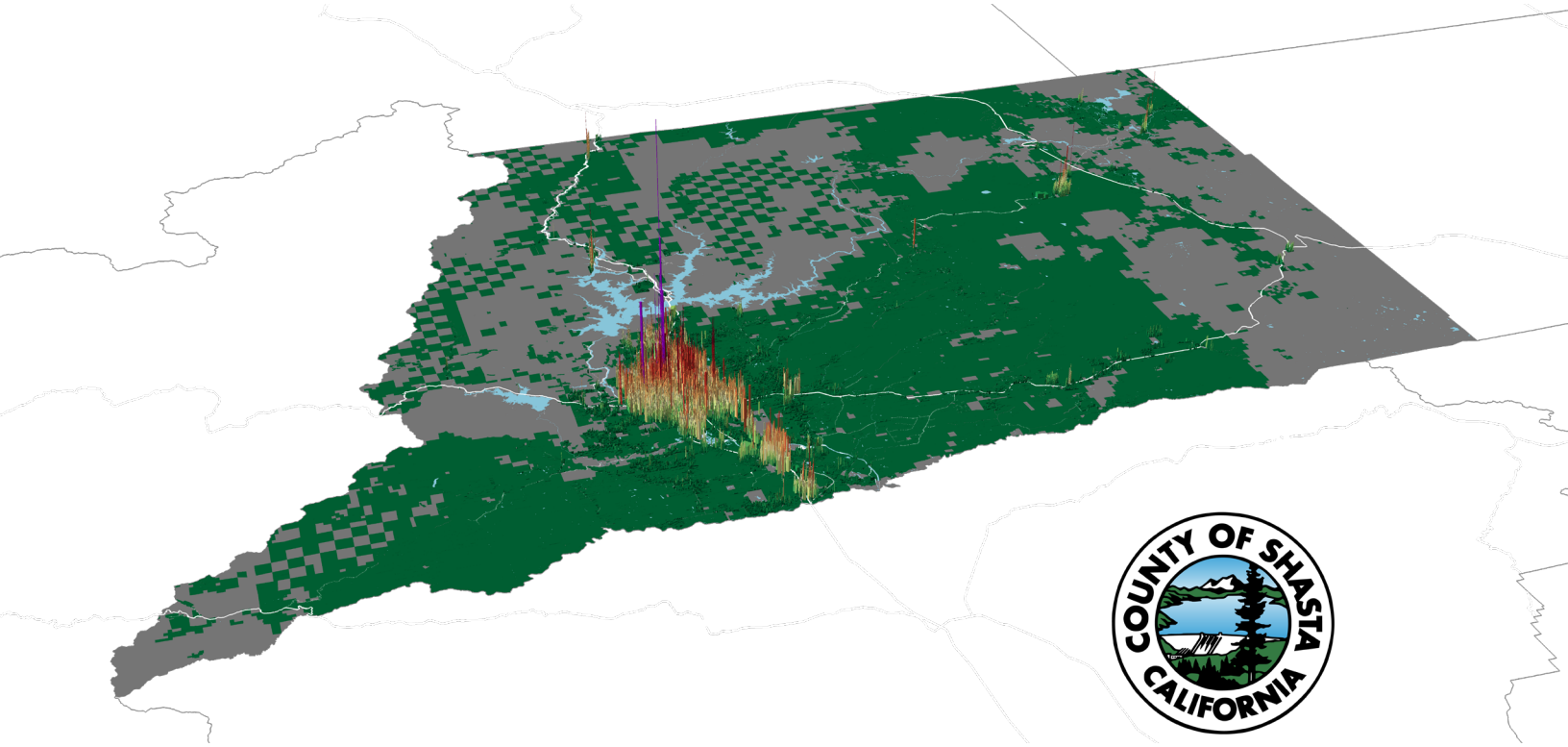
Economics of Community Design



Shasta County

California

URBAN3 2023

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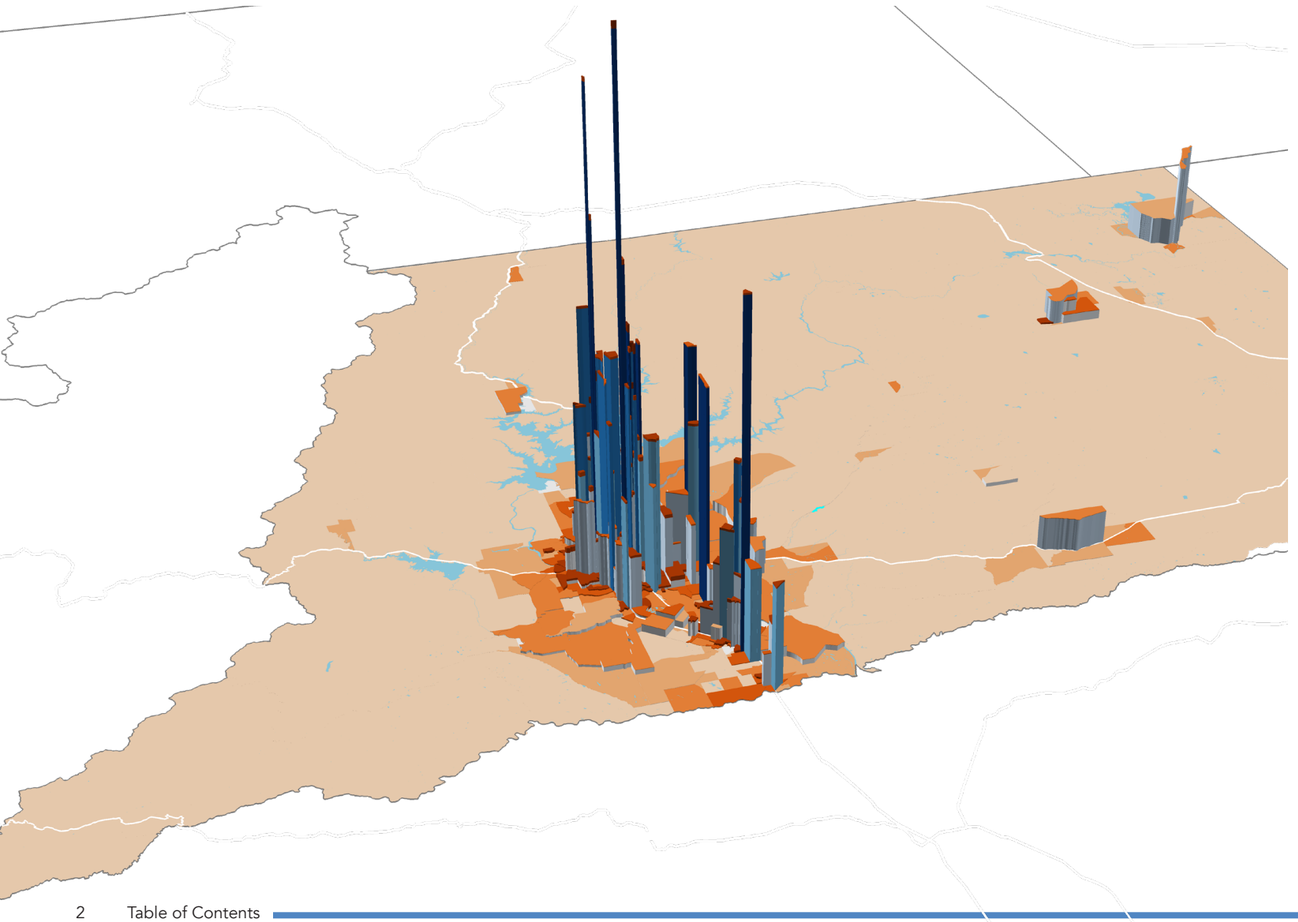


Glossary

Arterial Roads
Thoroughfare roads designed for high capacity and speeds that usually connect activity centers; these roads sit below freeways/motorways in the road classification hierarchy.

Assessed Value
The valuation of a real estate asset that determines the amount of property tax applicable to it.

Auto-Oriented Development
Refers to the urban development pattern in which the individual significantly relies on a vehicle to move from place to place. Does not support walkability or other modes of transportation.

Centerline Miles
Total length of a road in miles. For example, a two lane road that is ten miles long has 10 centerline miles. A four lane road that is ten miles long also has 10 centerline miles. *See also: Lane Miles.*

Geoaccounting
Process of mapping a community's revenues and expenditures to understand how different land uses and development patterns perform financially.

Intergovernmental Revenue
Revenue that is exchanged between different municipalities or levels of government.

Infill Development
The process of developing vacant or under-utilized parcels within existing urban areas that are already largely developed.[1]

Land Uses
Regulating the use of land to achieve urban and regional planning goals; land uses include commercial, residential, industrial, agricultural, open space, recreational, etc.

Lane Miles
The total length of a road in miles multiplied by the road's lane count. For example, a two lane road that is ten miles long has 20 lane miles. A four lane road that is ten miles long has 40 lane miles. *See also: Centerline Miles.*

Medium-Density Residential
Multi-unit housing that is consistent in scale and form to the single-family detached building typology, but has fewer people per geographic area than high-density residential.

Mill Rate
The mill rate is the amount of tax payable per dollar of the assessed value of a property. The mill rate is based on "mills."[2]

Mixed-Use Development
A development that combines two or more land uses in a project.

Neighborhood Roads
Local or residential streets that provide primary access to residential areas; these streets are below collectors in the road classification hierarchy.

Parcel
Area of land that is owned (i.e. lot, plot).

Parking Minimums
Also known as Minimum Parking Requirements (MPR), parking minimums are laws requiring new

1 Source: mrsc.org
2 Source: investopedia.com

Glossary

buildings to include a fixed number of off-street parking spaces based on an assumed demand for parking generated by the building's use.[3]

Prop 13

An amendment of the Constitution of California enacted in 1978 that established base year values, a restricted rate of increase on assessments of no greater than 2% each year, and a limit of a 1% property tax rate of the assessed values.

