

A photograph of a large green arch bridge with a pedestrian walkway and a highway below. The bridge has a prominent green arch structure with multiple cables supporting the deck. A chain-link fence runs along the top of the bridge deck. Below the bridge, a multi-lane highway with several cars is visible. The background shows a clear blue sky and some distant hills.

CREATING CHANGE

Steven Grover
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SPUR Oakland | January 14, 2019

Steven Grover & Associates



THE BENEFITS OF CYCLING

{HEALTH & COMMUNITY}



Cyclists are a diverse group. Some of us ride fat tires down rocky trails, some of us ride road bikes up burly hills, some of us ride for sport and some of us ride just for fun. Some ride for the adrenaline rush and some ride their bikes for basic transportation.

Bicycling, along with being the most efficient mode of human locomotion, is also one of the best all-around activities for improving our health and communities.

www.atlantabike.org • www.peoplepoweredmovement.org



CYCLING IS THE SECOND MOST POPULAR OUTDOOR ACTIVITY IN THE U.S.

Source: Outdoor Foundation, 2010

47%

OF AMERICANS SAY THEY WOULD LIKE MORE BIKE FACILITIES IN THEIR COMMUNITIES.

Source: National Highway Traffic Safety Administration



Studies have shown that homes closer to bike paths are more valuable.

Source: Bikes Belong Foundation



THE AVERAGE PERSON WILL LOSE 13 LBS IN THEIR FIRST YEAR OF RIDING TO WORK

Source: Outdoor Foundation, 2010

BALANCE

Cycling produces the balance between exertion and relaxation which is so important for the body's inner equilibrium.



MENTAL HEALTH

Cycling has a relaxing effect due to uniform, movement which stabilizes physical and emotional functions. It reduces anxiety, depression and other psychological problems.

HEART

All the risk factors that lead to a heart attack are reduced and regular cycling reduces the likelihood of heart attack by more than 50%.



BACK PAIN

Cycling posture is optimum, and the cyclic movement of the legs stimulates muscles in the lower back.

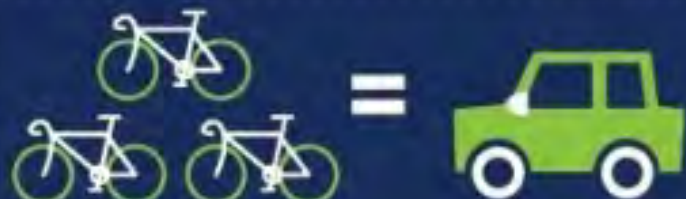
WAISTLINE

Cycling is ideal for targeting problem areas. It enables people who can not move easily to exercise. It increases fitness and stimulates the body's fat metabolism.

COORDINATION

Moving both feet around in circles while steering with both your hands and your body's own weight is good practice for your coordination skills.

