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# Rural Renewal





# **Rural Renewal**

...reinvention through archiscape

by **STACEY L. GROSHONG HAGEMAN**

A Terminal Project  
Presented to the Faculty of  
The College of Architecture  
At the University of Nebraska, Lincoln  
In Partial Fulfillment of Requirements  
For the Degree of  
Master of Architecture and  
Master of Community and Regional Planning  
Under the Supervision of  
Planning Professor N. Brito Mutunayagam and  
Architecture Professor Martin Despang  
Including Additional Advisory Committee Members  
Gordon Scholz, Nathan Krug and Andela Taylor





**PREFACE**

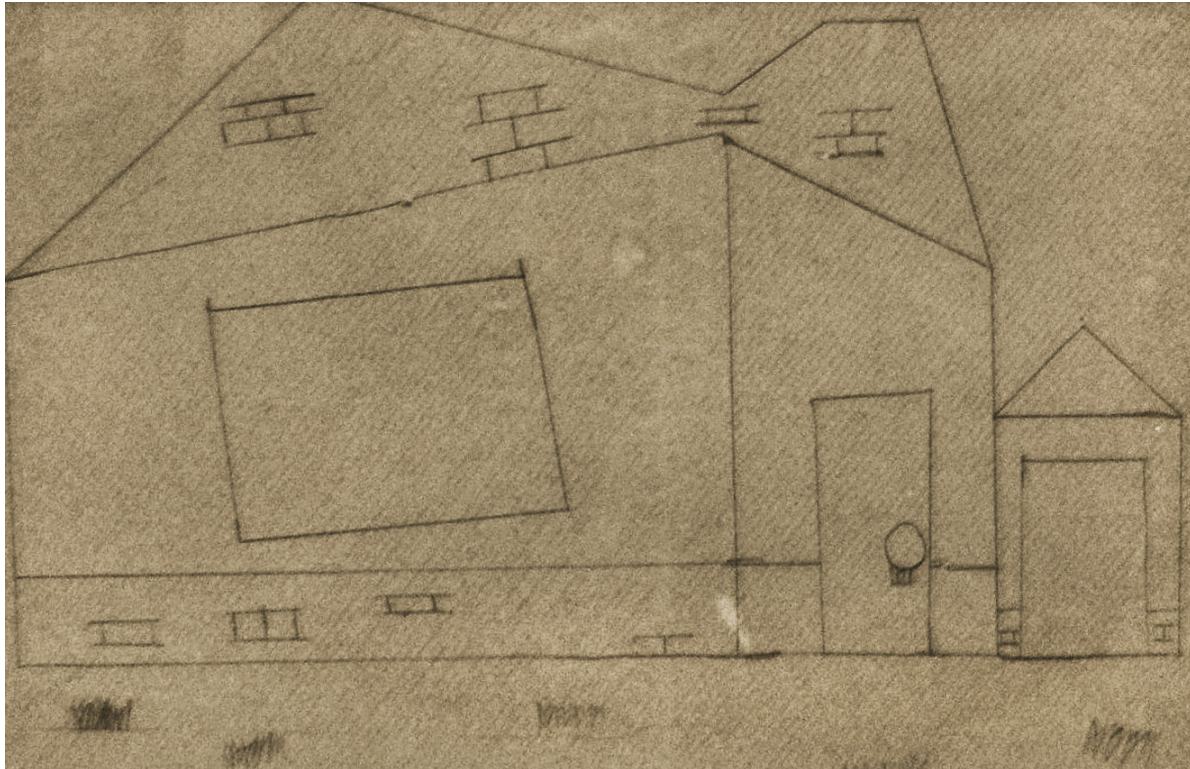
Foreword

Acknowledgements

Executive Summary



## FOREWORD



From the day I was born in October of 1982 until I went away to college I lived in Cambridge, Nebraska. And on that fall day I was taken home to the same house I left 18 years later, the house my parents literally built for themselves. The handwritten date on the underside of the stone fireplace mantel reads 1979, two years after my eldest sister was born. Just like it was then, that house is still my home. Because, no matter where I go and what I experience, I know that my heart will always belong to Cambridge and to the people and places that make it “home”.

My parents’ motivations and abilities have influenced me greatly in my career choice. I spent a great deal of my childhood working with my family not only on our house but the houses of family and friends. I was constantly emerged in the changing and adaptive world of architecture. Design became a large part of my aspirations at a young age. Houses and buildings were almost always the primary subject of my childhood artwork. When I graduated from UNL with a Bachelor’s Degree in May of 2006, my grandma framed a pencil drawing of a house that I had dreamed up when I was only 8 years old (Figure 0.101).

My family was not the only influence on my choices and goals in life. Nearly everyone in Cambridge had an impact on me as I grew because I knew so many on a personal level from the tight-knit social fabric that is the rural community. And because so many have influenced my life, I know that it is my responsibility to contribute to the community in the best way that I know how, as the Architect and Planner that I went away to become. I am the daughter of Cambridge, my motivation, drive for excellence, and impeccable work ethic have been derived from the influences placed upon me as I matured. I owe to my home an innovative design and lasting concept, something that reflects the character of the community and creates pride in the hearts of residents; a masterful entrance to the city.



## ACKNOWLEDGEMENTS

After more than nine months of preparation, this book has become something I am proud to call my own. It would not have been possible without the generous support of my family, friends and mentors.

I would like to thank my committee chairs for their guidance and criticism throughout the course of the project. To Brito Mutunayagam, you are an unreckoning force that has refused to let me settle for anything less than the absolute best. Thank you for always supporting me.

Martin Despang, your ever-present encouragement has allowed me to open up to a higher level of creativity and innovation. You have played an immense part in my education and I am truly grateful.

I also must thank Andela Taylor for her ongoing pursuit of my expertise in planning and architecture. Thank you for having faith in my work and allowing me the opportunity to give back to my home community.

I shall also take this opportunity to thank Bruce Kumpula, Dwayne Kumpula and Mark Lafferty at Reimers Kaufman and Bob Irwin and Roger Andersson at Stephens & Smith for their guidance and generosity in the use of concrete materials for my physical model.

Mom and Dad, thank you for always believing in me. Your encouragement over the past 26 years has led me to this point and I am glad to have you both at my side.

I am grateful to the many friends and family members that have supported me throughout my college career, especially Elizabeth Leach, Amanda Phillips, Emily Ross and Jesse McConnell. Thank you for being there for late-night phone calls, ridiculous requests and supportive lunches. Your morale support has been my crutch in the most stressful of times.

Lastly, and certainly not least, thank you to my husband, Lucius. I could not have made it here without your unconditional love and support. You have encouraged me through my most difficult times and celebrated with me during my greatest achievements. Thank you for your gracious understanding and patience through it all.



## EXECUTIVE SUMMARY

This project looks to combat the decline of rural communities by employing innovative planning and design processes in order to create a sustainable plan that incorporates quality of life, community pride, walkability/active living, and innovative and energy-efficient design; specifically in the rural community of Cambridge, Nebraska.

A site analysis and needs assessment explore and define the requirements of the study and aide in the creation of focused goals and objectives. Planned Unit Developments and Form-Based Codes are implemented in order to influence a creative and innovative plan for the subdivision.

Earth-sheltering highly influences the structure of buildings within the site. This is implemented in order to preserve the natural character and landscape of the surrounding recreation, parks and open space; and in order to incorporate enery-efficient and sustainable design standards. Architectural consideration has been given to each building type contained within the site, where each has been designed in detail.

The project vision is presented to Andela Taylor, Economic Development Director in Cambridge, for consideration and further action.

### RURAL

of or relating to the country, country people or life, or agriculture : not urban

### RENEW(AL)

to make like new, restore to freshness, vigor, or perfection  
 to make new spiritually : regenerate  
 to restore to existence : revive  
 to make extensive changes in : rebuild  
 to do again : repeat  
 to begin again : resume  
 replace : replenish





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## INTRODUCTION



**Figure 1.101** MID AMERICA AGRI-PRODUCTS ETHANOL PLANT

The history and economy of the Cambridge region revolves around agriculture and the progressiveness of its people. From the water-powered flour mill built in 1877 on the Medicine Creek to the recently constructed ethanol plant (Figure 1.101), Cambridge has a long history of realizing its progressive agricultural opportunities. From this has come the opportunity for the City of Cambridge to leverage significant resources to develop a 77-acre subdivision for residential and commercial development. Now, as the largest job creation opportunities in its history are presenting themselves, Cambridge seeks to rapidly respond to make truly leading-edge housing opportunities available as well.

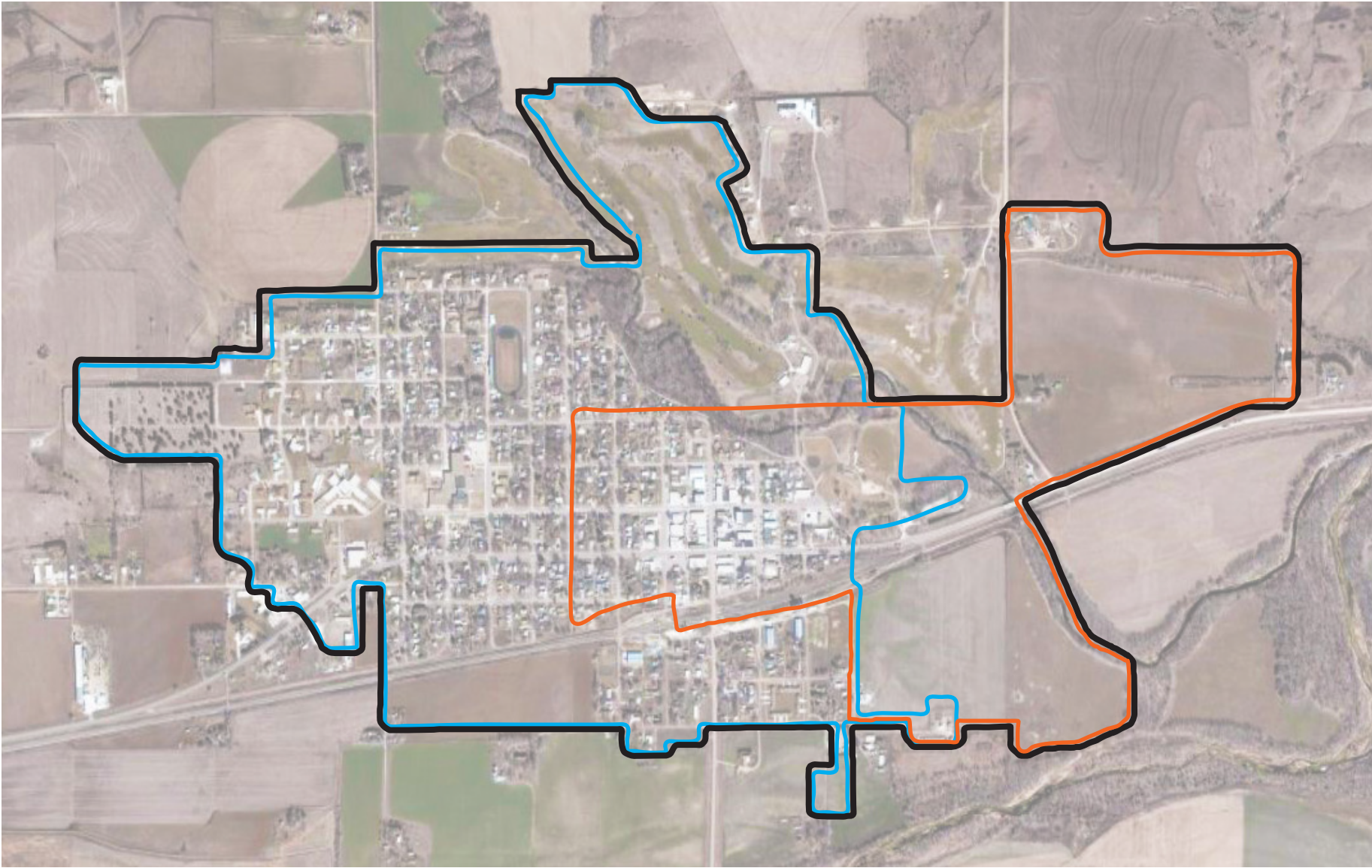
In January of 2005, the City of Cambridge saw the opportunity for major economic development within the community and began business with Mid America Agri-Products/Hoizon LLC. The city was successful in recruiting the ethanol plant which acquired land along the southeastern edge of the city, shown in Figure 1.102 above. The ethanol plant promptly began construction of the new facility.



**Figure 1.102** SITE LOCATION  
GOOGLE EARTH

The plant began production in the summer of 2008, creating 34 primary jobs. The economic impact studied for the project expands this number to include another 50+ secondary and induced jobs. A recent study produced by the Nebraska Department of Economic Development studied 51 area businesses primarily in Furnas County, including 10 Cambridge businesses. The study reinforced this projection (NEDED, 2007).





**Figure 1.103** MAP OF CAMBRIDGE CITY BOUNDARY AND BLIGHT AND SUBSTANDARD AREA BOUNDARY

- Cambridge Boundary (2000)
- Blight & Substandard Area (2007)
- Cambridge Boundary (2007)







**Figure 1.104** SUBDIVISION SITE

With the addition of these new employment opportunities, Economic Development foresaw the need for housing in Cambridge. The city partnered with Miller & Associates to delineate an area and target it for housing in Cambridge. They produced a *Blight and Substandard Analysis* that classified the area shown in Figure 1.103 as such and allowed the city to be eligible for tax increment financing. (See Appendix A for a more detailed map of the redevelopment area). The area delineated by the study and targeted for new development was then annexed into the City of Cambridge in July of 2008. The area outlined in black in Figure 1.103 illustrates the growth of city limits within the past decade.

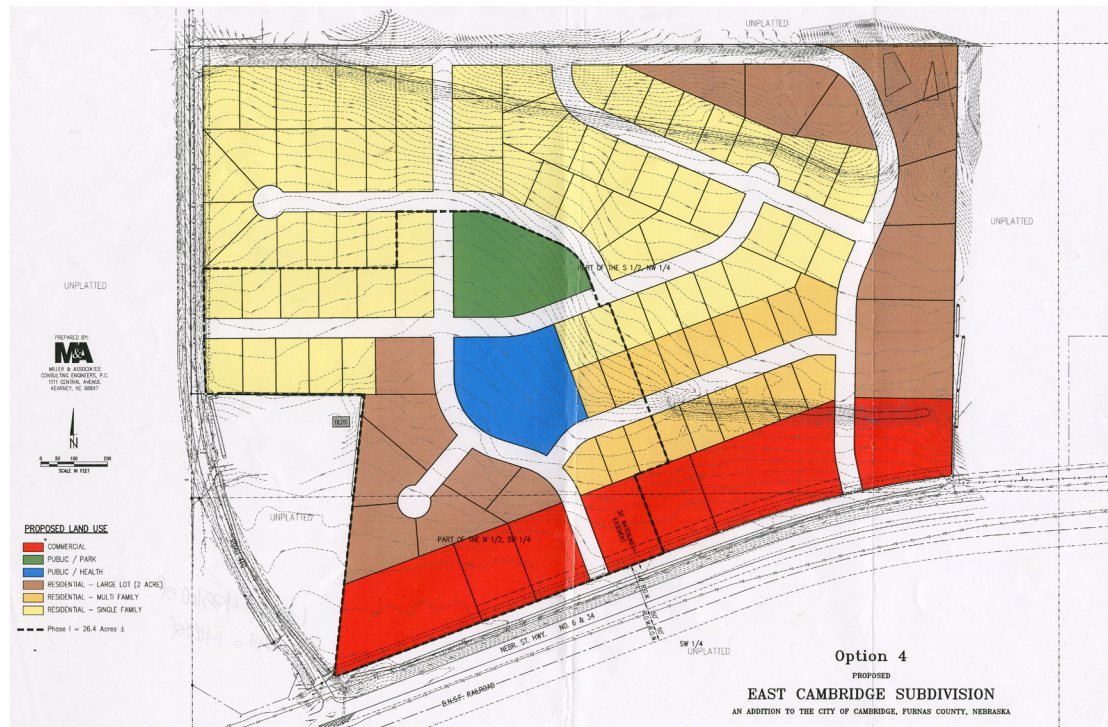
The City of Cambridge then commissioned me to prepare a *Housing Profile & Needs Assessment* for the community. The study found that there is current demand in Cambridge for 19 new renter-occupied housing units and 28 new owner-occupied housing units by 2010 (Taylor & Hageman, 2008).

There is significant demand in all housing types for high-rent units. The majority of individuals looking for housing in Cambridge are in the highest income brackets, including first-time

homebuyers and move-up buyers. According to the study, there are 57 potential first-time homebuyers in Cambridge and 94 potential move-up buyers.

The officially annexed subarea allows great potential for additional housing. This area is currently designated for use as Agricultural/Vacant land (See Appendix B for the Existing Land Use Map). Figure 1.104 is an image of the site in its current condition.



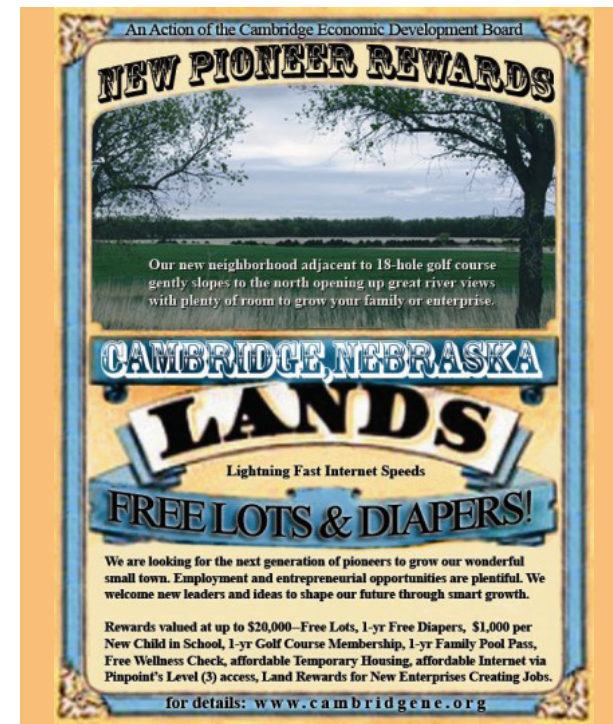


**Figure 1.105** SUBDIVISION PLAT MAP  
GOOGLE EARTH/MILLER & ASSOCIATES

After the completion of the *Housing Profile & Needs Assessment*, the City of Cambridge employed Miller & Associates to develop the plat map shown in Figure 1.105 above in order to secure tax increment financing for the new subdivision. The subdivision plat map serves only as a starting point to launch the process of securing tax increment financing and to initiate the process of land acquisition of the property by the City of Cambridge. The platting of the site was never contemplated as final, and it was confirmed from discussion with Andela Taylor, Economic Development Director in Cambridge, that the prospects for detailed planning, site layout, design and property development were still open. This created the opportunity for initiating and undertaking this professional project. The City of Cambridge is looking forward to this professional project as a potential opportunity for land development to be considered by decision-makers in Cambridge.

It should be noted also that the ethanol plant has chosen not to capture their own tax increment financing; so the city has an increased amount of funds. Through the redevelopment process, the City of Cambridge will guide and direct the development in the proposed area.

Economic Development also foresees the need to attract young professionals to the area. In order to do this, they will be offering financial incentives to those who are interested in developing housing and industrial sites in the city (Miller & Associates, 2007). The city has employed the “New Pioneer Rewards” program in order to provide these incentives. This program offers homebuyers free lots on which to develop and also a year supply of diapers to those with children entering Cambridge Public



**Figure 1.106** INCENTIVES FLYER  
WWW.CAMBRIDGE-NE.ORG

Schools. Figure 1.106 shows the flyer developed as a marketing tool for the new incentive program.

The City of Cambridge will be providing the subdivision with infrastructure. They again partnered with Miller & Associates to develop a plan for infrastructure (see Appendix C). They will expand their current system to service the area.

Cambridge Economic Development is negotiating the acquisition of this 77-acre tract of land with the property owner. The city entered into an Option to Purchase Contract with the private landowner. At the initiation of the contract, the City of Cambridge paid the land-owner a non-refundable deposit. The city then has until a specifically defined date to purchase the land from the landowner or the deposit will be forfeited. In the event that the City

of Cambridge decides to purchase the property, the deposit will be applied toward the purchase price.

According to Andela Taylor, the Economic Development Director, the city initially intended to close on the property by December 15th, 2008. However, the ethanol plant ceased production in January of 2009 because of declining profits and the contract was extended until October 1, 2009. Although the City is currently unsure if Mid America Agri-Products will be committed to paying their property taxes, the City Council has elected to go ahead with the acquisition of the 77-acre tract of land.



## RESEARCH & ANALYSIS

Literature Review

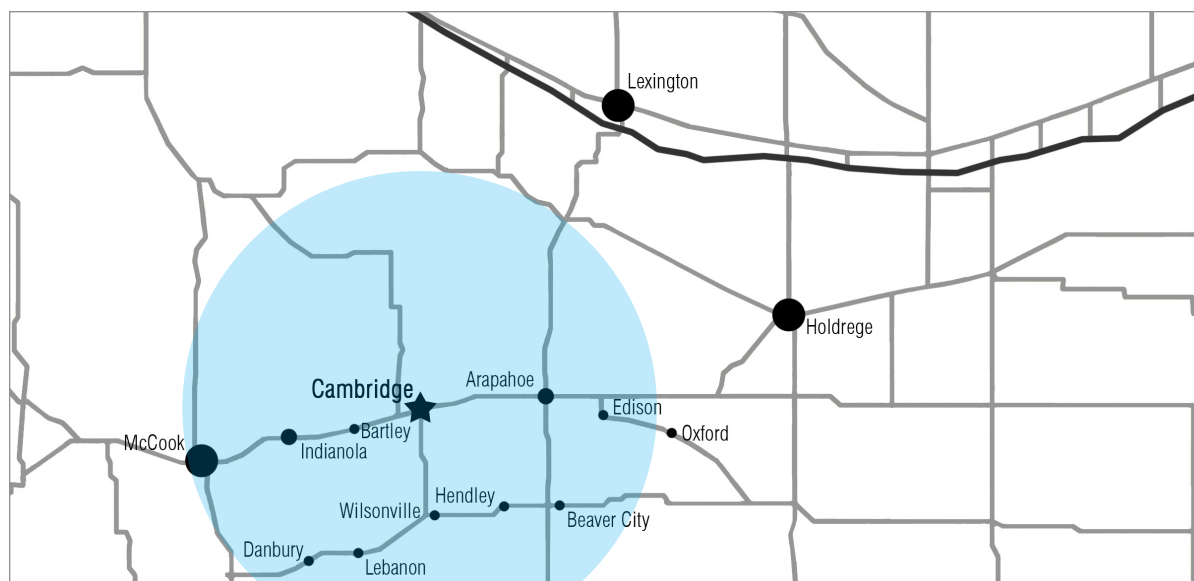
Needs Assessment

Site Analysis

Design Precedents



## LITERATURE REVIEW



**Figure 2.101** MAP OF SURROUNDING AREA

McCook is located just 25 miles west of Cambridge. It is the seat of Red Willow County and a major regional commercial and residential center with a population of 7,994. Other nearby economic centers include Holdrege – population 5,636 – 47 miles east of Cambridge and Lexington – population 10,011 – 50 miles north-northeast of Cambridge (Census, 2000). Figure 2.101 illustrates the aforementioned area that surrounds the City. The blue circle creates a study boundary with a 25 mile radius from Cambridge.

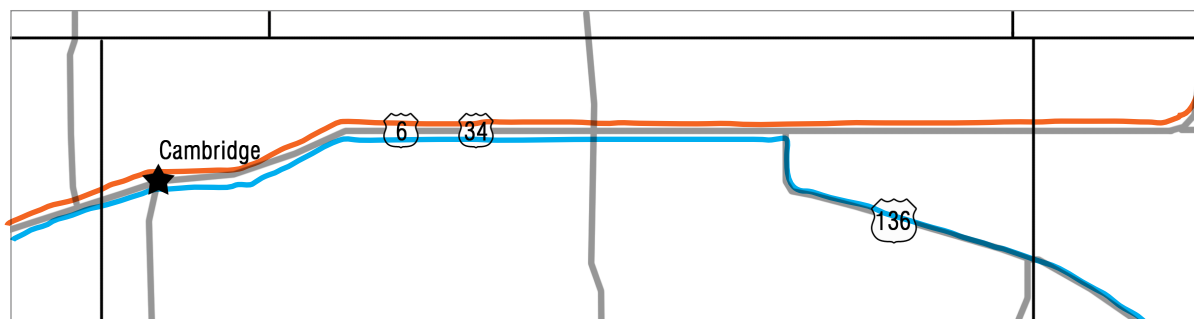
The transportation assets passing directly through the community have proven to be important in Cambridge. The Burlington Northern Railroad was constructed in 1880 and now serves the ethanol plant. US 6 was built in 1911 and runs through Cambridge parallel to the railroad. Both the railroad and the highway are illustrated in Figure 2.102 above.



**Figure 2.102** TRANSPORTATION ASSETS  
CAMBRIDGE MAGAZINE

— Burlington Northern Railroad  
— US Highway 6/34

A group of state officials and leaders have proposed a future project named the “Snowbird Trail” that would potentially bring additional traffic onto US 6/34 from those traveling south for the winter (O’Hanlon, 2006). Further, US 136, designated as “Heritage Highway” under the Nebraska Scenic Byway program ends at US 6/34 approximately 20 miles east of Cambridge (IADA, 2005). State officials plan to extend the Scenic Byway designation onto US 6/34 to the west. The byway would then carry travelers statewide from east to west. These two important designations, shown in Figure 2.103, will increase tourism traffic and exposure of Cambridge to potential residents.



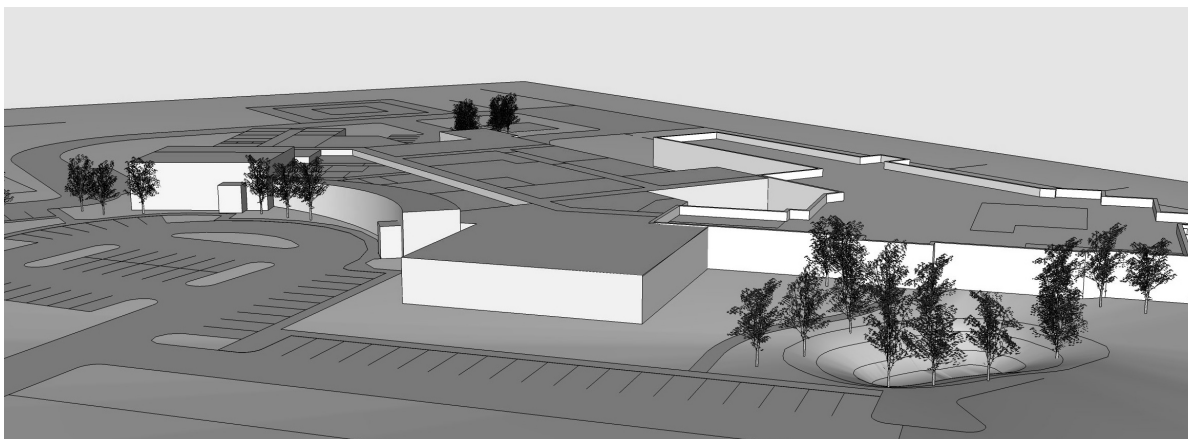
**Figure 2.103** PROPOSED HIGHWAY DESIGNATIONS

— Snowbird Trail  
— Heritage Highway





**Figure 2.104** TOP EMPLOYERS IN CAMBRIDGE



**Figure 2.105** PROPOSED ADDITION/REMODEL TO TRI-VALLEY HEALTH SYSTEMS  
WWW.TRI-VALLEYHEALTH.COM/HARDHATNEWS

Cambridge has established itself as a service and medical center with a compact retail sector and strong food service sector. The manufacturing and technology job base of Cambridge has increased with the ethanol plant and fiber optic availability. The majority of Furnas County's largest employers are located in Cambridge (NEDED, 2007). Figure 2.104 shows Cambridge's major employers including the headquarters of Tri Valley Health Systems, Cambridge Telephone/Pinpoint Communication, Twin Valley Public Power District, Cambridge Public Schools, Mid America Agri-Products, Besler Industries, Ag Valley Coop, First Central Bank, First National Bank, and the City of Cambridge (Taylor & Hageman, 2008).

The Tri Valley Health System, Cambridge's largest employer, is an innovative regional system with the Cambridge Memorial Hospital, administration, and other services in Cambridge (Taylor & Hageman, 2008). It was the first system in Nebraska to offer rural health clinics in nearby towns. A physical therapy practice and Tranquil Valley Spa, with a new wellness emphasis, round out the opportunity for good health and wellbeing in Cambridge.

Tri Valley Health System is in dire need of more hospital space and, because of this, there are departments located in other buildings throughout the city. A new facility would provide an opportunity to consolidate all functions into one building. It should be noted that the Tri Valley Health System Board of Trustees has recently signed a resolution to move forward with the construction of a new facility. The proposed facility is shown in Figure 2.105. The current health club facility will be lost with the new hospital remodel and addition. A replacement facility may be an ideal use to be located in the new subdivision.

Today, communication of information is also vital. There is significant opportunity for future growth with Pinpoint, Cambridge's Internet Service Provider, accessing the only point on the Level (3) fiber



network between Omaha and Denver. Cambridge Public Schools further reveal the importance of technology to the community. They are involved in a plan that provides every high school student with 24/7 access to their own personal laptop for the entire school year. Additionally, every classroom is equipped with SMARTboard technology (Nebraska Rural Living, 2008).

The Cambridge Public School, serving grades K-12, provides the highest level of academic, athletic, and life skills education. The tradition of great athletic teams is a standard in Cambridge that motivates tremendous community pride (Figure 2.106). Attending the sporting and cultural events of the school is an important part of the social fabric of the community. The City of Cambridge has mentioned the creation of a learning center, where education can be extended beyond the high school. The new subdivision may be an ideal place for its location.

A fun and active lifestyle is enjoyed by both residents and tourists due to the many recreational amenities in Cambridge. The pioneers of Cambridge recognized the need for an inviting place for road and rail-weary travelers to stop. In 1887, C. M. Brown gave the City of Cambridge 20 acres of land to be used as a park (Burch Publishing, 1884).

McKinley Park, now an affiliate site of the Nebraska Statewide Arboretum, has continued to be an important recreational asset that continually benefits from the generosity and commitment of Cambridge citizens. The natural beauty of the park has been greatly enhanced with gardens, trails, sports, recreation, public area, a historic one room schoolhouse, and the 18-hole Cross Creek Golf Links public golf course (Figure 2.107). City officials believe Cambridge has the largest number of acres of public parks per capita in Nebraska even without including the adjacent public golf course.



**Figure 2.106** LADY TROJAN BASKETBALL



**Figure 2.107** CROSS CREEK GOLF LINKS



**Figure 2.108** TRAIL IN AUTUMN



**Figure 2.109** MEDICINE CREEK CROSSINGS TRAIL

Several historic county bridges have been added along the Medicine Creek Crossings Trail system, which loops through the park and connects to the commercial downtown and primary residential areas. Medicine Creek Crossings Trail is pictured in Figure 2.108 and Figure 2.109. The City of Cambridge would like this trail to be extended into the new subdivision to enhance the quality of life and promote a healthy lifestyle.

The scope of planning for the development area includes: natural environment, built environment, social environment, and economic environment (Anderson, 2000). The interrelated nature of these environments is important to consider when planning for an area. These four environments relate to planning as well as architecture and therefore both should be considered in this project.

## NEEDS ASSESSMENT

Arthur C. Nelson's *Planner's Estimating Guide: Projecting Land-Use and Facility Needs* was used to provide the needs assessment that follows.

The US population is projected to reach 375 million in 2030, influencing housing and employment to grow exponentially over the next two decades. Nelson estimates that in order to accommodate growth to 2030, the US will construct 50% more residential units and 90% more nonresidential space than existed in 2000. This new construction will not only include new units, but also units that must be replaced. Because so much growth is projected to occur, architects and community planners now have a unique opportunity to greatly influence the shape of cities in the 21st Century.

The approach recommended by Nelson was adopted to estimate land-use and facility needs for Cambridge. The tables were completed using data from Cambridge to provide a first impression of future land-use needs in order to meet the development needs of the future.

Whereas, Nelson's approach was much more elaborate than required for this study, it proved to be a useful guide to enable the author to simplify the data using the following format:

- Data, Trends, and Baseline Conditions
- Residential Land-Use Needs
- Employment Land-Use Needs
- Functional Population Adjustments for Public Facilities
- Public Facility Space and Land-Use Needs
- Summary Land-Use Needs and Market Factor Adjustment

### DATA, TRENDS, AND BASELINE CONDITIONS

The plan period for Cambridge is 2000 to 2020. The projected population in 2020 was estimated based on the addition of the ethanol plant and the growth that the 2007 Business Retention and Expansion Survey (NEDED, 2007) detailed with the creation of primary, secondary and induced jobs. Table 1.1 shows population and household figures for Cambridge. From 1990 to 2020 the population is projected to increase while the household size is projected to decrease. This causes an increase in the number of households. A dip in the population occurred in 2000 but this

decrease will be recovered by the projected growth that the ethanol plant will stimulate in Cambridge.

Table 1.2 shows employment figures. Employment is projected to increase in the following industries from 1990 to 2020: Agriculture/Forestry/Fishing, Construction, Manufacturing, TCU, Retail, FIRE, Services, and Total Employment. The largest increases are occurring with Manufacturing and FIRE, attributable to the Ethanol Plant. Employment is projected to decrease in the following industries from 1990 to 2020: Wholesale, Health & Social Services, and Public Administration. Table 1.1 and Table 1.2 form the basis for the land-use facility estimation tables that follow.

**Table 1.1** BASELINE POPULATION AND HOUSEHOLD DATA

<i>Population Data Category</i>	<i>1980</i>	<i>1990</i>	<i>2000</i>	<i>2020</i>	<i>Change 1990-2020</i>	<i>Percent Change 1990-2020</i>	<i>Annual Rate 1990-2020</i>
Year-Round Population	1,206	1,107	1,041	1,199	92	8.31%	0.27%
Group Quarters Population	60	75	78	90	15	20.00%	0.61%
Permanent Population	1,146	1,032	963	1,109	77	7.46%	0.24%
Permanent Households	507	453	486	528	75	16.56%	0.51%
Average Household Size	2.26	2.28	1.98	2.10		-7.80%	

US BUREAU OF THE CENSUS, 2000

**Table 1.2** BASELINE EMPLOYMENT DATA

<i>Employment Data Category</i>	<i>1990</i>	<i>2000</i>	<i>2020</i>	<i>Change 1990-2020</i>	<i>Percent Change 1990-2020</i>	<i>Annual Rate 1990-2020</i>
<b>Nonurban Related*</b>						
Agriculture, Forestry, Fishing	32	49	60	28	87.50%	2.12%
Mining	8	0	0	(8)	-100.00%	-
Total Nonurban-Related Employees	40	49	60	20	50.00%	1.36%
<b>Urban Related</b>						
Construction	16	28	44	28	175.00%	3.43%
Manufacturing	19	25	65	46	242.11%	4.19%
TCU	47	40	50	3	6.38%	0.21%
Wholesale	23	13	20	(3)	-13.04%	-0.46%
Retail	42	47	62	20	47.62%	1.31%
FIRE	16	39	69	53	331.25%	4.99%
Services**	125	116	130	5	4.00%	0.13%
Healthcare & Social Services	83	74	80	(3)	-3.61%	-0.12%
Public Administration	17	8	12	(5)	-29.41%	-1.15%
Total Urban-Related Employees	388	390	532	144	37.11%	1.06%
Total Employment	428	439	592	164	38.32%	1.09%

\*NOT USED IN EMPLOYMENT-BASED LAND-USE AND FACILITY NEEDS CALCULATIONS.

\*\*EXCLUDES GROUP CARE, HOTEL/MOTEL, AND GOVERNMENT WORKERS.

NEBRASKA WORKFORCE DEVELOPMENT



**Table 2.1** RESIDENTIAL LAND-USE BASELINE CONDITIONS

<i>Residential Land-Use Category</i>	<i>Units 1990</i>	<i>Share of Units 1990</i>	<i>Existing Acres 1990</i>	<i>Units Per Net Acre 1990</i>	<i>Units 2000</i>	<i>Share of Units 2000</i>	<i>Existing Acres 2000</i>	<i>Units Per Net Acre 2000</i>	<i>Units Added 1990-2000</i>	<i>New Units Per Net Acre 1990-2000</i>	<i>Percent of New Units 1990-2000</i>	<i>Acres Added 1990-2000</i>	<i>Percent of Acres 1990-2000</i>
Single Family	475	84.82%	123.78	3.8375	482	79.93%	125.60	3.8376	7	3.8462	16.28%	1.82	42.13%
Multifamily	51	9.11%	4.80	10.6250	67	11.11%	6.30	10.6349	16	10.6667	37.21%	1.50	34.72%
Group Care	34	6.07%	1.00	34.0000	54	8.96%	2.00	27.0000	20	20.0000	46.51%	1.00	23.15%
Total Residential	560	100%	129.58	4.3217	603	100%	133.90	4.5034	43	9.9537	100%	4.32	100%

CAMBRIDGE, NEBRASKA COMPREHENSIVE PLAN 2009; HOUSING PROFILE &amp; NEEDS ASSESSMENT, 2008

## RESIDENTIAL LAND-USE NEEDS

Housing consumes the largest share of land of all major land uses and its share has grown steadily since the 1950s. The basic steps involved in estimating future residential land-use needs are:

- Inventorying residential land uses and analyzing trends
- Estimating occupied units and residents
- Estimating residential acres and units lost
- Estimating residential units needed
- Estimating residential land-use needs

The first step is to inventory residential land uses and analyze trends in three different categories; single family, multifamily, and group care while taking the small size and seemingly uniform density of Cambridge into consideration. Table 2.1 shows recent residential development trends used to estimate housing demand and future needs within the community.

The share of single family residential units decreased from 1990 to 2000. The share of multi-family units increased and is attributable to the addition of South Ridge Apartments, which were built as government subsidized housing in Cambridge. This indicates that there is a shift in demand from single family units to multi-family units.

The second step is to estimate occupied units and the population residing in each of the residential land-use categories. The calculation method is described in Appendix D. The estimated occupied units and the population residing in each of the residential land-use categories is shown in Table 2.2. There is a significantly higher vacancy rate in single family housing and group care units and therefore,

**Table 2.2** OCCUPIED UNITS

<i>Residential Land-Use Category</i>	<i>Units 2000</i>	<i>Vacancy Rate 2000</i>	<i>Occupied Units 2000</i>	<i>Estimated Household Size 2000</i>	<i>Estimated Residents 2000</i>
Single Family	482	13.07%	419	1.98	830
Multifamily	67	1.49%	66	1.98	131
Group Care	54	14.81%	46	1.00	46
Total Residential	603	29.38%	485	5	1006

US BUREAU OF THE CENSUS, 2000

there is little demand for these types of units and higher demand for multifamily units.

The number of vacant units, usually expressed as a percent of total habitable units, varies with growth rates and tenure characteristics of renters and buyers. Table 2.3 shows the range of vacancy rate assumptions that may be used, based on information from a number of states and other authorities under normal market conditions. Vacancy rates that exceed the normal are considered surplus. Growth rate can also influence vacancy rates. The lower the growth rate, the fewer the number of vacant habitable units needed to provide sufficient alternatives. It also facilitates free movement from one housing category to another.

The annual growth rate in Cambridge is less than 1.00%. If it is assumed that single family residences are normally detached and multifamily residences are normally attached, the vacancy rates from Table 2.2 can be related to the data in Table 2.3. The Federal Housing Administration (FHA) suggests that the normal vacancy rate for detached units is less than 1.00%. The vacancy rate for this type of housing in Cambridge was 13.07% in 2000, showing a surplus in the number of vacant single family houses. However, the vacancy rate for

**Table 2.3** ALTERNATIVE RESIDENTIAL VACANCY RATE ASSUMPTIONS

<i>Source</i>	<i>Detached (Owner-Occupied)</i>	<i>Attached (Renter-Occupied)</i>
<i>Readings in Market Research for Real Estate*</i>	4.00%	7.00%
Federal Housing Administration**	5% + Annual Growth 1.50% - 2.00%	5% + Annual Growth 6.00% - 8.00%
	1% - 5% Annual Growth 1.00% - 1.50%	1% - 5% Annual Growth 4.00% - 6.00%
	Below 1% Annual Growth <1.00%	Below 1% Annual Growth <4.00%

\*SINGER (1985), PP. 92-93; READINGS IN MARKET RESEARCH FOR REAL ESTATE, PP. 85-101.

\*\*FEDERAL HOUSING ADMINISTRATION (UNDATED).

attached units in Cambridge is 1.49% which is well below the 4.00% normal vacancy rate. Therefore, vacancy data confirms the additional demand for multifamily units in Cambridge.

The calculation method for estimating residential acres and units lost is described in Appendix D. Table 2.4 shows that existing residential units will be removed from the inventory over time. These units are usually replaced with a residential land-use of a greater density or a different land-use altogether. Loss can occur from fire, natural disaster or aging

and it is customary for planners to assume that about one-half of one percent (0.5%) of conforming residential units will be lost due to these reasons.

In older communities like Cambridge, the loss rate may be higher. The number used in Table 2.4 comes from the American Housing Survey (U.S. Department of Housing and Urban Development, 1989 and 1999) which indicates that the average national annual loss rate for the plan period 2000 to 2020 is about 0.58%. Because of the high percentage of single family residential units in Cambridge, it is not a surprise that the largest loss falls in this category.

The calculation method for estimating residential units needed is described in Appendix D. Table 2-5 estimates total housing units needed by type and density category at the end of the plan period. In Cambridge, there is a trend toward higher density housing. Local governments are becoming increasingly willing to raise the density in their respective communities in order to decrease the cost per residential unit. Higher density also provides more flexibility to meet housing needs.

The Joint Center for Housing Studies of Harvard University and the Massachusetts Institute of Technology, according to Nelson, illustrates ways in which housing policy and practices are shaped by economic and demographic trends. Important trends that will shape housing demand are the increasing diversity of the population, the aging of the baby boomers, the higher tendency of people to live alone, and the growth of the elderly population. Specifically, between 2000 and 2010:

- The aging population, and aging baby boomers in particular, will drive changes in the age distribution of households. Baby boomers will increase the number of households in the 45-54 and 55-64 age ranges. Life expectancies are also rising. Therefore, the number of 65-74 and 75 and over household heads will increase between 2000 and 2010.

**Table 2.4** RESIDENTIAL ACRES AND UNITS LOST, 2000 TO 2020

Residential Land-Use Category	Existing Acres 2000	Units Lost, Average Annual Loss Rate @			
		0.58%	Acres Lost	Acres Remaining	Units Remaining
Single Family	126	56	15	110.60	426.09
Multifamily	6	8	1	5.30	59.23
Group Care	2	6		2.00	47.74
Total Residential	134	70		115.90	533.05

CAMBRIDGE, NEBRASKA COMPREHENSIVE PLAN 2009; HOUSING PROFILE & NEEDS ASSESSMENT, 2008

**Table 2.5** RESIDENTIAL UNITS NEEDED

Residential Land-Use Category	Plan		Assumed Household Size 2020	Occupied Units Needed 2020
	Percent Residents 2020	Estimated Residents 2020		
Single Family	74.00%	821	2.10	391
Multifamily	20.00%	222	2.10	106
Group Care	6.00%	67	2.10	32
Total Residential	100%	1109	2.10	528

- Baby boomers will be moving into the “empty nest” stage of life when their children leave home. As a result, couples, without children under the age of 18, will be the fastest growing family type in the years ahead.
- The number of people living alone will also increase. The average age at first marriage continues to increase, and the share of single-person households with persons born after 1940 is climbing. The number of single-person households age 65 and over will grow.
- Single-parent households are headed for a slowdown. With the number of women in their mid-20s to mid-30s declining, growth of this household type will decrease before picking up again after 2005.

- Married couples with children under age 18 will also decrease in number because the last of the baby boomers will be leaving their childbearing years.
- With the 85 and over population growing during the first decade of the 21st century, housing suited to the health-related needs of the elderly will be increasing in demand. By the time people reach their late 60s and 70s, about one in 10 of these living in the community (outside of nursing homes and group quarters) requires assistance in performing the activities of daily life. As they advance into their 80s and 90s, disabilities become much more common and the share needing help increases to one in three.

The final step is estimating net and gross land needs for residential land uses. The calculation method is described in Appendix D. The future vacancy rate, density and gross area factor are all assumed in Table 2-6. The gross area factor accounts for rights-of-way, easements, drainage ways, and other land on which development occurs. The future vacancy rate assumptions vary from the current rates because it is assumed that current market conditions are applicable to Cambridge.

