

WHAT DO YOU THINK OF WHEN YOU HEAR THE WORD

NEIGHBORHOOD?

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EAST 4TH STREET, CLEVELAND, OHIO

GATHERING PLACES

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CLEVELAND MUSEUM OF ART

CIVIC AMENITIES

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GREAT LAKES BREWING COMPANY, CLEVELAND

WORKPLACE ANCHORS

© 2016 HAZEL BORYS



WINNIPEG, MANITOBA

CONNECTIONS

© 2015 HAZEL BORYS



CONNECTIONS

IMAGE CREDIT: CITY OF EDMONTON



WINNIPEG, MANITOBA

CONVIVIALITY

IMAGE CREDIT: ROBERT GALSTON, 2015



WINNIPEG, MANITOBA

CONVIVIALITY

© 2015 HAZEL BORYS



SNOWGA, FARGO, NORTH DAKOTA

WELLNESS

IMAGE CREDIT: FARGOMOORHEAD.ORG



FESTIVAL DU VOYAGEUR, WINNIPEG, MANITOBA

CULTURE

© 2015 HAZEL BORYS





WINNIPEG ART GALLERY

CULTURE

© 2015 STEPHEN BORYS





COMPLETE

IMAGE CREDIT: RAW-ALMOND.COM, 2015



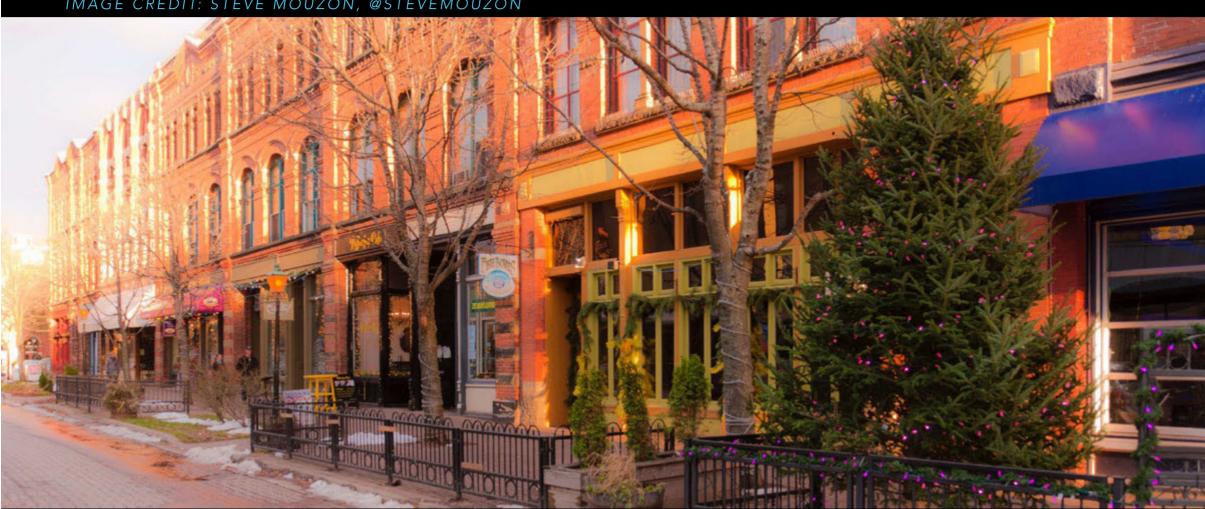




CHARLOTTETOWN, PEI

COMPLETE

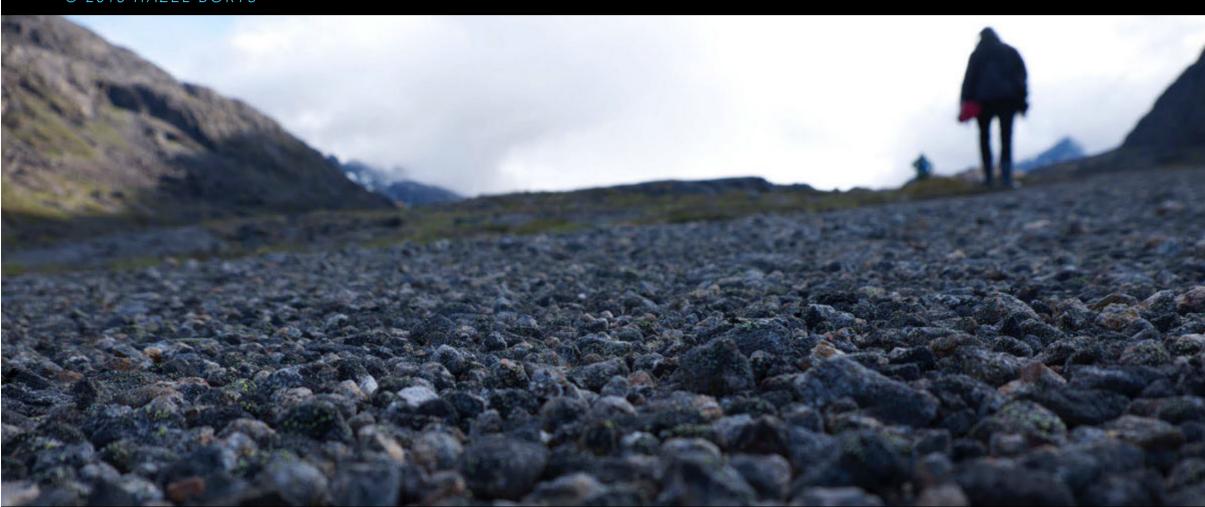
IMAGE CREDIT: STEVE MOUZON, @STEVEMOUZON



EVIDGHEDSFIORDEN, GREENLAND

RESILIENT

© 2015 HAZEL BORYS



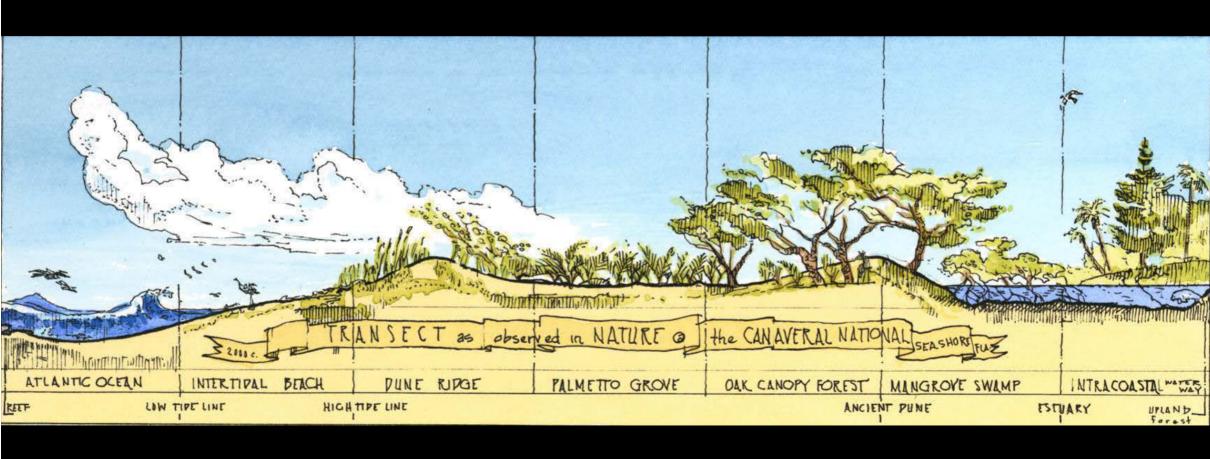
WALK :: CYCLE :: SKI :: SKATE :: SLED

DESIGNING FOR ACTIVE LIFE

SPECTRUM OF LIFE

TRANSECT

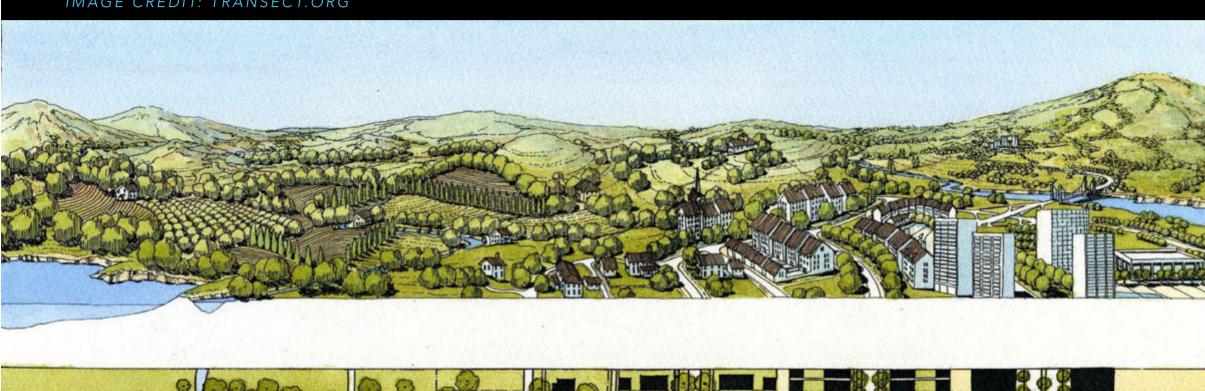
IMAGE CREDIT: TRANSECT.ORG

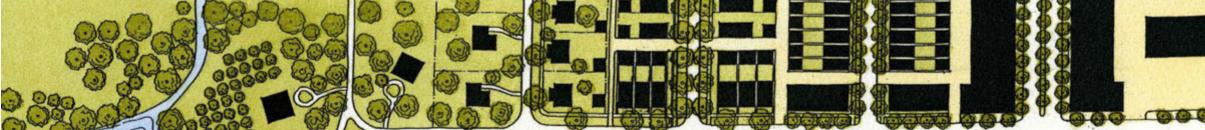


SPECTRUM OF URBAN CHARACTER

TRANSECT

IMAGE CREDIT: TRANSECT.ORG





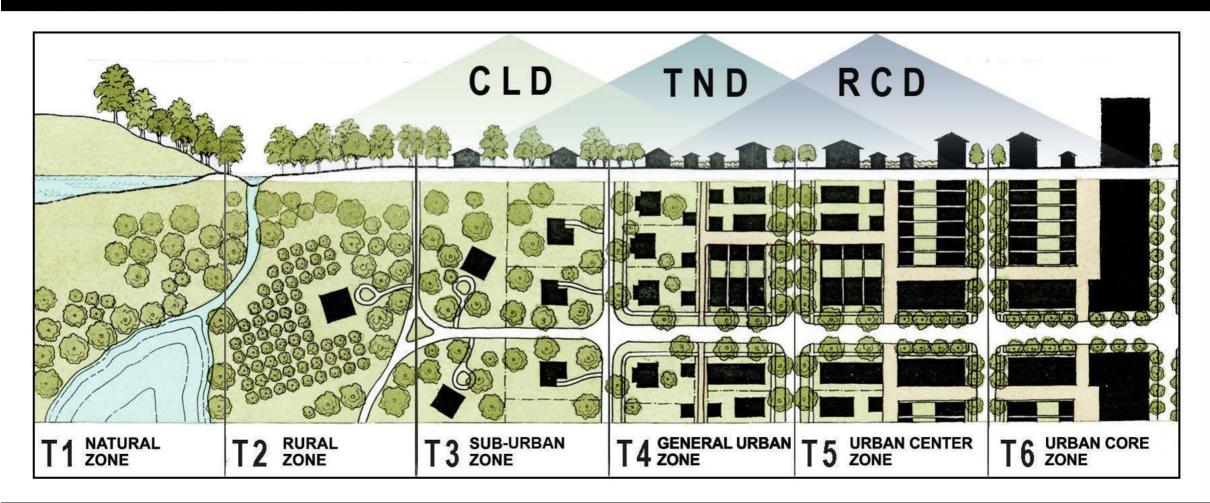
WINNIPEG © 2010 HAZEL BORYS



THE TRANSECT AND

COMMUNITY

IMAGE CREDIT: TRANSECT.ORG



1. STAY ALIVE

DESIGNING FOR ACTIVE LIFE:

STREET CHARACTER



CHARACTER: A REFLECTION OF PRIORITIES

LINK OR PLACE?

