Dollars and $ense of Smart Growth – Add it up!

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Savings on infrastructure

38%

Savings on services

10%

Revenue generated

10x

Your Dollars and Policies at Work

Policy Implications

- Better land use and transportation planning
- Taxpayer fairness
- Establish as routine component of planning and development approvals

Economic Implications

- Better “asset” management
- Plan for growth and costs in efficient ways
- Do more with less, and more with more

The Issue

- Revenue side of fiscal impact has been identified – “Do the Math!”
- Local Government currently invests in necessary infrastructure and services – The Costs
- Yet we still don’t know how *density* and *location* of the built environment impacts revenues and costs – “Add it Up!”

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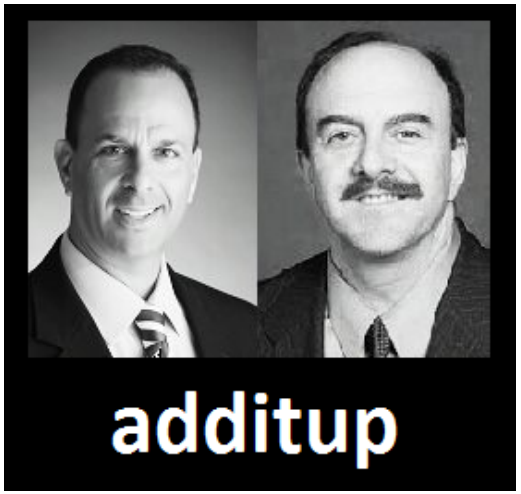

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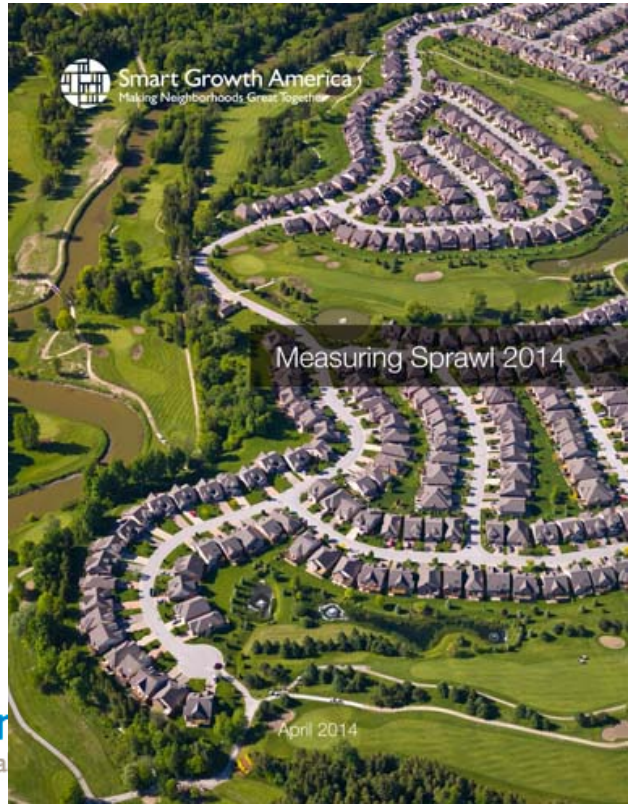
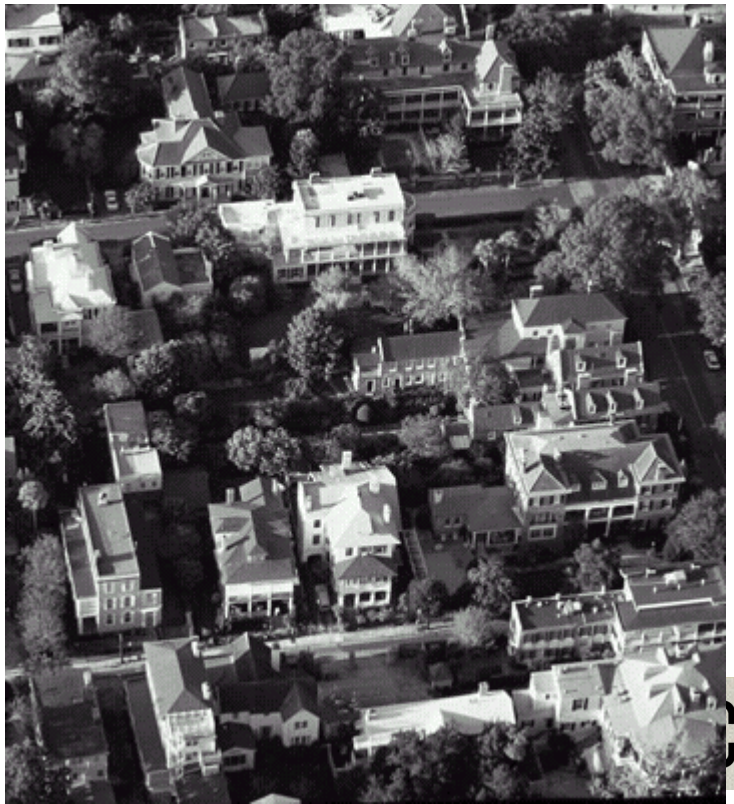
Our Hypothesis – Add It Up!

