From the Outskirts to Downtown:
Taxes, Land Use & Value in 2 Southwest NH Communities

A virtual presentation by
Joe Minicozzi AICP | Urban3
January 20, 2021 at 6:30 PM

Hosted by
Southwest Region Planning Commission
Keene | Peterborough

NHHFA.org/events
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TD Bank
Our thanks to all the communities that supported this study.
Value per acre map of Auckland, New Zealand

URBAN3

Economics of Land Use
DNA
Case Study: Economic MRI®

Asheville, North Carolina
In the 70’s and 80’s our downtown died.

Asheville’s de facto motto was:

“That will never work here - don’t even try.”
Public Interest Projects

- Salsa's & Zambras
- City Seeds
- URBAN3
- The Orange Peel
- 51 Biltmore
- Downtown benches
- The Mountain Xpress
- The Dogwood Fund
- Julian Price
- The Alternative Reading Room
- YWCA
- The Laughing Seed
- The Public Service Building
In God we trust; everyone else, bring data.

Mayor Michael Bloomberg
Asheville’s de facto motto was:

“That will never work here - don’t even try.”
Asheville CBD Taxable Value

- 1991: $104M
- 2000: $350M
- 2007: $552M
- 2010: $665M
- 2013: $648M

Renovation timeline:
- 1991-2000: $104M to $350M
- 2000-2007: $350M to $552M
- 2007-2010: $552M to $665M
- 2010-2013: $665M to $648M
DON’T TRUST THIS GROUP OF LYING POLITICIANS!

THE GREAT RIVER GRAB HAS BEGUN!
DON’T BE FOOLED BY THESE CHARLETANS!

THIS CORRUPT GROUP NEEDS TO RESIGN ALONG WITH THEIR AARRC RIVER COMMITTEE

HELP US FIGHT! AshevilleRiverGate.com
What is a City?
What is a City?
Incorporate (inˈkôrpəˌrät)
VERB
Constitute (a company, city, or other organization) as a legal corporation.

Source: Oxford Dictionary
“The United States is the largest corporation in the world.”

Joe Biden
United States Vice President
Late Show: 12/6/2016
Life is a game.
Money is how we keep score.
-Ted Turner
Life is a game.
Money is how we keep score.
-Ted Turner
Old Penneys

For 40 years this building remained vacant...... its tax value in 1991 was just over $300,000

Today the building is valued at over $11,000,000, an increase of over 3500% in 15 years.

The lot is less than 1/5 acre.
Asheville Walmart

Downtown

$11,000,000 Tax Value
Asheville Walmart

$20,000,000 Tax Value

Downtown

$11,000,000 Tax Value
Asheville Walmart

- Tax Value: $20,000,000
- Land Consumed (acres): 34

Downtown

- Tax Value: $11,000,000
- Land Consumed (acres): 0.2
Asheville Walmart

- Tax Value: $20,000,000
- Land Consumed (acres): 34
- Total Property Taxes/Acre: $6.5K

Downtown

- Tax Value: $11,000,000
- Land Consumed (acres): 0.2
- Total Property Taxes/Acre: $634K
<table>
<thead>
<tr>
<th>Property</th>
<th>Tax Value</th>
<th>Land Consumed (acres)</th>
<th>Total Property Taxes/Acre</th>
<th>City Sales Taxes/Acre</th>
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<tbody>
<tr>
<td>Asheville Walmart</td>
<td>$20,000,000</td>
<td>0.2</td>
<td>$6.5K</td>
<td>$48K</td>
</tr>
<tr>
<td>Downtown</td>
<td>$11,000,000</td>
<td></td>
<td>$634K</td>
<td>$84K</td>
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Asheville Walmart

- Land Consumed (acres): 0.2
- Total Property Taxes/Acre: $6.5K
- City Sales Taxes/Acre: $48K
- Residents/Acre: 34

Downtown

- Tax Value: $11,000,000
- Land Consumed (acres): 0
- Total Property Taxes/Acre: $84K
- City Sales Taxes/Acre: $634K
- Residents/Acre: 90
Asheville Walmart

- **Tax Value**: $20,000,000
- **Land Consumed (acres)**: 0.2
- **Total Property Taxes/Acre**: $6.5K
- **City Sales Taxes/Acre**: $48K
- **Residents/Acre**: 6
- **Jobs/Acre**: 90

Downtown

- **Tax Value**: $11,000,000
- **Total Property Taxes/Acre**: $634K
- **City Sales Taxes/Acre**: $84K
- **Residents/Acre**: 74
- **Jobs/Acre**: 90
How do you compare cars?

Ford F150 Lariat LTD
648 miles per tank

1955 BMW Isetta
245 miles per tank

Rolls-Royce Phantom Drophead
380 miles per tank

Bugatti Veyron SS
390 miles per tank

Toyota Prius
571 miles per tank
How do you compare cars?

1. Ford F150 Lariat LTD
   648 miles per tank

2. Toyota Prius
   571 miles per tank

3. Bugatti Veyron SS
   390 miles per tank

4. Rolls-Royce Phantom Drophead
   380 miles per tank

5. 1955 BMW Isetta
   245 miles per tank
How do you compare cars?