ADAPTED FROM COMPLETE MOBILITY @DEWANMKARIM. FLICKR IMAGES: (L) COUNTRY LEMONADE; (R) LA CITTA VITA

LINK: STREET AS MOVEMENT CORRIDOR

DESIGN
PRIORITY:
SAVE TIME

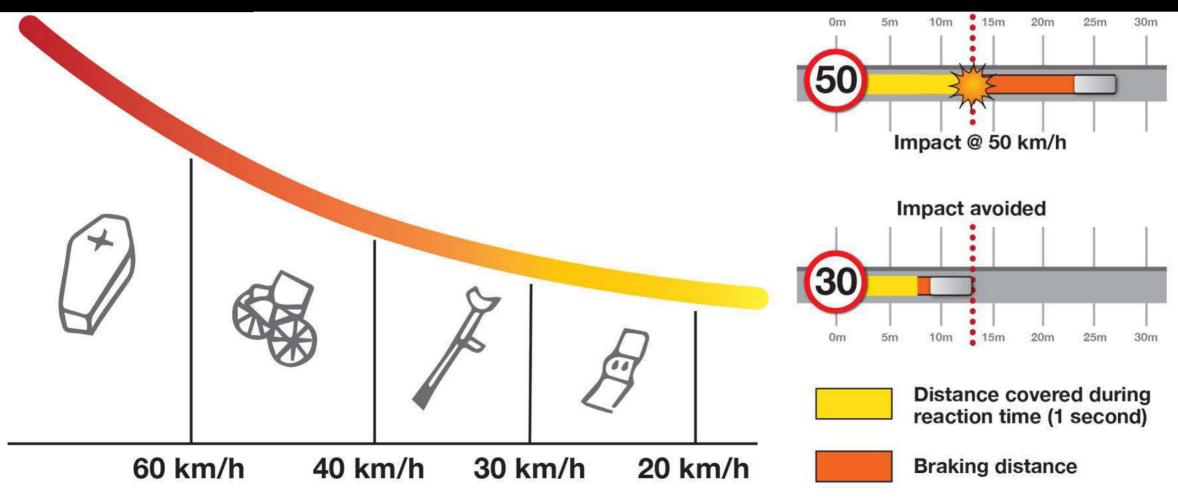


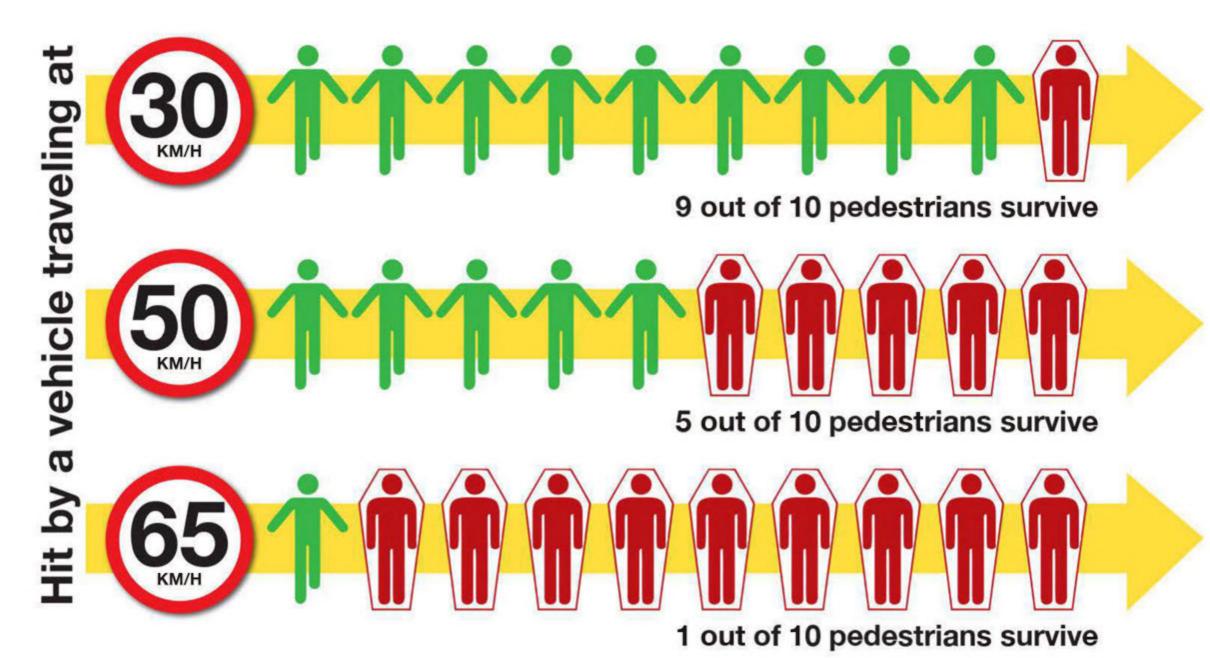
PLACE: STREET AS DESTINATION

DESIGN
PRIORITY:
SPEND TIME

AUTO-PEDESTRIAN COLLISIONS

ADAPTED FROM COMPLETE MOBILITY @DEWANMKARIM





2. RAISON D'ETRE

DESIGNING FOR ACTIVE LIFE:

THE USEFUL WALK



CONNECTED BLOCK STRUCTURE

MIXTURE OF USES

IMAGE CREDIT: CITY OF SARASOTA, FLORIDA



CONNECTED WINNIPEG

MIXTURE OF USES

© 2010 HAZEL BORYS, WINNIPEG





3. SHELTER FROM THE ELEMENTS

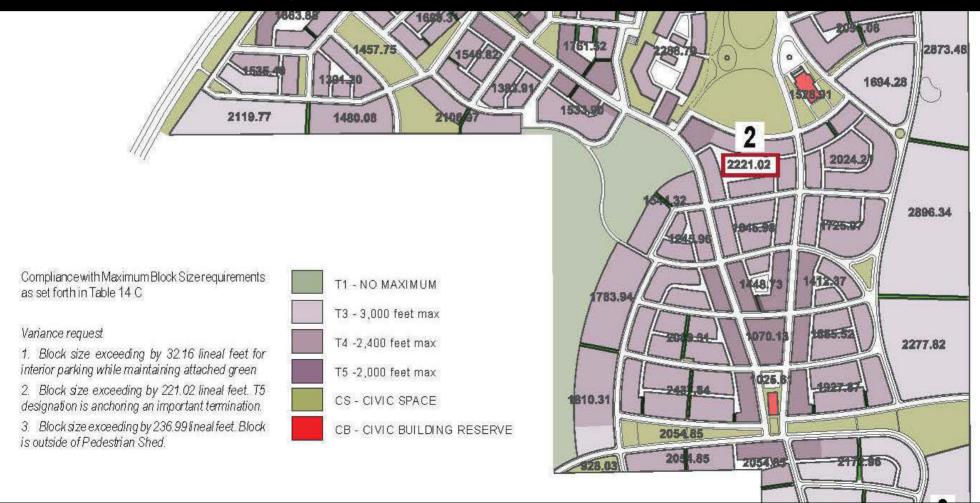
DESIGNING FOR ACTIVE LIFE:

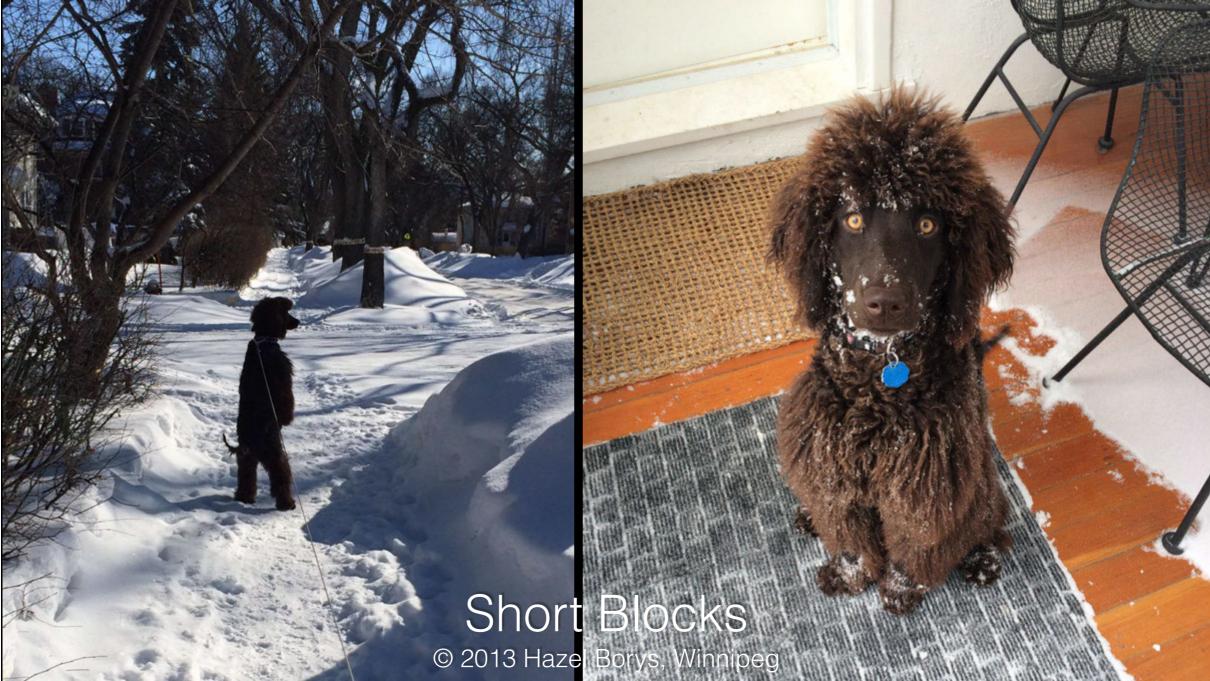
FINE-GRAINED GRID



MAXIMUM BLOCK SIZE

IMAGE CREDIT: CITY OF SARASOTA, FLORIDA





4. NEIGHBOURHOOD ANCHORS

DESIGNING FOR ACTIVE LIFE:

