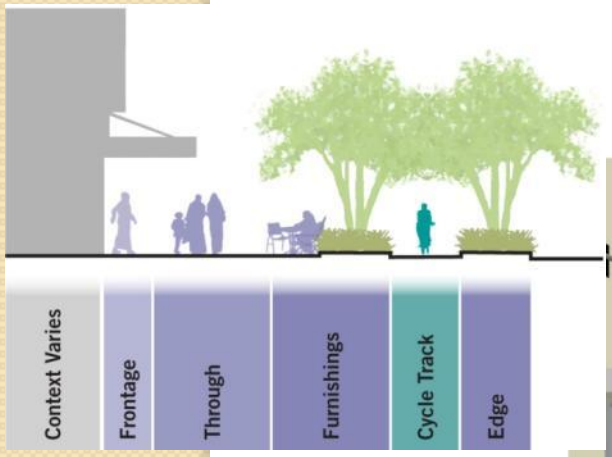

VARZ
LANUKAWI
6 50

Challenges for Planners:

Taming the Urban Freeway

Creating a better public realm

Pedestrian Realm Zones



Frontage	Through	Furnishings	Cycle Track	Edge
Space between the building façade, wall or fence and the through zone of the pedestrian realm	Obstacle-free space for clear pedestrian through travel. This is the primary walking area of the pedestrian realm	Primary buffer space between the active pedestrian walking area of the through zone and adjacent thoroughfares	Designated track for bicyclists; may not be required on some streets	Interface between the on-street parking or travel lane


STARBUCKS COFFEE
Barnes & Noble
Context
Roadside
Traveled Way


STARBUCKS COFFEE
Barnes & Noble
Frontage Zone
Throughway Zone
Edge Zone

Role of Transit Stops & Amenities:

- Linkage with adjacent land uses
- Functionality as part of the street system
- Linkage with the community and the transit agency
- Design components suggesting a "sense of place" and permanence

Roadside amenities

What makes a good stop?

- High visibility
- Good access & a nice pedestrian environment
- Human-scale details
- Lighting
- Well-maintained
- Information

All modes are accommodated on this Portland street

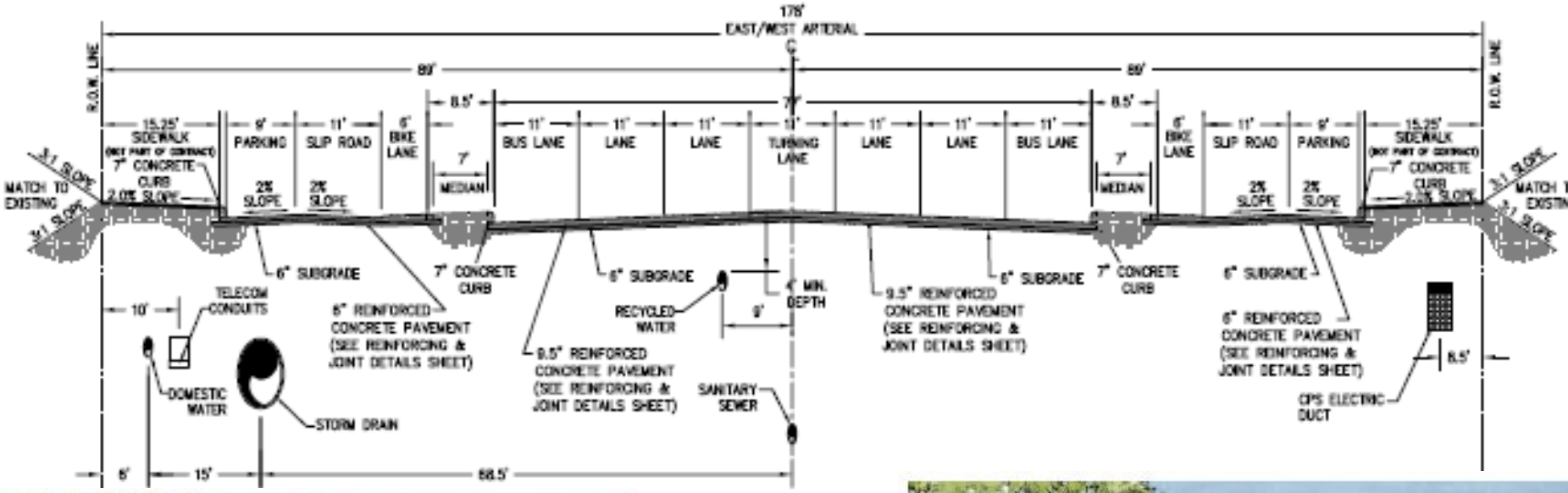
Long Range Comprehensive Transportation Plan

