



Stantec's Urban Places
Group



Reimagine 419

419 Town Center Plan
Appendix 1: Existing Conditions Report
November 27, 2018

Reimagine 419

419 Town Center Plan

Existing Conditions Report

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Stantec's Urban Places Group helps communities realize the full range of benefits that flow from fully urban, walkable downtowns, neighborhoods, and suburban centers. Driven by data and focused on resilience, our urban design team creates places, networks and infrastructure that connect people to place, to prosperity, and to each other.

All unsourced photos, graphics and maps were taken or created by the consultant team.



Photo credit: Mark Morrow

Introduction

View of the 419 Town Center study area



The Route 419 Town Center study area covers about 390 acres—roughly 300 football fields or three-fifths of a square mile. In 2011, Roanoke County staff analyzed 15 areas in the county for possible higher-density development and redevelopment under the State’s Urban Development Area (UDA) requirements. Of the areas studied, Tanglewood Mall ranked #1, and South Peak ranked #3 for areas with high density zoning, existing utilities and good transportation access. While the Board of Supervisors did not adopt Urban Growth Areas at that time, the UDA analysis has been used for other planning efforts.

Analyses of Route 419 (Electric Road) have consistently shown on-going accessibility, mobility, and safety issues in certain portions of the corridor, including the largely commercialized area between US 220 and Starkey Road. The highest traffic count in Roanoke County exists on Electric Road between US 220 and Starkey Road; this is the third-highest traffic count in the Roanoke

Valley. The County is pursuing road, bicycle, and pedestrian improvements along Electric Road between Ogden Road and US 220, through different funding mechanisms. Transit currently serves portions of the planning area.

The surrounding area (2-mile radius) includes 4,879 higher-density residential units within 45 multi-family developments. As of 2016, the estimated current vacancy rate at Tanglewood Mall is approximately 21.4%; adding underutilized retail space (educational, service, non-profit) with vacant stores raises the rate to 32.4%.

In September 2015, the Roanoke County Board of Supervisors met to discuss the County’s first-ever Community Strategic Plan. According to the report, the Strategic Plan “is a systematic process of engaging community leaders and citizens to envision a desired future for the community and translating this vision into broadly defined goals and measurable objectives to achieve those goals.”

The core focus areas of the plan included economic development, transportation, quality of life, education, community health and well-being, and public safety.

An important issue for Roanoke County is that there is very little available land for commercial development. Commercially zoned land represents 1.85% of the county’s land area. Vacant, developable, land with commercial zoning makes up 0.53% of land area in the county, with 0.08% of that located in the Cave Spring Magisterial District. If significant commercial rezoning actions are not anticipated, that means redevelopment of existing commercial areas will need to be part of the County’s economic development strategy. 96% of the Route 419 Town Center study area is now zoned for high-intensity commercial and multi-family residential development, and the Future Land Use Map designates 88% of the area for higher-density residential and commercial uses. Three property owners and their associated corporations own just over half of the study area.

This report contains additional information about the planning area and the region, including zoning, future land use, traffic counts, transportation projects, transit, demographics, multi-family housing, and the likelihood of change within the planning area.

Existing Conditions

Previous Planning Studies and Analyses

Roanoke County Comprehensive Plan (2005)

The Comprehensive Plan is a blueprint for the county's future growth and development. The document reflects the community's goals and visions of what the future might be. It also ensures that decisions based on the plan are well thought-out and in the best interests of the county as a whole. The plan contains vision statements, goals, objectives, strategies, and policies relevant to this planning study. Specifically, the Comprehensive Plan supports: higher-density commercial and residential development and redevelopment; a multi-modal transportation system; flexibility in site design while still requiring quality development with high design standards; and citizen involvement and participation in the design of large new developments and development standards.

Route 419 Transportation Plans

Numerous analyses of Route 419 have shown ongoing concerns with traffic, accessibility, mobility and safety. While these are issues throughout the corridor, the portion included within the study area between US 220 and Starkey Road has been noted for some of the highest accident rates within the County.

- A 1987 study by the Fifth Planning District Commission ranked the level of service (LOS) from US 220 to the Starkey Road in-

tersection at an "F" level during the evening peak hour and described this segment as "notably dangerous."

- A joint 2010 study by the Roanoke Valley Area Metropolitan Planning Organization (RVAMPO) and the Salem District of the Virginia Department of Transportation (VDOT) found accessibility, mobility, and safety issues between US 220 and the Starkey Road intersection. In 2010 the signalized intersection at US 220 operated at an LOS of F during both peak AM and PM periods. The report projects that the segment between US 220 and Starkey Road will reach an unacceptable LOS by 2035 and recommended a series of multi-modal improvements for this segment.

Urban Development Area / Designated Growth Area

In 2007, the Commonwealth of Virginia established a land-use planning category known as an Urban Development Areas (UDAs). UDA designations identify areas for higher-density development close to transportation infrastructure and with public water and sewer availability. These areas would accommodate projected population growth and would be identified in the localities' comprehensive plans. Roanoke County

identified 15 areas as possible UDAs that meet these criteria. The study area includes two of them: Tanglewood Mall (#1 ranking) and South Peak (#3 ranking). The Board of Supervisors did not adopt UDAs in 2011, and the legislation was amended in 2012 to make UDAs optional.

With the adoption of House Bill 2 (HB2), now known as Smart Scale, in 2014, the Commonwealth provided additional incentives for localities to designate growth areas by making this designation an eligibility requirement for receiving state funding for local transportation projects. On September 22, 2015, the Board of Supervisors approved an amendment to the County's Comprehensive Plan to include and identify Designated Growth Areas (DGAs). The six adopted DGAs are based upon Comprehensive Plan Future Land Use designations that meet UDA criteria. The Route 419 Study Area is located entirely within DGA #5, Route 419/221/Cave Spring/Windsor Hills.

Other Planning Studies / Documents

- Regional Pedestrian Vision Plan (2015)
- Bikeway Plan for the Roanoke Valley Area Metropolitan Planning Organization (2012)
- RVAMPO Constrained Long-Range Transportation Plan 2035 (2011)
- Virginia Surface Transportation Plan 2035 (2010)
- Virginia Surface Transportation Plan 2035 UPDATE (2013)
- Roanoke Valley Transit Vision Plan (2016)