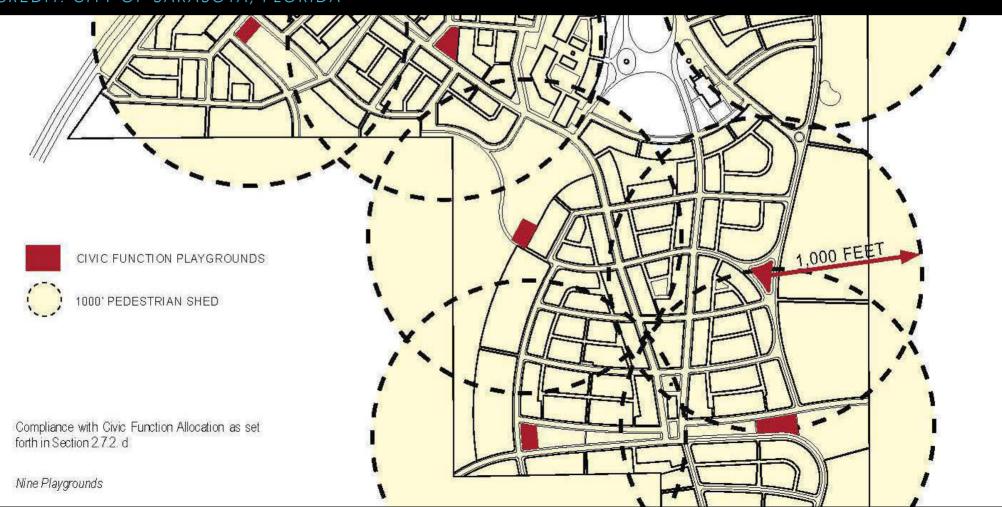
CIVIC AT HEART



NEIGHBOURHOOD ANCHORS

CIVIC AT HEART

IMAGE CREDIT: CITY OF SARASOTA, FLORIDA



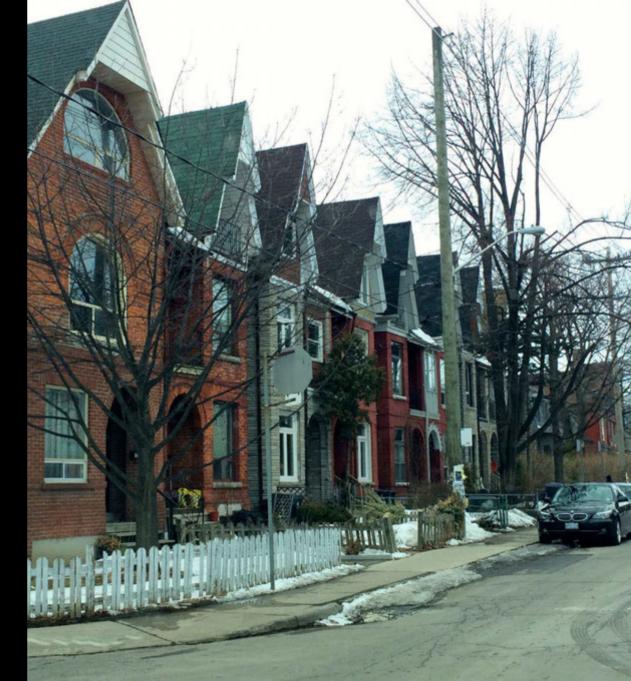




5. ALLEY-LOADED

DESIGNING FOR ACTIVE LIFE:

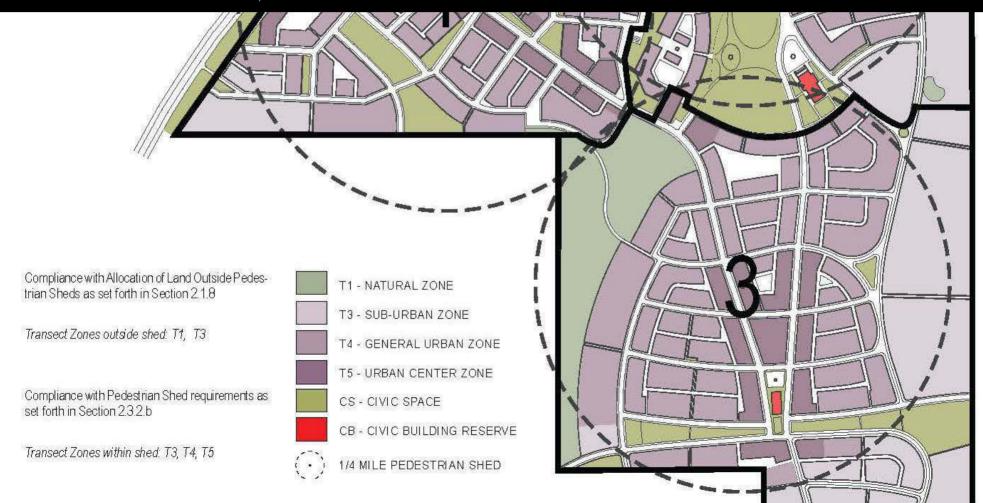
HUMAN SCALE



HUMAN SCALE

ALLEY LOADED

IMAGE CREDIT: CITY OF SARASOTA, FLORIDA









DESIGNING FOR ACTIVE LIFE

• Street Character Link or Place

The Useful Walk
 Mixture of Uses

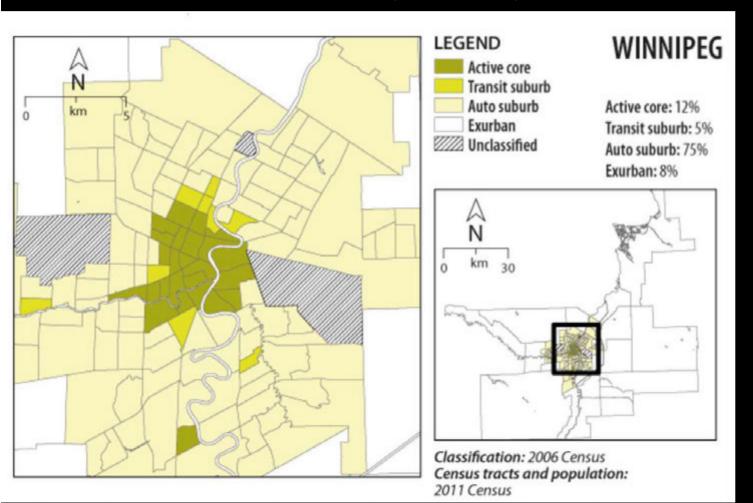
• Fine-Grained Grid Shelter from Elements

Civic at Heart
 Neighbourhood Anchors

Human Scale
 Alley Loaded

A COUNTRY OF SUBURBS

IMAGE CREDIT: DR. DAVID GORDON, PROFESSOR; SOURCE: STATISTICS CANADA, 2011 AND 2006 CENSUS TRACT DATA



75% AUTO 'BURB

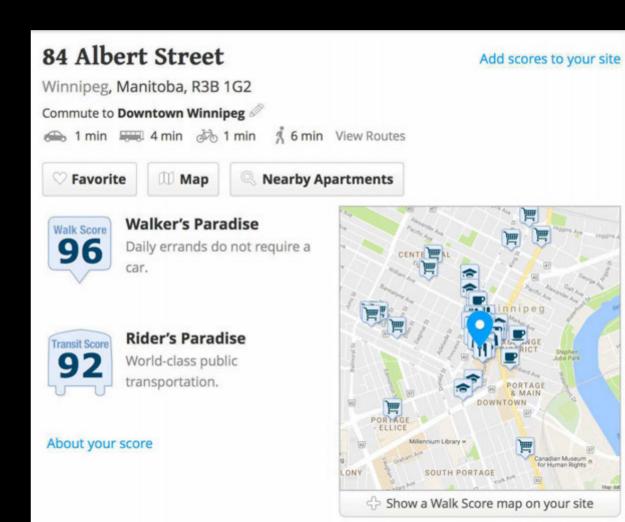
12%
ACTIVE
CORE

MEASURING THE ACTIVE METROPOLIS

GOT WALKABILITY?

