

# **Pedestrian-Bicycle Task Force, and 2017 Lawrence Budget Recommendations by Sustainability Action**



# **Bicycle Transportation Advocacy by Sustainability Action**

## **Sustainability Action Network:**

- We are Lawrence's grassroots bicycle transportation advocate, since 2007
- In 2013, we initiated budget proposals for bicycle funding.
- We proposed spending 25% of transportation funds on bicycles, and hiring a bicycle engineer
- We noted that 37 years had passed since the first Lawrence bicycle plan – The Pedalplan for Lawrence
- In 2014, we were invited to present a budget proposal - [http://www.lawrenceks.org/assets/agendas/cc/2014/05-13-14/Lawrence%20Bicycle%20Transportation%20Budget%20Plan%20PPT\\_13May14.pdf](http://www.lawrenceks.org/assets/agendas/cc/2014/05-13-14/Lawrence%20Bicycle%20Transportation%20Budget%20Plan%20PPT_13May14.pdf)
- In it we proposed spending \$2 million/year on bicycle transportation, reallocate some pavement from auto to bicycle use, and hire a Bicycle Division Manager/engineer

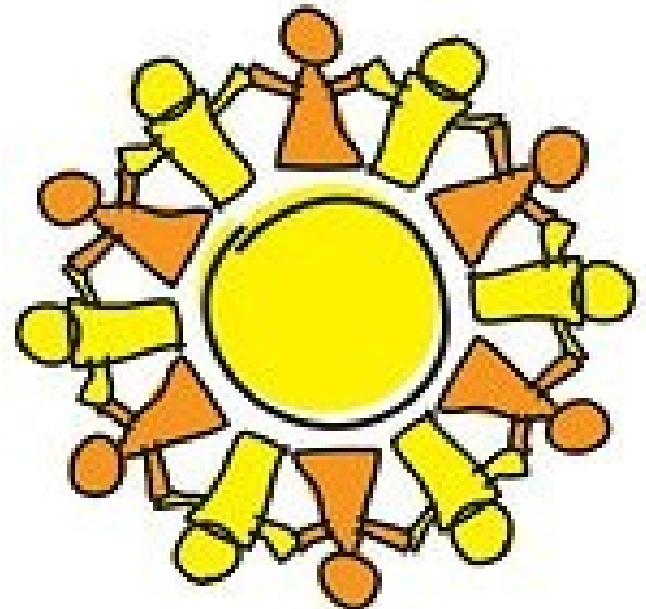
# **Bicycle Transportation Advocacy by Sustainability Action**

## **Lead up to Ped-Bike Task Force:**

- In 2013, pedestrian advocates saw value in a budget initiative, and formed the Pedestrian Coalition
- On 1 July 2014, the City Commission asked the City Mgr. to prepare a resolution for a Pedestrian-Bicycle Task Force

## **Community action:**

- In January 2015, Sustainability Action convened 15 bicycle and pedestrian stakeholders to prompt staff action on the resolution for a task force
- On 24 March 2015, the Commission created the Pedestrian Bicycle Issues Task Force



# Task Force Report in Brief

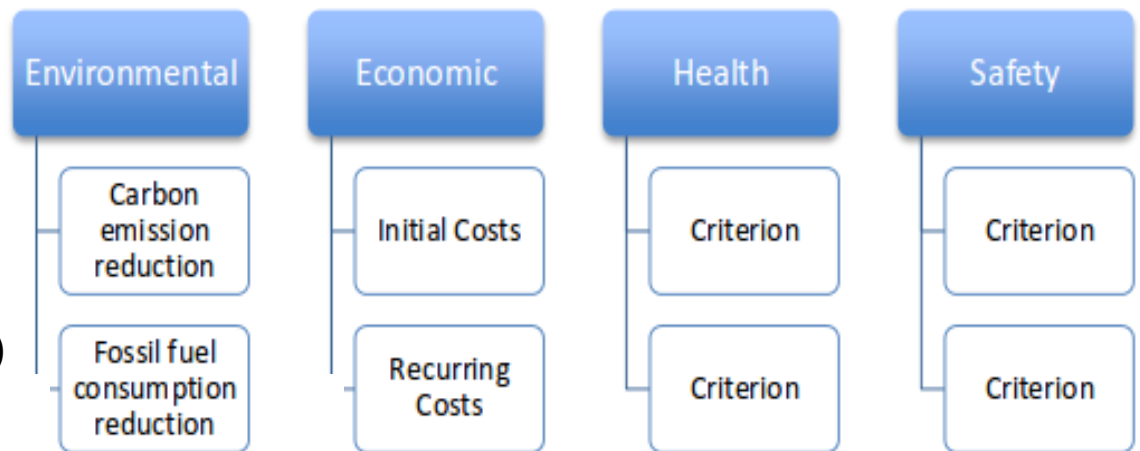
## **Sustainability Action supports most of the report:**

