

ELLEN DUNHAM-JONES AND JUNE WILLIAMSON

RETROFITTING

URBAN DESIGN SOLUTIONS *for* REDESIGNING SUBURBS

SUBURBIA

for 21st Century Challenges

UPDATED
EDITION



WITH A NEW UPDATE BY THE AUTHORS AND A FOREWORD BY RICHARD FLORIDA

Ellen Dunham-Jones, AIA

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1100 shopping malls: 1/3 are dead or dying

50,000+ strip malls, 11% vacancy rate



350,000+ big box stores, 300 mil vacant sf

suburban office vacancy rates 16-24%

market driver headlines :

demographic shifts

suburbia simply isn't "family-focused" anymore. 2/3 of suburban hh's don't have kids, 85% of new hh's won't through 2025. Millennials value wifi, nightlife and connectedness more than cars. 58% of 65+ want walkable urbanism (Pew, 2014)

the new centers

as metros have expanded, first ring suburbs and commercial corridors now have central locations, often meriting densification and urbanization of their "underperforming asphalt".

price premiums

70-400% for walkable urbanism



strategy.

Walk UPs

Chris Leinberger, Patrick Lynch

Study of regionally-significant Walkable Urban Places in 30 metros in 2014 found an average 74% rent premium for office – reversing the trend of 30 years ago.

Half of the walkable urban places measured are in the suburbs.



Foot Traffic *Ahead*

Ranking Walkable Urbanism in
America's Largest Metros

By Christopher B. Leinberger & Patrick Lynch

The George Washington University School of Business

retrofitting challenge.

Auto Dependency

Walkability + Multi-modal systems

Transit-Oriented Development

Road diets

Street Networks

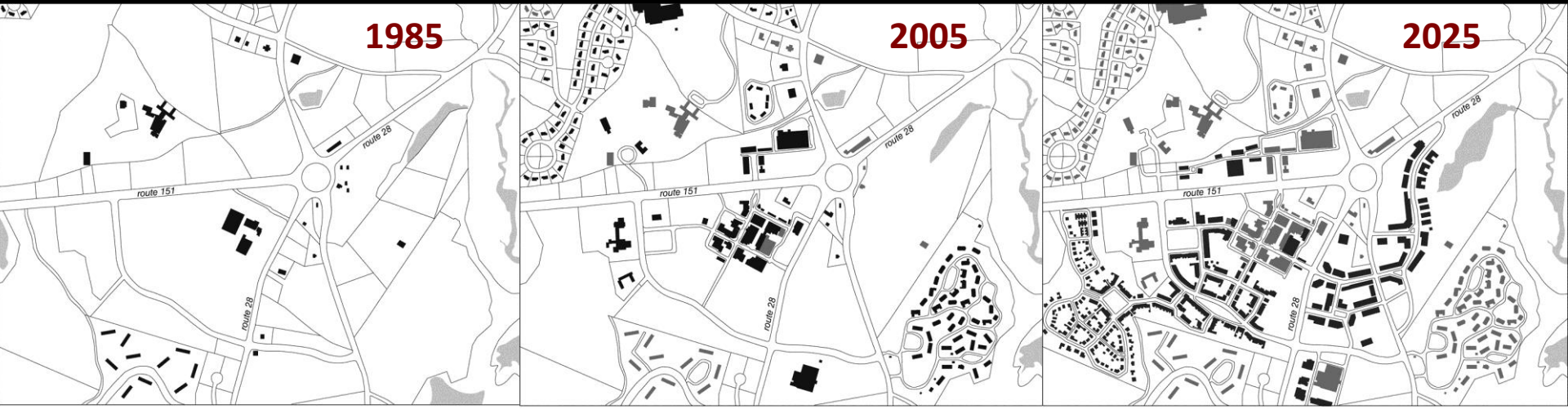
Parking Districts

Car Sharing

from strip center to New England village by building on the parking lots

Mashpee Commons, Cape Cod, MA, 1988-present

Cornish Assoc. Ltd / Duany Plater-Zyberk & Co / Imai, Keller Moore



Source: Dunham-Jones, Williamson 2009



From edge city sprawl to developer-led walkable urbanism

White Flint, N Bethesda MD: W.F. Ptrship, Montgomery Cty, Glattig Jackson, var designers
-new high-rise downtown over 20 years, \$6-7 bil tax revenue, 10k residents – 25% affordable

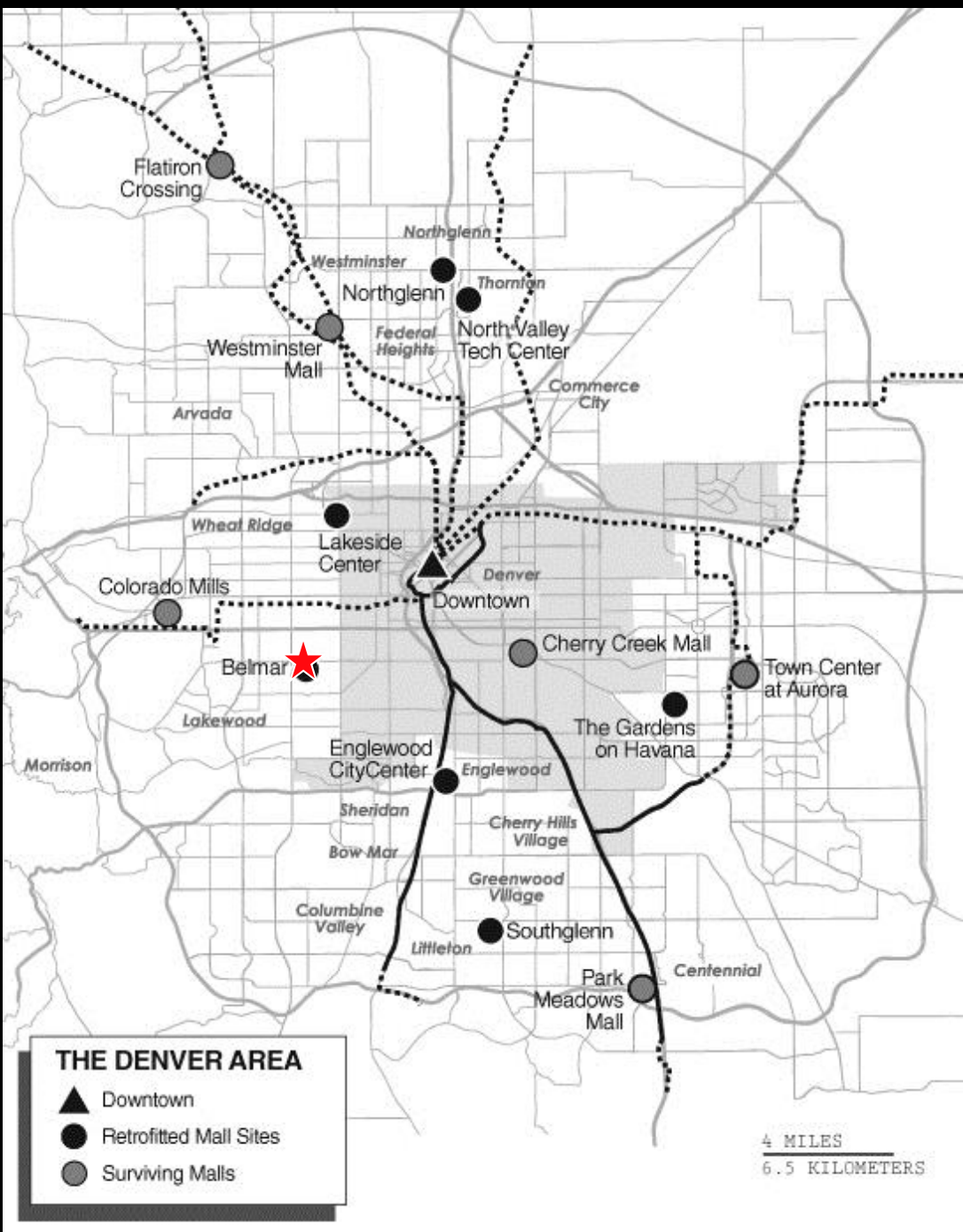


From dead mall to green downtown

Belmar, Lakewood, CO: Continuum Partners; Elkus Manfredi Architects, Civitas Inc., VMWP



