

Development Patterns



KEY TOPICS

- Land Use Patterns
- Housing Density
- Implications for the Future



DRAFT 11/5/09
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SUBJECT TO PUBLIC PARTICIPATION PROCESS

Introduction

The built environment including the type, location and intensity of existing land uses – defines the character of a community. Understanding how much land is presently devoted to commercial, industrial, residential; parks and vacant land is a key component to developing a vision and plan for the future. The land use patterns that were described in the 1996 POCD remain evident in the fabric of the City today.

The major land use changes that have occurred over the last decade include:

- Substantial new residential development (both condominiums and apartments) in Downtown
- Conversion of the Charter Oak public housing complex into a significant retail center
- Redevelopment and reconfiguration of other high-density public housing complexes into lower density residential units including Rice Heights, Stowe Village and Dutch Point
- Designation of an Industrial Re-Use Overlay District (IROD) in the Parkville neighborhood leading to the conversion of former industrial buildings into the mixed use Design Center.
- Condominium developments in the West End neighborhood
- New retail development in various

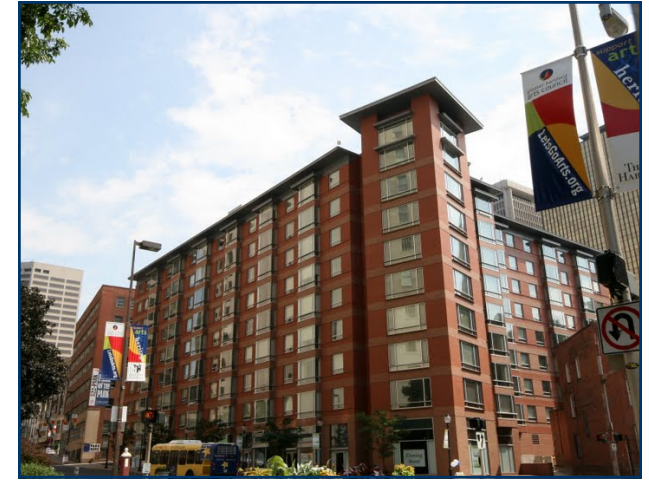
neighborhoods, including the Main and Pavilion (Metro Center) retail development in Clay-Arsenal and the Gateway Plaza on Albany Avenue

- Revitalization of Park Street retail
- Creation of the Learning Corridor in Frog Hollow
- Relocation of the Capitol Community College to the former G. Fox building
- Development in the Adriaen’s Landing project area, including the Connecticut Convention Center and the Connecticut Center for Science and Exploration
- Erection of the Morgan Street Garage
- Redevelopment of the Colt Firearms factory and vicinity

These changes are transforming older land uses into new uses that are more compatible with existing uses and Hartford’s vision for the future. While the overall development patterns of the City have remained relatively unchanged over the last decade, new emphasis has been placed on redevelopment in the City. The City’s zoning and land use regulations are its tools for not only controlling its land uses but also influencing future development patterns.

Understanding the existing land use patterns of the City is an important component to the Plan of Conservation and Development. Knowledge of where specific types of uses are located, particularly on a parcel basis, can help local officials identify areas that may have potential

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Trumbull Street Residential Development



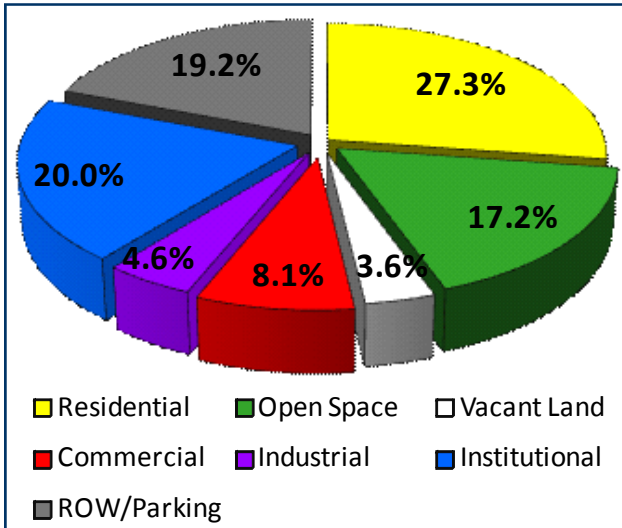
The Connecticut Science Center

One City, One Plan– POCD 2020

Land Use Category	Area (Acres)	Percent of City's Land Area	Percent Change 1994-2009 ⁽¹⁾
Residential	3,199	28.9%	-6.3%
Commercial	950	8.6%	-21.5%
Industrial	541	4.9%	8.2%
Institutional / Infrastructure	2,341	21.2%	42.2%
Parks & Open Space	1,365	12.3%	-10.9%
ROW's & Parking	2,246	20.3%	-3.0%
Raw Vacant Land	422	3.8%	-48.6%

Source: Tax Assessor Database 2009
⁽¹⁾ Based on 1996 Plan of Conservation & Development

2009 Land Use Distribution Summary



Existing Land Use 2009

for economic development or open space protection. This section describes in detail the existing land use composition of Hartford.

Land Use Patterns

The City of Hartford has a total area of approximately 11,064 acres or roughly 17 square miles. Hartford contains a variety of land uses including industrial, commercial, residential, institutional, and open space. Hartford's land records are incorporated into its parcel base map so that information such as land use, zoning, property assessment value (land and building) can be displayed and analyzed on a city wide, parcel-by-parcel basis. While utilizing detailed information of this type for quantifying land use patterns and trends, it is important to recognize that the purpose of this analysis is to provide a generalized assessment of land use patterns as a guide for planning purposes. These planning purposes are to describe Hartford in terms of land use characteristics and indicate growth trends and potential for the future.

Land Use Inventory

In order to accurately assess the composition and distribution of the City's land use categories, a current digital land use map of Hartford was utilized. The existing digital base map and corresponding property records from the assessor's database, resulted in a detailed *Existing Land Use Map* and inventory for all parcels within the City.

An updated 2009 land use inventory has been compiled with assessor records current as of January 2009. The accompanying table provides a summary of the major land use categories and a calculation of percent change since the 1994 inventory. Five major categories of use are utilized to record land use in the City. These general categories are further broken down into 25 subcategories as shown in the *Existing Land Use Map*, which has been divided into four quadrants (NW, NE, SW and SE) for readability in this document.

