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## **Stores as Schools: An Adaptive Reuse Alternative For Communities Dealing With Underutilized Commercial Space and Overcrowded Schools**

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**STORES AS SCHOOLS:  
AN ADAPTIVE REUSE ALTERNATIVE FOR COMMUNITIES DEALING  
WITH UNDERUTILIZED COMMERCIAL SPACE AND OVERCROWDED  
SCHOOLS**

A Thesis Presented

by

JAYNE M. BERNHARD

Submitted to the Graduate School of the  
University of Massachusetts Amherst in partial fulfillment  
of the requirements for the degree of

MASTER OF REGIONAL PLANNING

MAY 2008

Department of Landscape Architecture and Regional Planning

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JAYNE M. BERNHARD

Approved as to style and content by:

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Elisabeth Hamin, Chair

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Mark Hamin, Member

---

Jane Thurber, Member

---

Elizabeth Brabec, Department Head  
Landscape Architecture and Regional Planning

## **DEDICATION**

To my aunt and godmother Patricia Blackburn, whose strength has been an inspiration.

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Finally I would like to thank Andrew. Editor-in-chief and chief distracter, his support has meant everything.

## **ABSTRACT**

### **STORES AS SCHOOLS: AN ADAPTIVE REUSE ALTERNATIVE FOR COMMUNITIES DEALING WITH UNDERUTILIZED COMMERCIAL SPACE AND OVERCROWDED SCHOOLS**

MAY 2008

JAYNE M. BERNHARD, B.A., MARQUETTE UNIVERSITY

M.A., UNIVERSITY OF MASSACHUSETTS AMHERST

M.R.P., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Elisabeth Hamin

Over the past two decades, underused shopping malls and big-box stores have become more prevalent in the landscape, even as newer ones are built. Shopping centers from the last half of the twentieth century may not have been designed to serve uses other than commercial, but that does not mean these buildings must or should only be thought of as single-use spaces. Projects from across the United States demonstrate that large, empty commercial structures can become municipal complexes, new town centers, mixed-use complexes, office buildings, churches, and gymnasiums. They also can be rehabilitated to fill the need for new schools in communities where there is no suitable or cheap land, limited funds, overcrowding, and growing enrollments.

This thesis identifies twelve cases where public school districts have converted former shopping malls or big-box stores into schools and conducts histories on three of these cases. A detailed comparative analysis of three school conversion projects in Burnsville, Minnesota, Wake Forest, North Carolina, and Fort Myers, Florida is the foundation for the thesis research. By researching examples of retail conversion and assessing project history, this thesis determines common factors to these school projects

and develops conclusions about relationships between school planning, growth management, and economic development. It develops a strong knowledge base that can be used to guide local governments interested in undertaking this type of initiative. Finally, the thesis demonstrates the importance of planning and building for future flexibility by underscoring the value of reusing the built form.

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## CHAPTER I

### IMPETUS AND EXPECTATIONS OF RESEARCH

#### A. Introduction

##### a. Research Overview

Over the past two decades, underused shopping malls and big-box stores have become more prevalent in the landscape, even as newer ones are built. Shopping centers from the last half of the twentieth century may not have been designed to serve uses other than commercial, but that does not mean communities must or should only think of them as single-use spaces. Projects from across the United States demonstrate that large, empty commercial structures can become municipal complexes, new town centers, mixed-use complexes, office buildings, churches, and gymnasiums. They also can be rehabilitated to fill the need for new schools in communities where there is no suitable or cheap land, limited funds, overcrowding, and growing enrollments.

This thesis first looks broadly at fourteen public schools that were identified to be operating in a former shopping mall or big-box store. The thesis then conducts historical studies on three of these school projects. These chosen case studies are:

- Burnsville High School Senior Campus, Burnsville, Minnesota
- Wakefield High School 9<sup>th</sup> Grade Center, Wake Forest, North Carolina
- Rayma C. Page Elementary School, Fort Myers, Florida

The rationale for the narrow selection was to be able to intensively profile three school projects under the limitations of time and resources. The purpose of this study is to identify factors that influenced school districts to undertake this type of school project and to consider how current community trends will influence the future use of these

particular schools. The goal is to determine the existence of common factors from these school projects. As shopping centers continue to go dark and school districts face more unaffordable and undevelopable land, an exploration of this innovative adaptive reuse option should provide lessons that that planning practitioners and education professionals can use to address community issues.

### **b. Thesis Outline**

Chapter I identifies problems in the retail and school planning fields and examines how adapting former commercial retail structures for public schools may be an option for addressing community issues. Chapter II explores literature related to the overall process of taking a former commercial retail structure and adapting it to a public school. Chapter III describes the overall research study. It first addresses goals, objectives, and outcomes of the research. It next explains the method for selecting three of the fourteen identified school projects as case studies. Then it describes the framework by which each case study will be analyzed. Finally the chapter closes with a discussion on research delimitations and limitations. Chapter IV presents the analysis and key findings from a demographic survey of the fourteen identified public school projects.

Chapters V, VI, and VII comprise the individual case studies. These three chapters analyze and assess the factors that led each of the school district to choose this alternative construction option. In so doing, these case studies consider the relationship between the school district and county as well as the school and surrounding area. The end result is a profile of the project but also a story. Chapter VIII cross analyzes the three case studies. It looks to determine the existence of common factors to these three school projects. It also evaluates the findings from the analysis in light of the thesis's research

claims. Chapter IX concludes the study with significant findings and key lessons for planning practitioners and education professionals. It also provides recommendations for future research.

## **B. Background to Research**

### **a. Proliferation of Vacant Commercial Retail Structures**

#### **i. Historical Development**

Several studies identify federal tax policy as the root of an epidemic of vacant shopping centers.<sup>1</sup> Historian Thomas Hanchett points out that commercial retail businesses did not initially follow new residents to the suburbs, “Large initial investment, slow payout, and need for careful long-term management continued to make the shopping center a less-than-ideal financial vehicle.”<sup>2</sup> Hanchett argues that the 1954 Internal Revenue Code accounts for the increased development of shopping centers. One of its provisions provided substantial tax deductions for developers during the initial years of their newly constructed income-producing developments under the principle known as accelerated depreciation. Accelerated depreciation allowed developers to make a substantial profit during the initial years of investment and then motivated them to sell the property and invest in a new development. The lucrative U.S. tax policy contributed

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<sup>1</sup> Stacy Mitchell, Big-box Swindle: The True Cost of Mega-Retailers and The Fight for America’s Independent Businesses (Boston: Beacon Press, 2006); Thomas Hanchett, “U.S. Tax Policy and the Shopping Center Boom of the 1950s and 1960s,” American Historical Review Vol. 101 No. 4, (Oct 1996): 1082-1110.

<sup>2</sup> Hanchett, “U.S. Tax Policy and the Shopping Center Boom of the 1950s and 1960s,” 1091.

to the abundance of vacant or declining shopping centers that we see today. In 1986 IRS policy reverted back to its pre-1954 straight line depreciation formula.<sup>3</sup>

## **ii. Effects of Current Retail Trends**

To meet the broad demands of American consumer society, shopping centers now come in several forms. All types of shopping centers are vulnerable to fluctuating economic forces and changing area demographics. New commercial construction verifies that the retail economy is growing but according to urban planner John Mullin, “there are no new retail dollars, just shifting dollars.”<sup>4</sup> The ability of a community to sustain several different forms of shopping centers over the long-term is unusual. New shopping malls and big box stores come at the expense of small businesses, already established big box stores and existing shopping malls. The result is several new stores and several vacant ones. The real estate industry has coined the term ‘Greyfield’ to describe the large swaths of empty asphalt parking lots that envelop vacant buildings.

In 2001 the Congress for New Urbanism commissioned PricewaterhouseCoopers’ “Greyfield Regional Mall Study” to get a better general understanding of the ‘greyfield’ situation.<sup>5</sup> The study reported that seven percent of all regional malls in the United States are greyfields and an additional twelve percent remain susceptible to becoming

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<sup>3</sup> Hanchett, “U.S. Tax Policy and the Shopping Center Boom of the 1950s and 1960s,” 1106.

<sup>4</sup> George Homsy, “New Lives for Old Malls” Planning (May 1999), 22.

<sup>5</sup> Steven Bodzin, Ellen Greenberg, and Lee S. Sobel, Greyfields Into Goldfields: Dead Malls Become Living Neighborhoods (San Francisco: Congress for the New Urbanism, 2002).

‘greyfields.’<sup>6</sup> Michael Beyard, Vice-president of the Urban Land Institute and leading retail research specialist, told Planning magazine that “those [shopping malls] that survive must reinvent themselves every five to eight years.”<sup>7</sup> Big-box stores are also a recognizable face in this problem. A commonly cited Washington Post article claims that Wal-Mart had an alarming 245 vacant buildings nationwide in 2004 even as the company had plans for 484 new or expanded stores in 2006.<sup>8</sup>

### **iii. Strategies for Managing Vacant Commercial Structures**

Given the competitive nature of the retail field, this commercial real estate trend does not show signs of slowing down. Professional and trade organizations, such as the Urban Land Institute, routinely publish strategies developers and municipalities can use to revitalize sites as retail centers. Developers want to continue to see a return on their investment. Cities want to maintain the property and sales tax revenue the sites once generated as well as employment opportunities for their citizens.<sup>9</sup>

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<sup>6</sup> Bodzin et al, Greyfields Into Goldfields, 17. PricewaterhouseCoopers defined regional malls in their 2001 “Greyfield Regional Mall Study” as “centers with at least 35 stores and at least 350,000 square feet of space.” Bodzin, Greyfields Into Goldfields, 16.

<sup>7</sup> George Homsy, “New Lives for Old Malls” Planning (May 1999), 20.

<sup>8</sup> Jennifer Evans-Cowley, Meeting the Big-Box Challenge: Planning, Design, and Regulatory Strategies (Chicago: American Planning Association, 2006), 2, 51; Kortney Stringer, “Wal-Mart's Surge Leaves Dead Stores Behind” Wall Street Journal September 15, 2004.

<sup>9</sup> Many studies contradict the positive effects that shopping centers bring to communities. Stacy Mitchell’s the Big Box Swindle is an example.

## 1. Developer Strategies

The most common action is to try to revitalize these sites by reinventing the retail center with a different image. Nationwide, there are numerous successful examples where developers reconnected the landscape to the consumers by reevaluating the massive scale of the existing mall structures. The Congress for New Urbanism published a study in 2002, Greyfields into Goldfields, that showcased twelve such projects where developers externalized the once inwardly focused, sociofugal retail spaces, creating a sociopetal environment, relating them more outwardly to the surrounding community. Developers have also incorporated new pedestrian-friendly circulation systems to augment the abundant expanses of parking lots found in many locations.

To continue to attract clientele, malls work on enhancing their profile by adding new retail, entertainment or even housing if strong demographics still exist for its market. Malls may also reposition themselves in the retail field as big-box stores with the help of some reconstruction.<sup>10</sup> The owners of the Mountain Farms Mall in Hadley, Massachusetts used this strategy when adjacent competition rendered the mall unviable. The mall was subdivided into multiple stores that had direct access to the parking lot.

Problems occur when market studies indicate that area demographics will no longer support these sites as large-scale retail centers. There are successful examples of vacant shopping malls and big-box stores being reused as municipal complexes, new town centers, mixed-use office complexes, office buildings, churches, gymnasiums, and schools. The shopping mall or big-box store usually sits vacant for several years until a

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<sup>10</sup> Andrew P. Cohen and Marty Borko, "The Community Mall" Urban Land (November/December 2002):100-105.

better use for the site becomes available or the property lapses into receivership. Often the end result in these instances is demolition.

## **2. Municipal Strategies**

Municipalities typically maintain a strong interest in seeing vacant shopping mall and big-box store sites reused. Research has shown that these idle properties often act as catalysts for other forms of community disinvestment.<sup>11</sup> These sites, regardless of ownership, become community liabilities. Municipalities frequently offer financial incentives or rezone the site to facilitate the redevelopment of the property. The shopping center site may be the largest available land parcel in the area for development. In addition, the site likely offers benefits such as prime location, existing public infrastructure, and good transportation access. These larger-scale sites may offer municipalities an opportunity to redefine an existing commercial corridor and, by doing so, revitalize the community.

### **b. School Facility Planning**

#### **i. Managing Growth**

Demographic changes that have influenced the proliferation of vacant shopping centers have paralleled demographic changes affecting school facility planning. The increase of students that resulted from the housing construction boom of the late 1990 and 2000s caused suburban and rural school districts to erect new schools or additions to meet the needs of a growing student population. The conversion of single-family homes

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<sup>11</sup> Bodzin et al, Greyfields Into Goldfields; Evans-Cowley, Meeting the Big-Box Challenge; David J. Smiley, ed. Sprawl and Public Space: Redressing the Mall (Washington, D.C.: National Endowment for the Arts; New York: Princeton Architectural Press, 2002).

into multi-family housing structures coupled with the influx of immigrant families has caused urban school districts to expand as well. Public school districts in certain areas of the nation have struggled to accommodate surges in student enrollment. Depending on the school district, there are state-mandated or recommended classroom size limits to maintain to ensure a quality learning environment for every student. Some schools simply cannot contain any more students, being at capacity. School districts typically face two alternatives when confronted with overcrowded schools: construct new schools or add to existing buildings. In both cases, finding space can be challenging.

Some school sites do not have the space to accommodate an addition. Finding affordable and available land to construct new schools upon can be difficult. The predominant practice of school facility construction encourages sprawling, one-story schools that sit on large tracts of land. More than half of the states maintain some form of acreage requirements or guidelines by educational level that work to uphold this practice. For example, Missouri required new elementary schools to be placed on at least 10 acres, middle schools 20 acres, and high schools 30 acres. In addition, Missouri requires an additional acre for every 100 students projected to be enrolled. A new high school for 1,500 students would necessitate available 45 acres of land!<sup>12</sup> For communities that are approaching or are at their build-out, finding developable land to meet these standards may be difficult. School districts also face competition from developers for land. Scarcity of land, in turn, drives up the cost to the school districts for purchasing a school site.

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<sup>12</sup> Janell Weihs, "State Acreage Policies," *IssueTrak*, (2003), available from [http://www.cefpi.org/pdf/state\\_guidelines.pdf](http://www.cefpi.org/pdf/state_guidelines.pdf); accessed January 18, 2008.

School districts, on average, spend 9% of their total budget for a high school on site purchase and development.<sup>13</sup>

**Table 1.1: New School Construction Costs**

	Educational Level	Median Cost (\$000's)	Median # Students	Median Size (sq. ft.)
Region 2: NJ, NY, PA	Elementary School	\$ 20,920	619	94,500
	Middle School	\$ 24,559	604	111,123
	High School	\$ 60,000	1400	340,000
Region 5: AL, FL, GA, MS	Elementary School	\$ 13,800	810	108,000
	Middle School	\$ 20,413	1,037	156,000
	High School	\$ 35,000	1,500	247,000
National Median	Elementary School	\$ 12,885	700	82,000
	Middle School	\$ 20,000	850	120,000
	High School	\$ 40,643	1,400	223,500

Source: *School Planning & Management 2008 Annual School Construction Report*

According to *School Planning and Management's* "2008 Annual School Construction Report," dollars spent on construction in 2007 bought less square feet of construction in 2007 than in previous years.<sup>14</sup> In other words, school construction costs keep increasing. Schools, in general, are expensive. Consider the following 2007 statistics: the U.S. median building cost for a new elementary school was \$12.9 million, for a middle school \$20.0 million, and for a high school \$40.6 million. As Figure 1.1 demonstrates, construction costs vary by area of the country due to market constraints on

<sup>13</sup> Joe Agron, "33<sup>rd</sup> Annual Official Education Construction Report" *American School & University* (May 2007), 34.

<sup>14</sup> Paul Abramson, "2008 Annual School Construction Report" *School Planning & Management* (February 2008), CR2.

the availability of construction materials and land. New school sites also cost the community in other ways since public utilities such roads, electric, and sewer need to be extended to the site and then maintained.

## **ii. Advocacy for Change**

Professional organizations and federal agencies have been working to influence the predominant pattern of school facility construction through advocacy and education. In 1997, the U.S. Department of Education created the National Clearinghouse for Educational Facilities (NCEF) to serve as a forum for educators, administrators, builders, and designers to learn about new ideas that would foster “safe, healthy, high performance schools.” The NCEF’s online resource center contains a comprehensive collection of informational material in various media, including a list of non-traditional site selection.<sup>15</sup> The National Trust for Historic Preservation (NTHP) advocates for the reduction of school sprawl through the reuse of existing, namely historic, schools. The NTHP’s influential 2000 report “Why Can’t Johnny Walk to School” cited local land use regulations and state acreage requirements as leading reasons that prevent schools from having a greater connection to the population it serves.<sup>16</sup>

The Council of Educational Facility Planners International (CEFPI), the leading professional school building association, removed acreage guidelines from its influential Guide for Planning Educational Facilities in 2004. The CEFPI endorses new policies that

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<sup>15</sup> National Clearinghouse for Educational Facilities, <http://www.edfacilities.org/index.cfm>

<sup>16</sup> Constance E. Beaumont and Elizabeth G. Pianca, Why Johnny Can't Walk to School: Historic Neighborhood Schools in the Age of Sprawl (Washington, DC: National Trust for Historic Preservation, 2002).

promote neighborhood based community schools.<sup>17</sup> The Environmental Protection Agency (EPA) affirmed the important relationship between growth management and educational facility planning through sponsorship of the 2004 publication Schools for Successful Communities: An Element of Smart Growth, jointly sponsored by (CEFPI).<sup>18</sup> The publication argues that the principles of smart growth can be applied to educational facility planning. It highlights state policies that can support smart growth and community-centered schools. Briefly these are:

- Promote school area safety
- Require information-sharing and coordinated planning
- Promote smart growth
- Coordinate and integrate planning
- Direct state funds to existing communities
- Fund aging schools
- Cut acreage standards
- Change grant criteria to encourage renovation
- Protect historic schools
- Fund joint use projects

In addition, the leading professional and trade publications, such as School Planning & Management, American School and University, District Administrator, and Educational Facility Planner, consistently highlight innovative design and planning solutions for school facility planning. Endorsement by these mainstream publications increases the likelihood that the field's best practices will be influenced

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<sup>17</sup> Council of Educational Facility Planners International, <http://www.cefpi.org/>

<sup>18</sup> Schools for Successful Communities: An Element of Smart Growth, (Scottsdale, AZ: Council of Educational Facility Planners International; Washington, D.C.: U.S. Environmental Protection Agency, Sep 2004).

### **C. Purpose of Research**

Metropolitan growth, school overcrowding, unavailable and unaffordable land, and a growing awareness of alternative educational facilities has created an environment that warrants exploration of non-traditional site options, such as vacant shopping centers. At least fourteen public schools in the United States operate in former commercial buildings. Little comprehensive research that would encourage interested parties to undertake these types of adaptive reuse projects exists. Only two of these examples have been well-documented. Articles that discuss one or more of these school projects mainly speak to design challenges and achievements. No research comparatively identifies these schools and studies them in the context of urban planning. Education professionals and planning practitioners would benefit from research on this topic that delves further into the working relationship between school planning, growth management and economic development.

In addition, research underscoring the flexibility of seemingly single-function buildings will show that options outside of demolition exist for large-scale commercial buildings. Furthering discussion on the importance of designing flexible-use spaces will help to positively influence community growth patterns. Vacant commercial sites adversely impact property values and aesthetic appeal of the surrounding area over time. Communities seeking to reduce underutilized commercial space and overcome overcrowded schools would benefit from research that can draw lessons from schools that successfully operate in former stores. An evaluation of these types of schools will attract attention to an alternative method for addressing community issues.

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **A. Introduction**

The subject of this thesis is the adaptive use of shopping malls and big box stores for public schools. There are few cases in the United States where this has occurred and even less documentation available to aid educational professionals and planning practitioners interested in undertaking this type of project. For this reason, the subject of this thesis needs to be explored from multiple angles in order to truly understand how this type of construction alternative could be considered a strategy for communities seeking to reduce underutilized commercial space and overcome overcrowded schools. This chapter explores topics related to the overall process of taking a former commercial retail structure and adapting it to a public school. The purpose is not only to place these school projects in the context of these topics but to identify key concepts that will be useful for developing case studies and comparative criteria regarding the fourteen schools.

The chapter is divided into four sections for organization. The first section focuses on topics related to commercial retail structures. It begins by briefly reviewing the history of suburban shopping centers to show how shopping centers have evolved into their several current forms. It then looks at the defining characteristics of these retail typologies to begin understanding the scale and context of these large-scale commercial structures. Finally it looks at the relationship between shopping center sites and the municipalities in which they are located.

The second section focuses on topics relating to school facility planning. It begins with general description of public school building and site characteristics with the aim of establishing characteristics that will later serve as a basis for comparison to commercial structures and sites. This section then identifies trends in the field of school facility planning to consider whether and how these school projects fit within this context.

The third section focuses on adaptive reuse. It establishes what it means and its associated benefits and challenges. This section should lead to concepts that will be important when comparing school projects. The fourth section considers school adaptive use projects. In particular, it looks at two well-documented examples of school districts that used vacant shopping malls to fill community needs for new schools. It will point out some general findings that will serve as a basis for comparison for other school projects.

## **B. Commercial Retail Structures**

### **a. Evolution of Suburban Shopping Center**

The International Council of Shopping Centers defines a shopping center as: “a group of retail and other commercial establishments that is planned, developed, owned and managed as a single property with on-site parking provided.”<sup>19</sup> The first modern shopping center is generally recognized as J.C. Nichols’ Country Club Plaza, which opened in 1923 in Kansas City, Missouri. Country Club Plaza’s popular concept was not widely imitated because the Great Depression and World War II stalled its spread across

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<sup>19</sup> International Council of Shopping Centers, “ICSC Shopping Center Definitions” (International Council of Shopping Centers: New York, 2004) cited in <http://www.icsc.org/srch/lib/SCDefinitions.php>

the United States.<sup>20</sup> While fewer large-scale shopping centers were built, small-scale commercial strip mall developments appeared during this era to service the growing amount of automobile travel. These early models were generally one-story brick buildings that contained three to five storefronts and set back just far enough from the street to provide parking for a single row of cars. Over the course of the twentieth century, these buildings would grow in depth and width and parking would expand from a small strip to a small parking lot.

Despite the steady growth of small, auto-oriented commercial strips by the late 1930s, most consumers generally shopped for groceries, clothing, and other household items at neighborhood stores or within the central business district (downtown). Most residents still lived in close proximity to the downtown or neighborhood store. In addition, people typically walked where they needed to go or they took a streetcar or bus because families usually only had one car. Shopping patterns began to shift in the post war era as a reflection of broad societal changes. The abundance of low-cost land; availability of low, federal mortgage rates; spread of the interstate highway system; growing use of the automobile; and mounting racial tensions impelled the middle-class to move their families to the suburbs.<sup>21</sup>

Southdale Center became the first climate-controlled shopping mall constructed in the United States. The mall was completed in 1956 in the Minneapolis suburb of Edina. The two-level mall contained seventy-two stores, which were primarily situated along

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<sup>20</sup> Kenneth T. Jackson, "All the World's a Mall: Reflections on the Social and Economic Consequences of the American Shopping Center," American Historical Review. Vol. 101, No. 4 (Oct 1996): 1113.

<sup>21</sup> Hanchett, "U.S. Tax Policy and the Shopping Center Boom of the 1950s and 1960;" Jackson, "All the World's a Mall."

wide, brightly-lit center corridor, and was anchored by two department stores. Patronage of suburban shopping centers like the Southdale Center slowly increased as residents became accustomed to the conveniences the modern shopping center offered in contrast to downtown storefronts: climate controlled indoor environments, free parking, longer hours, larger selections, perceived safety, and landscaped settings.<sup>22</sup> In contrast to today's highly privatized shopping centers, developers did much to highlight these spaces as community centers bringing civic, community and consumer life together.<sup>23</sup> Today there are over 1,500 shopping malls.<sup>24</sup>

Market analysts point to construction trends to show that 'lifestyle centers' or 'town centers' are replacing traditional mall models for new construction. Basically, they are open-air shopping malls that combine retail, housing, and entertainment as well as community spaces. Shopping malls such as these that claim to include community spaces have generated criticism since shopping malls by nature are not public spaces nor are they welcoming to all publics.<sup>25</sup> For many, this especially becomes troublesome as communities lose true public spaces. A frequent topic of discussion among academics

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<sup>22</sup> Jackson, "All the World's a Mall."

<sup>23</sup> Elizabeth Cohen, "From Town Center to Shopping Center: The Reconfiguration of Community Marketplaces in Postwar America," The American Historical Review. Vol. 101, No. 4. (Oct 1996).

<sup>24</sup> Michael Beyard et al., Ten Principles for Rethinking the Mall (Urban Land Institute: Washington D.C., 2006), iv.

<sup>25</sup> Cohen, "From Town Center to Shopping Center;" Michael Sorkin, Variations on a Theme Park: The New American City and the End of Public Space (New York: Hill and Wang, 1992).

and practitioners is how to legitimately restore the concept of civic community to the shopping center.<sup>26</sup>

**b. Modern Commercial Stores: Types and Design Characteristics**

To meet the broad demands of American consumer society, shopping centers have evolved into several types. The International Council of Shopping Centers (ICSC) has defined eight principal shopping center types: regional center, super-regional center, neighborhood center, community center, lifestyle center, power center, theme/festival center, and outlet center. The eight principal types are classified based on merchandise orientation and size of the facility (Figure 2.1). The ICSC asserts that these categories are “guidelines for understanding major differences between the basic types of shopping centers.”<sup>27</sup>

**Table 2.1: Shopping Center Types**

Type	Anchors	Median Size (sq.ft.)	Acreage
Neighborhood Center	Supermarket	30,000 - 150,000	3 to 15
Community Center	Discount Department Store	100,000 - 350,000	10 to 40
Lifestyle Center	Multi-plex Cinema	150,000 - 500,000	10 to 40
Power Center	Discount Department Store	250,000 - 600,000	25 to 80
Theme / Festival Center	Restaurant	80,000 - 250,000	5 to 20
Outlet Center	Manufacturers' Outlet Stores	50,000 - 400,000	10 to 50
Regional Center	Full-line Department Store	300,000 - 800,000	40 to 100
Super-Regional Mall	Full-line Department Store	800,000+	60 to 120

*Source: International Council of Shopping Centers, "ICSC Shopping Center Definitions"*

<sup>26</sup> Cohen, “From Town Center to Shopping Center;” Sorkin, Variations on a Theme Park; David J Smiley, ed. Sprawl and Public Space: Redressing the Mall (Washington, D.C.: National Endowment for the Arts; New York: Princeton Architectural Press, 2002).

<sup>27</sup> International Council of Shopping Centers, “ICSC Shopping Center Definitions.”

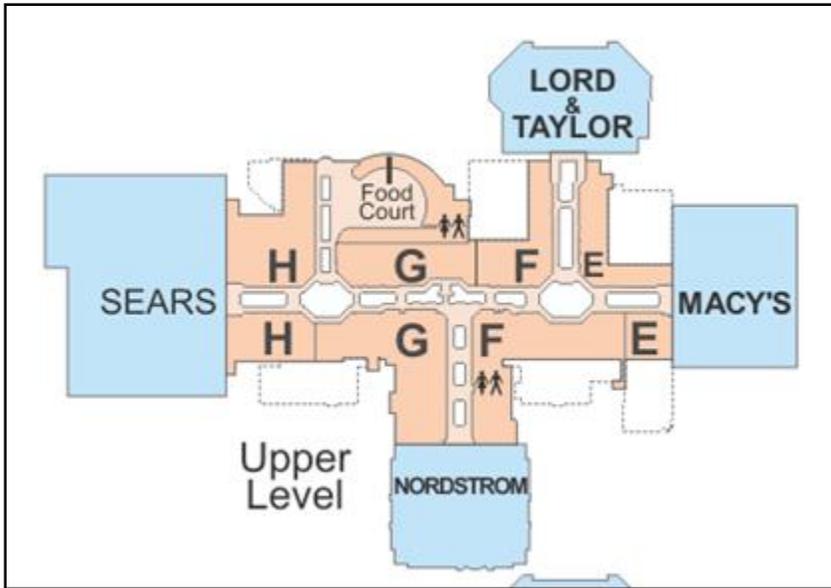
The ICSC does not place stand-alone big box stores into any of these categories since, as stand-alone facilities, they are not technically shopping centers. This thesis, though, will consider stand-alone big-box stores as one of the many retail types. These types of stores typically range from 20,000 to 260,000 square feet, making them about the size of the ICSC defined neighborhood center. In addition most types of shopping centers consist of a configuration of big-box shapes, which contain large footprints, high ceilings, post-and-beam structural systems, loading areas.<sup>28</sup>

Shopping malls are typically enclosed retail facilities. This type earns its name from the wide walkways that direct consumers through the large retail space. All retail activity faces these corridors. Shopping malls characteristically occupy anywhere from 300,000 to over 800,000 square feet. Their size is usually an indication of its age. The smaller the mall, the older the facility likely is. The ICSC does not acknowledge mall categories besides the regional and super-regional center types; but the retail industry does loosely categorize shopping malls by the size of entire facility, number of anchors, and merchandise selection.<sup>29</sup>

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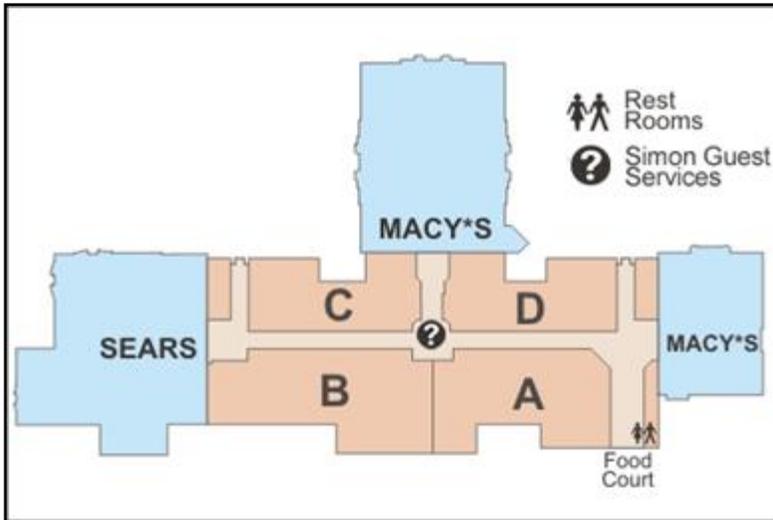
<sup>28</sup> Evans-Cowley, Meeting the Big-Box Challenge, 6.

<sup>29</sup> Sasha M. Pardy, "Malls a Dying Breed? Don't Bet on It." (March 26, 2008) available at Co-Star Group, <http://www.costar.com/retail/>; accessed April 1, 2008; Bill Hudnut, "What Do We Do With Dead and Dying Malls?" (Vol. IV No. 1) available at Urban Land Institute, [www.uli.org](http://www.uli.org) online; accessed January 27, 2008.



**Figure 2.1: 'A' Mall, Burlington Mall, Burlington Massachusetts**  
 Source: Simon Property Group Incorporated, <http://www.simon.com/findamall/>

'A' class malls are regional to super-regional malls. They are the largest of the traditional mall types and contain the widest variety of stores, which include upscale stores like Coach or Lacoste. They tend to be found in upper middle class communities as well as areas experiencing population growth. These malls are usually the newest or they have recently undergone renovation to ensure a contemporary style. 'B' class malls are smaller regional malls that do not contain as many upscale stores as 'A' class malls. 'B' class malls are usually older and smaller. They tend to be in locations that are less ideal such as more than a mile from an interstate exit or near communities struggling with demographic changes.



**Figure 2.2: ‘B’ Mall, Auburn Mall, Auburn, Massachusetts**

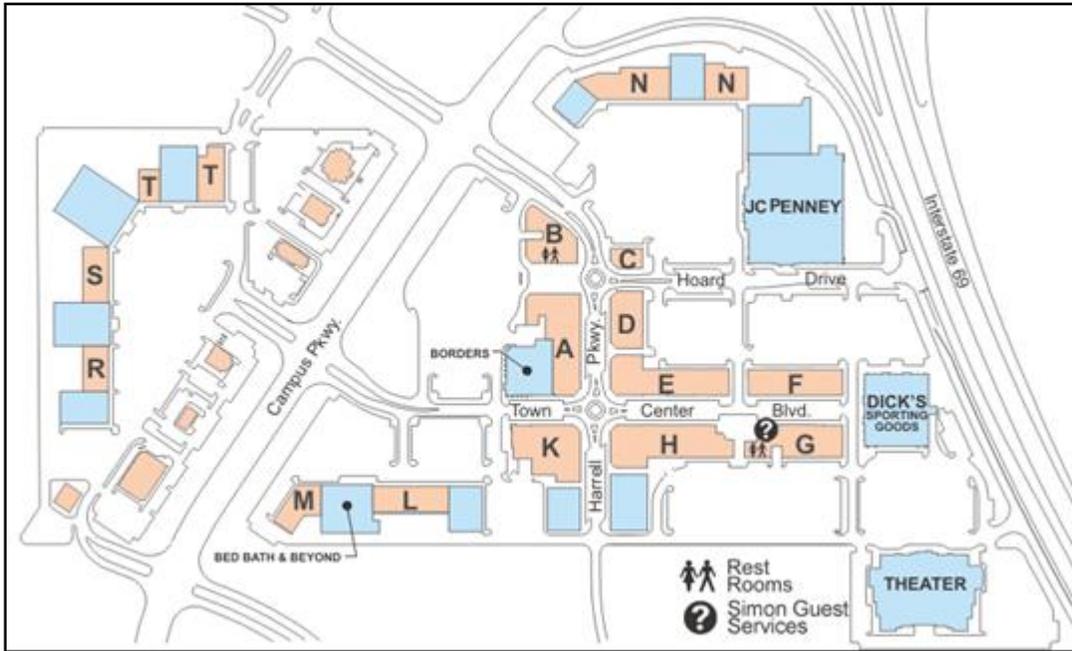
Source: Simon Property Group Incorporated, <http://www.simon.com/findamall/>

‘C’ class malls are the oldest and smallest of the mall classifications. They are either obsolete or are in a period of decline because they have not been able to keep up with competition from newer and bigger malls. Area demographics may have changed rendering the mall incompatible with the surrounding population. In many cases, ‘C’ class malls were the earliest shopping centers constructed. Therefore they tend to be located in established areas, often in first-ring suburbs of metropolitan areas, which are largely built-out.

As noted, open-air shopping malls have once again become in fashion, most as ‘lifestyle’ or ‘town centers’. The ICC reported last year that 144 open-air shopping centers were under development. Even older, enclosed shopping malls are reorienting their interior focused layout outwards, a process called ‘de-malling.’<sup>30</sup> These shopping centers are comparable to ‘A’ class malls, catering to an upscale consumer market. They

<sup>30</sup> Darrell Beach, “Inside Out,” Urban Land (Jan 2007): 66-72.

are typically located in rapidly developing areas, although some projects are redevelopments of obsolete retail property.



**Figure 2.3: ‘Town Center’: Hamilton Town Center, Noblesville, Indiana**  
Source: Simon Property Group Incorporated, <http://www.simon.com/findamall/>

‘Power centers’ are another form of commercial retail structure. Power centers consist of a contiguous linear row of small specialty stores anchored by three or more specialized product stores such as Barnes and Nobles, Home Depot, and Linens and Things, also termed as ‘category killers.’<sup>31</sup> Power centers lack the interior corridors found in the inner focusing ‘ABC’ malls. Power centers look like a conglomeration of big-box stores.

### **c. Commercial Developments and Local Governments**

Municipalities generally restrict the location of commercial uses to commercial or industrial zoning districts. Because the sheer size of retail structures has grown, many communities have zoning ordinances that contain two or more zoning districts for the

<sup>31</sup> Evans-Cowley, *Meeting the Big-Box Challenge*, 7, 17.

purpose of directing large-scale commercial uses to areas suitable to handling related impacts. Large-scale commercial developments are not necessarily undesired in a community. They reputedly increase the tax base, thus lifting some of the tax burden off local residents.<sup>32</sup> They provide residents better access to desired goods. Along both of these lines, they keep tax dollars in the community.

The best way for a community to avoid being inconvenienced with a vacant commercial building for several years is to have design and lease policies in place that undercut this likelihood. Evans-Cowley's Meeting the Big-Box Challenge, focuses on how communities can use planning, design, and regulatory strategies to mitigate potential adverse impacts brought by large-scale commercial developments. Local governments can require architectural elements like dormers, awnings, cupolas, and decorative windows to be placed on the generic box-like structures. They can insist upon building materials of higher quality. These design specifications will help to ensure that big-box stores can be reused.

Local governments can also create ordinances that prevent companies from placing lease restrictions on commercial buildings.<sup>33</sup> Greyfields into Goldfields points out that two of several hurdles to redeveloping shopping center sites for commercial uses comes from “encumbrances by store leases” and “fragmented ownership with covenants and restrictions.”<sup>34</sup> For example, it is not uncommon for a company, such as a national

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<sup>32</sup> This claim has been refuted by several studies.

<sup>33</sup> Evans-Cowley, Meeting the Big-Box Challenge; Frank Jossi, “Rewrapping the Big Box,” Planning (Aug 1998): 26-29.

<sup>34</sup> Bodzin et al., Greyfields into Goldfields, 10.

grocer, to place a restriction on its store that prevents a competing grocery store company from leasing the building after it vacates it. By furthering the discussion on design possibilities and flexibility in the built form, additional scholarship may contribute to circumventing the continued proliferation of vacant shopping centers.

