STAR COMMUNITIES

SUSTAINABILITY
TOOLS FOR
ASSESSING &
RATING COMMUNITIES

Achieving Compact & Complete Communities

with the STAR Community Rating System

SET GOALS. MEASURE PROGRESS.

Achieving Compact & Complete Communities

Presenters:

Trey Akers, U.S. Green Building Council

Dan Guilbeault, District of Columbia

Roy DeWitt, Davenport, IA

Karl Selm, KERAMIDA Inc.

Moderator:

Hilari Varnadore, STAR Communities

www.STARcommunities.org

STAR Communities helps cities and counties set a clear path for sustainability with helpful tools that measure progress.

www.STARcommunities.org

Built by and for Local Governments

- In 2008, the U.S. Green Building Council, National League of Cities, ICLEI and the Center for American Progress announced formal partnership

- Established a diverse, consensus-based stakeholder engagement process that included 200+ volunteers

- Rating System was released by STAR Communities in October 2012

- Pilot Program commenced in November 2012 to test the system, its reporting tool and associated products

STAR Steering Committee

- Suzanne Burnes, Sustainable Atlanta
- Michael Connors, St. Petersburg, FL
- Radcliffe Dacanay, Portland, OR
- Eric W. Faisst, M.P.H., Madison County, NY
- Wayne Feiden, Northampton, MA
- Rob Fernandez, Breckinridge Capital Advisors
- Deeohn Ferris, Sustainable Community Development Group
- Andrea Fox, ICMA
- Hilary Franz, Futurewise
- Nancy Gassman, Fort Lauderdale, FL
- Richard Gelb, King County, WA
- Josh Geyer, U.S. HUD
- Jen Horton, NACo
- Catherine Hurley, Evanston, IL
- Chris Kochtitzky, U.S. CDC
- Tessa LeSage, Lee County, FL
- Kristin Lynett, Tacoma, WA

- Amy Meese, Sarasota County, FL
- Doug Melnick, Albany, NY
- Dennis Murphey, Kansas City, MO
- Steve Nicholas, ISC
- Melanie Nutter, San Francisco, CA
- Melody Park, Indianapolis, IN
- Brooks Rainwater, NLC
- Brendan Shane, Washington, DC
- Lilly Shoup, U.S. DOT
- Dylan Siegler, Austin, TX
- Randy Solomon, Sustainable Jersey
- Michael Steinhoff, ICLEI USA
- Alison Taylor, Siemens Corporation
- John Thomas, U.S. EPA
- Catherine Werner, St. Louis, MO
- Jess Zimbabwe, Urban Land Institute

STAR Technical Advisory Group

NATURAL SYSTEMS
- Chris Bird, Alachua County, FL
- Robert Goff, Chandler, AZ
- Rebecca Kihslinger, Environmental Law Institute

BUILT ENVIRONMENT
- Jocelyn Hittle, PlaceMatters
- Kevin Nelson, U.S. EPA
- Leslie Oberholtzer, Coda Metrics

CLIMATE & ENERGY
- Jonathan Brewer, Carbon Solutions America, Inc.
- Cal Broomhead, San Francisco, CA
- Walker Wells, Global Green USA

ECONOMY & JOBS
- Ed Antczak, Burlington, VT
- Steve Lautze, Oakland, CA
- Curt Paddock, Will County, IL
- Andre Pettigrew, Clean Energy Solutions

EDUCATION, ARTS & COMMUNITY
- Amelia Greiner, John Hopkins University
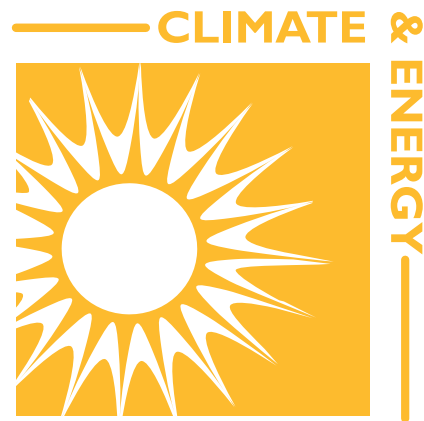- Cindy Steinhauser, City of Dubuque, IA

HEALTH & SAFETY
- Rochelle Bell, Monroe County, NY
- Kaye Bender, Public Health Accred. Board
- Vickie Boothe, U.S. CDC

EQUITY & EMPOWERMENT
- Pamela Sparr, private consultant
- Carrie Makarewicz, UC Berkeley

Rating System's Goal Areas

BUILT ENVIRONMENT

CLIMATE & ENERGY

ECONOMY & JOBS

EDUCATION, ARTS & COMMUNITY

EQUITY & EMPOWERMENT

HEALTH & SAFETY

NATURAL SYSTEMS

The STAR Community Rating System

Goal Areas & Objectives are mapped and rated in the online system, helping local leaders set goals and measure progress across areas.

Built Environment	Climate & Energy	Economy & Jobs	Education, Arts & Community	Equity & Empowerment	Health & Safety	Natural Systems
Ambient Noise & Light	Climate Adaptation	Business Retention & Development	Arts & Culture	Civic Engagement	Active Living	Green Infrastructure
Community Water Systems	Greenhouse Gas Mitigation	Green Market Development	Community Cohesion	Civil & Human Rights	Community Health & Health System	Invasive Species
Compact & Complete Communities	Greening the Energy Supply	Local Economy	Educational Opportunity & Attainment	Environmental Justice	Emergency Prevention & Response	Natural Resource Protection
Housing Affordability	Industrial Sector Resource Efficiency	Quality Jobs & Living Wages	Historic Preservation	Equitable Services & Access	Food Access & Nutrition	Outdoor Air Quality
Infill & Redevelopment	Resource Efficient Buildings	Targeted Industry Development	Social & Cultural Diversity	Human Services	Indoor Air Quality	Water in the Environment
Public Spaces	Resource Efficient Public Infrastructure	Workforce Readiness		Poverty Prevention & Alleviation	Natural & Human Hazards	Working Lands
Transportation Choices	Waste Minimization				Safe Communities	

Innovation & Process

- Best Practices & Processes
  - Comprehensive Planning
  - Public Engagement
  - Codes and Ordinances
- Exemplary Performance
- Local Innovation
- Regional Priority & Collaboration

Parts of the Rating System

GOALS
Sustainability themes with comprehensive community-level aspirations

OBJECTIVES
A clear, desired outcome intended to move the community toward the goal

OUTCOME MEASURES
Community-scale results: the measureable aim or purpose of each Objective

ACTION MEASURES
The steps you are taking to move the needle towards sustainability

Example

Goal	*Natural Systems*
Objective	*Green Infrastructure*
Outcome	*Demonstrate that 85% of the population lives within a 1/2-mile walk distance from green infrastructure features*
Actions	*Establish a green infrastructure monitoring program* *Increase the % of funding invested in green infrastructure*

Points & Scoring

GOAL	POINTS AVAILABLE
Built Environment	100
Climate & Energy	100
Education, Arts & Community	70
Economy & Jobs	100
Equity & Empowerment	100
Health & Safety	100
Natural Systems	100
Innovation & Process	50
TOTAL	**720**

Certifications & Recognitions

Certified 5-STAR Community (600+ points)
- *Recognized as top tier achiever in national sustainability*

Certified 4-STAR Community (400-599 points)
- *Recognized for national excellence*

Certified 3-STAR Community (200-399 points)
- *Recognized for sustainability leadership*

Reporting STAR Community (50-199 points)
- *Currently pursuing certification*

Participating STAR Community
- *Implementing the STAR framework of goals and objectives*

Why Certify?

Demonstrate commitment to local sustainability

Receive national recognition for leadership and achievements

Gain competitive advantage and attract funding

Increase transparency and accountability and showcase results

Communicate resilience and risk management to municipal bond agencies

Build and strengthen partnerships within government and with community partners

Cities and counties in the STAR Network
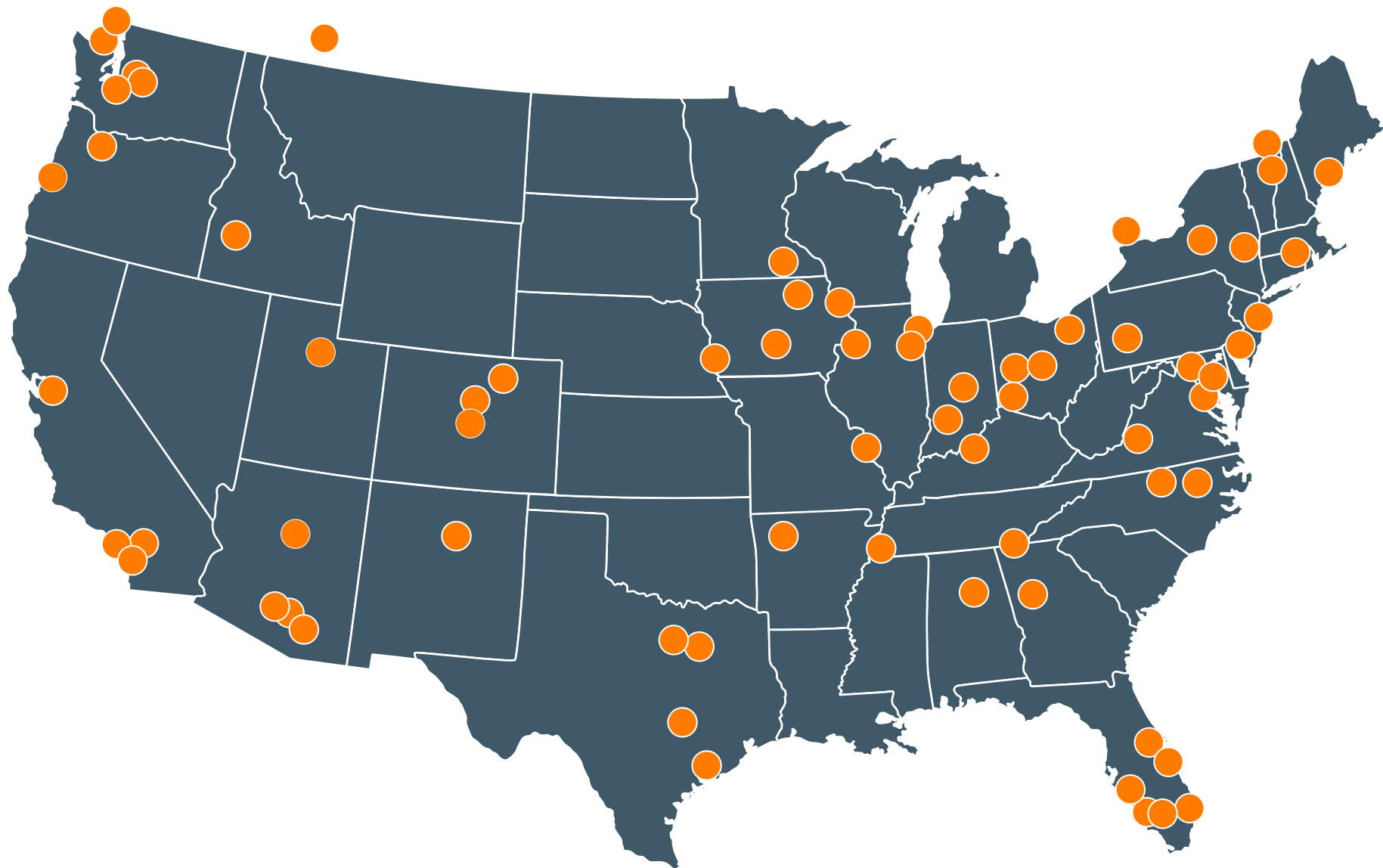
STAR Designation	Community	Population
Leadership	Nederland, CO	1,478
Leadership	Charles City, IA	7,652
Leadership	Park Forest, IL	22,000
Leadership	Rosemount, MN	22,420
Pilot	El Cerrito, CA	24,048
Pilot	Northampton, MA	28,592
Participating	Blacksburg, VA	42,627
Participating	Bonita Springs, FL	46,340
Leadership	Dubuque, IA	58,155
Participating	Hamilton, OH	62,695
Leadership	Frederick, MD	66,000
Leadership	Portland, ME	66,000
Participating	Flagstaff, AZ	67,468
Leadership	Redlands, CA	69,000
Pilot	Santa Fe, NM	69,204
Participating	Madison County, NY	72,382
Pilot	Evanston, IL	75,430
Leadership	Fayetteville, AR	76,899
Pilot	Victoria, BC	78,055
Participating	Bloomington, IN	81,963
Pilot	Santa Monica, CA	91,812
Pilot	Rockingham County, NC	92,720
Pilot	Woodbridge Township, NJ	97,203
Pilot	Albany, NY	97,904
Participating	Coos Bay Watershed, OR	~100,000
Pilot	Davenport, IA	101,363
Leadership	Palm Bay, FL	106,000
Participating	Elgin, IL	109,927
Leadership	Denton, TX	121,000
Participating	Dayton, OH	141,359
Participating	Lakewood, CO	145,516
Pilot	Fort Collins, CO	148,612
Leadership	Burlington/Chittenden County, VT	158,504
Pilot	Chattanooga, TN	171,279
Participating	Salt Lake City, UT	189,314

STAR Designation	Community	Population
Certified	Tacoma, WA	202,010
Pilot	Des Moines, IA	206,688
Leadership	Birmingham, AL	212,000
Participating	Boise, ID	212,303
Pilot	Chandler, AZ	245,628
Leadership	Plano, TX	273,000
Pilot	Riverside, CA	313,673
Pilot	St. Louis, MO	318,172
Participating	Sarasota County, FL	386,147
Pilot	Cleveland, OH	390,928
Participating	Omaha, NE	421,570
Leadership	Raleigh, NC	423,000
Pilot	Atlanta, GA	443,775
Pilot	Tucson, AZ	524,295
Participating	Vancouver, BC	578,040
Pilot	Portland, OR	603,106
Leadership	Baltimore, MD	621,342
Pilot	Washington, DC	632,323
Pilot	Seattle, WA	634,535
Pilot	Lee County, FL	645,293
Leadership	Louisville/Jefferson County, KY	750,000
Participating	Columbus, OH	809,798
Pilot	Austin, TX	842,592
Certified	Indianapolis, IN	844,220
Leadership	Memphis/Shelby County, TN	927,000
Pilot	Calgary, AB	988,195
Participating	Orange County, FL	1,202,000
Reporting	Allegheny County, PA	1,229,000
Leadership	Phoenix, AZ	1,500,000
Participating	Philadelphia, PA	1,548,000
Pilot	Montreal, QC	1,621,000
Pilot	Broward County, FL	1,815,000
Pilot	King County, WA	2,007,000
Leadership	Houston, TX	2,161,000
Pilot	Toronto, ON	2,503,000

Total Population: **32 million**

Questions we're going to tackle

1. Why are Compact & Complete Communities important to your city's sustainability goals?
2. Tell us about your approach to the Compact & Complete Communities Objective. Which evaluation measures did you focus on and why (e.g. outcomes and actions)?
3. Walk us through the steps you took to apply the evaluation measures to your city. What were your results or findings?
4. What were some challenges you encountered (e.g. lack of data)?
5. Would you recommend the CCC methodology as an effective tool for measuring urban design? Why or why not?
6. What will you do with the results? What did you identify through the process that may guide future decision making?

STAR COMMUNITIES
Sustainability Tools for Assessing & Rating Communities

Trey Akers
U.S. Green Building Council

Why? Trajectory Not Trend

- Boomers & Millenials Increasingly Value Walkable Places

  "Shifts in markets present opportunities for those who understand the trends."

- Coordinated Land Use & Transportation Investments

- Benchmarking Existing Conditions/Tracking Policy Goals

Sources

ULI Housing in America: The Next Decade

RCL Co. Presentation Archives

STAR COMMUNITIES
SUSTAINABILITY TOOLS FOR ASSESSING & RATING COMMUNITIES

Why Design Matters

Incomplete

- Single Use, Isolated: Housing
- Subdivision of Land Use
- One Access Mode

Bullhead City, AZ 3.1 units / acre

context

neighborhood   plan

St. Johnsbury, VT 11.7 units / acre

context

neighborhood   plan

Complete

- Single Use, Whole: Housing, Civic, Recreational, Retail
- Integration of Land Uses
- Multiple Access Modes

Source
Visualizing Density

What is a Neighborhood?
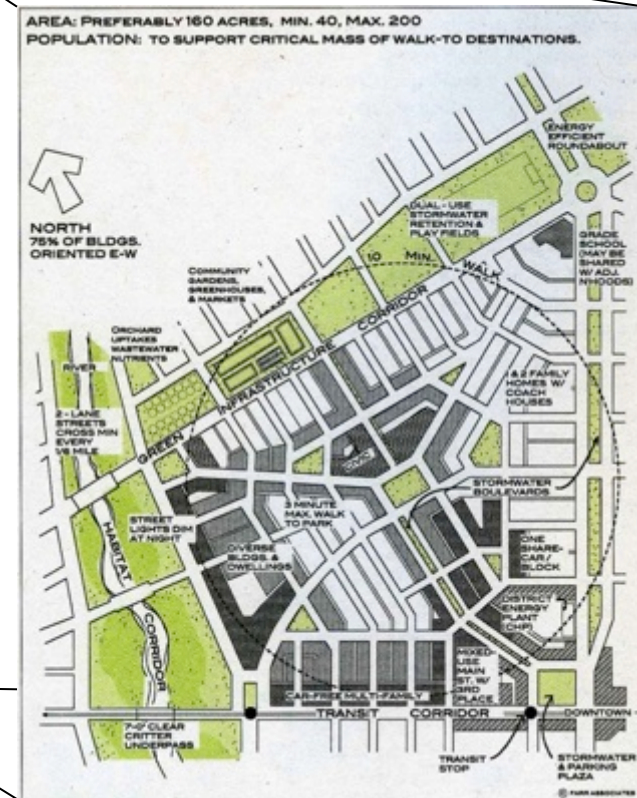
Sources Clarence Perry, Regional Plan of NY 1921,
Farr Associates, 2007

LEED for Neighborhood Development

- Nationally-compiled standards and metrics
- Primarily devised for private developers seeking approvals
- Readily-available set of land development standards

Smart Location
& Linkage (SLL)

Where to Build . . .

Neighborhood Pattern
& Design (NPD)

What to Build . . .

Green Buildings &
Infrastructure (GIB)

How to Build . . .