Regional Context

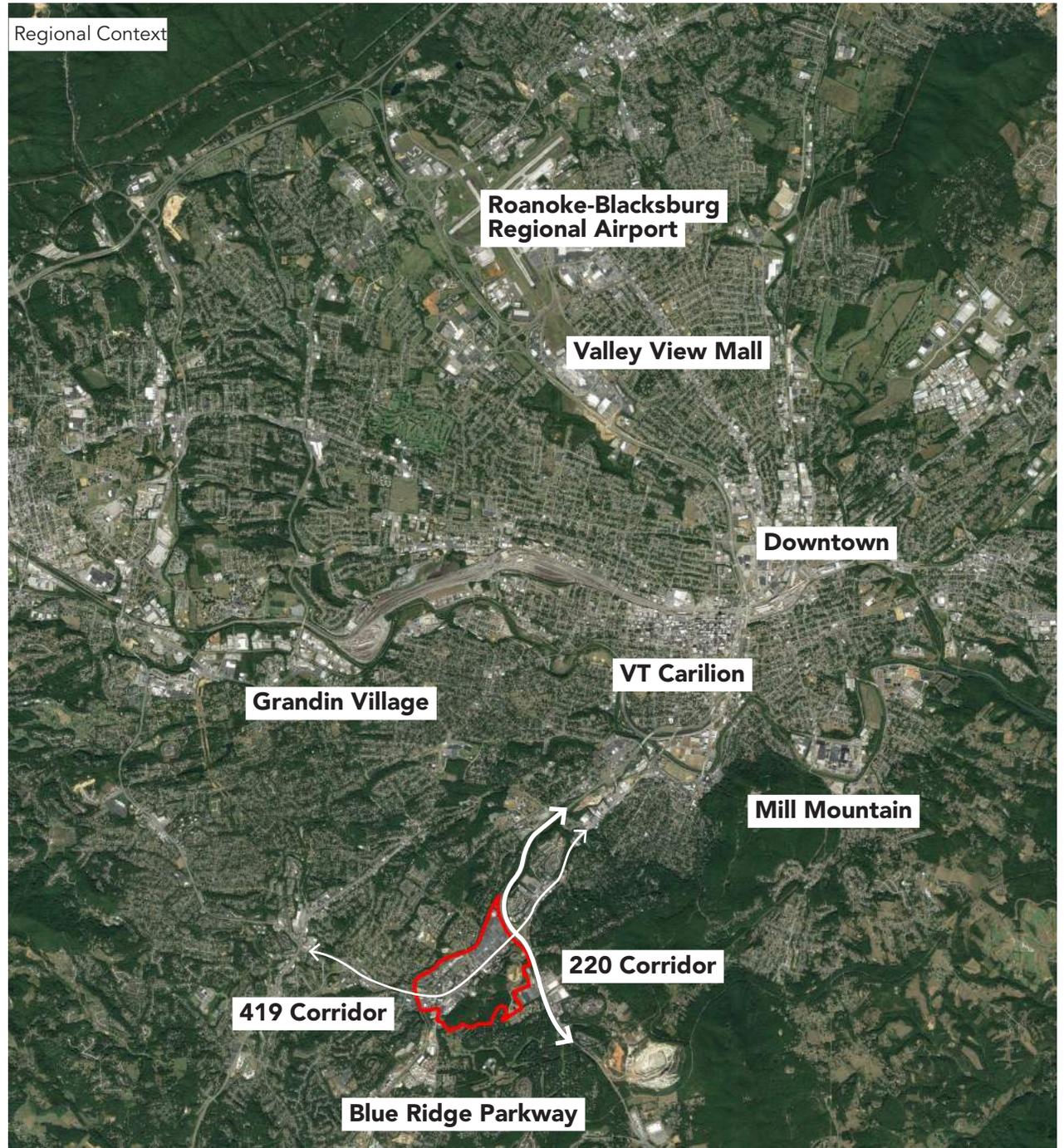
Regional Destinations

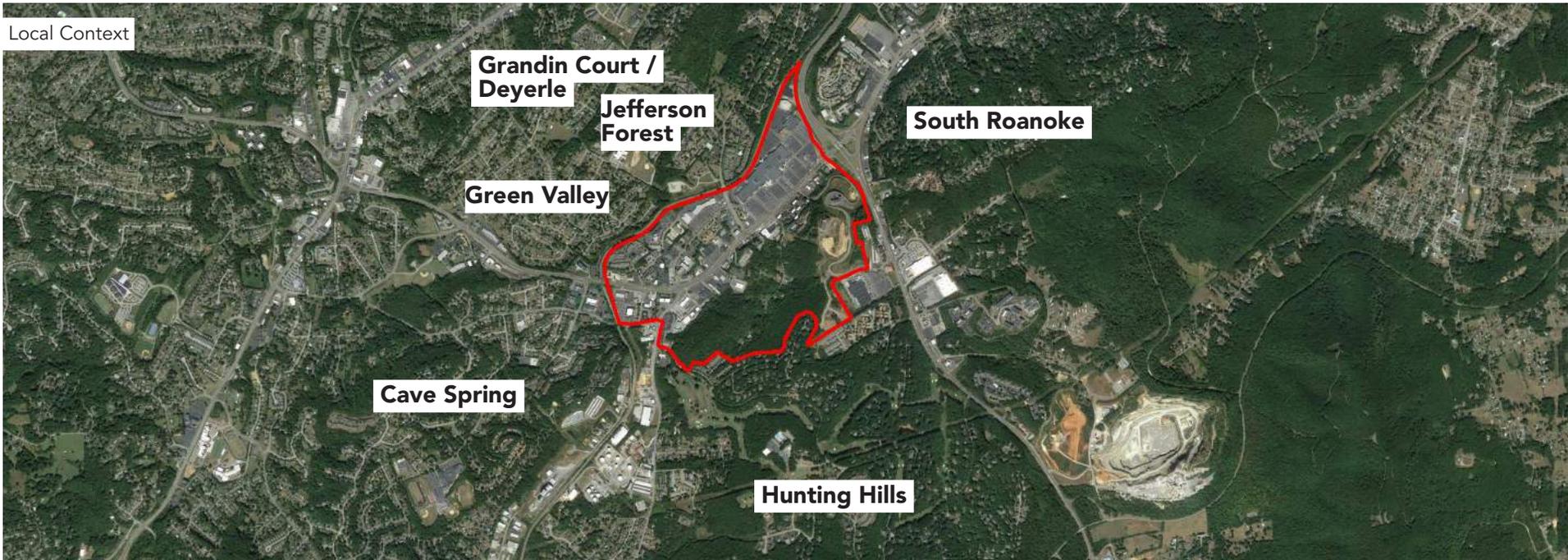
Valley View Mall

Roanoke's primary regional shopping destination, Valley View Mall, draws visitors from cities and towns many miles away. It is unlikely that Tanglewood Mall and the 419 corridor can compete with a regional mall. Instead, Tanglewood's advantage lies in its prime location, deep roots in the local economy and culture. Most 419 corridor customers live in the city or county, and the mall and adjacent establishments have long been central social and cultural gathering places for nearby neighborhoods. The Town Center plan should find ways to expand this central role in local economic, social, and cultural life.

Downtown

Downtown Roanoke is the region's commercial hub and hottest housing and cultural scene. However, most downtown real estate consists of older buildings that don't suit all tenants, and downtown lacks a large supply of central sites for large-scale redevelopment. To the extent development economics support it, a 419 Town Center could support large-scale commercial and housing redevelopment offering contemporary real estate products. The 419 Town Center could provide an alternative walkable, vibrant urban core to complement—not compete with—downtown.





Virginia Tech Carilion

A primary regional job center, the Carilion campus sits close to some of Roanoke’s most desirable residential neighborhoods and village centers. Especially with the strong multi-modal connectivity between the two (along a link that also ties to downtown), the 419 Town Center could provide an additional livable, walkable urban environment to attract existing and prospective Carilion employees. Furthermore, the 419 Town Center could complement downtown as a primary social and cultural destination for Carilion and other knowledge-sector affiliates, reinforcing the region’s ability to attract top national and international talent to Roanoke.

Blue Ridge Parkway

Among the country’s most popular national parks, the Blue Ridge Parkway passes just one mile from the 419 corridor, affording the Town Center market access to the 15 million annual visitors attracted by the region’s beautiful natural environment but also interested in authentic urban destinations to visit along their journey through the Blue Ridge mountains.

Local Context

Several distinct, established residential communities surround the study area, including South Roanoke, Hunting Hills, Cave Spring, Grandin Court / Deyerle, Green Valley and Jefferson Forest.

Tanglewood Mall and the 419 Corridor have historically served as these communities’ social and cultural center, a role the plan is poised to revive and strengthen through improved connectivity, walkability, mixed-use redevelopment, public amenities, and cultural programming.

Route 419 and US 220 also provide good access to downtown and other regional employment centers and destinations. But the communities around the Route 419 Corridor are sensitive to potential traffic impacts generated by any redevelopment, so corridor planning should include viable mobility options besides single-occupancy vehicles and avoid generating excess traffic that spills into nearby residential neighborhoods.

Demographics

Within a one-mile radius

5,400
residents in 2,830 households

41
median age

80%
white, 8% black, 7% asian

49%
family households

45%
owner-occupied housing

\$69,000
average household income

91%
drove alone to work,
5.4% carpooled

79%
went to a family restaurant
in last 6 months

47%
own a pet

Within a two-mile radius

2015		
Households by Income	Number	Percent
<\$15,000	227	7.6%
\$15,000 - \$24,999	294	9.9%
\$25,000 - \$34,999	419	14.1%
\$35,000 - \$49,999	574	19.3%
\$50,000 - \$74,999	620	20.8%
\$75,000 - \$99,999	296	9.9%
\$100,000 - \$149,999	275	9.2%
\$150,000 - \$199,999	162	5.4%
\$200,000+	111	3.7%

Median Household Income	\$49,095
Average Household Income	\$69,572
Per Capita Income	\$35,175

2015		
Population by Age	Number	Percent
0 - 4	255	4.5%
5 - 9	242	4.3%
10 - 14	263	4.7%
15 - 19	306	5.4%
20 - 24	433	7.7%
25 - 34	832	14.7%
35 - 44	676	12.0%
45 - 54	714	12.7%
55 - 64	735	13.0%
65 - 74	588	10.4%
75 - 84	365	6.5%
85+	233	4.1%

2015		
Race and Ethnicity	Number	Percent
White Alone	4,638	82.2%
Black Alone	430	7.6%
American Indian Alone	23	0.4%
Asian Alone	351	6.2%
Pacific Islander Alone	2	0.0%
Some Other Race Alone	52	0.9%
Two or More Races	146	2.6%
Hispanic Origin (Any Race)	216	3.8%

Source: U.S. Census Bureau, Esri forecasts.

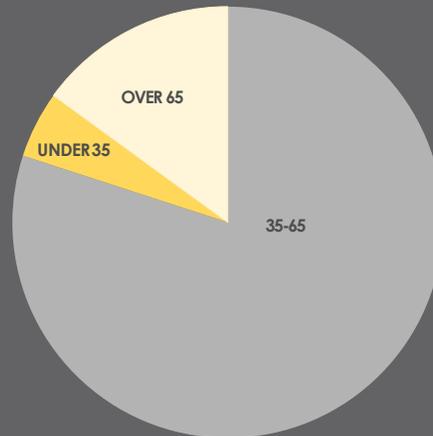
Urban Dividend

As the saying goes, demographics are destiny. Fundamental shifts in US demographics are dramatically boosting demand to live, work, and play in places that are dense and walkable as well as suburbs across the United States. That growing demand has refocused investment from suburban to urban places, creating an “urban dividend” that will reallocate trillions of dollars of real estate investment from now through 2030 and probably beyond.

Cities are in competition for people. The challenge for locations like the Roanoke Valley is to capitalize on pro-urban demographic changes to attract residents.

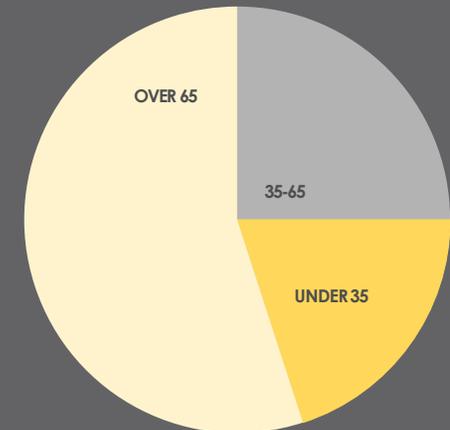
Between 1990 and 2010, people aged 35 to 64 accounted for more than three-quarters of US population growth. Looking forward, we can see the demographic outlook shifting dramatically. Between 2010 and 2030, people younger than 35 and older than 65 will account for roughly three-quarters of US population growth. As a result, roughly three-quarters of all new households will be singles or couples, essentially a 180-degree shift from the pattern that governed US markets for more than six decades following the end of World War II.

Demographics are Density - Population Growth By Age



1990-2010:

Baby Boomers and Generation X

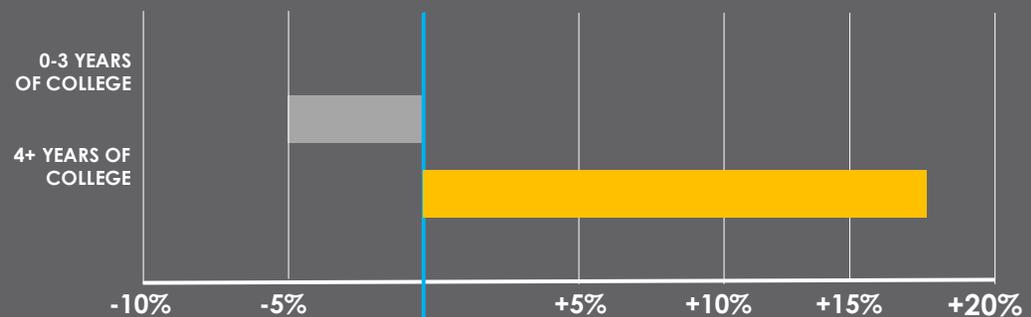


2010-2030:

Millennials and Boomers

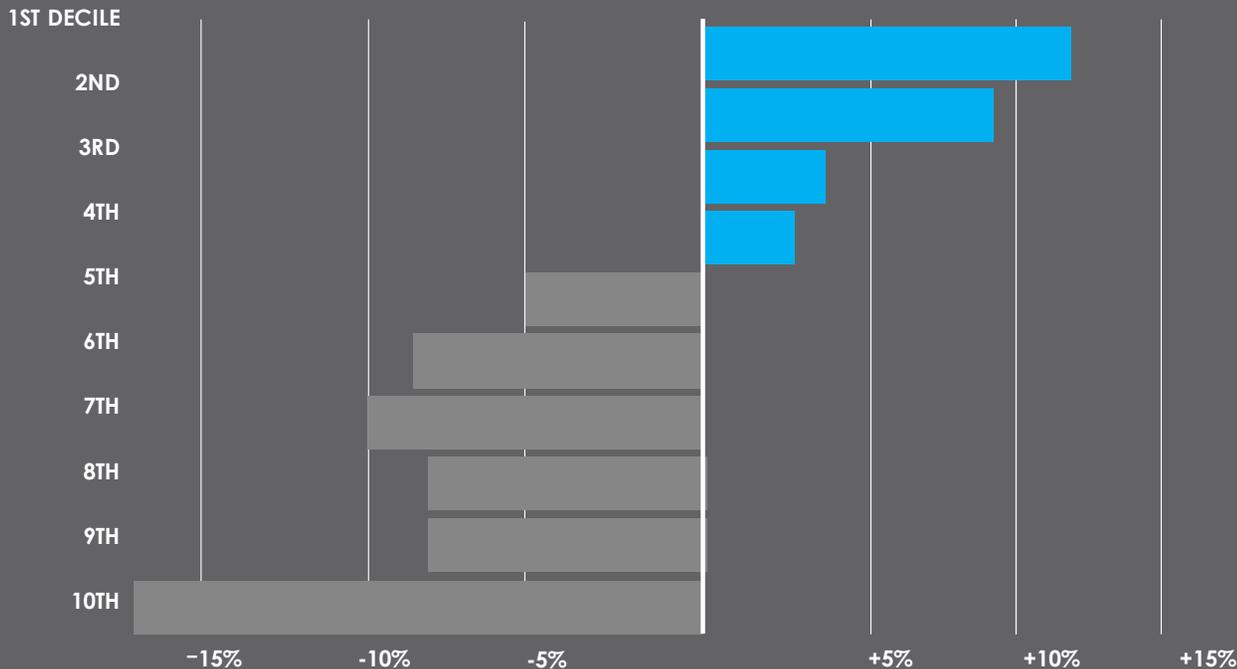
Educated households moving to dense urban cores, 2000-2014

HOUSEHOLD CHANGE IN DENSE URBAN CORES



Affluent households moving to dense urban cores, 2000-2014

HOUSEHOLD CHANGE IN DENSE URBAN CORES



What those new households want will shape housing markets. A preponderance of singles and couples strongly prefer higher-density “urban” to lower-density, single-family housing and are easily drawn to walkable, community-rich environments. That preference is translating into a profound imbalance in US housing markets. Between 2011 and 2030, the US will need to create more than 50 million new “urban” (small-lot single-family, rowhouse, and multifamily) housing units to meet demand. The development value of this new housing alone will exceed \$12 trillion.