- 2002-8 fiscal and economic impact on Lakewood of \$207.2 million (\$49.5 million in 2008 alone), including a fiscal impact of \$10.6 million
- 9 acres of public space and parks including a 2.1 acre park, 1.1 acre plaza
- 8 bus lines come through the new downtown
- 2/3 complete in '09: 1.1 mil sf retail, .9mil sf office, 1300 residential units



8 of 13 regional malls in the Denver Metro area have been retrofitted or announced plans to be.

Retrofitting does NOT imply the wholesale redevelopment of existing neighborhoods.

*Rather it provides existing neighborhoods with urban nodes on targeted underperforming sites—raising the question, **how to connect the dots?***

Access Management on a "Stroad"
Plainfield Avenue, Plainfield Township, MI:



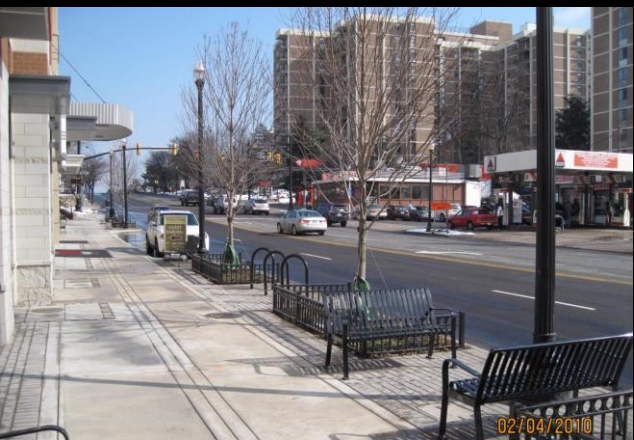
from commercial strip to multi-way boulevard and new downtown

Palm Canyon Drive, Cathedral City, CA; Freedman, Tung & Bottomley source: Dunham-Jones, Williamson, 2009



Retrofitting the strip corridor with transit-served nodes and a form-based code

Columbia Pike, Arlington County, VA, Ferrell Madden Associates, Dover Kohl & Partners



From 5-lane arterial to 2-lane Main Street with multi-use parking Ramblas & solar
Lancaster, CA (pop 157k): CT/KDF Community Development Partners, Moule & Polyzoides
Since revitalization started in 2009: \$106mil in New Markets Tax Credits for redevelopment for local entrepreneurs; 50 new businesses; 10% increase in downtown property values; 50% cut in traffic collisions



Photoz; G. Komar



From 5-lane arterials to 4-lanes w/ bike paths by replacing signaled intersections with roundabouts

Carmel, Indiana



Keystone Parkway Is the Greenest Highway Intersection in the US

by Andrew Michler, 05/10/11

filed under: [Green Transportation](#), [TransportationTuesday](#)

Like 133

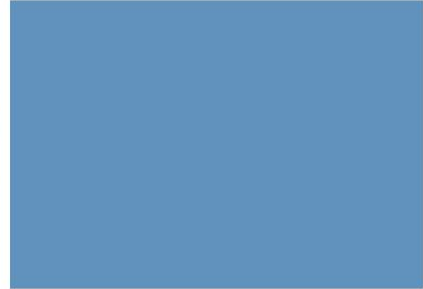
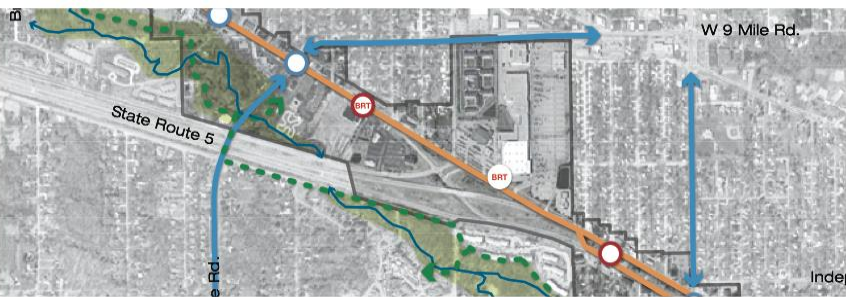


Roundabouts cost less than traffic signals, increase safety and traffic flow and eliminate left-turn lane— leaving room for multiuse bike paths while reducing idling and emissions.

Since installing 65 of 80 planned roundabouts injuries have fallen 80%

Comprehensive planning for change

Grand River Corridor, Farmington and Farmington Hills, MI:



GRAND RIVER CORRIDOR VISION PLAN

From car dealership to quasi-urban retail, bikes, wetland – and surface parking

Arbor Hills, Ann Arbor, MI: BSK Architecture



A map of the Arbor Hills development shows how the buildings are situated on the site.

retrofitting challenge.

Public Health

Physical activity and walkability

Safer streets

Reduce exposure to toxic emissions

Increase access to health care and healthy food

Retrofit for an aging population

From "Big Lots" to LEED gold recreation center and stormwater amenity
Collinwood Recreation Center, Cleveland, OH: City of Cleveland, Paul Volpe Architects



Meds & Eds: From dying mall to revived mall and university medical center

One Hundred Oaks, Nashville, TN: ATR & Assoc., Gresham Smith and Partners Architects



Source unverified

- Vanderbilt Health saved 44% over new construction, planted over 500 oaks, and has seen increased doctor satisfaction, patient follow-up and healthy outcomes
- The neighborhood has seen considerable new investment and rising property values
- Devel'r bought half-empty for \$49M, invested \$30-40M, sold in 6 yrs fully-leased for \$100-125M

from dead mall to mixed-use NORC with sr housing, grocery, hotel: zero stormwater runoff and geothermal
Wayzata Bay Center, Wayzata, MN: City of Wayzata, Presbyterian Homes, LHB, DIIAP, InSite



The wetland site was drained for construction of the Bay Center mall in the sixties. In addition to capturing all stormwater on site under pile-supported streets, the project paid \$129k for wetland credits to the Wayzata Wetland Bank to further protect the lake.

***How to increase public, economic and environmental health here?
Target-anchored strip mall, Battle Creek, MI***



retrofitting challenge.