### **C. Educational Facilities**

#### **a. Public Schools: Building and Site Characteristics**

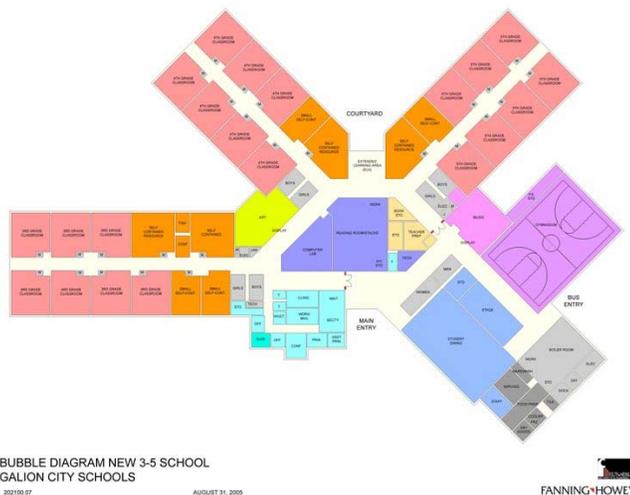
Public schools have also evolved in form over the past century from one-room school houses in the country or multi-story buildings in the city to sprawling one-story buildings on large tracts of land set far back from the road. Because it is more cost-effective to develop fewer, but larger schools, many schools are often located a considerable distance from the neighborhoods where students reside. As a result, most students can no longer walk to school and have to be bused in, incurring substantial transportation costs for the school district. Critics of predominant school facility planning practices claim that these types of schools are basically isolated fortresses with no real connection to the community.<sup>35</sup>

States have individual school building and site design guidelines, and school districts often have even more specific guidelines. Even so, the programmatic function of public schools remains consistent nationwide. Per educational level, schools typically include a specified number of classrooms, one or more gymnasiums, a cafeteria, media center, administrative and guidance offices, health service-related rooms, and

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<sup>35</sup> Steve Donnelly, "Toolkit for Tomorrow's Schools: Ways of Bringing Growth Management and School Planning Together," *Planning* (Oct 2003): 43-46; Philip Langdon, "Stopping School Sprawl," *Planning* (May 2000): 10-11.

maintenance facilities. Depending on the intended educational level and community needs, additional features will be added. According to the “2008 Annual School Construction Report” sponsored by School Planning and Management, the median size for a new elementary school building is 82,000 square feet, for a middle school is 120,000 square feet, and for a high school 223,500 square feet.<sup>36</sup> Schools typically sit on large tracts of land to ensure that adequate space is provided for all of these program functions, including outdoor recreation activities and parking lots. Large sites are also desired by school districts because for security and safety reasons: they help to isolate the school from potential incompatible land uses. School districts typically look for sites that contain a minimum of ten acres for elementary schools, twenty acres for middle schools and thirty acres for high schools.



**Figure 2.4: School Layout**  
 Source: Galion City School District, Galion, Ohio

While there are a range of basic design configurations for a school, layouts are typically organized around a central administrative hub, located at the main entrance to

<sup>36</sup> Abramson, “2008 Annual School Construction Report,” CR5.

the school. Schools usually contain one entrance, but several exits. Entrances are minimal to ensure the safety of students inside the building.<sup>37</sup> Building exits make certain students can leave the building quickly and orderly in case of an emergency.

Classrooms radiate from this central administrative hub typically in the form of wings with wide, long linear corridors. This is done for wayfinding purposes and to maximize the amount of daylight into the classrooms.<sup>38</sup> A school's façade characteristically contains a large number of windows, making it a defining aesthetic feature of schools. Numerous studies have demonstrated that daylight enhances academic performance.<sup>39</sup> For this reason, windows become just as important to classrooms as seats.

Many defining characteristics of schools (building size, site acreage, building setback, and configuration) interestingly reflect some of the same characteristics as small regional malls, discount department stores, and supermarkets. (Table 2.2). A school's pattern of fenestration acts as one of the essential characteristic that sets these two designs apart.

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<sup>37</sup> School building security has become even more important to school facility design since the occurrence of violent school incidents in the late 1990s.

<sup>38</sup> Amy S. Weisser, "Little Red School House, What Now? Two Centuries of American Public School Architecture" Journal of Planning History v5 n3 (2006): 196-217.

<sup>39</sup> Victoria Bergsagel, "Designing for Achievement: Processes, Principles and Patterns," Educational Facility Planner v42 n2/3 (2007): 3-6; Olivia Hale, "Improving Performance," American School and University, (Oct 2002): 32-35; Robbin M. Rittner-Heir, "Color and Light in Learning," School Planning and Management (Feb 2002): 57-58, 60-61; Lisa Heschong and Carey Knecht, "Daylighting Makes a Difference," Educational Facility Planner, v37 n2 (2002): 5-14.

**Table 2.2: Comparison: School Size to Shopping Center Size**

	School		Retail	
Median Size (sq.ft.)	Elementary School	65,998 - 123,000	30,000 - 150,000	Supermarket
	Middle School	90,000 - 212,000	100,000 - 350,000	Discount Department Store
	High School	147,000 - 425,000	300,000 - 800,000	Regional Mall
Acreage	Elementary School	10 to 20	3 to 15	Supermarket
	Middle School	20 to 35	10 to 40	Discount Department Store
	High School	30 to 50	40 to 100	Regional Mall

Source: *School Planning & Management* "2008 Annual School Construction Report,"  
International Council of Shopping Centers, "ICSC Shopping Center Definitions"

### **b. Trends in School Facility Planning**

A look at what is being constructed indicates that school facility planning is still focused on traditional practices; however, a review of literature shows plenty of examples that are influencing the role of schools in the community and the nature of learning. This literature sees the future of school facility planning in "mixed use, collaboration, and urbanity."<sup>40</sup> Judith P. Hoskens, a well-known educational facility planner, reported to Urban Land that she believes a "significant shift toward smart growth" has occurred over the last fifteen years.<sup>41</sup> School administrators are finding that the characteristics that formerly defined schools are no longer useful models. Breaking away from the current reality of homogenous school districts or schools will be "critically important to the next

<sup>40</sup> Langdon, "Stopping School Sprawl, 11.

<sup>41</sup> Bruce Beck and Jack Skelley, "Smart Growth Schools," Urban Land (Oct. 2004), 93.

generation of school planning.”<sup>42</sup> Trends specifically influencing the field of school facility planning are discussed below.

**Smaller, Neighborhood-based Schools:** Research, including studies by the U.S. Department of Education, shows that smaller schools provide the best educational experiences. Small schools tend to be located closer to the populations they serve, which increases participation in educational activities, increases available transportation options, and saves the district the bus transportation costs. Students and parents are more likely to participate in after school events since getting to school becomes less cumbersome.<sup>43</sup> Students may be able to walk or bike to school—physical activity that will help reduce the incidence of obesity. Studies have also demonstrated that smaller, neighborhood based schools help to increase community investment in the neighborhood by being a focal point for engaging the surrounding population.<sup>44</sup>

**Small Classroom Sizes:** States like Florida have recently passed laws that set limits on the number of students per classroom by educational level. Actions like this are being done in an effort to ensure that student educations are not harmed because the students reside in a high growth or poor school district.

**Form and Function as a Teaching Aid:** Standard mechanical and structural components of school buildings, innovative school designs and unique school sites offer

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<sup>42</sup> Donnelly, “Toolkit for Tomorrow's Schools,” 7.

<sup>43</sup> New Schools for Older Neighborhoods, produced by the Local Government Commission and National Association of Realtors (2002), 3.

<sup>44</sup> New Schools for Older Neighborhoods, 3. Jonathan Weiss, Public Schools and Economic Development: What Research Shows (KnowledgeWorks Foundation: Cincinnati, 2004), 28-29.

opportunities to educate students on modern technology and environmental responsibility. Exposed HVAC systems or security sensors can teach students how buildings function. A small compact school site can provoke discussion on the relationship between development, land-use and resource conservation.<sup>45</sup>

**Building for Flexibility:** The programmatic elements of school education are constantly in flux as are student demographics. For this reason, buildings should be well-suited to accommodate change. Scott Johnson, a partner at architecture firm Johnson Fain, believes that “building systems such as light, air, structure, and architectural surfaces need to be sufficiently generic to support a room’s reconstruction into various groupings of students studying a range of topics.”<sup>46</sup> Thus school design can support future building flexibility.

**Coordination:** Most literature on school facility planning trends emphasizes the importance of coordination between school administrators, developers, and local government officials to achieve successful schools. School districts typically operate independently from local governments in many areas of the country; however, there is a growing number of communities where school districts and local governments work collaboratively. States like New Jersey and Florida passed mandates that require school siting to be a coordinated effort and that communities explore co-locating community facilities where possible.

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<sup>45</sup> Schools for Successful Communities: An Element of Smart Growth, (Scottsdale, AZ: Council of Educational Facility Planners International; Washington, D.C.: U.S. Environmental Protection Agency, Sep 2004)

<sup>46</sup> Scott Johnson, “What a School Can Be,” Urban Land (October 2004), 50.

**Co-location and Joint-use:** Public schools are constructed with public funds much like other public buildings; yet they are often not available to the whole public.<sup>47</sup> If public money is going to be spent on a construction project, it makes sense to get the most public use out of that facility. Some school districts, because of state mandates or practical needs, actively work with local governments to construct projects that can be jointly used by students and the general public. This approach is known as co-location and the end result is referred to as joint-use facility. Several articles indicate how co-locating needed community facilities such as a library, athletic facilities, performing arts centers, and gathering spaces served to obviate additional expensive community projects while preserving undeveloped land.<sup>48</sup> One article noted how a joint-use library was the main reason the public passed a bond referendum for a new school. In this case, the public was able to see how they would personally benefit from the expenditure of public dollars on school children.<sup>49</sup> Overall, a good public school project will go beyond serving the needs of the immediate student-family population and consider those of the surrounding community as well.<sup>50</sup>

**Community Revitalization:** Neighborhood-based schools, joint-use school/community facilities, and alternative school sites can also be used as a tool for economic development. Several studies have provided examples where new schools have

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<sup>47</sup> Jim Romeo, "The ABCs of Mixed Use Schools," Planning (July 2004), 6.

<sup>48</sup> Donnelly, "Toolkit for Tomorrow's Schools;" Langdon, "Stopping School Sprawl;" Ellen Shoshkes, "Smarter Planning for Schools and Communities," PAS Memo (Feb 1, 2002).

<sup>49</sup> Andrea Neighbours, "What's Mine is Yours and Yours and Yours," Planning, (Aug. 2001), 10.

<sup>50</sup> Schools for Successful Communities, 16.

actually acted as catalysts for community revitalization.<sup>51</sup> Several practitioners have profiled the Los Angeles Unified School District's role in helping with community redevelopment. In most these cases, the new schools were the first large-scale public or private investment that had occurred in these blighted areas throughout the district in decades. Their presence established a perception of safety and security in the area, which demonstrated that the area could indeed handle further residential, commercial, or and public investment. In addition, these studies indicate that commercial establishments benefit from being in proximity to schools. Depending on the type of school, it can bring anywhere from 250 to 2,500 students, parents, and staff to an area. One of the cited studies found a relationship between a decrease in retail sales and the closing of a local high school.<sup>52</sup>

**Alternative Sites:** School districts in established areas or areas experiencing high population growth often do not have the land or time to construct traditional schools. Therefore some school districts nationwide have turned to building new schools on compact sites or retrofitting existing structures for educational facilities. The Gonzalo and Felicitas Mendez Fundamental School in Santa Ana, California is one of the most commonly cited examples of a school occupying an unusual compact site. The school was constructed atop a parking garage behind a shopping mall.<sup>53</sup>

#### **D. Adaptive Reuse**

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<sup>51</sup> Johnson, "What a School Can Be;" Sam Newberg, "The Link Between Schools and Land Value," Urban Land (Oct. 2004); David G. Roberts and Michael Sabel, "Redevelop with Schools in Mind," Urban Land (Oct. 2004); Weiss, Public Schools and Economic Development.

<sup>52</sup> Schools for Successful Communities, 13.

<sup>53</sup> New Schools for Older Neighborhoods, 16.

Buildings have historically been designed for specific purposes—office complexes as office complexes, factories as factories, houses as houses. Many of these structures no longer serve their intended, original uses. Houses contain office or retail space. Former factories host residential units. Commercial buildings house churches. For a host of reasons (economic, social, cultural and political), the purpose of the structure as intended may become obsolete. When a building loses its original, intended use, it is typically either demolished, abandoned or adapted for another use.

Adaptive reuse is the term used to describe the process of adapting an existing building for a non-traditional use. This process always involves one or more of the “R’s”: rehabilitate, retrofit, redevelop, and revitalize. Rehabilitation refers to making a structure livable or habitable again.<sup>54</sup> This is different from renovation, which refers to the remodeling of an existing structure to make it compatible for the current demands of life. Retrofitting refers to the addition of new technology or features to an older structure. Redevelopment involves a balance between economics and preservation, with economic viability weighing more. Redevelopment is reusing a large-parcel or a collection of smaller parcels of land in a way that makes them economically viable again. This process may involve demolition of the site, rehabilitation of existing structures, or a combination of the two.

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<sup>54</sup> The Secretary’s Standards define rehabilitation as “the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.” Kay D. Weeks and Anne E. Grimmer, The Secretary of the Interior’s Standards for the Treatment of Historic Properties (National Park Service: Washington D.C. 1995).

Adaptive reuse is championed by historic preservationist because the action saves the historic character of the structure from demolition by reusing it for another purpose. The federal government boosted this preservation method with the passage of the Tax Reform Act of 1976, which initially provided a 25% tax credit for income-producing properties. Before 1976, the Internal Revenue Code encouraged the demolition of older structures by allowing demolition costs to count for tax deductions. The Tax Reform Act of 1986 reduced this credit to 20% for certified historic structures but added a 10% tax credit for the rehabilitation of non-historic, non-residential buildings built before 1936. Preservationists are lobbying the LEED system to provide more credits for building reuse as a way to encourage this building option.<sup>55</sup>

Adaptive reuse has evolved from a preservation tool to a real estate tool. A report by Hamilton Morton states, “The rehabilitation credits channeled more than \$1.5 billion in private investment into the rehabilitation of 23,300 historic properties between 1976 and 1986.”<sup>56</sup> Projects like Fanieul Hall Market Place in the late 1970s were especially important because they demonstrated that large obsolete sites could once again be viable spaces. The adaptive reuse trend has led to the redevelopment of brownfields—former industrial sites—into retail, office, warehousing, and housing (if environmental contamination issues can be effectively mitigated).

Adaptive reuse projects are not limited solely to historic structures. Successful greyfield redevelopments serve as excellent examples of how structures originally

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<sup>55</sup> Keenan Hughes, “Reuse versus Tear Down,” Planning (January 2008), 42.

<sup>56</sup> Hamilton Morton Jr., “Update on U.S. Rehabilitation Tax Credits and the Transfer of Development Rights” in the Economics of Conservation an International Scientific Committee Symposium sponsored by ICOMOS (1993).

designed for specific purposes may be adapted for alternative uses. Projects across the United States exhibit a range of possibilities for former warehouses, factories, schools, multi-storied commercial buildings, office complexes, and single-story suburban retail facilities.

**a. Sustainability**

“The greenest building is the one that is already built.”<sup>57</sup> Carl Elefante, a director of sustainable design at Quinn Evans Architects, made this statement to emphasize that the best way to be sustainable is to reuse existing structures. “Reuse vs. Teardown” in the January 2008 edition of Planning provided several statistics to support Elefante’s claim. Research by the National Trust claims that a “50,000 square foot commercial buildings represents the same amount of fuel energy as 14.6 million car miles.” Research by the EPA argues that “construction and demolition debris accounts for about sixty percent of non-industrial waste generation, with most coming from demolition.” The article also notes that a new research initiative by the National Trust for Historic Preservation on the embodied energy of existing buildings will shed light on how much waste is generated from demolition and new construction. The last major U.S. study on this topic was done in 1976.<sup>58</sup> In addition, reuse of an existing building also teaches the public about environmental responsibility.

**b. Community Benefits**

Municipal governments promote adaptive reuse and site redevelopment for several reasons. Many reasons are financial. Vacancies reduce area property values. They

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<sup>57</sup> Hughes, “Reuse versus Tear Down,” 41.

<sup>58</sup> Hughes, “Reuse versus Tear Down,” 41, 42.

also indicate blight and suggest municipal disinvestment. In many cases, adaptive reuse utilizes existing public infrastructure investments. New public infrastructure costs taxpayers money and typically generates environmental impacts. Successful projects exhibit stability and can act as a catalyst for increased private investment in the area.<sup>59</sup>

They can also enhance the area's quality of life. Many of these vacant buildings may be associated with the community's history or have unique architectural features. An interesting redevelopment can positively augment the character of an area. It may provide the commercial strip or whole community with a sense of place. This is particularly relevant for towns that have developed without a traditional downtown.

Municipalities target sites for redevelopment by assembling property, posting Request for Proposals (RFP), offering tax breaks, assuring expedited permitting, passing reuse friendly ordinances, waiving fees, or simply by pledging public support. Municipal support is crucial to attracting investors. Municipal support can dictate the success or failure of a project as investors will feel more comfortable in a supportive community.<sup>60</sup> The federal government claims that the federal historic preservation tax incentives program is one of its "most successful and cost-effective community revitalization strategies."<sup>61</sup>

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<sup>59</sup> Donovan Rypkema, The Economics of Historic Preservation, (Washington D.C.: National Trust for Historic Preservation, 1994) 24-90; Patricia L. Kirk, "Changing Places," Urban Land (November/December 2007), 101.

<sup>60</sup> Bodzin et al., Greyfield into Goldfields, 28-29.

<sup>61</sup> Historic Preservation Tax Incentives, National Park Service, <http://www.nps.gov/history/hps/tps/tax/index.htm>.

### **c. Benefits and Challenges of Reuse**

Adaptive reuse can provide substantial financial benefits to developers who chose this construction alternative. Material and labor costs can be reduced since the cladding, foundation, and structural support system already exist. Existing physical attributes can also reduce the time it takes to occupy the building. Time is money for many who undertake this venture. For developers, the time factor may give their project the needed edge to make it financially feasible in a competitive market. Any redeeming aesthetic qualities of the building or its location can have a similar effect on the project's potential.<sup>62</sup> For school officials, this provides immediate space. New construction on undeveloped sites triggers a host of compliance issues that need to be met. According to Patricia Kirk, "reusing even a portion of an original building usually eliminates discretionary approvals and environmental review required for new construction, allowing developers to simply comply with existing building codes."<sup>63</sup> For example, many buildings that are reused have grandfathered benefits such as building setbacks, building height, and zoning.

Adaptive reuse can also present many challenges to developers who chose this construction alternative. Adaptive reuse in some cases may not be more cost-effective than new construction. Studies show that dollar for dollar construction costs are quite comparable. Once demolition and waste disposal costs are factored in adaptive reuse may be more financially reasonable.<sup>64</sup> Outdated city zoning ordinances may entail a lengthy

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<sup>62</sup> Kirk, "Changing Places," 102.

<sup>63</sup> Kirk, "Changing Places," 101.

<sup>64</sup> Hughes, "Reuse versus Tear Down," 41.

permitting process for proposed projects with non-traditional uses. Many cities have removed such barriers and actively work to move a redevelopment project along. Municipal support is crucial in easing any community opposition to the proposed project.

The structure may contain unique features that require expert knowledge. This adds to project costs, which may grow even higher if the building's original construction plans have been lost or unattainable. Several architects interviewed by Patricia Kirk claimed this happens in more cases than one would think.<sup>65</sup> When working with an older structure, especially if no plans can be found, developers run the risk of confronting contamination issues like asbestos, structural defects, and faulty mechanical systems. Retrofitting the structure to make it compliant for daily use may require extensive work and financial investment. For example skylights may need to be added to draw daylight into areas deep within the building or windows may need to be replaced because of energy deficiencies. Projects seeking to qualify for federal or state historic preservation tax credits will have to be particularly careful when making the structure ADA accessible—too much alteration to the historic fabric will negate eligibility.

In summary, the most optimal opportunities for adaptive reuse occur in communities seeking to strengthen current assets, have little to no space for growth, or in progressive communities seeking to maintain a competitive edge. Many studies exist on the benefits and challenges of adapting historic buildings for reuse, but there is less information available on the reuse of modern structures. This may be due to the perception that much of what has been built in the last 50 years is not worth saving or

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<sup>65</sup> Kirk, "Changing Places," 101.

will not withstand the wear and tear of time.<sup>66</sup> An architect who has worked on big-box adaptive use projects with the SchenkelSchultz design firm noted that shopping center developers typically construct commercial buildings for a ten-year life cycle. The ability of the building's structure to withstand renovation and use for additional years needs to be factored into the building analysis. For this reason, a consultant team who has worked on adaptive reuse projects and a financier who understands them are crucial to making sure the benefits of the project become rewards and the challenges do not become risks.

## **E. Adaptive Reuse School Projects**

### **a. Schools and Adaptive Reuse**

Adaptive reuse of vacant buildings for educational purposes is not a new phenomenon. Private schools have long exploited this opportunity, especially in the form of old homes. Private school and charter schools, unencumbered by many state and district regulations, have helped to push the envelope with alternative school designs. Public school districts have typically shied away from looking at this option because of state mandated acreage standards and negative public opinion; however, demographic factors have forced school districts to look at alternative options for meeting students needs.

The benefits and challenges derived from adaptive reuse projects that the above section spoke of apply to schools as well. According to the SchenkelShultz architectural firm important design issues specific to schools include: “organizational method of teaching, adaptability, school image, maximizing daylight, acoustics, technology, safety, community access and reconfiguring the site with efficient traffic flow for parent and bus

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<sup>66</sup> Hughes, “Reuse versus Tear Down,” 42.

drop.”<sup>67</sup> A good benefit-cost analysis will determine the amount of money the school district would need to spend to make a structure compatible as a school.

### **b. Mall-to-School Projects**

Two school districts bought former malls and turned them into a total of four separate schools. These projects are fairly well-documented and provide a basis for studying additional store-to-school projects. The Cartwright Elementary School District bought the Maryvale Mall in the Maryvale community of Phoenix, Arizona in 1997 and converted it into a 1,000 student middle school and a 600 student elementary school. The project also included transitional space for other district schools being renovated, a gym in the mall’s former skating rink, an auditorium in the mall’s former movie theater complex, a supply warehouse in the mall’s former bowling alley, and playgrounds and athletic fields from the mall’s former grounds and parking lots. The Pomona Unified School District bought the Plaza Azteca Mall in Pomona California in 1999 and converted it into a three-school 1,800 elementary student village and a 400 student magnet high school. The large size and open plan within the buildings actually made reuse suitable by allowing for flexibility in design.<sup>68</sup>

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<sup>67</sup> Staff, “School Assumes a Former Big Box Space,” found at SchoolFacilities.com (October 12, 2004).

<sup>68</sup> Stephen Spector, Creating Schools and Strengthening Communities through Adaptive Reuse (National Clearinghouse for Educational Facilities, Washington, D.C. , Aug 2003), <http://66.117.48.53/pubs/adaptiveuse.pdf>; Ron Nyren, “Lessons from Schools” Urban Land (Aug. 2007); Homsy, “New Lives for Old Malls; Robbin Rittner-Heir, “Get the Rehab Habit,” School Planning & Management (June 2001); Lisa Reagan et al. “Building Community: a Post-Occupancy Look at the Maryvale Mall Adaptive Reuse Project” IssueTrak (Feb 2006) <http://www.cefpi.org/pdf/issuetrak0206.pdf>; Peggy Bresnick Kendler, “RE-Construction” District Administration (June 2007), <http://www.districtadministration.com/>.

Both school districts can be characterized as urban, poor, and Hispanic. They experienced demographic shifts that facilitated the conversion of single-family homes to multiple-family homes and generated an increased number of students. Faced with surging school enrollments yet having no undeveloped or affordable land in sight, the school districts found these malls to be a viable and affordable option. The Cartwright School District paid \$9 million for 300,000 square feet of space (although this price had been reduced from \$17 million by the benevolent developer) and the Pomona School District paid \$6.4 million for 550,000. The two main benefits for this facility option were money and time. It took the Cartwright School District only one year to open the first school. The project manager for the Pomona project estimated that this facility option shaved at least six months off the project.<sup>69</sup>

Both projects cited floor and roof challenges.<sup>70</sup> The malls had been renovated throughout the years but the quality of work had not been consistent. Therefore, new floors and roofs had to be installed to make the structural elements uniform. Both projects had to find creative ways to maximize the amount of daylight into the building. This was particularly challenging for the Maryvale Mall project because the former owner placed a restrictive covenant on the building that forbade cutting windows into the façade. The designers of the Maryvale school got creative with the building's layout and turned the mall's long corridors into friendly streetscapes, complete with signs. Skylights help

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<sup>69</sup> Morgan Jones, "In Housing a School, Unused Commercial Space Sells Itself" School Construction News (Jan/Feb 2001) available at [www.SchoolConstructionNews.com](http://www.SchoolConstructionNews.com)

<sup>70</sup> Jones, "In Housing a School, Unused Commercial Space Sells Itself;" Kendler, "RE-Construction."

illuminate these “streets.” Overall, both mall-to-school projects resulted in a unique design that made the schools stand-out, adding to favorable community image.

These projects are the most cited two mall-to-school examples partly because they were such large projects, but also because they have been lauded as the catalyst for the revitalization of their communities. According to Warner, the area is now home to the spring training center for the Milwaukee Brewers, has a new \$10 million library and community center, and has seen a reinterest in new housing construction.<sup>71</sup> Netday, a national education non-profit wrote that the Plaza Azteca project has “invested more than \$30 million in new development and operational funding with the hope of bringing stability and economic growth to the community of Pomona.”<sup>72</sup>

The Maryvale Mall and Plaza Azteca projects demonstrate that shopping malls or big box stores can be reused as schools. Existing information on these two projects provides useful information on the conversion of the building, and how these two projects helped spur a revitalization of their respective communities. Educational professionals and planning practitioners would benefit, though, from additional research on this topic that delves further into the working relationship between school planning, growth management and economic development.

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<sup>71</sup> Reagan et al, “Building Community: a Post-Occupancy Look at the Maryvale Mall Adaptive Reuse Project.”

<sup>72</sup> Staff, “Pomona Unified School District Constructs a Village at Indian Hill,” webpage article at NetDay (November 2001), accessed April 11, 2007, [http://www.netday.org/article\\_pomona\\_village.htm](http://www.netday.org/article_pomona_village.htm)

## **F. Conclusion**

This account of literature informs this study by providing a sound contextual basis for further analysis on the adaptive reuse of vacant shopping center into schools. In addition, it points out that there is much more to be learned from the process of converting a shopping center into a school. A more coherent synthesis of this school facility option, then, should be a useful addition to the field of planning.

## **CHAPTER III**

### **RESEARCH DESCRIPTION**

#### **A. Research Goals and Objectives**

##### **a. Research Purpose**

The purpose of this thesis is to identify cases where commercial retail buildings have been converted into schools and to conduct histories on three select case studies. By researching examples of retail conversion and assessing project history, this thesis hopes to identify common factors and develop conclusions about relationships between school planning, growth management, and economic development. The final product of this thesis is to develop a strong knowledge base that can be used to guide local governments interested in undertaking this type of initiative. This study also demonstrates the importance of planning and building for future flexibility by underscoring the value of reusing the built form.

##### **b. Overview**

A detailed analysis of three school conversion projects is the foundation for the thesis research. The selection of these projects was mainly based upon the existence of similar characteristics found from a brief examination of fourteen identified school projects and host communities, described in Chapter IV. The three selected projects were profiled by synthesizing data compiled from multiple sources, including phone interviews. The project profiles were then organized by a common framework and comparatively evaluated. This strategy, known as comparative case study research, is

commonly used to generate in-depth information on select examples rather than generic information on several examples in a limited time frame.<sup>73</sup>

### **c. Research Questions, Objectives, and Claims**

Four research questions drove the case study analysis of these three school projects: what factors influenced the decision to undertake this type of school project, how is school facility planning practiced in this school district, what steps were taken to augment the image of the building, and what factors will influence the future use of this particular building as a school? Specific objectives designed to aid the identification of these factors are as follows:

1. To understand the trajectory of suburban shopping centers over the past century and the influence of current retail trends.
  - How have retail trends changed over the course of the century?
  - What preventative measures can a local government use to avoid being left with a vacant or abandoned store by a property owner?
  - What factors have led to obsolete commercial retail structures and sites?
  - What are the development alternatives for defunct shopping center sites?
  - What tools do local governments use to revitalize commercial sites?
2. To understand the triangular relationship between school planning, growth management and economic development.
  - What demographic factors influenced the rehabilitation of the structure?
  - How much do local governments and school districts coordinate strategy?
  - What are some current trends in the field of school planning and how do they affect land use and growth management?
  - How do projects reflect school district or municipal growth management strategies?
  - How does the structure fit into future school district and municipal plans?
3. To understand the role of school image on the future use of the building.
  - What programmatic and architectural elements are essential for a commercial retail store's redevelopment into a school facility?
  - What types of community outreach did the school district conduct to bolster support for the project?

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<sup>73</sup> Robert K. Yin, *Case Study Research: Design and Methods*, 3<sup>rd</sup> Edition, (Sage Publications: Thousand Oaks, CA, 2003).

- What advantages and challenges has the school posed to daily education?
  - What external benefits were generated from this school project?
4. To understand the implications of planning and building for flexible-use spaces.
- What architectural and structural factors are critical to the flexible reuse of big-box stores for schools with changing enrollments?
  - Are there certain design and/or structural characteristics that can easily be incorporated into common commercial building practices that will allow for future building use flexibility?
  - What implications might this research have for the design of large shopping center projects?

The research sought to address the following claims, which were derived from a thorough review of literature related to school planning, growth management, economic development, and retail trends; first-hand experience in the field of planning; and information on media articles about of this type of school project.

1. Shopping malls and big-box stores can effectively be redeveloped as schools.
2. Vacant commercial retail buildings and overextended schools are community problems; thus, the use of vacant commercial retail buildings for educational facilities can help address community problems.
3. The adaptive reuse of vacant commercial retail buildings for educational facilities is a fiscally responsible and a sustainable growth management initiative for school districts and local governments.
4. These types of school projects will typically occur in metropolitan regions where the cost of land is increasing and large tracts of land are becoming scarce.

#### **d. Key Research Outcomes**

The intention of this study is to generate research that will be of use to planning practitioners and education professionals as well as to increase overall awareness about this new alternative facility construction option. The following will be key outcomes from the research:

- Matrix of all known school projects that were completed, attempted or formally discussed.

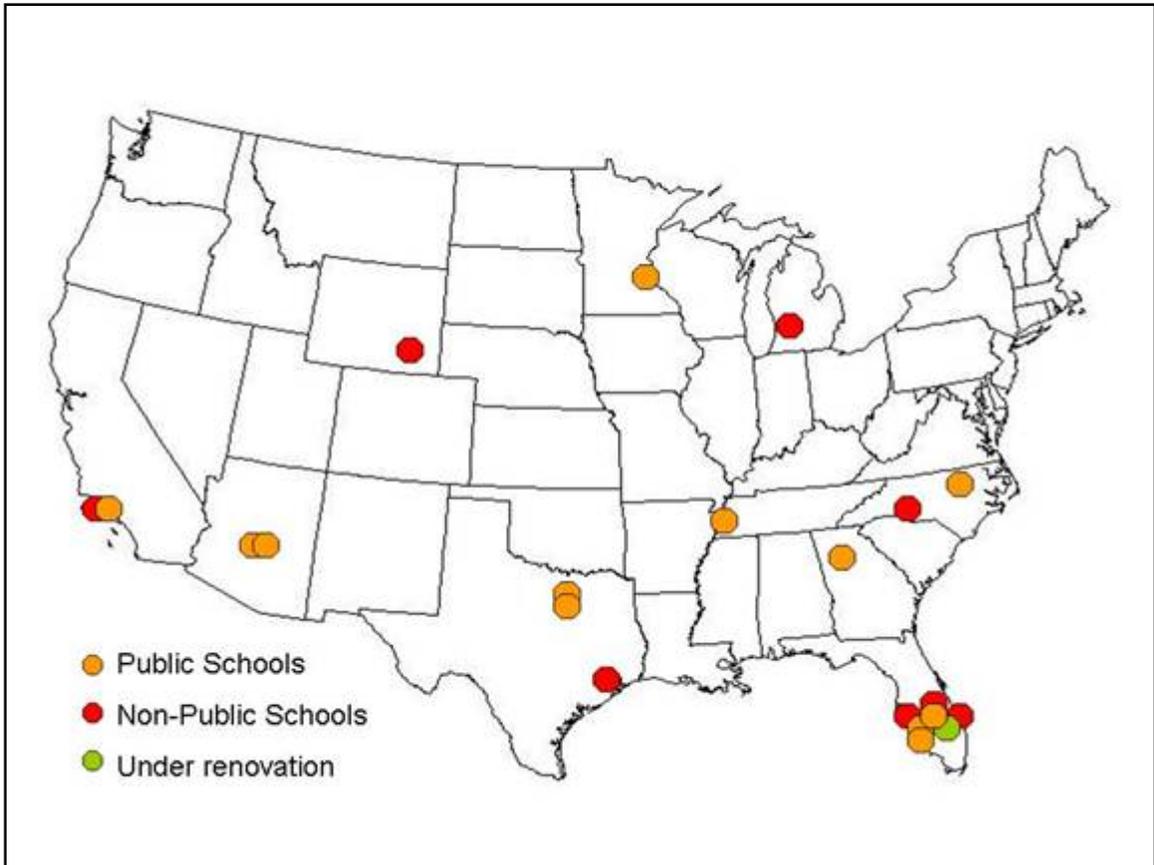
- Matrix of all known school projects.
- Matrix of all known school projects that resulted in public schools.
- Case studies of three school projects and subsequent comparative analysis.

These matrices will be given to staff at the National Clearinghouse for Educational Facilities to add to their resource collection of non-traditional school sites and facilities. In addition, sections from this thesis may eventually be revised and published as articles in appropriate magazines and journals. Finally, the study will offer lessons that could aid municipalities and school districts in the future reuse of these sites.

## **B. Case Study Development**

### **a. Identification of Public School Projects.**

The first research project goal was to identify cases where former retail stores had been converted into traditional public schools in the United States. This was achieved through three interrelated steps: web-based research, selected interviews, and email correspondence. Articles found through the National Clearinghouse for Educational Facilities' online resource collection identified 5 school projects. Investigation into these five school projects led to several more examples as did interviews with school facility planners affiliated with these projects. Research using online databases further supplemented this developing list of schools. The most useful database was Newsbank since it provided comprehensive access to local newspapers across the United States as well as to regional, state, and national news sources. The University of Massachusetts, unfortunately, does not maintain a license to Newsbank; however, some close associates were able to provide me access to Newsbank through their university or public library memberships. Email correspondence was performed to ensure that the school projects were seen to fruition or that the schools were still in use.



**Figure 3.1: Map of Identified School Projects**

Source: Map created by Jayne Bernhard, April 2008.

These methods of research generated a list of fourteen schools operated by public school districts, eight charter or private schools, and one store under rehabilitation for a school.<sup>74</sup> Although charter schools are types of public schools in most states and their existence can often be attributed to overcrowding within public school districts, these school projects were not included in this study. Analysis of these cases would not have led to an accurate determination of factors common to store-to-school projects because the characteristics of charter schools are highly variable, nor would the cases fully illuminate the relationship between school planning, growth management, and economic development. A list of all school projects, including the location, type of school, and type

<sup>74</sup> This is the number of schools as of February 12, 2008.

of structure can be found in Appendix A. The Appendix also contains a list of three initiatives—formally discussed and attempted—to acquire a store for a school. These cases never materialized because of public opinion, permitting issues, or financial reasons (Appendix B). The particulars of these cases would be of interest to future research because they would further illuminate the working relationship between school planning, growth management, and economic development.

**Table 3.1: Public Schools Operating Out of Former Stores**

	School	Town	State	Metro	School District	Facility Type
1	Mesquite Academy	Mesquite	TX	Dallas	Mequite Independent	Big-Box Store
2	Wakefield HS, North Campus	Wake Forest	NC	Raleigh	Wake Forest County	Big-Box Store
3	Tarver Elementary School	Phoneix	AZ	Phoneix	Cartwright Elementary	Shopping Mall
4	Atkinson Middle School	Phoneix	AZ	Phoneix	Cartwright Elementary	Shopping Mall
5	Village Academy High School	Pomona	CA	Los Angeles	Ponoma Unified	Shopping Mall
6	Pueblo Elementary School	Pomona	CA	Los Angeles	Ponoma Unified	Shopping Mall
7	Burnsville HS, Senior Campus	Burnsville	MN	Minneapolis	Burnsville-Eagan-Savage	Shopping Mall
8	DeKalb Alternative HS	Dekalb	GA	Atlanta	Dekalb County	Big-Box Store
9	Special Programs Center	Plano	TX	Dallas	Plano Independent	Big-Box Store
10	Rayma C. Page Elementary	Fort Myers	FL	Fort Myers	Lee County	Big-Box Store
11	Treeline Elementary	Lehigh Acres	FL	Fort Myers	Lee County	Big-Box Store
12	Zenith School & Alternative high school program center	Kissimmee	FL	Orlando	Osceloa County	Big-Box Store
13	Highland Oaks Primary	Memphis	TN	Memphis	Shelby County	Big-Box Store
14	Pedro Guerrero Elementary	Mesa	AZ	Phoneix	Mesa Public	Big-Box Store

## **b. Case Study Selection**

The goal of comparative case study analysis is best achieved by keeping as many variables as possible constant and varying only (when possible) the ones of interest. A general survey based on population, demographic, housing and spatial data for each school project community was conducted to begin determining basic similarities and differences common to these twelve projects. Information collected for the survey was based on data sets from the United States Census Bureau: the 1990 U.S. Census, 2000 U.S. Census, 2006 American Community Survey, and 2006 Population Estimates. The availability of these data sets was important to this research since it was crucial to see the longitudinal effect of these variables. The following elements were used as a basis of comparison:

- Percent change in population
- Population density
- Change in family size
- Percent minority population and percent change in minority population
- Change in median household income
- Housing units and percent change in housing units
- Age of structure
- Type of housing and percent change in housing type
- Housing tenure and change in housing tenure
- Percent change in school enrollment (1<sup>st</sup> grade through 12<sup>th</sup> grade)
- Proximity to major roads.
- Distance to town center (if relevant)
- Zoning classification

Cases that demonstrated the most similar characteristics were extracted from the original list of fourteen schools. Data and findings from this survey can be found in Chapter IV.