ON A ROUND TRIP OF TEN MILES, CYCLISTS SAVE



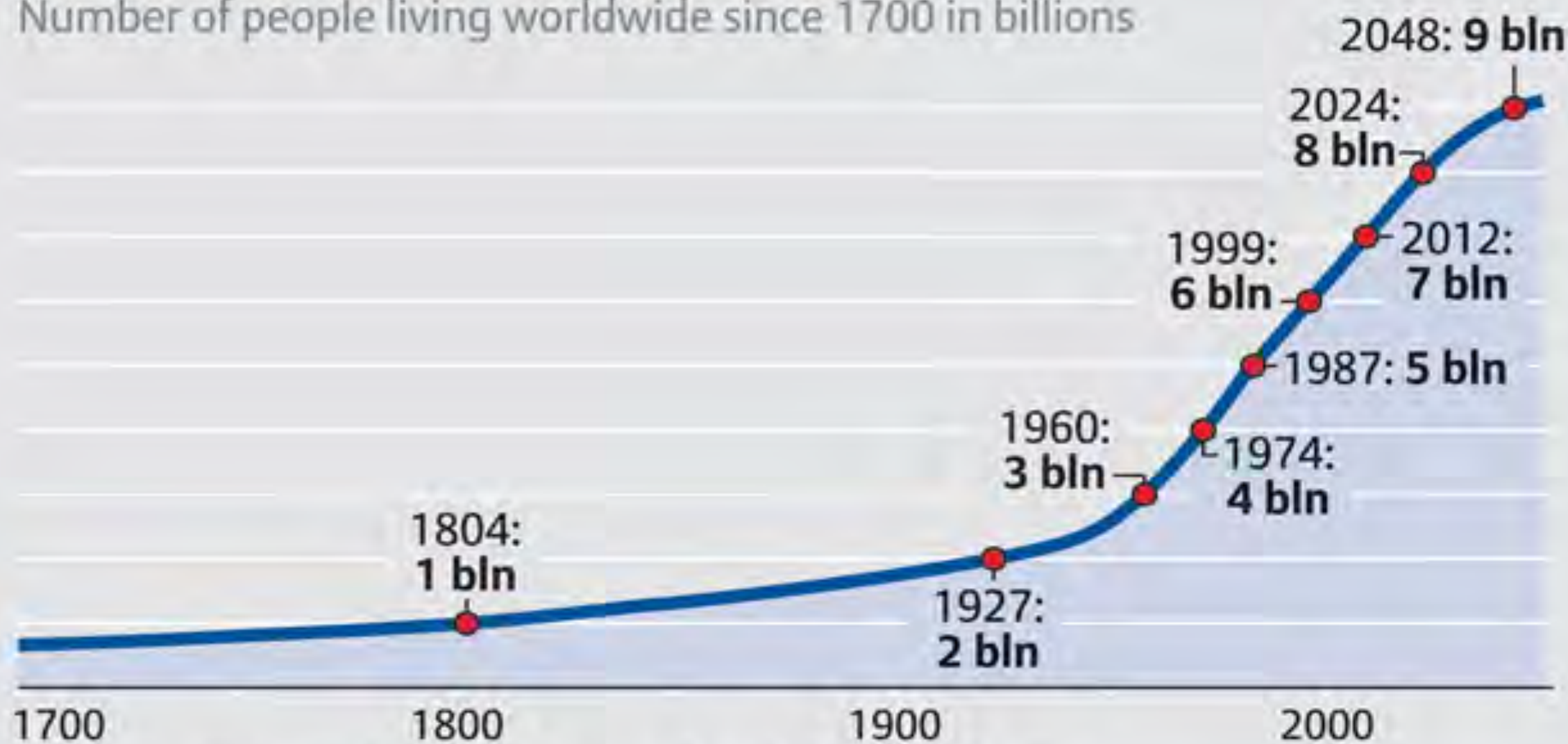
More than three times as many new bicycles (14.9 million) are sold in the U.S. each year than cars (4.6 million)