- Question: How do costs of infrastructure and services change where density and connectivity is higher or lower?
  - Hypothesis: Expenditures will be more efficient in denser, better connected areas.





What Variables to Add Up?

Services & Infrastructure
Fire
Police
Schools
Libraries
Hospitals
Parks
Waste
Roads
Stormwater
Sewer and Water

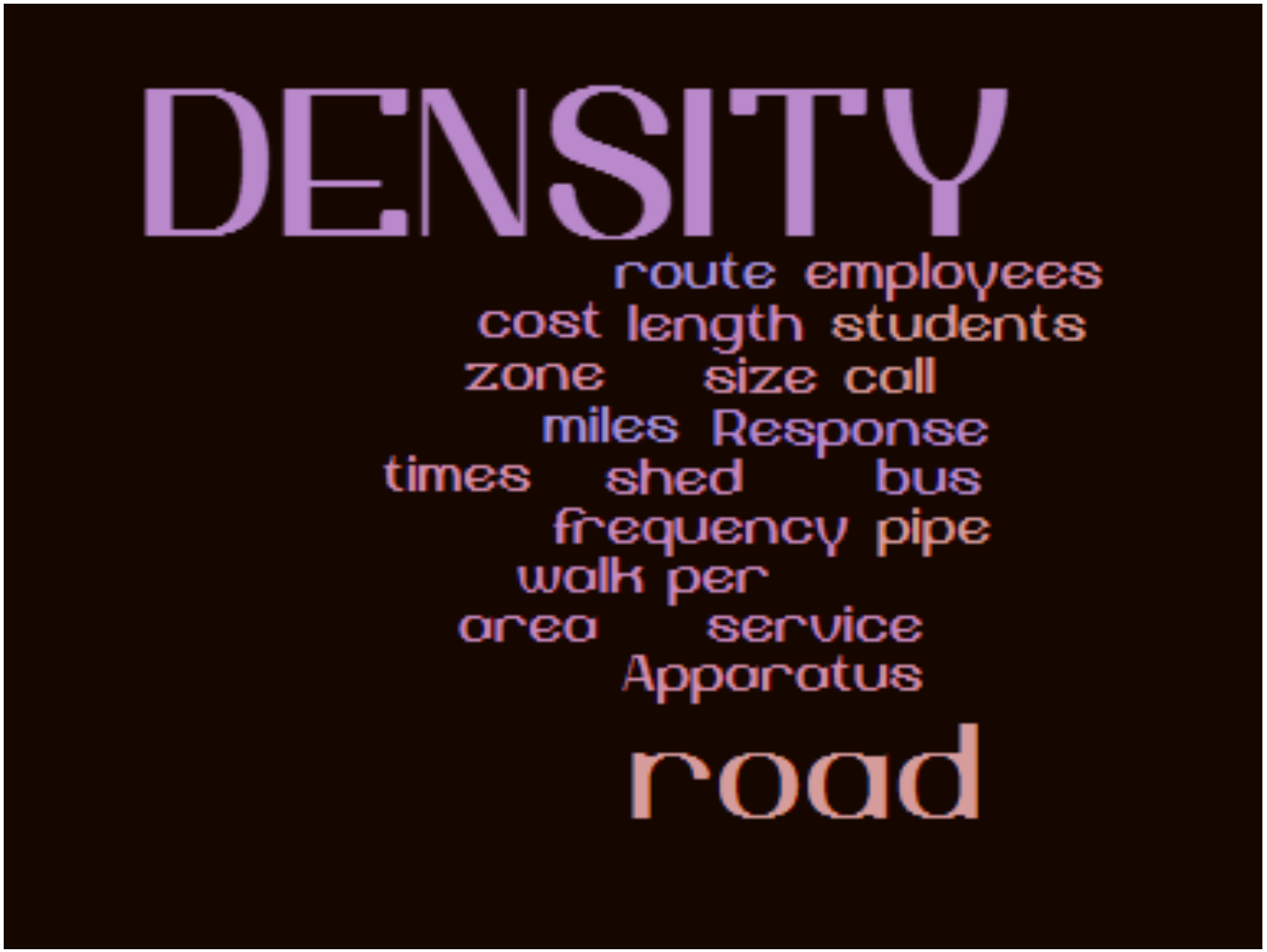
What Variables to Add Up?