Social Capital

Civic Engagement

Share: Uber, Lyft, Airbnb

Tactical urbanism

Play

Gathering Spaces

“Missing middle” housing types

Welcome diversity

TACTICAL URBANISM BETA

Short Term Action || Long Term Change

tac-ti-cal

adj: \tak-ti-kəl\

1. of or relating to small-scale actions serving a larger purpose
2. adroit in planning or maneuvering to accomplish a purpose



pavement to plaza



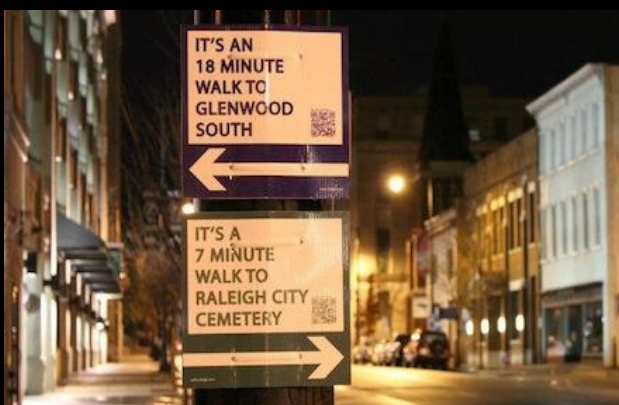
depave



parklet



yarnbombing



Walk posters



guerrilla grafting

Congress for the New Urbanism: Next Gen
short-term projects for long-term gains

From Wal-Mart to Public Library

McAllen Public Library, McAllen TX; Boultinghouse Simpson Gates Architects, Meyer Scherer Rockcastle Architects



Updating the “L” strip mall as a “third place” with portals to the neighborhood
Lake Grove Shopping Center, Lake Oswego, OR: Eric Shoemaker Beam Development



From “back” to a new front to the neighborhood

From downtown mall to locally-funded restored urbanism

Downtown, Muskegon, MI: Downtown Muskegon Development Corp, Chesapeake Group Inc

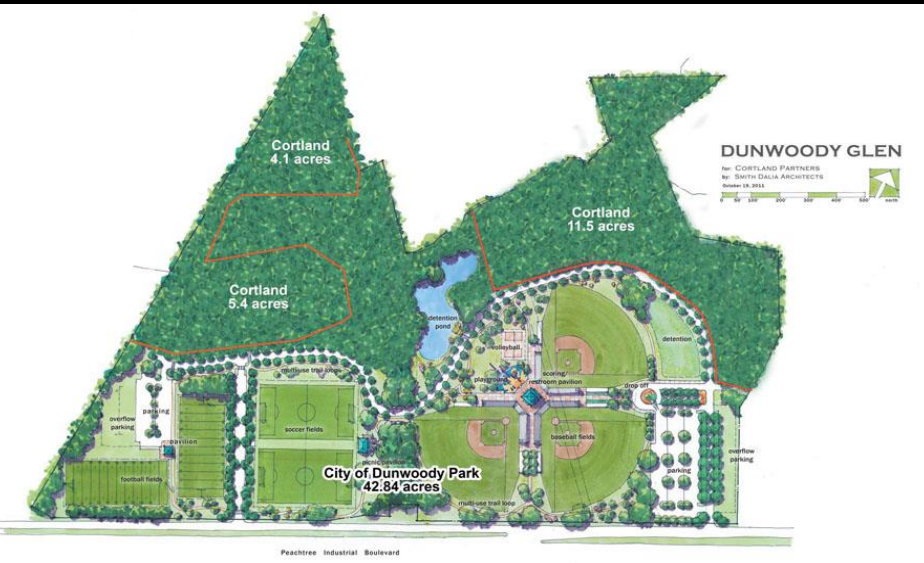
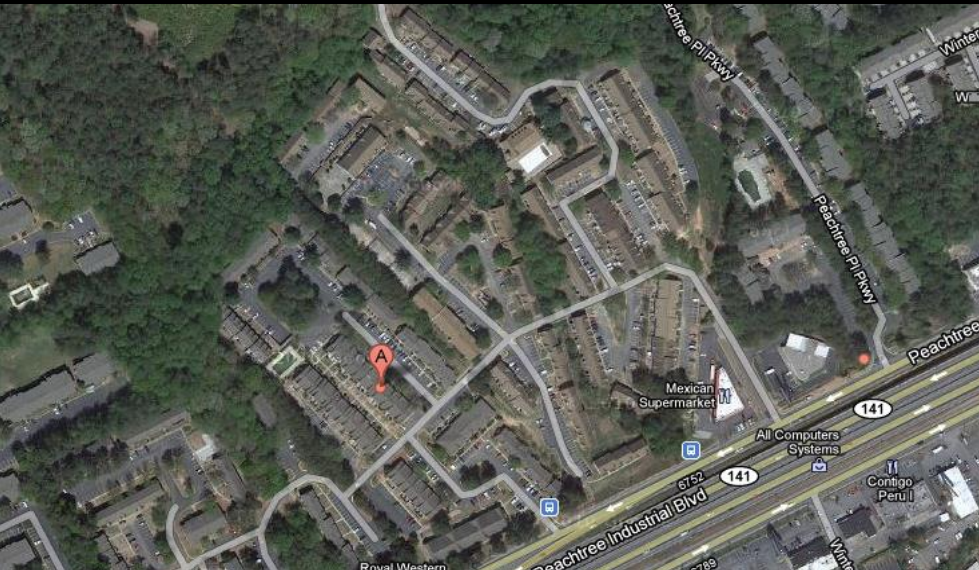


From downtown mall to park ringed with urban housing

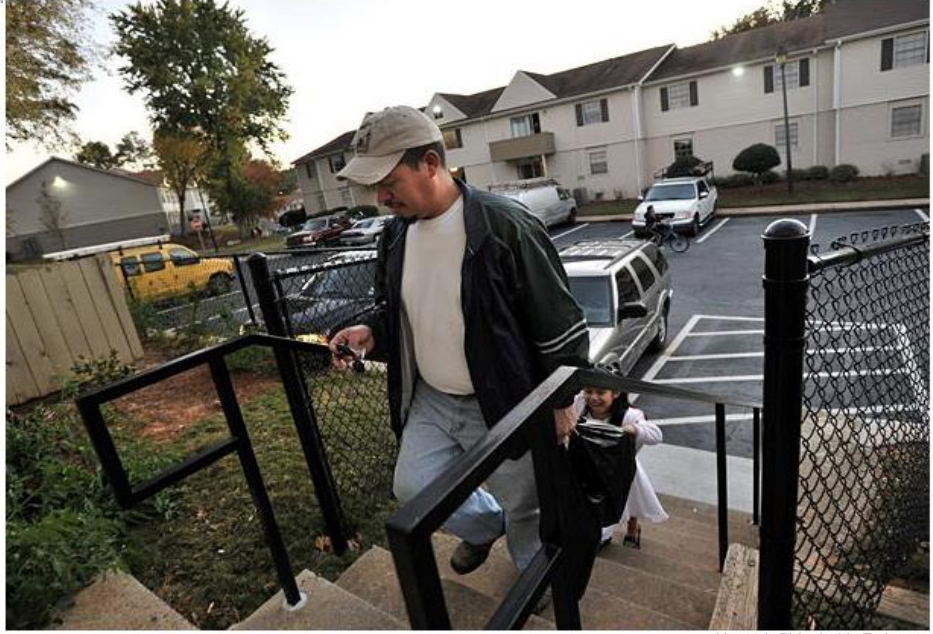
Columbus Commons, Columbus OH: CDDC, Capitol South, Coma-Kokosing, Moody Nolan, EDGE Group



Gentrification in the name of greening? Dunwoody Glen, Dunwoody GA



Hyosub Shin, hshin@ajc.com



Hyosub Shin, hshin@ajc.com

Kids get off the school bus at Dunwoody Glen Apartments, which is one of apartment complexes could be torn down to build a sports complex

Dunwoody Glen Apartments resident Erick Pereira and his daughter Mariana Pereira, 5, walk back home after a trip to a local grocery store.

retrofitting challenge.