Source: National Bicycle Dealers Association, 2010

CYCLING/WALKING PROJECTS

POPULATION OF THE EARTH

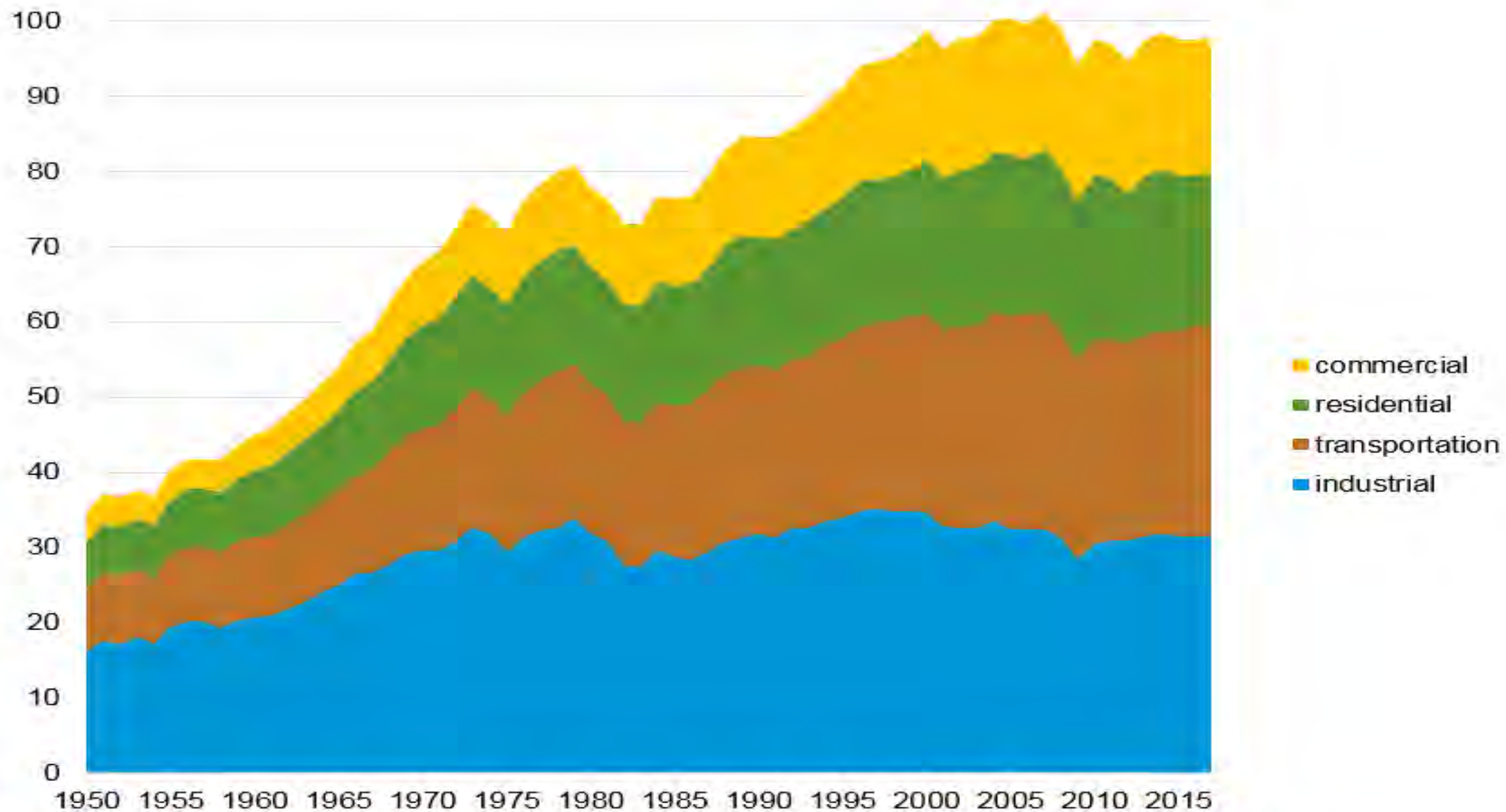
Number of people living worldwide since 1700 in billions