School district boundaries do not necessarily reflect county or municipal boundaries. They rarely change over time and can be thought of as fixed. By contrast, municipal boundaries can change annually because of land annexations. Only five of the

school projects fell in school districts whose boundaries matched U.S. Census Bureau geographic designations (Lee County, Osceola County, Shelby County, and Wake County). To normalize all study samples, the U.S. Census Bureau geography that most closely aligned with the school district was selected (Table 3.2). While every attempt was made to keep the units of geography consistent, it was beyond the capabilities of this study to determine changes in municipal boundaries over time.

**Table 3.2: School Projects & U.S. Census Bureau Geography Types**

	School	Geography Type
1	Mesquite Academy	Place--Mesquite, TX
2	Wakefield HS, North Campus	County--Wake County, NC
3	Pedro Guerrero Elementary	Census Tracts--Maricopa County, AZ
4	Tarver Elementary School	Census Tracts--Maricopa County, AZ
5	Atkinson Middle School	Census Tracts--Maricopa County, AZ
6	Village Academy High School	Place--Pomona, CA
7	Pueblo Elementary School	Place--Pomona, CA
8	Burnsville Senior HS, Senior Campus	Place--Burnsville, MN & Savage, MN
9	DeKalb Alternative HS	County--DeKalb County, GA
10	Special Programs Center	Place--Plano, TX
11	Rayma C. Page Elementary	County--Lee County, FL
12	Treeline Elementary	County--Lee County, FL
13	Zenith School	County--Osceola County, FL
14	Highland Oaks Primary	County--Shelby County, TN

### **c. Criteria for Case Study Selection**

The public school project survey, thoroughly discussed in Chapter IV, helped to identify school projects that shared the most characteristics with one another and determine outliers. All identified school projects from Group 2 (Lee County, Osceola County, Wake County, and Plano City) as well as Burnsville City/Savage City from Group 3 were selected as potential case study candidates. Although Burnsville consistently demonstrated low to moderate growth from 1990 to 2000 under all variables,

further analysis into the history of Burnsville indicated that the city matched the explosive growth of the Group 2 geographies during the previous two decades. In addition, I decided to include this school project as a potential case study candidate because the school's location in the far, upper Midwest would expand the geographic reaches of this study. Overall, the selection process narrowed the list to six case study candidates:

- Burnsville High School Senior Campus, Burnsville, Minnesota
- Wakefield High School North Campus, Wake Forest, North Carolina
- Rayma C. Page Elementary School, Fort Myers, Florida
- Treeline Elementary School, Lehigh Acres Florida
- Zenith School, Kissimmee, Florida
- Special Programs Center, Plano, Texas

The list of six schools was narrowed further based on the following criteria: similar population and demographic characteristics, relative permanency of school location, traditional student population, proximity to a major divided highway, and availability of existing information.<sup>75</sup> The Burnsville High School Senior Campus, Rayma C. Page Elementary School, and Wakefield High School 9<sup>th</sup> Grade Center exhibited all these criteria. They are also dissimilar in a way that gives variety to the study due to variations in type of commercial structure, years operating in a former commercial structure, and their location in the United States.

The Special Programs Center in Plano, Texas and Zenith School in Kissimmee, Florida were not chosen for further analysis for two main reasons: they were not traditional public schools and there was little existing information. The Special Programs Center would be a good school to include in a more expansive study because the school

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<sup>75</sup> The Tarver/Atkinson schools in the Cartwright School District and Village Academy/Pueblo schools in the Pomona School District consistently shared similar characteristics and are already well-documented cases.

district has also converted two other grocery stores into school district facilities. One is an administration center and the other is a warehouse (it was temporarily used as a school until asbestos problems surfaced). The school district, thus, seems to be using vacant commercial structures as a strategy for accommodating an expanding school population in its rapidly developing community.

Lee County School District had two schools in the running that shared similar characteristics. Treeline Elementary School in unincorporated Lee County was eliminated because the Rayma C. Page Elementary school was located along a major divided highway and in close proximity to the intersection of this highway and a major county road. In addition, the area appeared to be less fully developed, making the school project appear more advantageous for considering the ramifications of placing a school in a developing commercial corridor.

In sum, the Burnsville High School Senior Campus, Wakefield High School North Campus, and Rayma C. Page Elementary School were selected as the final case study candidates.

#### **d. Case Study Analysis**

The three selected school projects are individually profiled in Chapters V, VI, and VII and then comparatively analyzed in Chapter VIII. The development of these profiles and analysis chapters resulted from a step-by-step process, which is discussed in the following four sections.

##### **i. Literature Review**

The literature review, broadly defined as Chapters I and II, places these school projects in the context of broad societal movements and explores topics related to the

overall process of acquiring a former commercial retail structure and adapting it to a public school. This review established factors to consider for formulating case studies on the three selected school projects. These key factors presented below in Table 3.3.

**Table 3.3: Factors of Consideration for Case Study Development and Analysis**

Zoning and future land use plans	School district/local government relationship.
Area commercial retail trends	Benefits and challenges of adaptive reuse
Factors influencing population growth.	Characteristics of a model school building and site
Growth management methods: school district and local government	School facility planning trends
Reuse as a sustainable growth management practice	Community acceptance of the school
Community dialogue about school project	Schools as catalysts for economic development.
Authority of school district	Relationship of the school building and site to surrounding area

## ii. Case Study Framework

These key factors, along with necessary background information on the school district, local community, and region, have helped to develop a framework by which each school project would be profiled and subsequently analyzed. The case study framework provided a standardized method for presenting information on each school and facilitated the eventual cross-comparison of these three selected projects. The framework involves the following outline structure:

1. Introduction
2. Background Information
  - a. Regional Context
  - b. School District Context
    - i. Growth Management Strategies
    - ii. School Facility Planning

- c. Community Context
- d. Area Context
- 3. School Project
  - a. Pre-Occupancy
    - i. Existing School/Existing Conditions
    - ii. Site Identification Process: Presented Advantages & Disadvantages
    - iii. Site Acquisition Process: Negotiations and Approval
    - iv. Permitting Process: Working Relationship with Local Government
    - v. Building Conversion: Store to School
      - 1. Reconstruction of Space
      - 2. Image Repositioning
      - 3. Function
      - 4. Project Publicity
  - b. Post-Occupancy
    - i. General Community Response
    - ii. Advantages for Daily Education
    - iii. Challenges to Daily Education
    - iv. Suitability of Building and Site for School
    - v. Benefit to Surrounding Area
  - c. Future of School Building and Site
    - i. School District Perspective
    - ii. Town Perspective
- 4. Conclusion

### **iii. Data Collection**

Data from multiple sources was compiled and synthesized to form the case study profiles. This involved three data collection steps: background research, telephone interviews, and follow-up correspondence through telephone and email. Background research was conducted by obtaining information from local newspaper articles, magazine articles, school district plans and reports, local zoning ordinances and community plans, United States Census Bureau data, and various types of maps. Visits to these locations were not attempted, though this would have enhanced the analysis of these projects.

Telephone interviews with key individuals from the local governments, school districts, and architectural firms were the defining elements of the data collection phase

and subsequent development of the case study. This format had an advantage over an impersonal written or emailed survey because it offered the potential for greater dialogue on the intricacies of the school project. In addition, it imparted a greater sense of value to the interviewee for his or her contribution to the research.

Four interview questionnaires were constructed based on the identification of four pertinent interview groups: local planning department staff members, school principals, school district administrators (school facility planners, growth management specialists, project managers, and staff lawyers), and associates from the architecture firms. Interview questions were developed based on key concepts and points of consideration derived from the literature review. Some of the interview questions or variations of the question could be found on each questionnaire. The questionnaire also contained different questions depending on the intended interview group. The four questionnaires and all survey materials can be found in Appendix C. Because the degree of professional specialty ranged from school district to school district or planning department to planning department, the questionnaire that targeted school officials was at times divided (or joined with one of the other three forms) and sent separately to the appropriate parties. Basic questions, though, always stayed the same. The standardization of questions as well as the defined interview groups ensured a level of consistency for the development of the case studies. This consistency helped to guarantee that the three case studies could be comparatively analyzed more reliably.

Potential interviewees were identified based on background research into the school project or from referrals. After they were identified, the potential interviewees were telephoned and asked to participate in a to a telephone interview at a later date. If

the individual agreed, two documents were sent to the participant: a cover letter that explained the research project and how information derived from the interview would be incorporated into the study and the set of interview questions. Telephone interviews took approximately thirty minutes and were transcribed. The interviews occurred over a one-month period. Follow-up interviews were conducted by telephone or email. Interview participants were sent a draft of the related case study prior to its final submittal to ensure the proper usage of their comments and accuracy of information. A total of twelve individuals were interviewed for this research study.

**Table 3.4: Number of Interviews by School Project**

Burnsville High School Senior Campus	Rayma C. Page Elementary School	Wakefield High School North Campus
2	6	4

#### iv. Comparative Matrix

Interview responses and pertinent background information were placed into several matrices, following the case study framework, to organize the data and to facilitate comparison across the three school projects. These matrices can be found in Chapter VIII.

**Table 3.5: Example of Comparative Matrix**

School	BHS Senior Campus	Page Elementary School	WHS North Campus
Type of School			
Type of Structure			
Year Structure Built			

## **C. Research Delimitations and Limitations**

### **a. Delimitations**

This thesis is wholly focused on the planning process—school facility planning and municipal planning. The research includes fundamental discussions of shopping mall, big-box store, and school designs only to enhance overall understanding of the suitability of a commercial retail structure and site for a school. It is not the intention of this study to assess the quality of the school's design; however, the research takes the stance that the quality of facility design is a factor that influences the acceptance of the building as a school. In addition, it discusses design as it relates to factors that influenced the selection of the building and site for a school. Value-added judgments about the selected school projects were reported as indicated from interview participants.

### **b. Limitations**

Time and resources limited the number of school projects this research study was able to fully profile to three schools. The same case study framework could be applied to each of the additional eleven public schools as well as to schools not operated by public school districts. A study undertaking such a task would likely be the size of a dissertation; nonetheless, it would further enhance our understanding of factors that influence school districts to undertake this type of school project as well as how the outcomes influence the future of these types of schools. The three selected school projects would have benefited from site visits, but a lack of financial resources and time prohibited this option. Finally, the case studies would have benefited from additional interviews. Some of the identified potential interview candidates did not return phone calls or return email

solicitations. In addition, some of the key individuals needed for these interviews no longer worked for the school district, local government, or architectural firm.

#### **D. Conclusion**

This chapter clearly outlines the basis for this research. In addition, it outlines the methodology by which the three case studies were chosen and by which they are to be analyzed. The next chapter (Chapter IV) presents the findings from the school project survey. The following three chapters contain the case studies of the three individual school projects—the heart of the thesis. In Chapters V, VI, VII, the school projects will be profiled according to the organizing framework, questions, and data collection steps introduced in this chapter. Chapter VIII takes this framework and uses it to comparatively analyze the information presented in each of the case studies. Based on the findings from the comparative analysis in Chapter VIII, the last chapter of this research study concluded with a reassessment of the original research question, claims, and objective.

**CHAPTER IV**  
**SURVEY OF PUBLIC SCHOOL PROJECTS**

**A. Introduction**

Eleven public school districts in the United States turned twelve former shopping malls or big-box stores into schools. These projects resulted in a total of fourteen individual schools. The main purpose of the public school project survey is to assess each school project community by the same variables held constant over a set duration. By presenting the findings from this assessment comparatively, basic similarities and differences common to these twelve projects will begin to emerge. School projects that demonstrate the most similar characteristics will be grouped together. This grouping will help determine which school projects will be selected as case studies for further analysis since the goal of comparative case study analysis is best achieved by keeping as many variables as possible constant and varying only (when possible) the ones of interest.

**B. Demographic Data Collection and Analysis**

**a. Population**

**Table 4.1: Total Population & Percent Change in Population**

Geography	1990	2000	% change (1990-2000)	2006	% change (2000-2006)	Total % change (1990-2006)
United States	248,709,873	281,421,906	13.2%	299,398,485	6.4%	20.4%
Lee County, FL	335,113	440,888	31.6%	571,344	29.6%	70.5%
Osceola County, FL	107,728	172,493	60.1%	244,045	41.5%	126.5%
DeKalb County, GA	545,837	665,865	22.0%	723,602	8.7%	32.6%
Wake County, NC	423,380	627,846	48.3%	786,522	25.3%	85.8%
Shelby County, TN	826,330	897,472	8.6%	911,438	1.6%	10.3%
Pomona city, CA	131,723	149,644	13.6%	153,032	2.3%	16.2%

**Table 4.1: Total Population & Percent Change in Population, Continued**

Burnsville city, MN	51,288	60,148	17.3%	59,321	-1.4%	15.7%
Savage city, MN	9,906	21,184	113.9%	27,292	28.8%	175.5%
Mesquite city, TX	101,484	124,578	22.8%	137,653	10.5%	35.6%
Plano city, TX	128,679	222,301	72.8%	266,021	19.7%	106.7%
Cartwright SD, AZ	98,436	130,138	32.2%	132,466	1.8%	34.6%
Mesa SD, AZ	343,143	442,540	29.0%	516,976	16.8%	50.7%

Sources: 1990 U.S. Census SF3, 2000 U.S. Census SF3, 2006 Population Estimates

The total population of the United States increased an estimated 20.4% from 1990 to 2006. All but three of the profiled communities experienced rates of population growth higher than 20.4%. Of these communities, Plano, Savage, Wake County, Osceola County, and Lee County experienced very high rates of population growth at 70% or more.

#### b. Average Household Size and Average Family Size

**Table 4.2: Average Household Size**

Geography	1990	2000	2006
United States	2.63	2.59	2.61
Lee County, Florida	2.35	2.31	2.28
Osceola County, Florida	2.68	2.79	2.69
DeKalb County, Georgia	2.57	2.62	2.65
Wake County, North Carolina	2.46	2.51	2.58
Shelby County, Tennessee	2.65	2.60	2.60
Pomona city, California	3.52	3.82	4.04
Burnsville city, Minnesota	2.67	2.53	2.50
Savage city, Minnesota	3.04	3.10	
Mesquite city, Texas	2.81	2.82	2.99
Plano city, Texas	2.89	2.73	2.81
Cartwright School District	3.14	3.70	4.13
Mesa School District	2.62	2.63	2.80

Sources: U.S. Census 1990 SF1, U.S. Census 2000 SF1, 2006 American Community Survey

The average household size in the United States was 2.59 people per household in 2000 and 2.61 in 2006. Most of the profiled communities had average household sizes that fell close to the national average. Lee County's average household size was much lower at

2.31 people per household in 2000 and 2.28 in 2006. This lower-than-average number may be attributed to Lee County’s high percentage of residents who are 65 years old and over. In 2000, 25.6% of Lee County residents were 65 years old and over while 12.4% of United States residents were 65 years old and over. The average household size in Pomona city and the Cartwright School District far exceeded the United States’ 2000 and 2006 average household size by almost 1.5 more residents in 2006.

**Table 4.3: Average Family Size**

Geography	1990	2000
United States	3.16	3.14
Lee County, Florida	2.74	2.73
Osceola County, Florida	3.07	3.18
DeKalb County, Georgia	3.12	3.20
Wake County, North Carolina	3.01	3.06
Shelby County, Tennessee	3.22	3.18
Pomona city, California	3.96	4.22
Burnsville city, Minnesota	3.14	3.07
Savage city, Minnesota	3.31	3.38
Mesquite city, Texas	3.23	3.27
Plano city, Texas	3.25	3.18
Cartwright	3.52	4.01
Mesa	3.16	3.17

*Sources: U.S Census 1990 SF1, U.S Census 2000 SF1*

The average family size in the United States was 3.14 people per family in 2000. Most of the profiled communities had average family sizes that fell close to the national average. Lee County’s average family size was much lower at 2.73 people per family for the same reasons as hypothesized above. The average family size in Pomona city and the Cartwright School District, once again, far exceeded the United States’ 2000 and 2006 average family size.

**c. Median Household Income**

**Table 4.4: Median Household Income**

Geography	1989	1999
United States	\$ 30,056	\$ 41,994
Lee County, Florida	\$ 28,448	\$ 40,319
Osceola County, Florida	\$ 27,260	\$ 38,214
DeKalb County, Georgia	\$ 35,721	\$ 49,117
Wake County, North Carolina	\$ 36,222	\$ 54,988
Shelby County, Tennessee	\$ 27,132	\$ 39,593
Pomona city, California	\$ 32,132	\$ 40,021
Burnsville city, Minnesota	\$ 43,620	\$ 57,965
Savage city, Minnesota	\$ 45,579	\$ 75,097
Mesquite city, Texas	\$ 35,934	\$ 50,424
Plano city, Texas	\$ 53,905	\$ 78,722
Cartwright School District	\$ 27,991	\$ 35,161
Mesa School District	\$ 30,617	\$ 45,517

*Sources: U.S Census 1990 SF3, U.S Census 2000 SF3, 2006 American Community Survey*

The United States median household income in 1999 was \$41,994. Most of the profiled communities had median household incomes that fell close to this amount. Median household income in the Cartwright School District was noticeably lower than the national median while Savage city and Plano city was much higher.

**d. School Enrollment**

**Table 4.5: School Enrollment: Elementary through High School**

Geography	1990	2000	% change (1990-2000)	2006	% change (2000-2006)	Total % change (1990-2006)
United States	42,566,788	50,034,592	17.5%	49,757,424	-0.6%	16.9%
Lee County, Florida	42,600	57,839	35.8%	74,826	29.4%	75.6%
Osceola County, Florida	17,705	32,439	83.2%	41,664	28.4%	135.3%
DeKalb County, Georgia	85,654	109,631	28.0%	122,010	11.3%	42.4%
Wake County, North Carolina	62,961	103,220	63.9%	128,348	24.3%	103.9%
Shelby County, Tennessee	148,665	175,292	17.9%	166,929	-4.8%	12.3%
Pomona city, California	27,802	35,697	28.4%	31,451	-11.9%	13.1%
Burnsville city, Minnesota	9,036	10,979	21.5%			
Savage city, Minnesota	1,694	4,315	154.7%			
Mesquite city, Texas	19,512	26,295	34.8%	27,853	5.9%	42.7%
Plano city, Texas	24,718	40,959	65.7%	48,429	18.2%	95.9%
Cartwright School District	21,241	30,637	44.2%	30,490	-0.5%	43.5%
Mesa School District	60,622	76,797	26.7%	89,341	16.3%	47.4%

*Sources: U.S Census 1990 SF3, U.S Census 2000 SF3, 2006 American Community Survey*

All but two of the profiled communities encountered high increases in student enrollment from 1990 to 2006. Percent change in student enrollment was the highest in Lee County, Osceola County, Wake County, Savage City, and Plano City—communities that also experienced high population growth during this time period. Pomona city only experienced 13.6% increase in population from 1990 to 2000, yet the change in the number of students enrolled in school increased by 28.4% during this time period.

e. Population by Race

**Table 4.6: Population by Race**

Geography		% White	% Hispanic	% Black	% Asian
<b>United States</b>					
	1990	75.8%	8.8%	11.8%	2.8%
	2000	69.1%	12.5%	12.0%	3.6%
	2006	66.2%	14.8%	12.2%	4.3%
<b>Lee County, Florida</b>					
	1990	88.4%	4.4%	6.4%	0.5%
	2000	81.9%	9.5%	6.3%	0.7%
	2006	74.3%	16.1%	7.2%	1.2%
<b>Osceola County, Florida</b>					
	1990	81.1%	11.9%	5.3%	1.4%
	2000	59.8%	29.4%	6.5%	2.1%
	2006	46.7%	39.9%	9.1%	2.8%
<b>DeKalb County, Georgia</b>					
	1990	52.2%	2.7%	42.1%	2.9%
	2000	32.3%	7.7%	53.7%	3.9%
	2006	30.4%	9.6%	54.7%	4.0%
<b>Wake County, North Carolina</b>					
	1990	76.0%	1.2%	20.6%	1.9%
	2000	69.9%	5.4%	19.4%	3.3%
	2006	65.5%	8.0%	20.0%	4.4%
<b>Shelby County, Tennessee</b>					
	1990	54.6%	0.8%	43.5%	0.9%
	2000	46.3%	2.5%	48.3%	1.7%
	2006	41.4%	3.8%	51.3%	2.2%
<b>Pomona city, California</b>					
	1990	28.5%	50.6%	13.9%	6.5%
	2000	16.8%	64.5%	9.0%	7.1%
	2006	16.1%	70.4%	5.7%	5.9%
<b>Burnsville city, Minnesota</b>					
	1990	94.2%	1.4%	1.8%	2.4%
	2000	86.7%	3.0%	3.5%	3.4%
	2006				
<b>Savage city, Minnesota</b>					
	1990	95.6%	0.9%	1.1%	2.4%
	2000	89.9%	1.8%	1.2%	5.2%
	2006				
<b>Mesquite city, Texas</b>					
	1990	82.3%	8.6%	5.9%	2.6%
	2000	65.5%	15.4%	13.1%	3.7%
	2006	50.1%	25.8%	17.7%	4.6%
<b>Plano city, Texas</b>					
	1990	85.7%	6.1%	4.0%	3.9%
	2000	72.6%	10.1%	4.9%	10.1%
	2006	63.4%	14.4%	6.0%	14.7%

**Table 4.6: Population by Race, Continued**

Geography		% White	% Hispanic	% Black	% Asian
<b>Cartwright School District</b>					
	1990	62.2%	27.1%	7.6%	1.7%
	2000	26.0%	63.4%	6.5%	1.1%
	2006	14.7%	75.6%	5.9%	0.9%
<b>Mesa School District</b>					
	1990	85.9%	10.2%	1.6%	1.3%
	2000	73.7%	19.3%	2.2%	1.5%
	2006	64.4%	27.7%	2.2%	1.9%

Sources: U.S Census 1990 SF3, U.S Census 2000 SF3, 2006 American Community Survey

Similar to demographic trends shaping the United States as a whole, the profiled communities are becoming more racially diverse (white, Hispanic, black, and Asian residents). Every profiled community experienced a decrease in the number of white residents and an increase in the number of Hispanic residents from 1990 to 2006. In Osceola County, Dekalb County, Pomona city, Mesquite city, Plano city, Cartwright School District, and Mesa School District, these changes have been drastic. Dekalb County, Shelby County and Mesquite City were the only communities to see the percentage of black residents increase from 1990 to 2006. All communities saw the percentage of Asian residents increase—Plano city saw the highest percent gain from 3.9% in 1990 to 14.7% in 2006.

## f. Housing Units

**Table 4.7: Number of Housing Units by Decade & Percent Change**

Geography	1990	2000	% change (1990-2000)	2006	% change (2000-2006)	Total % change (1990-2006)
United States	102,263,678	115,904,641	13.3%	126,311,823	9.0%	23.5%
Lee County, FL	189,051	245,405	29.8%	341,117	39.0%	80.4%
Osceola County, FL	47,959	72,293	50.7%	109,889	52.0%	129.1%
DeKalb County, GA	231,520	261,231	12.8%	301,568	15.4%	30.3%
Wake County, NC	177,146	258,953	46.2%	325,712	25.8%	83.9%
Shelby County, TN	327,796	362,954	10.7%	394,211	8.6%	20.3%
Pomona city, CA	38,466	39,620	3.0%	39,094	-1.3%	1.6%
Burnsville city, MN	20,244	24,259	19.8%			
Savage city, MN	3,395	7,009	106.5%			
Mesquite city, TX	39,251	46,411	18.2%	50,030	7.8%	27.5%
Plano city, TX	47,386	86,107	81.7%	99,433	15.5%	109.8%
Cartwright SD, AZ	35,535	36,554	2.9%	34,034	-6.9%	-4.2%
Mesa SD, AZ	168,267	199,125	18.3%	209,234	5.1%	24.3%

*Sources: U.S Census 1990 SF3, U.S Census 2000 SF3, 2006 American Community Survey*

All profiled communities saw some increase in the number of housing units from 1990 to 2000. Pomona City and Cartwright School District actually lost housing units from 2000 to 2006. Lee County, Osceola County, Wake County, Savage City and Plano City saw the greatest percent gain in housing units from 1990 to 2006. Comparison to Figure 4.1 (% Change in Population) draws out additional findings. For most profiled communities, percent change in population reflects the percent change in housing units. In Pomona city, Cartwright School District, and Mesa School District there is a negative correlation between population growth and percent change in housing units. Population in Pomona city grew by 16.2% from 1990 to 2006 (Table 4.1) while the city only saw a 1.6% increase in its number of housing units (Table 4.7). Population within the Cartwright School District grew by 34.6% during this period, but the number of housing units

decreased by 4.2%. Population within the Mesa School District grew by 50%, but the number of housing units only grew by 24.3%. These three geographies, as a result, saw an increase in average household size.

**g. Housing Structure Type**

**Table 4.8: Type of Housing Structure by Percent**

Geography	Single - family detached	Single - family attached	2 units	3 or 4 units	5 or more units	Mobile home
<b>United States</b>						
1990	59.0%	5.3%	4.9%	4.9%	17.8%	7.2%
2000	60.3%	5.6%	4.3%	4.7%	17.3%	7.6%
2006	61.4%	5.7%	4.0%	4.6%	17.3%	6.9%
<b>Lee County, Florida</b>						
1990	47.9%	3.8%	5.1%	4.0%	21.0%	17.5%
2000	49.9%	4.9%	4.0%	4.4%	20.6%	15.5%
2006	52.9%	6.8%	2.6%	3.9%	22.8%	10.7%
<b>Osceola County, Florida</b>						
1990	52.5%	3.9%	2.1%	6.7%	14.3%	20.0%
2000	60.0%	4.1%	2.0%	4.9%	13.2%	15.2%
2006	61.5%	2.7%	1.8%	3.6%	18.8%	11.4%
<b>DeKalb County, Georgia</b>						
1990	55.6%	4.9%	1.8%	6.1%	30.6%	0.3%
2000	58.3%	5.0%	1.8%	7.1%	27.4%	0.3%
2006	57.8%	5.4%	1.3%	4.5%	30.8%	0.3%
<b>Wake County, North Carolina</b>						
1990	55.5%	6.7%	3.3%	5.7%	21.1%	7.1%
2000	61.1%	6.3%	2.2%	4.7%	20.3%	5.5%
2006	61.4%	6.9%	1.8%	4.0%	21.3%	4.5%
<b>Shelby County, Tennessee</b>						
1990	61.2%	5.4%	3.6%	5.1%	22.5%	1.2%
2000	65.8%	4.6%	2.9%	5.4%	20.0%	1.2%
2006	66.3%	4.0%	2.5%	4.6%	21.6%	1.0%
<b>Pomona city, California</b>						
1990	60.0%	7.4%	2.0%	5.9%	18.9%	4.9%
2000	61.0%	8.4%	2.2%	6.0%	18.0%	4.2%
2006	59.2%	8.6%	1.8%	6.8%	17.9%	5.6%
<b>Burnsville city, Minnesota</b>						
1990	46.6%	14.3%	0.3%	1.5%	33.4%	3.5%
2000	45.7%	17.3%	0.4%	1.6%	31.7%	3.2%
2006						
<b>Savage city, Minnesota</b>						
1990	79.8%	6.5%	0.5%	2.7%	9.4%	0.2%
2000	84.2%	8.2%	0.5%	1.9%	4.9%	0.2%
2006						
<b>Mesquite city, Texas</b>						

**Table 4.8: Type of Housing Structure by Percent, Continued**

Geography	Single - family detached	Single - family attached	2 units	3 or 4 units	5 or more units	Mobile home
<b>Mesquite city, Texas</b>						
1990	69.4%	2.1%	0.5%	2.4%	25.1%	0.0%
2000	71.4%	2.8%	0.3%	3.1%	22.2%	0.2%
2006	73.6%	1.5%	0.3%	2.9%	21.6%	0.1%
<b>Plano city, Texas</b>						
1990	74.0%	3.1%	0.5%	4.2%	16.7%	1.1%
2000	69.0%	1.9%	0.4%	3.3%	24.6%	0.5%
2006	66.9%	2.4%	0.3%	3.5%	25.3%	1.6%
<b>Cartwright School District</b>						
1990	71.4%	4.3%	0.0%	1.8%	19.6%	2.1%
2000	68.7%	4.3%	0.8%	3.1%	20.6%	2.4%
2006	67.7%	5.1%	0.4%	1.4%	24.0%	1.2%
<b>Mesa School District</b>						
1990	44.5%	5.7%	1.2%	5.0%	21.5%	21.2%
2000	47.7%	5.9%	1.2%	4.4%	19.7%	19.9%
2006	50.9%	5.9%	1.7%	5.0%	18.4%	17.6%
<i>Sources: U.S Census 1990 SF3, U.S Census 2000 SF3, 2006 American Community Survey</i>						

The number of detached single-family houses increased for most profiled communities; however there was a slight decrease for Pomona City, Burnsville City, Plano City and Cartwright School District. The percentage of housing structures that were duplexes in all of the communities fell below the national average; however most communities had a higher percentage of housing structures that contained 5 units or more than the national average. Dekalb County and Burnsville city had the highest percentage with over 30% of their housing stock containing 5 or more units. Savage City had the lowest percentage of structures with five or more units (9.4%, 4.9%), but it had the greatest concentration of detached single-family houses in the survey (79.8%, 84.2%). Lee County, Osceola County, and the Mesa School District contained a significant amount of mobile homes; yet, their numbers have been decreasing since 1990 while other types of housing have been growing. This trend suggests that mobile home parks are being completely replaced with other types of housing.

## h. Age of Structure

**Table 4.9: Median Year of Housing Structure**

Geography	1990	2000	2006
United States	1965	1971	1974
Lee County, Florida	1979	1983	1988
Osceola County, Florida	1982	1987	1992
DeKalb County, Georgia	1970	1975	1978
Wake County, North Carolina	1977	1985	1990
Shelby County, Tennessee	1966	1971	1975
Pomona city, California	1963	1964	1967
Burnsville city, Minnesota	1977	1980	
Savage city, Minnesota	1985	1990	
Mesquite city, Texas	1977	1981	1982
Plano city, Texas	1981	1989	1990
Cartwright School District	1972	1975	1976
Mesa School District	1978	1982	1983

*Sources: U.S Census 1990 SF3, U.S Census 2000 SF3, 2006 American Community Survey*

**Table 4.10: Percent of Housing Units Built 1990 - 2006**

Geography	%
United States	24.7%
Lee County, Florida	44.8%
Osceola County, Florida	60.6%
DeKalb County, Georgia	28.6%
Wake County, North Carolina	50.0%
Shelby County, Tennessee	26.1%
Pomona city, California	10.2%
Burnsville city, Minnesota	
Savage city, Minnesota	
Mesquite city, Texas	24.4%
Plano city, Texas	53.1%
Cartwright School District	14.6%
Mesa School District	29.3%

*Source: 2006 American Community Survey*

The communities with the highest totals and rates of population growth also contained greater percentages of housing constructed between 1990 and 2006. The median year of all housing structures was also higher in these same communities. Numbers in both categories were all well above the United States' averages. Pomona City and Cartwright School District did not experience as much housing construction as the other profiled communities during this time period and their percentages fell much below the U.S. average. For this reason, it is unsurprising that Pomona City had the lowest median housing structure year (1967) out of all the profiled communities in 2006.

**i. Housing Tenure**

**Table 4.11: Households by Tenure**

Geography	% Owner Occupied (1990)	% Owner Occupied (2000)	% Owner occupied (2006)
United States	64.2%	66.2%	67.3%
Lee County, Florida	72.1%	76.5%	75.0%
Osceola County, Florida	65.7%	67.8%	70.3%
DeKalb County, Georgia	57.8%	58.5%	60.7%
Wake County, North Carolina	60.9%	65.9%	66.1%
Shelby County, Tennessee	59.5%	63.1%	62.9%
Pomona city, California	57.4%	57.2%	60.5%
Burnsville city, Minnesota	64.9%	68.3%	
Savage city, Minnesota	86.2%	91.2%	
Mesquite city, Texas	63.5%	65.5%	67.6%
Plano city, Texas	70.1%	68.9%	68.0%
Cartwright School District	65.1%	64.5%	58.6%
Mesa School District	64.3%	67.4%	68.1%

*Sources: U.S Census 1990 SF3, U.S Census 2000 SF3, 2006 American Community Survey*

Home ownership has been on the rise in all the profiled communities except in Plano City and Cartwright School District. Savage city contained the highest percentage of owner-occupied housing units (91.2%) in 2000 while Pomona city contained the lowest percentage of owner-occupied housing units (57.2%) for that year.

**j. Population Density**

**Table 4.12: Population Density per Square Mile**

Geography	Density
United States	79.56
Lee County, Florida	548.61
Osceola County, Florida	130.49
DeKalb County, Georgia	2,482.07
Wake County, North Carolina	754.68
Shelby County, Tennessee	1,189.46
Pomona city, California	6,551.81
Burnsville city, Minnesota	2,418.11
Savage city, Minnesota	1,331.25
Mesquite city, Texas	2,869.42
Plano city, Texas	3,106.25
Cartwright School District	7,864.73
Mesa, Arizona	3,178.06

*Source: Data Place, U.S Census 2000, SF3 file*

Analysis of the communities’ population density provides many clues about the community context, but taken alone, the analysis could lead to misrepresented findings. Hence this analysis was conducted in tandem with a spatial analysis using orthographic images and GIS data. Findings are as follows. Pomona city and Cartwright school district had the highest population densities. These same communities, though, did not experience the amount of population growth as areas like Lee County, Osceola County, and Wake County did. Spatial analysis confirms that these communities are mostly built out and any undeveloped land is restricted by slope and hydrology. Osceola County had the lowest population density, and the county experienced a significant gain in population. In this location, undeveloped land is being rapidly converted. Population

growth is concentrated around the county's two existing towns: Kissimmee and St. Cloud. Unlike other areas in the county, numerous wetlands restrict development to certain areas.

This same dynamic is playing out in Lee County: high population growth resulting from the rapid conversion of undeveloped land adjacent to existing towns and communities and numerous wetlands restricting land development. Wake County, which had the third lowest population density from the study sample, also experienced high population growth. Like the previous two counties, rapid conversion of undeveloped is taking place; however wetland restrictions are not as predominant. The geographic boundaries of these three counties are all fixed and contain incorporated and unincorporated areas. By contrast, data for the municipalities only represent areas that are incorporated.

Spatial analysis of Shelby and Dekalb counties show that the counties are evenly developed. Small tracts of land remain undeveloped but on the whole, the counties appear to be fully developed. By no surprise, the greatest centers of population growth occur closest to the metropolitan centers.

**k. Location Analysis**

**Table 4.13: Community Context of School**

School	Town / Community	State	Roadway Type	Location Notes	Traditional Downtown	Driving Distance from city hall
Mesquite Academy	Mesquite	TX	Minor collector	Located within a "triangle" formed by: I-30, I-635, & US 80	Yes	3.9 miles
Wakefield HS, North Campus	Wake Forest	NC	Minor collector	Just west of U.S. Rt 1 exit	Yes	2.2 miles
Tarver Elementary School	Phoneix	AZ	Major Collector	Located 2.5 miles north of I-10	Yes	7.5 miles
Atkinson Middle School	Phoneix	AZ	Major Collector	Located 2.5 miles north of I-11	Yes	7.5 miles
Village Academy High School	Pomona	CA	Minor collector	Located 2.3 miles south of I-10	Yes	2.1 miles
Pueblo Elementary School	Pomona	CA	Minor collector	Located 2.3 miles south of I-11	Yes	2.1 miles
Burnsville Senior HS, Senior Campus	Burnsville	MN	Major Collector	Just east of I-35 exit and near I-35 & Hwy 13 interchange	No	0.7 miles
DeKalb Alternative HS	Dekalb	GA	Major Collector	Along SR 10 (McKinney Parkway)	Yes	3.0 miles
Special Programs Center	Plano	TX	Minor collector	3 miles east of US 75	Yes	5.6 miles
Rayma C. Page Elementary	San Carlos	FL	Major Collector	Just west of I-75 exit	No	11 miles
Treeline Elementary	Lehigh Acres	FL	Major Collector	Centrally located within Lehigh Acres community; 10 miles east of I-75	No	15 miles
Zenith School	Kissimmee	FL	Major Collector	Just west of Reagan Turnpike exit	Yes	4.6 miles
Highland Oaks Primary	Memphis	TN	Major Collector	3 miles east of US 78	Yes	24 miles
Pedro Guerrero Elementary	Mesa	AZ	Minor collector	Approximately 2 miles to US 60 & sr 101; Adjacent to industrial area	Yes	2.1 miles

Source: Google Earth; Google Maps

Only three of the schools were located within one mile of an interstate exit, but all were along major roads. Three of the communities did not contain a traditional town center.