The urban dividend, which speaks to the return on investing in higher density mixed-use developments, has additional components: affluence and education. Amenity-rich, lively and walkable environments have become magnets for the educated and affluent households. Since 2000, the fastest-growing income group in urban cores is the top 10% of households, followed in order by the next three deciles. While the top 40% of households have been moving into dense core neighborhoods, the bottom 60% have been moving out—in many cases forced out by rising urban housing costs. This inflow of affluent households correlates directly with education. The number of people with four years or more of higher education has grown in urban cores since 2000, while the number of those with less education has declined.

Zoning

The study area currently is zoned for high-density commercial and residential uses. Properties are zoned C-2 (High Intensity Commercial), C-1 (Low Intensity Commercial), R-4 (High Density Multi-Family Residential), and R-3 (Medium Density Multi-Family Residential).

C-2 zoning occurs throughout the study area, mainly for Route 419 frontage parcels and the South Peak development. Properties zoned C-1 are located at the end of Emma Lane. Properties zoned R-4 include the Copper Croft Apartments, the South Peak Condominiums, and Windy Hill Key Apartments. The majority of the R-3 zoned properties are located along Elm View Road. A zoning map of the study area appears on the facing page.

Roughly 1.8% of Roanoke County's land area (not including the Town of Vinton) carries a commercial zoning designation (C-2 zoning is 1.25%; C-1, 0.55%), and approximately 0.73% is zoned for multi-family residential (R-4, 0.13%; R-3, 0.60%). The study area's commercial zoning (C-2 and C-1) accounts for 8.4% of all the land zoned commercial throughout the county; the C-2 zoning in the study area accounts for 12% of the land with that zoning throughout the county. The study area's multi-family zoning (R-4 and R-3) makes up 10.6% of all multi-family zoning in the county. Properties zoned R-4 and R-3 within

the study area constitute 14.1% and 9.8%, respectively of the County's total for these zoning districts.



Study area breakdown by zoning classification

RANK	ZONING	ACREAGE	% OF TOTAL AREA	# OF PARCELS
1	C-2 (HIGH INTENSITY COMMERCIAL)	224.93	63%	135
2	R-3 (MEDIUM DENSITY MULTI-FAMILY RESIDENTIAL)	90.03	25%	104
3	R-4 (HIGH DENSITY MULTI-FAMILY RESIDENTIAL)	27.82	8%	41
4	C-1 (LOW INTENSITY COMMERCIAL)	13.36	4%	10
TOTALS		356.14	100%	290



Zoning

Roanoke County

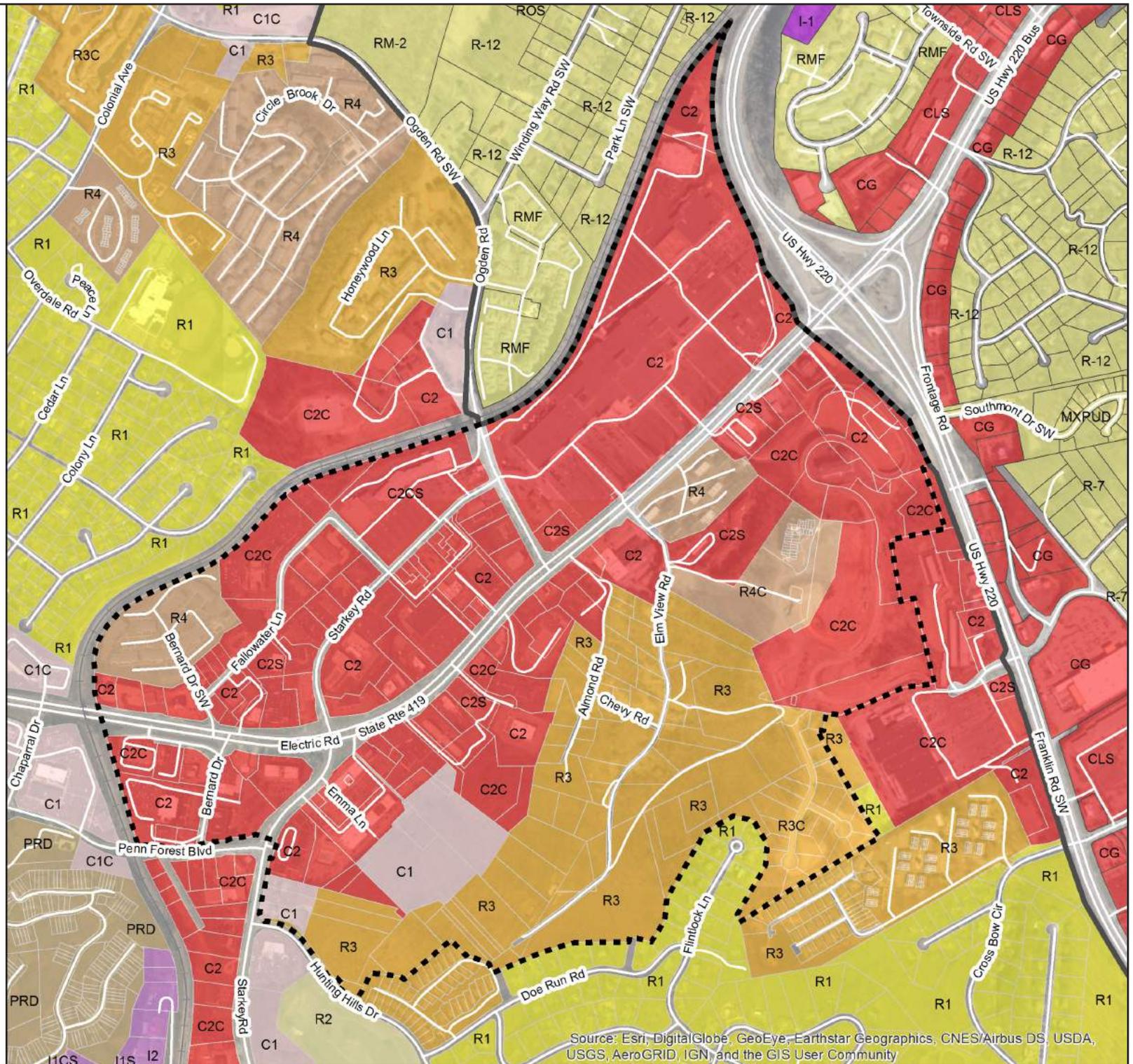
- C1
- C2
- I1
- I2
- PRD
- R1
- R2
- R3
- R4

City of Roanoke

- Residential, Mixed Use
- Commercial
- Industrial



March, 2017
 Data source: Roanoke County,
 City of Roanoke, 2016



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Future Land Use

The future land use designations within the study area include Core, Transition, Development, and Neighborhood Conservation.

Higher-density commercial and residential are recommended uses in the Core and Transition future land use designations, which account for 88% of the study area. A map of the study area's future land use designations appears on the facing page.

Neighborhood Conservation: A future land use area where established single-family neighborhoods are delineated and the conservation of the existing development pattern is encouraged. Land use types include single-family residential, neighborhood institutional centers (park, schools, libraries, etc.), and neighborhood commercial.

Development: A future land use area where most new neighborhood development will occur, including large-scale planned developments which mix residential with retail and office uses. Innovation in housing design and environmental sensitivity in site development is a key objective. Clustered developments are encouraged as is the use of greenways and bike and pedestrian trails. Land use types include conventional and clustered residential developments, multi-family residential (6-12 units per acre), planned residential/community

developments, and community activity centers (parks, schools, libraries, etc.).

Transition: A future land use area that encourages the orderly development of highway frontage parcels. Transition areas generally serve as developed buffers between highways and nearby or adjacent lower intensity development. Intense retail and highway oriented commercial uses are discouraged in transition areas, which are more suitable for office, institutional and small-scale, coordinated retail uses. Land use types include office and institutional uses, retail, multi-family residential (12-24 units per acre), single-family attached residential, and parks.

Core: A future land use area where high intensity urban development is encouraged. Land

uses within core areas may parallel the central business districts of Roanoke, Salem and Vinton. Core areas may also be appropriate for larger-scale highway-oriented retail uses and regionally-based shopping facilities. Land use types include retail, personal services, planned shopping centers, clustered retail uses, office, institutional uses, and limited industrial uses.