- **Toyota Prius**: 51/48 mpg
- **Bugatti Veyron SS**: 8/14 mpg
- **1955 BMW Isetta**: 50/70 mpg
- **Rolls-Royce Phantom Drophead**: 11/18 mpg
- **Ford F150 Lariat LTD**: 13/18 mpg
How do you compare cars?

1. 1955 BMW Isetta
   50/70 mpg

2. Toyota Prius
   51/48 mpg

3. Ford F150 Lariat LTD
   13/18 mpg

4. Rolls-Royce Phantom Drophead
   11/18 mpg

5. Bugatti Veyron SS
   8/14 mpg
County Property Taxes/Acre

Ratio Difference of 60 City Sample Set, in 21 States (+ a Province)

- Residential
- Commercial
- Mixed-Use

County S-F
City S-F
Walmart
Mall or strip
Mixed-Use (2 Story)
Mixed-Use (3 Story)
Mixed-Use (6 Story)
Fiber architecture of the brain. Measured from diffusion spectral imaging (DSI).

Human Connectome Project

DSI Studio

- up-down
- left-right
- anterior-posterior
Fiber architecture of the brain.
Measured from diffusion spectral imaging (DSI).

Human Connectome Project

Fiber architecture of the brain.
Measured from diffusion spectral imaging (DSI).

- blue: up-down
- red: left-right
- green: anterior-posterior
Value Productivity
Hennepin County, MN
Asheville, North Carolina
Biltmore Estate
Taxable Value per Acre
Buncombe County, NC

Value Per Acre ($)
- Not Taxable
- < 170,000
- 170,001 - 420,000
- 420,001 - 760,000
- 760,001 - 1.2M
- 1.2M - 2M
- 2M - 3.5M
- 3.5M - 6.2M
- 6.2M - 12M
- 12M - 20M
- > 20M
Taxable Value per Acre
Buncombe County, NC

Value Per Acre ($)
- Not Taxable
- < 170,000
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- 1.2M - 2M
- 2M - 3.5M
- 3.5M - 6.2M
- 6.2M - 12M
- 12M - 20M
- > 20M

Locations:
- Biltmore Estate
- Biltmore Park
- Black Mountain
WELL
ISN'T THAT SPATIAL
New Hampshire
New Hampshire Property Taxes FOR DUMMIES

A Reference for North Carolinians!
New Hampshire Property Taxes

\[ \text{Market Value} \times \text{Taxable Value \%} = \text{Taxable Value} \]

\[ \text{Taxable Value} \times \text{Tax Rate \%} = \text{Tax Bill} \]

This is how NC’s system works.
New Hampshire Property Taxes for Dummies

Assessed Value - Exemptions = Taxable Value

Taxable Value \times \text{Local Tax Rate} = \text{Tax Bill}

This is how NH’s system works.

*The city tax rate is established by the State
New Hampshire Property Taxes

For Dummies

Assessed Value - Exemptions = Taxable Value

Local Tax Rate \text{(Needed Budget - Non-property tax revenue)} / \text{City Assessed Value} = \text{Tax Bill}

This is how NH's system works.

*The city tax rate is established by the State.*
New Hampshire Property Taxes

For Dummies

Assessed Value = $600k

Dover Tax Rate

Commercial 2.332%

Residential 2.332%
New Hampshire Property Taxes

FOR DUMMIES

Assessed Value = $600k

Dover Tax Rate

Commercial $13,992

Residential $13,992
New Hampshire Property Taxes

FOR DUMMIES

Assessed Value = $600k

Commercial

Residential

Strafford County Tax Rate

0.13%
New Hampshire Property Taxes for Dummies

Assessed Value = $600k

- Commercial: $780
- Residential: $780

Strafford County Tax Rate

FOR DUMMIES
Value Per Acre
New Hampshire

Missing Data Accounts for 5.25% of Total Land Area

Source: New Hampshire Department of Revenue Administration 2019
Missing Data: the property is there and paying taxes but isn’t mapped. Significantly rural and undeveloped.
Total Taxable Area: 78%
Non Taxable Area: 22%

Source: New Hampshire Department of Revenue Administration 2019
Case Study: Economic MRI®
2020

Southwest Region
Case Study: Economic MRI®
2020

Keene
Value Per Acre
New Hampshire

Source: New Hampshire Department of Revenue Administration 2019
Source: New Hampshire Department of Revenue Administration 2019
Value Per Acre
Keene

Area

Taxable Value per Acre ($)
0
< 50,000
50,001 - 100,000
100,001 - 500,000
500,001 - 1,000,000
1,000,001 - 1,500,000
1,500,001 - 2,000,000
2,000,001 - 3,000,000
3,000,001 - 5,000,000
5,000,001 - 8,000,000
8,000,001 - 12,000,000
12,000,001 - 18,000,000
18,000,001 - 28,000,000
> 28,000,001
Missing Data