### I. Zoning Analysis

**Table 4.14: School Project and Zoning**

School	Zoned As	Surrounding Zoning	Nearby Zoning	Zoning Notes
Mesquite Academy	General Retail	General Retail; Service Station	General Retail; Single-family residential	General Retail district differs from Commercial district
Wakefield HS, North Campus	Highway Business	Highway Business; Single-family residential	Highway Business; Single-family residential	Surrounding zoning districts are "Conditional Use" districts
Tarver Elementary School	Commercial	Commercial; Single-Family Residential; Multi-Family Residential	Single-Family Residential; Multi-Family Residential	Targeted as a redevelopment area
Atkinson Middle School	Commercial	Commercial; Single-Family Residential; Multi-Family Residential	Single-Family Residential; Multi-Family Residential	Targeted as a redevelopment area
Village Academy High School	Commercial	Commercial; Light Industrial	Commercial; Light Industrial; Single-family Residential; Multi-family Residential	
Pueblo Elementary School	Commercial	Commercial; Light Industrial	Commercial; Light Industrial; Single-family Residential; Multi-family Residential	
Burnsville Senior HS, Senior Campus	Heart of City	Heart of City; High-density residential	Single-family residential; High-density residential; Business	Targeted as a special-use smart-growth redevelopment area
DeKalb Alternative HS	Commercial	Commercial; Single-family residential	Commercial; Single-family Residential; Multi-family residential	
Special Programs Center	Retail	Multi-family Residential	Single-family residential	Targeted Planned Development area; Former commercial node
Rayma C. Page Elementary	Commercial	Commercial; Mixed-use; Planned Development; Recreational Vehicle;	Multi-family residential; Industrial	Targeted Commercial Planned Development District
Treeline Elementary	Commercial	Commercial; Multi-family Residential; Single-family residential	Single-family residential; Commercial	

**Table 4.14: School Project and Zoning, Continued**

School	Zoned As	Surrounding Zoning	Nearby Zoning	Zoning Notes
Zenith School	Planned Development	Development; Commercial; Multi-family; Agricultural	Planned Commercial Development; Commercial	Planned Development areas currently contain residential units
Highland Oaks Primary	Commercial	Commercial; Single-family residential	Single-Family Residential	Near MS border; not dense
Pedro Guerrero Elementary	Commercial	Light Industrial; Commercial, Multi-Family Residential;	Single-Family Residential	LI district targeted as a planned development area

*Source: Municipal Zoning Maps & Ordinances*

All of the school projects were located in some type of commercial zoning district. Most of the schools were adjacent to residential zoning districts. All of the schools were within ½ mile of a residential zoning district. Four of the school projects sat within zoning districts targeted for redevelopment.

### **C. Findings**

The findings are broken into two sections: general findings and group findings. The general findings highlight characteristics common to all of the profiled geographies and school projects. Despite the existence of several common characteristics, these profiled geographies and school projects can be placed into three typological groups. The group type findings highlight characteristics definitive of these three types of groups.

#### **a. General Findings**

- All except one of the schools were located in the southern half of the United States.
- All of the schools were located in metropolitan areas.
- All of the school projects were located in some type of commercial zoning district.

- All are sited along major roads.
- All of the profiled geographies grew in population and saw an increase in school enrollment from 1990 to 2000. These two trends generally paralleled each other.
  - Population growth was at least 8% and most grew by at least 30%.
  - School enrollment grew by at least 17%. Almost all were at least 10% higher than the national average of 17.5%, with some geographies exceedingly high.
- All of the profiled geographies became more racially diverse from 1990 to 2006—a trend which paralleled the United States as a whole.
  - Six of these geographies experienced at least a 20% change.
  - Cartwright School District experienced almost a 50% change.
- The profiled geographies mainly fell into three typological groups:
  - Pomona city and Cartwright School District(Group 1).
  - Lee County, Osceola County, Wake County, and Plano city (Group 2).
  - Dekalb County, Shelby County, Burnsville/Savage cities, Mesquite city, Mesa School District, and (Group 3).

#### **b. Group Type Findings**

- Pomona City and Cartwright School District (Group 1) geographies can be characterized as dense, urban, poor, and Hispanic with older homes.
  - This group grew in population and school enrollment from 1990 – 2000 but the number of housing units gained in this decade was substantially less—less than 3%.

- These two geographies had the highest average household and family sizes—one full person over the national level.
- This group had the lowest percent of housing units built after 1990—under 15%.
- Lee County, Osceola County, Wake County, and Plano City (Group 2) geographies can be characterized as new, and growing communities.
  - This group consistently contained the fastest growing geographies using all of the data inputs, with total percent change from 1990 – 2006 usually over 50%.
  - This group became more racially diverse from 1990 to 2006. With the exception of Osceola County, all still contain majority white populations. Osceola County saw a drastic shift in its population demographics, going from an 81.1% white majority population in 1990 to a 46.7% white minority population in 2006.
  - This group had the highest percent of housing units built after 1990—over 40%
  - The rate of growth in Plano City seems to have slowed from 2000 to 2006 as compared to 1990 to 2000 while the rate in Lee County, Osceola County, and Plano City appears to have remained the same across the board.
  - Plano City may be reaching its build out as a city. The other three are counties and still contain rural / sub-rural areas by which to grow.

- Dekalb County, Shelby County, Burnsville/Savage cities, Mesquite city, and Mesa School District (Group 3) have geographies that are growing although at lesser level of intensity than Group 2.
  - This group became more racially diverse from 1990 to 2006, although the amount varied for each geography. Population demographics in both Dekalb and Shelby Counties went from a white majority to a black majority from 1990 to 2006. The composition of the Mesa School District and Mesquite City changed by roughly 20% and 30% since 1990. Racially diversity only slightly changed in the Burnsville and Savage geographies.
  - This group had over 20% of its housing units built after 1990.
  - Percent change in housing units ranged from 20% to 30% from 1990 to 2006.
  - Mesa city demonstrated levels of high growth for indicators such as % change in population, but showed lesser levels for most other indicators.
  - Burnsville consistently demonstrated low to moderate growth while Savage consistently demonstrated high growth. Since the Burnsville-Eagan-Savage encompasses only a portion of Savage, the duo seemed best suited for Group 3.

#### **D. Conclusion**

The general findings provide some predictability as to the circumstances and factors that could induce a community to consider an adaptive reuse construction option to house students. In addition, there were basic similarities and differences common to

these twelve school project communities that emerged from this comparative analysis to form definitive groups. These groups helped to identify school projects that shared the most characteristics with one another and determine outliers. The selection process is fully described in the previous chapter (Chapter III) as are the results from this selection process. The next three chapters profiles the three selected case studies according to the organizing framework, questions, and data collection steps introduced in Chapter III.

## CHAPTER V

### CASE STUDY: BURNSVILLE SENIOR CAMPUS

#### A. Introduction

Burnsville High School Senior Campus is located in a former shopping mall at 200 W. Burnsville Parkway in the center of the city of Burnsville, Minnesota. It is a satellite campus of the Burnsville High School and contains all of the high school's twelfth grade students. The school opened in 1998 to accommodate a student enrollment increase at Burnsville High School. The Burnsville high school is the Burnsville-Eagan-Savage Independent School District's only high school. Expansion options at the main campus were considered unfavorable. Therefore, the school district had to come up with a way to accommodate the anticipated increase in high school students.

Since 1998, high school seniors attending Burnsville High School have spent half their day at the satellite campus known as the Senior Campus Center. The story of the Burnsville Senior Campus is very much part of the history of this particular area in the city of Burnsville: past, present, and future. The city incorporated in 1964. As the city began to rapidly develop and increase in population in the 1960s, this area of Burnsville was expected to become the community center of the city. What resulted was a mix of vehicular-oriented shopping strips and office parks. By the 1980s, this area no longer figured prominently on the commercial retail market. City leaders began working with citizens on strategies to revive this area. Subsequently, the city rezoned this area in 1999 to encourage the private-market creation of a formal city center. The Burnsville Senior Campus is in the middle of the rapidly redeveloping area. This case study considers the

factors that led to the use of a former shopping mall for a school; the relationship between the school district and city as well as the school and surrounding area; the function and affect of the school; and the future of the school and site.

## **B. Background Information**

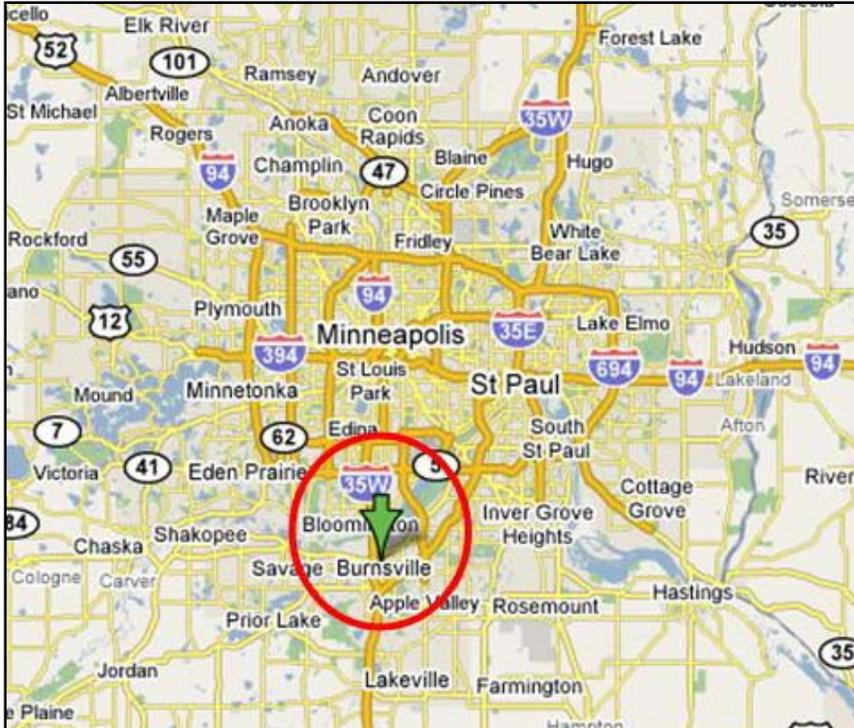
### **a. Regional Context: Twin Cities**

The city of Burnsville is located in the southeastern region of Minnesota. It is within the southern part of the Minneapolis/St. Paul seven county metropolitan region, which contained an estimated 2.82 million residents in 2006.<sup>76</sup> Minneapolis and St. Paul are the two largest cities in the region with respective populations of 387,970 residents and 286,620 residents. The region's other top ten cities have populations ranging from 85,832 residents to 58,491 residents. This listing includes Burnsville and its neighbors: Bloomington and Eagan.<sup>77</sup>

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<sup>76</sup> Metropolitan Council. "Twin Cities Area Population Fact Sheet." (September 2007) available from the Metropolitan Council, St. Paul, MN. <http://www.metrocouncil.org/about/facts/TwinCitiesPopulationFacts.pdf>; accessed March 27, 2008.

<sup>77</sup> Metropolitan Council. "Twin Cities Area Population Fact Sheet."



**Figure 5.1: Burnsville in Context of the Minneapolis / St. Paul Metropolitan Region**  
Source: Google Maps

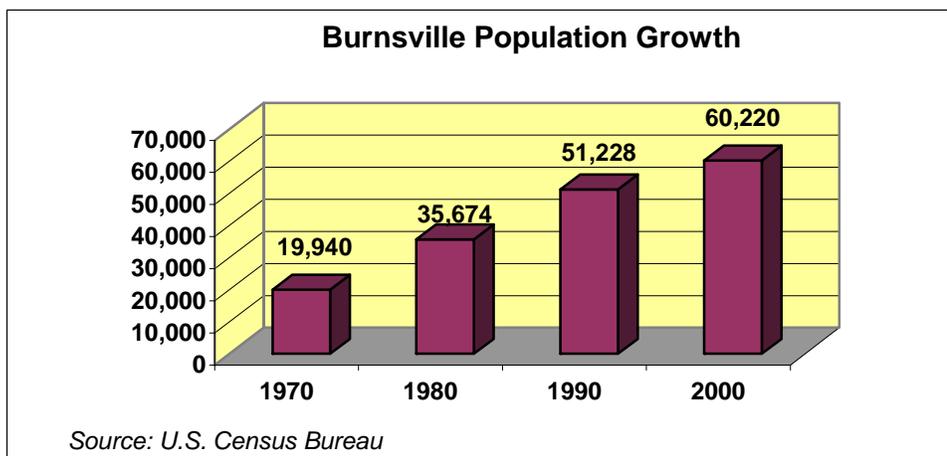
The region grew an estimated 22.2% from 1990 to 2006. The Metropolitan Council, the regional planning agency for the Minneapolis / St. Paul region, cited the increase in population during the 1990s was due to more births than deaths and net migration.<sup>78</sup> The metropolitan region is the sixteenth most populous metropolitan area in the United States. Much of this growth has occurred within formerly unincorporated areas of the region. As subdivisions were constructed, they were annexed into existing municipalities, causing them to increase in size and in population. In particular, the southern half of the metropolitan region has been a high-growth area. Eight of the region's top ten communities leading in population growth are located south of Interstate 494.

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<sup>78</sup> Metropolitan Council. "Twin Cities Area Population Fact Sheet."

## b. Community Context: City of Burnsville, Minnesota

Burnsville was the ninth largest city in the metropolitan region in 2006 with an estimated 61,048 residents.<sup>79</sup> The city is located approximately fifteen miles south of Minneapolis. It is directly connected to the Twin cities by Interstates 35 East and 35 West. Burnsville’s heritage as a small, rural, farming community changed when Interstate 35 West was extended across the Minnesota River to Highway 13 in 1960. The introduction of I-35 W greatly transformed the community by opening up seemingly inconsequential farmland as desirable sites for an expanding suburban housing market.<sup>80</sup> The community grew quickly from 2,500 residents in 1960 to 19,940 residents in 1970. During that decade, Burnsville incorporated as a city. The city’s population continued to rise dramatically throughout the 1970s, 1980s, and 1990s (Figure 5.2). The 2000 Census ranked Burnsville as the state’s tenth largest city in 2000.<sup>81</sup>



**Figure 5.2: Population Growth, Burnsville, Minnesota**

<sup>79</sup> Metropolitan Council. “Twin Cities Area Population Fact Sheet.”

<sup>80</sup> John Gessner, “Burnsville Looks Back at a Rich History,” Thisweek Online Newspaper, ( Jan 7, 2000) <http://www.thisweek-online.com/2000/january/7burns.html>

<sup>81</sup> United States Census Bureau, U.S. Census 2000, [www.census.gov](http://www.census.gov).

Burnsville typifies a third-ring suburb. It does not border the Twin Cities nor does it border the suburbs directly next to the Cities. It lacks a historic downtown or any type of traditional city center. Local government operations are somewhat scattered across the city. The city hall, central police station, ice arena, and athletic fields are located within the multi-building ‘Civic Center,’ but the library and post-office are located closer to the Burnsville Center (regional mall). The city is known as a retail center: it ranked fourth in the State of Minnesota for amount of retail sales.<sup>82</sup>

Despite its third-ring status, Burnsville’s build-out epitomizes that of a first-ring suburb. According to a 2006 community profile conducted by the State of Minnesota’s Department of Employment and Economic Development, Burnsville is 98% built-out. Only a few tracts of undeveloped land remain for commercial or industrial development.<sup>83</sup> This reality caused the city to shift its priorities to enhancing the environment and redeveloping obsolete spaces. A key component of the city’s enhancement and redevelopment effort has been the formation of a city center since Burnsville lacks a traditional downtown.

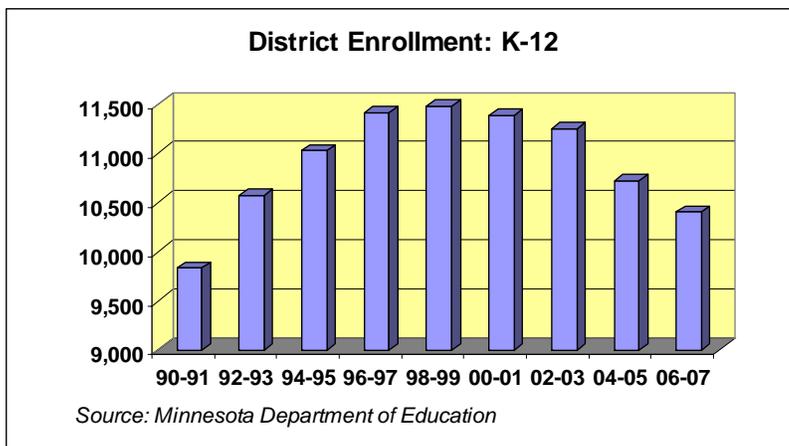
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<sup>82</sup> City of Burnsville, MN. “Burnsville Basics.” (2008) available from <http://www.ci.burnsville.mn.us/>

<sup>83</sup> Minnesota Department of Employment and Economic Development. “Burnsville, Minnesota Community Profile.” (2006) available from <http://www.mnpro.com/>

### c. School District Context

The Burnsville-Eagan-Savage Independent School District 191 is the state’s 13<sup>th</sup> largest school district with a 2007 enrollment of 10,203 students.<sup>84</sup> The school district boundaries do not follow municipal boundaries; the district services students from parts of Burnsville, Savage, and Eagan. The school district encompasses a population of 62,650 within its 37 square mile area. District enrollment steadily rose throughout the 1990s with the overall population growth of the school district service area. The construction of new school facilities kept pace with the district’s growing enrollment. The school district added two elementary schools and one junior high during the 1990s—the last two completed for the 1996/1997 school year. School district enrollment reached its peak during the 1997/1998 school year with 11,496 students, which is around the time the city was deemed almost completely built-out (Figure 5.2). The district currently contains a total of sixteen schools, one of which is a traditional high school.



**Figure 5.3: Burnsville-Eagan-Savage School District Enrollment 1990/91-2006/07**

<sup>84</sup> Minnesota Department of Education. “District Enrollment Statistics” (2007/2008) available from [http://education.state.mn.us/MDE/Data/Data\\_Downloads/Student/Enrollment/District/index.html](http://education.state.mn.us/MDE/Data/Data_Downloads/Student/Enrollment/District/index.html) ct/index.html

#### **d. Area Context: The Burnsville Parkway**

The Burnsville Parkway was constructed in the 1960s to serve as an east-west, crosstown thoroughfare that would connect various neighborhoods together in the rapidly developing city. A ‘modern downtown’ with shopping strips, service stations, restaurants, and office buildings was envisioned for the area surrounding the intersection of the Burnsville Parkway and Nicollet Avenue.<sup>85</sup> This was the type of development that occurred, including Diamondhead Mall.

The Diamondhead Mall opened in 1974 at Burnsville Parkway and Pleasant Avenue, less than a mile from the Interstate 35-West interstate exit. The mall performed well until the larger Burnsville Center opened in 1977 about 2.5 miles south of the Diamondhead Mall at the junction of Interstate 35 W, Interstate 35 E and County Road 42. As a result, customers began to patronize this shopping alternative instead of the Diamondhead Mall. The owner of the Diamondhead Mall did not attempt any major renovations to revitalize or reposition the dated retail center. The mall quickly became a “C” class mall. By the early 1990s, the mall had a 50% vacancy rate.<sup>86</sup> The collapse and failure of the mall effected real estate along the Burnsville Parkway causing commercial and professional businesses to relocate closer to the Burnsville Center.

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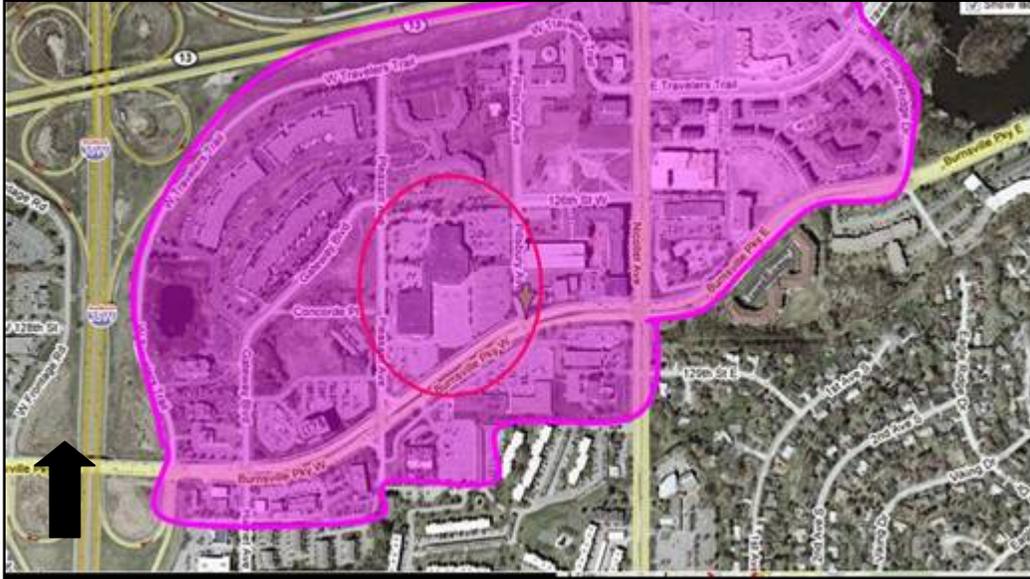
<sup>85</sup> John Gessner, “Burnsville Looks Back at a Rich History;” City of Burnsville, “Heart of the City History;” <http://mn-burnsville.civicplus.com/index.asp?NID=648>

<sup>86</sup> Bill Gardner, “Mall Referendum Rejected by Voters,” St. Paul Pioneer Press, November 3, 1993.



to make them attractive for redevelopment in 1995. The steering committee identified that the goal would be a mixed-use, pedestrian friendly downtown area for Burnsville. The focal point of the project would be a town-square style park with ample lawn and an outdoor amphitheater.

The city began implementing this vision by rezoning the 54 acre area defined by Interstate 35-W, Burnsville Parkway, Nicollet Boulevard, and Highway 13 to form two 'Heart of the City' zoning districts. The city also created a design review committee to ensure that prospective developments conformed to this vision. Heart of the City 1 (HOC1) defines the area slated to become the new town center. The 28.9 acre district is located between Burnsville Parkway and Highway 13 on either side of Nicollet Boulevard. It supports a dense mix of residential units and commercial businesses, but maintains a maximum three-story building height. Heart of City 2 (HOC2) is meant to encourage office and vehicular oriented commercial development in an integrated campus-like environment. This district is defined by the Burnsville Parkway, Pillsbury Avenue, Highway 13, and Interstate 35. The Diamondhead Mall is located within the HOC2 District.



**Figure 5.5: Heart of the City Zoning District**

Source: Adapted from Google Maps

### **C. School Project**

#### **a. Burnsville High School Senior Campus: Pre-Occupancy**

##### **i. Burnsville High School—Existing Conditions**

The school district started to look at options for increasing capacity at the districts only high school in 1994. District facilities adequately accommodated students at the primary level, but population projections indicated that high school enrollment would begin to increase in the late 1990s. Burnsville High School already contained 2,209 students during the 1994/1995 school year. Space was becoming an issue at the main campus making it hard for staff to find space for classes.<sup>89</sup>

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<sup>89</sup> Robbin M. Rittner-Heir, “Shopping Mall to Study Hall,” School Planning and Management (April 1999).

The school district determined that the school district needed approximately 56,000 square feet to accommodate the predicted number of new high school students.<sup>90</sup> The school district contemplated three options: build a new school, add to the existing high school, or find a suitable building in the district and convert it into an educational facility. Expanding the existing high school was not considered desirable because the building was already overbuilt, because of many additions.<sup>91</sup> One board member believed that it would be a “grave mistake.”<sup>92</sup> The school district traditionally had built schools to meet enrollment demands, but a new building for the specified square footage was found to be prohibitively expensive at \$6.3 million.<sup>93</sup> In addition, there was a lack of suitable land on which to construct a new building. Since these two options proved to be unfavorable, the school district began searching for an existing building.

**ii. Site Identification Process: Present Advantages and Disadvantages**

Around this time, the shopping mall became available for purchase. It had lapsed into receivership in 1992 and was being held by an insurance company, which wanted to sell it. The school district was aware of the buildings availability partly because the city

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<sup>90</sup> Rittner-Heir, “Shopping Mall to Study Hall.”

<sup>91</sup> John Gessner, “Dist. 191 Hopes to Buy, Renovate Diamondhead Mall,” Dakota County Tribune, August 24, 1995.

<sup>92</sup> John Gessner, “District is One Step Closer to Buying the Diamondhead Mall,” Dakota County Tribune, September 14, 1995.

<sup>93</sup> Rittner-Heir, “Shopping Mall to Study Hall.”

itself had made efforts to purchase it in 1993 for \$1.75 million.<sup>94</sup> The city's initiative was stopped short when voters rejected a \$12.9 million referendum in 1993. The nearly empty two-story mall offered 140,000 square feet of floor space and sat on 11 acres of land.

The Diamondhead Mall offered several advantages. The site was only 1.5 miles southwest of the main high school campus so students could move easily between the two campuses. The district presumed the building could be rehabilitated quickly to house students from Burnsville Senior High School. The total estimated cost of site acquisition and building renovation was in range of what the school district wanted to spend. The owner of the Diamondhead Mall offered to sell the building and site for \$2.1 million. The school district estimated that the total cost of site acquisition and building renovation to be \$6.9 million. This figure was lower than an amount the district would have paid for a new facility. The school district business manager estimated that cost of a new high school in 1998 would be an estimated \$25 million.<sup>95</sup> By purchasing the facility, the school district would acquire 140,000 square feet when they only needed around 56,000 for a satellite high school facility. The district had already been leasing space within the mall for community education programs. This extra space meant the district could keep its community education programs located in the building and not have to pay rent—a bonus that saved the district an estimated \$300,000.<sup>96</sup> Finally, the building provided the district with substantial room for future interior expansion. The mall was broken into two

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<sup>94</sup> John Gessner, "Burnsville, Mall Owner Agree on Price for Diamondhead," Dakota County Tribune, October 28, 1993.

<sup>95</sup> Norman Draper, "Burnsville Mall Gets New Life as School Campus," Star Tribune, September 6, 1998.

<sup>96</sup> Rittner-Heir, "Shopping Mall to Study Hall."

large sections that were connected by a 44-foot wide and 52-foot long corridor. One of these sections could easily be closed off until it was needed.

The disadvantages of the building and site were those relevant to any big-box store conversion: major renovations would have to occur to make the space compatible for a school. According to the architectural firm hired to oversee the building rehabilitation, the building's structure was fine, but the existing infrastructure would need a major overhaul (plumbing, wiring for technology, compatible lighting).<sup>97</sup> The district recognized that the building would never be able to accommodate traditional school facilities like a full-fledged media center, gym, and cafeteria without substantially increasing the costs; thus, the satellite school would never be self-operating facility. The location of the proposed school did not appear to be a major concern. This may be due to the fact that the Burnsville Senior High School sat alongside the busy Highway 13, thus the surroundings were not atypical for the school district.

### **iii. Process to Acquire the Site: Negotiations and Approval**

School district administrators believed the benefits offered by the former Diamondhead Mall far outweighed the disadvantages—building and site would work well as a satellite high school campus. They held expectations that: the project would be cost and time effective, the former mall could be successfully transitioned into a school, the new school campus would never be able to fully accommodate all of the programmatic elements typical to high schools, the location of the site would ensure an easy connection to the main campus, the additional square feet available in the building would provide the school district with space for future expansion. With these

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<sup>97</sup> Gessner, “Dist. 191 Hopes to Buy, Renovate Diamondhead Mall.”

expectations, school district staff initiated the formal steps to move the proposed project forward.

School district administrators initiated the formal steps to move the proposed project forward. They did not technically seek public comment outside of school board meetings; however, they were aware of existing concerns about this proposal.<sup>98</sup> Some staff from Burnsville High School expressed concern about the proposed purchase citing a lack of clarity about program offerings, the potential depletion of students from established programs, and a delay on stadium renovations.<sup>99</sup> The school board authorized district administrators to negotiate a purchase agreement in September 1995. A school board member stated that the “price and proximity to the high school offered a rare opportunity.”<sup>100</sup> The nearly vacant Diamondhead Mall also had another suitor, a private Christian school, so there was a sense of urgency to close the deal.<sup>101</sup>

The school district settled on a purchase price of \$2.1 million in late 1995. The renovation would be mainly funded with money from the 1994 bond referendum, which was specifically dedicated for new high school classrooms.<sup>102</sup> After the school district purchased the building, the remaining tenants (a sporting goods store, a taco restaurant, and an H & R Block) moved out of the building.

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<sup>98</sup> Burnsville Senior High School Principal, interviewed by Jayne Bernhard, by telephone 14 March 2008.

<sup>99</sup> Gessner, “District is One Step Closer to Buying the Diamondhead Mall.”

<sup>100</sup> Gessner, “District is One Step Closer to Buying the Diamondhead Mall.”

<sup>101</sup> Gessner, “District is One Step Closer to Buying the Diamondhead Mall.”

<sup>102</sup> Gessner, “District is One Step Closer to Buying the Diamondhead Mall.”

#### **iv. Permitting Process: Working Relationship with Local Government**

The Burnsville Senior Campus school project was not a controversial issue for the city of Burnsville.<sup>103</sup> The town recognized the district's acute capacity crisis and fully supported the school district's purchase action. As noted earlier, the city had attempted to purchase the property for a multi-purpose community center. The city's acquisition of the property became a part of its strategy to revitalize the Burnsville Parkway.<sup>104</sup> Similarly, the city saw the schools acquisition of the site in the same light.<sup>105</sup> The city was not concerned that the site would thwart future redevelopment efforts if utilized as a school nor was there any concern about a loss of tax revenue.<sup>106</sup> In addition, citizens supported this action as a fiscally responsible move. Tax dollars would have been spent anyway to acquire land and construct a new school. In acquiring the property, the community benefited with a new school and a new aesthetically-pleasing renovation along the Burnsville Parkway. According to various written sources as well as interviews with city staff and school district administrators, the school district and city have always maintained a strong relationship.<sup>107</sup> For example, the school district adopted a resolution, "the first of such action," supporting the city's failed 1993 bond referendum. The two

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<sup>103</sup> Burnsville City Planner 1, interviewed by Jayne Bernhard, 14 March 2008, by telephone.

<sup>104</sup> Gessner, "Burnsville, Mall Owner Agree on Price for Diamondhead."

<sup>105</sup> Burnsville City Planner 1.

<sup>106</sup> Burnsville City Planner 1.

<sup>107</sup> Gessner, "Burnsville, Mall Owner Agree on Price for Diamondhead;" Burnsville City Planner 1; Burnsville Senior High School Principal.

entities commonly work with one another to plan for the joint-use of community spaces. Diamondhead Education Center—in operation on the ground floor of the former mall prior to acquisition—is an example of such an agreement. One of the programs operating out of the Diamondhead Education Center is the Senior Citizen Center.

Staff in the planning department helped the school district obtain the necessary permits for use as a school. The first task was zoning. The school district needed to obtain a variance to use the site for a school, which was granted. According to the former superintendent, schools were not added as a permitted use because the city wanted to have the option of not approving an educational facility at this location should the school district ever want to vacate the building.

The city helped transform the site through its expansive streetscape project, which lined the Burnsville Parkway and Nicollet Avenue with trees, brick pavers, and decorative standardized street lights. In addition, it also extended a bike and pedestrian path along the north (school) side of the Parkway, making it possible for students and community members to walk or bike to the facility.<sup>108</sup> A garden marks the gateway to the school, containing a flag pole and a circular space paved in brick defined by plantings and land form. The streetscape project was completed in 1998 around the time the school opened.

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<sup>108</sup> The school principal noted, though, that he has never seen a student bike to school. The Senior Campus does not even have bike racks.



## **v. Building Conversion: Store to School**

The school district purchased the former Diamondhead Mall with the intention of using the upper floor as a satellite high school and maintaining the ground floor as the Senior Citizen Center and Early Education Programs and Services, which had been in the building prior to the district's purchase. It was not until early 1997 that they decided the upper floor would exclusively cater to Burnsville High School seniors. With the needs of senior high school students in mind, school administrators came up with a distinct vision for the satellite campus. The school would function and feel like a community college facility where students could feel like the adults they soon would be. As the assistant principal at the time stated, "the idea was to give them a little bit more freedom."<sup>109</sup> There would be no hall passes, no period bells, and no lockers. Accelerated coursework would be offered. The entire facility—upper and lower floor—was to be a unique blend of students. As the assistant principle stated, "part of the vision of having this whole thing here is to have older students mixing with the community."<sup>110</sup>

### **1. Reconstruction of Space**

The school district hired the St. Paul-based firm Wold Architects & Engineers, who specialize in designing educational facilities, to redesign the space and oversee the renovations. Renovation on the building's interior started in 1997. Contractors completely gutted the upper floor to accommodate the educational program. The building's shell is roughly shaped like a rectangle and the design reconfigured or divided the interior space into five areas. Administrative and technology support services occupy

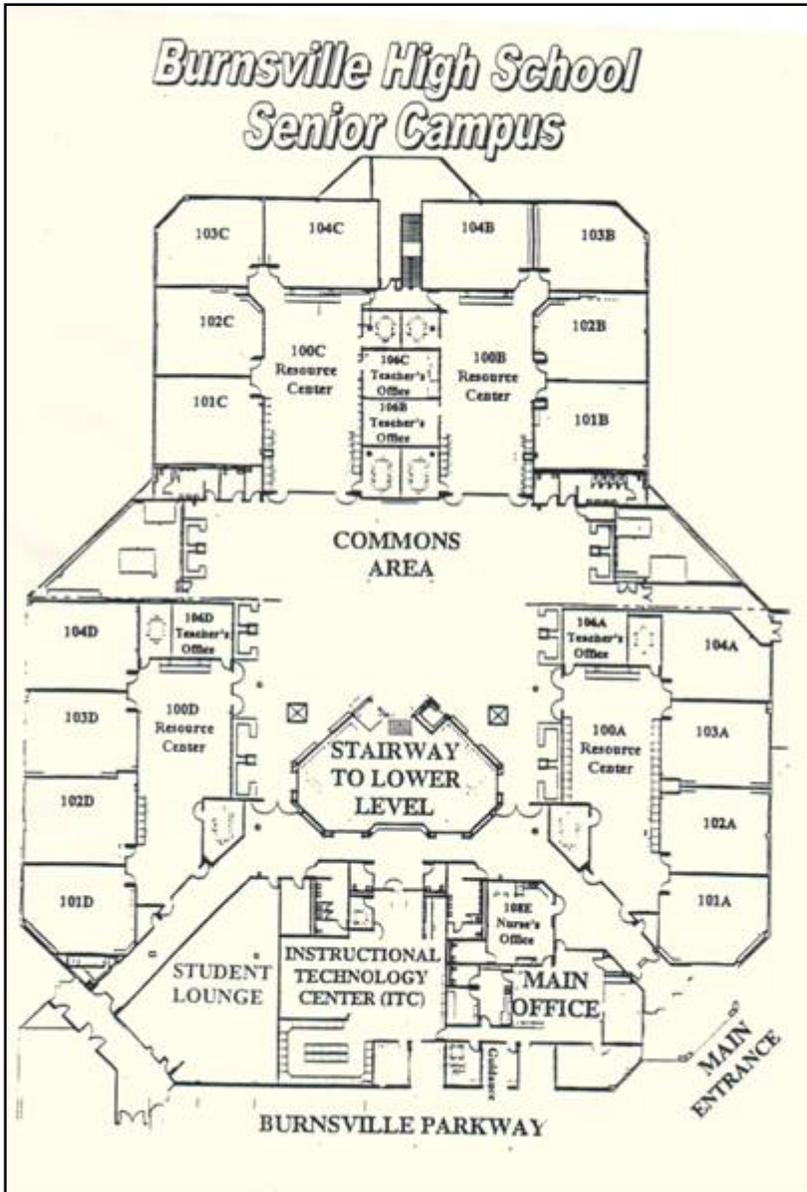
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<sup>109</sup> John Gessner, "New Burnsville High School to Open in Former Shopping Mall," Dakota County Tribune, August 13, 1998.

<sup>110</sup> Gessner, "New Burnsville High School to Open in Former Shopping Mall."

the south end of the building near the at the building's main entrance. The instructional technology center was to be a more limited version of the main campus's full-fledged media center.

Classrooms were situated along the perimeter of the remaining three sides to maximize the amount of classroom exposure to daylight. The twelve classrooms were divided into four 'wings,' with each wing containing four classrooms, two conference rooms, an office for five teachers, and a common resource room with fifteen computers. The north end of the building contained two 'wings.' The large, although windowless, commons area formed the fifth definitive space. This area has ceramic tile benches built into the wall to give students a place to sit and chat—a feature not possible at the main campus. An open staircase connects the Senior Campus to the floor below.



**Figure 5.8: Burnsville Senior Campus Floor Plan**  
 Source: BES School District

## 2. Aesthetic Augmentations

The architect and school district took several steps to make the building feel or appear like a school. In the interior, contractors cut windows into the exterior walls to bringing daylight into the building. The interior walls were painted in warm, light colors, and the floors were carpeted. On the exterior, the entire building was repainted with three

contrasting colors. Site improvement included plantings, resurfacing the entire parking lot, and using brick pavers and plantings to define pedestrian entrances and vehicular circulation paths. Senior students definitively made the move to disassociate the building from its past by dropping ‘Diamondhead’ from the name of the satellite campus and renaming it the ‘Senior Campus.’<sup>111</sup> The results of a senior-student vote indicated that this was the preferred name. The educational facilities located on the ground floor still collectively identify as the Diamondhead Educational Center.