Although it is recognized that some differences in inventory methodology and categorization of land uses between 1996 POCD and 2009 exist, it is still helpful to compare land use characteristics between decades in order to identify general trends in land development and uses. Because of the differences in source data and methodology, we hesitate to quote specific growth statistics based on the 1996 and 2009 studies, which may or may not be directly comparable.

The City of Hartford's overall land use fabric has remained stable over the last two decades. The top land use categories reported in 1984 and 1994 remain the same for 2009. The top land uses by percent of land area for 2009 are residential, Institutional and infrastructure, & ROWs categories. In total, approximately 84% of the land within the City is in a developed category while 16% is categorized open land.

Within the open land category, the parks and open space component represents land protected from future development. At 11.2% of the City's area it exceeds the States' goal of 11% for municipalities. Commercial land accounts for 8.1% of Hartford's land area with office and financial institutions as the largest subcategory at 29% of all commercial land. This percentage is likely to increase in the future as redevelopment continues in the City. Mixed use development, which consists of parcels that contain a blend of both residential and commercial uses, accounts for 2% of Hartford's total land, but represents 14% of all commercial land. Industrial land uses account for 4.9% of Hartford's land, of which much of this land is located in the North Meadows, South Meadows, and in the eastern side of the North East Neighborhood. Institutional uses account for over 21.2% while ROWs and parking account for an additional 20.3%.

Residential

The City has 3,199 acres (28.9%) of its land categorized as residential with single and two family residences comprising over 59.4% of all residential use. The remaining 31.6% is comprised of multi-family and apartment housing. The majority of Hartford's residential uses are low to moderate density in nature comprised of single family to four family housing. The majority of these residential uses are concentrated in Blue Hills, West End, Northeast, South End, and Southwest, Behind

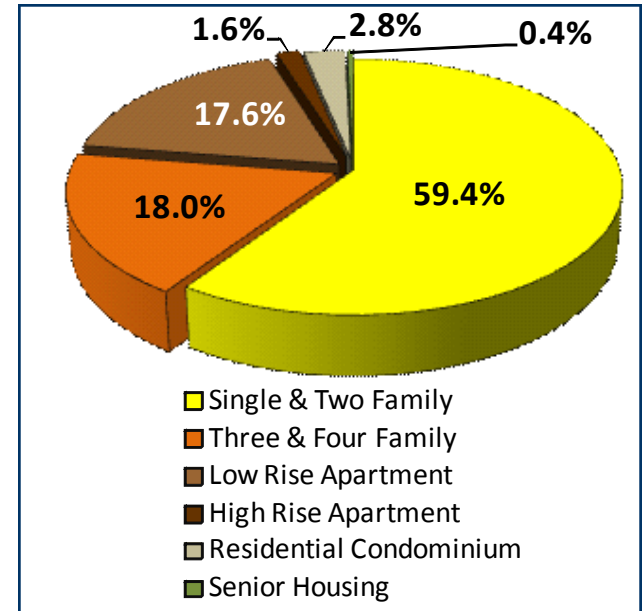
the Rocks, Barry Square neighborhoods. In fact, nearly 80% of all residential land in the City is located in these seven neighborhoods. Medium-density housing is primarily located in the Blue Hills, North East, Asylum Hill, Clay Arsenal, and Barry Square. High-density, high rise apartment residential housing is concentrated in the Downtown, West End, Asylum Hill, and Frog Hollow neighborhoods. Table VI-4 provides a summary of the major land use categories by neighborhood.

Commercial / Industrial

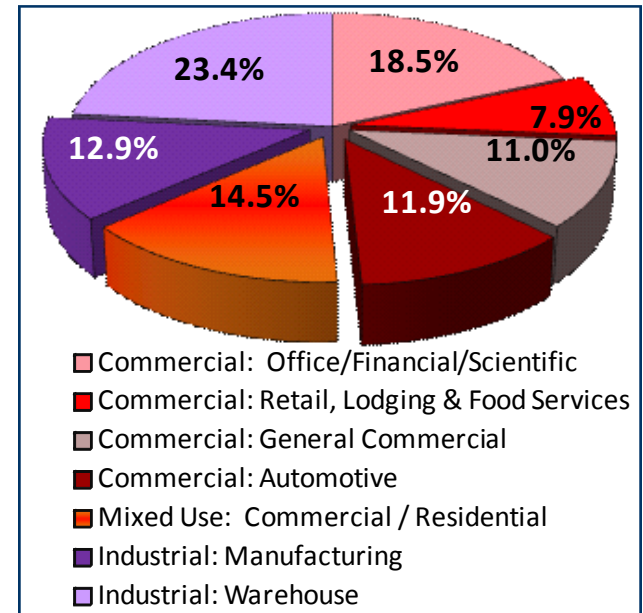
From 1994 to 2009 commercial land use experienced a significant decrease of 21% (from 1,211 to 950 acres). While commercial land use experienced a decrease, industrial land use increased by 8.2 % during this period. Commercial and Industrial land use combined to cover 13.6% of Hartford's land. In comparison to Hartford's 13.6%, the percent of land used for commercial or industrial purposes in some other large urban communities are: New Haven, 11%; and Bridgeport at 18.6%.

Commercial uses classified in the office and financial subcategories are densely clustered in Hartford's Downtown. Retail uses are predominately clustered along the major transportation corridors radiating from the downtown and connecting to commercial strips in neighboring communities. Industrial lands are predominately located in the North and South Meadows neighborhoods and along the rail corridor that