Source: New Hampshire Department of Revenue Administration 2019
Source: New Hampshire Department of Revenue Administration 2019
Source: New Hampshire Department of Revenue Administration 2019
Source: New Hampshire Department of Revenue Administration 2019
Value Per Acre
Downtown Keene

Source: New Hampshire Department of Revenue Administration 2019
Value Per Acre
Downtown Keene

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Value Per Acre
Downtown Keene

Source: New Hampshire Department of Revenue Administration 2019
Value Per Acre

Downtown Keene

<table>
<thead>
<tr>
<th>Area</th>
<th>Value Per Acre</th>
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</thead>
<tbody>
<tr>
<td>9</td>
<td>Missing Data</td>
</tr>
</tbody>
</table>

Source: New Hampshire Department of Revenue Administration 2019
Land Use Types

Local samples of buildings and development types
Keene Examples
Land Use Productivity

Single-family
Avg. VPA: $0.43 M

Source: New Hampshire Department of Revenue Administration 2019
Keene Examples
Land Use Productivity

Single-family
Avg. VPA: $0.43 M

Multi-family
Avg. VPA: $2.3 M

Source: New Hampshire Department of Revenue Administration 2019

Avg. VPA: $103,944
Keene Examples
Land Use Productivity

- Single-family Avg. VPA: $0.43 M
- Multi-family Avg. VPA: $2.3 M
- Commercial Avg. VPA: $0.95 M

Source: New Hampshire Department of Revenue Administration 2019
Keene Examples
Land Use Productivity

Source: New Hampshire Department of Revenue Administration 2019
Keene Examples
Land Use Productivity

- Single-family: Avg. VPA: $0.43 M
- Multi-family: Avg. VPA: $2.3 M
- Mixed-use: VPA: $8.1
- Commercial: VPA: $0.95 M
- Peak VPA: $14 M

Source: New Hampshire Department of Revenue Administration 2019
Keene Examples
Land Use Productivity

- Single-family
  Avg. VPA: $0.43 M

- Commercial
  VPA: $0.95 M

- Multi-family
  Avg. VPA: $2.3 M

- Peak VPA
  VPA: $14 M

- Mixed-use
  VPA: $8.1 M
Keene Profile
Land Use Productivity

Source: New Hampshire Department of Revenue Administration 2019

*Not Perfectly to Scale
Keene Profile
Land Use Productivity

Source: New Hampshire Department of Revenue Administration 2019

*Not Perfectly to Scale
Keene Profile
Land Use Productivity

Source: New Hampshire Department of Revenue Administration 2019

*Not Perfectly to Scale

- Multi-family Avg. VPA: $2.3 M
- Commercial VPA: $0.95 M
- Single-family Avg. VPA: $0.43 M
- City Avg. VPA: $0.1 M
Source: New Hampshire Department of Revenue Administration 2019

Keene Profile
Land Use Productivity

Mixed-use VPA
$8.1 M

Multi-family Avg. VPA
$2.3 M

Commercial VPA
$0.95 M

Single-family Avg. VPA
$0.43 M

City Avg. VPA
$0.1 M

*Not Perfectly to Scale
Keene Profile
Land Use Productivity

Peak VPA
$14 M

Mixed-use VPA
$8.1 M

Multi-family Avg. VPA
$2.3 M

Commercial VPA
$0.95 M

Single-family Avg. VPA
$0.43 M

City Avg. VPA
$0.1 M

Source: New Hampshire Department of Revenue Administration 2019

*Not Perfectly to Scale
Case Study: Economic MRI®
2020

Peterborough
Total Value
Peterborough

Source: New Hampshire Department of Revenue Administration 2019
Value Per Acre
Peterborough

Source: New Hampshire Department of Revenue Administration 2019
Value Per Acre
New Hampshire

Source: New Hampshire Department of Revenue Administration 2019
Value Per Acre
New Hampshire

1:2.4

Source: New Hampshire Department of Revenue Administration 2019
Value Per Acre
Peterborough

Taxable Value per Acre ($)

Source: New Hampshire Department of Revenue Administration 2019
Value Per Acre
Downtown Peterborough

Source: New Hampshire Department of Revenue Administration 2019
Source: New Hampshire Department of Revenue Administration 2019
1:32

Value Per Acre
Downtown Peterborough

Area

DTown
City

Value

Source: New Hampshire Department of Revenue Administration 2019
Value Per Acre
Downtown Peterborough

Source: New Hampshire Department of Revenue Administration 2019
Value Per Acre
Downtown Peterborough

Area
- DTown
- County

Taxable Value per Acre ($)
- $0
- $50,000
- $50,001 - $100,000
- $100,001 - $500,000
- $500,001 - $1,000,000
- $1,000,001 - $1,500,000
- $1,500,001 - $2,000,000
- $2,000,001 - $3,000,000
- $3,000,001 - $5,000,000
- $5,000,001 - $8,000,000
- $8,000,001 - $12,000,000
- $12,000,001 - $18,000,000
- $18,000,001 - $28,000,000
- $>28,000,000
- Missing Data

Source: New Hampshire Department of Revenue Administration 2019
Source: New Hampshire Department of Revenue Administration 2019
Source: New Hampshire Department of Revenue Administration 2019