Return on Investment (ROI)

The measure of how much is earned over the course of an investment relative to the initial investment; profit minus cost.

Traffic Analysis Zone (TAZ)

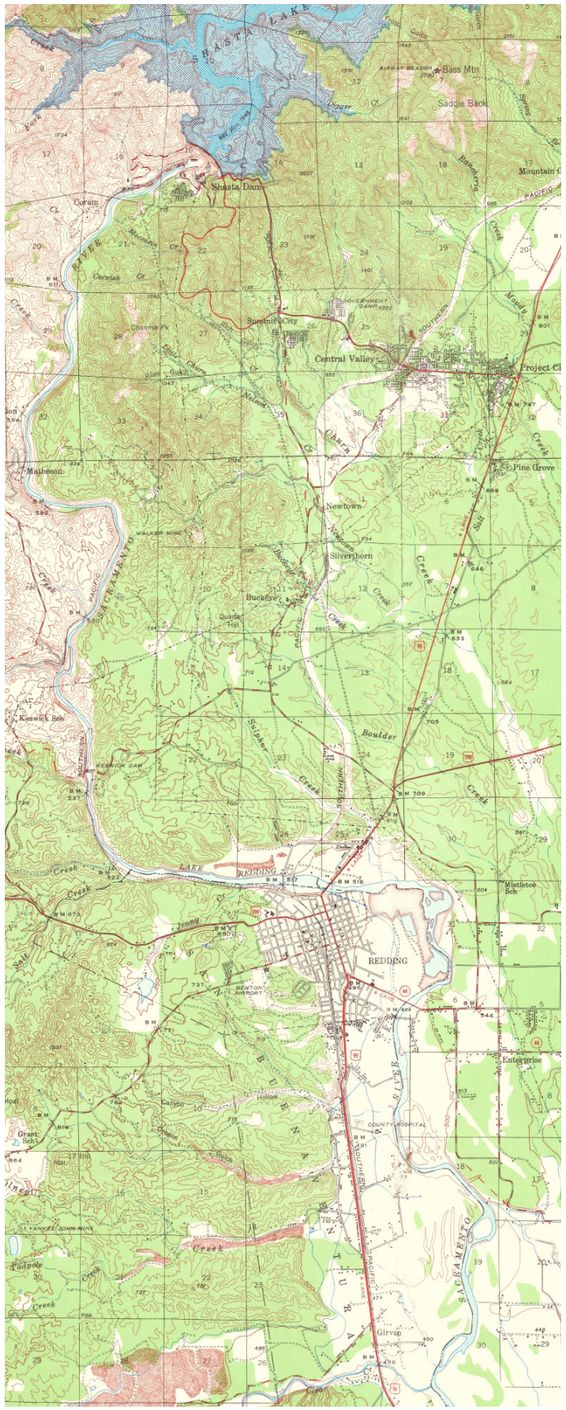
Basic spatial unit of analysis used by transportation planners to both forecast changes in commuting patterns, trip volumes, and modes of travel, as well as develop plans to meet the changing demands for transportation facilities and capacities.[4]

Value Per Acre (VPA)

A metric used to evaluate the effectiveness of land use policy; property value divided by acres utilized.

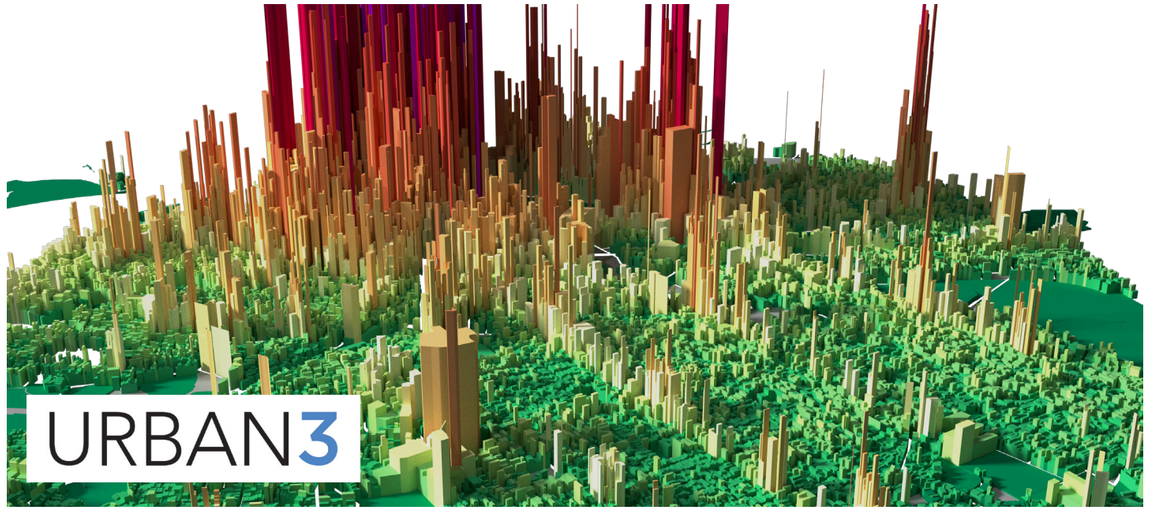
Vehicle Miles Traveled (VMT)

A measure of the demand for vehicle traffic on public roadways. It provides a metric for evaluating the impact of road maintenance needs and development patterns. It is calculated by multiplying the trip distance by the number of vehicles taking said trip.



3 Source: parking.net
4 Source: catalog.data.gov

About the Author



Urban3 is a consulting firm specializing in land value economics, property tax analysis, and community design. Our approach bridges the gap between economic analysis, public policy, and urban design. Our work will empower your community with the ability to promote development patterns that both secure its fiscal condition and create a strong sense of place.

We provide communities with an in-depth understanding of their financial health and built environment by measuring data and visualizing the results.

History of Urban3 & The Rebirth of Asheville

Before Urban3 helped communities understand the true value of good design, there was Julian Price.

Julian moved to Asheville and saw the dilapidated state of the downtown against the backdrop of the stunning Blue Ridge Mountains and began to dream. In the early 1990s, Downtown Asheville, like many downtowns, faced an uncertain future after years of neglect and disinvestment. Its vacant storefronts and empty streets repelled visitors and locals alike, despite the beautiful scenery. The city had lost its soul.

Julian had inherited a family fortune and decided to invest his money into the people and places that, with a little help, could reinvigorate downtown. Despite cries of "that's impossible" and "that'll never work here," Julian created the development company Public Interest Projects in 1990 and tapped Pat Whalen to take the lead. Mr. Whalen focused 75% of the $15 million portfolio on fixing buildings, and the remaining 25% was invested in entrepreneurs as a revolving fund. The investments focused on catalytic projects with a focus on making downtown more liveable

A building in downtown Asheville before (left) and after (right) revitalization
Source: urbanthree.com

as a neighborhood. Julian wasn't afraid to get down in the weeds—he picked up trash and fixed park benches, but he also had a crystal clear, big-picture vision. He knew that investing in restaurants, local media outlets, mixed-use buildings, and a self-help credit union would gradually create a self-sustaining ecosystem that would attract downtown residents, invite tourists, and help small businesses thrive. Together, these ingredients brought Downtown Asheville back to life.

Urban3 was created at Public Interest Projects to share the lessons of community revitalization and explain the importance of municipal economics to communities across the country.

"He knew that investing in restaurants, local media outlets, mixed-use buildings, and a self-help credit union would gradually create a self-sustaining ecosystem that would attract downtown residents, invite tourists, and help small businesses thrive."