Examples of coordination between the City, Developers, Planners, and VIA

- Verano and Texas A&M SA
- 24th/Cupples at Our Lady of the Lake
- Olmos Park Planning Workshops

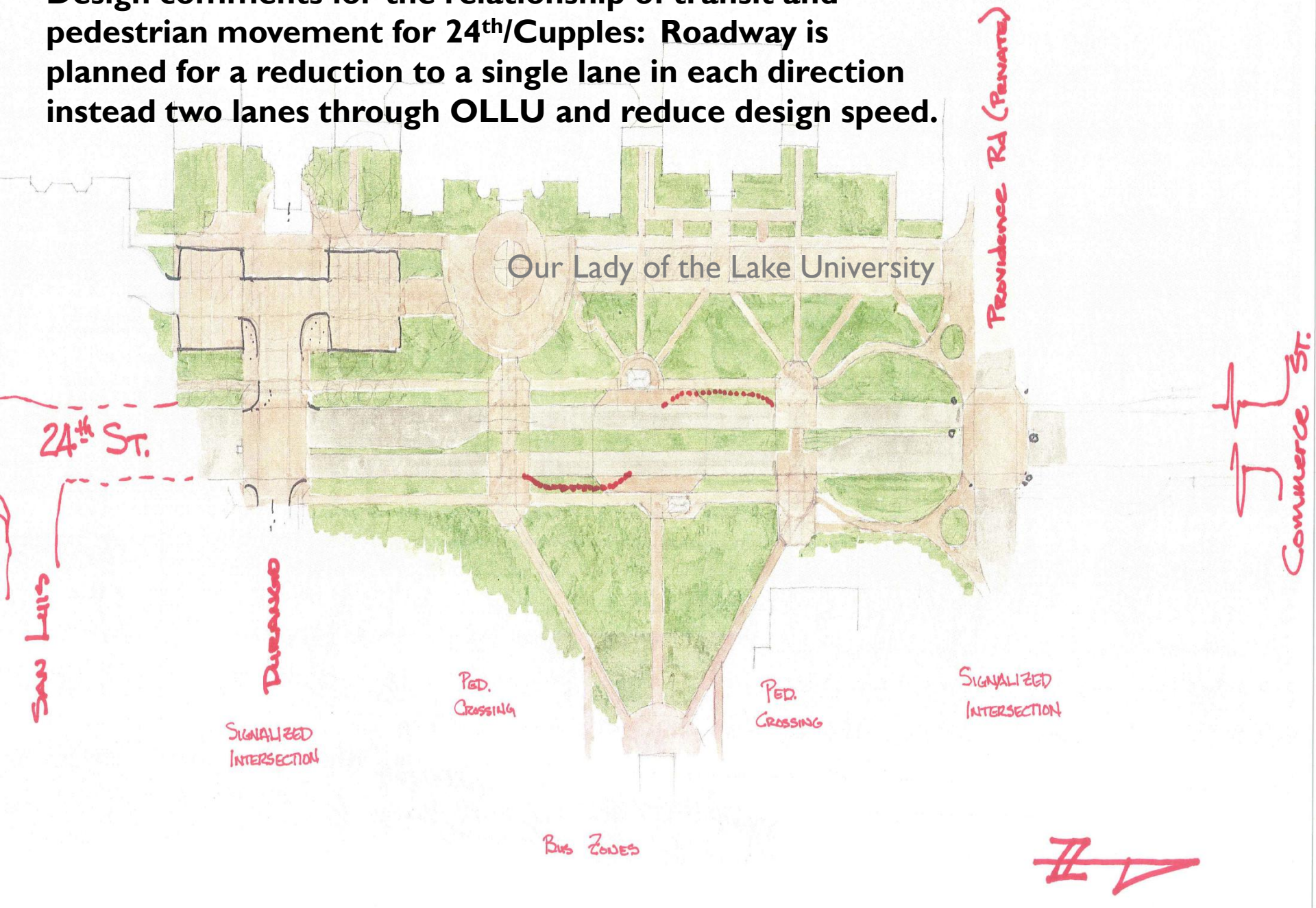
TYPICAL STREET CROSS SECTIONS
EAST/WEST ARTERIAL W/ TURN LANE
(STA. 29+50 TO STA. 76+00)

(NOT TO SCALE)



*Renderings from Texas A&M Master Plan

Design comments for the relationship of transit and pedestrian movement for 24th/Cupples: Roadway is planned for a reduction to a single lane in each direction instead two lanes through OLLU and reduce design speed.