Study area breakdown of future land use

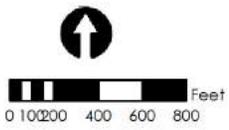
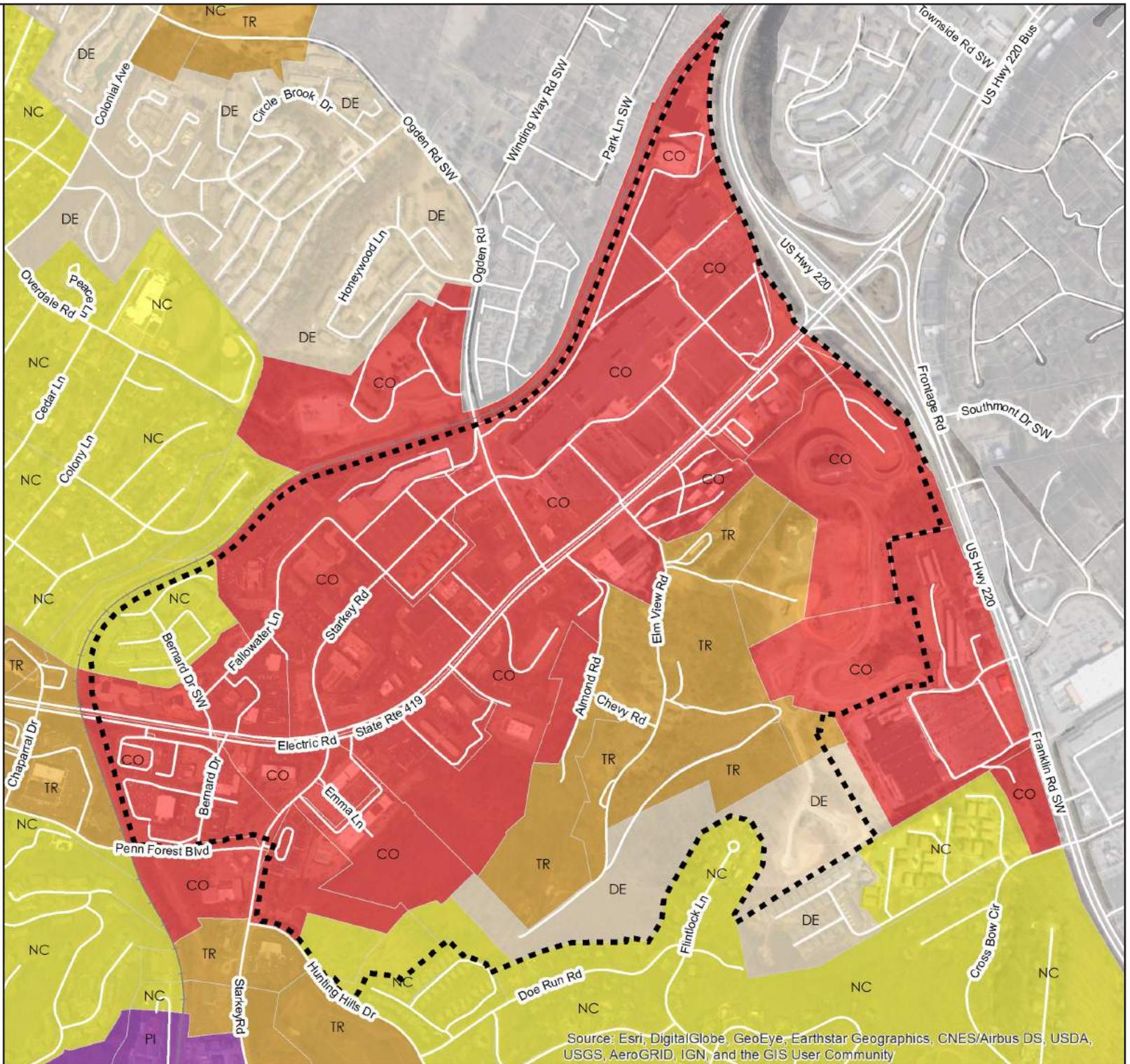
FUTURE LAND USE	ACREAGE	% OF TOTAL AREA
Core	275.71	71%
Transition	64.7	17%
Development	27.66	7%
Neighborhood Conservation	19.74	5%
Totals	387.81	100%





Future Land Use

- Neighborhood Conservation
- Development
- Transition
- Core
- Principal Industrial



March, 2017
Data source: Roanoke County,
City of Roanoke, 2016

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Topography and Floodplain

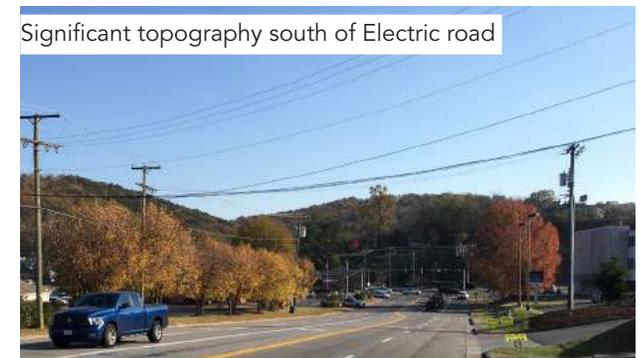
The topography along the Electric Road study area features some significantly steep terrain. The areas that are located on the southeast side of the study area (where the majority of parcels are owned by Smith/Packett or Old Heritage Corporation) are particularly mountainous, with the majority of the property over 15% slopes, with a large amount exceeding 25%, as seen in Topographic Map. This area features the majority of the steep 25% slopes for the entire area of study.

Development on the steep terrain will most likely require a larger amount of earthwork, as well as the construction of retaining walls, increasing construction costs. Recent construction, as a part of the South Peak development, demonstrates the extent of walls that could be necessary. Additionally, longer access drives and roads may be required to navigate across the excessive grade. While no geotechnical borings have been done as a part of this study, it is reasonable to expect to encounter rock while performing earthwork in this area.

The northwest side of Electric Road features slopes that are 15% or less and easier to be redeveloped. While some of these areas may require the use of retaining walls, the magnitude of that need is greatly reduced, allowing for development costs to be saved against the need for retaining walls.



The area immediately to the southeast of Electric Road features some steep slopes and existing retaining walls, however there is an opportunity for commercial redevelopment on approximately the first two hundred feet off the road, as these areas were previously developed and graded out.

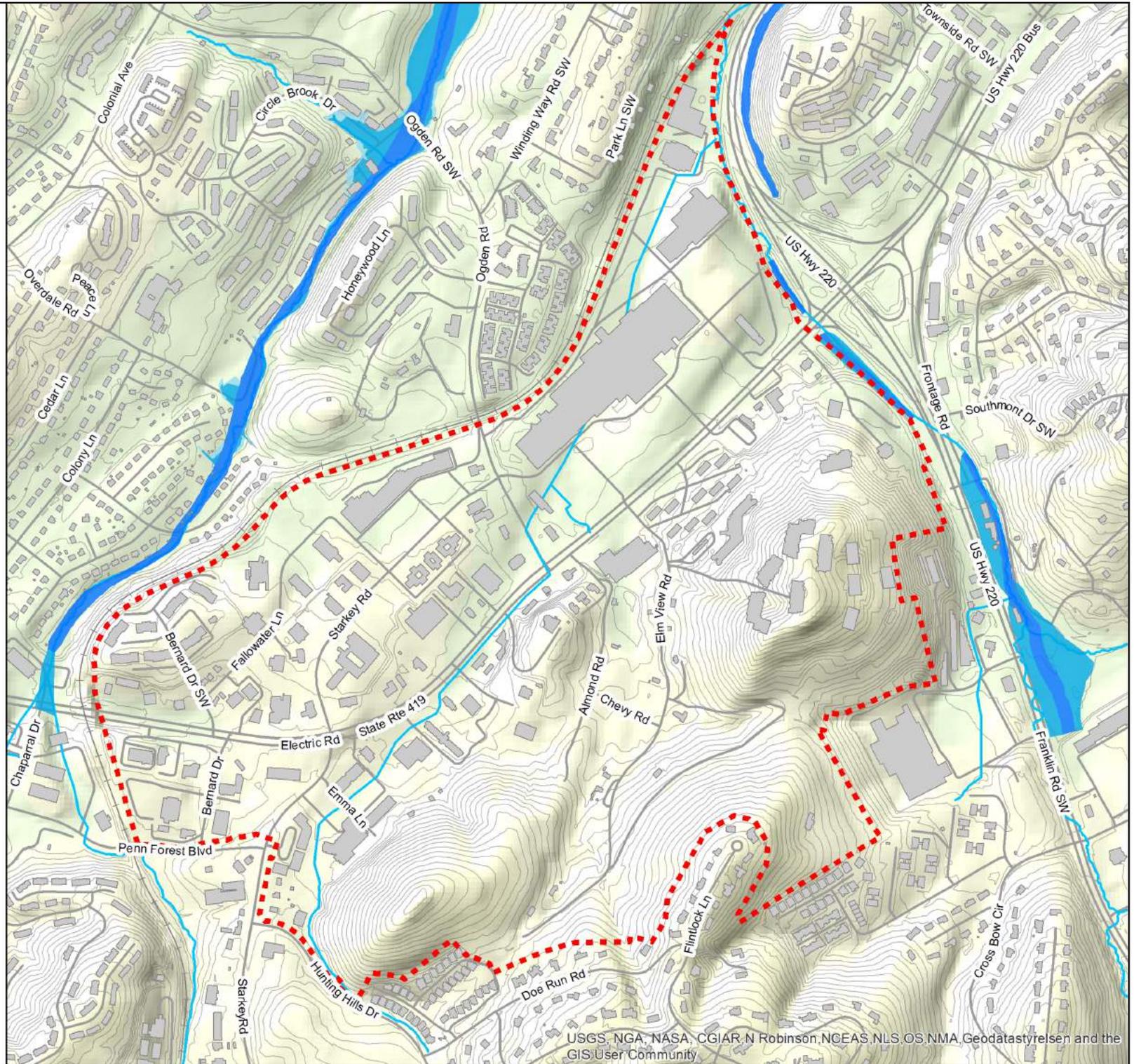


The previously developed areas along the Electric Road corridor are fairly level, as they were graded out during the original development of these parcels. These areas include Tanglewood Mall and the Old Country Plaza at the corner of Ogden Road and Starkey Road, as can be seen by the areas featuring no shading in the Topographic Map above.



Topography/Floodplain

-  500-year Floodplain
-  100-year Floodplain
-  Floodway (AE)
-  Streams
-  Topographic lines



0 100 200 400 600 800 Feet

March, 2017
Data source: Roanoke County,
City of Roanoke, FEMA, 2016

USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodastystreisen and the GIS User Community.

Transportation

The 419 Town Center Study area continues to undergo land use and transportation changes. As development occurs and travel patterns change, the area’s mobility needs will change as well. Understanding existing and potential mobility conditions will play a central role in developing sound recommendations to reinforce the 419 Town Center Plan’s vision for revitalization. The limits and opportunities of existing transportation patterns set the stage for subsequent analysis and recommendations.

Road Network

Major Roads

U.S. Route 220 is a major north-south state highway that extends from the North Carolina state line through Roanoke to the West Virginia state line. South of Roanoke, US 220 is a four-lane highway within the proposed Interstate 73 (I-73) corridor.

State Route 419, also known as Electric Road within the study area—serves as a major, north-east/southwest thoroughfare that connects the

study area to Roanoke. The roadway has two to three travel lanes in each direction and experiences an average daily traffic volume of approximately 42,000 vehicles (see traffic counts table below).

Streets

Ogden Road is west of the Tanglewood Mall property and connects to Colonial Avenue north of the study area. The roadway has up to two travel lanes in each direction within the study area, and one travel lane in each direction north of the study area.

Starkey Road is an important connector road on the southwest side of the study area that connects to Buck Mountain Road. When Rt. 419 becomes congested, many motorists use Starkey Road as a bypass. The northern portion of Starkey Road connects Rt. 419 and Ogden Road. With limited capacity, this portion of Starkey Road would be a strong candidate for a complete street retrofit.

Fallowater Lane connects Rt. 419 to Starkey Road. It is similar in capacity to the northern portion of Starkey Road and would be a strong candidate for a complete street retrofit.



Parking

All businesses and residential buildings in the study area have dedicated off-street surface parking, and there is currently no on-street parking within the study area.

Traffic counts for Route 220 and Route 419 from 2014 to 2017

ROUTE	ROUTE NAME	START	END	2014	2015	2016	2017
US 220	Roy Webber Expressway	Bus US 220, SR 419, Electric Road	Wonju Street	44,000	51,000	50,000	51,000
US 220	Franklin Road	South Corp. Limit Roanoke	Bus US 220; SR 419 Electric Road	36,000	34,000	33,000	34,000
VA 419	Electric Road	US 220; Bus US 220 Franklin Road	80-904 Starkey Road	43,000	46,000	42,000	42,000

Transit

Valley Metro is the public transportation provider for the Roanoke Valley and provides fixed routes within the study area as well as specialized transportation for individuals with disabilities. While there are several routes that cross through the study area, there are limited amenities in terms of bus stops. Frequency of the buses is limited during weekends and evening hours, and accessibility for residents with disabilities was a voiced concern during the October 2016 kickoff event.