Source A Citizen's Guide to LEED-ND

STAR COMMUNITIES
SUSTAINABILITY TOOLS FOR ASSESSING & RATING COMMUNITIES

LEED for Neighborhood Development
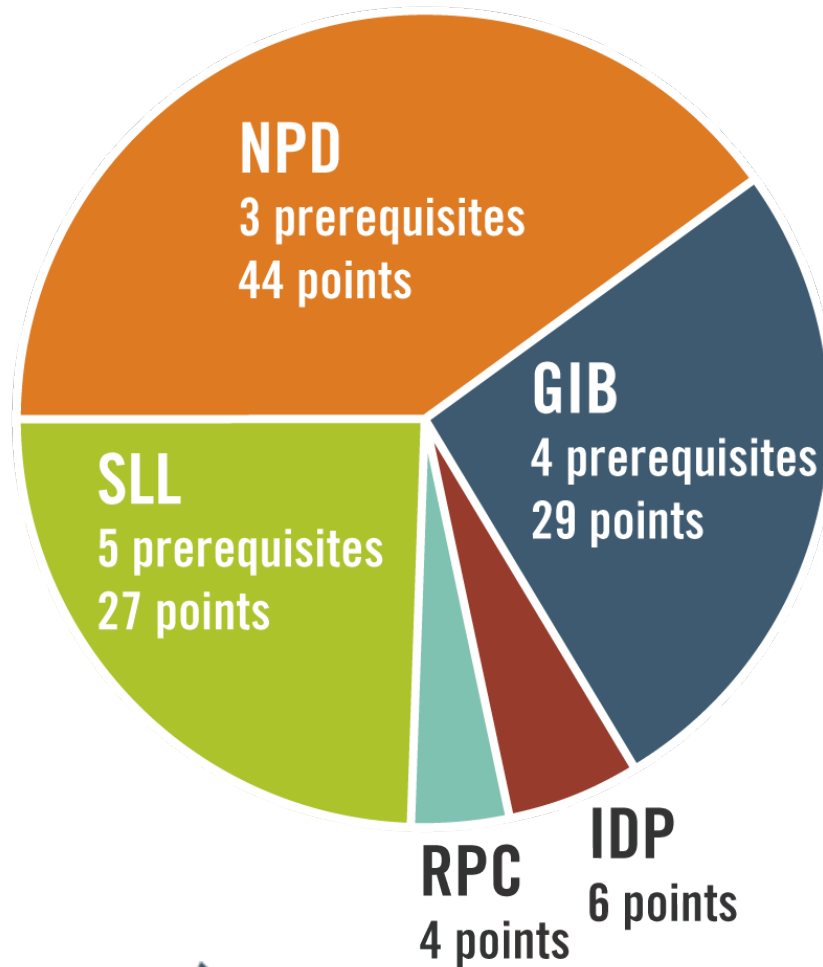
SLLp1 Smart Location

Four Compliance Pathways

- Infill

    Previously Developed Site or Context

- Adjacent Site / Connectivity

    Previously Developed Site or Context

- Transit Corridor (Existing or Planned Transit)

    Adequate Service: 60 Weekday / 40 Weekend Trips

- Nearby neighborhood assets

    ¼ Mile Walk Distance from 5 Diverse Uses, OR

    Project's geographic center is ½ mile walk distance from 7 diverse uses

STAR COMMUNITIES
SUSTAINABILITY TOOLS FOR ASSESSING & RATING COMMUNITIES

NPDp1 Walkable Streets

- Principal functional entry faces a public space/sidewalk

- Spatial enclosure: Minimum building height-to-street-width ratio

- Continuous sidewalks

- Limited garage entries

King Street, Alexandria, Virginia

STAR COMMUNITIES
SUSTAINABILITY TOOLS FOR ASSESSING & RATING COMMUNITIES

NPDc4 Mixed-Income Diverse Communities

- Promotes development that provides a variety of house types

- Also contains a pathway for affordable housing, to support a range of incomes

Main Street, Covington, Kentucky

STAR COMMUNITIES
SUSTAINABILITY TOOLS FOR ASSESSING & RATING COMMUNITIES

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Public Spaces	Resource Efficient Public Infrastructure	Workforce Readiness		Poverty Prevention & Alleviation	Natural & Human Hazards	Working Lands
Transportation Choices	Waste Minimization				Safe Communities	

BE-3: Compact & Complete Communities

Concentrate development in human-scaled, walkable centers that connect to transit, offer diverse uses, and provide housing options

Preliminary Step:

Identify the Compact & Complete Centers (CCCs) to be analyzed in the Objective

Population	Number of CCCs
> 1 million	10
750,000 – 1 million	9
500,000 – 749,999	8
250,000 – 499,999	6
100,000 – 249,999	4
50,000 – 99,999	2
< 50,000	1

- CCC area is measured as ½-mile walk distance around a central point

- Seek geographic diversity

- Standards based on LEED-ND

- Each CCC can achieve a max of 100 pts., score averaged across all CCCs for each Outcome
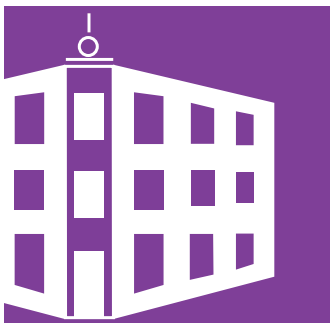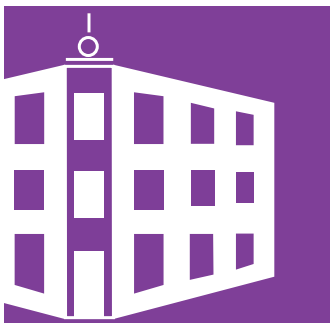
BE-3: Compact & Complete Communities

Concentrate development in human-scaled, walkable centers that connect to transit, offer diverse uses, and provide housing options

Outcome 1: Density, Destinations & Transit [Graduated credit available]

Residential Density:
- At least 12 units / acre within a ¼-mi walk distance of bus or streetcar stops or ½-mi of BRT, rail stops, or ferry terminals;
- At least 7 units / acre within rest of CCC

Employment Density: 25+ jobs per acre

Diverse Uses: At least diverse uses present }

Examples:
- Grocery store
- Restaurant
- Bank
- School
- Park
- Church

Transit Availability:
- At least 60 weekday trips per day — AND —
- At least 40 weekend trips per day

BE-3: Compact & Complete Communities

Concentrate development in human-scaled, walkable centers that connect to transit, offer diverse uses, and provide housing options

Outcome 2: Walkability [Partial credit available]

Google — 1200 1st Street Northeast, Washington, DC

60% of block faces have street trees at no more than 40 ft. intervals

Not pictured:
- Min. intersection density of 90 / mi.
- Bonus: 140 / mi.
- Speed limit: 25 mph or below

100% of crosswalks are ADA accessible

90% of roadways have sidewalks on both sides

BE-3: Compact & Complete Communities

Concentrate development in human-scaled, walkable centers that connect to transit, offer diverse uses, and provide housing options

Outcome 3: Design   [Partial credit available]

40% of commercial blocks' bldg. faces are free from blank walls, garages, and driveways

➡

80% of setbacks not more than 10 ft. (not more than 25 ft. for residential)

BE-3: Compact & Complete Communities

Concentrate development in human-scaled, walkable centers that connect to transit, offer diverse uses, and provide housing options

Outcome 4: Affordable Housing   [Partial credit available]

- 10% of total residential units are affordable
- 10% of units built or rehabbed in the last 3 years are subsidized affordable housing
- Some of dedicated units are affordable for very low-income households

BE-3: Compact & Complete Communities

Concentrate development in human-scaled, walkable centers that connect to transit, offer diverse uses, and provide housing options

Local Actions

1. Comprehensive plan supports compact, mixed-use development
2. Future land use map identifies areas for compact, mixed-use development
3. Permit or incentivize density and diverse uses
4. Design standards require sidewalks, street trees, crosswalks, target speed, and block length
5. Require build-to lines for commercial and residential structures
6. Adopt parking strategies in transit-served and compact, mixed-use areas
7. Proactive affordable housing creation polices
8. Establish a design review board for proposed development projects
9. Implemented affordable housing retention polices
10. Increase the percentage of households with access to transit

STAR COMMUNITIES
SUSTAINABILITY TOOLS FOR ASSESSING & RATING COMMUNITIES

Questions??

Dan Guilbeault
District of Columbia
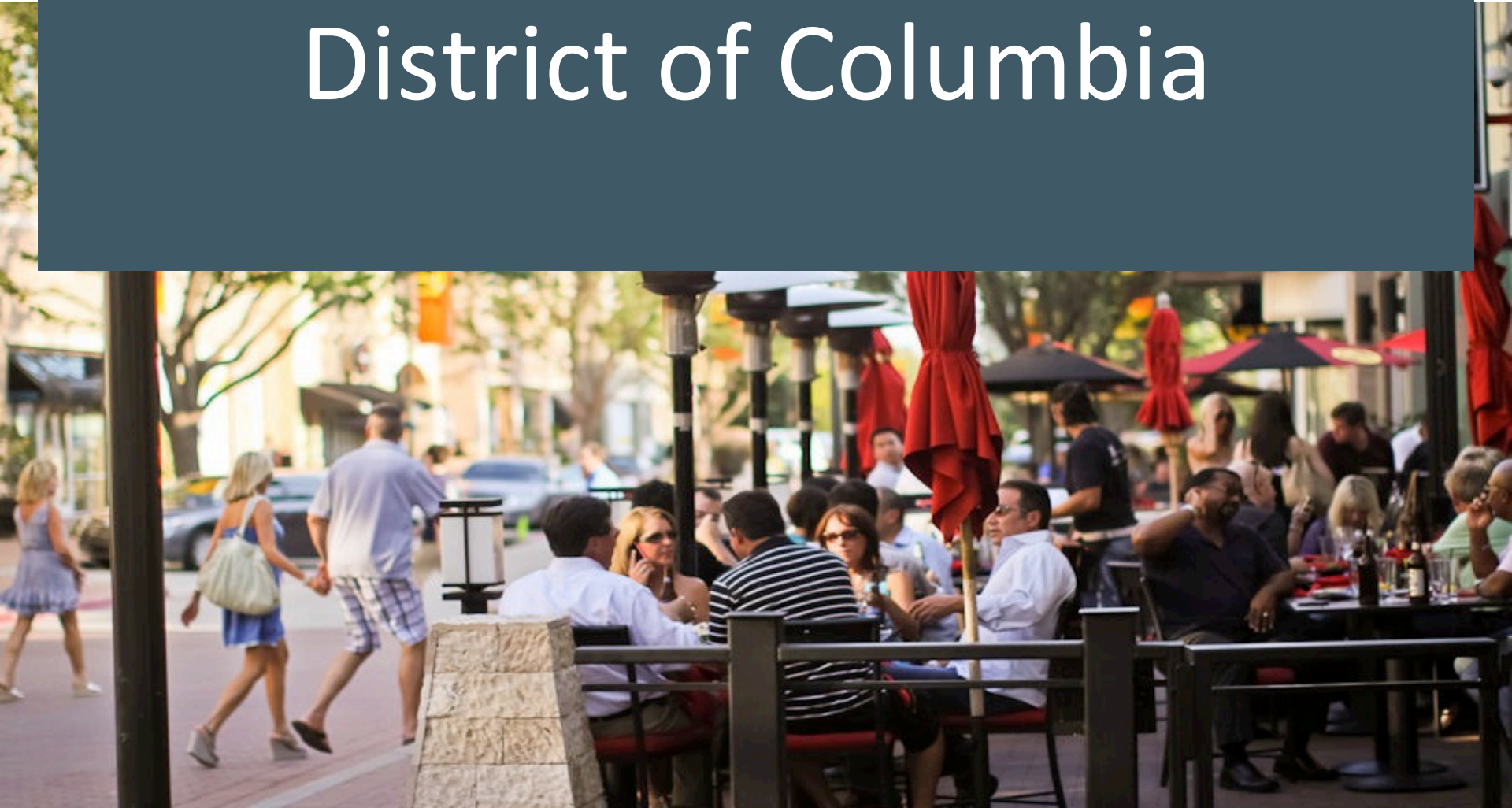
Importance of CCCs to DC

- **Affordability**
  - DC housing is expensive; DC H+T less so
- **Equity**
  - Should be able to access basic services without needing to drive
- **Congestion Reduction**
  - Part of the solution to lessening severe congestion
- **Healthy Lifestyle**
  - High rates of walking, biking, and using transit
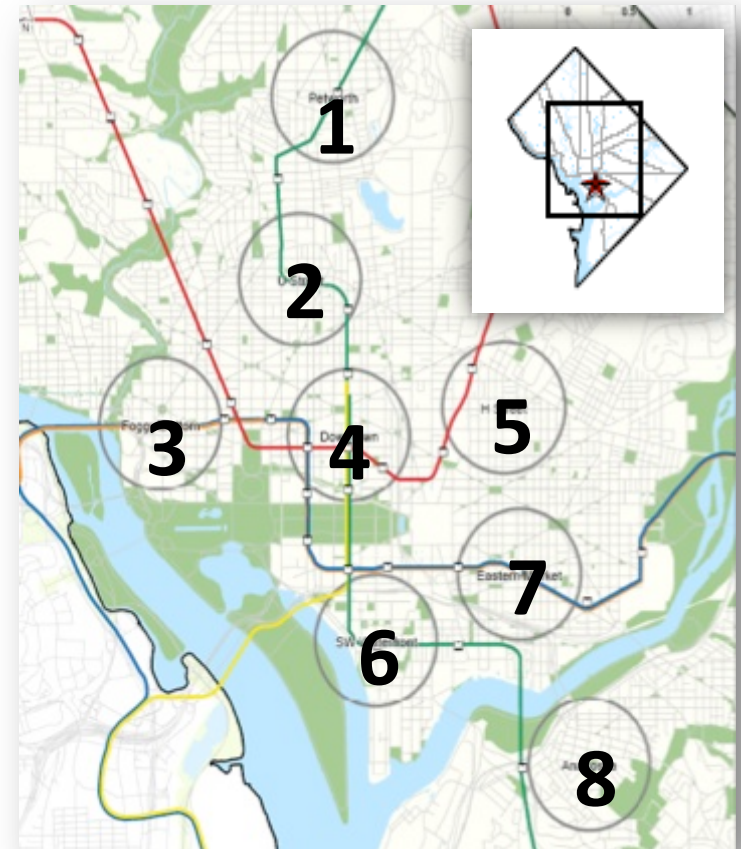 - High rates of obesity, diabetes, and heart disease

Importance of CCCs
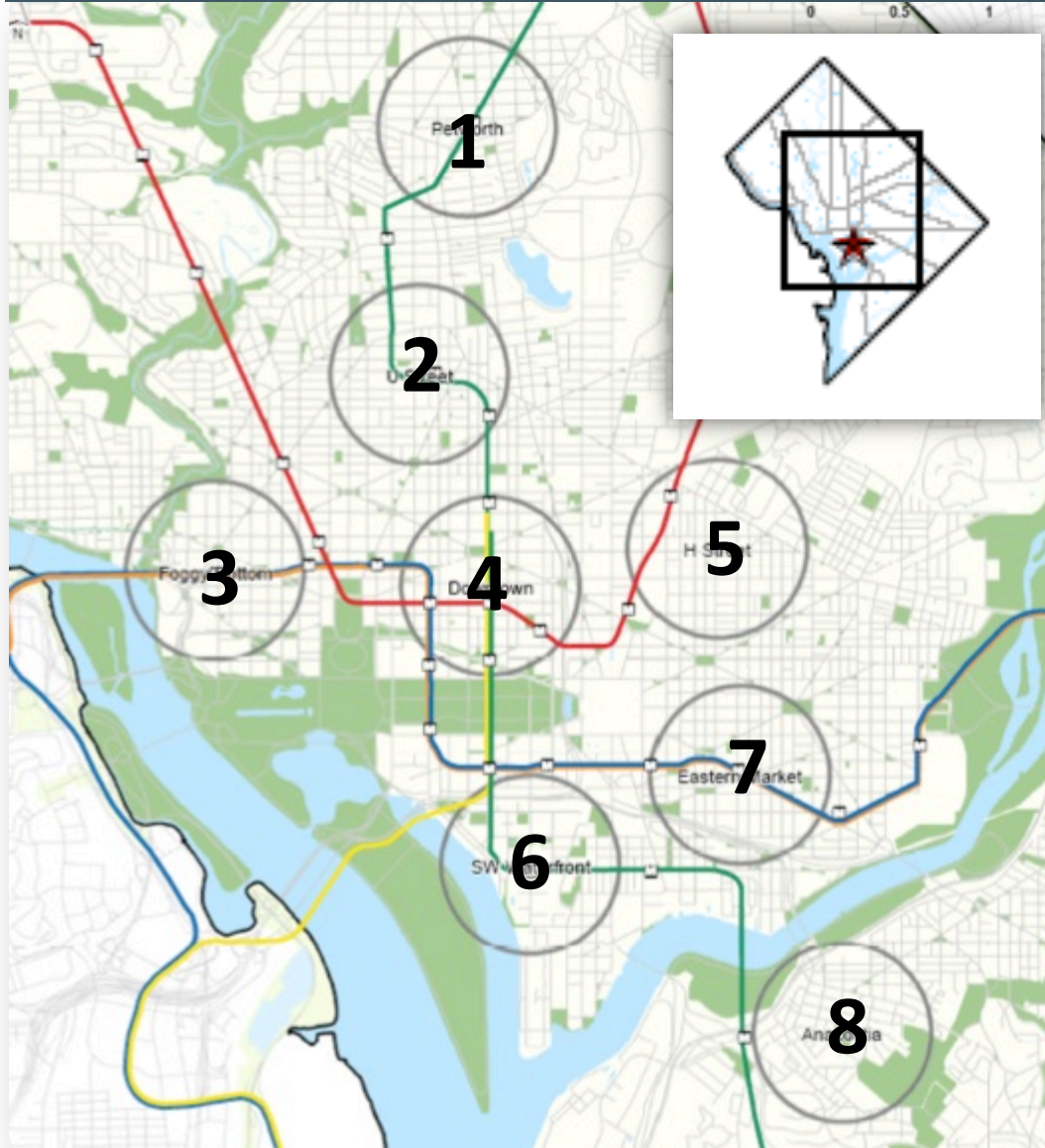
DC CCCs
1. Petworth
2. U St. Corridor
3. Foggy Bottom
4. Downtown
5. H St. Corridor
6. SW Waterfront
7. Eastern Market
8. Anacostia

Outcome 1: Residential Density

Neighborhood	Units/acre
Petworth	20
U Street	29
Foggy Bottom (GWU)	58
Downtown	110
H Street	26
SW Waterfront	21
Eastern Market	20
Anacostia	12