The City Of
Welcomes You
SPEED LIMIT 25 M.P.H. UNLESS OTHERWISE POSTED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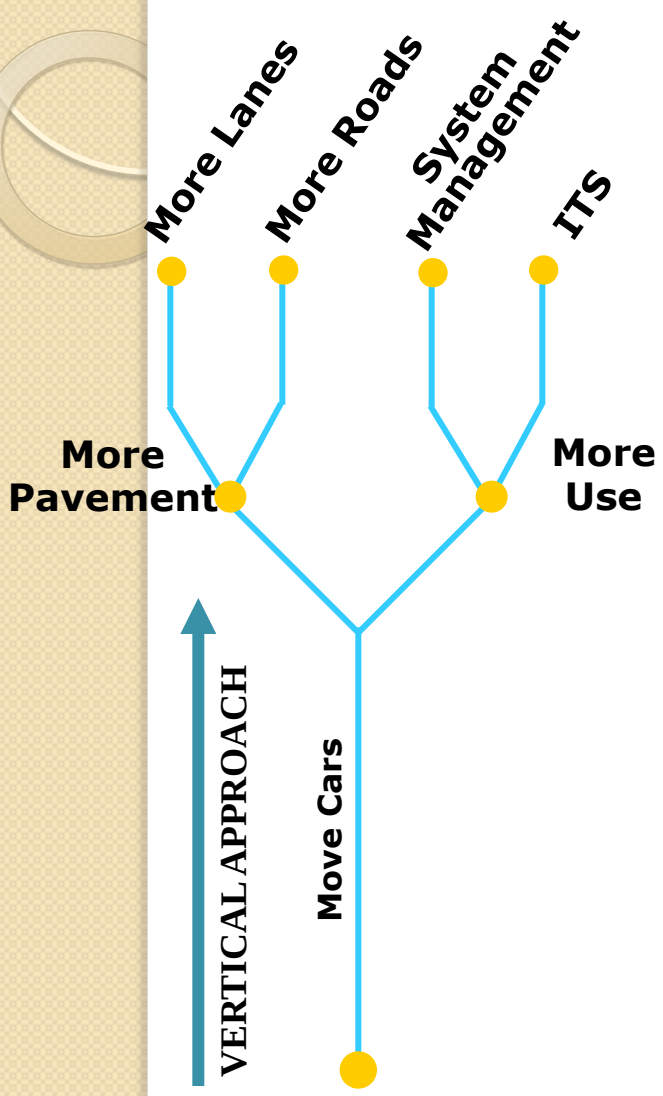
Welcomes You
SPEED LIMIT 25 M.P.H. UNLESS OTHERWISE POSTED