Downtown Asheville today
Source: expoloreasheville.com

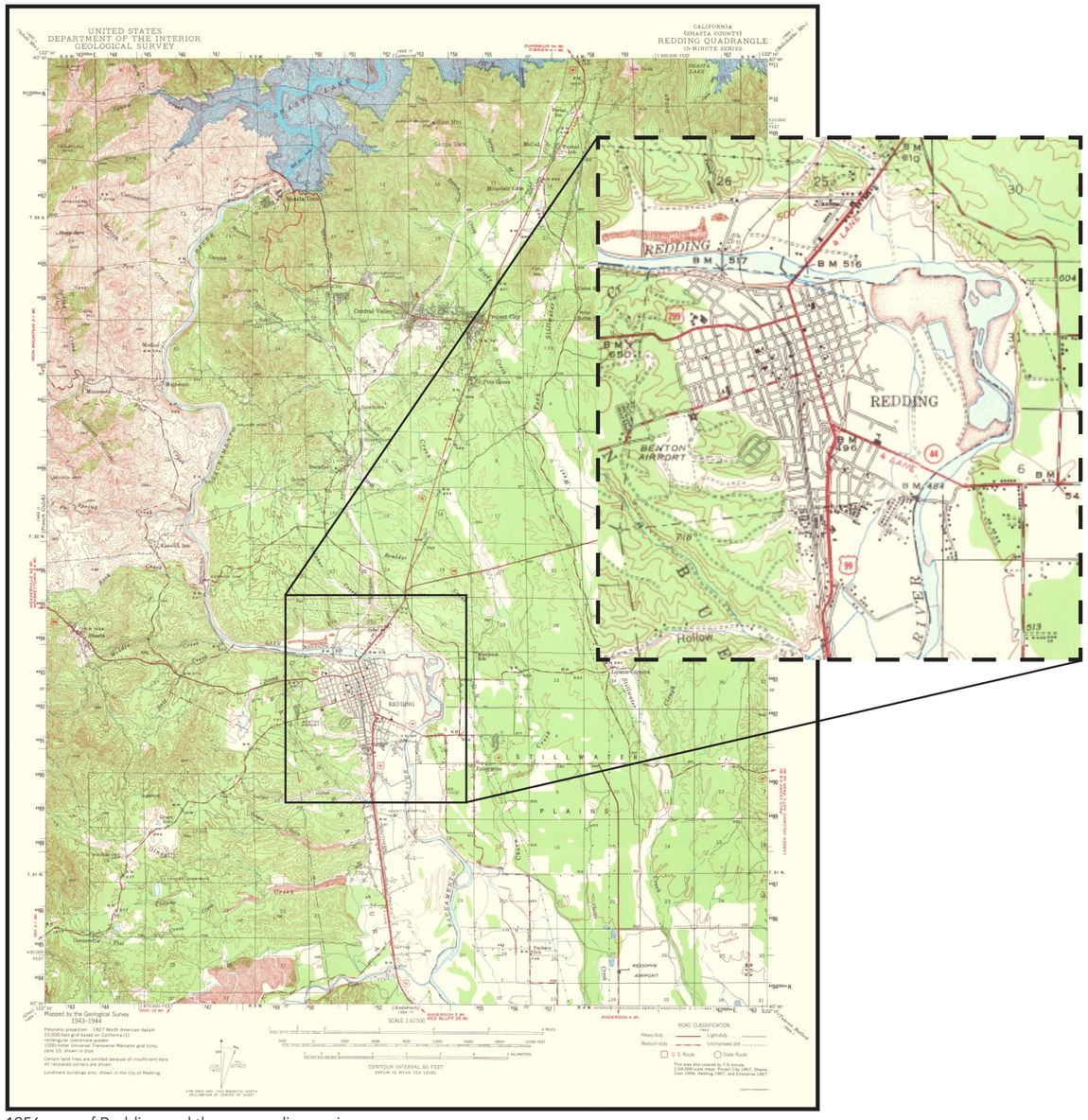
Introduction to Shasta County

Shasta County is located in Northern California and is home to approximately 180,000 people. Lying within the northern portion of the Sacramento Valley and reaching into the southern parts of the Cascade Range, Shasta County holds an endless amount of natural beauty and outdoor recreation activities for its residents and visitors. Shasta County's area is just under 4,000 square miles and encompasses Shasta Lake, Whiskeytown Lake, and Shasta-Trinity National Forest, as well as three incorporated cities: Redding, Anderson, and Shasta Lake.

One of the first counties in California, Shasta County was established in 1850 and developed around the mining industry. Since then, it has experienced fluctuations in its jurisdictional size, population, and urban growth. The City of Redding serves as the county's center of economic and cultural activity with more than half of the county's population residing within the city. However, with populations projected to rise across the nation, Shasta County has the opportunity to develop smaller communities, such as Palo Cedro and Cottonwood, that are economically sustainable and regionally contextual.

"Shasta County has the opportunity to develop smaller communities [...] that are economically sustainable and regionally contextual."

Historic photos of Market Street in Redding through time.
Source: Shasta Historical Society



1956 map of Redding and the surrounding region
Source: mapsofthepast.com

The following report highlights the results of several analyses conducted by Urban3 that can be used to understand Shasta County's current urban-economic health as an independent government entity. The county can then utilize this information to make informed decisions on future urban development, primarily through small scale commercial growth and subsequent residential development, to promote long-term fiscal productivity and enhanced livability for all Shasta County residents.

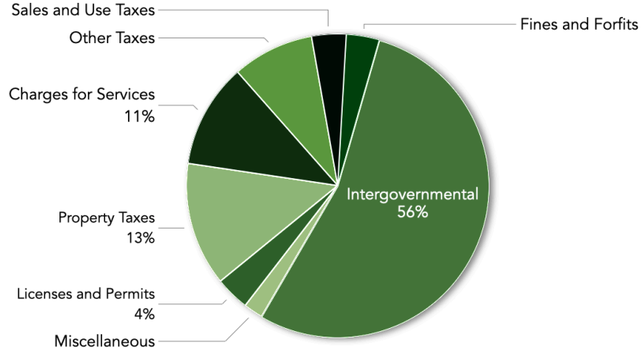
Understanding Local Finance

To understand the fiscal health of a community using geoaccounting methods, we must begin by understanding the underlying tax structure to uncover the relationship between land use decisions and public revenue production.

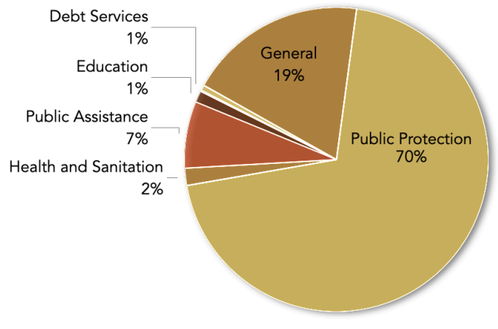
When public revenues vary geographically, comparisons can be made to other spatially relevant facts, such as patterns of development, commuting patterns, and public investment. Put simply, land use directly affects a parcel's tax productivity.

As such, analyzing both the source of government revenues and the patterns they come from is critical to planning a strong financial future. Like a business, local governments have revenues as well as expenses. Collecting sales tax from consumer expenditures and property tax from real property enables local governments to provide basic public services such as public safety, education, and infrastructure.

Revenues: **$151M**



Expenditures: **$147M**



General fund overview for Shasta County
Source: Shasta County ACFR 2022

In the United States, taxing systems vary by state and by municipality. The state of California collects a substantial amount in personal income tax that is then distributed to counties. This intergovernmental revenue is Shasta County's primary source of revenue, followed by property taxes and charges for services collected locally. For this project, Urban3's 3D public revenue models only include sales and property taxes because they compose a significant portion of the county's operating budget and are geospatially relevant.

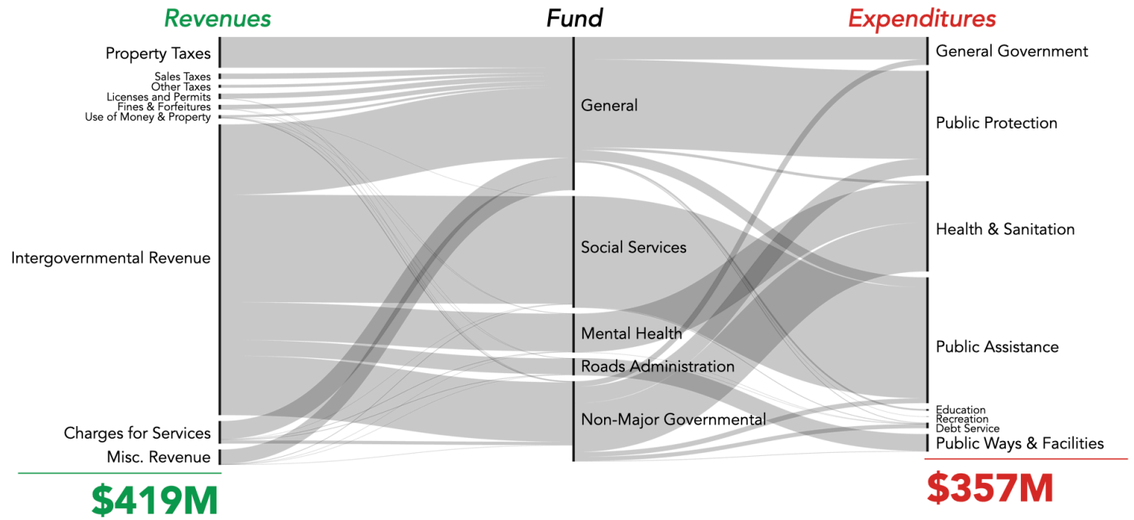
How Your Property Tax Bill is Calculated

Taxable Value - **Homestead & Other Exemptions** = **Net Taxable Value** x **Tax Rate** = **Tax Bill**

The County tax system follows a formulaic process. The value of homestead and other exemptions (i.e. Disabled Veterans Exemption) is subtracted from the market value to get the net taxable value. The county property tax rate is limited to just 1% of the net taxable value by Prop 13. However, municipalities can pass special assessments earmarked for specific purposes, like funding a community college. The net taxable value is multiplied by the 1% tax rate, plus special assessment rates, to get the property's tax bill value.

Property values are determined by the Shasta County Tax Assessor, an elected official. At the publication of this report, Shasta County's property tax rate was 1.00% per $100 of assessed value. The total sales tax rate countywide was 7.25% (except for Anderson where it is 7.50%), and the county collected 1% of that 7.25% towards its general fund.

For this analysis, Urban3 used the Annual Comprehensive Financial Report for fiscal year 2022 to match the geospatial data.