- The Pedestrian-Bicycle Task Force did a commendable job, given the complex learning curve, and the limited time
- They studied the taxonomy of decision making priorities
- They thoroughly researched Lawrence sidewalk deficiencies, and other cities' funding methods for sidewalks
- They explored options for consolidating City advisory groups.
- And at their 11th meeting, they delved into bicycle network priorities, and system design

## **Conceptual Taxonomy**

Task Force would need to develop a set of evaluation criteria that would span the entire tasking in the 7106 ordinance.

(Task Force meeting, 9/16/15)





# Task Force Report and Bicycles

## **Bicycle transportation:**

- The bicycle parts of the Report are good as far as it goes – protected bicycle lanes, bicycle boulevards, and overall safety
- What is more notable is what is not included about bicycles
- The Task Force was not prepared to consider the complexity of street geometrics, nor dynamics between 20lb and 4000lb vehicles at 40 mph
- As a result, some things were not discussed: design geometrics, policy revisions, evaluation protocols, and a professional bicycle engineer



NACTO National Association of City Transportation Officials

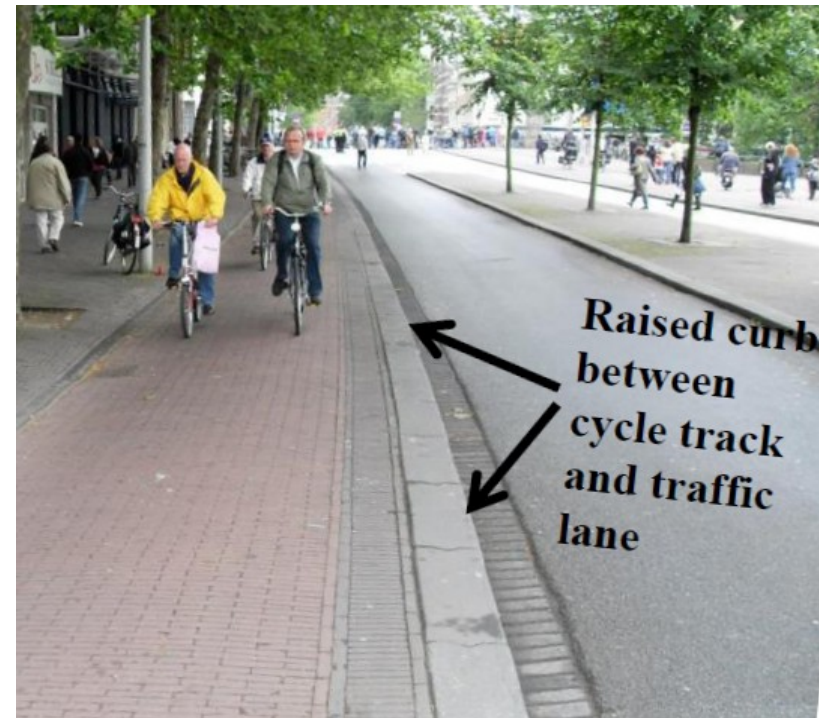


# Task Force Report: 11 Issues

## **Key bicycle issues yet to be addressed:**

1. Intersection design
2. Bicycle boulevard design, and Woonerf design
3. Shared path vs bicycle track; shared street vs bicycle lanes
4. Residential street default speed limit of 15 mph
5. The rolling or “Idaho” stop
6. Snow and debris removal
7. Design/maintenance protocols
8. Traffic Calming policy barriers
9. Adopting NACTO design guide
10. Licensed Bicycle Engineer, P.E.
11. Coordinated staff design team

photo: Peter Furth



# Bicycle Elements yet to be Addressed



## Intersection Design:

- Most collisions between autos and bicycles are at intersections, by turning autos, or autos emerging from side streets
- Cyclists on sidewalks or side paths are the highest percent of bike collisions at intersections
- In a four way intersection with bicycle lanes, there are 64 points of conflict
- All the protected bicycle lanes in the world won't offset vulnerability at intersections
- Lawrence bicycle lanes typically end 300 ft. before intersections