Total Area

- Taxable: 87%
- Nontaxable: 13%

Taxable Property
- No Data
- Nontaxable
- Taxable

MacDowell Reservoir
Land Use Types

Local samples of buildings and development types
Peterborough Examples
Land Use Productivity

Avg. VPA: $38,904

Source: New Hampshire Department of Revenue Administration 2019
Peterborough Examples
Land Use Productivity

Avg. VPA: $38,904

Single-family
Avg. VPA: $0.17 M

Multi-family
Avg. VPA: $0.34 M

Source: New Hampshire Department of Revenue Administration 2019
Peterborough Examples
Land Use Productivity

Commercial
VPA: $0.94 M

Multi-family
Avg. VPA: $0.34 M

Single-family
Avg. VPA: $0.17 M

Avg. VPA: $38,904

Source: New Hampshire Department of Revenue Administration 2019
Peterborough Examples
Land Use Productivity

- Single-family Avg. VPA: $0.17 M
- Multi-family Avg. VPA: $0.34 M
- Commercial Avg. VPA: $0.94 M
- Mixed-use VPA: $4.6

Source: New Hampshire Department of Revenue Administration 2019

Avg. VPA: $38,904
Peterborough Examples
Land Use Productivity

Avg. VPA: $38,904

Single-family
Avg. VPA: $0.17 M

Multi-family
Avg. VPA: $0.34 M

Commercial
VPA: $0.94 M

Peak VPA
VPA: $12.2 M

Mixed-use
VPA: $4.6 M

Source: New Hampshire Department of Revenue Administration 2019
Peterborough Examples
Land Use Productivity

- Commercial VPA: $0.94 M
- Mixed-use VPA: $4.6
- Peak VPA VPA: $12.2 M
- Multi-family Avg. VPA: $0.34 M
- Single-family Avg. VPA: $0.17 M
Productivity

Geospatial Analysis
Peterborough Profile
Land Use Productivity

Source: New Hampshire Department of Revenue Administration 2019

*Not Perfectly to Scale
Peterborough Profile
Land Use Productivity

City Avg. VPA
$0.04 M

Source: New Hampshire Department of Revenue Administration 2019
*Not Perfectly to Scale
Peterborough Profile
Land Use Productivity

Source: New Hampshire Department of Revenue Administration 2019

Single-family Avg. VPA
$0.17 M

City Avg. VPA
$0.04 M

*Not Perfectly to Scale
Peterborough Profile
Land Use Productivity

Source: New Hampshire Department of Revenue Administration 2019

Multi-family Avg. VPA
$0.34 M

Single-family Avg. VPA
$0.17 M

City Avg. VPA
$0.04 M

*Not Perfectly to Scale
### Peterborough Profile

#### Land Use Productivity

<table>
<thead>
<tr>
<th>Type</th>
<th>VPA</th>
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<tr>
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<td>$0.34 M</td>
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*Source: New Hampshire Department of Revenue Administration 2019*
Peterborough Profile
Land Use Productivity

Source: New Hampshire Department of Revenue Administration 2019

*Not Perfectly to Scale
Peak VPA
$12.2 M

Mixed-use VPA
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Multi-family Avg. VPA
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Single-family Avg. VPA
$0.17 M

City Avg. VPA
$0.04 M

Source: New Hampshire Department of Revenue Administration 2019

*Not Perfectly to Scale
Comparing Communities

15 municipalities from across New Hampshire
Source: New Hampshire Department of Revenue Administration 2019
Source: New Hampshire Department of Revenue Administration 2019
Source: New Hampshire Department of Revenue Administration 2019
Comparisons
Density

Source: New Hampshire Department of Revenue Administration 2019
Comparisons
Taxable & Non-Taxable

Source: New Hampshire Department of Revenue Administration 2019
Comparisons
Taxable & Non-Taxable

Source: New Hampshire Department of Revenue Administration 2019
Comparisons
Taxable & Non-Taxable

Source: New Hampshire Department of Revenue Administration 2019
Comparisons
Average Value/Acre

Source: New Hampshire Department of Revenue Administration 2019
Peer Groups
Population

<table>
<thead>
<tr>
<th>Location</th>
<th>Avg. Pop</th>
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<tbody>
<tr>
<td>Peterborough</td>
<td>10,238</td>
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<tr>
<td>Berlin</td>
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<tr>
<td>Hanover</td>
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<td>Claremont</td>
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Comparisons
Average Value/Acre

Source: New Hampshire Department of Revenue Administration 2019
Source: New Hampshire Department of Revenue Administration 2019
Comparisons
Average Value/Acre

Same Density as Keene

Source: New Hampshire Department of Revenue Administration 2019
Comparisons
Average Value/Acre

Source: New Hampshire Department of Revenue Administration 2019
Comparisons
Downtown to City Ratio

Source: New Hampshire Department of Revenue Administration 2019
Comparisons
Density : Value

Source: New Hampshire Department of Revenue Administration 2019
Comparisons
Density: Value

Source: New Hampshire Department of Revenue Administration 2019
County Property Taxes/Acre