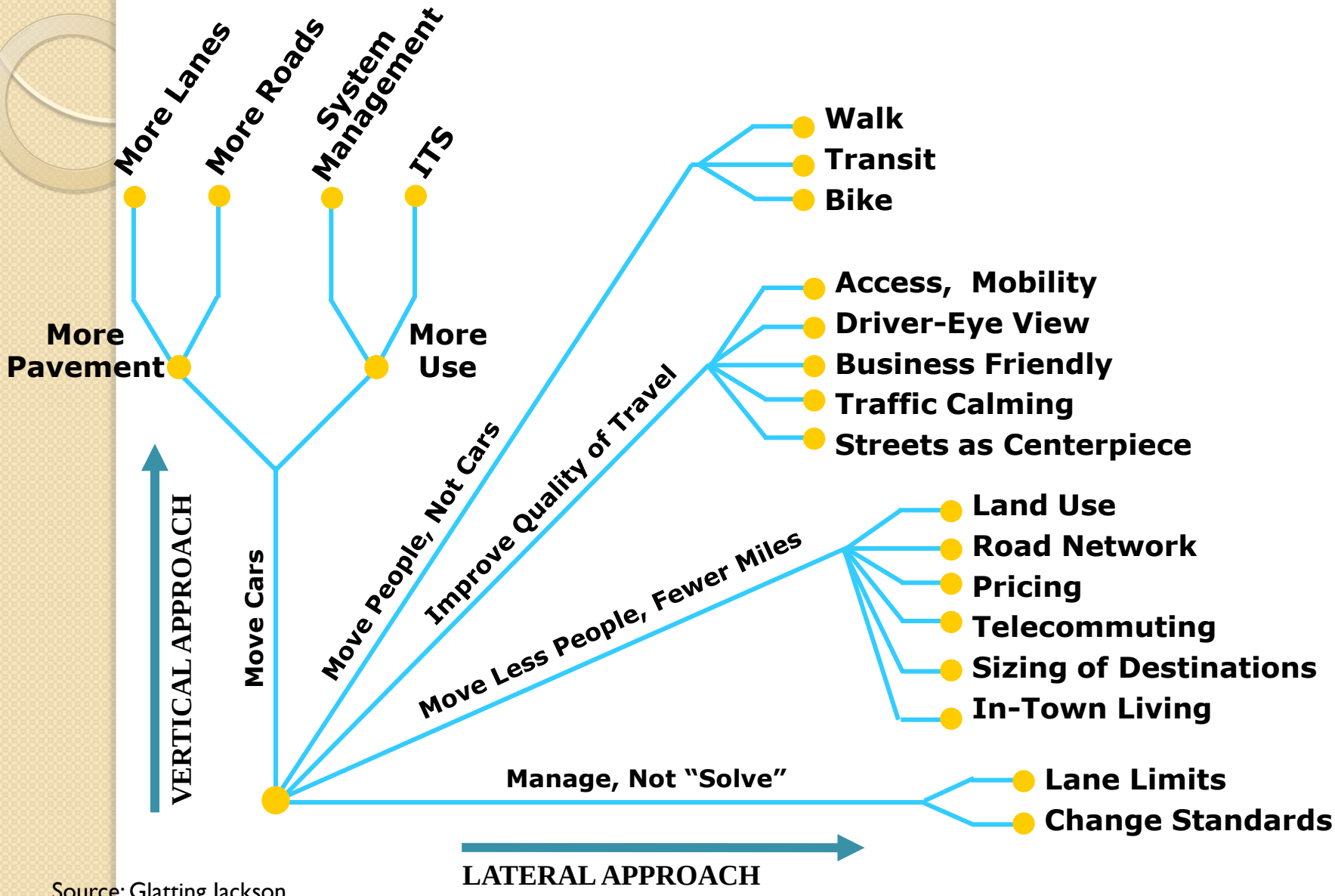
Olmos Park roadside issues

Two lane or four lane?



Source: Glatting Jackson

Vertical or Lateral? Alternative Approaches to Managing the Transportation System Supply & Demand



