Complete Streets: Promises and Proof

TSITE Winter Meeting
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THE UNIVERSITY OF MEMPHIS | Southeast Transportation Workforce Center

THE UNIVERSITY OF MEMPHIS Herff College of Engineering

U.S. Department of Transportation
Federal Highway Administration

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Talking Points

- What are Complete Streets?
- Promised Benefits
- Flawed Logic
- Case Studies
- What's Next for Complete Streets?

What are Complete Streets?

- Streets as Conveyance
- Standard Network Improvement Problem
  - Minimize travel time
  - Often benefit/cost analysis
    - Travel time savings at some $ value of time
    - Yields automobile-focused designs
- Pro: benefit/cost analysis is easy
- Cons:
  - Induced demand
  - Limited space
  - One-size-fits-all

Image credit: GAFollowers

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- Streets as Space
  - Broad set of benefits
  - Emphasis on ALL users, ALL modes
- Pros:
  - Diverted demand
  - Efficient use of space
  - Context-Sensitive*
- Cons:
  - Awareness
  - Cost
  - Hard to compare

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What are Complete Streets?

Complete Streets extend focus to ALL users and ALL modes:

- Transit
- Pedestrians
- Bikes
- Cars
- Shared micromobility
- Vendor/café space
- Elderly
- Users with disabilities