Ratio Difference of 60 City Sample Set, in 21 States (+ a Province)

- Residential
- Commercial
- Mixed-Use

- County S-F
- City S-F
- Walmart
- Mall or strip
- Mixed-Use (2 Story)
- Mixed-Use (3 Story)
- Mixed-Use (6 Story)
Property Value/Acre

Ratio Difference of New Hampshire Sample Set

- Residential
- Commercial
- Mixed-Use

City S-F
Commercial Box
City M-F
Mixed-Use (Average)
Mixed-Use (Peak Value/Acre)
Peer Clusters

Similar characteristics of places & learning from each other.
## Peer Groups

### Southwest Region

Source: New Hampshire Department of Revenue Administration 2019

<table>
<thead>
<tr>
<th></th>
<th>Keene</th>
<th>Peterborough</th>
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<tbody>
<tr>
<td><strong>Population</strong></td>
<td>23,056</td>
<td>6,284</td>
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<tr>
<td><strong>DTN. Ratio</strong></td>
<td>1:20</td>
<td>1:32</td>
</tr>
<tr>
<td><strong>Avg. VPA</strong></td>
<td>$103,944</td>
<td>$38,904</td>
</tr>
<tr>
<td><strong>Peak VPA</strong></td>
<td>$14,400,504</td>
<td>$12,205,874</td>
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</table>
### Peer Groups

**Southwest Region**

*Source: New Hampshire Department of Revenue Administration 2019*

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<th></th>
<th>Keene</th>
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<tbody>
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<td>23,056</td>
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**Taxable Value per Acre ($)**

- < 50,000
- 50,001 - 100,000
- 100,001 - 500,000
- 500,001 - 1,000,000
- 1,000,001 - 1,500,000
- 1,500,001 - 2,000,000
- 2,000,001 - 3,000,000
- 3,000,001 - 5,000,000
- 5,000,001 - 7,000,000
- 7,000,001 - 10,000,000
- 10,000,001 - 12,000,000
- 12,000,001 - 16,000,000
- 16,000,001 - 20,000,000
- + 20,000,001
- Missing Data
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Source: New Hampshire Department of Revenue Administration 2019
## Peer Groups

### Southwest Region

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- 100,001 - 150,000
- 150,001 - 200,000
- 200,001 - 300,000
- 300,001 - 400,000
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### Peer Groups

#### Southwest Region

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- 20,000,001 - 25,000,000
- > 25,000,000
- Missing Data

**Map:**

- **Legend:** The map uses a color scale to represent different taxable values per acre. Each color band corresponds to a range of values as described in the legend.
- **Annotations:** Key geographic features and data points are likely indicated on the map, with colors and symbols correlating to taxable values.

*Note: The map provides a visual representation of taxable properties, with colors denoting varying levels of taxable value per acre. This aids in understanding regional distribution and value assessment.*
Peer Groups

Academic Town

<table>
<thead>
<tr>
<th></th>
<th>Hanover</th>
<th>Keene</th>
<th>Exeter</th>
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<tbody>
<tr>
<td>Population</td>
<td>11,500</td>
<td>23,056</td>
<td>14,306</td>
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<tr>
<td>Non Tax %</td>
<td>11%</td>
<td>16%</td>
<td>32%</td>
</tr>
<tr>
<td>Avg. VPA</td>
<td>$100,083</td>
<td>$103,944</td>
<td>$197,142</td>
</tr>
<tr>
<td>Peak VPA</td>
<td>$37,827,184</td>
<td>$14,050,950</td>
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**Academic Town**

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1:20 Downtown

1:78 Downtown

1:9 Downtown
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<td>Hudson</td>
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<td>Claremont</td>
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## Peer Groups

**Downtown Focus**

Source: New Hampshire Department of Revenue Administration 2019

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### Peer Groups

#### Large Cities

- **Concord**
  - Population: 43,412
  - Avg. VPA: $153,833
  - Peak VPA: $45,923,043

- **Manchester**
  - Population: 112,525
  - Avg. VPA: $687,321
  - Peak VPA: $67,720,654

- **Nashua**
  - Population: 89,246
  - Avg. VPA: $539,622
  - Peak VPA: $12,915,100

*Source: New Hampshire Department of Revenue Administration 2019*
### Peer Groups

**Large Cities**

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## Peer Groups: Large Cities

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Source: New Hampshire Department of Revenue Administration 2019
Lesson:

Historic Value
Case Study: Economic MRI®, Value Capture Analysis
2015

Charleston, South Carolina
Beaches tuned out

Charleston, SC MSA
Built ca: 1686

Revolutionary

Walmart
$866,760 value per acre

Tavern Wine and Spirits
$13,394,415 Value per Acre
Pre-1776 Taxable Value Per Acre
Charleston, SC MSA
Pre-1776 Taxable Value Per Acre
Charleston, SC MSA
### Pre-1776 Tax Productivity