IMAGE CREDIT: WALKSCORE.COM





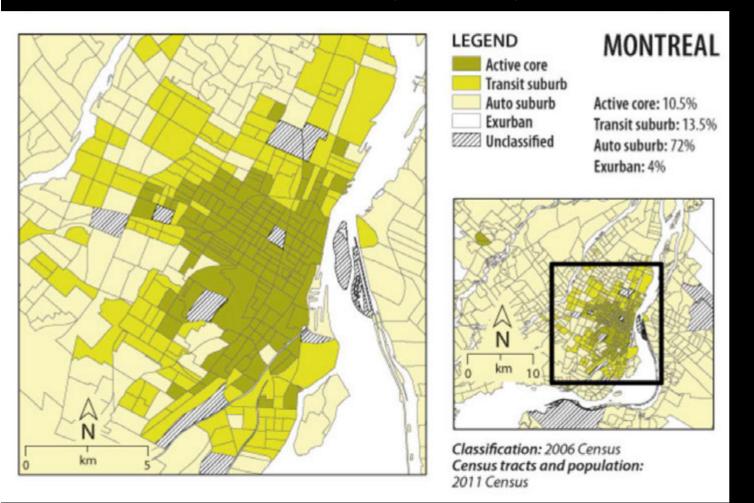




QUEEN'S UNIVERSITY SCHOOL OF URBAN AND REGIONAL PLANNING

MONTREAL

IMAGE CREDIT: DR. DAVID GORDON, PROFESSOR; SOURCE: STATISTICS CANADA, 2011 AND 2006 CENSUS TRACT DATA

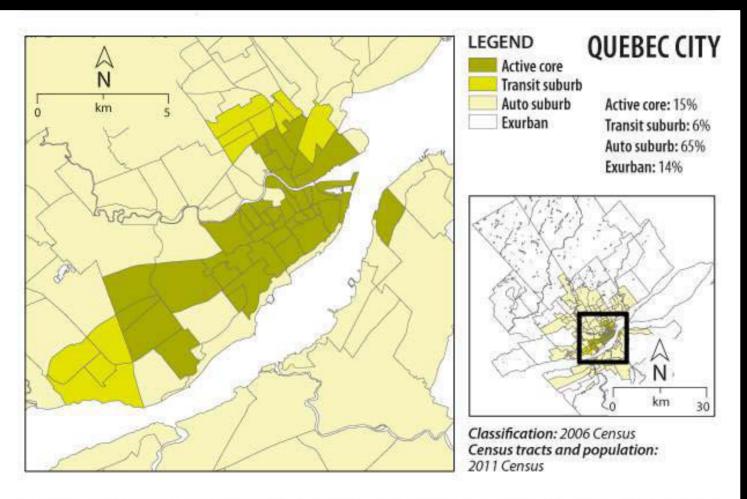


72% AUTO 'BURB

10.5%
ACTIVE
CORE

QUEBEC CITY

IMAGE CREDIT: DR. DAVID GORDON, PROFESSOR; SOURCE: STATISTICS CANADA, 2011 AND 2006 CENSUS TRACT DATA



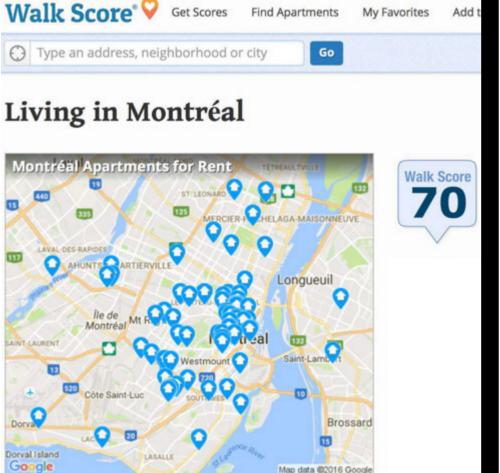
65% AUTO 'BURB

15% ACTIVE CORE

MEASURING THE ACTIVE METROPOLIS

GOT WALKABILITY?

IMAGE CREDIT: WALKSCORE.COM





Commute to **Downtown Westmount**





Nearby Apartments







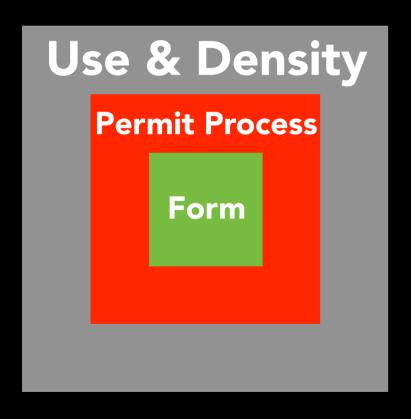
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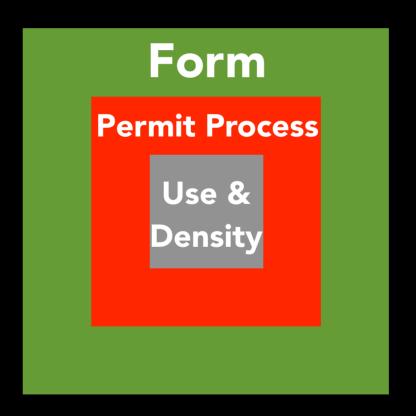
GETTING ACTIVE WITH DEVELOPMENT BY-LAWS

FORM-BASED CODE

USE BASED :: FORM BASED

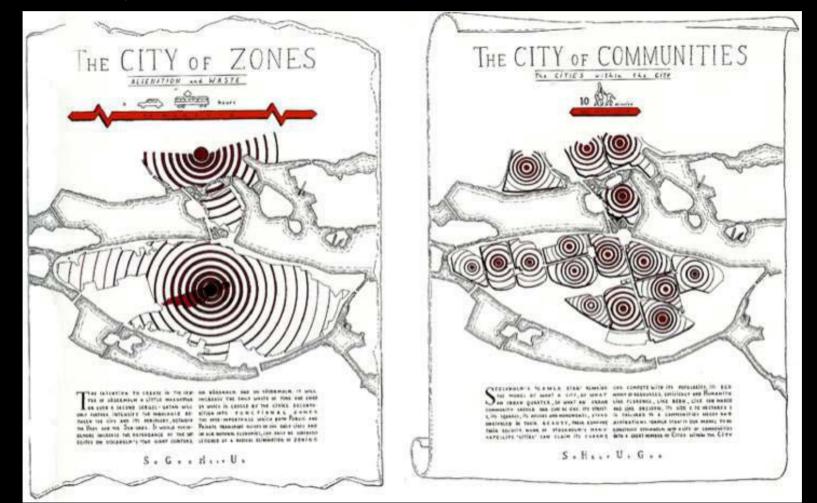
IMAGE CREDIT: MARINA KHOURY @MARINARKHOURY





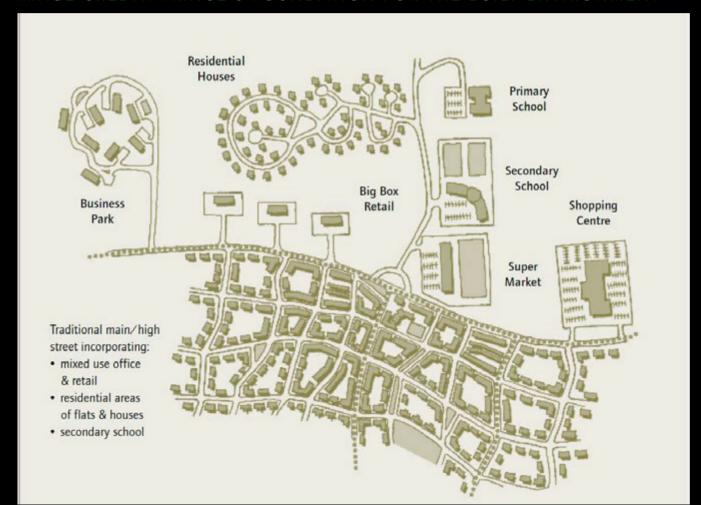
ZONES V. COMMUNITY

IMAGE CREDIT: LÉON KRIER, THE ARCHITECTURE OF COMMUNITY



SUBURBAN V. SUSTAINABLE

IMAGE CREDIT: PRINCE'S FOUNDATION FOR THE BUILT ENVIRONMENT



USE-BASED

FORM-BASED

T3 SUB-URBAN: Kingsway at Oxford

Low density residential areas, adjacent to higher zones that contain some mixed use. Home occupations and outbuildings are allowed. Planting is naturalistic and setbacks are relatively deep. Blocks may be large and roads irregular to accommodate natural conditions.



KINGSWAY & OXFORD

Average Block Dimension	2,906' perimeter 885.7 m	
Residential Units per Acre	6.6 1	
Average Lot Size	50' x 125' 15.2 m x 38 m	
Average Lot Coverage	50% ²	



PUBLIC FRONTAGE

Public Frontage Type	Street
ROW Width	54' or 16.5 m
Moving Lanes	2
Parking Lanes	1
Pavement Width	24' or 7.3 m ³
Curb Type	6" raised
VO.15.	15 cm raised
Curb Radius	23' or 7 m
Sidewalk	5' or 1.5 m
Planter Type	Tree lawn
Planter Width	25' or 7.6 m
	on center



PRIVATE FRONTAGE

Private Frontage Type	Porch and fence or common lawn	
Princi <mark>pal buildi</mark> ng height	2 - 3 stories	
Outbuilding height	1 - 1 1/2 stories	
Building disposition	Edge Yard	
Lot size	68' x 150'	
	20.7 m x 45.7 m	
Lot coverage	60% max ²	
Build out percentage @ sidewalk	60%	
Front Setback	30' min, 50' max	
	9.1 m, 15.2 m	
Side Setback	3' to 5' or	
	0.9 to 1.5 m	

Image credit: City of Winnipeg, Manitoba and PlaceMakers

T4 GENERAL URBAN: Dorchester at Lilac

Mixed use, but primarily residential urban fabric. It may have a wide range of building types: singles, rowhouses, and apartment buildings. Setbacks and landscaping are variable. Streets with curbs and sidewalks define medium-sized blocks.



DORCHESTER @ LIALIC

1,520' perimeter 463 m
24
58' x 120'
17.6 x 36.6 m
80%



PUBLIC FRONTAGE

Public Frontage Type	Street
ROW Width	57' or 17.4 m
Moving Lanes	2
Parking Lanes	1
Pavement Width	29' or 8.8 m
Curb Type	6" raised
19007	15 cm raised
Curb Radius	16' 8" or 5.1 m
Sidewalk	4' or 1.2 m
Planter Type	Tree Lawn
Planter Width	episodic
Planting Pattern	episodic



PRIVATE FRONTAGE

Private Frontage Type	Forecourt, Stoop
турс	Porch and Fence
Principal building height	3
Outbuilding height	1.5
First floor above	0 - 24"
grade	0 - 0.6 m
Building	Edgeyard,
disposition	Sideyard,
	Rearyard
Build out percentage @ sidewalk	75% min
Front Setback	0 - 20'
	0 - 6.1 m
Side Setback	0 min.
	9' or 3 1 m may

Image credit: City of Winnipeg, Manitoba and PlaceMakers

T5 URBAN CENTER McDermot at Albert

Higher density mixed-use buildings that accommodate retail, offices, multi-family residential. It has a tight network of streets, with wide sidewalks, regular street tree planting and buildings set close to the sidewalks.



MCDERMOT AVE. @ ALBERT STREET

Average Block	1,340' perimeter	
Dimension	408 meters	
Average Lot Size	96' x 157'	
	29 m x 48 m	
Average Lot Coverage	100% max	



PUBLIC FRONTAGE

Public Frontage Type	Commercial Street	
ROW Width	66'	
	20 m	
Moving Lanes	2: one way	
Parking Lanes	2	
Pavement Width	38' McDermot	
	11.5 m	
Curb Type	6" raised	
	15 cm raised	
Curb Radius	12' or 3.7 m	
Sidewalk	12' to 27'	
	3.7 to 8.2 m	
Planter Type	4' or 1.2 m	
96/104	pervious well	
Planting Pattern	36' o.c.	