**Table 2.6** RESIDENTIAL LAND-USE NEEDS

Residential Land-Use Category	Vacancy Rate 2020	Total Units Needed 2020	Total Units Lost	Total New Units Needed 2020	Plan New Unit Net Density 2020	New Net Acres Needed	Plan Net Acres Needed	Gross Acres Adjustment Factor	Gross Plan Acres Needed
Single Family	5.00%	411	56	-15	1.40	-10.52	100.08	20.00%	125.10
Multifamily	5.00%	111	8	52	12.00	4.33	9.63	35.00%	14.81
Group Care	5.00%	33	6	-14	28.00	-0.51	1.49	40.00%	2.48
Total Residential	5.00%	556	70	23	-3.406	-6.71	111.19	100%	142.39

**Table 3.1** MANUFACTURING AND OFFICE SPACE TRENDS

Year	Sq. Ft. Per Office Employee*	Sq. Ft. Per Manufacturing Employee**
1942	110	
1958	121	
1961		389
1979	199	
1980	209	
1990	252	
1991		495
2000***	280	546

\*ADAPTED FROM ARMSTRONG (1972); BUILDING OWNERS AND MANAGERS ASSOCIATION INTERNATIONAL (1980); PRICE WATERHOUSE REAL ESTATE GROUP (1991); NAIOP (1990)

\*\*ADAPTED FROM: NEZ (1961, PP. 3-8) (FOR LIGHT INDUSTRY); NAIOP (1990) (FOR GENERAL MANUFACTURING)

\*\*\*EXTRAPOLATION OF TRENDS

## EMPLOYMENT LAND-USE NEEDS

The average area per employee has risen during the past three decades, largely because of automation in manufacturing and computerization of office functions. This is shown in Table 3.1. It is difficult to say whether this trend will continue. One factor is that office automation may have achieved saturation in the workspace, especially among service industries. For Cambridge, the employment

projections for the period 2000 to 2020 are shown in Table 1.2. Land-use needs of employment-based activities are estimated in the following two steps:

- Determining gross square feet of building space per worker
- Determining net and gross acres needed for employment-based land uses

The calculation method for estimating gross building space occupied per employee is described in Appendix D. The averages used in Table 3.2 are based in part from studies conducted by the National Association of Industrial and Office Properties—NAIOP (1990), the Institute of Transportation Engineers—ITE (1997), and Price Waterhouse Real Estate Group (1991). Generally, office space consumption will be higher in small city firms. This indicates that office space consumption will be higher than average in Cambridge. The NAIOP (1990) study addresses those concerns in its national study and found little variation among office employees and, therefore, the national average figures can be used with confidence.

The calculation method for estimating employment-based land-use needs is described in Appendix D. Table 3.3 shows total net and gross land area needed to accommodate nonresidential, employment-based land-use needs through the plan period.

**Table 3.2** GROSS BUILDING SPACE OCCUPIED PER EMPLOYEE

Employment Land-Use Category	Net Sq Ft Per Employee	Efficiency Ratio	Adjusted Net Sq Ft Per Employee	Vacancy Rate	Gross Sq Ft Per Employee	Employee Share	Projected Employment 2020
<b>Industrial</b>							
Construction	260.00	95.00%	273.68	5.00%	228.09	24.58%	44
Manufacturing	550.00	95.00%	578.95	5.00%	609.42	36.31%	65
TCU	250.00	95.00%	263.16	5.00%	277.01	27.93%	50
Wholesale Trade	630.00	95.00%	663.16	5.00%	698.06	11.17%	20
Subtotal Industrial	404.00	95.00%	425.26	5.00%	447.65	100.00%	179
<b>Retail Trade</b>							
Neighborhood	510.00	85.00%	600.00	5.00%	631.58	30.00%	19
Community	510.00	80.00%	637.50	5.00%	671.05	70.00%	43
Subtotal Retail Trade	510.00	81.50%	625.77	5.00%	658.70	100.00%	62
<b>Office*</b>							
General Office	280.00	85.00%	329.41	6.00%	350.44	100.00%	211
Subtotal Office	280.00	85.00%	329.41	6.00%	350.44	100.00%	211

\*OFFICE INCLUDES FIRE, SERVICES AND GOVERNMENT.

**Table 3.3** EMPLOYMENT-BASED LAND-USE NEEDS

Employment Land-Use Category	Employee Share	FAR	Gross Sq Ft Per Net Acre	Gross Sq Ft Per Net Acre	Employees Per Net Acre	Projected Employment 2020	In-Place Employee Percent	Planned In-Place Employees 2020	Planned Acres Needed 2020	Existing Acres 2000	New Acres Needed	Gross Acre Adjustment Factor	Gross Acres Needed
<b>Industrial</b>													
Construction	24.58%	0.1500	288.09	6534.0	22.68	44	100.00%	44	1.94	1.94	0.00	20.00%	2.42
Manufacturing	36.31%	0.2000	609.42	8712.0	14.30	65	100.00%	65	4.55	4.55	0.00	20.00%	5.68
TCU	27.93%	0.1500	277.01	6534.0	23.59	50	100.00%	50	2.12	2.12	0.00	20.00%	2.65
Wholesale Trade	11.17%	0.2200	698.06	9583.2	13.73	20	100.00%	20	1.46	1.46	0.00	20.00%	1.82
Subtotal	100.00%	0.1760	447.65	7959.5	17.79	179	100.00%	179	10.06	10.06	0.00	20.00%	12.58
<b>Retail Trade</b>													
Neighborhood	30.00%	0.2200	631.58	9853.2	15.17	19	100.00%	19	1.23	1.23	0.00	35.00%	1.89
Community	70.00%	0.2200	671.05	9853.3	14.28	43	100.00%	43	3.04	3.04	0.00	30.00%	4.34
Subtotal	100.00%	0.2200	658.70	9853.2	14.54	62	100.00%	62	4.26	4.26	0.00	31.51%	6.23
<b>Office*</b>													
General Office	100.00%	0.2200	350.44	9853.2	27.35	211	90.00%	190	6.94	6.94	0.00	20.00%	8.68
Subtotal	100.00%	0.2200	350.44	9853.2	30.38	211	90.00%	190	6.94	6.94	0.00	20.00%	8.68
<b>Grand Total</b>						<b>452</b>			<b>21.27</b>	<b>21.27</b>			<b>27.49</b>

\*OFFICE INCLUDES FIRE, SERVICES AND GOVERNMENT.

## FUNCTIONAL POPULATION ADJUSTMENTS FOR PUBLIC FACILITIES

Table 4.1 establishes the baseline parameters for calculation of both functional population variations. The derivation of baseline functional population assumptions is described in Appendix D.

- 24/7 Functional Population relates to public safety facilities because they serve the community, 24 hours per day, seven days per week. Such facilities include fire and emergency medical facilities.
- Daytime functional population applies to all public facilities other than public safety and government buildings. Daytime Functional Population relates to facilities serving the public, essentially during daylight hours, such as parks and libraries. Although they are used at night, many are not open on certain days or certain hours on certain days. Twelve hours of daily operation, seven days per week, is assumed for daylight functional population.

Table 4.1 combines data from the ITE's Trip Generation (1997) handbook with the Federal Highway Administration's 2000 Nationwide Household Transportation Survey (2001) as indicated in Appendix D.

Table 4.2 uses the baseline assumptions to establish functional population coefficients or multipliers that are used to estimate functional population in Table 4.3. Calculations are described in Appendix D.

Table 4.3 multiplies the 2000 and 2020 population, employment, and student figures by the coefficients for both of the functional population variations to estimate total functional population.'

**Table 4.1** BASELINE FUNCTIONAL POPULATION ASSUMPTIONS

<i>Land-Use Category</i>	<i>ITE Code</i>	<i>In-Place Occupant Ratio</i>	<i>Hours in Place</i>	<i>Trips Per Employee</i>	<i>One-Way Trips Per Employee</i>	<i>Journey-to-Work Occupants Per Trip</i>	<i>Daily Occupants Per Trip</i>	<i>Visitors Per Employee</i>	<i>Visitor Per Trip</i>
Construction	110	1.0000	9.0000	3.0200	1.1500	1.3000	2.0200	1.0872	1.000
Manufacturing	140	1.0000	9.0000	2.1000	1.0500	1.3000	2.0200	0.7560	1.000
TCU	110	1.0000	9.0000	3.0200	1.5100	1.3000	2.0200	1.0872	1.000
Wholesale Trade	150	1.0000	9.0000	3.8900	1.9450	1.3000	2.0200	1.4004	1.000
Retail Trade	820	1.0000	9.0000	39.9450	19.9725	1.1900	1.9300	14.7796	1.000
FIRE	710	0.9000	9.0000	3.3200	1.6600	1.1350	1.9150	1.2948	1.000
Services	710	0.9000	9.0000	3.3200	1.6600	1.1350	1.9150	1.2948	1.000
Healthcare & Social Services	252			2.6100					
	253	1.0000	9.0000	3.4800	1.7400	1.1350	1.9150	1.3572	2.000
Public Administration	730	0.9000	9.0000	11.9500	5.9750	1.1350	1.9150	4.6605	1.000
Students	na	1.0000	9.0000	na	na	na	na	na	Na

**Table 4.2** 24/7 AND DAYTIME FUNCTIONAL POPULATION COEFFICIENTS

<i>Land-Use Category</i>	<i>24/7 Days Per Week</i>	<i>24/7 Functional Population Coefficient – Hours @ 168</i>	<i>Daytime Days Per Week</i>	<i>Daytime Functional Population Coefficient – Hours @ 84</i>
Permanent Population	7.00	0.6700	7.00	0.5000
Group Care Population	7.00	0.8333	7.00	1.0000
Construction	5.00	0.3002	5.00	0.6004
Manufacturing	5.00	0.2904	5.00	0.5807
TCU	5.00	0.3002	5.00	0.6004
Wholesale Trade	5.00	0.3095	5.00	0.6191
Retail Trade	7.00	0.9908	7.00	1.9816
FIRE	5.00	0.2796	5.00	0.5592
Services	5.00	0.2796	5.00	0.5592
Healthcare & Social Services	7.00	0.4881	7.00	0.9762
Public Administration	5.00	0.3798	5.00	0.7596
Students	5.00	0.2679	5.00	0.5357



**Table 4.3** 24/7 AND DAYTIME FUNCTIONAL POPULATION

<i>Land-Use Category</i>	<i>Residents, Employees, Students 2000</i>	<i>Residents, Employees, Students 2020</i>	<i>24/7 Functional Population 2000</i>	<i>24/7 Functional Population 2020</i>	<i>Daytime Functional Population 2000</i>	<i>Daytime Functional Population 2020</i>
<b>Permanent Residents</b>						
Rural Residents	3	0	2	0	1	0
Single Family	830	821	556	550	415	410
Multifamily	131	222	88	149	65	111
<b>Total Permanent Population</b>	<b>963</b>	<b>1042</b>	<b>645</b>	<b>698</b>	<b>482</b>	<b>521</b>
<b>Group Care</b>						
Residential	78	90	65	75	78	90
Employment	74	80	36	39	72	78
<b>Total Group Care</b>	<b>152</b>	<b>170</b>	<b>101</b>	<b>114</b>	<b>150</b>	<b>168</b>
<b>Employment</b>						
<b>Industrial</b>						
Construction	28	44	8	13	17	26
Manufacturing	25	65	7	19	15	38
TCU	40	50	12	15	24	30
Wholesale Trade	13	20	4	6	8	12
<b>Total Industrial</b>	<b>106</b>	<b>179</b>	<b>32</b>	<b>53</b>	<b>63</b>	<b>107</b>
Retail Trade	47	62	47	61	93	123
<b>Office</b>						
FIRE	39	69	11	19	22	39
Services	116	130	32	36	65	73
Public Administration	8	12	3	5	6	9
<b>Total Office</b>	<b>163</b>	<b>211</b>	<b>46</b>	<b>60</b>	<b>93</b>	<b>120</b>
<b>Total Employment</b>	<b>316</b>	<b>452</b>	<b>125</b>	<b>175</b>	<b>249</b>	<b>350</b>
Students	210	280	56	75	105	140
<b>Functional Population Total</b>			<b>927</b>	<b>1062</b>	<b>986</b>	<b>1179</b>

**Table 5.1** RECREATION CENTER SPACE AND LAND-USE NEEDS

<i>Measure</i>	<i>Existing 2000</i>	<i>Needed 2020</i>
Daytime Functional Population	1,279	1,627
Facility Space		
Facility Sq. Ft.	0	
Sq. Ft. Per Functional Resident	0.00	
Adopted Facility Acres Per 1000 Functional Residents	1.00	
Facility Acres Needed to Meet LOS	1.28	1.63
Additional Facility Acres Needed to Meet LOS	1.28	1.63

**Table 5.2** PARKS AND OPEN SPACE LAND-USE NEEDS

<i>Facility or Measure</i>	<i>Existing Acres 2000</i>	<i>Existing Acres Per 1,000 Functional Residents</i>	<i>LOS Acres Per 1,000 Functional Residents</i>	<i>Existing Demand</i>	<i>Excess (Deficient) Supply</i>	<i>Acres Needed or Planned 2020</i>	<i>New Acres Needed 2020</i>
Daytime Functional Population		1,279		1,279		1,627	
Parks & Open Space	71.30	55.7347	2.00	2.56	68.74	3.25	(68.05)
Golf Course, Public	31.00	24.2325	4.50	5.76	25.24	7.32	(23.68)
<b>Total</b>	<b>102.30</b>			<b>8.32</b>	<b>93.98</b>	<b>10.58</b>	<b>(91.72)</b>

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## PUBLIC FACILITY SPACE AND LAND-USE NEEDS

Public facilities are difficult to estimate in that each community has its own character and method of expressing its individual preferences for the quantity and quality of each type of public facility. Only (1) recreation center space and (2) parks and open space are estimated in this study. Additional facilities for public safety, government, library, or religious institutions do not appear to be an urgent need during the plan period.

Table 5-1 shows the general requirements for recreation center land-use needs in Cambridge. Level of service (LOS) has been assumed based on the existing inventories and standards in Cambridge.

Parks and recreational facility needs are estimated in Table 5-2 for local parks, land-extensive uses such as golf courses, and recreation centers. Calculations are described in Appendix D. For most of these land uses, LOS standards are recommended by the National Recreation and Parks Association—NRPA, although it advises that the standards are merely advisory and subject to local adaptation.

Public facility space and land-use needs are summarized in Table 5.3. The calculation method is described in Appendix D.

**Table 5.3** SUMMARY PUBLIC FACILITY SPACE AND LAND-USE NEEDS

<i>Facility</i>	<i>Existing Space</i>	<i>Needed or Planned Space</i>	<i>Existing Acres 2000</i>	<i>Acres Needed 2020</i>	<i>New Acres Needed</i>	<i>Gross Land Adjustment Factor</i>	<i>Gross Acres Needed</i>
Recreation Centers	0	1.63	0	1.63	1.63	25.00%	0.41
Parks & Open Space			71.30	3.25	(68.05)	4.00%	3.38
Public Golf Courses			31.00	7.32	(23.68)	4.00%	7.62
Summary			102.3	12.20	(90.10)		11.41

CAMBRIDGE, NEBRASKA COMPREHENSIVE PLAN 2009

### SUMMARY LAND-USE NEEDS AND MARKET FACTOR ADJUSTMENT

The summary, Table 6.1, shows a need for additional acres of housing. Whereas single family housing only needs another 2.6 acres, multifamily housing is expected to almost double over the next ten years.

According to normal vacancy standards, there is a surplus in vacant single family and a demand for additional vacant multifamily units. This reinforces

the increased need for multifamily housing, as compared to single family. Also, there is a shift toward higher density residential land-use, as a result of the changes in family structure over the past decade.

Table 6-1 also shows a demand for a recreation facility. The City of Cambridge has already expressed an interest in the addition of a recreation facility to the community, and the needs assessment serves to reinforce their desire.

Although conventional planning standards show that there is an excess of parks and open space in Cambridge, residents take great pride in the abundance of green space in their community. Designing the development needs to be consistent with the above.

There is also demand in Cambridge for additional Industrial and Commercial land-use. The City is currently attempting to recruit large businesses to stimulate the economy and employment opportunities in Cambridge. Having a plan for the new subdivision will provide a strong strategy for economic development.

**Table 6.1** SUMMARY OF LAND USE NEEDS, 2000 TO 2020

<i>Land Use</i>	<i>Existing Acres</i>	<i>Acres Needed or Planned</i>	<i>New Net Acres Needed</i>	<i>Gross Acres Needed</i>	<i>Market Factor Adjustment</i>	<i>Planned Acres Needed</i>	<i>Percent of Net Existing Urban Land</i>	<i>Percent of Net Planned Urban Land</i>	<i>Percent of Gross Planned Urban Land</i>	<i>Percent of Net New Urban Land</i>
<b>Residential</b>										
Single Family	125.60	128.22	2.62	160.27	25.00%	200.34				
Multifamily	6.30	12.89	6.59	19.82	25.00%	24.78				
Group Care	2.00	2.00	0.00	0.00	25.00%	0.00				
Subtotal	133.90	143.11	9.20	180.09		225.12	50.63%	76.13%	75.31%	(12.03%)
<b>Employment</b>										
Industrial	10.00	10.35	0.35	12.94	25.00%	17.25				
Commercial	11.30	15.38	4.08	21.97	25.00%	29.30				
Office	6.94	6.94	0.00	8.68	25.00%	11.57				
Subtotal	28.24	32.67	4.43	43.59		58.12	10.68%	17.38%	19.44%	(5.80%)
<b>Public Facilities</b>										
Recreation Center	0.00	1.63	1.63	2.04	25.00%	2.72				
Parks and Open Space	71.30	3.25	(68.05)	3.38	25.00%	4.51				
Public Golf Course	31.00	7.32	(23.68)	7.62	10.00%	8.46				
Subtotal	102.30	12.20	(90.10)	13.04		15.69	38.68%	6.56%	5.25%	117.83%
<b>Grand Total</b>	264.44	187.98	(76.46)	236.72	20.81%	298.93	100.0%	100.00%	100.00%	100.00%



## SITE ANALYSIS

The following maps illustrate the characteristics of the site selected for the subarea development. The analysis includes the following:

- Map of Topographic Conditions
- Map of Utilities
- Map of Access to the Site

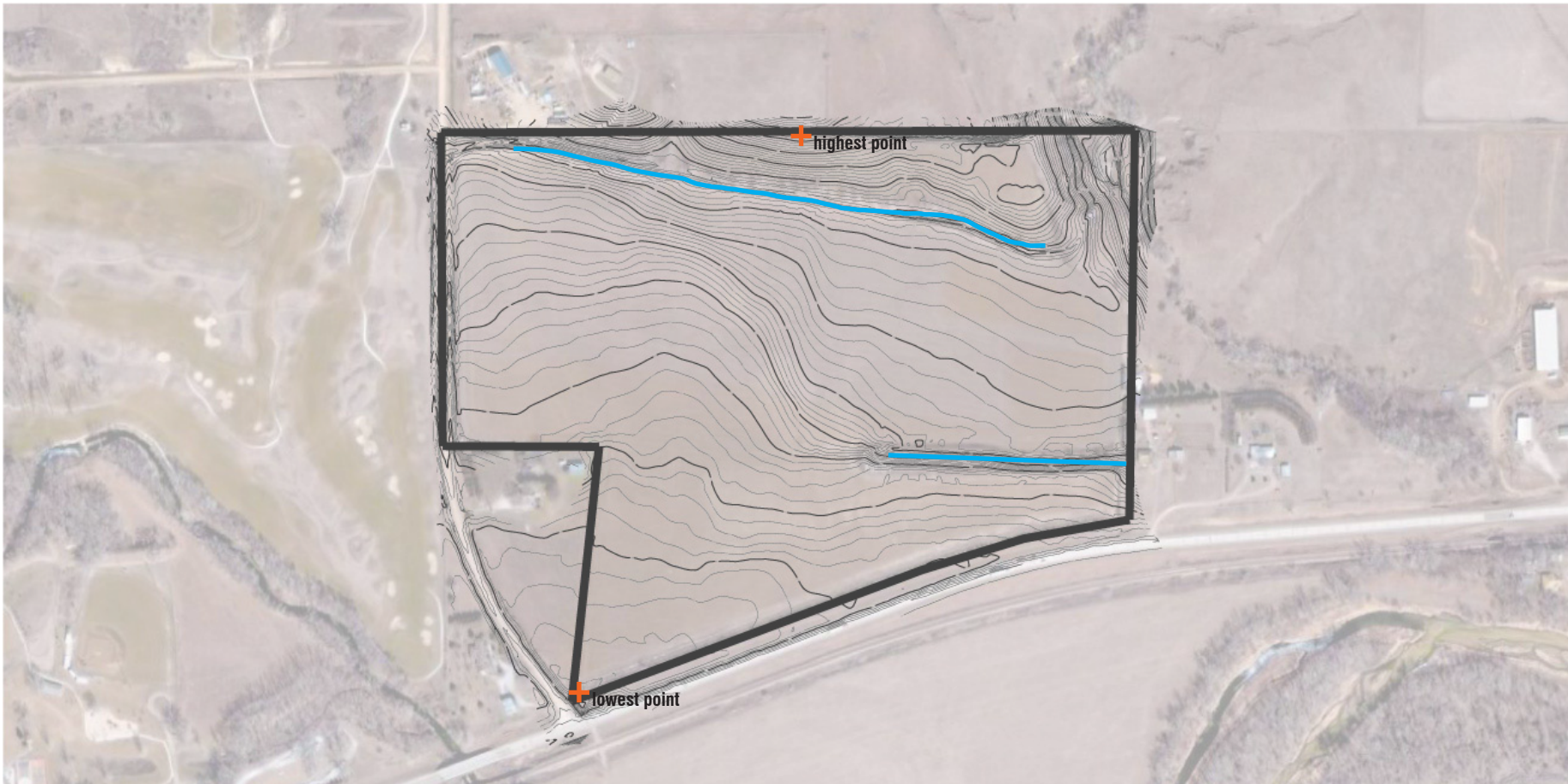


Figure 2.201 MAP OF TOPOGRAPHIC CONDITIONS



- 5'-0" contours
- 1'-0" contours
- Ridge

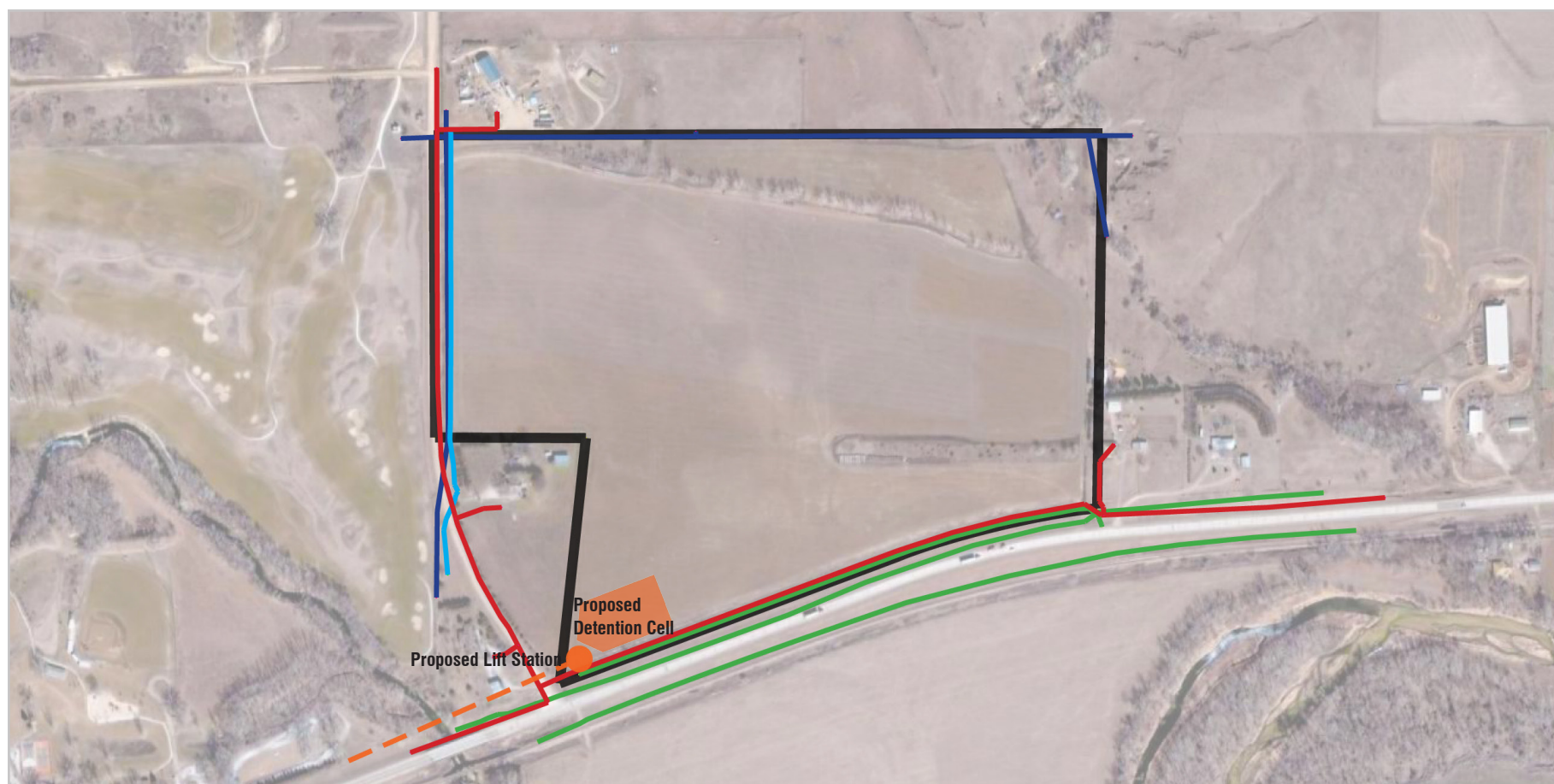
The development area was surveyed by Miller & Associates in the fall of 2007. The contours in Figure 2.201 were provided to the City of Cambridge. The existing topography reveals a gentle slope to the southwest with the lowest point in the southwest corner of the site. The northwestern corner of the site dramatically slopes to the north toward a dry drainage canal that empties into the Medicine Creek.

There is a ridge along the northern edge of the site. Land to the north of the ridge is not currently used for agriculture. The ridge separates cultivated and

uncultivated land. Another ridge runs east and west through the southeaster quadrant of the site. Ridge lines are illustrated above.

Since the north ridge creates a natural separation between uncultivated land on the north and the area to be developed on the south, it is proposed to retain this ridge in pristine condition. The second ridge will be subjected to alteration when the site is graded to enable natural surface drainage.





**Figure 2.202** MAP OF UTILITIES



- Water
- Natural Gas
- Telecommunications
- Electrical (overhead)
- - - Proposed Sanitary Sewer
- Development Area

Existing infrastructure provides the residential lots around the site with water, natural gas, electric and telecommunication lines from the City. The site itself is not currently served with infrastructure. The aforementioned utilities have the capacity to provide infrastructure within the subarea as needed.

It should also be noted that Miller & Associates has suggested the City of Cambridge incorporate a lift station in the development plan and reserve the southwestern corner of the subdivision for a detention cell. A review of the topography and slope of the site suggests that the location for the lift station and detention cell proposed by Miller & Associates appears to be justifiable and appropriate. Their recommendation is adopted for purposes of this study.



**Figure 2.203** MAP OF ACCESS TO THE SITE



- US Highway 6/34
- County Road 410
- Medicine Creek Crossings Trail
- Development Area

Direct access to the development site is limited even though the site virtually abuts Highway 6/34. Vehicular entry to the site is possible only from the field road off County Road 410 shown above in Figure 2.403 at the northwest corner of the site. Access to the site from the southwest corner is not possible at this time without significant modification of the terrain at that location. Access will need to be addressed when the platting of the site is negotiated.

The site does not have a direction connection to the existing Medicine Creek Crossings Trail system shown in red in the southwestern corner of the area depicted in Figure 2.203. The trail, which is developed throughout McKinley Park, will need to be extended in order to serve residents within the new subdivision.



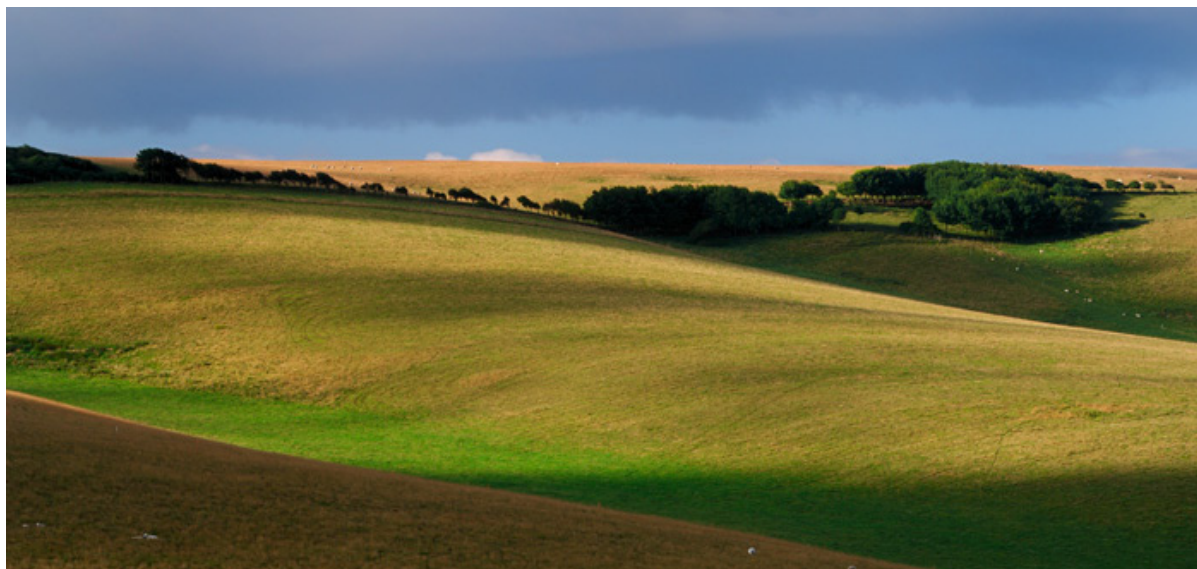
## DESIGN PRECEDENTS



**Figure 2.301** ABSTRACTION OF PLAN FOR CAMBRIDGE

The City of Cambridge is interested in the addition of a subdivision to accommodate its projected population growth within the next decade. Thus far, the proposal for the subdivision consists of more of the same. Figure 2.301 illustrates the platted subdivision as proposed in the application for TIF prepared by Miller & Associates.

It potentially sprawls, disconnected from the rest. But instead, it should become something that is integrated with the landscape; something that appeals to its natural surroundings like the public



**Figure 2.302** IMAGE OF ROLLING HILLS

golf course, McKinley Park, and the river valley.

Something that ebbs and flows like the rolling hills of the great plains (Figure 2.302). Like the earth lodge found at the Stuhr Museum in Grand Island

(Figure 2.303, Figure 2.304, Figure 2.305). From a distance there is a hint that there may be something there, but it is not clearly definable as a building. Approaching the mound, the features of the building to come to light. Even closer, the details of the entry



**Figure 2.303** EARTH LODGE, DISTANT



**Figure 2.304** EARTH LODGE

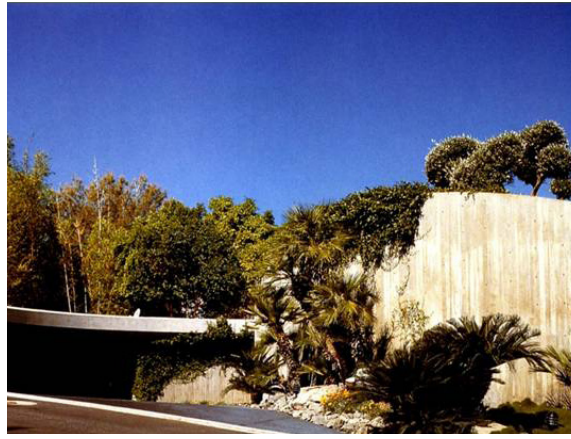


**Figure 2.305** EARTH LODGE, NEAR





**Figure 2.306** TURNER HOUSE, JOHN LAUTNER



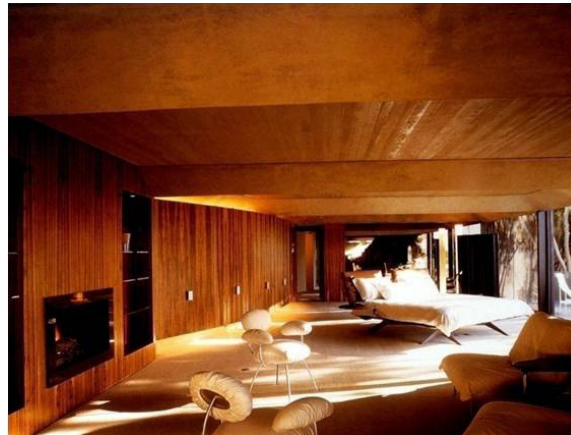
**Figure 2.308** ELROD HOUSE EXTERIOR, JOHN LAUTNER



**Figure 2.310** SEGEL HOUSE EXTERIOR, JOHN LAUTNER



**Figure 2.307** HOUSE IN WALES, FUTURE SYSTEMS



**Figure 2.309** ELROD HOUSE INTERIOR, JOHN LAUTNER



**Figure 2.311** SEGEL HOUSE INTERIOR, JOHN LAUTNER

and the path that lead inside are visible. Early settlers of the Great Plains knew that the earth was a great shelter from the elements. They were safe inside their earthen structures from the blistering winter wind and the harsh summer sun.

But earth shelters are not just for those from times past. Figure 2.306 shows the modern Turner House in Aspen designed by John Lautner in which there is a slight reveal in the earth for entry into the residence. Another example, Figure 2.307, is a house in Wales designed by Future Systems where the facade becomes the reveal in the landscape.

In the previous instances, as with the Elrod House in Figure 2.308 and Figure 2.309, the exterior of the home becomes something organic. And even through the exterior is this organic form, the interior is something much more modern and contemporary; a sleek design that centers on materiality.

Another such example is the Segel House in Malibu with its organic exterior (Figure 2.310) and contemporary interior (Figure 2.311).





**Figure 2.312** EXTERIOR WALL MATOSINHOS, PORTUGAL



**Figure 2.313** PRIVATE COURTYARD RESIDENCE



**Figure 2.314** COURTYARD IN MATOSINHOS, PORTUGAL

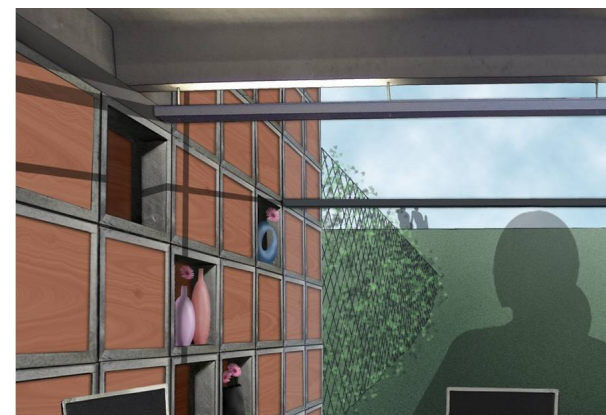
An issue that becomes transparent in many housing developments is privacy, especially with an increase in density. How does one maintain privacy from their nearby neighbors? Behind this wall (Figure 2.312) lies a courtyard housing development that has dealt with the issue in a unique way. Outside the wall, it is difficult to tell what lies beyond; but there are hints of life on the other side; clues to the nature of the development like the trees jutting into the sky in Figure 2.313. And on the inside, each residence is provided with a private outdoor space. In Figure 2.314 a thick concrete wall that separates one yard from its neighbor; a wall that further defines a sense of privacy.

But privacy is not the only issue we face in housing developments. There is also the view. It is important for residents to look out their window and see something pleasant. When sustainability is a key concept in the design of the neighborhood, houses are generally oriented toward the south in order to provide the resident with energy-saving passive solar heating. If rows of houses are all oriented to the south, the neighbor to the north has a view of



**Figure 2.315** DETACHED HOUSE AND GARDEN

the backside of the house; typically an unattractive backside at that like the one shown in Figure 2.315 above. In a project completed in the Spring of 2007 entitled “Domestic Re\_Rooting” (shown in Figure 2.316) the back of the house to the south was earth-sheltered. Therefore, the view of the northly neighbor was not marred by an unkempt



**Figure 2.316** HOUSE AS GARDEN / GARDEN AS HOUSE

backyard or a high wooden fence. Their view was of the landscape and the sky. Not only painting a picturesque view, but also providing privacy from their neighbors.



**Figure 2.317** GRASS PAVER DETAIL



**Figure 2.318** GRASS PAVER LANDSCAPE



**Figure 2.319** SHEATS/GOLDSTEIN HOUSE, JOHN LAUTNER



**Figure 2.320** SHEATS/GOLDSTEIN HOUSE, JOHN LAUTNER

Pervious pavers like those in Figure 2.317 and Figure 2.318 allow green space to show through the concrete; allowing roads and parking lots to become part of the landscape instead a stark concrete abyss. The pervious concrete pavers are visible from close-up, but further away the pavers disappear into the landscape.

Materiality is a key design feature in the modern home. Concrete lends itself to many various forms and textures. In the Sheats/Goldstein House (Figure 2.319 and Figure 2.320) the ceiling has a certain depth where light is allowed to bounce between surfaces and reflect ambiently into the space below. The same space also shows the diversity of concrete as a building material.

Materiality played a large role in the Domestic Re\_Rooting studio project as well. Like the Sheats/Goldstein House, concrete was used to showcase its diversity as a building material. The adjacent page shows the details in materiality as they related to this project.



The walls between each unit consisted of concrete cubes similar to those in Figure 2.321. This added depth to the space and an opportunity for personalization where the cubes become shelves to house the resident's belongings.

Light, combined with the depth of the wall system, provides an additional opportunity to exhibit depth. Figure 2.322 shows an example of how light may be incorporated to further accentuate the depth of the wall units.

This bench detail (Figure 2.323) illustrates the ability of contrasting wood adding warmth to the cool concrete structure.

The ceiling was created by incorporating similar design ideas as the Sheats/Goldstein House showcased on the previous page. Double T beams, like the ones at Prairie Life Fitness Center in Figure 2.324, were stretched between supporting walls to form the ceiling.

Mullionless glass was used similar to that in the home of Luis Barragan (Figure 2.325). This provided a seamless transition, blurring the boundary of interior and exterior.

Floors were created with a coarse aggregate concrete of polished stone in order to add texture to the space. An example of the floor system is shown in Figure 2.326 to the right.

Another method of incorporating light into the space was with glass-infused concrete, giving walls a translucent quality like that in Figure 2.327.

The diversity of concrete as a building material provides many opportunities for texture, depth and various other visual qualities. Figure 2.328 showcases yet another texture available through the use of concrete as a building material.



**Figure 2.321**  
HOLLOW CONCRETE CUBES



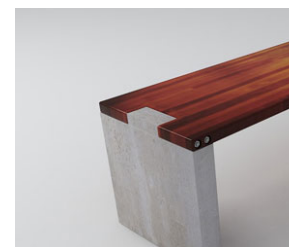
**Figure 2.325**  
MULLIONLESS WINDOW



**Figure 2.322**  
LIGHT AND DEPTH



**Figure 2.326**  
POLISHED AGGREGATE



**Figure 2.323**  
WOOD AND CONCRETE



**Figure 2.327**  
GLASS-INFUSED CONCRETE



**Figure 2.324**  
DOUBLE T CEILING SYSTEM



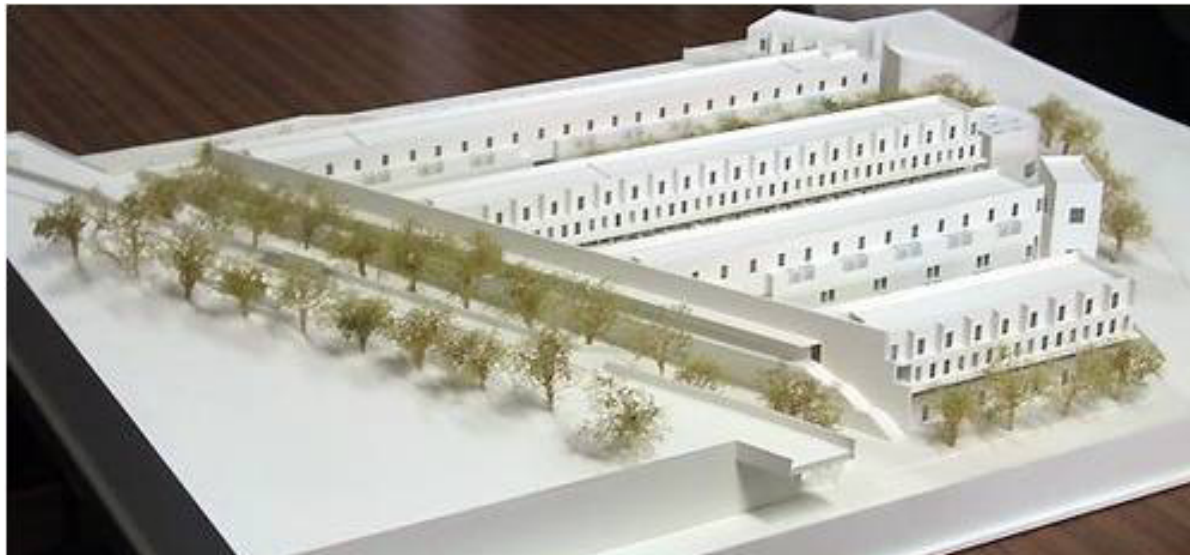
**Figure 2.328**  
CONCRETE VERSATILITY



**Figure 2.329** SOCIAL HOUSING, ALVARO SIZA

Another important quality that the subdivision should include is mixed-use and walkability. Figure 2.329 and Figure 2.330 show an example of a housing development that includes these concepts. This is Alvaro Siza's Social Housing development in Portugal. There are three rows of dense multifamily housing and a row of commercial land use oriented toward the street. Residents can live and work in the same neighborhood, making it easier to become less dependent on their automobile.

In a landscape setting, maybe the paths become more like the one shown here at Tulsch a'tSolais (Figure 2.331); cutting through the landscape, creating a view corridor and a path to travel from your home to work and back.



**Figure 2.330** SOCIAL HOUSING PHYSICAL MODEL, ALVARO SIZA



**Figure 2.331** TULSCH A'TSOLAIS





**Figure 2.332** BIRDSEYE VIEW OF DEVELOPMENT AREA



**Figure 2.333** BIRDSEYE OF PLAN SUBMITTED FOR TIF

Figure 2.332 shows a birdseye of the land available for the subdivision in the City of Cambridge and Figure 2.333 illustrates the plan that has been proposed to the City by Miller & Associates. The suggestion derived for this project should become something much more like Figure 2.334; where the plan is an extension of the landscape and of minimal impact to its surroundings.



**Figure 2.334** BIRDSEYE VIEW OF PROPOSED CONCEPT



## PROGRAM

Mission Statement and Scope

Goals & Objectives





## MISSION STATEMENT AND SCOPE



**Figure 3.101** VIEW FROM EARTH-SHELTERED HOUSING UNIT

privacy, conservation of energy, scenic views, and judicious selection and use of appropriate building materials (Figure 3.101).

The subarea development needs to conform to the subdivision regulations in effect in Cambridge since 1966, which states:

*“To further promote and secure the health, safety, and general welfare of the present and future citizens of the City of Cambridge, Nebraska; to provide for the location and width of streets, building lines, open spaces for traffic, utilities, access for fire-fighting apparatus, recreation, light, and air, and for the avoidance of congestion of population, including minimum width and area of lots; to provide the manner in which streets shall be graded and improved, and the extent to which water, sewers and other utility services shall be provided; and to insure logical community growth...”*

Additional design guidelines to complement existing Design Standards contained in the Subdivision Regulations Report will need to be formulated in order to accommodate creativity and innovation. Whereas form-based codes are currently not part of existing zoning and subdivision regulations, an attempt will be made to explore their appropriateness and applicability to the planning and development of the new subdivision in Cambridge. Draft form-based codes will be authored as may be necessary.

The proposed mission for the project is to introduce sustainable development as the paradigm for future land development in the City of Cambridge. Planning imperatives for sustainable development need to symbolize and be sensitive to small town values, strong work ethic, the creation of a distinguishing sense of place, and the enhancement of the local, community and environmental heritage unique to the area.

The scope of this study is limited to the planning and design of a new subdivision in Cambridge shown with the orange boundary in Figure 3.102.