**Figure 5.9: Burnsville Senior Campus / Diamondhead Educational Complex. Entrance to the Senior Campus is Highlighted in Red.**  
Source: Microsoft Live Search Maps

### 3. Function

The Senior Campus was not designed to function as a self-operating facility. Despite the large amount of room available, the building could not be made to accommodate science labs, a gymnasium, library, and cafeteria unless the school district spent an exorbitant amount of money. The Senior Campus would house most of the

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<sup>111</sup> Draper, “Burnsville Mall Gets New Life as School Campus.”

senior language arts and social science classes as well as upper-level math courses. All music and science courses remain at main campus. For this reason, all seniors would only spend three out of their seven periods at the Senior Campus. The Senior Campus would operate on two shifts: morning and afternoon. The Senior Campus would start fourteen minutes later than the main campus in the morning and end ten minutes early in the afternoon to ensure connection between the two campuses. The district planned for a shuttle bus to run between the two campuses or students would be allowed to drive back and forth.

#### **4. Project Publicity**

The Senior Campus project was much discussed in the Dakota County Tribune, Eagan Sun Current, and Burnsville Sun Current. The overall tone of these articles conveyed that the project was interesting and fiscally-responsible. One reporter hailed the Senior Campus as a “long-awaited solution to a growing BHS enrollment crunch.”<sup>112</sup> The articles, however, pointed out a looming skepticism about the outcome of the project. For many students, there existed a “why us?” attitude.<sup>113</sup> An article in the Star Tribune noted the following community concerns:

“Apart from the mall odium, some students didn't want to be separated from their friends. Others simply didn't like being taken away from the building that had been their school home for the past two years. And the senior citizens' center below was bracing for thundering droves of teenagers disturbing their card games. Parents worried about the extra driving their kids would have between the senior campus and the high school.”<sup>114</sup>

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<sup>112</sup> Gessner, “New Burnsville High School to Open in Former Shopping Mall.”

<sup>113</sup> Gessner, “New Burnsville High School to Open in Former Shopping Mall.”

<sup>114</sup> Draper, “Burnsville Mall Gets New Life as School Campus.”

To placate concerns, school administrators held meetings as the building underwent renovation to answer questions. One of the interviewed district officials confirmed that seniors went into the 1998/1999 school year envisioning the worst.<sup>115</sup>

### **b. Burnsville High School Senior Campus: Post-Occupancy**

The Burnsville High School Senior Campus opened in September 1998. As noted, it took on a different name than the Diamondhead Educational Complex to maintain the sense of separation. The school district also closed access to the south building—the former grocery store—and designated it for storage. The total cost of rehabilitating the building amounted to \$7.3 million, \$400,000 over budget. Despite going slightly over budget, the school district business manager and assistant principal believed the school purchase had been a “wise investment.”<sup>116</sup>



**Figure 5.10: Entrance to Burnsville Senior Campus, Facing Northwest**  
Source: BES School District Website

### **i. General Community Response**

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<sup>115</sup> Burnsville Senior High School Principal.

<sup>116</sup> Rittner-Heir, “Shopping Mall to Study Hall”

Community response to the Senior Campus appears to be overwhelming positive. An article featuring the Senior Campus a couple of days after it opened noted that many students could not even imagine it as a shopping center anymore.<sup>117</sup> The interviewed school official stated that once the building opened most concerns and criticisms went away. The biggest critics continue to be some of the high school teachers who wanted the money to go to remodeling at the main campus. The interviewee also believes that citizens appreciated the school project because it was done in a fiscally responsible manner.<sup>118</sup>

### **ii. Advantages for Daily Education**

The interviewed school official believed that a “better learning environment” at both campuses has been the primary achievement offered by the Senior Campus. The main campus was no longer as crowded. Students interviewed by the newspapers reported that the environment made it easier to learn.<sup>119</sup> Many students asserted that they appreciated the Senior Campus. The absence of lockers and existing wide corridors accounted for a sense of openness in the building. The building was not crowded like the main campus. Students claimed they thought they were treated more like adults. There was an overriding sense of freedom. School officials believed that this new sense of freedom was generating positive academic results.

### **iii. Challenges to Daily Education**

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<sup>117</sup> Draper, “Burnsville Mall Gets New Life as School Campus.”

<sup>118</sup> Burnsville Senior High School Principal.

<sup>119</sup> Draper, “Burnsville Mall Gets New Life as School Campus.”

The interviewed school district administrator acknowledged that scheduling has been the main challenge that holding classes at the Senior Campus has presented. Scheduling makes it difficult for some students in specialized programs to take what they want. The former school principal reported to the Savage Pacer that there were no students for the 2007/2008 school year that had scheduling conflicts from core classes, but there were a few conflicts that resulted from students desiring to take music and physics. As she stated, “It does mean they have to make choices.”<sup>120</sup> One student interviewed by the Savage Pacer claimed that having two campuses made it difficult to communicate with teachers. According to the Savage Pacer, one of the interviewed teachers believed having two campuses and subsequent scheduling conflicts has made a “negative impact” on enrollment in her courses.<sup>121</sup>

#### **iv. Suitability of Building and Site for School**

Both the interviewed city official and school district official believe the building and site work well as a school. They indicated they would whole-heartedly attempt and encourage such a project again.<sup>122</sup>

#### **v. Benefit to Surrounding Area**

The interviewed city official stated that many benefits have resulted from the Senior Campus project. Foremost, the Senior Campus, as the first project in the new redevelopment district, helped to jump-start other projects. Public investment in this area—in the form of education tax dollars—symbolized stability. The city and school

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<sup>120</sup> Keighla Schmidt, “Is BHS Senior Campus Still Viable,” Savage Pacer (February 2, 2008).

<sup>121</sup> Schmidt, “Is BHS Senior Campus Still Viable.”

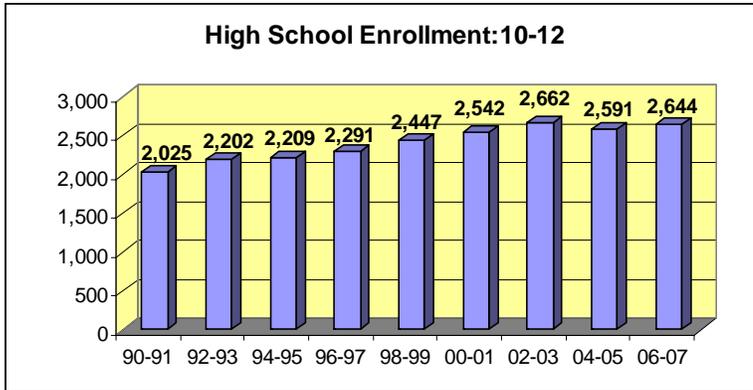
<sup>122</sup> Burnsville City Planner 1.

district continue its strong partnership by basing community education classes out of the Diamondhead Educational Center. In the summer, the Senior Campus's redesigned parking serves as the location for the local farmer's market. The new performing arts center, directly east of the Senior Campus, will utilize the parking lot for performances. The city official also believed that the businesses immediately surrounding the Senior Campus have benefited from having a school, particularly a satellite campus for senior-level students, at this area. The school brings around 900 teenage students daily to the site. The two campuses switch senior students around the lunch hour, forcing students to drive right past eateries along Nicollet Avenue on their way to the other campus.

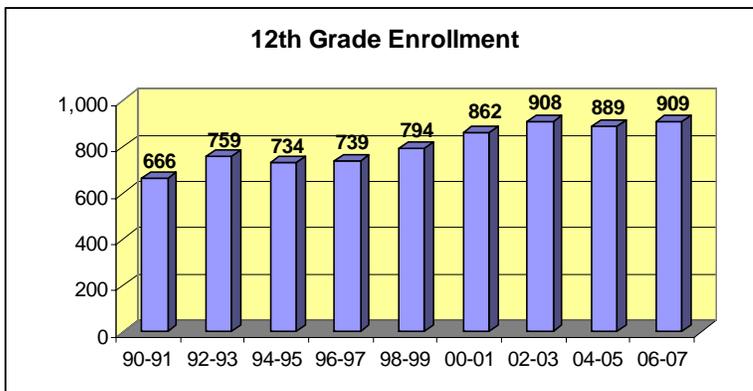
**c. Future of School Building and Site**

**i. School District Perspective**

The Senior Center and Diamondhead Educational Complex have been in operation for over ten years. Since the early 2000s, the following trends have been shaping the school district and impacting the current and future use of the facility: declining total student enrollments, rising minority student enrollments, increasing participation in the free and reduced lunch program, and ever-pending budget crises. Enrollment data exhibits that the Senior Center has been fulfilling its purpose. Enrollment at Burnsville High School has steadily increased since 1990. The senior class has grown by almost 300 students since 1990 with 955 students for the 2007/2008 school year. The purpose of the Senior Center, though, will be under debate as total district enrollment continues to decline.



**Figure 5.11: Burnsville-Eagan-Savage School District High School Enrollment**  
 Source: State of Minnesota Department of Education

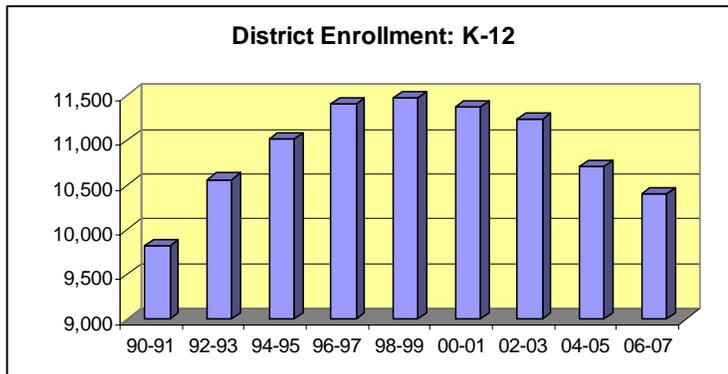


**Figure 5.12: Burnsville-Eagan-Savage School District 12<sup>th</sup> Grade Enrollment**  
 Source: State of Minnesota Department of Education

The school district’s overall student enrollment has been declining since the early 2000s (Figure 5.13). As smaller classes reach the high school level, the building may no longer be needed to accommodate overflow from the main campus. Fiscal problems may also cause the district to reconsider the need for the facility. Since the 1998/99 school year, \$14 million has been cut from the budget in an effort to keep up with rising costs.<sup>123</sup>

<sup>123</sup> Tom Ford, “District Sends Out Distress Call” Start Tribune (February 16, 2005)

An article in the Savage Pacer recently probed whether the Senior Campus was still a useful facility, especially given the current financial conditions.<sup>124</sup> As one staff member stated: “While it is undeniable that the Senior Campus building gives us the likable advantages of newness and large areas of open space, these are advantages that we cannot begin to justify, given the educational losses, student dangers and financial costs that we incur on a daily basis.” For these reasons, the staff member thought the building should be closed.<sup>125</sup> A parent echoed these concerns and added that the school was a “showplace to pretend to look good.”<sup>126</sup> At the same time, the article featured plenty of positive feedback and painted the picture that, on the whole, most seniors appreciate the building. As one student reported, “I think every senior would rather be here all day... I just love it here.”<sup>127</sup>



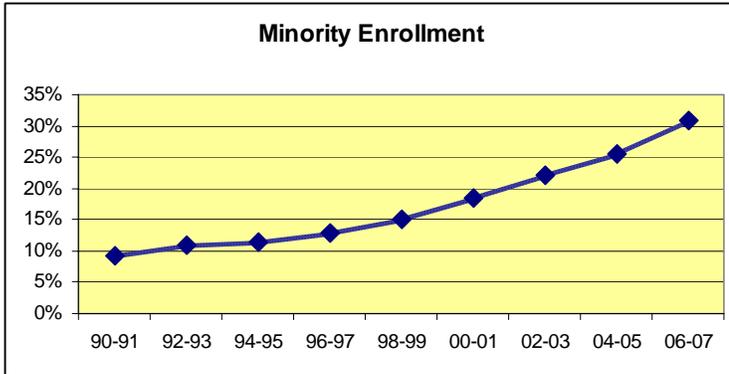
**Figure 5.13: Burnsville-Eagan-Savage School District Student Enrollment**  
 Source: State of Minnesota Department of Education

<sup>124</sup> Schmidt, “Is BHS Senior Campus Still Viable.”

<sup>125</sup> Schmidt, “Is BHS Senior Campus Still Viable.”

<sup>126</sup> Schmidt, “Is BHS Senior Campus Still Viable.”

<sup>127</sup> Schmidt, “Is BHS Senior Campus Still Viable.”



**Figure 5.14: Burnsville-Eagan-Savage School District Minority Student Enrollment**  
 Source: State of Minnesota Department of Education

Demographic changes have influenced the use of the Diamondhead Educational Complex. Since 1990 the student population has become more diverse and poorer. The percentage of minority students has risen from 9.2% in 1990 to 33% in 2007. In 2007, 67% of the students were white, 16% black, 8% Hispanic, and 9% Asian. The percentage of students receiving free or reduced lunch, a common measure used by school districts to determine the number of students living in poverty, increased from 14% in 1997 to 28% in 2007. The Diamondhead Educational Complex expanded to adapt to these changing district demographics. In 2005, the school district renovated the former grocery store within the mall for a free health clinic. The district had been using the space to store surplus school equipment, but the rise in low-income families prompted the district to take measures to ensure all students were receiving adequate health care.

The interviewed school district administrator noted that the Senior Campus/ Diamondhead Educational Center was going to remain. The interviewee believed that the main campus would not be able to accommodate these students returning to the main campus. In addition, the Diamondhead complex serves such a function in the community and it is so ingrained that it is hard to imagine it going away. The interviewee also stated

that the school district is in discussion with future Performing Arts Center about creating a type of magnet school.

## **ii. City Perspective**

The area surrounding the former Diamondhead Mall has been substantially transformed since the building welcomed its first senior class in the fall of 1998. Several mixed-use developments have been created, one of which is a 17 acre, \$60 million development. A total of six condominium, townhouse, and apartment developments have been constructed, two of which include units that qualify as affordable workforce housing. A city-owned Burnsville Performing Arts Center is almost completed. This center will contain a 1,000 seat main theatre, 150 seat theatre, art gallery, and rooms for business conferences, receptions and events. Nicollet Commons Park has hosted several community festivals and events since its dedication in 2004. Progress within the HOC has even encouraged existing businesses to renovate their buildings to fit with the new image.

The city facilitated the transformation of the HOC by acting as master developer for the site. The city used incentives like Tax Increment Financing and even purchased parcels to push redevelopment forward. It also formed partnerships with several organizations and worked with many community members to actualize the vision. The city expects to see financial returns on this substantial investment. It projects that the Heart of the City area will generate approximately \$3 to \$4 million in property taxes annually when fully developed.<sup>128</sup>

The momentum has been encouraging for a city that has lacked a focal point since its inception. The school district is cited as one of the city's seven partners in the HOC

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<sup>128</sup> "Heart of the City" City of Burnsville, Minnesota website, <http://www.burnsvilleheartofthecity.com/overview.htm>

project. According to the school principal and the planner with the city of Burnsville, the Senior Campus/Diamondhead Educational Complex, will continue to figure prominently into city plans for this area of Burnsville. The city has already made financial investments to connecting the Senior Campus/Diamondhead Educational Complex to the surrounding land uses through its extensive streetscape project. The school's parking lots function as parking lots for events at the city's new Performing Arts Center. The parking lots also host the city's weekly Farmer's Market in the summer. The school brings around 900 students daily to this area of Burnsville. It will be important for the city to think about ways the school could support development goals within the HOC.

#### **D. Conclusion**

The school district entered into this project with expectations that: the project would be cost and time effective, the former mall could be successfully transitioned into a school, the new school campus would never be able to fully accommodate all of the programmatic elements typical to high schools, the location of the site would ensure an easy connection to the main campus, the additional square feet available in the building would provide the school district with space for future expansion. All of these original expectations were met. The school project also generated additional positive outcomes. The school district obtained a facility to house an innovative model for twelfth grade learning. In addition, the building evolved into a multi-generational center for learning: both formal and informal. The addition of a school at this site fits well into the city's plans for a mixed-use district. According to both of the interviewed city and school officials, further interconnections between the school site and surrounding sites will be sought.

## **CHAPTER VI**

### **CASE STUDY: WAKEFIELD NORTH HIGH SCHOOL CAMPUS**

#### **A. Introduction**

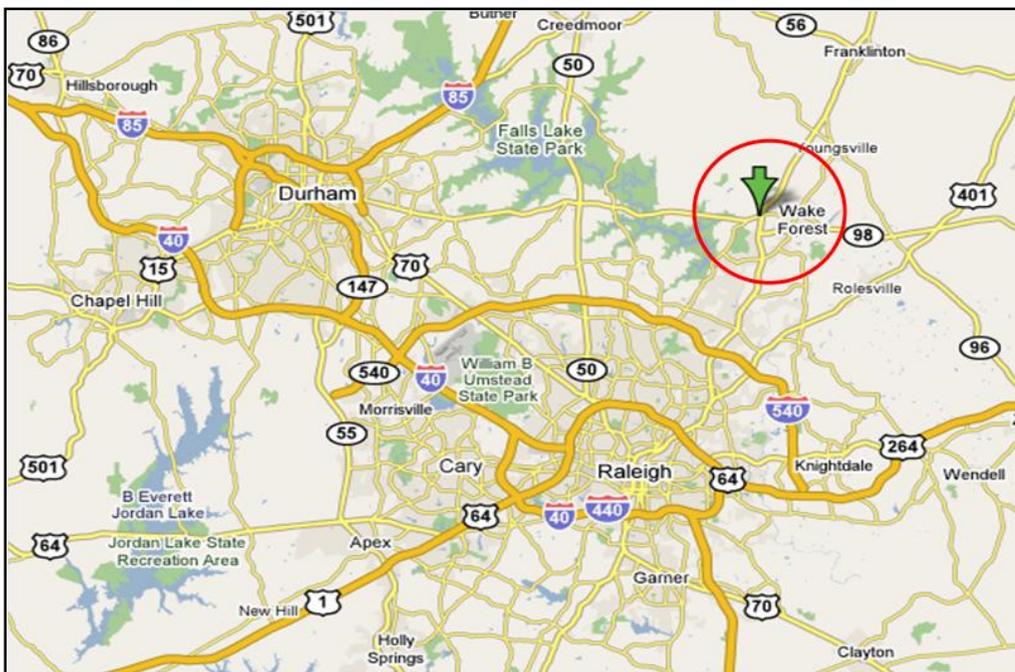
Wakefield North is located in a former Winn-Dixie grocery store at 931 Durham Road (NC 98), approximately 2 miles west of downtown Wake Forest, North Carolina. It is a satellite campus of Wakefield High School and contains all of the high school's ninth grade students. The school opened in August 2007 to accommodate a growing student enrollment increase at Wakefield High School. Wakefield High School added 425 students from 2005 to 2007, going from 2,131 students to 2,626 students. It is the largest of the Wake County Public School System's twenty-three high schools. The building capacity at the high school was 1,591 students in 2006. Even with the addition of 31 mobile units at the high school, total campus capacity only increased to 2,323 students. The district quickly had to find a way to accommodate the projected student increase for the 2007/2008 school year.

The use of a Winn-Dixie store is product of one of the school district's strategies to urgently keep pace with Wake County's explosive population growth. The new high school campus sits in a rapidly developing commercial area within the outer limits of Wake Forest, which is about fifteen miles north of Raleigh. This case study considers: the factors that led to the use of a Winn-Dixie; the relationship between the school district, town, and surrounding community; the function and effect of the school; and the future of the school and site.

#### **B. Background Information**

### a. Regional Context

Wake County is located in the northeast central region of North Carolina. It is part of the Research Triangle metropolitan region, which is formed by the cities of Raleigh, Durham, and Chapel Hill. The county contains twelve cities. Cary and Raleigh are the two largest cities in the county with respective populations of 106,439 residents and 341,530 residents. The remaining municipalities have populations ranging from 1,238 to 28,551 residents.<sup>129</sup>



**Figure 6.1: Raleigh-Durham-Chapel Hill Metropolitan Region**

Source: Google Maps

<sup>129</sup> United States Census Bureau, 2005 Population Estimates, Wake County, [www.census.gov](http://www.census.gov).

According to the United States Census Bureau, Wake County is one of the fastest growing counties in the nation.<sup>130</sup> From 1990 to 2006, the county increased an estimated 85.8% from 423,380 residents to 786,522 residents.<sup>131</sup> Correlating with the county's population growth, 50% of Wake County housing units were built between 1990 and 2006.<sup>132</sup> The Wake County Public School System's Growth Resource Center provides several reasons why the county is experiencing such high population growth. As the WCPSS Growth Resource Center noted:

Why are people moving here? Some of the draws include Wake's close proximity to Research Triangle Park, three major universities, the beach and mountains; a fairly low unemployment rate; a lower cost of living compared to many other parts of the country; and a good climate. Another big draw is the Wake County Public School System.<sup>133</sup>

Much of this growth has occurred within formerly unincorporated areas of the county. As planned residential communities were constructed, they were annexed into existing municipalities, causing them to increase in size and in population.

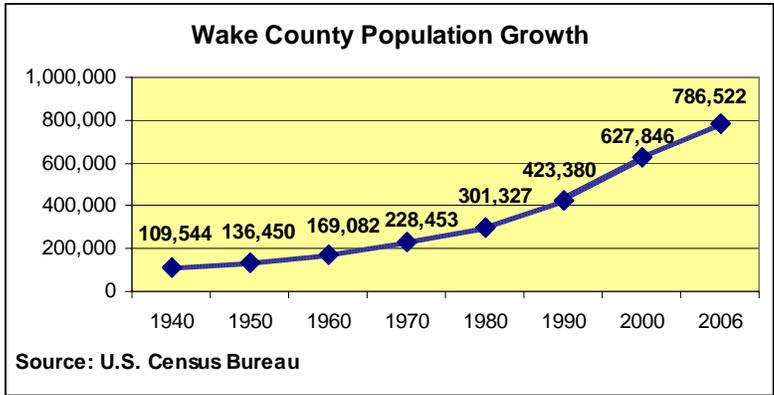
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<sup>130</sup> It ranked 14<sup>th</sup> in the United States for counties with the largest numeric increase from April 2000 to July 2006. Wake County's population increased an estimated 25.3% during this period.

<sup>131</sup> United States Census Bureau, 1990 United States Census, 2000 United States Census, 2006 United States Population Estimates, [www.census.gov](http://www.census.gov)

<sup>132</sup> United States Census Bureau, 2006 American Community Survey, [www.census.gov](http://www.census.gov).

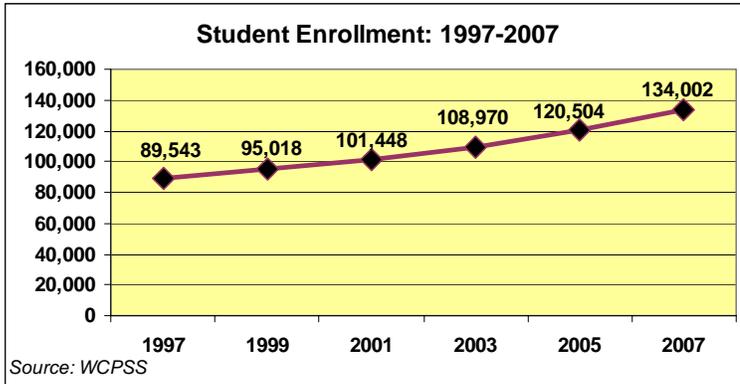
<sup>133</sup> Wake County Public School System Growth Resource Center. "Acute Growth Continues." (2005) available from [http://www.wcpss.net/growth/bigpicture/acute\\_growth.html](http://www.wcpss.net/growth/bigpicture/acute_growth.html)



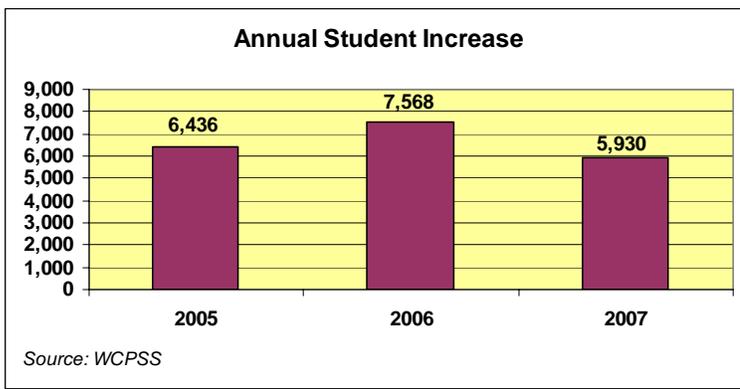
**Figure 6.2: Wake County Population Growth: 1940-2006**

**b. School District Context**

Wake County School District is the nineteenth largest school district in the nation and the largest in the state, recently surpassing the Charlotte-Meklenberg Public School District. The school district’s boundaries align with the boundaries of Wake County. For this reason, high population growth within the county has increased school district enrollments. Wake had 134,002 students enrolled for the 2007/2008 school year. This number is a 49.7% increase since 1997 when the district contained 73,192 students (Figure 6.3). Each year the school district must find space for thousands of new students (Figure 6.4). For example, almost 6,000 new students enrolled for school in the fall of 2007. District projections are already estimating 6,441 new students for the 2008/2009 school year.



**Figure 6.3: Wake County Public School System Student Enrollment: 1997-2007**



**Figure 6.4: Wake County Public School System Annual Student Increase: 2005-2007**

### **i. Growth Management Strategies**

The school district has taken several interrelated steps, starting in the 1990s, to accommodate the growing student population:

1. Constructing and planning for new schools. The school district embarked on an ambitious school building program. Since 1990, the school district has constructed seventy schools. Seven new schools were added during the 2007/2008 school year, bringing the district total to one-hundred and fifty-three schools. The school district currently projects that it will need twenty-six new schools by 2012/2013.<sup>134</sup>

<sup>134</sup> Wake County Public School System, Department of Growth and Planning. “WCPSS School Statistics and Maps 2007/2008.” (December 18, 2007) available from <http://www.wcpss.net/demographics/reports/book07.pdf>

2. Adding temporary, modular classrooms to existing schools. The school district has been using mobile classroom units to leverage fixed school building capacity since the late 1990s. In 2007, the school district had 1,104 mobile units in operation at schools of all levels across the county. The mobile units are a temporary fix. They are not within the school district's long-range plan for the school campuses.

3. Creating modular school campuses. The school district has 'constructed' entire school campuses to bring school facilities on line more quickly. The purpose of these modular campuses is to house a school population temporarily while the permanent school is undergoing construction. In 2007, the school district operated three modular campuses: an elementary school, a middle school and a ninth grade center.

4. Converting schools to follow a year-round calendar. The school district began converting several of its schools to year-round schedules in 2004. Current district policy stipulates that all new elementary and middle schools open as year-round calendar schools. Forty-six of the district's schools now operate on a year-round calendar, but the district would like to see this number increase. School officials assert that this option increases the districts ability to adequately accommodate more students. Many citizens have been unhappy with this district action. Consequently, a citizen-parent organization called WakeCARES formed in opposition and sued the district. The court decision stated that the district needed parental consent to place students in a year-round school and that the district needed to be able to accommodate students who still wished on attending a traditional-year school. The school district is currently appealing this decision. It claims

that meeting this court order has already led to overcrowding at traditional schools and will mean additional student reassignments.<sup>135</sup>

5. Opening Ninth Grade Centers. The school district opened three off-campus ninth grade centers in 2007 to ameliorate overcrowding at three high school campuses. This option was also chosen because research has shown that the ninth grade is an important year during the span of a student's education. The News & Observer reported that "ninth grade is where students are most likely to be held back in high school...and one-third of students who drop out are ninth graders."<sup>136</sup> The district would like to open more ninth grade centers in the next few years; however, it is not within the district's long-range plan to have separate freshmen campuses. The Wakefield Ninth Grade Center is one of three off-campus freshmen centers the school district opened in 2007.

6. Adapting existing buildings in communities to schools. The county is nowhere near being built-out; yet, it has become increasingly difficult for the school district to find large, undeveloped parcels near existing or projected student populations. This search has become even more challenging as land costs have escalated. Availability and cost factors have led the school district to utilize three non-traditional buildings for educational facilities. In 1997, the Lufkin Road Middle School opened in a former industrial building in Apex.<sup>137</sup> In 2006, the district purchased a former asthma-inhaler factory on Laura

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<sup>135</sup> T. Keung Hui, "Diverse Schools Mean Change" News & Observer, December 7, 2007.

<sup>136</sup> T. Keung Hui, "From Frozen Food to Focused Frosh," News & Observer, September 14<sup>th</sup>, 2007.

<sup>137</sup> The school is still in this facility.

Duncan Road in south Cary for a new elementary school.<sup>138</sup> That same year the district purchased a former Winn-Dixie on Durham Road in Wake Forest for a ninth grade center.

7. Initiating bond referendums. All of these initiatives cost money. The school board and Wake County commissioners have been working together on several bond referendum plans that will tentatively amount to over \$4.2 billion dollars through 2014.<sup>139</sup> The first \$970 million bond referendum was placed before voters in November 2006. School officials asserted that failure to pass the bond could entail fewer facility renovations, more school conversions to a year-round calendar, and split high-school schedules. The bond measure passed but not without plenty of criticism focused on “opposition to tax increases and loss of confidence in the Wake County school administration.”<sup>140</sup>

8. Reassigning students annually as new schools open. The school district divides the county into school attendance areas. As new schools open, the district redefines these attendance areas to fill these new seats. All students receive official notification of their school assignment for the upcoming year in May. The district reassigns thousands of students every year to ease overcrowding and promote diversity district-wide: 7,738

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<sup>138</sup> The district paid \$5 million for the building and 15 acres.

<sup>139</sup> The school district creates policies and sets plans, but it does not control how much money it will be allocated annually from the county.

<sup>140</sup> T. Keung Hui, “Voters Leaning Against School Bond Issue,” News & Observer, October 25, 2006.

students were reassigned for the 2004/2005 school year.<sup>141</sup> Citizens are continually unhappy with the number of students reassigned to new schools each year.

## **ii. School Facility Planning**

School facility planning is a function of the school district in Wake County. The Wake County School District maintains staff to conduct long-range planning, oversee construction projects, identify school sites, and acquire school sites. The school district maintains a list of criteria when searching for and selecting school locations such as size and shape of property, cost of acquisition, utility access, topography, proximity to existing student populations, etc.

At the same time, the school district works with the county and local governments. The school district is an agent of the county and reports to the Wake County Board of Commissioners. The school building and planning program are left to the school district, but the county oversees its budget. The school district works with local municipalities to identify sites in areas of interest. Often the planning director uses his knowledge of the area to steer the school district away from selecting poor sites and points them toward good sites. The local government helps the school district obtain exactions from subdivision developers. In addition, school district policy encourages working with municipalities to for joint-use community playgrounds.

After a site is acquired by the school district, local municipalities work with the school district to bring the site through the permitting process. The school district projects are held to the same standards as any development. They are not exempt from local zoning and planning ordinances. Depending on the jurisdiction in the county, the selected

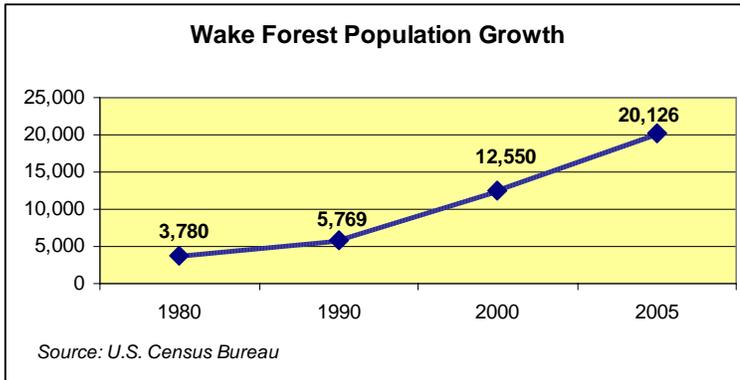
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<sup>141</sup> T. Keung Hui, "Less Chaos Each Year is Wake's Plan," News & Observer, June 16, 2004.

site may have to be rezoned, added as a permitted use to the zoning district, granted a variance, or granted a special-permit.

**c. Community Context**

Wake Forest is located approximately fifteen miles north of Raleigh. It is directly connected to Raleigh by Capital Boulevard (U.S.1)—a divided, four-lane highway. Wake Forest was a small college town and regional trading center until the 1980s when scores of new residents began moving to the Wake Forest area.<sup>142</sup> The city has grown in size through the annexation of formerly unincorporated county land and, as a result, in population. In 1980, the town contained 3,780 residents. By 2000 the population had increased by 232% to 12,588. Population projections for the year 2005 by the U.S. Census Bureau estimated 20,126 residents.



**Figure 6.5: Wake Forest Population by Decade: 1980-2005**

The town’s growth is related to the overall growth of the region; however there are three interrelated factors that have facilitated the movement of new residents to the Wake Forest area: location, housing prices, and transportation improvements. Developers

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<sup>142</sup> The town did not incorporate until 1909, but there has been a community since the beginnings of Wake Forest College in the early 1830s. Wake Forest College stayed in town until 1956 when it moved to Winston-Salem. The Southeastern Baptist Theological Seminary and Southeastern College now occupies its former campus.

can build more homes per acre in this vicinity because its topography. Wake Forest sits between two regional watersheds; areas outside the triangular shape that defines the boundaries of Wake Forest are zoned for larger lot sizes. Housing prices are generally lower. The median house value was \$143,500 in 2000 as compared to communities closer to the Research Triangle Park, such as Cary, where the median house value was \$196,700.

Federal and state transportation projects within the past decade have increased access to Raleigh, facilitated movement through the Wake Forest area, and improved road capacity. Capital Boulevard (U.S. 1), the town's main route to Raleigh, has improved from a two lane road to a four lane divided highway. Interstate 540 reached Capital Boulevard (U.S. 1) in 2002, providing quick access to the northwestern part of the Triangle.<sup>143</sup> A second segment of the interstate opened in 2007, providing access to the northeastern part of the metropolitan region. Also, the NC 98 Bypass was completed in 2006. Historically NC 98, an east-west state highway that connects Wake Forest to Durham, went through the downtown. The bypass directs heavy traffic southwest of the downtown along a new road that currently terminates at Capital Boulevard (U.S. 1). The NC 98 Bypass Corridor Plan proposes a northwest extension of the bypass past Capital Boulevard (U.S. 1) to reconnect with the original NC 98 at Durham Road.

The town uses its zoning ordinance as a strategy to guide growth in a direction appropriate to the context of Wake Forest. The ordinance specifies that any non-residential developments needs to adhere to the town's 'Appearance Standards,' whose

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<sup>143</sup> Commissioned in 1997, Interstate 540 is the Triangle's newest interstate. As of 2008, the interstate only loops around the northern perimeter of Raleigh; however, there are future plans to make this a true outer loop expressway.

purpose is to ensure high-quality developments that are compatible to its surroundings and the overall context of Wake Forest. The town maintains that requiring developments to adhere to these standards “is in the best economic development interests of all residents and businesses.”<sup>144</sup> In addition, the town’s zoning ordinance directs all large-scale commercial development to land alongside Capital Boulevard (U.S. 1) under the Highway Business zoning district. The completion of the NC 98 Bypass and road improvements on Capital Boulevard has made this area ideal for commercial retail developments.

#### **d. Area Context**

Wakefield North is located in this commercial area of Wake Forest on the south side of Durham Road (NC 98) and Capital Boulevard (U.S. 1). The store is part of a long, narrow vertical stretch of land zoned mostly for Highway Business that starts at Shearon Farms Avenue and ends at Wall Road—an estimated 7.5 miles. Within this commercial corridor, one can find just about every type of commercial retail business. The school sits approximately 580 feet from Durham Road. Access to the school occurs from Retail Drive, Durham Road, and Cloverleaf Drive. The school campus shares site access with Walgreens, Bojangles, a small strip mall, gas station, and Target. The surrounding context is not fully commercial, though. A subdivision of over one hundred single-family homes sits directly southwest of the school site. In addition, the area northwest of the school site is decidedly residential in character.

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<sup>144</sup> Town of Wake Forest, NC. Zoning Ordinance. (Amended June 19, 2007) available from [http://www.ci.wake-forest.nc.us/\\_work/bsummers/client\\_resources/residents/planning/Zoning\\_Ordinance.pdf](http://www.ci.wake-forest.nc.us/_work/bsummers/client_resources/residents/planning/Zoning_Ordinance.pdf).



**Figure 6.6: Aerial View of N.C. 98 and U.S. 1 Commercial Area**

Source: Google Maps

## **C. Wakefield North Campus**

### **a. Pre-occupancy**

#### **i. Wakefield High School—Existing High School**

Wakefield North is a product of the Wake County School District trying to swiftly accommodate a growing student enrollment at Wakefield High School as well as within the entire school district. Wakefield High School is located approximately three miles southwest of the Wakefield North site in the Wakefield community of Raleigh. It is the largest of Wake County’s twenty-three high schools.