PRIVATE FRONTAGE

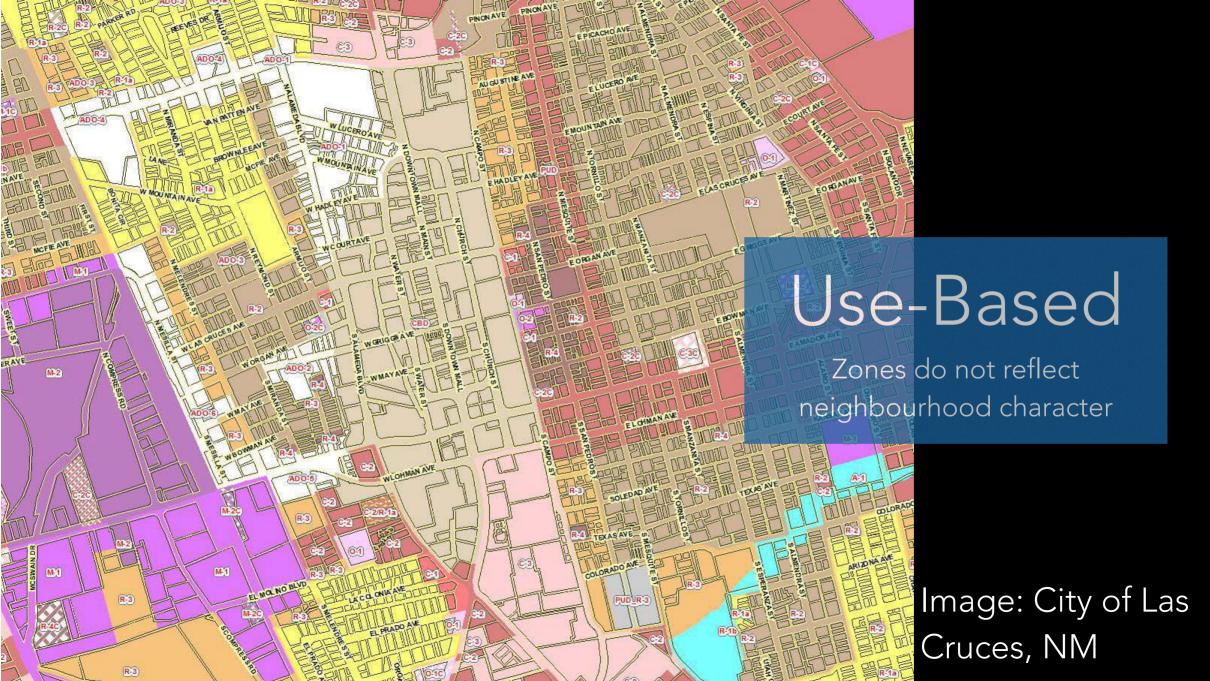
Private Frontage Type	Shopfront & Awning, Stoop	
Principal building height	6 max	
Outbuilding height	n/a	
First floor above grade	0	
Building disposition	rear yard	
Lot width	22' min or 6.7 m 200' max or 61 m	
Lot coverage	85% min 100% max	
Build out percentage @ sidewalk	90% min 100% max	
Front Setback	0	

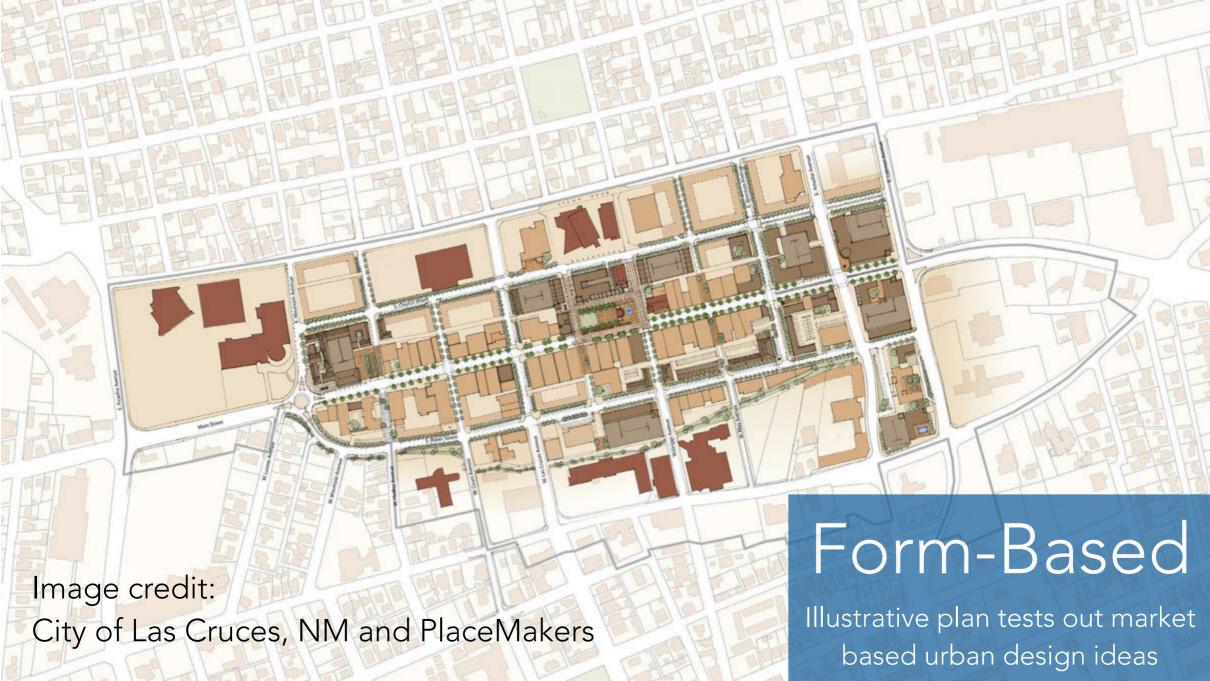
Image credit: City of Winnipeg, Manitoba and PlaceMakers

	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	PROPOSED	
	provides an area for a	SPECIAL DISTRICT	SPECIAL DISTRICT The	SPECIAL DISTRICT	COMMUNITY UNIT	COMMUNITY UNIT		
	central pedestrian-	provide for commercial	reacetrack commerical	Primarily for	(MUX uses + more)	(MUX + NCX Uses +		
	oriented	areas to be located on	district features the same	manufacturing and	Provide for the location	more)		
	concentration of	highways and major	bulk regulations as the	processing industries,	of shops, services, small	Serves a large market but	77.227	
	retailing, personal	thoroughfares; primarily	CBD but with specific	and their accessory uses,	worksplaces, and civic	not regional;	- MAAR -	
	services, public uses,	retail trade or service	controls on Uses to	supporting storage,	buildings central to a	employment, industrial		
	and office uses.	establishments	support the performance	transportation and	neighborhood within	parks, mixture of housing		
			of racetrack functions,	distribution activities and	walking distance to	types; community		
			and provide for its	the supporting activities	residential dwellings.	buildings and		
			efficient operation,	needed for the		stores/offices/	2 2	
			continuation, and	convenience of		workplaces	Secol Tooss	
			expansion.	employees			00001 /0000	
	C (ID : (CD)	Highway Commercial	Racetrack		Neighborhood	Urban Commercial	7 -111 6 .	
	Central Business (CB)	(HC)	Commercial (RC)	Industrial District (I)	Center Mix (NCX)	Mix (UCX)	T5 Urban Center	
LOT				Landscape Buffer*				
Width	25 ft. min.	25	25 ft. min.	150 ft 180 ft.	16 ft. min	16 ft. min	18 ft. min. 180 ft. max.	
	2510.111111.	23	2516.111111.		125 ft. max.	125 ft. max.	10 It. IIIII. 100 It. IIIax.	
Depth	-	-	-	125 ft.	-	-	-	Ш
Density	-	-	-	-	4 DU/ac. + bonus	4 DU/ac. + bonus	-	Ш
SETBACK					by Building Type*	by Building Type*		Z
Front Primary	0 ft.	none	0 ft.	0 ft.	5-20 ft. min	5-20 ft. min	2 ft. min. 12 ft. max.	ĬĚ
Front Secondary	0 ft.	none	0 ft.	0 ft.	5-30 ft. min.	5-30 ft. min.	2 ft. min. 12 ft. max.	OS
Side	10 ft. if abuting w/	none	10 ft. if abuting w/	10 ft.	5-30 ft. min.	5-30 ft. min.	0 ft. min. 24 ft max.	DISPOSITION
Rear	residential 0 ft.	none	residential 0 ft.	10 ft.	15-30 ft. min.	15-30 ft. min.	3 ft. min.	
	O It.	Hone	OTC.	1016.	15 5010.111111.	15 5010.111111.	510.111111.	: 1
PLACEMENT		*** 1	100					
Edgeyard	permitted	permitted	permitted	permitted	permitted	permitted	not permitted	
Sideyard	permitted	permitted	permitted	permitted	permitted	permitted	permitted	
Rearyard	permitted	permitted	permitted	permitted	permitted	permitted	permitted	Ш
HEIGHT								ني ا
Principal Building	50 ft.	80 ft.	50 ft.	50 ft.	none	none	5 stories max, 2 min.	
Accessory	Imaga cra	lit. Pancan	Panavada	0m 50 ft.	nono	nono	2 stories max.	CONFIG.
Building	image crec	Jil. Kanson	Renewed.c	OIII 301t.	none	none	2 Stories max.	L
					Required	Required		

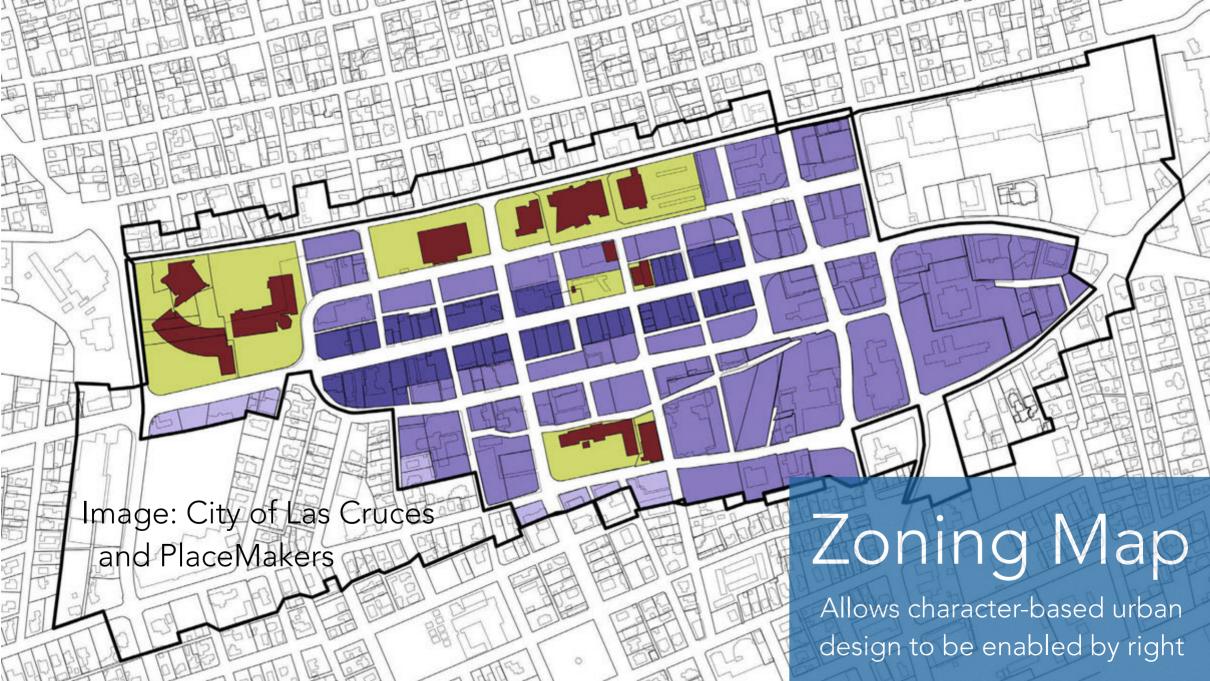


Image credit: Provo, Utah and PlaceMakers









Article 5

Subdivision & Zoning

Article 5

Subdivision & Zoning

TABLE 16. T20 LOT STRUCTURE

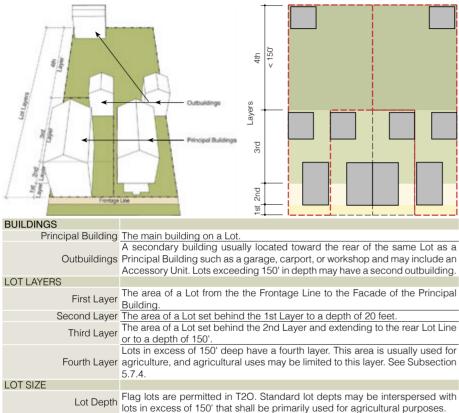
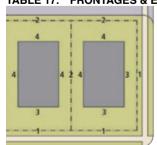