Transit Vision Plan

The Roanoke Valley Transit Vision Plan was a three-year planning effort that began in 2013 and was completed in September of 2016.

As part of the long-term recommendations, the Transit Vision Plan identifies the Rt. 419 Corridor as one of four areas that should increase frequency, increase hours of service, add additional weekend service, and add additional routes. According to the plan, frequent transit “supports and encourages

dense mixed-use development that increases property values and quality of life.” The goals and recommendations within the Transit Vision Plan align with the core goals expressed from the onset of the 419 Town Center Plan project.

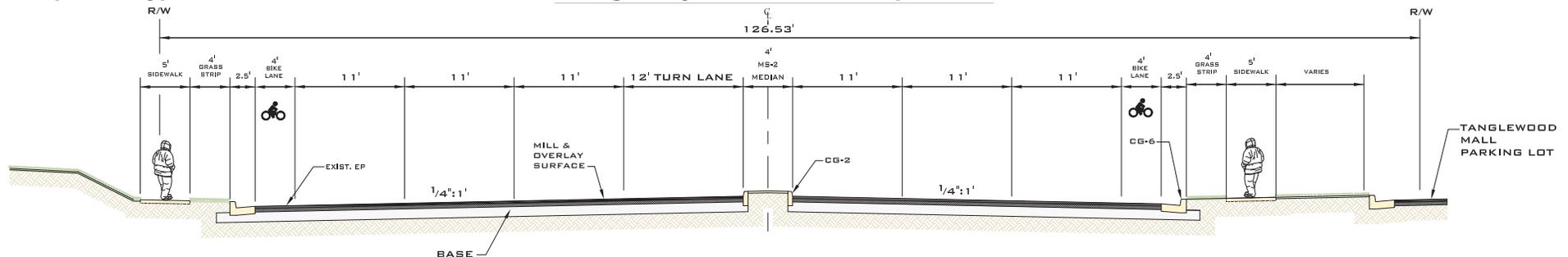
Bicycling

Limited bicycle amenities currently exist within the study area. As part of the Electric Road Widening, Safety, and Multimodal Improvements project that is currently underway, four-foot bike lanes are proposed on both sides of Electric Road.

Greenways

The closest greenway trail is the Murray Run Greenway that connects Colonial Avenue at Virginia Western Community College (just northeast of the study area) to Grandin Road SW. While this greenway is just over a mile from the study area, there are no current connections. Any likely connection would occur along Ogden Road SW.

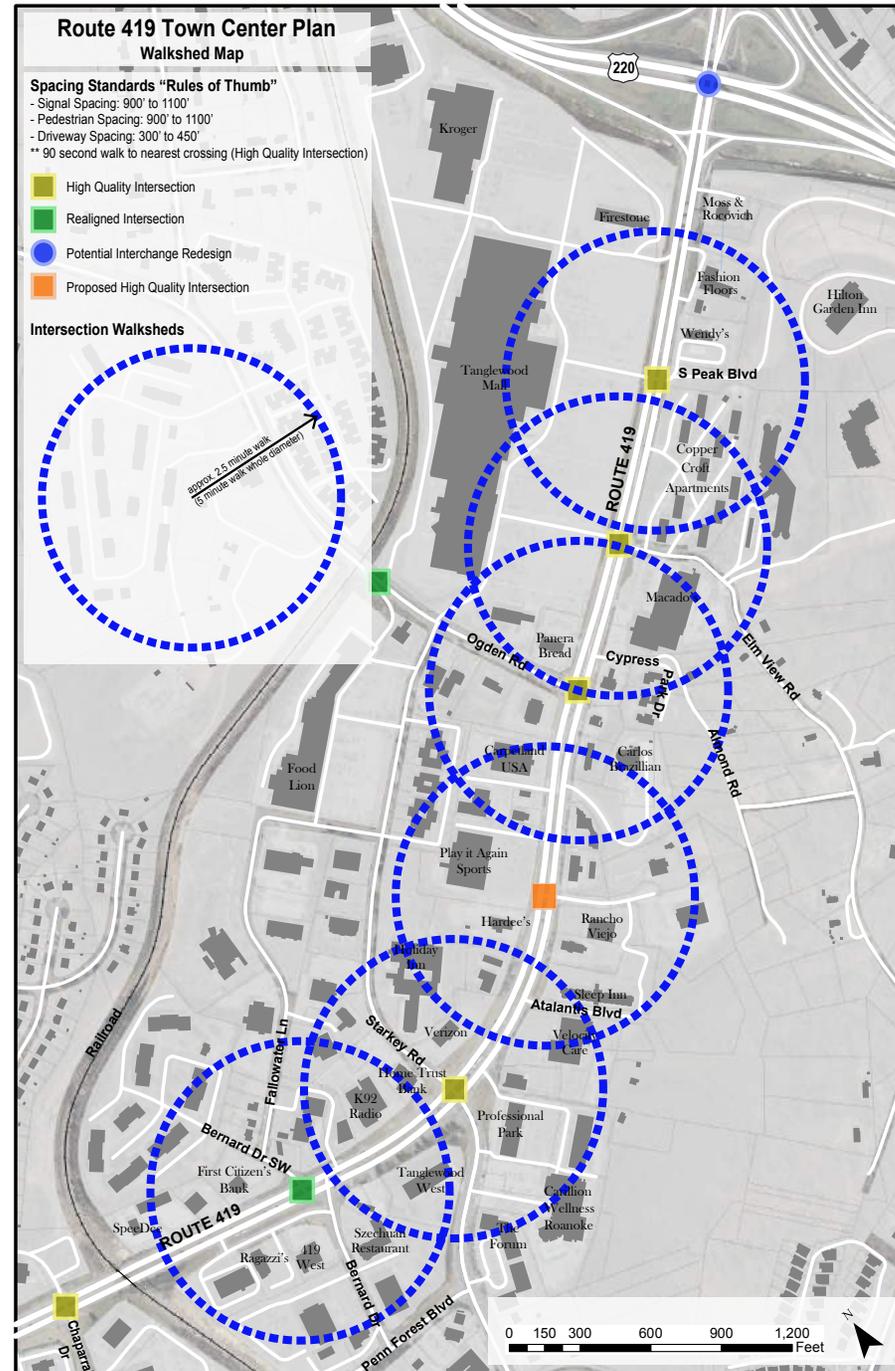
Example of a typical section from the Electric Road widening safety, and multimodal improvements



Walking

Pedestrian conditions within the study area vary greatly. While they are relatively safe within each of the existing developments, there is very little to no connections between areas in the corridor. Additionally, as the following map indicates, there are no safe pedestrian crossings within 5-minute walk zones.

New developments such as South Peak do not include sidewalks along connector roads. In some instances, sidewalks have been installed with new development, but they end at the property lines. During an initial tour of the existing conditions, the relatively high percent of pedestrians trying to access the study area became highly noticeable. Dirt paths (sometimes referred to as desire trails) highlight the pedestrian traffic patterns of residents, particularly near transit stops. Pedestrians were also seen crossing Electric Road in numerous locations. As the images on the following page make clear, pedestrian activity exists within the study area, but supportive amenities do not.



Pedestrians crossing Ogden Road near Starkey Road



Pedestrians crossing Electric Road between lights and moving traffic



The center raised median on Electric Road is not designed or intended as a pedestrian safety zone



A newly installed sidewalk along Franklin Road near the study area ends abruptly at the property line



The dirt path along Ogden Road highlights the need for improved pedestrian infrastructure



Electric Road Project: Route 419 Widening, Safety, and Multimodal Improvements

Smart Scale funding was approved in 2016 for a multimodal project along the most congested part of Route 419, between Ogden Road and US 220. The estimated cost for this project is \$5.8 million. Preliminary Engineering is currently underway, and the project is planned to be completed by 2022.

Proposed improvements include:

- Add one southbound, outside lane from Ogden Road to US 220, Franklin Road, which will become southbound exit lane.
- Reduce pavement widths and add bicycle lanes to outside of the travel lanes.
- Add sidewalks on the Tanglewood Mall side from Ogden Road through the US 220 interchange.
- Add sidewalks on the opposite side of the street from Ogden Road to South Peak Boulevard.
- Add pedestrian crosswalks and signals at Ogden Road, Elm View Road and South Peak Boulevard.
- Consolidate three bus stops into one bus shelter.

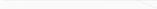
A diagram of the planned changes is on the following page.

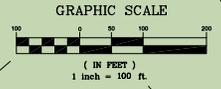
Concept Plan for the Route 419 Widening, Safety and Multimodal Improvements Project



NOTE:
LANE STRIPING ON PLAN
IS EXISTING CONDITION.
SEE SHEET 2 FOR CHANGES
IN LANE WIDTHS AND
STRIPING.

LEGEND

-  RETAINING WALL RW-3 (620 L.F.)
-  5' SIDEWALK (3,840 L.F.)
-  NEW PAVEMENT (689 SY.)
-  2" ASPHALT OVERLAY (2,336 TONS)
SURFACE AREA = 21,234 S.Y.
-  CONTINENTAL CROSSWALK STRIPING (667 L.F.)
-  PEDESTRIAN SIGNALS
(3 INTERSECTIONS)



Water and Sanitary Sewer (Wet Utilities)

Water and Sewer are provided in and throughout the study area, with both systems operated by the Western Virginia Water Authority (WVWA). The existing systems are appropriately sized for future development, with capacity for both water and sewer available.

While there are some unique existing elements, such as the interior waterline at Tanglewood Mall owned by the WVWA or a few private sanitary lines, there are no concerns for future development. Any redevelopment of the existing sites, would require water and sanitary lines be placed into easements, alleviating any potential existing operational concerns.

The water system features 16" main lines running down Ogden Road, and then from Ogden Road to the east in Electric Road up to the County line. The Route 419 area is sourced by the Hidden Valley/Penn Forest system which has three primary storage facilities. The three storage tanks and their capacities are as follows: Algoma tank, located between Starkey Road and Chaparral Drive, with a capacity of 500,000 gallons; Oriole Lane tank (near Chaparral Drive and Merriman Road), with a capacity of 250,000 gallons; and the Hidden Valley tank, located along Sugar Loaf Mountain Road (near Grandin Road Ext), with a capacity

of 500,000 gallons. The system features a hydraulic grade line (HGL) at elevation of 1388.

In addition to the aforementioned water system that feeds the Route 419 area, there is redundancy from the system that supplies South Peak and the area on the southeast side of Electric Road where the majority of the parcels are owned by Smith/Packett and Old Heritage Corporation. This area is fed by two systems, Carvins Cove and Spring Hollow, which have an HGL of 1550, with the peak of the study area being approximately 1400 (per GIS data). Carvins Cove features a 500,000 gallon tank, located on Route 220 near Rockydale Quarry, while Spring Hollow has a 1,000,000 gallon tank at Sugar Loaf Mountain. The redundancy this supply provides to the Route 419 corridor, requires pressure reducing valves at the connection points.