....with an emphasis on safety and context

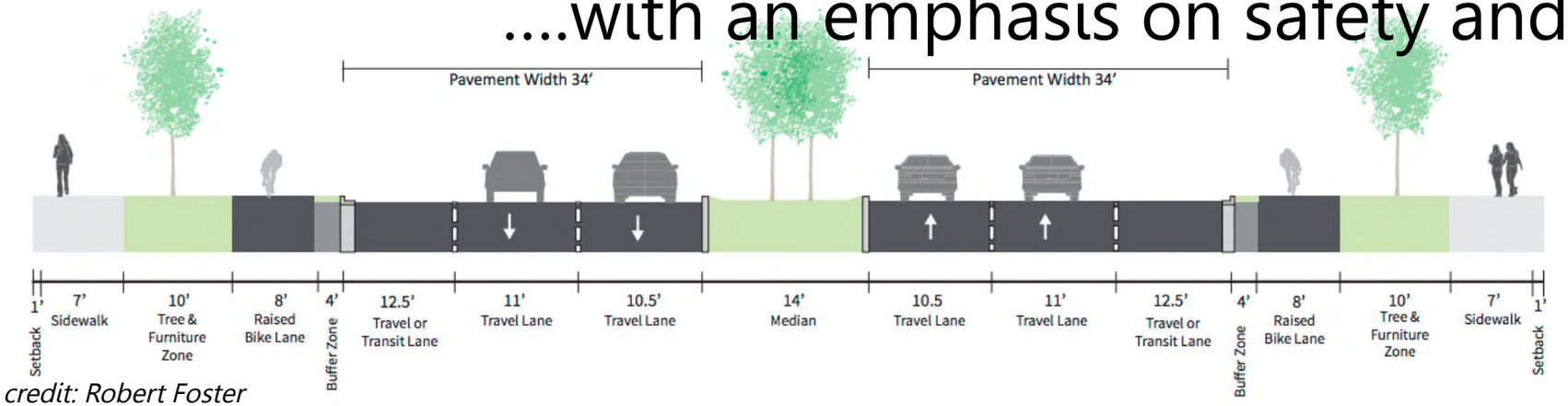

Image credit: Robert Foster

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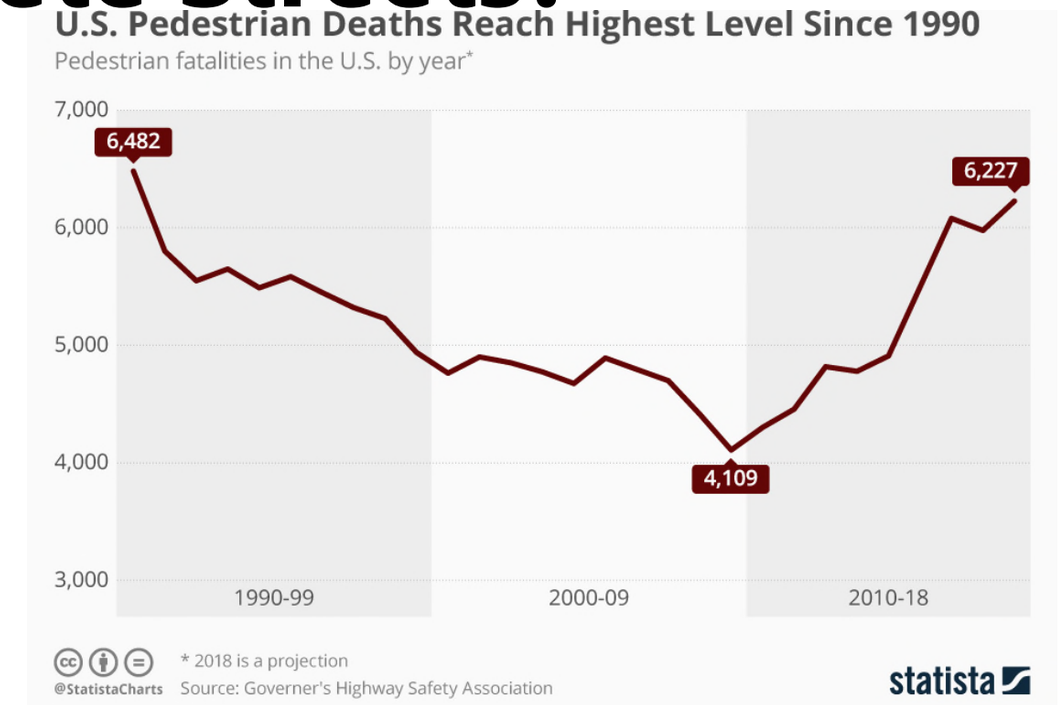
Why use Complete Streets?

- 12% of US households do not own a car (2014)
- Increase in bike/ped fatalities

Need to improve mode split and safety!



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Promised Benefits

- Safety
- Mobility
- Equity
- Environment
- Livability
- Economy

Image credits: Google Street View

Before CS

After CS

Broad Ave, Memphis TN

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Flawed Logic

Livable Communities

Improve Public Transit

Promote Health

Keep Kids Safe

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Flawed Logic

Livable Communities	Improve Public Transit	Fight Climate Change
Promote Health	Keep Kids Safe	Cure Cancer
End Racism	Fight Monopsony	Lower Suicide Rates

Flawed Logic

Catastrophizing

1. I can't find my keys.
2. I'll be late for work.
3. My boss will be mad.
4. I'll get fired.
5. I'll get a poor reference.
6. I won't be able to find another job.
7. My family will starve.

Complete Streets

1. Complete Streets change the build environment.
2. Changing the built environment can affect behavior.
3. Changed behavior means greater participation in active transit.
4. Active transit is exercise.
5. Exercise can help prevent or treat some types of cancer.
6. Therefore, Complete Streets cures cancer.

Challenges to Implementation

- Partisanship
  - Complete Streets Act of 2009 / 2019
- Policy ≠ Implementation
- Isolated costs, diffuse benefits
- Flawed performance measures

"bicycle trips as portion of total trips along project; measured by gender, age, income, race, ethnicity, and disability status"

~National Complete Streets Coalition

Case Studies

- Memphis, TN
- Somerville, NJ
- Thunder Bay, Ontario
- Washington, DC
- Las Cruces, NM