Outcome 1: Employment Density

Neighborhood	Jobs/acre
Petworth	73
U Street	27
Foggy Bottom (GWU)	174
Downtown	450
H Street	153
SW Waterfront	481
Eastern Market	60
Anacostia	6
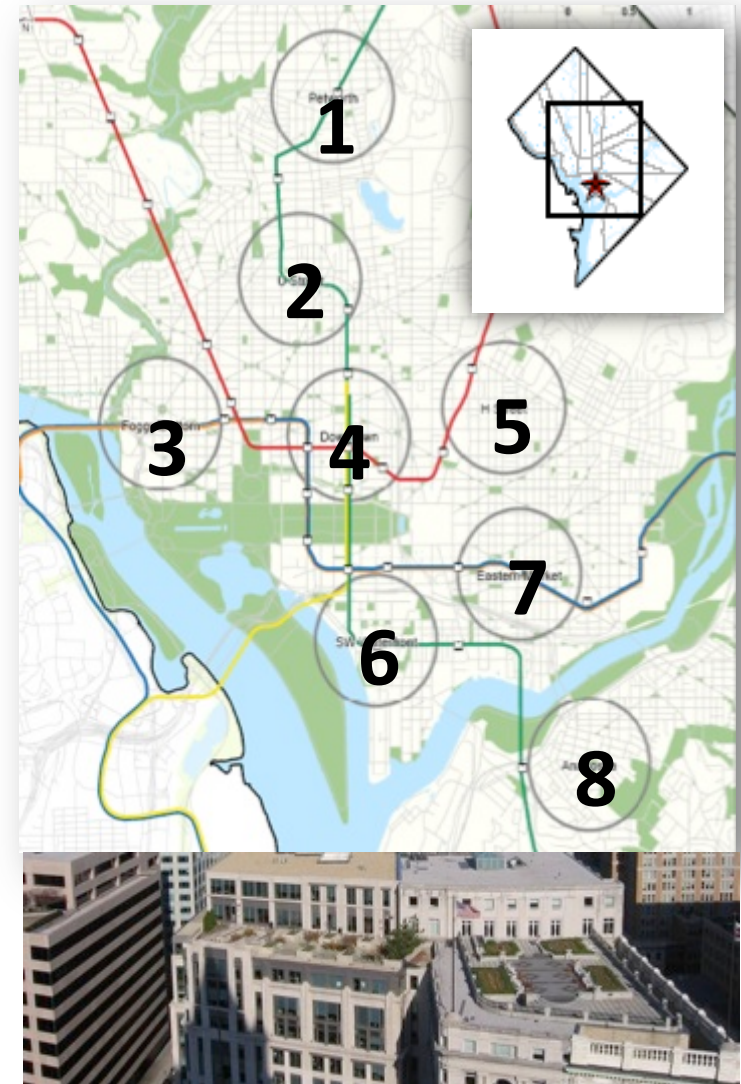
Outcome 1: Diverse Uses

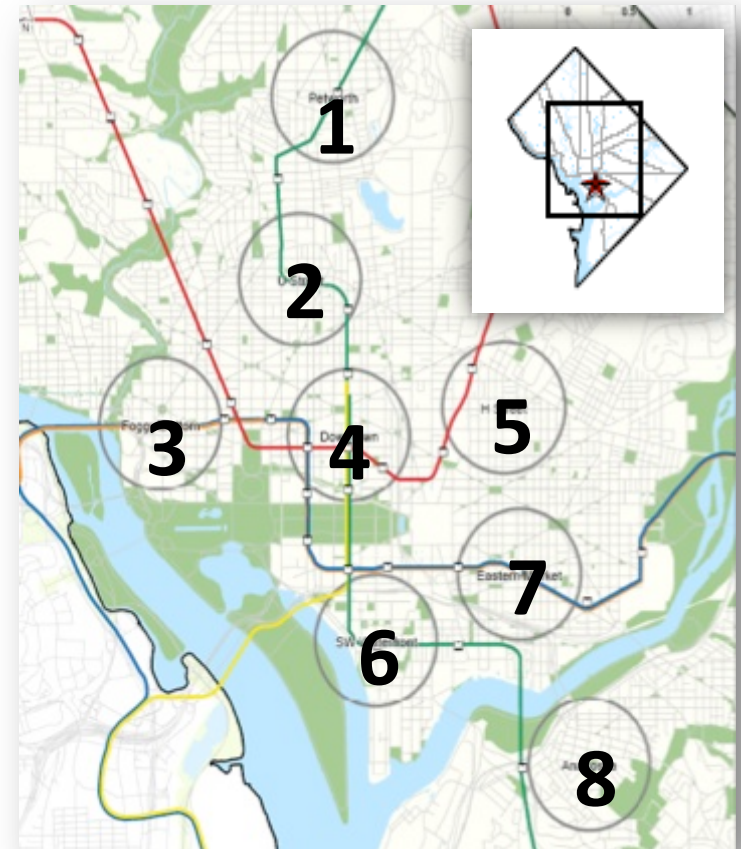| Table of Diverse Uses	
Food Retail	
Supermarket	*Healthful food retail outlet*
Community-Serving Retail	
Clothing store or department store selling clothes	Hardware store
Convenience store	Pharmacy
Farmer's market	Other retail
Services	
Bank	Laundry, dry cleaners
Gym, health club, exercise studio	Restaurant, café, diner, brewpub
Hair care	
Civic and Community Facilities	
Adult or senior care (licensed)	Place of worship
Child care (licensed)	Medical clinic or office that treats patients
Community or recreation center	Police or fire station
Cultural arts facility (museum, performing arts)	Post office
Educational facility (K–12 school, university, adult education center, vocational school, community college)	Public library
Family entertainment venue (theater, sports)	Public park
Government office that serves public on-site	Social services center
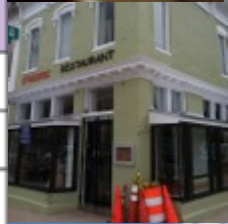
Outcome 1: Diverse Uses

Neighborhood	Uses
Petworth	21+
U Street	21+
Foggy Bottom (GWU)	21+
Downtown	21+
H Street	21+
SW Waterfront	21+
Eastern Market	21+
Anacostia	21+

Outcome 1: Transit Availability

Neighborhood	Wkday	Wknd
Petworth	466	206
U Street	466	206
Foggy Bottom	528	374
Downtown	344	244
H Street	406	382
SW Waterfront	398	256
Eastern Market	340	246
Anacostia	652	509
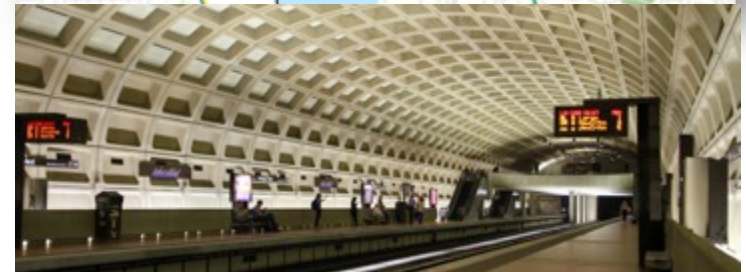
Outcome 1: Combined

Neighborhood	Jobs/ acre	Units/ acre	Uses	Wkday	Wknd
Petworth	73	20	21+	466	206
U Street	27	29	21+	466	206
Foggy Bottom	174	58	21+	528	374
Downtown	450	110	21+	344	244
H Street	153	26	21+	406	382
SW Waterfront	481	21	21+	398	256
Eastern Market	60	20	21+	340	246
Anacostia	6	12	21+	652	509

Questions??

Roy DeWitt
Davenport, Iowa

Davenport: Background

- Davenport, IA – Pop. 99,685 (2010 Census)
  - Largest of the "Quad Cities"
    - (QC also includes Bettendorf, IA and Moline and Rock Island, IL)
  - Largest 300 mi. Market West of Chicago
    - (Within 300 mi. of 37 Million Pop.)

Davenport: CCCs

- CCC Selection
  - Established Area Boundaries
  - Name Recognition
  - Area Are Building Momentum

Potential CCCs Using Existing Boundaries
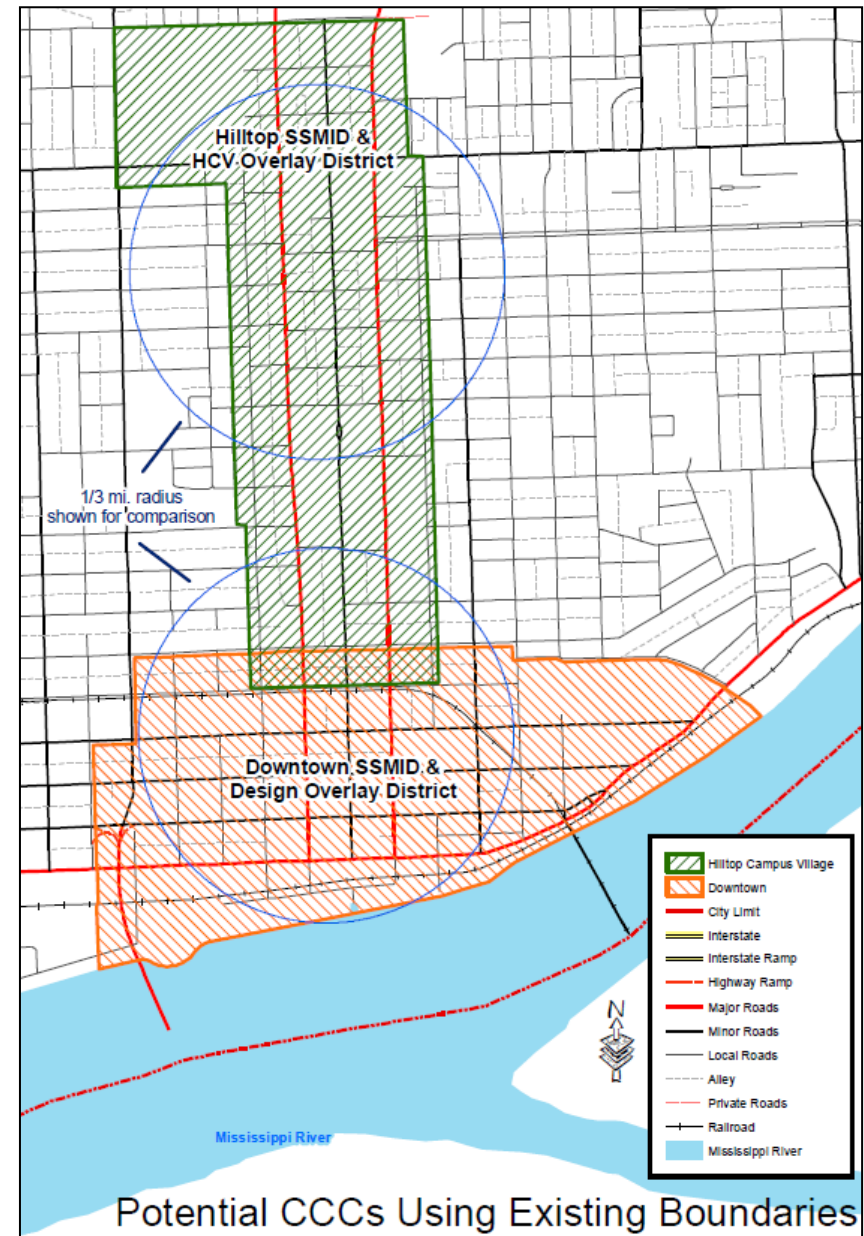
Davenport: CCCs Background

- DowntownDavenport.com

Davenport: CCCs Background

- HilltopCampusVillage.org

BE-3 - Outcome 2: Walkability

- Demonstrate that each CCC achieves the following thresholds:
    - 90% of roadways contain sidewalks on both sides
    - 100% of crosswalks are ADA accessible
    - 60% of block faces contain street trees at no more than 40 feet intervals
    - 70% of roadways are designed for a travel speed of no more than 25 mph
    - Minimum intersection density of 90 intersections per square mile

Sidewalks/ADA – Downtown CCC

Downtown Area
98 out of 107 Block Faces have Sidewalks on both sides (91.5%)

Legend

Bike Paths
Type
- Off-Street Multi-Use Path
- On-Street Bike Lane
- On-Street Bike Route
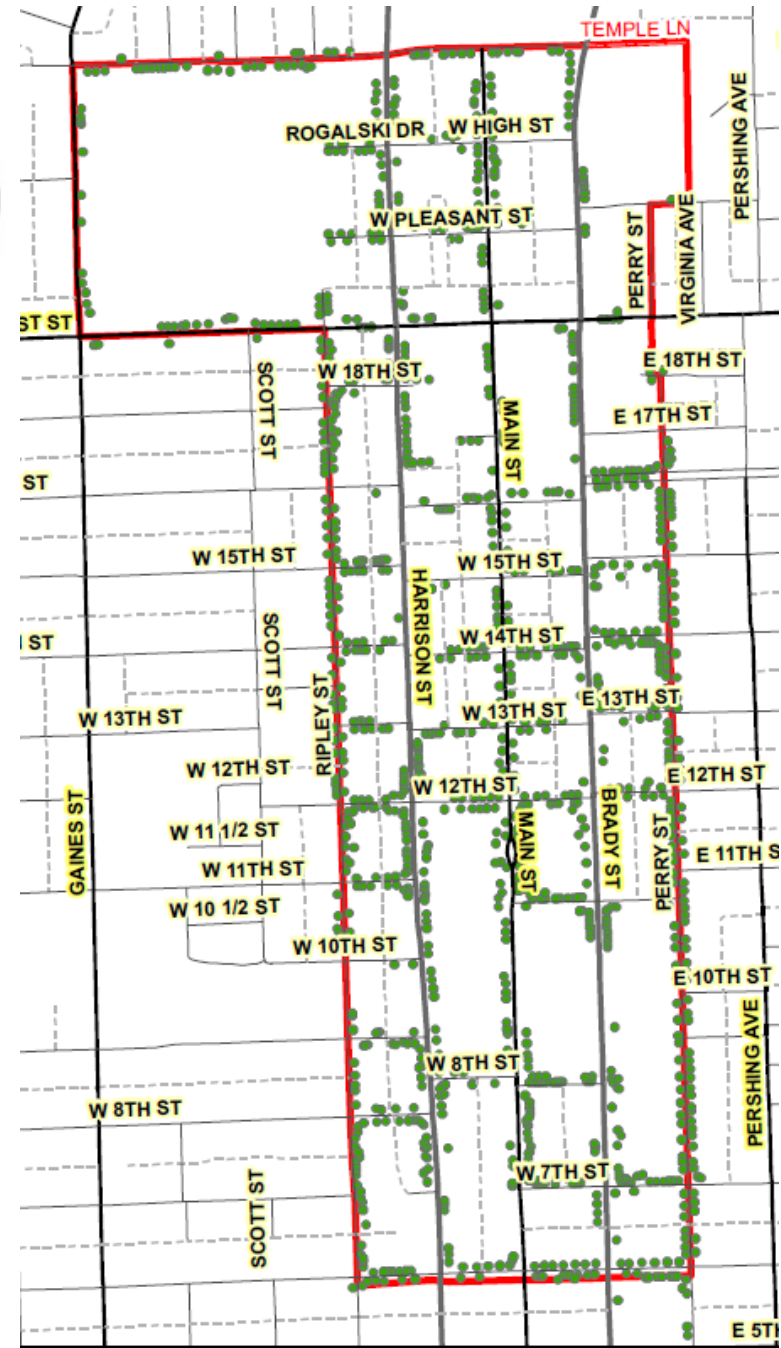- Downtown Sidewalks
- CCC-Downtown

Sidewalks/ADA – HCV CCC

Street Trees – HCV CCC

Hilltop Area
20 Foot Buffer Around Street Trees

Street Trees – HCV CCC
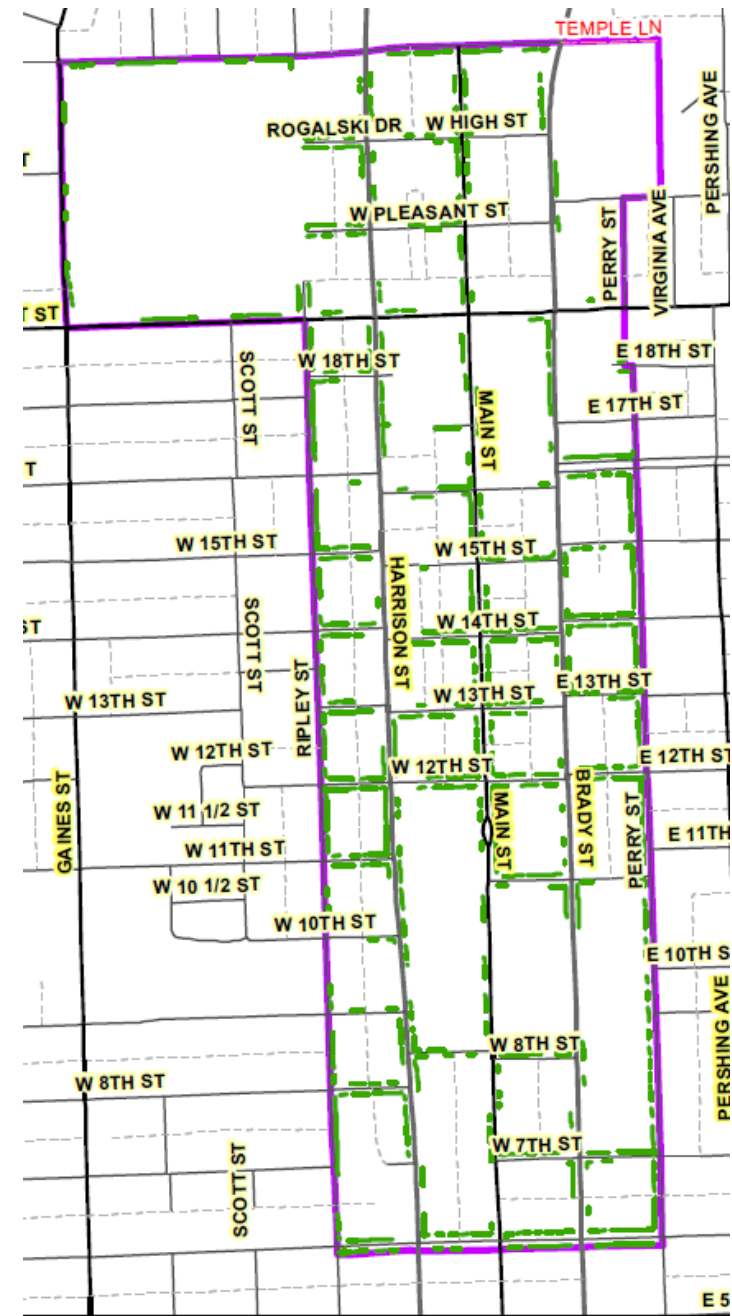
Hilltop Street Trees
6 of 159 Meet the Standard (3.8%)