Equity and Affordability

Equitable access: to transit, jobs,
parks, schools, and housing

Inclusionary zoning

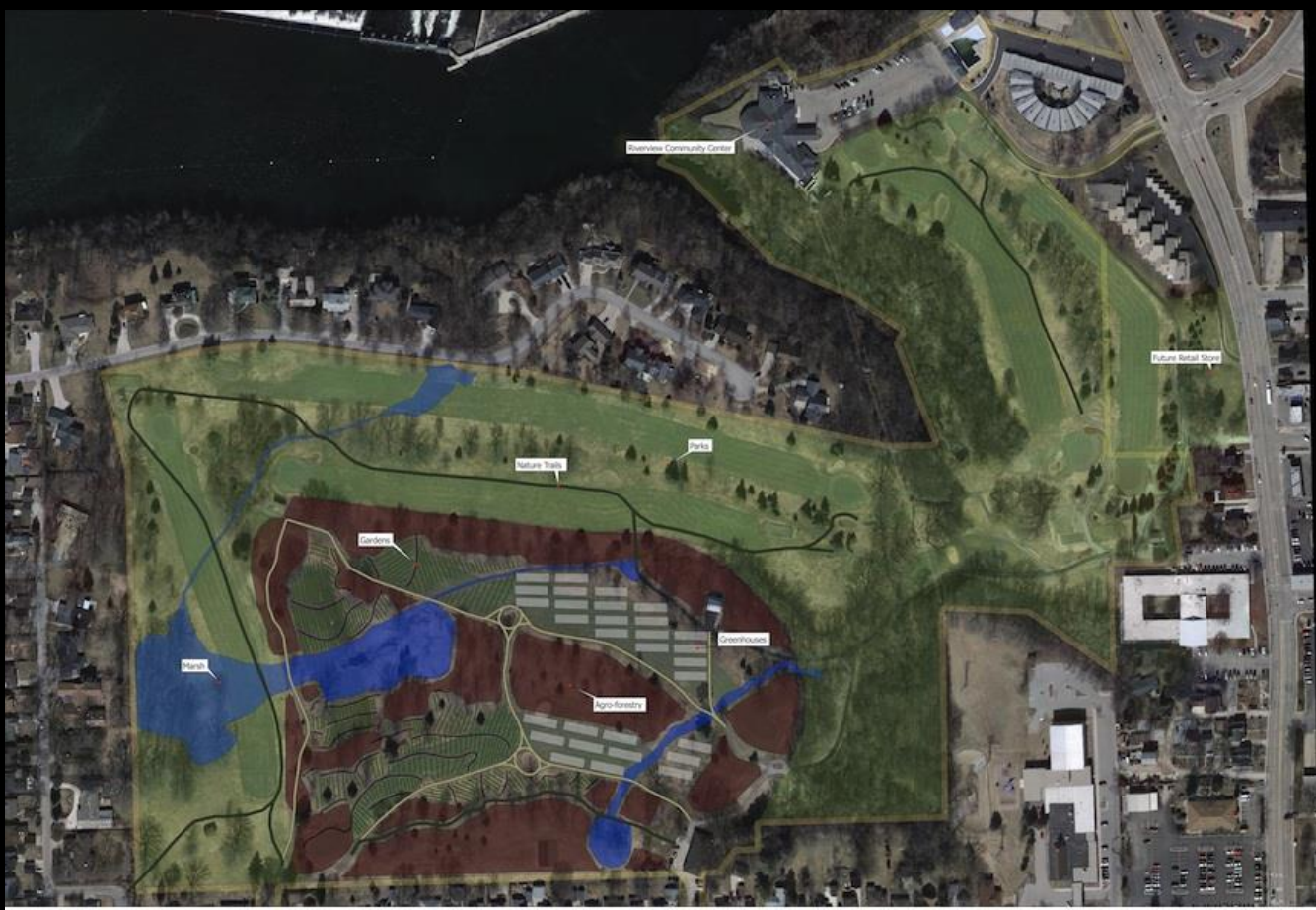
Replacement units

Reinhabitation

The city as master developer

From golf country club to gardens to feed and provide jobs for the homeless

Riverview Gardens, Appleton, WI;



Affordable, dense infill gracefully transitions the commercial-residential seam
Cottages on Greene Street, East Greenwich, RI: 620 Main St Associates, Union Architects



Former auto-repair lot



First proposal for affordable housing



Inward views to stormwater-catching court



15-units/acre maintains local scale at street

From strip to job and town center

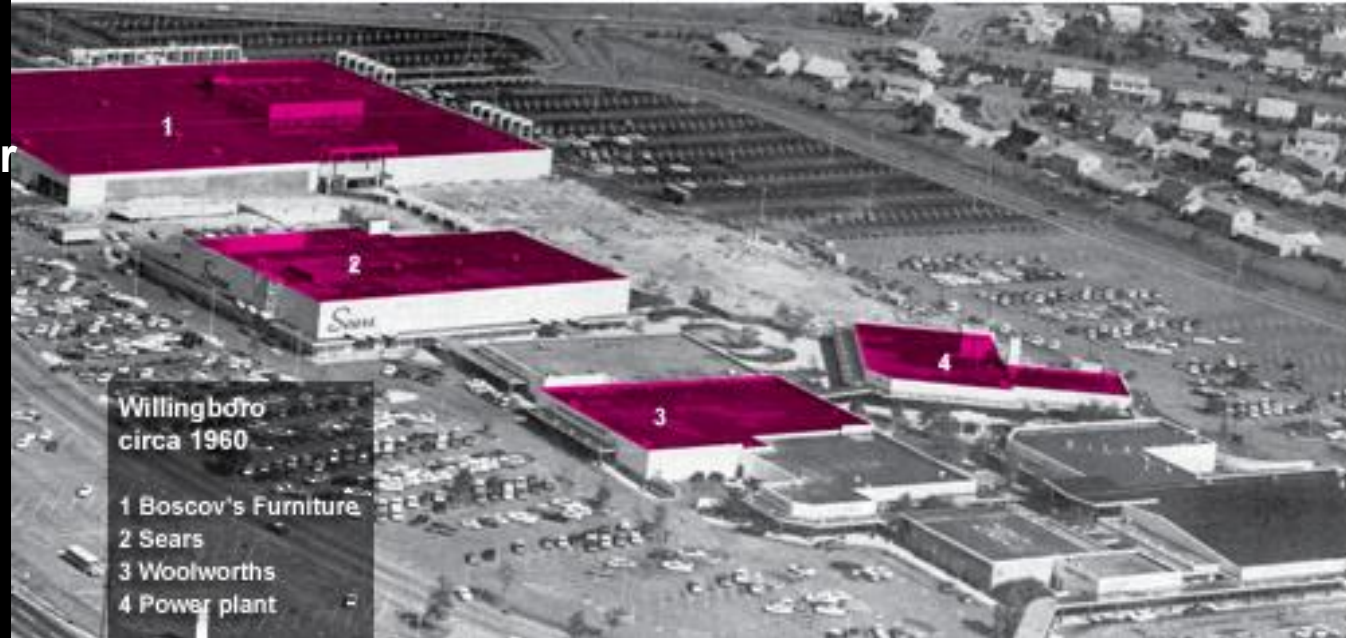
Willingboro Town Center

Willingboro, NJ

Croxtan Collaborative Architects

1960

- 1. Boscov's Furniture
- 2. Sears
- 3. Woolworths
- 4. Power plant



Courtesy Croxtan Collaborative Architects
Photography

MTC Aerial

2009

- 1. Mail-service pharmacy
- 2. Office building
- 3. Public library w/ retail
- 4. Community College
- 5. Town Commons
- 6. Townhouses
- 7. Planted swales



From zombie subdivision to mixed-income TND: City as Master Developer

Walkers Bend, Covington, GA: Covington Redevelopment Authority



New Leaf Center
Social services, incubator kitchen, restaurant, classrooms, mtg space, with apts abv.
3 funding sources: NPS3, SPLOST, CHA loan.