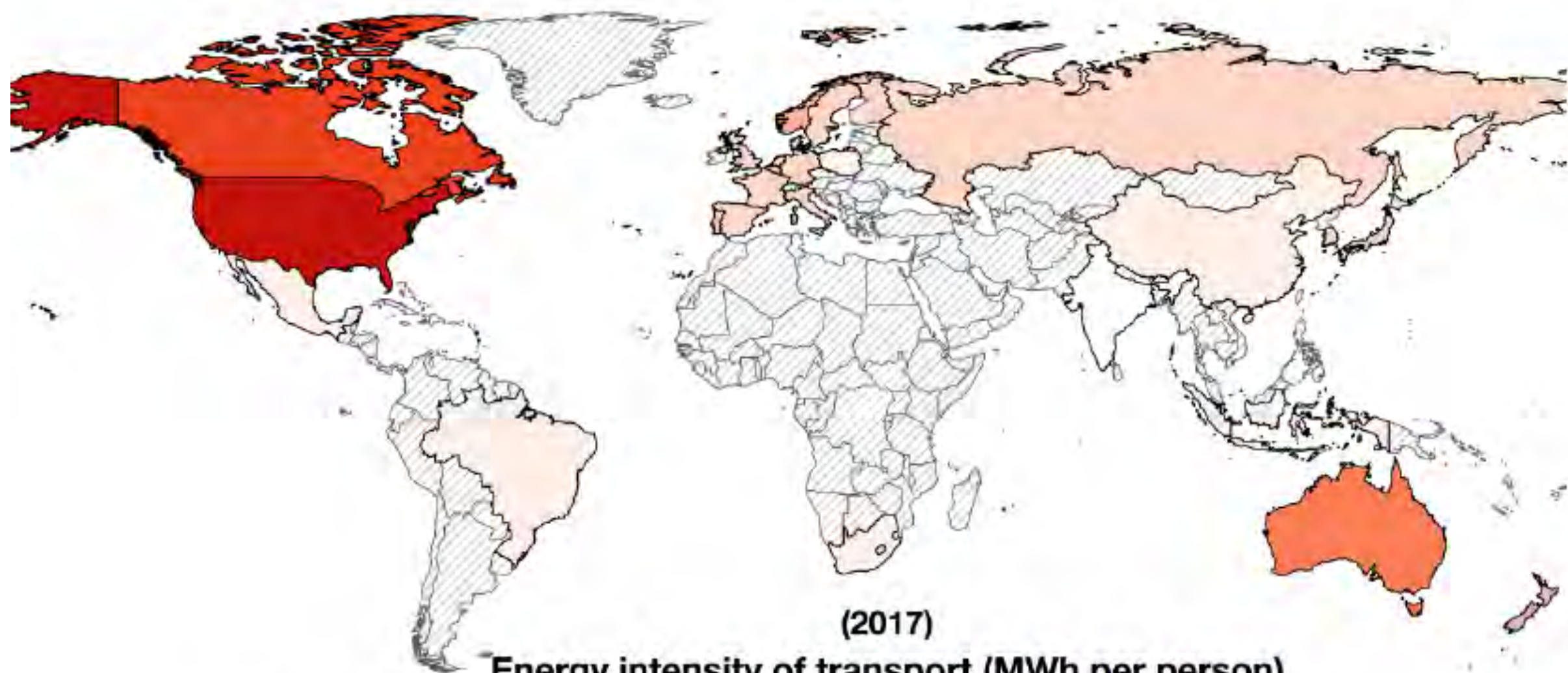


Source: United Nations World Population Prospects, Deutsche Stiftung Weltbevölkerung

U.S. total energy consumption by end-use sector, 1950–2017

quadrillion British thermal units





(2017)

Energy intensity of transport (MWh per person)