Services & Infrastructure Dependent on Density, but…	
Fire	Yes
Police	Not Yet
Schools	Bus transportation
Libraries	No
Hospitals	No
Parks	No
Waste	Collection, not processing
Roads	Yes
Stormwater	Yes
Sewer and Water	Yes

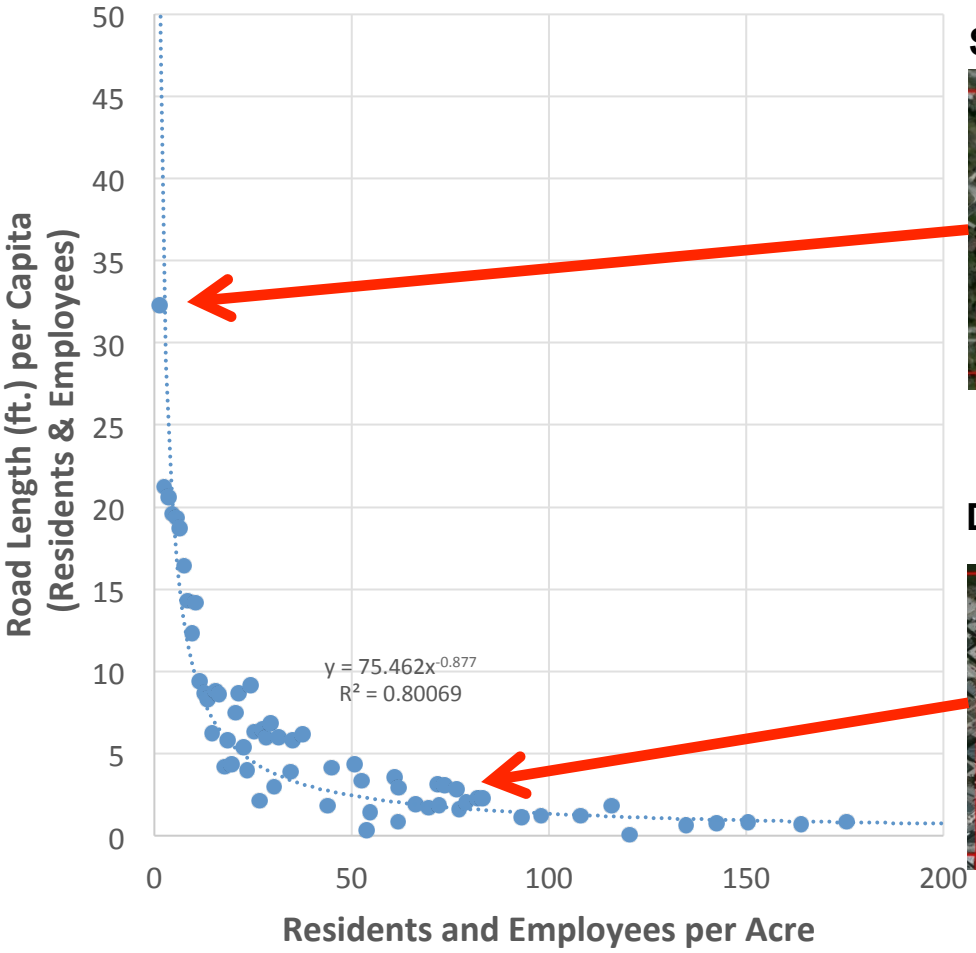
Where We Added it Up

Madison, Wisconsin	HUD
West Des Moines, Iowa	HUD
Dona Aña County, New Mexico	HUD/RCLCO
Nashville, Tennessee	RCLCO

How We Add Up


DENSITY
route employees
cost length students
zone size call
miles Response
times shed bus
frequency pipe
walk per
area service
Apparatus
road

Road Length and Area per Capita Decreases as Density Increases

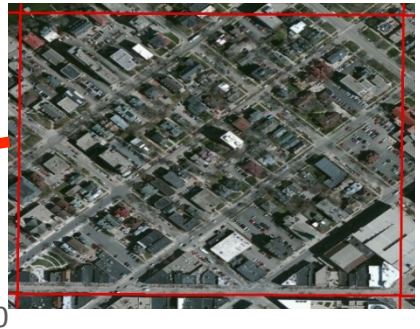


Samples from City of Madison

Suburban Residential

Residents: 178
Employees: 5
Total: 183
Total Res. & Emp Per Acre: 4.6
Total Road Length: 5,435
Road Length per Capita: 30 ft.