Affordable Equity Partners
Lease to Purchase
Low-income tax credits

Habitat for Humanity townhomes
NSP- funded

retrofitting challenge.

Jobs

Attract and retain 25-34 yr olds

Anti-corporate office, maker space, & innovation districts

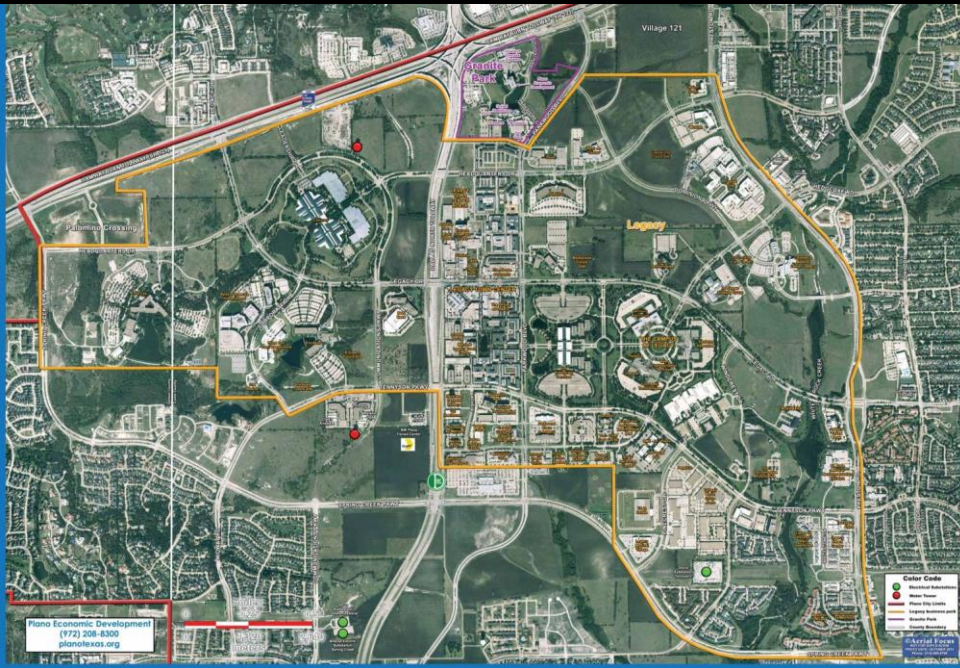
Update outdated office parks and sleepy suburbs with mixed uses and housing

Reinhabit, redevelop, or regreen the white elephants

Raising office rents by inserting walkable, mixed-use as an amenity?

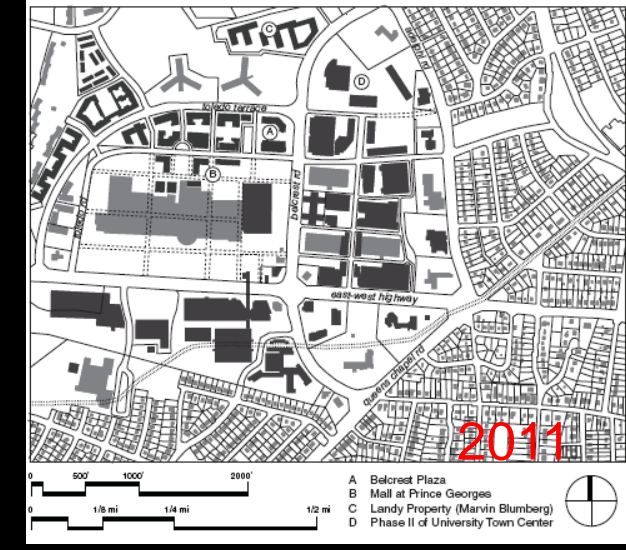
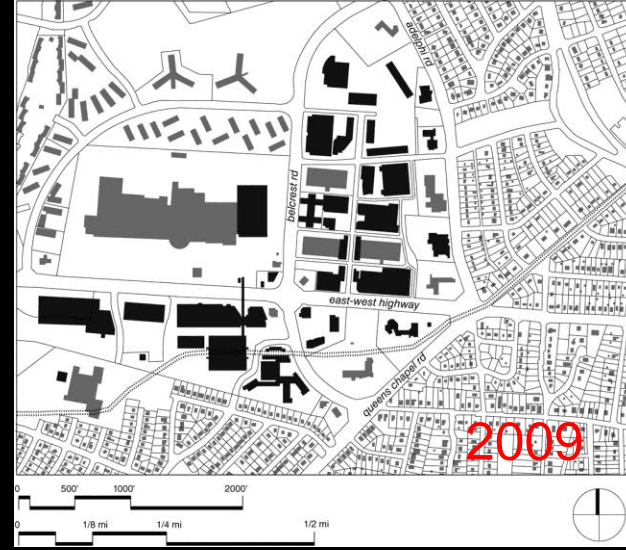
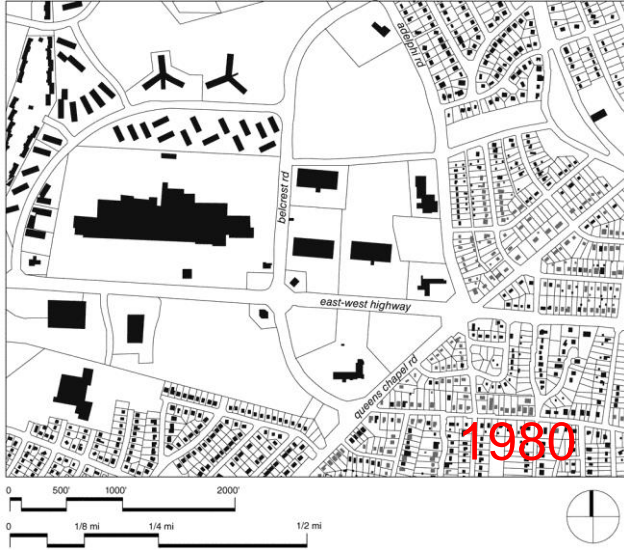
Legacy Town Center, Legacy Business Park, Plano TX:

Cassidy Turley's Q2 2013 Report: existing rental rates in Far North Dallas have risen 22% in 5 yrs to \$29.04/sf and 4th lowest vacancy rate (9.9%) of 13 Dallas submarkets.



“Just up the North Dallas Tollway, the success of Legacy has sparked the construction of Granite Park Four, Hall Office Park, Legacy Tower, Dominion at Parkwood, and Lincoln Legacy Two, all of which are underway, in hopes of mirroring what Legacy did so well: creating a premier mixed-use environment.”