TABLE 17. FRONTAGES & ELEVATIONS



- 1 Frontage Line
- 2 Lot Line
- ^{3- Facades}
 ^{4- Elevations} Image credit: City of Ranson, WV and PlaceMakers

TABLE 6. PRIVATE FRONTAGES 53 **SECTION PLAN** PRIVATE FRONTAGE PRIVATE PUBLIC FRONTAGE FIRST LOT LAYER REGULATIONS COMMON LAWN Transect District T2, T2O, T3, T4, SDB Permitted Elements Encroachments into Porch no less than 6 feet deep Grass, groundcover, continuing without Surface Treatment interruption, except sidewalks or drive-Specia Requirements FENCED LAWN Transect District T2O, T3, T4 Permitted Elements Fences, hedges and walls Encroachments into 80% of setback setback Surface Treatment Grass, groundcover Fences, hedges and walls shall be along frontage lines or parallel with the facade Requirements of the principal building **TERRACE** Transect District T2O, T4, T4O, T5L, T5, SDB Permitted Elements May be combined with stoop Terraces may encroach 100% of setback. Encroachments into no less than 6 ft. Terraces shall be raised setback a minimum of 12" from average sidewalk Surface Treatment Paved, terraces may be landscaped Special Ramps for wheelchair access may be Requirements located within first layer **FORECOURT** Transect District T40, T5, SDB May be combined with terrace, stoop, Permitted Elements shopfront, or gallery. May recess from the frontage line a Encroachments into maximum of 20 feet for pedestrian entries setback or a maximum of 30 feet for vehicular Paved in coordination with the public Surface Treatment frontage or with pervious materials Shall provide access to the main building entrance. Driveways within forecourts are limited to 20 feet in width. Portions of the driveway in the public frontage shall be limited to 12 feet in width and shall be paved in coordination with the adjacent

TABLE X (TS-MEDIUM). BULK STANDARDS - TS - MEDIUM

Pedestrian Street

Pedestrian Street

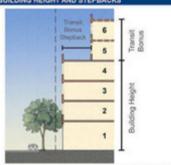
MAIN BUILDING SETBACKS				PARKING AND STORAGE SETBACKS			
ä	Pedestrian Street	6 - 18 ft. max.	h	Pedestrian Street	24 ft. min.		
b	Access Street	20 ft. max.	- 1	Access Street	8 ft. min.		
¢	Side Lot Line	0 - 20 ft. max.	1	Side Lot Line	0 ft, min.		
d	Rear Lot Line	3 ft. min.	k	Rear Lot Line	3 ft. min.		
	FRONTAGE	BUILDOUT		LOT REQUIRE	MENTS		
Pe	destrian Street:	70% min.		Lot Coverage:	70% max.		

Access Street: 30 ft, min. from Pedestrian Street

	BUILD	DING FRONTAGE	
	REQUIRED FR	ONTAGE SETBACK TYPES	
Pedestrian Street	shallow, urban	or pedestrian forecourt	
Access Street:	shallow, urban,	pedestrian forecourt, vehicular forecou	rt or screened parking
Additional Requirements:	common yard a	and fenced yard permitted for single far	mily residential only
	REQUIRED SP	ECIFIC FRONTAGE TYPES	
Pedestrian Street:		shopfront, arcade, gallery, terrace, stoo sidential uses only)	ip, or porch (access to
Access Street:		shopfront, arcade, gallery, terrace, stoo sidential uses only)	p, or porch (access to
	ACCES	SS RESTRICTIONS	740050274
Pedestrian Street:	1 access way over 150 ft.	for lots up to 150 ft. of frontage, 1 acc	sess per 75 ft. for lots
Access Street:	minimum spaci	ing of 120 ft. between access ways ass	ociated with one lot
MINIMUM GL	AZING	AMBIENT STAN	DARDS
Ground Floor:	75%	Light Level:	2 fc. max.
Second Floor:	45%	Noise: 12am to 7am	60 dBa
Upper Floors:	30%	Noise: 7am to 10pm	75 dBa

TABLE X (T5-MEDIUM). BULK STANDARDS - T5 - MEDIUM

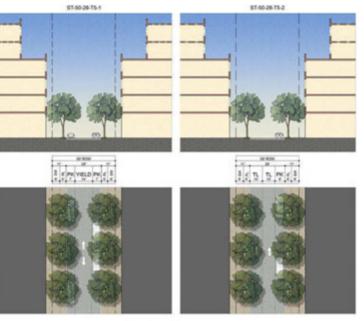
BUILDING HEIGHT AND STEPBACKS



Noise: 10pm to 12am

65 dBa

BUILDING HEIGHT	BUILDING STEPBACKS
Building Height: 4 stories	20 ft. stepback required along frontages for
Tonnell Bonus: 3 stories	stories above 4