Downtown Urban



Residents: 2236
Employees: 633
Total: =2,869
Total Res. & Emp Per Acre: 71
Total Road Length: 8,941
Road Length per Capita: 3.1 ft.

NOTE: Chart shows road length only. Road area per capita has a similar relationship to density.

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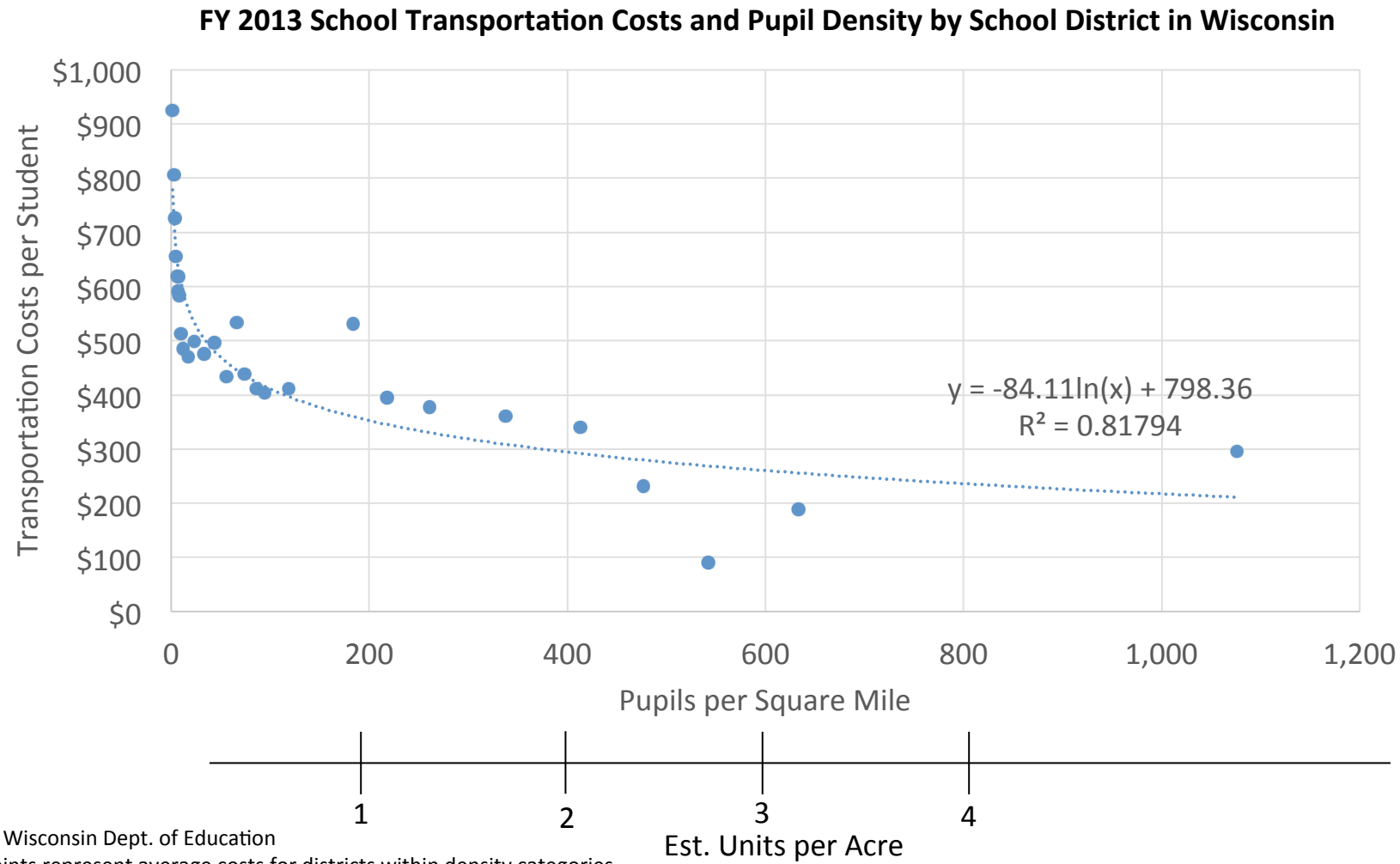
Per Pupil Transportation Costs Decline as Pupil Density Increases



SOURCE: Wisconsin Dept. of Education
NOTE: Points represent average costs for districts within density categories