Street Trees – Downtown CCC
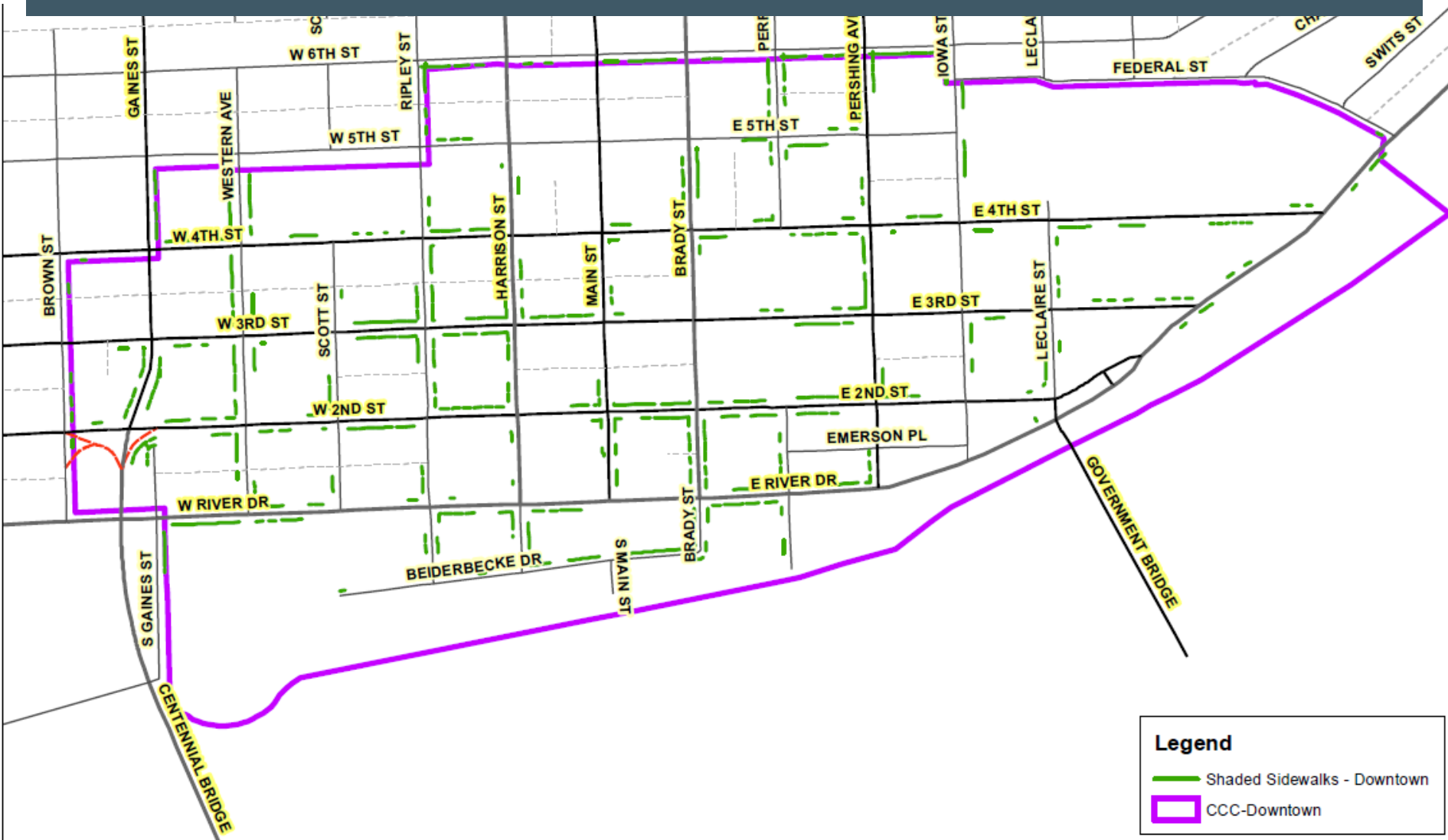
Downtown Street Trees
2 of 198 Meet the Standard (1%)

Legend

— Shaded Sidewalks - Downtown

▭ CCC-Downtown

Street Trees – Downtown CCC

Travel Speed – Downtown CCC
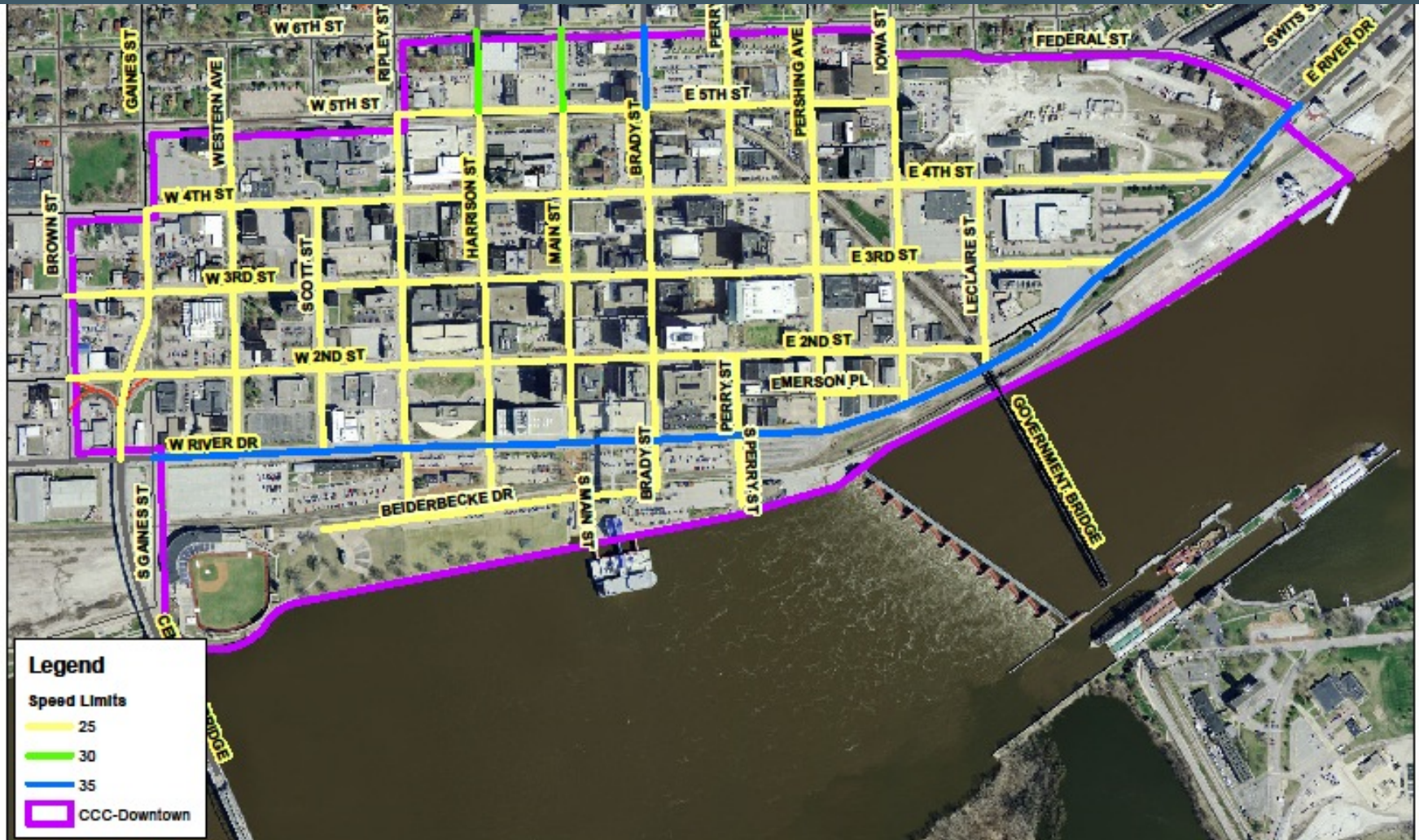
Downtown Area Speed Limits
85.2% of Block Segments 25 MPH or below

Travel Speed – HCV CCC
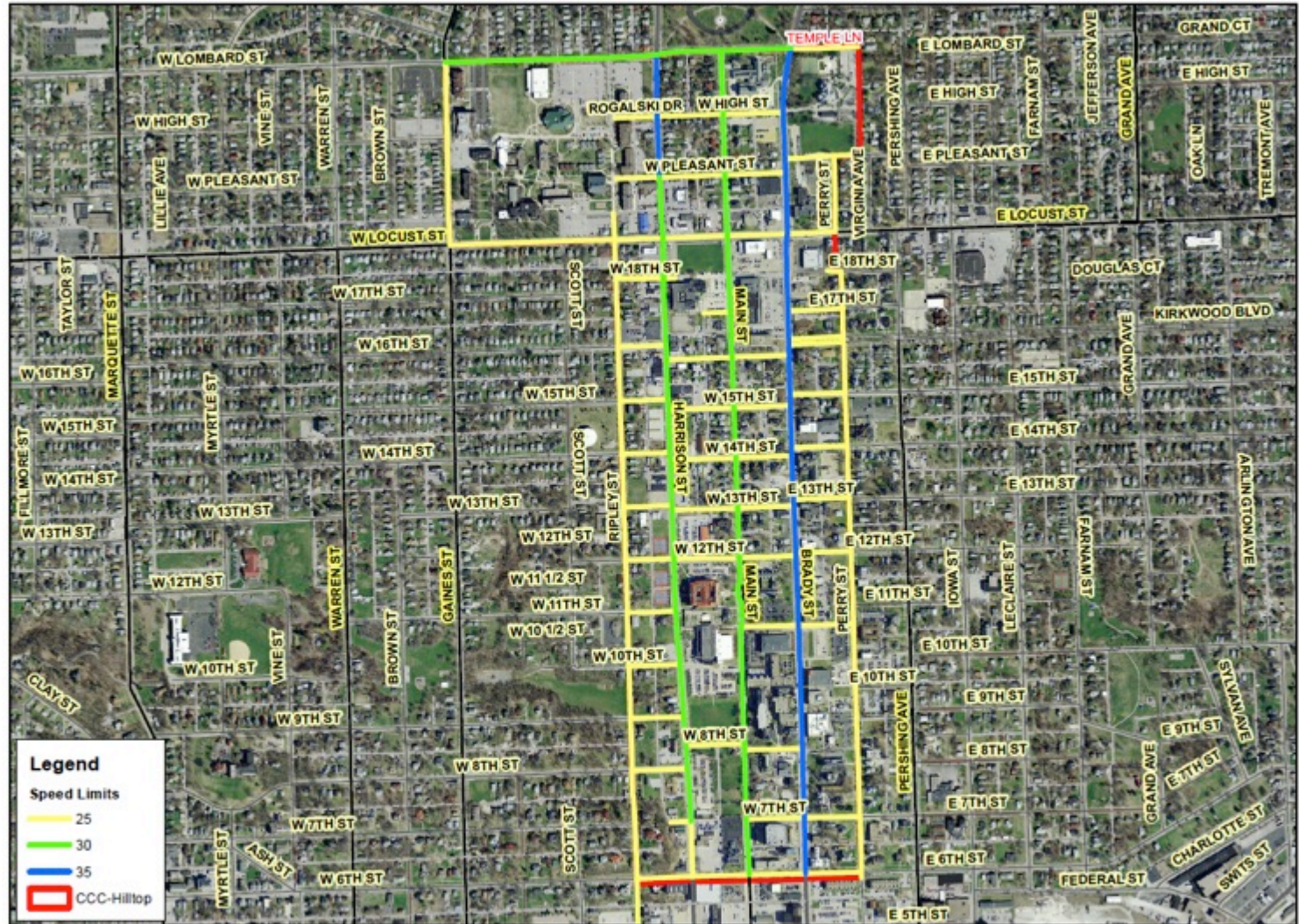
Hilltop Area Speed Limits
65.1% of Block Segments 25 MPH or below

Intersections – Downtown CCC
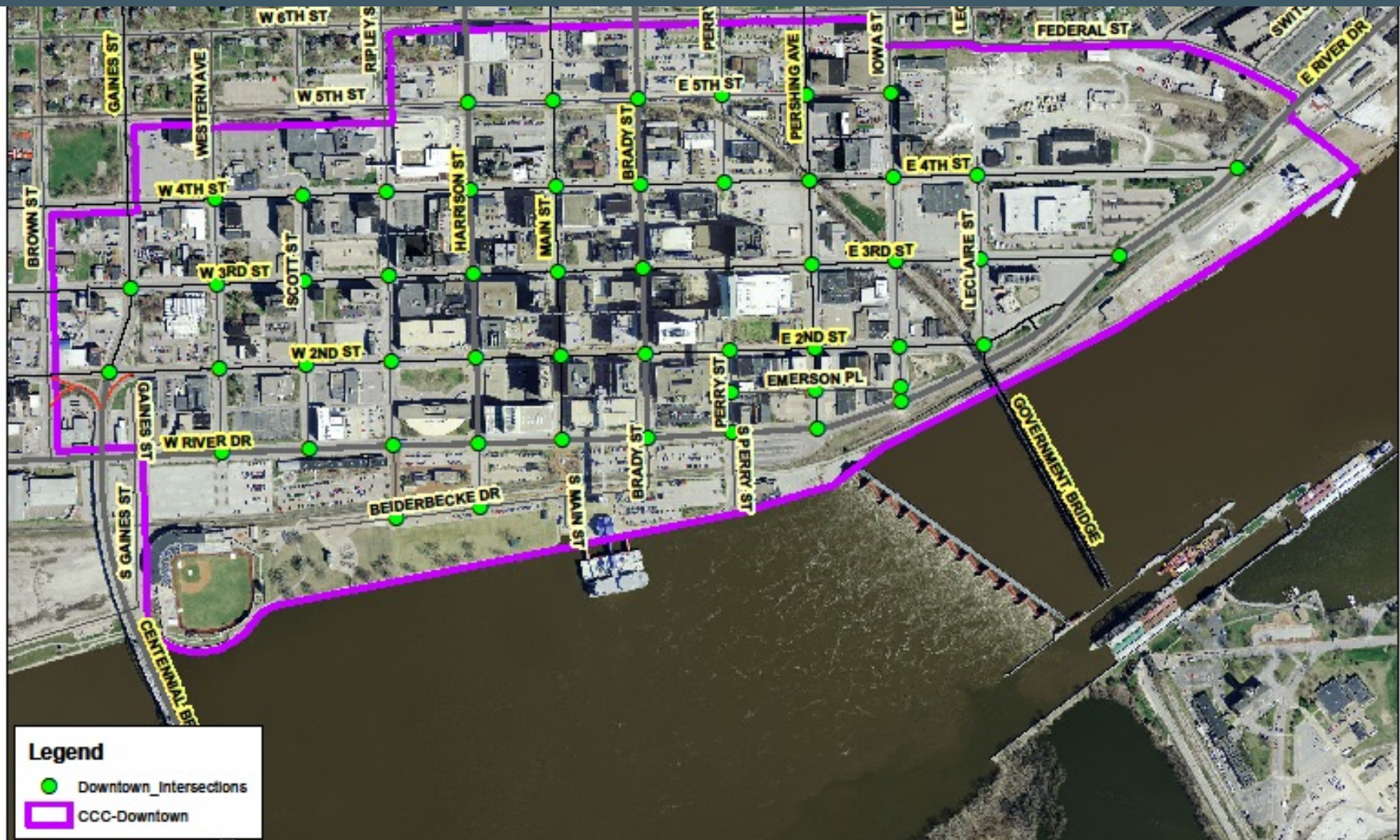
Downtown Area Intersections
53 intersections in .41 square miles
129 intersections per square mile

Legend
- Downtown_Intersections
- CCC-Downtown

Intersections – HCV CCC

Hilltop Area Intersections
42 intersections in .4 square miles
105 intersections per square mile
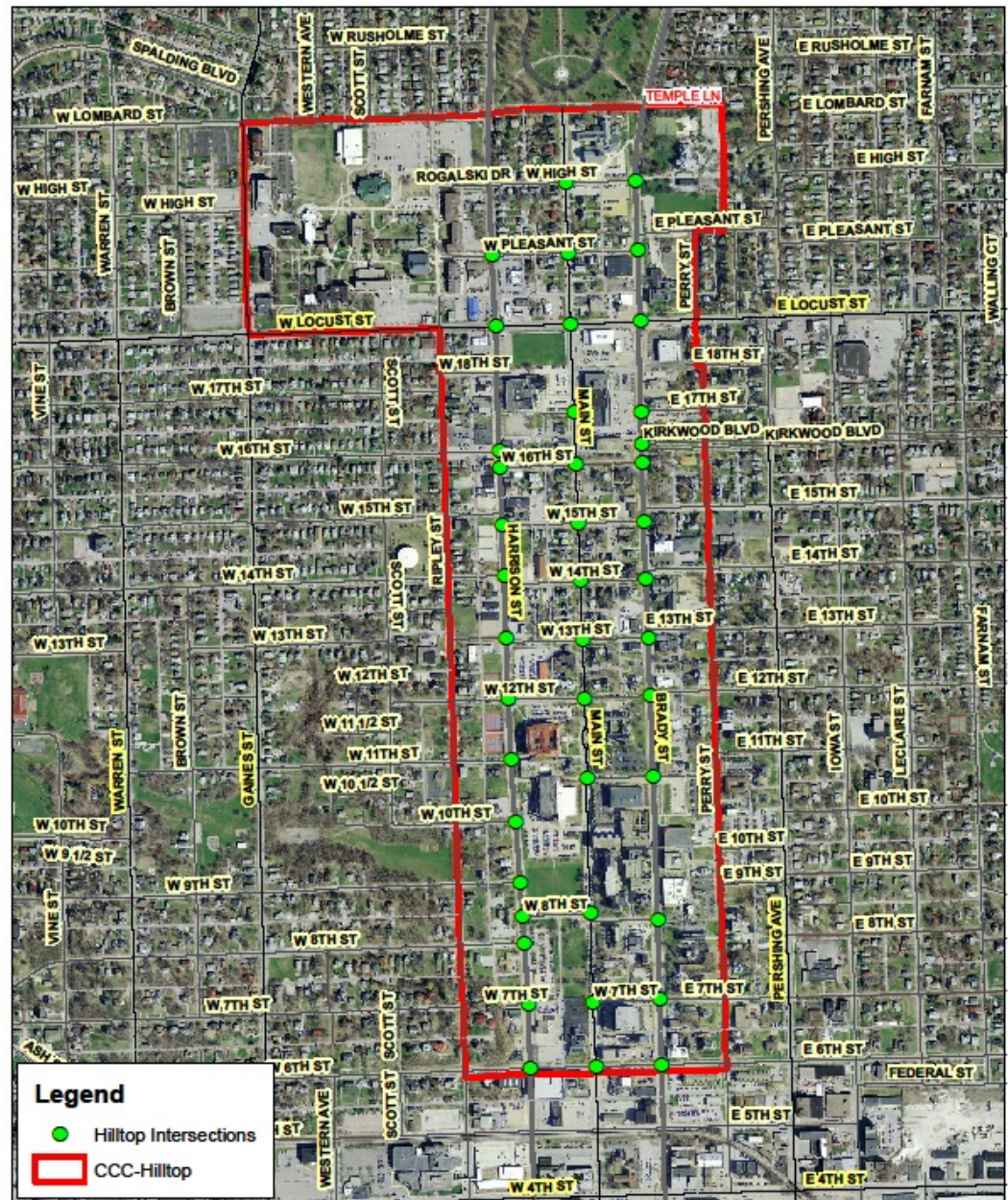
BE-3 Outcome 3: Design