Development Patterns



Residential Land Uses 2009

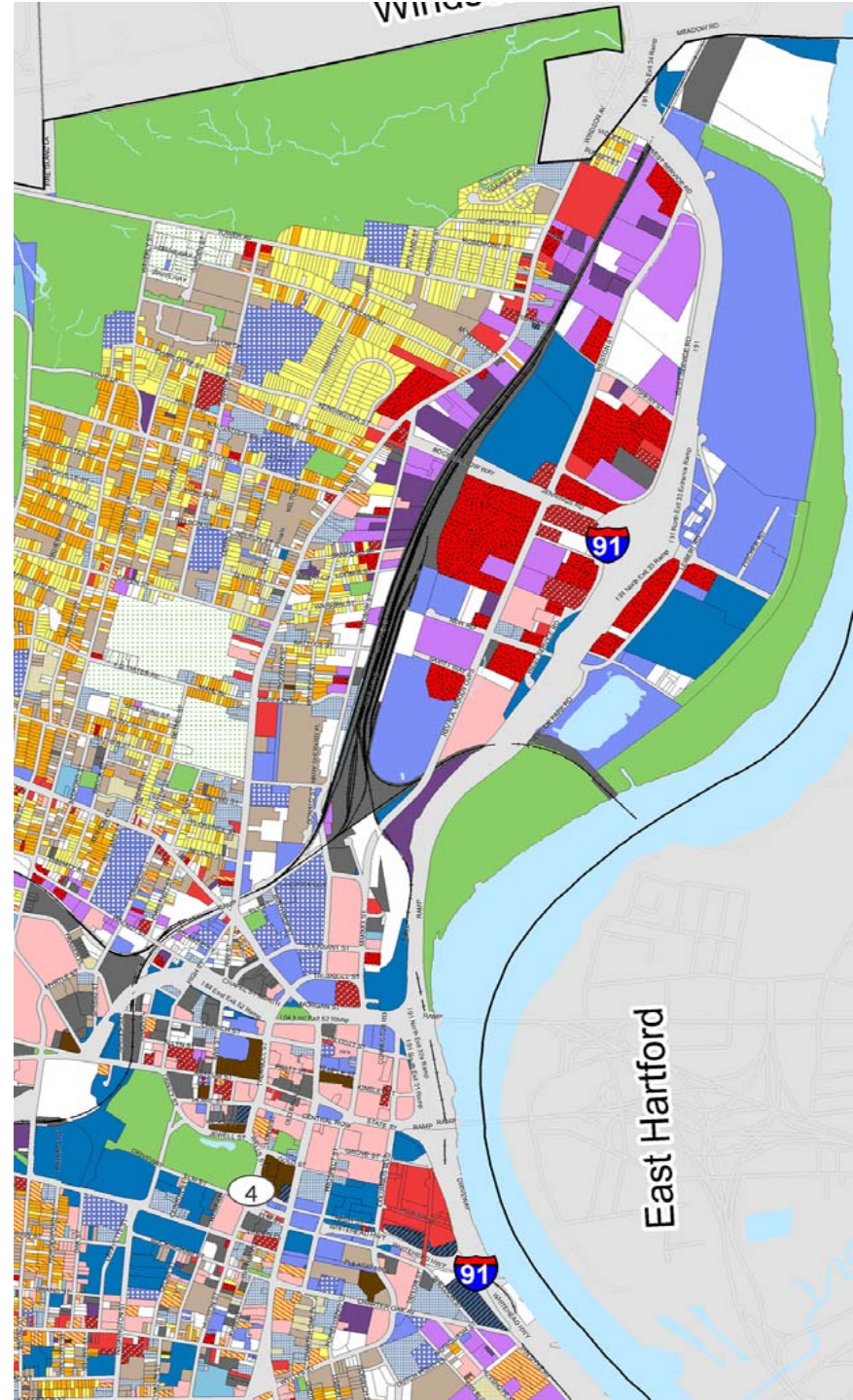


Commercial Land Use 2009

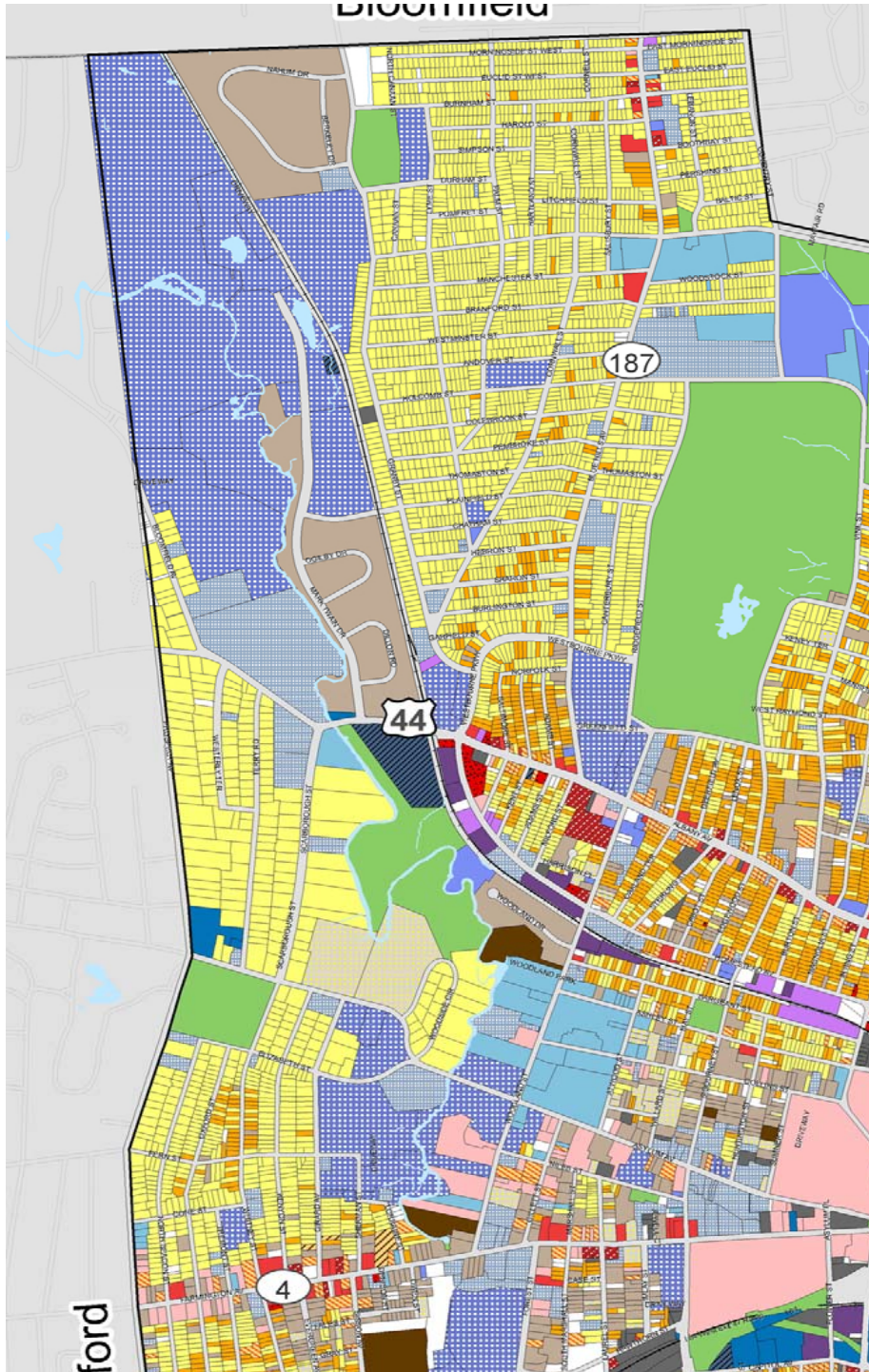
One City, One Plan– POCD 2020

Existing Land Use

- Single & Two Family
- Three & Four Family
- Low Rise Apartment
- High Rise Apartment
- Residential Condominium
- Senior Housing
- Commercial: Office/Financial/Scientific
- Commercial: Automotive
- Commercial: General Commercial
- Commercial: Retail, Lodging & Food Services
- Industrial: Manufacturing
- Industrial: Warehouse
- Mixed Use: Commercial / Residential
- Municipal Property (Various)
- State (Various)
- Federal (various)
- Educational
- Medical / Health Care Facility
- Private Institutional
- Public Utility
- Parking/Transportation
- ROW
- Cemetery
- Parks / Open Space
- Vacant Land