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Case Studies: Memphis, TN

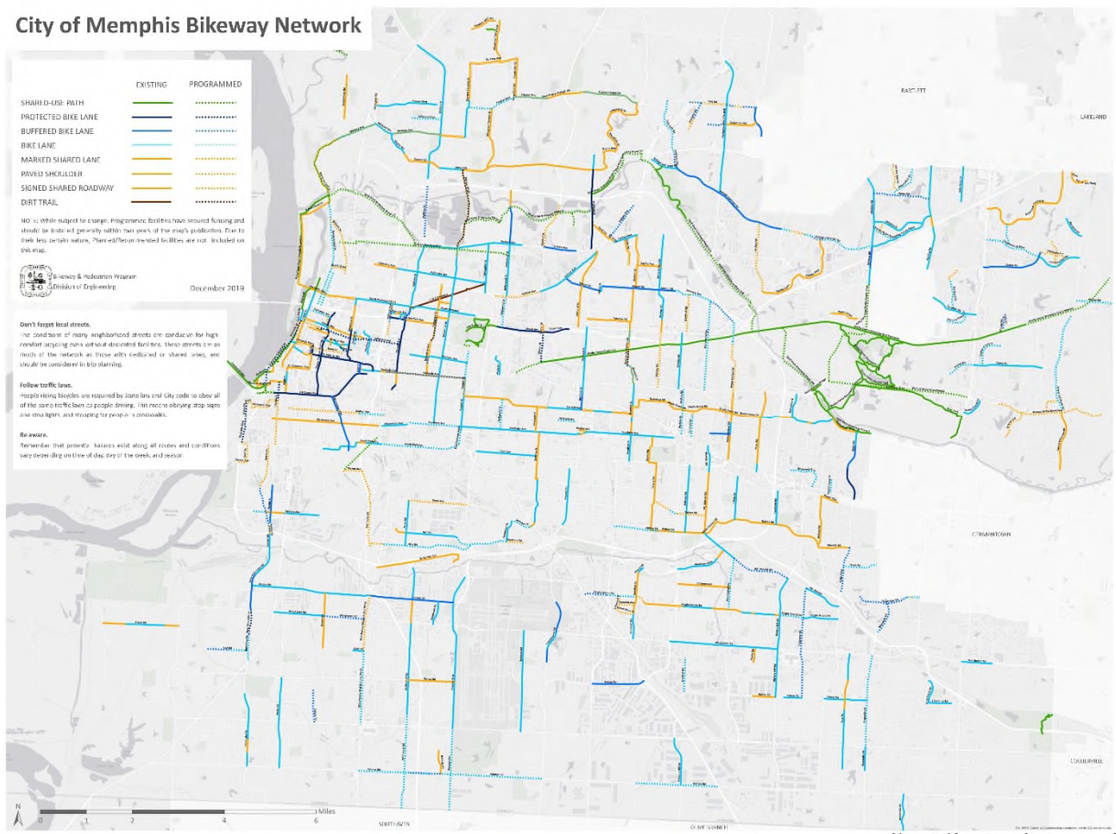

Image credit: BikePedMemphis

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Case Studies: Las Cruces, NM

Image credit: Victor Gibbs

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Case Studies: Discussion

- Anecdata is not proof!
  - Need detailed and rigorous study
- Smart Cities applications
  - Sensor tech, CAV readiness
- Start Small
  - Repaving projects

Case Studies: Discussion

- 4 Hallmarks of Successful Projects:
  - Strong local champion
  - Advocacy
  - Communication & Community Buy-In
  - Iteration