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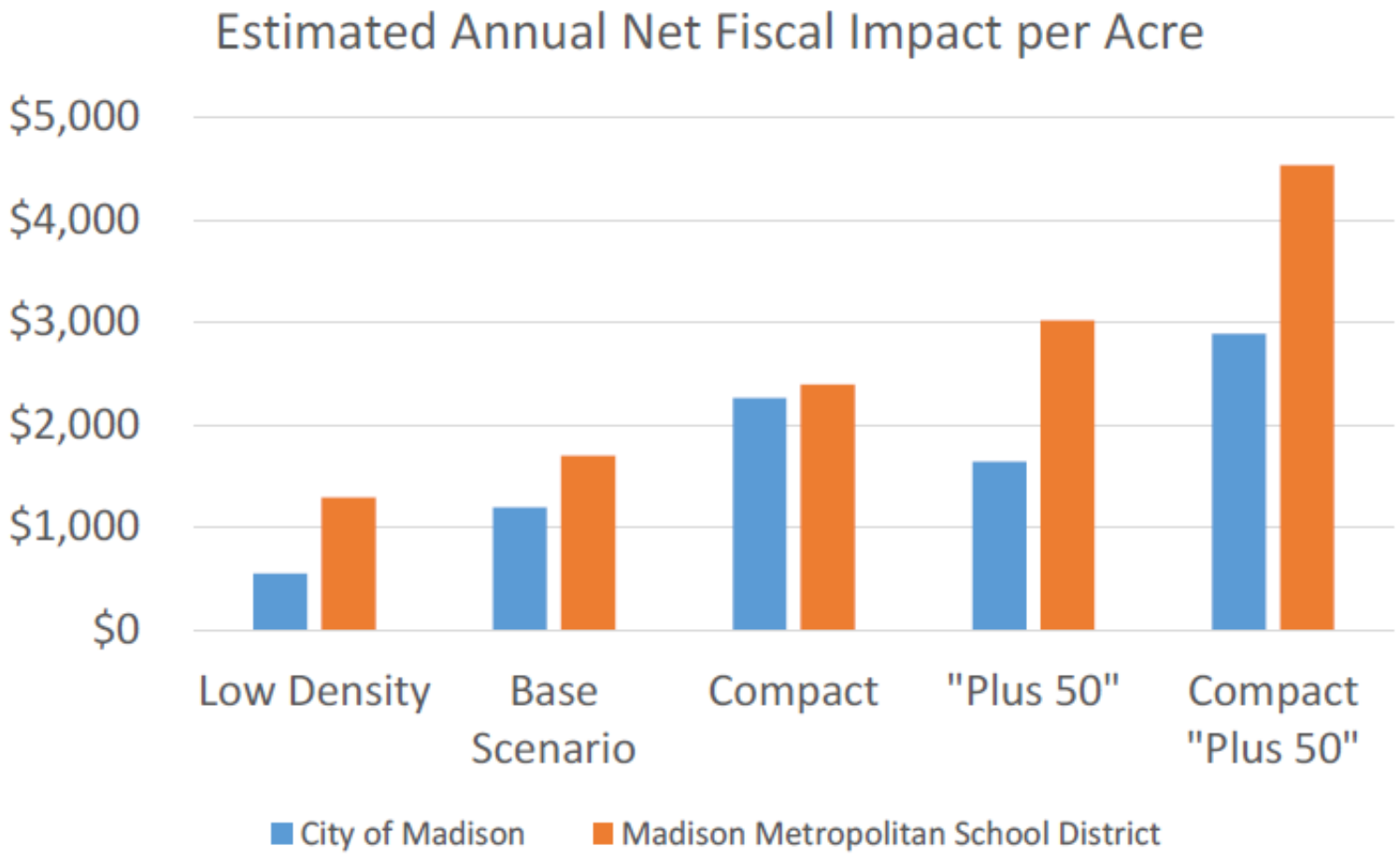
Madison – Preliminary Results