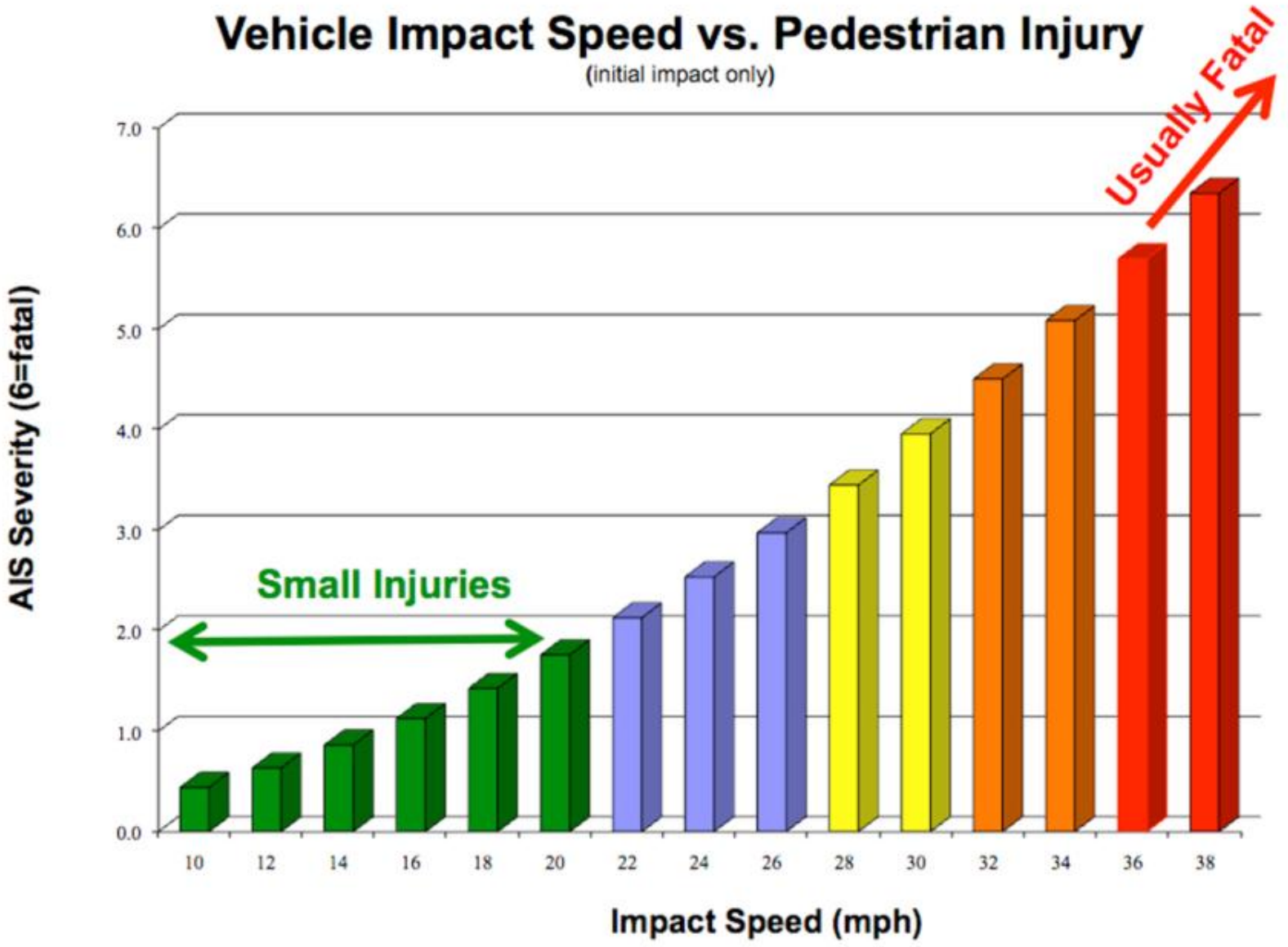
Source: Glatting Jackson

Existing conditions produced by the conventional system along Columbia Pike.

The effect of new standards for the public realm and private building placement.

An illustrated vision for future private development.