NE Quadrant Map



Existing Land Use

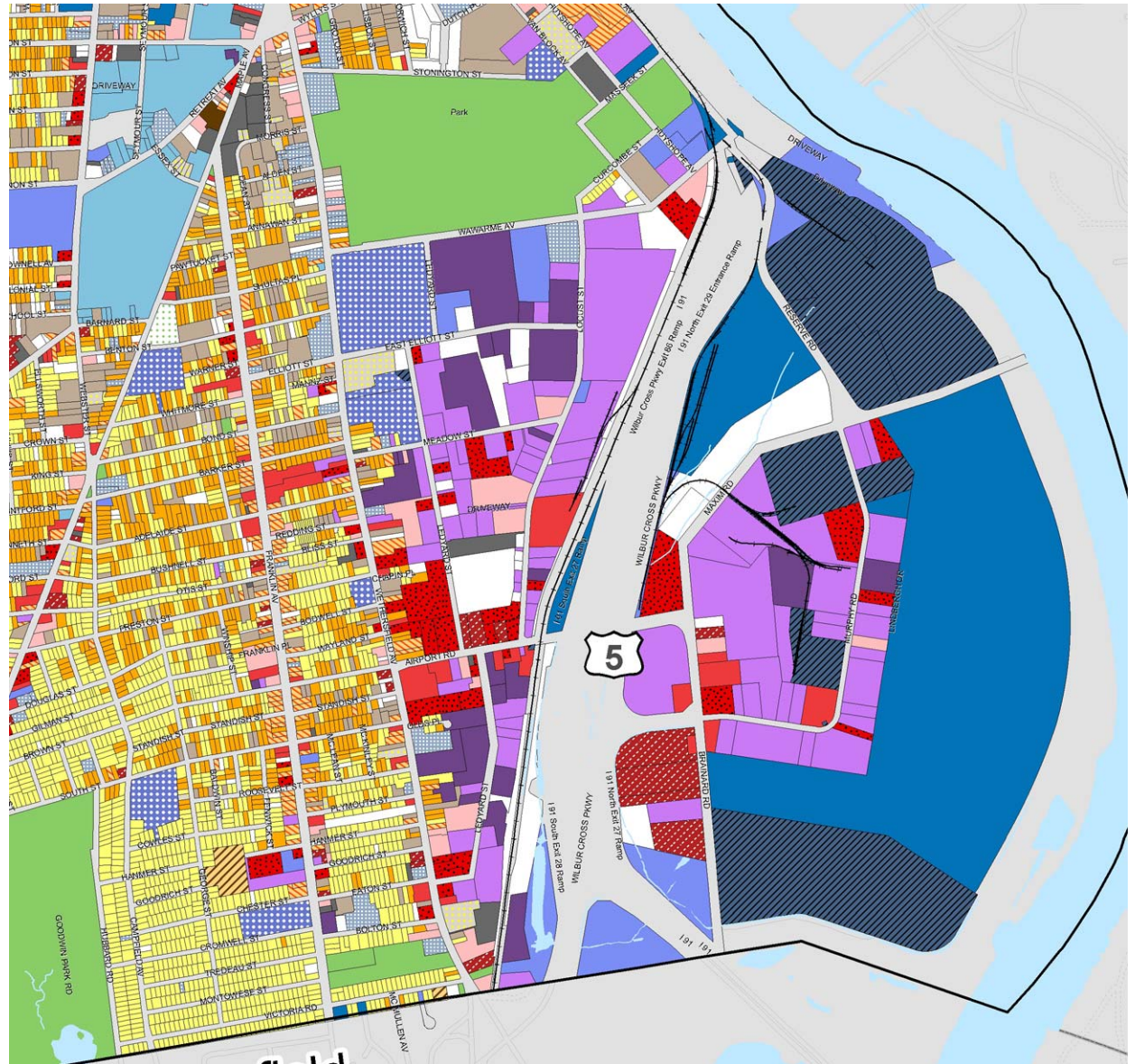
- Single & Two Family
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- Residential Condominium
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- Commercial: Office/Financial/Scientific
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- Industrial: Manufacturing
- Industrial: Warehouse
- Mixed Use: Commercial / Residential
- Municipal Property (Various)
- State (Various)
- Federal (various)
- Educational
- Medical / Health Care Facility
- Private Institutional
- Public Utility
- Parking/Transportation
- ROW
- Cemetery
- Parks / Open Space
- Vacant Land