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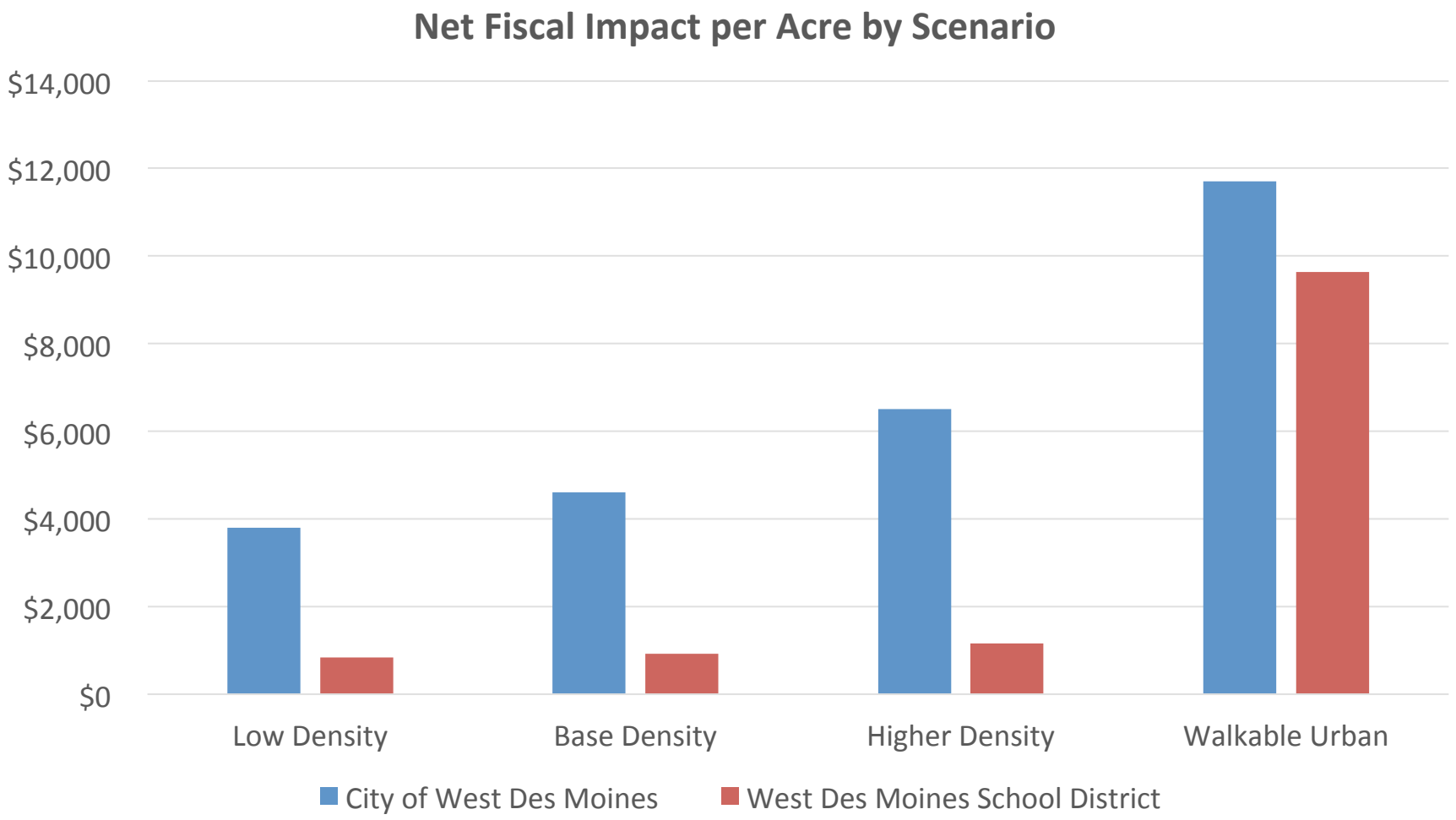
West Des Moines – Preliminary Results



