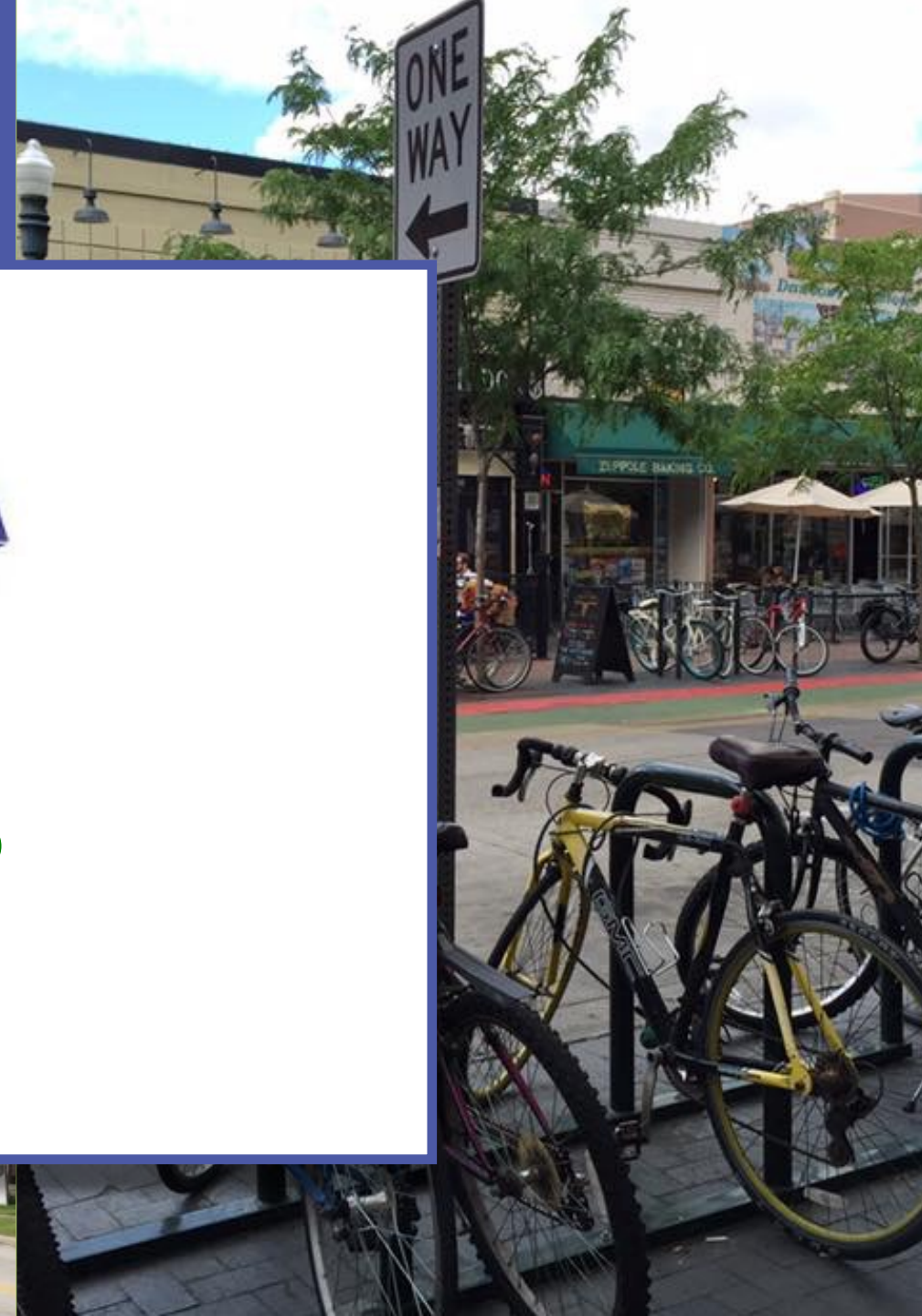


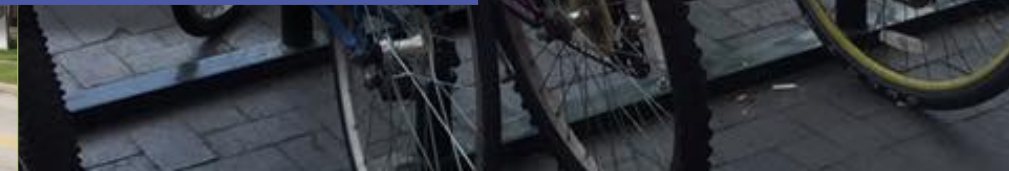


5th Annual Urban Street Symposium



How do you
Spell Vision Zero
D-E-S-I-G-N!

May 22, 2017





What Will be Covered

- **BWNC: who we are and what we do**
- **BIKE/PED: Key Need for NC's VZ Program**
- **CURRENT SAFETY PROGRAMS vs. VZ PRINCIPLES**
- **NEED TO INTEGRATE: 3 programs to Achieve VZ**

Safety

Complete Streets

Vision Zero





BikeWalk NC

BikeWalk NC

"To inspire and support advocacy and educational efforts throughout North Carolina for an environment that fairly and equitably accommodates bicyclists, skaters, pedestrians, and others using human-powered active transportation."