Earth-sheltered residential development is proposed as the design imperative and the defining attribute of the envisioned character of the subarea. Such character will be enhanced and embellished by functional design, spaciousness,

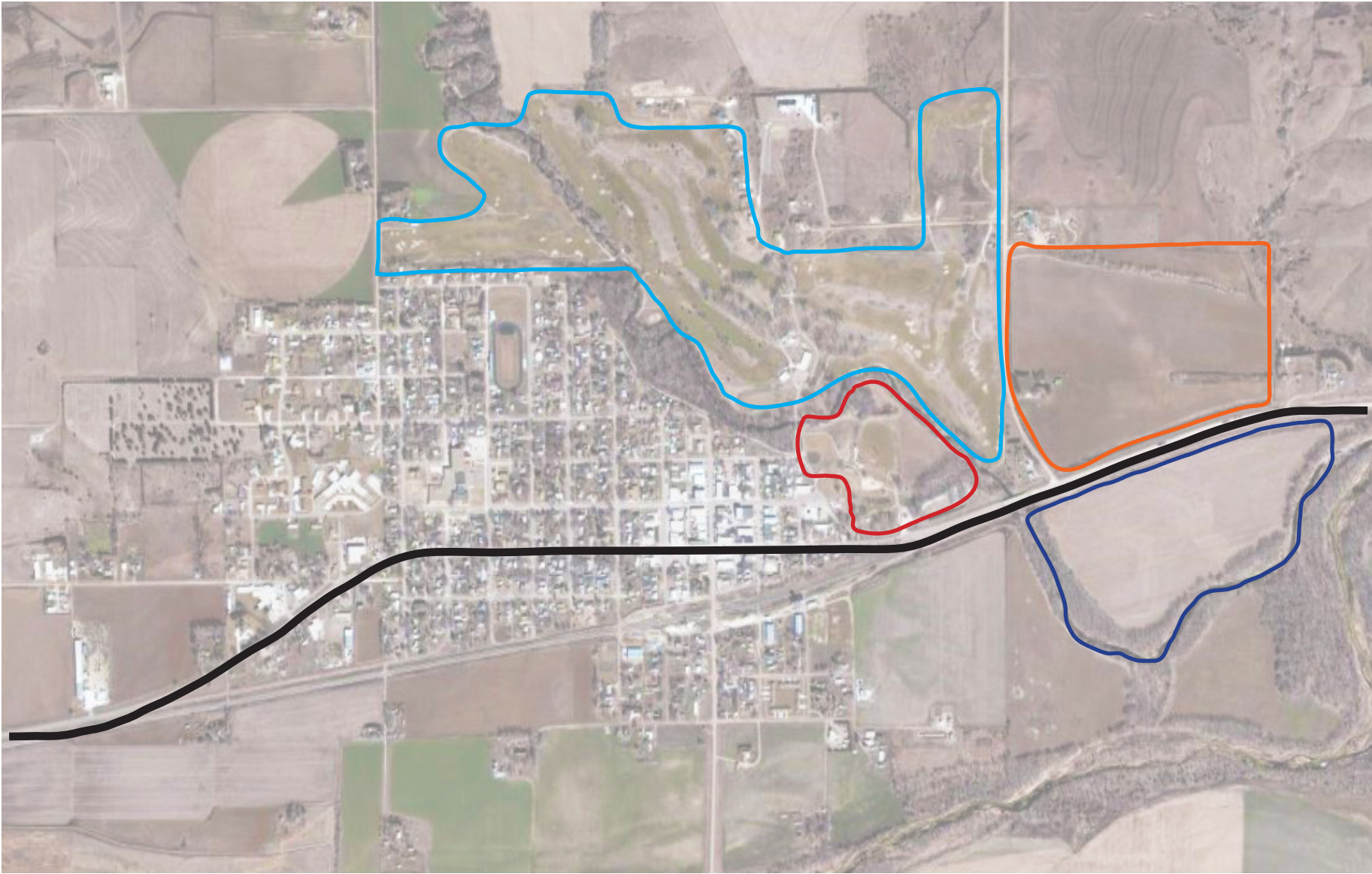



Figure 3.102 DEVELOPMENT AREA AND SURROUNDING USES



- |  |   |
|--|---|
|  Cross Creek Golf Links |  River Valley  |
|  Development Area       |  McKinley Park |
|  US Highway 6/34        |   |

## GOALS & OBJECTIVES

The goals for the subarea in the newly proposed development area shown in Figure 3.102 are as follows:

- Maintain and Improve the Quality of Life and Sense of Community for Residents of All Ages and Incomes
- Foster the Value of Community and Encourage Local Action to Preserve and Strengthen the City of Cambridge.
- Preserve and Enhance the Physical Character of the Community by Implementing a Gateway Entrance to Cambridge along US 6/34
- Provide All Residents with Choices for a Variety of Housing Types That Meet Their Respective Needs
- Maintain Sufficient Open Spaces and Park Land in Cambridge to Provide Both Passive and Active Outdoor Recreation Opportunities
- Stabilize and Diversify the Economic Base to Increase Employment Opportunities for All Age Categories
- Develop a Land Use Plan Which Personifies the Aforementioned Goals
- Develop Design Guidelines For the Subdivision.
- Draft and Implementation of Form-Based Codes
- Design and Build Energy-Efficient Earth-Sheltered Residences and Provide Incentives for Implementation
- Promote Maximum Energy Efficient Standards and Provide Incentives for Implementation.
- Incorporate passive solar design strategies.
- Reverse the Decline of the Population in the Community



### MAINTAIN AND IMPROVE THE QUALITY OF LIFE AND SENSE OF COMMUNITY FOR RESIDENTS OF ALL AGES AND INCOMES

This goal can be met by providing public services through the provision of medical facilities, human services, library and supportive services for the elderly in an efficient and economic manner. (Hanna:Keelan, 1999). Improving and developing recreational, educational and cultural facilities creates a sense of place in Cambridge. The City of Cambridge has mentioned the creation of a learning center, where education can be extended beyond high school. The new subdivision is an ideal place for this.

A health and wellness center is also an ideal use to be located in the new subdivision. According to *Housing & Residential Development*, 1.0 acre is required per 1,000 in population for a recreation facility. Therefore, an additional 1.6 acres is required for a recreation facility in Cambridge by 2020 in order to support the daytime functional population. A survey completed as part of the 1999 comprehensive plan indicated that the adult and youth recreation programs available to the community are “good” at best. In a recently completed community survey, 100 out of 198 people surveyed indicated that a fitness center was needed in the community.



**Figure 3.201** MEDICINE CREEK CROSSINGS TRAIL



**Figure 3.202** CAMBRIDGE LOGO

### PROMOTE THE VALUE OF COMMUNITY AND ENCOURAGE LOCAL ACTION TO PRESERVE AND STRENGTHEN THE CITY OF CAMBRIDGE

The design and process of design of the new subdivision should instill pride in residents. Maintaining pride and value in the community will motivate citizens to participate in planning and design processes, take action and make sure that their own needs and those of their neighbors are being met.



**Figure 3.203** IMAGE OF DOWNTOWN CAMBRIDGE

A physical, 3-dimensional model of the proposed development will be built and exhibited at a public location in the City of Cambridge. The purpose of this exhibition is to communicate the proposed evolving character of a sustainable neighborhood in the city and to motivate local stakeholders to embrace the concepts, principles and practices of sustainable development in the community in the short and long term.



**PROVIDE ALL RESIDENTS WITH CHOICES  
FOR A VARIETY OF HOUSING TYPES THAT  
MEET THEIR RESPECTIVE NEEDS**

The total population in Cambridge is projected to reach 1,199 in 2020, an increase of 158 persons from 2000. They will live in about 571 housing units, 22 units more than in 2000. Yet, nearly 86 new housing units will need to be built because 64 units existing in 2000 will be replaced. This number includes 20 structures that were classified as substandard, dilapidated/deteriorated with critical defects in Area 2 of the *Blight and Substandard Analysis* completed in 2007.

This project should meet this housing goal by providing new, innovative housing in the subdivision for all residents. In 2020, there is a need for 571 occupied residential units in Cambridge, an increase from 485 occupied units in 2000. Assuming a 5% vacancy rate in 2020, 601 housing units should exist in that year. To maintain the 5% vacancy rate, there is a need for 25 additional single family housing units and 91 additional multifamily housing units. It is projected that the density will increase from 2000 to 3.8 single family housing units and 10.7 multifamily housing units per acre. Therefore, a need for 6.6 additional acres of single family residential land-use and 8.5 additional acres of multifamily residential land-use is assumed for Cambridge for the year 2020.

**PRESERVE AND ENHANCE THE PHYSICAL  
CHARACTER OF THE COMMUNITY BY  
IMPLEMENTING A GATEWAY ENTRANCE  
TO CAMBRIDGE ALONG US 6/34**

Proportionately more growth will be seen in the space needed to accommodate employment. This estimates that there will be more than 590 jobs in Cambridge in 2020, 153 or 35% more than in 2000. These jobs will require 13.6 additional acres of nonresidential space. Counting the 3.4 acres to be replaced, about 19.2 acres of nonresidential space will be needed between 2000 and 2020.

To accommodate growth in 2020, Cambridge will need to construct 15% more residential units and need 75% more nonresidential spaces than what existed in 2000.

Hanna:Keelan (1999) suggests that the City of Cambridge create an aesthetic and quality built and natural environment in which to live. Rural communities should be provided for with the same innovation in design as in modern urban cities. The built environment in Cambridge should portray its progressive character and history of innovation in the 21st Century. Judicious selection and application of appropriate building materials are proposed to reflect the character of Cambridge.

The city location along two major US Highways is significant to the development of Cambridge. An entrance has previously been established along US 6/34 at the east entrance to the city prior to the construction of the ethanol plant. The location of the ethanol plant has altered the ceremonial character of the current entrance to Cambridge (Figure 3.205) and this project provides the opportunity to relocate this entrance further to the east.



**Figure 3.204** ETHANOL PRODUCTION



**Figure 3.205** EAST ENTRANCE TO CAMBRIDGE



**Figure 3.206** MCKINLEY PARK COMMUNITY GARDEN



**Figure 3.207** CAMBRIDGE PUBLIC SWIMMING POOL

**MAINTAIN SUFFICIENT OPEN SPACES AND PARK LAND IN CAMBRIDGE TO PROVIDE BOTH PASSIVE AND ACTIVE OUTDOOR RECREATION OPPORTUNITIES**

Cambridge has a relatively high percentage of parks and open space. There is an excess of more than 90 acres of parks and open space as compared to minimal space standards. The excess may be attributed to the 18-hole public golf course (an estimated 31 acres) or to McKinley Park (an estimated 65 acres). The high percentage of parks and open space in Cambridge adds to residents' pride in their



**Figure 3.208** RODEO ARENA



**Figure 3.209** MEDICINE CREEK RESERVOIR

community. Creating a pleasing, open landscape within the subdivision is consistent with the image of the community to its residents and provides the opportunity for recreation to residents of the subdivision.

Extending the walking trail into the subdivision will encourage a healthy lifestyle and enhance the quality of life to residents in the community. The trail is already well-established.

**STABILIZE AND DIVERSIFY THE ECONOMIC BASE TO INCREASE EMPLOYMENT OPPORTUNITIES FOR ALL AGE CATEGORIES**

A rise in employment will create the need for 13.6 additional acres of nonresidential land-use in 2020. Nonresidential land-use can be divided into two areas: Industrial and Commercial. Studies for Cambridge indicated that there is a need for 2.9 additional acres of Industrial and 10.7 additional acres of Commercial land-use. The 3.4 acres of nonresidential land that will be replaced by 2020 will create a maximum of 19.2 acres of nonresidential to be located within the subdivision. The addition of new commercial land within the subdivision should provide business opportunities in order to create employment opportunities for residents.

Cambridge should promote the existence and development of commercial/business types that will maximize the opportunity for job creation and future job quantity and quality. Expanding shopping facilities to attract non-local business is an action strategy recommended by Hanna:Keelan (1999).

**DEVELOP A LAND USE PLAN WHICH PERSONIFIES THE AFOREMENTIONED GOALS**

Changes to existing land-use from Agricultural use to Residential, Commercial, Industrial, Public and Semi-Public and Recreational uses in a harmonious and compatable manner will be reflected in a land-use plan that will be developed for the subdivision.

Development of an efficient parking plan within the new development area is an important functional requirement needed for the area.



## DESIGN AND BUILD ENERGY-EFFICIENT EARTH-SHELTERED RESIDENCES AND PROVIDE INCENTIVES FOR IMPLEMENTATION

Sustainable development is a goal prescribed for the City of Cambridge which is interested in smart growth, new urbanism and green buildings. This goal is not unlike those of LEED for Neighborhood Development which focus on the design and construction elements that bring buildings together into a neighborhood, and relate the neighborhood to its larger region and landscape (USGBC, 2007).

Orientation toward the south will be key in not only creating scenic views of the river valley below, but also for achieving passive-solar design. Figure 3.210 and Figure 3.211 illustrate the use of sun angles in passive-solar design.

Thermal mass is another technique used in sustainable design. This concept is illustrated in Figure 3.212 and Figure 3.213. Concrete is the ideal material for this concept in that it stores heat acquired during the day for over-night use.

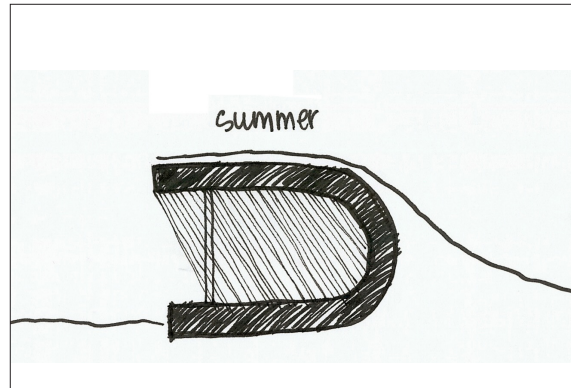


Figure 3.210 PASSIVE SOLAR DESIGN, SUMMER

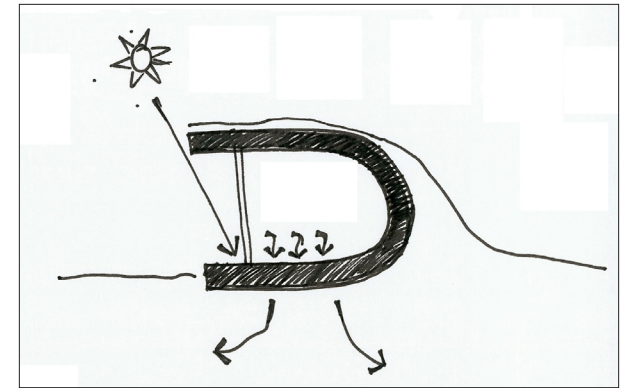


Figure 3.212 THERMAL MASS, DAY

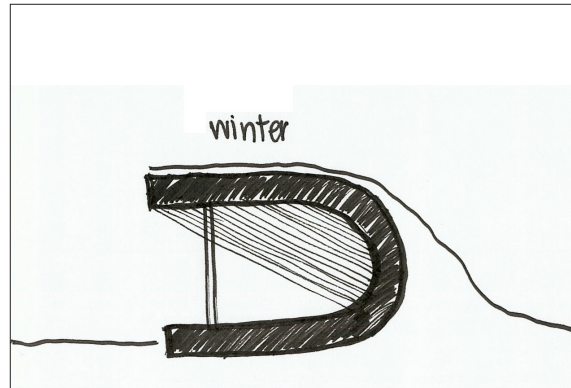


Figure 3.211 PASSIVE SOLAR DESIGN, WINTER

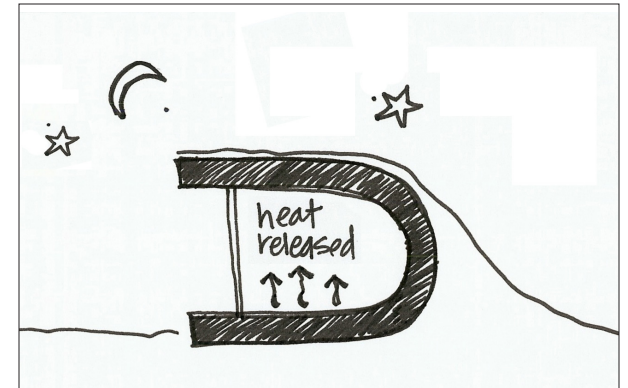


Figure 3.213 THERMAL MASS, NIGHT

## REVERSE THE DECLINE OF THE POPULATION IN THE COMMUNITY

This project seeks the creation of a residential living environment that is appealing to the youth and young adults who are leaving the Cambridge community for higher education and employment with no intent of returning. The combination of new job opportunities together with a quality of life and lifestyle that is comparable or superior to other metropolitan environments will provide the needed incentive and impetus to Cambridge alumni to return to Cambridge and invest in the future of their home community.

*“...Crisis and hard times create change because they force us to reexamine and make choices about what kind of nation we want to be, what kind of communities we want to live in, and what future we want for our children and grandchildren. Perhaps most important, times of crisis force us to decide whether we are willing to sacrifice and engage in the struggle to create change. Crisis forces us to make choices that test our character. Rural America has known crisis for some time. We have suffered chronic family farm and ranch decline, shrinking communities, and the growing gap between the haves and the have-nots.*

*So in rural America - as in all of America - it is a time to engage the struggle and speak boldly to advance our values. It is a time to remind our fellow Americans that the good life does not lie in accumulating goods or pursuing selfish interest, but rather in being part of strong communities and a just nation and world. Because if society and our community are sinking into poverty and decline, even as we prosper, we too will suffer the effects in social and community breakdown, declining public schools, and crime. Our true interest is tied to the common good.*

*It is a time to remind our fellow Americans that we cannot build strength by sacrificing fairness. Our communities and our nation will be truly strong and secure only when all share a stake in them and assume responsibility for their future.*

*It is a time to remind our fellow Americans and our neighbors that community matters. The bonds we form over time with the people and land of a place are worth preserving and a valuable foundation on which to build. It is time to remind our fellow Americans, as farmer and ranchers know, that we cannot measure success by what we consume in our lives but rather by what we leave to the next generation at least as well as we find it. And we must remind our fellow Americans, as the leaders of our rural churches and schools know that our communities and nation can be strong only if each of us assumes responsibility for their care and development.*

*That really is the key to creating a better future and to shaping history. As University of Nebraska sociologist John Allen has reminded us, the history of social change is a history of people deciding they do not like the direction things are moving - and then taking steps to change it. It has happened over and over throughout history. That is what the Center [for Rural Affairs] and the thousands who join with us have always been about. At a time when many have given up, together we've followed the words of the Apostle Paul: Proclaim the message. Be persistent whether the time is favorable or unfavorable...”*

*- Chuck Hassebrook, Executive Director, Center of Rural Affairs*

## PLAN IMPLEMENTATION

Planned Unit Development

Form-Based Codes





## PLANNED UNIT DEVELOPMENT

A zoning ordinance serves to shape land-use and density patterns within a community. The ordinance generally consists of two parts, a map and a text document. The map is based on the future land-use map of the community in order to stay consistent with the Comprehensive Plan. The goal of a zoning ordinance is to maintain or improve land-use patterns and enable orderly, sustainable growth (Daniels et al, 2007). The zoning map for the City of Cambridge is shown in Figure 4.101.

A Planned Unit Development (PUD) is a distinct type of land development intended for the process of converting large areas of vacant land into urban uses. The previous approach to developing vacant land involved a fragmented system of purchasing, subdividing, and building. For the most part, zoning and subdivision regulations would apply to the new development on a lot-by-lot basis until PUDs were implemented. A PUD allowed for multiple uses within one large tract of land. And because PUDs allow the greatest amount of flexibility they generally also allow for better design.

*“Designing residential developments by means of a flexible but unitary site plan which integrates housing types, circulation systems, and nonresidential facilities, and which clusters dwelling units for the preservation of open spaces and natural features is a significant and important departure from traditional practice.”*

Many developers tend to take advantage of the more lenient regulations. When the process is coupled with competent design and a good PUD ordinance, PUDs can prove to be beneficial to many communities.

There is an opportunity to create a more cohesive community plan through the implementation of a PUD. This opportunity allows for a mixture of land uses, including residential, commercial, recreation, etc. There is also the allowance for multiple housing types with the freedom to attach, detach and cluster.

A neighborhood commercial area can also be incorporated into the regulating plan of a PUD. The flexibility in design allows for commercial areas oriented to the needs of the PUD residents while at the same time allowing for a community commercial district. And with commercial areas oriented toward residents, PUDs also encourage walkability.

Another opportunity created in a PUD involves recreational and educational facilities. These are neighborhood amenities that can easily be incorporated into neighborhoods via PUD ordinances, providing for an increased quality of life for residents. The PUD process of approval encourages developers to include these amenities in order to gain public acceptance and therefore plan implementation.

Open space is an essential component that is typically the focus of well-designed PUDs. Because open space is an important element in creating pride in their community, Cambridge residents should be in favor of such a development, a development that provides space for active and passive recreation that is immediately adjacent to housing units, where landscaped areas and scenic views increase project amenities.

A PUD is ideal in order to meet the requirements of this project. In order to implement a PUD ordinance in Cambridge, the existing zoning ordinance will need to be amended to include the basic elements of PUD approval and review with direct regard to density and use.

PUDs can be included in the zoning ordinance as either a separate zoning district or as a special or conditional use. I suggest that Cambridge incorporate PUDs into their regulations as a special or conditional use district. In this approach, PUDs are permitted as conditional uses in designated zoning districts by including PUD among other special uses listed in the individual district regulations.

Whereas PUDs would be the most creative, innovative and flexible method for plan implementation at Cambridge, it is regrettable that State Enabling Legislation in Nebraska does not permit PUDs in second-class cities like Cambridge. If State Enabling Legislation eventually authorizes PUDs for second-class cities, then this would be the most suitable method for implementing the proposals contained in this study.

As part of the learning experience and future preparation for a professional career in Community and Regional Planning, the author of this study chose to explore and formulate a PUD Ordinance as a hypothetical implementation mechanism for this project. See Appendix E. Additions to the existing zoning ordinance were made in orange. The current Zoning Map is contained in Appendix F.

Whereas this ordinance may not be applicable to Cambridge at this time, the drafting of this ordinance was considered as an essential academic exercise necessary for the author's professional development and intellectual enrichment.

It is recommended that the City of Cambridge hire a professional planning consultant to formulate necessary zoning ordinances, subdivision regulations and building bylaws that will be needed to implement the vision contained in this study.



## FORM-BASED CODES

Form-based codes are vision-centered, purposeful, place-based, regionally diverse, consequential, precise, integrated, binding, comprehensible and adjustable (Parolek et al, 2008). Form-based codes are a method of zoning and subdivision planning intended to negate the effects of urban sprawl and promote smart growth.

Form-based codes will focus on the physical character and quality of public space and emerge as the preferred instrument for implementing sustainable development in Cambridge. The proposed form-based codes contained in this study will be applicable only to the proposed planned unit development; eventually it would be highly desirable to implement form-based codes applicable to the entire community.

The first component of form-based code is the regulating plan. The proposed regulating plan for the planned unit development is shown in Figure 4.201. The plan serves three main purposes.

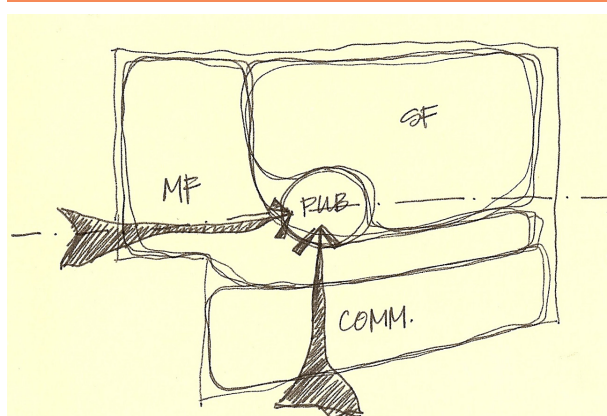
1. A developer uses the regulating plan as a key or index, identifying applicable zones and then referring to the zoning ordinance text to determine the rules for design within that particular zone.
2. Actual development standards such as street frontage requirements or roadway type requirements will be illustrated.
3. Defining and highlighting critical differences in physical form of each development zone will enable the creation of unique identities and characters in different zones within the neighborhood.

The form-based codes applicable to the proposed subdivision are contained in Appendix G. These codes evolved from research of material derived from Duany Plater-Zyberg's SmartCode template.





# SCHEMATIC DESIGN



**Figure 5.101** ZONING CONCEPT DIAGRAM

According to the Zoning Ordinance derived as a part of this study, a developer must submit a regulating plan and a development plan to the City for approval of a project. A regulating plan assigns the code's various standards to physical locations within the development area. However, before creating a regulating plan there must be a concept from which to employ these standards. Figure 5.101 illustrates a general land-use concept for this project.

Development shall be focused around a central public amenity that serves the residents of the community. Residential land-use can serve as a buffer between various unrelated land-use functions. For example, multifamily residential provides a buffer and smooth transition from single family residential land-use to commercial land-use.

The diagram also suggests that access to the site should be directly linked to the central amenity. Buildings and sites at the termination of major roadways are assigned much more authority than alternate sites within the subarea. Therefore, the intersection and termination of the two major routes further establishes the significance of the the civic space within the neighborhood.

A concept diagram, such as that in Figure 5.101, provides a starting point from which a layout plan can be developed. However, there is a great deal of process that follows. Figure 5.102, Figure 5.103 and Figure 5.104 illustrate the process in designing a development plan for the subdivision.

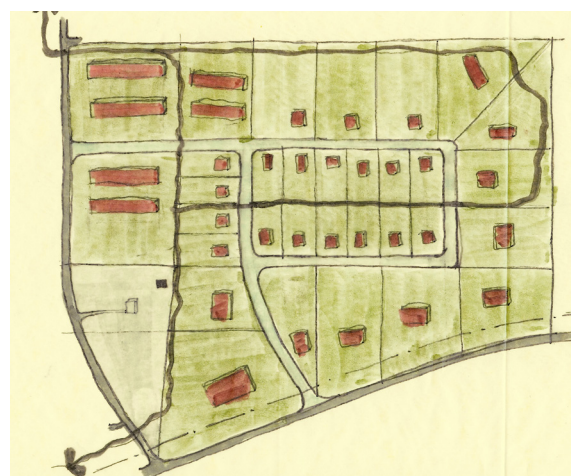
Because the maps are arranged in chronological order, it is evident that density was a growing concern of the project. As the focus of the study drew from the principles of sustainability, density-related issues moved to the forefront of priorities. These two issues are interrelated with regards to urban sprawl.

Building types were also taken into consideration when dealing with density. Detached housing units require more land area than attached housing units, such as rowhouses. However, in order to maintain a sustainable character within the subdivision, it is important to orient buildings to the south. The orientation of all units to the south subjects residents to the visual pollution of a southerly neighbor's rear yard.

Recalling a former project from a personal studio class in the Fall of 2007, the author maintained that earth-sheltering is a method that addresses this particular challenge with a unique and visually appealing design.



**Figure 5.102** SITE PROCESS MAP #2



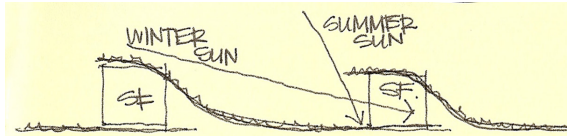
**Figure 5.103** SITE PROCESS MAP #3



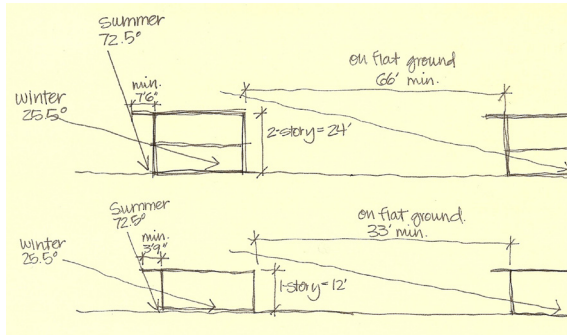
**Figure 5.104** SITE PROCESS MAP #4

Incorporating sun angles into the design of these earth-sheltered rowhouses is also important in achieving sustainable design solutions. Figure 5.105 illustrates the basic concept in solar shading for the project whereas Figure 5.106 depicts more detailed requirements for building placement and overhang depth.

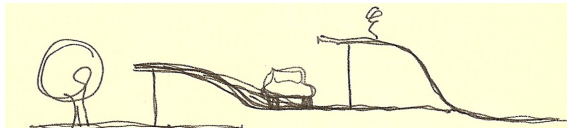
Further development of the earth-sheltered residential section led to the introduction of vehicular traffic within the site. A drive should be incorporated into the design where residents can load/unload near their unit (Figure 5.107). However, the visual obstruction that vehicular parking and steady traffic typically bring about would interfere with the creation of a unified landscape that imposes minimal visual impact on the site and surrounding area (Figure 5.108). One development scenario includes the incorporation of underground parking structures like the one shown in Figure 5.109. The implementation of a unique parking system will require a detailed parking plan in order to further illustrate the concept.



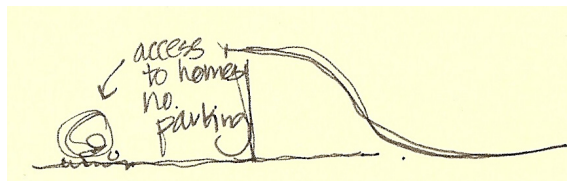
**Figure 5.105** PASSIVE SOLAR CONCEPT DIAGRAM



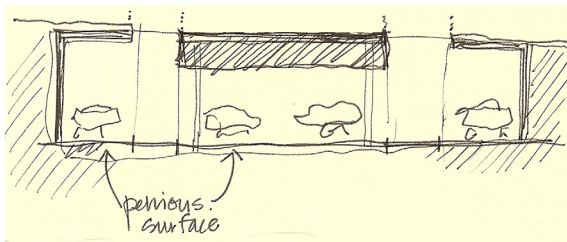
**Figure 5.106** SPACING AND OVERHANG REQUIREMENTS



**Figure 5.107** VEHICULAR DRIVE PLACEMENT

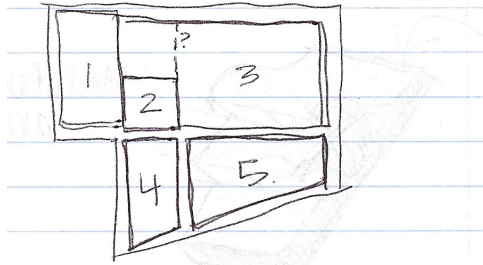


**Figure 5.108** VEHICULAR ACCESS TO HOUSING UNITS

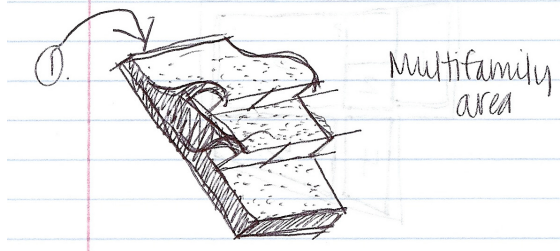


**Figure 5.109** SECTION OF PARKING STRUCTURE

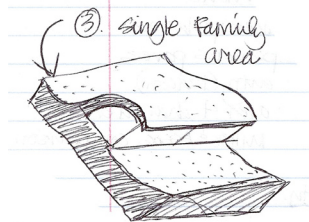




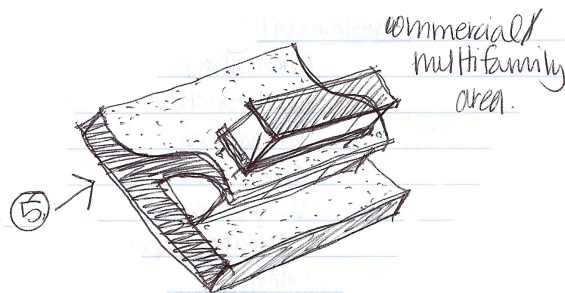
**Figure 5.110** TYPOLOGY CONCEPT



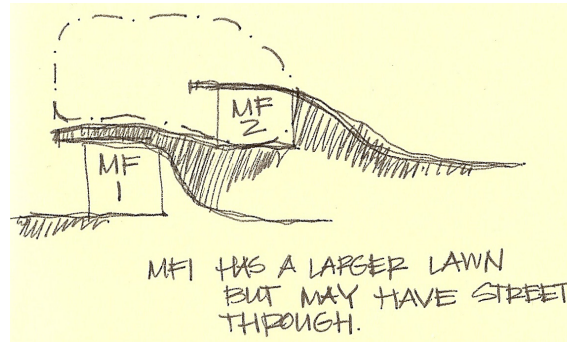
**Figure 5.111** MULTIFAMILY RESIDENTIAL TYPOLOGY



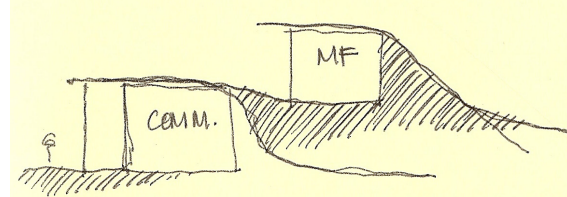
**Figure 5.112** SINGLE FAMILY RESIDENTIAL TYPOLOGY



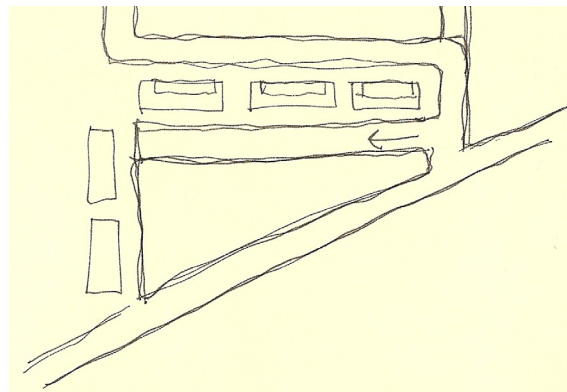
**Figure 5.113** MIXED USE TYPOLOGY



**Figure 5.114** DENSE MULTI-FAMILY UNITS



**Figure 5.115** PROPOSED MIXED USE SPACE



**Figure 5.116** MIXED USE COMMERCIAL CONCEPT

A typology concept was then established that prescribed a unique character to each building type within the development area (Figure 5.110). This was used to reinforce the initial concept focused around a central civic space. The numbers in the figure correspond to the following building typologies:

1. Earth-Sheltered Multifamily Residential
2. Civic Space
3. Earth-Sheltered Single Family Residential
4. Detached Single Family Residential
5. Mixed Use Space

The earth-sheltered units were developed with a uniform concept; as a means to incorporate energy-efficient and sustainable structure for the residents of Cambridge (Figure 5.111, Figure 5.112, and Figure 5.113).

In order to pursue the highest density, multifamily units were considered in a bilevel sense (Figure 5.114). Whereas this idea was also considered for the mixed use typology as shown in Figure 5.115, it was much more suitable to the increased density standards of the multifamily residential typology.

Figure 5.116 is a concept plan for the commercial area. Commercial units are earth-sheltered with sleek residential forms floating above. With sustainability in mind, the storefront is oriented toward the south for maximum passive-solar heating and cooling. Parking serves as a buffer to the highway along with a large open space. Evergreen trees are currently planted along the southern edge of the site. Although they provide a buffer to the relatively high-speed traffic and the noise associated with such, these trees should at a minimum be thinned out in order to provide maximum views of the river valley below.



The remaining residential land-use typology calls for Detached Single Family units within a highly landscaped area (Figure 5.117). This will create a buffer between the Commercial Mixed Use space to the east and the existing acreage on the west. Because of the nature of intent, this building typology does not lend itself to earth-sheltering.

The Civic Space was viewed as an area to bring the community together; a place to reinforce the pride that citizens have in Cambridge. The Civic Building could function as any of the following that have been established as needs in Cambridge through this study:

- Recreation/Welness Center
- Cultural Center
- Extended Educational Facility
- Community Involvement Center

Figure 5.118 illustrates the central amenity within the development area, including a civic facility, gathering space for residents and a central underground parking facility. A suggested gathering space includes a self-sustaining natural pond. A lush landscape could also be planted near the pond for residents to enjoy while conversing with their neighbors. Figure 5.119 shows another diagram illustrating the same point. In Figure 5.120, it is suggested that the gathering space become an earthform; something that relates to the building design within the development area in an abstract way.

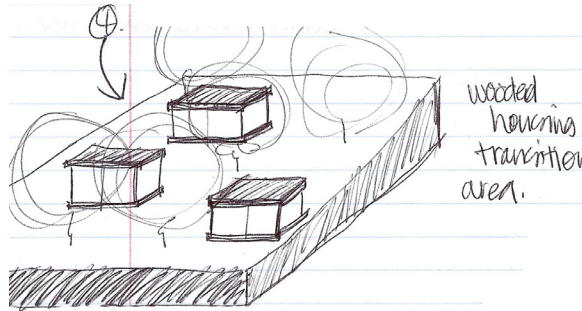


Figure 5.117 DETACHED RESIDENTIAL TYPOLOGY

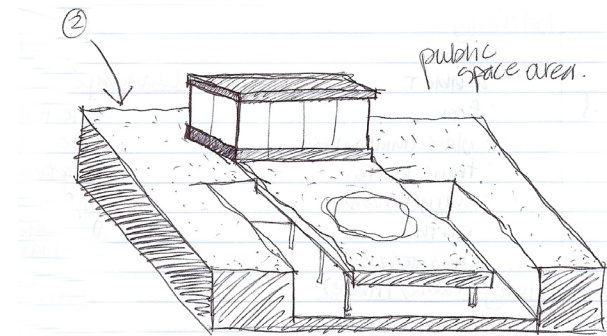


Figure 5.118 CIVIC SPACE TYPOLOGY

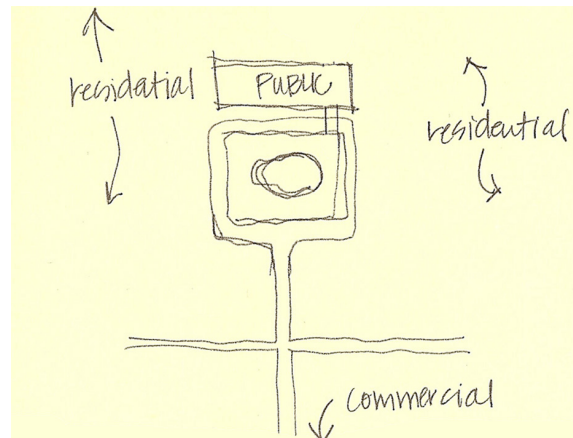


Figure 5.119 CIVIC SPACE CONCEPT DIAGRAM

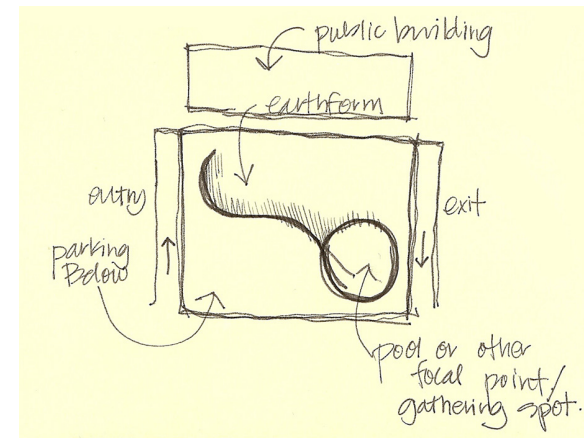


Figure 5.120 PUBLIC GATHERING SPACE

## FINAL DESIGN & CONCLUSION



**Figure 6.101** FINAL LAYOUT / MASTER PLAN



The culmination of findings of this study are illustrated in the final master plan in Figure 6.101. The central civic space is enveloped in a landscape that houses dense residential and commercial space within a walkable, sustainable community. The form of the development area mimics the rolling hills of the great plains; rejuvenating the land with rural renewal.

The development area plan is essential for providing dense growth, unlike that of sprawl conditions. The plan that the City of Cambridge approved in order to secure TIF financing called for a development of 102 housing units whereas, the landscape intensive plan above, makes consideration for nearly twice as many units, 197. It should also be noted that the plan above is conservative in comparison to the density that can be achieved with this method of housing design and construction.

The dense fabric of the community supplies the city with an innovative character and defines the eastern entrance to the city with a landscape design that compliments the sense of pride within the Community.

The following pages specify in detail the architectural implications for the site. The needs established for Cambridge shall be met by following the guidelines outlined.





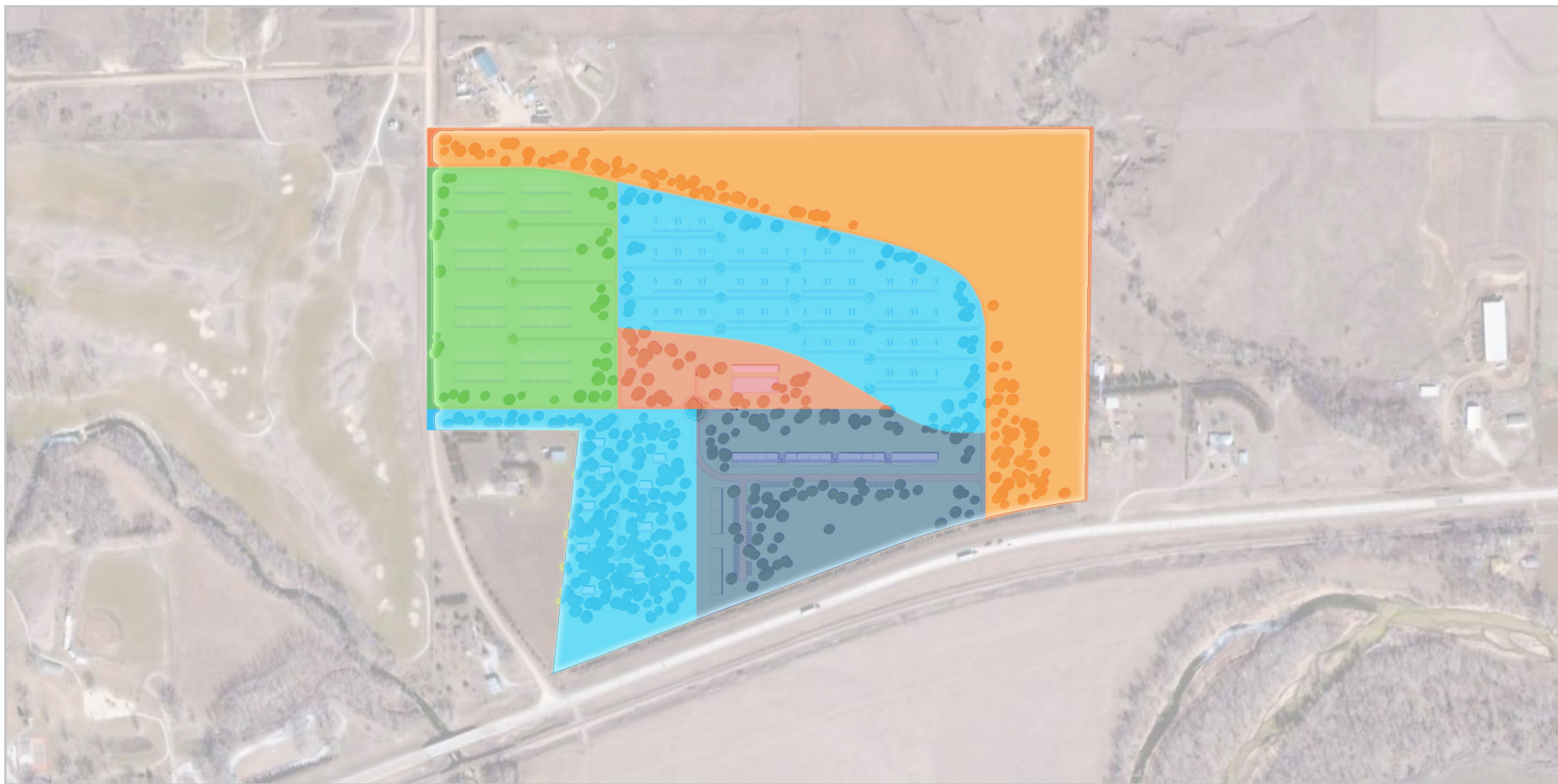
**Figure 6.102** FINAL PARKING PLAN



The parking plan has become a critical piece of the project in that it provides an uninterrupted landscape, free of the vehicular clutter of American life. Similarly, it provides a habitable ductwork underground that frees the interior space above of large mechanical spaces that generally consume desired floor area.

The parking plan in Figure 6.102 is also centralized around the communal civic space. An entrance and exit to the facility are located at the critical junction of the roads servicing the site. This entrance leads underground to a shared-parking space available to both guests of the civic facility and residents of nearby housing units.

The parking structure branches out in fingers, providing private parking for each single family housing resident. These single family residences have direct access to their home from the parking structure. Multifamily residents are provided with common parking at the end of each row of the bilevel structures.