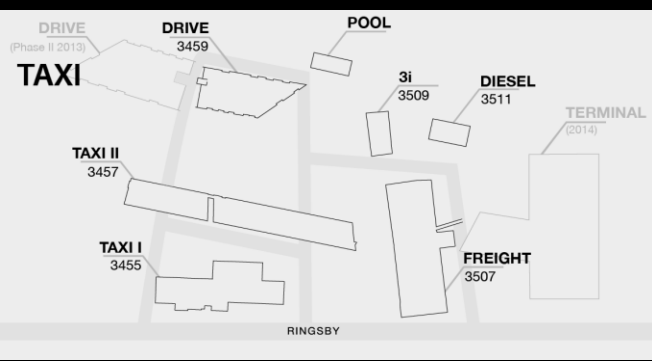
Ward Eastman, “The Legacy Effect,”
Cassidy Turley Commercial Real Estate Review, Oct 24, 2013.



transit triggers infill of an office park
University Town Center, Hyattsville, MD
 Prince George's Metro Center, Inc.; Parker Rodriguez, RTKL Associates, WDG Architecture

from taxi distributor to small mixed-use TOD w daycare and container pool

TAXI, Riverfront North, Denver, CO: Zeppelin Development

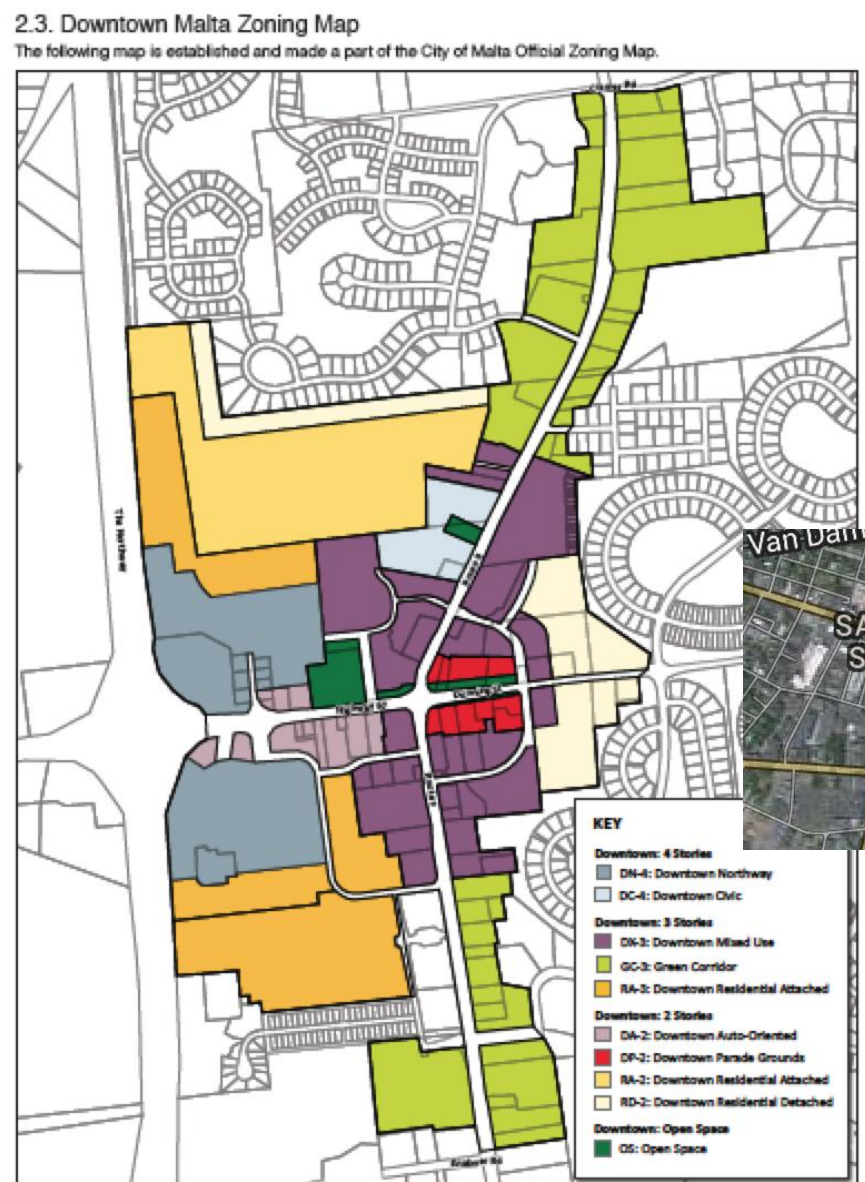


Transfer of Development Rights to regreen and urbanize flooded 50's biz park
Fort Washington Office Center, Upper Dublin, PA: Urban Ptrns, URS, Smith & Porter, McMahon



Failed attempt to replicate Saratoga Springs on 3X the land w 1/16th the market

Downtown Malta, Malta, NY: Code Studio, Third Coast Design Study, Fuss & O'Neill, Howard/Stein-Hudson; Synthesis LLP



Failed attempt to replicate Saratoga Springs on 3X the land w 1/16th the market

Downtown Malta, Malta, NY: Code Studio, Third Coast Design Study, Fuss & O'Neill, Howard/Stein-Hudson; Synthesis LLP



Article XVI Downtown Malta Form-Based Code

prepared by

CODE STUDIO

for

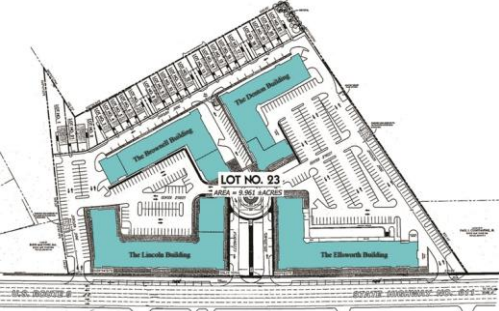
the Town of Malta, New York

ADOPTED February 4, 2013



Good code, too big area, inadequate phasing leads to failed fragments

Downtown Malta, Malta, NY: Code Studio, Third Coast Design Study, Fuss & O'Neill, Howard/Stein-Hudson; Synthesis LLP