A Human Powered Future



What We Do

- **RESOURCE:** serve as a clearinghouse for information and resources about biking and walking
- **ADVOCACY:** work for bike-friendly laws (and policies) at the state and federal level
- **PROMOTE:** promote walking and cycling in NC to improve health, tourism, quality of life, the environment and provide low-cost transportation alternative





Why Focus on Bike/Ped Safety

Fatalities Disproportionate

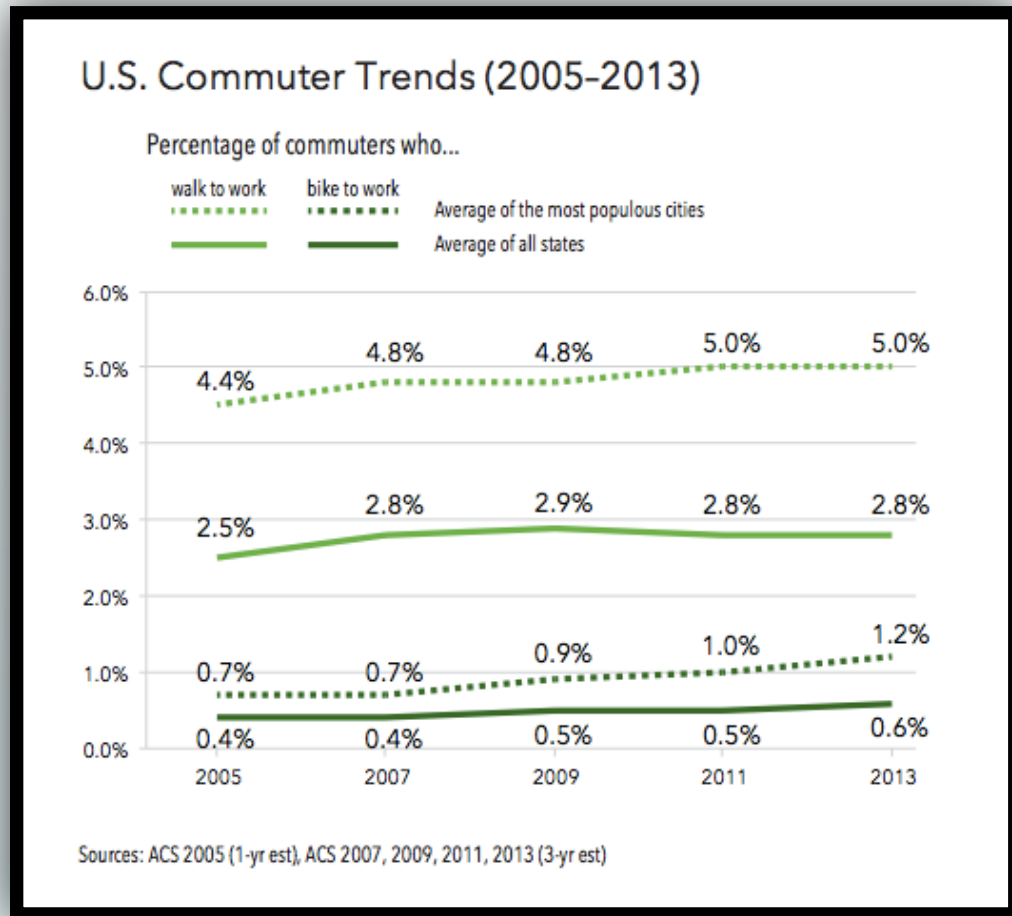
- 2,400 NC pedestrians & 960 bicyclists hit / yr
- NC is 10th in size but 7th in # of ped deaths*
- Bike/Ped fatalities ~15% of all
- Mode share in NC is <3%
- Minorities higher % active transportation commuting