Skinny Streets

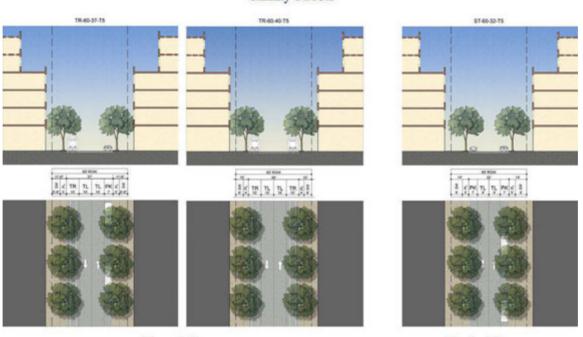


Image: City of Phoenix, AZ, DPZ, and PlaceMakers



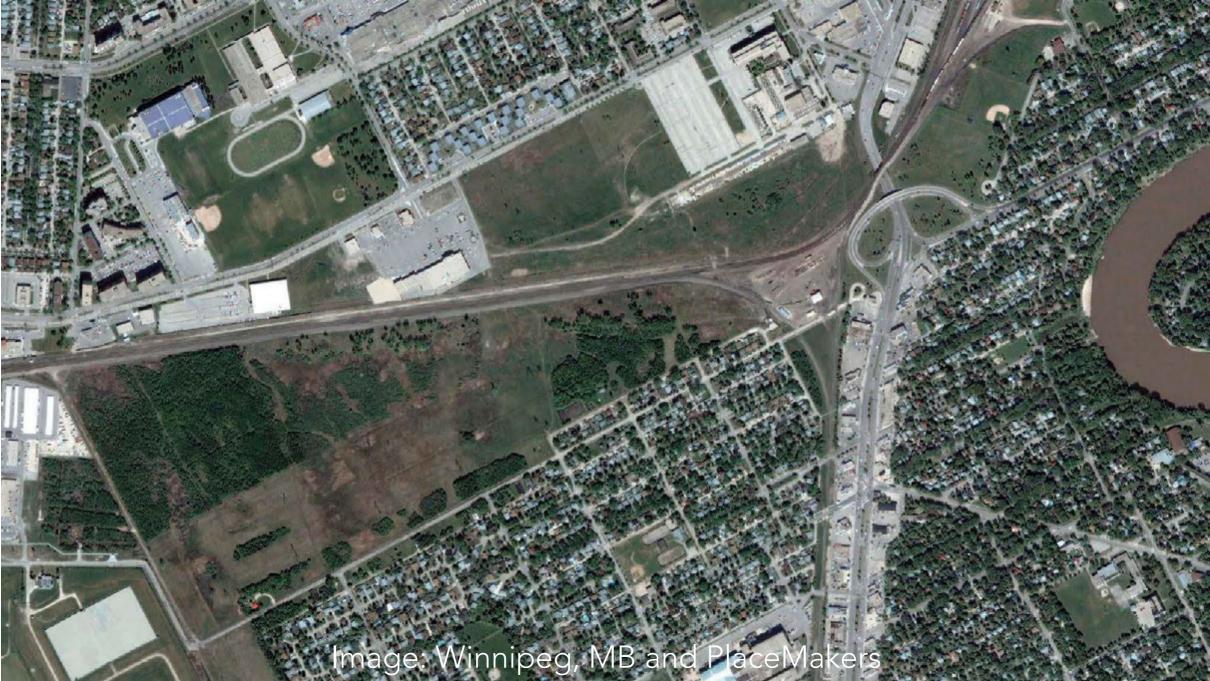






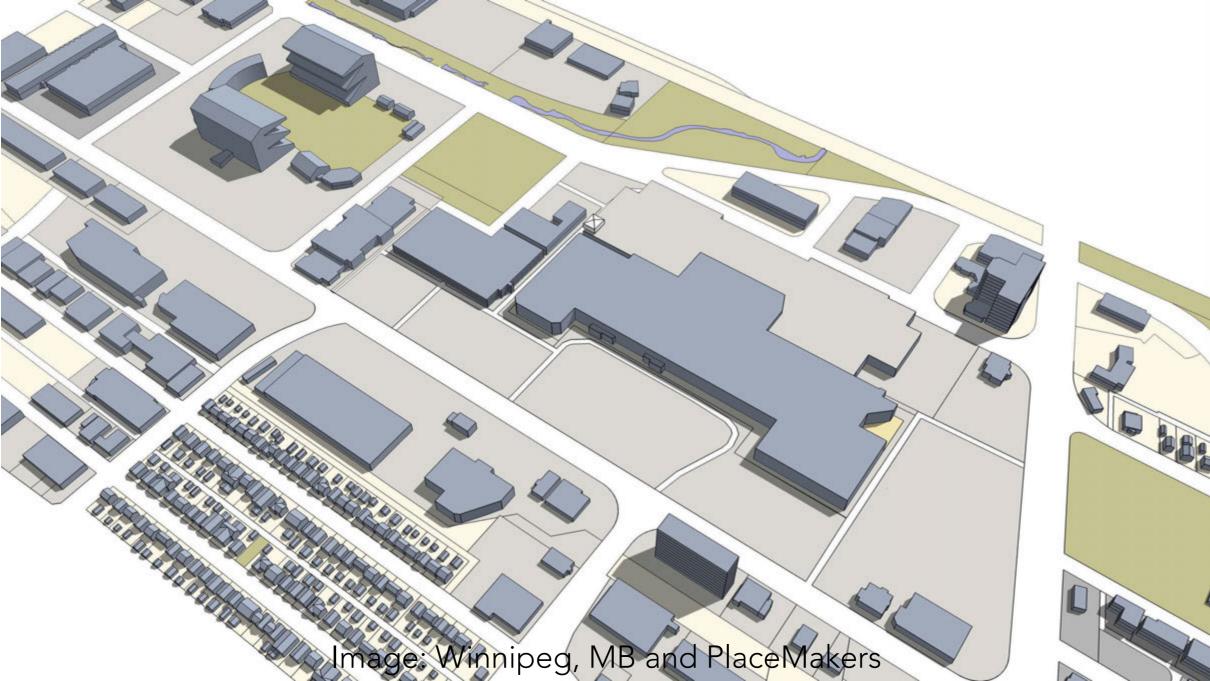


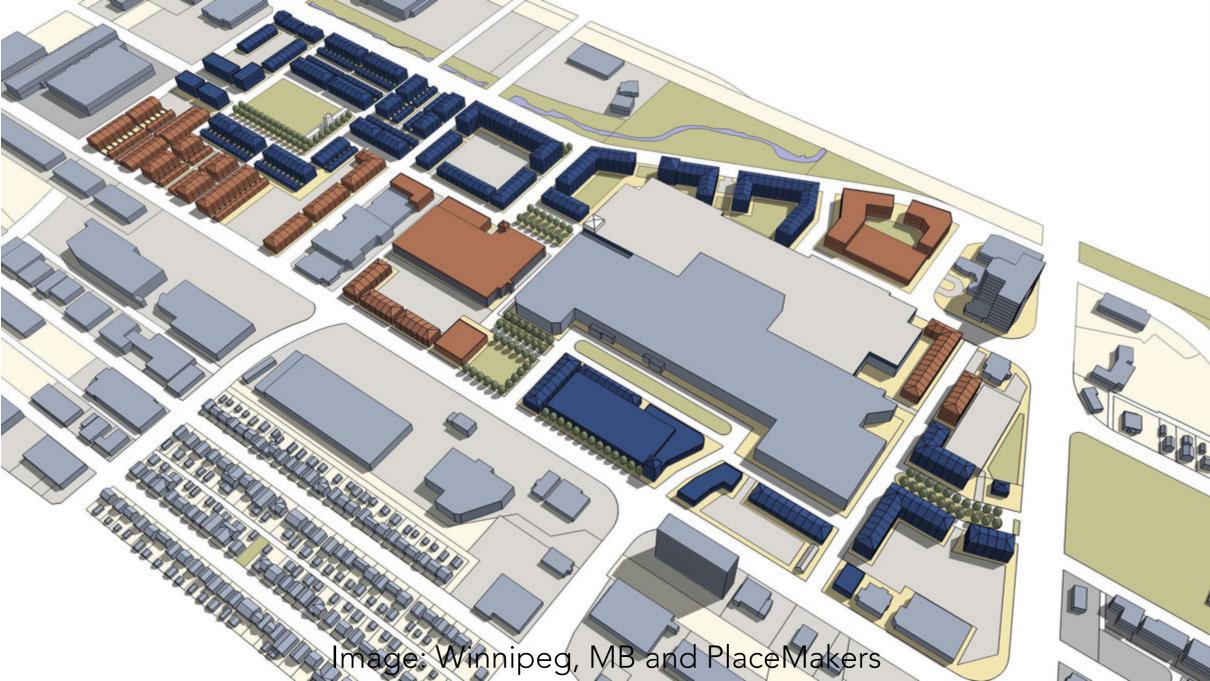












CODESSTUDY.ORG

Cultivate.





How We Think

How We Work

How We Teach

Stories from the Fields

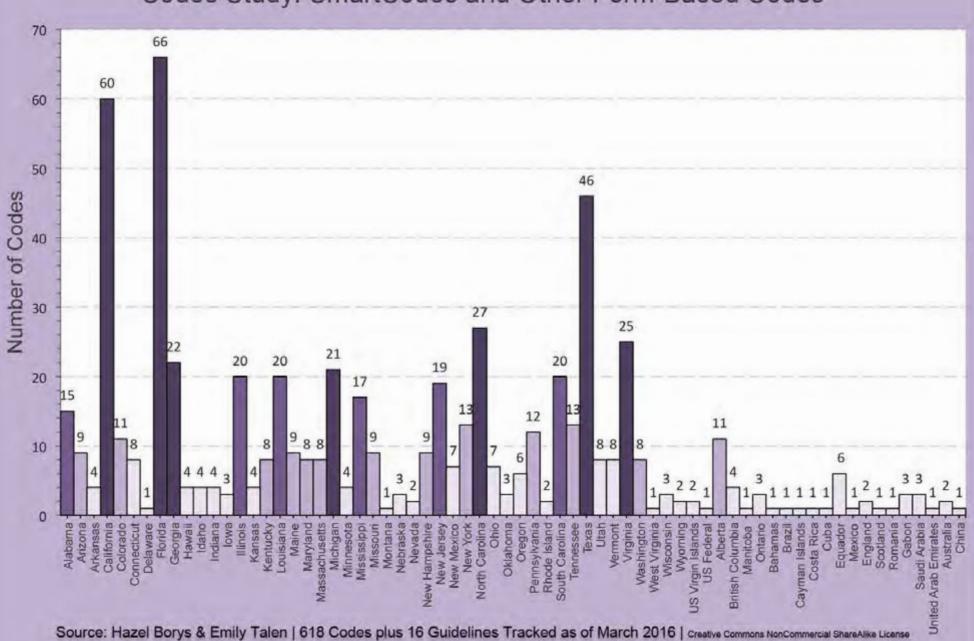
How We Teach > Form-Based Codes? You're not alone.

Form-Based Codes? You're not alone.

The Codes Study is a collaborative effort led by Hazel Borys, Emily Talen, and Matthew Lambert, and contributed to by many public and private planners, tracking the prevalence of form-based codes worldwide. As of March 2016, we've tracked 618 codes that meet criteria established by the Form-Based Codes Institute (FBCI), as well as an additional 16 form-based guidelines. 362 of these are adopted, with others in progress. Even though form-based codes are 35 years old, 87% have been adopted since 2003.

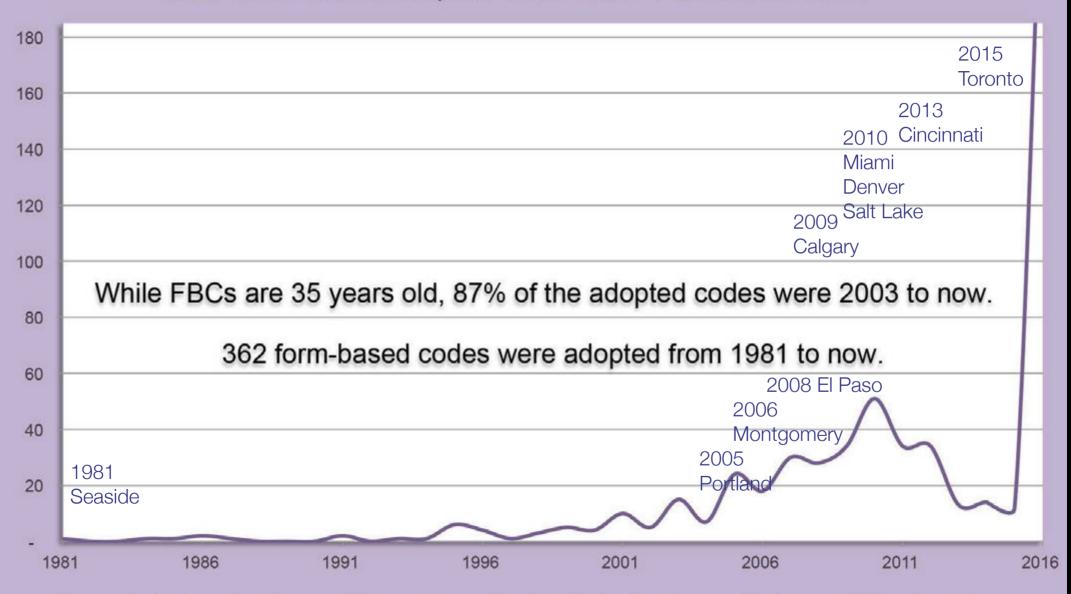


Codes Study: SmartCodes and Other Form-Based Codes

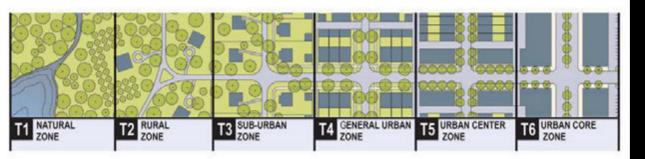




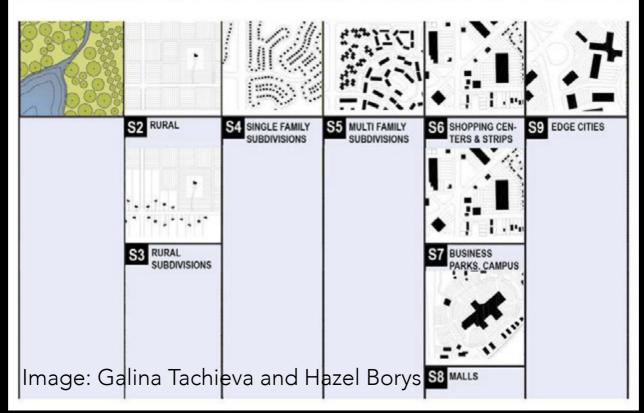
Form-Based Codes Adopted 1981-2015 + In Process 2016

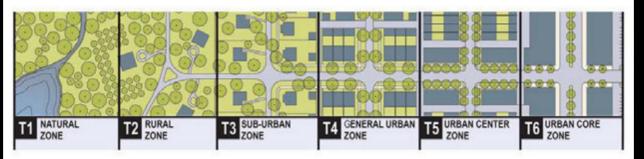


Source: Codes Study, Hazel Borys and Emily Talen, as of March 2016, Creative Commons NonCommercial ShareAlike License