The sanitary system drains to Roanoke Regional Water Pollution Control Plant, which has a capacity of 55 million gallons per day

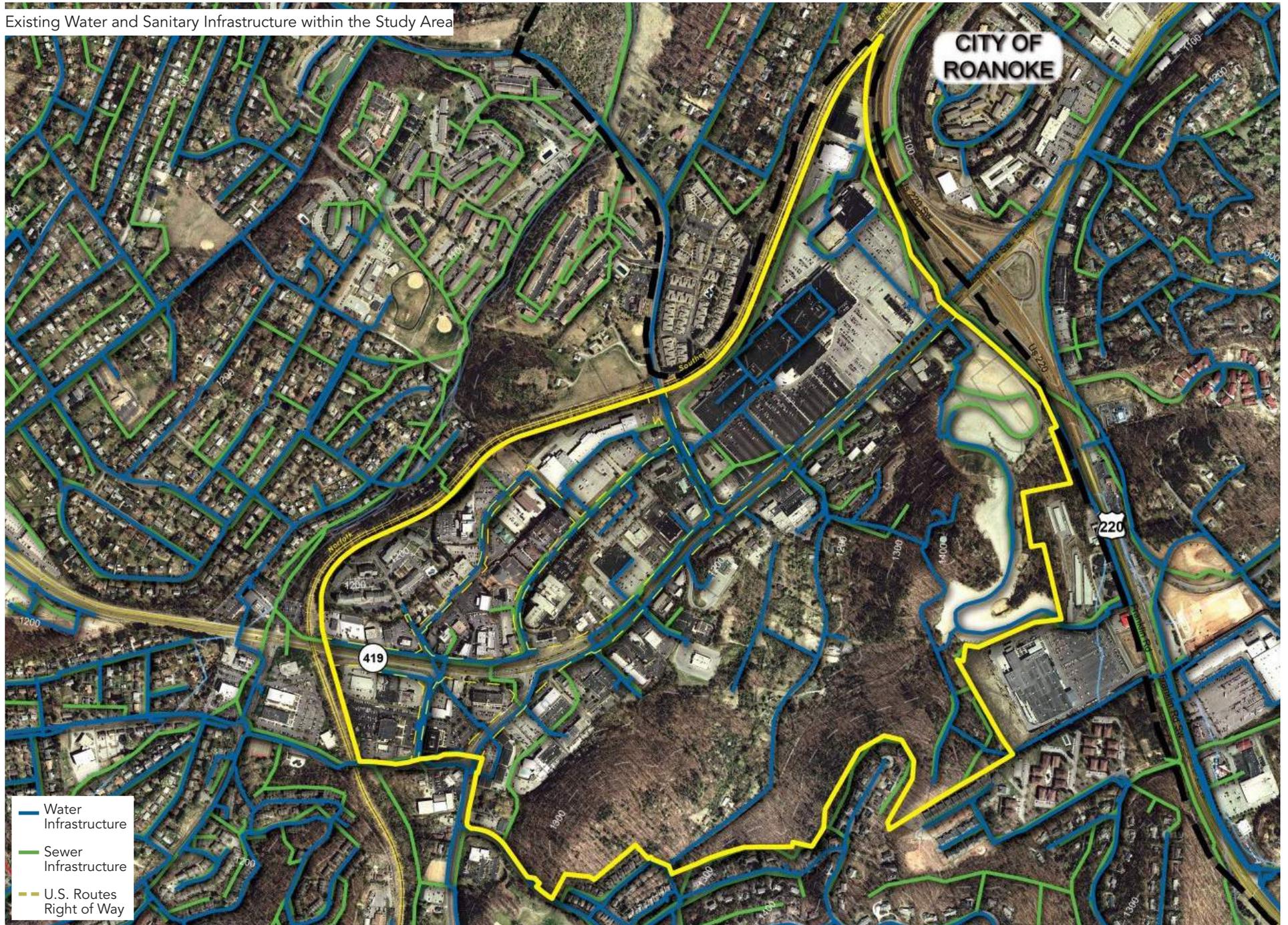
(MGD), while it currently sees an average daily flow of 37 MGD. The redevelopment of the corridor will not put any unnecessary strain on the treatment plant, as it is more than adequate for the additional development.

There are some limitations along Fallowater Lane (5314, 5318, 5324, and 5332) and Bernard Drive SW (5301), as it relates to obtaining gravity sanitary service. Per discussions with the WVWA it has been confirmed that the parcel on Bernard Drive SW would require pumping and the parcels along Fallowater Lane most likely will, although those have not yet been confirmed and there may be opportunity for service to be extended through a parcel along Electric Road, if an easement can be gained. The parcels in question have been outlined in Image 2 below. These areas should be further researched to best understand what opportunities are available for future development, as it may be possible to install a small pump to better drain the sanitary system out of this area.



- A** 5314,5318,5324 and 5332 Fallowater Lane
- B** 5301 Bernard Drive

Existing Water and Sanitary Infrastructure within the Study Area



Electric, Gas, and Broadband (Dry Utilities)

Meetings with Appalachian Electric Power and Roanoke Gas confirmed that the supply of both utilities was available to provide supply towards the redevelopment in the area. Both services, power and gas, noted that the existing infrastructure would support increased useage and that improvements and service could be expanded during redevelopment to meet the needs of new residential and commercial development.

In 2017, the Roanoke Valley Broadband Authority completed a 25 mile fiber expansion project. This expansion is the second phase of a project to install 50 miles of fiber, bringing fiber into the Route 419 corridor, enhancing broadband connections and opportunities.

Stormwater

Currently, the majority of the study area just off of Electric Road is highly impervious. This will allow improvements to occur with the benefit of the redevelopment guidelines, as outlined in the Type IIB Stormwater guidelines. These guidelines, which make use of the Runoff Reduction Method Spreadsheet, will require redevelopment of impervious surfaces to treat approximately 20% of the generated pollutant load.

Bird's eye view of Tanglewood Mall showing large areas of impervious surface



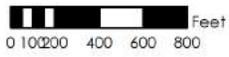
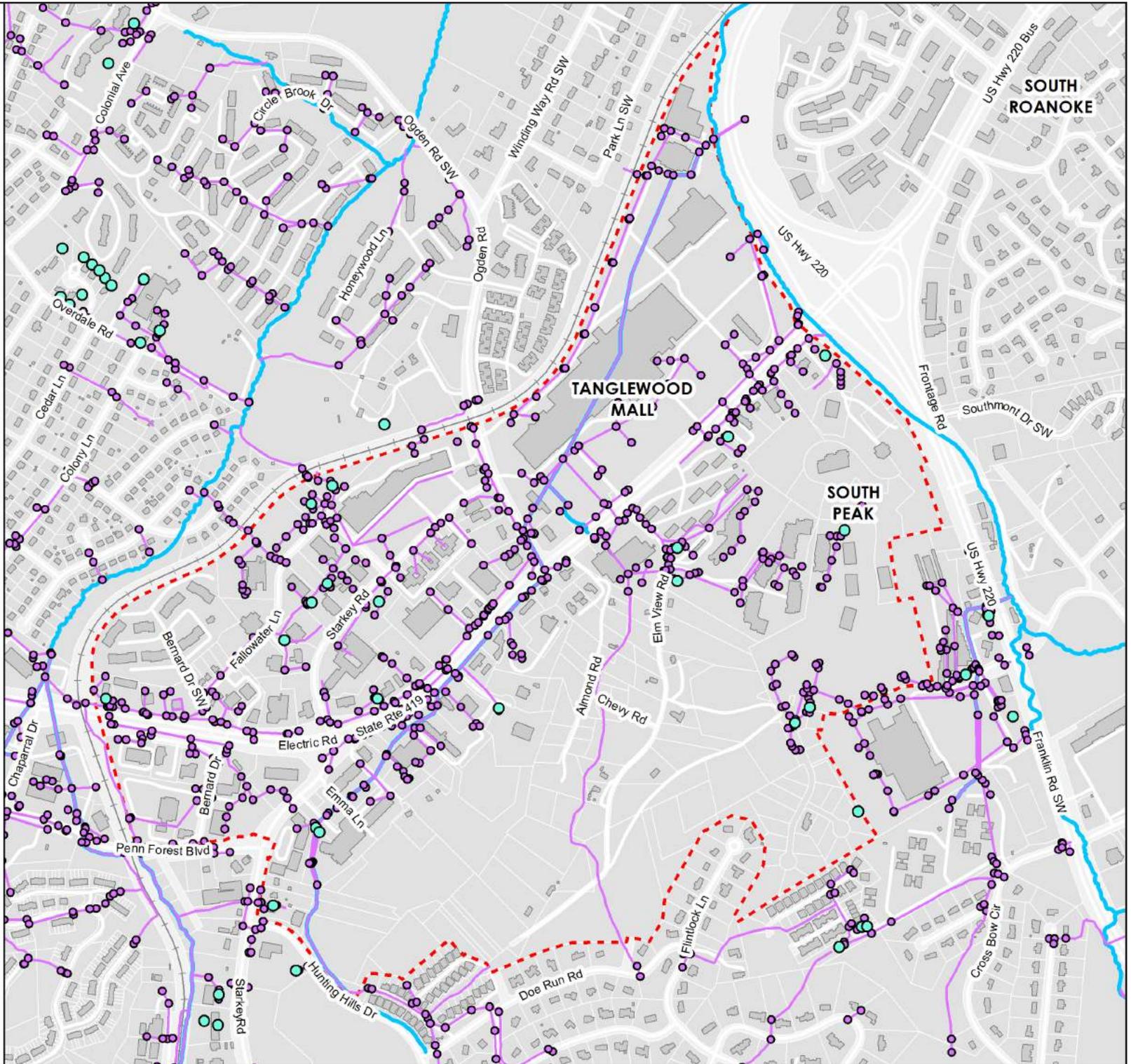
In addition to the above, flow runoff from future development in the currently developed areas, will benefit by being able to more easily meet the requirements of the downstream channel. The downstream channel, if inadequate, requires analysis to demonstrate that the post developed flow rate is equal of less to the pre-developed flow multiplied by a reduction factor and a ratio of the pre-developed volume to the post developed volume. This ratio for the highly impervious existing parcels could be greater than one, especially if some green spaces are added as a part of the revitalization.

Lastly, the existing storm infrastructure appears to be in good standing. The largest concern was the storm infrastructure at Tanglewood Mall, as a large pipe runs underneath the existing building. Ideally, this condition will be remedied during some phasing of infrastructure improvements and redevelopment of this parcel, as this storm line conveys the majority of the site's drainage area to the stream that runs along Route 220.