* Mary E. Madden & Bill Spikowski ULI

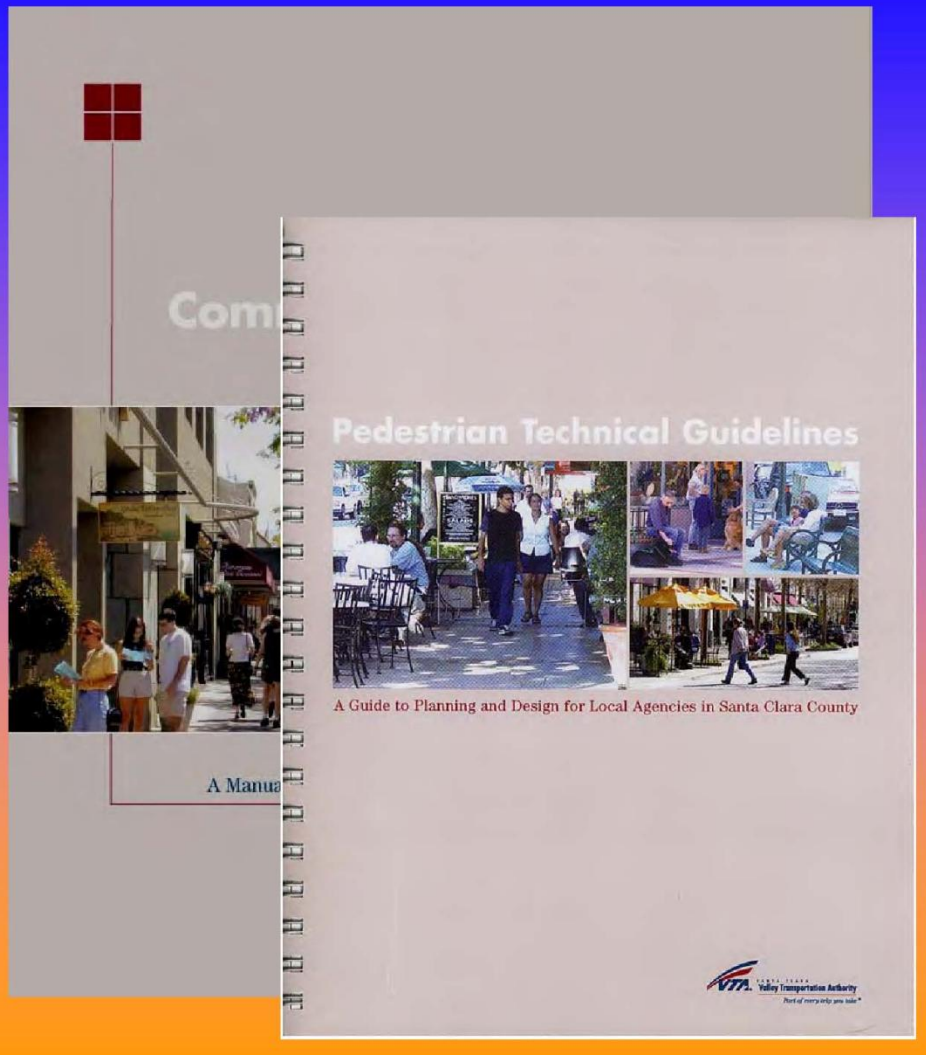

Vehicle Impact Speed vs. Pedestrian Injury
(initial impact only)
AIS Severity (6=fatal)
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
Usually Fatal
Small Injuries
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
Impact Speed (mph)

Planning Tools – Santa Clara VTA

Toolkits

A Manual of Best Practices for Integrating Transportation and Land Use

Pedestrian Technical Guidelines



Community Design & Transportation (CDT) Program

- Tool for education, advocacy and incentives
- Incentives Programs
  - Planning grants
  - Capital grants
- Planning and design guidelines
- Cores, corridors and station areas
- Local endorsement
- Manual of Best Practices for Integrating Transportation and Land Use

BIG PICTURE IDEAS

Planning and Partnerships form the foundation for designing and delivering effective transit service, and permeate all aspects of efficient, aesthetic, and safe transit systems. With robust partnerships between VTA, local jurisdictions, developers and communities the presence and performance of the bus transit system can be optimized to reach its full potential. Four general categories where partnerships are essential are presented below:

- **System performance** concerns total travel time; that is in addition to in-vehicle travel time, the time it takes to walk to the stop and the time waiting for transit. Walk and wait times are affected by both the location and spacing of bus stops. It also concerns the reliability of transit. Street and signal treatments can reduce the influence of traffic and make bus service more efficient and reliable.
- **Traffic operations** concerns the affect of the location and design of bus stops on traffic. Minimizing traffic delays for other vehicles may be the priority at some stops while maximizing transit operations and passenger convenience may take priority at others.
- **Safety and security** concerns pedestrians, transit riders, buses, and general traffic flow at or near bus stops. Security generally concerns the perception of personal security from other persons. Issues arising from this include providing lighting, ensuring stops are visible from the street and nearby land uses, and avoiding locations with hidden areas. Security issues involve residents, businesses, transit riders, and bus drivers.
- **Integration with land uses** concerns with the long-range vision of transit's role within a community. To realize the full potential of transit service, the transit "system" must be integrated into the fabric of everyday life—transit should have a "place" within the community. Equally important is the need to consider transit early in the

This bus by-pass lane and signal priority in San Diego allows transit to move easily through a congested intersection.

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Santa Clara, CA

El Camino Real

The Pay Off

- Create a sense-of-place and permanence for the transit system
- Transit becomes a more appealing option
- Attract new riders and existing riders to ride more often
- Have a positive role in contributing to the quality of the urban environment, and the overall quality of life

Questions?

Streets designed with all users in mind help connect transit to destinations – work, stores, school, and home. Every transit trip requires crossing the street at least once, and a complete streets policy ensures those streets have safe crossings and accessible sidewalks to get passengers, regardless of ability, from the bus or train to where they need to go.