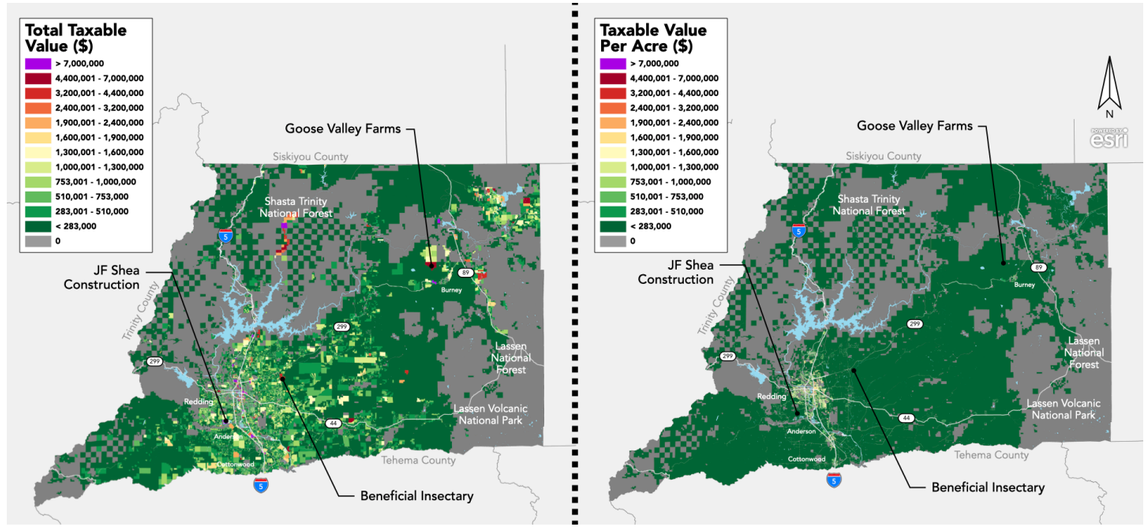


Sankey diagram of Shasta County's annual budget, fiscal year 2022
Source: Shasta County ACFR 2022

The diagram above depicts the flow of Shasta County's $419 million fiscal activity beginning from their revenue source into different funds and their expense categories. For this analysis, we were primarily interested in understanding the General Fund, the largest of the five funds. For fiscal year 2022, Shasta County collected over $150 million for its General Fund, as shown in the pie charts on the previous page. Of that $150 million, approximately $84 million (56%) was intergovernmental revenue that includes funding (grants) from other government entities such as state-collected income tax that is redistributed to the county. The second highest source of revenue was property taxes with a contribution of $20 million (14%).

Value Per Acre

Total taxable value is one way to analyze the overall value of a city, but when it comes to understanding economic productivity, it is not always the most useful. Urban3's analysis focuses on the "per acre" metric as a unit of productivity. After all, cities and counties are, at their simplest, finite areas of land. How that land is used has a direct effect on municipal coffers. The per acre metric normalizes total revenues and tax values into a direct "apples-to-apples" comparison utilizing land consumed as a unit of productivity. Put another way, different cars have differently sized gas tanks, so, when looking at the efficiency of a vehicle, the gallon is used as the standard measure, not the tank. Therefore, "miles per gallon" is common practice to gauge efficiency, not "miles per tank." We apply the same principle to measure the financial productivity of various development types across a community.

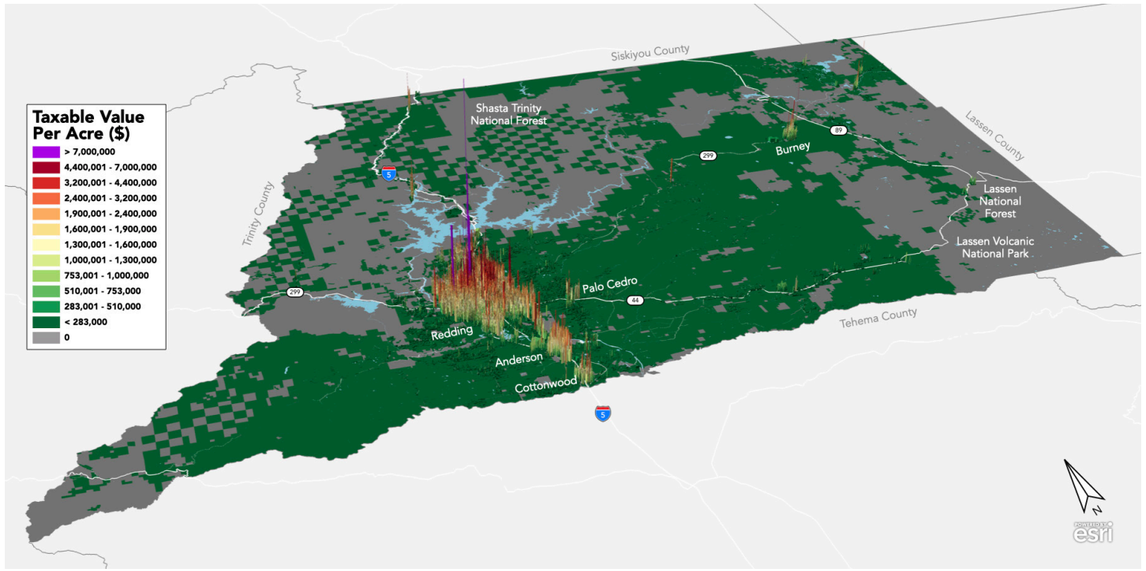


Total taxable value (left) vs. Taxable value per acre (right) of Shasta County
Source: Shasta County

The 2D maps above illustrate the difference between total taxable value and taxable value per acre of parcels in Shasta County. When we normalize taxable value by acre, higher value productivity areas are concentrated in Redding and along Interstate-5, whereas the rest of the county is primarily lower productivity agricultural land and nontaxable forest lands.

"The per acre metric normalizes total revenue and tax values in a direct 'apples-to-apples' comparison utilizing land consumed as a unit of productivity."

When we view the taxable Value Per Acre Model, larger purple spikes indicate properties that yield high property tax revenue relative to parcel size. Only examining a development's total tax production overlooks the amount of land and other public resources consumed in order to produce revenue. Expansive developments with large footprints (like a sprawling subdivision) are typically more expensive to service with public utilities (streets, water, and sewer) than denser developments. By a function of being more spread out, sprawling development requires longer stretches of infrastructure to service each unit (more roads, sewage, and water pipes, for example).



Taxable value per acre model for Shasta County viewed in 3D
Source: Shasta County

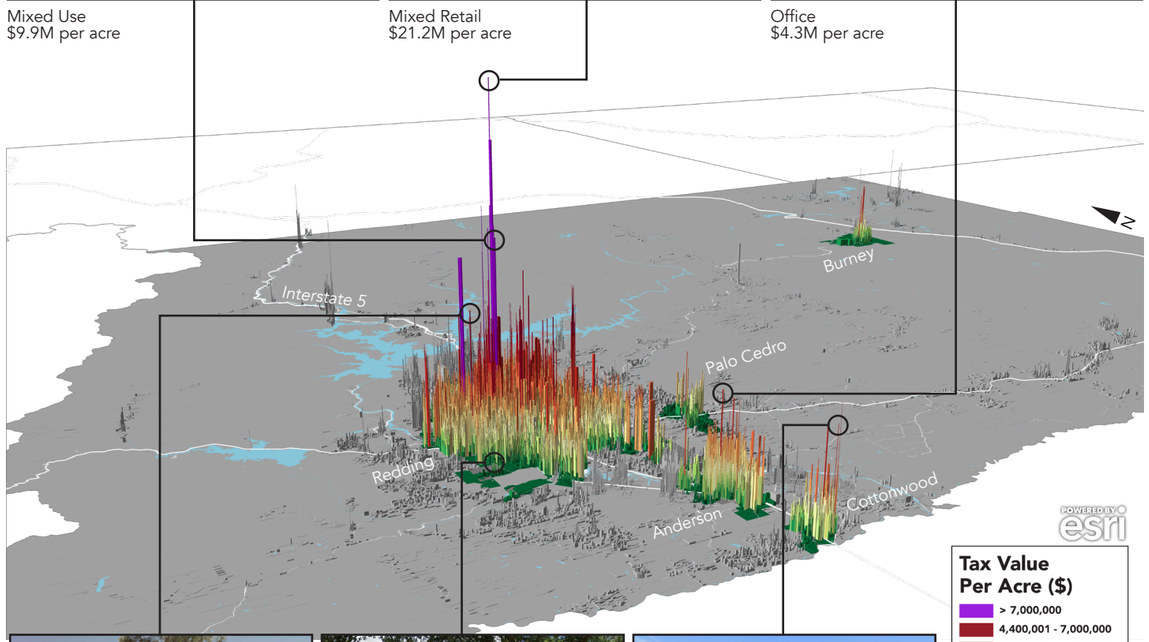
*Sierra Printing is currently closed. (Data from 2022)

"Expansive developments with large footprints [...] are typically more expensive to service with public utilities (streets, water, and sewer) than denser developments."

Mixed Use
$9.9M per acre

Mixed Retail
$21.2M per acre

Office
$4.3M per acre



Multifamily Housing
$4.7M per acre

Single Family Housing
$0.5M per acre

Commercial
$2.8M per acre

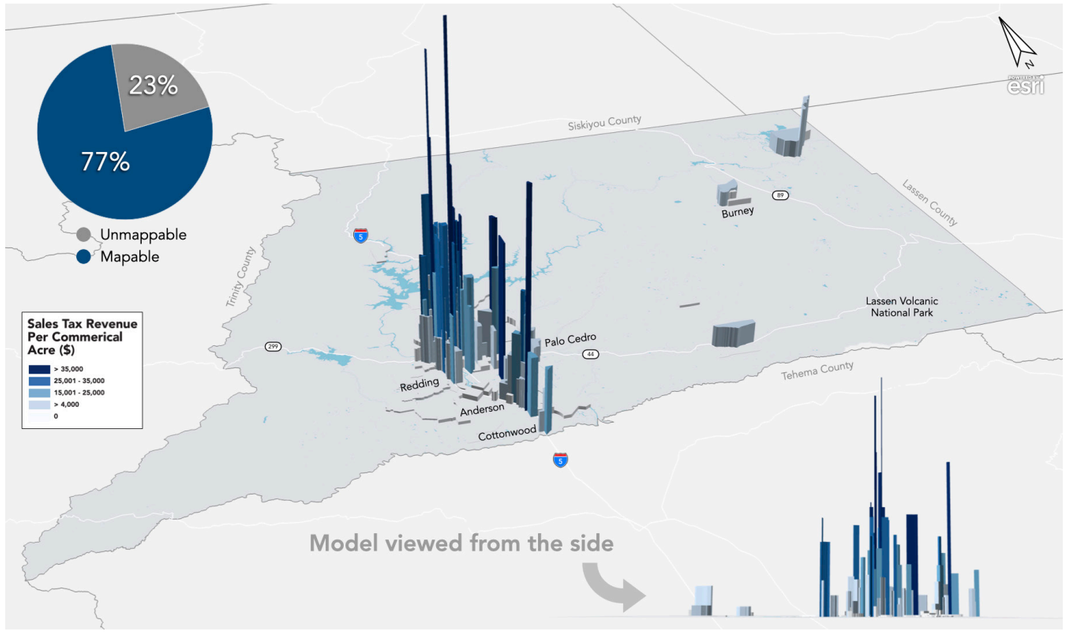
By focusing on areas like Redding, Anderson, Palo Cedro and Cottonwood in the model above, we are able to highlight the importance of land use patterns in terms of property tax revenue for Shasta County. For example, although downtown Redding has the highest productivity overall, one can see that Cottonwood (population of approximately 5,000) - with its compact, traditional mainstreet-style development pattern - performs just as well as some parcels of core Redding.