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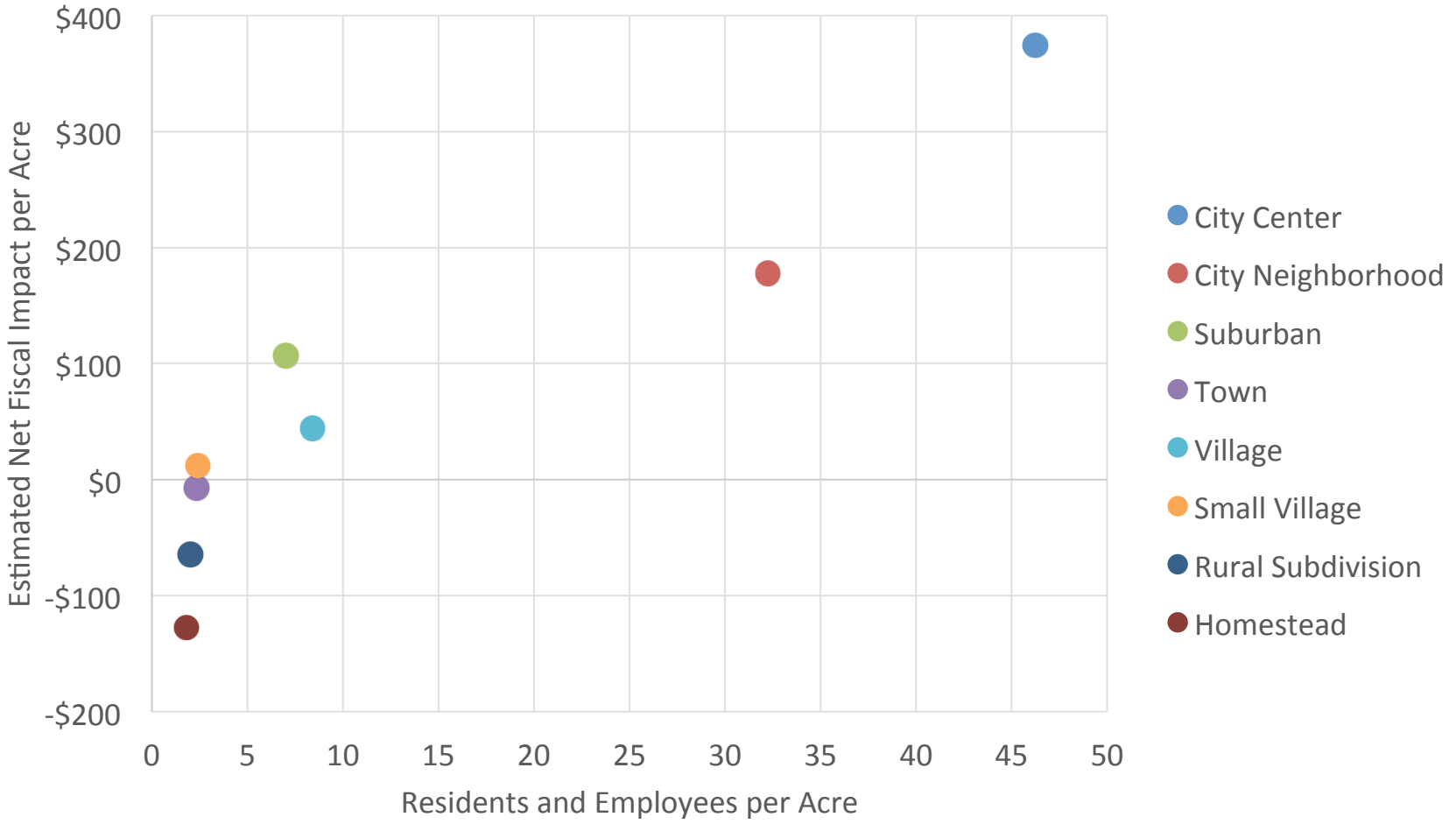
Doña Ana County Comprehensive Plan – Preliminary Results



