

Saratoga Springs Area Build-Out Analysis

Community Planning Technical Assistance Program | 2025

Prepared by: Capital District Regional Planning Commission (CDRPC)

In Partnership with: City of Saratoga Springs and the Capital Region Transportation Council (CRTC)

Executive Summary

Through the 2025 Community Planning Technical Assistance Program, the Capital District Regional Planning Commission (CDRPC) partnered with the City of Saratoga Springs to conduct a land use and zoning-based analysis along the West Avenue corridor, including segments of Church Street, Kirby Road, and Grand Avenue, with a quarter-mile buffer. This work supports a larger Linkage Study administered by the Capital Region Transportation Council and seeks to inform future transportation and mobility planning by assessing existing development conditions and estimating potential build-out under current zoning.

CDRPC's work focused on three main tasks: identifying developable parcels within the study area, reviewing proposed development activity, and conducting a zoning build-out analysis to estimate the range of new residential units that could be constructed under existing regulations. The project team used parcel data, zoning code review, and development application materials to classify parcels by type and potential intensity of development. This effort establishes a baseline of likely growth scenarios for future transportation modeling and planning.

This memo concludes CDRPC's portion of the technical assistance and sets the stage for the next phase of work under the Transportation Council's Linkage Study. The next phase will model the potential implications of low-, medium-, and high-intensity development scenarios on corridor infrastructure, such as vehicle, pedestrian, bicycle, and transit networks. Together, these efforts will help the City of Saratoga Springs and regional partners make informed decisions about land use, transportation investments, and the adoption of Complete Streets principles in this rapidly evolving corridor.

Project Overview

2.1 Background and Context

This technical assistance effort focused on the West Avenue corridor in the City of Saratoga Springs, with an expanded study area that includes Church Street, Kirby Road, and Grand Avenue, as well as a quarter-mile buffer surrounding these corridors. The study area encompasses a mix of residential, institutional, and commercial land uses and is

subject to ongoing development pressure due to its proximity to downtown Saratoga Springs, public transportation hubs, and key institutional anchors, such as Saratoga Hospital.

Multiple large-scale developments have been proposed or are currently under review within the corridor. These changes, along with projected future growth, are expected to significantly impact how people move through the area, by car, on foot, by bicycle, or using public transit. The City has identified the need for a comprehensive evaluation of these dynamics to ensure new development aligns with its mobility and sustainability goals.

The findings primarily contribute to the broader Saratoga Springs Complete Streets Linkage Study, a multi-agency planning effort led by the Transportation Council to guide future land use and transportation decisions in the corridor.

2.2 Goals and Objectives

The goals of this technical assistance project were to:

- Evaluate existing conditions and development potential of parcels in the study area;
- Estimate likely growth scenarios based on current zoning and development applications under review; and
- Lay the groundwork for assessing how different levels of build-out may impact the multimodal transportation network.

These objectives were intended to support both short-term planning and long-range infrastructure investments, ensuring alignment with the City's goals for livability and sustainable growth.

2.3 Scope of Work

CDRPC's work focused on three primary tasks:

1. **Parcel Assessment** – Identification and categorization of parcels within the corridor, including ownership, land use, and development status;
2. **Zoning Code Build-Out Analysis** – Evaluation of the minimum and maximum allowable development under existing zoning and land use regulations; and
3. **Development Scenario Preparation** – Estimation of low-, medium-, and high-intensity development scenarios based on zoning, parcel characteristics, and available development application materials.

Methodology for Estimating the Base Population in the Study Area

To estimate the existing residential population within the study area, the following steps were taken. It is important to note that parcels currently under development were excluded

from the base population estimate. These parcels are, however, included in each of the development intensity scenarios in the build-out analysis.

1. Data Acquisition

The City of Saratoga Springs provided the Capital District Regional Planning Commission (CDRPC) with parcel-level data for all properties within the defined study area. This dataset included the number of residential units per parcel for property class code 411.