Wakefield High School contained 2,131 ninth through twelfth grade students during the 2005/2006 school year. Total campus capacity sat at 2,137 students. With additional students projected for the 2006/2007 school year, school officials looked for a way to accommodate more students at the high school. School officials determined that

there was not enough room at the main campus for a large addition.<sup>145</sup> The main campus already contained 31 mobile units. District officials decided to create an off-campus ninth grade center to alleviate crowding at the high school.<sup>146</sup>

**ii. Site Identification Process: Present Advantages and Disadvantages**

District officials started looking for a new school site near the Wakefield community in the fall of 2005. Around this time, the Winn-Dixie grocery store at Durham Road and Capital Boulevard went on the market. The 54,274 square foot stand-alone big-box store had been unoccupied since August of 2005 when the company filed for bankruptcy and closed all eleven of its stores in the Triangle area. The windowless one-story store was built in 2000. The structure was too small for discount department store retailer, but potentially could have been repositioned as a specialty store. The property owner, however, reportedly did not put too much effort into marketing the building nor did the town did not make any attempts to attract tenants to the site.<sup>147</sup>

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<sup>145</sup> Wakefield High School was completed in 1999. It sits adjacent to Wakefield Middle School and Wakefield Elementary School—all completed in 1999.

<sup>146</sup> They repeated this strategy at two other high schools and opened a total of three ninth grade centers in 2007.

<sup>147</sup> Wake Forest City Planner 1, interviewed by Jayne Bernhard, by telephone, 18 March 2008.



**Figure 6.7: Former Winn-Dixie Grocery Store**

Source: Microsoft Live Search Maps

The school district performed a feasibility study to determine the Winn-Dixie's appropriateness for a ninth grade center and the cost-effectiveness for such a conversion. The Winn-Dixie offered two main advantages: proximity and time. The site was in close enough proximity to the main high school campus, which was 3 miles southwest of the store. The district presumed the building could be rehabilitated quickly to house students from Wakefield High School. In addition, the site was already connected town power, water, and sewer.

The central disadvantage associated with the site was its cost, surrounding land-uses, building size, and lease restrictions. The owner of the store offered to lease, not sell, the building to the school district for ten years for \$4.7 million.<sup>148</sup> The site strayed from predominant school district school siting practices because the district makes an effort to place schools next to existing residential populations. This particular site in no way could be considered a neighborhood school given its proximity to a major U.S. highway and

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<sup>148</sup> Kinnea White Epps, "School in Old Winn-Dixie Taking Form," News & Observer, May 5, 2006.

adjacency to a major intersection. The building was slightly smaller than the district would have liked for a ninth grade center. For this reason, the district would have to make concessions on classroom sizes, the availability of non-core course offerings, and scheduling. Finally, the owner placed a restriction on the building that forbade the school district from cutting windows into the façade. The architect would need to find an alternative method for simulating daylight in the building.

### **iii. Process to Acquire the Site: Negotiations and Approval**

School district administrators believed the benefits offered by the former Winn-Dixie store outweighed the disadvantages. They held expectations that the interior of the building could be successfully transitioned into a semi-permanent, satellite ninth grade campus. They expected that the project would be time effective, but not cost effective. School district administrators acknowledged that the satellite campus would never be able to fully accommodate all of the programmatic elements typical to a high school, nor would it look like a school from the exterior. They also acknowledged that existing, surrounding land uses made this location less suitable than traditional school site location. With these expectations, school district staff initiated the formal steps to move the proposed project forward.

School district staff brought the proposed project to the school board for approval to enter into negotiations with the property owner. The school district did not seek public comment outside of the school board and county commissioners—both of which involve elected public officials.<sup>149</sup> Some school board members expressed concern about

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<sup>149</sup> Wake County Public School System Planner 1, interviewed by Jayne Bernhard, by telephone, 14 March 2008.

spending so much money for a leased facility.<sup>150</sup> The property owner wanted \$4.7 million for a ten year lease of the building. This amount in addition to the estimated \$5 million cost of interior renovations brought the total project cost to \$9.7 million. In comparison, the school district bought 20.3 acres for \$3.1 million for an elementary school in 2006. District officials assured them that the former Winn-Dixie store was the best strategy for alleviating overcrowding at Wakefield High School. They asserted that the project was not intended to be a huge money-saver. The central advantage this site offered was time. School board members issued approval for school staff to enter into negotiations with the property owner and the school district signed a ten year lease in February 2006 for \$4.7 million. The owner indicated the future possibility of extending the lease agreement.

The Wakefield North school project was not a controversial issue for the town of Wake Forest.<sup>151</sup> The town recognized the district's acute capacity crisis and fully supported the school district's lease option. A member from the planning staff stated that the town was not concerned a school that the site would thwart future redevelopment efforts, nor was there any concern about a loss of tax revenue.<sup>152</sup> Staff felt occupancy was better than vacancy. According to a Wake County School District project manager, people had been dumping large unwanted appliances in the rear of the store.<sup>153</sup> Therefore, the district's use of the site prevented the property from further becoming blighted.

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<sup>150</sup> Epps, "School in Old Winn-Dixie Taking Form."

<sup>151</sup> Wake Forest City Planner 1.

<sup>152</sup> Wake Forest City Planner 1.

<sup>153</sup> Wake County Public School System Project Manager 1, interviewed by Jayne Bernhard, by telephone, 13 March 2008.

#### **iv. Permitting Process: Working Relationship with Local Government**

Staff in the planning department helped the district obtain the necessary permits for use as a school. The first task was zoning. The school site sat in a Highway Commercial Zoning District, where schools were not listed as a permitted use—neither by right nor by special permit. Planning staff thus grappled with how a school could be accommodated at this site. They decided that adding schools as a permitted use by right within the Highway Commercial Zoning District would be an easier option than rezoning the particular site or issuing a variance. The town council passed this addition without issue.<sup>154</sup>

Planning staff looked at the original site plan and required the landscape improvements initially approved by the town. The town did not require any further onsite landscape improvements. They did require the installation of sidewalks from the entrance of the facility to the edge of the property. They also required a traffic circulation plan from the school district. Planning staff worked with the school district to ensure that the school did not block any recorded access easements across the property. The school district originally wanted to close off one of the entrances to the school with an iron gate to separate it physically from the surroundings. The town allowed the school district to place orange cones at one of the entrances with the understanding that parties with shared access can request removal. The school district also worked with the town's Building Inspections Division to bring the entire building up to code, since the International Building Code considered the rehabilitation project to be a change of use.

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<sup>154</sup> Wake Forest City Planner 1

## **v. Building Conversion: Store to School**

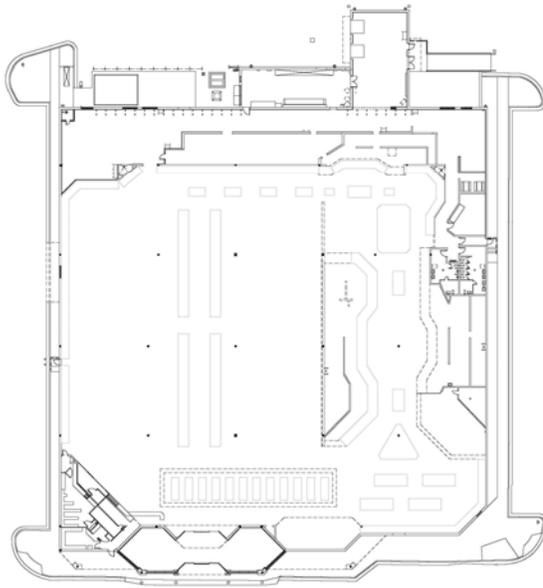
The lease agreement with the owner of the Winn-Dixie property signified that the building would be used semi-permanently. The new school would house the ninth grade population from Wakefield High School indefinitely during the ten year lease period. If the school was no longer needed to house ninth grade students, the district intended on using the building as a school for a different age group.

### **1. Reconstruction of Space**

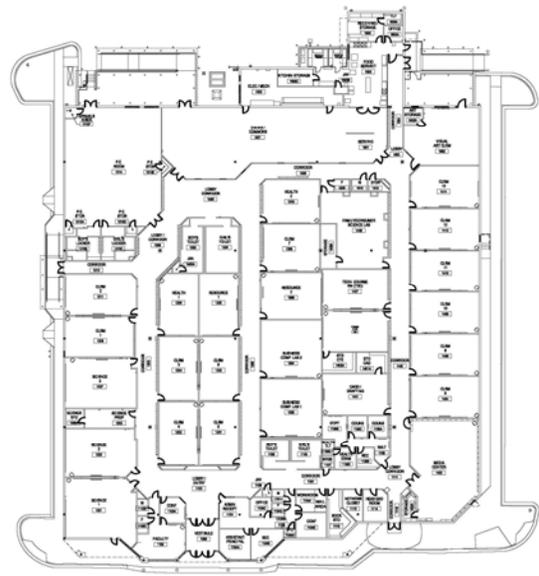
The school district hired the architectural firm SchenkelSchultz, a company with experience in non-traditional school facilities, to redesign the building.<sup>155</sup> The firm was required to redesign the building to accommodate the educational program for 900 ninth grade students. The architect reconfigured space within the square building into three zones. SchenkelSchultz kept the school's main entrance consistent with that of the former store and designed an entrance lobby at this location. Administrative offices and technology-related classrooms comprise the first definitive area of the school. The offices are located to the front of the building, around the main entrance. The middle section of the school contains classroom space. The architect situated classrooms along an inner and perimeter corridor within the building. These two circulation paths lead to the third area in the back of the school, which contains the physical education room, art classroom, cafeteria, kitchen, and maintenance offices.

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<sup>155</sup> One of these projects was for a Kmart building in the Lee County School District.



**Figure 6.8: Pre-rehabilitation Floor Plan**  
Source: SchenkelSchultz



**Figure 6.9: Post-rehabilitation Floor Plan**  
Source: WCPSS

The final product included 13 classrooms, 3 science labs, a physical education room, two computer labs, drafting room, and media center, a cafeteria with full kitchen, and six sets of bathroom facilities. Physical education space was the most significant compromise the school district had to make with this particular building. While the gym is one of the largest rooms in the school, it is still substantially smaller than a traditional gym. To offset the small interior space, the school district installed an outdoor basketball court and scheduled some of its ninth grade students to take their P.E. class at the main campus.



**Figure 6.10: Wake North Campus, Main Entrance**  
Source: Microsoft Live Search Maps

## **2. Aesthetic Augmentation**

Due to the property owner's restrictions, little could be done to enhance the school's exterior image besides repainting the building and affixing a sign on the front façade. No additional site improvements were performed, such as removing sections of the asphalted parking lot. The architect took several steps to make the interior of the building feel or appear like a school. To create the illusion of light, the architect skillfully crafted fake skylights at the intersection of major corridors by raising the ceilings at these junctures. The architect also planned for the installation of brighter lights and the addition of a color scheme of warm, light hues. The challenge of fitting all of the necessary school elements into the building resulted in smaller than average high school classrooms. To make the rooms feel larger, the architect made the classroom ceiling height in these spaces higher than average.

## **3. Function**

For the most part, Wakefield North was designed to be a self-operating school facility since it contained a gym, cafeteria, and space for core curriculum courses. The

school still maintained connections with the main campus, located three miles away. Freshmen would be able to take certain electives that could not be accommodated at Wakefield North at the main campus. Both schools would operate on a block schedule to facilitate scheduling and movement between the two campuses. Shuttle buses would leave the main campus at the end of the second block to bring freshmen back to Wakefield North and shuttles would leave at the end of the third block to bring students to the Main Campus for fourth period. In addition, a shuttle bus would head back to the Main Campus at the end of the school day so students can participate in after-school activities.

#### **4. Project Publicity**

As soon as the school district started on interior renovations, they made every effort to publicize the merits of this project to the media. At least six newspaper articles were written about the school project prior to its opening. All characterized the project as a necessity due to surging school enrollments and lack of available land. School officials from Wakefield High School also presented the project to parents in the spring of 2007. Not surprising, they were met with uncertainty.

##### **b. Post-Occupancy**

###### **i. General Community Response**

The school opened in August 2007 after one year and four months of work, which included the design phase.<sup>156</sup> The News & Observer and Wake Forest Gazette reported that many students were embarrassed at first that they had to attend high school in a

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<sup>156</sup> The project design started in April of 2006 and interior construction started in January of 2007. The project was completed in August 2007.

former grocery store, but, overtime, that feeling soon went away.<sup>157</sup> Moreover, students believed it no longer felt like a grocery store. All interviewees indicated that the project had “exceeded expectations.” In addition, school officials believe that the community has been quite thrilled with the facility.<sup>158</sup>

## **ii. Advantages for Daily Education**

A common sentiment expressed by students and faculty was that they believed the facility made students “more focused.”<sup>159</sup> Staff interviewed by the media believed that the freshmen were behaving better since they were not around upperclassmen. The assistant principle of Wakefield North claimed that there had been fewer discipline problems from freshmen already that year.<sup>160</sup> At the Main Campus, there were benefits of less crowded hallways and the ability of additional teachers having their own classrooms instead of moving every period.

## **iii. Challenges to Daily Education**

The central challenges the building has presented to daily education has been scheduling. The building could not be made to accommodate all of the non-essential programmatic elements, so extra scheduling has been needed to make sure students can take electives not offered at North at the main campus. The principal noted that it would be nice to have an auditorium-like space so that North could have all-school functions.

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<sup>157</sup> T. Keung Hui, “From Frozen Food to Focused Frosh.”

<sup>158</sup> Wakefield High School North Campus Principal 1 interviewed by Jayne Bernhard, by telephone, 14 March 2008; Wake County Public School System Planner 1; Wake County Public School System Project Manager 1.

<sup>159</sup> T. Keung Hui, “From Frozen Food to Focused Frosh.”

<sup>160</sup> T. Keung Hui, “From Frozen Food to Focused Frosh.”

Non-traditional gym space has also posed a challenge to the schools physical education teachers.<sup>161</sup>

#### **iv. Suitability of Site for a School**

Despite these disadvantages, the principal believed the building works well as a school. Other school and town officials indicated that the building and site works, but is not ideal. The school district would like to see the school integrated more holistically with the main campus. As one school district employee noted, “If the Winn-Dixie could be dropped on the current site, that would be fabulous.” One interviewee doubted the site would have worked for an elementary school since the surrounding area is too busy. Most interviewees expressed disappointment that the district was not able to buy the building and site. If this had occurred, more money would have been invested to permanently improve the building.

#### **v. Benefit to Surrounding Area**

The school principal believed that the businesses immediately surrounding the school picked up. Staff from Wakefield North frequent the Bojangles fast-food restaurant. Walgreens altered their hours to be open earlier for parents who drop off their children in the morning. For this reason, other local businesses probably benefited as well. A member of the town of Wake Forest’s planning staff thought that it was too early to determine if the school would spur further commercial investment in the surrounding area. Nothing has occurred to date. The planner cited the lack of extensive site improvements and the existing character of the area as potential reasons.

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<sup>161</sup> Wakefield High School North Campus Principal 1.

### **c. Future of School Building and Site**

#### **i. School District Perspective**

The school district will have possession of the building until 2016 and will operate the building as a school until its lease expires. The school district is currently trying to get the owner to agree to allow modular units at Wake North for the 2008/2009 school year. The school has already almost run out of space. It is too early to determine if the lease will be renewed by either parties or if the option to purchase will be presented. Two new high schools are slated to open near Wake Forest in the next five years. Heritage High is scheduled to open during the summer of 2009 and high school H-6 at an undetermined location in 2011. One of the school planners indicated that eventually they would like to do away with ninth grade centers and focus on regular high schools.

#### **ii. Town Perspective**

At present, the town does not have any plans for the area incorporating the school site. A member of the planning department staff indicated that the town is interested in more progressive zoning strategies. For example, the planner noted that the area the school sits within could be well-suited for a Transportation Oriented Development overlay district. The town is currently encouraging a mixed-use redevelopment project within the downtown, which incorporates a former downtown Winn-Dixie.

### **D. Conclusion**

The school district entered into this project with expectations that: that the interior of the building could be successfully transitioned into a semi-permanent, satellite ninth grade campus, the project would be time effective, the satellite campus would never be able to fully accommodate all of the programmatic elements typical to a high school,

nor would it look like a school from the exterior, the existing, surrounding land uses made this location less suitable than traditional school site location. All of these original expectations were basically met. The success of this school project centered on the ability of the school district to house students quickly. The only additional outcome was that reuse of the former Winn-Dixie store by the school district positively rehabilitated a large vacant building that was quickly becoming a community eyesore.

## CHAPTER VII

### CASE STUDY: RAYMA C. PAGE ELEMENTARY SCHOOL

#### A. Introduction

The Rayma C. Page Elementary School is located in a former Kmart at 17000 S. Tamiami Trail (U.S. 41), approximately 11 miles south of downtown Fort Myers Florida. The school is one of forty-three elementary schools within the Lee County Public School District. It opened in August 2005 to accommodate a growing student population in the school district. In just two years, from 2003 to 2005, the school district added nearly 9,000 students. Substantial growth coupled with mandated classroom size reductions by the State of Florida pushed the school district to urgently search for classroom spaces.

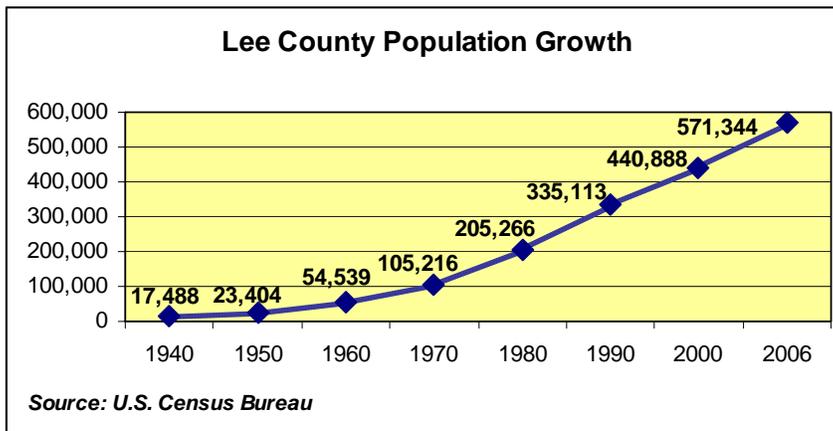
The use of a former Kmart is an example of a method the school district is using to keep pace with Lee County's explosive growth. The school is one of three former commercial retail buildings the school district has purchased and converted. The Rayma C. Page Elementary School sits within a rapidly developing area of unincorporated Lee County, near the San Carlos Park community. Besides considering factors that led the school district to choose former Kmart, the case study also considers the relationship between the school district and county as well as the school and surrounding area.

#### B. Background Information

##### a. Regional Context

Lee County is located in southwestern Florida and is closely associated with the cities of Cape Coral-Fort Myers. The county contains five cities—Cape Coral, Fort Myers, Fort Myers Beach, Sanibel, and Bonita Springs. Throughout its history, people

have been coming to this region of Florida for its climate, proximity to beaches, and relative housing affordability. The county has grown substantially since people first started permanently settling in the 1890s, but this growth became especially acute after 1940. The county's population grew from 17,488 residents in 1940 to an estimated 571,344 residents in 2006.<sup>162</sup> Based on estimates from the 2006 American Community Survey, 44.8% of Lee County housing units were built between 1990 and 2006.<sup>163</sup> Cape Coral, Fort Myers, and Bonita Springs are the county's three largest cities, with their respective populations of 140,010 residents, 58,428 residents, and 37,992 residents.<sup>164</sup>



**Figure 7.1: Lee County Population Growth**

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<sup>162</sup> United States Census Bureau, 2006 Population Estimates, Lee County, [www.census.gov](http://www.census.gov).

<sup>163</sup> United States Census Bureau, 2006 American Community Survey, Lee County, [www.census.gov](http://www.census.gov).

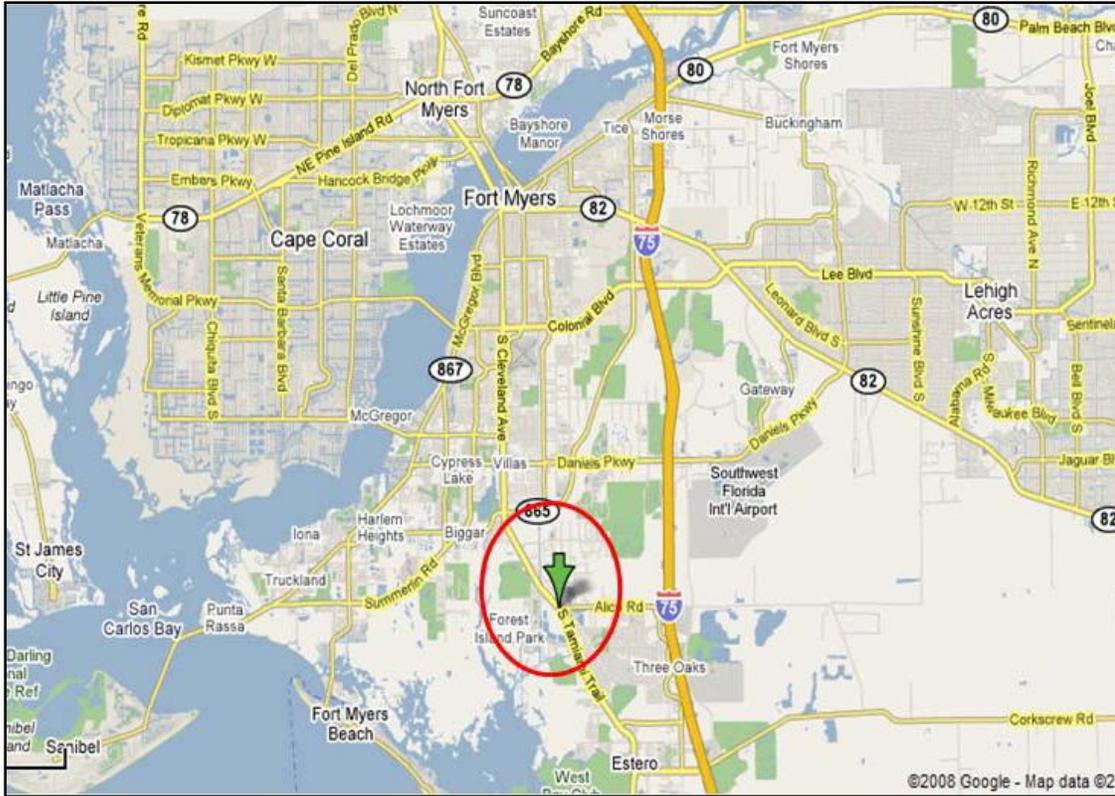
<sup>164</sup> United States Census Bureau, 2005 Population Estimates, Lee County, [www.census.gov](http://www.census.gov)

Much of the population growth within the last several decades has occurred within the county's seventeen unincorporated communities.<sup>165</sup> Development in these unincorporated areas of the county has been fueled by the improvement, extension and construction of roads. Many two lane roads are now four to six lane parkways. The construction of Interstate 75 in the 1970s made the biggest impact. This north-south interstate was constructed east of the county's existing population centers through largely unpopulated areas. Soon after the completion of the interstate, major residential, commercial, industrial, and transportation-related development began to be constructed.<sup>166</sup>

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<sup>165</sup> Much of this has its roots in the Florida land boom of the 1920s, which resulted in the subdivision and transfer of thousands of acres of real estate. Planned residential communities were platted and roads were even constructed in several instances, but it was not until decades later that these vacant lots were developed. During one of the thesis interviews, a Lee County School District planner estimated that over a thousand of these vacant lots still exist today.

<sup>166</sup> One of these major developments includes the Southwest Florida International Airport, which was completed in 1983.



**Figure 7.2: School site in the Context of the Fort Myers / Cape Coral Metropolitan Area (Lee County)**

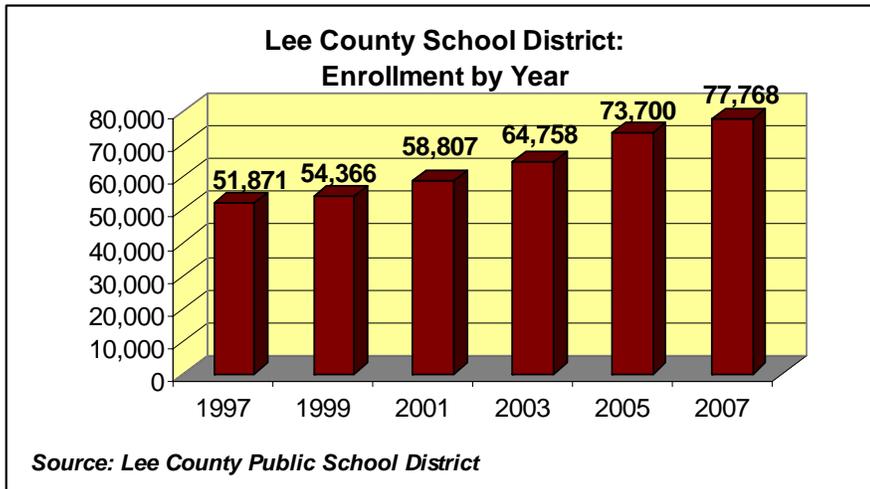
Source: Google Maps

### **b. School District Context**

The Lee County School District is the 9<sup>th</sup> largest school district in Florida and ranks within the 50 largest school districts in the nation.<sup>167</sup> The school district's boundaries align with the boundaries of Lee County. For this reason, high population growth within the county has increased school district enrollments. The district counted 77,768 kindergarten through high school students in December 2007. This is a 49.9%

<sup>167</sup> Lee County School District, Lee County, Florida, School district homepage: <http://www.lee.k12.fl.us/home.htm>

increase since 1997 when the district contained 51,871 kindergarten through high school students.<sup>168</sup>



**Figure 7.3: Lee County School District Enrollment: 1997 – 2007**

The need for more schools became even more immediate in 2002 due to the state legislature’s passage of the Classroom Size Reduction Amendment (Amendment 9). This amendment mandated that all public school class room sizes fall below the following thresholds before the 2010/2011 school year<sup>169</sup>:

- Pre-kindergarten through third grade class rooms: 18 students
- Fourth through eighth grade classrooms: 22 students
- Ninth through twelfth grade classrooms: 25 students

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<sup>168</sup> The student population is not only increasing, but also becoming more diverse. Minority students comprised 29.2% of the district’s student population in 1997 and that number was 48.3% as of December 2007. Of that percentage 28.4% of those students were Hispanic and 13.9% were black. Source: Lee County School District, “Historical Enrollments & Demographics,” (1997/1998-2007/2008) available from <http://www.leeschools.net/dept/plan/Enrlcurr.htm>.

<sup>169</sup> Lee County School District. “Class Size Reduction Efforts.” (2005/2006) available from <http://www.leeschools.net/dept/pgsc/classize.htm>.

It also mandated that school districts prove that they are incrementally making gains toward these goals by meeting yearly thresholds prior to the 2010/2011 school year. According to the “Impact Fee Update Study,” an inventory of existing schools indicated most schools in the district were operating at over-capacity in 2005 based on the standards set by Amendment Nine. In fact, the inventory showed that the district had a deficit of 11,530 permanent student stations in 2005.<sup>170</sup>

#### **i. Growth Management Strategies**

The school district has taken several steps, starting in the 1990s, to address student enrollment increases. Foremost, the school district embarked on an ambitious school building program. Since 1997 the school district has constructed thirty-six new schools.<sup>171</sup> Seven new schools were added during the 2007/2008 school year, bringing the district total to ninety-three traditional schools.<sup>172</sup> The school district website asserts that it will be necessary for the school district to have an “aggressive and creative site acquisition and school construction program” to accommodate a potential 237,000 students by 2025.<sup>173</sup>

Secondly, the school district implemented a school choice program in 1998 to spread growth related impacts to schools throughout the county as well as to enhance

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<sup>170</sup> Lee County School District, “Impact Fee Update Study,” Prepared by Duncan Associates for the Lee County School District, Final Draft (2005), 15-16. Available from [http://www.leeschools.net/dept/pgsc/Data/lee%20school%20II\\_final%20draft.pdf](http://www.leeschools.net/dept/pgsc/Data/lee%20school%20II_final%20draft.pdf)

<sup>171</sup> Lee County School District, “Historical Enrollments & Demographics.”

<sup>172</sup> Traditional means all schools except charter schools. The school district contains 14 charter schools.

<sup>173</sup> Lee County School District. “School Construction Schedule.” (2008) available from <http://www.leeschools.net/dept/pgsc/newschools.htm>

diversity in all county schools. This program divides the county into three attendance zones (East, South and West), each with three to five sub-zones. Parents rank their schools of choice within the zone of the child's residence, and student assignments are made based on these preferences as well as other pertinent factors such as school capacity. According to the Director of Planning, Growth and School Capacity for Lee County, this program has greatly enhanced the district's ability to accommodate significant increases in student enrollment.<sup>174</sup>

Finally, the school district worked with the Lee County Board of Commissioners to adopt an ordinance in 2001 that places school impact fees on new developments. According to the "Impact Fee Update Study" prepared by Duncan Associates, the ordinance "contains provisions requiring that impact fee revenues be spent only on growth-related educational capital improvements."<sup>175</sup>

## **ii. School Facility Planning**

School facility planning is a function of the school district in Lee County. The Lee County School District maintains staff to conduct long-range planning, oversee construction projects, identify school sites, and acquire school sites. A staff member from the county planning department assesses school sites prior to acquisition to ensure they adhere to the Lee Comprehensive Plan and zoning, but the county does not work with the school district to secure school sites.<sup>176</sup> Schools generally are allowed to be constructed in any zone unless it is adjacent to an industrial site, in proximity to an airport runway, or if

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<sup>174</sup> Lee County School District Director of Planning, interviewed by Jayne Bernhard, by telephone Interview, 14 March 2008.

<sup>175</sup> Lee County School District, "Impact Fee Update Study."

<sup>176</sup> Lee County Planner 2, interviewed by Jayne Bernhard, by telephone, 7 April 2008.

the project will have adverse environmental implications. Both county planning and school planning strategy encourages the joint-use of community resources, and, as a result, the county has a lot of examples of shared facilities.<sup>177</sup>

In 2005, the state of Florida passed a Concurrency Law which mandated school districts and municipalities work together on growth-related planning issues. According to staff at the county planning department, this law did not have too much of an impact both operations. It basically required by law that the two government entities to share information to ensure that school capacity was commensurate with residential development.<sup>178</sup> Besides site assessment and data sharing, the school district mainly works with the county to obtain the necessary permits for new schools.

The passage of the 2002 state amendment as well as continued student enrollment increases meant that the school district needed to greatly increase its number of new schools. The school district currently projects that the district will need over 100 new schools in the next twenty years to keep up with rising student enrollments. 22 of these schools will be needed within the next five years.<sup>179</sup> Two main challenges have confronted the district as they search for new school sites: cost and availability. The county is nowhere near being built-out. The cost of land, though, has risen dramatically since 2000. School officials are basically competing with developers for land. Large, centrally located tracts of undeveloped land are increasingly difficult to find, even more so when land with environmental restrictions is factored in. The school district desires 12

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<sup>177</sup> Lee County Planner 1, interviewed by Jayne Bernhard, by telephone, 4 April 2008; Lee County Planner 2.

<sup>178</sup> Lee County Planner 2.

<sup>179</sup> Lee County School District, "School Construction Schedule."

acres for an elementary school, 20-25 acres for a middle school, and 40-50 acres for a high school.<sup>180</sup>

The school district has explored alternative options for increasing school capacity besides constructing traditional schools. As several school districts in high-growth areas across the nation have done, the district has contemplated placing its schools on a year-round calendar. Based on an analysis of several articles in the News-Press, this option has not been popular. The district has also considered greatly expanding current school facilities to form educational complexes with concentrated school populations. The result would be a district of mega-schools with elementary school enrollments of 1,600, middle schools of 2,000, and high schools of 3,500. This would be a sizable difference from the current average elementary school size of 700 students. The district school facility planner indicated that current school policy is to site schools as close as possible to new or existing residential developments to make these educational facilities true neighborhood schools.<sup>181</sup>

The district has also started examining non-traditional buildings as well as sites for schools. This led to two schools opening in former K-marts in the fall of 2005 and a new district administration center overtaking a former shopping mall in 2007. It has been reported that the school district superintendent routinely inquires into the status of commercial properties with for-sale signs during daily drives through the county.<sup>182</sup> The other Kmart-school is located on Homestead Avenue in the Lehigh Acres community in

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<sup>180</sup> Lee County School District Director of Planning.

<sup>181</sup> Lee County School District Director of Planning.

<sup>182</sup> Jason Wermers, "Schools Seek More Capacity," News-Press, September 30, 2005.

east Lee County. This building was redesigned by the noted educational facility architectural firm SchenkelSchultz and no longer resembles a Kmart. It was rehabilitated to serve as a permanent elementary school, but it currently functions as a staging school, holding elementary school students scheduled to attend the newly constructed Treeline Elementary School during the 2008/2009 school year. Prior to the 2007/2008 school year, the facility held high school students awaiting the completion of East Lee County High School. The district planning department stated that the school facility will become a permanent elementary school for the 2008/2009 school year.<sup>183</sup>

The surge in school enrollment also meant the district had to increase the number of its central administrative and support staff. District officials looked for a site large enough to accommodate its entire central staff and could be expanded if needed. They became interested in a former shopping mall at Metro Parkway and Colonial Boulevard because of its central location and size. The Metro Mall had not been in use as a traditional shopping mall for several years. It was last used as a flea market. The school district purchased the 330,000 square foot, 31 acre property for \$9 million in 2004. The “X” shaped mall then underwent substantial renovation, bringing the total costs to \$51 million. The new district administration center opened the summer of 2007. Six hundred employees will eventually report to work at the center.<sup>184</sup>

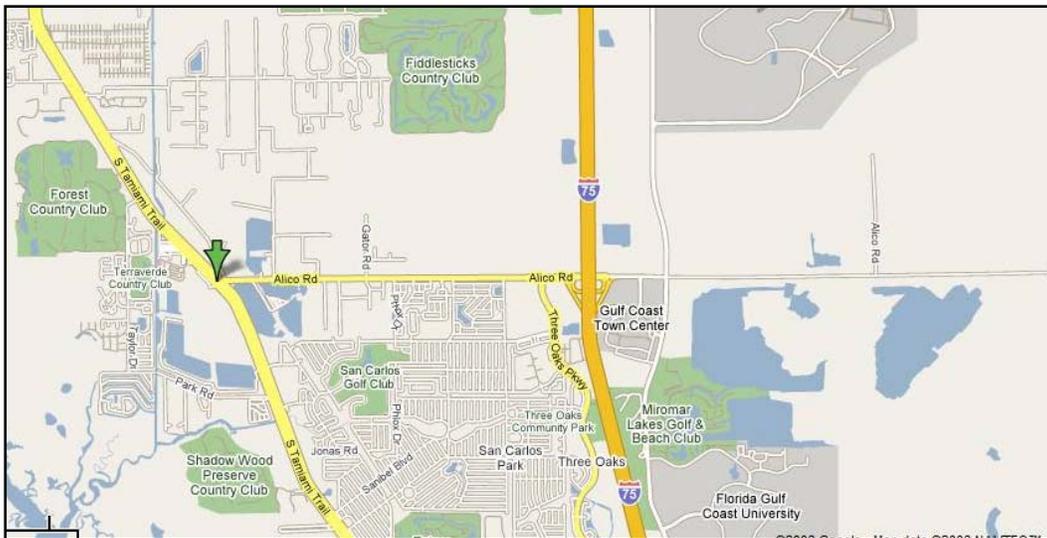
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<sup>183</sup> Pam Witmer “Treeline Elementary Construction Lags Student Growth - Transition to New School Next Fall” News-Press, November 24, 2007; Jennifer Booth Reed, “School District Turns Kmart Into Classrooms” News-Press, March 12, 2005; Jennifer Booth Reed, “Kmart Quite A Bargain for Lee Schools” News-Press, December 12, 2003; Dave Breitenstein, “Lee Finds Building Deals Not a Bargain,” News-Press, October 30, 2004.

<sup>184</sup> Dave Breitenstein, “School Building Almost Done-Former Metro Mall to Open in May,” News-Press, March 14, 2007.

### c. Community Context

The intersection of Tamiami Trail and Alico Road is a rapidly developing area of unincorporated Lee County, approximately 11 miles south of downtown Fort Myers. Tamiami Trail (U.S. 41) is a busy north-south highway that connects the city of Fort Myers to all points south along the west Florida coast.<sup>185</sup> Alico Road is an east-west connector to Interstate 75 that terminates at Tamiami Trail (US 41). This intersection is approximately 3 ¼ miles from Interstate 75. Alico Road and Tamiami Trail have become increasingly busy transportation corridors in Lee County, upgrading from two to six lanes during the past twenty years, due to two interrelated factors: ‘Developments of Regional Impact’ (DRI) and new residential construction.<sup>186</sup>

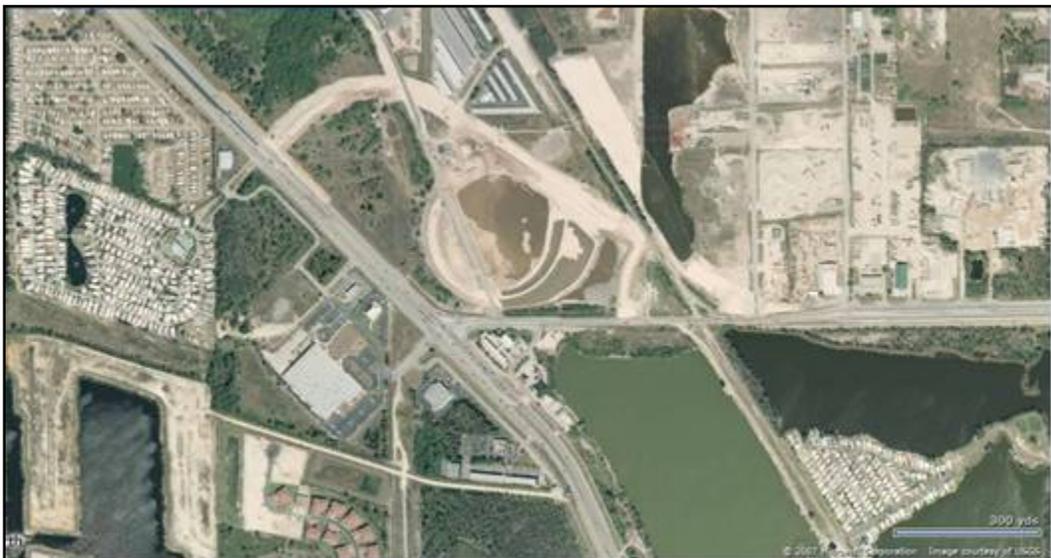


**Figure 7.4: U.S. 41 (Tamiami Trail), Alico Road, and Interstate 75 Area Map**  
Source: Google Maps

<sup>185</sup> The Tamiami Trail was constructed in the 1920s to connect the city of Tampa to Miami and it subsequently became integrated into United States highway system as U.S. 41.