Storm Water

-  Retention Pond
-  Storm Drain
-  Storm Sewer
-  Streams
-  Study Area
-  Railroad
-  Buildings
-  Parcels



March, 2017
Data source: Roanoke County,
City of Roanoke, 2016

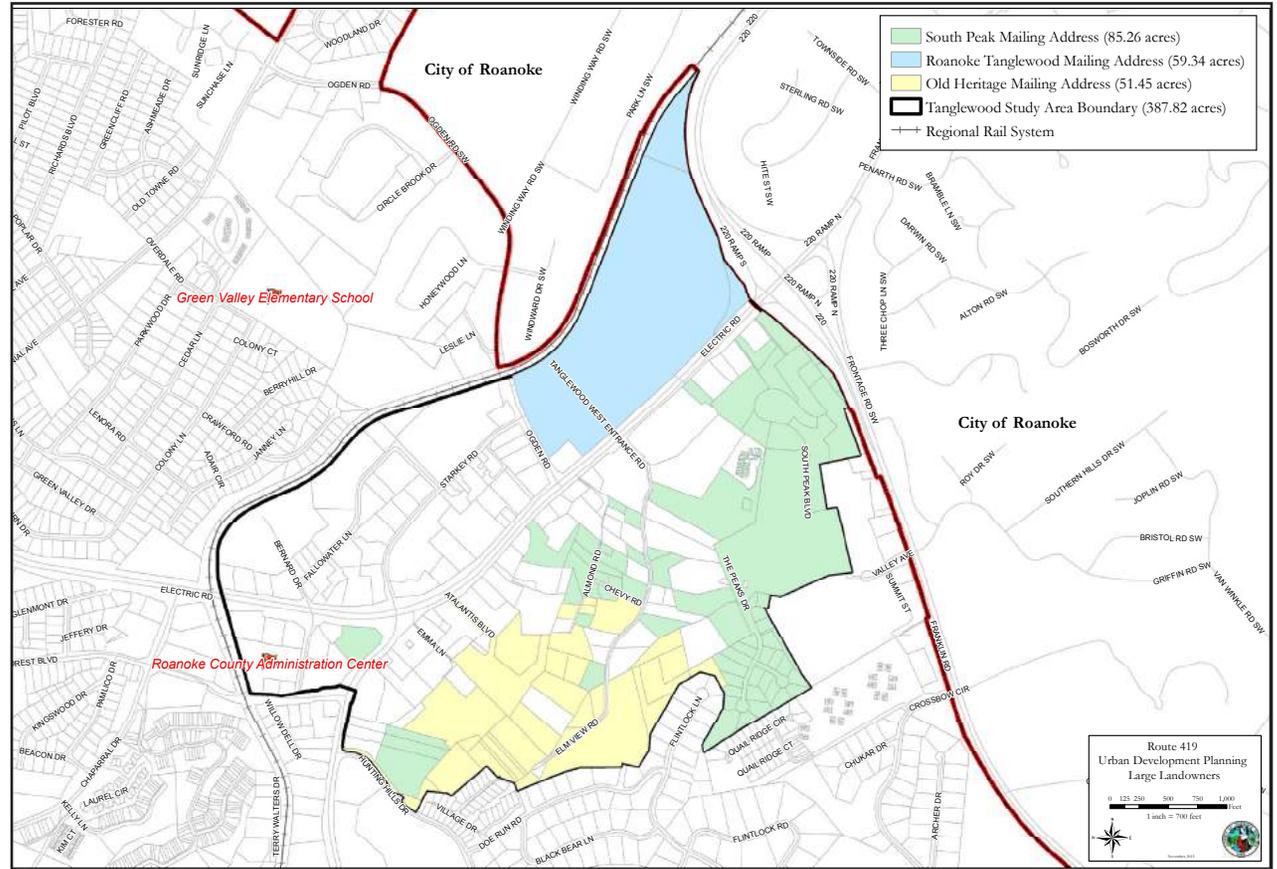
Large Land Owners

Three major landowners own a total of 196.05 acres within the study area, or 50.6% of the total area. South Peak and its associated corporations own 85.26 acres (22%); the owners of Tanglewood Mall own 59.34 acres (15.3%); and Old Heritage Corporation owns 51.45 acres (13.3%).

Tanglewood Mall



Hilton Garden Inn at South Peak



Old Heritage Corporation property (hillside)



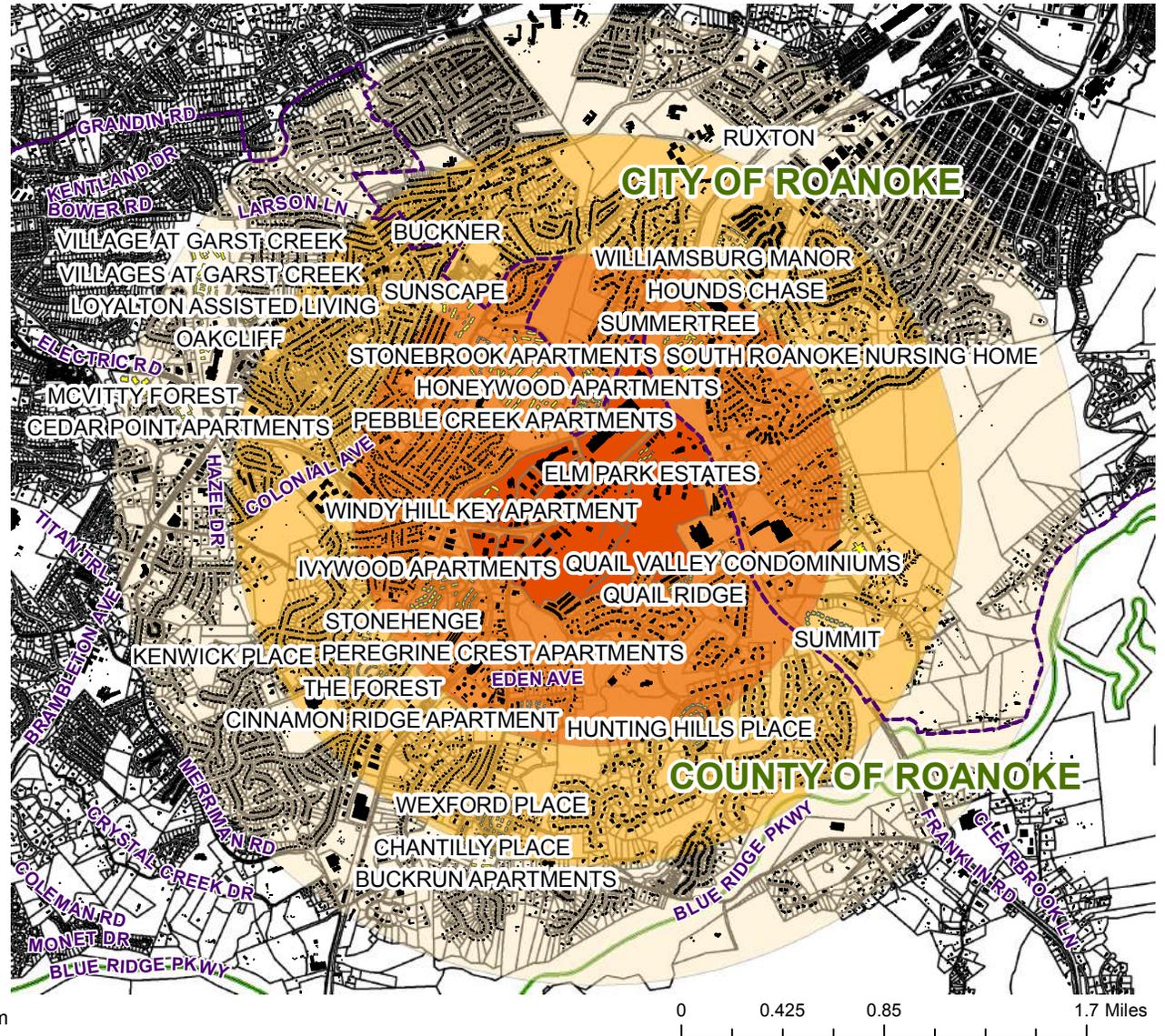
Multi-family Housing

South Peak multi-family development



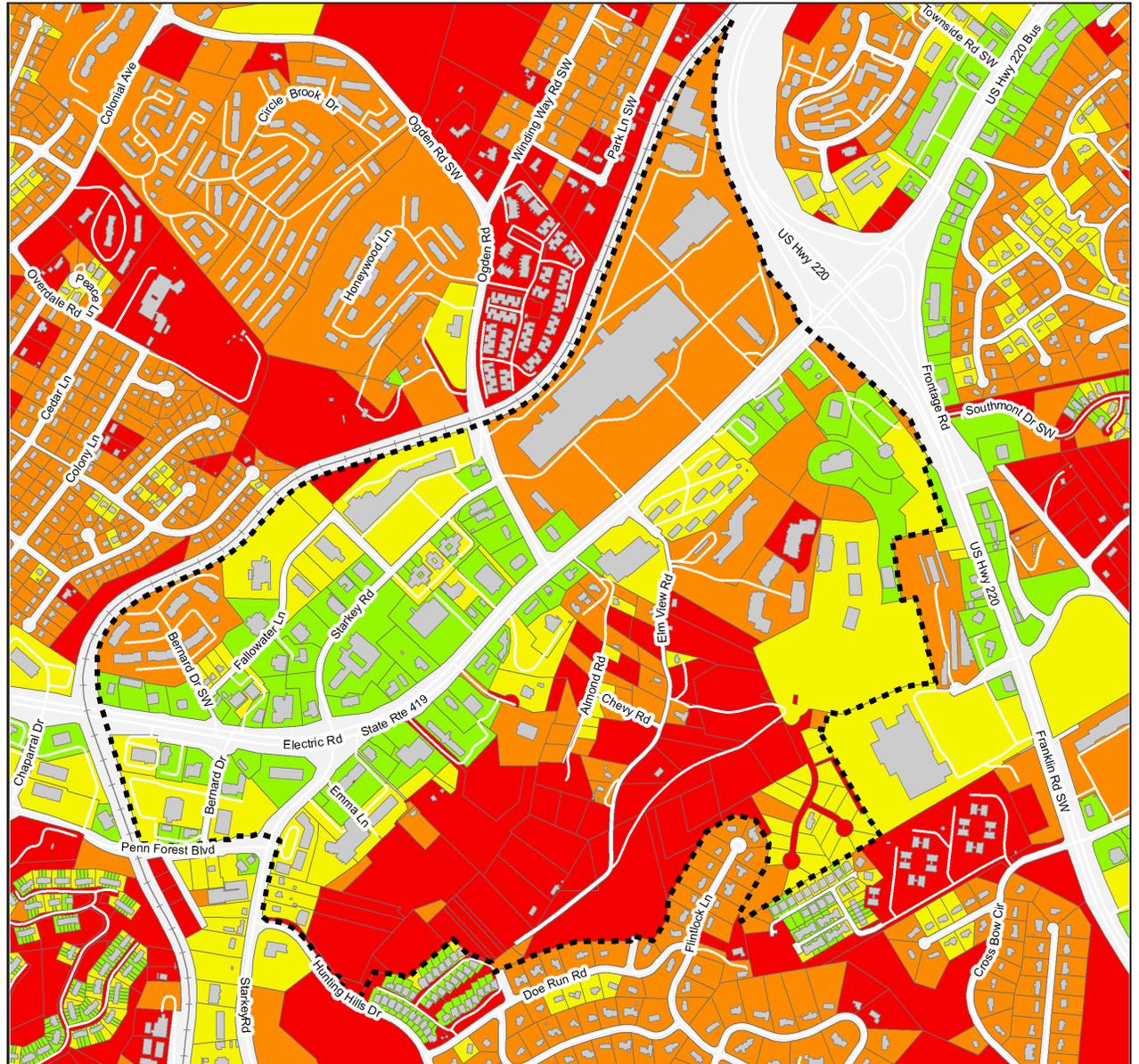
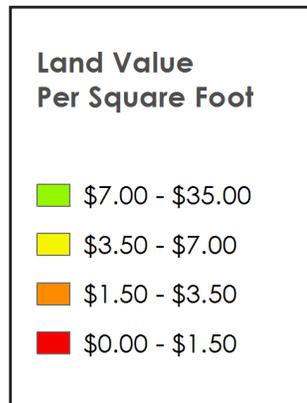
There are many multi-family housing developments located within a radius of two miles of the study area