**Charleston, SC MSA**

<table>
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<tr>
<th>Metric</th>
<th>2015 Value</th>
<th>Pre-1776 Value</th>
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<tbody>
<tr>
<td>Acres</td>
<td>20.95</td>
<td>$344M</td>
</tr>
<tr>
<td>Value/Acre</td>
<td>$16,440,700</td>
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<td>County Taxes 2015</td>
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**Detail Map**
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Charleston, SC MSA

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Detail Map
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Charleston, SC MSA

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### Pre-1776 Tax Productivity
Charleston, SC MSA

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<th>Walmart (at Tanger)</th>
<th>Value per acre</th>
<th>Born: 2005</th>
</tr>
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<td>Walmart</td>
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</tr>
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### Walmart at Tanger

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**Value per acre:** $866,760

**Charleston, SC MSA**
### Walmart (at Tanger)

- **Value per Acre:** $866,760
- **Value:** $18M
- **County Taxes 2015:** $47,000

### > 1776

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- **Pre-1776 Tax Productivity**
  - Charleston, SC MSA

- **Detail Map**

- **Born:** 2005

- **13x the County Taxes**
Value Per Acre
Traditional Commercial

Keene
Peak VPA
VPA: $14 M

Lebanon
Mixed-use
VPA: $6.2 M

Laconia
Mixed-use
VPA: $3.7 M

Hanover
Mixed-use
VPA: $12 M

Concord
Mixed-use
VPA: $7.6 M

Nashua
Mixed-use
VPA: $10 M

Exeter
Peak VPA
VPA: $13.5 M

Dover
Mixed-use
VPA: $9.6 M

Berlin
Peak VPA
VPA: $2.5 M

Peterborough
Peak VPA
VPA: $12.2 M

Rochester
Mixed-use
VPA: $3.9 M

Portsmouth
Mixed-use
VPA: $29.3 M

Source: New Hampshire Department of Revenue Administration 2019

Sample average: $8,300,000 value/acre
Lesson:

The Value of Urban Design
Case Study: Economic MRI®
2020

Derry
<table>
<thead>
<tr>
<th></th>
<th>Siragusa</th>
<th>Butterfield</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Building Footprint (Acres)</strong></td>
<td>1.92</td>
<td>2.13</td>
</tr>
<tr>
<td><strong>Parking Acres</strong></td>
<td>2.65</td>
<td>5.95</td>
</tr>
<tr>
<td><strong>Building:Parking Ratio</strong></td>
<td>1 : 1.4</td>
<td>1 : 2.8</td>
</tr>
</tbody>
</table>
Manchester, New Hampshire
What is Parking?
Measuring space
What is Parking?
Measuring space

Average Building
998 sq.ft.

Average Parking (1.5 spaces)
585 sq.ft.
$90/square foot

What is Parking? Measuring Manchester space
What is Parking?
Measuring Manchester space

$90/square foot

$1.20/square foot*

* (75X) - Data from Assessment data on Pearl Street parking lot
$90/square foot

$1.20/square foot*

* (75X) - Data from Assessment data on Pearl Street parking lot

What is Parking?
Measuring Manchester space

-$20 / square foot
What is Parking?
Measuring Manchester space

$90/square foot

-$20 / square foot

$1.20/square foot*
$90/square foot

What is Parking?
Measuring Manchester space

* (75X) - Data from Assessment data on Pearl Street parking lot

$1.20/square foot*

-$20 / square foot

-$20 / square foot
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<tr>
<td>Value Per Acre</td>
<td>$4.6M</td>
<td>$2.5M</td>
</tr>
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</table>
Lesson:

What are you carrying?
Asset Management
$85,000

Asset Management
Asset Management

$85,000
$85,000
$35,000
Asset Management
15-20 years

$85,000

$35,000
Asset Management

In 20 years you’ll need another $205,000
Asset Management
Asset Management
Asset Management

$+$+$+

$-$+$+$+$+$+
Asset Management
Asset Management
Asset Management
Case Study: Economic MRI®, Fiscal MRI®, Policy Analytics
2014 - 2019

Lancaster, California
LANCASTER:
City of Lancaster, CA

Paved Roads

Los Angeles

LANCASTER

LA COUNTY
LANCASTER:
Paved Roads
City of Lancaster, CA
LANCASTER: 953 MILES
PORTLAND, OR

LANCASTER: 953 MILES

Paved Roads
City of Lancaster, CA
<table>
<thead>
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<th>Year</th>
<th>Roads (Total Square Feet)</th>
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Lancaster, CA
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<thead>
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<th>Year</th>
<th>Roads (Total Square Feet)</th>
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Rebuild
Road Built (SF)
Road Construction and Reconstruction
Lancaster, CA

Rebuild
Road Built (SF)

Year Built
Roads (Total Square Feet)
<table>
<thead>
<tr>
<th>Year</th>
<th>Roads (Total Square Feet)</th>
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<tbody>
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</table>
What Roads Can You Sustain?

Based on revenue flow, what can we afford? About half the network.

Source: City of Lancaster
*Based on 50 year useful life

Road Obligation*

$50M
(-$25M Shortfall)
What Roads Can You Sustain?