Active Transportation Trend only Increasing

- **NC - One of Fastest Growing States**
- **Opportunity - to Design Roads Better**
- **Mode Share Small but Growing**





Safety Education & Enforcement in NC

NCDOT



Local Efforts

Motorist/Bicyclist Conflict High
Fatalities Disproportionately High



A Human Powered Future



Watch for Me NC

A CRITICAL PART OF A 5 “E” APPROACH

- **EDUCATION**
- **ENFORCEMENT**
- Encouragement/Engagement (Everyone)
- Engineering/planning
- Evaluation (Emergency Response)





Project Activities

Awareness-Raising Events

- Increase one-time awareness events about the importance of Safe Routes to School

Ongoing Programs

- Increase the number of ongoing programs that encourage walking and biking to or at school

Trainings/ Workshops

- Increase the number of trainings on how to implement Safe Routes to School-related activities

Policy Changes

- Increase the number of policies that support walking and biking to or at school

Built Environment Changes

- Develop a plan to identify and address safety features near schools that need improvement



Active Routes is implementing Safe Routes to School initiatives through local health departments across the state.

A PARTNERSHIP BETWEEN NC DEPARTMENT OF TRANSPORTATION AND NC DIVISION OF PUBLIC HEALTH

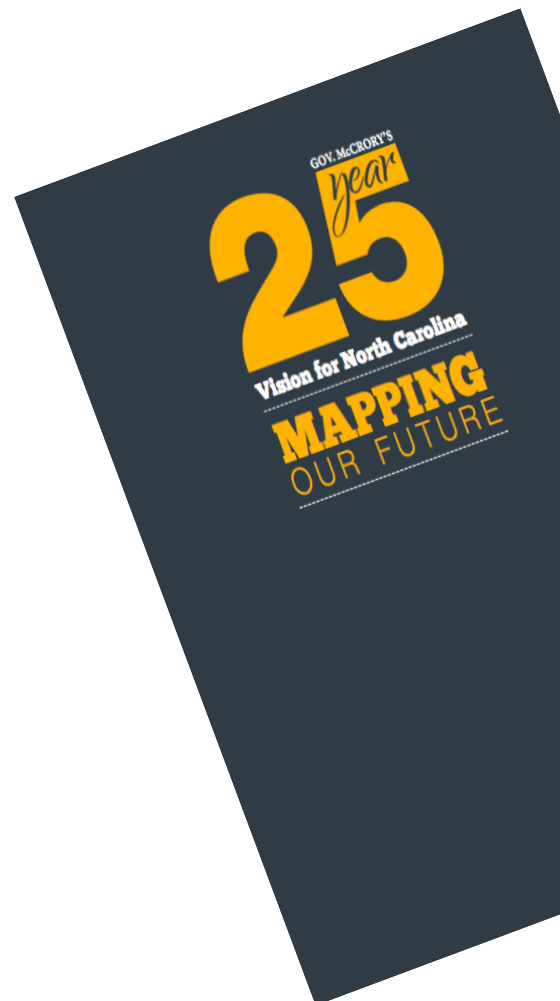


A Human Powered Future



Broad Goals on VZ and Complete Streets

2015 VZ Initiative Adopted



INVESTING IN SOLUTIONS

Strengthen Maintenance of our Existing Facilities

- Evaluate and improve the prioritization system for funding maintenance projects to implement an authentic, needs-based program.
- As funding solutions are determined, ensure an increased percentage of revenue directed toward maintenance.
- Identify opportunities for using public-private partnerships to fund maintenance needs.



Improve Public Transportation Network including Passenger Rail

- Expand access to mass transit options in high-growth areas to accommodate a changing demographic and address congestion issues.
- Expand access to public transportation options for people in all regions of the state to accommodate local transportation needs and enhance the quality of life throughout the state.
- Expand access to passenger rail options in all regions of the state to accommodate a changing demographic, address congestion issues and meet regional transportation needs.



Expand Bicycle and Pedestrian Network Statewide

- Implement Walk/Bike NC, the North Carolina Statewide Pedestrian and Bicycle Plan, enabling the state to become a premier place for walking and bicycling.
- Continue the implementation of the North Carolina Complete Streets Policy to make it easier and safer for people to walk, bicycle, drive or use public transportation services.
- Support the completion of statewide and regionally significant bicycle and pedestrian systems in order to provide transportation options and promote the "great trails state" brand.



Support Greater Broadband Connectivity through Existing Right of Way

- Support the expansion of broadband access, using existing right of way where possible, to establish the foundation for connectivity required for intelligent transportation systems, support the growth of high-tech businesses, expand access to educational opportunities, and enhance global business connectivity.



A Human Powered Future



Vision Zero Principles - NC Context

- **All Road Users Deserve Safe Streets** (shared responsibility)
- **No Loss of Life on our Roads is Acceptable** (ethics)
- **Injury or Death is not an Inevitable Price to Pay for Mobility** (plan for human error, comprehensive safety approach)