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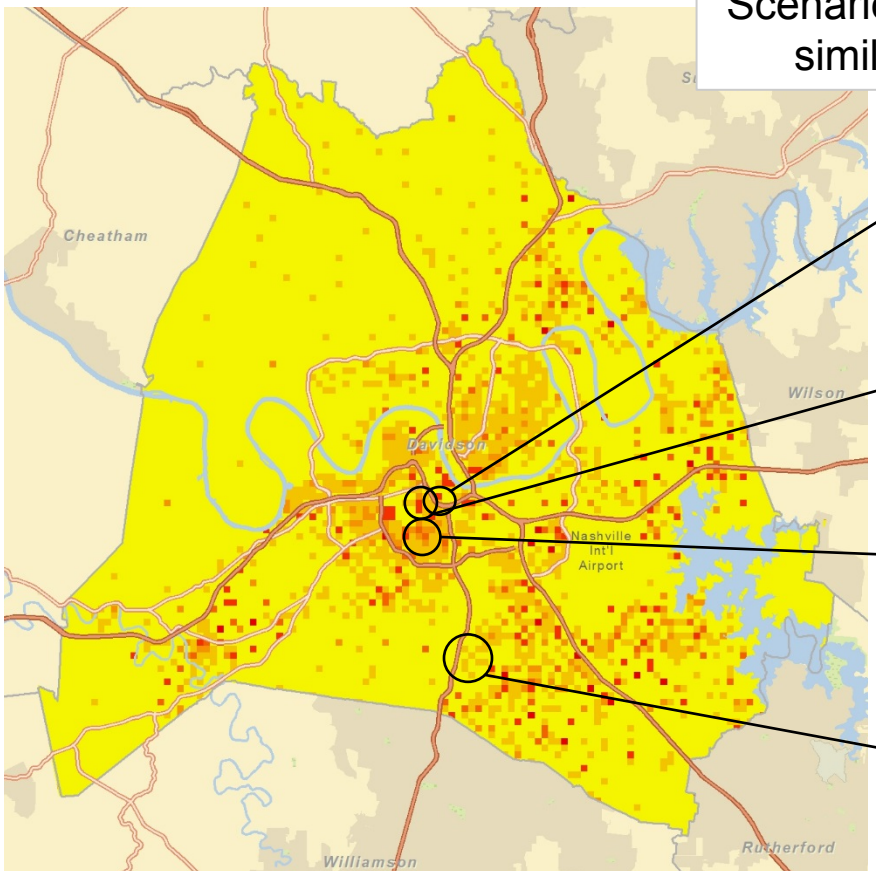
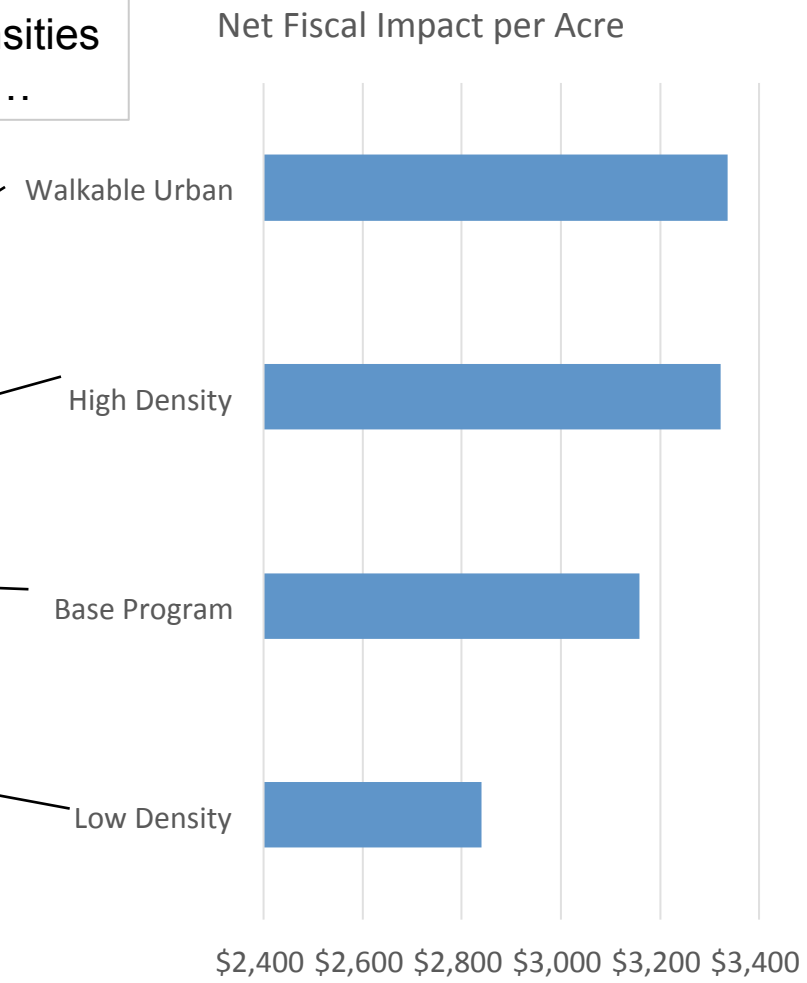
Nashville – Preliminary Results



Scenario densities similar to…



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What Did We Learn When Adding It Up?

- Preliminary results support the hypothesis
- However,
  - Order of magnitude varies greatly
  - Not enough samples for conclusive findings
  - Data collected is not organized for this level of analysis --

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communities are currently not in a position to know costs based on land use patterns

Challenges Adding Some Things Up

- Our model doesn't necessarily capture all relevant functions of local government (e.g., police, hospitals, libraries, parks . . .)
- Data limitations impede ability to fully deploy the model
- Need to look at variables in addition to density and transportation: Household income, crime, education, demographics, etc.

Next Math Lesson

- How can we create a system to better organize data?
- Better understand how certain cost/revenue allocations work at the local level
  - Resident/employee allocation, road usage, response time policy, etc.

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Would you like us to add up your community?

– ***See us after the session***

Add It Up

Thank you to:

Erin Talkington, RCLCO

Margaret Liddon, RCLCO

Patrick Lynch, Smart Growth America

~•~

Katherine Cornwell, Brian Grady (Madison)

Tom Hadden, Kara Tragesser (West Des Moines)

Daniel Hortert, Angela Roberson (Doña Ana)

Rick Bernhardt, Jennifer Higgs (Nashville)