Based on revenue flow, what can we afford? About half the network.
77,000 people
77,000 people
140 miles* of road
77,000 people

140 miles* of road

9.6 feet of road per person
Roads over Time
Manchester, NH

111,000 people

*Road centerline miles
111,000 people

535 miles* of road
111,000 people

535 miles* of road

25.4 feet of road per person
111,000 people

535 miles* of road

25.4 feet of road per person

*Road centerline miles
111,000 people

535 miles* of road

25.4 feet of road per person
Neighborhood Costs
South Bend, IN

Originally Built 1920s-1940s
Neighborhood Costs
South Bend, IN

Originally Built 1970s
Neighborhood Costs
South Bend, IN
Originally Built 1970s
Neighborhood Costs
South Bend, IN
Originally Built 1970s
Neighborhood Costs
South Bend, IN

Originally Built 1970s

Roads: $75,161
Neighborhood Costs
South Bend, IN

Originally Built 1970s

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Roads</th>
<th>Water Pipes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighborhood Yearly Costs</td>
<td>$75,161</td>
<td>$11,675</td>
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### Neighborhood Costs

**South Bend, IN**

**Originally Built 1970s**

<table>
<thead>
<tr>
<th>Infrastructure</th>
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<th>Storm &amp; Sewer Pipes</th>
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<tbody>
<tr>
<td>Neighborhood Yearly Costs</td>
<td>$75,161</td>
<td>$11,675</td>
<td>$35,176</td>
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**South Bend, IN**

- **Originally Built 1970s**

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<td>$11,675</td>
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*Map showing infrastructure distribution with highlighted infrastructure types.*
### Neighborhood Costs

South Bend, IN  
Originally Built 1970s

<table>
<thead>
<tr>
<th>Roads</th>
<th>Water Pipes</th>
<th>Storm &amp; Sewer Pipes</th>
<th>Annual Total</th>
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<td>$75,161</td>
<td>$11,675</td>
<td>$35,176</td>
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### Neighborhood Costs
*South Bend, IN*

- Originally Built 1970s
- 10% of Annual Neighborhood Property Taxes: $21,079

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Roads</th>
<th>Water Pipes</th>
<th>Storm &amp; Sewer Pipes</th>
<th>Annual Total</th>
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<td>Neighborhood Yearly Costs</td>
<td>$75,161</td>
<td>$11,675</td>
<td>$35,176</td>
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- Roads
- Water Pipes
- Storm & Sewer Pipes
- Annual Total
Originally Built 1920s-1940s

Neighborhood Costs
South Bend, IN
Originally Built 1920s-1940s

**Neighborhood Costs**

South Bend, IN

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Roads</th>
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<tr>
<td>Neighborhood Yearly Costs</td>
<td>$38,465</td>
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*Map showing neighborhood costs and infrastructure.*
Originally Built 1920s-1940s

Neighborhood Costs
South Bend, IN

Yearly Costs

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<th>Roads</th>
<th>Water Pipes</th>
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<tr>
<td>Neighborhood</td>
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<tr>
<td>Neighborhood Yearly Costs</td>
<td>$38,465</td>
<td>$12,154</td>
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Originally Built 1920s-1940s

Neighborhood Costs
South Bend, IN

Roads
Water Pipes
Storm & Sewer Pipes
### Neighborhood Costs

**Originally Built 1920s-1940s**

**South Bend, IN**

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Roads</th>
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<th>Storm &amp; Sewer Pipes</th>
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<tr>
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<td>$38,465</td>
<td>$12,154</td>
<td>$28,362</td>
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## Neighborhood Costs

**South Bend, IN**

Originally Built 1920s-1940s

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<td>Neighborhood Yearly Costs</td>
<td>$38,465</td>
<td>$12,154</td>
<td>$28,362</td>
<td>$78,981</td>
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<td>Water Pipes</td>
<td>Storm &amp; Sewer Pipes</td>
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<td>Neighborhood Yearly Costs</td>
<td>$38,465</td>
<td>$12,154</td>
<td>$28,362</td>
<td>$78,981</td>
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10% of Annual Neighborhood Property Taxes: $21,965
## Neighborhood Costs
**South Bend, IN**

### Originally Built 1920s-1940s

<table>
<thead>
<tr>
<th></th>
<th>1920-1940s</th>
<th>1970s</th>
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<tbody>
<tr>
<td>Lots</td>
<td>88</td>
<td>88</td>
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<tr>
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<td>$75,161</td>
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<td>Storm &amp; Sewer Pipes</td>
<td>$28,382</td>
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<td>Annual Total Costs</td>
<td><strong>$78,981</strong></td>
<td><strong>$122,012</strong></td>
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<td>10% Property Taxes</td>
<td>$21,965</td>
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<td><strong>-$57,016</strong></td>
<td><strong>-$100,933</strong></td>
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## Neighborhood Costs

**South Bend, IN**

### Originally Built 1920s-1940s

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<th>Description</th>
<th>1920-1940s</th>
<th>1970s</th>
<th>Difference</th>
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<td>-$57,016</td>
<td>-$100,933</td>
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Question:

OK. So now what?
1. Do more analytics.
Tax Code
Land Value Per Acre
Hillsborough Co, NH