2. Filtering Residential Property Classes

Parcels were filtered to include only existing residential properties not currently under development. The analysis focused on the following New York State property class codes:

- a. **411 - Apartments:** Unit counts were provided directly by the City of Saratoga Springs
- b. **210 – One-Family Residences:** Assumed 1 unit on each parcel
- c. **220 – Two-Family Residences:** Assumed 2 units on each parcel
- d. **230 – Three-Family Residences:** Assumed 3 units on each parcel

Miscellaneous Residential Parcels: These parcels contained residential units but were not classified under the standard residential property class codes listed above. They were included in the base population estimate based on unit information provided by the city.

Property Class Code	Total Number of Units
210	812
220	6
230	1
411	20
Misc.	13
Total	852

3. Applying a Demographic Multiplier

To estimate the residential population, the number of units per parcel was multiplied by a demographic multiplier representing the average household size per housing type. These multipliers were derived from the U.S. Census 2023 5-Year

Estimates. Please note that this demographic multiplier is at the PUMA geography, as it is the most granular data available.

Saratoga County (South & Central)	Housing Units	Total Persons in Unit	Total Persons per Unit
Mobile Home	2,474	4,816	1.9
One-Family House Detached	29,451	72,161	2.5
One-Family House Attached	4,410	7,809	1.8
Duplex	3,645	6,211	1.7
Apartment (3-4)	4,901	7,199	1.5
Apartment (5-9)	3,498	4,733	1.4
Apartment (10-19)	2,380	4,028	1.7
Apartment (20-49)	1,681	2,092	1.2
Apartment (50+)	2,808	3,513	1.3
Boat, RV, Van	31	51	1.6

Source: 2023 ACS 5-Year Estimates Public Use Microdata Sample (PUMS)

Geography: Public Use Microdata Area

Prepared by the Capital District Regional Planning Commission, Jan. 2025

The estimated total population residing within the study area is approximately 3,010 people. To validate this estimate, 2020 U.S Census block-level data was referenced. While the boundary of the study area did not align with the Census blocks, the total population reported within the closest matching blocks was 2,952 people. This confirms the accuracy of the demographic multiplier used.

Property Class Code	Total Number of Units	Number of People
210	812	1,705
220	6	20
230	1	5
411	20	761
Misc.	13	519
Total	852	3,010

Methodology for Estimating the Build-Out Analysis

1. Data Acquisition

In addition to the parcel-level data used to estimate the base population, the City of Saratoga Springs provided CDRPC with a list of approved development projects, including the number of residential units associated with each. These parcels represent developments that are approved and either under construction or expected to be constructed in the near future. Zoning designations for all parcels were also provided to support this phase of the analysis.

2. Applying a Demographic Multiplier to the Proposed Development

The following parcels were provided by the City of Saratoga Springs and represent development projects that have already been approved. These projects are either currently under construction or expected to begin shortly. As such, they are included in all build-out scenarios (low, medium, and high intensity) as committed developments within the study area.

Print Key	Address	Number of Units	Zoning	Number of People
165.-2-70	NYS RT 29	403	T-5	523
165.-2-90	14 TAIT LN	202	T-4	262
165.-2-76.2	WEST AVE	68	T-5	88
165.-2-76.1	3 STATION LN	30	T-5	36
165.72-1-6	12 ST RAYMOND CT	2	UR-2	3

3. Identifying Additional Parcels for Development

- a. **Filter for Vacant Parcels:** Parcels within the study area were evaluated to identify those that are currently vacant and potentially developable. A total of 60 parcels were identified as suitable for future development.