<sup>186</sup> The Southwest Florida Regional Planning Commission (Fort Myers, Florida) used the term ‘Developments of Regional Impact’ to identify large-scale commercial, industrial, institutional, residential, or transportation-related developments that would impact areas beyond its immediate confines upon completion. Cited from Southwest Florida Regional Planning Council website: <http://www.swfrpc.org/dri.shtml>

Several large-scale developments have been constructed or are in progress on land near the Interstate 75 and Alico Road interchange. The Florida Gulf Coast University, the state's newest public university, opened in 1997 on 760 acres just east of Interstate 75 between Alico and Corkscrew Roads. Just north of the University is the Gulf Coast Town Center a 1.7 million square foot shopping center development that opened in 2006. The Southwest Florida International Airport, which opened in 1983, just north of Alico and Interstate 75, began construction on a new terminal in 2002 that will increase airport capacity with 28 gates. In addition, a few industrial parks have been constructed near this interchange.



**Figure 7.5: Aerial Map of U.S. 41 and Alico Road Intersection**

Source: Microsoft Live Search Maps

#### **d. Area Context**

The Rayma C. Page Elementary school sits in this rapidly developing area of Lee County on the west side of Tamiami Trail and Alico Road. This area is distinctly commercial and includes several fast-food franchises, a drugstore, auto shops, and a motel. The school building sits approximately 500 feet from Tamiami Trail. There is no direct access to the school from Tamiami Trail. Two secondary roads extend from the school site to Tamiami Trail. Only one of these intersections is regulated with a traffic light. The school campus shares these two access roads with Walgreens, Arby's and Dunkin Donuts. Planned residential communities, including recreational vehicle parks, are near the school on all but its northeast side, but the closest one is a quarter of a mile away. The northeast is zoned industrial and includes operating rock quarries.

### **C. School Project**

#### **a. Rayma C. Page Elementary School: Pre-Occupancy**

##### **i. Existing Conditions**

The Lee County School District embarked on an ambitious school-building program in the late 1990s to keep pace with the county's overall population growth. The 2003, state-mandated Class Size Reduction Amendment pushed the school district even more urgently to find classroom space. In just two years, from 2001 to 2003, the district grew from 58,807 students to 64,758 students.<sup>187</sup> The school district tries to locate schools within or near existing or projected residential communities, but the school choice program (attendance zone demarcations) has provided the district with some

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<sup>187</sup> Lee County School District, "Historical Enrollments & Demographics."

flexibility in finding school sites.<sup>188</sup> As noted, the district is divided into three attendance zones and students can select the school they would like to attend based upon the zone in which they reside. For school planning purposes, the three attendance zones are further divided into three or five subzones. Almost all of the subzones were in need of schools for all levels.

## **ii. Site Identification Process**

The school district's long-range planning staff began looking for elementary school sites for South Subzone 2 in late 2003 to ensure that school capacity was commensurate with development in that area. Around this time, the Kmart discount department store at Tamiami Trail (US 41) and Alico Road went on the market. The 128,000 square foot stand-alone big-box store had been unoccupied since early 2003. Kmart filed for bankruptcy in January 2002 and, as a result, the company began closing almost all of its stores in Lee County. The windowless one-story big-box store was built in 1993. According to one county official, the government did not make any direct attempts to fill the store vacancy with additional retail.<sup>189</sup> The existence of undeveloped commercially zoned land nearby and the foreseen completion of the Gulf Town Center retail development rendered the building and site unlikely for reuse at that time.<sup>190</sup> Reportedly, the county did not play a role in helping point the school district toward this particular site.<sup>191</sup>

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<sup>188</sup> Lee County School District Director of Planning.

<sup>189</sup> Lee County Director of Smart Growth, interviewed by Jayne Bernhard, by telephone, 14 March 2008.

<sup>190</sup> Lee County Director of Smart Growth.



**Figure 7.6: Former Kmart Store, Facing North**  
Source: Microsoft Live Search Maps

The Kmart site offered several key advantages. The site was in close proximity to the residential populations the school district was intending to serve. The building square footage was comparable to those of other Lee County elementary schools, so it could accommodate a traditional school program. The district presumed the building could be rehabilitated quickly to open up needed classroom space for the subzone. The school district also felt the proposed cost was optimal for what they were trying to do. The property owner was willing to sell the site for \$5.7 million. The district estimated that the building would need \$11.1 million in building renovation and site improvements, which would bring the total cost closer to \$16.8 million.<sup>192</sup> The district felt the associated costs were on par with what the district spends on traditional school sites and new

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<sup>191</sup> Lee County Director of Smart Growth; Lee County Planner 1; Lee County School District Director of Planning.

<sup>192</sup> Jennifer Booth Reed, “School District Turns Kmart Into Classrooms,” News-Press, March 12, 2005; Jennifer Booth Reed, “Kmart Quite A Bargain for Lee Schools,” News-Press, December 12, 2003.

construction.<sup>193</sup> The Hans Marsh Elementary School, for example, was constructed around the same time for approximately \$13.64 million. Additional benefits came from the fact that the Kmart site already featured connection to county power, water, and sewer and had been assessed for adverse environmental impacts.

The central disadvantage associated with the site was the surrounding land-uses. This particular site in no way could be considered a neighborhood school given its proximity to a major U.S. highway and adjacency to a major intersection. For this reason, the site strayed from predominant school district school siting practices because the district makes an effort to place schools next to existing residential populations.<sup>194</sup>

### **iii. Process to Acquire the Site: Negotiations and Approval**

The 9.7 acres the building was located on was a little less than the 12 acres desired by the school district for an elementary school, but school district administrators believed the benefits far outweighed the disadvantages. School district administrators believed the benefits offered by the former Kmart store far outweighed the disadvantages. They held expectations that the building and site could be successfully transitioned into a permanent, self-operating elementary school in terms of aesthetics and function. They also expected that the project would be cost and time effective. School district administrators acknowledged that existing or potential land uses surrounding the future school site made this location less suitable than traditional elementary school projects.

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<sup>193</sup> The average land acquisition cost per acre for new school sites was \$105,000 in November 2004. Lee County hired a real estate appraiser to determine an appropriate land cost for new school sites and this information was incorporated into the “Impact Fee Update Study.” Duncan Associates, page 23, 2005.

<sup>194</sup> Lee County School District Director of Planning.

With these expectations, school district staff initiated the formal steps to move the proposed project forward.

School district administrators initiated the formal steps to move the proposed project forward. The school district tried to purchase the property in early 2004, but the proposed project became delayed because the properties were tied up in court due to bankruptcy and foreclosure proceedings. The school district finally closed on the property for \$5.7 million in July 2004.

The school district did not technically seek special public comment outside of presentations to school board meeting.<sup>195</sup> Officials from the school district and county claim that neither the county nor the community had any opposition to the proposed purchase.<sup>196</sup> A staff member from the planning department indicated that the county encouraged use of the building by the school district. In addition, there had not been discussion that placing a school at that site might thwart long-term redevelopment efforts or would cause the county to lose potential tax revenue. The site and surrounding area was zoned for general commercial, commercial planned developments, and mixed use, but there was no particular sub-area comprehensive plan for that area. County staff characterizes the purchase as a “random occurrence in that the site was available at a time when the District was having a hard time finding sites.”<sup>197</sup>

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<sup>195</sup> Lee County School District Director of Planning

<sup>196</sup> Lee County Director of Smart Growth; Lee County Planner 1; Lee County School District Director of Planning.

<sup>197</sup> Lee County Planner 2.

#### **iv. Permitting Process: Working Relationship with Local Government**

Staff in the County planning department mainly helped the district obtain the necessary permits for use as a school. The building needed to meet all necessary fire and safety codes. Special accommodations did not need to be made to ensure the school conformed to zoning. The state of Florida allows public schools to be placed in any zoning district unless the site sits in a defined airport runway flight path, adjacent to an industrial use, or construction will have an adverse environmental impact.<sup>198</sup> This law is reiterated in the Lee County Plan.<sup>199</sup> The county did review the site plan. According to one of the County planner's, this review occurs regardless of the applicant and typically entails negotiations for further on-site improvements. The county always seeks the most aesthetic features from new developments.<sup>200</sup>

#### **v. Building Conversion: Store to School**

The school district purchased the former Kmart with the intention of using the building as a 'staging school.' Staging schools are facilities that temporarily hold students of an entire school while the permanent school is being constructed. When the permanent school is completed, the 'school' moves to the new location—students, staff, mascot, and school name. The staging school then takes on a new school population and follows the same cycle. After the building went through a series of cycles, the school district intended

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<sup>198</sup> Lee County Planner 2.

<sup>199</sup> Lee County. Lee Plan (August 2007) available from <http://www.lee-county.com/dcd1/Leeplan/Leeplan.pdf> .

<sup>200</sup> Lee County Planner 3.

the building to assume status as a permanent elementary school. Thus, the building was rehabilitated with the intention of it serving as a permanent elementary school.

### 1. Reconstruction of Space

The school district hired the Punta Gorda-based Alliance Design Group, who specializes in designing educational facilities, to redesign the space and oversee the renovations. The firm was required to redesign the building to accommodate the educational program for 1,000 students.<sup>201</sup> One of the main challenges noted by the school district's project manager being able to come up with a configuration that would include as many of the building's existing structural columns.<sup>202</sup> The design divided the building's rectangular shape into eight areas through the use of four vertical and two horizontal corridors.



**Figure 7.7: Former Kmart Store, Facing West**  
Source: Microsoft Live Search Maps

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<sup>201</sup> Lee County School District Director of Planning Interview, Director of Planning, Lee County School District.

<sup>202</sup> Lee County School District Director of Construction, interviewed by Jayne Bernhard, by telephone, 18 March 2008.

Rayma C. Page Elementary Code Blue Evacuation Map



**Figure 7.8: Rayma C. Page Elementary School Floor Plan**  
 Source: Lee County School District

Alliance kept the school’s main entrance consistent with that of the former store. An administrative and professional services zone comprises the first definitive area of the school. The offices are centered around the main entrance at the northeast corner of the building. The southern half of the building contains the art and music classrooms, media center, multi-purpose cafeteria, kitchen, and maintenance offices. The remaining space in the building is divided into separate classroom areas by educational level: kindergarten through fifth grade. Promotional literature on the school proclaims oversized classrooms and extra-wide hallways as features of the elementary school.<sup>203</sup>

Renovation on the building’s interior started in 2004. Plumbing was a notable obstacle cited by the project manager. The state of Florida mandates bathrooms for classrooms serving kindergarten through third grade students. For this reason, contractors

<sup>203</sup> Lee County School District, “Rayma C. Page Elementary School Brochure,” Provided by the Rayma C. Page Elementary School principal, obtained March 12, 2008.

were required to cut channels into the floor to install plumbing for the bathrooms.<sup>204</sup>

Large sections of the existing parking lot were removed to accommodate two outdoor physical education spaces: one in front of the school for first through fifth grade students and one on the side for kindergarten students.



**Figure 7.9: Building & Site  
Pre-rehabilitation**  
Source: Microsoft Live Search Maps



**Figure 7.10: Building & Site  
Post-rehabilitation**  
Source: Microsoft Live Search Maps

## 2. Aesthetic Augmentations

The school district was adamant that the final product not bear any resemblance to a Kmart. The school was to be permanent, and they wanted to ensure that students who attended the school would not be stigmatized or think they were in a substandard learning environment. Consequently, the exterior school design went through three sets of revisions until the school board signed off on the plan, because school board members thought the façade still bore resemblances of a Kmart.<sup>205</sup> The approved exterior design included a warm, multi-colored, multi-dimensional façade, bell tower, prominent entry,

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<sup>204</sup> Lee County School District Director of Construction.

<sup>205</sup> Deirdre Conner, “School Board Dislikes Design Transforming Building into School” Naples Daily News, January 14, 2005.

and covered walkways. Site improvement included turf and some trees, but landscaping was kept minimal to cut down on maintenance costs.<sup>206</sup>



**Figure 7.11: Drawing, Rayma C. Page Elementary School**

Source: Lee County School District

The architect and school district took several steps to make the interior of the building feel or appear like a school. Contractors cut windows into the exterior walls to bring daylight into the classroom located on the perimeter of the building; however, it was not deemed feasible to cut into the roof and install skylights to extend daylight into the remaining classrooms.<sup>207</sup> The walls were painted in soft, warm colors, and the floors were carpeted. A themed mural runs throughout the building for wayfinding as well as aesthetic purposes.<sup>208</sup>

### 3. Function

The school principal asserted that, technically, no programmatic compromises resulted from using building and site as a school. The interior program met all of the district's and state's specifications. The building was designed to be a self-operating school, and it functions as such. The principal, though, noted that the building lacks traditional physical education classroom space. The cafeteria, which includes a stage, is a multi-purpose room that acts as a cafeteria, auditorium, and gym. In addition, there is a

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<sup>206</sup> Rayma C. Page Elementary School Principal, interviewed by Jayne Bernhard, by telephone, 12 March 2008.

<sup>207</sup> Lee County School District Director of Construction.

<sup>208</sup> Rayma C. Page Elementary School Principal.

small court adjacent to this room. Since the area enjoys year-round warm weather, the bulk of physical education class was designed to take place outside.<sup>209</sup>

Despite being located next to a busy intersection, the school is quite isolated from the highway. Students are either transported to school by bus or by a parent. Sidewalks line Tamiami Trail (U.S. 41), but there is no pedestrian access from Tamiami Trail to the school site. The principal indicated that lack of transportation alternatives and connection to the surrounding area was a compromise the district made when choosing the site. For safety reasons, school staff would never encourage students to walk or bike to school.<sup>210</sup>

#### **4. Project Publicity**

The school district encouraged media coverage on its two Kmart-to-school projects. The News-Press, Lee County's local newspaper, provided the most coverage, but the two projects also earned the school district state and national attention. The overall tone of these articles was positive. Local and state coverage painted the picture of Lee County School District acting in a fiscally-responsible manner. In fact, one article claimed these types of projects have earned "broad appeal" in Lee County.<sup>211</sup> National coverage focused more on how the action was a solution to the vacant big-box store dilemma and drew attention to environmental implications.

Despite the reputed "broad appeal," the media reported some criticism about the two school projects when both started going over budget due to unexpected construction cost increases from Hurricane Charley and some prolonged roof work. With the final cost

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<sup>209</sup> Rayma C. Page Elementary School Principal.

<sup>210</sup> Rayma C. Page Elementary School Principal.

<sup>211</sup> Matthew Pinzur, "At Two Former Kmart, School Will Be In Soon," Miami Herald, January 18, 2004.

for the Rayma C. Page Elementary School approaching \$17.5 million, some citizens began to complain that the money would have been better spent on a brand new school. School district officials offered a rebuttal to these comments, claiming that the above quoted figure did not factor in the cost of land acquisition, which in several areas of the rapidly developing county was quite high. In addition, suitable land was becoming scarce. The district asserted that their actions had been fiscally responsible.<sup>212</sup>

#### **b. Post-Occupancy**

The building opened its doors in August 2005 as the Rayma C. Page Elementary School with 460 Kindergarten through 5<sup>th</sup> grade students. The school is named after the first female Lee County School Board member, who later served as president of the Florida School Board Association and National School Boards Association. In total, the final project cost \$17.5 million, \$700,000 over-budget.<sup>213</sup>

Shortly after the school opened, the school district was informed that the city of Bonita Springs denied approval for the permanent Rayma Page School to be built at the chosen site. The city claimed that the planned use would be too intense for its location because the site was part of an area critical to the city's drinking water supply.<sup>214</sup> Consequently, the district decided to make the staging school the permanent location for

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<sup>212</sup> Dave Breitenstein, "Lee Finds Building Deals Not a Bargain," News-Press, October 30, 2004.

<sup>213</sup> Deirdre Connor, "Cost Rises to Transform Kmart Bldg. Into School" Naples Daily News, July 8, 2005.

<sup>214</sup> The school district still owns the land, but currently does not have future plans for it.

the Rayma C. Page Elementary School. The school district then spent an additional \$400,000 for more permanent shelving and furniture.<sup>215</sup>



**Figure 7.12: Front Entrance, Rayma C. Page Elementary School**  
Source: Lee County School District

#### **i. General Community Reception**

Community response to the school has been overwhelming positive. Initially there was a slight stigma associated with the school for being a former Kmart and, as a result, school had some empty seats its first year, but this skepticism has diminished. The principal reports that the school is a very popular choice. Enrollment since August 2005 has gone from 460 to 680 students. There is even a waiting list to enroll one's child at the school. The principal also indicated that the building had been remodeled so thoroughly that most of the parents of enrolled students do not know that the building had been a Kmart.<sup>216</sup>

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<sup>215</sup> Dave Breitenstein, "Page Elementary Getting Upgrade - School District Spending \$400,000 On Furniture, Shelving," News-Press, September 22, 2005.

<sup>216</sup> Rayma C. Page Elementary School Principal.



**Figure 7.13: Bird’s Eye Perspective of the Rayma C. Page Elementary School**  
Source: Microsoft Live Search Maps

### **ii. Advantages to Daily Education**

The school principal believed that the greatest advantage this particular building had to offer for daily education was its large spaces. The building has a sense of openness from its “over-sized classrooms,” “extra-wide hallways,” and above-average height ceilings. The building functions as any traditional elementary school.<sup>217</sup>

### **iii. Challenges to Daily Education**

The school principal was happy to report that all of the operating challenges the school faced have been or are in the process of being fixed: “the school district has been very attentive.” For example, the school district is installing an outdoor physical education pavilion, complete with bathroom facilities, to augment the interior’s lack of traditional physical education space. The school principal indicated that more windows

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<sup>217</sup> Lee County School District. “Rayma C. Page Elementary School Brochure;” South Side Communities Periodical. “Rayma C. Page Elementary School.” (August 2005). Provided by the Rayma C. Page Elementary School principal; obtained March 12, 2008

would be nice for the school, but it has not been a challenge to daily education with the building's limited number.<sup>218</sup>

#### **iv. Suitability of Building and Site for School**

The overriding verdict on this project is that the building and school grounds work great as a school, but the location is not ideal.<sup>219</sup> The school principal wishes it could be more of a neighborhood school. The school district planner stated that this project works because the store was a stand-alone building. Schools ideally need to be located in self-contained sites for security reasons. For that reason, this type of project would not work if the building was part of a commercial retail complex.<sup>220</sup> Currently, the school is the dominant land use in this area, but much of the land surrounding the school site remains undeveloped. The school district planner indicated that the school district would not want an incompatible uses to locate to one of the adjacent properties. An Arby's and then a Dunkin Donuts built fast-food restaurants in front of the school, adjacent to Tamiami Trail, not long after the school opened. The Principal met with the owners of these two businesses not only to welcome them, but to encourage them to help the school keep the area looking nice.<sup>221</sup>

Officials from both the county and school district thought this school facility alternative should be done again only if other options were expended. The Director of Smart Growth for Lee County pointed out that schools are built to be such fortresses

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<sup>218</sup> Rayma C. Page Elementary School Principal

<sup>219</sup> Rayma C. Page Elementary School Principal; Lee County School District Director of Planning; Lee County Director of Smart Growth.

<sup>220</sup> Lee County School District Director.

<sup>221</sup> Rayma C. Page Elementary School Principal.

these days that it almost does not matter where you put them. For that reason, it should not be surprising that the Rayma C. Page Elementary School effortlessly assumed the building and site of a former big-box store.<sup>222</sup>

**v. Benefit to Surrounding Area**

The main benefit to the surrounding area has been the positive redevelopment of a community eyesore. County staff stated that the school has made the area look better. The Director of Smart Growth stated that it is still too early to tell if the school will spur revitalization along this highway corridor. He believes that the area needs more residences and the highway needs more minor infrastructure improvements such as sidewalks and lighting before commercial investment to occur in this area.<sup>223</sup> The construction of the Arby's and Dunkin Donuts fast-food restaurants may be indicative of coming commercial investment, but the Director did not personally know if this could be attributed to the school's opening. The Director could imagine, though, how these businesses would receive a boost from visits by school staff and parents. The school principal confirmed that her staff frequents these two businesses.<sup>224</sup> She believed that the surrounding businesses have definitely benefited from being located near her school.<sup>225</sup>

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<sup>222</sup> Lee County Director of Smart Growth.

<sup>223</sup> Lee County Director of Smart Growth.

<sup>224</sup> Christina Cepero, "Arby's Opens at Alico Road, U.S. 41," News-Press, December 24, 2005.

<sup>225</sup> Rayma C. Page Elementary School Principal.

### **c. Future of School Building and Site**

#### **i. School District Perspective**

School district staff stated that they had no plans to close the school in the future despite the recent downturn in housing market.<sup>226</sup> The school district spokesman reported that the district has delayed seven new school construction projects; however, this would be a welcome change since “Lee County has been going 150 mph on school construction for the last few years...this allows the school district to take a deep breath and only go 80 or 90 mph.”<sup>227</sup>

#### **ii. County Perspective**

The Alico Road/Tamiami Trail intersection is zoned for commercial uses and is starting to see development interest. Since the early 2000s, three fast food restaurants have been built, a Walgreens and two auto-service shops. While there were not concerns about the school inhibiting future development at this intersection in 2004, additional properties surrounding the school site are suitable for redevelopment. Some types of business activities can be restricted or prohibited because of proximity to a school. The Lee County Board of Commissioners meeting in early 2007 approved a zoning change for the 32 acre site that is just north of the school to allow for the possibility of a six story hotel. The school district protested the rezoning citing concerns of a transient population merely 300 feet from the school.<sup>228</sup> One county commissioner claimed that the county

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<sup>226</sup> Lee County School District Director of Planning.

<sup>227</sup> Jason Wermers, “Slowing Enrollment Halts School Construction Projects,” News-Press, October 26, 2007.

<sup>228</sup> Christina Cepero, “Lee Officials to Vote on Hotel Planned Near School,” News-Press, February 19, 2007.

always intended commercial uses for this intersection and that the elementary school is “incompatible with this intersection.”<sup>229</sup> The relationship between the school site and surrounding land uses will be interesting to watch as this area develops. This area will likely become more valuable if plans to extend the Metro Parkway south from Fort Meyers materialize and other road improvements occur.<sup>230</sup>

#### **D. Conclusion**

The school district entered into this project with expectations that: the former Kmart store and site could be successfully transitioned into a permanent, self-operating elementary school: aesthetically and functionally, the project would be cost and time effective, and the existing or potential land uses surrounding the future school site made this location less suitable than a traditional elementary school projects. All of these original expectations were basically met. The school project did go slightly over budget. In addition, it took the school district longer than expected to obtain formal possession of the building. The school district has been quite pleased with the project and has invested more money into the school. The only additional outcome was that use of the former Kmart by the school district positively rehabilitated a large vacant building that was quickly becoming a community eyesore.

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<sup>229</sup> Christina Cepero, “Hotel OK Near Kmart School,” News-Press, February 20, 2007.

<sup>230</sup> Chuck Curry, “Alico Road Work Slated to Continue Through 2008,” Naples Daily News, January 13, 2007.

**CHAPTER VIII**  
**COMPARATIVE ANALYSIS**

**A. Introduction**

The comparative analysis of the three case studies is a crucial component of this thesis research. Information derived from interviews, newspaper articles, school district reports and local government reports were placed into matrices, organized by the case study framework, to visually present how the school projects compared to one another relative to particular topics. This presentation method facilitated the comparative analysis of the three school projects. The matrices and subsequent discussion of findings can be found below.

**B. Findings from Comparative Matrix**

**a. Regional Context**

**Table 8.1: Regional Context**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
<b>Regional Context</b>	<b>Metropolitan Area</b>	Minneapolis / St. Paul	Fort Myers / Cape Coral	Raleigh / Durham / Chapel Hill
	<b>Metropolitan Area Population (2000)</b>	2,968,000	440,888	1,187,941
	<b>Metropolitan Area Size</b>	7 counties	1 county	8 counties
	<b>Estimated Regional growth (1990-2006)</b>	22.00%	66%	60%
	<b>Percent Minority Population (2000)</b>	15.20%	18.10%	33.20%

The three selected school projects are located in growing metropolitan regions. The Fort Myers / Cape Coral metropolitan region led the study sample with a 66% population increase from 1990 to 2006. The Raleigh / Durham / Chapel Hill region grew 60% during this time period and the Minneapolis / St. Paul region grew 22%. Much of

this regional growth is occurring in the communities or areas where these school projects are located.

**b. Community Context**

**Table 8.2: Community Context**

School	BHS Senior Campus	Page Elementary School	WHS North Campus	
<b>Community Context</b>	Town / Community	Burnsville	San Carlos	Wake Forest
	Community Populaton (2000)	60,220	N/A	12,550
	Percent gain (1980-2006)	69%	N/A	432%
	Percent Minority Population (2000)	13.30%	N/A	21.80%
	Major Transportation Corridors	I-35-E, I-35-W, MN 13	I-75, U.S. 41	U.S. 1
	Aproaching Community Build-out?	Yes	Yes	No
	Comprehensive plan completed within last 5 years?	No	No	No
	Sub-Area comprehensive plan?	Yes	No	No
	Number of zoning districts (including mixed use)	7	~30	5

All three of these communities have interstate access or major divided highways that lead directly to their respective metropolitan centers. The completion of these major transportation corridors and/or corresponding road improvements were all cited as leading factors that caused these three communities to grow in population. The city of Burnsville’s population rose from 2,500 residents in 1960 to 35,674 residents by 1980, a direct effect of the opening of Interstates 35-E and 35-W.

All three of these communities have experienced high rates of growth since the 1980s. Wake Forest increased its population by an astounding 432% since 1980. Although Lee County has completed several community plans for its twenty-two

planning sub- communities, the county has yet to complete a plan for the San Carlos community. Consequently, no readily attainable statistical information existed on this community that would allow for a cross-comparison between all three projects. Several members of the Lee County planning staff commented, though, that this was a fast growing area of the county due to the completion of several developments of regional impact in close proximity this community.

Population growth in these three communities has paralleled the construction of new residential units and commercial developments. Burnsville reached build-out in the late 1990s. The San Carlos community is approaching build-out. The Lee County Comprehensive Plan indicates that “most of the vacant property in this community has some type of development approval.”<sup>231</sup> The Wake Forest area of the Research Triangle still has room to absorb more residential and commercial units, but developable land is becoming scarcer. This trend has affected the ability of the Wake County Public School System to secure sites for future schools.

None of these three communities have had a comprehensive plan completed in the last five years. Lee County has a county-wide comprehensive plan that was last amended in 2007, which pertains to the San Carlos community. The city of Burnsville completed its last comprehensive plan in 1998 and is in the process of finalizing their 2030 plan. The town of Wake Forest is also in the process of completing a community plan. Only the city of Burnsville had a sub-area comprehensive plan for school project area.

The three communities each contained several commercial zoning districts to direct and regulate the various types and sizes of commercial land uses. Burnsville and

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<sup>231</sup> Lee Plan, Vision Statement, I-7, August 2007.

Wake Forest each contained one zoning district especially designated to accommodate large-scale commercial developments, which can be found adjacent to its major transportation corridors. Lee County contains an abundance of commercial zoning district categories, many of which are variations of planned developments. Parcels with contiguous zoning are not as prominent in Lee County as in Burnsville or Wake Forest.

**c. School District Context**

**Table 8.3: School District Context 1**

School	BHS Senior Campus	Page Elementary School	WHS North Campus
<b>School District</b>	Burnsville-Eagan-Savage Independent School District	Lee County Public School District	Wake County Public School System
<b>District Headquarters</b>	Burnsville	Fort Myers	Raleigh
<b>Size of District</b>	37 square miles	804 square miles	864 square miles
<b>District Rank in State</b>	13th largest	9th largest	1st largest
<b>Total number of students 2007/08</b>	10,203	77,768	134,002
<b>Percent student gain since 1997/98</b>	-11%	49.90%	49.70%
<b>Total number of schools</b>	16	93	153
<b>Percent Minority students</b>	33%	48.30%	46.20%
<b>Percent free or reduced lunch</b>	28%	52%	28%
<b>School facility planning entirely a function of the school district?</b>	Yes	Mostly (Concurrency Law)	Yes
<b>Schools funded by local government?</b>	No	Yes	Yes
<b>Role of local government in school identification</b>	N/A	Often points district to viable sites; leverages fees and/or land for future school sites	Often points district to viable sites; leverages fees and/or land for future school sites
<b>Role of local government in school site acquisition</b>	Site assessment & permitting	Site assessment & permitting	Site assessment & permitting

Despite the vast differences in scale between these three school districts, there are some similarities. These three school districts were some of the largest in the United States—Wake County Public School System (WCPSS) and Lee County Public School (LCSD) District ranked in the nation’s top fifty. Both Wake County and Lee County gained similar percent gains in student enrollment from 1997 to 2007. Burnsville-Eagan-Savage School District (BES) actually started to lose students starting in the late 1990s. BES School District had comparable percent gains in student enrollment in the 1960s through 1980s, during Burnsville’s major growth period. BES’s enrollment reached its peak in 1997/98.

All three school districts are more racially diverse than the community or regional demographic profile indicated. All three school districts have become more racially diverse over the past decade, with an approximate 10 to 20% gain. All three school districts have become more racially diverse over the past decade, with an approximate 10 to 20% gain. In addition, the student population has become poorer in accordance with the growing percentage of free and reduced lunch program participants.

School facility planning characteristically is a function of the school district. They all locate their own school sites utilizing school district site selection criteria. Lee County and Wake County, though, are the authoritative body that leverage fees and/or land for future school sites. In addition, the two respective counties have the sole authority to levy impact fees and bonds. BES School District, by contrast, is an independent local government authority. BES levy’s its own bonds.

**Table 8.4: School District Context 2**

School	BHS Senior Campus	Page Elementary School	WHS North Campus	
<b>School District Context</b>	Local government-school district joint-use	Yes	Yes	Yes
	State or District Acreage Standards?	Yes	Yes	Yes
	Preference for neighborhood schools?	N/a	Yes	Yes
	Schools can locate in any zoning district?	No, variance or special permit needed unless schools are an established permitted-use.	Yes, unless an environmentally sensitive area, an airport noise zone, or adjacent to an industrial site.	No, variance or special permit needed unless schools are an established permitted-use.
	Additional alternatively sited educational facilities?	Yes	Yes	Yes

In most cases, the local governments assess potential school sites prior to acquisition to ensure adherence to local land development codes. If approved, the local government will perform building inspections. LCSD is affected by the state of Florida’s 2005 Concurrency Law, but this appears to have made limited additional gains, thus far, in joint planning efforts between the school district and county. All of the school districts and local governments indicated that it is policy to collocate community resources such as parks, indoor recreation centers and libraries at schools. In fact, LCSD and WCPSS prefer to construct neighborhood schools that will facilitate the joint-use of community resources.

While the adaptive use of commercial structures for schools is not a trend, all three of these school districts have additional examples of adaptive use educational facilities. Therefore, this alternative construction option was not a one-time solution, and appears to be a strategy for solving growth-related enrollment pressures. All three of the

states or school districts have school site acreage standards with exceptions that allow non-traditionally-sited schools when alternative options have been expended.

An interesting finding from this study was that educational uses are not necessarily allowed in every zoning district per local ordinance. The state of Florida, like Massachusetts, stipulates that schools are a permitted use in every zoning district. In other states, no such state law exists. This means that it took extra effort for these school districts to obtain the necessary permits that would allow an educational use in non-designated districts. This potential time delay could effectively undermine the whole purpose of the adaptive-reuse construction option.

**d. Area Context**

**Table 8.5: Area Context**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
<b>Area Context</b>	<b>Distance from school to nearest building</b>	200 feet	350 feet	80 feet
	<b>Distance from road</b>	175 feet	500 feet	600 feet
	<b>Surrounding land uses (1/4 mile)</b>	Park, Performing Arts Center, several mixed-use residential buildings, several multi-family residential buildings, several multi-story office buildings, several 1-2 store commercial buildings,	Four fast-food restaurants, 1 gas station, Walgreens drugstore, 1 auto-service shop, 1 motel, small commercial building, RV park, Single-family home subdivision	2 banks, 2 gas stations, 2 auto-service shops, 2 small professional buildings, 3 small strip malls, 1 power center, Pizza Hut, Bojangles, Walgreens, Target, Home Depot, single-family home subdivision
	<b>Distance to major highway/interstate exit</b>	0.7 miles	3.25 miles	.25 miles
	<b>Distance from metropolitan center to school</b>	15 miles	11 miles	15 miles
	<b>Predominant Zoning in Area</b>	Commercial	Commercial	Commercial
	<b>Zoning of School Site</b>	Commercial	Commercial	Commercial

All three of these schools are located in predominantly commercial areas along major transportation corridors, and contain several fast food franchises, drugstores, and gas stations. Each area, though, maintains a different character. The Burnsville Senior Campus area has several multi-level office buildings, mixed-use structures, and multi-family residential while the other two have nothing comparable. The Rayma Page Elementary School area is the least built-out with existing land uses, partly due to several protected water resources; however, the area has seen several new commercial developments since the early 2000s. Land along U.S. 41 reputedly will become developed or redeveloped as this section of the county increases in population. There are already rumors that a major franchise grocery store company will build a new store adjacent to the school district property to the north.

**e. Existing Conditions**

All of the school districts began looking at options for increasing classroom space due to projected or existing overcrowding. School district officials decided that placing additional mobile units or constructing a new addition would not be optimal solutions to increasing school capacity at Wakefield High School and Burnsville High. LCSD officials began looking for a permanent educational facility to temporarily house entire school populations as the intended school was being constructed.

f. Site Identification Process: Advantages & Disadvantages

Table 8.6: Characteristics of Building

School	BHS Senior Campus	Page Elementary School	WHS North Campus	
<b>Building Characteristics</b>	<b>Former Name</b>	Diamondhead	Kmart	Winn-Dixie
	<b>Retail Category</b>	"C" class shopping mall	Discount department store	Grocery store
	<b>Type of Structure</b>	Mall	Big-Box	Big-Box
	<b>Year Structure Built</b>	1974	1993	2000
	<b>Acres</b>	11	9.7	5.5
	<b>Total Building Square Feet</b>	140,000	128,000	54,274
	<b>Total School Square Feet</b>	54,000	128,000	54,274
	<b>Acres</b>	11	9.7	5.5
	<b>Factors affecting the reuse of site for commercial retail?</b>	Obsolete building & site for retail.	Older building & site	Older building & site
		Major shopping center located nearby (Burnsville Center).	Major shopping center located nearby (Gulf Town Center).	Additional big-box stores in immediate vicinity
			Existence of developable land nearby	Existence of developable land nearby
			site not fully-marketed	site not fully-marketed
<b>Direct government attempts to fill the store vacancy with additional retail?</b>	No--but it tried to acquire property for use as a city-operated community facility.	No	No	

All of the identified commercial buildings were in the form of big-box commercial structures, but they varied in size and age. According to local planning staff, all of these stores faced similar challenges that affected their immediate reuse. All of three of these retail structures did not sit completely vacant for too long; however, they came to be characterized as blighted, community eyesores. Despite this trajectory, the

three local governments did not make any direct attempts to fill the store vacancy. The city of Burnsville, though, did try to purchase the Diamondhead Mall for a new community center.

**Table 8.7: Site Identification Information**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
<b>Site Identification</b>	<b>Year building identified as an option</b>	Aug-95	Dec-03	Jun-05
	<b>Key factors for choosing this option.</b>	Cost, proximity to existing high school, familiarity with facility	Time, lack of available land, cost	Time, lack of available land, proximity to existing high school
	<b>Building recycling as a motivating factor for reuse?</b>	No	No	No

The profiled school districts chose this construction option for similar reasons although they ranked in importance. For the WCPSS and LCSD, the reputed abbreviated construction cycle and lack of available land in their target area were the leading factors. For BES SD, cost and proximity to the existing high school were the lead factors. WCPSS openly stated that the Wakefield North project was not a money saving option—the project’s main value was the abbreviated time frame. Not one of the school districts considered building recycling as a motivating factor for reuse.

**Table 8.8: Building and Site Disadvantages**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
<b>Disadvantages</b>	<b>Building disadvantages</b>	Building could not be retrofitted for science labs, full media center, unless more money was spent.	None	Building footprint smaller than school template. Would not be able to fully accommodate all typical features Expensive project for a leased facility.
	<b>Building able to accommodate a traditional gymnasium?</b>	No	No	No
	<b>Site disadvantages</b>	None stated	Surrounding, commercially-zoned parcels remained undeveloped at time of purchase; uncertainty over future adjacent land uses.	Enclosed by other types of commercial retail; not able to physically separate school site from surroundings.