No data

0

4

8

12

16

20

24





NO
LOADING
ONLY



Berkeley Bike/Ped Bridge

NEXT LEVEL BIKE/PED INFRASTRUCTURE | SPUR OAKLAND | 01/14/19

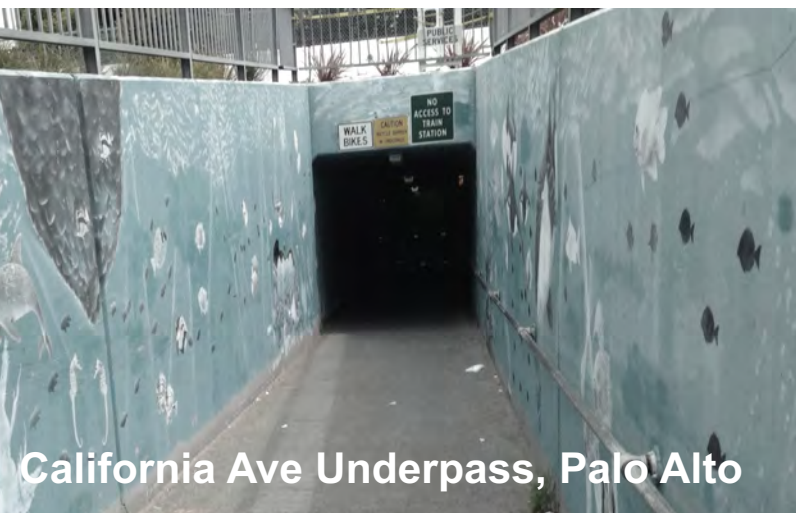




Berkeley Bike/Ped Bridge

NEXT LEVEL BIKE/PED INFRASTRUCTURE | SPUR OAKLAND | 01/14/19





California Ave Underpass, Palo Alto

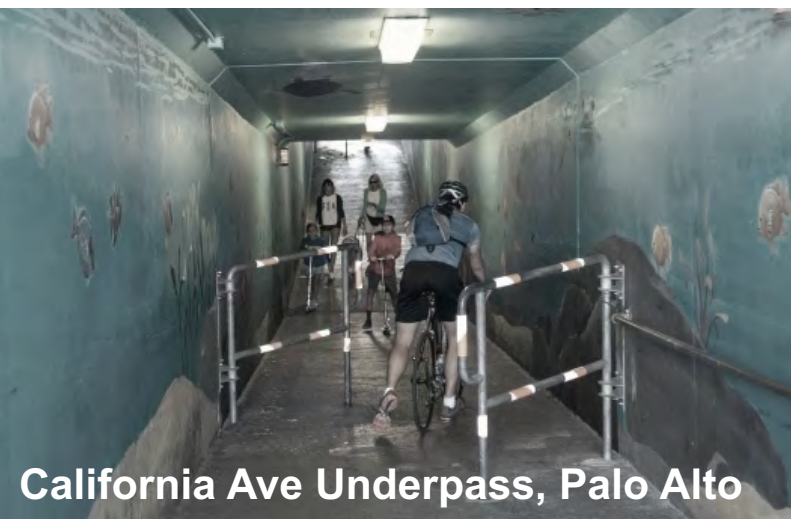


Homer Ave Underpass, Palo Alto

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Homer Ave Underpass, Palo Alto