- Demonstrate that each CCC achieves the following thresholds:
  - 80% of front building setbacks along primarily single-family residential blocks are not more than 25 feet from the property line
  - 80% of front building setbacks along primarily commercial blocks are not more than 10 feet from the property line
  - 40% of primarily commercial blocks have ground floor street frontages free from blank walls and loading docks, and do not have structured or surface parking as the principal land use along the street

Setbacks – Downtown CCC
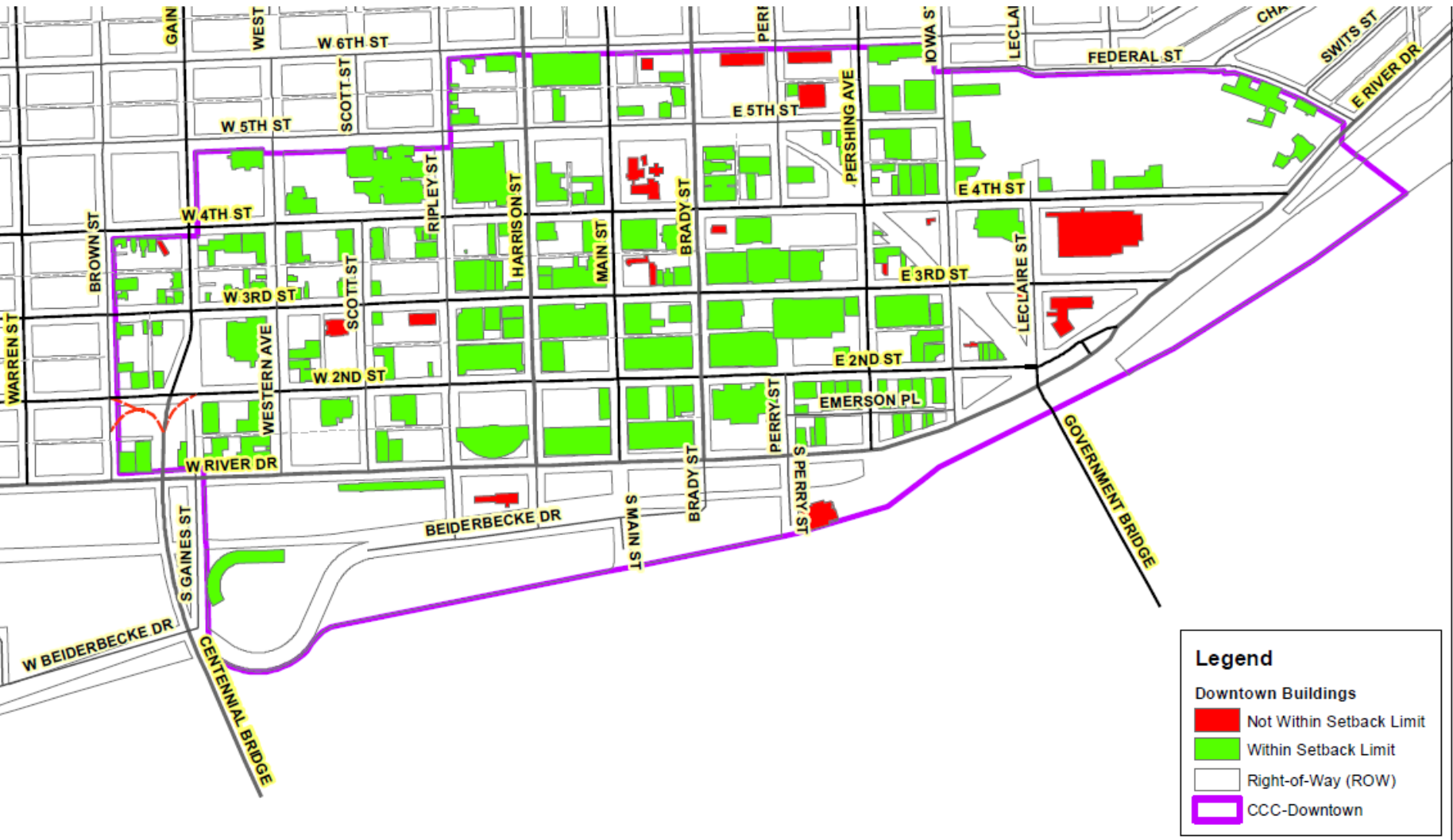
177 of the 197 Buildings (89.8%)
are within a 10 foot setback on Commercial Blocks

Residential Setbacks – HCV CCC
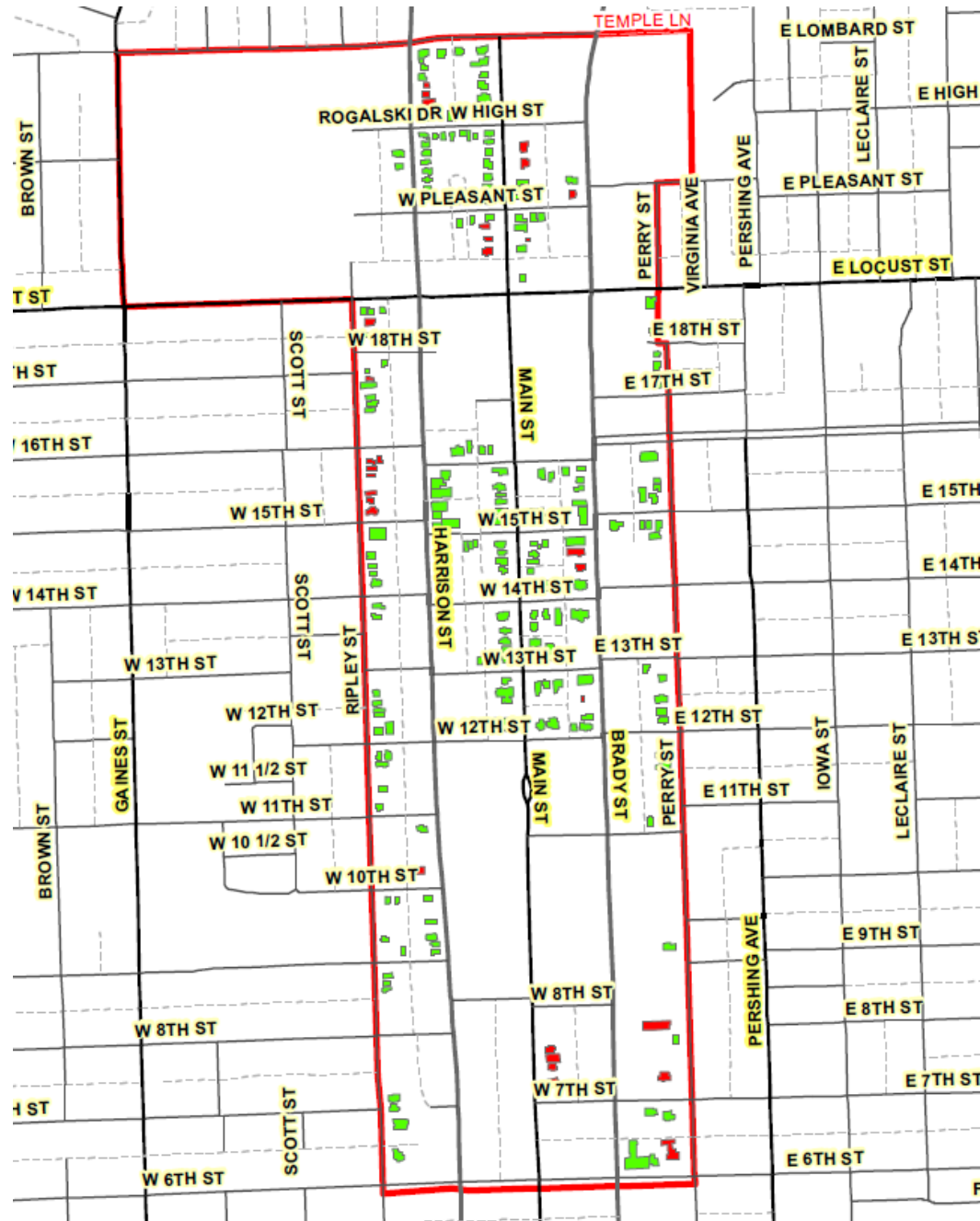
201 of 231 Buildings (87%)
are within a 25 foot setback on Residential Blocks

Commercial Setbacks – HCV CCC
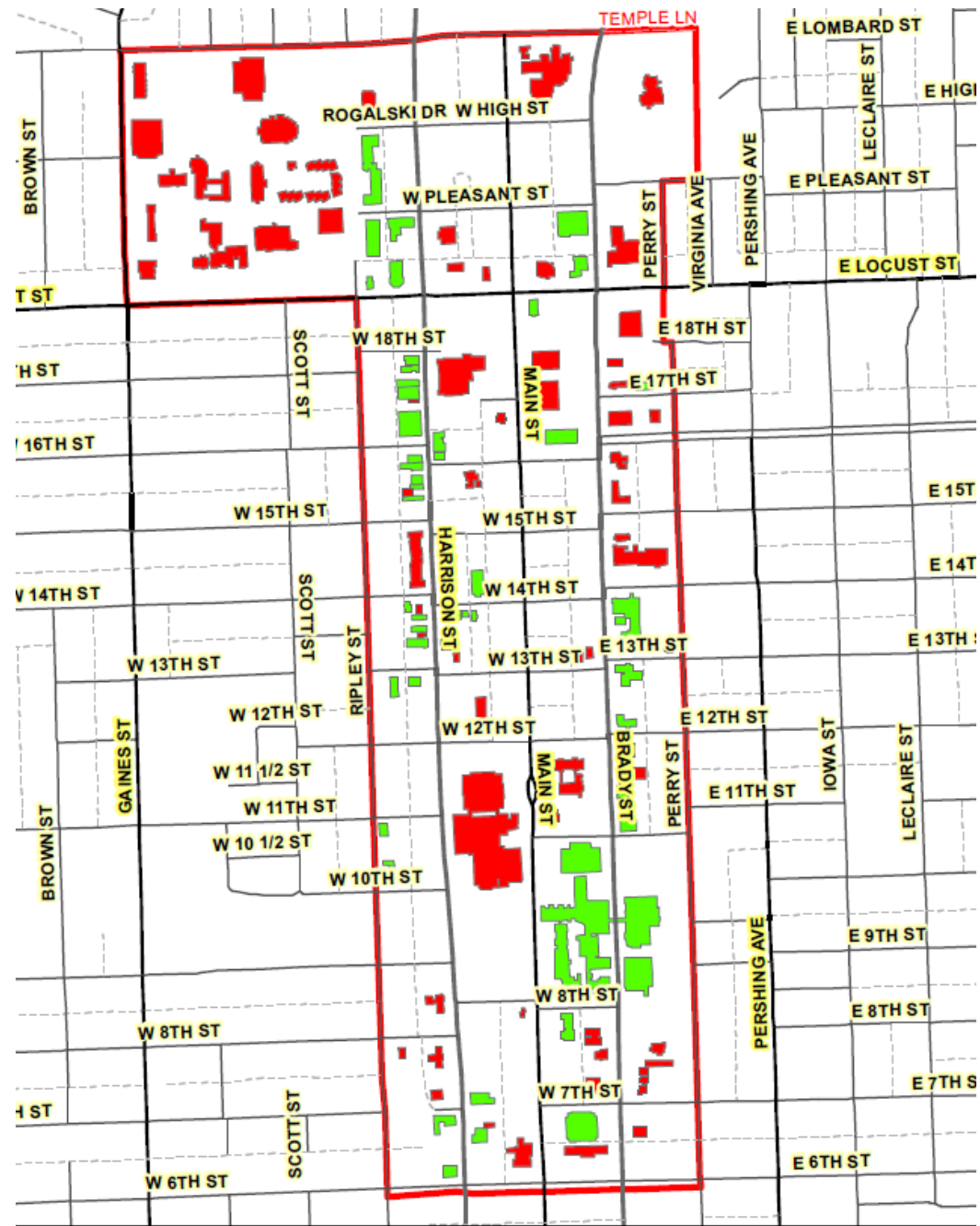
53 of the 126 Buildings (42.1%) are within a 10 foot setback on Commercial Blocks

Frontages – HCV CCC
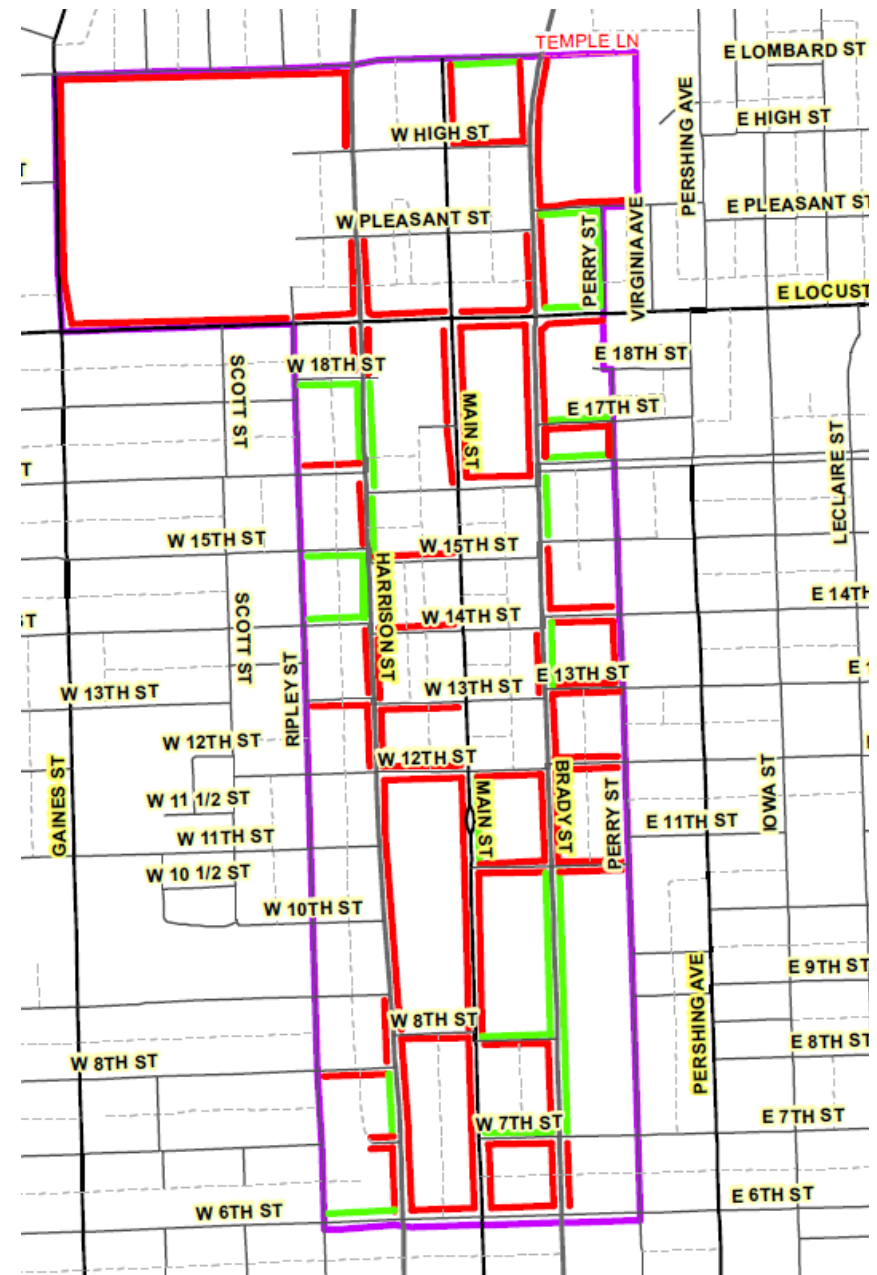
Commercial Block Frontages
22 of 99 Meet the Standard (22.2%)

Frontages – Downtown CCC

Commercial Block Frontages
26 of 198 Meet the Standard (13.1%)
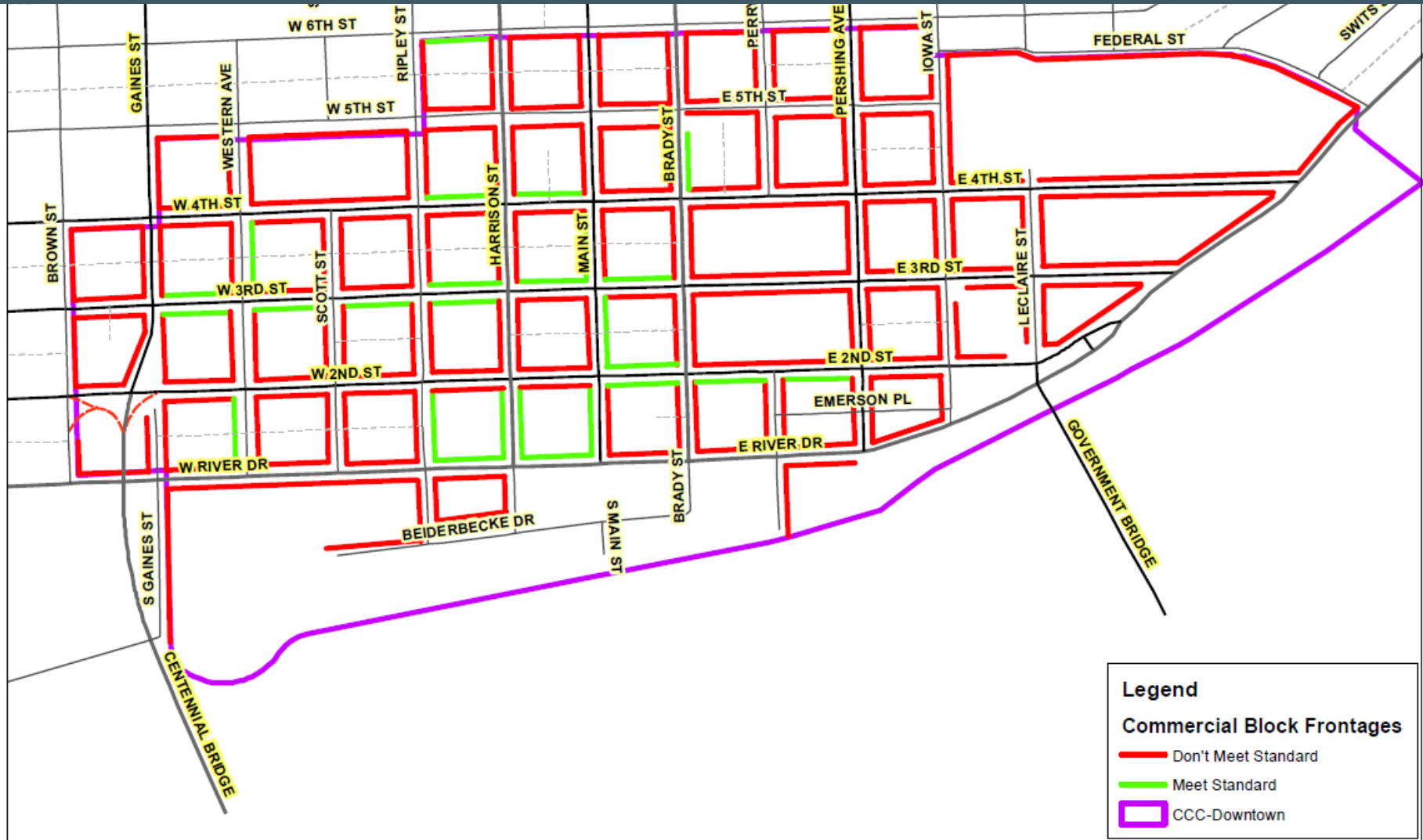
Show Me the Points!