Property Class Code	Property Class Description	Total Number
311	Res vac land	43
330	Vacant comm	11
322	Rural vac>10	3
314	Rural vac<10	2
331	Com vac w/imp	1

- b. **Apply Environmental Criteria:** A set of environmental criteria, drawn from the City of Saratoga Springs' municipal code, was applied to the previously identified developable parcels. These criteria were used to assess physical and regulatory constraints that could limit or restrict development potential within the study area. This analysis was done using ArcGIS Pro and include:
- Steep Slopes:** No slopes greater than 25 degrees were identified on any of the vacant parcels within the study area.
 - Floodplains:** According to the [New York State FEMA Flood Hazard Zones Viewer](#), no parcels fall within designated flood hazard areas.
 - Wetlands:** A 50-foot buffer was applied around New York State Department of Environmental Conservation (DEC) informational wetlands.
 - Streams:** A 100-foot buffer was applied around streams using U.S. Geological Survey (USGS) stream data to account for riparian constraints.

c. Calculation of Developable Acreage

Using ArcGIS Pro, the environmental constraint areas were subtracted from the total acreage of each identified parcel. This spatial analysis yielded the net developable acreage for each parcel, representing the land area potentially available for development after accounting for environmental limitations.

4. Build-Out Analysis

a. Join Data with Zoning Information

The developable parcel dataset was then joined with the City of Saratoga Springs zoning layer. This allowed CDRPC to analyze applicable zoning regulations, dimensional requirements, and permitted uses for each developable parcel. By integrating zoning information, the analysis could assess the build-out potential in alignment with the City’s existing land use policies.

Zoning	Number of Parcels
UR-2	22
T-4	9
T-5	7
RR	6
SR-2	6
UR-1	6
UR-4	3
INST-PR	1

Study Area's Zoning Designations' Characteristics

Code	Name	Characteristics
Residential Districts		
RR	Rural Residential District	Low-density single-family
SR	Suburban Residential District	Low-density single-family
UR-1	Urban Residential 1 District	Medium density single-family
UR-2	Urban Residential 2 District	Medium density single-family residential uses of a higher density than that of UR-1 District
UR-4	Urban Residential 4 District	Moderate to high-density mixture of housing types, including single-family, two-family, and multi-family residential uses.
Mixed-Use and Commercial Districts		
T-4	UN Urban Neighborhood District	Multi-family mixed use
T-5	NC Neighborhood Center District	Multi-family mixed use
Institutional Districts		
INST-PR	Institutional Parkland/Recreation District	Non residential

b. Zoning-Based Build-Out Analysis

To estimate the potential development capacity of parcels within the study area, CDRPC conducted a zoning-based build-out analysis using a standardized set of calculations derived from the City of Saratoga Springs' zoning code. This analysis applied quantitative formulas to each parcel to estimate the maximum number of residential dwelling units allowed under existing zoning regulations. Separate methods were used for multifamily and single-family zones, depending on the permitted use in each zoning district.

Maximum Building Footprint and Floor Area

For all zoning types, the analysis determined the **maximum building footprint**, which represents the allowable ground coverage based on the zoning district's maximum lot coverage percentage:

Maximum Building Footprint = Buildable Area × Maximum Lot Coverage %

Next, the **maximum floor area** was calculated by multiplying the building footprint by the district's maximum permitted building height for non mixed-use designated parcels:

Maximum Floor Area = Maximum Building Footprint × Maximum Building Height

A 10' reduction was applied to the maximum building height on mixed-use designated parcels to account for expected ground-floor commercial.

c. Scenario Categorization of Low, Medium, High Development

Each parcel was assigned to a low-, medium-, or high-intensity development scenario based on zoning characteristics, development constraints, and existing use. The methodology for multi-family and single-family parcels differed and is explained below.

Scenario Categorization for Estimating Single-Family Lot Yield

For single-family residential parcels, Saratoga Springs' zoning districts establish a **minimum lot area** per dwelling unit. The analysis compared the parcel's buildable area to the minimum required lot size to determine the number of potential housing units:

Max Allowable Parcels = Buildable Area ÷ Minimum Lot Area

This output was used as the High-Intensity development scenario. The following equations were then used to determine the Low- and Medium-Intensity development scenarios:

Medium-Intensity Development Parcels = Max Allowable Parcels × 0.333

(This method reduced the number of units by approximately two-thirds to represent a moderate density development scenario.)