Ellsworth Commons: Albany Partners, Humphreys & Partners Architects

Malta Crossings: Seth Harry & Assoc

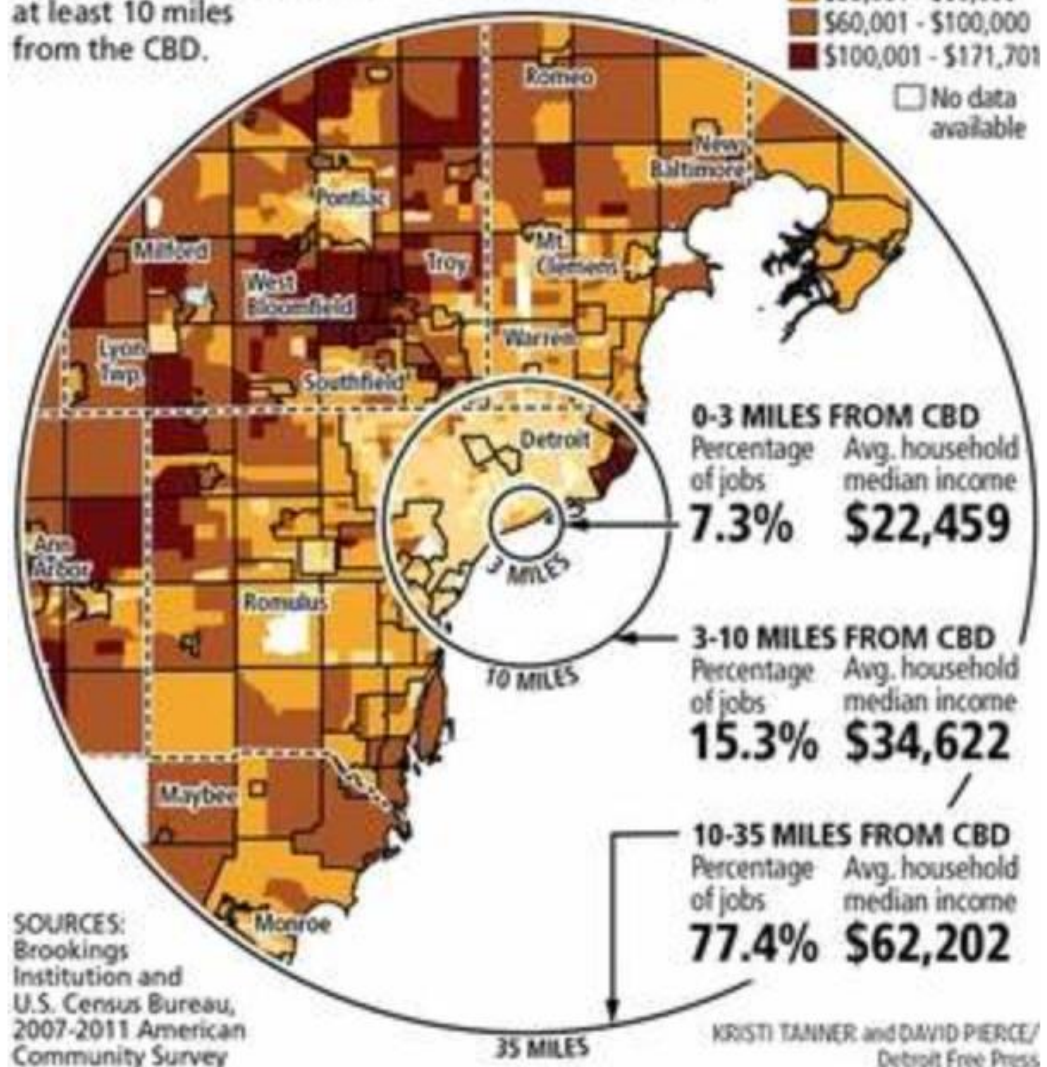


JOB SPRAWL: WE'RE NO. 1

Metropolitan Detroit leads the nation's 100 largest metro areas in the percentage of its jobs found at least 10 miles from the central business district. More than 75% of jobs in metro Detroit are found at least 10 miles from the CBD.

Median household income

- \$5,568 - \$15,000
- \$15,001 - \$35,000
- \$35,001 - \$60,000
- \$60,001 - \$100,000
- \$100,001 - \$171,701
- No data available



SOURCES: Brookings Institution and U.S. Census Bureau, 2007-2011 American Community Survey

KRISTI TANNER and DAVID PIERCE/
Detroit Free Press

Reinhabit? Redevelop? Regreen?

Kmart Headquarters, Troy, MI --- Old Hospital, City of Three Rivers, MI



OLD THREE RIVERS AREA HOSPITAL City Retains "Hospital Hill" City of Three Rivers, Michigan

Prepared By: City of Three Rivers, MI
Department of Public Services - GIS
Date Printed: October 27, 2023
Project Date: Spring 2022
Dimension: Based on Mattson Surveys:
NO. TR3-22514 & NO. TR3-22515

This map is provided by the City of Three Rivers (the "City"). The person or entity receiving this map (the "User") agrees: (1) that there are no warranties of any kind, (2) that use of this map is at the User's sole risk, (3) that the City shall not be liable for any damages to User or any third party, and (4) that this map may not be used by any third party without the specific written consent of the City.

- City Retains
- Old Hospital Property & Parking Lots
- Parcel Lines



retrofitting challenge.

Energy

District Energy Systems

Waste Heat Capture

**Peak Load Shaving with
renewables**

**Energy retrofits of existing
buildings**

From 3-acre truck loading facility to urban park w/ 600 ton BTU geothermal source

Guthrie Green Urban Park, Tulsa, OK: OSU, SWA, Kinslow, Keith & Todd Architects

The \$8M conversion of the 3-acre site in an emerging arts district received a \$2.5M ARRA grant to provide gardens, stage, pavilion and 120 wells to serve 120k of nearby non-profit users.



Guthrie Green Project Site - Before



From airport to solar + smart grid new urbanist community

Mueller, Austin, TX: Catellus Development

Use of retrofit's renewables more for peak-shaving than net-zero optimization

Living laboratory shows how a smart grid works

Austin community benefits from clean energy system of the future



Solar panels dot the roofs of homes in the Mueller neighborhood of Austin.



retrofitting challenge.

Water

Water Quality:

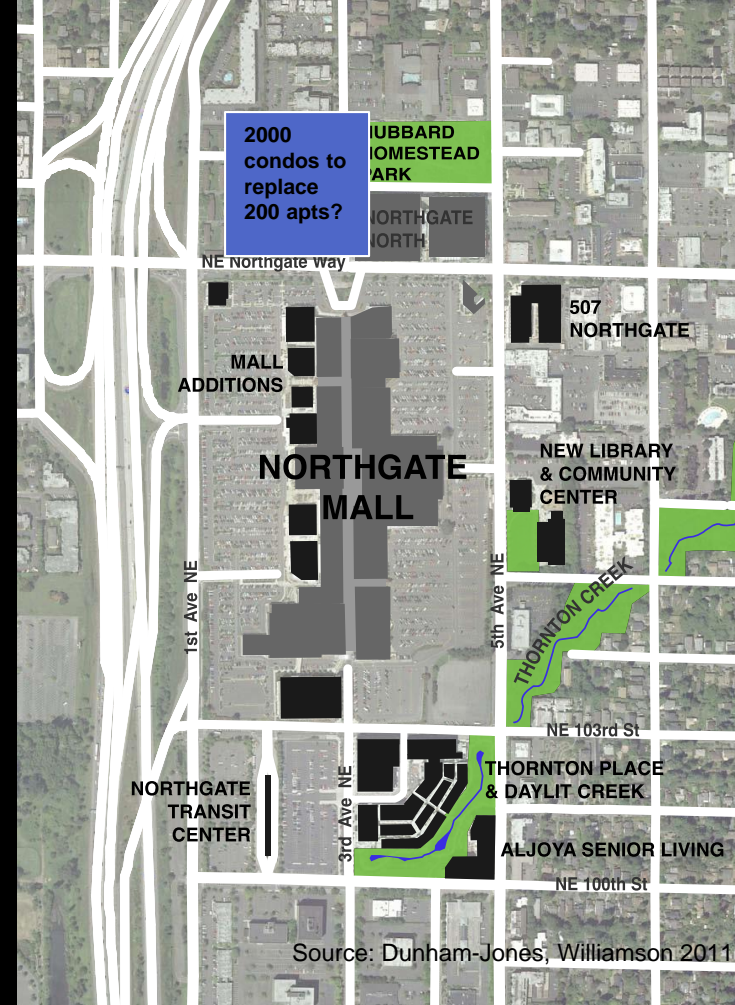
- Daylight culverted creeks
- Reconstruct wetlands
- Clean and control runoff