- Outcome 2: STAR-Calculated Walkability Score = 10.5 (15 Max)
  - 90% of roadways contain sidewalks on both sides
  - 100% of crosswalks are ADA accessible
  - 60% of block faces contain street trees at no more than 40 feet intervals – I&P
  - 70% of roadways are designed for a travel speed of no more than 25 mph
  - Minimum intersection density of 90 intersections per square mile – BONUS in HCV
- Outcome 3: STAR-Calculated Design Score = 5 (15 Max)
  - 80% of residential setbacks < 25' from property line
  - 80% of commercial setbacks < 10' from property line
  - 40% of commercial block frontages

Davenport Summary

Presentation Overview

- Indianapolis at a glance
- Data sources
- Using Outcome 1 to choose CCC locations for analysis
- A Closer look at 3 CCCs
  - Convention Center Plaza
  - Broad Ripple
  - Massachusetts Avenue
- CCC Summary
- Conclusions

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Indianapolis at a Glance

- Area: **372 sq mi**
- Population: **834,852** (2012 estimate)
- Population Density: **2244/sq. mi.**
- UNIGOV (1970)
  - 13th largest city
  - 34th largest metro area

Jurisdiction Population	Number of CCCs
> I million	10
750,000-I million	9
500,000-749,999	8
250,000-499,999	6
100,000-249,999	4
50,000-99,999	2
< 50,000	I

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Data Sources

- Census.gov, onthemap.ces.census.gov
- Marion County GIS
- IndyGo
- Google Maps
- Walkscore.com
- Indiana HUD office
  Indiana Housing and Community Development Authority (IHCDA)
  Indianapolis Housing Agency (IHA)

Interstate highways

Major Bodies of Water

Housing Units

• = 50 housing units

Interstate highways

Major Bodies of Water

Jobs per census block
- 1 - 100
- 101 - 500
- 501 - 1000
- 1001 - 5000
- >= 5001

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Interstate highways

Major Bodies of Water

Bus Routes
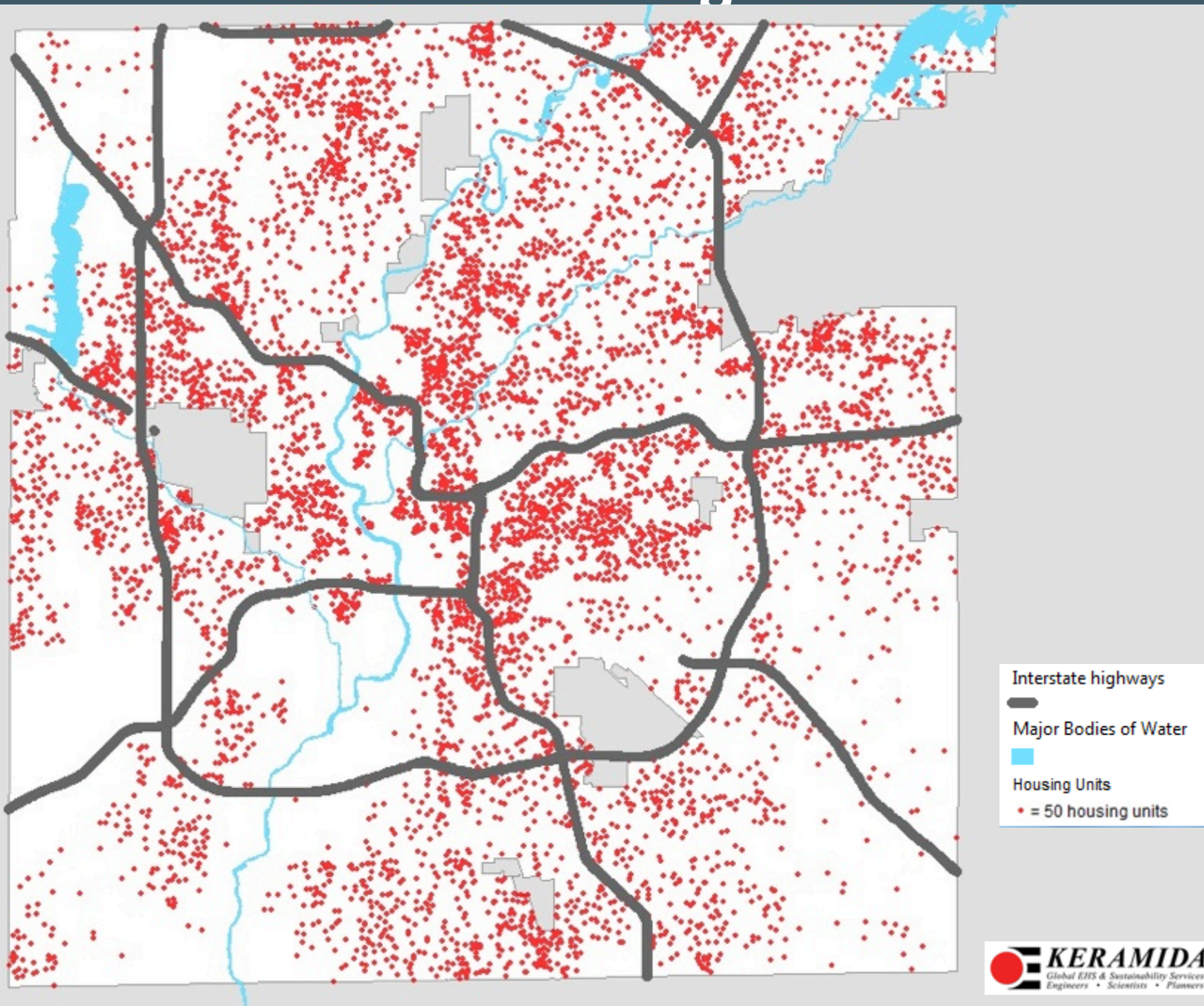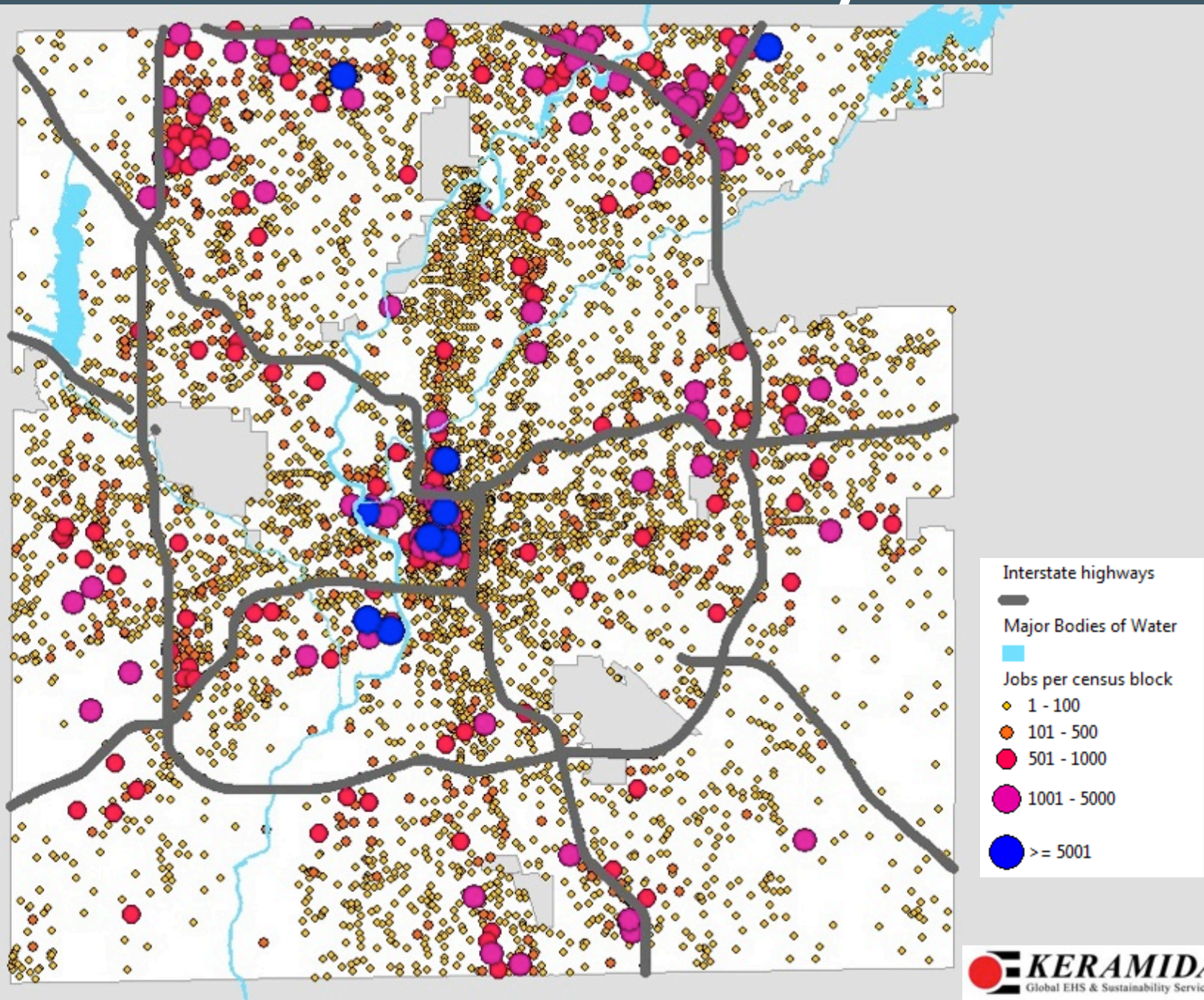
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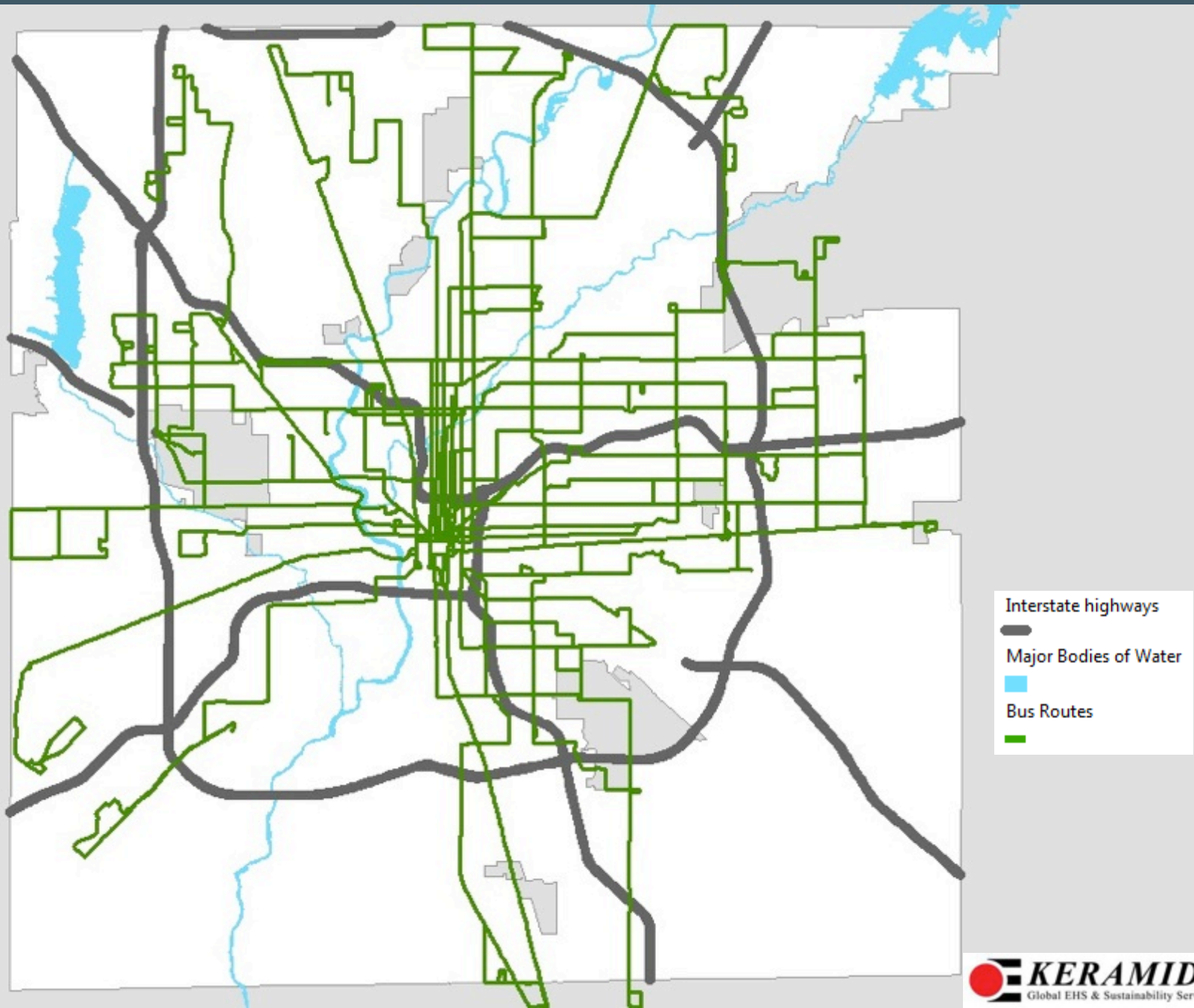
Outcome 1: Diverse Uses

- Maps.google.com, Walkscore.com
- Historical Maps
- Interplay between factors

Source: walkscore.com

Potential CCC Sites

Interstate highways

Major Bodies of Water

<Broad Ripple

<Mass Ave

Convention Center Plaza>

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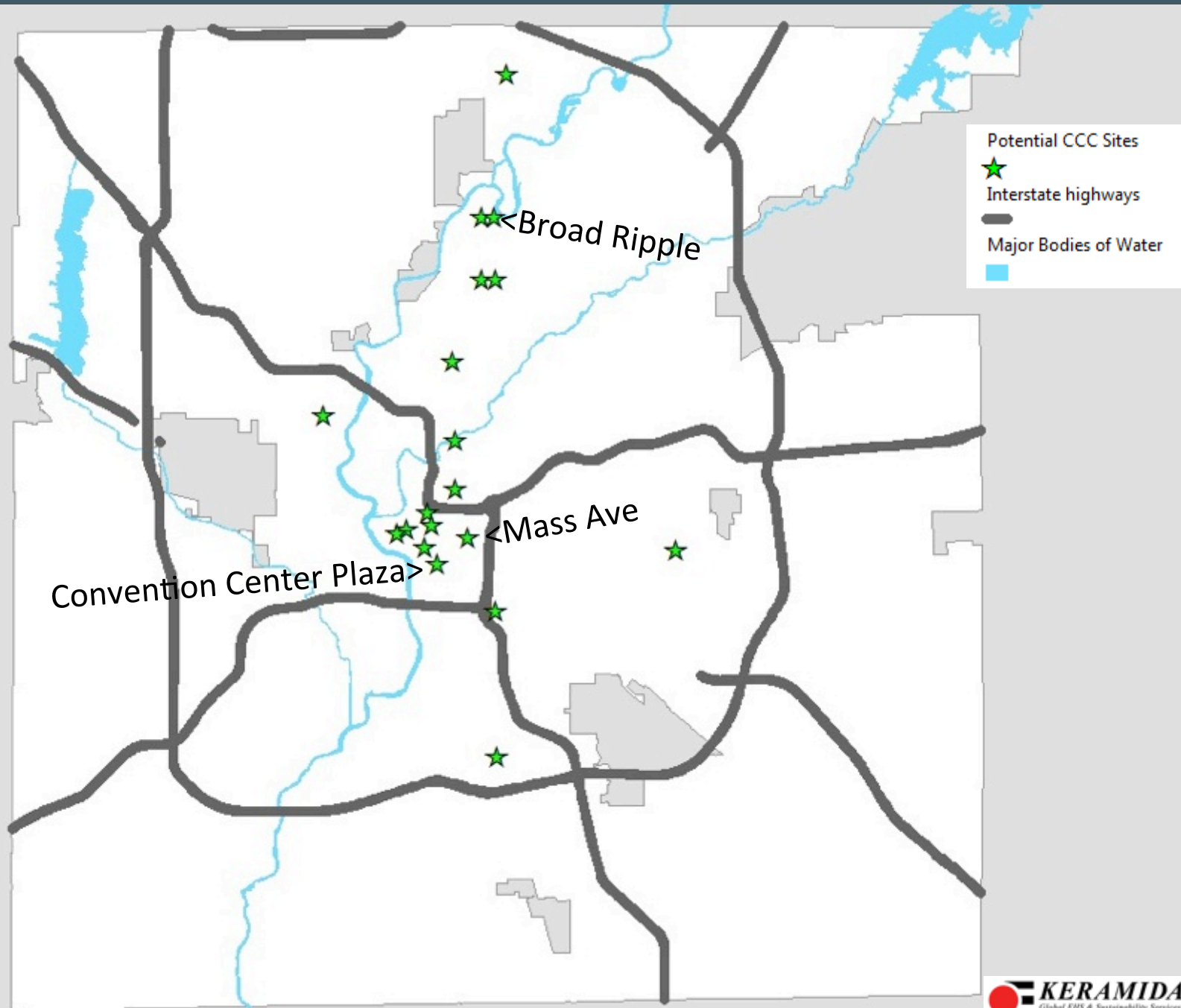
Convention Center Plaza