# Bicycle Elements yet to be Addressed



Bicycle Boulevard auto diverter

## Bicycle Boulevard & Woonerf Design:

- The Task Force Report did mention bicycle boulevards, but seem to be unclear on the design, judging by the lowball cost estimates
- Woonerfs were not mentioned
- Correctly designed elements, as parts of a whole, will determine effectiveness
- Cyclist/auto speed parity goal: 15 mph for bike boulevards, 5 mph for woonerfs
- The "3 Vs" are the means: Visibility, Velocity, Volume



Woonerf "living street"



# Bicycle Elements yet to be Addressed



## Validity of shared path vs bicycle track; shared street vs protected lanes:

- A bicycle-pedestrian side path can have dangerous auto visibility issues and user conflicts
- Two-way on-street bicycle tracks for exclusive cyclist use are safer; increase family riding up to 71%
- Shared streets with only sharrows or signs are not universal bikeways
- Three tiered system:
  - » shared residential feeders
  - » protected lane collector routes
  - » bike boulevard thru corridors



# Bicycle Elements yet to be Addressed

## **15 mph default residential street speed limit:**

- Multi modal safety and equity is largely contingent on equalizing speeds
- 15 mph is a typical bicycle speed (20-25 for performance cyclists)
- 15 mph is an optimal motor vehicle speed for observing the road and for braking reaction time
- KSA 8-1558 sets residential street speed limit at 30 mph
- KSA 8-1560 allows localities to lower it to 20 mph
- KSA 8-1560a allows Wabaunsee County to lower it more
- The City of Lawrence could advocate for the same authority



**Kansas Statutes Annotated**

# Bicycle Elements yet to be Addressed



image: Spencer Bloomhower

## **Rolling stop for cyclists:**

- Also referred to as “bike yield law” or “Idaho stop”, allows cyclists to roll slowly and cautiously through a stop sign if there's no conflict with autos or pedestrians
- Idaho enacted this law in 1982, and has experienced a 14.5% decline in bicyclist injuries
- Start-stop travel is tiring on cyclists, requiring 25% more energy and 33% more time to regain speed from a full stop
- Stopping regulations designed for 4000lb autos shouldn't apply to cyclists who are more akin to pedestrians

# Bicycle Elements yet to be Addressed



Lane delineators



## Snow removal, street sweeping:

- Valid concerns by Public Works
- Efficient handling is a major budgetary concern
- Street crews preferable over Parks & Rec crews
- Lane delineators: a clear visible separation
- 10 foot path manageable by plows and sweepers
- Textured pavement or rumble strips are options in place of lane delineators



Sentinel Rider  
Sweeper  
6 or 7 foot path



# Bicycle Elements yet to be Addressed

## Pavement Condition Index

### Annual Street Maintenance Metrics

- The overall PCI
  - Cycle 1 = 69.0
  - Cycle 2 = 70.28
  - Cycle 3, Phase 1 = 77.83

## WATER AND WASTEWATER FUND

### PERFORMANCE INDICATORS

Indicator	2014 Actual	2015 Estimated	2016 Target
City Main Blockages	20	18	16
% Planned Maintenance Completed	107.7%	100%	100%
% Planned TV Inspection Completed	79.5%	100%	100%
Lift Station By-passes	0	0	0
Lost time accidents	0	0	0

## System design and maintenance protocols:

- Public Works uses the Pavement Condition Index to gauge when to repair streets
- Planning uses a traffic impact study to plan the capacity of intersections or streets
- Utilities uses treatment plant and sewer metrics
- Measurable bikeway protocols would lend equivalence:
  - » origin-destination studies
  - » level of service evaluation
  - » functional condition index