Too little water:

- Capture for reuse
- Conserve

Too much water:

- Regreen flood plains
- Blue/Green infrastructure/LID
- Pervious surface
- Hard and soft barriers
- Buildings and infrastructure that can take a bath
- Planned retreat



Source: Dunham-Jones, Williamson 2011

from mall parking lot to TOD with condos, senior housing, and daylit creek park

Northgate Urban Center, North Seattle, WA: LEED-ND pilot program

Thornton Place, Mithun Architects for Stellar Holdings & Lorig Associates

- Added 530 units of housing at net 96 units/acre (another 1800 coming?)
- Increased open space within the Northgate Urban Center by 50%
- Provided pedestrian links that shortened walking distances by 50% from several adjacent neighborhoods



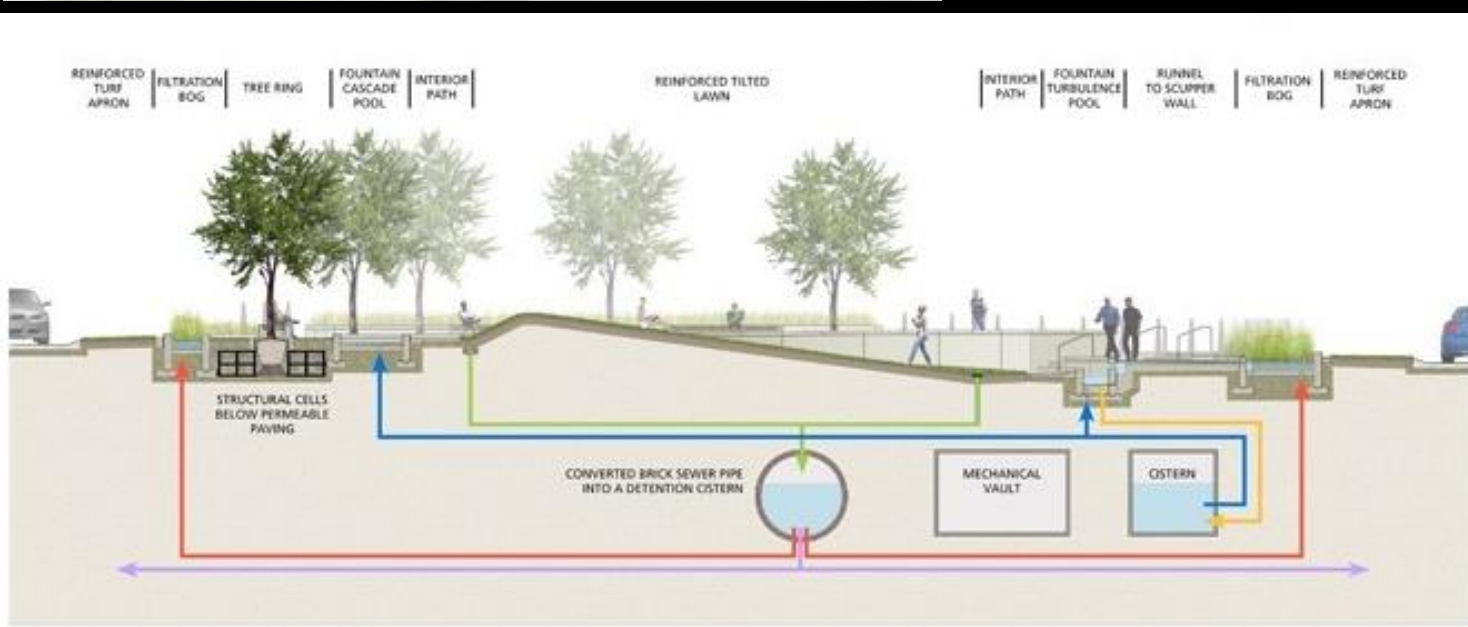
Thornton Creek Water Quality Channel: City of Seattle, SvR Design

- Reduced impervious surface by 78%
- Designed to remove an estimated 40-80% of suspended solids from 91% of the avg annual stormwater runoff from the 680-acre drainage basin
- Created new habitat: native birds were observed within one month and native volunteer plants have gotten established with the 85% native species that were planted.
- Adds an estimated 30% increase in adjacent property values

Source: Kaid Benfield, Natural Resources Defence Council

Intersection retrofit and public placemaking as redevelopment catalyst

Uptown Normal Illinois Roundabout, Normal IL: Farr Associates, Hoerr Schaudt L'scape



Inserting bike paths and bioswales in a corridor retrofit

Indy Cultural Trail, Indianapolis, IN: Rundell Ernstberger Associates



The Magnificent Bioswales & Stormwater Treatment Along the Indy Cultural Trail

from STREETFILMS



\$62.5M 8-mile bike path and bioswale system. Coincided with \$100Ms in new development and triggered 25 new businesses in core 5-block area in first 9 months.

From urban mall to multi-modal TOD and flood control park

Meriden Downtown Hub, Meriden, CT: Parsons Brinckerhoff, Milone & MacBroom



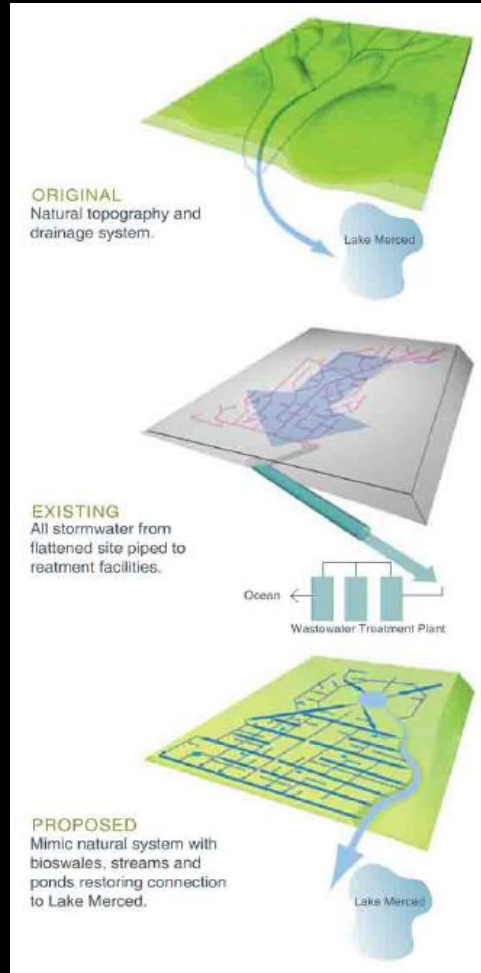
BEFORE



Upgrading 1940-s-50's environmental, social, and transportation systems

Parkmerced, a 3,221-unit rental apt community, San Francisco, CA: SOM

5,665 net new residences with net zero increase in greenhouse gases, zero landfill waste, 100% aquifer recharge, local food, 56% reduction in reliance on "the grid" BUT concerns about evictions



retrofitting challenge.

Layered solutions, Performance metrics

Auto-dependence

Affordability

Public Health

Social Capital

Jobs

Water

Energy

Waste



**CNU 23: Meeting the Demand for Walkable Places
April 29 - May 2, 2015 in Dallas/Fort Worth**

**CNU 24 – The Transforming City, June 7-11, 2016
in DETROIT**

www.cnu.org/michigan