Sales Tax

Like property tax productivity, sales tax productivity is also dependent on how land is used. While Shasta County's collection of sales tax revenue excludes the incorporated areas of Redding, Anderson, and Shasta Lake, it remains crucial to understand how land use patterns affect economic productivity.

Urban3 was able to map 77% of taxable retail sales in Shasta County to visualize the productivity of different generalized land use patterns. The Sales Tax Per Acre Model below was constructed using 2022 sales tax data by business location and commercial parcel acreage. Values were controlled by traffic analysis zones (TAZ).[1]

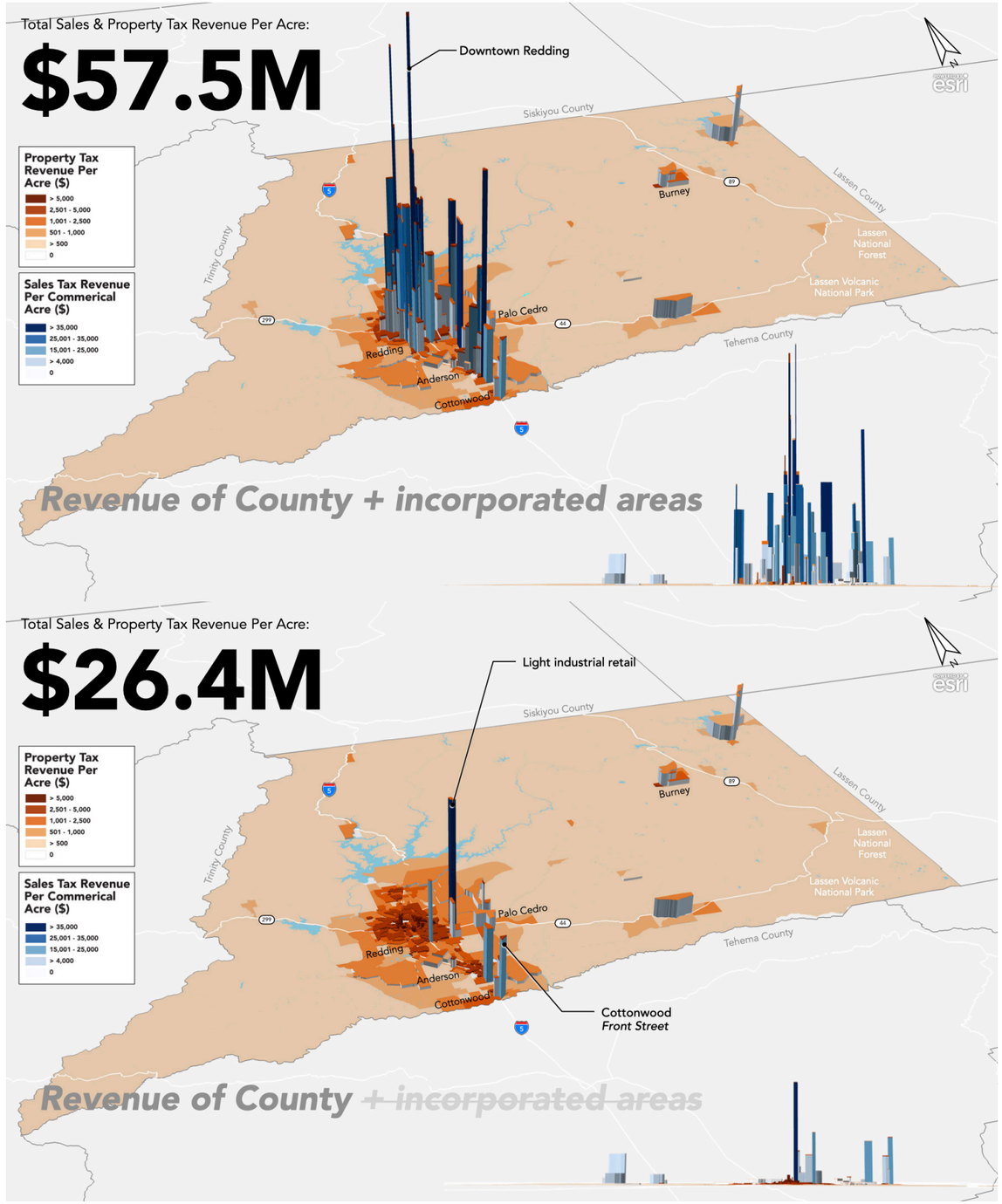
1 See VMT section for explanation of TAZ.



Sales tax revenue per acre. Data is aggregated to more generalized spatial boundaries based on Traffic Analysis Zones (TAZs).
Source: Shasta County

As shown in the model above, the highest sales tax producing areas are located along I-5 and the immediate area surrounding Redding. The Sales Tax Per Acre Model is only an approximate snapshot of sales productivity as annual sales taxes are subject to external economic forces and the data is aggregated to ensure business confidentiality. To get a better sense of how land use patterns affect Shasta County fiscally, Urban3 combined both the Property and Sales Tax Models.

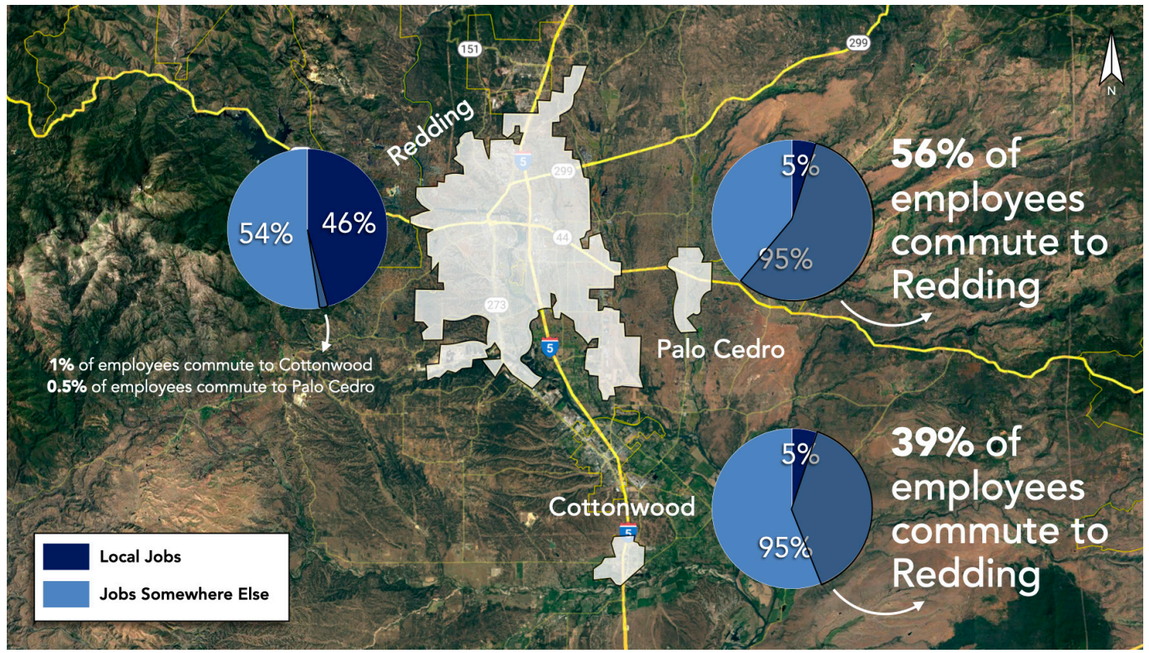
In the Combined Tax Model on the following page, downtown Redding is the most productive jurisdiction per acre. However, Shasta County does not directly receive sales tax revenue from the three incorporated areas. The second Property & Sales Tax Model excludes the sales tax revenue from the incorporated cities to show only what the county receives. Shasta County only produces half of what these incorporated areas do in sales tax revenue simply due to a difference in land use and development patterns. However, areas of denser development outside of Redding and Cottonwood produce a combined higher revenue per acre.



Sales and property tax revenue of Shasta County (above) and Shasta County minus incorporated areas (below). Data is aggregated to more generalized spatial boundaries based on Traffic Analysis Zones (TAZs).
Source: Shasta County

Commuting Patterns

Compact development contributes to tax production, but it also helps bolster employment opportunities. Density creates the potential for more jobs and gives smaller businesses a chance to establish themselves. When a community lacks a strong community town center, more residents have to commute outside their city or county for work. The pie charts for Shasta County and its municipalities below show that few residents live and work in their community. Most residents commute elsewhere for work (export) or residents from outside the municipality or County commute in for work (import). Making future land use decisions that boost value productivity could also help retain residents and strengthen the local workforce.