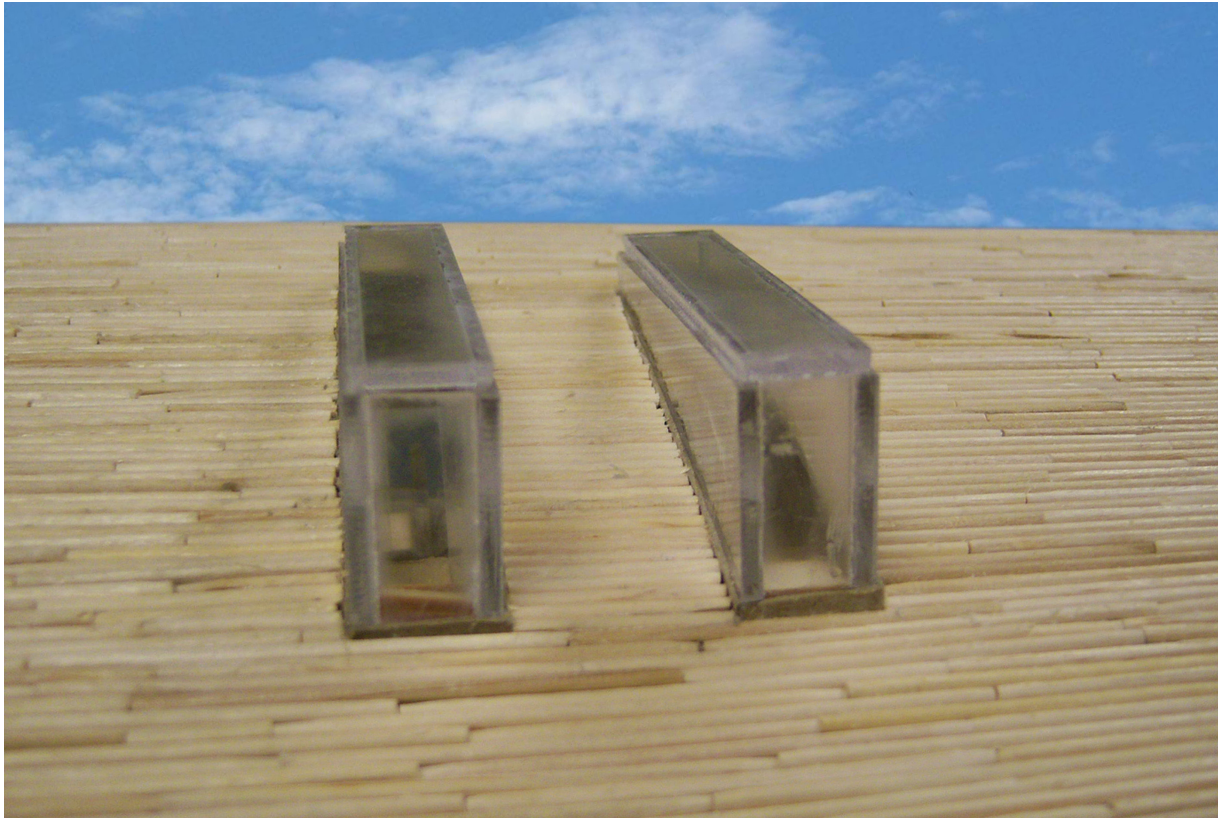
**Figure 6.103** REGULATING PLAN



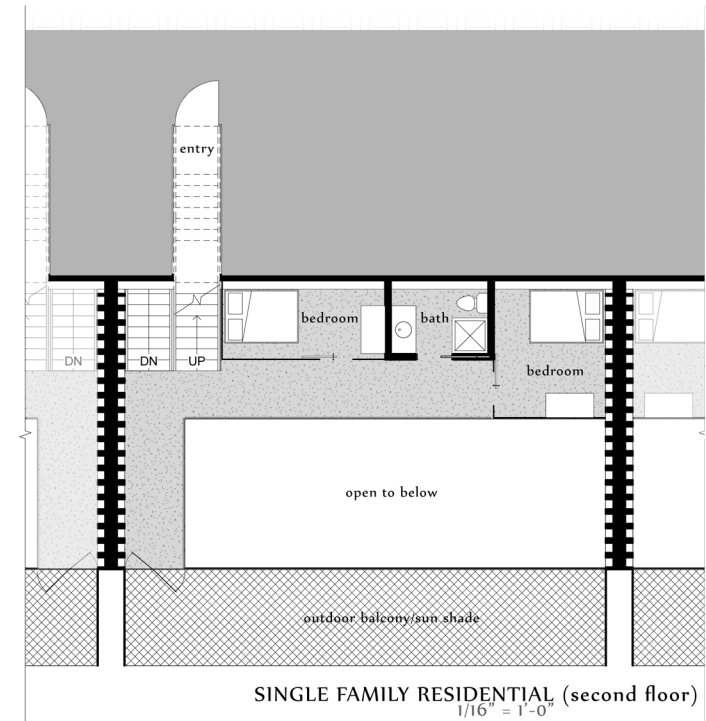
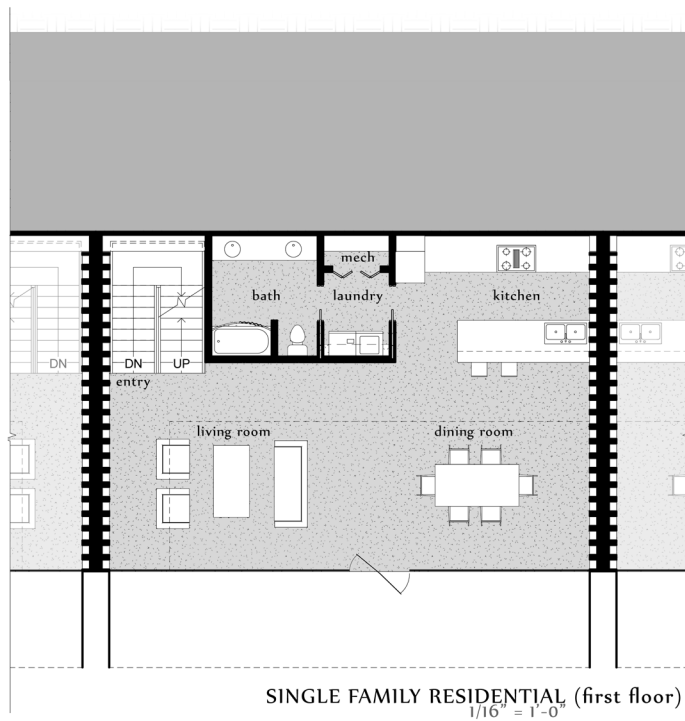
- (T1) Natural
- (T3) Suburban
- (T4) General Neighborhood
- (T5) Neighborhood Center
- (CS) Civic Space

As a requirement of the suggested Form-Based Code located in Appendix G, a regulating plan was created for the development area (Figure 6.103). Stemming directly from the concept diagram in the previous chapter, the layout is designed around the central Civic Space. The definitions of each transect used in defining the typology within the site can be found in the appendix document.

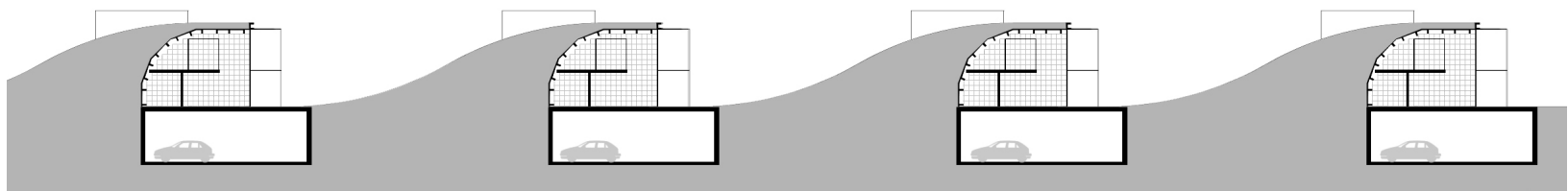




**Figure 6.104** PHYSICAL MODEL OF SINGLE FAMILY HOUSING



**Figure 6.105** SINGLE FAMILY RESIDENTIAL FLOOR PLANS  
SCALE 1/16" = 1' - 0"



SITE SECTION

**Figure 6.106** SITE SECTION THROUGH SINGLE FAMILY RESIDENTIAL UNITS  
SCALE 1" = 50' - 0"

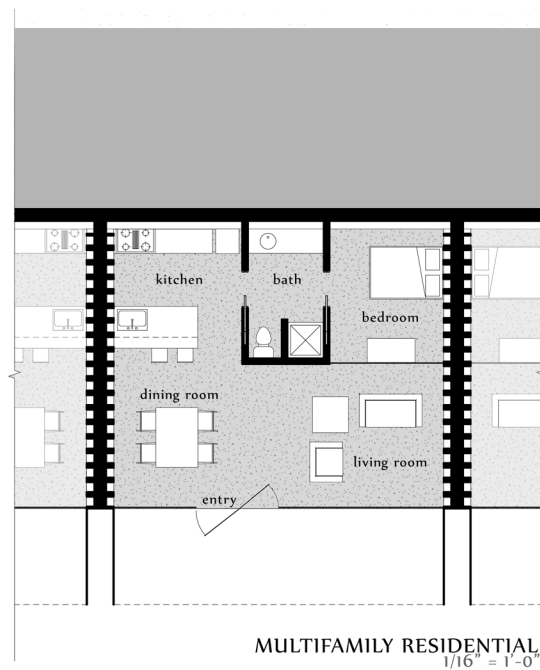




**Figure 6.107** PHYSICAL MODEL OF MULTIFAMILY HOUSING



**Figure 6.108** VIEW FROM UNIT



MULTIFAMILY RESIDENTIAL  
1/16" = 1'-0"

**Figure 6.109** MULTIFAMILY RESIDENTIAL FLOOR PLANS  
SCALE 1/16" = 1'-0"



SITE SECTION

**Figure 6.110** SITE SECTION THROUGH MULTIFAMILY RESIDENTIAL UNITS  
SCALE 1" = 50'-0"

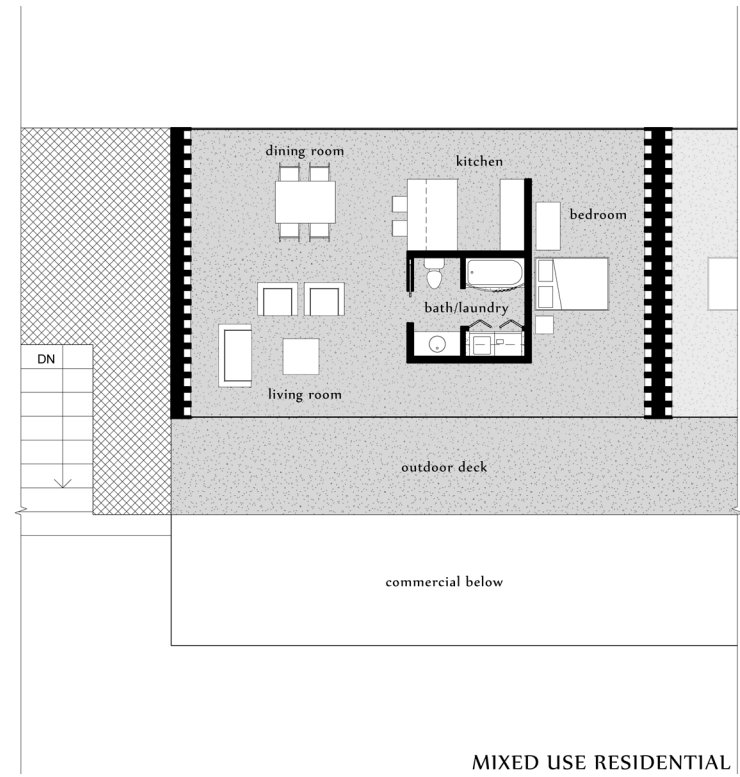
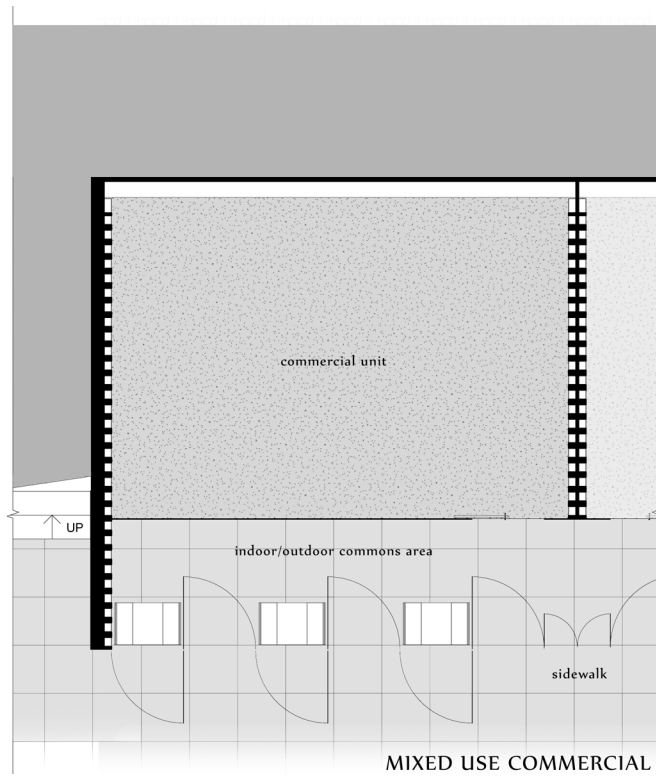




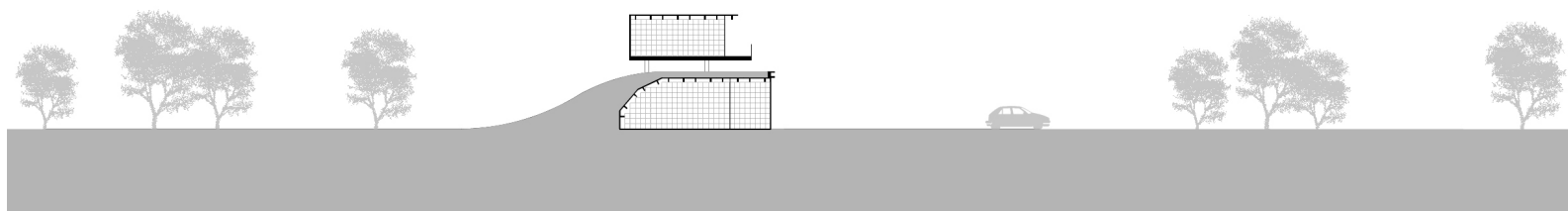
**Figure 6.111** PHYSICAL MODEL OF MIXED USE



**Figure 6.112** PHYSICAL MODEL OF MIXED USE



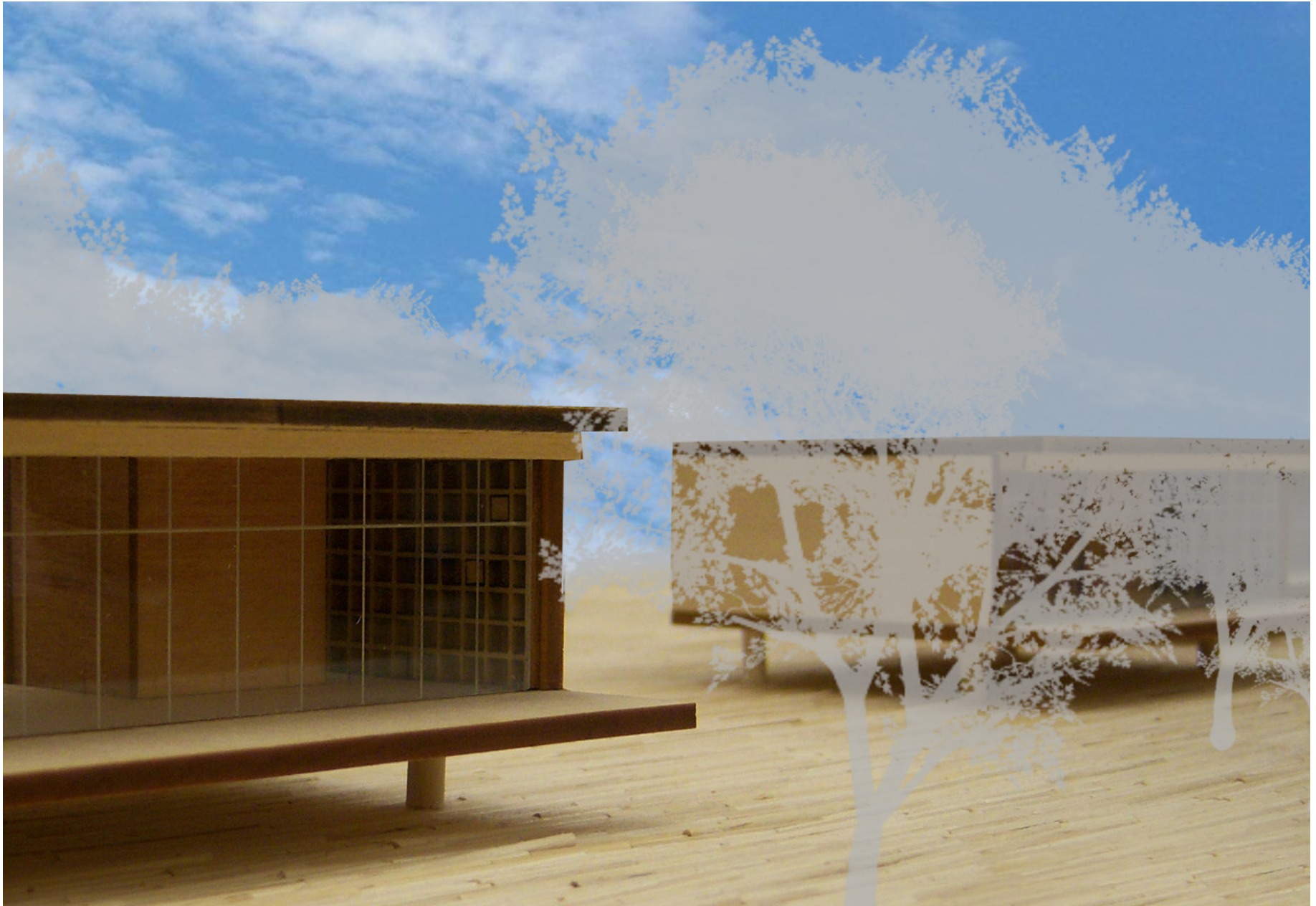
**Figure 6.113** MIXED USE FLOOR PLANS  
SCALE 1/16" = 1' - 0"



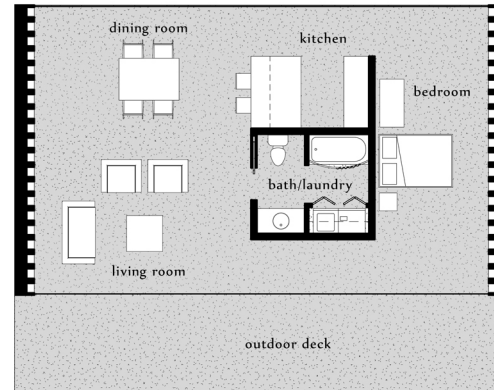
SITE SECTION

**Figure 6.114** SITE SECTION THROUGH MIXED USE UNITS  
SCALE 1" = 50' - 0"



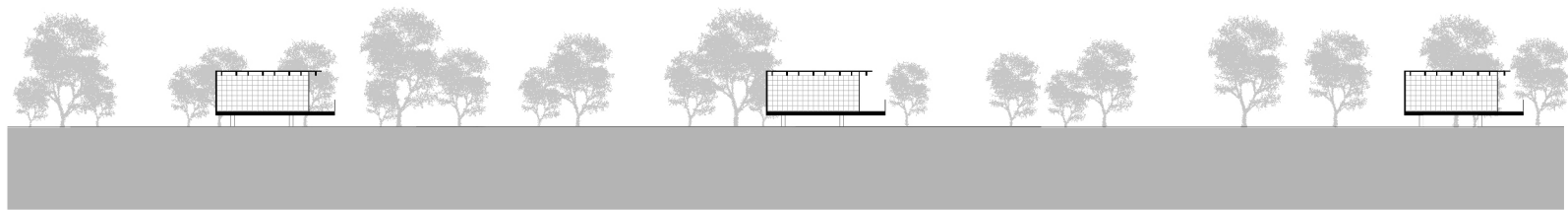


**Figure 6.115** PHYSICAL MODEL OF DETACHED SINGLE FAMILY HOUSING



## DETACHED SINGLE FAMILY RESIDENTIAL

**Figure 6.116** DETACHED SINGLE FAMILY RESIDENTIAL FLOOR PLANS  
SCALE 1/16" = 1' - 0"



SITE SECTION

**Figure 6.117** SITE SECTION THROUGH DETACHED SINGLE FAMILY RESIDENTIAL UNITS  
SCALE 1" = 50' - 0"





Figure 6.118 PRESENTATION MODEL



Figure 6.119 PRESENTATION MODEL



Figure 6.120 PRESENTATION MODEL

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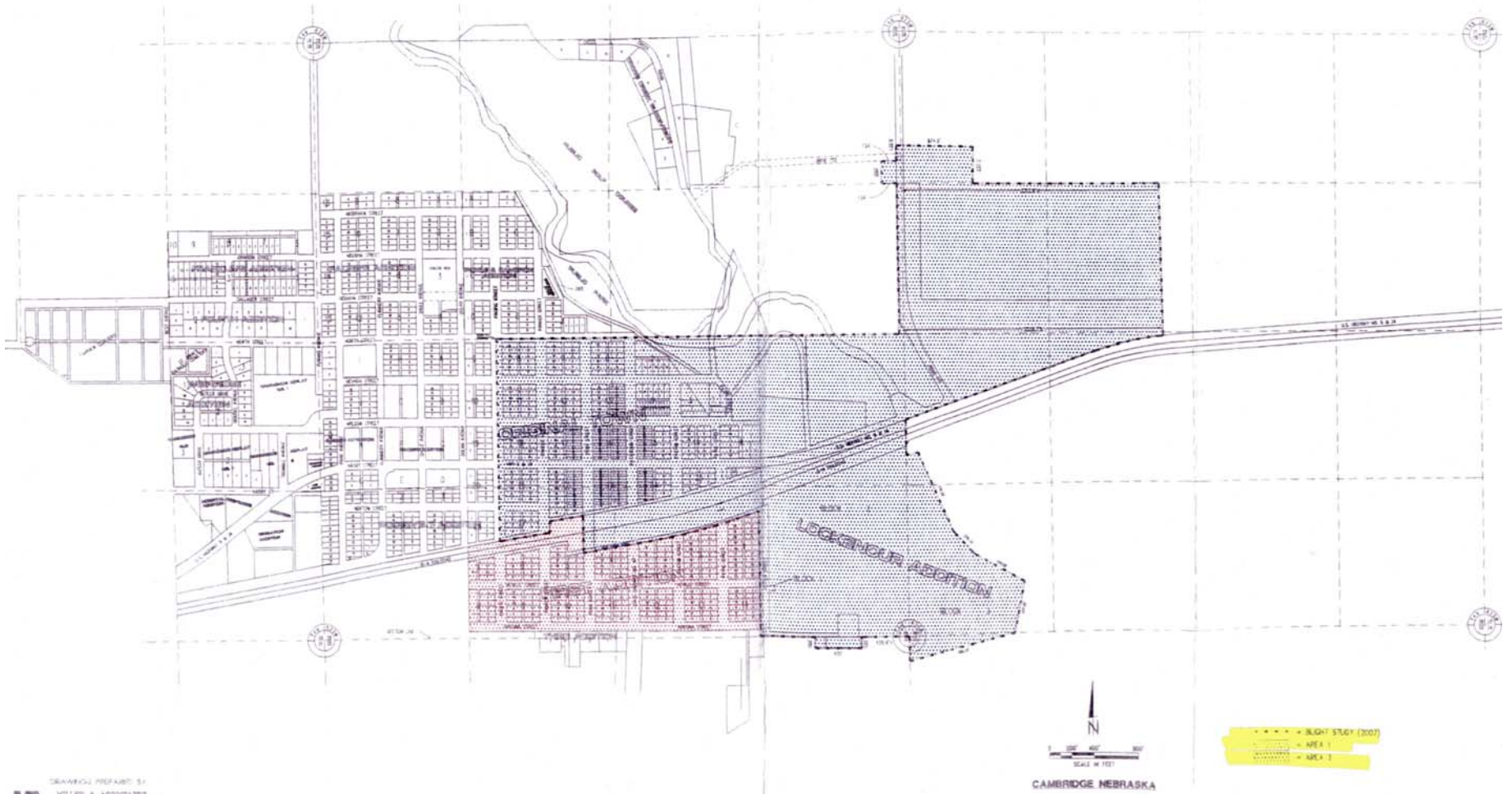
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APPENDIX II  
MAP OF THE CITY OF CAMBRIDGE  
AND REDEVELOPMENT AREA 2





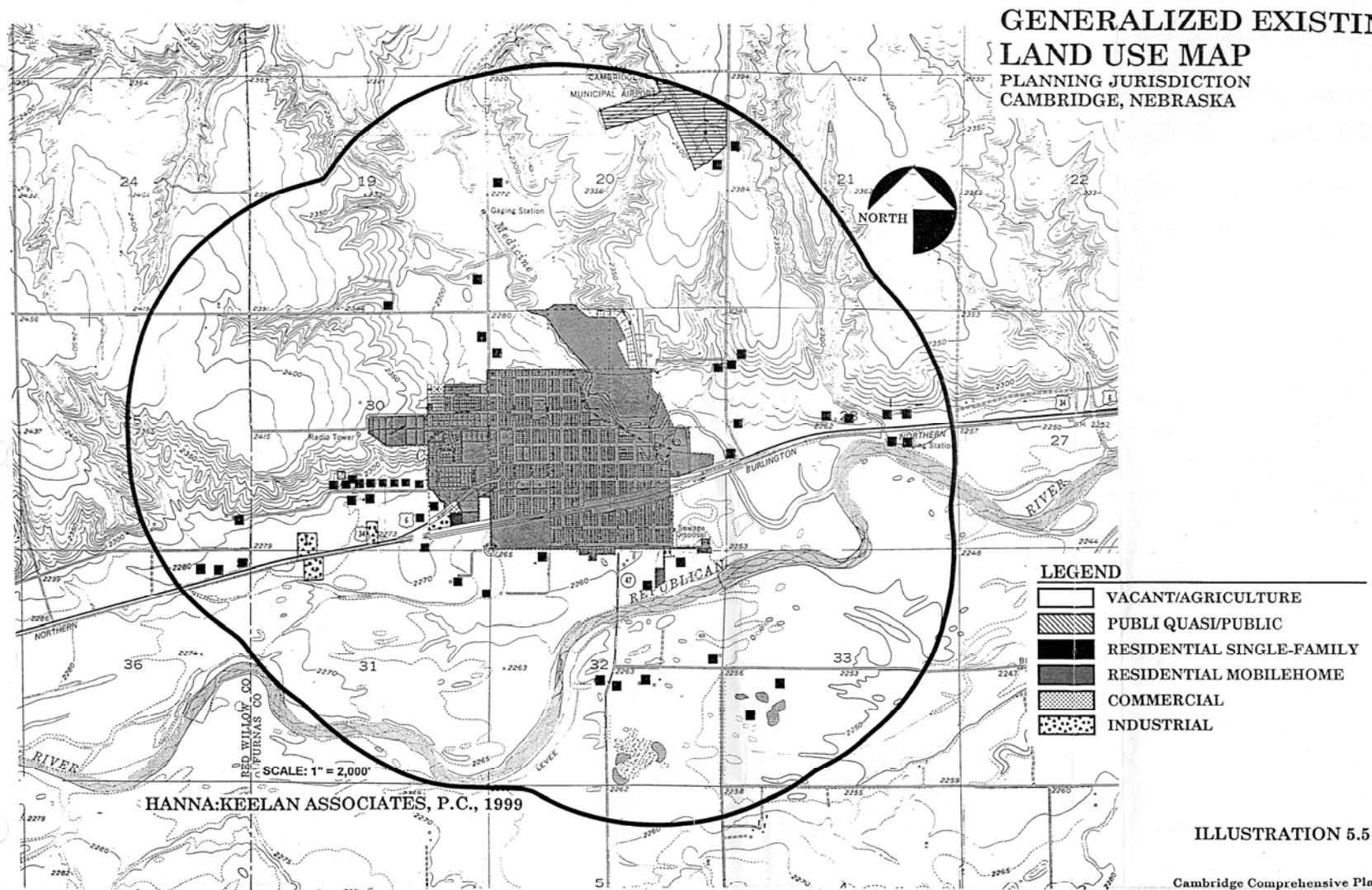


ILLUSTRATION 5.5

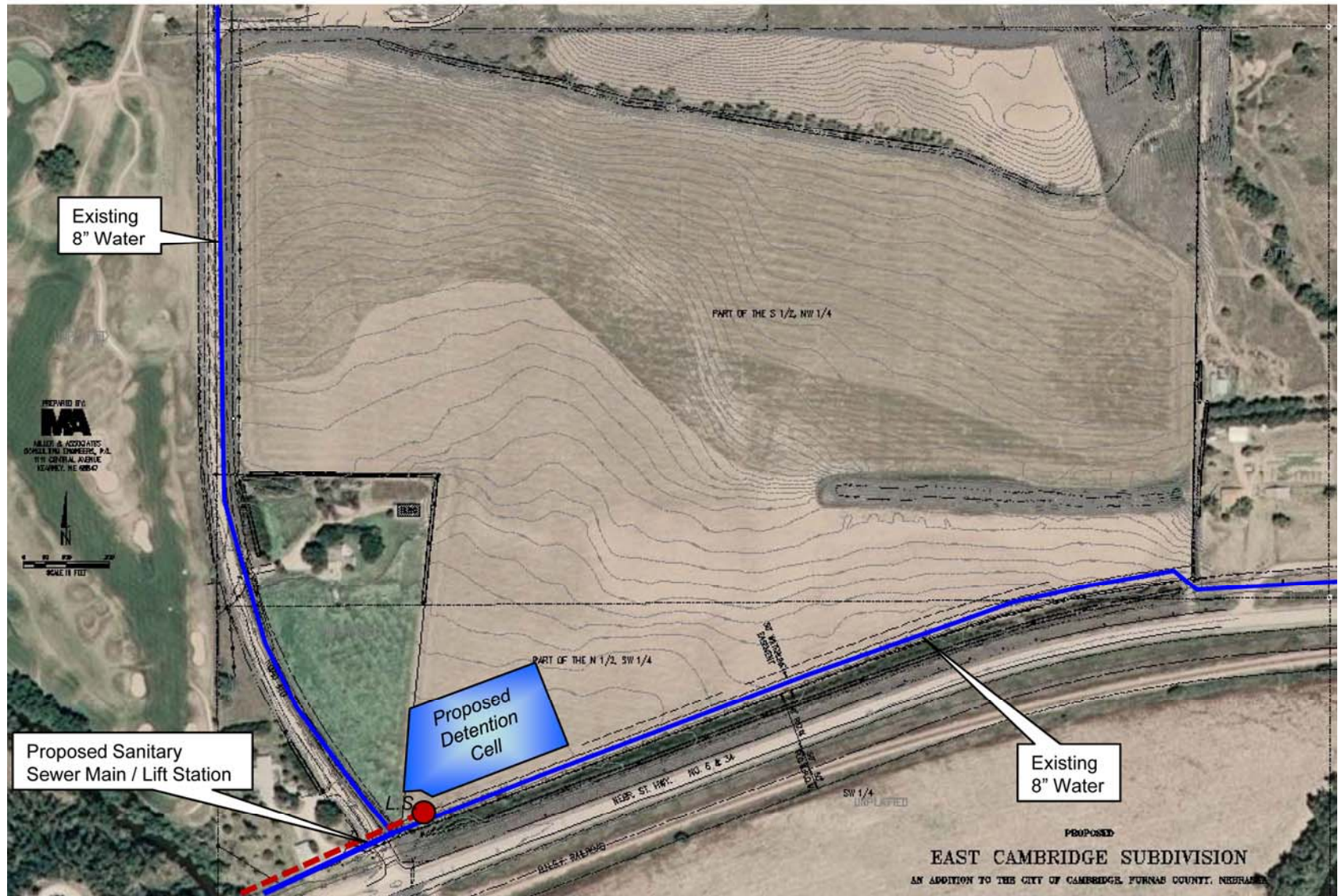




# Public Works / Infrastructure Plan



Prepared By:  
**Miller & Associates**  
Consulting Engineers, P.C.





## NEEDS ASSESSMENT CALCULATIONS

The calculations necessary for Table 2.2 are:

**UNITS 2000:** From Table 2.1.

**VACANCY RATE 2000:** Detached unit vacancy data comes from local realtors.

**OCCUPIED UNITS 2000** =  $UNITS\ 2000 \times (1 - VACANCY\ RATE\ 2000)$

**ESTIMATED HOUSEHOLD SIZE 2000:** This is the assumed percentage distribution of residents within each group for planning purposes.

**ESTIMATED RESIDENTS 2000** =  $OCCUPIED\ UNITS\ 2000 \times ESTIMATED\ HOUSEHOLD\ SIZE\ 2000$

Adjustments to current housing supply associated with conversions are made in Table 2.4 as follows:

**EXISTING ACRES 2000:** From Table 2.1.

**UNITS LOST, AVERAGE ANNUAL LOSS RATE @ 0.58%:** This is the assumed rate of loss for units not otherwise subject to planned conversions. This assumption is based on the national average. The formula for estimating losses is:  $UNITS\ 2000 \times 0.58\% \times PLAN\ PERIOD$

**ACRES LOST** =  $UNITS\ LOST, AVERAGE\ ANNUAL\ LOSS\ RATE\ @\ 0.58\% / UNITS\ PER\ NET\ ACRE\ 2000$  (Table 2.1)

**ACRES REMAINING** =  $EXISTING\ ACRES\ 2000 - ACRES\ LOST$

**UNITS REMAINING** =  $UNITS\ 2000$  (Table 2.1) –  $UNITS\ LOST, AVERAGE\ ANNUAL\ LOSS\ RATE\ @\ 0.58\%$

The calculations involved in Table 2.5 include:

**PLAN PERCENT RESIDENTS 2020:** This is the local planning target for the percent of population that will reside in each land-use category in 2020 within each residential group.

**ESTIMATED RESIDENTS 2020** =  $PLAN\ PERCENT\ RESIDENTS\ 2020 \times PERMANENT\ POPULATION\ 2020$

**ASSUMED HOUSEHOLD SIZE 2020:** Estimated household size for each land-use category from the average household size in 2000 (Table 1.1).

**OCCUPIED UNITS NEEDED 2020** =  $ESTIMATED\ RESIDENTS\ 2020 / ASSUMED\ HOUSEHOLD\ SIZE\ 2020$

The particular calculations involved in Table 2.6 are as follows:

**VACANCY RATE 2020:** Assumed vacancy rate for 2020. In this case, the assumed rate is the same for single family and higher for multifamily.

**TOTAL UNITS NEEDED 2020** =  $OCCUPIED\ UNITS\ NEEDED\ 2020$  (Table 2.5) /  $(1 - VACANCY\ RATE\ 2020)$

**TOTAL UNITS LOST:** From Table 2.4.

**TOTAL NEW UNITS NEEDED 2020** =  $TOTAL\ UNITS\ NEEDED\ 2020 - UNITS\ 2000$  (Table 2.1) +  $UNITS\ LOST$  (Table 2.4)

**PLAN NEW UNIT NET DENSITY 2020:** Local planning target for the density of residential development within each land-use category. Lower densities mean much more land will be needed to accommodate future development than higher densities.

**NEW NET ACRES NEEDED** =  $TOTAL\ NEW\ UNITS\ NEEDED\ 2020 / PLAN\ NEW\ UNIT\ NET\ DENSITY\ 2020$

**PLAN NET ACRES NEEDED** =  $ACRES\ REMAINING$  (Table 2.4) +  $NEW\ NET\ ACRES\ NEEDED$

**GROSS ACRES ADJUSTMENT FACTOR:** Planning assumption for the amount of total developed land that is used for roads, drainage, utility easements, and other property-serving purposes. This is based on local planning knowledge and planning targets (the higher the factor, the less efficient will land be used and the more costly development becomes).

**GROSS PLAN ACRES NEEDED** =  $PLAN\ NET\ ACRES\ NEEDED / (1 - GROSS\ ACRE\ ADJUSTMENT\ FACTOR)$

Gross building area per worker and total workers for each employment land-use category are calculated in Table 3.2 as follows:

**NET SQ FT PER EMPLOYEE:** This is a local planning assumption.

**EFFICIENCY RATIO:** Adapted mainly from the ULI (1975, 1980, 1982, 1988, and 2000) and the ULI's Project Reference Files (selected from the years 1976-94), and from Canestaro (1989).

**ADJUSTED NET SQ FT PER EMPLOYEE** =  $NET\ SQ\ FT\ PER\ EMPLOYEE / (1 - EFFICIENCY\ RATIO)$

**VACANCY RATE:** This is adapted mainly from NAIOP (1989 and 1990) and Recht Hausrath & Associates (1981).

**GROSS SQ FT PER EMPLOYEE** =  $ADJUSTED\ NET\ SQ\ FT\ PER\ EMPLOYEE / (1 - VACANCY\ RATE)$

**EMPLOYEE SHARE:** This is the share of total employment projected for a given land-use category based on total employment in its group (land-use category employment divided by total group employment in Table 1.2).

**PROJECTED EMPLOYMENT 2020:** This figure is the *TOTAL URBAN-RELATED EMPLOYEES* for 2020 from Table 1.2.

The calculations needed in Table 3.3 to estimate net and gross acres for employment land uses are:

**EMPLOYEE SHARE:** From Table 3.2.

**FAR:** FAR appropriate for each land-use category. The higher the FAR, the less land is needed to accommodate needed development.

**GROSS SQ FT PER EMPLOYEE:** From Table 3.2.

**GROSS SQ FT PER NET ACRE** = FAR x 43,560 sq ft per acre

**EMPLOYEES PER NET ACRE** = *GROSS SQ FT PER NET ACRE / GROSS SQ FT PER EMPLOYEE*

**PROJECTED EMPLOYMENT 2020:** From Table 1.2 with adjustments from Table 3.2.

**IN-PLACE EMPLOYEE PERCENT:** This is the assumed percent of workers actually working at their location of business.

**PLANNED IN-PLACE EMPLOYEES 2020** = *PROJECTED EMPLOYMENT 2020 x IN-PLACE EMPLOYEE PERCENT*

**PLANNED ACRES NEEDED 2020** = *PLANNED IN-PLACE EMPLOYEES 2020 / EMPLOYEES PER NET ACRE*

**EXISTING ACRES 2000:** This is based on data estimated from land-use inventories. This figure excludes land area designated for conversion to other than employment land uses.

**NEW ACRES NEEDED** = *PLANNED ACRES NEEDED 2020 – EXISTING ACRES 2000*

**GROSS ACRE ADJUSTMENT FACTOR:** Planning assumption for the amount of total developed land that is used for roads, drainage, utility easements, and other property-serving purposes. This is based on local planning knowledge and planning targets (the higher the factor, the less efficient will land be used and the more costly development becomes).

**GROSS ACRES NEEDED** = *PLANNED ACRES NEEDED 2020 / (1 – GROSS ACRE ADJUSTMENT FACTOR)*

Calculations for Table 4-1 are as follows:

**ITE CODE:** This is the land-use code by the ITE in its Trip Generation (1997) handbook that reflects best the general land-use categories used in these tables.

**IN-PLACE OCCUPANT RATIO:** This is the *IN-PLACE EMPLOYEE PERCENT* from Table 3.3 converted into a ratio.

**HOURS IN PLACE:** This means the number of hours on any given day that a worker or student occupies space in the respective land-use category.

**TRIPS PER EMPLOYEE:** This is from the ITE's Trip Generation (1997) handbook based on the land-use codes and trip figures referenced in Table 4.1. Trips per retail employee are from the following table:

<i>Retail Scale</i>	<i>Assumed Center Size</i>	<i>Trip Rate</i>	<i>Share</i>	<i>Weighted Trips</i>
Neighborhood < 50k Sq. Ft.	50,000	87.31	30.0%	26.19
Community 50k–250k Sq. Ft.	250,000	49.15	70.0%	34.40
Sum of Weighted Trips Per 1k Sq Ft				60.60
Projected Retail Space				40,871
Projected Retail Employees				62
Employees Per 1,000 Sq. Ft.				1,5170
Trips Per Employee				39.9450

**ONE-WAY TRIPS PER EMPLOYEE:** This divides numbers in the previous column by two to avoid double counting trips to and from the land use.

**JOURNEY-TO-WORK OCCUPANTS PER TRIP:** This is from the 2000 Nationwide Household Transportation Survey (2001). For all occupations, there was an average of 1.19 occupants per vehicle per journey-to-work trip. This figure does not include public transit, walking, or bicycling to work, but these modes account for fewer than 5% of all such trips in suburban locations. Because the 2000 Nationwide Household Transportation Survey data are based on occupations of workers in their journey to work and not on land uses, we convert those data to land uses in the following manner: *(DAILY OCCUPANTS PER TRIP x ONE-WAY TRIPS PER EMPLOYEE) – (JOURNEY-TO-WORK OCCUPANTS PER TRIP x ONE-WAY TRIPS PER EMPLOYEE)*

**VISITOR HOURS PER TRIP:** This is the assumed length of time a visitor occupies space in a given land-use category.



The calculations for Table 4.2 are as follows:

**24/7 DAYS PER WEEK** and **DAYTIME DAYS PER WEEK**: These indicate the number of days per week the land use is occupied.

**24/7 FUNCTIONAL POPULATION COEFFICIENT – HOURS @ 168** and **DAYTIME FUNCTIONAL POPULATION COEFFICIENT – HOURS @84**: These calculate the coefficient or multiplier to estimate functional population based on these two variations: (1) a week at 24 hours per day for seven days is 184 total hours; and (2) a daytime week at 12 hours per day for seven days is 84 hours. For residential land uses, the coefficients are assumed. For nonresidential land uses and the employment part of group care, the coefficients are estimated by the following formula:  $(IN-PLACE\ OCCUPANT\ RATIO \times HOURS\ IN\ PLACE) + (VISITORS\ PER\ EMPLOYEE \times VISITOR\ HOURS\ PER\ TRIP \times DAYS\ PER\ WEEK_{24/7, DAYTIME}) / HOURS\ @168\ and\ 84$ . For students the formula is:  $(IN-PLACE\ OCCUPANCY\ RATIO \times HOURS-IN-PLACE \times DAYS\ PER\ WEEK_{24/7\ and\ DAYTIME}) / HOURS\ @168\ and\ 84$ .

For parks and open space in Table 5.2, calculations of need are based on the following:

**EXISTING ACRES 2000**: This is from local officials for each parks and open space category.

**EXISTING ACRES PER 1,000 FUNCTIONAL RESIDENTS** =  $(EXISTING\ ACRES\ 2000 / DAYTIME\ FUNCTIONAL\ POPULATION\ 2000) \times 1,000$

**LOS ACRES PER 1,000 FUNCTIONAL RESIDENTS**: This is the locally adopted LOS standard for parks and open space.

**EXISTING DEMAND** =  $LOS\ ACRES\ PER\ 1,000\ FUNCTIONAL\ RESIDENTS \times DAYTIME\ FUNCTIONAL\ POPULATION\ 2000 \times 1,000$

**EXCESS (DEFICIENT) SUPPLY**: This indicates the extent to which existing parks and open space uses are sufficient. If they are not, there is an existing deficiency. It is calculated as:  $EXISTING\ ACRES\ 2000 - EXISTING\ DEMAND$ .

**ACRES NEEDED OR PLANNED 2020** =  $LOS\ ACRES\ PER\ 1,000\ FUNCTIONAL\ RESIDENTS \times DAYTIME\ FUNCTIONAL\ POPULATION\ 2000 \times 1,000$

**NEW ACRES NEEDED 2020** =  $ACRES\ NEEDED\ OR\ PLANNED\ 2020 - EXISTING\ ACRES\ 2000$

Table 5.3 synthesizes public facility space and land-use needs to 2020. This table includes:

**EXISTING SPACE & NEEDED OR PLANNED SPACE**: These summarize and total existing and needed public facility space for recreation center facilities.

**EXISTING ACRES 2000 & ACRES NEEDED 2020**: These summarize existing and needed land area for all facilities covered in Table 5.1 and Table 5.2.

**NEW ACRES NEEDED**: This shows the new acres needed to be added by the community over the plan period. This is calculated as  $ACRES\ NEEDED\ 2020 - EXISTING\ ACRES\ 2000$ .



CITY OF CAMBRIDGE  
ZONING ORDINANCE  
AND  
SUDIVISION REGULATIONS  
REPORT  
1999

Second Revision:

The preparation of the original report was financially aided through a Federal Grant from the Urban Renewal Administration of the Housing and Home Finance Agency, under the Urban Planning Assistance Program authorized by Section 701 of the Housing Act of 1954, as amended. Original report prepared in 1966.

The **first revision** was prepared in 1991-1999 under the direction of the Mayor and City Council through the Cambridge Planning Commission.

**The second revision was prepared in 2009 as part of a professional project for candidacy for the degree Master of Community and Regional Planning.**

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Barbara Langley	Mayor
Di Anna Bantam	City Council Member
Mark Harpst	City Council Member
Richard V. Minnick	City Council Member
Gary Benson	City Council Member
John P. Trumble	City Council Member
Vernita Saylor	City Council Member

CAMBRIDGE PLANNING COMMISSION MEMBERS

Larry Cornett	Chairman
Colonie Jones	Planning Commission Member
Kevin Banzhaf	Planning Commission Member
Greg Howerter	Planning Commission Member
Gary Kapustka	Planning Commission Member
Mike Tomlin	Zoning Administrator

WEST CENTRAL NEBRASKA DEVELOPMENT DISTRICT  
OGALLALA, NEBRASKA

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CITY OF CAMBRIDGE  
NEBRASKA  
ZONING REGULATIONS

CHAPTER 1

Article 1

Introduction

**1-101 SHORT TITLE** – These regulations constitute and may be referred to as “The Cambridge Zoning Ordinance”.

Article 2

Purpose and Intent

**1-201 PURPOSE** – In order to promote the health, safety, morals and the general welfare of the City of Cambridge, Nebraska, this is an ordinance that divides the City of Cambridge and the Suburban area, within one (1) mile of the corporate limits of the City of Cambridge, into districts to regulate and restrict the height, number of stories, size of buildings and other structures, the percentage of lot that may be occupied, the size of the buildings and other open spaces, the density of population, the location and use of buildings, courts and other open spaces, the density of population, the location and use of buildings, structures and land for trade, industry and residence or other purpose; and the erection, construction, reconstruction, alteration, repair or use of buildings, structures or land.

**1-202 DESIGN** – These regulations are made in accordance with Chapter 19, Article 9 and Chapter 17, Article 10, of the Revised Statutes of the State of Nebraska, and amendments thereto, and in accordance with the Comprehensive Development Plan of the City of Cambridge and are designed to:

- lessen congestion in the streets
- secure safety from fire, panic and other dangers
- to promote the health and the general welfare
- to provide adequate light and air
- to avoid undue concentration of population
- to prevent the overcrowding of land



- g) to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirements.

These regulations are set up in form by Chapter, Article, and Section. The first number shall represent the chapter, the second number shall represent the Article and the third and fourth numbers shall represent the section.

**1-203 CONSIDERATION** – These regulations are made with reasonable consideration of the character of the district and its peculiar suitability for particular uses and with a view to conserving the value of buildings and encourage the most appropriate use of land throughout the City of Cambridge and the area lying within one (1) mile of the corporate limits of the City of Cambridge.

Article 3  
General Provisions

**1-301 JURISDICTIONAL AREA** – The provisions of these regulations shall apply to all structures and land in the incorporated area of Cambridge, Nebraska; and that portion of the unincorporated area within one (1) mile of the corporate limits of Cambridge as shown on the Official Zoning Maps.