Low-Intensity Development Parcels = Max Allowable Parcels × 0.666 *(This method reduced the number of units by approximately one-third to represent a lower density development scenario.)*

Scenario Categorization for Estimating Multifamily Dwelling Units

We calculated and then averaged the units per acre of the multi-family developments under review within the study area. Then, to determine the units per acre for each vacant multi-family designated parcel, we multiplied the Buildable Area by the Average Units Per Acre of the parcels under review.

Avg Multi-Family Units per Acre = Buildable Area × Avg. Units Per Acre of parcels under review within the study area.

The output was then rounded down and used as the Medium-intensity development scenario. The Medium-intensity output was then used to determine the High- and Low-intensity units through the following equations:

High-Intensity Development Units = Med-intensity development units × 1.5

(This method increased the number of units by approximately 50% to represent a higher density development scenario.)

Low-Intensity Development Units = Buildable Area ÷ Minimum Allowable Lot Area *(This method relied on the Saratoga Springs Zoning Code to represent the minimum allowable parcels.)*

This aberrant set of equations was essential to determine each scenario's number of dwelling units that reflect typical values found in similar local developments. Please see footnotes for more information.ⁱ

d. Applying the Demographic Multiplier to each Development Scenario

Using the same demographic multiplier applied in the base population analysis, CDRPC estimated the potential population associated with each low-, medium-, and high-intensity development scenario. The number of residential units in each scenario was based on allowable densities and dimensional/physical requirements defined by the City's zoning code. This

yielded a range of projected population outcomes depending on the intensity of development pursued within the study area.

	Projected Additional Population	Total Projected Population (Base + New)
Low Intensity Development	999	4,009
Medium Intensity Development	1,171	4,181
High Intensity Development	1,336	4,346

Assumptions

A few important elements were not included in this build-out analysis, either due to data limitations or the defined scope of this technical assistance:

- **Commercial Parcels:** Although the analysis considered zoning parameters across all parcels, it focused strictly on potential residential build-out. Parcels zoned primarily for commercial use were not evaluated for their commercial development capacity or economic function, and any estimated residential capacity reflects zoning allowances rather than market intent.
- **Utility Connections:** The availability and capacity of water, sewer, and other utility infrastructure were not evaluated. The analysis assumes utility access is the responsibility of the developer and does not constrain the estimated development potential.
- **Greenfield vs. Infill Development:** The model does not distinguish between undeveloped (greenfield) parcels and those already developed but potentially suitable for infill or redevelopment. As a result, feasibility may vary depending on existing site conditions and redevelopment costs.
- **Flexible Zoning Provisions:** Certain zoning districts allow for density bonuses, special use permits, or other discretionary approvals that could increase allowable development. These provisions were excluded from the baseline analysis to maintain consistency across parcels.

Conclusion

This memo summarizes CDRPC's technical assistance to the City of Saratoga Springs under the 2025 Community Planning Technical Assistance Program. The analysis provides a data-driven estimate of development potential along the West Avenue corridor based on current zoning, parcel characteristics, and available development information. These findings offer a foundation for the next phase of the Complete Streets Linkage Study, where CRTD will evaluate how different growth scenarios may impact mobility and infrastructure.

ⁱ **Estimating Multi-family Dwelling Units**

The original method may have been more intuitive and reflective of the method used to estimate residential capacity in single-family zones. The original equation was Maximum Dwelling Units = Maximum Floor Area ÷ Average Unit Size. This yielded an estimate of the maximum number of dwelling units that could be developed under current zoning:

Maximum Dwelling Units = Maximum Floor Area (Saratoga Springs zoning code) ÷ Average Unit Size (based on sq ft for different unit types across Saratoga Springs)

The output of this equation for each vacant multi-family parcel was so out of range of the under-review developments, which allowed us to recognize that relying on the zoning code for maximum development potential is not a feasible method for any of the scenarios. Ultimately, the scenario unit numbers would be unrealistic for City approval if proposed.