Feasibility studies on all three of the proposed projects determined that a traditional gymnasium would never be able to be accommodated in the existing building. The BES SD proposed project reputedly could have accommodated science labs but this would have entailed more money than the district wanted to spend. The WCPSS, saw the existing, adjacent commercial land uses as a site disadvantage because the district would not be able to maintain exclusive control over their immediate surroundings. The LCSD saw the commercially zoned, yet undeveloped land adjacent to the proposed school in a similar manner.

**g. Process to Acquire the Site: Negotiations & Approval**

**Table 8.9: Local Government Involvement and Community Concern**

School	BHS Senior Campus	Page Elementary School	WHS North Campus	
<b>Government Involvement &amp; Community Concern</b>	Government encourage the reuse of the site by school district?	Yes	Yes	Yes
	Action taken for the school to comply with local zoning?	Variance issued	None-per state and county law, schools are basically allowed to locate in any zoning district	Schools added as a permitted-use in Highway Business District
	Local government concern that a school would thwart future development opportunities at the site or at surrounding properties?	No--thought it would encourage private investment in the area.	No	No-- , but curious about traffic impact at specific times of the day.
	Citizen concern that a school could thwart future development opportunities at the site or at surrounding properties?	No	Somewhat--certain types of business activities can be restricted or prohibited because of proximity to a school.	No
	Concern about a loss of tax revenue the building's use as a school?	No	No	No
	School project relate to a broader plan for that area?	Somewhat	No	No

All local governments encouraged the school district to reuse the site. All interviewed planning staff members indicated that planning staff, in general, would not be the government body that would show partiality/concern about the proposed project. County commissioners, city councilmen, or board of commissioners would be the authoritative body that could make comments. Reputably, local government officials showed little to no concern that the potential school projects could thwart future

development at the site or cause the government to lose out on tax revenue. One member of the Lee County Board of Commissioners, though, did state two years after the school had been operating at its location that the school did not belong there and was out of place. In this case, the school at this location restricted the sale of alcohol.

**Table 8.10: Building Purchase Information**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
Purchase	Year Building purchased / leased	Dec-95	Jul-04	Mar-06
	Purchase / Lease Price (million)	\$2.10	\$5.7	\$4.70
	Sought public comment prior to purchase?	No	No	No

Some BES SD and WCPSS school board members expressed concern about the proposed project. WCPSS members were particularly concerned that the school district appeared to be spending a large sum of money on a leased facility.

**h. Building Conversion: Store to School**

**Table 8.11: Reconstruction of Space**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
Reconstruction of Space	Number of Classrooms	12	45	13
	Gym	No	Yes	yes
	Outdoor play area	No	Yes	yes
	Cafeteria	No	Yes	yes
	Kitchen	No	Yes	yes
	Media Center	Yes	Yes	yes
	Technology	Yes	Yes	yes
	Art/Music/	No	Yes	yes
	Administration / Guidance	Yes	Yes	yes

All school projects entailed some form of program compromises. Notably they concerned gymnasiums and media centers. The Wakefield North project experienced the most compromises since the school district was trying to make the smaller than average building accommodate around 900 students. The final result was smaller-than average classrooms, small media center, non-traditional physical education space. The most significant project compromise was the lack of daylight due to the property owner's restriction on cutting windows into the façade.

**Table 8.12: Aesthetic Augmentation**

School	BHS Senior Campus	Page Elementary School	WHS North Campus	
<b>Aesthetic augmentations</b>	Design Firm	Wold	Alliance SchenkelSchultz	
	Windows	Yes	Yes no	
	Interiors painted with warm, bright colors?	Yes	Yes	Yes
	Additional interior aesthetic improvements?	large, central commons area; few hallways	Over-sized rooms; muraled hallway theme	false skylights; maintained high ceilings in key areas;
	New building Entrance?	No	No	No
	Main Entrance enhanced?	Yes	Yes	No
	Façade augmented?	No	Yes	No
	Façade repainted?	Yes	Yes	Yes
	Outdoor play / recreational space	No	Yes--two playgrounds	Yes --basketball court
	Installation of sod?	No	Yes	No
	Site improvements	Yes	Yes	No
	Use of landscaping to define space?	Yes	Yes	no

All of the school districts hired reputable architectural firms to redesign the buildings. Where allowed, the architects all creatively enhanced the interior and exterior

of the building to give it a new image and turn it into a working school. The Rayma C. Page school had the most aesthetic improvements to the point where the building no longer looks like a former Kmart.

**Table 8.13: Function of School**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
Function	Type of School	Satellite high school campus	Elementary school	Satellite high school campus
	Self-sufficient	No	Completely	Partly
	Miles to Main Campus	1.5 miles	N/A	3 miles
	Grade level	12th grade	Pre-k - 5th grade	9th grade
	Enrollment (2007/2008)	470 per shift	680	821
	Transportation	All students drive or take bus to campus	All students are driven or take bus to campus	Most students come by bus or parent. Some walk
	Connection to surrounding land uses via sidewalks	Yes	Yes	Yes

All of the buildings operate at various levels of self-sufficiency. Due to their commercial locations, almost all students take the bus to school or are driven by car. Every school, though, is connected to the surrounding area by sidewalks.

**Table 8.14: Publicity of School Project**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
Publicity	School district encourage media coverage?	Yes	Yes	Yes
	Favorable media coverage?	Yes	Yes	yes
	Parent / student presentation prior to opening?	Yes	No	Yes
	Community response to proposed, new school?	Initial skepticism	Initial skepticism	Initial skepticism

The school district encouraged media coverage on the school projects and they mainly received favorable reviews. Many of the articles maintained a witty, playful tone that helped conjure interest and excitement in the project. Despite favorable reviews and interesting articles, many community members remained skeptical of the school project prior to it being completed.

**i. General Response**

**Table 8.15: General Response to School Project**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
General Response	Community reaction post-occupancy	Positive	Skeptical at first, currently positive	positive
	Community perception that school district acted in a fiscally-responsible way?	Yes	Yes	Yes

The school projects were generally well-received by students, parents, and staff after it opened. Newspaper articles and school principles reported that all of the initial skepticism went away. Citizen perception of these projects was portrayed by the media as approving of the school district's investment.

**j. Advantages for Daily Education**

**Table 8.16: Advantages for Daily Education**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
Advantages	Advantages	Better learning environment since less crowded, less distractions	Larger-than-average spaces	Better learning environment since less crowded, less distractions
	Comment	Students claim they are treated more like adults		Less discipline problems-- suspension rates have gone down.

The main advantage offered by these new schools for daily education was space. The completion of the Burnsville Senior Campus and Wakefield North Campus allowed both the main and satellite campuses to be less crowded. Principals at these two school believed that students were less distracted at the satellite campuses. Students at Burnsville Senior Campus attributed the environment to their being treated more like adults by staff. Staff at the Wakefield North Campus claimed there were less discipline problems. The principal of the Rayma C. Page School stated that the primary advantage the building offered was the larger-than-average spaces.

**k. Challenges to Daily Education**

**Table 8.17: Challenges to Daily Education**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
<b>Challenges</b>	<b>Challenge</b>	Scheduling conflicts	Physical education space	Scheduling conflicts
	<b>Challenge</b>	slight more staffing needed to operate both campuses		Physical education space
	<b>Comment</b>	Division of senior class	More daylight / windows would be ideal.	Students have to leave the building to take certain classes at the main campus.

There were no common challenges posed to daily education at these specific schools because of the building. Lack of traditional physical education space was cited as a challenge at two of the schools. For the Rayma C. Page Elementary school this problem is being rectified with the construction of an outdoor physical education pavilion. Scheduling conflicts was the other main challenge for two of the schools. This was due to the fact that the Burnsville Senior Campus and Wakefield North Campus could not be

made to accommodate all of the students at one time. Principals of these three schools commented differently on obstacles the building posed to its functionality as a school.

### 1. Suitability of Building & Site for School

**Table 8.18: Suitability of Building & Site as a School 1**

School	BHS Senior Campus	Page Elementary School	WHS North Campus	
<b>Suitability of building and site for a school</b>	<b>Works as a School?</b>	Yes	Yes	yes
	<b>Ideal as a School?</b>	Yes	No	No
	<b>Comments</b>		Only Stand-alone big-box stores are suitable for reuse.	Would not work for an elementary school.
			Wouldn't want non-compatible uses next door.	Great project, wishes it could be more of a neighborhood school.
			Great building, wishes it could be more of a neighborhood school.	
	<b>Would you recommend that it be done again?</b>	Yes.	Yes--if other alternatives are expended	Yes--but only if future facilities are purchased
		Yes--if building can be isolated from surrounding land uses	Yes--if building can be isolated from surrounding land uses	

All interviewees believed the physical structure of a former shopping mall or big box store buildings worked as a school; however, only interviewees from the Burnsville Senior Campus project thought the building and site were ideal as a school. The Burnsville project was ideal because it was relatively cost effective, the location of the building was only 1.5 miles away from the main campus and seniors were the intended student population. Had the building been marked for use as an elementary school, there may have been different sentiments on whether the building and site could be considered

ideal. The site made this construction alternative more or less ideal for the other two school projects. These two projects had several commercial neighbors and were located Adjacent to busy highways. According to planners from both of these school districts, the more isolated the site is or could be, the better. In addition, the school sites would be more ideal if there had been greater connections to existing residential communities.

**Table 8.19: Suitability of Building and Site as a School 2**

School	BHS Senior Campus	Page Elementary School	WHS North Campus	
<b>Suitability of building and site for a school</b>	<b>School compatible for the area? (planners)</b>	Yes	Not really compatible but not a nuisance no	
	<b>Future local government encouragement of this type of project?</b>	Yes	Yes--if other options have been expended and not at this location Yes-- if other options have been expended.	
	<b>School as model for future adaptive reuse projects</b>	Yes--architectural firm showcases this project	Yes--architectural firm showcases this project	Yes--this is a good alternative to mobile classroom units.
	<b>Will the use of commercial retail buildings for schools become more commonplace?</b>	Yes-- because of lack of available & suitable school	Yes-- because of lack of available & suitable school	Yes-- because of lack of available & suitable school
		Yes-- because projects appear to be a wise & efficient use of community resources	Yes-- because of need to bring schools online more quickly.	Yes-- because of need to bring schools online more quickly.
			Yes-- because of potentially more cost-effective.	Yes-- because of potentially more cost-effective.
			Yes-- because projects appear to be a wise & efficient use of community resources	Yes-- because projects appear to be a wise & efficient use of community resources
	<b>Design &amp; structural characteristics that would make the reuse of commercial retail structures easier</b>	Higher construction quality	Fewer structural columns	Higher construction quality

Responses from local planners varied when asked if the school was compatible for the area. Considering that the Burnsville Senior Campus project was described as ideal, it was not surprising that the local planner thought the school was compatible with and figured into the city's plans for that area of Burnsville. Planning staff from the other two local governments did not think the school was as compatible. Local planners stated that they would encourage this type of project again in their community. Planning staff from Lee County and Wake Forest, though, stated they would encourage this type of project only if other options had been expended.

All of the interviewees believed that their respective school projects could be considered models for future school adaptive reuse projects. In addition, they believed this type of construction alternative would become more prominent due to regional growth patterns. Other reasons for attempting this type of project included: the action appearing as an efficient use of government resources, the potential to bring schools online more quickly, and potential savings. Interviewees stated that there are design and structural characteristics that can easily be incorporated into common commercial building practices to facilitate the future reuse of commercial structures such as higher structural quality and fewer columns.

**m. Benefit to Surrounding Area**

**Table 8.20: Benefit to Surrounding Area**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
<b>Benefit to Surrounding Area</b>	<b>Benefits to surrounding area?</b>	Yes--helped make the area look better, made space	Yes--cleaned up the site, helped make the area look	Yes--cleaned up the site, helped make the area look
	<b>Helped revitalize the area</b>	Yes--first action in the city-sponsored redevelopment project.	Inconclusive / to early to tell	Inconclusive / to early to tell
	<b>Benefit to surrounding businesses (principal)</b>	Unsure	Yes	yes
	<b>Benefit to surrounding businesses (planner)</b>	Yes	Unsure/Unaware	Unsure/Unaware

The primary benefit of these school projects to the surrounding area is that they cleaned up the site. The planner with the city of Burnsville believes that the school project help to jump-start the revitalization of this area of the city. Planners with the other two communities believed it was too early to tell if the school projects would help to revitalize the areas.

**n. Future of School Building Site**

**Table 8.21: Future of School Building and Site: Government Perspective**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
<b>Future of School Building &amp; Site</b>	<b>School site figure into future plans for the area?</b>	Yes. School district an integral partner in the area redevelopment project.	Not yet	Not yet.
	<b>School affects future use / redevelopment of surrounding parcels?</b>	Not yet	Yes	Not yet.
	<b>School district discussion of closing school?</b>	No	No	yes
	<b>Community discussion of closing school?</b>	Yes	No	no

The planner from Burnsville stated that the school figures into future plans for the area and that the school district is an integral partner in the area redevelopment project. Planning staff from the other two communities noted that there are no specific future plans for that area. For this reason, the school has not yet been considered.

**Table 8.22: Future of School Building and Site: School District Perspective**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
<b>Future of School Building &amp; Site</b>	<b>How does the school site fit into future school district plans?</b>	Not going anywhere.	Not going anywhere.	Will use the building as a school until the lease runs out.
		School district is in discussion with Performing Arts Center about starting a magnet school program for the arts.	District currently investing more financial resources into the school-- outdoor P.E. Pavillion	School district will try to increase capacity at the campus by placing mobile units at site
				May house other student populations after new area high school opens and student reassignments take place
				Not in the district's long-range plans to have ninth grade centers--would like to have more, consolidated high schools.

Burnsville-Eagan-Savage School District and Lee County School District have no plans to close the schools. The principal of the Burnsville High School stated that the Senior Campus and Diamondhead Educational Center were too much a part of the community to consider closing. It would also be close to impossible to reintegrate the staff and students back at the main campus. The school district would like to capitalize on the location of the school by forming a partnership in the near future with the almost

complete Performing Arts Center next door. There were some grumblings by a few citizens and high school staff early in 2008 about closing the facility, which was the feature of an article in the Savage Pacer.

The school planner at Lee County School District said there was no reason in the near and distant future to close the school. The school district, in fact, was investing more financial resources into the school with the construction of an outdoor physical education pavilion.

The school planner at Wake County Public School System stated that it is not within the school districts long-range plans to operate 9<sup>th</sup> grade centers. The school district would like all its high schools to be consolidated. The school facility, though, will be in use by the school district at least until the building lease is expended. The school district would like to increase the school’s capacity and is currently petitioning the building’s owner to allow mobile units at the site.

**C. Assessment of District Goals for the Project**

**Table 8.23: School Project in Relation to Total Costs**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
<b>Cost</b>	<b>Purchase / Lease Price (million)</b>	\$2.10	\$5.7	\$4.70
	<b>Estimated Renovation Costs (million)</b>	\$4.80	\$11.10	\$7
	<b>Final Renovation Costs</b>	\$5.20	\$11.8	\$6.80
	<b>Total Costs (including renovation)</b>	<b>\$7.30</b>	<b>\$17.5</b>	<b>\$11.50</b>

Each school district chose this alternative construction option for similar reasons, many of which centered on the expectation that the project would save time and money.

For two of the projects, unforeseen circumstances slightly drove up the cost of the

project. More importantly, the unforeseen circumstances delayed the construction timeline. Several months elapsed from the initial idea to when renovation actually commenced. Once renovations started, the school projects were completed much more quickly than typical new schools. The extended timeline generated criticism toward the Lee County School District for choosing this particular construction option. School district staff responded that the lack of available land in targeted areas still made their choice a wise investment.

**Table 8.24: School Project in Relation to Elapsed Time**

School		BHS Senior Campus	Page Elementary School	WHS North Campus
<b>Time</b>	<b>Key factors for choosing this option.</b>	Cost, proximity to existing high school, familiarity with facility	Time, lack of available land, cost	Time, lack of available land, proximity to existing high school
	<b>Year building identified as an option</b>	Aug-95	Dec-03	Jun-05
	<b>Year Building purchased / leased</b>	Dec-95	Jul-04	Mar-06
	<b>Year Renovations Started</b>	Nov-97	Nov-04	May-06
	<b>Year School Opened</b>	Sep-98	Aug-05	Aug-07
	<b>Time elapsed from renovation to occupancy</b>	10 months	9 months	13 months
	<b>Time elapsed from idea to occupancy</b>	<b>24 months</b>	<b>20 months</b>	<b>18 months</b>

## CHAPTER XI

### CONCLUSION

#### A. Significant Findings

The thesis research began with research questions, claims, and objectives that can now be addressed after completion of the comparative analysis in the form of significant findings.

- **These types of school projects occur in metropolitan regions and, in particular, in fast-growing communities where the cost of land is increasing and large tracts of land are becoming scarce.** These types of public school projects were all found to occur in growing metropolitan areas and, in particular, growing communities. School district enrollment increased to the point where the district needed to consider constructing, adding or acquiring extra space. Escalating land prices and scarcity of developable land suitable for schools led school districts to choose this alternative construction option.
- **School facility planning is a function of the school district and occurs with limited input from local governments.** The main role of the local government is to levy impact fees on new developments, perform site assessments and assist with the permitting process. The local governments encouraged the projects, but stayed out of other discussions.
- **These adaptive reuse projects all occurred in communities with a commitment to co-locate public resources.**

- **The school project reflected school district but not necessarily municipal growth management strategies.** The encouragement by local governments to reuse these particular buildings was not part of a formal policy action on behalf of the government to promote sustainable growth management principles.
- **Shopping malls and big-box stores can potentially work well as schools.** Their characteristically large interior spaces with minimal divisions provide optimal design flexibility for interior reconfigurations. These buildings can be retrofitted to increase the capacity of the plumbing, mechanical, and electric systems. Windows can be cut into the exterior walls to draw daylight into the building. The bland facades can be augmented to give the building an entirely new image. The physical structure of a former shopping mall or big box store can with proper adaptation work as a public school facility.
- **Shopping malls and big box stores can work as schools, but it is the site that makes this construction alternative more or less suitable.** The most suitable sites are stand-alone big-box stores with substantial setbacks from roads and few commercial neighbors. The more isolated the site is or could be, the better. Despite the fact that each of these profiled schools exhibited similar surrounding land uses, unique contextual characteristics affected the suitability of these sites as schools. The Rayma C. Page Elementary school site was moderately well-suited because the building was located approximately 500 feet from the road and remained 350 feet from the nearest building. With the removal of excess asphalt and the addition of sod to the former parking lot, the commercial property began to feel more like a school: more isolated from its surroundings. Interviewees

believed the school site would have been more ideal if it had not been located near a busy intersection—the location inherently prevented it from becoming a neighborhood school with pedestrian access.

- **Shopping malls and big box stores can work as schools, but the amount of money a school district is willing to spend makes this construction alternative more or less suitable.** The Page example demonstrates that shopping malls and big box store site conditions can be made more ideal or less ideal by the amount of money the school district is willing to spend on site improvements.
- **Overextended schools are community problems and the use of vacant commercial retail buildings for educational facilities were the answer to these community problems.** This alternative construction option increased the school districts' number of needed classrooms and created an effective learning environment for students. All interviewees believed this to be the greatest advantage this construction alternative offered for daily education.
- **The use of vacant commercial retail buildings for educational facilities did not necessarily solve a community problem of vacant retail buildings.** Vacant commercial retail buildings were not identified as community problems in these profiled cases. None of the local governments of the profiled school project communities made attempts to fill the vacancy left after the exit of the former retailer or property owner. This is in contrast to municipalities that rezone parcels or areas of the community to entice development interest or that provide some type of financial incentive to facilitate redevelopment. The buildings involved in

the three profiled projects, though, had not been vacant for an extended period of time. These properties had yet to be considered true community problems.

- **The reuse of vacant commercial retail buildings for educational facilities was better than no reuse.** All interviewees indicated that the properties had become somewhat blighted during their periods of vacancy. The former Winn-Dixie was even described as derelict—apparently people had been dumping large unwanted items in the rear of the property. These interviewees—school district and local government staff—described the simple use of the building and site as visually enhancing to the surrounding area. The use of these properties prevented them from becoming future community problems.
- **The adaptive reuse of vacant commercial retail buildings for educational facilities is a fiscally responsible growth management initiative for school districts.** One way or another, new schools cost tax payers money. This alternative construction option saved taxpayers additional tax dollars by reusing sites with existing public utilities and road access—infrastructure put in place with public tax dollars. Some citizens complained that the final costs of the rehabilitation project, including site acquisition made the school cost as much as new, traditional school. School district officials were always quick to assert that these school sites were the only available options given time and land constraints.
- **Positive media coverage was crucial to influencing public opinion that the school district acted in a fiscally responsible manner and that the school would work as a school.** This is evident through headlines like “Elementary Has Come Long Way Since Kmart Days” and “From Frozen Food to Focused

Frosh.”<sup>232</sup> Playful comments like: “Joyce used to eat at the Taco John's at the mall. But literature has replaced tacos and enchiladas: the former fast-food site is Tom Ferderer's English class” positively enhanced the perception that the district made a good decision.<sup>233</sup>

- **The adaptive reuse of vacant commercial retail buildings for educational facilities could be considered in some ways an indirect sustainable growth management practice for school districts and local governments.** The literature review showed that renovation of existing buildings generates less waste than demolition and consumes less energy than new construction. The environmental benefits potentially derived from reusing an existing building did not motivate any of the profiled school districts to choose this alternative construction option. More ordinary factors such as time, lack of available land, location and cost were cited as the key reasons.
- **The adaptive reuse of vacant commercial retail buildings for educational facilities may, however, in other ways not be considered a sustainable growth management practice for school districts and local governments.** These schools are not neighborhood schools. Almost all students arrive by bus or car. Sidewalks connect the school sites to surrounding areas, but the existing atmosphere does not encourage pedestrian accessibility.
- **Local planning staff did not explicitly recognize the school projects as an economic development tool.** School principals all indicated that students, parents, and staff frequented the adjacent businesses before and after school. All

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<sup>232</sup> Pedro Morales, “Elementary Has Come Long Way Since Kmart Days” *News-Press* (July 31, 2005); T. Keung Hui, “From Frozen Food to Focused Frosh,” *News & Observer* (September 14, 2007).

<sup>233</sup> Norman Draper, “Burnsville Mall Gets New Life as School Campus,” *Star Tribune* (September 6, 1998)

interviewed planners seemed completely unaware of any potential economic benefits the profiled school may bring to surrounding businesses. For this reason, it is unlikely that potential, external benefits will be a factor influencing the future use of this school.

- **This type of construction alternative may not necessarily save the school district time or money.** Time, lack of available land, location and cost were cited as the key reasons school districts chose this alternative construction option; however, unforeseen circumstances had the potential to drive costs up and prolong the construction time-line. Each situation seems highly variable. School district staff commented that the lack of available land in targeted areas still made their choice a wise investment.
- **The future use of these particular buildings as schools will be much more influenced by its overall suitability as a school and its image than by municipal plans for the area.**

## **B. Recommendations for Future Research**

The case study methodology and framework used in this research study could be applied to profile the other eight public school districts. Findings from a larger sample size would further enhance our understanding of what factors influence school districts to undertake this type of school project, as well as how the outcomes influence the future of these types of schools. In addition, the same methodology and framework can be applied to profile private and charter schools. This study identified nine schools such schools that are still in operation (Appendix \_\_\_\_). A research study on these types of schools would be especially interesting to pursue because it may tell a different story about the

complacency of local governments and elected officials to approve and support of a school in a former shopping center. If an acute school enrollment crisis did not exist, would communities be so accepting? Thus, a research study on private and charter school projects would help us understand the relationships between schools, growth management, and economic development from a different angle.

The Appendix also contains a list of all initiatives—formally discussed and attempted—to acquire a store for a school. These cases never materialized because of public opinion, permitting issues, or financial reasons. For example, the Los Angeles Unified School District became interested in the Valley Plaza shopping center site in North Hollywood for a new high school; however, the school district found itself embroiled in a controversy that centered on the site's future economic development potential. Consequently, the school gave up pursuit of this shopping center site. The particulars of cases like these would be of interest to future research because they would also illuminate the working relationship between school planning, growth management, and economic development.

Findings from this thesis indicate that further research on the potential economic benefits a school can bring to an area would be beneficial. School staff claimed they often frequent the adjacent fast-food franchises or drug store. Local planning staff, though, seemed unaware that this dynamic. A research survey of specific duration at these nearby businesses would help to quantify the relationship between school siting and economic development.

Finally, all of the interviewees believed that their respective school projects could be considered a model for future school adaptive reuse projects and that this type of

construction alternative would become more prominent due to regional growth patterns. This research, though, did not spend enough time exploring if and how the school district staff or the architectural firm promoted these school projects to increase awareness about this type of construction alternative. Further study on from this angle would indicate how committed the school district planning staff is to influencing school facility planning best-practices or if these profiled school projects were random occurrences.

### **C. Implications for City Planning**

Findings from this thesis have four main implications for city planning. The first is that vacant shopping center sites can accommodate alternative uses, such as schools. These schools are relatively successful examples of development alternatives for defunct shopping center sites. In general, this research hopes to draw further attention to creative ways of reusing large-scale buildings whether this is malls, big-box stores, warehouses, office complexes, hotels, and manufacturing facilities.

The second implication is that planners need to be more aware that primary and secondary schools can be an economic development tool. Studies completed by education professionals show that schools draw spending to the surrounding areas. In addition, new schools often act as a catalyst for community revitalization. All interviewed planners seemed completely unaware of any potential economic benefits the profiled school may bring to surrounding businesses. This may be because planners have not been trained to think of schools in this way. Society has gotten used to the idea of schools operating in separate, removed spheres.

The third implication centers on the broader implications of planning and building for flexible-use spaces. This research suggests that there are design and/or structural

characteristics that can easily be incorporated into common commercial building practices that will lend to future building use flexibility. All of the interviewed project managers and architects believed that the construction timeline could have been even more abbreviated had the materials of the existing building been of higher quality. In addition, the timeline would have benefited from the building having existing windows since the ability to create day light was considered a factor critical to the adaptive reuse of big-box stores for schools. As Jennifer Evans-Cowley's book Meeting the Big-Box Challenge suggests, local communities can demand more from commercial development through planning, design and regulatory strategies.

The fourth implication is that redesigning these former commercial sites alone will not be enough to overcome the inherent aspects of an auto-oriented society. To truly make these schools compatible with the surrounding area, additional non-commercial infill needs to take place. Local government planning departments should initiate this type of activity by adopting design codes and creating zoning districts with measures in place to encourage integrated, sustainable site design.

#### **D. Final Statement**

Certainly not every building can nor should be saved. The size and configuration of many of the newer commercial retail developments will prevent serious consideration of these shopping centers being appropriate for anything more than commercial uses in the future. The point is that more thought should be given to the quality and design of what is being constructed. Local governments have the legal authority to adopt design standards and zoning ordinances that will lend to flexibility of use in the built form. The profiled school projects show that these former commercial spaces work as educational

facilities, but these spaces could be more ideal for schools had sophisticated design guidelines been in place at the time of the building's original construction.

## APPENDICES

**APPENDIX A**

**ALL KNOWN STORE-TO-SCHOOL PROJECTS:**

**CURRENTLY IN USE**

	School	Facility Type	School Type	Town	State
1	Wakefield High School North Campus	Big-Box Store	Public (traditional)	Wake Forest	NC
2	Pedro Guerrero Elementary School	Big-Box Store	Public (traditional)	Mesa	AZ
3	Tarver Elementary School	Shopping Mall	Public (traditional)	Phoneix	AZ
4	Atkinson Middle School	Shopping Mall	Public (traditional)	Phoneix	AZ
5	Village Academy High School	Shopping Mall	Public (traditional)	Pomona	CA
6	Pueblo Elementary School	Shopping Mall	Public (traditional)	Pomona	CA
7	Burnsville High School Senior Campus	Shopping Mall	Public (traditional)	Burnsville	MN
8	Rayma C. Page Elementary School	Big-Box Store	Public (traditional)	Fort Myers	FL
9	Treeline Elementary School	Big-Box Store	Public (traditional)	Lehigh Acres	FL
10	Highland Oaks Primary School	Big-Box Store	Public (traditional)	Memphis	TN
11	Mesquite Academy	Big-Box Store	Public (alternative)	Mesquite	TX
12	DeKalb Alternative High School	Big-Box Store	Public (alternative)	Dekalb	GA
13	Special Programs Center	Big-Box Store	Public (alternative)	Plano	TX
14	Zenith School	Big-Box Store	Public (alternative)	Kissimmee	FL
15	(Sports Authority) School	Big-Box Store	Public (alternative)	Kissimmee	FL
16	Geneva School	Big-Box Store	Private	Winter Park	FL
17	Camino Nuevo Elementary School	Mini-mall	Charter	Los Angeles	CA
18	Sugar Creek Charter School	Big-Box Store	Charter	Charlotte	NC
19	Kalamazoo Advantage Academy	Big-Box Store	Charter	Kalamazoo	MI
20	Coral Springs Charter School	Shopping Mall	Charter	Coral Springs	FL
21	Lee Charter Academy	Big-Box Store	Charter	Fort Myers	FL
22	Snowy Range Academy	Big-Box Store	Charter	Laramie	WY
23	Energized for Excellence	Big-Box Store	Charter	Houston	TX

**APPENDIX B**

**ALL KNOWN STORE-TO-SCHOOL PROJECTS:**

**ATTEMPTED OR TEMPORARY**

<b>Attempted School Projects</b>						
	Facility Type	School	Town	State	Metro	School Type
1	Grocery Store (Food Lion)	Plano Independent	Plano	TX	Dallas	Elementary school
2	Shopping Mall (Valley Plaza)	Los Angeles Unified	Los Angeles	CA	Los Angeles	High school
3	Discount Department Store (K-mart)	Knoxville County	Knoxville	TN	Knoxville	High school

<b>Temporary School Projects</b>						
	Facility Type	School	Town	State	Metro	School Type
1	Grocery Store (Jewel-Osco)	Urbana	Urbana	IL	Champ-Urbana	Elementary school

**APPENDIX C**  
**INTERVIEW MATERIALS**

**Initial Contact Script**

**Introduction**

Hi, my name is Jayne Bernhard. I am a graduate student researcher at the University of Massachusetts Amherst.

I am researching cases in the U.S. where public school districts have utilized space within a vacant shopping center or store for a school for my master's thesis in Regional Planning.

I was hoping to ask you some questions about the school project based on your knowledge or involvement with it.

Further research on this topic will offer a great opportunity to learn more about the working relationship between school planning, growth management and economic development.

The intention of this research is to provide lessons that planning practitioners and education professionals can use to address community issues.

**Logistics**

This study is voluntary.

Participation will occur by phone interview.

If you agree to participate in this study, I will email you a cover letter that explains the research project and what I intend to do with the interview information.

Along with this cover letter will be a short questionnaire that asks specific questions about your knowledge of or involvement in the school project.

I will then call you at our specified time to discuss the questions with you over the phone.

The phone conversation should take approximately 30 minutes.

You can decide at the time of the call to withdraw from participating. You may skip questions you do not want to answer. You can also withdraw at any time from the study during our conversation.

Prior to our phone conversation, if you have any questions or concerns, you may contact me, Jayne Bernhard, at (414) 526-4817.

**Closing**

I look forward to speaking with you at \_\_\_time on \_\_\_day.

Have a good day.

## **Cover Letter to Interview Candidates**

March 11, 2008

Dear Mr. Muttillo,

The Wakefield North School in Wake Forest is one of fourteen schools in the United States that uses a former commercial building as a school facility. Schools like Wakefield North offer a great opportunity to learn more about the working relationship between school planning, growth management and economic development.

Few examples of this type of project have been well-documented. For this reason, I am asking you to participate in a research study that I, Jayne Bernhard, am conducting for my master's thesis in Regional Planning at the University of Massachusetts. The purpose of this study is to identify cases where commercial buildings have been converted to schools and to determine the existence of common factors in these cases based on a comparative analysis. The intention of this research is to provide lessons that planning practitioners and education professionals can use to address community issues. The final product is a master's thesis, although I hope to reformat and publish this study as an article in appropriate magazines and journals.

Along with this letter is a short questionnaire that asks specific questions about your knowledge of or involvement in the school project. Participation in the study will occur by phone interview. I am asking you to look over the questionnaire and, with your permission, allow me to discuss the questions with you over the phone. The phone conversation should take approximately 30 minutes. A follow-up phone call or email may occur at a later date. The study will be completed by April 2008.

This study will maintain confidentiality and privacy to the fullest possible extent. I will not use your personal name in the writing of this research study or in any subsequent publications. Participants will be listed under their generalized professional title: principal developer, school superintendent, city planner, etc. For this reason, please do not provide any information you feel uncomfortable sharing. I will provide you a copy of the case study for your review and approval before final submittal.

I hope you will take the time to participate in this study. Regardless of your participation, please let me know if you would like a summary of my overall findings. To receive a summary email: [jmbernha@history.umass.edu](mailto:jmbernha@history.umass.edu).

If you have any questions or concerns, you may contact me at [jmbernha@history.umass.edu](mailto:jmbernha@history.umass.edu) or (414) 526-4817. This project has been approved by the Institutional Review Board at The University of Massachusetts Amherst.

Sincerely,

Jayne Bernhard

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## INTERVIEW QUESTIONS

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### **School Principals**

1. What architectural and programmatic elements were essential for the building's transition to a school?
2. What challenges and obstacles (architectural & structural) did the building have?
3. What advantages and opportunities (architectural & structural) did the building have?
4. What have been the key advantages this building has offered for daily education since it opened?
5. What have been the key challenges this building has presented to daily education since it opened?
6. Based on your evaluation of this project, what architectural & programmatic factors do you think are critical to the adaptive reuse of big-box stores for schools?
7. Do you think the building and site works as a school? Do you think it should be done again?
8. What has been the response of the community to the "new" school? (parents, children, citizens)
9. Do you think there are community benefits to having this school at this site? (economic, social, environmental, cultural, political)
10. Based on your evaluation of this project, would you consider it to be a model for future school adaptive reuse projects?

11. Do you think the rehabilitation and retrofitting of big-box stores for schools will become more commonplace?

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## INTERVIEW QUESTIONS

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### School Officials

<i>General</i>
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1. Is school planning entirely a function of the school district or is it a collaborative effort with the local government?
2. To what extent are schools exempt from local planning and zoning ordinances?
3. What criteria do you use to select school locations? (projected enrollments, current school overcrowding, school district funds, land)

<i>Pre-Occupancy</i>
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4. What were the factors that led you to choose this construction option?
5. What architectural and programmatic elements were essential for the building's transition to a school?
6. How much of a role did the local government play in your process to identify and acquire that particular site/building?
7. Did this school project greatly stray from predominant school siting practices by the district?
8. Did the school district seek public comment on the use of a commercial site for a school?
9. Did the school district make efforts to publicize the merits of the school project in the local newspaper and other forms?

## *Post-Occupancy*

10. Do you think there are community benefits to having this school at this site?  
(economic, social, environmental, cultural, political)
11. What has been the response of the community to the “new” school? (parents, children, citizens)
12. What opportunities and obstacles (architectural & structural) did the building have?
13. What have been the key advantages & challenges this building has offered / posed for daily educational use since it opened?
14. Do you think the building and site works as a school? Would you do it again?
15. Based on your evaluation of this project, would you consider it to be a model for future school adaptive reuse projects?
16. Do you think the rehabilitation and retrofitting of big-box stores for schools will become more commonplace?
17. Does the school district have any additional plans for non-traditionally sited schools?

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## INTERVIEW QUESTIONS

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### **Architect/Contractor**

1. What advantages and opportunities (architectural & structural) did the structure have?
2. What were the key challenges & obstacles you faced when working on this school project?
3. What architectural & structural factors do you think are critical to the adaptive reuse of big-box stores for schools?
4. Do you think the rehabilitation and retrofitting of big-box stores for alternative uses will become more commonplace?
5. Are there certain design and/or structural characteristics that can easily be incorporated into common commercial building practices that will lend to future flexibility in terms of building use?

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## INTERVIEW QUESTIONS

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***General***

1. Does the city have any preventative measures in place to avoid being left with a vacant or an abandoned store by a property owner/developer (bond requirements, non-restrictive lease requirements, design standards to ensure future building reuse)?
2. To what extent are schools exempt from local planning and zoning ordinances?

***Former Kmart Store / Rayma C. Page Elementary School at 17000 S. Tamiami Trail***

3. Were there any attempts by your department or another government entity to fill the vacancy left by the loss of the Kmart store? (RFP's, special zoning, tax incentives)
4. Why do you think the building was not reused for commercial retail?
5. How was the local government involved in the rehabilitation project?
6. What were the key challenges / obstacles this project presented for reuse?
7. Did the school project fit into a larger comprehensive plan for that area (perhaps as a strategy to spur a mixed-use district), or was it a random occurrence?
8. Did your department/city encourage the school district to reuse the structure?
9. Was there concern that placing a school at that site would thwart long-term redevelopment efforts of the surrounding area?

10. Was there concern (municipal, citizen) about a loss of tax revenue and jobs because of the project?
11. Do you think the surrounding businesses have benefited from the school being at this location? (visibility, foot traffic, stabilizing effect, property value increase etc.)
12. Do you think there are community benefits to having this school at this site? (economic, social, environmental, cultural, political)
13. Do you think the school works well at this location?
14. Would you encourage this type of project in your community in the future?

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## **Interviews**

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