Daily commuting patterns in Shasta County
Source: Shasta County, On the Map 2018, Google Earth

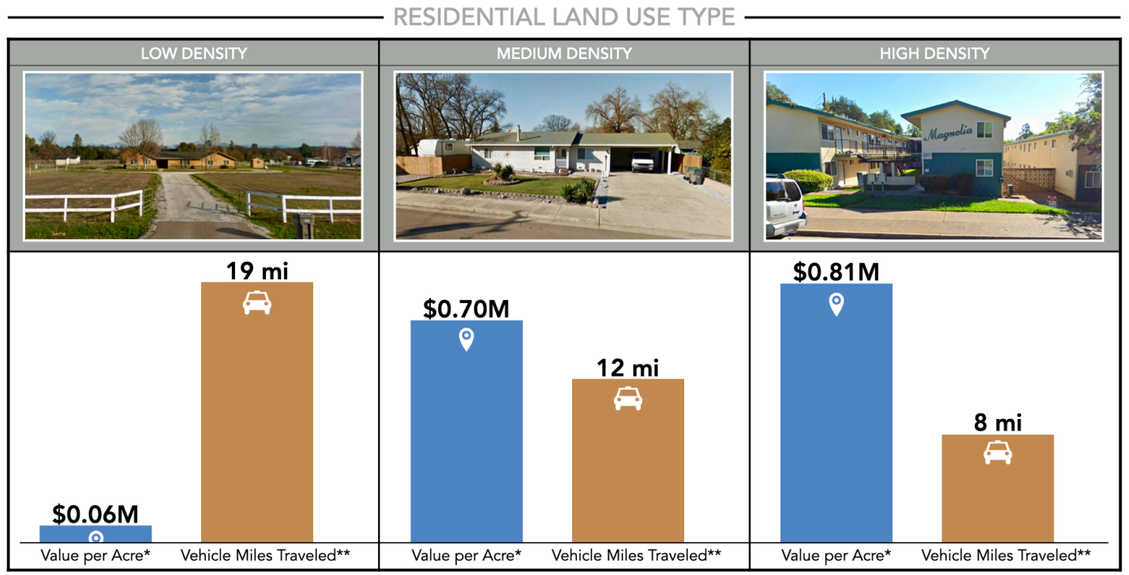
Additionally, compact development means that residents are closer to not only employment opportunities or their workplace, but that they are also closer to resources and activities such as grocery stores, restaurants, and entertainment. Close proximity to resources means less miles traveled and less trips taken in vehicles to get to these destinations.

"When a community lacks a strong downtown, more residents have to commute outside their city or county for work."

Vehicle Miles Traveled (VMT) Analysis

With new development comes concern about changes in traffic. Communities across the U.S. struggle with the balance of attracting more people and business without adding more cars on the road. Fortunately, not all land use decisions and changes to the built environment are created equal when it comes to Vehicle Miles Traveled. VMT, measured by a trip distance multiplied by each time that trip is taken, is one of many metrics that attempt to quantify the scope of traffic.

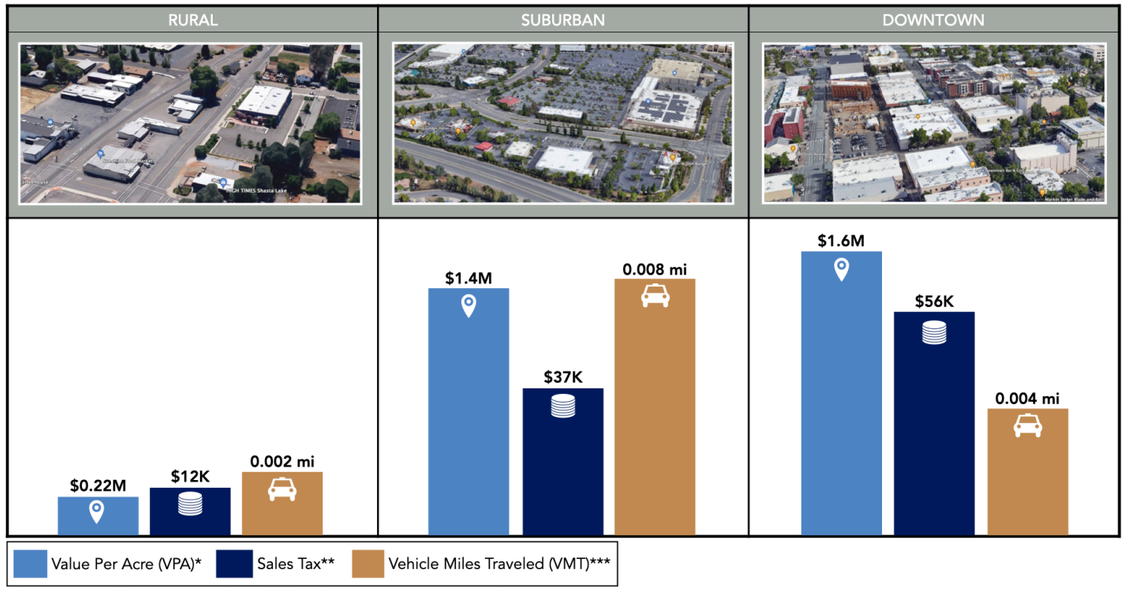
For Shasta County, we conducted a VMT analysis in order to understand how the county's current land use patterns influence the movement of people.



**Measured by Traffic Analysis Zone (TAZ)*
***Per person*

Comparing Value Per Acre (VPA) and Vehicle Miles Traveled (VMT) for three residential land use types in Shasta County
Source: Shasta County, Google Maps

Urban3 distilled Shasta County's development patterns into three categories of increasing development density for both residential (low, medium, high) and commercial (rural, suburban, downtown) land use types. These categories reflect the increase in density and value per acre that occurs when lots get smaller, stories are stacked, and parking is minimized. Low density depicts areas of Shasta County, such as Cottonwood and Shasta Lake, that have the remnants of an earlier commercial core with the potential to build more residential, commercial, and mixed-use development at a contextual urban scale. Medium density refers to areas that are more suburban such as areas just outside of Redding. Urban refers directly to core Redding, where value productivity and density are high.



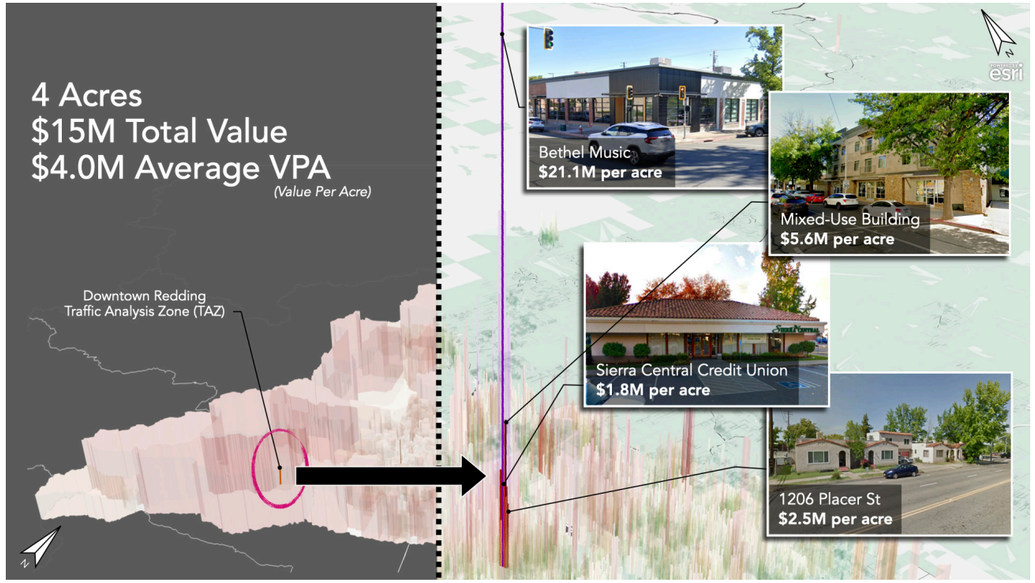
*Measured by Traffic Analysis Zone (TAZ); **Per Commercial Acre; ***Per Value per Acre (VPA)*

Comparing Value Per Acre (VPA), Sales Tax, and Vehicle Miles Traveled (VMT) for three commercial land use types in Shasta County
Source: Shasta County, Google Maps

As shown in the figures above, the results of the analysis conclude that as residential and commercial development increase in density and value, VMT decreases. We can infer that residents who live in the most rural parts of Shasta County will contribute to higher VMT because they must travel further distances to reach resources and services. VMT in suburban areas can be attributed to the auto-oriented development patterns which includes big box stores with large parking lots, strip malls, and the immense amount of low density suburban single-family residential. Areas of more compact development where urban services exist results with lower VMT and are also areas with more value per acre productivity due to more compact commercial development.