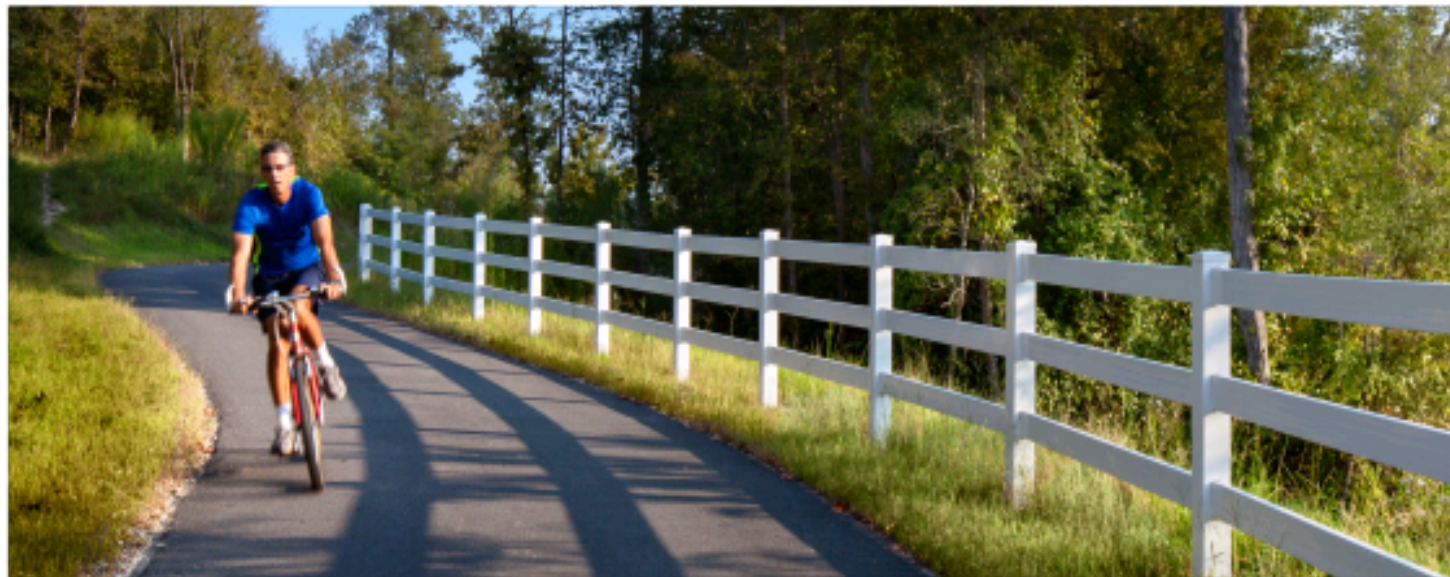




Legislative Trends Not Supportive

Funding Reduced for Bike/Ped Stand-Alone Projects in 2013

unlike roads, considered a “local” issue



A Human Powered Future



Opportunity to Integrate Efforts

USING VISION ZERO UMBRELLA

- **Support & Enhance Statewide Safety Education Plan Development**
- **Promote VZ Principals**
- **Support Complete Street Campaign**





Pedestrian-Shaming Campaigns

NYC Example

- **Issue:** # of pedestrians killed or injured at dusk increases by about 40 % during the darkest months
- **Response:** NYC launches “Darkness-is-dangerous messaging”
- **VZ Response:** address bigger issues around street design, lighting, and enforcement that would save lives day or night, in any weather, at any time of year.





Pedestrian-Shaming Campaigns

Toronto Public Health Study