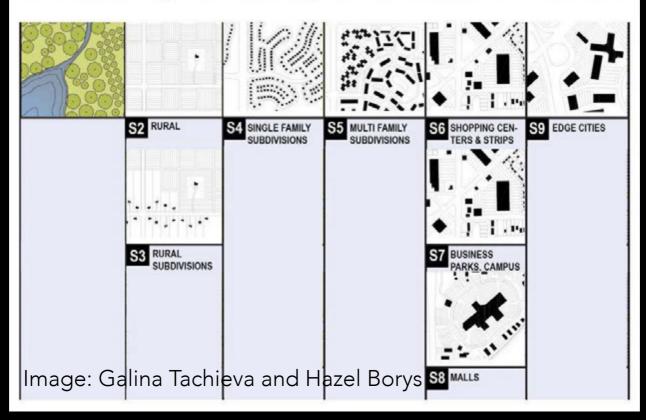


Repair, Regenerate, Restore Walkable, Runable, Bikeable Places





Repair, Regenerate, Restore Sledable, Skiable, Skateable Places



PAYBACKS TO PEOPLE, PLANET, PROFIT

THE NURTURING METROPOLIS

WALKABLE PLACES ARE EQUITABLE PLACES

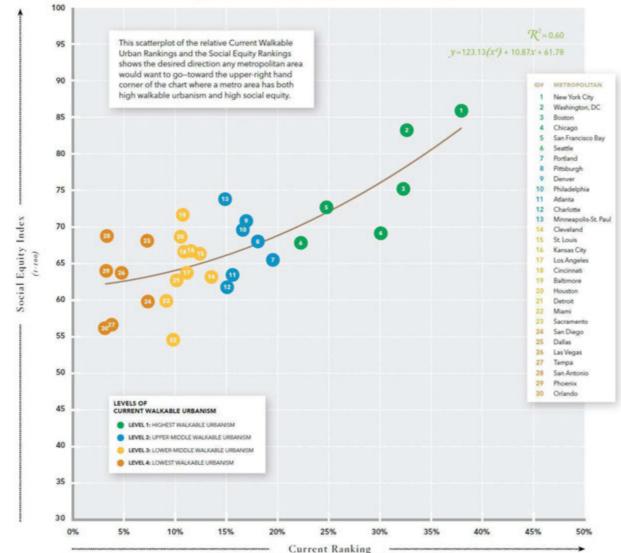
EQUITY



FOOT TRAFFIC AHEAD

Walkable Urbanism & Social Equity of the 30 Largest U.S. Metros:

Scatterplot Showing the Relationship Between Current Rankings vs. Social Equity Rankings



% of Metro Region's Office, Retail & Multi-Family Space in WalkUPs

BOWLING ALONE?

EVERY 10 MINUTES OF COMMUTING REDUCES SOCIAL CAPITAL BY 10%



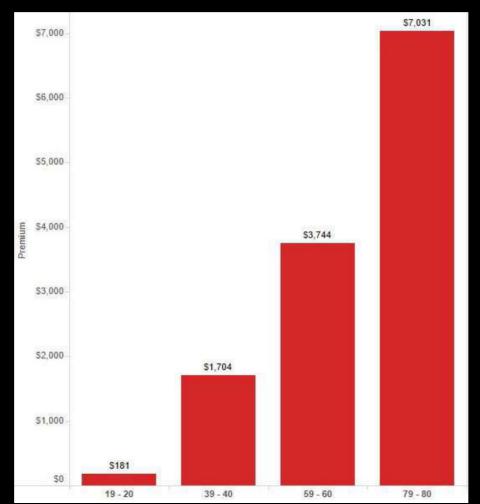
WALKABLE NEIGHBORHOODS ARE RESILIENT

ECONOMY



1 POINT = \$3,000 HOME VALUE

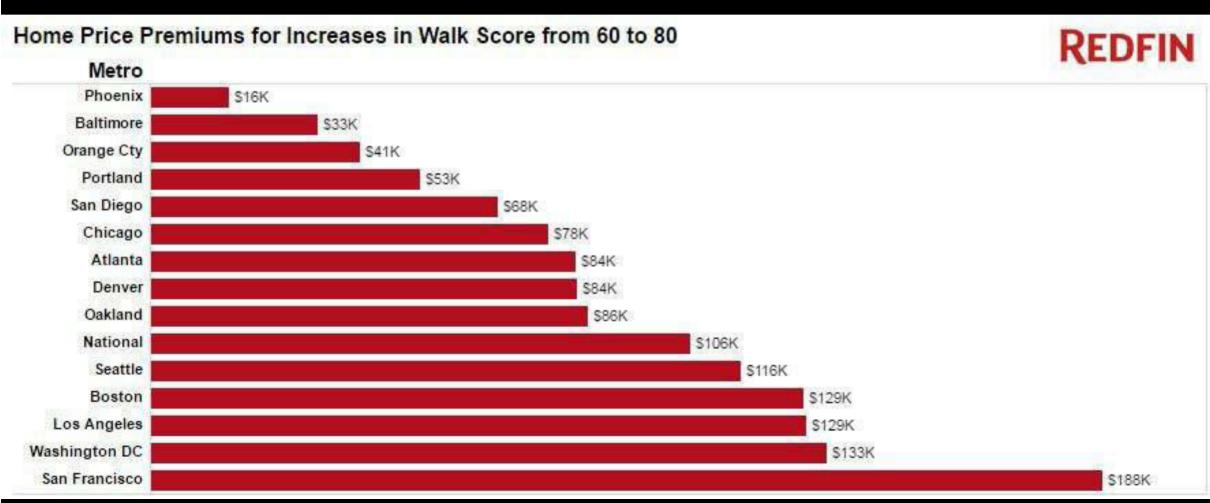
REDFIN, HOW MUCH IS A POINT OF WALK SCORE WORTH? 2016



HOME PRICE PREMIUM OF WALKSCORE

WALK SCORE: 60->80: \$100,000

REDFIN, HOW MUCH IS A POINT OF WALK SCORE WORTH? 2016



ROADS, SEWER, WATER

SAVINGS ON DENSE INFRASTRUCTURE 38%



CALGARY SAVES 33% OF COSTS

2009 CITY OF CALGARY

Compact development estimated to save Calgary \$11 billion over 60 years:

Roads :: Transit :: Water ::

Recreation :: Fire :: Schools





POLICE, AMBULANCE, FIRE

SAVINGS ON DENSE SERVICES 10%



SMART GROWTH DEVELOPMENT

10X MORE TAX REVENUE PER ACRE



TAX REVENUE PER ACRE



TAX REVENUE PER ACRE



39X MORE REVENUE PER ACRE



WOODSTOCK, GEORGIA

4X MORE JOBS PER ACRE





	Super WalMart	Outlet Mall	New Main St
Land Consumed	30	49	0.65
Property Tax / Acre	\$ 5,706	\$ 8,886	\$ 223,575
Residents / Acre			103
Jobs / Acre	10	20	40

LESS CAR COSTS & LESS CARBON

ABOGO.COM





Abogo is a tool that lets you discover how transportation impacts the affordability and sustainability of where you live.

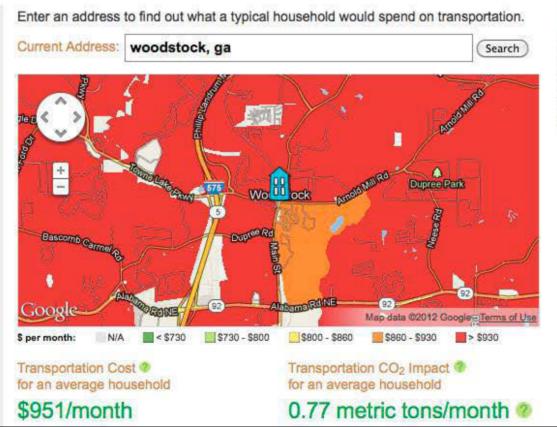
Sign up for Updates

Blog

\$4,155: Gas Bill for the Typical American Household

An Associated Press article found that the typical American household pays \$4,155 a year to fill their gas tanks—or 8.4 percent of median family income. Research by the Center for Neighborhood Technology has found that living in location efficient places—walkable communities with access to amenities and transit—helps people keep transportation costs low compared with people [...]

Santa and his Bright Red





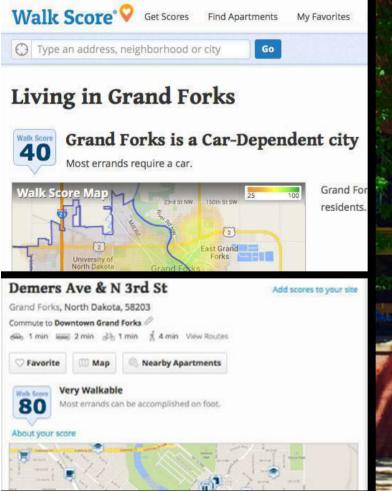
Experiment with different

FORM DRIVES RETURNS



DOWNTOWN DRIVES VALUE

SOURCE: WALKSCORE.COM





GRAND FORKS, NORTH DAKOTA

DOWNTOWN CASH COW

IMAGE CREDIT: JOE MINNICOZZI



1,150X INCOME PER ACRE

© 2013 BUILDING BETTER BUDGETS, SMART GROWTH AMERICA



NASHVILLE, TENNESSEE

PROPERTY VALUES UP 3.5X REGION

2013, RICHARD BERNHARDT, PLANNING DIRECTOR, CITY OF NASHVILLE

Area	2005 Appraisal \$Million	2009 Appraisal \$Million	2013 Appraisal \$Million	Change 2005-2013
Davidson County	\$49,699	\$63,492	\$66,270	33%
Form Based Code	\$918	\$1,553	\$1,977	115%

WASHINGTON, D.C.

1 POINT UP WALKABILITY LADDER

2012, CHRIS LEINBERGER AND MARIELA ALFONZO, BROOKINGS INSTITUTION

- + \$9 / Square Foot Annual Office Rents
- + \$7 / Square Foot Annual Retail Rents
- + \$300 / Month Apartment Rents
- + \$82 / Square Foot Home Value

<1/2 DECLINE OF RECESSION

BROOKINGS INSTITUTION, 2011. IMAGE CREDIT: HAZEL BORYS, 2015, QUEBEC CITY.



WALKING BURNS LESS CARBON

ENVIRONMENT

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LOSS OF RURAL LAND TO SPRAWL

40 ACRES PER HOUR

41 MILLION ACRES 1982 TO 2007



NYC VERSUS THE AVERAGE AMERICAN

NEW YORKERS EMIT 66% LESS GHG THAN AVERAGE AMERICAN