Image credit: Meetingtomorrow.com

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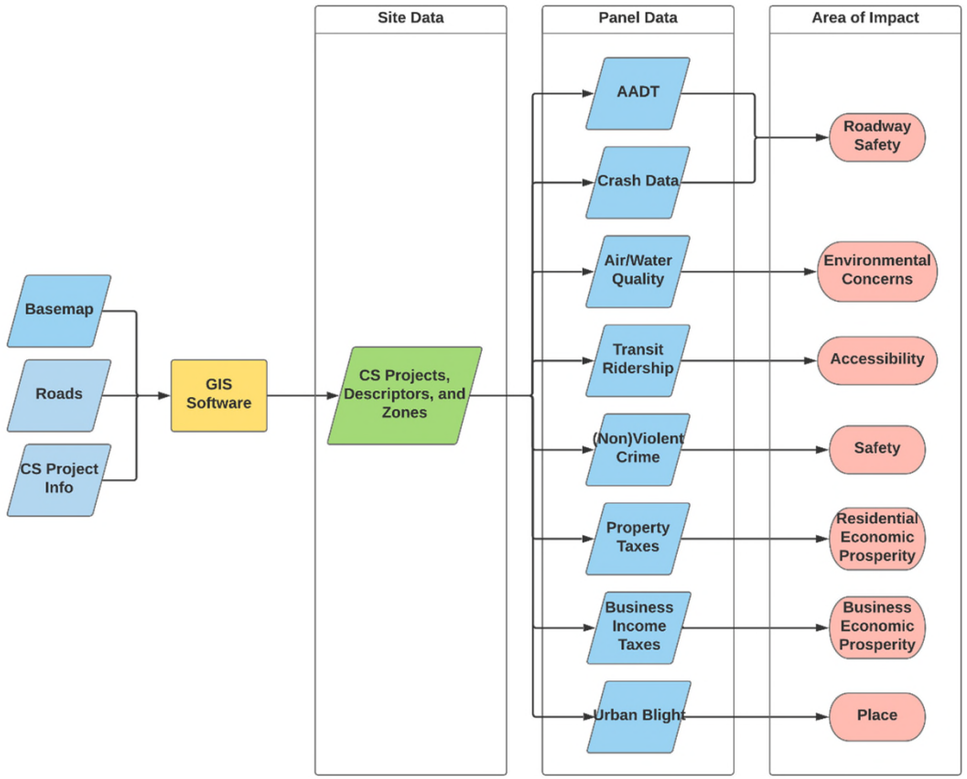
What's Next for Complete Streets?



- Evidence-based claims
- Are we meeting our goals?
- Model using publicly available data
  - Geospatial panel data

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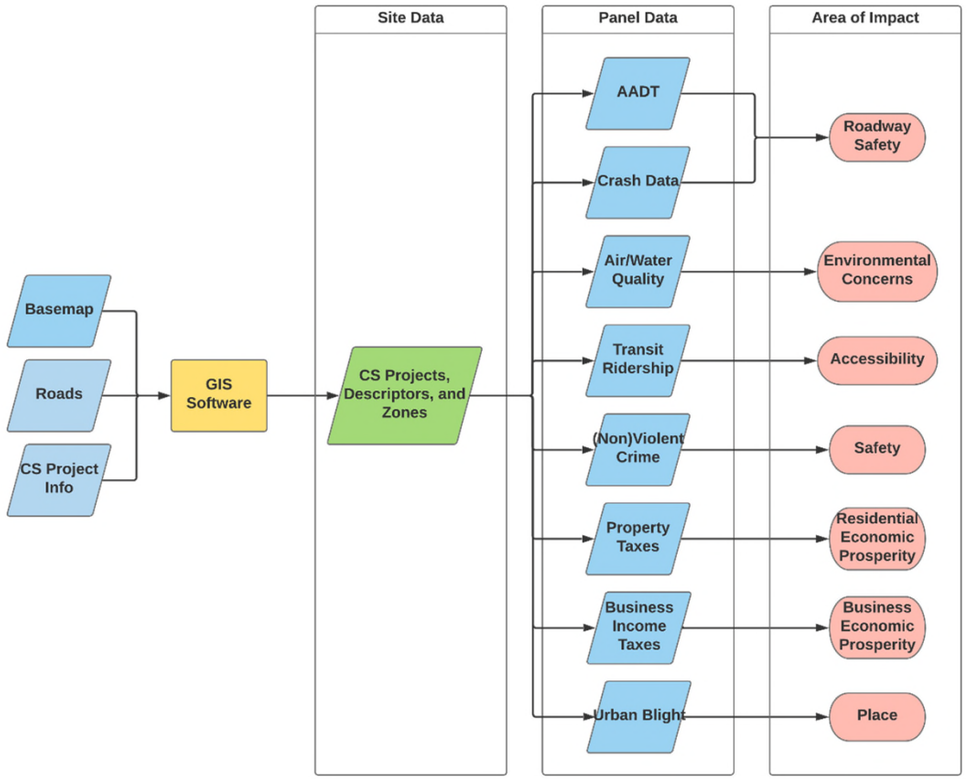

- Listening session
  - Role of private sector?
  - Challenges to CS implementation?
  - Data collection/storage?
  - Interagency collaboration?

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Thank You

Image credit: Alta Planning and Design

Please fill out a survey!

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