California Ave Underpass, Palo Alto



Homer Ave Underpass, Palo Alto

Homer Ave Underpass, Palo Alto





American Tobacco Trail Bridge, Durham NC



American Tobacco Trail Bridge, Durham NC







Connecting Windsor CA

NEXT LEVEL BIKE/PED INFRASTRUCTURE | SPUR OAKLAND | 01/14/19





Connecting Windsor CA



Adobe Creek, Palo Alto CA



Adobe Creek, Palo Alto CA

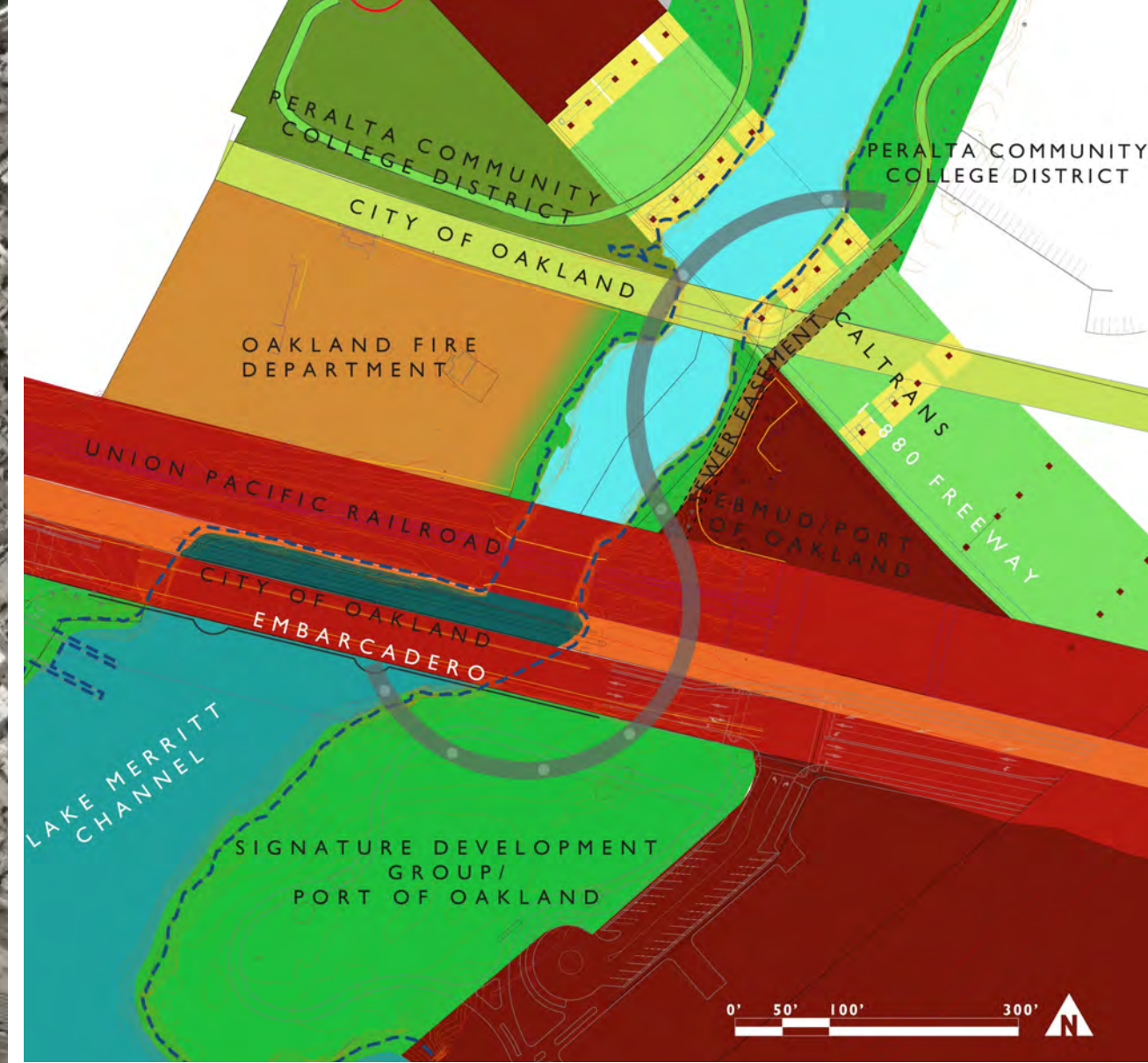
NEXT LEVEL BIKE/PED INFRASTRUCTURE | SPUR OAKLAND | 01/14/19





Lake Merritt to Bay Trail, Oakland CA

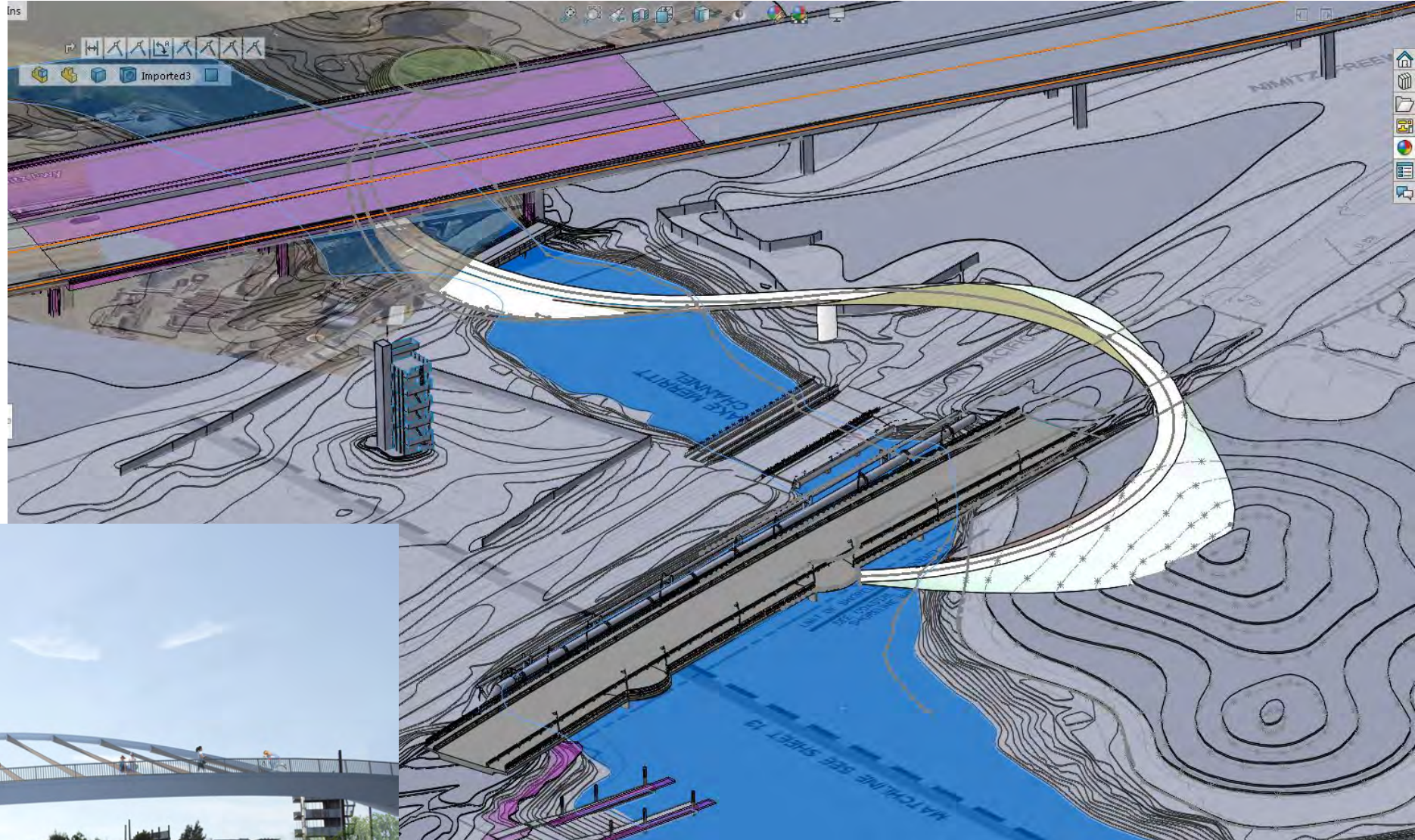
NEXT LEVEL BIKE/PED INFRASTRUCTURE | SPUR OAKLAND | 01/14/19



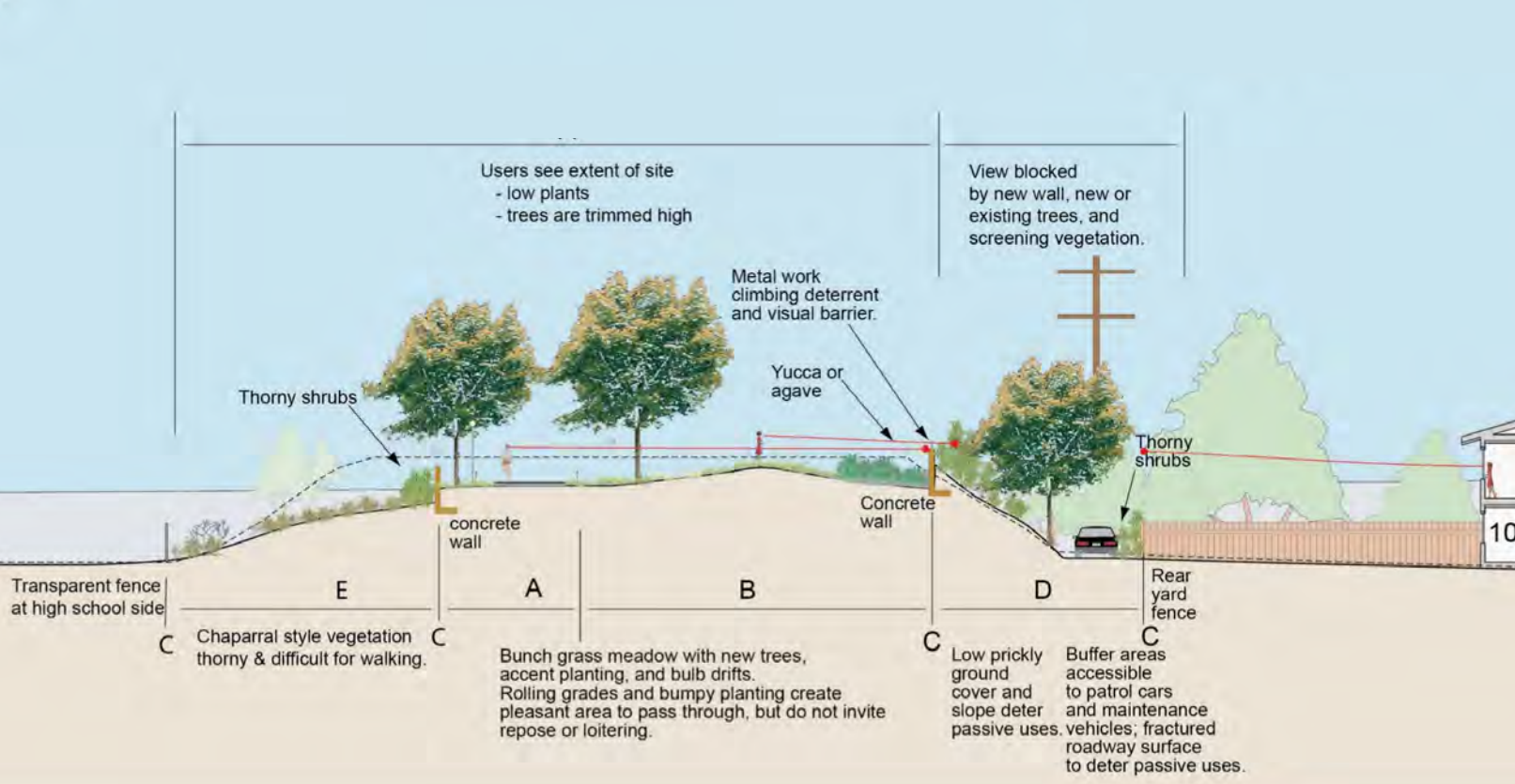
Lake Merritt to Bay Trail, Oakland CA

LESS CONSTRAINED

MORE CONSTRAINED



Lake Merritt to Bay Trail, Oakland CA



Mary Avenue Bridge, Cupertino CA

SHARED-USE FACILITIES FOR PEDESTRIANS & CYCLISTS

BEST PRACTICES

London, UK



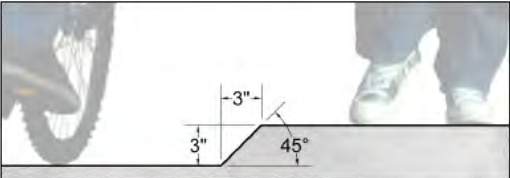
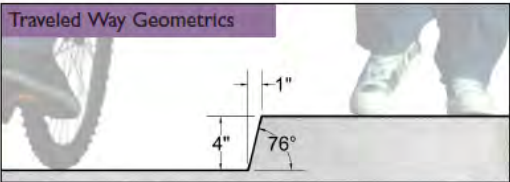
Photo: Mayor of London, "The London Cycling Design Standards (LCDS)", Transport for London, 2014, Chapter 7 General Requirements, 05.