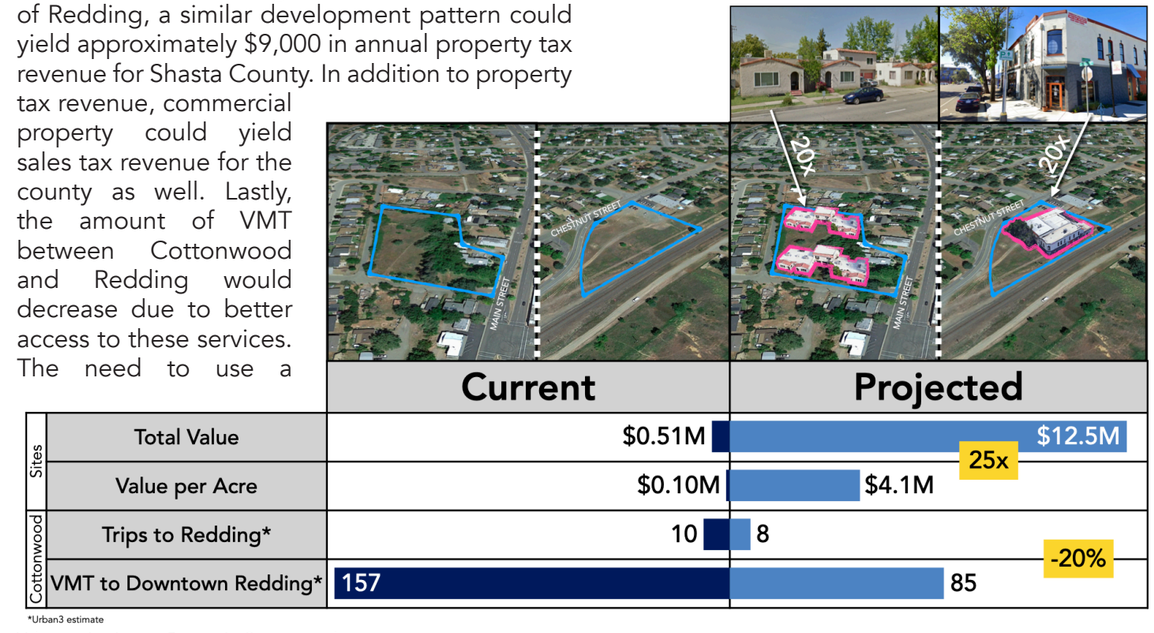
Value and VMT Projections: Cottonwood

As part of the analysis, Urban3 created a projection scenario for the Cottonwood community to explain how development would impact the value productivity and the VMT for the area. First, we identified an area within downtown Redding that had a desirable mix of commercial and residential that would contextually fit the small town of Cottonwood. The area used for the projections included a bank, a restaurant, a recording studio, several other commercial services, and Missing Middle residential (see photo). We then calculated the current total VMT between this area of Redding and Cottonwood in order to have an understanding of how often people from Cottonwood frequent this part of Redding. Then we identified vacant lots in Cottonwood that have development potential for these commercial services, as well as medium-density residential.



Four peak properties within a sample Traffic Analysis Zone (TAZ) located in Redding
Source: Shasta County

We estimated that with the amount of vacant land identified in Cottonwood and the potential for those lots to be developed for businesses and housing of similar value to those of Redding, a similar development pattern could yield approximately $9,000 in annual property tax revenue for Shasta County. In addition to property tax revenue, commercial property could yield sales tax revenue for the county as well. Lastly, the amount of VMT between Cottonwood and Redding would decrease due to better access to these services. The need to use a vehicle decreases by increasing medium-density residential and adding commercial space within close proximity to one another.

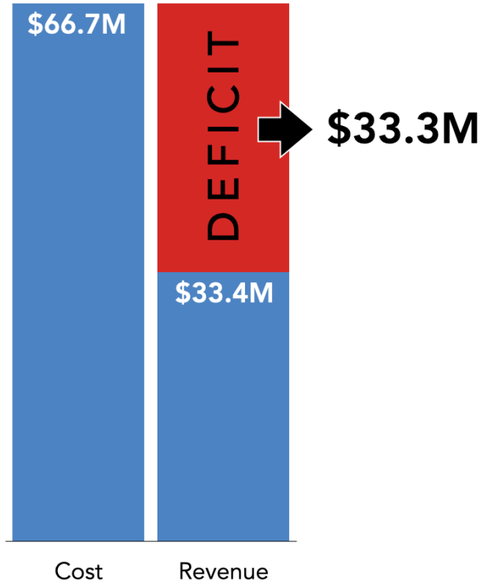


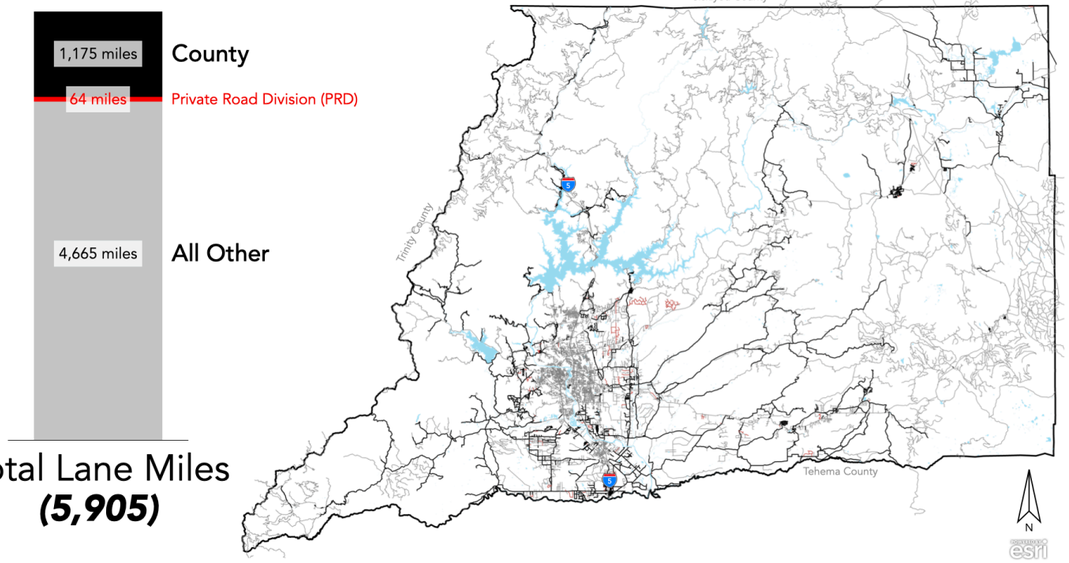
Value projection on 5 acres in Cottonwood
Source: Shasta County

Road System Costs

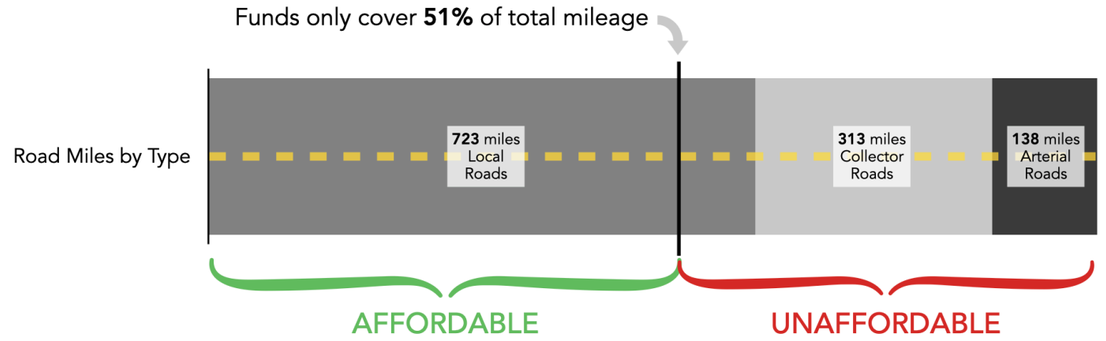
After modeling property and sales tax revenue, Urban3 estimated expenditures associated with county-maintained road infrastructure - a vital component of operating any municipality. The results of this analysis help to understand the fiscal impact of road maintenance and what that means for Shasta County's future urban and non-urban development.

Shasta County's Road Maintenance Fund is primarily funded by California Gas Tax revenue that is distributed by the State of California based on population. Based on the 2021 Operating Budget, Shasta's Road Maintenance Fund received a total revenue of $33 million. The county's $19 million in expenditures includes the costs of physical maintenance of roads, department salaries, and other services and supplies.





Shasta County's cost and revenue of roads, fiscal year 2021-2022 (above), and all roads in Shasta County (below)
Source: Shasta County Budget FY 2021-2022 Shasta County Department of Public Works (DPW)



Bar chart demonstrating the percentage of county-maintained roads that Shasta County can afford under their current budget
Source: Shasta County Department of Public Works (DPW)

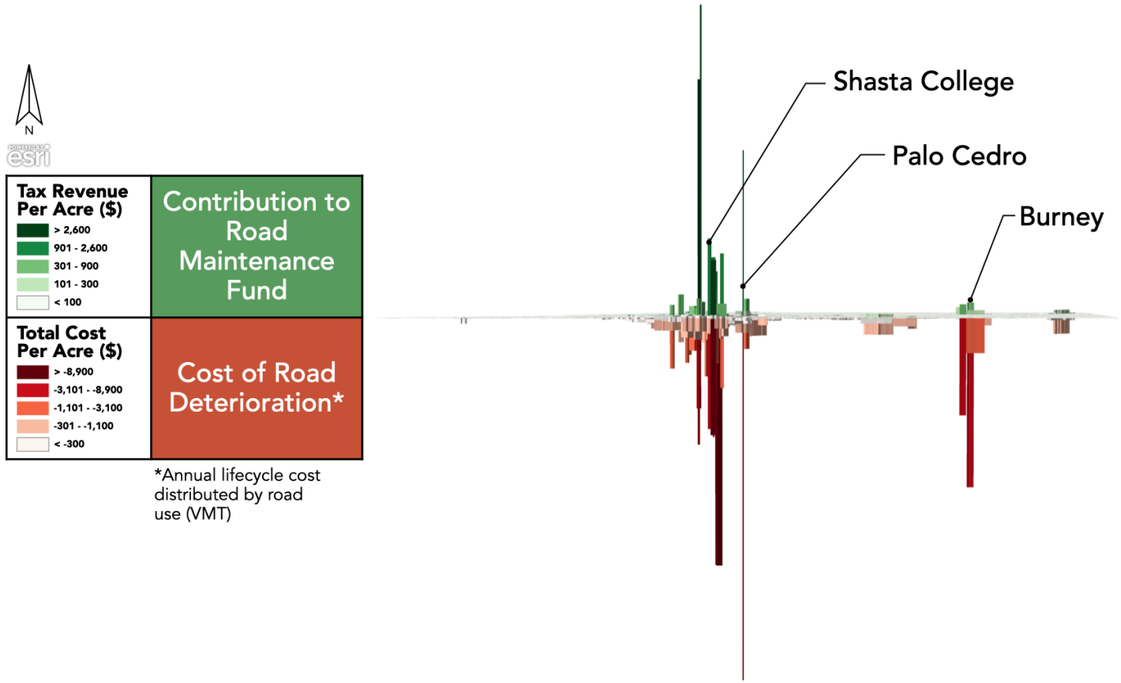
Urban3's road infrastructure analysis determined that Shasta County's total annual spending on roads should be approximately $67 million - creating a deficit of approximately $33 million. In other words, the $33 million that Shasta collects towards its road maintenance fund is $33 million short of what it should be. This large deficit, calculated as a factor of road deterioration, can be attributed to the rising costs of construction, materials, and machinery. In Shasta County's case, much of the cost comes from the size of the road system. The county is responsible for maintaining 1,175 centerline miles of road; enough road to pave from Redding to Fort Collins, CO. Most of the road system is composed of local roads with an expected annual cost of $26 million or about 64 percent of the total annualized road cost.