NW Quadrant Map

One City, One Plan– POCD 2020

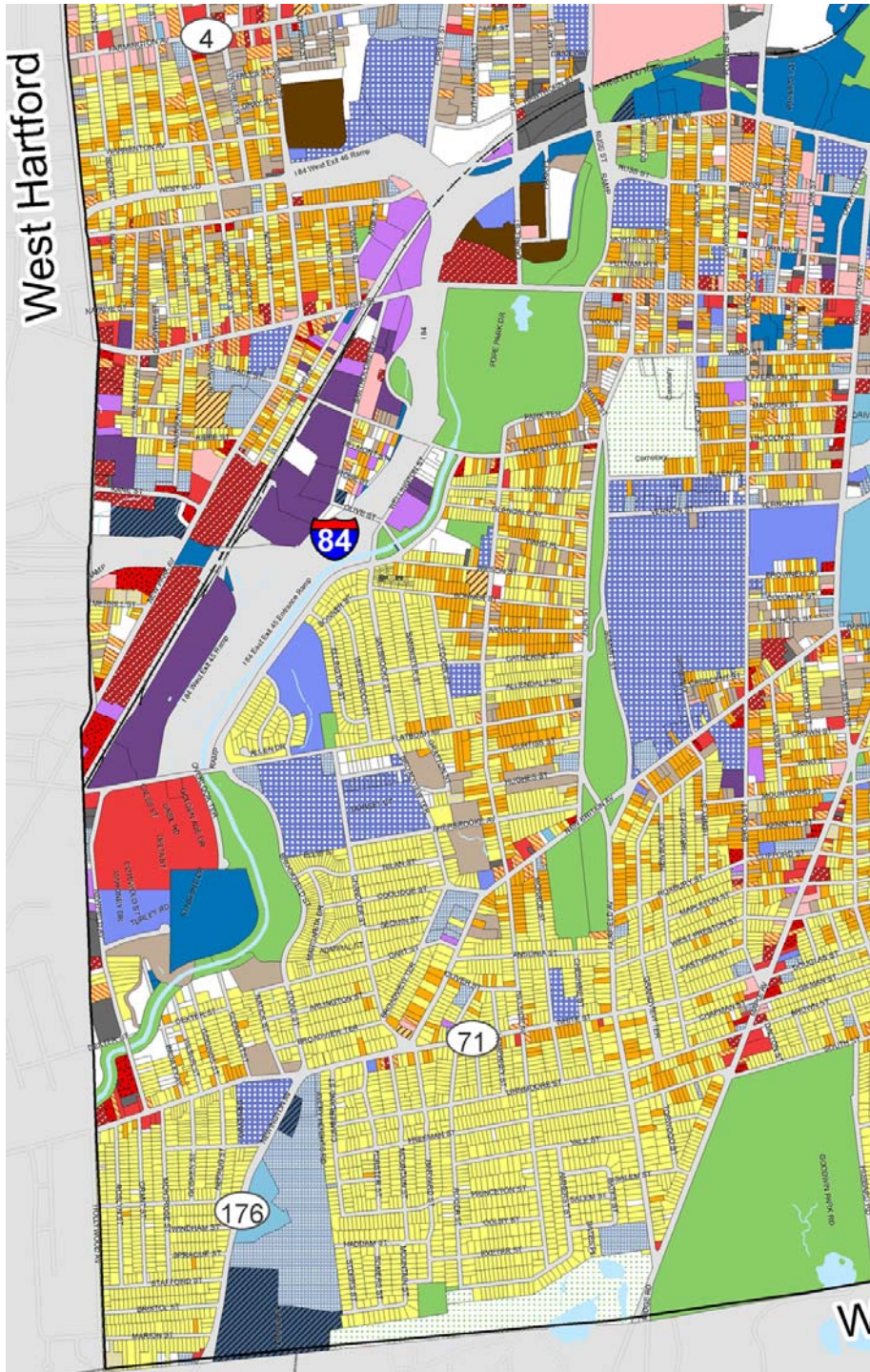
Existing Land Use

- Single & Two Family
- Three & Four Family
- Low Rise Apartment
- High Rise Apartment
- Residential Condominium
- Senior Housing
- Commercial: Office/Financial/Scientific
- Commercial: Automotive
- Commercial: General Commercial
- Commercial: Retail, Lodging & Food Services
- Industrial: Manufacturing
- Industrial: Warehouse
- Mixed Use: Commercial / Residential
- Municipal Property (Various)
- State (Various)
- Federal (various)
- Educational
- Medical / Health Care Facility
- Private Institutional
- Public Utility
- Parking/Transportation
- ROW
- Cemetery
- Parks / Open Space
- Vacant Land



SE Quadrant Map

Development Patterns



Existing Land Use

- Single & Two Family
- Three & Four Family
- Low Rise Apartment
- High Rise Apartment
- Residential Condominium
- Senior Housing
- Commercial: Office/Financial/Scientific
- Commercial: Automotive
- Commercial: General Commercial
- Commercial: Retail, Lodging & Food Services
- Industrial: Manufacturing
- Industrial: Warehouse
- Mixed Use: Commercial / Residential
- Municipal Property (Various)
- State (Various)
- Federal (various)
- Educational
- Medical / Health Care Facility
- Private Institutional
- Public Utility
- Parking/Transportation
- ROW
- Cemetery
- Parks / Open Space
- Vacant Land



Riverside Park is part of Hartford's open space network.



Goodwin Park is located in the South End neighborhood

bisects the City. Commercial and industrial uses were broken down into 6 and 2 subcategories respectively.

Institutional/ Infrastructure

Hartford has 4,587 acres or 41.5% of its land categorized as institutional or infrastructure. Of the 4,587 acres in this category, 2,052 acres or 18.5% of all land in Hartford is classified as right-of-ways (ROWs). A majority of the land classified as ROWs in Hartford is a result of Interstate 91 and Interstate 84 bisecting the City. The remaining 2,535 acres contain municipal, educational, medical, religious, fraternal, and other non-profit service institutions in the City. Hartford has a significant amount of land dedicated to educational uses. Trinity College, Rensselaer College, University of Hartford, and Hartford Public Schools are examples of the major educational facilities that in part account for 6.4% of the land in City.

Open Land

The City has 1,236.8 acres designated as open space, comprised of parks and open space. The open space category represents land used for active and passive recreation and illustrates areas generally protected from future development. At 11.2% of the City's area it exceeds the States' open space goal of 11% for municipalities. Hartford also owns significant open space acreage outside of its borders. Batterson Park

(585 acres) is located entirely in Farmington, while parts of Goodwin, Keney, and Elizabeth Park extend into adjacent communities. An additional 1.2% of Hartford's land is classified as cemeteries.

The 1996 POCD reported that in 1984, the City contained 929 acres (8.2%) of raw vacant land and by 1996 the total decreased to 823 acres (7.2%). In 2009, the City has only 3.2% of its land in this category. With only 422 acres of vacant land, a limited amount of future development can be anticipated to occur on raw vacant lots. The C-1 and I-2 zones have the largest inventory of vacant land with 50 and 164 acres respectively and shown on the map titled *Vacant Land by Zoning District*. These two zones contain over half the raw vacant land in the City. It should also be noted that this vacant land calculation fails to take into account the physical development constraints such as wetlands, floodplains, and steep slopes that will further reduce the amount of developable land. Due to the limited amount of raw vacant land, it is clear that reuse and redevelopment will play an increasingly critical role in the City's future development.