1. The jurisdictional area shall be shown on the Official Zoning District Map and filed in the office of the City Clerk.
2. All land which may hereafter be annexed to the City of Cambridge shall be classified as R-1 Residential district unless otherwise changed by ordinance.
3. All land in the unincorporated area which may hereafter fall under the jurisdiction of the City of Cambridge because of an increase in the jurisdictional area shall be classified as A-1 Agricultural District unless otherwise changed by ordinance.

**1-302 CLASSES OF DISTRICT** – For the purpose of these regulations, the City of Cambridge, Nebraska and the suburban area lying within one (1) mile of the corporate limits of the City of Cambridge, Nebraska, is divided into the following district in accordance with a “Zoning Map”.

1. Agricultural
2. Residential
3. Industrial
4. Commercial

**1-303 ZONING DISTRICT MAP** – Said districts are bounded and defined as shown on a map entitled “Zoning Map – Cambridge, Nebraska

and Suburban Area”, adopted as a part of these regulations. The “Zoning Map” shall be kept and maintained by the City of Cambridge and shall be available for inspection and examination by members of the public at all reasonable times as that of any public record.

**1-304 EXEMPTIONS** – The following structures and uses shall be exempt from the provision of these regulations:

1. Poles, wires, cables, conduits, vaults, laterals, pipes, mains, valves, or other similar equipment for the distribution to consumers of telephone or other communications, electricity, gas, or water, or the collection of sewage or surface water operated or maintained by a public utility but not including substations located on or above the ground.
2. Retaining walls
3. Public signs as defined in chapter 5.

Article 4  
Rules and Definitions

**1-401 RULES OF WORDS** – In the construction of these regulations, the provisions and rules of this section shall be preserved and applied, except when the context clearly requires otherwise:

1. Words used in the present tense shall include the future.
2. Words in the singular number include the plural number, and words in the plural number include the singular number.
3. The phrase “used for” shall include the phrases “arranged for”, “designed for”, “intended for”, “maintained for”, and “occupied for”.
4. The word “shall” is mandatory.
5. The word “may” is permissive.
6. The word “person” includes individuals, firms, corporations, associations, governmental bodies and agencies, and all other legal entities.
7. The word “Board” means the Board of Adjustments.
8. Unless otherwise specified, all distances shall be measured horizontally.
9. The Word “City” means City of Cambridge, Nebraska.
10. The abbreviation N/A means not applicable.

Any word or phrase, which is defined in this article or elsewhere in these regulations, shall have the meaning as so regulations, unless such definition is expressly limited in its meaning or scope.

#### **1-402 RULES FOR INTERPRETATION OF DISTRICT BOUNDARIES** –

Where uncertainty exists with respect to the boundaries of any of the aforesaid districts on the zoning map, the following rules shall apply:

1. Where district boundary lines are indicated as approximately following streets and alleys, highways or railroads, such boundaries shall be construed as following the centerlines thereof.
2. Where district boundary lines are indicated, as approximately following lot lines, or section lines, such lines shall be construed to be said boundaries.
3. Where a boundary of a district follows a stream, lake or other body of water, said boundary line should be deemed to be at the limit of the jurisdiction of the City of Cambridge unless otherwise indicated.
4. Where a district boundary line divides a lot, or unsubdivided property, and the dimension are not shown on the zoning map, the location of such boundary shall be as indicated upon the zoning map using the scale appearing on such map.

#### **1-402 INTERPRETATION**

1. Minimum Requirements. In their interpretation and application, the provision of these regulations shall be held to be the minimum Requirements for the promotion of the public health, safety, morals and welfare.
2. Overlapping or Contradictory Regulations. Except as specifically herein provided, it is not intended to repeal, abrogate, annul or in any way impair or interfere with any existing law or ordinance of the City of Cambridge, or any easement, convenient or other agreement between parties; provided, however, that where these regulations impose a greater restriction upon the use of buildings or requires larger building site areas, yards or open spaces that are imposed or required by any such other law, ordinance, easement, convenient or agreement, than the provision of these regulations shall control.
3. Private Agreements: These regulations are not intended to abrogate, annul, enforce or otherwise interfere with any easement, convenient or any other private agreement or legal relationship; provided, however, that where the provisions of

these regulations are more restrictive (or impose higher standards or requirements) that such easements, convenient or other private agreements or legal relationships, the provisions of these regulations shall govern.

4. Unlawful Uses. The adoption of these regulations shall not be interpreted as retroactively legalizing a use or structure which was illegal under previous law.

**1-403 SEPARABILITY** – It is hereby declared to be the intention of the City that the provisions of these regulations are separable, in accordance with the following rules:

- A. If any court of competent jurisdiction shall adjudge any provision of these regulations to be invalid, such judgment shall not affect any other provisions of these regulations.
- B. If any court of competent jurisdiction shall adjudge invalid the application of any provision of these regulations to a particular property or structure, such judgment shall not affect the application of said provisions to any other property or structure.

#### **1-404 CONFORMITY REQUIREMENTS**

1. Except as otherwise provided herein, it shall be unlawful to use any land or building for any purpose other than is permitted in the district in which such land or building is located. No building shall thereafter be erected, reconstructed, relocated or structurally altered to have a greater percentage of lot area, to accommodate or have a greater number of facilities, to have narrower or smaller yards, courts or open spaces than permissible under the limitations set forth herein for the district in which such building is located.
2. No part of yard, or other open space required bout any building, existing or hereafter provided for a building or use and necessary to meet or partially meet the requirements of this regulation shall be included as part of a yard or other open space required for another building.
3. No lot, held under ownership at the effective date of this regulation shall be reduced in dimension or area in relation to any building thereon so as to be smaller than that required by this regulation; if already less, the dimensions or area shall not be further reduced.
4. No building shall hereafter be erected, reconstructed, relocated or structurally altered on any lot or parcel unless such lot or faces a

publicly dedicated street or right-of-way. Where a building is in existence, no such required dedicated street or right-of-way shall be vacated so as to eliminate the required access to a publicly dedicated street or right-of-way.

#### 1-406 DEFINITIONS

1. **Abut.** To touch, border on or be contiguous to abutting owner, having property or district lines in common.
2. **Accessory Building.** A subordinate building which serves a function customarily incidental to that of the main building. Customary accessory building include but are not limited to garages, carports, and small storage sheds 10' x 12'.
3. **Accessory Use.** A subordinate use which serves an incidental function to that of the main use of the premises. Customary accessory uses include tennis courts, swimming pool, and air conditioners, barbecue ovens, solar panels, dish antennas, and fireplaces.
4. **Alley.** A dedicated public right-of-way, other than a street, which provides only a secondary means of access to abutting property, and has a right-of-way 20 feet or less in width.
5. **Alteration.** Alteration, as applied to a building or structure, is a change or rearrangement in the structural parts of an existing building or structure. Enlargement, whether by extending a side, increasing in height, or the moving from one location or position to another, shall be considered an alteration.
6. **Apartment.** A room or suite of rooms in a multiple dwelling or where more than one living unit is established in any building, intended, designed, used or suitable for use by one or more persons as a place of residence with culinary accommodations.
7. **Basement.** That portion of a building having more than one-half of its height below finished grade. This portion shall serve as a substructure or foundation for the remainder of the building.
8. **Bed and Breakfast.** A house or portion thereof where short – term lodging rooms and meals are provided. The operator of the establishment shall live on the premises or in adjacent premises.
9. **Board of Adjustments.** That Board which has been created by the Governing Body to hear and determine appeals and variances to the zoning regulations.
10. **Boarding or Lodging House.** A building other than a hotel or motel where, for compensation and by pre-arrangement for

definite periods, meals, or lodging and meals, are provided for three or more persons, but not to exceeding 20 persons. Individual cooking facilities are not provided.

11. **Building.** A structure having a roof support by columns or walls, intended, designed, used or suitable for use for the support, enclosure, shelter or protection of persons, animals, or property.
12. **Building Envelope.** The net cubic space that remains for placing a structure on a site after building line, height and bulk regulations are observed.
13. **Building, Height.** The vertical dimension measured from the average elevation of the finished lot grade at the front of the building to the highest point of ceiling of the top story in the case of a flat roof; to the deck line of a mansard roof; and to the average height between the plate and ridge of a gable, hip or gambrel roof.
14. **Building Line.** A building line fixed at a specific distance from the front, rear and side boundaries of a lot beyond which a structure cannot lawfully extend.
15. **Building – Main.** A building in which is conducted the principal use of the lot or parcel upon which it is situated. Every dwelling in the residence district is a main building.
16. **Building Site.** The land area, consisting of one or more lots or parcel of land under common ownership or control, considered as the unit of land occupied or to be occupied by a main building or buildings and accessory buildings, or by a principal use or uses accessory thereto, together with such parking and loading spaces, yards and open spaces as are required by these regulations.
17. **Carwash.** An area of land and/or a structure with machine-or-operated facilities used principally for the cleaning, washing, polishing, or waxing of motor vehicles.
18. **Cat.** Feline species over 3 months of age.
19. **Commercial Venture.** An activity undertaken as a primary means of income or which provides a substantial supplement to a primary income.
20. **Common Open Space.** An area within a development designed and intended for the use or enjoyment of all residents of the development or for the use and enjoyment of the public in general.

21. **Community Center.** A place, structure, area, or other facility used for and providing religious, fraternal, social, and/or recreation programs generally open to the public and designed to accommodate and serve significant segments of the community.
22. **Conditional Use.** A use that would not be appropriate generally or without restriction throughout the zoning district but which, if controlled as to number, area, location, or relation to the neighborhood, would not be detrimental to public health, safety, or general welfare.
23. **Condominium.** A single dwelling unit under individual ownership within a two-family or multiple dwelling unit structure.
24. **Day Care Center.** A building or place where care, supervision, custody, or control is provided for more than seven (7) unrelated children or adults for any part of a 24-hour day.
25. **Day Care Home.** A residence or building in which care, supervision, custody, or control is provided for seven (7) or less unrelated children or adults for any part of a 24-hour day. Babysitting service for seven (7) or less infants shall be considered a day care home.
26. **District or Zone.** A section or sections of the Zoning Area for which uniform regulations governing the use of land, the height, use, area, size, and intensity of use of buildings, land, and open spaces are herein established.
27. **Dog.** Any canine species over six (6) months of age.
28. **Drive-in Service.** A type of retail sales which encourages, recognizes, or permits patrons or customers to call for service by the flashing of lights or by the parking of motor vehicles at a particular place, intended to result in a cash sale and delivery outside of the places of business to such patrons or customers.
29. **Duplex.** Any building containing exactly two dwelling units which are side by side with a common wall and roof, situated on a single lot.
30. **Dwelling.** Any building or portion thereof, not including mobile homes but including modular homes, which is designed and used exclusively for residential purposes.
31. **Dwelling Single Family.** A dwelling having accommodations for and occupied exclusively by one family.
32. **Dwelling, Single Family Attached or Townhouse.** A portion of a dwelling having accommodations for and occupied exclusively by one family, and which is located on a separate lot of record apart from the remaining portions of the building. Each such dwelling may be sold independently of the other portions.
33. **Dwelling, Two-family.** A building or semi-detached building or portion thereof designed or occupied exclusively by two families living independently of each other.
34. **Dwelling, Multifamily.** A building or portion thereof designed with accommodations for or occupied by three (3) or more families living independently of each other who may or may not have joint services or facilities or both. The term includes dormitories, lodging and rooming houses but does not include hotels, motels, and tourist courts.
35. **Dwelling for the Elderly and/or Handicapped.** A two-family or multifamily dwelling having accommodations for and occupied exclusively by elderly or handicapped residents and necessary maintenance personnel. Elderly residents are those people who are at least sixty-two (62) years of age. Handicapped persons are those people having an impairment which is expected to be of long, continuous and indefinite duration and is a substantial limitation to their ability to live independently.
36. **Earth Sheltered Residence.** A residence designed as a complete structure below or partially below ground level, which was not intended to serve as a substructure or foundation for a building.
37. **Easement.** The right of a person, government agency, or public utility company to use public or private land owned by another for a specific purpose.
38. **Family.** One person or more than one person related by blood, marriage or adoption, living together as a single housekeeping unit; or a group of not more than four unrelated persons living together as a single housekeeping unit; plus in either case, usual domestic servants, and/or resident staff. A family shall under no circumstances be constructed as a boarding house, fraternity or sorority house, club, lodging house, hotel or motel.
39. **Farm.** The use of a tract of land of twenty (20) acres or more for the growing of crops, pasture, nursery, or the raising of poultry and livestock, including the structures necessary for carrying out farming operations and the residence or residences of those owning or operation the premises, or persons employed thereon.



40. **Feedlot.** Any tract of land or structure, pen, or corral, wherein cattle, horses, sheep, goats, swine and poultry are maintained in close quarters for the purpose of fattening such livestock for final shipment to market.
41. **Fence.** Any artificially constructed barrier of any material or Combination of materials erected to enclose or screen areas of land.
42. **Floodplain.** Floodplain or flood-prone area means any land area susceptible to being inundated by water from any source.
43. **Floodway.** The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the 100-year flood without cumulatively increasing the water surface elevation more than one foot at any point.
44. **Floodway fringe.** All that land in a floodplain not lying within a delineated floodway. Land within a floodway fringe is subject to a inundation by relatively low velocity flows and shallow water depths.
45. **Floor area, gross.** The sum of the areas of the several floors of a building, including areas used for human occupancy in basements, attics, elevator shafts; stairwells at each story; floor space used for mechanical equipment with structural headroom of six feet, six inches or more; as measured from the exterior faces of the walls. It does not include cellars unclosed porches, or attics not used for human occupancy, or any floor space in accessory buildings or in the main building intended and designed for the parking of motor vehicles in order to meet the parking requirements of this by law.
46. **Frontage.** (see yard definitions)
47. **Funeral home.** A building or part hereof used for human funeral services, such building may contain space and facilities for: a) embalming and the performance of other services used in preparation of the dead for burial; b.) the performance of autopsies and other surgical procedures; c.) the storage of caskets, funeral urns, and other related funeral supplies; and d.) the storage of funeral vehicles, but shall not include facilities for cremation. Where a funeral home is permitted, a funeral chapel shall also be permitted.
48. **Garage, private.** A building for the private use of the owner or occupant of a principal building situated o the same lot or attached to the principal building for the storage of motor vehicles with no facilities for mechanical service or repair of a commercial or public nature.
49. **Garage, public.** A building designed and used for the storage of personal property or automotive vehicles operated as a business enterprise with a service charge or fee being paid to the owner or operator for the parking or storage of privately owned vehicles.
50. **Garage repair.** (See also Service Station.) A building designed and used for the storage, care, repair, or refinishing of motor vehicles including both minor and major mechanical overhauling, paint, and body work.
51. **Governing Body.** The City Council of the City of Cambridge, Nebraska.
52. **Grade.** As the average finished ground level of the land around the building within the area between the building and the property line is more than five feet from the building, between the building and a line five feet from the building.
53. **Greenhouse.** A structure devoted to the cultivation and/or the protection of plants; usually having a roof and/or sides of translucent material.
54. **Group home for the handicapped.** (See also Family.) A dwelling shared by four or more handicapped person, including resident staff, who live together as a single housekeeping unit and in a long-term, family-like environment in which staff persons provide care, education, and participation in community activities for the residents with the primary goal of enabling the resident to live independently as possible in order to reach their maximum potential. As used herein, the term “handicapped” shall mean having 1) a physical or mental impairment that substantially limits one or more of such person’s major life activities so that such person is incapable of living independently; 2) a record of having such an impairment; or 3) being regarded as having such an impairment. However, “handicapped” shall not include current illegal use of or addiction to a controlled substance, nor shall it include any person whose residency in the home would constitute a direct threat to the health and safety of other individuals. The term “group home for the handicapped” shall not include alcoholism or drug treatment center, work release facilities for convicts or ex convicts, or other housing facilities for serving as an alternative to incarceration.

55. **Hazardous Substances.** Any substances or materials that, by reason of their toxic, caustic, corrosive, abrasive, or otherwise injurious properties, may be detrimental or deleterious to the health of any person handling or otherwise coming into contact with such material or substance.
56. **Health/Recreation Facility.** An indoor facility including uses such as game courts, exercise equipment, locker rooms, Jacuzzi, and/or sauna and pro shop.
57. **Height.** The vertical distance to the highest point of the roof for flat roofs; to the deck line of mansard roofs; and to the average height between eaves and the ridge for gable, hip, and gambrel roofs, measured from the curb level if the building from the grade in all other cases.
58. **Helistop – limited use.** Any landing area used for the taking off or landing of private helicopters for the purpose of picking up and discharging of passengers or cargo. This facility is not open to use by any helicopter without prior permission having been obtained.
59. **Historic District.** An area containing buildings or places in which historic events occurred or having special public value because of notable architectural or other features relating to the cultural or artistic heritage of the community, of such significance as to warrant conservation and preservation.
60. **Hobby.** An activity undertaken as a means of providing relaxation, enjoyment or a learning experience and where any income is an incidental part of the activity.
61. **Home Occupation.** A business, profession, service or trade conducted for gain or support entirely within a residential building or its accessory structures. (See chapter 3 for requirements)
62. **Hospital.** An institution specializing in giving clinical, temporary, and emergency services of a medical or surgical nature to human patients and injured person, and licenses by state law to provide facilities and services in surgery, obstetrics, and general medical practice.
63. **Hotel or Motel.** A building or portion thereof, or a group of buildings, used as a transient abiding place which may or may not serve meals and whether such establishments are designated as a hotel, inn, automobile court, motel, motor inn, motor lodge, motor court, tourist cabin, tourist court, or other similar designation.
64. **Housing for the elderly.**
65. **Inoperable Motor vehicle.** A motor vehicle that is wrecked, dismantled, or unable to move under its own power or is impounded by a governmental agency or is not currently licensed.
66. **Junk.** Old, dilapidated, scrap or abandoned metal, paper, building material and equipment, bottles, glass, appliances, furniture, beds and bedding, rags, rubber, motor vehicles, and parts thereof.
67. **Junk Yard.** A lot, land or structure or part thereof, used primarily for the collection, storage and sale of waste paper, rags, scrap metal, or discarded material, or for the collecting, dismantling, storage and salvaging of machinery or vehicles not in running condition and for the sale of parts thereof.
68. **Kennel.** An establishment licensed to operate a facility housing dogs, cats, or other household pets and where grooming, breeding, boarding, training, or selling of animals is conducted as a business.
69. **Laundry, Self Service.** A business that provides home-type washing, drying and/or ironing machines for hire to be used by customers on the premises.
70. **Lean to.** Building having 3 sides and a roof using the wall of another building for the fourth side used for storage or a workshop.
71. **Lot.** A parcel of land shown as a unit on a recorded subdivision plat.
72. **Lot Area.** The total horizontal area within the lot lines of a lot.
73. **Lot, Corner.** A lot abutting upon two or more streets at their intersection.
74. **Lot Depth of.** The mean horizontal distance between the front and rear lot lines.
75. **Lot, Double Frontage.** An internal lot having a frontage on two streets.
76. **Lot, Flag.** Lots or parcels that the City has approved with less frontage on a public street than is normally required. The panhandle is an access corridor to lots or parcels located behind lots or parcels with normally required street frontage.

77. **Lot Line, Front** (See also Yard, Front.) On an interior lot, the lot line abutting a street; or, on a corner lot, the shorter lot line abutting a street; or, on a through lot, the lot line abutting the street providing the primary access to the lot; or, on a flag lot, the interior lot line most parallel to an nearest the street from which access is obtained.
78. **Lot, Rear.** The rear of a lot shall be that side opposite the front of the lot.
79. **Lot of Record.** A lot whose existence, location, and dimensions have been legally recorded or registered in a deed or on a plat.
80. **Lot, Substandard.** A lot or parcel of land that has less than the required minimum area or width as established by the zone in which it is located and provided that such lot or parcel was of record as a legally created lot on the effective date of the ordinance codified in this title.
81. **Lot, Through.** A lot having its front and rear yards each abutting on a street.
82. **Lot, Width.** The mean horizontal distance between the side lot lines, measured at right angles to the lot depth. Where side lot lines are not parallel the minimum width of a lot shall be measured at the front yard setback line, but in no case shall the front lot line be less than 35 feet in width.
83. **Mini-warehouse.** (See Self Service Storage Facility)
84. **Mobile Home park.** Any area, tract, site or plot of land where upon a minimum of two (2) mobile homes as herein defined are placed, located or maintained or intended to be placed, located or maintained for dwelling purposes.
85. **Mobile or Manufactured Home.** A factory build residential structure or structures eight (8) or more feet in width or forty (40) or more feet in length or three hundred and twenty (320) or more square feet in floor area, equipped with the necessary service connections for required utilities, having the plumbing, heating, and electrical systems contained therein and constructed on a permanent chassis so as to be readily moveable as a unit or units on its or their own running gear and designed to be used for residential purposes with or without a permanent foundation, whether or not a permanent foundation is subsequently provided. It may consist of one or more units that can be expanded later or joined together into one integral unit. Mobile homes shall have been built to the Federal Manufactured Home Construction and safety Standards in effect on the date of manufacture.
86. **Mobile Home, Double-Wide.** A mobile home that consists of two or more sections that are transported separately and assembled at the site into one structure of a width of not less than twenty feet.
87. **Mobile Home, Single – Wide.** A mobile home that consists of one section which the main body, exclusive of expansions or extensions, is sixteen feet or less in width.
88. **Mobile Home Space.** A plot of ground within a mobile home park which can accommodate one mobile home and which provides the necessary utility services for water, sewerage, and electricity.
89. **Mobile Home Subdivision.** A subdivision where individual lots are sold for the placement of manufactured or mobile homes where the lot and structure are intended, to be owned by the same party.
90. **Motel.** (See also Hotel.) A building or group of buildings containing apartments and /or rooming units, each of which maintains a separate outside entrance. Such building or group of buildings is designed, intended, or used primarily for the accommodation of automobile travelers and provides automobile parking conveniently located on the premises.
91. **Nonconforming Building.** Any building that does not meet the limitations on building size and location on a lot, for the district in which such building is located, for the use to which such building is being put.
92. **Nonconforming Lot.** A use or activity which lawfully existed prior to the adoption, revision, or amendment of this ordinance, but which fails by reason of such adoption revision, or amendment to conform to the use district in which it is located.
93. **Nonconforming use.** A lawful use of land or building that does not comply with the use regulations for its zoning district but which complied with applicable regulations at the time the use was established.
94. **Nursery.** An area where plants, such as trees and shrubs, are grown for transplanting, for use as stock for budding and grafting or for sale.

95. **Nursing Home – Convalescent Home.** A licensed dwelling where Persons are housed or lodged and furnished with professional nursing and convalescent care for a fee.
96. **Open Space.** An area that is intended to provide light and air, and is designed for environmental, scenic, or recreational purposes.
97. **Park.** Any public or private land available for recreation, educational, cultural, or aesthetic use.
98. **Parking Area, Public or Customer.** An area other than private parking area, street or alley, used for the parking of automobiles and available for public or semi-public use.
99. **Parking Space.** A surfaced area of not less than two hundred (200) square feet on private or public property, either within or outside a building, suitable in size and location to store one standard automobile.
100. **Planned Unit Development.** The development of an area of land as a single entity for a number of dwelling units or a number of uses, according to a plan which does not correspond in lot size, bulk or type of dwelling, density, lot coverage, or required open space to the regulations otherwise required by this ordinance.
101. **Poultry Farm.** ( See Feedlot)
102. **Principal Building.** Building in which the primary use of the lot
103. **Principal Use.** The primary use and chief purpose of a lot or structure.
104. **Recreational Vehicle (RV) Park.** Any lot of land upon which two or more recreational vehicle sites are located, established, or maintained for occupancy by recreational vehicles of the general public as temporary living quarters for recreation or vacation purposes.
105. **Recycling Center.** A facility that is not a junk yard and in which recoverable resources are collected, stored, flattened, crushed, or bundled, essentially by hand within a completely enclosed building. (Such as newspaper, glassware, metal, cans, etc.)
106. **Restaurant.** An establishment that serves food and beverages primarily to persons seated within the building. This includes cafes, tea rooms, and outdoor cafes.
107. **Restaurant, Drive-in** A retail outlet where food or beverages are sold to a substantial extent for consumption by customers in parked motor vehicles.
108. **Restaurant, Fast-food.** An establishment that offers quick food service, which is accomplished through a limited menu of items already prepared and held for service, or prepared, fried, or grilled quickly, or heated in a device such as a microwave oven. Orders are not generally taken at the customer's table, and food is generally served in disposable wrapping or containers.
109. **Right-of –way.** A strip of land occupied or intended to be occupied by a street, crosswalk, railroad, electric transmission line, oil or gas pipeline, water main, sanitary or storm sewer main, shade trees, or other special use.
110. **Road, Public.** (See also Right-of-way and Street.) All public property reserved or dedicated for street traffic.
111. **Road, Private.** (See also Right-of-way and Street) A way open to vehicular ingress and egress established as a separate tract for the benefit of certain, adjacent properties. This definition shall not apply to driveways.
112. **School.** A facility that provides a curriculum of elementary and secondary academic instruction, including kindergartens, elementary schools, junior high schools, and high school.
113. **Screening.** The method by which a view of one site from another elements or form adjacent or contiguous development. Screening may include one or a combination of the following materials of sufficient mass to be opaque or that shall become opaque after 12 months and which shall be maintained in an opaque condition; walls, berms, or plantings.
114. **Self-service storage facility.** A building consisting of individual, small, self-contained units that are leased or owned for the storage of business and household goods or contractors supplies.
115. **Service Station.** (See also Garage, Repair) Any premises where gasoline and other petroleum products are sold and/or light maintenance activities such as engine tune ups, lubrication, minor repairs, and carburetor cleaning are conducted. Service stations shall not include premises where heavy automobile maintenance activities such as engine overhauls, automobile painting, and body fender work are conducted.
116. **Setback.** The required minimum horizontal distance between the building line and the related front, side, or rear property line.
117. **Shed.** Free standing building not larger than 10' by 12' used for storage or workshop.



118. **Sight Triangle.** An area at a street intersection in which nothing shall be erected, placed, planted, or allowed to grow in such a manner as to materially impede vision between a height of 2-1/2 feet and 10 feet above the grades of the bottom of the curb of the intersecting streets, measured from the point of intersection of the center line of the streets, 90 feet in each direction along the center line of the streets. At the intersection of major or arterial streets, the 90-foot distance shall be increased to 120 feet for each arterial leg of the intersection.
  119. **Sign.** Any device which shall display or include any letter, word, model, banner, flag, pennant, insignia, device, or representation used as, or which is in the nature of, and advertisement or announcement which directs, attention to an object, product, place, activity, person, institution, organization, or business, but shall not include any display of governmental notice or flag.
  120. **Single Family Attached.** A dwelling having a common wall with another dwelling. The common wall is on a lot line dividing 2 residential lots. Each dwelling may be the property of 2 different owners.
  121. **Site Plan.** A plan, prepared to scale, showing accurately and with complete dimensioning, the boundaries of a site and the location of all buildings, structures, uses, and principal site development features proposed for a specific parcel of land.
  122. **Story.** That portion of a building included between the surface of any floor and the surface of the floor next above it, or if there be no floor above it, the space between such floor and the ceiling above it. A basement shall be counted as a story if its ceiling is over six feet above the average level of the finished ground surface adjoining the exterior walls of such story, or it is used for business or dwelling purposes.
  123. **Street.** That area of land plated and dedicated for public use, or lawfully used, as a public thoroughfare for vehicular travel; excluding from this definition access ways commonly designated as alleys.
  124. **Structure.** Anything constructed or erected, the use of which requires a permanent location on the ground or attachment to something having a permanent location on the ground, but not including fences or public items such as utility poles, street light fixtures, and street signs.
  125. **Structure Alterations.** Any change in the supporting members of a building, such as bearing walls or partitions, columns, beams or girders; any substantial change in the roof or in the exterior walls, excepting from this definition such alterations as may be required for the safety of the building.
  126. **Subdivision.** Subdivision shall mean the division of lot, tract, or parcel of land into two or lots, sites, or other divisions of land for the purpose, whether immediate or future, of ownership or building development, except that the division of land shall not be considered to be a subdivision when the smallest parcel created is more than ten acres in area.
  127. **Temporary Use.** A prospective use, intended for limited duration to be located in a zoning district not permitting such use, and not continuing a nonconforming use or building.
  128. **Variance.** A dispensation permitted by the Board of Adjustments relieving a property owner from dimensional requirements of the zoning regulations which would cause exceptional practical difficulties or exceptional and undue hardship.
  129. **Yard.** A space on a lot that is open, unoccupied and unobstructed by buildings or structures from the ground upward.
  130. **Yard, Front.** A yard extending across the full width of the lot, the depth of which is the least distance between a front lot line and the front setback line.
  131. **Yard, Rear.** A yard extending across the full width of the lot, of which is the least distance between the rear lot line and the rear setback line.
  132. **Yard Side.** A yard extending from the front yard, or front lot line where no front yard is required, to the rear yard.
  133. **Zoning Area.** The area that is zoned as set out on the official Zoning Map filed of record.
  134. **Zero Lot Line.** The location of a building on a lot in such a manner that one or more of the building's sides rests directly on a lot line.
  135. **Zoning Regulations.** The term zoning regulations or this or these regulations shall mean the requirements stipulated in the regulations herewith attached.
- 1-407.1 UNDEFINED WORDS** – Words or terms not herein defined shall have their Ordinary meaning in relation to the context.

ZONING DISTRICTS  
CHAPTER 2

Article 1

**A-1 Agricultural District**

**2-101 INTENT** – It is the intent of this district to provide for agricultural and related uses in the manner which will facilitate the eventual conversion of the land in this district to more intensive urban uses.

**2-102 PERMITTED USES** – In district A-1 no building, structure, land or premises shall be used and no building or structure shall be hereafter erected constructed, reconstructed, moved, or altered, except for one or more of the following uses:

1. Farming, pasturing, truck gardening, orchards and nurseries, including the sale of products raised on the premises, provided that no livestock feedlot or yard for more than twelve (12) animals shall be established unless approved as a conditional use.
2. Horse stables and ranches.
3. Publicly, owned or operated parks, playgrounds, golf courses, and recreational uses.
4. Single-family dwellings when in conjunction with an agricultural use.
5. Churches and other places of worship.
6. Public or private schools.
7. Accessory buildings and uses customarily incidental to those listed above.
8. Single Family dwellings in Non Agricultural Use.
9. Plant Nursery.
10. Green House.
11. Modular Homes.

**2-103 CONDITIONAL USES** – The following conditional uses may be permitted subject to approval procedures outlined in Section 8-105 of these regulations.

1. Cemeteries including mausoleums; provided mausoleums shall be at least two hundred (200) feet from every street line and adjoining lot lines.

2. Hospitals and institutions of and educational, religious, charitable, philanthropic nature; provided such buildings shall not be located upon sites containing an area of less than five (5) acres.
3. The storage and distribution of anhydrous ammonia shall not be within 1,320 feet of any residential district boundary.
4. Airports and airfields.
5. Greenhouse and nurseries.
6. Commercial transmitting towers.
7. Wind Energy Conversion Systems (WECS) subject to the following conditions:
  - a) No tower or propeller shall be so located as to ever be within one hundred (100) feet of any structure, power line or antenna located on other than the property on which the system is located.
  - b) The bottom tip of any propeller shall be at least ten (10) feet above any accessible pedestrian area.
  - c) The system and component parts must be totally surrounded by a fence having a minimum height of six (6) feet and a maximum height of eight (8) feet unless otherwise physically inaccessible to the public.
  - d) The system shall not cause interference to the radio and television reception on adjoining property.
  - e) The system shall contain a breaking device for speeds above 40 miles per hour.
  - f) The safety results of an approved testing laboratory shall be submitted.
  - g) Proof that the system is covered by a homeowner's insurance policy shall be submitted.
  - h) The maximum height shall be determined by anemometer studies which find out where the proper wind strata are in specific areas.
  - i) No system shall interfere with the wind access of an existing system. Systems shall be a minimum of five rotor blades lengths apart based upon the largest rotor in the area.
  - j) The minimum lot area shall not be less than one (1) acre.

8. Kennels – breeding and boarding.
    - a) All kennels shall be located at least 1,320 feet from a residential district.
    - b) The minimum lot size shall be less than one acre.
    - c) No kennel buildings or runs shall be located nearer than seventy five (75) feet to any property line.
    - d) The kennel shall be completely enclosed by fencing of sufficient height to retain the dogs kept within said kennel. If necessary, fencing may be required across the top of any such kennel in order to retain a dog within the kennel. An enclosed ground area of 48 sq. ft. per dog shall be provided.
  9. Auto wrecking yards, junk yards, salvage yards, and scrap processing yards.
    - a) Shall be located at least 1,320 feet from a residential district Zone.
    - b) The operation shall be conducted wholly within a non-combustible building or within an area completely enclosed by a fence or wall at least eight (8) feet high. The fence or wall shall be of uniform height, color and texture, and shall be maintained by the proprietor as to insure maximum safety to the public, and preserve the general welfare of the neighborhood. No scrap, junk, or other salvaged materials may be piled so as to exceed the height of this enclosing fence or wall.
    - c) No junk or salvaged material shall be loaded, unloaded or stored either temporarily or permanently, outside the enclosing building, fence, or wall.
  10. Other publicly owned buildings and uses not specifically listed elsewhere in this district.
  11. Earth-sheltered residences may be constructed as a conditional use providing the following conditions are met.
    - a) The living area shall be provided with exterior windows or sky lights which have a glassed area of not less than ten percent (10%) of the floor area and give direct visual access to natural light and open space.
    - b) Lot areas, lot widths and setbacks for underground dwellings shall conform to those established by the zoning district.
    - c) An outdoor space of no less than 500 square feet shall be provided immediately outside one wall of the dwelling. The minimum width of the space shall be twenty (20) feet and the average grade elevation shall be no more than two (2) feet above or below the grade elevation of the floor of the dwelling.
    - d) All earth-covered structures shall be designed by a structural Engineer and plans shall be submitted signed and sealed by a licensed structural engineer.
    - e) A site plan, elevations, cross sections and other necessary drawings shall be submitted to ensure that the proposed structure is compatible with the adjacent residents and the topography of the area. No site plan will be approved that creates a storm drainage or runoff problem for an adjacent property.
  12. Seasonal or temporary uses such as recreation camp or similar enterprises.
  13. Telephone exchanges, electric substations or similar public utility uses.
  14. The extraction of minerals or raw minerals and the processing, treating or storing of such minerals or materials.
  15. Solid waste disposal and processing sites which include landfills, incinerators, transfer stations and other similar functions.
  16. Mobile Homes.
- 2-104 INTENSITY OF REGULATIONS**
1. Minimum lot area: 1 acre for residential non agricultural uses.
  2. Minimum lot width and dept: 100 feet.
- 2- 105 HEIGHT REGULATIONS**
1. Maximum structure height; 35 feet, except that barns, silos and other Agriculture structures may be of any height.
- 2-106 YARD REGULATIONS**
1. Front Yard.
    - a) The front yard shall be a minimum of 25 feet in depth measured from the front lot line to structure.
    - b) Where lots have a double frontage, the required front yard shall be provided on both streets.

- c) In those instances where lots front on both intersecting streets within the same block, the corner lot shall maintain a front yard setback as set out in “a” above on both streets.
  - d) In those instances where lots front on only one of the intersecting streets within the same block, the corner lot shall maintain a front yard setback, as set out in “a” above, on the street upon which other lots front, and the setback on the other intersection street may be reduced to not less than 15 feet.
2. Minimum side yards: 6 feet on each side of a zoning lot.
  3. Minimum rear yards: 20 feet.
  4. Outside Corporate Limits, but within one mile of corporate limits: The zoning regulation for the City of Cambridge in areas outside the corporate limits, but within one mile of the corporate limits shall differ in that the size requirements for the structures shall follow the provisions of county zoning regulations. With regards to side yard set-back requirements, in the event the side yard is not adjacent to a public roadway, an owner may build closer than five feet to the side property line, so long as the adjoining owner signs an agreement that any building that he builds along the same side yard boundary is no closer than ten feet to the neighboring structure. Said agreement shall be filed by the applicant in the appropriate county clerk’s office. The permit will be issued when the City receives a copy signed by both property owners and certified filed by the county clerk’s office. All other aspects of the city zoning requirements shall apply.

## Article 2

### R-1 Single Family and Multifamily Residential District

**2-201 INTENT** – The intent of this district is to provide for high density residential development including single family, two-family and multi-family residences in a manner which will encourage a strong residential neighborhood.

**2-202 PERMITTED USES** – In District R-1 no building structure, land, or premises shall be used and no building or structure shall be hereafter erected, constructed, reconstructed, moved, or altered, except for one or more of the following uses:

1. Single Family dwellings.
2. Multifamily dwellings.
3. Boarding and Lodging Houses.

4. Public parks, playgrounds, and schools.
5. Day care nurseries.
6. Nursing or convalescent homes.
7. Hospitals
8. Churches
9. Modular homes
10. Accessory buildings and uses customarily incidental to the above uses.

**2-203 CONDITIONAL USES** – The following conditional uses may be permitted subject to approval procedures outlined in Section 8-105 of these regulations.

1. Single-family, attached subject to the following conditions:
  - a) The common wall between attached units shall be on the side lot line separating the two lots and shall not be subject to side yard requirements providing there are no doors, windows, vents or other openings in the common wall.
  - b) Not more than six units shall be attached in this district.
  - c) No unit shall have a depth of greater than four times its width.
  - d) Any exterior wall which is not a common wall must meet all yard requirements.
  - e) Each lot must have direct access to a public street.
  - f) The deed to each lot must include covenants requiring the proper and timely reconstruction of any damaged or destroyed dwelling.
  - g) The application for such conditional use must include a plot plan with the general location of buildings, parking areas, driveways, fences and other structures, the location of easements and units and the property lines within the proposed development.
2. Earth-Sheltered residences may be constructed as a conditional use providing the following conditions are met:
  - a) The living area shall be provided with exterior windows or sky lights which have a glassed area of not less than ten percent (10%) of the floor area and give direct visual access to natural light and open space.



- b) Lot areas, lot widths and setbacks for underground dwellings shall conform to those established by the zoning district.
  - c) An outdoor space of no less than five hundred (500) sq. feet shall be provided. Immediately outside one wall of the dwelling. The minimum width of the space shall be twenty (20) feet and the average grade elevation shall be no more than two feet above or below the grade elevation of the floor of the dwelling.
  - d) All earth-covered structures shall be designed by a structural Engineer and plans shall be submitted signed and sealed by a licensed structural engineer.
  - e) A site plan, elevations, cross sections and other necessary drawings shall be submitted to ensure that the proposed structure is compatible with the adjacent residents and the topography of the area. No site plan will be approved that creates a storm drainage or run off problems for an adjacent property.
- 3. Telephone exchanges, electric substations or other similar public utilities.
  - 4. Group homes.
  - 5. Mobile home doublewide.
  - 6. Day Care Center
  - 7. Duplex
  - 8. Bed & Breakfast
  - 9. Non-profit institutions of an education, philanthropic or charitable nature, except for penal or mental institutions.

#### **2-204 INTENSITY OF USE REGULATIONS**

- 1. Minimum lot area: single-family – 7,000 sq. feet. Two- family, single family attached – 5,000 sq. feet per dwelling unit. Multifamily – 1,500 sq. feet per D.U. but not less than 6,000 sq. feet of lot area. Dwellings for the Elderly – 1,000 sq. feet D.U. Other uses – 7,500 sq. feet.
- 2. Minimum lot width: 50 feet.

#### **2-205 HEIGHT REGULATIONS**

- 1. Maximum structure height : 45 feet

#### **2-206 YARD REGULATIONS**

- 1. Front Yard
  - a) The front yard shall be a minimum of 25 feet in depth measured from the front lot line to structure.
  - b) Where lots have a double frontage, the required front yard shall be provided on both streets.
  - c) In those instances where lots front on both intersecting streets within the same block, the corner lot shall maintain a front set back as set out in “a” above on both streets.
  - d) In those instances where lots front on only one of the intersecting streets within same block, the corner lots shall maintain a front yard setback, as set out in “a” above, on the street upon which other lots front, and the setback on the other intersecting street may be reduced to not less than 15 feet.
- 2. Minimum Side Yard: Not less than six (6) feet, except as provided for single-family attached and zero lot-line development. Multi-family uses excess of two stories shall have a side yard of not less than eight (8) feet.
- 3. Minimum Rear Yard: 20 feet
- 4. Outside Corporate Limits, but within one mile of corporate limits: The zoning regulation for the City of Cambridge in areas outside the corporate limits, but within one mile of the corporate limits shall differ in that the size requirements for the structures shall follow the provisions of county zoning regulations. With regards to side yard set-back requirements, in the event the side yard is not adjacent to a public roadway, an owner may build closer than five feet to the side property line, so long as the adjoining owner signs an agreement that any building that he builds along the same side yard boundary is no closer than ten feet to the neighboring structure. Said agreement shall be filed by the applicant in the appropriate county clerk’s office. The permit will be issued when the City receives a copy signed by both property owners and certified filed by the county clerk’s office. All other aspects of the city zoning requirements shall apply.

#### **2-207 USE LIMITATIONS – none.**

Article 3  
I-1 Industrial District

**2-301 INTENT** – The intent of this district is to provide locations for all types of industrial uses. Some of these uses have characteristics that may create incompatibilities with adjacent uses and, therefore, will require a conditional use approval. Certain extremely obnoxious or hazardous uses will require special permission to locate in this district.

**2-302 PERMITTED USES** – In District I-1 no building, structure, land, or premises shall be used and no building or structure shall be hereafter erected, constructed, reconstructed, moved, or altered, except for one or more of the following uses:

1. Animal hospital or clinics
2. Bottling works.
3. Building materials, storage and sales.
4. Carpenter, cabinet, plumbing and sheeting metal shop
5. Contractor's office and equipment storage yard, providing the storage yard is completely enclosed with a six-foot solid fence, wall or hedge.
6. Dog kennels
7. Dry cleaning and laundry plants
8. Feed and seed stores
9. Frozen food lockers
10. Greenhouse and nurseries retail and wholesales.
11. Light manufacturing or fabrication establishments, which are not noxious or offensive by reason vibration, noise, dust, fumes, gas, odor or smoke.
12. Machinery sales, service and storage.
13. Mini-warehouses.
14. Monument sales.
15. Motor vehicle body shop, provided that all work shall be performed and all materials shall be stored within an enclosed building; and provided further that all operable or inoperable motor vehicles determined by the Zoning Administrator to be a safety hazard or visual blight shall be screened from public view and access by a solid or semi-solid fence having a minimum height of six (6) feet and a visual density of no less than 90%.

16. Motor vehicle repair service, provided that all work shall be municipal storage yards.

17. Public utility and public service uses as follows:

- a) Substations
- b) Railroads
- c) Telephone exchange, microwave towers, radio towers, television towers, telephone transmission buildings, electric power plants.
- d) Service stations
- e) Sign painting and manufacturing
- f) Truck and rail terminals.
- g) Upholstering shops.
- h) Warehousing or storage except for products of a highly explosive, combustible or volatile nature.
- i) Welding and blacksmith shop.
- j) Wholesale establishments except those which handle products of a highly explosive, combustible or volatile nature.
- k) Contractor's office and equipment storage yard.
- l) Grain elevators.
- m) Livestock auction sales.
- n) Manufacturing or fabrication establishments, which are not noxious or offensive by reason of vibration, noise, dust, fumes, gas, odor or smoke.
- o) Radiator repair shop.

**2-303 CONDITIONAL USES** – The following conditional uses may be permitted subject to approval procedures outlined in Section 8-105 of these regulations.

1. Auto wrecking yards, junk yards, salvage yards and scrap processing yards subject, however, to the following:
  - a) Located on a tract of land at least 300 feet from a residential district zone.
  - b) The operation shall be conducted wholly within a noncombustible building or within an area completely surrounding on all sides by a fence or wall at least eight (8) feet high. The fence or wall shall be of uniform height, uniform texture and color, and have a density of not less than 80% and shall be so maintained by the proprietor as to

ensure maximum safety to the public, obscure the junk from normal view of the public, and preserve the general welfare of the neighborhood. The fence or wall shall be installed in such a manner as to retain all scrap, junk or other material within the yard.

- c) No junk shall be loaded, unloaded or otherwise placed, either temporarily or permanently outside the enclosing building, hedge, fence or wall, or within the public right-of-way.
- d) Burning of paper, trash, junk or other waste materials shall be permitted only after approval of the Fire Department except when prohibited by the State Board of Health. Said burning, when permitted, shall be done only during daylight hours.
- e) No junk, salvage, scrap or other materials shall be piled or stacked higher than the top of the required fence or wall.
- f) Said use shall not be located on or visible from an arterial or major street or highway.
- g) Manufacturing or storage of bulk oil, gas and explosives.
- h) Other uses which may be noxious or offensive by reason of the emission of odor, dust, smoke, gas noise or vibration.
- i) Ready-mixed concrete and asphalt mix plants.
- j) Solid waste, disposal and processing sites which include landfills, incinerators, transfer stations and other similar functions.
- k) Stockyard and slaughter houses.
- l) Storage and warehousing of products of a highly explosive, combustible or volatile nature.
- m) Wholesale and retail establishments which handle products of a highly explosive, combustible or volatile nature.

**2-304 INTENSITY OF USE REGULATIONS**

- 1. Minimum lot area: 10,000 square feet.
- 2. Minimum lot width : 100 feet

**2-305 HEIGHT REGULATIONS**

- 1. Maximum height of structure: 45 feet within 150 feet of a residential district; 75 feet when more than 150 feet from a residential district, except grain elevators shall have no height limitation.