When considering future road costs, it is important to understand the relationship between road use and deterioration. Additionally, the County must consider how its current source of road maintenance fund - the gas tax - might change given the rise of electric vehicles and what other revenue sources can close the spending gap. Urban3 conducted a cost-revenue analysis that considered property and sales tax revenue as an alternative to funding road maintenance.

"[Shasta County] is responsible for maintaining 1,175 centerline miles of road; enough road to pave from Redding to Fort Collins, CO."

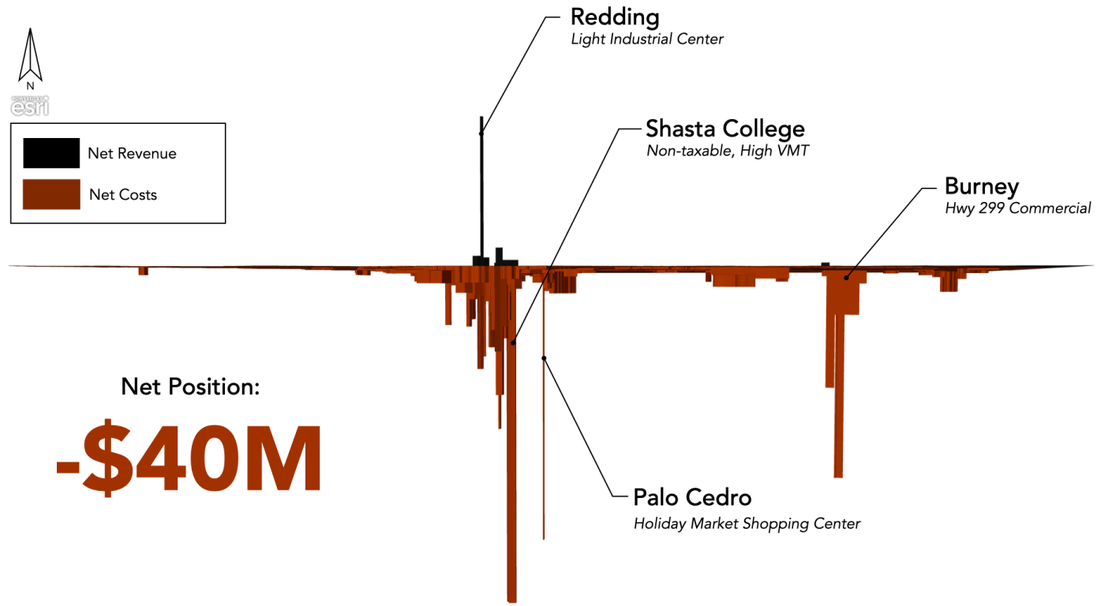
VMT and Road Costs

Ultimately, there is a direct correlation between VMT and the deterioration of a road system. The more VMT that any stretch of road experiences (how much it is used), the faster it will deteriorate and expedite the need for maintenance over time. The goal of this analysis was to answer the question: Does any given area generate enough revenue through property and sales tax to close the $33 million deficit of the road maintenance fund not supported by gas taxes? In other words, do the current land uses and commercial activity support the frequency at which the roads are used?



Road cost and tax revenue per acre by TAZ (Traffic Analysis Zone) in Shasta County
Source: Shasta County

The maintenance cost of infrastructure in each Traffic Analysis Zone (TAZ) was measured by its share of VMT. For example, if a TAZ in Cottonwood produced/contributed 10% of the County's VMT, we then multiplied that by the $67 million road infrastructure cost.



Net road costs per acre by TAZ (Traffic Analysis Zone) in Shasta County
Source: Shasta County

Lastly, to answer the question of whether or not each TAZ generates enough in property and sales tax to fund its road infrastructure maintenance, Urban3 calculated the net cost for each TAZ. We found that only 8% of the area of Shasta County currently operates at net positive (where tax revenue exceeds the cost of road infrastructure maintenance), while overall the county is operating at a net negative position of approximately $40 million. The same principles of lifecycle costs apply to other infrastructure like water and sewer pipes. As new development is added, considering the extension or reuse of existing infrastructure will be an important factor.

Key Takeaways

Increase Your Value Per Acre (VPA)

➔ Thicken Up!/Use Your Land Wisely

Allowing greater density is a simple way to increase VPA. In the context of Shasta County, density doesn't mean adding 3+ story buildings to small communities such as Cottonwood. You can grow your mainstreet commercial without disrupting the identity and character of the community. For example, developing underutilized parking lots (zero revenue production) into 1-2 story buildings has a dramatic effect on productivity. Allowing for greater density leads to greater tax revenue without expanding land area or building new infrastructure. This means the value number in the "value per acre" equation will go up, while the acres will stay the same. This yields a higher VPA and greater productivity.

Density increases often come in the form of zoning regulation changes.

➔ Encourage Infill Development

Many communities have an abundance of vacant properties or underutilized parking in their area. These properties have roads, water pipes, sewer pipes, and other infrastructure in their vicinity that can serve them. Jurisdictions should take steps to reduce vacant properties and encourage infill development. Infrastructure is already there, why not get more tax revenue from it?

This may be done by reducing development fees in certain areas, by creating investment incentives, or even by implementing a TIF (Tax Increment Financing) or TIRZ (Tax Increment Reinvestment Zone).

➔ Implement a Form-Based Land Development/ Zoning Code

A Form-Based Code is an increasingly popular method for regulating development in a community. Unlike traditional zoning, form-based codes focus primarily on building form and site development standards. This allows for a wider variety of land uses to coexist, while maintaining community character. Jurisdictions can tailor their standards to create building types that fit their local context and allow for more productive development.

Consider the Spatial Consequences of Spreading Out

➔ Understand the Cost to Maintain Infrastructure Systems

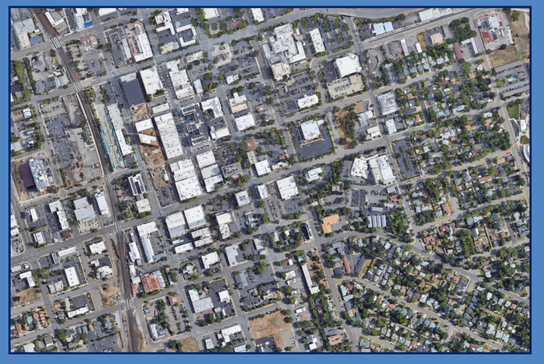
Urban3 has seen that funding for infrastructure systems (roads, sewer, water) is insufficient in covering the life-cycle expenses for these systems. Certain users of these systems may not be paying for the true cost of what it takes to serve them (meaning other users are subsidizing them). Adjust fees, with geography in mind, to adequately cover the costs of operation and maintenance or encourage infill development rather than servicing new areas.

➔ Unburden Commercial Development Regulations

The development of auto-oriented commercial properties often requires large amounts of land to satisfy parking minimums, which requires more city investment in infrastructure to service those districts. On the other hand, cities can reduce the amount they need to invest in a commercial property by eliminating parking minimums, allowing for smaller commercial parcels.

Most importantly, because these developments would consume less land, they would produce more sales and property tax per acre. By minimizing infrastructure expenses and maximizing potential tax revenue, any municipality can improve their return on investment (ROI).

"The development of auto-oriented commercial properties often requires large amounts of land..."



"...Cities can eliminate parking minimums, allowing for smaller commercial parcels."

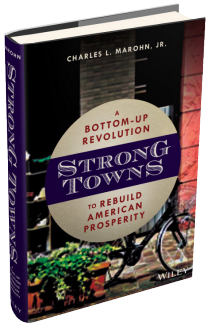
Expanded Readings

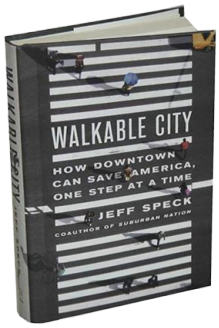
Strong Towns: *A Bottom-Up Revolution to Rebuild American Prosperity*
Charles L. Marohn, Jr.

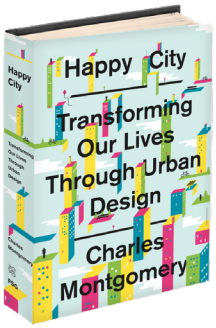
Walkable City: *How Downtown Can Save America, One Step at a Time*
Jeff Speck

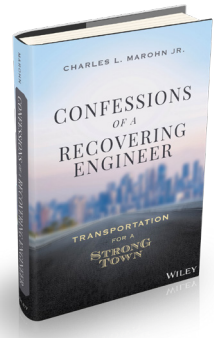
Happy City: *Transforming Our Lives Through Urban Design*
Charles Montgomery

Confessions of a Recovering Engineer: *Transportation for a Strong Town*
Charles L. Marohn, Jr.









URBAN3

Data-driven storytelling

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All data used in this analysis and report, unless otherwise noted, was provided by Shasta County. All maps are created with ESRI software.

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