Modes Separated?
Pedestrians and Cyclists

Angled or Vertical Curb?
Angled

Project or Regional Standard?
Regional Standard

Notes
"Angled kerbs ... are more comfortable for disabled cyclists to negotiate than low, square-faced kerbs."



Documentation
Mayor of London, "The London Cycling Design Standards (LCDS)", Transport for London, 2014, Chapter 7 General Requirements, 05.

Copenhagen, Denmark



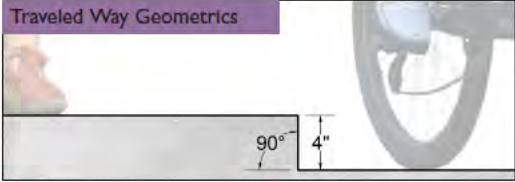
Photo: Colville-Andersen, "Copenhagen Crowd", June 2, 2009, <https://www.flickr.com/photos/16nine/4606269785/in/photostream/>.

Modes Separated?
Pedestrians and Cyclists

Angled or Vertical Curb?
Vertical

Project or Regional Standard?
Regional Standard

Notes
"Nearly all cycling infrastructure along major roads are what we call 'cycle tracks', with a curb separating bicycle traffic from car traffic and another curb separating bicycle traffic from pedestrians. Only 10 % of the on street infrastructure is 'cycle lanes', where there is a curb to separate cyclists from pedestrians, but just a painted line to separate cyclists from cars." Niels Jensen, email message to Emily Marsh, October 22nd, 2015.