- Pedestrians had the clear right of way in 67 % of collisions reported that resulted in an injury or death.
- “Pedestrian Inattentiveness” was a factor in just 13 %
- In the vast majority of cases where a pedestrian is hit, the major factors are things totally within the control of the driver. Things like speed, reckless turns and driver distraction.



Message to Pedestrians:

Wear bright clothing, don't “rush with umbrellas,” ensure that boots are broken-in before venturing outside.



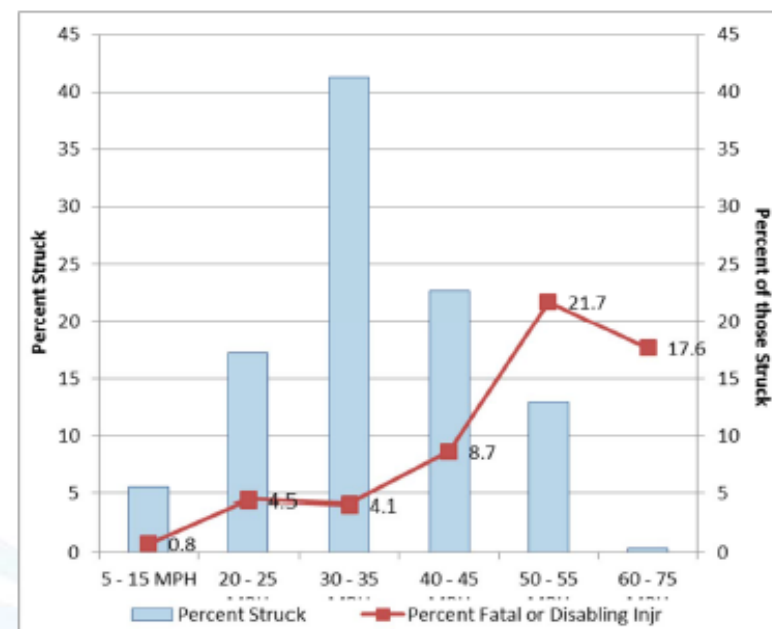


NC Vision Zero - Focus on Design

Example: Speed is significant factor in fatalities

Roads must be designed for appropriate speed

Road Speed Limits



The red line and markers indicate the percentage of crashes on the different speed limit roads with fatal or disabling injuries.