Convention Center Plaza

- 2 housing units/acre
- 247 jobs/acre
- 3rd highest CCC score: 53

CCC Boundaries
☐

Housing Units per Census Block
☐ 0 - 20
▨ 21 - 66
▨ 67 - 162
▨ 163 - 318
■ 319 - 741

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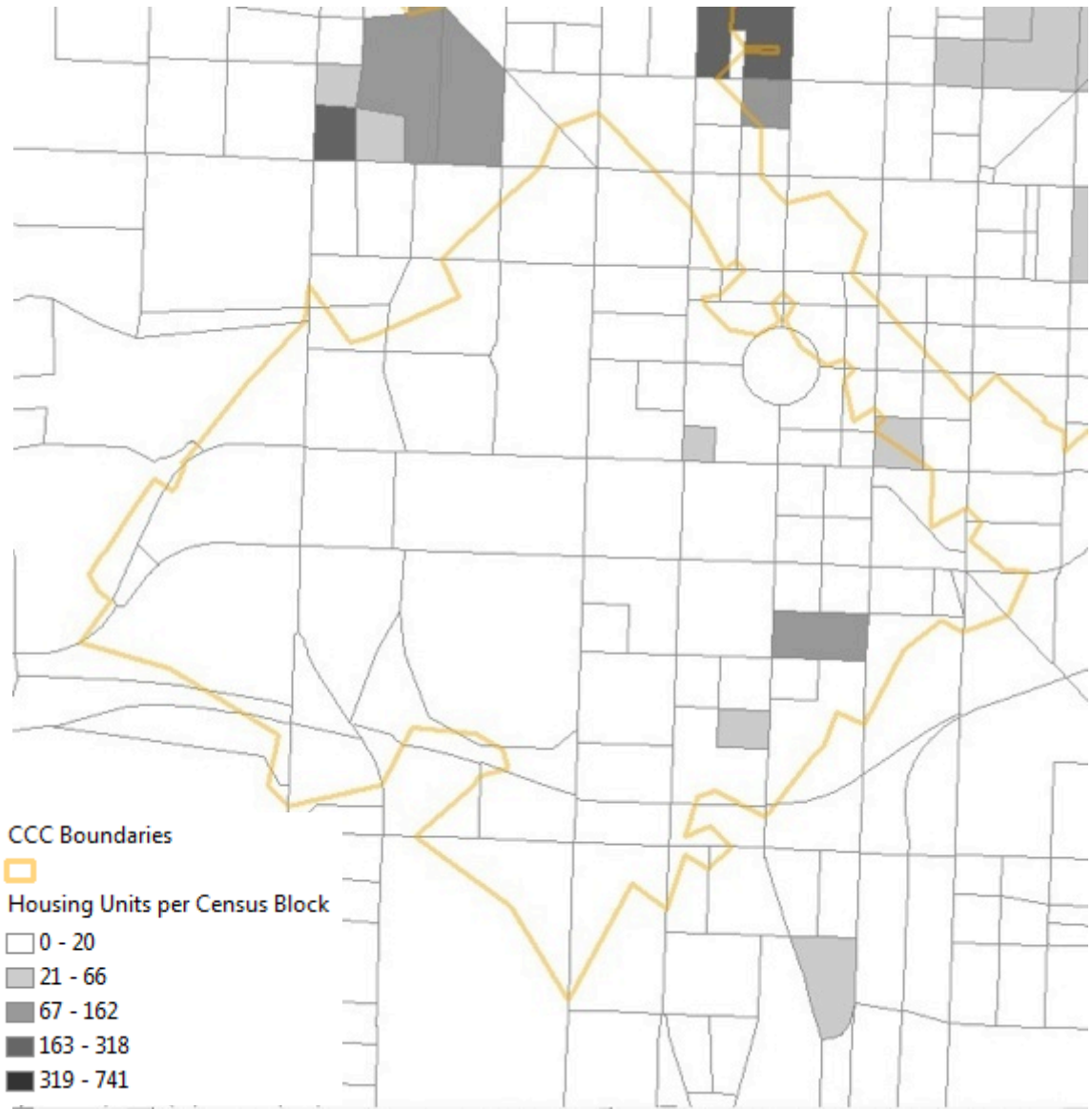
Convention Center Plaza

- No residential zoning
- Central Business District Zoning (Blue) coincides with CCC's goals in many ways.

CCP_zone
Zoning
- Commercial
- Central Business District
- Industrial
- Electrical Substation

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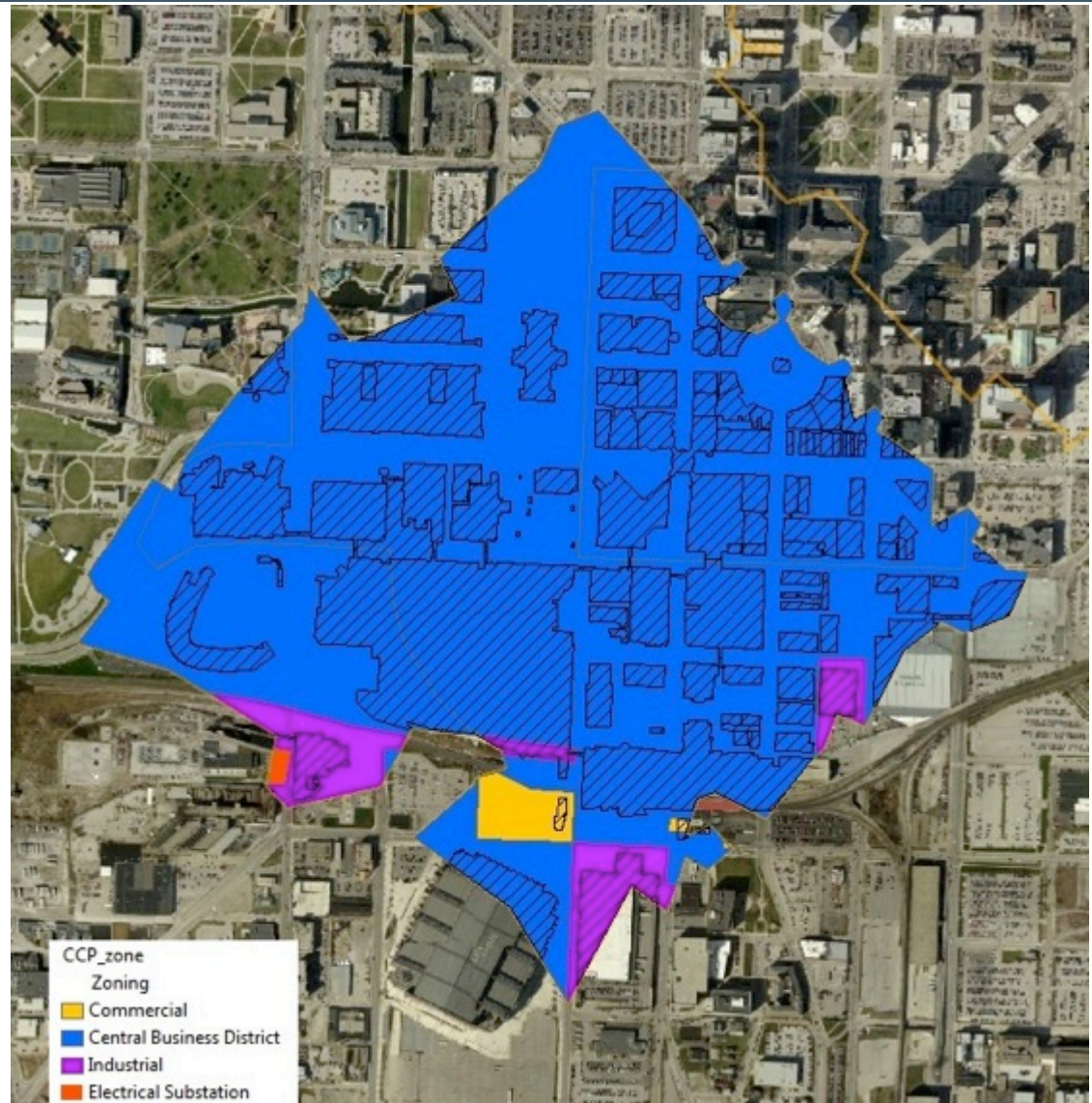
Convention Center Plaza

- Jobs per acre: 247
- highest potential points available (12)

CCC Boundaries

⬜

Jobs per census block
- ◇ 1 - 100
- 🟠 101 - 500
- 🔴 501 - 1000
- 🟣 1001 - 5000
- 🔵 >= 5001

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Convention Center Plaza

	value	points
Convention Center Plaza		
12 dwelling units per acre within a 1/4 mile walk distance of bus or streetcar stops	2	0
7 dwelling units per acre average within the rest of the CCC boundary	2	
at least 25 Jobs per acre	274	12
at least 7 diverse uses present (See diverse uses table in the PDF)	19	10
60 weekday transit trips per day	1387	14
40 weekend transit trips per day	693.5	
O1 TOTAL:		**36**
90% of roadways contain sidewalks on both sides	98%	3
100% of crosswalks are ADA accessible	34%	0
60% of block faces contain street trees at no more than 40-foot intervals		
70% of roadways are designed for a travel speed of no more than 25mph	94%	3
minimum intersection density of 90 intersections per sqare mile	160.9	6
O2 TOTAL:		**12**
80% of front building setbacks along primarily singe-family residential blocks <=25 ft from ROW	NA	0
80% of front building setbacks along primarily commercial frontage <= 10 ft from ROW	84%	5
40% of building faces are free from blank walls, garage, and driveway entrances		
O3 TOTAL:		**5**
10% of total residential units are affordable	0%	0
10% of new residential units are dedicated as subsidized affordable housing	N	0
some of the dedicated long-term affordable housing units are deeply subsidized or affordable	N	0
O4 TOTAL:		**0**
GRAND TOTAL		**53**

Broad Ripple

Broad Ripple

- Notable for its exclusion from the final 9 CCCs.
- Total CCC Score: **27**
- Bars, Independent boutiques, and restaurants
- Convergence of two popular active transportation paths (green areas)

Broad Ripple

Outcome 2: speed limits

- Throughout Indianapolis, the standard low speed limit is 30mph.
- Areas that have 25mph speed limits are uncommon

Speed Limit (mph)
— 15 - 25
— 26 - 40
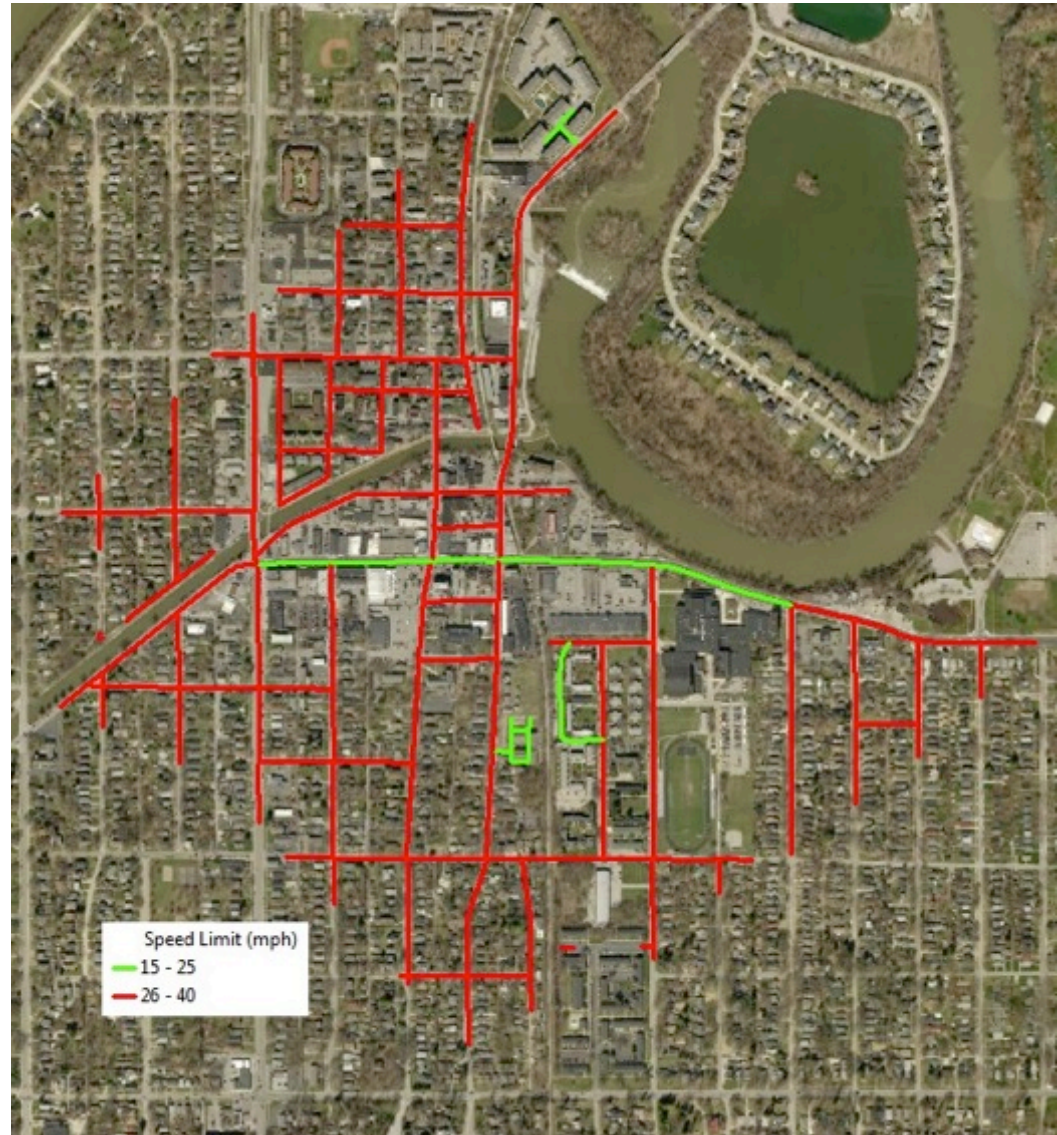
Broad Ripple

Outcome 3: building Setbacks

- Clear land use divide
- Zoning is designed to keep density low:
    - minimum open space requirements.
    - Setback requirements
    - Maximum heights

Zoning
- Commercial
- Residential
- Industrial
- Park
- Special Use

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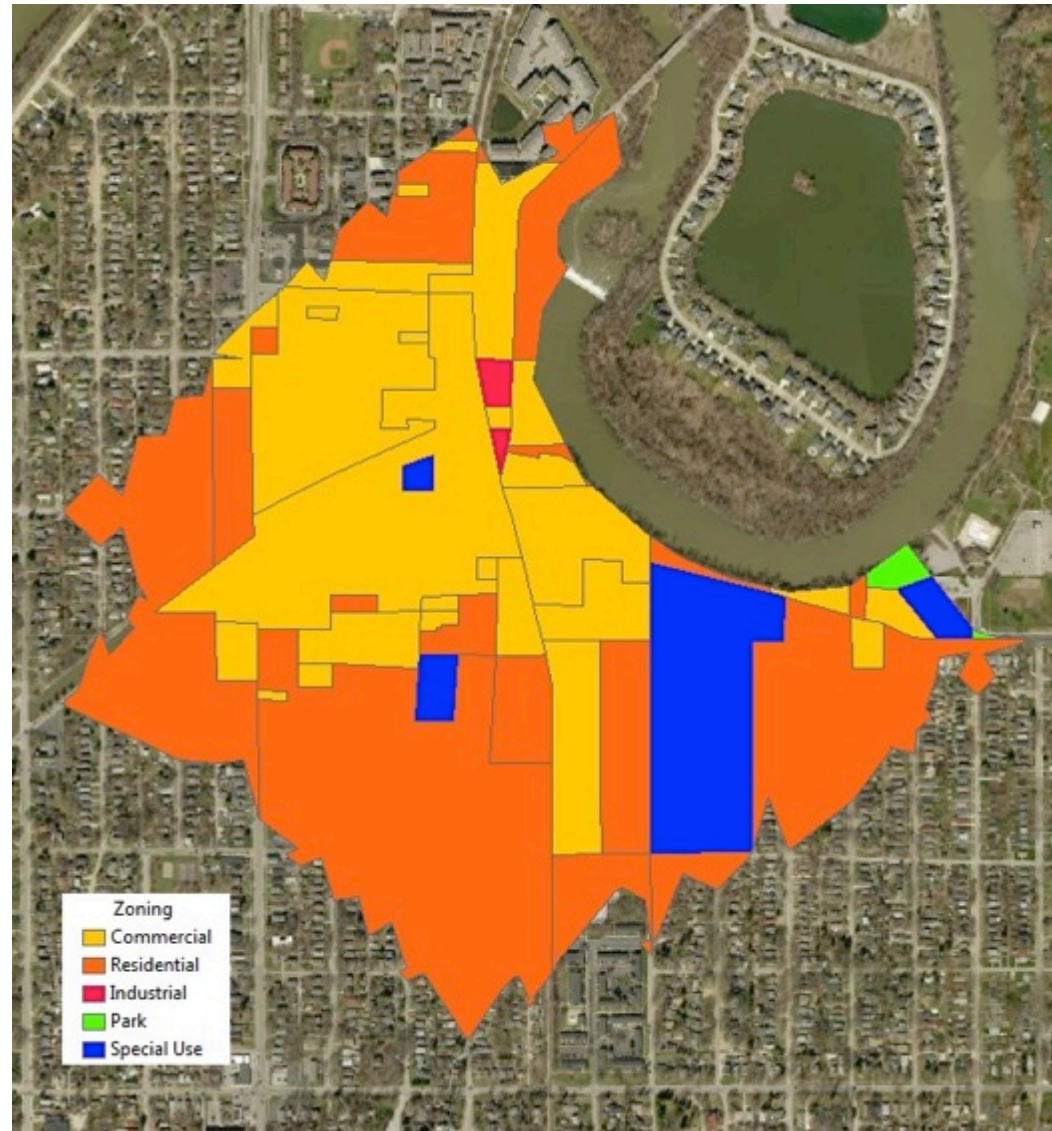
Broad Ripple

- Garages excluded from the analysis.
- **59%** of residential buildings had setbacks <=25ft
- **43%** of commercial buildings had setbacks <=10ft