Source: NH DRA and City of Manchester
Land Value Per Acre
Manchester, NH

Source: NH DRA and City of Manchester
2. Learn from your neighbors
<table>
<thead>
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<th>Peer Groups</th>
<th>Hanover</th>
<th>Portsmouth</th>
<th>Exeter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>11,500</td>
<td>21,896</td>
<td>14,306</td>
</tr>
<tr>
<td>% Non-Tax</td>
<td>11%</td>
<td>18%</td>
<td>32%</td>
</tr>
<tr>
<td>Avg. VPA</td>
<td>$100,083</td>
<td>$557,719</td>
<td>$197,142</td>
</tr>
<tr>
<td>Peak VPA</td>
<td>$37,827,184</td>
<td>$51,157,466</td>
<td>$13,578,189</td>
</tr>
</tbody>
</table>
3. Maintain/Recreate Historic Value

What you can do:
Portsmouth, long term success.
4. Adapt

What you can do:
Value Per Acre
High Yield Buildings

Source: New Hampshire Department of Revenue Administration

Multi-family
VPA: $1.9 M

Mixed-use
VPA: $9.6 M

Peak VPA
VPA: $15.3 M
What you can do:

5. Realize that Parking is Subsidized.
What is Parking?
Measuring Manchester space

$90/square foot

$1.20/square foot

* (75X) - Data from Assessment data on Pearl Street parking lot

-$20 / square foot
6. Build for Productivity
Value Per Acre
Commercial

Peterborough
Commercial
VPA: $0.94 M

Exeter
Commercial
VPA: $0.97 M

Concord
Commercial
VPA: $0.84 M

Berlin
Commercial
VPA: $0.31 M

Dover
Commercial
VPA: $1.2 M

Portsmouth
Commercial
VPA: $2.4 M

Hanover
Commercial
VPA: $3.4 M

Hudson
Commercial
VPA: $0.66 M

Kenne
Commercial
VPA: $0.95 M

Rochester
Commercial
VPA: $0.9 M

Pelham
Commercial
VPA: $0.5 M

Claremont
Commercial
VPA: $0.49 M

Lebanon
Commercial
VPA: $1.1 M

Laconia
Commercial
VPA: $0.9 M

Nashua
Commercial
VPA: $1.3 M

Sample average: $970,000 value/acre

Source: New Hampshire Department of Revenue Administration 2019
Value Per Acre
Traditional Commercial

Keene
Peak VPA
VPA: $14 M

Lebanon
Mixed-use
VPA: $6.2 M

Laconia
Mixed-use
VPA: $3.7 M

Hanover
Mixed-use
VPA: $12 M

Concord
Mixed-use
VPA: $7.6 M

Nashua
Mixed-use
VPA: $10 M

Exeter
Peak VPA
VPA: $13.5 M

Dover
Mixed-use
VPA: $9.6 M

Berlin
Peak VPA
VPA: $2.5 M

Peterborough
Peak VPA
VPA: $12.2 M

Rochester
Mixed-use
VPA: $3.9 M

Portsmouth
Mixed-use
VPA: $29.3 M

Source: New Hampshire Department of Revenue Administration 2019

Sample average: $8,300,000 value/acre
What you can do:

7. Patterns of Costs
### Neighborhood Costs
South Bend, IN

#### Originally Built 1920s-1940s

#### Originally Built 1970s

<table>
<thead>
<tr>
<th></th>
<th>1920-1940s</th>
<th>1970s</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lots</td>
<td>88</td>
<td>88</td>
<td>0</td>
</tr>
<tr>
<td>Road Cost</td>
<td>$38,465</td>
<td>$75,161</td>
<td>2x</td>
</tr>
<tr>
<td>Water Pipes</td>
<td>$12,154</td>
<td>$11,675</td>
<td>-0.96x</td>
</tr>
<tr>
<td>Storm &amp; Sewer Pipes</td>
<td>$28,382</td>
<td>$35,176</td>
<td>1.2x</td>
</tr>
<tr>
<td>Annual Total Costs</td>
<td>$78,981</td>
<td>$122,012</td>
<td>1.5x</td>
</tr>
<tr>
<td>10% Property Taxes</td>
<td>$21,965</td>
<td>$21,079</td>
<td>-0.96x</td>
</tr>
<tr>
<td>Deficit</td>
<td>-$57,016</td>
<td>-$100,933</td>
<td>1.8x</td>
</tr>
</tbody>
</table>
What you can do:

8. Measure What You Own
111,000 people
535 miles* of road
25.4 feet of road per person
What you can do:

9. Consider the Tax System
Question:

What is an appropriate tax?
Proponent of the “single tax” on land.

Henry George
Author of *Progress and Poverty* (1879)
1839-97
by Elizabeth Magie Phillips

FAMOUS ORIGINATOR OF GAMES
by Elizabeth Magic Phillips
FAMOUS ORIGINATOR OF GAMES
Just put your happy little numbers on a map. Don’t worry about mistakes.
DO THE MATH
DO THE MATH
DO THE MATH