The declining amount of vacant land in the City indicates that future growth especially in core areas of the City will likely involve "infill" development projects to fill in the gaps of the existing land use pattern. In addition, it is likely that many of the new commercial developments that

will occur in Hartford over the decade or so are likely to involve redevelopment projects, or conversion of abandoned and obsolete land uses and brownfields into new redefined development projects. Evidence of this trend can already be seen with the City focusing on redevelopment. Adriaen's Landing, Charter Oak Marketplace, Main and Pavilion (Metro Center), and the Coltsville Gateway Preservation Project, and Homestead Avenue are a few of the recently completed and ongoing redevelopment and reuse projects in the City.

Effective Housing Density

The effective housing density within the various districts of the City was analyzed. The six neighborhoods with the highest density are the City's downtown (134 units/acre), Asylum Hill (44 units/acre), South Green (39 units/acre), Frog Hollow (34 units/acre), Sheldon-Charter Oak (26 units/acre), and Clay-Arsenal (22 units/acre).

The City has experienced a resurgence of housing in the Downtown over the last decade. It is estimated that the number of units have tripled to nearly 2,700 units over this time period. Frog Hollow, South Green, Charter Oak, and Clay Arsenal are mature neighborhoods that grew around the factories and manufacturing centers during the early to late 20th century. Typical of many cities, the less mature neighborhoods on the fringe of the city have the lowest effective

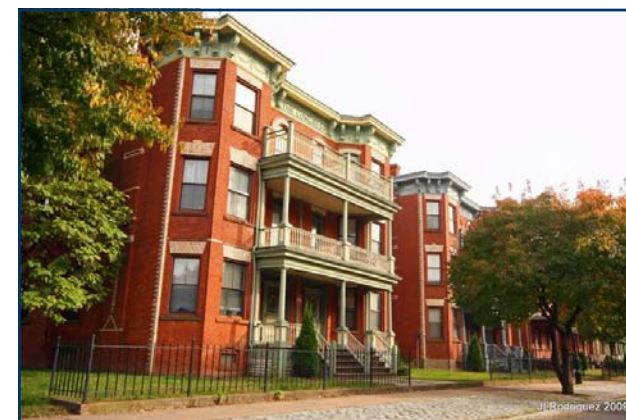
housing density as shown on the map titled "Housing Density by Neighborhood". Hartford's pattern of housing density is typical of many New England cities of similar size and age.

Under the current zoning regulations, density is measured as person per acre (PPA) and families per acre (FPA). The average household size for the City is 2.5 persons per household. For this analysis, PPA and FPA were converted to dwelling units per acre. As shown in the accompanying table the City's R-4, R-6, R-7 and R-8 zones have effective densities that are very similar to the maximum allowed by zoning. The R-1, R-2, and R-3 zones have overall effective densities that are 28% - 33% lower than the maximum density allowed. For the City's residential office districts, the RO-1 and RO-2 districts have effective densities 52% and 72% lower than zoning allows, whereas the density for the RO-3 is 27% lower. Within these zones, the density for apartment and condominium use subcategories are very similar to the maximum allowed by zoning.

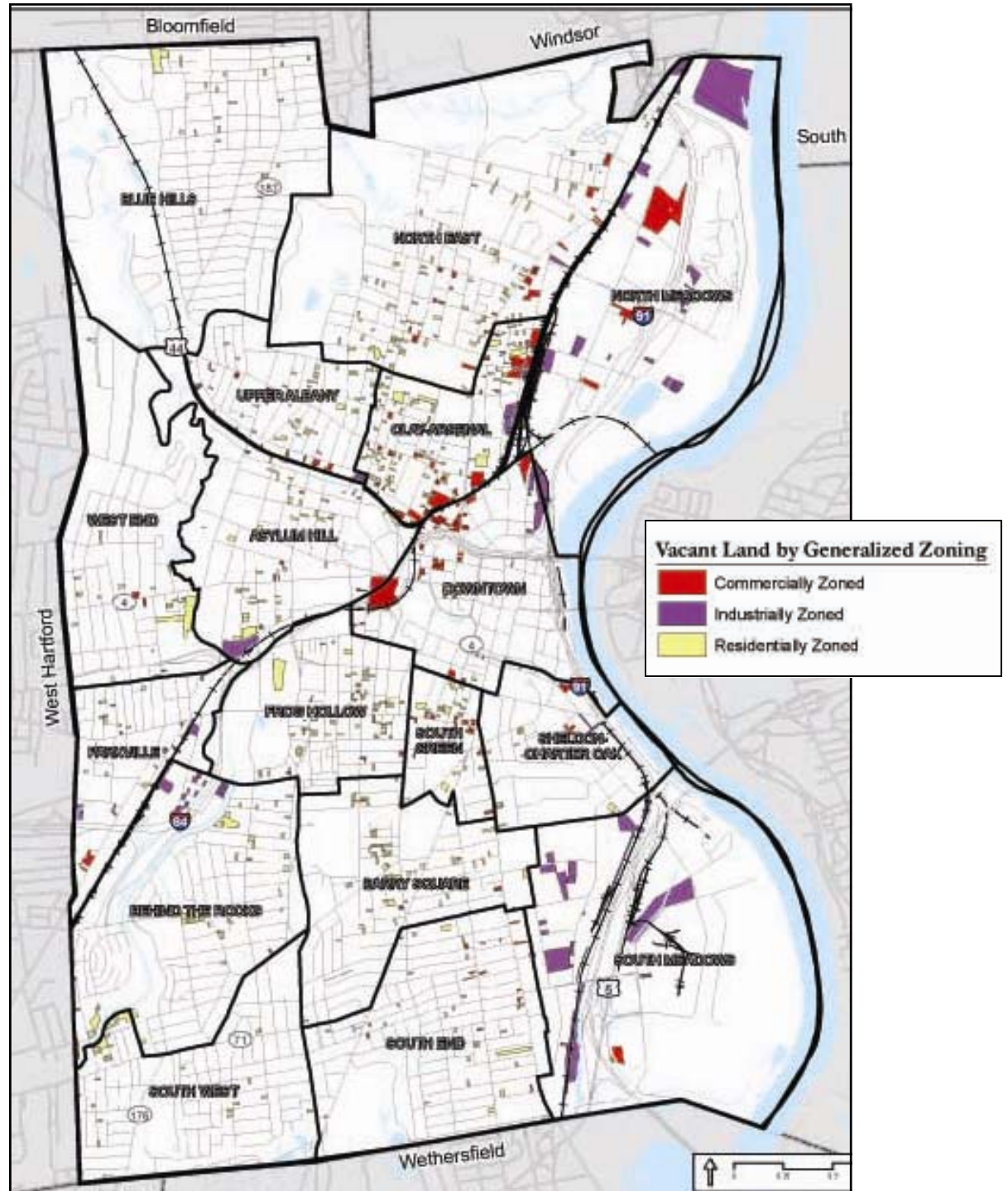
This plan recommends revising zoning regulations to change the measurement of residential density from "persons per acre" and "families per acre" to "dwelling units per acre", in order to more accurately mesh the density allowed under zoning regulations to the actual housing densities.