# Bicycle Elements yet to be Addressed

## Impediments in the:



## **TRAFFIC CALMING POLICY**

**Resolution No. 6602, August 23, 2005**

- Continuous-flow bicycle corridors are essential – ie. bicycle boulevards and on-street bicycle tracks – for bicycles to become viable transportation
- Consistent motor vehicle management devices must be in place along the full corridor length
- The policy provision of 31% veto right by clusters of homeowners can fragment a corridor – it should be deleted from the policy in cases of these corridors
- The minimum warrants criteria should not apply to corridors.
- Alternately, bicycle corridors could be exempted as “traffic management devices”, just as roundabouts are

# Bicycle Elements yet to be Addressed

## **Adoption of the National Association of City Transportation Officials (NACTO) Guide:**

- NACTO is geared to cities; AASHTO toward state highways
- Designing effective bikeways requires engineering judgment that is beyond the AASHTO guide
- The NACTO Urban Bikeway Design Guide contains innovative bicycle facility designs



## **NACTO membership:**

- NACTO membership is \$4000 per year
- Benefits include:
  - » Local staff training by NACTO professionals (rate discount)
  - » Peer to peer exchange among member cities
  - » Data sharing, workshops, conferences

# Bicycle Elements yet to be Addressed

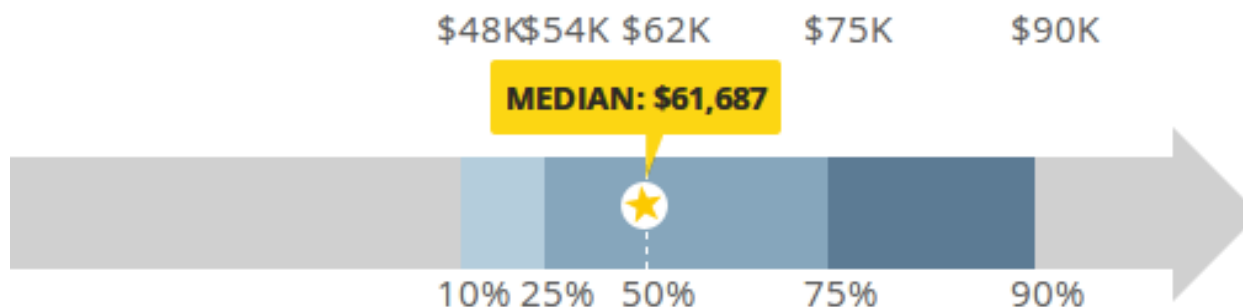
## Licensed Professional Bicycle Staff Engineer, PE:

- Good design makes for good behavior
- An expert bicycle engineer makes for good design
- Design complexity calls for an expert bicycle engineer
- Core services of public safety and bicycle transportation are achieved by good design

## Bicycle Engineer position description:

- Traffic engineer, Bachelor's degree, with bicycle experience
- Toole Design, Nelson\Nygaard, etc. employ engineers
- Bicycle-Pedestrian Coordinators usually are engineers

### Traffic Engineer Salary (United States)



Payscale.com  
January 2016



# A Staff Design Team Is Critical

## **Interdepartmental Staff Working Group:**

- The 4th recommendation of the Task Force includes:
  - » “create an interdepartmental staff team . . . to provide a coordinated approach to engineering”
- Instead, the report presentation on 3 May 2016 emphasized
  - » a combined agency commission, and
  - » a staff point-of-contact to liaise between the public and a combined agency commission
- However, a monthly combined commission or an inexperienced liaison cannot convene an interdepartmental design team nor design bicycle facilities
- A bicycle Engineer should convene the design team.
- Interdepartmental design should be done weekly and face-to-face at every stage of projects.



# **Sustainability Action Recommendations**

## **Take action on all eleven key issues**

- involving -  
design geometrics, policy revisions, evaluation  
protocols, and professional licensed staff

## **Implement our top four issues**

1. Bicycle system design and maintenance protocols
2. Adopt NACTO Bikeway Design Guide; join NACTO
3. Bridge the silos with an interdepartment design team
4. Hire a licensed Bicycle Engineering Division Manager

## **Bicycle system financial adequacy**

Allocate \$1million annually to bicycle infrastructure  
in the CIP bicycle-pedestrian line item, and  
allocate 6% of FHWA project funds to bicycles.

Thank you  
very much



Michael Almon



**Sustainability Action Network**

Local Solutions for Transition to a Sustainable Economy