Rationale for Infrastructure Improvements

- Safe design is present 100% of the time and influences all users of a street.
- Enforcement is rarely present and focuses only on those already breaking the law.
- Education will never reach all users of street.
- Therefore, any VZ effort that does not make design a priority is destined to fail.





NC Vision Zero - Focus on Design

Behavior Alone, Not Enough

Note: Many of the following
need for design examples are
from former BWNC board
member Don Kostelec

Diagram from Don Kostelec,
Adapted from Clive MacGregor
(Halifax's Herald Opinions)



A Human Powered Future



Road Design Must Fit Desired Speed



A Human Powered Future



Roundabouts

Speed is
significant factor in
fatalities

Design for safety vs. straighter
entrance/exit to allow max speed



North American Roads Roundabouts



Bill Schultheiss @schlthss · 3h

Dutch prioritize slow speeds in/out of [#roundabouts](#) [4](#)
[#VisionZero](#). We prioritize fast traffic out of circle w/straight
line=unsafe crossing pic.twitter.com/lC0LntwFQ





Elements of a Safe Crossing

- The shorter and more visible the crossing, the better
- Allow drivers and pedestrians to see each other





Pedestrians and Crosswalks - Laws in NC

§ 20-173. Pedestrians' right-of-way at crosswalks.

(a) Where traffic-control signals are not in place or in operation the driver of a vehicle shall yield the right-of-way, slowing down or stopping if need be to so yield, to a pedestrian crossing the roadway within any marked crosswalk or within any unmarked crosswalk at or near an intersection, except as otherwise provided in Part 11 of this Article.

§ 20-174. Crossing at other than crosswalks; walking along highway.

(c) Between adjacent intersections at which traffic-control signals are in operation pedestrians shall not cross at any place except in a marked crosswalk.

“We also address pedestrians that don’t make use of marked crosswalks and mechanical pedestrian signals, so they can cross the street safely.”