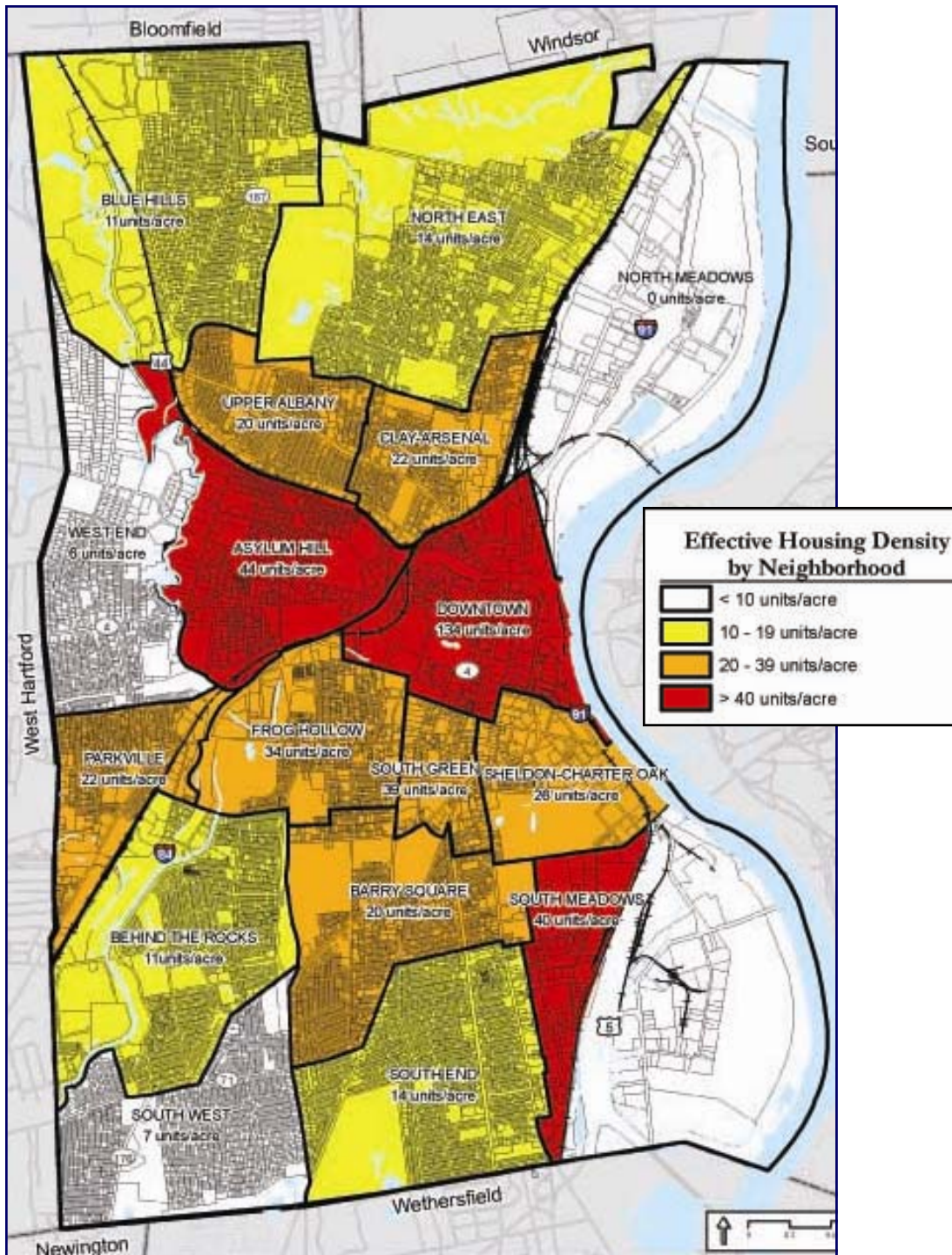
The Clay Arsenal neighborhood has an effective residential density of 22 units per acre



The South Green neighborhood has an effective residential density of 39 units per acre



Vacant Land by Generalized Zoning



Housing Density by Neighborhood

One City, One Plan– POCD 2020

Residential Zones	Effective Density			Existing	
R-1 (High Density)	Units	Acres	U/A	PPA	U/A
Low-Rise Apartment	2,150	42.7	50		
Mixed-Use: Residential / Commercial	100	4.9	20		
Residential Condominium	94	5.9	16		
Single & Two Family	98	9.6	10		
Three & Four Family	239	12.7	19		
Total:	2,681	75.8	35	150	60
R-2 (Medium Density)	Units	Acres	U/A	PPA	U/A
High Rise Apartment	581	18.7	31		
Low Rise Apartment	3,478	91.9	38		
Mixed Use: Commercial / Residential	181	5.7	32		
Residential Condominium	361	10.1	36		
Senior Housing	24	0.3	80		
Single & Two Family	397	36.1	11		
Three & Four Family	662	32.0	21		
Total:	5,684	195	29	100	40
R-3 (Medium Density)	Units	Acres	U/A	PPA	U/A
Low Rise Apartment	3,019	99.2	30		
Mixed Use: Commercial / Residential	284	12.4	23		
Residential Condominium	378	15.6	24		
Single & Two Family	950	101.8	9		
Three & Four Family	2,449	127.4	19		
Total:	7,080	356.4	20	75	30