**2-306 YARD REGULATIONS** – Same as A-1 district.

**2-307 USE LIMITATIONS**

- 1. All operations and activities shall be conducted within a building or buildings; however, storage may be maintained outside said storage area if properly screened from adjacent streets and residential areas.
- 2. A solid or semi – solid fence or wall at least six (6) feet, but not more than eight (8) feet high, and having a density of not less than seventy (70) percent per square foot, shall be provided adjacent to an adjoining residential district and the industrial district are separated by a street right-of-way. Said fence or wall shall be maintained in good condition by the owner or owners of the property in the I-I District.
- 3. No building shall be used for residential purposes except that a watchman may reside on the premises.

Article 4

**C-1 Commercial District**

**2-401 INTENT** – The intent of this district is to provide a zone which will accommodate the broad range of retail shopping activities and service and office uses that are normally found in the core area of a City.

**2-402 PERMITTED USES** – In district C-1 no building, structure, land, or premises shall be used and no building or structure shall be hereafter erected constructed, reconstructed, and moved, or altered, except for one or more of the following uses:

- 1. Accessory Uses.
- 2. Amusement places (indoors), including video games, arcades, game machines, pool halls, and other similar establishments.
- 3. Animal hospitals, clinics and kennels providing the establishment and runs are completely enclosed in a building.
- 4. Antique shops and stores, providing all merchandise is displayed and sold inside a building.
- 5. Apparel and accessory stores.
- 6. Apartments on floors other than the ground floor.
- 7. Art and Art supply stores.
- 8. Artist studio.
- 9. Auditoriums and similar places of public assembly.
- 10. Automobile accessory and supply store.

11. Automobile parking lots and garages.
12. Bait Shop
13. Bakery and pastry shop (retail only).
14. Banks and other savings and lending institutions.
15. Barber shops, beauty shops, chiropody, massage or similar personal services.
16. Bicycle shops.
17. Books and stationary stores.
18. Bowling alleys.
19. Business and technical schools including schools for photography, dancing, and music.
20. Business machine repair, sales and services.
21. Cigar and tobacco stores.
22. Clothing and costume rental.
23. Commercial recreation centers.
24. Custom dressmaking, millinery, tailoring and similar trades.
25. Delicatessens and catering establishments.
26. Department stores.
27. Drug stores and prescription shops.
28. Dry goods and notion stores.
29. Dry cleaning and laundry establishments.
30. Fire stations, police stations and jails.
31. Fix-it shops (radio, television and small household appliances).
32. Florist and gift shop.
33. Furniture and home furnishing stores.
34. Government administrative buildings.
35. Grocery stores.
36. Hardware stores.
37. Hobby, stamp and coin shops.
38. Hotels and Motels.
39. Household appliance stores.
40. Interior decorators shops.
41. Jewelry and metal craft stores and shops.
42. Leather goods and luggage stores.

43. Library and museum (public).
44. Lock and key shops.
45. Mail order catalog stores.
46. Medical, dental and health clinics.
47. Medical and orthopedic appliance stores.
48. Meeting halls and auditoriums.
49. Messenger and telegraph service stations.
50. Music instrument sales and repair shop.
51. Newspaper offices.
52. Newsprint, job printing and printing supply stores.
53. Newsstand.
54. Offices and office buildings.
55. Office supply and office equipment stores.
56. Optician and optometrists.
57. Package liquor stores.
58. Paint and wallpaper stores.
59. Parking lots and garages.
60. Parks and open spaces.
61. Pawn shops.
62. Pet shops.
63. Photographic equipment sales and supply stores.
64. Photographic studios.
65. Picture framing studios.
66. Plumbing, heating, ventilation, air conditioning and electrical shops including related fabrication.
67. Post office.
68. Printers.
69. Private clubs and lodges.
70. Radio and television studios.
71. Restaurants, excluding drive-ins.
72. Service stations.
73. Self-services laundries and dry cleaning establishments.
74. Sewing machine shops and stores.
75. Shoe stores.



76. Shoe repair shops.
77. Sporting and athletic goods stores.
78. Stores and shops for the conduct of retail and service business similar to the uses listed in this section.
79. Tailor shops.
80. Taverns
81. Theaters.
82. Toy stores.
83. Travel bureaus.
84. Upholstery – furniture.
85. Utility company office.
86. Variety stores.
87. Watch repair shops.

**2-403 CONDITIONAL USES** – The following conditional uses may be permitted subject to approved procedures outlined in Section 8-105 of these Regulations.

1. Motor vehicle repair service, provided that all work shall be performed and all materials shall be stored within an enclosed building; and provided further that all operable or inoperable motor vehicles determined by the building officials to be a safety hazard or visual blight shall be screened from public view and access by a solid or semi-solid fence having a minimum height of six feet and a visual density of no less than 90%.
2. Motor vehicle body shop, provided that all work shall be performed and all materials shall be stored within an enclosed building; and provided further that all operable or inoperable motor vehicles determined by the Building Official to be a safety hazard or visual blight shall be screened from public view and access by a solid or semi-solid fence having a minimum height of six feet and a visual density of no less than 90%.
3. Storage and warehouse except for products of a highly explosive combustible or volatile nature.
4. Wholesale establishments except those which handle products of a highly explosive, combustible or volatile nature.

**2-404 INTENSITY OF USE REGULATIONS**

1. Minimum Lot Area: None.
2. Minimum Lot Width: None.

**2-405 HEIGHT REGULATIONS**

1. Maximum structure height: None.

**2-406 YARD REGULATIONS**

1. Minimum front yard: None.
2. Minimum side yard: 10 feet when adjacent to a residential districts, otherwise none.
3. Minimum rear yard: 20 feet when adjacent to a residential district, otherwise none.

**2-407 USE LIMITATIONS**

1. No outdoor storage, except the display of merchandise for sale to the public, shall be permitted.
2. No business establishment shall offer or sell food or beverages where consumption is primarily intended to occur in parked motor vehicles.
3. Exterior lighting fixtures shall be shaded so that no direct light is cast upon any residential district and so that no glare is visible to any traffic on any public street.
4. A solid or semi-solid fence, hedge or wall at least six feet, but not more than eight (8) feet high, and having a density of not less than seventy (70) per square foot, shall be provided adjacent to an adjoining residential district unless the adjacent residential district and the commercial development are separated by a street right-of-way. Said fence or wall shall be maintained in good condition by the owner or owners of the property in the C-1 District.

**Article 5**

**PUD Planned Unit Development**

The requirements for a planned unit development set forth in this article are in addition to the conditional use procedures and standards in this ordinance.

**2-510 GENERAL PURPOSE** – Planned unit developments serve to encourage developing as one project, tracts of land that are sufficiently large to allow site design for a group of structures. Deviation from specific site development standards is allowable as long as the general purpose for the standards is achieved and the general provisions of the zoning regulations are observed. PUD districts are intended to promote the public convenience and necessity; protect the health, safety and welfare, to implement the goals and policies of the Comprehensive Plan. It

is further the purpose of planned unit developments to take into account the following:

1. Advance is technology and design.
2. Recognition and resolution of problems created by increasing population density.
3. A comprehensive development equal to or better than that resulting from traditional lot-by-lot land use development, in which the design of the overall unit permits increased freedom in the placement and uses of buildings and the location of open spaces, circulation facilities, off-street parking areas and other facilities.
4. The potential of sites characterized by special features of geography, topography, size or shape.
5. The height and bulk characteristics of buildings can vary as long as the ratio of site area to dwelling units and openness of the site will be in harmony with the area in which the proposed development is located.

**2-520 REQUIREMENTS** – The Planning Commission shall approve a planned unit development only if it finds that the planned unit development will satisfy standards of this Section including the following:

**A. General Requirements**

1. The City or owners of any tract of land, at least 3 acres in size, may apply for a planned unit development designation.
2. The planned unit development is an effective and unified treatment of the development possibilities on the project site while remaining consistent with the comprehensive plan and making appropriate provisions for the preservation of natural features.
3. The planned unit development will be compatible with the area surrounding the project site and with no greater demand on public facilities and services than other authorized uses for the land.
4. Financing is available to the applicant sufficient to assure completion of the planned unit development.
5. The maximum residential density of a planned unit development shall not exceed five percent. An increase in density of over five percent, but less than 10 percent, can be permitted by the Planning Commission if the arrangement of yards and common

open space is found to provide superior protection to existing or future development on adjacent property.

6. If the Planning Commission finds that an increase in density would create any of the following conditions, it may prohibit or limit the increase in density by an amount which is sufficient to avoid any of these conditions:
  - a) Inconvenient or unsafe access to the planned unit development.
  - b) Traffic congestion in the streets which adjoin the planned unit development.
  - c) An excessive burden on sewerage, water supply, parks, recreational areas, schools or other public facilities which serve or are proposed to serve the planned unit development.
7. No open area may be accepted as common open space within a planned unit development unless it meets the following requirements:
  - a) The location, shape, size and character of the common open space is suitable for the planned development.
  - b) The common open space is for amenity or recreational purposes and the uses authorized are appropriate to the scale and character of the planned unit development, considering its size, density, expected population, topography, and the number and type of dwellings provided.
  - c) Common open space will be suitably improved for its intended use, except that common open space containing natural features worthy of preservation may be left unimproved. The buildings, structures and improvements to be permitted in the common open space are appropriate to the uses which are authorized for the common open space.
  - d) The development schedule which is part of the development plan coordinates the improvement of the common open space and the construction of buildings and other structures in the common open space with the construction of residential dwellings in the planned unit development.
  - e) If buildings, structures or other improvements are to be made in the common open space, the developer provides a bond or other adequate assurance that the buildings, structures and improvements will be completed.

8. Land shown on the final development plan as common open space shall be conveyed under one of the following options:
    - a) To a public agency which agrees to maintain the common open space and any buildings, structures or other improvements which have been placed on it.
    - b) To an association of owners or tenants, created as a nonprofit corporation under the laws of the state, which shall adopt and impose articles of incorporation and bylaws and adopt and impose a declaration of covenants and restrictions on the common open space that is acceptable to the Planning Commission as providing for the continuing care of the space. Such an association shall be formed and continued for the purpose of maintaining the common open space.
  9. An applicant shall include with the application for approval of a planned unit development either an outline development plan as described in section B or a preliminary development plan as described in section C.
- B. Outline Development Plan Requirements.** If an outline development plan is prepared, it shall include both maps and a written statement as described in this section. The information shall deal with enough of the area surrounding the proposed planned unit development to demonstrate the relationship of the planned unit development to adjoining uses, both existing and allowable.
1. The maps which are part of the outline plan may be in general schematic form, and shall contain the following information:
    - a) The existing topographic character of the land.
    - b) Existing and proposed land uses and the approximate location of buildings and other structures.
    - c) The character and approximate density of the proposed buildings.
    - d) The approximate location of major thoroughfares.
    - e) Public uses, including schools, parks, playgrounds and other public open spaces.
    - f) Common open spaces and a description of the proposed use of these spaces.
  2. The written statement which is part of the outline development plan shall contain the following information:
    - a) An explanation of the character of the planned unit development and the manner in which it has been planned to take advantage of the planned unit development regulations.
    - b) A statement of the proposed financing.
    - c) A statement of the present ownership of all the land included within the planned unit development.
    - d) A general indication of the expected schedule of development.
  3. Approval of the outline development plan shall constitute provisional approval of the planned unit development contingent upon approval of the preliminary development plan.
- C. Preliminary Development Plan Requirements.**
1. A map showing street systems, lot or partition lines and other divisions of land for management, use or allocation purposes.
  2. Area proposed to be conveyed, dedicated or reserved for public streets, parks, parkways, playgrounds, school sites, public buildings and similar public and semi-public uses.
  3. A plot plan for each building site and common open space area, showing the approximate location of buildings, structures, and other improvements and indicating the open spaces around buildings and structures.
  4. Elevation and perspective drawings of proposed structures.
  5. A development schedule indicating:
    - a) The approximate date when construction of the project can be expected to begin.
    - b) The stages in which the project will be built and the approximate date when construction of each stage can be expected to begin.
    - c) The anticipated rate of development.
    - d) The approximate dates when each stage in the development will be completed.
    - e) The area, location and degree of development of common open space that will be provided at each stage.
  6. Agreements, provisions or covenants which govern the use, maintenance and continued protection of the planned unit development and any of its common open space areas.

7. If no outline development plan has been filed, the preliminary plan shall contain the written statement required by section B and shall include enough information on the area surrounding the proposed development to show the relationship of the planned unit development to adjacent uses, both existing and proposed.

#### **2-530 PRELIMINARY DEVELOPMENT PLAN PROCEDURE**

1. If an outline development plan has been submitted the applicant shall file the preliminary development plan with the Planning Commission within six (6) months following the provisional approval of the outline development plan. The Planning Commission shall then reapprove, disapprove or re-approve with modifications the planned unit development based on the preliminary development plan.
2. If a preliminary development plan covering at least 20 percent of the area of the outline development plan has not been submitted within six months following the approval of the planned unit development, then the provisional approval of the planned unit development by the Planning Commission shall terminate unless, for good cause, the Planning Commission extends for three months the period for the filing of the preliminary development plan.

#### **2-540 FINAL DEVELOPMENT PLAN PROCEDURE**

1. Within six months following the approval of the preliminary development plan, the applicant shall file with the Planning Commission a final development plan containing in final form the information required in the preliminary plan. In its discretion and for a good cause, the Planning Commission may extend for six months the period for the filing of the final development plan.
2. If the Planning Commission finds evidence of a material deviation from the preliminary development plan, the Planning Commission shall advise the applicant to submit an application for amendment of the planned unit development. An amendment shall be considered in the same manner as an original application.

**2-550 CONTROL OF THE DEVELOPMENT AFTER COMPLETION** – The final development plan shall continue to control the planned unit development after it is finished and the following shall apply:

1. The building official in issuing a certificate of completion of the planned unit development shall note the issuance on the recorded final development plan.

2. After the certificate of completion has been issued, the use of the land and the construction, modification or alteration of a building or structure within the planned unit development shall be governed by the approved final development plan.

#### **2-560 PLANNED UNIT DEVELOPMENT AMENDMENTS**

1. After the City Council has approved the final development plan, the Planning Commission is authorized to approve amendments in the planned unit development provided that:
  - a) A request for amendment is filed with the Planning Commission and, if appropriate, accompanied by a plot plan showing all pertinent information.
  - b) Minor modifications of existing buildings or structures may be authorized by the Planning Commission if they are consistent with the purposes and intent of the final plan.
  - c) A building or structure that is totally or substantially destroyed may be reconstructed without approval of an amended planned unit development if it is in compliance with the purpose and intent of the final development plan.
  - d) Minor increases in the number of dwelling units or total floor area originally authorized by the City Council may be approved if such increases will not cause a significant adverse impact on the public infrastructure, existing development within the planned unit development and adjoining properties.
2. An amendment to a completed planned unit development may be approved if it is required for the continued success of the planned unit development, if it is appropriate because of changes in conditions that have occurred since the final development plan was approved or because there have been changes in the development policy of the community as reflected by the comprehensive plan or related land use regulations
3. Any amendment not in conformance shall be submitted to the Planning Commission in the same manner as a formal application for a planned unit development.

## CHAPTER 3

### Article 1

#### Supplementary District Regulations

**3-101 HEIGHT USE REGULATIONS** – Chimneys, cooling towers, elevator head-houses, fire towers, grain elevators, monuments, stacks, stage towers, or scenery lofts, tanks, water towers, ornamental towers, and spires, church steeples, radio and television towers, antennas or necessary mechanical appurtenances, usually required to be placed above the roof level and not intended for human occupancy, are not subject to the height limitations contained in the District regulations. In all districts, two (2) additional feet of height above the specified height limitation shall be permitted for each one foot of additional front yard provided over the minimum requirements.

#### **3-102 YARD REGULATIONS**

A. Front Yards. The front yards in residential districts only heretofore established shall be adjusted in the following cases:

1. Where a building is to be erected on a parcel of land that is within 100 feet of existing buildings on both sides, the minimum front yard shall be a line drawn between the two closest front corners of adjacent buildings on the two sides, or
2. Where a building is to be erected on a parcel of land that is within 100 feet of an existing building on one side only, such building may be erected as close to the street as the existing adjacent building.

B. Accessory buildings.

1. No accessory buildings or uses shall be erected or installed in any required front yard, and no detached accessory building shall be erected closer than five (5) feet to any other building. Accessory buildings may be located in the rear yard and side yard, but shall not be closer than five (5) feet to the rear or side lot-line except that if the building has a vehicular alley entrance, the setback of the structure shall not be less than ten (10) feet from the alley line. The total of all accessory buildings shall not cover more than twenty-five (25) of the required rear yard or 1,250 sq ft, or be constructed upon a lot until the construction of the main building has been started or be used for dwelling purposes.
2. Detached accessory garages or carports shall not exceed one thousand two hundred fifty (1,250) square feet or more than twenty five percent (25%) of the total rear yard and the sidewalls

of said buildings shall not exceed ten (10) feet in height. No Quonset type buildings will be permitted. The detached accessory garage or carport must meet all set back requirements for its zoning district.

3. Detached accessory storage buildings for residences shall not exceed one hundred fifty (150) square feet in gross floor area.

C. Zoning Regulation for the City of Cambridge in areas outside the corporate limits. Outside Corporate Limits, but within one mile of corporate limits: The zoning regulation for the City of Cambridge in areas outside the corporate limits, but within one mile of the corporate limits shall differ in that the size requirements for the structures shall follow the provisions of county zoning regulations. With regards to side yard set-back requirements, in the event the side yard is not adjacent to a public roadway, an owner may build closer than five feet to the side property line, so long as the adjoining owner signs an agreement that any building that he builds along the same side yard boundary is no closer than ten feet to the neighboring structure. Said agreement shall be filed by the applicant in the appropriate county clerk's office. The permit will be issued when the City receives a copy signed by both property owners and certified filed by the county clerk's office. All other aspects of the city zoning requirements shall apply.

#### **3-103 NUMBER OF STRUCTURES AND USES ON ZONING LOTS** –

Where a lot or tract is used for other than a residential dwelling, more than one principal uses and structure may be located upon the lot or tract, but only when the building or buildings conform to all requirements for the district in which the lot or tract is located.

**3-104 SIGHT TRIANGLE** – On a corner lot in all districts, except the Commercial District, development shall conform to the requirements of the sight triangle as defined by this regulation.

**3-105 ACCESS TO COMMERCIAL AND INDUSTRIAL DISTRICT** – No land which is located in a residential district shall be used for a driveway, walkway or access to any land which is located in any Commercial or Industrial district.

**3-106 HOME OCCUPATIONS** – Home occupations shall be permitted in the Agricultural, Residential and Industrial District.

A. Restrictions and Limitations.

1. No outdoor storage of materials or equipment used in the home occupations shall be permitted.



2. No alteration of the exterior of the principal residential building or accessory building shall be made which changes the character thereof as a residence. The home occupation shall be carried on entirely within the principal or accessory structures.
3. No sign shall exceed sixteen (16) square feet in area and shall not be illuminated.
  - a) Signs will be used for home occupations that occupy the main floor.
  - b) Signs will be located a maximum of one foot from the house when detached and parallel to the house or if attached shall be attached parallel to the house.
  - c) No sign shall be maintained at any locations where by reason of its position, size, shape or color, it may obstruct, impair, obscure, interfere with the view of, or be confused with any traffic or railroad control sign, signal or device, or where it may interfere with, mislead, or confuse traffic.
  - d) Approval by State of Nebraska, Department of Roads, on State Application forms must be submitted with application, if necessary for signs located on property adjacent to the highway.
  - e) The sign shall not interfere with the sight triangle for traffic or interfere with traffic view and safety.
  - f) Sign must be attractive and maintained by owner.
  - g) Design, location and size shall be approved by the Planning Commission.
  - h) If home occupation no longer exists the sign shall be removed.
4. No equipment shall be utilized that creates a nuisance due to noise or electrical interference.
- B. Particular Home Occupations prohibited. Home occupations shall not in any event, include the following:
  1. Groceries – retail
  2. Equipment rental
  3. Automobile, truck and vehicle repair services.
  4. Machine shops
  5. Restaurants

6. Any use which by its flow of vehicular traffic creates an unsafe, hazardous or congested traffic condition.
7. Any permitted or conditional use listed in “I-1” industrial District.

### 3-107 TEMPORARY USES PERMITTED

- A. Street Sales. The retail sale of merchandise not within an enclosed structure for a period not to exceed three (3) days. Street sales displays need not comply with the yard and setback requirements of these regulations, provided that no merchandise shall be displayed in the sight triangle.
- B. Christmas Tree Sales. Christmas tree sales in any business or industrial district for a period not to exceed sixty (60) days. Display of Christmas Trees need not comply with the yard and setback requirements of these regulations, provided that no trees shall be displayed within the sight triangle.
- C. Contractor’s Office. Contractor’s offices (containing no sleeping or cooking accommodations) accessory to a construction project and to continue only during the duration of such project.
- D. Real Estate Offices. Real estate offices (containing no sleeping or cooking accommodations unless located in a model dwelling unit) incidental to a new housing development to continue only until the sale of lease of all dwelling units in the development.
- E. Seasonal Sales. Seasonal sale of farm produce grown on the premises in an A-1 District. Structures incidental to such sale need not comply with the applicable front yard requirements if the structures are removed or moved back of the required front yard setback line at the end of the season during which they are used. All permanent structures must comply with the front yard requirements.
- F. Carnivals and Circuses. A carnival or Circus, but only in A-1 or I-1 Districts, and then only for a period that does not exceed three (3) weeks. Carnivals and circuses must be approved by the City Council. Such use need not comply with the front yard requirements, provided that structures or equipment which might block the view of operators of motor vehicles on the public streets shall conform to the requirements of the sight triangle as defined by these regulations.
- G. Garage or Porch Sales. The sale of used or second-hand merchandise shall be permitted in any district providing that such use shall not exceed three (3) consecutive days in duration nor shall it occur more than twice each year at any particular location. A 2’ by 3’ sign shall be permitted during the duration of the sale.

**3-108 OPEN STORAGE** – The storage of salvage or scrap materials, inoperable motor vehicles, house hold goods or furniture, or business equipment or materials for more than forty-eight (48) consecutive hours shall not be allowed in any residential district unless such items are stored in a completely enclosed building.

**3-109 DETERMINATION OF BUILDING SETBACK LINE.** – The building setback line shall be determined by measuring the horizontal distance between the property line and the existing or proposed main structure nearest the property line.

**3-110 FENCES** – Except as otherwise specifically provided in other codes and regulations, the following regulations shall apply to the construction of fences:

- A. No fence shall be constructed which will constitute a traffic hazard.
- B. No fence shall be constructed in such a manner or be of such design as to be hazardous or dangerous to persons or animals.
- C. No person shall erect or maintain any fence which will materially damage the adjacent property by obstructing the view, shutting out the sunlight or hindering ventilation or which fence shall adversely affect the public health, safety and welfare.
- D. No fence except fences erected upon public or parochial school grounds or in public parks and in public playgrounds shall be constructed of a height greater than three (3) feet or 42 “for open fences in the front yard or six (6) feet elsewhere; provided, however, that the Governing Body may, as a conditional use, authorize the construction of a fence higher than six (6) feet if it finds the public welfare is served.
- E. Fences should be made of a material that its primary use is for fencing.

**3-111 RECREATIONAL VEHICLES** – Major recreational equipment such as boats, boat trailers, travel trailers, pickup campers, or coaches, motor homes, camping buses or converted trucks, tent trailers and other similar vehicles shall not be stored in a residential district except within an enclosed building, behind the front setback line, or in the side yard.

- A. On a corner lot such equipment shall be kept back of the front setback lines on both street sides.
- B. No such recreational equipment shall be utilized for living, sleeping or housekeeping purposes when parked on a residential lot or in any location not approved for such use.

- C. In those cases where compliance with the above regulation is Impossible due to lack of access to a side or rear yard, the City Council may, after public hearing, issue a Conditional Use Permit to allow certain specified deviations.

**3-112 RADIO AND TELEVISION TOWERS** – Radio and Television towers shall be permitted in any commercial or industrial district providing the height of said radio or television tower does not conflict with any airport approach or landing zone or with any other City ordinances. In all other districts, radio and television towers may only be permitted as an exception by the Board of Zoning Appeals.

## CHAPTER 4

## Article 1

**Off-street parking regulations**

**4-101 APPLICABILITY** – Off-street parking and loading space, as required in this article, shall be provided for all new buildings and structures. Existing parking area previously required shall not be used to satisfy required off street parking for any new structures or additions to existing buildings, structures or use of land. Such existing parking space shall be maintained and shall not be reduced so long as the main building, structure or use remains, unless an equivalent number of such spaces are provided elsewhere as provided in this article. Except that no off street parking or loading space shall be required for any use in the C-1 Commercial District.

**4-102 GENERAL PROVISIONS**

- A. **Utilization.** Required accessory off-street parking facilities provided for the uses hereinafter listed shall be solely for the parking of motor vehicles in operating condition of patrons, occupants, or employees of such use.
- B. **Residential Districts.** Spaces shall be provided in other than the front yard in all residential districts except that in the event an attached garage is converted to a livable room of the dwelling, the parking space may occupy the existing concrete or asphalt drives when located within the required front yard.
- C. **Accessory use.** Off-street parking shall be considered as an accessory use to the use for which the parking is provided.
- D. **Repair Service.** No motor vehicle repair work or service of any kind shall be permitted in association with any off-street parking facilities.
- E. **Computation.** When determination of the number of off- street parking spaces required by this regulation results in a requirement of a fractional space, the fraction of  $\frac{1}{2}$  or less may be disregarded, and a fraction in excess of  $\frac{1}{2}$  shall be counted as one parking space.
- F. **Mixed uses.** When a building or development contains mixed uses, the off-street parking requirements shall be calculated for each individual use and the total parking requirement shall be the sum of individual parking requirements.

**4-103 LAYOUT AND DESIGN REQUIREMENTS**

- A. **Area.** A required off-street parking space shall be at least 8 feet 6 inches in width and at least 19 feet in length, exclusive of access drives or aisles, ramps and columns.
- B. **Access.** Each required off-street parking space shall open directly upon an aisle or driveway of such width and design as to provide safe and efficient means of vehicular access to such parking space.
- C. **Design.** Off-street parking spaces shall comply with the design standard relating to curb length, stall depth, driveway width, island width, barriers, and ingress and egress as contained in the Off-Street Parking Standards of this article.
- D. **Surfacing.** All open off-street parking and loading areas, including driveways and aisles, shall be graded and paved with asphalt, concrete or asphalt concrete.
- E. **Lighting.** Any lighting used to illuminate off-street parking and loading areas shall be directed away from residential properties in such a way as not to interfere with the residential use.

**4-104 PLANS AND APPROVAL REQUIRED** – Plans showing the layout of all required off-street parking and loading areas shall be submitted to and approved by the Zoning Administrator prior to issuance of a building permit. Before approving any parking layout, the zoning Administrator shall satisfy himself that the spaces provided are usable and meet standard design criteria contained herein. All required off-street parking spaces shall be clearly marked.

**4-105 REQUIRED SPACES** – Off-street parking spaces shall be provided as follows:

- A. **Dwelling and Lodging Uses.**
  1. **Boarding or rooming houses:** One parking space per each three sleeping rooms.
  2. **Dormitories, fraternities, sororities:** Two parking spaces for each three occupants based on the maximum design capacity of the buildings.
  3. **Hotels and motels:** One space per each rental unit plus one space per each two employees in the largest working shift and such spaces as are required for restaurants, assembly rooms, and other affiliated facilities provided.
  4. **Mobile homes:** Two parking spaces per each mobile home.

5. Nursing homes, rest homes etc.: One parking space per each five beds based on the designed maximum capacity of the buildings, plus one parking space for each employee.
  6. Single family and modular dwellings: Two spaces per dwelling unit.
  7. Two-family and multifamily: Two spaces per dwelling unit.
  8. Dwelling units designed specifically for the elderly, one space per two dwelling units.
- B. Business, Commercial, and Industrial Uses.
1. Automobile, truck, recreational vehicle and mobile home sales and rental lots: One parking space for each 3,000 square feet of open sales lot area devoted to the sale, display and rental of said vehicles, plus one parking space for each employee.
  2. Automobile salvage yards: One parking space for each employee, plus one parking space for each 10,000 square feet of storage area.
  3. Financial, business, and professional offices; one parking space for each 300 square feet of gross floor area.
  4. Bowling alleys: Three parking spaces for each lane.
  5. Carriage, express, and parcel delivery and freight terminal establishments: One parking space for each two employees in the largest working shift in a 24-hour period, plus one parking space for each vehicle maintained on the premises.
  6. Automobile wash: Three holding spaces for each car washing plus two drying spaces for each car washing stall.
  7. Funeral homes and mortuaries: One parking space for each four seats based upon the designed maximum capacity of the parlor, plus one additional parking space for each employee and each vehicle maintained on the premises.
  8. Furniture and appliance stores, household equipment or furniture repair shop: One parking space for each 400 square feet of floor area.
  9. Manufacturing, production, processing, assembly, disassembly, cleaning, servicing, testing or repairing of goods, materials or products: One per three employees based upon the largest working shift in any 24-hour period.
  10. Medical and dental clinics or offices: One parking space for each 100 square feet of gross floor area.
11. Restaurants, private clubs and taverns: One parking space for seats based on the maximum designed seating capacity; provided, however, that drive-in restaurants shall have minimum of at least ten parking spaces.
  12. Retail stores and shops: One space per 200 square feet of floor area.
  13. Service Station: One parking space for each employee plus two spaces for each service bay.
  14. Theaters, auditoriums, and places of assembly, with or without fixed seats: One parking space for each four people, based upon the designed maximum capacity of the buildings.
  15. Warehouse, storage and wholesale establishments: One parking space for each four people, based upon the designed maximum capacity of the building.
  16. All other business and commercial establishments not specified above: One parking space for each 300 square feet of floor area.
- C. Other uses.
1. Churches: One parking space for each five seats based on upon the maximum designed seating capacity, including choir lofts.
  2. Elementary, junior high and equivalent parochial and private schools: Two for each classroom.
  3. High schools, colleges, universities and other similar public or private institutions of higher learning: Eight parking spaces for each classroom, plus one space for each two employees.
  4. Hospitals: One parking space for each two beds, plus one parking space for each resident or staff doctor plus one space for each two employees based on the largest working shift in any 24-hour period.
  5. Laundromats: One space for each two washing machines.
  6. Nursery schools and day care centers, public or private: One parking space for each employee.
  7. Fraternal associations and union headquarters: One parking space for each three seats based upon the design maximum seating capacity.
  8. Swimming pool and clubs: One parking space for each 38 square feet of water area.
  9. Trade and commercial schools: One parking space for each three students and employees.

## CHAPTER 5

## Article 1

## Sign regulations

**5-101 APPLICABILITY** – Any sign shall, by definition, be a structure. No land or building or structure shall be used for sign purposes except within the stipulated districts listed in the Sign Uses Regulations specified herein. All signs legally existing at the time of passage of these regulations may remain in use under the conditions of legal non-conformance. Signs in legal non-conformance shall not be enlarged, moved, lighted, or reconstructed; however, the change of the advertising display shall be erected, enlarged, constructed in such a manner and of such materials that they shall be safe and substantial. Scale drawings of the sign and manner of supports shall be furnished to the Zoning Administrator in application for a sign permit for all signs.

**5-101 CLASSIFICATION OF SIGNS**

- A. Advertising sign. A sign which directs the attention of the public to any goods, merchandise, property, business, service, entertainment or amusement conducted or produced which is bought or sold, furnished, offered or dealt in elsewhere than on the premises where such sign is located or to which it is affixed.
- B. Bulletin Board Sign. A sign that indicates the name of an institution or organization on whose premises it is located and which contains the name of the institution or organization, the name or names of persons connected with it, and announcement of persons, events or activities occurring at the institution. Such sign may also present a greeting or similar messages.
- C. Business Sign. A sign which directs attention to a business or profession conducted, or to products, services or entertainment sold or offered upon the premises where such sign is located, or to which it is affixed.
- D. Construction Sign. A temporary sign indicating the names of the Architects, engineers, landscape architects, contractors and similar artisans involved in the design and construction of a structure, complex or project. This sign is permitted only during the construction period and only on the premises on which the construction is taking place.
- E. Identification Sign. A sign giving the name and address of a building, business, development or establishment. Such signs may be wholly or partly devoted to a readily-recognized symbol.

F. Name Plate Sign. A sign giving the name and/or address of the owner or occupant of a building or premises on which it is located, and where applicable, a professional status.

G. Real Estate Sign. A sign pertaining to the sale or lease of a lot or tract of land on which the sign is located, or to the sale or lease of one or more structures, or a portion thereof on which the sign is located.

**5-102 STRUCTURAL TYPES**

- A. Awning, Canopy or Marquee Sign. A sign that is mounted on, painted on, or attached to, an awning, canopy or marquee. No such signs shall project above, below or beyond the awning, canopy or marquee.
- B. Ground Sign. Any sign placed upon, or supported by, the ground independent of the principal building or structure on the property, where the bottom edge of the sign is less than six (6) feet above the ground.
- C. Pole Sign. Any sign placed upon, or supported by, the ground independent of the principal building or structure on the property where the bottom edge of the sign is six (6) feet or more above the ground level.
- D. Projecting Sign. A sign that is wholly or partly dependent upon a building for support and which projects more than 12 inches from such building.
- E. Wall Sign. A sign fastened to or painted on a wall of a building or structure in such a manner that the wall becomes merely the supporting structure or forms the background surface, and which does not project more than 12 inches from such building.
- F. Roof Sign. A sign totally supported on the roof of a structure. Roof signs shall not project more than 12 inches beyond the face of the building.

**5-103 GENERAL STANDARDS**

- A. Gross Area of Sign. Gross area shall include the entire area within a single continuous perimeter enclosing the extreme limits of the sign, exclusive of the base on which it is mounted or from which it is suspended. If more than one side of a sign is utilized as a sign, then only the largest side shall be computed and shall be counted as a portion of the gross area. On lots where more than one sign is located, the total gross area of all the signs shall not exceed the maximum gross area permitted by this regulation.



For computing the gross area of any wall sign which consists of letters mounted or painted on a wall, the area shall be deemed to be the area of the smallest rectangular figure which can encompass all of the letters.

- B. Sign Height. Sign height shall be measured from the ground elevation at the base of the sign to the highest element of the sign.
- C. Illuminated Signs. A sign designed to give forth artificial light or designed to reflect light derived from any source.
  - 1. Illuminated signs shall be designed as to reflect or direct light away from any residential dwelling district.
  - 2. Lighted signs in direct vision of a traffic signal shall not be in red, amber or green illumination.
- D. Flashing or Moving Signs. Any illuminated sign on which the artificial light is not constant in intensity or color at all times shall be considered as a flashing sign. For the purpose of this regulation, any revolving, rotating, moving, animated, signs with lights or signs which create the illusion of movement shall be considered as a flashing sign.
- E. Access way or Window. No sign shall block any required access way or window.
- F. Signs on Trees or Utility Poles. No sign shall be attached to a tree or utility pole whether on public or private property.
- G. Metal Signs. Sign constructed of metal and illuminated by any means requiring internal wiring or electrically wired accessory fixtures attached to a metal sign shall maintain a free clearance to grade of nine (9) feet. Accessory lighting fixtures attached to a non-metal frame sign shall also maintain a clearance of nine (9) feet to grade. No metal ground sign shall be located within eight (8) feet vertically and four (4) feet horizontally of electric wires or conductors in free air carrying more than 48 volts, whether or not such wires or conductors are insulated or otherwise protected.
- H. Traffic Safety.
  - 1. No sign shall be maintained at any location where by reason of its position, size, shape or color, it may obstruct, impair, obscure, interfere with the view of, or be confused with any traffic or railroad control sign, signal or device, or where it may interfere with, mislead, or confuse traffic.
  - 2. Any sign located within three (3) feet of a driveway or within a parking area shall have its lowest elevation at least ten (10) feet

above the curb level; however, in no event shall any sign except wall signs be placed so as to project over any public right-of-way.

- 3. Under no circumstances shall any sign be placed in the sight triangle as defined by this regulation.
- I. Lineal Street Frontage. In those districts where gross sign area is allocated based on lineal street frontage and the tract or parcel is adjacent to more than one street, the lineal street frontage shall be computed as follows:
  - 1. For those tracts or parcels located on collector or arterial streets as designated in the Major Street plan of the comprehensive Plan, the lineal street frontage shall be the distance of that property line abutting the collector or arterial street.
  - 2. For those tracts or parcels not located on a major street, the lineal street frontage shall be one-half the sum of all the street frontages.
- J. Portable Signs. Portable signs shall be permitted on a temporary basis in only the C-1 District, subject to the following conditions:
  - 1. Portable signs shall not be placed on public right of way.
  - 2. An applicant may utilize a portable sign for a period of not more than seven consecutive days and shall be permitted to utilize a portable sign a maximum of four times per calendar year.
  - 3. No portable sign shall be utilized without first obtaining a sign permit from the Zoning Administrator.
  - 4. A portable sign shall contain no more than 32 square feet of advertising space, including all sides of the sign.

#### 5-104 EXEMPTIONS

- A. Total Exemptions. The following signs shall be exempt from the requirements of this article, except for the provisions of Section 5-103.
  - 1. Flags or emblems of a governmental or of a political, civic, philanthropic, educational or religious organization, displayed on private property.
  - 2. Signs of a duly constituted governmental body, including traffic or similar regulatory signs, legal notices, warnings at railroad crossing and other instructional or regulatory signs having to do with health, safety, parking, swimming, dumping, etc.

3. Memorial signs, and tablets displayed on public or private property.
  4. Small signs, not exceeding three (3) square feet in area, displayed on private property for the convenience of the public, including signs to identify entrance and exit drives, parking areas, one-way drives, restrooms, freight entrances, and other similar signs.
  5. Score boards in athletic stadiums
  6. Political campaign signs, not exceeding four (4) square feet in area, may be displayed for a period beginning on the last day of the statutory filing period and ending one-week after the general or special election. Political signs may remain up between the primary and general elections except that signs for candidates who lost in the primary and general elections except signs that become deteriorated or partially destroyed shall be removed.
  7. Temporary signs for the sale of household goods at a residence (garage sales) for a period not to exceed three (3) days.
- B. Exemptions from Sign Permits. The following signs are exempt from the sign permit section of this Article, but shall comply with all of the other regulations imposed by this Article.
1. Name plate signs not exceeding two (2) square feet in gross area accessory to a single-family or two family dwelling.
  2. Bulletin board signs not exceeding 100 square feet in gross area accessory to a church, school or public or non-profit institution.
  3. Business signs when located on property used for agricultural purposes and pertaining to the sale of agricultural products produced on the premises.
  4. Real Estate signs not exceeding six (6) square feet in area.
  5. Construction signs not exceeding sixteen (16) square feet in area.

#### 5-105 DISTRICT REGULATIONS

- A. A-1 Agricultural District, R-1 Single Family and Multifamily Residential District.
1. Functional Types Permitted.
    - a) Business signs pertaining to a home occupation and subject to the sign requirements of the home occupation section of this regulation.
    - b) Bulletin board signs.
    - c) Construction signs.

- d) Identification signs.
  - e) Nameplate signs.
  - f) Real estate signs.
  - g) Business signs pertaining to Bed and Breakfast establishments and located on the same lot.
2. Structural Types Permitted.
    - a) Ground signs.
    - b) Wall signs
  3. Number of signs Permitted: One sign per zoning lot.
  4. Maximum Gross Area.
    - a) Business signs – Home occupation only: 16 square feet attached to the building.
    - b) Bulletin board and identification signs: 100 square feet.
    - c) Construction signs: 32 square feet.
    - d) Name plate signs: 2 square feet.
    - e) Real estate signs: 6 square feet, provided that one sign not more than 100 square feet in area announcing the sale of lots and or houses in a subdivision may be located on said development. Said sign shall be removed at the end of three years or when seventy-five (75) percent of the lots have been sold, whichever occurs sooner.
  5. Maximum Height: 15 feet.
  6. Required Setback: No sign shall be placed closer to the front property line than ½ the distance of the required front yard.
  7. Illumination: Bulletin boards and identification signs maybe indirectly illuminated with incandescent or florescent lighting.
- B. C-2 Commercial District and I-1 Industrial District.
1. Functional Types Permitted.
    - a) Advertising signs.
    - b) Bulletin board signs.
    - c) Business signs.
    - d) Construction signs.
    - e) Identification signs.
    - f) Nameplate signs
    - g) Real estate signs

2. Structural Types Permitted.
  - a) Awning, canopy or marquee signs.
  - b) Ground signs.
  - c) Pole signs.
  - d) Projecting signs.
  - e) Wall signs.
3. Number of signs Permitted.
  - a) Awning, canopy or marquee signs and wall signs; No limitations.
  - b) Ground signs and pole signs: Two per zoning lot.
  - c) Projection signs: One per zoning lot.
4. Maximum Gross Surface Area: Four (4) square feet for each lineal foot of street frontage, provided no single sign shall exceed a gross surface area of 400 square feet.
5. Maximum Height: thirty (30) feet.
6. Required Setback: None except that advertising signs shall maintain the same setback that is required for principal structures.
7. Illumination: Illumination signs shall be permitted.

## CHAPTER 6

### Article 1

#### Nonconformities

**6-101 GENERAL** – Nonconformity's are of three types: nonconforming lots of record, nonconforming structures, and nonconforming uses. A definition of each type is as follows:

- A. **Nonconforming Lot of Record.** A lot which is part of a recorded subdivision or a parcel of land, the deed to which was recorded prior to these regulations and said lot does not comply with the lot width or area requirements of the district in which it is located.
- B. **Nonconforming Structure.** A structure that existed prior to the adoption of these regulations that does not comply with the lot coverage, height or yard requirements which are applicable to structures in the zoning district in which it is located.
- C. **Nonconforming Use.** A use of a structure or of land that lawfully existed prior to the adoption of these regulations which does not comply with the use regulations applicable in the zoning district in which it is located.

**6-102 NONCONFORMING LOTS OF RECORD** – The zoning Administrator may issue a Building Permit for any nonconforming lot of record provided that:

- A. Said lot is shown by a recorded plat or deed to have been owned separately and individually from adjoining tracts of land at a time when the creation of a lot of such size and width at such location would not have been prohibited by the zoning regulations.
- B. Said lot has remained in separate and individual ownership from adjoining tracts of land continuously during the entire time that the creation of such lot has been prohibited by the zoning regulations.
- C. Said lot can meet all yard regulations for the district in which it is located.
- D. Said lot can meet minimum sanitation requirements by either connecting to a sanitary sewer line or having adequate area to support a septic system.

#### **6-103 NONCONFORMING STRUCTURES**

- A. Authority to Continue, any existing structure which does not comply with the applicable intensity of use regulations and / or the applicable yard and height regulations, may be continue, as long as it remains otherwise lawful.

- B. **Enlargement, Repair, Alterations.** Any nonconforming structure, may be enlarged, maintained, repaired or remodeled; provided, however, that no such enlargement, maintenance, repair or remodeling shall either create any additional nonconformity or increase the degree of existing nonconformity of all or any part of such structure. Notwithstanding the above, a porch which is covered by a roof which extends into a front setback area may be enclosed but not in excess of the area covered by the existing roof.
- C. **Damage or Destruction.** In the event that any nonconforming structure is damaged or destroyed, by any means, to the extent of more than sixty (60) percent of its replacement value, such structure shall not be restored unless it shall thereafter conform to the regulations for the zoning district in which it is located. When a structure is damaged to the extent of sixty (60) percent or less, no repairs or restoration shall be made unless a building permit is obtained within six months and restoration is actually begun within one year after the date of such partial destruction and is diligently pursued to completion.
- D. **Moving.** No nonconforming structure shall be moved in whole or in part for any distance whatever, to any other location on the same or any other lot unless the entire structure shall thereafter conform to the regulations of the zoning district in which it is located after being moved.

#### 6-104 NONCONFORMING USES

- A. **Authority to continue.** Any lawfully existing use of part or all of a structure or any lawfully existing use of all of a structure or any lawfully existing use of land which existed prior to the adoption of these regulations and does not comply with the use requirements of these regulations may be continued, so long as otherwise lawful and so long as it is not specified to be terminated by these regulations. The authority to continue a nonconforming use applies to the use and its structure and passes with the title to subsequent owners.
- B. **Ordinary Repair and Maintenance.**
  - 1. Normal maintenance and incidental repair or replacement, installation or relocation of nonbearing walls, nonbearing partitions, fixtures, wiring or plumbing, may be performed on any structure that is devoted in whole or in part to a nonconforming use.
  - 2. Nothing in these regulations shall be deemed to prevent the strengthening or restoring to a safe condition of a structure in

accordance with an order of a public official who is charged with protecting the public safety and who declares such a structure to be unsafe and orders its restoration to a safe condition.