**– Asheville Police Chief, Citizen-Times,
May 30, 2014**

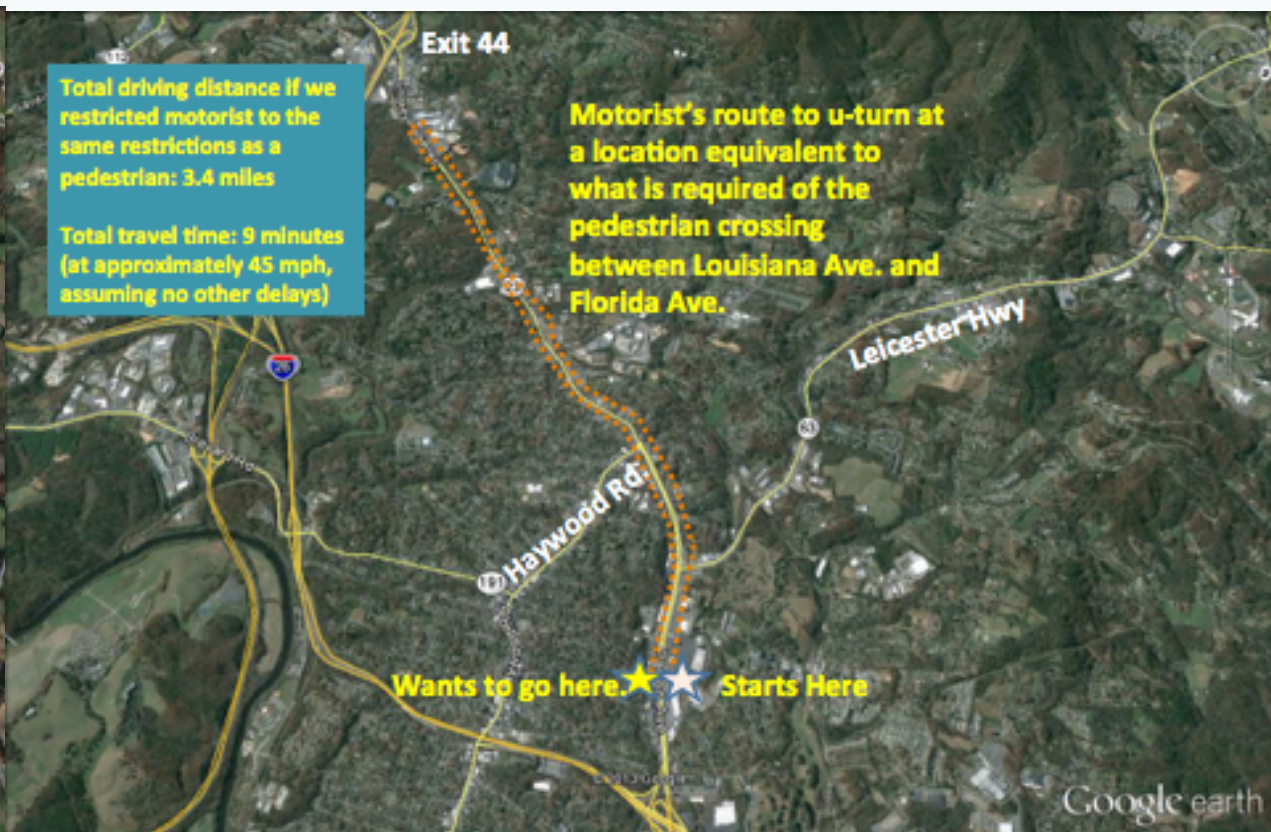




Unreasonable Crosswalk Expectations



A pedestrian who needs to cross Patton Avenue between Florida Ave and Louisiana Ave to reach a destination immediately across the street must walk approximately 950 feet from the mid-block to reach the nearest signalized intersection. A total distance of 1,900 feet at a walk speed of 3.5 feet per second means a 9-minute trip.



If a motorist was starting and ending at the same place and we applied the same expectations, it would be the time equivalent of having the motorist travel 3.4 miles (at 45 mph, assuming no other delay) in one direction before making a u-turn to get to the motorist's desired destination across the street. The motorist would be required to travel along Patton Avenue to a location near the I-40 interchange at Exit 44 and Smokey Park Highway.





A Real-Life Example from NC

Video:

<https://youtu.be/YUpxQbyPe1M>



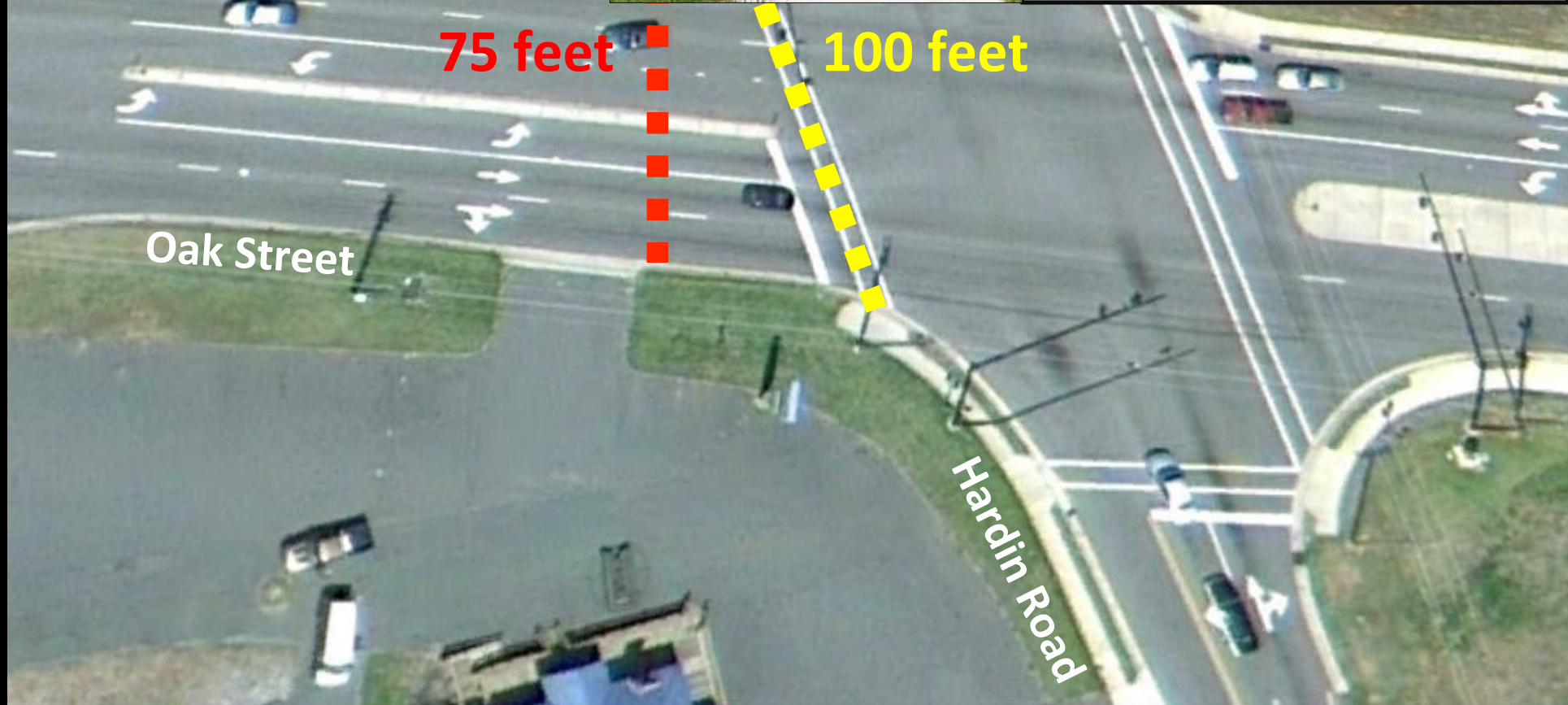
A Human Powered Future



**1.67 feet per second speed
60 seconds to walk 100 feet**

**34-second walk phase
2.95 feet per second allowed**

**26-second countdown phase
3.84 feet per second allowed**





What Might VZ Initiatives Look Like in NC

- **Slower Speeds** – road diets, roundabouts, lane width reduction, and other traffic calming infrastructure
- **Corridor vs Spot Treatment** (bundle projects, more efficient)
- **Protect Vulnerable Users** – curb extensions, pedestrian median islands, protected bike lanes
- **Enforcement** – if done well – progressive, automated acceptable (not legal in NC)
- **Education and Outreach** (San Francisco is spending \$50 million for VZ)
- **Shoulders in Rural Areas!!!**





Example VZ Goals from San Francisco

- Adopt mayoral Vision Zero Resolution
- Fix top ten most dangerous intersections with things like zebra striped crosswalks, curb extensions, and no turn on red signals
- Fund bike lanes, road diets and crosswalks to calm traffic speeds and provide safe transit access on 8 most dangerous corridors – FY16 Budget
- Police + City Transportation Education Campaign
- Update Pedestrian Crossing Policy*
- Adopt Pedestrian Master Plan**
- Fund small scale public improvements to beautify neighborhoods and calm traffic speeds
- Amend vehicular Level of Service policy
- Adopt Complete Streets policy





Progress is Possible!

- **DC: 4X increase in biking (2000-2012) while fatalities decreased 3X from 9 to 3 per 100,000.**
 - Possibly from protected bike lanes, resulting in narrower lanes, slowing traffic
- **US average – almost 12 per 100,000 while Sweden is <3**
 - Roundabouts
 - Slower Speeds
 - To lesser extent, enforcement



**5th Annual
Urban Street
Symposium**



**Contact information:
Lisa Riegel
BikeWalk NC
Lisa@bikewalknc.org
(919) 830-4243**