- Study Area: 4 developments
- Within One Mile: 22 developments
- Within 1.5 Miles: 36 developments
- Within 2 Miles: 45 developments



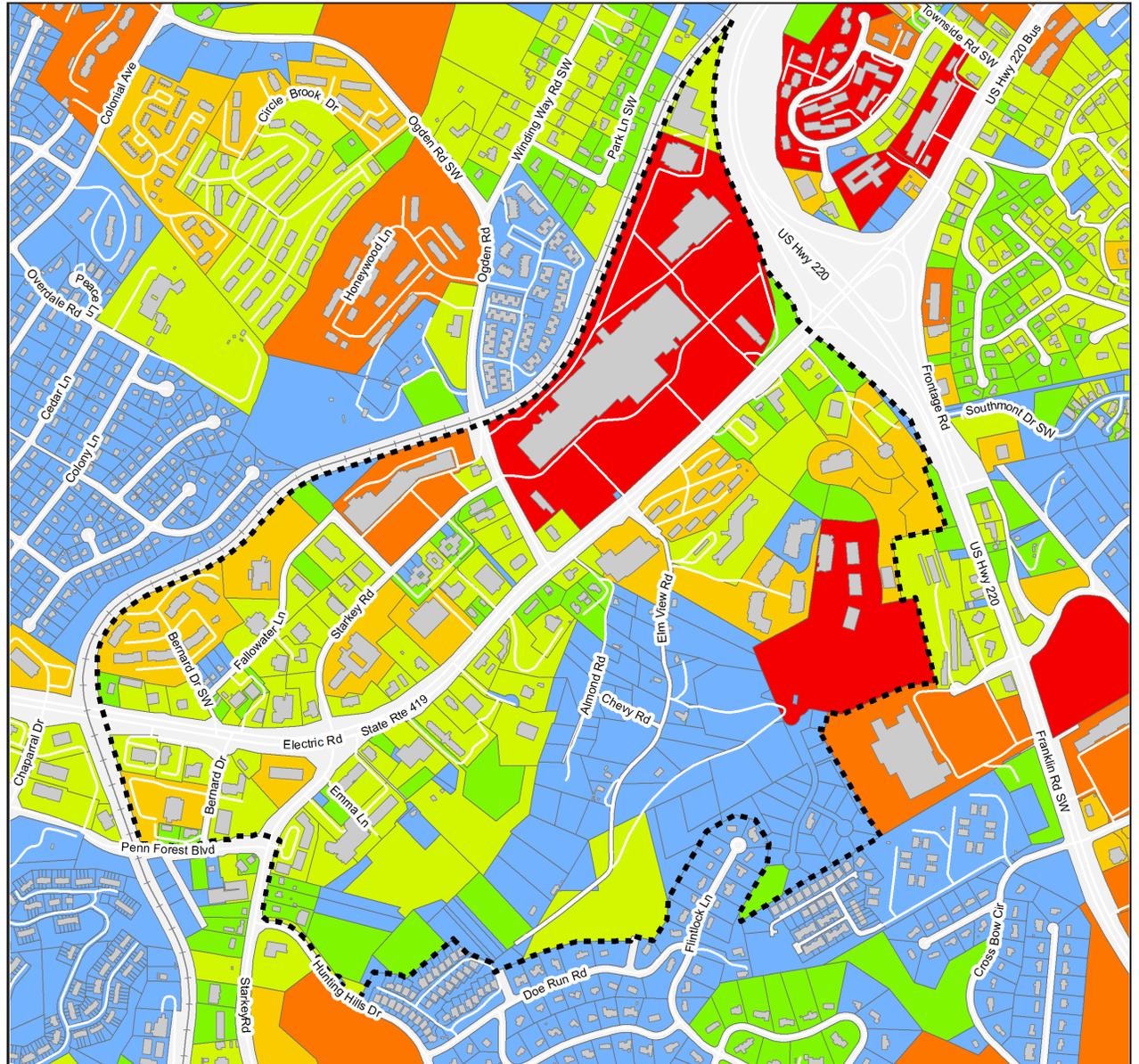
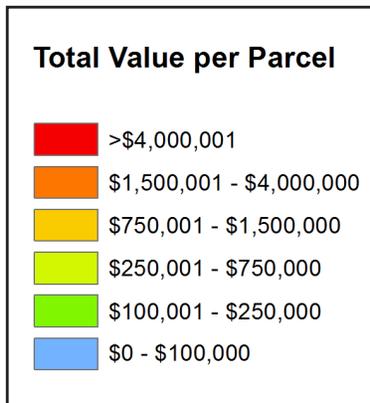
Land Value

Parcels with higher economic value are concentrated along major roads whose frontages have the highest visibility to through traffic. Parcels with lower values per square foot are less improved than other land, such as the Old Heritage Corporation property at the southern end of the planning area.



Total Property Value

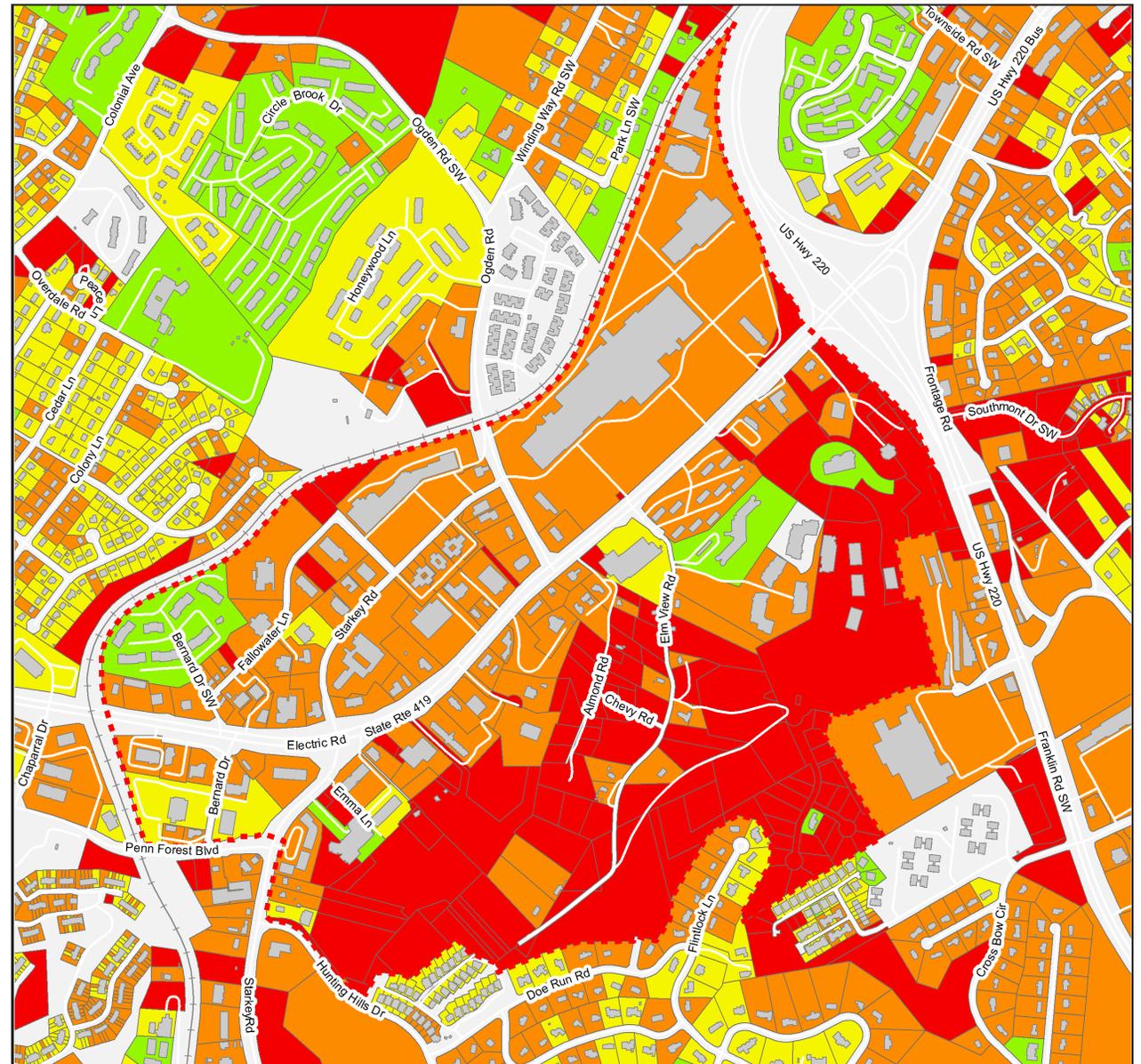
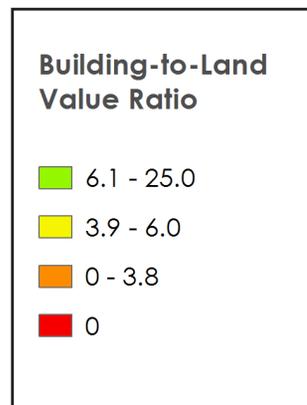
Total property value is the value of a parcel of land plus the value of improvements (Improvements include new buildings, enhancements to existing structures, substantial remodels etc.).



Building-to-Land-Value Ratio

Calculating the ratio of a building's value to the value of the parcel it sits on offers a simple (but not perfect) way to assess each parcel's overall value, meaning a comparison of a parcel's current economic return against its most valuable potential use.

Where an owner has invested in improving the land—for example, building a multi-family housing development on a former parking lot—the building-to-land-value ratio is high. Parcels that haven't seen investment or been built on typically have lower building-to-land-value ratios. Land with a low ratio may signal and opportunity for higher-density redevelopment.



Redevelopment Potential

The study team compared data on recent redevelopment, land-ownership patterns, and building-to-land-value ratios to assess redevelopment potential throughout the study area.

Areas with the least potential for redevelopment have existing high-value uses and/or have recently received new investment. The review found relatively few parcels at that level. The largest proportion of the study area comprises land with moderate potential for redevelopment. Many of these sites could use reinvestment, but it's not clear whether the owners plan to or want to reinvest in them. Finally, the review found select parcels with a high potential for redevelopment. This land is underutilized, may be held by a single owner, and may have an owner with a strong interest in redeveloping that land.

Potential For Redevelopment				
	Motivated Owner	Underutilized	High Infrastructure Costs	Disinterested Tenant
Large parcels (>10 acres)	High	Medium	Medium	Low
Moderate parcels (2-10 acres)	High	Medium	Low	Low
Fragmented ownership	High	Low	Low	Low
Recently redeveloped	Medium	Low	Low	Low





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