- C. **Extension.** A Nonconforming use shall not be extended, expanded, enlarged or increased either in land area or floor area.
- D. **Enlargement.** No structure that is devoted in whole or in part to a nonconforming use shall be enlarged or added to in any manner unless the use thereof shall thereafter conform to the regulations of the district in which it is
- E. **Damage or Destruction.** In the event that any structure that is devoted in whole or in part to a nonconforming use is damaged or destroyed, by any means, to the extent of more than sixty (60) percent of its replacement value, such structure shall not be restored unless such structure and the use thereof shall thereafter conform to all regulations of the zoning district in which it is located. When such damage or destruction is sixty (60) percent or less, no repairs or restoration shall be made unless a building permit is obtained and restoration is actually begun within one year after the date of such partial destruction and is diligently pursued to completion.
- F. **Moving.** No structure that is devoted in whole or in part to a nonconforming use and non nonconforming use of land shall be moved in whole or in part for any distance whatever to any location on the same or any other lot, unless the entire structure and the use thereof and the use of land shall thereafter conform to all regulations of the zoning district in which it is located after being so moved. Mobile homes may be replaced on an existing utility hookup outside a mobile home park unless such hookup has not been used for the previous twelve consecutive months.
- G. **Change in Use.** If no external structural alterations are made which will expand the area or change the dimensions of the existing structure any nonconforming use of a structure or structure and premises may be changed or another nonconforming use as a conditional use application, provided that the City Council, after receiving the recommendation of the Planning Commission, shall find that the proposed use is as appropriate or more appropriate to the district than the existing nonconforming use. In permitting such change the City Council, after receiving the recommendation of the Planning Commission, may require conditions and safeguards to protect surrounding areas and properties. Once such use has

changed it may no longer be returned to the original use or any other less appropriate use.

- H. Abandonment or Discontinuance. When a nonconforming use is discontinued or abandoned for a period of twelve consecutive months, such use shall not thereafter be re-established or resumed and any subsequent use or occupancy of such land or buildings shall comply with the regulations of the zoning district in which such land or buildings are located.
- I. Nonconforming Accessory Uses. No use which is accessory to a principal nonconforming use shall continue after such principal use shall cease or terminate unless said accessory use is permitted in the district.
- J. Nonconforming Residential Uses. Notwithstanding the provisions of Section 6-104.C and 6-104.D, any structure which is devoted to a residential use and which is located in a business or industrial district may be remodeled, extended, expanded, and enlarged; provided that after any such remodeling, expansion or enlargement, such structure shall not be used to accommodate a greater number of dwellings or lodging units than such structure accommodated prior to any such work.
- K. Open Storage in Residential Districts. No use prohibited by Section 3-108 shall be continued in any residential district for more than six (6) months past the effective date of this ordinance.

## CHAPTER 7

### Article 1

#### Planning Commission

**7-101 PLANNING COMMISSION** – The Planning Commission shall consist of five (5) members who shall represent insofar as is possible professions or occupations in the City and who shall be appointed by the Mayor, by and with the approval of three-fourths (3/4) vote of the City Council. All members of the Planning Commission shall serve without compensations and shall hold no other municipal office. The terms of each member shall be three (3) years except the two (2) members of the first Commission appointed shall serve for the term of one (1) year, two (2) for a term of two (2) years and two (2) for the term of three (3) years. All members may, after a public hearing before the City Council, be removed by the Mayor and by and with the consent of a three-fourths (3/4) vote to the Council. Reasons for removal shall include but not be limited to inefficiency, neglect of duty, malfeasance in office or other good and sufficient cause. Vacancies occurring otherwise than through expiration of terms shall be filled for the unexpired term by the Mayor.

**7-102 CHAIRMAN AND MEETINGS** – The Planning Commission shall elect its chairman from its members and create and fill such other offices as it may determine. The term of the Chairman shall be one (1) year and he shall be eligible for reelection. The Commission shall hold at least one (1) regular meeting during each month. It shall adopt rules for transaction of business and shall keep a record of its resolutions, transactions, findings and determinations which record shall be a public record.

**7-103 FUNDS** – The City Council may provide the funds, equipment and accommodations necessary for the work of the Planning Commission but the expenditures of the Commission exclusive of gifts shall be within the amounts appropriated for that purpose by the City Council; and no expenditures shall be valid in excess of such amounts.

#### **7-104 MUNICIPAL PLANNING**

- A. It shall be the function and duty of the Planning Commission to make and adopt plans for the physical development of the Municipality including any areas outside the boundaries of the Municipality which, in the Commission's judgment, bear relation to the planning of the Municipality.



- B. The Planning Commission shall from time to time recommend to the appropriate public officials programs for public structures and improvements and for the financing thereof. It shall be part of its duties to consult and advise with public officials and agencies, public utility companies, civic educational, professional and other organizations and with citizens with relation to the protection of carrying out of the plan.

## CHAPTER 8

### Article 1

#### Board of Adjustment

**8-101 CREATION** – The Board of Adjustment shall consist of the five (5) members. Vacancies shall be filled for the unexpired term of any members whose terms becomes vacant.

**8-102 MEETING AND VOTING** – The Board shall adopt rules in accordance with this ordinance. Meetings of the Board shall be held at the call of the Mayor and at such other times as the Board may determine. The Mayor or, in his absence, the Council President, may administer oaths and compel the attendance of witnesses. All meetings of the Board shall be open to the public. Any resident or property owner in the City shall have the right to appear before the Board in regard to which they have a reasonable interest in the matter to be determined. A majority of the Board shall constitute a quorum for the transaction of business. The Board shall keep minutes of its proceeding showing the vote of each member upon each question, or, if absent or failing to vote, indicating such fact. Records of its examinations and other official actions shall be immediately filed in the office of the City Clerk and shall be a public record. The concurring vote of two-thirds (2/3) of the members of the Board is necessary to decide any questions upon which the Board is required to pass. The concurring vote of four (4) members of the Board shall be necessary to reverse any order, requirement, and decision in favor of the applicant on any matter upon which the Board is required to pass.

**8-103 DUTIES** – The board of Adjustment is hereby authorized to:

- A. Hear appeals where it is alleged that there is an error in any order, decision, or determination made by the officer charged with the administration of this ordinance.
- B. Hear and decide upon petitions for variance and, subject to such standards, principles, and procedures provided in this ordinance, to vary the strict application of the height, area, parking, or sign requirements to the extent necessary to permit the owner a reasonable use of his land. In granting a variance, the Board may impose such conditions, safeguards and restrictions upon the premises benefited by the variance as may be necessary to reduce or minimize any potentially injurious effect of such variance upon other property in the neighborhood, and to carry out the general purpose and intent of these regulations. A request for a variance may be granted, upon a finding of the Board that all of the following conditions have been met.

The Board shall make a determination on each condition, and the finding shall be entered in the record.

1. The variance requested arises from such conditions that are unique to property in question and which are not ordinarily found in the same zone or district or vicinity; and are not created by an action or actions of the property owner or applicant.
  2. The granting of the permit for the variance will not be of substantial detriment to adjacent property, and the character of the district will not be changed by granting the variance.
  3. The strict application of the provisions of the zoning regulations of which the variance is requested will constitute unnecessary hardship upon the properly owner represented in the applications.
  4. The granting of the variance is based upon reasons of demonstrable and exceptional hardship as distinguished from variations for purposes of convenience, profit or caprice.
  5. The variance desired will not adversely affect the public health, safety, morals, order, convenience, prosperity, or general welfare.
  6. The granting of the variance desired will not be opposed to the general spirit and intent of the zoning regulations.
- C. Make interpretations of the provisions of this ordinance with regard to zoning district boundaries as shown on the map made part of this ordinance.
- D. Affirm or reverse, wholly or in part, after public hearing, the determination appealed from. Every decision of the Board of Adjustment shall be accompanied by a written finding of fact specifying the reason for granting or denying the request.

#### 8-104 APPLICATIONS

- A. Procedure. The procedure for requesting a hearing before the Board shall be as follows:
1. All Applications to the Board shall be in writing on forms provided by the Board and filed with the Zoning Administrator.
  2. All applications shall be accompanied by an ownership list obtained from an abstractor or from County Records, listing the legal description and the name address of the owners of all property located within three hundred (300) feet of the boundaries of the property included in the application.

3. The Board shall fix a reasonable time for the hearing of an application and notice of the time, place and subject of each hearing shall be published in a newspaper of general circulation at least ten (10) days prior to the date fixed for the public hearing. A copy of the notice of public hearing shall be mailed by the applicant, return receipt requested, to each person on the ownership list and each Planning Commission Member at least ten (10) days prior to the meeting. The applicant shall submit the receipts and returned notices to the Planning Commission prior to the public hearing.
  4. An application shall be accompanied by a filing fee of fifty dollars (\$50). A separate filing fee of fifty dollars (\$50) shall be required for each request.
- B. Additional Requirements. In addition to the above requirements, certain applications require additional information as follows:
1. Appeals and interpretations:
    - a) An application for an appeal or interpretation shall be filed within sixty (60) days after a ruling has been made by the Zoning Administrator.
    - b) A copy of the order, requirement, decision or determination of the Zoning Administrator which the applicant believes to be in error shall be submitted.
    - c) A clear and accurate, written description of the proposed use, work or action in which the appeal or interpretation is involved and a statement justifying the appellant's position.
    - d) Where necessary, a plot plan, drawn to scale, in duplicate showing existing and proposed plans for the area in question shall be submitted.
  2. Variances.
    - a) The applicant shall submit a statement in writing, justifying the Variance requested; indicating specifically the enforcement provisions of the zoning regulations from which the variance is requested, and outlining in detail the manner in which it is believed that this application will meet each of the six (6) conditions as set out in section 7-103.B of this article.
    - b) The applicant shall submit a sketch, in duplicate drawn to scale and showing the lot or lots included in the application; the structures existing thereon; and the structures

contemplated necessitating the variance requested. All appropriate dimensions and any other information which would be helpful to the Board in consideration of the application should be included.

- c) Performance. In making any decision varying or modifying any provisions of the zoning regulations, the Board shall impose such restrictions, terms, time limitations, landscaping, screening, and other appropriate safeguards as needed to protect adjoining property.
- d) The Board may require a performance bond to guarantee the installation of improvements such as parking lot surfacing, landscaping, etc. The amount of the bond shall be based on a general estimate of cost for the improvements as determined by the Board, and shall be enforceable by or payable to the Governing body in the sum equal to the cost of constructing the required improvements.
- e) In lieu of the performance bond requirement, the Board may specify a time limit for the completion of such required improvements and in the event the improvements are not completed within the specified time, the Board may declare the granting of the application null and void after reconsideration.

**8-105 APPEALS FROM THE BOARD OF ADJUSTMENT** – Any person or persons aggrieved by any decision of the Board of Adjustment, or any officer, department or board of the City of Cambridge may present to the District Court a petition setting forth that any decision of the Board of Adjustment is illegal, in whole or in part, and specifying the grounds of the illegality. Such petitions must be presented to the Court within fifteen (15) days after the filing of the decision in the office of the City Clerk and shall follow the provisions of the Nebraska State Statutes.

CHAPTER 9

Article 1

Amendments

**9-101 GENERAL PROVISION**

- A. Authority. The Governing Body of Cambridge may, by ordinance, amend, supplement, change, modify or repeal these regulations and the district boundaries. No such amendment or change shall be adopted by the City Council until the Planning Commission has held a public hearing and submitted its recommendations.
- B. Proposal of Amendments. Amendments may be initiated by the Governing Body, the Planning Commission, or upon application by the owners of the property affected. However, no person may apply for an amendment within a period of six (6) months following the denial by the City Council of the same application.
- C. Application. When the owner of the property affected initiates an amendment to the regulations or the district boundaries, an applicant for such amendment shall be obtained from the City Clerk. Said application shall be completed in its entirety and filed with the City Clerk so that a public hearing date can be established.
- D. Ownership List. The application for an amendment shall be accompanied by the ownership list obtained from an abstractor or County Records listing the legal description and the name and address of the owners of all property located within three hundred (300) feet of the boundaries of the property for which the zoning change is requested.
- E. Fees. For the purpose of wholly or partially defraying the costs of the amendment proceedings, fees shall be paid upon the filing of each application for a change of district boundaries or conditional use permits, as follows:
  - Agricultural District.....\$50.00
  - Residential District .....\$50.00
  - Industrial District.....\$100.00
  - Commercial District.....\$100.00
  - Conditional Use .....\$75.00
- F. Disposition of Amendment Proposals. Upon receipt of a proposed amendment from the City Council or an application for an amendment from the owner of the property affected, the Planning Commission shall hold a public hearing on the proposed amendment,

and forward its findings and recommendations with respect to the proposed amendment to the City Council.

#### **9-102 PLANNING COMMISSION PUBLIC HEARING**

- A. The Planning Commission shall hold a public hearing on each proposed amendment that is referred to, filed with, or initiated by it. The Planning Commission shall select a reasonable hour and place for such public hearing. And it shall hold such hearing within sixty (60) days from the date on which the proposed amendment is referred to, file with, or initiated by it. An applicant for an amendment may waive the requirement that such hearing be held within sixty (60) days.
- B. Notice of Hearing. Public notice of a hearing on a proposed Amendment shall be published once in a newspaper or general circulation and at least ten (10) days shall elapse between the date of the publication and the date set for such hearing. Such notice shall state the date, time and place of the hearing and shall contain a statement regarding the proposed change in regulations or restrictions, or the zoning classification or zoning district boundaries of the property.
- C. If the proposed amendment would change the zoning classification of any property, or the boundaries of any zoning district, such notice shall contain the legal description and street address or general street location of such property, its present zoning classification, and the proposed classification.
- D. When a proposed amendment will affect the zoning classification of specific property, in addition to the publication of the notice described above, the notice shall be posted in a conspicuous place on or near the property on which action is pending. Such notice shall not be less than eighteen inches in height and twenty-four inches in width with a white or yellow background and black letters not less than one and one-half inches in height. Such posted notice shall be so placed upon such premises that it is easily visible from the street nearest the same shall be so posted at least ten days prior to the date of such hearing. It shall be unlawful for anyone to remove, mutilate, destroy, or change such posted notice prior to such hearing. Any person so doing shall be deemed guilty of a misdemeanor. If the record title owners of any lots included in such proposed change or within three hundred (300) feet thereof be non-residents of the municipality, then a written notice of such hearing shall be mailed by certified mail to them addressed to their last-known address at least

ten (10) days prior to such hearing by the Secretary of the Planning Commission. The Planning Commission shall also send such notice to the Board of Education. The Planning Commission may give such additional notice to other person as it may from time to time provide by its rules.

- E. Conduct of Hearings. The hearing shall be conducted and a record of the proceedings shall be preserved in such a manner and according to such procedures as the Planning Commission may from time to time prescribe by rule. Any interested person or party may appear and be heard at the hearing in person, by agent or by attorney. The Planning Commission may request a report on any proposed amendment from any governmental official or agency, or any other person, firm or corporation. If such a report is made, a copy thereof shall be made available to the applicant and any other interested persons and shall be available for review in the office of the City Clerk at least three (3) days before the date set for public hearing. The Planning Commission may also require such reports after such public hearing if additional information is deemed necessary. Such reports shall again be available to the applicant and any other interested persons.

#### **9-103 ACTION BY THE PLANNING COMMISSION**

- A. Recommendations. Upon the conclusion of the public hearing, the Planning Commission shall prepare and adopt its recommendations and shall submit the same, together with a record of the hearing thereon, to the City Council. Said recommendations may be for approval or disapproval, or approval for less land area or a less intense zoning district, and reasons for recommendation shall be included.
- B. Amendments to text. When a proposed amendment would result in a change in the text of these regulations, but would not result in a change of zoning classification of any specific property, the recommendation of the Planning Commission shall contain a statement as to the nature and effect of such proposed amendment.

#### **9-104 ACTION BY THE GOVERNING BODY**

- A. Adoption of Amendments. The Governing Body shall consider the proposed amendment at a duly advertised public hearing. Upon the receipt of the recommendation of the Planning commission and any protest petitions that have been submitted, the Governing Body shall consider the application and may approve the recommendations of the Planning Commission or take whatever action it deems necessary.

If a proposed amendment is not acted upon finally by the Governing Body within one hundred twenty (120) days after the recommendation of the Planning Commission is submitted to it, such proposed amendment shall be deemed to have been defeated and denied, unless the applicant for such period of time. Whenever a proposed amendment is defeated, either by vote of the Governing Body or by reason of the operation of this Section, such amendment shall not thereafter be passed without a further public hearing and notice thereof as provided by this Article.

- B. Notice of hearing. Public notice of the City Council hearing on a proposed amendment shall be published once in a newspaper of general circulation and at least ten (10) days shall elapse between the date of the publication and the date set for such hearing. Such notice shall state the date, time and place of the hearing and shall contain a statement regarding the proposed change in regulations or restrictions, or the zoning classification or zoning district boundaries of the property.

If the proposed amendment would change the zoning classification of any property, or the boundaries of any zoning district, such notice shall contain the legal description and street address or general street location of such property, its present zoning classification, and the proposed classification.

When a proposed amendment will affect the zoning classification of specific property, in addition to the publication of the notice described above, a notice shall be posted in a conspicuous place on or near the property on which action is pending. Such notice shall not be less than eighteen inches in height and twenty-four inches in width with a white or yellow background and black letters not less than one and one-half inches in height. Such posted notice shall be so placed upon the premises that it is easily visible from the street nearest the same and shall be so posted at least ten (10) days prior to the date of such hearing. It shall be unlawful for anyone to remove, mutilate, destroy, or change such posted notice prior to such hearing. Any person so doing shall be deemed guilty of a misdemeanor. If the record title owners of any lots included in such proposed change be non-residents of the municipality, then a written notice of such hearing shall be mailed by certified mail to them addressed to their last-known addresses at least ten (10) days prior to such hearing by the City Clerk.

- C. Protest. If a written protest against a proposed amendment shall be filed in the office of the City clerk within fourteen (14) days after the

date of the conclusion of the hearing on a proposed amendment by the Planning Commission, which protest is duly signed and acknowledged by the owners of twenty (20) percent or more either of the area of the lot or lots immediately adjacent on the sides and in the rear thereof extending three hundred (300) feet there from, and of those directly opposite thereto extending three hundred (300) feet from the street frontage of such opposite lots, then such proposed amendment shall not be passed except by a three-fourths (3/4) vote of the City Council.

- D. Approved Action. If the City Council approves a change, it shall adopt an ordinance to that effect. If the official zoning map has been adopted by reference, the amending ordinance shall define the change or boundary as amended, shall order the official zoning map to be changed to reflect such amendment, and shall amend the section of the ordinance incorporating the same and shall reincorporate such map as amended.

#### 9-105 CONDITIONAL USES

- A. Definition. Conditional uses are those type of uses which, due to their nature, are dissimilar to the normal uses permitted within a given zoning district or where the product, process, mode of operation, or nature of business may prove detrimental to the health, safety, welfare or property values of the immediate neighborhood and its environs. Within the various zoning districts, conditional uses that specifically listed in the district regulation may be permitted only after additional requirements are complied with as established within this section.
- B. Procedure. The consideration of a conditional use application shall be handled in the same manner as a zoning amendment regarding the requirements for public hearing, notices, protests and action by the Planning Commission and Governing Body.
- C. Minimum requirements. A conditional use permit shall not be granted unless specific written findings of fact directly based upon the particular evidence presented support the following conclusions:
1. The proposed conditional use complies with all applicable provisions of these regulations, including intensity of use regulations, yard regulations and use limitations.
  2. The proposed conditional use at the specified location will not adversely affect the welfare or convenience of the public.



3. The proposed conditional use will not cause substantial injury to the value of other property in the neighborhood in which it is to be located.
  4. The location and size of the conditional use, the nature and intensity of the operation involved in or conducted in connection with it, and the location of the site with respect to streets giving access to it are such that the conditional use will not dominate the immediate neighborhood so as to prevent development and use of neighboring property in accordance with the determining whether the conditional use will so dominate the immediate neighborhood, consideration shall be given to:
    - a. The location, nature and height of buildings, structures, walls fences on the site, and
    - b. The nature and extent of landscaping and screening on the site.
  5. Off-street parking and loading areas will be provided in accordance with the standards set forth in these regulations, and such areas will be screened from adjoining residential uses and located so as to protect such residential uses from any injurious effect.
  6. Adequate utility, drainage, and other such necessary facilities have been or will be provided.
  7. Adequate access roads or entrance and exit drives will be provided and shall be so designed to prevent traffic hazards and to minimize traffic congestion in public streets and alleys
- D. Additional Requirements. In granting a conditional use, the City Council may impose such conditions, safeguards and restrictions upon the premises benefited by the conditional use as may be necessary to reduce or minimize any potential injurious effect of such conditional uses upon other property purpose and intent of these regulations.

**9-106 AUTHORIZATION TO GRANT OR DENY CONDITIONAL USES –** A conditional use listed in this ordinance shall be permitted, altered or denied in accordance with the standards and procedures of this article. In the case of a use existing prior to the effective date of this ordinance and classified in this ordinance as a conditional use, a change in the use or in lot area, or an alteration of structure shall conform to the requirements for conditional use. In judging whether or not a conditional use proposal shall be approved or denied the Planning Commission shall weigh its appropriateness and desirability or the public convenience or

necessity to be served against any adverse conditions that would result from authorizing the particular development at the location proposed and, to approve such use, shall find that the following criteria are either met, can be met by observance of conditions, or are not applicable.

1. The proposal will be consistent with the comprehensive plan and the objective of the zoning ordinance and other applicable policies of the City.
2. The location, site, design and operating characteristics under the proposal will have minimal adverse impact on the livability, value or appropriate development of abutting properties and the surrounding.
3. The location and design of the site and structures for the proposal will be as attractive as the nature of the use and its setting warrants.
4. The proposal will preserve environment assets of particular interest to the community.
5. The applicant has a bona fide intent and capability to develop and use the land as proposed and has no inappropriate purpose for submitting the proposal, such as to artificially alter property values for speculative purposes.

**9-107 PLACING CONDITIONS ON A PERMIT –** In permitting a new conditional use or the alteration of an existing conditional use, the Planning Commission may impose, in addition to those standards and requirements expressly specified by this ordinance, additional conditions which it finds necessary to avoid a detrimental environmental impact and to otherwise protect the best interest of the surrounding area or the community as a whole. These conditions may include but are not limited to the following:

1. Limiting the manner in which the use is conducted including restricting the time a certain activity may take place and restraints to minimize such environmental effects as noise, vibration, air pollution, glare and odor.
2. Establishing a special yard or other open space or lot area or dimension.
3. Limiting the height, size or location of a building or other structure.
4. Designating the size, number, location and nature of vehicle access points.

5. Increasing the amount of street dedication, roadway width or improvements within the street right-of-way.
6. Designating the size, location, screening, drainage, surfacing or other improvement of a parking area or truck loading area.
7. Limiting or otherwise designating the number, size, location, height and lighting of signs.
8. Limiting the location and intensity of outdoor lighting and requiring its shielding.
9. Requiring diking, screening, landscaping or another facility to protect adjacent or nearby property and designating standards for its installation and maintenance.
10. Designating the size, height, location and materials for a fence.
11. Protecting and preserving existing trees, vegetation, water resource, wildlife habitat or another significant natural resource.
12. Making any other condition to permit the development of the city in conformity with the intent and purpose of the conditional classification of uses.

**9-110 PROCEDURE FOR TAKING ACTION ON A CONDITIONAL USE**

– The procedure for taking action on a conditional use application shall be as follows:

1. A property owner may initiate a request for a conditional use by filing an application with the planning department.
2. The Planning Commission shall hold a public hearing on the conditional use application following the procedure established.
3. Within five days after a decision has been rendered on a conditional use application, the planning director shall provide the applicant with written notice of the decision.

**9-120 TIME LIMIT ON PERMIT FOR A CONDITIONAL USE**

– Authorization of a conditional use shall be void after one year or such lesser time as the authorization may specify unless substantial construction has taken place. However, the Planning Commission may extend authorization for an additional period not to exceed one year on request. In the case of a planned unit development, the one year shall commence with approval of the final development plan instead of with approval of the planned unit development.

**CHAPTER 10**

**Article 1**

**Administration**

**10-101 ADMINISTRATIVE PROCEDURE** – The City Building inspector shall serve as Zoning Administrator and shall be responsible for the administration of the Ordinance. The Zoning Administrator shall have the following powers and duties:

- A. To enter upon any premises at reasonable times and make all inspections necessary to the performance of his duties.
- B. To order work stopped by written notice served on the proper person, firm or corporation when such work is being done contrary to the provisions of this ordinance.
- C. To issue building permits that are in harmony with the provisions of this ordinance.
- D. To allow a period of ten (10) days for compliance with this ordinance after issuance of a “Stop Work” notice.

**10-102 PERMITS REQUIRED** – No such permit shall be issued for any building, structure, or land use except in complete conformance with all provisions of these regulations.

**10-103 APPLICATION FOR BUILDING PERMIT** – Every application for a building permit shall include at least the following:

- A. A plat of the piece or parcel of land, lot, lots, block or blocks, or part of portions thereof, drawn, to scale showing the actual dimensions of the piece or parcel, lot, lots, block or blocks, or parts or portions thereof, according to the recorded plat or legal description of such land.
- B. A plot plan drawn to scale and in such form as may, from time to time, be prescribed by the Zoning Administrator showing the location, ground area, height, and bulk of all present and proposed structures, drives and parking lots, the building lines in relation to lot lines, waste disposal areas, the use to be made of such present and proposed structures on the land, and such other information as may be required by the Zoning Administrator for the proper enforcement of these regulations.

One copy of both the plat and the plot plan shall be retained by the Zoning Administrator as a public record.

**10-104 ISSUANCE OF BUILDING PERMITS** – A building permit shall be either issued or refused by the Zoning Administrator and when a building permit is refused, the applicant shall be advised in writing of the reasons of the refusal.

**10-108 PERMIT FEES** – For each permit issued, there shall be charged and collected from the application a fee as established by the City Council by ordinance.

**10-109 PERMITS REVOKED** – A permit may be revoked at any time by the Zoning Administrator when it appears that there is a departure from conditions as required by the terms of the permit or that any of the terms of this ordinance are being violated. In such case, or when no permit has been issued before construction or occupancy begins, the Zoning Administrator may issue a stop order and thereafter any construction or further violation of this ordinance shall be punishable as provided herein.

**10-110 EFFECT OF BUILDING PERMIT** – Any building permit issued by the Zoning Administrator contrary to the provisions of this Ordinance shall be null and void and shall not be construed as waiving any provisions of this Ordinance. Building permits are effective for one year from the date of approval. Applicants must start construction within one year of approval of the permit and must complete construction within a reasonable period of time. If construction has not started within one year of the approval of the application the building permit shall be null and void.

**10-111 CERTIFIED SURVEYS** – The Planning Commission may, at its discretion, require the submission of a certified survey attached to the building permit application of the property described in the application.

## CHAPTER 11

### Article 1

#### Violations and penalties

**11-101** Any person who violates any provisions of this ordinance shall be guilty of a misdemeanor and shall be punished by a fine not to exceed one hundred dollars (\$100.00) for each offense. Each and every day that such violation continues shall constitute a separate offense.

Whenever a violation exists as defined in these regulations, the City may proceed by a suit in equity to enjoin and abate the same, in the manner provided by law. Whenever, in any action, it is established that a violation exists, the court may, together with the fine or penalty imposed, enter an order of abatement as a part of the judgment in the case.

CHAPTER 12

Article 1

Invalidity in part

**12-101** If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid by any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance.

CHAPTER 13

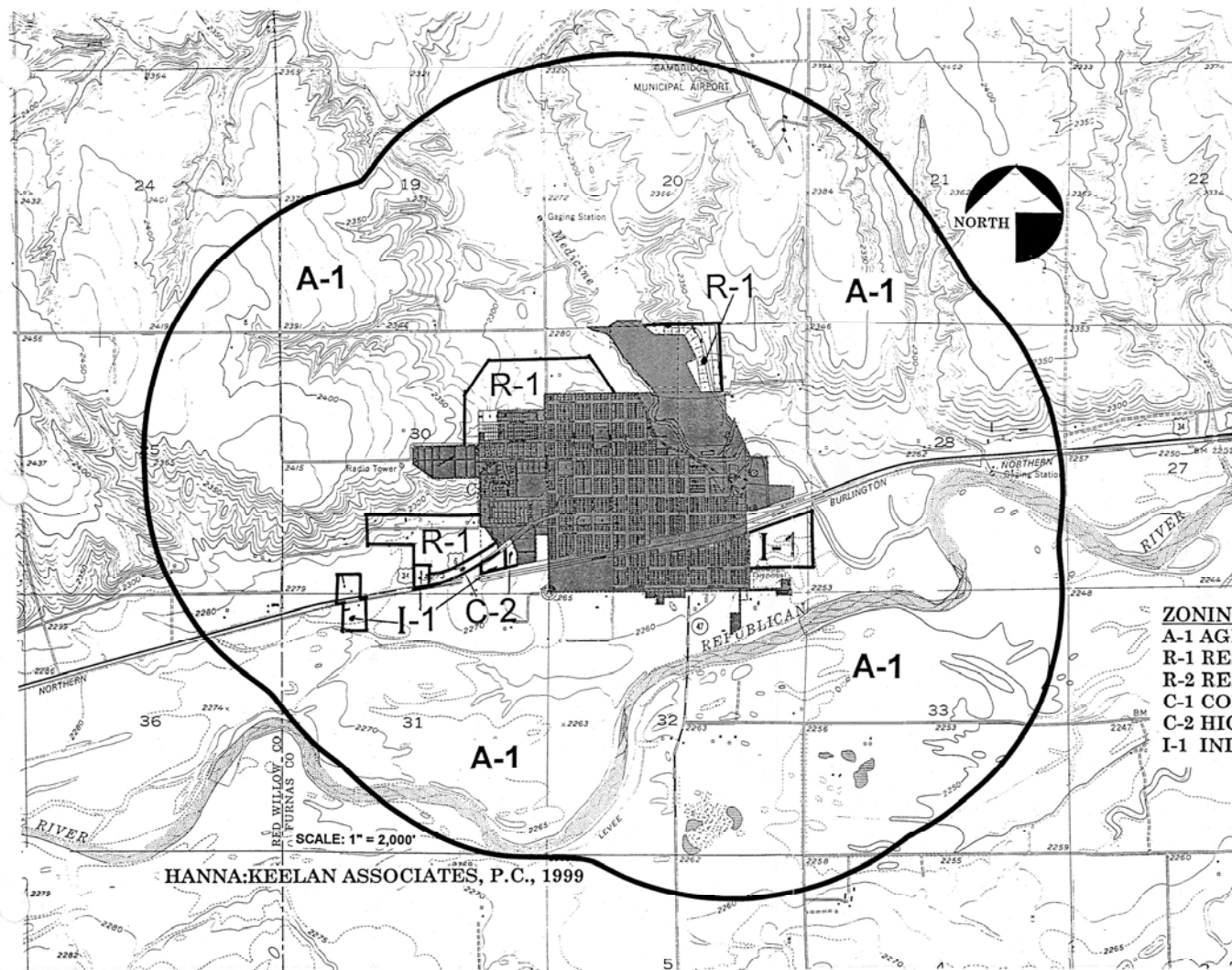
Article 1

Conflicting ordinance

**13-101** Where this ordinance conflicts with any other local, State or Federal ordinance or regulation, the most restrictive ordinance or regulation shall apply.







# **ZONING MAP** **PLANNING JURISDICTION** **CAMBRIDGE, NEBRASKA**

**ZONING DISTRICTS**  
**A-1 AGRICULTURE**  
**R-1 RESIDENTIAL SINGLE-FAMILY**  
**R-2 RESIDENTIAL MULTIFAMILY**  
**C-1 COMMERCIAL**  
**C-2 HIGHWAY COMMERCIAL**  
**I-1 INDUSTRIAL**

**ILLUSTRATION 5.10**



CITY OF CAMBRIDGE  
SMARTCODE  
2009

The images and diagrams in the City of Cambridge, Nebraska SmartCode were derived from the SmartCode Version 9.2 authored by Duany Plater-Zyberg & Co.

The Code language was adapted from the SmartCode Version 9.2 and from the Truman Heights Revitalization Code, City of Mesquite, Texas.

The SmartCode Version 9.2 was customized to become the City of Cambridge, Nebraska Smart Code by:

Stacey L. Groshong Hageman in partial fulfillment of requirements for the Degree of Master of Community and Regional Planning from the University of Nebraska, Lincoln – College of Architecture

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CITY OF CAMBRIDGE  
NEBRASKA

GENERAL TO ALL PLANS

CHAPTER 1

Article 1

Authority

**1-101** This Code was adopted as one of the instruments of implementation of the public purposes and objectives of the adopted Cambridge, Nebraska Comprehensive Plan 2009. This Code is declared to be in accord with the comprehensive plan, as required by Nebraska statutes.

**1-102** This Code was adopted to promote the health, safety and general welfare of the City of Cambridge, Nebraska and its citizens, including protection of the environment, conservation of land, energy and natural resources, reduction in vehicular traffic congestion, more efficient use of public funds, health benefits of a pedestrian environment, historic preservation, education and recreation, reduction in sprawl development, and improvement of the built environment.

**1-103** This Code was adopted and may be amended by vote of the Planning Commission and City Council.

Article 2

Applicability

**1-201** The functions and buildings on all land within the Development Area shall conform exclusively to this Code.

**1-202** Provisions of this Code are activated by “shall” when required; “should” when recommended; and “may” when optional.

**1-203** The provisions of this Code, when in conflict, shall take precedence over those of other codes, ordinances, regulations and standards except the local health and safety codes.

**1-204** The City of Cambridge, Nebraska Zoning Regulations Report, 1999 and the City of Cambridge, Nebraska Subdivision Regulations Report, 1966 continue to be applicable to issues not covered by this Code.

Article 3

Intent

The intent and purpose of this Code is to enable, encourage and qualify the implementation of the following policies:

**1-301 THE COMMUNITY**

- a. That Planned Unit Developments (PUDs) should be compact, pedestrian-oriented and mixed use.
- b. That PUDs should be the preferred pattern of development and those districts specializing in a single use should be the exception.
- c. That ordinary activities of daily living should occur within walking distance of most dwellings, allowing independence to those who do not drive.
- d. That interconnected networks of roadways should be designed to disperse traffic and reduce the length of automobile trips.
- e. That within neighborhoods, a range of housing types and price levels should be provided to accommodate diverse ages and incomes.
- f. That civic, institutional, and commercial activity should be embedded in Planned Unit Developments, not isolated in remote single-use complexes.
- h. That a range of open space including parks, squares, and playgrounds should be distributed within the Development Area.

**1-302 THE BLOCK AND THE BUILDING**

- a. That buildings and landscaping should contribute to the physical definition of roadways as civic places.
- b. That development should adequately accommodate automobiles while respecting the pedestrian and the spatial form of public areas.
- c. That the design of streets and buildings should reinforce safe environments, but not at the expense of accessibility.
- d. That architecture and landscape design should grow from local climate, topography, history, and building practice.
- e. That buildings should provide their inhabitants with a clear sense of geography and climate through energy efficient methods.



- f. That civic buildings and public gathering places should be provided as locations that reinforce community identity and support self-government.
- g. That civic buildings should be distinctive and appropriate to a role more important than the other buildings that constitute the fabric of the city.
- h. That the harmonious and orderly evolution of urban areas should be secured through form-based codes.

Article 4

Development Process

**1-401** The standards for this Code shall be determined as set forth in Chapter 2 and Chapter 3 through a process of public hearing and approval by the City Council. Projects that require no deviation from the requirements of the Code shall be processed administratively as a site plan. The site plan submittal shall consist of such information as the Director may require in order to evaluate compliance with this Code. If the project requires new infrastructure, or if the viability of the project is affected by development regulations external to this Code, the Director may provide for concurrent review of the project by the Planning Commission.

**1-402** A deviation from the requirements of this Code may be approved by either warrant or variance. The Director shall determine whether a deviation requires a warrant or variance.

**1-403** A warrant is an administrative ruling that would permit a practice that is not consistent with or covered by a specific provision of this Code, but is justified by its Intent (Article 3). Variances may be granted in accordance with the procedures set forth in the Zoning Regulations.

**1-404** The Director shall have the authority administratively to approve or disapprove a request for a Warrant. Such decision shall be made in writing and made a permanent part of the applicable Regulating Plan.

**1-405** Should a violation of an approved Regulating Plan occur during construction, or should any construction, site work, or development be commenced without an approved Regulating Plan or Building Scale Plan, the Board of Adjustments has the right to require the owner to stop, remove, and/or mitigate the violation, or to secure a Variance to cover the violation.

**1-406** The request for a Warrant or Variance shall not subject the entire application to public hearing, but only that portion necessary to rule on the specific issue requiring the relief.

**1-407** The Board of Adjustments is not authorized to grant relief from the following standards and requirements:

- a. The maximum dimensions of traffic lanes. (See Table 2-4.)
- b. The minimum base residential densities. (See Table 2-9.)
- c. The minimum requirements for parking. (See Table 3-5.)
- d. A building or specific function not permitted.
- e. The Architectural Standards in Chapter 3 Article 8.
- f. The Signage Standards in Chapter 3 Article 9.

Article 5

Incentives

**1-501** To encourage the use of this Code, the City Council, in its sole discretion, may grant one or more incentives in accordance with adopted policies for neighborhood and economic development, and to the extent authorized by law. The project owner, or the Director on his initiative, may submit an application for incentives to the City Council for consideration.

## NEW COMMUNITY SCALE PLANS

### CHAPTER 2

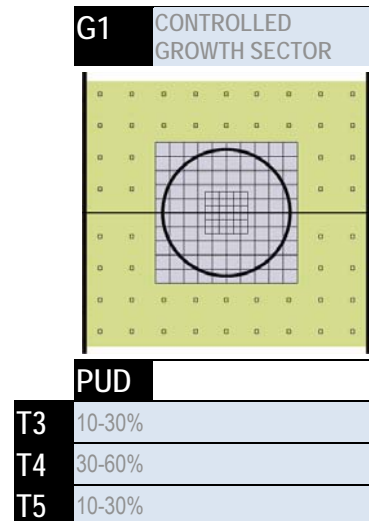
#### Article 1

#### Sector Allocation and Spatial Hierarchy

**2-101** The Development Area falls within the following SmartCode hierarchy:

Controlled Growth Sector	G2
Community Types	Planned Unit Development
Transect Zones	Natural Zone (T1)
	Suburban Zone (T3)
	General Neighborhood Zone (T4)
	Neighborhood Center Zone (T5)

**Table 2-1 Sector/Community Allocation.** *This table defines the geography, including both natural and infrastructure elements, determining areas that are or are not suitable for development. This table also allocates the proportions of Transect Zones within the Planned Unit Development community type.*



**2-102** The planning principles and standards of the SmartCode as they pertain to the Sector, Community Type and Transect Zones designated in this section shall guide the development of the Regulating Plan; provide valuable rationale for evaluating applications to rezone additional properties into the Development Area, and aid in the interpretation of this Code.

#### Article 2

#### Planning Process

**2-201** The owner shall prepare or have prepared on their behalf, Regulating Plans to guide development within the Development Area.

**2-202** Regulating Plans shall consist of one or more maps showing the following elements:

- Transect Zones and Civic Zones within the Planned Unit Development, assigned according to an analysis of existing conditions and future needs
- A planned roadway network (Tables 2-4, 2-5, 2-6, 2-7 and 2-8).
- A record of warrants approved by the Director or variances granted by the Board of Adjustments.

**2-203** Once the City Council approves a Regulating Plan, the parcel shall become a Planned Unit Development and shall be marked as such on the Zoning Map of the City of Cambridge. Within the Development Area, this Code shall be the exclusive and mandatory zoning regulation, and its provisions shall be applied in their entirety.

#### Article 3

#### Community Types

#### 2-301 PLANNED UNIT DEVELOPMENT (PUD)

- A PUD shall be structured so as to include the extents of the Development Area.
- A PUD shall include Transect Zones as allocated in Table 2 and should blend into adjacent parcels.
- The provisions of this Code shall take precedents over those set forth in the City of Cambridge, Nebraska Zoning Regulations Report, 1999.

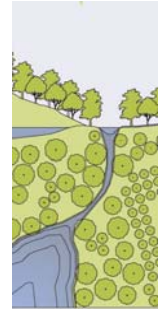

## Article 4

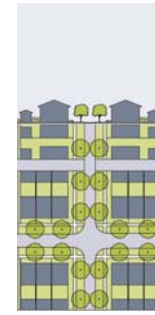
## Transect Zones

**2-401** Transect Zones shall be assigned and mapped on the Development Area Plan according to the percentages allocated on Table 2-2.

**2-402** A Transect Zone may include any of the elements indicated throughout this Code, in accordance with Intent.

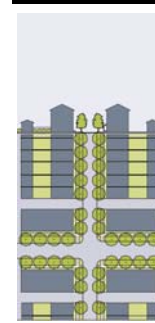
**Table 2-2 Transect Zone Descriptions.** *This table provides descriptions of the character of each T-Zone.*

<b>T1</b>		<p><b>NATURAL (T1)</b> Natural Zone (T1) consists of lands approximating or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation.</p>	<p>General Character: Natural landscape with some agricultural use Building Placement: Not applicable Frontage Types: Not applicable Typical Building Height: Not applicable Type of Civic Space: Parks, Greenways</p>
<b>T2</b>		<p><b>SUBURBAN (T3)</b> Suburban Zone (T3) consists of low density residential areas, adjacent to higher zones where some mixed use is allowed. Planting is naturalistic and setbacks are relatively deep. Blocks may be large and the roads irregular to accommodate natural conditions.</p>	<p>General Character: Lawns, and landscaped yards surrounding single family attached houses; pedestrians occasionally Building Placement: Large front yard setbacks Frontage Types: Porches, naturalistic tree planting Typical Building Height: 1-to 2- story Type of Civic Space: Parks, Greenways</p>

**T3**

**GENERAL NEIGHBORHOOD (T4)**  
General Neighborhood Zone (T4) consists of a residential urban fabric. It may have a wide range of building types: single, sideyard, and row houses. Setbacks and landscaping are variable. Medium-sized blocks.

General Character: Mix of Houses and Townhouses; balance between landscape and buildings; presence of pedestrians  
Building Placement: Shallow to medium  
Frontage Types: setbacks  
Typical Building Height: Porches, and dooryards  
Type of Civic Space: 1-to 2- story Squares, Greens

**T3**

**NEIGHBORHOOD CENTER (T5)**  
Neighborhood Center Zone (T5) consists of higher density mixed use building that accommodate retail, offices, row houses and apartments. It has a light network of streets, with wide sidewalks, steady street tree planting and buildings set close to the sidewalks.

General Character: Shops mixed with townhouses, offices and civic buildings; trees within the public right-of-way; substantial pedestrian activity  
Building Placement: Shallow setbacks or none; buildings oriented to street defining a street wall  
Frontage Types: Stoops, storefronts, galleries  
Typical Building Height: 2-to 3- story  
Type of Civic Space: Parks, Plazas and Squares, median landscaping

Article 5  
Civic Zones

2-501 GENERAL

- a. Civic Zones dedicated for public use shall be required for each Community Unit and designated on the Development Area Plan as Civic Space (CS) and Civic Building (CB).
- b. Civic Space Zones are public sites permanently dedicated to open space.
- c. Civic Building Zones are sites dedicated for buildings generally operated by not-for-profit organizations dedicated to culture, education, religion, government, transit and municipal parking, or for a use approved by the City Council.
- d. Parking for Civic Zones shall be determined by warrant.

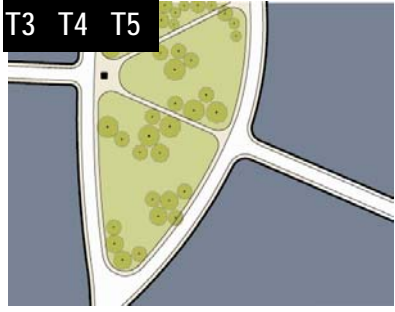
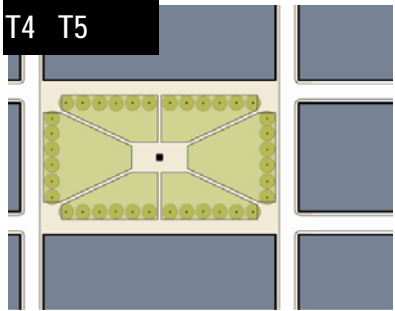
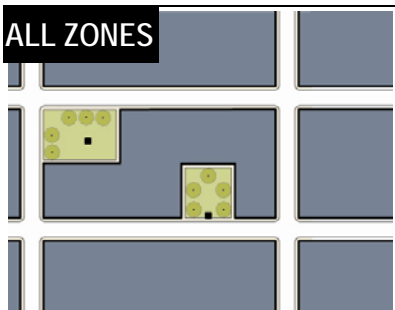
2-502 CIVIC SPACE (CS)

- a. Civic Spaces shall be designed as generally described in Table 2-3, approved by warrant.

2-503 CIVIC BUILDINGS (CB)

- a. The owner shall covenant to construct a meeting hall in proximity to the main civic space of the Development Area.
- b. Civic Building sites should be located within or adjacent to a Civic Space, or at the axial termination of a significant roadway.
- c. Civic Buildings shall not be subject to the standards of Chapter 3. The particulars of their design shall be determined by warrant.

**Table 2-3 Civic Space.** *Within the Development Area greens, squares and playgrounds are permitted.*

	<p><b>GREEN</b></p> <p>An open space, available for unstructured recreation. A Green may be spatially defined by landscaping rather than building frontages. Its landscape shall consist of lawn and trees, naturalistically disposed. The minimum size shall be ½ acre and the maximum shall be 8 acres.</p>
	<p><b>SQUARE</b></p> <p>An open space available for unstructured recreation and civic purposes. A Square is spatially defined by building frontages. Its landscape shall consist of paths, lawns and trees, formally disposed. Squares shall be located at the intersection of important roadways. The minimum size shall be ½ acre and the maximum size shall be 5 acres.</p>
	<p><b>PLAYGROUND</b></p> <p>An open space designed and equipped for the recreation of children. Playgrounds may be included within greens. There shall be no minimum or maximum size.</p>

Article 6  
Roadway Standards

2-601 GENERAL

- a. Roadways are intended for use by vehicular and pedestrian traffic and to provide access to lots and open spaces.
- b. Roadways shall generally consist of vehicular lanes and public frontages.