Buildings within 25ft of ROW
- >25ft
- <=25ft

Buildings within 10ft of ROW
- >10ft
- <=10ft

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Broad Ripple

Broad Ripple

	value	points
12 dwelling units per acre within a 1/4 mile walk distance of bus or streetcar stops	11	0
7 dwelling units per acre average within the rest of the CCC boundary	11	
at least 25 Jobs per acre	19	0
at least 7 diverse uses present (See diverse uses table in the PDF)	20	10
60 weekday transit trips per day	105	6
40 weekend transit trips per day	79.5	
O1 TOTAL:		**16**
90% of roadways contain sidewalks on both sides	93%	3
100% of crosswalks are ADA accessible	72%	0
60% of block faces contain street trees at no more than 40-foot intervals		
70% of roadways are designed for a travel speed of no more than 25mph	8%	0
minimum intersection density of 90 intersections per sqare mile	164.0	6
O2 TOTAL:		**9**
80% of front building setbacks along primarily singe-family residential blocks <=25 ft from ROW	59%	0
80% of front building setbacks along primarily commercial frontage <= 10 ft from ROW	43%	0
40% of building faces are free from blank walls, garage, and driveway entrances		
O3 TOTAL:		**0**
10% of total residential units are affordable	0%	0
10% of new residential units are dedicated as subsidized affordable housing	N	0
some of the dedicated long-term affordable housing units are deeply subsidized or affordable	N	0
O4 TOTAL:		**0**
GRAND TOTAL		**25**

Massachusetts Avenue

Massachusetts Avenue

Outcome 4: Housing Affordability
- **16%** affordable housing
- **6%** new housing is affordable
- Indy's highest CCC score: **75**

IHA Apartments

Section8Housing

new housing units 2010-2012

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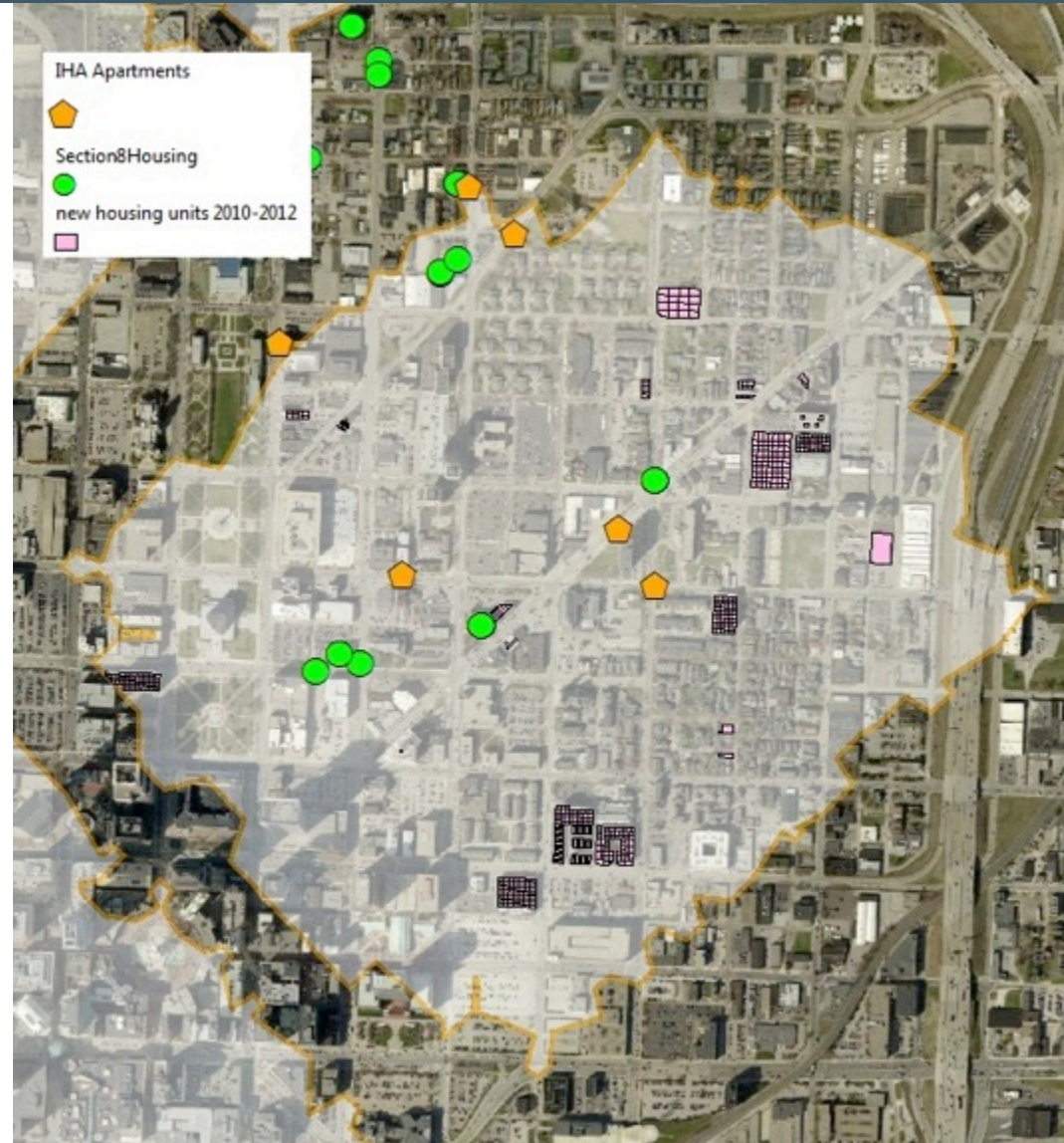
Massachusetts Avenue (cont.)

- Data Sources:
  - Indianapolis Housing Authority (IHA)
  - Indiana Housing and Community Development Authority (IHCDA)
  - Indiana HUD office
- Section8Housing (Green circles) layer did not include number of units, but did include phone numbers
- IHA Apartments layer (Orange pentagons) existed only as a printed list.

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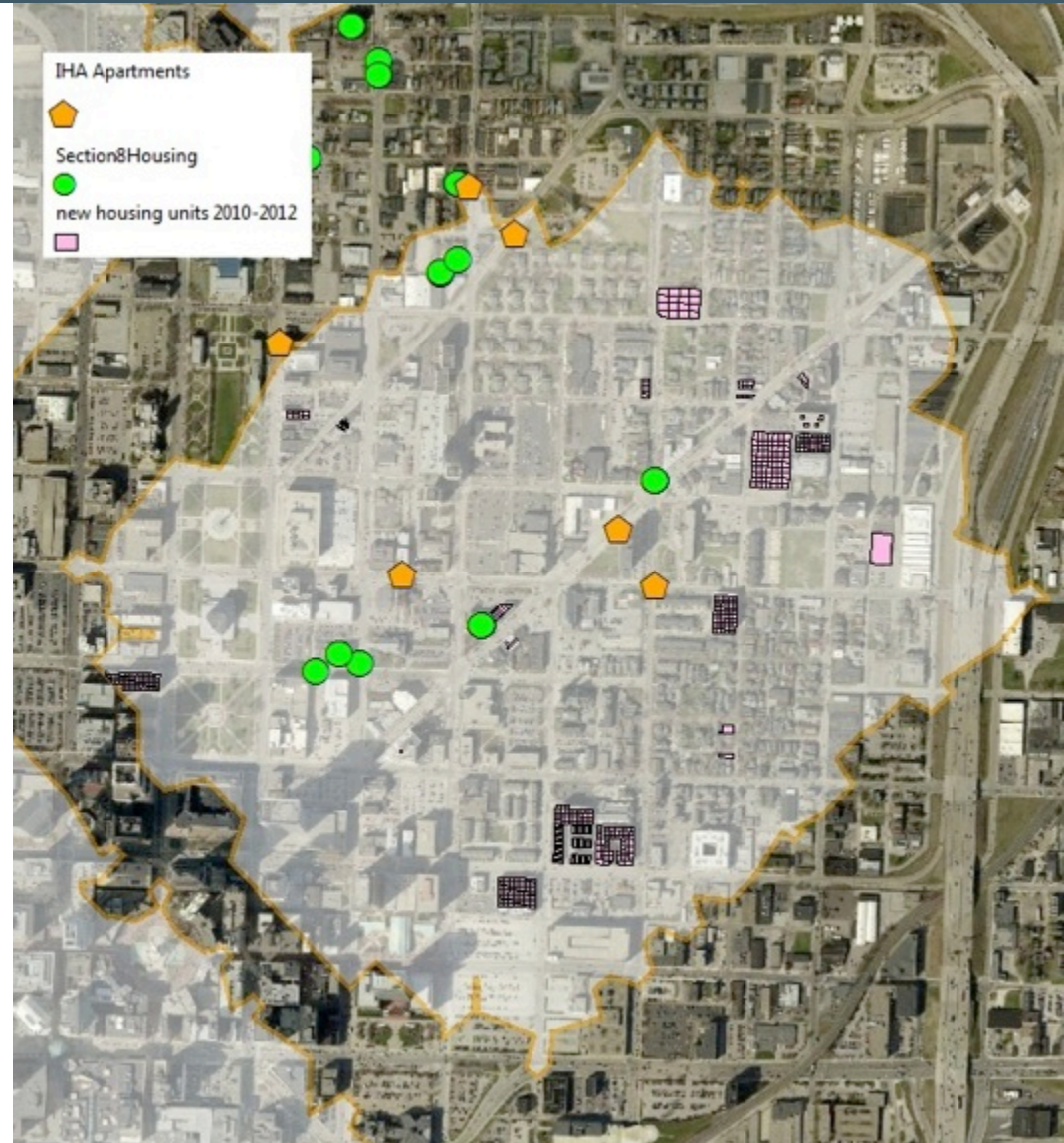
Massachusetts Avenue

Outcome 2: Street Trees

- Purple points from 2002 do not reflect true locations of trees
- Yellow and Orange points are all the trees planted by Keep Indianapolis Beautiful, Inc. (KIBI) since 2006.
- Green points were collected using a Trimble GeoXH 6000 in Summer 2013 over the course of 5 hours.

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Massachusetts Avenue

Massachusetts Avenue

	value	points
12 dwelling units per acre within a 1/4 mile walk distance of bus or streetcar stops	19	6
7 dwelling units per acre average within the rest of the CCC boundary	19	
at least 25 Jobs per acre	152	12
at least 7 diverse uses present (See diverse uses table in the PDF)	25	12
60 weekday transit trips per day	1387	14
40 weekend transit trips per day	682.5	
O1 TOTAL:		**44**
90% of roadways contain sidewalks on both sides	93%	3
100% of crosswalks are ADA accessible	52%	0
60% of block faces contain street trees at no more than 40-foot intervals		
70% of roadways are designed for a travel speed of no more than 25mph	40%	0
minimum intersection density of 90 intersections per sqare mile	233.3	6
O2 TOTAL:		**9**
80% of front building setbacks along primarily singe-family residential blocks <=25 ft from ROW	92%	5
80% of front building setbacks along primarily commercial frontage <= 10 ft from ROW	81%	5
40% of building faces are free from blank walls, garage, and driveway entrances		
O3 TOTAL:		**10**
10% of total residential units are affordable	16.16%	6
10% of new residential units are dedicated as subsidized affordable housing	6%	0
some of the dedicated long-term affordable housing units are deeply subsidized or affordable	Y	6
O4 TOTAL:		**12**
GRAND TOTAL		**75**

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CCC Summary Table

Metric	Fountain Square	1	SOBRO	2	Tarkington	3	Mass Ave	4	Kessler Park	5	Herron HS	6	Convention Center Plaza	7	Spruance Basin	8	St. Clair Place	9
12 dwelling units/acre	12	2	13	2	18	4	19	6	10	0	12	2	2	0	12	2	12.47	2
7 dwelling units/acre	11		13		15		19		8		12		2		11		12.47	
25 Jobs/acre	5	0	5	0	15	0	152	12	18	0	83	8	274	12	52	6	2.32	0
7+ diverse uses present	21	12	14	8	17	10	25	12	17	10	20	12	19	10	17	10	19	10
60 weekday trips/day	105	2	154	8	307	12	1387	14	471	14	524	14	1387	14	604	14	232	8
40 weekend trips /day	45		109.5		177.5		682.5		235.5		280		693.5		307		96	
Outcome 1 TOTAL:		**16**		**18**		**26**		**44**		**24**		**36**		**36**		**32**		**20**
sidewalks on both sides	95%	3	95%	3	98%	3	93%	3	91%	3	96%	3	98%	3	97%	3	99%	3
ADA accessible crosswalks	80%	0	45%	0	73%	0	52%	0	74%	0	84%	0	34%	0	62%	0	59%	0
trees at 40ft intervals																		
25mph speed limit	0%	0	2%	0	3%	0	40%	0	2%	0	1%	0	94%	3	12%	0	1%	0
intersection density	219.5	6	189.5	6	233.5	6	233.3	6	204.2	6	177.8	6	160.9	6	247.7	6	188.0	6
Outcome 2 TOTAL:		**9**		**9**		**9**		**9**		**9**		**9**		**12**		**9**		**9**
residential setback <=25ft	80%	5	59%	0	61%	0	92%	5	84%	5	88%	5	NA	0	32%	0	80%	5
commercial setback <=10ft	55%	0	50%	0	45%	0	81%	5	24%	0	46%	0	84%	5	60%	0	46%	0
free from blank walls etc.																		
Outcome 3 TOTAL:		**5**		**0**		**0**		**10**		**5**		**5**		**5**		**0**		**5**
10% affordable res. Units	65%	6	25%	6	58%	6	16.16%	6	30%	6	23%	6	0%	0	35%	6	90%	6
10% new res. is affordable	N	0	N	0	N	0	6%	0	N	0	N	0	N	0	N	0	N	0
some deeply affordable	Y	6	Y	6	Y	6	Y	6	Y	6	Y	6	N	0	Y	6	Y	6
Outcome 4 TOTAL:		**12**		**12**		**12**		**12**		**12**		**12**		**0**		**12**		**12**
GRAND TOTAL		**42**		**39**		**47**		**75**		**50**		**62**		**53**		**53**		**46**

CCC Summary

Label	CCC Name	Score
1	Fountain Square	42
2	SoBro	39
3	Tarkington Park	47
4	Massachusetts Avenue	75
5	Kessler Park	50
6	Herron High School	62
7	Convention Center Plaza	53
8	Spruance Basin	53
9	St. Clair Place	46

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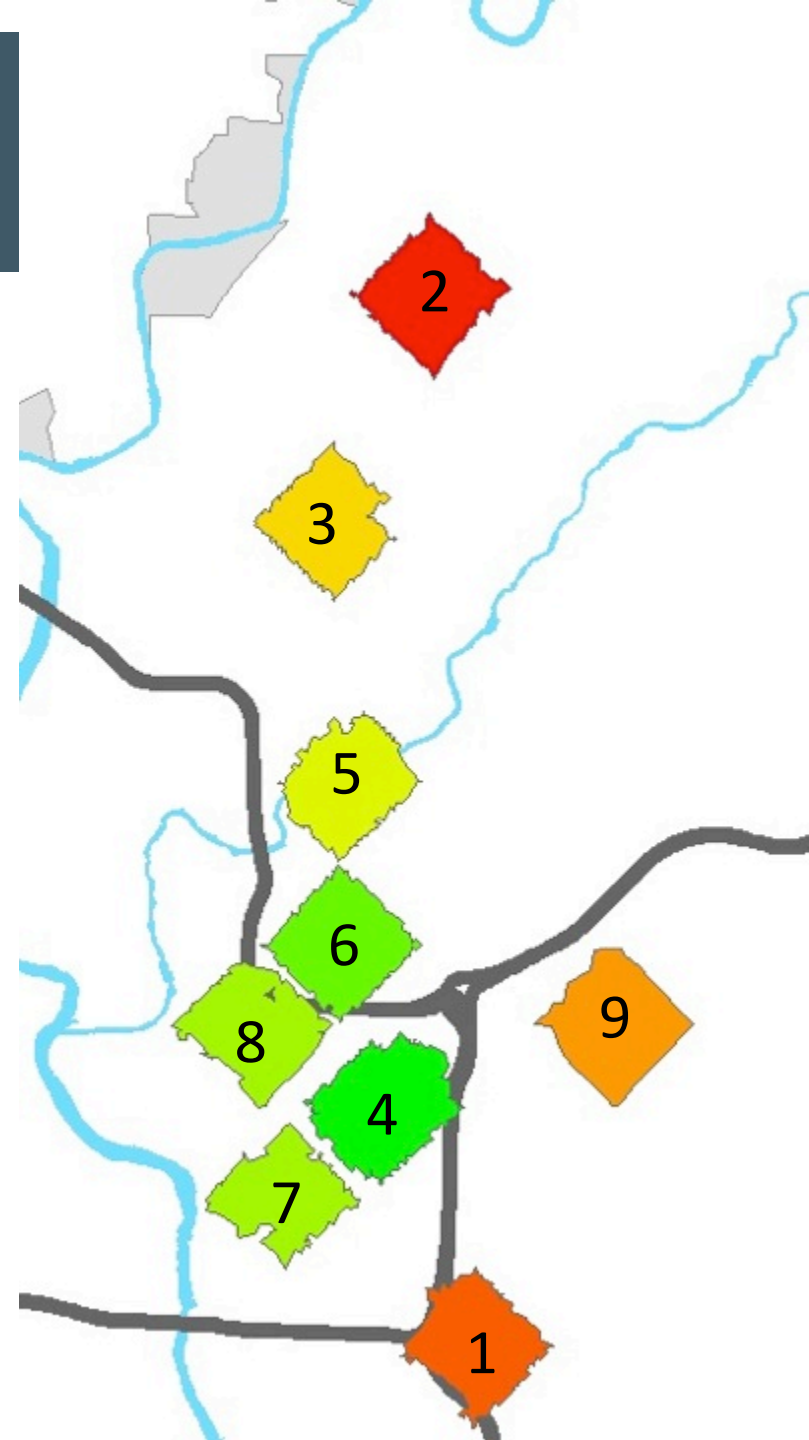
Conclusions

- GIS was tremendously helpful
  - Developed models to quickly calculate sidewalk coverage and setbacks.
  - Data availability is crucial, I worked closely with our client, the City of Indianapolis to get all the data and analyses necessary, with emphasis on the City's priorities.
- What can Indianapolis learn from this exercise?
  - Indy Rezone is an ongoing project to update the city's zoning code, much of which has been unchanged since the 1970s http://www.indyrezone.org
  - Velocity plan strives to improve downtown livability http://www.indyvelocity.com
  - Indy Connect plan to make vast improvements to our regional transit http://www.indyconnect.org
- Now that the procedure has been established, the analysis can be easily applied to other cities.

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Questions??

Thank You!
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