Effective Housing Density– Residential Zones

Residential Zones	Effective Density			Existing	
R-4 (Three-Family)	Units	Acres	U/A	PPA	U/A
Low Rise Apartment	4,099	93.1	44		
Mixed Use: Commercial / Residential	208	9.0	23		
Residential Condominium	164	4.5	36		
Senior Housing	294	5.6	53		
Single & Two Family	2,601	293.1	9		
Three & Four Family	5,190	280.2	19		
Total:	12,556	685.5	18	18.9	
R-5 (One- & Two-Family)	Units	Acres	U/A	PPA	U/A
Low Rise Apartment	323	8.2	39		
Mixed Use: Commercial / Residential	26	2.5	10		
Residential Condominium	90	2.3	39		
Senior Housing	161	5.1	32		
Single & Two Family	3,660	407.7	9		
Three & Four Family	1,255	75.3	17		
Total:	5,515	501.1	11	11.6	
R-6 (One-Family)	Units	Acres	U/A	PPA	U/A
Low Rise Apartment	2,652	107.4	25		
Mixed Use: Commercial / Residential	1	0.1	10		
Single & Two Family	1,843	255.0	7		
Three & Four Family	40	2.0	20		
Total:	4,536	364.5	12	7.3	
R-7 (One-Family)	Units	Acres	U/A	PPA	U/A
Low Rise Apartment	257	8.0	32		
Mixed Use: Commercial / Residential	2	0.7	3		
Residential Condominium	26	1.5	17		
Senior Housing	15	0.3	50		
Single & Two Family	3,267	595.6	5		
Three & Four Family	141	10.6	13		
Total:	3,708	616.7	6	5.8	

Findings

The major land use category in Hartford is residential with 28.9% of the land committed to this use. Single and two family housing comprise 82% of the residential acreage. The combined area currently in use for commercial and industrial purposes is 13.5% of the City’s acreage. Currently, 26% of the land area in Hartford is zoned for commercial and industrial purposes.

Commercial uses in the office and financial subcategories are densely clustered in Hartford’s Downtown. Retail Uses are predominately clustered along the major transportation corridors radiating from the downtown and connecting to commercial strips in neighboring communities.

Industrial lands are predominately located in the North and South Meadows neighborhoods and along the rail corridor that bisects the City.

The lack of a sizeable inventory of raw vacant land (422 acres) indicates that much of City’s future development activity will be a combination of infill development, redevelopment and revitalization projects. Over half (212 acres) of vacant land is located in the I-2 and C-1 districts. It should also be noted that this vacant land calculation fails to take into account the physical development constraints such as wetlands, floodplains, and steep slopes that will further reduce the amount of developable land.

Implications for the Future

The existing land use patterns of Hartford are generally consistent with those of other older Northeastern industrial cities. As the City has continued to evolve over the past 10 to 15 years, its land use has changed to reflect the vagaries of the local economy, the housing market and the individual development programs, projects and initiatives of both the public and private sectors. Over the next decade, Hartford’s land use patterns will continue to change under the influence of these same factors. The inventory and analysis of Hartford’s land use and development patterns contained in this chapter will form the foundation for recommended future land use changes in the “Generalized Land Use” chapter.

Development Patterns

Residential Zones	Effective Density			Existing	
	Units	Acres	U/A	PPA	U/A
R-8 (One-Family)					
Residential Condominium	88	29.2	3		
Single & Two Family	254	173.0	1		
Total:	342	202	2	3.6	
RO-1 (Residence Office)					
High Rise Apartment	1,414	13.7	103		
Low Rise Apartment	1,707	31.7	54		
Mixed Use: Commercial / Residential	402	9.4	43		
Residential Condominium	409	8.6	48		
Single & Two Family	24	2.4	10		
Three & Four Family	89	3.7	24		
Total:	4,045	69.5	58	300	120
RO-2 (Residence Office)					
High Rise Apartment	113	1.1	103		
Low Rise Apartment	2,192	33.2	66		
Mixed Use: Commercial / Residential	406	88.4	5		
Residential Condominium	454	6.8	67		
Senior Housing	234	1.9	123		
Single & Two Family	52	6.8	8		
Three & Four Family	39	2.0	20		
Total:	3,490	140	25	225	90
RO-3 (Residence Office)					
Low Rise Apartment	6	0.2	30		
Mixed Use: Commercial / Residential	5	0.4	13		
Single & Two Family	12	0.5	24		
Three & Four Family	66	2.4	28		
Total:	89	4	22	75	30

One City, One Plan– POCD 2020

<u>Commercial Zones</u>	<u>Effective</u>			<u>Existing</u>	
<u>B-1 Downtown Development Dist.</u>	<u>Units</u>	<u>Acres</u>	<u>U/A</u>	<u>FAR</u>	<u>U/A</u>
High Rise Apartment	1,758	8.4	209		
Mixed Use: Commercial / Residential	178	2.2	81		
Total:	1,936	11	176	10	762
<u>B-2 Downtown Development Perimeter</u>	<u>Units</u>	<u>Acres</u>	<u>U/A</u>	<u>FAR</u>	<u>U/A</u>
High Rise Apartment	270	1.1	245		
Low Rise Apartment	244	3.4	72		
Mixed Use: Commercial / Residential	363	5.0	73		
Residential Condominium	21	0.7	30		
Three & Four Family	3	0.1	30		
Total:	24	1	24	7	533
<u>B-3 Business District (General - Linear)</u>	<u>Units</u>	<u>Acres</u>	<u>U/A</u>	<u>FAR</u>	<u>U/A</u>
Low Rise Apartment	352	5.6	63		
Mixed Use: Commercial / Residential	224	10.5	21		
Residential Condominium	85	2.2	39		
Single & Two Family	58	5.6	10		
Three & Four Family	73	4.6	16		
Total:	792	29	27	2 (1.2)	91

<u>Commercial Zones</u>	<u>Effective</u>			<u>Existing</u>	
<u>B-4 Neighborhood</u>	<u>Units</u>	<u>Acres</u>	<u>U/A</u>	<u>FAR</u>	<u>U/A</u>
High Rise Apartment	136	4.0	34		
Low Rise Apartment	1,013	22.1	46		
Mixed Use: Commercial / Residential	1,355	53.2	25		
Residential Condominium	234	3.4	69		
Single & Two Family	70	6.3	11		
Three & Four Family	230	12.6	18		
Total:	3,038	102	30	2 (1.2)	91
<u>C-1 Commercial District</u>	<u>Units</u>	<u>Acres</u>	<u>U/A</u>	<u>Only allowed with IROD</u>	
Low Rise Apartment	165	1.5	110		
Mixed Use: Commercial / Residential	64	3.7	17		
Residential Condominium	41	0.4	103		
Single & Two Family	44	2.5	18		
Three & Four Family	352	3.4	104		
Total:	666	12	56		
<u>I-2 Industrial District</u>	<u>Units</u>	<u>Acres</u>	<u>U/A</u>	<u>Only allowed with IROD</u>	
Low Rise Apartment	101	2.3	44		
Mixed Use: Commercial / Residential	153	8.4	18		
Single & Two Family	31	3.9	8		
Three & Four Family	63	3.0	21		
Total:	348	18	19		

Effective Housing Density– Commercial Zones