- c. Within the Development Area pedestrian comfort shall be a primary consideration of the roadway. Design conflict between vehicular and pedestrian movement generally shall be decided in favor of the pedestrian.
- d. All roadways shall terminate at other roadways, forming a network. Internal roadways shall connect wherever possible to those on adjacent sites. Cul-de-sacs shall be subject to approval by warrant to accommodate specific site conditions only.
- e. Standards for paths and bicycle trails shall be approved by warrant.

2-602 VEHICULAR LANES

- a. The standards for vehicular lanes shall be as shown in Table 2-4.
- b. A bicycle network consisting of bicycle trails should be provided throughout as defined in Chapter 4 Definitions of Terms and allocated. The community bicycle network shall be connected to existing or proposed regional networks wherever possible.

**Table 2-4 Vehicular Lane Dimensions.** *This table assigns lane widths to Transect Zones. The Design ADT (Average Daily Traffic) is the determinant for each of these sections. The most typical assemblies are shown in Table 2-5.*

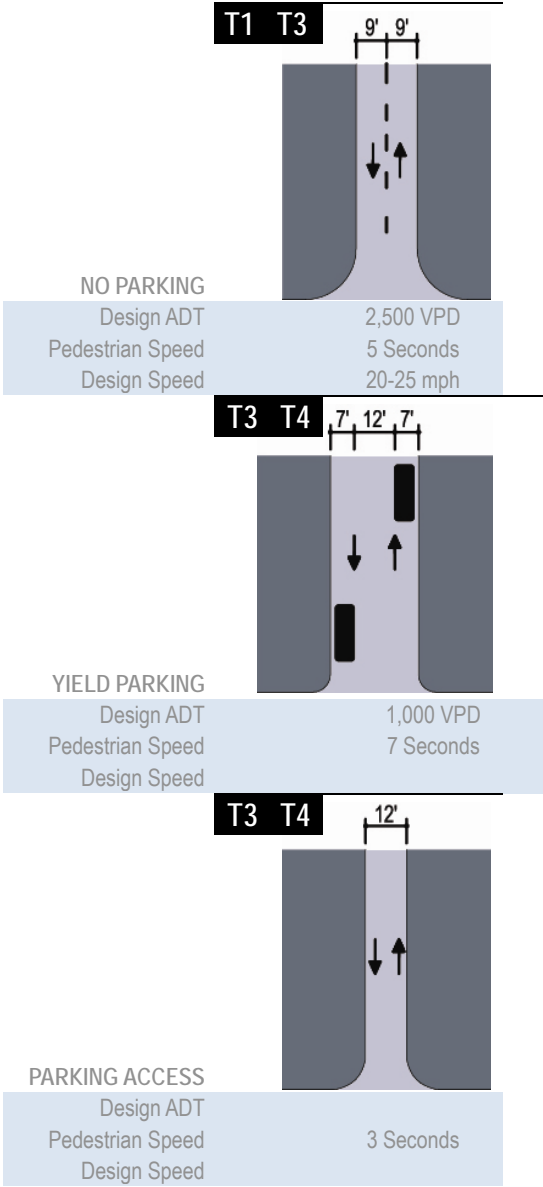
DESIGN SPEED	TRAVEL LANE WIDTH	T1	T3	T4	T5
Below 20 mph	8 feet	■	■	□	
20-25 mph	9 feet	■	■	■	□
25-35 mph	10 feet	■	■	■	■
25-35 mph	11 feet	■			■
Above 35 mph	12 feet	■			■

DESIGN SPEED	PARKING LANE WIDTH	T1	T3	T4	T5
20-25 mph	(Parallel) 7 feet			■	
25-35 mph	(Parallel) 8 feet		■	■	■
Above 35 mph	(Parallel) 9 feet				■

DESIGN SPEED	EFFECTIVE TURNING RADIUS	T1	T3	T4	T5
Below 20 mph	5-10 feet		■	■	■
20-25 mph	10-15 feet	■	■	■	■
25-35 mph	15-20 feet	■	■	■	■
Above 35 mph	20-25 feet	■			□

■ BY RIGHT  
□ BY WARRANT

**Table 2-5 Vehicular Lane & Parking Assemblies.** *The project design speeds determine the dimensions of the vehicular lanes and turning radii assembled for roadways.*

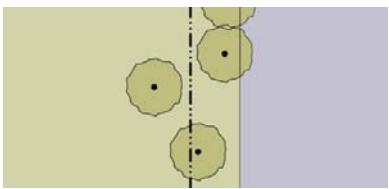
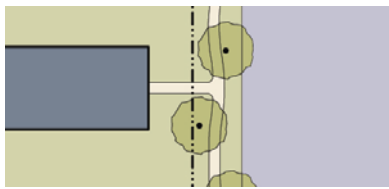
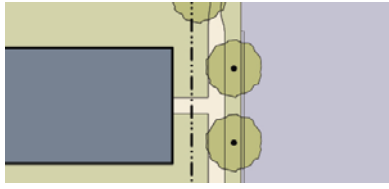




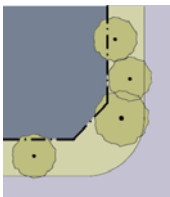
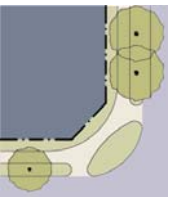


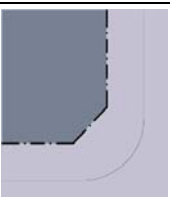




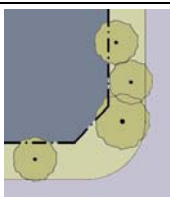
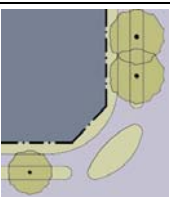
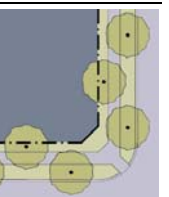
## 2-603 PUBLIC FRONTAGES

- Public Frontages shall be designed as shown in Table 2-6 and Table 2-7 and allocated within Transect Zones as specified.
- Within the public frontages, the prescribed types of public planting and public lighting shall be as shown in Table 2-6, Table 2-7, Table 2-8 and Table 2-9. The spacing may be adjusted by warrant to accommodate specific site conditions.
- The introduced landscape shall consist primarily of native and durable species requiring minimal irrigation, fertilization and maintenance and tolerant of soil compaction. Lawn shall be permitted only by warrant.
- The public frontage shall include trees planted in a regularly-spaced allee pattern of alternated species with shade canopies of a height that, at maturity, clears at least one story.






**Table 2-6 Public Frontages – General.** *The public frontage is the area between the private lot line and the edge of the vehicular lands. Dimensions are given in Table 2-7.*

	PLAN	
	Lot ► Private Frontage ►	◄ R.O.W ◄ Public Frontage
<b>HIGHWAY (HW):</b> This frontage has open swales drained by percolation, bicycle trails and no parking. The landscaping consists of the natural condition or multiple species arrayed in naturalistic clusters. Buildings are buffered by distance or berms.		
<b>ROAD (RD):</b> This frontage has open swales drained by percolation and a walking path or bicycle trail along one or both sides and yield parking. The landscaping consists of multiple species arrayed in naturalistic clusters.		
<b>STREET (ST):</b> This frontage has raised Curbs drained by inlets and sidewalks separated from the vehicular lanes by individual or continuous planters, with parking on one or both sides. The landscaping consists of multiple species arrayed in naturalistic clusters.		





**Table 2-7 Public Frontages – Specific.** *This table assembles prescriptions and dimensions for the public frontage elements – curbs, walkways and planters – relative to specific roadway types within Transect Zones.*

PUBLIC FRONTAGE TYPE	HW	RD	ST
<b>ASSEMBLY:</b> The principal variables are the type and dimension of curbs, walkways, planters and landscape.			
Total Width	12-24 feet	12-24 feet	12-18 feet
<b>CURB:</b> The detailing of the edge of the vehicular pavement, incorporating drainage.			
Type Radius	Open Swale 10-30 feet	Open Swale 10-30 feet	Raised Curb 5-20 feet
<b>WALKWAY:</b> The pavement dedicated exclusively to pedestrian activity.			
Type Width	Path Optional n/a	Path 4-8 feet	Sidewalk 4-8 feet
<b>PLANTER:</b> The layer which accommodates street trees and other landscape.			
Arrangement Species Planter Type Planter Width	Clustered Multiple Continuous Swale 8-16 feet	Clustered Multiple Continuous Swale 8-16 feet	Regular Alternating Continuous Planter 8-12 feet
<b>LANDSCAPE:</b> The recommended plant species. (See Table 2-8).			
<b>LIGHTING:</b> The recommended public lighting. (See Table 2-9).			

**Table 2-8 Public Planting.** *This table shows five common types of street tree shapes and their appropriateness within the Transect Zones. The local planning office selects species appropriate for the bioregion.*

	T1	T3	T4	T5
 Oval	■	■	■	■
 Ball	■	■	■	■
 Pyramid	■	■	■	
 Umbrella	■	■	■	
 Vase	■	■	■	

**Table 2-9 Public Lighting.** *Lighting varies in brightness and also in the character of the fixture according to the Transect. The table shows four common types. A listed set of streetlights corresponding to these types would be approved by the utility company and listed on the page.*

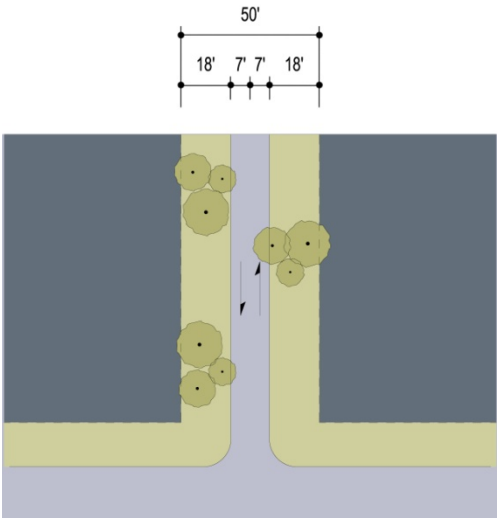
	T1	T3	T4	T5
 Pipe	■	■		
 Post		■	■	
 Column		■	■	■
 Double Column				■

**Table 2-10 Roadway Assemblies.** *These roadways are assembled from the elements that appear in Table 2-4 and Table 2-5 and incorporate the public frontages of Table 2-6. The key gives the roadway type followed by the right-of-way width, followed by the pavement width, and in some instances followed by specialized transportation capability.*

KEY                    ST 57 20  
Roadway Type        ▪  
R.O.W. Width        ▪  
Pavement Width     ▪

**ROADWAY TYPES**

Highway            HW  
Street              ST  
Road                RD  
Bicycle Trail        BT

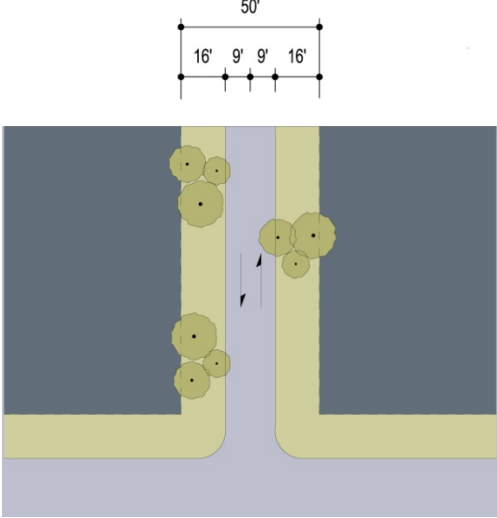


RD - 50 - 14	
Roadway Type	Road
Transect Zone Assignment	T1, T3
Right-of-Way Width	50 feet
Pavement Width	14 feet
Movement	Yield Movement
Design Speed	15 mph
Pedestrian Crossing Trail	4 seconds
Traffic Lanes	2 lanes
Parking Lanes	None
Curb Radius	25 feet
Walkway Type	Path optional
Planter Type	Continuous Swale
Curb Type	Swale
Landscape Type	Trees clustered
Transportation Provision	BT

KEY                    ST 57 20  
Roadway Type        ▪  
R.O.W. Width        ▪  
Pavement Width     ▪

**ROADWAY TYPES**

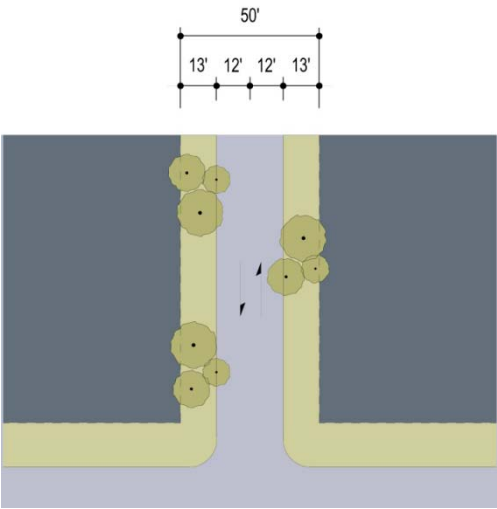
Highway            HW  
Street              ST  
Road                RD  
Bicycle Trail        BT



RD - 50 - 18	
Roadway Type	Road
Transect Zone Assignment	T1, T3
Right-of-Way Width	50 feet
Pavement Width	18 feet
Movement	Slow Movement
Design Speed	15 mph
Pedestrian Crossing Trail	5.1 seconds
Traffic Lanes	2 lanes
Parking Lanes	None
Curb Radius	25 feet
Walkway Type	Path optional
Planter Type	Continuous Swale
Curb Type	Swale
Landscape Type	Trees clustered
Transportation Provision	BT

KEY                    ST 57 20  
Roadway Type        ■  
R.O.W. Width        ■  
Pavement Width     ■

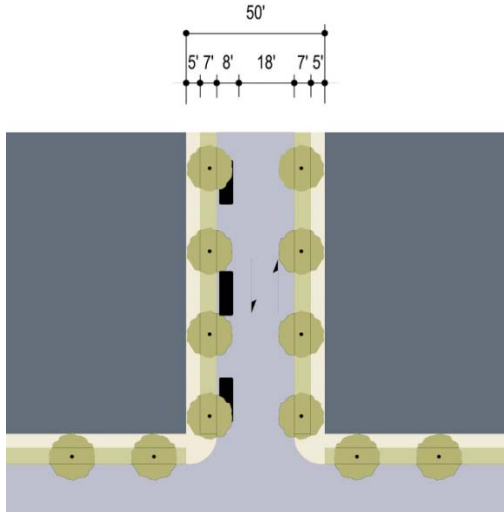
ROADWAY TYPES  
Highway            HW  
Street              ST  
Road                RD  
Bicycle Trail        BT



RD – 50 – 24	
Roadway Type	Road
Transect Zone Assignment	T1, T3
Right-of-Way Width	50 feet
Pavement Width	24 feet
Movement	Slow Movement
Design Speed	20 mph
Pedestrian Crossing Trail	6.8 seconds
Traffic Lanes	2 lanes
Parking Lanes	None
Curb Radius	25 feet
Walkway Type	Path optional
Planter Type	Continuous Swale
Curb Type	Swale
Landscape Type	Trees clustered
Transportation Provision	BT

KEY                    ST 57 20  
Roadway Type        ■  
R.O.W. Width        ■  
Pavement Width     ■

ROADWAY TYPES  
Highway            HW  
Street              ST  
Road                RD  
Bicycle Trail        BT

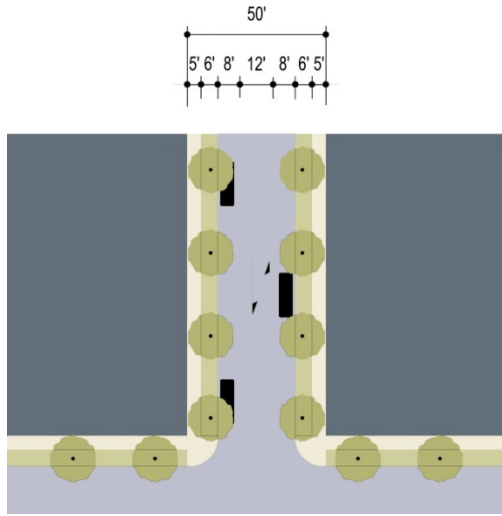


ST – 50 – 26	
Roadway Type	Street
Transect Zone Assignment	T4, T5
Right-of-Way Width	50 feet
Pavement Width	26 feet
Movement	Free Movement
Design Speed	20 mph
Pedestrian Crossing Trail	7.4 seconds
Traffic Lanes	2 lanes
Parking Lanes	One side @ 8 feet marked
Curb Radius	10 feet
Walkway Type	5 foot sidewalk
Planter Type	7 foot continuous planter
Curb Type	Curb
Landscape Type	Trees @ 30' o.c. avg
Transportation Provision	BT

KEY ST 57 20  
 Roadway Type ■  
 R.O.W. Width ■  
 Pavement Width ■

**ROADWAY TYPES**

Highway HW  
 Street ST  
 Road RD  
 Bicycle Trail BT



ST – 50 – 28	
Roadway Type	Street
Transect Zone Assignment	T4, T5
Right-of-Way Width	50 feet
Pavement Width	28 feet
Movement	Yield Movement
Design Speed	20 mph
Pedestrian Crossing Trail	7.6 seconds
Traffic Lanes	2 lanes
Parking Lanes	Both sides @ 8 feet unmarked
Curb Radius	10 feet
Walkway Type	5 foot sidewalk
Planter Type	6 foot continuous planter
Curb Type	Curb
Landscape Type	Trees at 30' o.c. avg.
Transportation Provision	

**Article 7**

**Density Calculations**

**2-701** All areas of the New Community Plan site shall be considered cumulatively the Net Site Area. The Net Site Area shall be allocated to the various Transect Zones according to the parameters specified in Table 2-1.

**2-702** Density shall be expressed in terms of housing units per acre as specified for the area of each Transect Zone by Table 2-11. For purposes of Density calculation, the Transect Zones include the Roadways but not land assigned to Civic Zones.

**Table 2-11 Base Residential Density.**

	T1	T3	T4	T5
By Right	not applicable	2 units/ac. gross	4 units/ac. gross	6 units/ac. gross

**2-703** The housing and other functions for each Transect Zone shall be subject to further adjustment at the building scale as limited by Table 3-5 and Chapter 3 Article 6.

**Article 8**

**Natural Drainage Standards**

**2-801 GENERAL TO ALL ZONES**

- Trees should be planted below the grade of the sidewalk and the street in structural cells with sufficient root space.
- Rain gardens and bioswales should be installed to infiltrate runoff from parking lots, roadways and other impervious surfaces, if any.
- Where vegetative solutions are not feasible, porous concrete or porous asphalt should be specified for sidewalks and parking lots to infiltrate stormwater.
- Native plant perennial landscapes should replace turf grass where possible and be very diverse. They should be placed lower than walkways, not mounded up.



BUILDING SCALE PLANS

CHAPTER 3

Article 1

Instructions

**3-101** Lots and buildings located within Regulating Plans shall be subject to the requirements of this Chapter.

**3-102** An applicant shall make a complete submittal, which shall consist of Building and Site Plans showing the following information, in order to evaluate compliance with the standards prescribed in this Chapter:

- a. Building Disposition
- b. Building Configuration
- c. Building Function
- d. Parking Location Standards
- e. Architectural Standards
- f. Landscape Standards
- g. Signage Standards
- h. Natural Drainage Standards
- i. Lighting Standards

Article 2

Specific to Natural Zone (T1)

**3-201** Buildings are prohibited in the Natural Zone (T1).

Article 3

Building Disposition

**3-301** SPECIFIC TO ZONES T3, T4 AND T5

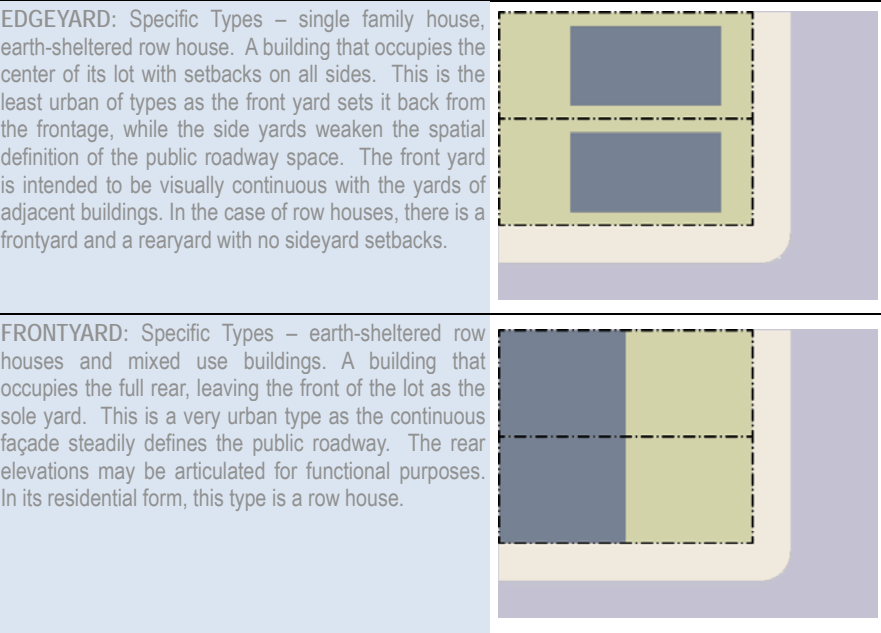
- a. Newly platted lots shall be dimensioned according to Table 3-1.

Table 3-1 Lot Occupation.

	T1	T3	T4	T5
Lot Width	not applicable	72 ft min 120 ft max	18 ft min 96 ft max	18 ft min 180 ft max
Lot Coverage	not applicable	60% max	70% max	80% max

- b. Building disposition types shall be as shown in Table 3-2.

**Figure 3-2 Building Disposition.** This table approximates the location of the structure relative to the boundaries of each individual lot, establishing suitable basic building types.



- c. Buildings shall be disposed in relation to the boundaries of their lots.
- d. Setbacks for principal buildings shall be as shown in Table 3-3. Setbacks may otherwise be adjusted by warrant.

Table 3-3 Setbacks – Principle Buildings.

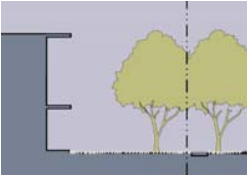
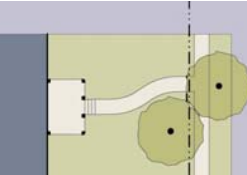
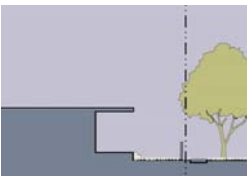
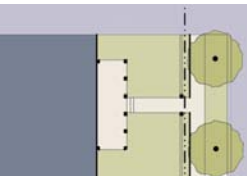
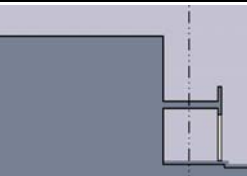
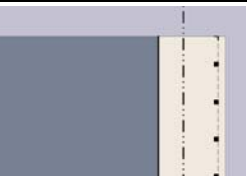
	T1	T3	T4	T5
Front Setback	not applicable	24 ft min	20 ft min	2 ft min 12 ft max
Side Setback	not applicable	12 ft min	not applicable	not applicable
Rear Setback	not applicable	12 ft min	3 ft min	3 ft min
Frontage Buildout	not applicable	40% min	60% min	80% min

Article 4  
Building Configuration

3-401 GENERAL TO ALL ZONES

- The private frontage of buildings shall conform to and be allocated in accordance with Table 3-4.
- All facades shall be glazed with clear glass no less than 70% of the first story.
- Stories may not exceed 14 feet in height from finished floor to finished ceiling, except for a first floor commercial function, which shall be a minimum of 11 feet with a maximum of 25 feet.

**Table 3-4 Private Frontages.** *The private frontage is the area between the building facades and the lot lines.*

	SECTION	PLAN
	Lot ► ◄ ROW Private ► ◄ Private	Lot ► ◄ ROW Private ► ◄ Private
COMMON YARD: a planted frontage wherein the façade is set back substantially from the frontage line. The front yard created remains unfenced and is visually continuous with adjacent yards, supporting a common landscape.		
PORCH & SUNSHADE: a planted frontage wherein the façade is set back from the frontage line with an attached porch permitted to encroach. Porches shall be constructed similar to sunshade devices. Depth shall be determined for maximum passive-solar heating.		
GALLERY: a frontage wherein the façade is aligned close to the frontage line with an attached cantilevered shed or a lightweight colonnade abutting the sidewalk. This type is conventional for retail use. The gallery shall be no less than 10 feet.		

Article 5  
Building Function and Density

3-501 GENERAL

- Buildings in each Transect Zone shall conform to the functions on Table 3-5 and Table 3-6. Functions that do not conform shall require approval by warrant or variance.
- First Story Commercial Functions shall be permitted in Zone T5.

**Table 3-5 Building Function.** *This table categorizes building functions within Transect Zones. Parking requirements are correlated to functional intensity. For specific function and use permitted by right or by warrant, see Table 3-6.*

	T3	T4	T5
RESIDENTIAL	RESTRICTED RESIDENTIAL: The number of dwellings on each lot is restricted to one within a principal building with 2.0 parking places. Dwellings shall be under single ownership.	LIMITED RESIDENTIAL: The number of dwellings on each Lot is limited by the requirement of 1.5 parking places for each dwelling.	OPEN RESIDENTIAL: The number of dwellings on each lot is limited by the requirement of 1.0 parking places for each dwelling, a ratio which may be reduced according to the shared parking standards.
OFFICE			OPEN OFFICE: The building area available for office use on each lot is limited by the requirement of 2.0 assigned parking places per 1000 square feet of new office space
RETAIL			OPEN RETAIL: The building area available for retail use is limited by the requirement of 3.0 assigned parking places per 1000 square feet of net retail space. Retail space under 1500 square feet is exempt from parking requirements.
CIVIC	See Table 3-6	See Table 3-6	See Table 3-6

**Table 3-7 Specific Function & Use.** *This table expands the categories of Table 3-5 to delegate specific functions and uses within Transect Zones.*

RESIDENTIAL	T1	T3	T4	T5
Mixed Use Block				■
Row House			■	■
House		■	■	
OFFICE	T1	T3	T4	T5
Office Building		■	■	■
RETAIL	T1	T3	T4	T5
Open-Market Building		■	■	■
Retail Building			■	■
Display Gallery			■	■
Kiosk			■	■
CIVIC	T1	T3	T4	T5
Fountain of Public Art		■	■	■
Movie Theater				■
Outdoor Auditorium		■		■
Parking Structures				■
Playground		■	■	■

**Article 6**  
**Parking and Density Calculations**

**3-601 SPECIFIC TO ZONE T3**

- a. Buildable density on a lot shall be determined by the actual parking provided within the lot as applied to the Functions permitted in Table 3-5.

**3-602 SPECIFIC TO ZONES T4 AND T5**

- a. Based on the effective parking available, the density of the projected function may be determined according to Table 3-5.

**Article 7**  
**Parking Location Standards**

**3-701 GENERAL**

- a. Open parking areas shall be masked from the frontage by a building or streetscreen.
- b. Pedestrian exits from all parking areas shall be directly to a Frontage Line (i.e., not directly into a building) except underground levels which may be exited by pedestrians directly into a building.
- c. A minimum of one bicycle rack place shall be provided within the public or private frontage for every ten vehicular parking spaces.

**Article 8**  
**Architectural Standards**

**3-801 GENERAL**

- a. All openings, including porches, galleries and windows, with the exception of shopfronts, shall be square or vertical in proportion.
- b. The exterior finish material on all facades shall be limited to glass, steel and concrete.
- c. Pitched roofs shall be prohibited.
- d. Mechanical equipment for residential units shall be located in underground parking structures so as to conceal equipment from view of residents.
- e. Mechanical equipment for commercial and mixed use development shall be located within the interior of the building to conceal equipment from view.
- f. Balconies and porches shall be made to incorporate similar design features and materials as exterior solar sunshades.

**Article 9**  
**Landscape Standards**

**3-901 GENERAL TO ZONES T3, T4 AND T5**

- a. Impermeable surface shall be confined to the ratio of lot coverage specified in Table 3-1.

**3-902 SPECIFIC TO ZONE T3**

- a. A minimum of two trees shall be planted within the first Layer for each 30 feet of frontage line or portion thereof. (Table 4-1)
- b. Trees may be of single or multiple species.
- c. Trees shall be naturalistically clustered.

**3-903 SPECIFIC TO ZONE T4**

- a. A minimum of one tree shall be planted within the first Layer for each 30 feet of frontage line or portion thereof. (Table 4-1)
- b. Trees shall be a single species to match the species of street trees on the public frontage.

**3-904 SPECIFIC TO ZONE T5**

- a. Trees shall not be required in the first Layer.
- b. The first Layer may be paved to match the pavement of the public frontage.

Article 10  
**Signage Standards**

**3-1001 GENERAL**

- a. There shall be no signage permitted additional to that specified in this section.
- b. The address number, no more than 6 inches measured vertically, shall be attached to the building in proximity to the principal entrance or at a mailbox.

**3-1002 SPECIFIC TO ZONE T3 AND T4**

- a. Signage shall not be illuminated.

**3-1003 SPECIFIC TO ZONE T5**

- a. Signage shall be externally illuminated, except that signage within the shopfront glazing may be neon lit.
- b. Blade signs, not to exceed 6 square ft. for each separate business entrance, may be attached to and should be perpendicular to the facade, and shall clear 8 feet above the sidewalk.
- c. A single external permanent sign band may be applied to the Facade of each building, providing that such sign not exceed 3 feet in height by any length.

Article 11  
**Natural Drainage Standards**

**3-1101 GENERAL**

- a. Buildings should be approved for extensive green roofs to hold 6" deep or less soils and drought-resistant plants.
- b. Green walls, if provided, shall be restricted to non-invasive species.

- c. Cisterns may be used to capture and re-circulate stormwater from buildings.
- d. The landscape installed shall consist primarily of native and durable species requiring minimal irrigation, fertilization and maintenance; including species that are tolerant to soil compaction.
- e. Planter boxes should be bottomless, flow-through boxes with native plants, placed next to buildings and designed to capture building runoff.

## DEFINITIONS OF TERMS

## CHAPTER 4

## Article 1

## Definitions

This article provides definitions for terms in this Code that are technical in nature or that otherwise may not reflect a common usage of the term. If a term is not defined in this Chapter, then the CRC shall determine the correct definition.

1. **Allee:** a regularly spaced and aligned row of trees usually planted along a Thoroughfare or Path.
2. **Apartment:** a Residential unit sharing a building and a Lot with other units and/or uses; may be for rent, or for sale as a condominium.
3. **Base Density:** the number of dwelling units per acre before adjustment for other Functions and/or TDR. See **Density**.
4. **Bicycle Trail (BT):** a bicycle way running independently of a vehicular Thoroughfare.
5. **Block:** the aggregate of private Lots, Passages, Rear Alleys and Rear Lanes, circumscribed by Thoroughfares.
6. **Block Face:** the aggregate of all the building Facades on one side of a Block.
7. **By Right:** characterizing a proposal or component of a proposal for a Community Plan or Building Scale Plan (Article 3, Article 4, or Article 5) that complies with the SmartCode and is permitted and processed administratively, without public hearing. See **Warrant** and **Variance**.
8. **Civic:** the term defining not-for-profit organizations dedicated to arts, culture, education, recreation, government, transit, and municipal parking.
9. **Civic Building:** a building operated by not-for-profit organizations dedicated to arts, culture, education, recreation, government, transit, and municipal parking, or for use approved by the legislative body.
10. **Civic Space:** an outdoor area dedicated for public use. Civic Space types are defined by the combination of certain physical constants including the relationships among their intended use, their size, their landscaping and their Enfronting buildings. See Table 2-3.
11. **Civic Zone:** designation for public sites dedicated for Civic Buildings and Civic Space.
12. **Commercial:** the term collectively defining workplace, Office, Retail, and Lodging Functions.
13. **Common Destination:** An area of focused community activity, usually defining the approximate center of a Pedestrian Shed. It may include without limitation one or more of the following: a Civic Space, a Civic Building, a Commercial center, or a transit station, and may act as the social center of a neighborhood.
14. **Common Yard:** a planted Private Frontage wherein the Facade is set back from the Frontage line. It is visually continuous with adjacent yards. See Table 3-4.
15. **Community Unit:** a regulatory category defining the physical form, Density, and extent of a settlement. The three Community Unit types addressed in this Code are CLD, PUD, and RCD.
16. **Configuration:** the form of a building, based on its massing, Private Frontage, and height.
17. **Corridor:** a lineal geographic system incorporating transportation and/or Greenway trajectories. A transportation Corridor may be a lineal Transect Zone.
18. **Curb:** the edge of the vehicular pavement that may be raised or flush to a Swale. 2-7.
19. **Density:** the number of dwelling units within a standard measure of land area.
20. **Design Speed:** is the velocity at which a Thoroughfare tends to be driven without the constraints of signage or enforcement. There are four ranges of speed: Very Low: (below 20 MPH); Low: (20-25 MPH); Moderate: (25-35 MPH); High: (above 35 MPH). Lane width is determined by desired Design Speed. See Table 2-4.
21. **Developable Areas:** lands other than those in the O-1 Preserved Open Sector.
22. **Disposition:** the placement of a building on its Lot. See Table 3-1 and Table 17.
23. **Dooryard:** a Private Frontage type with a shallow Setback and front garden or patio, usually with a low wall at the Frontage Line. See Table 3-4.
24. **Edgeyard Building:** a building that occupies the center of its Lot with Setbacks on all sides. See Table 3-2.
25. **Effective Turning Radius:** the measurement of the inside Turning Radius taking parked cars into account. See Table 17.



26. **Elevation:** an exterior wall of a building not along a Frontage Line. See Table 4-1. See: **Facade**.
27. **Encroach:** to break the plane of a vertical or horizontal regulatory limit with a structural element, so that it extends into a Setback, into the Public Frontage, or above a height limit.
28. **Encroachment:** any structural element that breaks the plane of a vertical or horizontal regulatory limit, extending into a Setback, into the Public Frontage, or above a height limit.
29. **Enfront:** to place an element along a Frontage, as in “porches Enfront the street.”
30. **Facade:** the exterior wall of a building that is set along a Frontage Line. See **Elevation**.
31. **Extensive Green Roof:** a building roof with a planting medium six inches in depth or less, designed to be virtually self-sustaining and requiring a minimum of maintenance. Such roofs are intended to function as an ecological protection layer. They are planted with low-lying species design to provide maximum cover achieving water retention, erosion resistance, and transpiration of moisture.
32. **Frontage:** the area between a building Facade and the vehicular lanes, inclusive of its built and planted components. Frontage is divided into **Private Frontage** and **Public Frontage**. See Table 2-6 and Table 2-7.
33. **Frontage Line:** a Lot line bordering a Public Frontage. Facades facing Frontage Lines define the public realm and are therefore more regulated than the Elevations facing other Lot Lines. See Table 4-1.
34. **Function:** the use or uses accommodated by a building and its Lot, categorized as Restricted, Limited, or Open, according to the intensity of the use. See Table 3-5 and Table 3-6.
35. **Gallery:** a Private Frontage conventional for Retail use wherein the Facade is aligned close to the Frontage Line with an attached cantilevered shed or lightweight colonnade overlapping the Sidewalk. See Table 2-7.
36. **GIS (Geographic Information System):** a computerized program in widespread municipal use that organizes data on maps. The protocol for preparing a Regional Plan should be based on GIS information.
37. **Green:** a Civic Space type for unstructured recreation, spatially defined by landscaping rather than building Frontages. See Table 2-3.
38. **Greenfield:** an area that consists of open or wooded land or farmland that has not been previously developed.
39. **Green Roof:** a building roof partially or completely covered with vegetation and soil, or a growing medium, over a waterproofing membrane. See also **Extensive Green Roof**.
40. **Greenway:** an Open Space Corridor in largely natural conditions which may include trails for bicycles and pedestrians.
41. **Growth Sector:** one of four Sectors where development is permitted By Right in the SmartCode, three for New Communities and one for Infill. See Article 2.
42. **Highway:** a rural and suburban roadway of high vehicular speed and capacity. This type is allocated to the more rural Transect Zones (T-1 and T-3).
43. **House:** an Edgeyard building type, usually a single-family dwelling on a large Lot. (Syn: single.)
44. **Layer:** a range of depth of a Lot within which certain elements are permitted. See Table 4-1.
45. **Liner Building:** a building specifically designed to mask a parking lot or a Parking Structure from a Frontage.
46. **Lot:** a parcel of land accommodating a building or buildings of unified design. The size of a Lot is controlled by its width in order to determine the grain (i.e., fine grain or coarse grain) of the urban fabric.
47. **Lot Line:** the boundary that legally and geometrically demarcates a Lot.
48. **Lot Width:** the length of the Principal Frontage Line of a Lot.
49. **Main Civic Space:** the primary outdoor gathering place for a community. The Main Civic Space is often, but not always, associated with an important Civic Building.
50. **Meeting Hall:** a building available for gatherings, including conferences, that accommodates at least one room equivalent to a minimum of 10 square feet per projected dwelling unit within the Pedestrian Shed in which it is located.
51. **Mixed Use:** multiple Functions within the same building through superimposition or adjacency, or in multiple buildings by adjacency, or at a proximity determined by Warrant.
52. **Net Site Area:** all developable land within a site including Thoroughfares but excluding land allocated as Civic Zones.

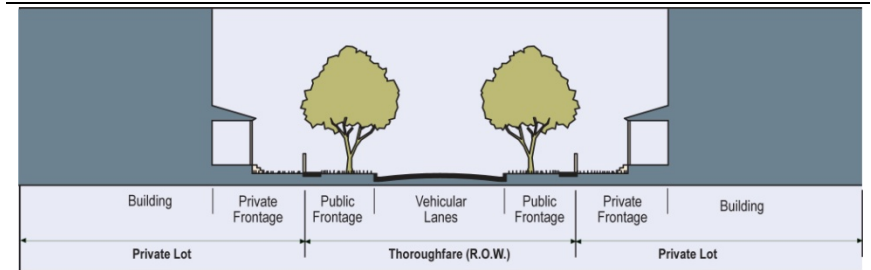
53. **Office:** premises available for the transaction of general business but excluding Retail, artisanal and Manufacturing uses. See Table 3-5.
54. **Open Space:** land intended to remain undeveloped; it may be for Civic Space.
55. **Passage (PS):** a pedestrian connector, open or roofed, that passes between buildings to provide shortcuts through long Blocks and connect rear parking areas to Frontages.
56. **Path (PT):** a pedestrian way traversing a Park or rural area, with landscape matching the contiguous Open Space, ideally connecting directly with the urban Sidewalk network.
57. **Planter:** the element of the Public Frontage which accommodates street trees, whether continuous or individual.
58. **Principal Building:** the main building on a Lot, usually located toward the Frontage. See Table 4-1.
59. **Principal Entrance:** the main point of access for pedestrians into a building.
60. **Principal Frontage:** On corner Lots, the Private Frontage designated to bear the address and Principal Entrance to the building, and the measure of minimum Lot width. Prescriptions for the parking Layers pertain only to the Principal Frontage. Prescriptions for the first Layer pertain to both Frontages of a corner Lot. See **Frontage**.
61. **Private Frontage:** the privately held Layer between the Frontage Line and the Principal Building Facade. See Table 3-4 and Table 4-1.
62. **Public Frontage:** the area between the Curb of the vehicular lanes and the Frontage Line. See Table 2-6 and Table 2-7.
63. **Regulating Plan:** a Zoning Map or set of maps that shows the Transect Zones, Civic Zones, Special Districts if any, and Special Requirements if any, of areas subject to, or potentially subject to, regulation by the SmartCode.
64. **Residential:** characterizing premises available for long-term human dwelling.
65. **Retail:** characterizing premises available for the sale of merchandise and food service. See Table 3-5 and Table 3-6.
66. **Retail Frontage:** Frontage designated on a Regulating Plan that requires or recommends the provision of a Shopfront, encouraging the ground level to be available for Retail use. See **Special Requirements**.

67. **Road (RD):** a local, rural and suburban Thoroughfare of low-to-moderate vehicular speed and capacity. This type is allocated to the more rural Transect Zones (T1-T3). See Table 2-4.
68. **Roadway:** a way for use by vehicular and pedestrian traffic and to provide access to Lots and Open Spaces, consisting of Vehicular Lanes and the Public Frontage. See Table 2-4, Table 2-5 and Table 4-1.
69. **Row house:** a single-family dwelling that shares a party wall with another of the same type and occupies the full Frontage Line.
70. **Sector:** a neutral term for a geographic area. In the SmartCode there are six specific Sectors for regional planning that establish the legal boundaries for Open Space and development.
71. **Setback:** the area of a Lot measured from the Lot line to a building Facade or Elevation that is maintained clear of permanent structures, with the exception of Encroachments listed in Table 3-3. (Var: build-to-line.)
72. **Shopfront:** a Private Frontage conventional for Retail use, with substantial glazing and an awning, wherein the Facade is aligned close to the Frontage Line with the building entrance at Sidewalk grade. See Table 3-4.
73. **Sidewalk:** the paved section of the Public Frontage dedicated exclusively to pedestrian activity.
74. **Square:** a Civic Space type designed for unstructured recreation and Civic purposes, spatially defined by building Frontages and consisting of Paths, lawns and trees, formally disposed. See Table 2-3.
75. **Story:** a habitable level within a building, excluding an Attic or raised basement.
76. **Street (ST):** a local urban roadway of low speed and capacity. See Table 2-5 and Table 2-7.
77. **Streetscreen:** a freestanding wall built along the Frontage Line, or coplanar with the Facade. It may mask a parking lot from the roadway, provide privacy to a side yard, and/or strengthen the spatial definition of the public realm. (Syn: streetwall.)
78. **Sustainability:** the basis upon which an organism or a community can manage its own continuing viability, meeting the needs of the present without compromising the ability of future generations to meet their own needs.
79. **Swale:** a low or slightly depressed natural area for drainage.
80. **T-zone: Transect Zone.**

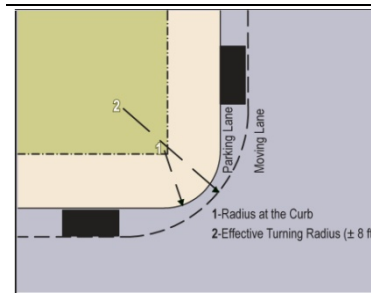
81. **Terminated Vista:** a location at the axial conclusion of a roadway. A building located at a Terminated Vista designated on a Regulating Plan is required or recommended to be designed in response to the axis.
82. **Transect:** a cross-section of the environment showing a range of different habitats. The rural-urban Transect of the human environment used in the SmartCode template is divided into six Transect Zones. These zones describe the physical form and character of a place, according to the Density and intensity of its land use and Urbanism.
83. **Transect Zone (T-zone):** One of several areas on a Zoning Map regulated by the SmartCode. Transect Zones are administratively similar to the land use zones in conventional codes, except that in addition to the usual building use, Density, height, and Setback requirements, other elements of the intended habitat are integrated, including those of the private Lot and building and Public Frontage. See Table 2-2.
84. **Turning Radius:** the curved edge of a roadway at an intersection, measured at the inside edge of the vehicular tracking. The smaller the Turning Radius, the smaller the pedestrian crossing distance and the more slowly the vehicle is forced to make the turn. See Table 2-5 and Table 4-1.
85. **Variance:** a ruling that would permit a practice that is not consistent with either a specific provision or the Intent of this Code. Variances are usually granted by the Board of Appeals in a public hearing.
86. **Warrant:** a ruling that would permit a practice that is not consistent with a specific provision of this Code, but that is justified by its Intent.
87. **Yield:** characterizing a roadway that has two-way traffic but only one effective travel lane because of parked cars, necessitating slow movement and driver negotiation. Also, characterizing parking on such a roadway.
88. **Zoning Map:** the official map or maps that are part of the zoning ordinance and delineate the boundaries of individual zones and districts. See **Regulating Plan**.

**Table 4-1 Definitions Illustrated.**

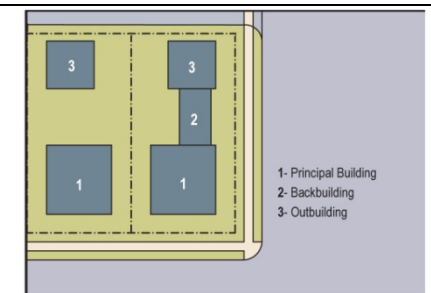
*Roadways & Frontages*



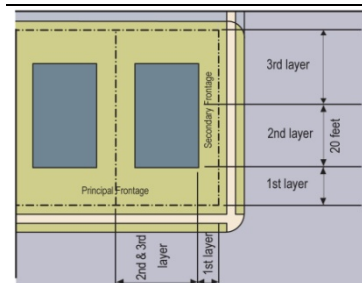
*Turning Radius*



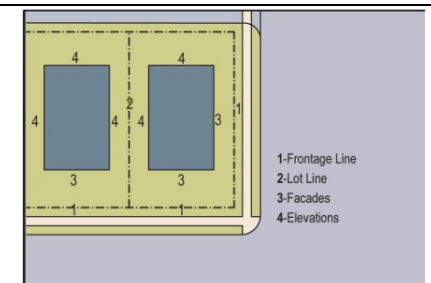
*Building Disposition*



*Lot Layers*



*Frontage & Lot Lines*



*Setback Designations*