Figure: A protected bike lane in Copenhagen, Denmark. Photo: Jonathan Maus/BikePortland, April 17th, 2015, <http://www.peopleforbikes.org/blog/entry/protected-bike-lanes-and-the-social-justice-of-urban-space>



Documentation
Troels Andersen et al., "Collection of Cycle Concepts 2012", Cycling Embassy of Denmark, Translated by Joan Høberg-Petersen, 2012, 64.

Malmo, Sweden



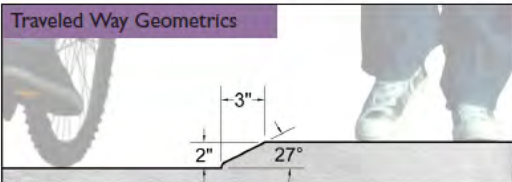
Photo: Cycling in Malmo, "Proposal for the upgraded bike path Malmö-Lund", September 10, 2012, http://cyklaimalmo.blogspot.com/2012_09_01_archive.html.

Modes Separated?
Pedestrians and Cyclists

Angled or Vertical Curb?
Angled

Project or Regional Standard?
Project

Notes
"at some places (mainly in connection to an underpass) we've introduced the vertical separation with angled curb"
Figure: Benders, "Offentliga Miljöer", 2015, 110



Documentation
Benders, "Offentliga Miljöer", 2015



El Cerrito Plaza BART Station

Secure Bike Parking





San Diego Trolley Station



Adobe Headquarters, San Francisco



THANK YOU!

SPUR Oakland | January 14, 2019

